

CITY OF LA MARQUE
CITY COUNCIL
REGULAR AGENDA
of
July 24, 2023

Notice is hereby given that the City Council of the City of La Marque, Texas will conduct a **Regular Meeting** on **July 24, 2023**, beginning at **6:00 PM** in the **Council Chambers** at **1109-B Bayou Road La Marque, Texas as well as via videoconference hosted through Zoom** (**<https://cityoflamarque-org.zoomgov.com/j/1618808925>**). In accordance with Section 551.127(b) of the Texas Local Government Code the presiding officer and a quorum of the La Marque City Council intend to be and will be physically present at 1109-B Bayou Road, La Marque, Texas. This location will be open to the public and the meeting will be broadcast at this location, on Channel 16, and via YouTube (**<https://www.youtube.com/watch?v=L6G8ypjyEDo>**).

The Council will meet for the purpose of considering the following agenda:

1. CALL MEETING TO ORDER
2. ROLL CALL
3. INVOCATION AND PLEDGE OF ALLEGIANCE
4. CITIZENS PARTICIPATION
LIMITED TO THREE MINUTES PER PERSON

Comments from the public will be heard at this time. Any person with city-related business who has signed up may speak to Council (limited to three (3) minutes). If wishing to speak give the Mayor or presiding officer your full legal name and the item you wish to speak about. In compliance with Texas Open Meeting Act, the City may not deliberate on comments. Personal attacks will not be allowed, and personnel matters should be addressed to the City Manager during normal business hours. *Press *6 to mute or unmute if you are participating by telephone, press the unmute button if attending via zoom on a smartphone, tablet or computer, or stand if attending in person, and the mayor will call on you in turn.*

5. PUBLIC HEARINGS

Conduct Public Hearing to hear public input on:

5.1. Ordinance No. O-2023-0004

Amending the fiscal year 2021-22 Budget for various funds' expenditures by decreasing various funds' fund balances, increasing certain expenditures to individual budget accounts in various funds, and increasing certain revenues in various funds as set forth in Exhibit A

Documents:

[ORDINANCE YEAR END BUDGET AMENDMENT 2022 REVISED.PDF](#)

[YE AMENDMENT EXHIBIT A REVISED.PDF](#)

5.II. Ordinance No. O-2023-0006

Issuing a Conditional Use Permit for Hunt Energy Network Battery Storage Facility
(Galveston County Property ID# 363493)

Documents:

[ORDINANCE- CUP HUNT ENERGY.PDF](#)
[ADDITIONAL BESS SITES.PDF](#)
[BATTERY STORAGE FACILITIES NEAR LM.PDF](#)
[MAINLAND BESS SITE SURVEY.PDF](#)
[MAINLAND POWER STATION - LA MARQUE FIRE DEPARTMENT
TRAINING.PDF](#)
[SARA_SUMMER__2023 - BESS PROJECTS.PDF](#)
[ERCOT PLANNED BESS PROJECTS.PDF](#)
[TEXAS 70 OF US BATTERY STORAGE DEPLOYMENTS.PDF](#)

6. ORDINANCES

Discussion/ possible action regarding approving:

6.I. Ordinance No. O-2023-0004

Amending the fiscal year 2021-22 Budget for various funds' expenditures by decreasing various funds' fund balances, increasing certain expenditures to individual budget accounts in various funds, and increasing certain revenues in various funds as set forth in Exhibit A

THIS IS THE SECOND AND FINAL READING

Documents:

[ORDINANCE YEAR END BUDGET AMENDMENT 2022 REVISED.PDF](#)
[YE AMENDMENT EXHIBIT A REVISED.PDF](#)

6.II. Ordinance No. O-2023-0005

Establishing and implementing a program to charge mitigation rates for the deployment of emergency and non-emergency services by the fire department for services provided/rendered for the City of La Marque Fire Department

THIS ITEM WAS TABLED 07.10.2023

Documents:

[AGENDA FORM- FIRE BILLING CONTRACT EMERGIFIRE.PDF](#)
[2023 FIRE BILLING ORDINANCE.PDF](#)
[LA MARQUE EMERGIFIRE ADDENDUM C.PDF](#)
[EMERGIFIRE- EMAIL HANDOUT.PDF](#)
[LA MARQUE FIRE BILLING DATA.PDF](#)

6.III. Ordinance No. O-2023-0006

Issuing a Conditional Use Permit for Hunt Energy Network Battery Storage Facility
(Galveston County Property ID# 363493)

THIS IS THE SECOND AND FINAL READING

Documents:

[ORDINANCE- CUP HUNT ENERGY.PDF](#)
[ADDITIONAL BESS SITES.PDF](#)
[BATTERY STORAGE FACILITIES NEAR LM.PDF](#)
[MAINLAND BESS SITE SURVEY.PDF](#)
[MAINLAND POWER STATION - LA MARQUE FIRE DEPARTMENT TRAINING.PDF](#)
[SARA_SUMMER__2023 - BESS PROJECTS.PDF](#)
[ERCOT PLANNED BESS PROJECTS.PDF](#)
[TEXAS 70 OF US BATTERY STORAGE DEPLOYMENTS.PDF](#)

6.IV. Ordinance No. O-2023-0007

Repealing Section 44-2 of the Code of Ordinances, City of La Marque, Texas

Documents:

[AGENDA FORM - CURFEW REPEAL.PDF](#)
[ORDINANCE - CURFEW REPEAL.PDF](#)
[HB 1819.PDF](#)

7. OLD BUSINESS

7.I. Wastewater Discharge Agreement

Discussion/ provide direction regrading a potential Wastewater Discharge Agreement with Republic Services, with a 90-day trial period to ensure operational compliance with the City's Wastewater Discharge Permit

THIS ITEM WAS TABLED 07.10.2023

Documents:

[2016 WWTP EVAL - COMPLETE DRAFT 6-9-2016.PDF](#)
[WW DISCHARGE PACKET.PDF](#)
[2016 SERVICE AGREEMENT- POTW- LEACHATE- COUNTY.PDF](#)

8. CITY MANAGER REPORT

a submitted report to update Council and Community on the standard operations of the City, report can be acknowledged as whole or discussed at the pleasure of Council.

- o Police - Central Square Invoice

Documents:

[AGENDA FORM-ANNUAL RENEWAL FEE FOR CENTRAL SQUARE.PDF](#)
[CENTRAL SQUARE INVOICE--ANNUAL RENEWAL FEE.PDF](#)

9. NEW BUSINESS

Items presented to the Council for discussion and possible action:

9.I. Event Request

Discussion/possible action regarding the proposal received from Coastal Community Federal

Documents:

[CITY MANAGER MEMO.PDF](#)
[COLM B2SB PROPOSAL.PDF](#)

9.II. Pavilion Reservation Fee Waiver Request

Discussion/possible action regarding Highland Bayou Park Pavilion Reservation Fee waiver for Coastal Conservation Association -Texas, Mainland Chapter

Documents:

[AGENDA FORM- HBP FEE WAIVER.PDF](#)
[CCA-TEXAS-MAINLAND CHAPTER 08122023.PDF](#)
[FLYER.PDF](#)

9.III. Citywide Street Sign Design

Discussion/ possible action regarding approving new Street Name sign design

Documents:

[AGENDA FORM- NEW STREET SIGN DESIGN.PDF](#)
[KLMBC LETTER TO MAYOR AND COUNCIL FOR STREET SIGNS_ - SIGNED BY LYNDSEY.PDF](#)
[NEW STREET NAME SIGNS.PDF](#)
[STREET SIGN QUOTE 20689.PDF](#)
[STREET SIGN REQUIREMENTS IN THE DESIGN CRITERIA MANUAL ADOPTED 2018.PDF](#)

9.IV. Request For Proposal

Discussion/ possible action regarding approving advertisement and Request for Proposal for Citywide Life Station Upgrade - Package 1

Documents:

[AGENDA FORM - LIFT STATION PROJECT D-223 PHASE 1.PDF](#)
[BIDDING SCHEDULE.PDF](#)
[CONSTRUCTION CONTRACT.PDF](#)
[PERFORMANCE STATEMENT.PDF](#)
[PROJECT MANUAL V3.PDF](#)
[ADVERTISEMENT.PDF](#)
[AUGF_LA MARQUE 22-085-003-D223.PDF](#)

9.V. Items For The Good Of The Order

Additional items to bring awareness to Council and the Community as well as future agenda item requests are accepted at this time.

9.VI. Upcoming Events

City Events and Important Dates for Community Awareness

10. EXECUTIVE SESSION

The City Council for the City of La Marque, Texas reserves the right to adjourn into executive

session at any time during this meeting to discuss any of the matters listed above, as authorized by the Texas Government Code Section 551.071 (Consultation with Attorney), 551.072 (Deliberations about Real Property), 551.073 (Deliberations about Gifts and Donations), 551.074 (Personnel Matters), 551.076 (Deliberations about Security Devices), and 551.087 (Economic Development)

11. ACTIONS TAKEN FROM EXECUTIVE SESSION

12. ADJOURNMENT

CERTIFICATION:

I hereby certify that the above notice of meeting was posted at 1109-B Bayou Road, La Marque, Texas on July 21, 2023 at 1:30 p.m.

Kierra K. Nance, TRMC

City Clerk

ORDINANCE O-2023-0004

AN ORDINANCE AMENDING THE CITY OF LA MARQUE 2021-2022 BUDGET FOR VARIOUS EXPENDITURES AT END OF FISCAL YEAR BY DECREASING VARIOUS FUNDS' FUND BALANCES AND INCREASING CERTAIN EXPENDITURES TO INDIVIDUAL BUDGET ACCOUNTS IN VARIOUS FUNDS AND INCREASING CERTAIN REVENUES IN VARIOUS FUNDS AS SET FORTH IN ATTACHED EXHIBIT "A" BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LA MARQUE, TEXAS;

Section 1. That the City La Marque 2021-2022 Fiscal Year Budget is hereby amended for various expenditures at end of fiscal year by decreasing various funds' fund balances and increasing certain expenditures to the individual budget accounts in various funds and increasing certain revenues in various funds as set forth in Exhibit "A" attached hereto and made a part hereof.

Section 2. Open Meetings Act. It is hereby officially found and determined that the meeting at which this ordinance was passed was open to the public as required and that public notice of the time, place and purpose of said meeting was given as required by the Open Meetings Act, *Chapter 551, Tex. Gov't Code*.

PASSED AND APPROVED by City Council of the City of La Marque, Texas, on this the first reading this the **12th** day of **June**, 2023.

PASSED, APPROVED and ADOPTED by City Council of the City of La Marque, Texas, on this the second and final reading this the ____ day of _____, 2023.

CITY OF LA MARQUE, TEXAS

Keith Bell, Mayor

ATTEST:

Kierra K. Nance, TRMC
City Clerk

EXHIBIT A (Revised)

Fiscal Year 2021-22

Funds	Accounts	Descriptions	Expenditure	Revenue	Fund Balance	Reasons
Drug Seizure	12-4040-00-00	Professional services	22,597.00			Contractor help
Drug Seizure	12-4050-00-00	Special operation	35,416.00			Software for narcotic detectives
Drug Seizure	12-2401-00-00	Fund balance			-58,013.00	
TIRZ-Omega Bay	26-9001-00-00	Transfer In from General Fund		62,710.00		FY 2022 Omega Bay TIRZ collection
General Fund	01-8026-00-00	Transfer Out to Fund 26 TIRZ Omega B.	62,710.00			FY 2022 Omega Bay TIRZ collection
TIRZ-Omega Bay	26-2401-00-00	Fund Balance			62,710.00	
General Fund	01-2401-00-00	Fund Balance			-62,710.00	
PID Section 1	17-4040-00-00	Professional service	100,000.00			Developer payment
PID Section 2	21-4040-00-00	Professional service	100,000.00			Developer payment
PID Section 3	22-4040-00-00	Professional service	100,000.00			Developer payment
PID Section 4	23-4040-00-00	Professional service	100,000.00			Developer payment
PID Section 5	25-4040-00-00	Professional service	100,000.00			Developer payment
PID Section 1	17-2401-00-00	Fund balalnce			-100,000.00	
PID Section 2	21-2401-00-00	Fund balalnce			-100,000.00	
PID Section 3	22-2401-00-00	Fund balalnce			-100,000.00	
PID Section 4	23-2401-00-00	Fund balalnce			-100,000.00	
PID Section 5	25-2401-00-00	Fund balalnce			-100,000.00	
CDBG Grant	39-3016-00-00	Mitigation Harvey grant proceeds		3,146,211.00		Grant project
CDBG Grant	39-7114-24-00	Capital project	3,146,211.00			Grant project
2016 CO	47-7001-06-00	Fire Station project	146,137.00			Final payment settlement
2016 CO	47-2401-00-00	Fund balance			-146,137.00	
Sanitation	63-6024-14-00	Residential	165,000.00			September sanitation payment
Sanitation	63-6028-14-00	Commercial	13,000.00			September sanitation payment
Sanitation	63-6031-14-00	Container collection	72,000.00			September sanitation payment
Sanitation	63-2401-00-00	Fund balance			-250,000.00	
Capital projects	65-7021-05-00	Police facility professional services	50,764.00			Architech/engineering serv for police station
Capital projects	65-7001-12-01	Boat Ramp engineering	81,117.00			Texas Parks and Wildlife grant project
Capital projects	65-7040-13-00	PEG capital	43,379.00			Computers and cameras
Capital projects	65-2401-00-00	Fund balance			-175,260.00	
Disaster Fund	70-2010-01-03	COVID supplies	1,065.00			COVID supplies
Disaster Fund	70-2010-05-03	COVID supplies	48.00			COVID supplies
Disaster Fund	70-2010-06-03	COVID supplies	239.00			COVID supplies
Disaster Fund	70-2010-12-07	Storm Nicholas	41,400.00			Debris removal due to storm Nicholas Oct 2021
Disaster Fund	70-2010-12-07	Storm Nicholas	17,956.00			Emergency debris removal at dump site
Disaster Fund	70-3020-24-02	Harvey damages	37,500.00			Duplex lift station pump #8 rehab
Disaster Fund	70-8001-99-00	Transfer out ARPA	2,149,943.01			to General Fund
Disaster Fund	70-8002-99-00	Transfer out ARPA	2,145,702.43			to Utility Fund
Disaster Fund	70-2401-00-00	Fund balance			-98,208.00	
Disaster Fund	20-3700-00-00	ARPA proceeds		4,295,645.44		
PEG	88-7040-13-00	PEG expense	440.00			Software
PEG	88-2401-00-00	Fund balance			-440.00	
General Fund	01-4042-99-00	Legal services	150,000.00			Legal services
General Fund	01-5020-99-00	Utilities	100,000.00			Electricity
General Fund	01-2401-00-00	Fund Balance			-250,000.00	

ORDINANCE NO. O-2023 -00__

**A ORDINANCE OF THE CITY COUNCIL OF LA MARQUE, TEXAS ISSUING A
CONDITIONAL USE PERMIT FOR HUNT ENERGY NETWORK BATTERY STORAGE
FACILITY, (GALVESTON COUNTY PROPERTY ID# 363493)**

WHEREAS, The Owner of Block 12 of the William K. Wilson League, Abstract No 208, Section 12 (Galveston County Property ID # 363493) (the “Property”) submitted an application for a Conditional Use Permit for the Property to allow for a battery storage facility.

WHEREAS, the City Council has determined that the establishment, maintenance or operation of this conditional use will not be materially detrimental to, or endanger, the public health, safety, morals, or general welfare;

WHEREAS, the City Council has also determined that the uses, values and enjoyment of other property in the neighborhood, for the purpose already permitted, shall be in no foreseeable manner substantially impaired or diminished by the establishment, maintenance, or operation of the conditional use;

WHEREAS, the City Council has also determined that the establishment of the conditional use will not significantly impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district;

WHEREAS, the City Council has also determined That the uses, values, and enjoyment of other property in the neighborhood, for the purpose already permitted, shall be in no foreseeable manner substantially impaired or diminished by the establishment, maintenance, or operation of the conditional use; and

WHEREAS, the City Council has also determined that adequate utilities, access roads, drainage and other necessary site improvements have been or are being provided;

WHEREAS, the City Council has also determined that adequate measures have been or will be taken to provide ingress or egress, so designed as to minimize traffic congestion in the public streets; and

WHEREAS, the City Council has also determined that the conditional use shall conform to all applicable yard area regulations of the district in which it is located.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LA MARQUE, TEXAS THAT:

Section 1. That the facts and matters set forth in the preamble of this Ordinance are found to be true and correct.

Section 2. That the City of La Marque, Texas will issue a Conditional Use Permit in accordance with Section 71-6 of the City Code for the construction of a single-family residential dwelling.

Section 3. As provided by Section 71-3 of the City Code, any person who shall violate any of the provisions of this Ordinance or the Conditional Use Permit issued hereunder or who shall erect or alter any building, or who shall commence to erect or alter any building in violation of any detailed statement of plan submitted or approved hereunder, shall for each violation or noncompliance be deemed guilty of a misdemeanor, and upon conviction, shall be fined as provided in Section 1-7 of the City Code. The owner of that building or premises or part thereof where anything in violation of this chapter shall be placed or shall exist, and any architect, builder contractor, agent, or corporation employed in connection therewith who may have assisted in the commission of any such violation shall be subject to the penalties herein provided.

Section 4. In the event any clause, phrase, provision sentence, or part of this Ordinance or the application of the same to any person or circumstance for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it is the intention of the City Council that the invalidity or unconstitutionality of the one or more parts shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision other than the part declared to be invalid or unconstitutional; and the City Council of the City of La Marque, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, whether there be one or more parts.

PASSED AND APPROVED this ____ day of _____, 2023.

PASSED, APPROVED, AND ADOPTED this ____ day of _____, 2023.

Keith Bell
Mayor

ATTEST:

Kierra Nance, TRMC
City Clerk

Additional BESS Sites:

Broadreach Power - BESS Locations/ Cities in Texas:

- League City, (Additionally, League City currently has 5 additional BESS projects under active construction or in the permitting process.)
- Texas City,
- Dickinson,
- Victoria,
- Odessa

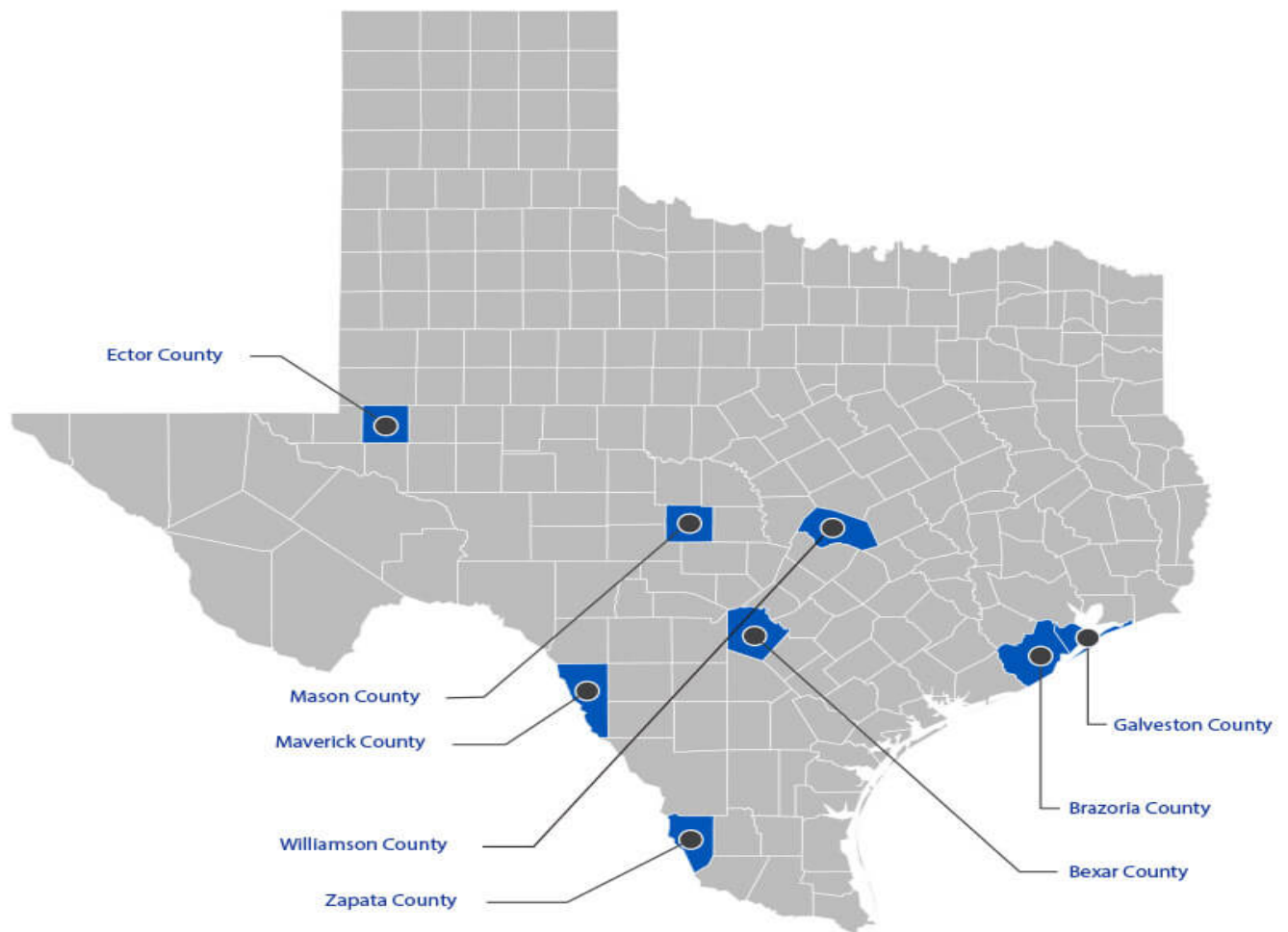
Key Capture Energy - BESS Locations/ Cities in Texas:

- Austin,
- Round Rock,
- Pecos

Hunt Energy Network - BESS Locations/ Cities in Texas:

- Corpus Christi,
- Irving,
- Farmersville,
- Del Rio,
- McAllen,
- Pecos,
- Junction,
- Mineral Wells

Additionally, League City currently has 5 additional BESS projects under active construction or in the permitting process.



Texas Projects

Broad Reach Power operates 17 Battery Energy Storage resources across Texas, providing energy reliability services to the Electric Reliability Council of Texas (ERCOT), electric cooperatives, retail electric providers, and municipal utilities. This portfolio in operation represents nearly \$200 million investment.

The company is presently actively developing, designing and building an additional 800 MW of transmission-level battery projects in ERCOT territory.

In addition, Broad Reach Power leads the ERCOT interconnection queue for large battery projects with 6,000 MW on the boards. These projects represent an estimated \$3 billion in investment potential, with projects being constructed as early as 2022.



Bat Cave Energy Storage

Mason County, TX – Mason County

Capacity: 100-MW / 100-MWH

Status: In Operation

Commercial Operation Date: 2021



North Fork Energy Storage

Williamson County, TX – Williamson County

Capacity: 100-MW / 100-MWH

Status: In Operation

Commercial Operation Date: 2021



BRP Alvin BESS

Alvin, TX – Brazoria County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2020



BRP Angleton BESS

Angleton, TX – Brazoria County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2020



BRP Brazoria BESS

Brazoria, TX – Brazoria County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2020



BRP Dickinson BESS

Dickinson, TX – Galveston County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2021



BRP Loop 463 BESS

Victoria TX-Victoria County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2021



BRP Heights BESS

Texas City, TX – Galveston County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2020



BRP Lopeno BESS

TX – Zapata County

Status: In Operation

Commercial Operation Date: 2021



BRP Magnolia BESS

League City, TX – Galveston County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2020



BRP Odessa Southwest BESS

Odessa, TX – Ector

Capacity: 9.95-MW /9.95-MWH

Status: In Operation

Commercial Operation Date: 2020



BRP Pueblo I BESS

Eagle Pass TX – Maverick County

Status: In Operation

Commercial Operation Date: 2021



BRP Pueblo II BESS

Eagle Pass TX – Maverick County

Status: In Operation

Commercial Operation Date: 2021



BRP Ranchtown BESS

Helotes TX – Bexar County

Status: In Operation

Commercial Operation Date: 2021



BRP Sweeny BESS

Sweeny TX – Brazoria County

Status: In Operation

Commercial Operation Date: 2021



BRP Zapata I BESS

TX – Zapata county

Status: In Operation

Commercial Operation Date: 2021



BRP Zapata II BESS

TX – Zapata county

Status: In Operation

Commercial Operation Date: 2021



GALVESTON COUNTY, TEXAS

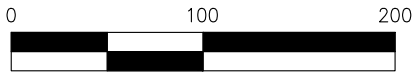
LINE TABLE		
LINE #	BEARING	DISTANCE
L1	N46° 13' 43"E	152.50'
L2	S16° 25' 10"E	223.65'
L3	S86° 56' 42"W	121.15'
L4	N24° 23' 28"W	126.80'

P.O.B.
5/8" IRON ROD W/CAP STAMPED "SAM" FOUND
NAD 83 N: 13712843.70
NAD 83 E: 3228817.31
NAD 83 LAT: 29.39596342
NAD 83 LONG: -095.04110378

EXP-DRAINAGE DITCH #2
ABSTRACT 208, PAGE 7
PART OF LOT 19
WATERMANS SUBDIVISION
F.C. NO. 009-63-0217

JAMES R. PACE SURVEY,
ABSTRACT NO. 161

GRAPHIC SCALE



1 INCH = 100 FT.

LEGEND

	PROPERTY LINE
	BOUNDARY LINE
	ADJOINER LINE
	FOUND IRON ROD
	CAPPED IRON ROD SET
	POWER POLE
	OVERHEAD ELEC. LINE
	FENCE LINE
P.O.B.	POINT OF BEGINNING
O.P.R.G.C.T.	OFFICIAL PUBLIC RECORDS OF GALVESTON COUNTY, TEXAS

FM 1764

ELECTRIC TOWER

GRAVEL

TEXAS NEW MEXICO POWER CO
ABSTRACT 208, PAGE 7
PART OF LOT 19
WATERMANS SUBDIVISION
F.C. NO. 010-35-0532

WILLIAM K. WILSON SURVEY,
ABSTRACT NO. 208
SECTION 12, BLOCK 12

HIGH POINT SELF STORAGE
CALLED 10.3342 ACRES
LOT 1, BLOCK 1
DOCUMENT NO. 2019058650
O.P.R.G.C.T.

5/8" IRON ROD FOUND
NAD 83 N: 13712405.39
NAD 83 E: 3229109.41
NAD 83 LAT: 29.39473148
NAD 83 LONG: -095.04023352

BOUNDARY SURVEY OF A 0.512 ACRE TRACT
SITUATED IN
WILLIAM K. WILSON SURVEY, ABSTRACT NO. 208,
GALVESTON COUNTY, TEXAS

LANDPOINT

4100 INTERNATIONAL PLAZA, SUITE 240
FORT WORTH, TX 76109
FIRM NO. 10193814
PHONE: (318) 226-0100

SHEET 1 OF 2

FIELD BY: RC

DRAWN BY: ARB

CHECKED BY: AK

JOB NO. 22-2124

X:\2022\22-2124\Working\Plats and Field Notes\Plats\M&B PLAT\22-2124_MAINLAND BESS SITE SURVEY_M&B Plat.dwg

X:\2022\22-2124\Working\Plats and Field Notes\Plats\M&B PLAT\22-2124_MAINLAND BESS SITE SURVEY_M&B Plat.dwg

METES AND BOUNDS DESCRIPTION OF A 0.512 ACRE SITE

Being a 0.512 acre proposed site, situated in the William K. Wilson Survey, Abstract no. 208, Section 12, Block 12, Galveston County, Texas, and being a portion of a tract of land conveyed to Texas New Mexico Power Co, Recorded in Abstract 208, Page 7, Part of Lot 19 of Watermans Subdivision, F.C. No. 010-35-0532, being more particularly described by metes and bounds as follows:

BEGINNING at a 5/8 inch iron rod with cap stamped "SAM" found for the Northwest corner of said tract [N: 13712843.70, E: 3228817.31] and in the South right-of-way line of FM 1764;

THENCE N 46°13'43" E with the North boundary line of said tract, a distance of 152.50 feet for the Northeast corner of said site;

THENCE S 16°25'10" E, a distance of 223.65 feet for the Southeast corner of said site, from which a 5/8 inch iron rod found for the Southeast corner of said tract bears S 19°49'59" E, a distance of 350.04 feet;

THENCE S 86°56'42" W, a distance of 121.15 feet to a point in the West line of said tract, for the Southwest corner of said site;

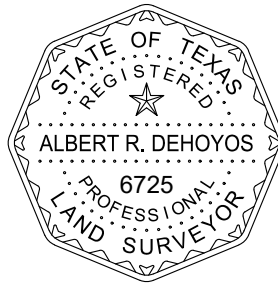
THENCE N 24°23'28" W, with said West line, a distance of 126.80 feet, returning to the **POINT OF BEGINNING**, and containing **0.512 acres** of land more or less.

I, Albert R. DeHoyos, certify that this plat was prepared under my direct supervision from a survey made on the ground on November 10, 2022, that this plat correctly represents the facts found at the time of said survey.



Albert R. DeHoyos
STATE OF TEXAS R.P.L.S. NO. 6725

12/08/22



BOUNDARY SURVEY OF A 0.512 ACRE TRACT
SITUATED IN
WILLIAM K. WILSON SURVEY, ABSTRACT NO. 208,
GALVESTON COUNTY, TEXAS

NOTES:

1. PROPERTY LINES HAVE BEEN ESTABLISHED BASED UPON FOUND MONUMENTS, MEASUREMENTS, AND EVIDENCE OBTAINED IN THE FIELD, ALONG WITH RECORDS AS PROVIDED BY THE CLIENT.
2. ABSTRACT LINES AND INFORMATION SHOWN ARE BASED ON AVAILABLE RECORDS, INCLUDING GENERAL LAND OFFICE (GLO) MAPS.
3. BASIS OF BEARINGS IS GRID NORTH, NAD '83, TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE.
4. ELEVATIONS ARE BASED ON GPS OBSERVATION, NAVD' 88 DATUM.
5. THIS PLAT PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR ABSTRACT OF TITLE; THERE MAY BE ADDITIONAL EASEMENTS THAT ARE NOT SHOWN HEREON.
6. SURVEY BASED UPON CONTROLLING DATA AS SHOWN OR AS FURTHER NOTED ON THIS PLAT.



4100 INTERNATIONAL PLAZA, SUITE 240
FORT WORTH, TX 76109
FIRM NO. 10193814
PHONE: (318) 226-0100

SHEET 2 OF 2



Preliminary Training for City of La Marque Fire Department

This training program is provided to aid in the education of battery storage facilities, as well as a guide to ensure adequate safety measures are taken by first responders in case of an emergency. HEN Infrastructure's Emergency Response Fire Training Program was developed to provide remote and on-site training to ensure the City of La Marque Fire Department and Command Staff can perform their duties safely and knowledgeably. Below is a preliminary high-level breakout of the main topics covered during the remote and on-site training, as well as a tentative schedule for when these training courses are to be administered. This training program will be developed with the aid of the Fire Department throughout the permitting process to make certain that it meets the standards and expectations of the City.

Remote/Online Training:

- Remote training course to be conducted by HEN Infrastructure for City of La Marque Fire Department and staff.
- Walkthrough site layout and operation of the battery facility.
- Review technical documentation on site specific safety equipment.
- General understandings and education on the hazards of LFP Batteries.
- Review of site specific UL9540A Test Results.
- **Additional remote training sessions can/will be provided per City's request if necessary.**

On-Site Training:

- 1 day training course for each of the 3 shifts of the La Marque Fire Department.
- Provide overview of site specific safety components.
- Provide a site walkthrough with Fire Department on the location of all emergency related components.

Schedule:

- Remote/ Online Training can be scheduled as early as 30 days after the receipt of all approved permits (est. September 28th, 2023).
- On-Site Training can be scheduled as early as 1 week after mechanical construction is completed (est. December 11th, 2023)
- Annual Training will be scheduled 1 calendar year from the completion of the on-site training of year 1. HEN Infrastructure will coordinate schedule with the Fire Department as the 1 year deadline approaches.

Additions/ Clarifications:

- **All dates listed above are contingent upon HEN Infrastructure obtaining receipt of approval for all permits by the end of August 2023.



Release Date: May 3, 2023

**Seasonal Assessment of Resource Adequacy for the ERCOT Region (SARA)
Summer 2023**

SUMMARY

Assuming that the ERCOT Region experiences typical summer grid conditions, ERCOT anticipates that there will be sufficient installed generating capacity available to serve the system-wide forecasted peak load for the upcoming summer season, June - September 2023.

The base summer peak load is 82,739 MW. This load amount is based on average weather conditions at the time of the summer peaks for years 2007 through 2021, and does not incorporate ERCOT's summer 2023 weather outlook. Weather forecast information, including the 2023 summer weather outlook, is available at:

<https://www.ercot.com/gridmktinfo/dashboards/weatherforecast/>

The peak load also incorporates load adjustments to account for incremental solar rooftop system additions as well as the interconnection of Large Loads (such as crypto-mining facilities) to Transmission Service Provider networks and individual generating units. The background tab includes a detailed description of the methodology used for accounting for these Large Loads.

Over 97,000 MW of summer-rated resource capacity is expected to be available for the summer peak load. This includes 688 MW of planned thermal resources and 372 MW of planned solar resources forecasted to be available by July 2023. The total resource amount also includes 3,544 MW of installed battery storage capacity, with 447 MW of the installed total assumed to be available for dispatch prior to the highest summer net load hours. (Net load is total load minus wind and solar generation.) This capacity estimate serves as a proxy for the amount expected during a tight reserve hour for the upcoming summer and is an interim availability assumption to be used until a formal capacity contribution method is adopted for future SARA reports.

Also noteworthy is a 568 MW coal unit that changed its operations from year-round to summer only. The total amount of capacity associated with units operating only during the summer now stands at 704 MW, which is the highest amount since summer 2016.

ERCOT and thermal generation owners are closely monitoring the potential impacts of the U.S. Environmental Protection Agency's March 15th approval of its "Good Neighbor Plan" for reducing cross-state emissions of ozone-forming nitrogen oxides (NOx). Several generation owners in the ERCOT region indicated the potential that certain generators may face operational constraints in complying with the Program's provisions as soon as July 2023. Texas, Louisiana and other parties filed a motion with the Fifth Circuit court to stay the EPA's regulatory action due to potential reliability impacts. On May 1, 2023, the Court granted the motion to stay the EPA action.

The summer SARA includes a typical thermal generating unit outage assumption of 5,034 MW. This outage assumption is based on historical outage data for the last three summer seasons (2020, 2021, 2022).

The summer SARA includes two Risk Scenario tabs: Base & Moderate Risk Scenarios, and Extreme Risk Scenarios. The most severe Risk Scenario assumes a high peak load, extreme unplanned thermal plant outages based on historic observations, and extreme low wind power production.

Seasonal Assessment of Resource Adequacy for the ERCOT Region
Summer 2023
Release Date: May 3, 2023

Installed and Summer Capacity Ratings, MW

Resources, MW	Installed Capacity Rating 1/	Expected Capacity for Summer Peak Demand 2/	
Thermal Resources, Installed Summer-rated Capacity	73,239	65,091	Based on current Seasonal Maximum Sustainable Limits reported through the unit registration process
Hydroelectric, Peak Average Capacity Contribution	563	478	Based on 84% of installed capacity for hydro resources (Summer season) per ERCOT Nodal Protocols Section 3.2.6.2.2
Switchable Capacity Total	3,840	3,490	Installed capacity of units that can interconnect with other Regions and are available to ERCOT
Less Switchable Capacity Unavailable to ERCOT	(572)	(542)	Based on survey responses of Switchable Resource owners
Available Mothballed Capacity	713	704	Based on seasonal Mothball units plus Probability of Return responses of Mothball Resource owners
Capacity from Private Use Networks	9,575	2,869	Average grid injection during the top 20 Summer peak load hours over the last three years, plus the forecasted net change in generation capacity available to the ERCOT grid pursuant to Nodal Protocols Section 10.3.2.4.
Coastal Wind, Peak Average Capacity Contribution	5,436	3,258	Based on 60% of installed capacity for coastal wind resources (Summer season) per ERCOT Nodal Protocols Section 3.2.6.2.2
Panhandle Wind, Peak Average Capacity Contribution	4,410	1,322	Based on 30% of installed capacity for panhandle wind resources (Summer season) per ERCOT Nodal Protocols Section 3.2.6.2.2
Other Wind, Peak Average Capacity Contribution	27,900	5,847	Based on 21% of installed capacity for other wind resources (Summer season) per ERCOT Nodal Protocols Section 3.2.6.2.2
Solar Utility-Scale, Peak Average Capacity Contribution	15,659	12,264	Based on 79% of rated capacity for solar resources (Summer season) per Nodal Protocols Section 3.2.6.2.2
Storage, Peak Average Capacity Contribution	3,287	415	Based on the amount of battery storage capability assumed to be available for dispatch prior to the highest summer net load hours. (Net load is total load minus wind and solar generation, and represents the demand that must be met with other available resources.) This is an interim availability assumption for use until a formal capacity contribution method is adopted for future reports
RMR Capacity to be under Contract	-	-	
Capacity Pending Retirement	-	-	Announced retired capacity that is undergoing ERCOT grid reliability reviews pursuant to Nodal Protocols Section 3.14.1.2
Non-Synchronous Ties, Capacity Contribution	1,220	850	Based on net imports during summer 2019 Energy Emergency Alert (EEA) intervals
Planned Thermal Resources with Signed IA, Air Permits and Adequate Water Supplies	720	688	Based on in-service dates provided by developers
Planned Coastal Wind with Signed IA, Peak Average Capacity Contribution	-	-	Based on in-service dates provided by developers and 60% Summer capacity contribution for coastal wind resources
Planned Panhandle Wind with Signed IA, Peak Average Capacity Contribution	-	-	Based on in-service dates provided by developers and 30% Summer capacity contribution for panhandle wind resources
Planned Other Wind with Signed IA, Peak Average Capacity Contribution	-	-	Based on in-service dates provided by developers and 21% Summer capacity contribution for other wind resources
Planned Solar Utility-Scale, Peak Average Capacity Contribution	471	372	Based on in-service dates provided by developers and 79% Summer capacity contribution for solar resources
Planned Storage, Peak Average Capacity Contribution	257	32	Based on the amount of battery storage capability assumed to be available for dispatch prior to the highest summer net load hours. This is an interim availability assumption for use until a formal capacity contribution method is adopted for future reports

[a] Total Resources, MW 146,719 97,138

1/ Installed capacity ratings are based on the maximum power that a generating unit can produce during normal sustained operating conditions as specified by the equipment manufacturer.

Seasonal Assessment of Resource Adequacy for the ERCOT Region
Summer 2023
Release Date: May 3, 2023

Base & Moderate Reserve Capacity Risk Scenarios, MW

	Forecasted Peak Load / Typical Unplanned Outages / Typical Wind and Solar	High Peak Load / Typical Unplanned Outages / Typical Wind and Solar	Forecasted Peak Load / High Unplanned Outages / Typical Wind and Solar	Forecasted Peak Load / Typical Unplanned Outages / Low Wind and Solar
Scenario Adjustments				
[a] Peak Load Forecast (Baseline)	82,739	82,739	82,739	82,739
[b] Rooftop PV Forecast Reduction, MW	(432)	(432)	(432)	(432)
[c] Large Flexible Load Adjustment, MW	1,105	1,105	1,105	1,105
[d] Adjusted Peak Load Forecast, [a+b+c]	83,412	83,412	83,412	83,412
[e] Total Resources (from Forecast Capacity tab)	97,138	97,138	97,138	97,138
Uses of Reserve Capacity				
High Peak Load Adjustment	-	3,389	-	-
Typical Planned Outages, Thermal	59	59	59	59
Typical Unplanned Outages, Thermal	4,975	4,975	4,975	4,975
High Unplanned Outage Adjustment, Thermal	-	-	3,389	-
Low Wind Output Reduction to 2,894 MW	-	-	-	7,533
Low Solar Output Reduction to 9,263 MW	-	-	-	3,373
[f] Total Uses of Reserve Capacity	5,034	8,423	8,423	15,940

Capacity Available For Operating Reserves

[g] Capacity Available for Operating Reserves, Normal Operating Conditions (Scenarios tab e-d-f), MW Less than 2,300 MW indicates risk of EEA1	8,692	5,303	5,303	(2,215)
[h] Pre-EEA Resources available for ERCOT deployment (Emergency Response Service, distribution voltage reduction, LFL curtailment)	-	-	-	2,760
[i] EEA Resources available for ERCOT deployment	-	-	-	1,817
[j] Capacity Available for Operating Reserves, Emergency Conditions (g+h+i), MW Less than 1,000 MW indicates risk of EEA3 Load Shed	8,692	5,303	5,303	2,362

Seasonal Assessment of Resource Adequacy for the ERCOT Region
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Extreme Reserve Capacity Risk Scenarios, MW
(One or a combination of extreme risk assumptions resulting in low probability, high impact outcomes)

	Extreme Peak Load / Typical Unplanned Outages / Typical Wind and Solar	Extreme Peak Load / Extreme Unplanned Outages / Typical Wind and Solar	High Peak Load / Extreme Unplanned Outages / Extreme Low Wind
Scenario Adjustments			
[a] Peak Load Forecast (Baseline)	82,739	82,739	82,739
[b] Rooftop PV Forecast Reduction, MW	(432)	(432)	(432)
[c] Large Flexible Load Adjustment, MW	1,105	1,105	1,105
[d] Adjusted Peak Load Forecast, [a+b+c]	83,412	83,412	83,412
[e] Total Resources (from Forecast Capacity tab)	97,138	97,138	97,138
Uses of Reserve Capacity			
High/Extreme Peak Load Adjustment	5,114	5,114	3,389
Typical Planned Outages, Thermal	59	59	59
Typical Unplanned Outages, Thermal	4,975	4,975	4,975
Extreme Unplanned Outage Adjustment, Thermal	-	6,173	6,173
Extreme Low Wind Output Adjustment to 61 MW	-	-	10,366
[f] Total Uses of Reserve Capacity	10,148	16,321	24,962

Capacity Available For Operating Reserves

[g] Capacity Available for Operating Reserves, Normal Operating Conditions (Scenarios tab e-d-f), MW Less than 2,300 MW indicates risk of EEA1	3,578	(2,595)	(11,236)
[h] Pre-EEA Resources available for ERCOT deployment (Emergency Response Service, distribution voltage reduction, LFL curtailment)	-	2,760	2,760
[i] EEA Resources available for ERCOT deployment	-	1,817	1,817
[j] Capacity Available for Operating Reserves, Emergency Conditions (g+h+i), MW Less than 1,000 MW indicates risk of EEA3 Load Shed	3,578	1,982	(6,659)

Unit Megawatt Capacities - Summer

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
Operational Resources (Thermal)									
4 COMANCHE PEAK U1		CPSES_UNIT1	SOMERVELL	NUCLEAR	NORTH	1990	1,269.0	1,205.0	
5 COMANCHE PEAK U2		CPSES_UNIT2	SOMERVELL	NUCLEAR	NORTH	1993	1,269.0	1,195.0	
6 SOUTH TEXAS U1		STP_STP_G1	MATAGORDA	NUCLEAR	COASTAL	1988	1,365.0	1,293.2	
7 SOUTH TEXAS U2		STP_STP_G2	MATAGORDA	NUCLEAR	COASTAL	1989	1,365.0	1,280.0	
8 COLETO CREEK		COLETO_COLETOG1	GOLIAD	COAL	SOUTH	1980	650.0	655.0	
9 FAYETTE POWER U1		FPPYD1_FPP_G1	FAYETTE	COAL	SOUTH	1979	615.0	604.0	
10 FAYETTE POWER U2		FPPYD1_FPP_G2	FAYETTE	COAL	SOUTH	1980	615.0	599.0	
11 FAYETTE POWER U2		FPPYD2_FPP_G3	FAYETTE	COAL	SOUTH	1988	460.0	437.0	
12 J K SPRUCE U1		CALAVERS_JKS1	BEXAR	COAL	SOUTH	1992	555.0	560.0	
13 J K SPRUCE U2		CALAVERS_JKS2	BEXAR	COAL	SOUTH	2010	922.0	785.0	
14 LIMESTONE U1		LEG_LEG_G1	LIMESTONE	COAL	NORTH	1985	893.0	824.0	
15 LIMESTONE U2		LEG_LEG_G2	LIMESTONE	COAL	NORTH	1986	956.8	836.0	
16 MARTIN LAKE U1		MLSES_UNIT1	RUSK	COAL	NORTH	1977	893.0	800.0	
17 MARTIN LAKE U2		MLSES_UNIT2	RUSK	COAL	NORTH	1978	893.0	805.0	
18 MARTIN LAKE U3		MLSES_UNIT3	RUSK	COAL	NORTH	1979	893.0	805.0	
19 OAK GROVE SES U1		OGSES_UNIT1A	ROBERTSON	COAL	NORTH	2010	916.8	855.0	
20 OAK GROVE SES U2		OGSES_UNIT2	ROBERTSON	COAL	NORTH	2011	916.8	855.0	
21 SAN MIGUEL U1		SANMIGL_G1	ATASCOSA	COAL	SOUTH	1982	430.0	391.0	
22 SANDY CREEK U1		SCES_UNIT1	MCLENNAN	COAL	NORTH	2013	1,008.0	932.6	
23 TWIN OAKS U1		TNP_ONE_TNP_O_1	ROBERTSON	COAL	NORTH	1990	174.6	155.0	
24 TWIN OAKS U2		TNP_ONE_TNP_O_2	ROBERTSON	COAL	NORTH	1991	174.6	155.0	
25 W A PARISH U5		WAP_WAP_G5	FORT BEND	COAL	HOUSTON	1977	734.1	664.0	
26 W A PARISH U6		WAP_WAP_G6	FORT BEND	COAL	HOUSTON	1978	734.1	663.0	
27 W A PARISH U7		WAP_WAP_G7	FORT BEND	COAL	HOUSTON	1980	614.6	577.0	
28 W A PARISH U8		WAP_WAP_G8	FORT BEND	COAL	HOUSTON	1982	654.0	610.0	
29 ARTHUR VON ROSENBERG 1 CTG 1		BRAUNIG_AVR1_CT1	BEXAR	GAS-CC	SOUTH	2000	195.0	164.0	
30 ARTHUR VON ROSENBERG 1 CTG 2		BRAUNIG_AVR1_CT2	BEXAR	GAS-CC	SOUTH	2000	195.0	164.0	
31 ARTHUR VON ROSENBERG 1 STG		BRAUNIG_AVR1_ST	BEXAR	GAS-CC	SOUTH	2000	222.0	190.0	
32 ATKINS CTG 7		ATKINS_ATKINSG7	BRAZOS	GAS-GT	NORTH	1973	21.0	18.0	
33 BARNEY M DAVIS CTG 3		B_DAVIS_B_DAVIG3	NUECES	GAS-CC	COASTAL	2010	189.6	157.0	
34 BARNEY M DAVIS CTG 4		B_DAVIS_B_DAVIG4	NUECES	GAS-CC	COASTAL	2010	189.6	157.0	
35 BARNEY M DAVIS STG 1		B_DAVIS_B_DAVIG1	NUECES	GAS-ST	COASTAL	1974	352.8	292.0	
36 BARNEY M DAVIS STG 2		B_DAVIS_B_DAVIG2	NUECES	GAS-CC	COASTAL	1976	351.0	319.0	
37 BASTROP ENERGY CENTER CTG 1		BASTEN_GTG1100	BASTROP	GAS-CC	SOUTH	2002	188.0	171.0	
38 BASTROP ENERGY CENTER CTG 2		BASTEN_GTG2100	BASTROP	GAS-CC	SOUTH	2002	188.0	171.0	
39 BASTROP ENERGY CENTER STG		BASTEN_ST0100	BASTROP	GAS-CC	SOUTH	2002	242.0	233.0	
40 BEACHWOOD POWER STATION U1		BCH_UNIT1	BRAZORIA	GAS-GT	COASTAL	2022	60.5	44.6	
41 BEACHWOOD POWER STATION U2		BCH_UNIT2	BRAZORIA	GAS-GT	COASTAL	2022	60.5	44.6	
42 BEACHWOOD POWER STATION U3		BCH_UNIT3	BRAZORIA	GAS-GT	COASTAL	2022	60.5	44.6	
43 BEACHWOOD POWER STATION U4		BCH_UNIT4	BRAZORIA	GAS-GT	COASTAL	2022	60.5	44.6	
44 BEACHWOOD POWER STATION U5		BCH_UNIT5	BRAZORIA	GAS-GT	COASTAL	2022	60.5	44.6	
45 BEACHWOOD POWER STATION U6		BCH_UNIT6	BRAZORIA	GAS-GT	COASTAL	2022	60.5	44.6	
46 BOSQUE ENERGY CENTER CTG 1		BOSQUESW_BSQSU_1	BOSQUE	GAS-CC	NORTH	2000	188.7	143.0	
47 BOSQUE ENERGY CENTER CTG 2		BOSQUESW_BSQSU_2	BOSQUE	GAS-CC	NORTH	2000	188.7	143.0	
48 BOSQUE ENERGY CENTER CTG 3		BOSQUESW_BSQSU_3	BOSQUE	GAS-CC	NORTH	2001	188.7	145.0	
49 BOSQUE ENERGY CENTER STG 4		BOSQUESW_BSQSU_4	BOSQUE	GAS-CC	NORTH	2001	95.0	79.5	
50 BOSQUE ENERGY CENTER STG 5		BOSQUESW_BSQSU_5	BOSQUE	GAS-CC	NORTH	2009	254.2	213.5	
51 BRAZOS VALLEY CTG 1		BVE_UNIT1	FORT BEND	GAS-CC	HOUSTON	2003	198.9	149.7	
52 BRAZOS VALLEY CTG 2		BVE_UNIT2	FORT BEND	GAS-CC	HOUSTON	2003	198.9	149.7	
53 BRAZOS VALLEY STG 3		BVE_UNIT3	FORT BEND	GAS-CC	HOUSTON	2003	275.6	257.9	
54 CALENERGY-FALCON SEABOARD CTG 1		FLCNS_UNIT1	HOWARD	GAS-CC	WEST	1987	75.0	75.0	
55 CALENERGY-FALCON SEABOARD CTG 2		FLCNS_UNIT2	HOWARD	GAS-CC	WEST	1987	75.0	75.0	
56 CALHOUN (PORT COMFORT) CTG 1		CALHOUN_UNIT1	CALHOUN	GAS-GT	COASTAL	2017	60.5	44.0	
57 CALHOUN (PORT COMFORT) CTG 2		CALHOUN_UNIT2	CALHOUN	GAS-GT	COASTAL	2017	60.5	44.0	
58 CASTLEMAN CHAMON CTG 1		CHAMON_CTG_0101	HARRIS	GAS-GT	HOUSTON	2017	60.5	44.0	
59 CASTLEMAN CHAMON CTG 2		CHAMON_CTG_0301	HARRIS	GAS-GT	HOUSTON	2017	60.5	44.0	
60 CEDAR BAYOU 4 CTG 1		CBY4_CT41	CHAMBERS	GAS-CC	HOUSTON	2009	205.0	163.0	
61 CEDAR BAYOU 4 CTG 2		CBY4_CT42	CHAMBERS	GAS-CC	HOUSTON	2009	205.0	163.0	
62 CEDAR BAYOU 4 STG		CBY4_ST04	CHAMBERS	GAS-CC	HOUSTON	2009	205.0	178.0	
63 CEDAR BAYOU STG 1		CBY_CBY_G1	CHAMBERS	GAS-ST	HOUSTON	1970	765.0	745.0	
64 CEDAR BAYOU STG 2		CBY_CBY_G2	CHAMBERS	GAS-ST	HOUSTON	1972	765.0	749.0	
65 COLORADO BEND ENERGY CENTER CTG 1		CBEC_GT1	WHARTON	GAS-CC	SOUTH	2007	86.5	81.5	
66 COLORADO BEND ENERGY CENTER CTG 2		CBEC_GT2	WHARTON	GAS-CC	SOUTH	2007	86.5	74.8	
67 COLORADO BEND ENERGY CENTER CTG 3		CBEC_GT3	WHARTON	GAS-CC	SOUTH	2008	86.5	82.1	
68 COLORADO BEND ENERGY CENTER CTG 4		CBEC_GT4	WHARTON	GAS-CC	SOUTH	2008	86.5	75.9	
69 COLORADO BEND ENERGY CENTER STG 1		CBEC_STG1	WHARTON	GAS-CC	SOUTH	2007	105.0	103.2	
70 COLORADO BEND ENERGY CENTER STG 2		CBEC_STG2	WHARTON	GAS-CC	SOUTH	2008	108.8	107.6	
71 COLORADO BEND II CTG 7		CBECII_CT7	WHARTON	GAS-CC	SOUTH	2017	360.9	329.3	
72 COLORADO BEND II CTG 8		CBECII_CT8	WHARTON	GAS-CC	SOUTH	2017	360.9	335.0	
73 COLORADO BEND II STG 9		CBECII_STG9	WHARTON	GAS-CC	SOUTH	2017	508.5	478.4	
74 CVC CHANNELVIEW CTG 1		CVC_CVC_G1	HARRIS	GAS-CC	HOUSTON	2002	192.1	169.0	
75 CVC CHANNELVIEW CTG 2		CVC_CVC_G2	HARRIS	GAS-CC	HOUSTON	2002	192.1	165.0	
76 CVC CHANNELVIEW CTG 3		CVC_CVC_G3	HARRIS	GAS-CC	HOUSTON	2002	192.1	165.0	
77 CVC CHANNELVIEW STG 5		CVC_CVC_G5	HARRIS	GAS-CC	HOUSTON	2002	150.0	144.0	
78 DANSBY CTG 2		DANSBY_DANSBYG2	BRAZOS	GAS-GT	NORTH	2004	48.0	45.0	
79 DANSBY CTG 3		DANSBY_DANSBYG3	BRAZOS	GAS-GT	NORTH	2010	50.0	47.0	
80 DANSBY STG 1		DANSBY_DANSBYG1	BRAZOS	GAS-ST	NORTH	1978	120.0	107.0	
81 DECKER CREEK CTG 1		DECKER_DPGT_1	TRAVIS	GAS-GT	SOUTH	1989	56.7	48.0	
82 DECKER CREEK CTG 2		DECKER_DPGT_2	TRAVIS	GAS-GT	SOUTH	1989	56.7	48.0	
83 DECKER CREEK CTG 3		DECKER_DPGT_3	TRAVIS	GAS-GT	SOUTH	1989	56.7	48.0	
84 DECKER CREEK CTG 4		DECKER_DPGT_4	TRAVIS	GAS-GT	SOUTH	1989	56.7	48.0	
85 DECORDOVA CTG 1		DCSES_CT10	HOOD	GAS-GT	NORTH	1990	89.5	69.0	
86 DECORDOVA CTG 2		DCSES_CT20	HOOD	GAS-GT	NORTH	1990	89.5	69.0	
87 DECORDOVA CTG 3		DCSES_CT30	HOOD	GAS-GT	NORTH	1990	89.5	68.0	
88 DECORDOVA CTG 4		DCSES_CT40	HOOD	GAS-GT	NORTH	1990	89.5	69.0	
89 DEER PARK ENERGY CENTER CTG 1		DDPEC_GT1	HARRIS	GAS-CC	HOUSTON	2002	190.4	172.0	
90 DEER PARK ENERGY CENTER CTG 2		DDPEC_GT2	HARRIS	GAS-CC	HOUSTON	2002	190.4	182.0	
91 DEER PARK ENERGY CENTER CTG 3		DDPEC_GT3	HARRIS	GAS-CC	HOUSTON	2002	190.4	172.0	
92 DEER PARK ENERGY CENTER CTG 4		DDPEC_GT4	HARRIS	GAS-CC	HOUSTON	2002	190.4	182.0	
93 DEER PARK ENERGY CENTER CTG 6		DDPEC_GT6	HARRIS	GAS-CC	HOUSTON	2014	199.0	156.0	
94 DEER PARK ENERGY CENTER STG 1		DDPEC_ST1	HARRIS	GAS-CC	HOUSTON	2002	274.5	287.0	
95 DENTON ENERGY CENTER IC A		DEC_AGR_A	DENTON	GAS-IC	NORTH	2018	56.5	56.5	
96 DENTON ENERGY CENTER IC B		DEC_AGR_B	DENTON	GAS-IC	NORTH	2018	56.5	56.5	
97 DENTON ENERGY CENTER IC C		DEC_AGR_C	DENTON	GAS-IC	NORTH	2018	56.5	56.5	
98 DENTON ENERGY CENTER IC D		DEC_AGR_D	DENTON	GAS-IC	NORTH	2018	56.5	56.5	
99 ECTOR COUNTY ENERGY CTG 1		ECEC_G1	ECTOR	GAS-GT	WEST	2015	179.4	147.0	
100 ECTOR COUNTY ENERGY CTG 2		ECEC_G2	ECTOR	GAS-GT	WEST	2015	179.4	147.0	
101 ELK STATION IC 3		AEEC_ELK_3	HALE	GAS-IC	PANHANDLE	2016	202.0	190.0	
102 ENNIS POWER STATION CTG 2		ETCCS_CT1	ELLIS	GAS-CC	NORTH	2002	260.0	204.0	
103 ENNIS POWER STATION STG 1		ETCCS_UNIT1	ELLIS	GAS-CC	NORTH	2002	140.0	115.0	
104 EXTEX LAPORTE GEN STN CTG 1		AZ_AZ_G1	HARRIS	GAS-GT	HOUSTON	2009	38.3	36.0	
105 EXTEX LAPORTE GEN STN CTG 2		AZ_AZ_G2	HARRIS	GAS-GT	HOUSTON	2009	38.3	36.0	
106 EXTEX LAPORTE GEN STN CTG 3		AZ_AZ_G3	HARRIS	GAS-GT	HOUSTON	2009	38.3	36.0	
107 EXTEX LAPORTE GEN STN CTG 4		AZ_AZ_G4	HARRIS	GAS-GT	HOUSTON	2009	38.3	36.0	
108 FERGUSON REPLACEMENT CTG 1		FERGCC_FERG GT1	LLANO	GAS-CC	SOUTH	2014	185.3	169.0	
109 FERGUSON REPLACEMENT CTG 2		FERGCC_FERG GT2	LLANO	GAS-CC	SOUTH	2014	185.3	169.0	
110 FERGUSON REPLACEMENT STG 1		FERGCC_FERG ST1	LLANO	GAS-CC	SOUTH	2014	204.0	182.0	
111 FORNEY ENERGY CENTER CTG 11		FRNYPP_GT11	KAUFMAN	GAS-CC	NORTH	2003	196.7	165.0	
112 FORNEY ENERGY CENTER CTG 12		FRNYPP_GT12	KAUFMAN	GAS-CC	NORTH	2003	196.7	157.0	
113 FORNEY ENERGY CENTER CTG 13		FRNYPP_GT13	KAUFMAN	GAS-CC	NORTH	2003	196.7	157.0	
114 FORNEY ENERGY CENTER CTG 21		FRNYPP_GT21	KAUFMAN	GAS-CC	NORTH	2003	196.7	165.0	
115 FORNEY ENERGY CENTER CTG 22		FRNYPP_GT22	KAUFMAN	GAS-CC	NORTH	2003	196.7	157.0	
116 FORNEY ENERGY CENTER CTG 23		FRNYPP_GT23	KAUFMAN	GAS-CC	NORTH	2003	196.7	157.0	
117 FORNEY ENERGY CENTER STG 10		FRNYPP_ST10	KAUFMAN	GAS-CC	NORTH	2003	422.0	406.0	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
118 FORNEY ENERGY CENTER STG 20		FRNYPP_ST20	KAUFMAN	GAS-CC	NORTH	2003	422.0	406.0	
119 FREESTONE ENERGY CENTER CTG 1		FREC_GT1	FREESTONE	GAS-CC	NORTH	2002	179.4	147.0	
120 FREESTONE ENERGY CENTER CTG 2		FREC_GT2	FREESTONE	GAS-CC	NORTH	2002	179.4	147.0	
121 FREESTONE ENERGY CENTER CTG 4		FREC_GT4	FREESTONE	GAS-CC	NORTH	2002	179.4	145.0	
122 FREESTONE ENERGY CENTER CTG 5		FREC_GT5	FREESTONE	GAS-CC	NORTH	2002	179.4	145.0	
123 FREESTONE ENERGY CENTER STG 3		FREC_ST3	FREESTONE	GAS-CC	NORTH	2002	190.7	169.0	
124 FREESTONE ENERGY CENTER STG 6		FREC_ST6	FREESTONE	GAS-CC	NORTH	2002	190.7	168.0	
125 FRIENDSWOOD G CTG 1 (FORMERLY TEJAS POWER GENERATION)		FEGC_UNIT1	HARRIS	GAS-GT	HOUSTON	2018	129.0	119.0	
126 GRAHAM STG 1		GRSES_UNIT1	YOUNG	GAS-ST	WEST	1960	225.0	239.0	
127 GRAHAM STG 2		GRSES_UNIT2	YOUNG	GAS-ST	WEST	1969	387.0	390.0	
128 GREENS BAYOU CTG 73		GBY_GBYGT73	HARRIS	GAS-GT	HOUSTON	1976	72.0	56.0	
129 GREENS BAYOU CTG 74		GBY_GBYGT74	HARRIS	GAS-GT	HOUSTON	1976	72.0	56.0	
130 GREENS BAYOU CTG 81		GBY_GBYGT81	HARRIS	GAS-GT	HOUSTON	1976	72.0	56.0	
131 GREENS BAYOU CTG 82		GBY_GBYGT82	HARRIS	GAS-GT	HOUSTON	1976	72.0	50.0	
132 GREENS BAYOU CTG 83		GBY_GBYGT83	HARRIS	GAS-GT	HOUSTON	1976	72.0	56.0	
133 GREENS BAYOU CTG 84		GBY_GBYGT84	HARRIS	GAS-GT	HOUSTON	1976	72.0	56.0	
134 GREENVILLE IC ENGINE PLANT IC 1		STEAM_ENGINE_1	HUNT	GAS-IC	NORTH	2010	8.4	8.2	
135 GREENVILLE IC ENGINE PLANT IC 2		STEAM_ENGINE_2	HUNT	GAS-IC	NORTH	2010	8.4	8.2	
136 GREENVILLE IC ENGINE PLANT IC 3		STEAM_ENGINE_3	HUNT	GAS-IC	NORTH	2010	8.4	8.2	
137 GREGORY POWER PARTNERS GT1		LGE_LGE_GT1	SAN PATRICIO	GAS-CC	COASTAL	2000	185.0	145.0	
138 GREGORY POWER PARTNERS GT2		LGE_LGE_GT2	SAN PATRICIO	GAS-CC	COASTAL	2000	185.0	145.0	
139 GREGORY POWER PARTNERS STG		LGE_LGE_STG	SAN PATRICIO	GAS-CC	COASTAL	2000	100.0	75.0	
140 GUADALUPE ENERGY CENTER CTG 1		GUADG_GAS1	GUADALUPE	GAS-CC	SOUTH	2000	181.0	143.0	
141 GUADALUPE ENERGY CENTER CTG 2		GUADG_GAS2	GUADALUPE	GAS-CC	SOUTH	2000	181.0	143.0	
142 GUADALUPE ENERGY CENTER CTG 3		GUADG_GAS3	GUADALUPE	GAS-CC	SOUTH	2000	181.0	141.0	
143 GUADALUPE ENERGY CENTER CTG 4		GUADG_GAS4	GUADALUPE	GAS-CC	SOUTH	2000	181.0	141.0	
144 GUADALUPE ENERGY CENTER STG 5		GUADG_STM5	GUADALUPE	GAS-CC	SOUTH	2000	204.0	198.0	
145 GUADALUPE ENERGY CENTER STG 6		GUADG_STM6	GUADALUPE	GAS-CC	SOUTH	2000	204.0	198.0	
146 HANDLEY STG 3		HLSES_UNIT3	TARRANT	GAS-ST	NORTH	1963	395.0	375.0	
147 HANDLEY STG 4		HLSES_UNIT4	TARRANT	GAS-ST	NORTH	1976	435.0	435.0	
148 HANDLEY STG 5		HLSES_UNIT5	TARRANT	GAS-ST	NORTH	1977	435.0	435.0	
149 HAYS ENERGY FACILITY CSG 1		HAYSEN_HAYSENG1	HAYS	GAS-CC	SOUTH	2002	242.0	210.0	
150 HAYS ENERGY FACILITY CSG 2	21INR0527	HAYSEN_HAYSENG2	HAYS	GAS-CC	SOUTH	2002	242.0	211.0	
151 HAYS ENERGY FACILITY CSG 3	21INR0527	HAYSEN_HAYSENG3	HAYS	GAS-CC	SOUTH	2002	252.0	210.0	
152 HAYS ENERGY FACILITY CSG 4		HAYSEN_HAYSENG4	HAYS	GAS-CC	SOUTH	2002	252.0	213.0	
153 HIDALGO ENERGY CENTER CTG 1		DUKE_DUKE_GT1	HIDALGO	GAS-CC	SOUTH	2000	176.6	149.0	
154 HIDALGO ENERGY CENTER CTG 2		DUKE_DUKE_GT2	HIDALGO	GAS-CC	SOUTH	2000	176.6	149.0	
155 HIDALGO ENERGY CENTER STG 1		DUKE_DUKE_ST1	HIDALGO	GAS-CC	SOUTH	2000	198.1	168.0	
156 JACK COUNTY GEN FACILITY CTG 1		JACKCNTY_CT1	JACK	GAS-CC	NORTH	2006	198.9	150.0	
157 JACK COUNTY GEN FACILITY CTG 2		JACKCNTY_CT2	JACK	GAS-CC	NORTH	2006	198.9	150.0	
158 JACK COUNTY GEN FACILITY CTG 3		JCKCNTY2_CT3	JACK	GAS-CC	NORTH	2011	198.9	158.0	
159 JACK COUNTY GEN FACILITY CTG 4		JCKCNTY2_CT4	JACK	GAS-CC	NORTH	2011	198.9	158.0	
160 JACK COUNTY GEN FACILITY STG 1		JACKCNTY_STG	JACK	GAS-CC	NORTH	2006	320.6	289.0	
161 JACK COUNTY GEN FACILITY STG 2		JCKCNTY2_ST2	JACK	GAS-CC	NORTH	2011	320.6	295.0	
162 JOHNSON COUNTY GEN FACILITY CTG 1		TEN_CT1	JOHNSON	GAS-CC	NORTH	1997	185.0	163.0	
163 JOHNSON COUNTY GEN FACILITY STG 1		TEN_STG	JOHNSON	GAS-CC	NORTH	1997	107.0	106.0	
164 LAKE HUBBARD STG 1		LHSES_UNIT1	DALLAS	GAS-ST	NORTH	1970	397.0	392.0	
165 LAKE HUBBARD STG 2		LHSES_UNIT2A	DALLAS	GAS-ST	NORTH	1973	531.0	523.0	
166 LAMAR ENERGY CENTER CTG 11		LPCCS_CT11	LAMAR	GAS-CC	NORTH	2000	186.0	153.0	
167 LAMAR ENERGY CENTER CTG 12		LPCCS_CT12	LAMAR	GAS-CC	NORTH	2000	186.0	145.0	
168 LAMAR ENERGY CENTER CTG 21		LPCCS_CT21	LAMAR	GAS-CC	NORTH	2000	186.0	145.0	
169 LAMAR ENERGY CENTER CTG 22		LPCCS_CT22	LAMAR	GAS-CC	NORTH	2000	186.0	153.0	
170 LAMAR ENERGY CENTER STG 1	23INR0486	LPCCS_UNIT1	LAMAR	GAS-CC	NORTH	2000	216.0	204.0	
171 LAMAR ENERGY CENTER STG 2		LPCCS_UNIT2	LAMAR	GAS-CC	NORTH	2000	216.0	204.0	
172 LAREDO CTG 4		LARDVFTN_G4	WEBB	GAS-GT	SOUTH	2008	98.5	90.1	
173 LAREDO CTG 5		LARDVFTN_G5	WEBB	GAS-GT	SOUTH	2008	98.5	87.3	
174 LEON CREEK PEAKER CTG 1		LEON_CRK_LCPCT1	BEXAR	GAS-GT	SOUTH	2004	48.0	46.0	
175 LEON CREEK PEAKER CTG 2		LEON_CRK_LCPCT2	BEXAR	GAS-GT	SOUTH	2004	48.0	46.0	
176 LEON CREEK PEAKER CTG 3		LEON_CRK_LCPCT3	BEXAR	GAS-GT	SOUTH	2004	48.0	46.0	
177 LEON CREEK PEAKER CTG 4		LEON_CRK_LCPCT4	BEXAR	GAS-GT	SOUTH	2004	48.0	46.0	
178 LIGNIN (CHAMON 2) U1		LIG_UNIT1	HARRIS	GAS-GT	HOUSTON	2022	60.5	41.5	
179 LIGNIN (CHAMON 2) U2		LIG_UNIT2	HARRIS	GAS-GT	HOUSTON	2022	60.5	41.5	
180 LOST PINES POWER CTG 1		LOSTPL_LOSTPGT1	BASTROP	GAS-CC	SOUTH	2001	202.5	170.0	
181 LOST PINES POWER CTG 2		LOSTPL_LOSTPGT2	BASTROP	GAS-CC	SOUTH	2001	202.5	170.0	
182 LOST PINES POWER STG 1		LOSTPL_LOSTPST1	BASTROP	GAS-CC	SOUTH	2001	204.0	188.0	
183 MAGIC VALLEY STATION CTG 1		NEDIN_NEDIN_G1	HIDALGO	GAS-CC	SOUTH	2001	266.9	215.0	
184 MAGIC VALLEY STATION CTG 2		NEDIN_NEDIN_G2	HIDALGO	GAS-CC	SOUTH	2001	266.9	215.0	
185 MAGIC VALLEY STATION STG 3		NEDIN_NEDIN_G3	HIDALGO	GAS-CC	SOUTH	2001	258.4	236.0	
186 MIDLOTHIAN ENERGY FACILITY CTG 1	23INR0489	MDANP_CT1	ELLIS	GAS-CC	NORTH	2001	247.0	229.0	
187 MIDLOTHIAN ENERGY FACILITY CTG 2	21INR0534	MDANP_CT2	ELLIS	GAS-CC	NORTH	2001	247.0	227.0	
188 MIDLOTHIAN ENERGY FACILITY CTG 3	22INR0543	MDANP_CT3	ELLIS	GAS-CC	NORTH	2001	247.0	227.0	
189 MIDLOTHIAN ENERGY FACILITY CTG 4	22INR0523	MDANP_CT4	ELLIS	GAS-CC	NORTH	2001	247.0	227.0	
190 MIDLOTHIAN ENERGY FACILITY CTG 5		MDANP_CT5	ELLIS	GAS-CC	NORTH	2002	260.0	241.0	
191 MIDLOTHIAN ENERGY FACILITY CTG 6		MDANP_CT6	ELLIS	GAS-CC	NORTH	2002	260.0	243.0	
192 MORGAN CREEK CTG 1		MGSES_CT1	MITCHELL	GAS-GT	WEST	1988	89.4	66.0	
193 MORGAN CREEK CTG 2		MGSES_CT2	MITCHELL	GAS-GT	WEST	1988	89.4	65.0	
194 MORGAN CREEK CTG 3		MGSES_CT3	MITCHELL	GAS-GT	WEST	1988	89.4	65.0	
195 MORGAN CREEK CTG 4		MGSES_CT4	MITCHELL	GAS-GT	WEST	1988	89.4	67.0	
196 MORGAN CREEK CTG 5		MGSES_CT5	MITCHELL	GAS-GT	WEST	1988	89.4	67.0	
197 MORGAN CREEK CTG 6		MGSES_CT6	MITCHELL	GAS-GT	WEST	1988	89.4	67.0	
198 MOUNTAIN CREEK STG 6		MCSES_UNIT6	DALLAS	GAS-ST	NORTH	1956	122.0	122.0	
199 MOUNTAIN CREEK STG 7		MCSES_UNIT7	DALLAS	GAS-ST	NORTH	1958	118.0	118.0	
200 NUECES BAY REPOWER CTG 8		NUECES_B_NUECESG8	NUECES	GAS-CC	COASTAL	2010	189.6	157.0	
201 NUECES BAY REPOWER CTG 9		NUECES_B_NUECESG9	NUECES	GAS-CC	COASTAL	2010	189.6	157.0	
202 NUECES BAY REPOWER STG 7		NUECES_B_NUECESG7	NUECES	GAS-CC	COASTAL	1972	351.0	319.0	
203 O W SOMMERS STG 1		CALAVERS_OWS1	BEXAR	GAS-ST	SOUTH	1972	445.0	420.0	
204 O W SOMMERS STG 2		CALAVERS_OWS2	BEXAR	GAS-ST	SOUTH	1974	435.0	410.0	
205 ODESSA-ECTOR POWER CTG 11		OECCS_CT11	ECTOR	GAS-CC	WEST	2001	176.0	166.7	
206 ODESSA-ECTOR POWER CTG 12		OECCS_CT12	ECTOR	GAS-CC	WEST	2001	176.0	158.2	
207 ODESSA-ECTOR POWER CTG 21		OECCS_CT21	ECTOR	GAS-CC	WEST	2001	176.0	166.7	
208 ODESSA-ECTOR POWER CTG 22		OECCS_CT22	ECTOR	GAS-CC	WEST	2001	176.0	158.2	
209 ODESSA-ECTOR POWER STG 1		OECCS_UNIT1	ECTOR	GAS-CC	WEST	2001	224.0	206.0	
210 ODESSA-ECTOR POWER STG 2		OECCS_UNIT2	ECTOR	GAS-CC	WEST	2001	224.0	206.0	
211 OLD BLOOMINGTON ROAD CTG 1 (VICTORIA PORT 2)		VICTPRT2_UNIT1	VICTORIA	GAS-GT	SOUTH	2022	60.5	44.0	
212 OLD BLOOMINGTON ROAD CTG 2 (VICTORIA PORT 2)		VICTPRT2_UNIT2	VICTORIA	GAS-GT	SOUTH	2022	60.5	44.0	
213 PANDA SHERMAN POWER CTG 1		PANDA_S_SHER1CT1	GRAYSON	GAS-CC	NORTH	2014	232.0	199.0	
214 PANDA SHERMAN POWER CTG 2		PANDA_S_SHER1CT2	GRAYSON	GAS-CC	NORTH	2014	232.0	199.0	
215 PANDA SHERMAN POWER STG 1		PANDA_S_SHER1ST1	GRAYSON	GAS-CC	NORTH	2014	353.1	287.0	
216 PANDA TEMPLE I POWER CTG 1	22INR0533	PANDA_T1_TMPL1CT1	BELL	GAS-CC	NORTH	2014	232.0	223.0	
217 PANDA TEMPLE I POWER CTG 2	22INR0533	PANDA_T1_TMPL1CT2	BELL	GAS-CC	NORTH	2014	232.0	220.0	
218 PANDA TEMPLE I POWER STG 1	22INR0533	PANDA_T1_TMPL1ST1	BELL	GAS-CC	NORTH	2014	353.1	326.0	
219 PANDA TEMPLE II POWER CTG 1	23INR0524	PANDA_T2_TMPL2CT1	BELL	GAS-CC	NORTH	2015	232.0	191.2	
220 PANDA TEMPLE II POWER CTG 2	23INR0524	PANDA_T2_TMPL2CT2	BELL	GAS-CC	NORTH	2015	232.0	191.2	
221 PANDA TEMPLE II POWER STG 1	23INR0524	PANDA_T2_TMPL2ST1	BELL	GAS-CC	NORTH	2015	353.1	334.7	
222 PARIS ENERGY CENTER CTG 1		TNSKA_GT1	LAMAR	GAS-CC	NORTH	1989	90.9	76.0	
223 PARIS ENERGY CENTER CTG 2		TNSKA_GT2	LAMAR	GAS-CC	NORTH	1989	90.9	76.0	
224 PARIS ENERGY CENTER STG 1		TNSKA_STG	LAMAR	GAS-CC	NORTH	1990	90.0	87.0	
225 PASADENA COGEN FACILITY CTG 2		PSG_PSG_GT2	HARRIS	GAS-CC	HOUSTON	2000	215.1	164.5	
226 PASADENA COGEN FACILITY CTG 3		PSG_PSG_GT3	HARRIS	GAS-CC	HOUSTON	2000	215.1	164.5	
227 PASADENA COGEN FACILITY STG 2		PSG_PSG_ST2	HARRIS	GAS-CC	HOUSTON	2000	195.5	170.4	
228 PEARSALL ENGINE PLANT IC A		PEARSAL2_AGR_A	FRIO	GAS-IC	SOUTH	2012	50.6	50.6	
229 PEARSALL ENGINE PLANT IC B		PEARSAL2_AGR_B	FRIO	GAS-IC	SOUTH	2012	50.6	50.6	
230 PEARSALL ENGINE PLANT IC C		PEARSAL2_AGR_C	FRIO	GAS-IC	SOUTH	2012	50.6	50.6	
231 PEARSALL ENGINE PLANT IC D		PEARSAL2_AGR_D	FRIO	GAS-IC	SOUTH	2012	50.6	50.6	
232 PERMIAN BASIN CTG 1		PB2SES_CT1	WARD	GAS-GT	WEST	1988	89.4	63.0	
233 PERMIAN BASIN CTG 2		PB2SES_CT2	WARD	GAS-GT	WEST	1988	89.4	64.0	
234 PERMIAN BASIN CTG 3		PB2SES_CT3	WARD	GAS-GT	WEST	1988	89.4	64.0	

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235 PERMIAN BASIN CTG 4		PB2SES_CT4	WARD	GAS-GT	WEST	1990	89.4	64.0	
236 PERMIAN BASIN CTG 5		PB2SES_CT5	WARD	GAS-GT	WEST	1990	89.4	65.0	
237 PROENERGY SOUTH 1 (PES1) CTG 1		PRO_UNIT1	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
238 PROENERGY SOUTH 1 (PES1) CTG 2		PRO_UNIT2	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
239 PROENERGY SOUTH 1 (PES1) CTG 3		PRO_UNIT3	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
240 PROENERGY SOUTH 1 (PES1) CTG 4		PRO_UNIT4	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
241 PROENERGY SOUTH 1 (PES1) CTG 5		PRO_UNIT5	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
242 PROENERGY SOUTH 1 (PES1) CTG 6		PRO_UNIT6	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
243 PROENERGY SOUTH 2 (PES2) CTG 7		PRO_UNIT7	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
244 PROENERGY SOUTH 2 (PES2) CTG 8		PRO_UNIT8	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
245 PHR PEAKERS (BAC) CTG 1		BAC_CTG1	GALVESTON	GAS-GT	HOUSTON	2018	65.0	59.0	
246 PHR PEAKERS (BAC) CTG 2		BAC_CTG2	GALVESTON	GAS-GT	HOUSTON	2018	65.0	61.0	
247 PHR PEAKERS (BAC) CTG 3		BAC_CTG3	GALVESTON	GAS-GT	HOUSTON	2018	65.0	49.0	
248 PHR PEAKERS (BAC) CTG 4		BAC_CTG4	GALVESTON	GAS-GT	HOUSTON	2018	65.0	54.0	
249 PHR PEAKERS (BAC) CTG 5		BAC_CTG5	GALVESTON	GAS-GT	HOUSTON	2018	65.0	54.0	
250 PHR PEAKERS (BAC) CTG 6		BAC_CTG6	GALVESTON	GAS-GT	HOUSTON	2018	65.0	52.0	
251 POWERLANE PLANT STG 2		STEAM_STEAM_2	HUNT	GAS-ST	NORTH	1967	25.0	21.5	
252 POWERLANE PLANT STG 3		STEAM_STEAM_3	HUNT	GAS-ST	NORTH	1978	43.2	36.0	
253 QUAIL RUN ENERGY CTG 1		QALSW_GT1	ECTOR	GAS-CC	WEST	2007	90.6	74.0	
254 QUAIL RUN ENERGY CTG 2		QALSW_GT2	ECTOR	GAS-CC	WEST	2007	90.6	74.0	
255 QUAIL RUN ENERGY CTG 3		QALSW_GT3	ECTOR	GAS-CC	WEST	2008	90.6	72.0	
256 QUAIL RUN ENERGY CTG 4		QALSW_GT4	ECTOR	GAS-CC	WEST	2008	90.6	72.0	
257 QUAIL RUN ENERGY STG 1		QALSW_STG1	ECTOR	GAS-CC	WEST	2007	98.1	98.0	
258 QUAIL RUN ENERGY STG 2		QALSW_STG2	ECTOR	GAS-CC	WEST	2008	98.1	98.0	
259 R W MILLER CTG 4		MIL_MILLERG4	PALO PINTO	GAS-GT	NORTH	1994	115.3	100.0	
260 R W MILLER CTG 5		MIL_MILLERG5	PALO PINTO	GAS-GT	NORTH	1994	115.3	100.0	
261 R W MILLER STG 1		MIL_MILLERG1	PALO PINTO	GAS-ST	NORTH	1968	75.0	70.0	
262 R W MILLER STG 2		MIL_MILLERG2	PALO PINTO	GAS-ST	NORTH	1972	113.6	118.0	
263 R W MILLER STG 3		MIL_MILLERG3	PALO PINTO	GAS-ST	NORTH	1975	216.0	208.0	
264 RAY OLINGER CTG 4		OLINGR_OLING_4	COLLIN	GAS-GT	NORTH	2001	88.4	80.0	
265 RAY OLINGER STG 2		OLINGR_OLING_2	COLLIN	GAS-ST	NORTH	1971	113.6	107.0	
266 RAY OLINGER STG 3		OLINGR_OLING_3	COLLIN	GAS-ST	NORTH	1975	156.6	146.0	
267 RABBS POWER STATION U1		RAB_UNIT1	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
268 RABBS POWER STATION U2		RAB_UNIT2	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
269 RABBS POWER STATION U3		RAB_UNIT3	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
270 RABBS POWER STATION U4		RAB_UNIT4	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
271 RABBS POWER STATION U5		RAB_UNIT5	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
272 RABBS POWER STATION U6		RAB_UNIT6	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
273 RABBS POWER STATION U7		RAB_UNIT7	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
274 RABBS POWER STATION U8		RAB_UNIT8	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
275 REDGATE IC A		REDGATE_AGR_A	HIDALGO	GAS-IC	SOUTH	2016	56.3	56.3	
276 REDGATE IC B		REDGATE_AGR_B	HIDALGO	GAS-IC	SOUTH	2016	56.3	56.3	
277 REDGATE IC C		REDGATE_AGR_C	HIDALGO	GAS-IC	SOUTH	2016	56.3	56.3	
278 REDGATE IC D		REDGATE_AGR_D	HIDALGO	GAS-IC	SOUTH	2016	56.3	56.3	
279 RIO NOGALES POWER CTG 1		RIONOG_CT1	GUADALUPE	GAS-CC	SOUTH	2002	188.7	165.5	
280 RIO NOGALES POWER CTG 2		RIONOG_CT2	GUADALUPE	GAS-CC	SOUTH	2002	188.7	158.0	
281 RIO NOGALES POWER CTG 3		RIONOG_CT3	GUADALUPE	GAS-CC	SOUTH	2002	188.7	158.0	
282 RIO NOGALES POWER STG 4		RIONOG_ST1	GUADALUPE	GAS-CC	SOUTH	2002	373.2	303.0	
283 SAM RAYBURN POWER CTG 7		RAYBURN_RAYBURG7	VICTORIA	GAS-CC	SOUTH	2003	60.5	50.0	
284 SAM RAYBURN POWER CTG 8		RAYBURN_RAYBURG8	VICTORIA	GAS-CC	SOUTH	2003	60.5	50.0	
285 SAM RAYBURN POWER CTG 9		RAYBURN_RAYBURG9	VICTORIA	GAS-CC	SOUTH	2003	60.5	50.0	
286 SAM RAYBURN POWER STG 10		RAYBURN_RAYBURG10	VICTORIA	GAS-CC	SOUTH	2003	42.0	40.0	
287 SAN JACINTO SES CTG 1		SJS_SJS_G1	HARRIS	GAS-GT	HOUSTON	1995	88.2	80.0	
288 SAN JACINTO SES CTG 2		SJS_SJS_G2	HARRIS	GAS-GT	HOUSTON	1995	88.2	80.0	
289 SANDHILL ENERGY CENTER CTG 1		SANDHSYD_SH1	TRAVIS	GAS-GT	SOUTH	2001	60.5	47.0	
290 SANDHILL ENERGY CENTER CTG 2		SANDHSYD_SH2	TRAVIS	GAS-GT	SOUTH	2001	60.5	47.0	
291 SANDHILL ENERGY CENTER CTG 3		SANDHSYD_SH3	TRAVIS	GAS-GT	SOUTH	2001	60.5	47.0	
292 SANDHILL ENERGY CENTER CTG 4		SANDHSYD_SH4	TRAVIS	GAS-GT	SOUTH	2001	60.5	47.0	
293 SANDHILL ENERGY CENTER CTG 5A		SANDHSYD_SH_5A	TRAVIS	GAS-CC	SOUTH	2004	198.9	142.0	
294 SANDHILL ENERGY CENTER CTG 6		SANDHSYD_SH6	TRAVIS	GAS-GT	SOUTH	2010	60.5	47.0	
295 SANDHILL ENERGY CENTER CTG 7		SANDHSYD_SH7	TRAVIS	GAS-GT	SOUTH	2010	60.5	47.0	
296 SANDHILL ENERGY CENTER STG 5C		SANDHSYD_SH_5C	TRAVIS	GAS-CC	SOUTH	2004	191.0	139.0	
297 SILAS RAY CTG 10		SILASRAY_SILAS_10	CAMERON	GAS-GT	COASTAL	2004	60.5	46.0	
298 SILAS RAY POWER CTG 9		SILASRAY_SILAS_9	CAMERON	GAS-CC	COASTAL	1996	50.0	38.0	
299 SILAS RAY POWER STG 6		SILASRAY_SILAS_6	CAMERON	GAS-CC	COASTAL	1962	25.0	20.0	
300 SIM GIDEON STG 1		GIDEON_GIDEONG1	BASTROP	GAS-ST	SOUTH	1965	136.0	130.0	
301 SIM GIDEON STG 2		GIDEON_GIDEONG2	BASTROP	GAS-ST	SOUTH	1968	136.0	135.0	
302 SIM GIDEON STG 3		GIDEON_GIDEONG3	BASTROP	GAS-ST	SOUTH	1972	351.0	336.0	
303 SKY GLOBAL POWER ONE IC A		SKY1_SKY1A	COLORADO	GAS-IC	SOUTH	2016	25.7	26.7	
304 SKY GLOBAL POWER ONE IC B		SKY1_SKY1B	COLORADO	GAS-IC	SOUTH	2016	25.7	26.7	
305 STRYKER CREEK STG 1		SCSES_UNIT1A	CHEROKEE	GAS-ST	NORTH	1958	177.0	167.0	
306 STRYKER CREEK STG 2		SCSES_UNIT2	CHEROKEE	GAS-ST	NORTH	1965	479.0	502.0	
307 T H WHARTON CTG 1		THW_THWGT_1	HARRIS	GAS-GT	HOUSTON	1967	16.3	14.0	
308 T H WHARTON POWER CTG 31		THW_THWGT31	HARRIS	GAS-CC	HOUSTON	1972	51.3	54.0	
309 T H WHARTON POWER CTG 32		THW_THWGT32	HARRIS	GAS-CC	HOUSTON	1972	51.3	54.0	
310 T H WHARTON POWER CTG 33		THW_THWGT33	HARRIS	GAS-CC	HOUSTON	1972	51.3	54.0	
311 T H WHARTON POWER CTG 34		THW_THWGT34	HARRIS	GAS-CC	HOUSTON	1972	51.3	54.0	
312 T H WHARTON POWER CTG 41		THW_THWGT41	HARRIS	GAS-CC	HOUSTON	1972	51.3	54.0	
313 T H WHARTON POWER CTG 42		THW_THWGT42	HARRIS	GAS-CC	HOUSTON	1972	51.3	54.0	
314 T H WHARTON POWER CTG 43		THW_THWGT43	HARRIS	GAS-CC	HOUSTON	1974	62.0	54.0	
315 T H WHARTON POWER CTG 44		THW_THWGT44	HARRIS	GAS-CC	HOUSTON	1974	62.0	54.0	
316 T H WHARTON POWER CTG 51		THW_THWGT51	HARRIS	GAS-GT	HOUSTON	1975	85.0	56.0	
317 T H WHARTON POWER CTG 52		THW_THWGT52	HARRIS	GAS-GT	HOUSTON	1975	85.0	56.0	
318 T H WHARTON POWER CTG 53		THW_THWGT53	HARRIS	GAS-GT	HOUSTON	1975	85.0	56.0	
319 T H WHARTON POWER CTG 54		THW_THWGT54	HARRIS	GAS-GT	HOUSTON	1975	85.0	56.0	
320 T H WHARTON POWER CTG 55		THW_THWGT55	HARRIS	GAS-GT	HOUSTON	1975	85.0	56.0	
321 T H WHARTON POWER CTG 56		THW_THWGT56	HARRIS	GAS-GT	HOUSTON	1975	85.0	56.0	
322 T H WHARTON POWER STG 3		THW_THWST_3	HARRIS	GAS-CC	HOUSTON	1974	113.1	110.0	
323 T H WHARTON POWER STG 4		THW_THWST_4	HARRIS	GAS-CC	HOUSTON	1974	113.1	110.0	
324 TEXAS CITY POWER CTG A		TXCTY_CTA	GALVESTON	GAS-CC	HOUSTON	2000	129.1	80.3	
325 TEXAS CITY POWER CTG B		TXCTY_CTB	GALVESTON	GAS-CC	HOUSTON	2000	129.1	80.3	
326 TEXAS CITY POWER CTG C		TXCTY_CTC	GALVESTON	GAS-CC	HOUSTON	2000	129.1	80.3	
327 TEXAS CITY POWER STG		TXCTY_ST	GALVESTON	GAS-CC	HOUSTON	2000	143.7	124.9	
328 TEXAS GULF SULPHUR CTG 1		TGS_GT01	WHARTON	GAS-GT	SOUTH	1985	94.0	67.5	
329 TRINIDAD STG 6		TRSES_UNIT6	HENDERSON	GAS-ST	NORTH	1965	239.0	235.0	
330 TOPAZ POWER PLANT U1		TOPAZ_UNIT1	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
331 TOPAZ POWER PLANT U2		TOPAZ_UNIT2	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
332 TOPAZ POWER PLANT U3		TOPAZ_UNIT3	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
333 TOPAZ POWER PLANT U4		TOPAZ_UNIT4	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
334 TOPAZ POWER PLANT U5		TOPAZ_UNIT5	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
335 TOPAZ POWER PLANT U6		TOPAZ_UNIT6	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
336 TOPAZ POWER PLANT U7		TOPAZ_UNIT7	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
337 TOPAZ POWER PLANT U8		TOPAZ_UNIT8	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
338 TOPAZ POWER PLANT U9		TOPAZ_UNIT9	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
339 TOPAZ POWER PLANT U10		TOPAZ_UNIT10	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
340 V H BRAUNIG CTG 5		BRAUNIG_VHB6CT5	BEXAR	GAS-GT	SOUTH	2009	64.5	48.0	
341 V H BRAUNIG CTG 6		BRAUNIG_VHB6CT6	BEXAR	GAS-GT	SOUTH	2009	64.5	48.0	
342 V H BRAUNIG CTG 7		BRAUNIG_VHB6CT7	BEXAR	GAS-GT	SOUTH	2009	64.5	48.0	
343 V H BRAUNIG CTG 8		BRAUNIG_VHB6CT8	BEXAR	GAS-GT	SOUTH	2009	64.5	47.0	
344 V H BRAUNIG STG 1		BRAUNIG_VHB1	BEXAR	GAS-ST	SOUTH	1966	225.0	217.0	
345 V H BRAUNIG STG 2		BRAUNIG_VHB2	BEXAR	GAS-ST	SOUTH	1968	240.0	230.0	
346 V H BRAUNIG STG 3		BRAUNIG_VHB3	BEXAR	GAS-ST	SOUTH	1970	420.0	412.0	
347 VICTORIA CITY (CITYVICT) CTG 1		CITYVICT_CTG01	VICTORIA	GAS-GT	SOUTH	2020	60.5	44.0	
348 VICTORIA CITY (CITYVICT) CTG 2		CITYVICT_CTG02	VICTORIA	GAS-GT	SOUTH	2020	60.5	44.0	
349 VICTORIA PORT (VICTPORT) CTG 1		VICTPORT_CTG01	VICTORIA	GAS-GT	SOUTH	2019	60.5	44.0	
350 VICTORIA PORT (VICTPORT) CTG 2		VICTPORT_CTG02	VICTORIA	GAS-GT	SOUTH	2019	60.5	44.0	
351 VICTORIA POWER CTG 6		VICTORIA_VICTORG6	VICTORIA	GAS-CC	SOUTH	2009	196.9	160.0	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
352 VICTORIA POWER STG 5		VICTORIA_VICTORG5	VICTORIA	GAS-CC	SOUTH	2009	180.2	125.0	
353 W A PARISH CTG 1		WAP_WAPGT_1	FORT BEND	GAS-GT	HOUSTON	1967	16.3	13.0	
354 W A PARISH STG 1		WAP_WAP_G1	FORT BEND	GAS-ST	HOUSTON	1958	187.9	169.0	
355 W A PARISH STG 2		WAP_WAP_G2	FORT BEND	GAS-ST	HOUSTON	1958	187.9	169.0	
356 W A PARISH STG 3		WAP_WAP_G3	FORT BEND	GAS-ST	HOUSTON	1961	299.2	240.0	
357 W A PARISH STG 4		WAP_WAP_G4	FORT BEND	GAS-ST	HOUSTON	1968	580.5	527.0	
358 WICHITA FALLS CTG 1		WFCOGEN_UNIT1	WICHITA	GAS-CC	WEST	1987	20.0	20.0	
359 WICHITA FALLS CTG 2		WFCOGEN_UNIT2	WICHITA	GAS-CC	WEST	1987	20.0	20.0	
360 WICHITA FALLS CTG 3		WFCOGEN_UNIT3	WICHITA	GAS-CC	WEST	1987	20.0	20.0	
361 WICHITA FALLS STG 4		WFCOGEN_UNIT4	WICHITA	GAS-CC	WEST	1987	20.0	17.0	
362 WINCHESTER POWER PARK CTG 1		WIPOPA_WPP_G1	FAYETTE	GAS-GT	SOUTH	2009	60.5	44.0	
363 WINCHESTER POWER PARK CTG 2		WIPOPA_WPP_G2	FAYETTE	GAS-GT	SOUTH	2009	60.5	44.0	
364 WINCHESTER POWER PARK CTG 3		WIPOPA_WPP_G3	FAYETTE	GAS-GT	SOUTH	2009	60.5	44.0	
365 WINCHESTER POWER PARK CTG 4		WIPOPA_WPP_G4	FAYETTE	GAS-GT	SOUTH	2009	60.5	44.0	
366 WISE-TRACTEBEL POWER CTG 1	20INR0286	WCPP_CT1	WISE	GAS-CC	NORTH	2004	275.0	241.4	
367 WISE-TRACTEBEL POWER CTG 2	20INR0286	WCPP_CT2	WISE	GAS-CC	NORTH	2004	275.0	241.4	
368 WISE-TRACTEBEL POWER STG 1	20INR0286	WCPP_ST1	WISE	GAS-CC	NORTH	2004	290.0	298.0	
369 WOLF HOLLOW POWER CTG 1		WHCCS_CT1	HOOD	GAS-CC	NORTH	2002	264.5	238.5	
370 WOLF HOLLOW POWER CTG 2		WHCCS_CT2	HOOD	GAS-CC	NORTH	2002	264.5	230.5	
371 WOLF HOLLOW POWER STG		WHCCS_STG	HOOD	GAS-CC	NORTH	2002	300.0	268.0	
372 WOLF HOLLOW 2 CTG 4		WHCCS2_CT4	HOOD	GAS-CC	NORTH	2017	360.0	327.8	
373 WOLF HOLLOW 2 CTG 5		WHCCS2_CT5	HOOD	GAS-CC	NORTH	2017	360.0	329.3	
374 WOLF HOLLOW 2 STG 6		WHCCS2_STG6	HOOD	GAS-CC	NORTH	2017	511.2	458.3	
375 NACOGDOCHES POWER		NACPW_UNIT1	NACOGDOCHES	BIOMASS	NORTH	2012	116.5	105.0	
376 BIOENERGY AUSTIN-WALZEM RD LFG		DG_WALZE_4UNITS	BEXAR	BIOMASS	SOUTH	2002	9.8	9.8	
377 BIOENERGY TEXAS-COVEL GARDENS LFG		DG_MEDIN_1UNIT	BEXAR	BIOMASS	SOUTH	2005	9.6	9.6	
378 FARMERS BRANCH LANDFILL GAS TO ENERGY		DG_HBR_2UNITS	DENTON	BIOMASS	NORTH	2011	3.2	3.2	
379 GRAND PRAIRIE LFG		DG_TRIRA_1UNIT	DALLAS	BIOMASS	NORTH	2015	4.0	4.0	
380 NELSON GARDENS LFG		DG_78252_4UNITS	BEXAR	BIOMASS	SOUTH	2013	4.2	4.2	
381 WM RENEWABLE-AUSTIN LFG		DG_SPRIN_4UNITS	TRAVIS	BIOMASS	SOUTH	2007	6.4	6.4	
382 WM RENEWABLE-BIOENERGY PARTNERS LFG		DG_BIOE_2UNITS	DENTON	BIOMASS	NORTH	1988	6.2	6.2	
383 WM RENEWABLE-DFW GAS RECOVERY LFG		DG_BIO2_4UNITS	DENTON	BIOMASS	NORTH	2009	6.4	6.4	
384 WM RENEWABLE-MESQUITE CREEK LFG		DG_FREIH_2UNITS	COMAL	BIOMASS	SOUTH	2011	3.2	3.2	
385 WM RENEWABLE-WESTSIDE LFG		DG_WSTHL_3UNITS	PARKER	BIOMASS	NORTH	2010	4.8	4.8	
386 Operational Capacity Total (Nuclear, Coal, Gas, Biomass)							72,744.8	64,709.9	
387									
388 Operational Resources - Synchronized but not Approved for Commercial Operations (Thermal)									
389 BRANDON (LP&L) (DGR)	21INR0201	BRANDON_UNIT1	LUBBOCK	GAS-GT	PANHANDLE	2021	25.0	20.0	
390 BROTMAN POWER STATION U3	23INR0095	BTM_UNIT3	BRAZORIA	GAS-GT	COASTAL	2023	60.5	44.6	
391 BROTMAN POWER STATION U4	23INR0095	BTM_UNIT4	BRAZORIA	GAS-GT	COASTAL	2023	60.5	44.6	
392 BROTMAN POWER STATION U5	23INR0095	BTM_UNIT5	BRAZORIA	GAS-GT	COASTAL	2023	60.5	44.6	
393 BROTMAN POWER STATION U6	23INR0095	BTM_UNIT6	BRAZORIA	GAS-GT	COASTAL	2023	60.5	44.6	
394 COLORADO BEND ENERGY CENTER CTG 11	21INR0512	CBEC_GT11	WHARTON	GAS-GT	HOUSTON	2023	41.7	39.0	
395 COLORADO BEND ENERGY CENTER CTG 12	21INR0512	CBEC_GT12	WHARTON	GAS-GT	HOUSTON	2023	41.7	39.0	
396 R MASSENGALE CTG 1 (LP&L)	21INR0202	MASSENGL_G6	LUBBOCK	GAS-CC	PANHANDLE	2021	20.0	18.0	
397 R MASSENGALE CTG 2 (LP&L)	21INR0202	MASSENGL_G7	LUBBOCK	GAS-CC	PANHANDLE	2021	20.0	18.0	
398 R MASSENGALE STG (LP&L)	21INR0202	MASSENGL_G8	LUBBOCK	GAS-CC	PANHANDLE	2021	58.9	38.0	
399 TY COOKE CTG 1 (LP&L)	21INR0506	TY_COOKE_GT2	LUBBOCK	GAS-GT	PANHANDLE	2021	18.7	14.0	
400 TY COOKE CTG 2 (LP&L)	21INR0506	TY_COOKE_GT3	LUBBOCK	GAS-GT	PANHANDLE	2021	26.6	17.0	
401 Operational Capacity - Synchronized but not Approved for Commercial Operations Total (Nuclear, Coal, Gas, Biomass)							494.5	381.4	
402									
403 Operational Capacity Thermal Unavailable due to Extended Outage or Derate		THERMAL_UNAVAIL					-	-	
404 Operational Capacity Thermal Total		THERMAL_OPERATIONAL					73,239.3	65,091.3	
405									
406 Operational Resources (Hydro)									
407 AMISTAD HYDRO 1		AMISTAD_AMISTAG1	VAL VERDE	HYDRO	WEST	1983	34.7	37.9	
408 AMISTAD HYDRO 2		AMISTAD_AMISTAG2	VAL VERDE	HYDRO	WEST	1983	34.7	37.9	
409 AUSTIN HYDRO 1		AUSTPL_AUSTING1	TRAVIS	HYDRO	SOUTH	1940	9.0	8.0	
410 AUSTIN HYDRO 2		AUSTPL_AUSTING2	TRAVIS	HYDRO	SOUTH	1940	9.0	9.0	
411 BUCHANAN HYDRO 1		BUCHAN_BUCHANG1	LLANO	HYDRO	SOUTH	1938	18.3	16.0	
412 BUCHANAN HYDRO 2		BUCHAN_BUCHANG2	LLANO	HYDRO	SOUTH	1938	18.3	16.0	
413 BUCHANAN HYDRO 3		BUCHAN_BUCHANG3	LLANO	HYDRO	SOUTH	1950	18.3	17.0	
414 DENISON DAM 1		DNDAM_DENISOG1	GRAYSON	HYDRO	NORTH	1944	50.8	49.5	
415 DENISON DAM 2		DNDAM_DENISOG2	GRAYSON	HYDRO	NORTH	1948	50.8	49.5	
416 EAGLE PASS HYDRO		EAGLE_HY_EAGLE_HY1	MAVERICK	HYDRO	SOUTH	2005	9.6	9.6	
417 FALCON HYDRO 1		FALCON_FALCONG1	STARR	HYDRO	SOUTH	1954	10.5	12.0	
418 FALCON HYDRO 2		FALCON_FALCONG2	STARR	HYDRO	SOUTH	1954	10.5	12.0	
419 FALCON HYDRO 3		FALCON_FALCONG3	STARR	HYDRO	SOUTH	1954	10.5	12.0	
420 GRANITE SHOALS HYDRO 1		WIRTZ_WIRTZ_G1	BURNET	HYDRO	SOUTH	1951	27.0	29.0	
421 GRANITE SHOALS HYDRO 2		WIRTZ_WIRTZ_G2	BURNET	HYDRO	SOUTH	1951	27.0	29.0	
422 GUADALUPE BLANCO RIVER AUTH-CANYON		CANYHY_CANYHYG1	COMAL	HYDRO	SOUTH	1989	6.0	6.0	
423 INKS HYDRO 1		INKSDA_INKS_G1	LLANO	HYDRO	SOUTH	1938	15.0	14.0	
424 MARBLE FALLS HYDRO 1		MARBFA_MARBFAG1	BURNET	HYDRO	SOUTH	1951	19.8	21.0	
425 MARBLE FALLS HYDRO 2		MARBFA_MARBFAG2	BURNET	HYDRO	SOUTH	1951	19.8	20.0	
426 MARSHALL FORD HYDRO 1		MARSFO_MARSFOG1	TRAVIS	HYDRO	SOUTH	1941	36.0	36.0	
427 MARSHALL FORD HYDRO 2		MARSFO_MARSFOG2	TRAVIS	HYDRO	SOUTH	1941	36.0	36.0	
428 MARSHALL FORD HYDRO 3		MARSFO_MARSFOG3	TRAVIS	HYDRO	SOUTH	1941	36.0	36.0	
429 WHITNEY DAM HYDRO		WND_WHITNEY1	BOSQUE	HYDRO	NORTH	1953	21.0	22.0	
430 WHITNEY DAM HYDRO 2		WND_WHITNEY2	BOSQUE	HYDRO	NORTH	1953	21.0	22.0	
431 Operational Capacity Total (Hydro)							549.6	557.4	
432 Hydro Capacity Contribution (Top 20 Hours)		HYDRO_CAP_CONT					549.6	468.0	
433									
434 Operational Hydro Resources, Settlement Only Distributed Generators (SODGs)									
435 ARLINGTON OUTLET HYDROELECTRIC FACILITY		DG_OAKHL_1UNIT	TARRANT	HYDRO	NORTH	2014	1.4	1.4	
436 GUADALUPE BLANCO RIVER AUTH-LAKEWOOD TAP		DG_LKWDTP_2UNITS	GONZALES	HYDRO	SOUTH	1931	4.8	4.8	
437 GUADALUPE BLANCO RIVER AUTH-MCQUEENEY		DG_MCQUE_5UNITS	GUADALUPE	HYDRO	SOUTH	1928	7.7	7.7	
438 GUADALUPE BLANCO RIVER AUTH-SCHUMANSVILLE		DG_SCHUM_2UNITS	GUADALUPE	HYDRO	SOUTH	1928	3.6	3.6	
439 LEWISVILLE HYDRO-CITY OF GARLAND		DG_LWSVL_1UNIT	DENTON	HYDRO	NORTH	1991	2.2	2.2	
440 Operational Hydro Resources Total, Settlement Only Distributed Generators (SODGs)							19.7	19.7	
441 Hydro SODG Capacity Contribution (Highest 20 Peak Load Hours)		DG_HYDRO_CAP_CONT					19.7	15.0	
442									
443 Operational Capacity Hydroelectric Unavailable due to Extended Outage or Derate		HYDRO_UNAVAIL					(6.0)	(5.0)	
444 Operational Capacity Hydroelectric Total		HYDRO_OPERATIONAL					563.3	478.0	
445									
446 Operational Resources (Switchable)									
447 ANTELOPE IC 1		AEEC_ANTLP_1	HALE	GAS-IC	PANHANDLE	2016	56.0	54.0	
448 ANTELOPE IC 2		AEEC_ANTLP_2	HALE	GAS-IC	PANHANDLE	2016	56.0	54.0	
449 ANTELOPE IC 3		AEEC_ANTLP_3	HALE	GAS-IC	PANHANDLE	2016	56.0	54.0	
450 ELK STATION CTG 1		AEEC_ELK_1	HALE	GAS-GT	PANHANDLE	2016	202.0	190.0	
451 ELK STATION CTG 2		AEEC_ELK_2	HALE	GAS-GT	PANHANDLE	2016	202.0	190.0	
452 TENASKA FRONTIER STATION CTG 1		FTR_FTR_G1	GRIMES	GAS-CC	NORTH	2000	185.0	160.0	
453 TENASKA FRONTIER STATION CTG 2		FTR_FTR_G2	GRIMES	GAS-CC	NORTH	2000	185.0	160.0	
454 TENASKA FRONTIER STATION CTG 3		FTR_FTR_G3	GRIMES	GAS-CC	NORTH	2000	185.0	160.0	
455 TENASKA FRONTIER STATION STG 4		FTR_FTR_G4	GRIMES	GAS-CC	NORTH	2000	400.0	400.0	
456 TENASKA GATEWAY STATION CTG 1		TGCCS_CT1	RUSK	GAS-CC	NORTH	2001	179.0	156.0	
457 TENASKA GATEWAY STATION CTG 2		TGCCS_CT2	RUSK	GAS-CC	NORTH	2001	179.0	135.0	
458 TENASKA GATEWAY STATION CTG 3		TGCCS_CT3	RUSK	GAS-CC	NORTH	2001	179.0	153.0	
459 TENASKA GATEWAY STATION STG 4		TGCCS_UNIT4	RUSK	GAS-CC	NORTH	2001	400.0	402.0	
460 TENASKA KIAMICHI STATION 1CT101		KMCHI_1CT101	FANNIN	GAS-CC	NORTH	2003	185.0	151.0	
461 TENASKA KIAMICHI STATION 1CT201		KMCHI_1CT201	FANNIN	GAS-CC	NORTH	2003	185.0	148.0	
462 TENASKA KIAMICHI STATION 1ST		KMCHI_1ST	FANNIN	GAS-CC	NORTH	2003	318.0	310.0	
463 TENASKA KIAMICHI STATION 2CT101		KMCHI_2CT101	FANNIN	GAS-CC	NORTH	2003	185.0	150.0	
464 TENASKA KIAMICHI STATION 2CT201		KMCHI_2CT201	FANNIN	GAS-CC	NORTH	2003	185.0	152.0	
465 TENASKA KIAMICHI STATION 2ST		KMCHI_2ST	FANNIN	GAS-CC	NORTH	2003	318.0	311.0	
466 Switchable Capacity Total							3,840.1	3,490.0	
467									
468 Switchable Capacity Unavailable to ERCOT									

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
469 ANTELOPE IC 1		AEEC_ANTLP_1_UNAVAIL	HALE	GAS-IC	PANHANDLE	2017	(56.0)	(54.0)	
470 ANTELOPE IC 2		AEEC_ANTLP_2_UNAVAIL	HALE	GAS-IC	PANHANDLE	2017	(56.0)	(54.0)	
471 ANTELOPE IC 3		AEEC_ANTLP_3_UNAVAIL	HALE	GAS-IC	PANHANDLE	2017	(56.0)	(54.0)	
472 ELK STATION CTG 1		AEEC_ELK_1_UNAVAIL	HALE	GAS-GT	PANHANDLE	2017	(202.0)	(190.0)	
473 ELK STATION CTG 2		AEEC_ELK_2_UNAVAIL	HALE	GAS-GT	PANHANDLE	2017	(202.0)	(190.0)	
474 Switchable Capacity Unavailable to ERCOT Total							(572.0)	(542.0)	
475									
476 Available Mothball Capacity based on Owner's Return Probability		MOTH_AVAIL					712.8	703.5	
477									
478 Private-Use Network Capacity Contribution (Top 20 Hours)		PUN_CAP_CONT					9,575.0	2,940.0	
479 Private-Use Network Forecast Adjustment (per Protocol 10.3.2.4)		PUN_CAP_ADJUST						(71.0)	
480									
481 Operational Resources (Wind)									
482 WESTERN TRAIL WIND (AJAX WIND) U1		AJAXWIND_UNIT1	WILBARGER	WIND-O	WEST	2022	225.6	225.6	
483 WESTERN TRAIL WIND (AJAX WIND) U2		AJAXWIND_UNIT2	WILBARGER	WIND-O	WEST	2022	141.0	141.0	
484 AMADEUS WIND 1 U1		AMADEUS1_UNIT1	FISHER	WIND-O	WEST	2021	36.7	36.7	
485 AMADEUS WIND 1 U2		AMADEUS1_UNIT2	FISHER	WIND-O	WEST	2021	35.8	35.8	
486 AMADEUS WIND 2 U1		AMADEUS2_UNIT3	FISHER	WIND-O	WEST	2021	177.7	177.7	
487 ANACACHO WIND		ANACACHO_ANA	KINNEY	WIND-O	SOUTH	2012	99.8	99.8	
488 AQUILLA LAKE WIND U1		AQUILLA_U1_23	HILL & LIMESTONE	WIND-O	NORTH	2023	13.9	13.9	
489 AQUILLA LAKE WIND U2		AQUILLA_U1_28	HILL & LIMESTONE	WIND-O	NORTH	2023	135.4	135.4	
490 AQUILLA LAKE 2 WIND U1		AQUILLA_U2_23	HILL & LIMESTONE	WIND-O	NORTH	2023	7.0	7.0	
491 AQUILLA LAKE 2 WIND U2		AQUILLA_U2_28	HILL & LIMESTONE	WIND-O	NORTH	2023	143.8	143.8	
492 AVIATOR WIND U1		AVIATOR_UNIT1	COKE	WIND-O	WEST	2021	180.1	180.1	
493 AVIATOR WIND U2		AVIATOR_UNIT2	COKE	WIND-O	WEST	2021	145.6	145.6	
494 AVIATOR WIND U3		DEWOLF_UNIT1	COKE	WIND-O	WEST	2021	199.3	199.3	
495 BAFFIN WIND UNIT1		BAFFIN_UNIT1	KENEDY	WIND-C	COASTAL	2016	100.0	100.0	
496 BAFFIN WIND UNIT2		BAFFIN_UNIT2	KENEDY	WIND-C	COASTAL	2016	102.0	102.0	
497 BARROW RANCH (JUMBO HILL WIND) 1		BARROW_UNIT1	ANDREWS	WIND-O	WEST	2021	90.2	90.2	
498 BARROW RANCH (JUMBO HILL WIND) 2		BARROW_UNIT2	ANDREWS	WIND-O	WEST	2021	70.5	70.5	
499 BARTON CHAPEL WIND		BRTSW_BCW1	JACK	WIND-O	NORTH	2007	120.0	120.0	
500 BLUE SUMMIT WIND 1 A	22INR0550	BLSUMMIT_BLSMT1_5	WILBARGER	WIND-O	WEST	2013	132.8	132.8	
501 BLUE SUMMIT WIND 1 B	22INR0550	BLSUMMIT_BLSMT1_6	WILBARGER	WIND-O	WEST	2013	7.0	6.9	
502 BLUE SUMMIT WIND 2 A		BLSUMMIT_UNIT2_25	WILBARGER	WIND-O	WEST	2020	92.5	6.9	
503 BLUE SUMMIT WIND 2 B		BLSUMMIT_UNIT2_17	WILBARGER	WIND-O	WEST	2020	6.9	92.5	
504 BLUE SUMMIT WIND 3 A		BLSUMIT3_UNIT_17	WILBARGER	WIND-O	WEST	2020	13.7	13.4	
505 BLUE SUMMIT WIND 3 B		BLSUMIT3_UNIT_25	WILBARGER	WIND-O	WEST	2020	186.5	182.4	
506 BOBCAT BLUFF WIND		BCATWIND_WIND_1	ARCHER	WIND-O	WEST	2020	162.0	162.0	
507 BRISCOE WIND		BRISCOE_WIND	BRISCOE	WIND-P	PANHANDLE	2015	149.9	149.8	
508 BRUENNING'S BREEZE A		BBREEZE_UNIT1	WILLACY	WIND-C	COASTAL	2017	120.0	120.0	
509 BRUENNING'S BREEZE B		BBREEZE_UNIT2	WILLACY	WIND-C	COASTAL	2017	108.0	108.0	
510 BUCKTHORN WIND 1 A		BUCKTHRN_UNIT1	ERATH	WIND-O	NORTH	2017	44.9	44.9	
511 BUCKTHORN WIND 1 B		BUCKTHRN_UNIT2	ERATH	WIND-O	NORTH	2017	55.7	55.7	
512 BUFFALO GAP WIND 1		BUFF_GAP_UNIT1	TAYLOR	WIND-O	WEST	2006	120.6	120.6	
513 BUFFALO GAP WIND 2_1		BUFF_GAP_UNIT2_1	TAYLOR	WIND-O	WEST	2007	115.5	115.5	
514 BUFFALO GAP WIND 2_2		BUFF_GAP_UNIT2_2	TAYLOR	WIND-O	WEST	2007	117.0	117.0	
515 BUFFALO GAP WIND 3		BUFF_GAP_UNIT3	TAYLOR	WIND-O	WEST	2008	170.2	170.2	
516 BULL CREEK WIND U1		BULLCRK_WND1	BORDEN	WIND-O	WEST	2009	89.0	88.0	
517 BULL CREEK WIND U2		BULLCRK_WND2	BORDEN	WIND-O	WEST	2009	91.0	90.0	
518 CABEZON WIND (RIO BRAVO I WIND) 1 A		CABEZON_WIND1	STARR	WIND-O	SOUTH	2019	115.2	115.2	
519 CABEZON WIND (RIO BRAVO I WIND) 1 B		CABEZON_WIND2	STARR	WIND-O	SOUTH	2019	122.4	122.4	
520 CACTUS FLATS WIND U1		CFLATS_U1	CONCHO	WIND-O	WEST	2022	148.4	148.4	
521 CALLAHAN WIND		CALLAHAN_WND1	CALLAHAN	WIND-O	WEST	2004	123.1	123.1	
522 CAMERON COUNTY WIND		CAMWIND_UNIT1	CAMERON	WIND-C	COASTAL	2016	165.0	165.0	
523 CAMP SPRINGS WIND 1		CSEC_CSECG1	SCURRY	WIND-O	WEST	2007	134.4	130.5	
524 CAMP SPRINGS WIND 2		CSEC_CSECG2	SCURRY	WIND-O	WEST	2007	123.6	120.0	
525 CANADIAN BREAKS WIND		CN_BRKS_UNIT_1	OLDHAM	WIND-P	PANHANDLE	2019	210.1	210.1	
526 CAPRICORN RIDGE WIND 1	17INR0054	CAPRIDGE_CR1	STERLING	WIND-O	WEST	2007	231.7	231.7	
527 CAPRICORN RIDGE WIND 2	17INR0054	CAPRIDGE_CR2	STERLING	WIND-O	WEST	2007	149.5	149.5	
528 CAPRICORN RIDGE WIND 3	17INR0054	CAPRIDGE_CR3	STERLING	WIND-O	WEST	2008	200.9	200.9	
529 CAPRICORN RIDGE WIND 4	17INR0061	CAPRIDG4_CR4	STERLING	WIND-O	WEST	2008	121.5	121.5	
530 CEDRO HILL WIND 1		CEDROHIL_CHW1	WEBB	WIND-O	SOUTH	2010	75.0	75.0	
531 CEDRO HILL WIND 2		CEDROHIL_CHW2	WEBB	WIND-O	SOUTH	2010	75.0	75.0	
532 CHALUPA WIND		CHALUPA_UNIT1	CAMERON	WIND-C	COASTAL	2021	173.3	173.3	
533 CHAMPION WIND		CHAMPION_UNIT1	NOLAN	WIND-O	WEST	2008	126.5	126.5	
534 CHAPMAN RANCH WIND IA (SANTA CRUZ)		SANTACRU_UNIT1	NUECES	WIND-C	COASTAL	2017	150.6	150.6	
535 CHAPMAN RANCH WIND IB (SANTA CRUZ)		SANTACRU_UNIT2	NUECES	WIND-C	COASTAL	2017	98.4	98.4	
536 COTTON PLAINS WIND		COTPLNS_COTTONPL	FLOYD	WIND-P	PANHANDLE	2017	50.4	50.4	
537 CRANELL WIND		CRANELL_UNIT1	REFUGIO	WIND-C	COASTAL	2022	220.0	220.0	
538 DERMOTT WIND 1_1		DERMOTT_UNIT1	SCURRY	WIND-O	WEST	2017	126.5	126.5	
539 DERMOTT WIND 1_2		DERMOTT_UNIT2	SCURRY	WIND-O	WEST	2017	126.5	126.5	
540 DESERT SKY WIND 1 A	17INR0070	DSKYWND1_UNIT_1A	PECOS	WIND-O	WEST	2022	65.8	53.1	
541 DESERT SKY WIND 1 B	17INR0070	DSKYWND2_UNIT_2A	PECOS	WIND-O	WEST	2022	65.8	50.4	
542 DESERT SKY WIND 2 A	17INR0070	DSKYWND1_UNIT_1B	PECOS	WIND-O	WEST	2022	23.9	18.7	
543 DESERT SKY WIND 2 B	17INR0070	DSKYWND2_UNIT_2B	PECOS	WIND-O	WEST	2022	14.7	8.0	
544 DOUG COLBECK'S CORNER (CONWAY) A		GRANDVW1_COLA	CARSON	WIND-P	PANHANDLE	2016	100.2	100.2	
545 DOUG COLBECK'S CORNER (CONWAY) B		GRANDVW1_COLB	CARSON	WIND-P	PANHANDLE	2016	100.2	100.2	
546 EAST RAYMOND WIND (EL RAYO) U1		EL_RAYO_UNIT1	WILLACY	WIND-C	COASTAL	2021	101.2	98.0	
547 EAST RAYMOND WIND (EL RAYO) U2		EL_RAYO_UNIT2	WILLACY	WIND-C	COASTAL	2021	99.0	96.0	
548 ELBOW CREEK WIND		ELB_ELBECREEK	HOWARD	WIND-O	WEST	2008	121.9	121.9	
549 ELECTRA WIND 1		DIGBY_UNIT1	WILBARGER	WIND-O	WEST	2017	101.3	98.9	
550 ELECTRA WIND 2		DIGBY_UNIT2	WILBARGER	WIND-O	WEST	2017	134.3	131.1	
551 EL ALGODON ALTO W U1		ALGODON_UNIT1	WILLACY	WIND-C	COASTAL	2022	171.6	171.6	
552 EL ALGODON ALTO W U2		ALGODON_UNIT2	WILLACY	WIND-C	COASTAL	2022	28.6	28.6	
553 ESPIRITU WIND		CHALUPA_UNIT2	CAMERON	WIND-C	COASTAL	2021	25.2	25.2	
554 FALVEZ ASTRA WIND		ASTRA_UNIT1	RANDALL	WIND-P	PANHANDLE	2017	163.2	163.2	
555 FLAT TOP WIND I		FTWIND_UNIT_1	MILLS	WIND-O	NORTH	2018	200.0	200.0	
556 FLUVANNA RENEWABLE 1 A		FLUVANNA_UNIT1	SCURRY	WIND-O	WEST	2017	79.8	79.8	
557 FLUVANNA RENEWABLE 1 B		FLUVANNA_UNIT2	SCURRY	WIND-O	WEST	2017	75.6	75.6	
558 FOARD CITY WIND 1 A		FOARDCTY_UNIT1	FOARD	WIND-O	WEST	2019	186.5	186.5	
559 FOARD CITY WIND 1 B		FOARDCTY_UNIT2	FOARD	WIND-O	WEST	2019	163.8	163.8	
560 FOREST CREEK WIND		MCDLD_FCW1	GLASSCOCK	WIND-O	WEST	2007	124.2	124.2	
561 GOAT WIND		GOAT_GOATWIND	STERLING	WIND-O	WEST	2008	80.0	80.0	
562 GOAT WIND 2		GOAT_GOATWIN2	STERLING	WIND-O	WEST	2010	69.6	69.6	
563 GOLDTHWAITE WIND 1		GWEC_GWEC_G1	MILLS	WIND-O	NORTH	2014	148.6	148.6	
564 GOPHER CREEK WIND 1		GOPHER_UNIT1	BORDEN	WIND-O	WEST	2020	82.0	82.0	
565 GOPHER CREEK WIND 2		GOPHER_UNIT2	BORDEN	WIND-O	WEST	2020	76.0	76.0	
566 GRANDVIEW WIND 1 (CONWAY) GV1A		GRANDVW1_GV1A	CARSON	WIND-P	PANHANDLE	2014	107.4	107.4	
567 GRANDVIEW WIND 1 (CONWAY) GV1B		GRANDVW1_GV1B	CARSON	WIND-P	PANHANDLE	2014	103.8	103.8	
568 GREEN MOUNTAIN WIND (BRAZOS) U1	21INR0532	BRAZ_WND_WND1	SCURRY	WIND-O	WEST	2003	99.0	99.0	
569 GREEN MOUNTAIN WIND (BRAZOS) U2	21INR0532	BRAZ_WND_WND2	SCURRY	WIND-O	WEST	2003	61.0	61.0	
570 GREEN PASTURES WIND I		GPASTURE_WIND_I	BAYLOR	WIND-O	WEST	2015	150.0	150.0	
571 GRIFFIN TRAIL WIND U1		GRIF_TRL_UNIT1	KNOX	WIND-O	WEST	2021	98.7	98.7	
572 GRIFFIN TRAIL WIND U2		GRIF_TRL_UNIT2	KNOX	WIND-O	WEST	2021	126.9	126.9	
573 GULF WIND I		TGW_T1	KENEDY	WIND-C	COASTAL	2021	141.6	141.6	
574 GULF WIND II		TGW_T2	KENEDY	WIND-C	COASTAL	2021	141.6	141.6	
575 GUNSIGHT MOUNTAIN WIND		GUNMTN_G1	HOWARD	WIND-O	WEST	2016	119.9	119.9	
576 HACKBERRY WIND		HWF_HWFG1	SHACKELFORD	WIND-O	WEST	2008	165.6	163.5	
577 HEREFORD WIND G		HRFDWIND_WIND_G	DEAF SMITH	WIND-P	PANHANDLE	2015	99.9	99.9	
578 HEREFORD WIND V		HRFDWIND_WIND_V	DEAF SMITH	WIND-P	PANHANDLE	2015	100.0	100.0	
579 HICKMAN (SANTA RITA WIND) 1		REAGAN_G1	REAGAN	WIND-O	WEST	2018	152.5	152.5	
580 HICKMAN (SANTA RITA WIND) 2		HICKMAN_G2	REAGAN	WIND-O	WEST	2018	147.5	147.5	
581 HIDALGO & STARR WIND 11		MIRASOLE_MIR11	HIDALGO	WIND-O	SOUTH	2016	52.0	52.0	
582 HIDALGO & STARR WIND 12		MIRASOLE_MIR12	HIDALGO	WIND-O	SOUTH	2016	98.0	98.0	
583 HIDALGO & STARR WIND 21		MIRASOLE_MIR21	HIDALGO	WIND-O	SOUTH	2016	100.0	100.0	
584 HIDALGO II WIND		MIRASOLE_MIR13	HIDALGO	WIND-O	SOUTH	2021	50.4	50.4	
585 HIGH LONESOME W 1A		HI_LONE_WGR1A	CROCKETT	WIND-O	WEST	2021	46.0	46.0	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
586 HIGH LONESOME W 1B		HI_LONE_WGR1B	CROCKETT	WIND-O	WEST	2021	51.9	52.0	
587 HIGH LONESOME W 1C		HI_LONE_WGR1C	CROCKETT	WIND-O	WEST	2021	25.3	25.3	
588 HIGH LONESOME W 2		HI_LONE_WGR2	CROCKETT	WIND-O	WEST	2021	122.4	122.5	
589 HIGH LONESOME W 2A		HI_LONE_WGR2A	CROCKETT	WIND-O	WEST	2021	25.3	25.3	
590 HIGH LONESOME W 3		HI_LONE_WGR3	CROCKETT	WIND-O	WEST	2021	127.5	127.6	
591 HIGH LONESOME W 4		HI_LONE_WGR4	CROCKETT	WIND-O	WEST	2021	101.5	101.6	
592 HORSE CREEK WIND 1		HORSECRK_UNIT1	HASKELL	WIND-O	WEST	2017	134.8	131.1	
593 HORSE CREEK WIND 2		HORSECRK_UNIT2	HASKELL	WIND-O	WEST	2017	101.7	98.9	
594 HORSE HOLLOW WIND 1	17INR0052	H_HOLLOW_WND1	TAYLOR	WIND-O	WEST	2005	230.0	230.0	
595 HORSE HOLLOW WIND 2	17INR0053	HHOLLOW2_WND1	TAYLOR	WIND-O	WEST	2006	184.0	184.0	
596 HORSE HOLLOW WIND 3	17INR0053	HHOLLOW3_WND_1	TAYLOR	WIND-O	WEST	2006	241.4	241.4	
597 HORSE HOLLOW WIND 4	17INR0053	HHOLLOW4_WND1	TAYLOR	WIND-O	WEST	2006	115.0	115.0	
598 INADALE WIND 1		INDL_INADALE1	NOLAN	WIND-O	WEST	2008	95.0	95.0	
599 INADALE WIND 2		INDL_INADALE2	NOLAN	WIND-O	WEST	2008	102.0	102.0	
600 INDIAN MESA WIND	18INR0069	INDNNWP_INDNNWP2	PECOS	WIND-O	WEST	2001	91.8	91.8	
601 JAVELINA I WIND 18		BORDAS_JAVEL18	WEBB	WIND-O	SOUTH	2015	19.7	19.7	
602 JAVELINA I WIND 20		BORDAS_JAVEL20	WEBB	WIND-O	SOUTH	2015	230.0	230.0	
603 JAVELINA II WIND 1		BORDAS2_JAVEL2_A	WEBB	WIND-O	SOUTH	2017	96.0	96.0	
604 JAVELINA II WIND 2		BORDAS2_JAVEL2_B	WEBB	WIND-O	SOUTH	2017	74.0	74.0	
605 JAVELINA II WIND 3		BORDAS2_JAVEL2_C	WEBB	WIND-O	SOUTH	2017	30.0	30.0	
606 JUMBO ROAD WIND 1		HRFDWIND_JRDWIND1	DEAF SMITH	WIND-P	PANHANDLE	2015	146.2	146.2	
607 JUMBO ROAD WIND 2		HRFDWIND_JRDWIND2	DEAF SMITH	WIND-P	PANHANDLE	2015	153.6	153.6	
608 KARANKAWA WIND 1A		KARAKAW1_UNIT1	SAN PATRICIO	WIND-C	COASTAL	2019	103.3	103.3	
609 KARANKAWA WIND 1B		KARAKAW1_UNIT2	SAN PATRICIO	WIND-C	COASTAL	2019	103.3	103.3	
610 KARANKAWA WIND 2		KARAKAW2_UNIT3	SAN PATRICIO	WIND-C	COASTAL	2019	100.4	100.4	
611 KEECHI WIND		KEECHI_U1	JACK	WIND-O	NORTH	2015	110.0	110.0	
612 KING MOUNTAIN WIND (NE)		KING_NE_KINGNE	UPTON	WIND-O	WEST	2001	79.7	79.7	
613 KING MOUNTAIN WIND (NW)		KING_NW_KINGNW	UPTON	WIND-O	WEST	2001	79.7	79.7	
614 KING MOUNTAIN WIND (SE)		KING_SE_KINGSE	UPTON	WIND-O	WEST	2001	40.5	40.5	
615 KING MOUNTAIN WIND (SW)		KING_SW_KINGSW	UPTON	WIND-O	WEST	2001	79.7	79.7	
616 LANGFORD WIND POWER		LGD_LANGFORD	TOM GREEN	WIND-O	WEST	2009	160.0	160.0	
617 LOCKETT WIND FARM		LOCKETT_UNIT1	WILBARGER	WIND-O	WEST	2019	183.7	183.7	
618 LOGANS GAP WIND I U1		LGW_UNIT1	COMANCHE	WIND-O	NORTH	2015	106.3	106.3	
619 LOGANS GAP WIND I U2		LGW_UNIT2	COMANCHE	WIND-O	NORTH	2015	103.9	103.8	
620 LONE STAR WIND 1 (MESQUITE)		LNCRK_G83	SHACKELFORD	WIND-O	WEST	2006	194.0	194.0	
621 LONE STAR WIND 2 (POST OAK) U1		LNCRK2_G871	SHACKELFORD	WIND-O	WEST	2007	98.0	98.0	
622 LONE STAR WIND 2 (POST OAK) U2		LNCRK2_G872	SHACKELFORD	WIND-O	WEST	2007	100.0	100.0	
623 LONGHORN WIND NORTH U1		LHORN_N_UNIT1	FLOYD	WIND-P	PANHANDLE	2015	100.0	100.0	
624 LONGHORN WIND NORTH U2		LHORN_N_UNIT2	FLOYD	WIND-P	PANHANDLE	2015	100.0	100.0	
625 LORAIN WINDPARK I		LONEWOLF_G1	MITCHELL	WIND-O	WEST	2010	48.0	48.0	
626 LORAIN WINDPARK II		LONEWOLF_G2	MITCHELL	WIND-O	WEST	2010	51.0	51.0	
627 LORAIN WINDPARK III		LONEWOLF_G3	MITCHELL	WIND-O	WEST	2011	25.5	25.5	
628 LORAIN WINDPARK IV		LONEWOLF_G4	MITCHELL	WIND-O	WEST	2011	24.0	24.0	
629 LOS VIENTOS III WIND		LV3_UNIT_1	STARR	WIND-O	SOUTH	2015	200.0	200.0	
630 LOS VIENTOS IV WIND		LV4_UNIT_1	STARR	WIND-O	SOUTH	2016	200.0	200.0	
631 LOS VIENTOS V WIND		LV5_UNIT_1	STARR	WIND-O	SOUTH	2016	110.0	110.0	
632 LOS VIENTOS WIND I		LV1_LV1A	WILLACY	WIND-C	COASTAL	2013	200.1	200.1	
633 LOS VIENTOS WIND II		LV2_LV2	WILLACY	WIND-C	COASTAL	2013	201.6	201.6	
634 MAGIC VALLEY WIND (REDFISH) 1A		REDFISH_MV1A	WILLACY	WIND-C	COASTAL	2012	99.8	99.8	
635 MAGIC VALLEY WIND (REDFISH) 1B		REDFISH_MV1B	WILLACY	WIND-C	COASTAL	2012	103.5	103.5	
636 MARIAH DEL NORTE 1		MARIAH_NORTE1	PARMER	WIND-P	PANHANDLE	2017	115.2	115.2	
637 MARIAH DEL NORTE 2		MARIAH_NORTE2	PARMER	WIND-P	PANHANDLE	2017	115.2	115.2	
638 MAVERICK CREEK WIND WEST U1		MAVCRK_W_UNIT1	CONCHO	WIND-O	WEST	2022	201.6	201.6	
639 MAVERICK CREEK WIND WEST U2		MAVCRK_W_UNIT2	CONCHO	WIND-O	WEST	2022	11.1	11.1	
640 MAVERICK CREEK WIND WEST U3		MAVCRK_W_UNIT3	CONCHO	WIND-O	WEST	2022	33.6	33.6	
641 MAVERICK CREEK WIND WEST U4		MAVCRK_W_UNIT4	CONCHO	WIND-O	WEST	2022	22.2	22.2	
642 MAVERICK CREEK WIND EAST U1		MAVCRK_E_UNIT5	CONCHO	WIND-O	WEST	2022	71.4	71.4	
643 MAVERICK CREEK WIND EAST U2		MAVCRK_E_UNIT6	CONCHO	WIND-O	WEST	2022	33.3	33.3	
644 MAVERICK CREEK WIND EAST U3		MAVCRK_E_UNIT7	CONCHO	WIND-O	WEST	2022	22.0	22.0	
645 MAVERICK CREEK WIND EAST U4		MAVCRK_E_UNIT8	CONCHO	WIND-O	WEST	2022	20.0	20.0	
646 MAVERICK CREEK WIND EAST U5		MAVCRK_E_UNIT9	CONCHO	WIND-O	WEST	2022	76.8	76.8	
647 MCADOO WIND		MWEC_G1	DICKENS	WIND-P	PANHANDLE	2008	150.0	150.0	
648 MESQUITE CREEK WIND 1		MESQCRK_WND1	DAWSON	WIND-O	WEST	2015	105.6	105.6	
649 MESQUITE CREEK WIND 2		MESQCRK_WND2	DAWSON	WIND-O	WEST	2015	105.6	105.6	
650 MIAMI WIND G1		MIAM1_G1	GRAY	WIND-P	PANHANDLE	2014	144.3	144.3	
651 MIAMI WIND G2		MIAM1_G2	GRAY	WIND-P	PANHANDLE	2014	144.3	144.3	
652 MIDWAY WIND		MIDWIND_UNIT1	SAN PATRICIO	WIND-C	COASTAL	2019	162.8	162.8	
653 NIELS BOHR WIND A (BEARKAT WIND A)		NBOHR_UNIT1	GLASSCOCK	WIND-O	WEST	2018	196.6	196.6	
654 NOTREES WIND 1		NWF_NWF1	WINKLER	WIND-O	WEST	2009	92.6	92.6	
655 NOTREES WIND 2		NWF_NWF2	WINKLER	WIND-O	WEST	2009	60.0	60.0	
656 OCOTILLO WIND		OWF_OWf	HOWARD	WIND-O	WEST	2008	58.8	54.6	
657 OLD SETTLER WIND		COTPLNS_OLDSETLR	FLOYD	WIND-P	PANHANDLE	2017	151.2	151.2	
658 OVEJA WIND U1		OVEJA_G1	IRION	WIND-O	WEST	2021	151.2	151.2	
659 OVEJA WIND U2		OVEJA_G2	IRION	WIND-O	WEST	2021	151.2	151.2	
660 PALMAS ALTAS WIND		PALMWIND_UNIT1	CAMERON	WIND-C	COASTAL	2020	144.9	144.9	
661 PANHANDLE WIND 1 U1		PH1_UNIT1	CARSON	WIND-P	PANHANDLE	2014	109.2	109.2	
662 PANHANDLE WIND 1 U2		PH1_UNIT2	CARSON	WIND-P	PANHANDLE	2014	109.2	109.2	
663 PANHANDLE WIND 2 U1		PH2_UNIT1	CARSON	WIND-P	PANHANDLE	2014	94.2	94.2	
664 PANHANDLE WIND 2 U2		PH2_UNIT2	CARSON	WIND-P	PANHANDLE	2014	96.6	96.6	
665 PANTHER CREEK WIND 1		PC_NORTH_PANTHER1	HOWARD	WIND-O	WEST	2008	142.5	142.5	
666 PANTHER CREEK WIND 2		PC_SOUTH_PANTHER2	HOWARD	WIND-O	WEST	2019	115.5	115.5	
667 PANTHER CREEK WIND 3 A		PC_SOUTH_PANTH31	HOWARD	WIND-O	WEST	2022	106.9	106.9	
668 PANTHER CREEK WIND 3 B		PC_SOUTH_PANTH32	HOWARD	WIND-O	WEST	2022	108.5	108.5	
669 PAPALOTE CREEK WIND		PAP1_PAP1	SAN PATRICIO	WIND-C	COASTAL	2009	179.9	179.9	
670 PAPALOTE CREEK WIND II		COTTON_PAP2	SAN PATRICIO	WIND-C	COASTAL	2010	200.1	200.1	
671 PECOS WIND 1 (WOODWARD)		WOODWRD1_WOODWR	PECOS	WIND-O	WEST	2001	91.7	91.7	
672 PECOS WIND 2 (WOODWARD)		WOODWRD2_WOODWR	PECOS	WIND-O	WEST	2001	86.0	85.8	
673 PENASCAL WIND 1		PENA_UNIT1	KENEDY	WIND-C	COASTAL	2009	160.8	160.8	
674 PENASCAL WIND 2		PENA_UNIT2	KENEDY	WIND-C	COASTAL	2009	141.6	141.6	
675 PENASCAL WIND 3		PENA3_UNIT3	KENEDY	WIND-C	COASTAL	2011	100.8	100.8	
676 PEYTON CREEK WIND		PEY_UNIT1	MATAGORDA	WIND-C	COASTAL	2020	151.2	151.2	
677 PYRON WIND 1	23INR0525	PYR_PYRON1	NOLAN	WIND-O	WEST	2008	121.5	121.5	
678 PYRON WIND 2	23INR0525	PYR_PYRON2	NOLAN	WIND-O	WEST	2008	127.5	127.5	
679 RANCHERO WIND		RANCHERO_UNIT1	CROCKETT	WIND-O	WEST	2020	150.0	150.0	
680 RANCHERO WIND		RANCHERO_UNIT2	CROCKETT	WIND-O	WEST	2020	150.0	150.0	
681 RATTLESNAKE I WIND ENERGY CENTER G1		RSNAKE_G1	GLASSCOCK	WIND-O	WEST	2015	109.2	104.6	
682 RATTLESNAKE I WIND ENERGY CENTER G2		RSNAKE_G2	GLASSCOCK	WIND-O	WEST	2015	109.2	102.7	
683 RED CANYON WIND		RDCANYON_RDCNY1	BORDEN	WIND-O	WEST	2006	89.6	89.6	
684 RELOJ DEL SOL WIND U1		RELOJ_UNIT1	ZAPATA	WIND-O	SOUTH	2022	55.4	55.4	
685 RELOJ DEL SOL WIND U2		RELOJ_UNIT2	ZAPATA	WIND-O	SOUTH	2022	48.0	48.0	
686 RELOJ DEL SOL WIND U3		RELOJ_UNIT3	ZAPATA	WIND-O	SOUTH	2022	83.1	83.1	
687 RELOJ DEL SOL WIND U4		RELOJ_UNIT4	ZAPATA	WIND-O	SOUTH	2022	22.8	22.8	
688 ROCK SPRINGS VAL VERDE WIND (FERMI) 1		FERMI_WIND1	VAL VERDE	WIND-O	WEST	2017	121.9	121.9	
689 ROCK SPRINGS VAL VERDE WIND (FERMI) 2		FERMI_WIND2	VAL VERDE	WIND-O	WEST	2017	27.4	27.4	
690 ROSCOE WIND		TKWSW1_ROSCOE	NOLAN	WIND-O	WEST	2008	114.0	114.0	
691 ROSCOE WIND 2A		TKWSW1_ROSCOE2A	NOLAN	WIND-O	WEST	2008	95.0	95.0	
692 ROUTE 66 WIND		ROUTE_66_WIND1	CARSON	WIND-P	PANHANDLE	2015	150.0	150.0	
693 RTS 2 WIND (HEART OF TEXAS WIND) U1		RTS2_U1	MCCULLOCH	WIND-O	SOUTH	2021	89.9	89.9	
694 RTS 2 WIND (HEART OF TEXAS WIND) U2		RTS2_U2	MCCULLOCH	WIND-O	SOUTH	2021	89.9	89.9	
695 RTS WIND		RTS_U1	MCCULLOCH	WIND-O	SOUTH	2018	160.0	160.0	
696 SAGE DRAW WIND U1		SAGEDRAW_UNIT1	LYNN	WIND-O	WEST	2022	169.2	169.2	
697 SAGE DRAW WIND U2		SAGEDRAW_UNIT2	LYNN	WIND-O	WEST	2022	169.2	169.2	
698 SALT FORK 1 WIND U1		SALTFORK_UNIT1	DONLEY	WIND-P	PANHANDLE	2017	64.0	64.0	
699 SALT FORK 1 WIND U2		SALTFORK_UNIT2	DONLEY	WIND-P	PANHANDLE	2017	110.0	110.0	
700 SAN ROMAN WIND		SANROMAN_WIND_1	CAMERON	WIND-C	COASTAL	2017	95.3	95.2	
701 SAND BLUFF WIND U1		MCDLD_SB1_2	GLASSCOCK	WIND-O	WEST	2022	71.4	71.4	
702 SAND BLUFF WIND U2		MCDLD_SB3_282	GLASSCOCK	WIND-O	WEST	2022	14.1	14.1	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
703 SAND BLUFF WIND U3		MCDLD_SB4_G87	GLASSCOCK	WIND-O	WEST	2022	4.0	4.0	
704 SENATE WIND		SENATEWD_UNIT1	JACK	WIND-O	NORTH	2012	150.0	150.0	
705 SENDERO WIND ENERGY		EXGNSND_WIND_1	JIM HOGG	WIND-O	SOUTH	2015	78.0	78.0	
706 SEYMOUR HILLS WIND (S_HILLS WIND)		S_HILLS_UNIT1	BAYLOR	WIND-O	WEST	2019	30.2	30.2	
707 SHAFFER (PATRIOT WIND/PETRONILLA)		SHAFFER_UNIT1	NUECES	WIND-C	COASTAL	2021	226.1	226.1	
708 SHANNON WIND		SHANNONW_UNIT_1	CLAY	WIND-O	WEST	2015	204.1	204.1	
709 SHERBINO 2 WIND	19INR0120	KEO_SHRBINO2	PECOS	WIND-O	WEST	2011	132.0	132.0	
710 SILVER STAR WIND	18INR0064	FLTCK_SSI	ERATH	WIND-O	NORTH	2008	52.8	52.8	
711 SOUTH PLAINS WIND 1 U1		SPLAIN1_WIND1	FLOYD	WIND-P	PANHANDLE	2015	102.0	102.0	
712 SOUTH PLAINS WIND 1 U2		SPLAIN1_WIND2	FLOYD	WIND-P	PANHANDLE	2015	98.0	98.0	
713 SOUTH PLAINS WIND 2 U1		SPLAIN2_WIND21	FLOYD	WIND-P	PANHANDLE	2016	148.5	148.5	
714 SOUTH PLAINS WIND 2 U2		SPLAIN2_WIND22	FLOYD	WIND-P	PANHANDLE	2016	151.8	151.8	
715 SOUTH TRENT WIND		STWF_T1	NOLAN	WIND-O	WEST	2008	101.2	98.2	
716 SPINNING SPUR WIND TWO A		SSPURTWO_WIND_1	OLDHAM	WIND-P	PANHANDLE	2014	161.0	161.0	
717 SPINNING SPUR WIND TWO B		SSPURTWO_SS3WIND2	OLDHAM	WIND-P	PANHANDLE	2015	98.0	98.0	
718 SPINNING SPUR WIND TWO C		SSPURTWO_SS3WIND1	OLDHAM	WIND-P	PANHANDLE	2015	96.0	96.0	
719 STANTON WIND ENERGY		SWEC_G1	MARTIN	WIND-O	WEST	2008	123.6	120.0	
720 STELLA WIND		STELLA_UNIT1	KENEDY	WIND-C	COASTAL	2018	201.0	201.0	
721 STEPHENS RANCH WIND 1		SRWE1_UNIT1	BORDEN	WIND-O	WEST	2014	213.8	211.2	
722 STEPHENS RANCH WIND 2		SRWE1_SRWE2	BORDEN	WIND-O	WEST	2015	166.5	164.7	
723 SWEETWATER WIND 1	18INR0073	SWEETWND_WND1	NOLAN	WIND-O	WEST	2003	37.5	42.5	
724 SWEETWATER WIND 2A	17INR0068	SWEETWN2_WND24	NOLAN	WIND-O	WEST	2006	16.0	16.8	
725 SWEETWATER WIND 2B	17INR0068	SWEETWN2_WND2	NOLAN	WIND-O	WEST	2004	105.3	110.8	
726 SWEETWATER WIND 3A		SWEETWN3_WND3A	NOLAN	WIND-O	WEST	2011	30.8	33.6	
727 SWEETWATER WIND 3B		SWEETWN3_WND3B	NOLAN	WIND-O	WEST	2011	108.5	118.6	
728 SWEETWATER WIND 4-4A		SWEETWN4_WND4A	NOLAN	WIND-O	WEST	2007	119.0	125.0	
729 SWEETWATER WIND 4-4B		SWEETWN4_WND4B	NOLAN	WIND-O	WEST	2007	105.8	112.0	
730 SWEETWATER WIND 4-5		SWEETWN5_WND5	NOLAN	WIND-O	WEST	2007	80.5	85.0	
731 TAHOKA WIND 1		TAHOKA_UNIT_1	LYNN	WIND-O	WEST	2019	150.0	150.0	
732 TAHOKA WIND 2		TAHOKA_UNIT_2	LYNN	WIND-O	WEST	2019	150.0	150.0	
733 TEXAS BIG SPRING WIND A		SGMTN_SIGNALMT	HOWARD	WIND-O	WEST	1999	27.7	27.7	
734 TEXAS BIG SPRING WIND B		SGMTN_SIGNALM2	HOWARD	WIND-O	WEST	1999	6.6	6.6	
735 TG EAST WIND U1		TRUSGILL_UNIT1	KNOX	WIND-O	WEST	2022	42.0	42.0	
736 TG EAST WIND U2		TRUSGILL_UNIT2	KNOX	WIND-O	WEST	2022	44.8	44.8	
737 TG EAST WIND U3		TRUSGILL_UNIT3	KNOX	WIND-O	WEST	2022	42.0	42.0	
738 TG EAST WIND U4		TRUSGILL_UNIT4	KNOX	WIND-O	WEST	2022	207.2	207.2	
739 TORRECILLAS WIND 1		TORR_UNIT1_25	WEBB	WIND-O	SOUTH	2019	150.0	150.0	
740 TORRECILLAS WIND 2		TORR_UNIT2_23	WEBB	WIND-O	SOUTH	2019	23.0	23.0	
741 TORRECILLAS WIND 3		TORR_UNIT2_25	WEBB	WIND-O	SOUTH	2019	127.5	127.5	
742 TRENT WIND 1 A	17INR0069	TRENT_TRENT	NOLAN	WIND-O	WEST	2001	38.3	38.3	
743 TRENT WIND 1 B		TRENT_UNIT_1B	NOLAN	WIND-O	WEST	2018	15.6	15.6	
744 TRENT WIND 2		TRENT_UNIT_2	NOLAN	WIND-O	WEST	2018	50.5	50.5	
745 TRENT WIND 3 A		TRENT_UNIT_3A	NOLAN	WIND-O	WEST	2018	38.3	38.3	
746 TRENT WIND 3 B		TRENT_UNIT_3B	NOLAN	WIND-O	WEST	2018	13.8	13.8	
747 TRINITY HILLS WIND 1	20INR0019	TRINITY_TH1_BUS1	ARCHER	WIND-O	WEST	2012	103.4	103.4	
748 TRINITY HILLS WIND 2	20INR0019	TRINITY_TH1_BUS2	ARCHER	WIND-O	WEST	2012	94.6	94.6	
749 TSTC WEST TEXAS WIND		DG_ROSC2_1UNIT	NOLAN	WIND-O	WEST	2008	2.0	2.0	
750 TURKEY TRACK WIND		TTWEC_G1	NOLAN	WIND-O	WEST	2008	174.6	169.5	
751 TYLER BLUFF WIND		TYLRWIND_UNIT1	COOKE	WIND-O	NORTH	2017	125.6	125.6	
752 VENADO WIND U1		VENADO_UNIT1	ZAPATA	WIND-O	SOUTH	2021	105.0	105.0	
753 VENADO WIND U2		VENADO_UNIT2	ZAPATA	WIND-O	SOUTH	2021	96.6	96.6	
754 VERA WIND 1		VERAWIND_UNIT1	KNOX	WIND-O	WEST	2021	12.0	12.0	
755 VERA WIND 2		VERAWIND_UNIT2	KNOX	WIND-O	WEST	2021	7.2	7.2	
756 VERA WIND 3		VERAWIND_UNIT3	KNOX	WIND-O	WEST	2021	100.8	100.8	
757 VERA WIND 4		VERAWIND_UNIT4	KNOX	WIND-O	WEST	2021	22.0	22.0	
758 VERA WIND 5		VERAWIND_UNIT5	KNOX	WIND-O	WEST	2021	100.8	100.8	
759 VERTIGO WIND (FORMERLY GREEN PASTURES WIND 2)		VERTIGO_WIND_I	BAYLOR	WIND-O	WEST	2015	150.0	150.0	
760 WAKE WIND 1		WAKEWE_G1	DICKENS	WIND-P	PANHANDLE	2016	114.9	114.9	
761 WAKE WIND 2		WAKEWE_G2	DICKENS	WIND-P	PANHANDLE	2016	142.4	142.3	
762 WEST RAYMOND (EL TRUENO) WIND U1		TRUENO_UNIT1	WILLACY	WIND-C	COASTAL	2021	116.6	116.6	
763 WEST RAYMOND (EL TRUENO) WIND U2		TRUENO_UNIT2	WILLACY	WIND-C	COASTAL	2021	123.2	123.2	
764 WHIRLWIND ENERGY		WEC_WECG1	FLOYD	WIND-P	PANHANDLE	2007	59.8	57.0	
765 WHITETAIL WIND		EXGNWTL_WIND_1	WEBB	WIND-O	SOUTH	2012	92.3	92.3	
766 WHITE MESA WIND U1		WHMESA_UNIT1	CROCKETT	WIND-O	WEST	2022	152.3	152.3	
767 WHITE MESA 2 WIND U1		WHMESA_UNIT2_23	CROCKETT	WIND-O	WEST	2022	13.9	13.9	
768 WHITE MESA 2 WIND U2		WHMESA_UNIT2_28	CROCKETT	WIND-O	WEST	2022	183.3	183.3	
769 WHITE MESA 2 WIND U3		WHMESA_UNIT3_23	CROCKETT	WIND-O	WEST	2022	18.6	18.6	
770 WHITE MESA 2 WIND U4		WHMESA_UNIT3_28	CROCKETT	WIND-O	WEST	2022	132.5	132.5	
771 WILLOW SPRINGS WIND A		SALVTION_UNIT1	HASKELL	WIND-O	WEST	2017	125.0	125.0	
772 WILLOW SPRINGS WIND B		SALVTION_UNIT2	HASKELL	WIND-O	WEST	2017	125.0	125.0	
773 WILSON RANCH (INFINITY LIVE OAK WIND)		WL_RANCH_UNIT1	SCHLEICHER	WIND-O	WEST	2020	199.5	199.5	
774 WINDTHORST 2 WIND		WNDTHST2_UNIT1	ARCHER	WIND-O	WEST	2014	67.6	67.6	
775 WKN MOZART WIND		MOZART_WIND_1	KENT	WIND-O	WEST	2012	30.0	30.0	
776 WOLF RIDGE WIND	21INR0511	WHTTAIL_WR1	COOKE	WIND-O	NORTH	2008	112.5	112.5	
777 Operational Capacity Total (Wind)							31,562.3	31,494.7	
778									
779 Operational Wind Capacity Sub-total (Coastal Counties)		WIND_OPERATIONAL_C					4,862.3	4,856.1	
780 Wind Peak Average Capacity Percentage (Coastal)		WIND_PEAK_PCT_C	%				100.0	60.0	
781									
782 Operational Wind Capacity Sub-total (Panhndle Counties)		WIND_OPERATIONAL_P					4,410.4	4,407.7	
783 Wind Peak Average Capacity Percentage (Panhndle)		WIND_PEAK_PCT_P	%				100.0	30.0	
784									
785 Operational Wind Capacity Sub-total (Other Counties)		WIND_OPERATIONAL_O					22,289.6	22,230.9	
786 Wind Peak Average Capacity Percentage (Other)		WIND_PEAK_PCT_O	%				100.0	21.0	
787									
788 Operational Resources (Wind) - Synchronized but not Approved for Commercial Operations									
789 AGUAYO WIND U1	20INR0250	AGUAYO_UNIT1	MILLS	WIND-O	NORTH	2023	193.5	192.9	
790 ANCHOR WIND U1	21INR0546	ANCHOR_WIND1	CALLAHAN	WIND-O	WEST	2023	16.0	16.0	
791 ANCHOR WIND U2	21INR0387	ANCHOR_WIND2	CALLAHAN	WIND-O	WEST	2023	98.9	98.9	
792 ANCHOR WIND U3	21INR0539	ANCHOR_WIND3	CALLAHAN	WIND-O	WEST	2023	90.0	90.0	
793 ANCHOR WIND U4	21INR0539	ANCHOR_WIND4	CALLAHAN	WIND-O	WEST	2023	38.7	38.7	
794 ANCHOR WIND U5	22INR0562	ANCHOR_WIND5	CALLAHAN	WIND-O	WEST	2023	19.3	19.3	
795 APPALOOSA RUN WIND U1	20INR0249	APPALOSA_UNIT1	UPTON	WIND-O	WEST	2023	157.9	157.9	
796 APPALOOSA RUN WIND U2	20INR0249	APPALOSA_UNIT2	UPTON	WIND-O	WEST	2023	13.9	13.9	
797 APOGEE WIND U1	21INR0467	APOGEE_UNIT1	THROCKMORTON	WIND-O	WEST	2023	25.0	25.0	
798 APOGEE WIND U2	21INR0467	APOGEE_UNIT2	THROCKMORTON	WIND-O	WEST	2023	14.0	14.0	
799 APOGEE WIND U3	21INR0467	APOGEE_UNIT3	THROCKMORTON	WIND-O	WEST	2023	30.2	30.2	
800 APOGEE WIND U4	21INR0467	APOGEE_UNIT4	THROCKMORTON	WIND-O	WEST	2023	115.0	115.0	
801 APOGEE WIND U5	21INR0467	APOGEE_UNIT5	THROCKMORTON	WIND-O	WEST	2023	110.0	110.0	
802 APOGEE WIND U6	21INR0467	APOGEE_UNIT6	THROCKMORTON	WIND-O	WEST	2023	24.0	24.0	
803 APOGEE WIND U7	21INR0467	APOGEE_UNIT7	THROCKMORTON	WIND-O	WEST	2023	75.0	75.0	
804 BAIRD NORTH WIND U1	20INR0083	BAIRDWND_UNIT1	CALLAHAN	WIND-O	WEST	2023	195.0	195.0	
805 BAIRD NORTH WIND U2	20INR0083	BAIRDWND_UNIT2	CALLAHAN	WIND-O	WEST	2023	145.0	145.0	
806 BLACKJACK CREEK WIND U1	20INR0068	BLACKJAK_UNIT1	BEE	WIND-O	SOUTH	2023	120.0	120.0	
807 BLACKJACK CREEK WIND U2	20INR0068	BLACKJAK_UNIT2	BEE	WIND-O	SOUTH	2023	120.0	120.0	
808 BOARD CREEK WP U1	21INR0324	BOARDCRK_UNIT1	NAVARRO	WIND-O	NORTH	2023	108.8	108.8	
809 BOARD CREEK WP U2	21INR0324	BOARDCRK_UNIT2	NAVARRO	WIND-O	NORTH	2023	190.4	190.4	
810 COYOTE WIND U1	17INR0027b	COYOTE_W_UNIT1	SCURRY	WIND-O	WEST	2023	90.0	90.0	
811 COYOTE WIND U2	17INR0027b	COYOTE_W_UNIT2	SCURRY	WIND-O	WEST	2023	26.6	26.6	
812 COYOTE WIND U3	17INR0027b	COYOTE_W_UNIT3	SCURRY	WIND-O	WEST	2023	126.0	126.0	
813 EL SUAZ RANCH U1	20INR0097	ELSAUZ_UNIT1	WILLACY	WIND-C	COASTAL	2023	153.0	153.0	
814 EL SUAZ RANCH U2	20INR0097	ELSAUZ_UNIT2	WILLACY	WIND-C	COASTAL	2023	148.5	148.5	
815 FOXTROT WIND U1	20INR0129	FOXTROT_UNIT1	BEE	WIND-O	SOUTH	2023	130.2	130.2	
816 FOXTROT WIND U2	20INR0129	FOXTROT_UNIT2	BEE	WIND-O	SOUTH	2023	84.0	84.0	
817 FOXTROT WIND U3	20INR0129	FOXTROT_UNIT3	BEE	WIND-O	SOUTH	2023	54.0	54.0	
818 HARALD (BEARKAT WIND B)	15INR0064b	HARALD_UNIT1	GLASSCOCK	WIND-O	WEST	2023	162.1	162.1	
819 INERTIA WIND U1	22INR0326	INRT_W_UNIT1	HASKELL	WIND-O	WEST	2023	67.7	67.7	

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820 INERTIA WIND U2	22INR0326	INRT_W_UNIT2	HASKELL	WIND-O	WEST	2023	27.7	27.7	
821 INERTIA WIND U3	22INR0326	INRT_W_UNIT3	HASKELL	WIND-O	WEST	2023	205.9	205.9	
822 LACY CREEK WIND U1	18INR0043	LACY_CRK_UNIT1	GLASSCOCK	WIND-O	WEST	2023	135.4	135.4	
823 LACY CREEK WIND U2	18INR0043	LACY_CRK_UNIT2	GLASSCOCK	WIND-O	WEST	2023	15.1	15.1	
824 LACY CREEK WIND U3	18INR0043	LACY_CRK_UNIT3	GLASSCOCK	WIND-O	WEST	2023	138.2	138.2	
825 LACY CREEK WIND U4	18INR0043	LACY_CRK_UNIT4	GLASSCOCK	WIND-O	WEST	2023	12.6	12.6	
826 LAS MAJADAS WIND U1	17INR0035	LMAJADAS_UNIT1	WILLACY	WIND-C	COASTAL	2023	110.0	110.0	
827 LAS MAJADAS WIND U2	17INR0035	LMAJADAS_UNIT2	WILLACY	WIND-C	COASTAL	2023	24.0	24.0	
828 LAS MAJADAS WIND U3	17INR0035	LMAJADAS_UNIT3	WILLACY	WIND-C	COASTAL	2023	138.6	138.6	
829 MARYNEAL WINDPOWER	18INR0031	MARYNEAL_UNIT1	NOLAN	WIND-O	WEST	2023	182.4	182.4	
830 MESTENO WIND	16INR0081	MESTENO_UNIT_1	STARR	WIND-O	SOUTH	2023	201.6	201.6	
831 PRAIRIE HILL WIND U1	19INR0100	PHILLWND_UNIT1	LIMESTONE	WIND-O	NORTH	2023	153.0	153.0	
832 PRAIRIE HILL WIND U2	19INR0100	PHILLWND_UNIT2	LIMESTONE	WIND-O	NORTH	2023	147.0	147.0	
833 PRIDDY WIND U1	16INR0085	PRIDDY_UNIT1	MILLS	WIND-O	NORTH	2023	187.2	187.2	
834 PRIDDY WIND U2	16INR0085	PRIDDY_UNIT2	MILLS	WIND-O	NORTH	2023	115.2	115.2	
835 VORTEX WIND U1	20INR0120	VORTEX_WIND1	THROCKMORTON	WIND-O	WEST	2023	153.6	153.6	
836 VORTEX WIND U2	20INR0120	VORTEX_WIND2	THROCKMORTON	WIND-O	WEST	2023	24.2	24.2	
837 VORTEX WIND U3	20INR0120	VORTEX_WIND3	THROCKMORTON	WIND-O	WEST	2023	158.4	158.4	
838 VORTEX WIND U4	20INR0120	VORTEX_WIND4	THROCKMORTON	WIND-O	WEST	2023	14.0	14.0	
839 WHITEHORSE WIND U1	19INR0080	WH_WIND_UNIT1	FISHER	WIND-O	WEST	2023	209.4	209.4	
840 WHITEHORSE WIND U2	19INR0080	WH_WIND_UNIT2	FISHER	WIND-O	WEST	2023	209.5	209.5	
841 WILDWIND U1	20INR0033	WILDWIND_UNIT1	COOKE	WIND-O	NORTH	2023	18.4	18.4	
842 WILDWIND U2	20INR0033	WILDWIND_UNIT2	COOKE	WIND-O	NORTH	2023	48.0	48.0	
843 WILDWIND U3	20INR0033	WILDWIND_UNIT3	COOKE	WIND-O	NORTH	2023	6.3	6.3	
844 WILDWIND U4	20INR0033	WILDWIND_UNIT4	COOKE	WIND-O	NORTH	2023	54.6	54.6	
845 WILDWIND U5	20INR0033	WILDWIND_UNIT5	COOKE	WIND-O	NORTH	2023	52.8	52.8	
846 YOUNG WIND U1	21INR0401	YNG_WND_UNIT1	YOUNG	WIND-O	WEST	2023	197.4	197.4	
847 YOUNG WIND U2	21INR0401	YNG_WND_UNIT2	YOUNG	WIND-O	WEST	2023	152.3	152.3	
848 YOUNG WIND U3	21INR0401	YNG_WND_UNIT3	YOUNG	WIND-O	WEST	2023	149.5	149.5	
849 Operational Capacity - Synchronized but not Approved for Commercial Operations Total (Wind)							6,184.9	6,184.4	
850									
851 Operational Wind Capacity Synchronized but not Approved for Commercial Operations Sub-total (Coastal Counties)	WIND_SYNCHRONIZED_C						574.1	574.1	
852 Wind Peak Average Capacity Percentage (Coastal)	WIND_SYNC_PEAK_PCT_						100.0	60.0	
853									
854 Operational Wind Capacity Synchronized but not Approved for Commercial Operations Sub-total (Panhandle Counti	WIND_SYNCHRONIZED_P						-	-	
855 Wind Peak Average Capacity Percentage (Panhandle)	WIND_SYNC_PEAK_PCT_						100.0	30.0	
856									
857 Operational Wind Capacity Synchronized but not Approved for Commercial Operations Sub-total (Other Counties)	WIND_SYNCHRONIZED_O						5,610.8	5,610.3	
858 Wind Peak Average Capacity Percentage (Other)	WIND_SYNC_PEAK_PCT_						100.0	21.0	
859									
860 Operational Resources (Solar)									
861 ACACIA SOLAR	ACACIA_UNIT_1	PRESIDIO	SOLAR	WEST	2012		10.0	10.0	
862 ALEXIS SOLAR	DG_ALEXIS_ALEXIS	BROOKS	SOLAR	SOUTH	2019		10.0	10.0	
863 ANSON SOLAR U1	ANSON1_UNIT1	JONES	SOLAR	WEST	2022		100.8	100.0	
864 ANSON SOLAR U2	ANSON1_UNIT2	JONES	SOLAR	WEST	2022		100.8	100.0	
865 ARAGORN SOLAR	ARAGORN_UNIT1	CULBERSON	SOLAR	WEST	2021		188.2	185.0	
866 AZURE SKY SOLAR U1	AZURE_SOLAR1	HASKELL	SOLAR	WEST	2021		74.9	74.9	
867 AZURE SKY SOLAR U2	AZURE_SOLAR2	HASKELL	SOLAR	WEST	2021		153.5	153.5	
868 BECK 1	DG_CECSolar_DG_BEC	BEXAR	SOLAR	SOUTH	2016		1.0	1.0	
869 BHE SOLAR PEARL PROJECT (SIRIUS 2)	SIRIUS_UNIT2	PECOS	SOLAR	WEST	2017		50.0	49.1	
870 BLUE WING 1 SOLAR	DG_BROOK_1UNIT	BEXAR	SOLAR	SOUTH	2010		7.6	7.6	
871 BLUE WING 2 SOLAR	DG_ELMENT_1UNIT	BEXAR	SOLAR	SOUTH	2010		7.3	7.3	
872 BLUEBELL SOLAR (CAPRICORN RIDGE SOLAR)	CAPRIDG4_BB_PV	STERLING	SOLAR	WEST	2019		30.0	30.0	
873 BLUEBELL SOLAR II 1 (CAPRICORN RIDGE 4)	CAPRIDG4_BB2_PV1	STERLING	SOLAR	WEST	2021		100.0	100.0	
874 BLUEBELL SOLAR II 2 (CAPRICORN RIDGE 4)	CAPRIDG4_BB2_PV2	STERLING	SOLAR	WEST	2021		15.0	15.0	
875 BNB LAMESA SOLAR (PHASE I)	LMESASLR_UNIT1	DAWSON	SOLAR	WEST	2018		101.6	101.6	
876 BNB LAMESA SOLAR (PHASE II)	LMESASLR_IVORY	DAWSON	SOLAR	WEST	2018		50.0	50.0	
877 BOVINE SOLAR LLC	DG_BOVINE_BOVINE	AUSTIN	SOLAR	SOUTH	2018		5.0	5.0	
878 BOVINE SOLAR LLC	DG_BOVINE2_BOVINE2	AUSTIN	SOLAR	SOUTH	2018		5.0	5.0	
879 BRIGHTSIDE SOLAR	BRIGHTSD_UNIT1	BEE	SOLAR	SOUTH	2022		53.4	50.0	
880 BRONSON SOLAR I	DG_BRNSN_BRNSN	FORT BEND	SOLAR	HOUSTON	2018		5.0	5.0	
881 BRONSON SOLAR II	DG_BRNSN2_BRNSN2	FORT BEND	SOLAR	HOUSTON	2018		5.0	5.0	
882 CASCADE SOLAR I	DG_CASCADE_CASCADE	WHARTON	SOLAR	SOUTH	2018		5.0	5.0	
883 CASCADE SOLAR II	DG_CASCADE2_CASCADE	WHARTON	SOLAR	SOUTH	2018		5.0	5.0	
884 CASTLE GAP SOLAR	CASL_GAP_UNIT1	UPTON	SOLAR	WEST	2018		180.0	180.0	
885 CATAN SOLAR	DG_CS10_CATAN	KARNES	SOLAR	SOUTH	2020		10.0	10.0	
886 CHISUM SOLAR	DG_CHISUM_CHISUM	LAMAR	SOLAR	NORTH	2018		10.0	10.0	
887 COMMERCE_SOLAR	DG_X443PV1_SWRI_PV1	BEXAR	SOLAR	SOUTH	2019		5.0	5.0	
888 CONIGLIO SOLAR	CONIGLIO_UNIT1	FANNIN	SOLAR	NORTH	2021		125.7	125.7	
889 CORAZON SOLAR PHASE I	CORAZON_UNIT1	WEBB	SOLAR	SOUTH	2021		202.6	202.6	
890 DANCIGER SOLAR U1	DAG_UNIT1	BRAZORIA	SOLAR	COASTAL	2023		101.4	100.0	
891 DANCIGER SOLAR U2	DAG_UNIT2	BRAZORIA	SOLAR	COASTAL	2023		101.4	100.0	
892 EAST BLACKLAND SOLAR (PFLUGERVILLE SOLAR)	E_BLACK_UNIT_1	TRAVIS	SOLAR	SOUTH	2021		144.0	144.0	
893 EDDY SOLAR II	DG_EDDYII_EDDYII	MCLENNAN	SOLAR	NORTH	2018		10.0	10.0	
894 ELARA SOLAR	ELARA_SL_UNIT1	FRIO	SOLAR	SOUTH	2022		132.4	132.4	
895 EMERALD GROVE SOLAR (PECOS SOLAR POWER I)	EGROVESL_UNIT1	CRANE	SOLAR	WEST	2023		109.5	108.0	
896 EUNICE SOLAR U1	EUNICE_PV1	ANDREWS	SOLAR	WEST	2021		189.6	189.6	
897 EUNICE SOLAR U2	EUNICE_PV2	ANDREWS	SOLAR	WEST	2021		237.1	237.1	
898 FIFTH GENERATION SOLAR 1	DG_FIFTHGS1_FGSOLAR	TRAVIS	SOLAR	SOUTH	2016		6.8	6.8	
899 FOWLER RANCH	FWLR_SLR_UNIT1	CRANE	SOLAR	WEST	2020		152.5	150.0	
900 FS BARILLA SOLAR-PECOS	HOVEY_UNIT1	PECOS	SOLAR	WEST	2015		22.0	22.0	
901 FS EAST PECOS SOLAR	BOOTLEG_UNIT1	PECOS	SOLAR	WEST	2017		126.0	121.1	
902 GALLOWAY 1 SOLAR	GALLOWAY_SOLAR1	CONCHO	SOLAR	WEST	2021		251.4	250.0	
903 GREASEWOOD SOLAR 1	GREASWOD_UNIT1	PECOS	SOLAR	WEST	2021		126.3	124.6	
904 GREASEWOOD SOLAR 2	GREASWOD_UNIT2	PECOS	SOLAR	WEST	2021		132.2	130.4	
905 GRIFFIN SOLAR	DG_GRIFFIN_GRIFFIN	MCLENNAN	SOLAR	NORTH	2019		5.0	5.0	
906 HIGHWAY 56	DG_HWY56_HWY56	GRAYSON	SOLAR	NORTH	2017		5.3	5.3	
907 HM SEALY SOLAR 1	DG_SEALY_1UNIT	AUSTIN	SOLAR	SOUTH	2015		1.6	1.6	
908 HOLSTEIN SOLAR 1	HOLSTEIN_SOLAR1	NOLAN	SOLAR	WEST	2020		102.2	102.2	
909 HOLSTEIN SOLAR 2	HOLSTEIN_SOLAR2	NOLAN	SOLAR	WEST	2020		102.3	102.3	
910 IMPACT SOLAR	IMPACT_UNIT1	LAMAR	SOLAR	NORTH	2021		198.5	198.5	
911 JUNO SOLAR PHASE I	JUNO_UNIT1	BORDEN	SOLAR	WEST	2021		162.1	162.1	
912 JUNO SOLAR PHASE II	JUNO_UNIT2	BORDEN	SOLAR	WEST	2021		143.5	143.5	
913 KELLAM SOLAR	KELAM_SL_UNIT1	VAN ZANDT	SOLAR	NORTH	2020		59.8	59.8	
914 LAMPWICK SOLAR	DG_LAMPWICK_LAMPWI	MENARD	SOLAR	WEST	2019		7.5	7.5	
915 LAPETUS SOLAR	LAPETUS_UNIT_1	ANDREWS	SOLAR	WEST	2020		100.7	100.7	
916 LEON	DG_LEON_LEON	HUNT	SOLAR	NORTH	2017		10.0	10.0	
917 LILY SOLAR	LILY_SOLAR1	KAUFMAN	SOLAR	NORTH	2021		147.6	147.6	
918 LONGBOW SOLAR	LON_SOLAR1	BRAZORIA	SOLAR	HOUSTON	2022		78.2	77.0	
919 LONG DRAW SOLAR U1	LGDRAW_S_UNIT1_1	BORDEN	SOLAR	WEST	2021		98.5	98.5	
920 LONG DRAW SOLAR U2	LGDRAW_S_UNIT1_2	BORDEN	SOLAR	WEST	2021		128.3	128.3	
921 MARLIN	DG_MARLIN_MARLIN	FALLS	SOLAR	NORTH	2017		5.3	5.3	
922 MARS SOLAR (DG)	DG_MARS_MARS	WEBB	SOLAR	SOUTH	2019		10.0	10.0	
923 MISAE SOLAR U1	MISAE_UNIT1	CHILDRESS	SOLAR	PANHANDLE	2021		121.4	121.4	
924 MISAE SOLAR U2	MISAE_UNIT2	CHILDRESS	SOLAR	PANHANDLE	2021		118.6	118.6	
925 NEBULA SOLAR (RAYOS DEL SOL) U1	NEBULA_UNIT1	CAMERON	SOLAR	COASTAL	2022		137.5	137.5	
926 NOBLE SOLAR U1	NOBLESRL_SOLAR1	DENTON	SOLAR	NORTH	2022		148.8	146.7	
927 NOBLE SOLAR U2	NOBLESRL_SOLAR2	DENTON	SOLAR	NORTH	2022		130.2	128.3	
928 NORTH GAINESVILLE	DG_NGNSVL_NGAINESV	COOKE	SOLAR	NORTH	2017		5.2	5.2	
929 OBERON SOLAR	OBERON_UNIT_1	ECTOR	SOLAR	WEST	2020		180.0	180.0	
930 OCI ALAMO 1 SOLAR	OCI_ALM1_UNIT1	BEXAR	SOLAR	SOUTH	2013		39.2	39.2	
931 OCI ALAMO 2 SOLAR-ST. HEDWIG	DG_STHWG_UNIT1	BEXAR	SOLAR	SOUTH	2014		4.4	4.4	
932 OCI ALAMO 3-WALZEM SOLAR	DG_WALZM_UNIT1	BEXAR	SOLAR	SOUTH	2014		5.5	5.5	
933 OCI ALAMO 4 SOLAR-BRACKETVILLE	ECLIPSE_UNIT1	KINNEY	SOLAR	SOUTH	2014		37.6	37.6	
934 OCI ALAMO 5 (DOWNIE RANCH)	HELIOS_UNIT1	UVALDE	SOLAR	SOUTH	2015		100.0	100.0	
935 OCI ALAMO 6 (SIRIUS/WEST TEXAS)	SIRIUS_UNIT1	PECOS	SOLAR	WEST	2017		110.2	110.2	
936 OCI ALAMO 7 (PAINT CREEK)	SOLARA_UNIT1	HASKELL	SOLAR	WEST	2016		112.0	112.0	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
937 PHOEBE SOLAR 1		PHOEBE_UNIT1	WINKLER	SOLAR	WEST	2019	125.0	125.1	
938 PHOEBE SOLAR 2		PHOEBE_UNIT2	WINKLER	SOLAR	WEST	2019	128.0	128.1	
939 PHOENIX SOLAR		PHOENIX_UNIT1	FANNIN	SOLAR	NORTH	2021	83.9	83.9	
940 POWERFIN KINGSBERY		DG_PFK_PFKPV	TRAVIS	SOLAR	SOUTH	2017	2.6	2.6	
941 PROSPERO SOLAR 1 U1		PROSPERO_UNIT1	ANDREWS	SOLAR	WEST	2020	153.6	153.6	
942 PROSPERO SOLAR 1 U2		PROSPERO_UNIT2	ANDREWS	SOLAR	WEST	2020	150.0	150.0	
943 PROSPERO SOLAR 2 U1		PRSPERO2_UNIT1	ANDREWS	SOLAR	WEST	2021	126.5	126.5	
944 PROSPERO SOLAR 2 U2		PRSPERO2_UNIT2	ANDREWS	SOLAR	WEST	2021	126.4	126.4	
945 QUEEN SOLAR PHASE I		QUEEN_SL_SOLAR1	UPTON	SOLAR	WEST	2020	102.5	102.5	
946 QUEEN SOLAR PHASE I		QUEEN_SL_SOLAR2	UPTON	SOLAR	WEST	2020	102.5	102.5	
947 QUEEN SOLAR PHASE II		QUEEN_SL_SOLAR3	UPTON	SOLAR	WEST	2020	97.5	97.5	
948 QUEEN SOLAR PHASE II		QUEEN_SL_SOLAR4	UPTON	SOLAR	WEST	2020	107.5	107.5	
949 RAMBLER SOLAR		RAMBLER_UNIT1	TOM GREEN	SOLAR	WEST	2020	211.2	200.0	
950 RE ROSEROCK SOLAR 1		REROCK_UNIT1	PECOS	SOLAR	WEST	2016	78.8	78.8	
951 RE ROSEROCK SOLAR 2		REROCK_UNIT2	PECOS	SOLAR	WEST	2016	78.8	78.8	
952 REDBARN SOLAR 1 (RE MAPLEWOOD 2A SOLAR)		REDBARN_UNIT_1	PECOS	SOLAR	WEST	2021	222.0	222.0	
953 REDBARN SOLAR 2 (RE MAPLEWOOD 2B SOLAR)		REDBARN_UNIT_2	PECOS	SOLAR	WEST	2021	28.0	28.0	
954 RENEWABLE ENERGY ALTERNATIVES-CCS1		DG_COSERVSS_CSS1	DENTON	SOLAR	NORTH	2015	2.0	2.0	
955 RIGGINS (SE BUCKTHORN WESTEX SOLAR)		RIGGINS_UNIT1	PECOS	SOLAR	WEST	2018	155.4	150.0	
956 RIPPEY SOLAR		RIPPEY_UNIT1	COOKE	SOLAR	NORTH	2020	59.8	59.8	
957 SOLAIREHOLMAN 1		LASSO_UNIT1	BREWSTER	SOLAR	WEST	2018	50.0	50.0	
958 SP-TX-12-PHASE B		SPTX12B_UNIT1	UPTON	SOLAR	WEST	2017	157.5	157.5	
959 STERLING		DG_STRLING_STRLING	HUNT	SOLAR	NORTH	2018	10.0	10.0	
960 STRATEGIC SOLAR 1		STRATEGC_UNIT1	ELLIS	SOLAR	NORTH	2022	135.0	135.0	
961 SUNEDISON RABEL ROAD SOLAR		DG_VALL1_1UNIT	BEXAR	SOLAR	SOUTH	2012	9.9	9.9	
962 SUNEDISON VALLEY ROAD SOLAR		DG_VALL2_1UNIT	BEXAR	SOLAR	SOUTH	2012	9.9	9.9	
963 SUNEDISON CPS3 SOMERSET 1 SOLAR		DG_SOME1_1UNIT	BEXAR	SOLAR	SOUTH	2012	5.6	5.6	
964 SUNEDISON SOMERSET 2 SOLAR		DG_SOME2_1UNIT	BEXAR	SOLAR	SOUTH	2012	5.0	5.0	
965 TAYGETE SOLAR 1 U1		TAYGETE_UNIT1	PECOS	SOLAR	WEST	2021	125.9	125.9	
966 TAYGETE SOLAR 1 U2		TAYGETE_UNIT2	PECOS	SOLAR	WEST	2021	128.9	128.9	
967 TITAN SOLAR (IP TITAN) U1		TI_SOLAR_UNIT1	CULBERSON	SOLAR	WEST	2021	136.8	136.8	
968 TITAN SOLAR (IP TITAN) U2		TI_SOLAR_UNIT2	CULBERSON	SOLAR	WEST	2021	131.1	131.1	
969 TPE ERATH SOLAR		DG_ERATH_ERATH21	ERATH	SOLAR	NORTH	2021	10.0	10.0	
970 VANCOURT SOLAR		VANCOURT_UNIT1	CAMERON	SOLAR	COASTAL	2023	45.7	45.7	
971 VISION SOLAR 1		VISION_UNIT1	NAVARRO	SOLAR	NORTH	2022	129.2	127.0	
972 WAGYU SOLAR		WGU_UNIT1	BRAZORIA	SOLAR	COASTAL	2021	120.0	120.0	
973 WALNUT SPRINGS		DG_WLNTSPRG_1UNIT	BOSQUE	SOLAR	NORTH	2016	10.0	10.0	
974 WAYMARK SOLAR		WAYMARK_UNIT1	UPTON	SOLAR	WEST	2018	182.0	182.0	
975 WEBBERVILLE SOLAR		WEBBER_S_WSP1	TRAVIS	SOLAR	SOUTH	2011	26.7	26.7	
976 WEST MOORE II		DG_WMOOREII_WMOOR	GRAYSON	SOLAR	NORTH	2018	5.0	5.0	
977 WEST OF PECOS SOLAR		W_PECOS_UNIT1	REEVES	SOLAR	WEST	2019	100.0	100.0	
978 WESTORIA SOLAR U1		WES_UNIT1	BRAZORIA	SOLAR	COASTAL	2022	101.6	101.6	
979 WESTORIA SOLAR U2		WES_UNIT2	BRAZORIA	SOLAR	COASTAL	2022	101.6	101.6	
980 WHITESBORO		DG_WBORO_WHTSBOR	GRAYSON	SOLAR	NORTH	2017	5.0	5.0	
981 WHITESBORO II		DG_WBOROI_WHBORO	GRAYSON	SOLAR	NORTH	2017	5.0	5.0	
982 WHITEWRIGHT		DG_WHTRT_WHTRGHT	FANNIN	SOLAR	NORTH	2017	10.0	10.0	
983 WHITNEY SOLAR		DG_WHITNEY_SOLAR1	BOSQUE	SOLAR	NORTH	2017	10.0	10.0	
984 YELLOW JACKET SOLAR		DG_YLWJACKET_YLWJA	BOSQUE	SOLAR	NORTH	2018	5.0	5.0	
985 Operational Capacity Total (Solar)							9,991.3	9,941.9	
986 Solar Peak Average Capacity Percentage		SOLAR_PEAK_PCT	%				100.0	79.0	
987									
988 Operational Resources (Solar) - Synchronized but not Approved for Commercial Operations									
989 BIG STAR SOLAR U1	21INR0413	BIG_STAR_UNIT1	BASTROP	SOLAR	SOUTH	2023	132.3	130.0	
990 BIG STAR SOLAR U2	21INR0413	BIG_STAR_UNIT2	BASTROP	SOLAR	SOUTH	2023	70.8	70.0	
991 BLUE JAY SOLAR I	21INR0538	BLUEJAY_UNIT1	GRIMES	SOLAR	NORTH	2023	69.0	69.0	
992 BLUE JAY SOLAR II	19INR0085	BLUEJAY_UNIT2	GRIMES	SOLAR	NORTH	2023	141.0	141.0	
993 BPL FILES SOLAR	20INR0164	FILESLR_PV1	HILL	SOLAR	NORTH	2023	146.1	145.0	
994 BUFFALO CREEK (OLD 300 SOLAR CENTER) U1	21INR0406	BCK_UNIT1	FORT BEND	SOLAR	HOUSTON	2023	217.5	217.5	
995 BUFFALO CREEK (OLD 300 SOLAR CENTER) U2	21INR0406	BCK_UNIT2	FORT BEND	SOLAR	HOUSTON	2023	221.3	221.3	
996 CROWN SOLAR	21INR0323	CRWN_SLR_UNIT1	FALLS	SOLAR	NORTH	2023	101.3	100.7	
997 FIGHTING JAYS SOLAR U1	21INR0278	JAY_UNIT1	FORT BEND	SOLAR	HOUSTON	2023	179.5	179.6	
998 FIGHTING JAYS SOLAR U2	21INR0278	JAY_UNIT2	FORT BEND	SOLAR	HOUSTON	2023	171.8	171.9	
999 GOLINDA SOLAR	21INR0434	GOLINDA_UNIT1	FALLS	SOLAR	NORTH	2023	101.1	100.5	
1000 GRIZZLY RIDGE SOLAR	21INR0375	GRIZZLY_SOLAR1	HAMILTON	SOLAR	NORTH	2023	101.7	100.0	
1001 HOVEY (BARILLA SOLAR 1B)	12INR0059b	HOVEY_UNIT2	PECOS	SOLAR	WEST	2023	7.4	7.4	
1002 JADE SOLAR UNIT 1	22INR0360	JADE_SLR_UNIT1	SCURRY	SOLAR	WEST	2023	158.8	158.0	
1003 JADE SOLAR UNIT 2	22INR0360	JADE_SLR_UNIT2	SCURRY	SOLAR	WEST	2023	162.4	162.0	
1004 MCLEAN (SHAKES) SOLAR	19INR0073	MCLNSLR_UNIT1	DIMMIT	SOLAR	SOUTH	2023	207.4	200.0	
1005 MUSTANG CREEK SOLAR U1	18INR0050	MUSTNGCK_SOLAR1	JACKSON	SOLAR	SOUTH	2023	60.2	60.0	
1006 MUSTANG CREEK SOLAR U2	18INR0050	MUSTNGCK_SOLAR2	JACKSON	SOLAR	SOUTH	2023	90.3	90.0	
1007 MYRTLE SOLAR U1	19INR0041	MYR_UNIT1	BRAZORIA	SOLAR	COASTAL	2023	171.6	167.2	
1008 MYRTLE SOLAR U2	19INR0041	MYR_UNIT2	BRAZORIA	SOLAR	COASTAL	2023	149.6	145.8	
1009 PISGAH RIDGE SOLAR U1	22INR0254	PISGAH_SOLAR1	NAVARRO	SOLAR	NORTH	2023	189.4	186.5	
1010 PISGAH RIDGE SOLAR U2	22INR0254	PISGAH_SOLAR2	NAVARRO	SOLAR	NORTH	2023	64.4	63.5	
1011 PLAINVIEW SOLAR (RAMSEY SOLAR) U1	20INR0130	PLN_UNIT1	WHARTON	SOLAR	SOUTH	2023	270.0	257.0	
1012 PLAINVIEW SOLAR (RAMSEY SOLAR) U2	20INR0130	PLN_UNIT2	WHARTON	SOLAR	SOUTH	2023	270.0	257.0	
1013 RADIAN SOLAR U1	21INR0205	RADN_SLR_UNIT1	BROWN	SOLAR	NORTH	2023	161.4	158.9	
1014 RADIAN SOLAR U2	21INR0205	RADN_SLR_UNIT2	BROWN	SOLAR	NORTH	2023	166.0	162.9	
1015 RATLIFF SOLAR (CONCHO VALLEY SOLAR)	21INR0384	RATLIFF_SOLAR1	TOM GREEN	SOLAR	WEST	2023	162.4	159.8	
1016 ROSELAND SOLAR U1	20INR0205	ROSELAND_SOLAR1	FALLS	SOLAR	NORTH	2023	254.0	250.0	
1017 ROSELAND SOLAR U2	20INR0205	ROSELAND_SOLAR2	FALLS	SOLAR	NORTH	2023	167.9	165.3	
1018 ROSELAND SOLAR U3	22INR0506	ROSELAND_SOLAR3	FALLS	SOLAR	NORTH	2023	86.1	84.7	
1019 ROWLAND SOLAR I	19INR0131	ROW_UNIT1	FORT BEND	SOLAR	HOUSTON	2023	101.7	100.0	
1020 TAYGETE II SOLAR U1	21INR0233	TAYGETE2_UNIT1	PECOS	SOLAR	WEST	2023	101.9	101.9	
1021 TAYGETE II SOLAR U2	21INR0233	TAYGETE2_UNIT2	PECOS	SOLAR	WEST	2023	101.9	101.9	
1022 TAVENER (FORT BEND SOLAR)	18INR0053	TAV_UNIT1	FORT BEND	SOLAR	HOUSTON	2023	143.6	143.6	
1023 SAMSON SOLAR 1 U1	21INR0221	SAMSON_1_G1	LAMAR	SOLAR	NORTH	2023	128.4	125.0	
1024 SAMSON SOLAR 1 U2	21INR0221	SAMSON_1_G2	LAMAR	SOLAR	NORTH	2023	128.4	125.0	
1025 SAMSON SOLAR 3 U1	21INR0491	SAMSON_3_G1	LAMAR	SOLAR	NORTH	2023	128.4	125.0	
1026 SAMSON SOLAR 3 U2	21INR0491	SAMSON_3_G2	LAMAR	SOLAR	NORTH	2023	128.4	125.0	
1027 SUN VALLEY U1	19INR0169	SUNVASLR_UNIT1	HILL	SOLAR	NORTH	2023	165.8	165.8	
1028 SUN VALLEY U2	19INR0169	SUNVASLR_UNIT2	HILL	SOLAR	NORTH	2023	86.2	86.2	
1029 Operational Capacity - Synchronized but not Approved for Commercial Operations Total (Solar)							5,667.5	5,581.9	
1030 Solar Peak Average Capacity Percentage		SOLAR_SYNC_PEAK_PC	%				100.0	79.0	
1031									
1032 Operational Resources (Storage)									
1033 AZURE SKY BESS		AZURE_BESS1	HASKELL	STORAGE	WEST	2022	77.6	77.6	
1034 BAT CAVE		BATCAVE_BES1	MASON	STORAGE	SOUTH	2021	100.5	100.5	
1035 BLUE SUMMIT BATTERY		BLSUMMIT_BATTERY	WILBARGER	STORAGE	WEST	2017	30.0	30.0	
1036 BRP ALVIN (DGR)		ALVIN_UNIT1	BRAZORIA	STORAGE	COASTAL	2022	10.0	10.0	
1037 BRP ANGELTON (DGR)		ANGLETON_UNIT1	BRAZORIA	STORAGE	COASTAL	2022	10.0	10.0	
1038 BRP BRAZORIA		BRAZORIA_UNIT1	BRAZORIA	STORAGE	COASTAL	2020	10.0	10.0	
1039 BRP DICKINSON (DGR)		DICKNSON_UNIT1	GALVESTON	STORAGE	HOUSTON	2022	10.0	10.0	
1040 BRP HEIGHTS (DGR)		HEIGHTTN_UNIT1	GALVESTON	STORAGE	HOUSTON	2022	10.0	10.0	
1041 BRP LOOP 463 (DGR)		L_463S_UNIT1	VICTORIA	STORAGE	SOUTH	2023	10.0	10.0	
1042 BRP LOPENO (DGR)		BRP_LOP1_UNIT1	ZAPATA	STORAGE	SOUTH	2022	10.0	9.9	
1043 BRP MAGNOLIA (DGR)		MAGNO_TN_UNIT1	GALVESTON	STORAGE	HOUSTON	2022	10.0	10.0	
1044 BRP ODESSA SW (DGR)		ODESW_UNIT1	ECTOR	STORAGE	WEST	2020	10.0	9.9	
1045 BRP PUEBLO I (DGR)		BRP_PBL1_UNIT1	MAVERICK	STORAGE	SOUTH	2022	10.0	9.9	
1046 BRP PUEBLO II (DGR)		BRP_PBL2_UNIT1	MAVERICK	STORAGE	SOUTH	2022	10.0	9.9	
1047 BRP RANCHTOWN (DGR)		BRP_RNC1_UNIT1	BEXAR	STORAGE	SOUTH	2021	10.0	9.9	
1048 BRP SWEENY (DGR)		SWEENY_UNIT1	BRAZORIA	STORAGE	COASTAL	2022	10.0	10.0	
1049 BRP ZAPATA I (DGR)		BRP_ZPT1_UNIT1	ZAPATA	STORAGE	SOUTH	2022	10.0	9.9	
1050 BRP ZAPATA II (DGR)		BRP_ZPT2_UNIT1	ZAPATA	STORAGE	SOUTH	2022	10.0	9.9	
1051 BYRD RANCH STORAGE		BYRDR_ES_BESS1	BRAZORIA	STORAGE	COASTAL	2022	50.6	50.0	
1052 CASTLE GAP BATTERY		CASL_GAP_BATTERY1	UPTON	STORAGE	WEST	2018	9.9	9.9	
1053 CATARINA BESS (DGR)		CATARINA_BESS	DIMMIT	STORAGE	SOUTH	2022	10.0	9.9	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
1054 CEDARVALE BESS (DGR)		CEDRVALE_BESS	REEVES	STORAGE	WEST	2022	10.0	9.9	
1055 CHISHOLM GRID		CHISMGRD_BES1	TARRANT	STORAGE	NORTH	2021	101.7	100.0	
1056 COMMERCE ST ESS (DGR)		X443ESS1_SWRI	BEXAR	STORAGE	SOUTH	2020	10.0	10.0	
1057 COYOTE SPRINGS BESS (DGR)		COYOTSPR_BESS	REEVES	STORAGE	WEST	2022	10.0	9.9	
1058 CROSSETT POWER U1		CROSSETT_BES1	CRANE	STORAGE	WEST	2022	101.5	100.0	
1059 CROSSETT POWER U2		CROSSETT_BES2	CRANE	STORAGE	WEST	2022	101.5	100.0	
1060 DECORDOVA BESS U1		DCSES_BES1	HOOD	STORAGE	NORTH	2022	67.3	66.5	
1061 DECORDOVA BESS U2		DCSES_BES2	HOOD	STORAGE	NORTH	2022	67.3	66.5	
1062 DECORDOVA BESS U3		DCSES_BES3	HOOD	STORAGE	NORTH	2022	64.2	63.5	
1063 DECORDOVA BESS U4		DCSES_BES4	HOOD	STORAGE	NORTH	2022	64.2	63.5	
1064 ENDURANCE PARK STORAGE		ENDPARKS_ESS1	SCURRY	STORAGE	WEST	2022	51.5	50.0	
1065 EUNICE STORAGE		EUNICE_BES1	ANDREWS	STORAGE	WEST	2021	40.3	40.3	
1066 FAULKNER BESS (DGR)		FAULKNER_BESS	REEVES	STORAGE	WEST	2022	10.0	9.9	
1067 FLAT TOP BATTERY (DGR)		FLAT_TOP_BESS1	REEVES	STORAGE	WEST	2023	9.9	9.9	
1068 FLOWER VALLEY BATTERY (DGR)		FLVABES1_FLATU1	REEVES	STORAGE	WEST	2021	9.9	9.9	
1069 FLOWER VALLEY II BATT		FLOWERII_BESS1	REEVES	STORAGE	WEST	2022	101.5	100.0	
1070 GAMBIT BATTERY		GAMBIT_BESS1	BRAZORIA	STORAGE	COASTAL	2021	102.4	100.0	
1071 HOEFSROAD BESS (DGR)		HRBESS_BESS	REEVES	STORAGE	WEST	2020	2.0	2.0	
1072 HOLCOMB BESS (DGR)		HOLCOMB_BESS	LA SALLE	STORAGE	SOUTH	2023	10.0	9.9	
1073 INADALE ESS		INDL_ESS	NOLAN	STORAGE	WEST	2018	9.9	9.9	
1074 JOHNSON CITY BESS (DGR)		JC_BAT_UNIT_1	BLANCO	STORAGE	SOUTH	2020	2.3	2.3	
1075 KINGSBERY ENERGY STORAGE SYSTEM		DG_KB_ESS_KB_ESS	TRAVIS	STORAGE	SOUTH	2017	1.5	1.5	
1076 LILY STORAGE		LILY_BESS1	KAUFMAN	STORAGE	NORTH	2021	51.7	51.7	
1077 LONESTAR BESS (DGR)		LONESTAR_BESS	WARD	STORAGE	WEST	2022	10.0	9.9	
1078 MADERO GRID U1		MADERO_UNIT1	HIDALGO	STORAGE	SOUTH	2023	100.8	100.0	
1079 MADERO GRID U2 (IGNACIO GRID)		MADERO_UNIT2	HIDALGO	STORAGE	SOUTH	2023	100.8	100.0	
1080 MU ENERGY STORAGE SYSTEM		DG_MU_ESS_MU_ESS	TRAVIS	STORAGE	SOUTH	2018	1.5	1.5	
1081 NOBLE STORAGE U1		NOBLES1R_BESS1	DENTON	STORAGE	NORTH	2022	63.5	62.5	
1082 NOBLE STORAGE U2		NOBLES1R_BESS2	DENTON	STORAGE	NORTH	2022	63.5	62.5	
1083 NOTREES BATTERY FACILITY		NWF_NBS	WINKLER	STORAGE	WEST	2013	36.0	33.7	
1084 NORTH COLUMBIA (ROUGHNECK STORAGE)		NCO_ESS1	BRAZORIA	STORAGE	COASTAL	2022	51.8	50.0	
1085 NORTH FORK		NF_BRP_BES1	WILLIAMSON	STORAGE	SOUTH	2021	100.5	100.5	
1086 PORT LAVACA BATTERY (DGR)		PRTLAVS_BESS1	CALHOUN	STORAGE	COASTAL	2020	9.9	9.9	
1087 PROSPECT STORAGE (DGR)		WCOLDG_BSS_U1	BRAZORIA	STORAGE	COASTAL	2020	9.9	9.9	
1088 PYRON ESS		PYR_ESS	SCURRY	STORAGE	WEST	2018	9.9	9.9	
1089 RABBIT HILL ENERGY STORAGE PROJECT (DGR)		RHESS2_ESS_1	WILLIAMSON	STORAGE	SOUTH	2020	9.9	9.9	
1090 RATTLESNAKE BESS (DGR)		RTLSNAKE_BESS	WARD	STORAGE	WEST	2022	10.0	9.9	
1091 REPUBLIC ROAD STORAGE		RPUBRDS_ESS1	ROBERTSON	STORAGE	NORTH	2022	51.8	50.0	
1092 SADDLEBACK BESS (DGR)		SADLBACK_BESS	REEVES	STORAGE	WEST	2022	10.0	9.9	
1093 SARAGOSA BESS (DGR)		SGSA_BESS1	REEVES	STORAGE	WEST	2022	10.0	9.9	
1094 SCREWBEAN BESS (DGR)		SBEAN_BESS	CULBERSON	STORAGE	WEST	2023	10.0	9.9	
1095 SILICON HILL STORAGE U1		SLCNHLS_ESS1	TRAVIS	STORAGE	SOUTH	2023	51.8	50.0	
1096 SILICON HILL STORAGE U2		SLCNHLS_ESS2	TRAVIS	STORAGE	SOUTH	2023	51.8	50.0	
1097 SNYDER (DGR)		SNY_BESS_UNIT1	SCURRY	STORAGE	WEST	2021	10.0	9.9	
1098 SWEETWATER BESS (DGR)		SWT_BESS_UNIT1	NOLAN	STORAGE	WEST	2021	10.0	9.9	
1099 SWOOSE BATTERY (PYOTE) (DGR)		SWOOSE1_SWOOSEU1	WARD	STORAGE	WEST	2021	9.9	9.9	
1100 SWOOSE II		SWOOSEII_BESS1	WARD	STORAGE	WEST	2022	101.5	100.0	
1101 TOS BATTERY STORAGE (DGR)		TOSBATT_UNIT1	MIDLAND	STORAGE	WEST	2017	2.0	2.0	
1102 TOYAH POWER STATION (DGR)		TOYAH_BESS	REEVES	STORAGE	WEST	2021	10.0	9.9	
1103 TRIPLE BUTTE (DGR)		TRIPBUT1_BELU1	PECOS	STORAGE	WEST	2021	9.2	7.5	
1104 WESTOVER BESS (DGR)		WOV_BESS_UNIT1	ECTOR	STORAGE	WEST	2021	10.0	9.9	
1105 WORSHAM BATTERY (DGR)		WORSHAM_BESS1	REEVES	STORAGE	WEST	2023	9.9	9.9	
1106 YOUNICOS FACILITY		DG_YOUNICOS_YINC1_1	TRAVIS	STORAGE	SOUTH	2015	2.0	2.0	
1107 Operational Capacity Total (Storage)							2,365.5	2,335.0	
1108 Storage Peak Average Capacity Percentage		STORAGE_PEAK_PCT	%				100.0	-	
1109									
1110 Operational Resources (Storage) - Synchronized but not Approved for Commercial Operations									
1111 ANCHOR BESS U1	21INR0474	ANCHOR_BESS1	CALLAHAN	STORAGE	WEST	2023	35.2	35.2	
1112 ANCHOR BESS U2	21INR0474	ANCHOR_BESS2	CALLAHAN	STORAGE	WEST	2023	36.3	36.3	
1113 BLUE JAY BESS	23INR0019	BLUEJAY_BESS1	GRIMES	STORAGE	NORTH	2023	51.6	50.0	
1114 GOMEZ BESS (DGR)	23INR0519	GOMZ_BESS	REEVES	STORAGE	WEST	2023	10.0	9.9	
1115 HIGH LONESOME BESS	20INR0280	HI_LONEB_BESS1	CROCKETT	STORAGE	WEST	2023	51.1	50.0	
1116 OLNEY BESS (DGR)	22INR0603	OLNEYTN_BESS	YOUNG	STORAGE	WEST	2023	10.0	9.9	
1117 PYRON BESS 2A	20INR0268	PYR_ESS2A	NOLAN	STORAGE	WEST	2023	15.1	15.1	
1118 PYRON BESS 2B	20INR0268	PYR_ESS2B	NOLAN	STORAGE	WEST	2023	15.1	15.1	
1119 QUEEN BESS	20INR0281	QUEEN_BA_BESS1	UPTON	STORAGE	WEST	2023	51.1	50.0	
1120 RIVER VALLEY STORAGE U1	20INR0290	RVRVLYS_ESS1	WILLIAMSON	STORAGE	SOUTH	2023	51.5	50.0	
1121 RIVER VALLEY STORAGE U2	20INR0293	RVRVLYS_ESS2	WILLIAMSON	STORAGE	SOUTH	2023	51.5	50.0	
1122 ROSELAND STORAGE	22INR0280	ROSELAND_BESS1	FALLS	STORAGE	NORTH	2023	51.6	50.0	
1123 SP TX-12B BESS	21INR0357	SPTX12B_BES1	UPTON	STORAGE	WEST	2023	22.7	22.7	
1124 TURQUOISE STORAGE	22INR0509	TURQBESS_BESS1	HUNT	STORAGE	NORTH	2023	196.2	190.0	
1125 VORTEX BESS	21INR0473	VORTEX_BESS1	THROCKMORTON	STORAGE	WEST	2023	121.8	121.8	
1126 WOLF TANK STORAGE	22INR0551	WFTANK_ESS1	WEBB	STORAGE	SOUTH	2023	150.4	150.0	
1127 Operational Capacity - Synchronized but not Approved for Commercial Operations Total (Storage)							921.1	906.0	
1128 Storage Peak Average Capacity Percentage		STORAGE_SYNC_PEAK_	%				100.0	-	
1129									
1130 Reliability Must-Run (RMR) Capacity		RMR_CAP_CONT					-	-	
1131									
1132 Capacity Pending Retirement		PENDRETIRE_CAP					-	-	
1133									
1134 Non-Synchronous Tie Resources									
1135 EAST TIE		DC_E	FANNIN	OTHER	NORTH		600.0	600.0	
1136 NORTH TIE		DC_N	WILBARGER	OTHER	WEST		220.0	220.0	
1137 LAREDO VFT TIE		DC_L	WEBB	OTHER	SOUTH		100.0	100.0	
1138 SHARYLAND RAILROAD TIE		DC_R	HIDALGO	OTHER	SOUTH		300.0	300.0	
1139 Non-Synchronous Ties Total							1,220.0	1,220.0	
1140 Non-Synchronous Ties Peak Average Capacity Percentage		DCTIE_PEAK_PCT	%				100.0	69.7	
1141									
1142 Planned Thermal Resources with Executed SGIA, Air Permit, GHG Permit and Proof of Adequate Water Supplies									
1143 AIR PRODUCTS GCA	21INR0012		GALVESTON	GAS-ST	HOUSTON	2023	60.0	60.0	
1144 BEACHWOOD II POWER STATION (U7-U8)	23INR0506		BRAZORIA	GAS-GT	COASTAL	2024	-	-	
1145 BROTMAN POWER STATION (U1 - U2)	23INR0613		BRAZORIA	GAS-GT	COASTAL	2024	-	-	Yes
1146 BROTMAN II POWER STATION (U7- U8)	23INR0551		BRAZORIA	GAS-GT	COASTAL	2023	121.0	89.2	
1147 FRONTERA ENERGY CENTER	23INR0472		HIDALGO	GAS-CC	SOUTH	2023	538.5	538.5	
1148 MIRAGE CTG 1	17INR0022		HARRIS	GAS-GT	HOUSTON	2023	-	-	
1149 REMY JADE POWER STATION	23INR0339		HARRIS	GAS-GT	HOUSTON	2024	-	-	
1150 REMY JADE II POWER STATION	24INR0382		HARRIS	GAS-GT	HOUSTON	2025	-	-	Yes
1151 SKY SEALY	21INR0500		AUSTIN	GAS-IC	SOUTH	2024	-	-	Yes
1152 TECO GTG2	23INR0408		HARRIS	GAS-GT	HOUSTON	2024	-	-	
1153 Planned Thermal Resources Total (Nuclear, Coal, Gas, Biomass)							719.5	687.7	
1154									
1155 Planned Wind Resources with Executed SGIA									
1156 BIG SAMPSON WIND	16INR0104		CROCKETT	WIND-O	WEST	2024	-	-	
1157 CANYON WIND	18INR0030		SCURRY	WIND-O	WEST	2023	-	-	
1158 CAROL WIND	20INR0217		POTTER	WIND-P	PANHANDLE	2024	-	-	
1159 CRAWFISH	19INR0177		WHARTON	WIND-O	SOUTH	2023	-	-	
1160 GOODNIGHT WIND	14INR0033		ARMSTRONG	WIND-P	PANHANDLE	2023	-	-	
1161 LOMA PINTA WIND	16INR0112		LA SALLE	WIND-O	SOUTH	2024	-	-	
1162 LORAIN WINDPARK PHASE III	18INR0068		MITCHELL	WIND-O	WEST	2024	-	-	
1163 MONARCH CREEK WIND	21INR0263		THROCKMORTON	WIND-O	WEST	2025	-	-	
1164 MONTE ALTO 2 WIND	19INR0023		WILLACY	WIND-C	COASTAL	2024	-	-	
1165 MONTE ALTO I WIND	19INR0022		WILLACY	WIND-C	COASTAL	2024	-	-	
1166 MONTGOMERY RANCH WIND	20INR0040		FOARD	WIND-O	WEST	2023	-	-	
1167 PIONEER DJ WIND	23INR0387		MIDLAND	WIND-O	WEST	2024	-	-	Yes
1168 RAY GULF WIND	22INR0517		WHARTON	WIND-O	SOUTH	2023	-	-	
1169 ROADRUNNER CROSSING WIND 1	19INR0117		EASTLAND	WIND-O	NORTH	2023	-	-	
1170 SHAMROCK	22INR0502		CROCKETT	WIND-O	WEST	2024	-	-	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
1171 SHEEP CREEK WIND	21INR0325		CALLAHAN	WIND-O	WEST	2023	-	-	
1172 SIETE	20INR0047		WEBB	WIND-O	SOUTH	2024	-	-	
1173 Planned Capacity Total (Wind)							-	-	
1174									
1175 Planned Wind Capacity Sub-total (Coastal Counties)		WIND_PLANNED_C					-	-	
1176 Wind Peak Average Capacity Percentage (Coastal)		WIND_PL_PEAK_PCT_C	%				100.0	60.0	
1177									
1178 Planned Wind Capacity Sub-total (Panhndle Counties)		WIND_PLANNED_P					-	-	
1179 Wind Peak Average Capacity Percentage (Panhndle)		WIND_PL_PEAK_PCT_P	%				100.0	30.0	
1180									
1181 Planned Wind Capacity Sub-total (Other counties)		WIND_PLANNED_O					-	-	
1182 Wind Peak Average Capacity Percentage (Other)		WIND_PL_PEAK_PCT_O	%				100.0	21.0	
1183									
1184 Planned Solar Resources with Executed SGIA									
1185 TV SOLAR	21INR0351		FAYETTE	SOLAR	SOUTH	2024	-	-	
1186 ADAMSTOWN SOLAR	21INR0210		WICHITA	SOLAR	WEST	2025	-	-	
1187 ALILA SOLAR	23INR0093		SAN PATRICIO	SOLAR	COASTAL	2024	-	-	
1188 AMSTERDAM SOLAR	21INR0256		BRAZORIA	SOLAR	COASTAL	2024	-	-	
1189 ANDROMEDA SOLAR	22INR0412		SCURRY	SOLAR	WEST	2023	320.0	320.0	
1190 ANGELO SOLAR	19INR0203		TOM GREEN	SOLAR	WEST	2024	-	-	
1191 ANGUS SOLAR	20INR0035		BOSQUE	SOLAR	NORTH	2024	-	-	
1192 ARMADILLO SOLAR	21INR0421		NAVARRO	SOLAR	NORTH	2024	-	-	
1193 ARROYO SOLAR	20INR0086		CAMERON	SOLAR	COASTAL	2024	-	-	
1194 ASH CREEK SOLAR	21INR0379		HILL	SOLAR	NORTH	2024	-	-	
1195 BAKER BRANCH SOLAR	23INR0026		LAMAR	SOLAR	NORTH	2024	-	-	
1196 BIG ELM SOLAR	21INR0353		BELL	SOLAR	NORTH	2024	-	-	
1197 BLUE SKY SOL	22INR0455		CROCKETT	SOLAR	WEST	2024	-	-	
1198 BRASS FORK SOLAR	22INR0270		HASKELL	SOLAR	WEST	2025	-	-	
1199 BRIGHT ARROW SOLAR	22INR0242		HOPKINS	SOLAR	NORTH	2023	-	-	
1200 BUCKEYE CORPUS FUELS SOLAR	22INR0397		NUECES	SOLAR	COASTAL	2025	-	-	
1201 CACHENA SOLAR	23INR0027		WILSON	SOLAR	SOUTH	2025	-	-	
1202 CAROL SOLAR	21INR0274		POTTER	SOLAR	PANHANDLE	2025	-	-	
1203 CASTRO SOLAR	20INR0050		CASTRO	SOLAR	PANHANDLE	2025	-	-	
1204 CHARGER SOLAR	23INR0047		REFUGIO	SOLAR	COASTAL	2025	-	-	
1205 CLUTCH CITY SOLAR	22INR0279		BRAZORIA	SOLAR	COASTAL	2025	-	-	
1206 COMPADRE SOLAR	24INR0023		HILL	SOLAR	NORTH	2024	-	-	
1207 CORAL SOLAR	22INR0295		FALLS	SOLAR	NORTH	2023	-	-	
1208 CORAZON SOLAR PHASE II	22INR0257		WEBB	SOLAR	SOUTH	2025	-	-	
1209 COTTONWOOD BAYOU SOLAR I	19INR0134		BRAZORIA	SOLAR	COASTAL	2024	-	-	
1210 CRADLE SOLAR	23INR0150		BRAZORIA	SOLAR	COASTAL	2025	-	-	Yes
1211 CROWDED STAR SOLAR	20INR0241		JONES	SOLAR	WEST	2025	-	-	
1212 CROWDED STAR SOLAR II	22INR0274		JONES	SOLAR	WEST	2025	-	-	
1213 DANISH FIELDS SOLAR I	20INR0069		WHARTON	SOLAR	SOUTH	2023	-	-	
1214 DAWN SOLAR	20INR0255		DEAF SMITH	SOLAR	PANHANDLE	2024	-	-	
1215 DELILAH SOLAR 1	22INR0202		LAMAR	SOLAR	NORTH	2024	-	-	
1216 DELILAH SOLAR 2	22INR0203		LAMAR	SOLAR	NORTH	2024	-	-	
1217 DELILAH SOLAR 3	23INR0042		LAMAR	SOLAR	NORTH	2023	-	-	
1218 DELILAH SOLAR 4	23INR0060		LAMAR	SOLAR	NORTH	2023	-	-	
1219 DESERT VINE SOLAR	22INR0307		ZAPATA	SOLAR	SOUTH	2024	-	-	
1220 DILEO SOLAR	22INR0359		BOSQUE	SOLAR	NORTH	2023	71.4	71.4	
1221 DONEGAL SOLAR	23INR0089		DICKENS	SOLAR	PANHANDLE	2024	-	-	
1222 DORI BQ SOLAR	23INR0040		HARRIS	SOLAR	HOUSTON	2024	-	-	Yes
1223 DR SOLAR	22INR0454		CULBERSON	SOLAR	WEST	2024	-	-	
1224 EASTBELL MILAM SOLAR	21INR0203		MILAM	SOLAR	SOUTH	2023	-	-	
1225 EIFFEL SOLAR	22INR0223		LAMAR	SOLAR	NORTH	2023	-	-	
1226 ELIZA SOLAR	21INR0368		KAUFMAN	SOLAR	NORTH	2024	-	-	
1227 ELLIS SOLAR	21INR0493		ELLIS	SOLAR	NORTH	2023	80.0	80.0	
1228 EQUINOX SOLAR 1	21INR0226		STARR	SOLAR	SOUTH	2026	-	-	
1229 ESTONIAN SOLAR FARM	22INR0335		DELTA	SOLAR	NORTH	2024	-	-	
1230 FAGUS SOLAR PARK (MISAE SOLAR II)	20INR0091		CHILDRESS	SOLAR	PANHANDLE	2024	-	-	
1231 FENCE POST SOLAR	22INR0404		NAVARRO	SOLAR	NORTH	2024	-	-	
1232 FIVE WELLS SOLAR	24INR0015		BELL	SOLAR	NORTH	2023	-	-	
1233 FRYE SOLAR	20INR0080		SWISHER	SOLAR	PANHANDLE	2024	-	-	
1234 GALACTIC SOLAR	23INR0144		GRAYSON	SOLAR	NORTH	2024	-	-	
1235 GALLOWAY 2 SOLAR	21INR0431		CONCHO	SOLAR	WEST	2023	-	-	
1236 GARCITAS CREEK SOLAR	23INR0223		JACKSON	SOLAR	SOUTH	2024	-	-	
1237 GP SOLAR	23INR0045		VAN ZANDT	SOLAR	NORTH	2024	-	-	
1238 GRANDSLAM SOLAR	21INR0391		ATASCOSA	SOLAR	SOUTH	2024	-	-	
1239 GRANSOLAR TEXAS ONE	22INR0511		MILAM	SOLAR	SOUTH	2024	-	-	
1240 GREATER BRYANT G SOLAR	23INR0300		MIDLAND	SOLAR	WEST	2024	-	-	
1241 GREEN HOLLY SOLAR	21INR0021		DAWSON	SOLAR	WEST	2024	-	-	
1242 GREYHOUND SOLAR	21INR0268		ECTOR	SOLAR	WEST	2025	-	-	
1243 GRIMES COUNTY SOLAR	23INR0160		GRIMES	SOLAR	NORTH	2025	-	-	
1244 GULF STAR SOLAR SLF (G-STAR SOLAR)	23INR0111		WHARTON	SOLAR	SOUTH	2024	-	-	
1245 HALO SOLAR	21INR0304		BELL	SOLAR	NORTH	2023	-	-	
1246 HAYHURST TEXAS SOLAR	22INR0363		CULBERSON	SOLAR	WEST	2023	-	-	
1247 HOPKINS SOLAR	20INR0210		HOPKINS	SOLAR	NORTH	2023	-	-	
1248 HORIZON SOLAR	21INR0261		FRIO	SOLAR	SOUTH	2023	-	-	
1249 HORNET SOLAR	23INR0021		SWISHER	SOLAR	PANHANDLE	2024	-	-	
1250 HOWLE SOLAR	20INR0075		ELLIS	SOLAR	NORTH	2024	-	-	
1251 HOYTE SOLAR	23INR0235		MILAM	SOLAR	SOUTH	2024	-	-	
1252 INDIGO SOLAR	21INR0031		FISHER	SOLAR	WEST	2024	-	-	
1253 INERTIA SOLAR	22INR0374		HASKELL	SOLAR	WEST	2025	-	-	
1254 JACKALOPE SOLAR	23INR0180		SAN PATRICIO	SOLAR	COASTAL	2024	-	-	
1255 JUNGSMANN SOLAR	22INR0356		MILAM	SOLAR	SOUTH	2024	-	-	
1256 LAVACA BAY SOLAR	23INR0084		MATAGORDA	SOLAR	COASTAL	2024	-	-	
1257 LONG POINT SOLAR	19INR0042		BRAZORIA	SOLAR	COASTAL	2024	-	-	
1258 LUNIS CREEK SOLAR 1	21INR0344		JACKSON	SOLAR	SOUTH	2024	-	-	
1259 MALEZA SOLAR	21INR0220		WHARTON	SOLAR	SOUTH	2024	-	-	
1260 MARKUM SOLAR	20INR0230		MCLENNAN	SOLAR	NORTH	2024	-	-	
1261 MATAGORDA SOLAR	22INR0342		MATAGORDA	SOLAR	COASTAL	2023	-	-	
1262 MERCURY I SOLAR	21INR0257		HILL	SOLAR	NORTH	2024	-	-	
1263 MERCURY II SOLAR	23INR0153		HILL	SOLAR	NORTH	2024	-	-	
1264 MORROW LAKE SOLAR	19INR0155		FRIO	SOLAR	SOUTH	2024	-	-	
1265 NABATOTO SOLAR NORTH	21INR0428		LEON	SOLAR	NORTH	2025	-	-	
1266 NAZARETH SOLAR	16INR0049		CASTRO	SOLAR	PANHANDLE	2025	-	-	
1267 NEPTUNE SOLAR	21INR0499		JACKSON	SOLAR	SOUTH	2023	-	-	
1268 NORIA SOLAR DCC	23INR0061		NUECES	SOLAR	COASTAL	2024	-	-	
1269 NORTON SOLAR	19INR0035		RUNNELS	SOLAR	WEST	2024	-	-	
1270 OLD HICKORY SOLAR	20INR0236		JACKSON	SOLAR	SOUTH	2025	-	-	
1271 ORIANA SOLAR	24INR0093		VICTORIA	SOLAR	SOUTH	2024	-	-	
1272 OUTPOST SOLAR	23INR0007		WEBB	SOLAR	SOUTH	2024	-	-	
1273 OYSTERCATCHER SOLAR	21INR0362		ELLIS	SOLAR	NORTH	2024	-	-	
1274 PEREGRINE SOLAR	22INR0283		GOLIAD	SOLAR	SOUTH	2024	-	-	
1275 PINE FOREST SOLAR	20INR0203		HOPKINS	SOLAR	NORTH	2024	-	-	
1276 PINK SOLAR	22INR0281		HUNT	SOLAR	NORTH	2023	-	-	
1277 PITTS DUDIK SOLAR	20INR0074		HILL	SOLAR	NORTH	2023	-	-	
1278 PORTER SOLAR	21INR0458		DENTON	SOLAR	NORTH	2024	-	-	
1279 RED HOLLY SOLAR	21INR0022		DAWSON	SOLAR	WEST	2024	-	-	
1280 REDONDA SOLAR	23INR0162		ZAPATA	SOLAR	SOUTH	2024	-	-	
1281 RED-TAILED HAWK SOLAR	21INR0389		WHARTON	SOLAR	SOUTH	2024	-	-	
1282 ROCINANTE SOLAR	23INR0231		GONZALES	SOLAR	SOUTH	2024	-	-	
1283 RODEO SOLAR	19INR0103		ANDREWS	SOLAR	WEST	2025	-	-	
1284 ROWLAND SOLAR II	22INR0482		FORT BEND	SOLAR	HOUSTON	2024	-	-	
1285 SAMSON SOLAR 2	21INR0490		LAMAR	SOLAR	NORTH	2024	-	-	
1286 SBRANCH SOLAR PROJECT	22INR0205		WHARTON	SOLAR	SOUTH	2024	-	-	
1287 SCHOOLHOUSE SOLAR	22INR0211		LEE	SOLAR	SOUTH	2025	-	-	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
1288 SECOND DIVISION SOLAR	20INR0248		BRAZORIA	SOLAR	COASTAL	2024	-	-	
1289 SHAULA I SOLAR	22INR0251		DEWITT	SOLAR	SOUTH	2025	-	-	
1290 SHAULA II SOLAR	22INR0267		DEWITT	SOLAR	SOUTH	2026	-	-	
1291 SIGNAL SOLAR	20INR0208		HUNT	SOLAR	NORTH	2024	-	-	
1292 SODA LAKE SOLAR 1 SLF	23INR0080		CRANE	SOLAR	WEST	2023	-	-	
1293 SODA LAKE SOLAR 2	20INR0143		CRANE	SOLAR	WEST	2024	-	-	
1294 SP JAGUAR SOLAR	24INR0038		MCLENNAN	SOLAR	NORTH	2024	-	-	
1295 SPACE CITY SOLAR	21INR0341		WHARTON	SOLAR	SOUTH	2025	-	-	
1296 SPARTA SOLAR	22INR0352		BEE	SOLAR	SOUTH	2023	-	-	
1297 STAMPEDE SOLAR	22INR0409		HOPKINS	SOLAR	NORTH	2023	-	-	
1298 STARLING SOLAR	23INR0035		GONZALES	SOLAR	SOUTH	2024	-	-	
1299 STARR SOLAR RANCH	20INR0216		STARR	SOLAR	SOUTH	2024	-	-	
1300 SUNRAY	21INR0395		UVALDE	SOLAR	SOUTH	2024	-	-	
1301 TALITHA SOLAR	21INR0393		JIM WELLS	SOLAR	SOUTH	2024	-	-	
1302 TANGLEWOOD SOLAR	23INR0054		BRAZORIA	SOLAR	COASTAL	2025	-	-	
1303 TEXANA SOLAR	18INR0058		WHARTON	SOLAR	SOUTH	2024	-	-	
1304 TEXAS SOLAR NOVA	19INR0001		KENT	SOLAR	WEST	2023	-	-	
1305 TEXAS SOLAR NOVA 2	20INR0269		KENT	SOLAR	WEST	2023	-	-	
1306 TIERRA BONITA SOLAR	21INR0424		PECOS	SOLAR	WEST	2024	-	-	
1307 TRES BAHIAS SOLAR	20INR0266		CALHOUN	SOLAR	COASTAL	2023	-	-	
1308 TROJAN SOLAR	23INR0296		COOKE	SOLAR	NORTH	2024	-	-	
1309 TULSITA SOLAR	21INR0223		GOLIAD	SOLAR	SOUTH	2024	-	-	
1310 TYSON NICK SOLAR	20INR0222		LAMAR	SOLAR	NORTH	2024	-	-	
1311 ULYSSES SOLAR	21INR0253		COKE	SOLAR	WEST	2024	-	-	
1312 UMBRA (STOCKYARD) SOLAR	23INR0155		FRANKLIN	SOLAR	NORTH	2024	-	-	
1313 XE MURAT SOLAR	22INR0354		HARRIS	SOLAR	HOUSTON	2024	-	-	
1314 ZIER SOLAR	21INR0019		KINNEY	SOLAR	SOUTH	2023	-	-	
1315 Planned Capacity Total (Solar)							471.4	471.4	
1316 Solar Peak Average Capacity Percentage		SOLAR_PL_PEAK_PCT	%				100.0	79.0	
1317									
1318 Planned Storage Resources with Executed SGIA									
1319 ADAMSTOWN STORAGE	21INR0209		WICHITA	STORAGE	WEST	2025	-	-	
1320 AEP_N_ALAMO_LD02(SMT ALAMO)	23INR0477		HIDALGO	STORAGE	SOUTH	2023	-	-	
1321 AL PASTOR BESS	24INR0273		DAWSON	STORAGE	WEST	2024	-	-	
1322 AMSTERDAM STORAGE	22INR0417		BRAZORIA	STORAGE	COASTAL	2024	-	-	
1323 ANEMOI ENERGY STORAGE	23INR0369		HIDALGO	STORAGE	SOUTH	2023	-	-	
1324 ARROYO STORAGE SLF	24INR0306		CAMERON	STORAGE	COASTAL	2024	-	-	
1325 BIG STAR STORAGE	21INR0469		BASTROP	STORAGE	SOUTH	2023	-	-	
1326 BOCO BESS	23INR0470		BORDEN	STORAGE	WEST	2024	-	-	
1327 BORDERTOWN BESS	23INR0354		STARR	STORAGE	SOUTH	2025	-	-	
1328 BRAZOS BEND BESS	23INR0363		FORT BEND	STORAGE	HOUSTON	2024	-	-	
1329 BRIGHT ARROW STORAGE	22INR0302		HOPKINS	STORAGE	NORTH	2023	-	-	
1330 BRP ANTLIA BESS	22INR0349		VAL VERDE	STORAGE	WEST	2023	-	-	
1331 BRP AVILA BESS	23INR0287		PECOS	STORAGE	WEST	2024	-	-	
1332 BRP CACHI BESS	22INR0388		GUADALUPE	STORAGE	SOUTH	2024	-	-	
1333 BRP CARINA BESS	22INR0353		NUECES	STORAGE	COASTAL	2024	-	-	
1334 BRP DICKENS BESS	22INR0325		DICKENS	STORAGE	PANHANDLE	2023	-	-	
1335 BRP HYDRA BESS	22INR0372		PECOS	STORAGE	WEST	2023	-	-	
1336 BRP LIBRA BESS	22INR0366		GUADALUPE	STORAGE	SOUTH	2023	-	-	
1337 BRP PALEO BESS	22INR0322		HALE	STORAGE	PANHANDLE	2023	-	-	
1338 BRP PAVO BESS	22INR0384		PECOS	STORAGE	WEST	2023	-	-	
1339 BRP TORTOLAS BESS	23INR0072		BRAZORIA	STORAGE	COASTAL	2023	-	-	
1340 BRP ZEYA BESS	23INR0290		GALVESTON	STORAGE	HOUSTON	2024	-	-	
1341 CALLISTO I ENERGY CENTER	22INR0490		HARRIS	STORAGE	HOUSTON	2024	-	-	
1342 CITADEL BESS	24INR0147		HARRIS	STORAGE	HOUSTON	2024	-	-	
1343 CONNOLLY STORAGE	23INR0403		WISE	STORAGE	NORTH	2024	-	-	Yes
1344 CORAL STORAGE	23INR0124		FALLS	STORAGE	NORTH	2023	-	-	
1345 COTTONWOOD BAYOU STORAGE	21INR0443		BRAZORIA	STORAGE	COASTAL	2024	-	-	
1346 DAMON STORAGE	23INR0523		BRAZORIA	STORAGE	COASTAL	2023	-	-	
1347 DANISH FIELDS STORAGE	21INR0450		WHARTON	STORAGE	SOUTH	2023	-	-	
1348 DIBOLL BESS (DGR)	23INR0522		ANGELINA	STORAGE	NORTH	2023	-	-	
1349 EBONY ENERGY STORAGE	23INR0154		COMAL	STORAGE	SOUTH	2024	-	-	
1350 ELIZA STORAGE	22INR0260		KAUFMAN	STORAGE	NORTH	2024	-	-	
1351 ESTONIAN ENERGY STORAGE	22INR0336		DELTA	STORAGE	NORTH	2024	-	-	
1352 EVAL STORAGE	22INR0401		CAMERON	STORAGE	COASTAL	2024	-	-	
1353 FENCE POST BESS	22INR0405		NAVARRO	STORAGE	NORTH	2023	-	-	
1354 FERDINAND GRID BESS	22INR0422		BEXAR	STORAGE	SOUTH	2025	-	-	
1355 FIVE WELLS STORAGE	23INR0159		BELL	STORAGE	NORTH	2023	-	-	
1356 FORT DUNCAN BESS	23INR0350		MAVERICK	STORAGE	SOUTH	2025	-	-	Yes
1357 GIGA TEXAS ENERGY STORAGE	23INR0239		TRAVIS	STORAGE	SOUTH	2023	-	-	
1358 GREAT KISKADEE STORAGE	23INR0166		HIDALGO	STORAGE	SOUTH	2024	-	-	
1359 GREEN HOLLY STORAGE	21INR0029		DAWSON	STORAGE	WEST	2024	-	-	
1360 GRIZZLY RIDGE BESS (DGR)	22INR0596		HAMILTON	STORAGE	NORTH	2023	9.9	9.9	
1361 GUAJILLO ENERGY STORAGE	23INR0343		WEBB	STORAGE	SOUTH	2024	-	-	
1362 HOUSE MOUNTAIN 2 BATT	22INR0485		BREWSTER	STORAGE	WEST	2023	-	-	
1363 HUMMINGBIRD STORAGE	22INR0327		DENTON	STORAGE	NORTH	2023	-	-	
1364 INERTIA BESS	22INR0328		HASKELL	STORAGE	WEST	2023	-	-	
1365 INERTIA BESS 2	22INR0375		HASKELL	STORAGE	WEST	2025	-	-	
1366 IRON BELT ENERGY STORAGE	25INR0208		DAWSON	STORAGE	WEST	2025	-	-	
1367 JUNCTION BESS (DGR)	23INR0521		KIMBLE	STORAGE	SOUTH	2023	9.9	9.9	
1368 LARKSPUR ENERGY STORAGE	23INR0340		UPTON	STORAGE	WEST	2025	-	-	
1369 LIMOUSIN OAK STORAGE	22INR0338		GRIMES	STORAGE	NORTH	2023	-	-	
1370 MUSTANG CREEK STORAGE	21INR0484		JACKSON	STORAGE	SOUTH	2023	70.5	70.5	
1371 MYRTLE STORAGE	21INR0442		BRAZORIA	STORAGE	COASTAL	2023	-	-	
1372 NORIA STORAGE	23INR0062		NUECES	STORAGE	COASTAL	2024	-	-	
1373 ORIANA BESS	24INR0109		VICTORIA	STORAGE	SOUTH	2024	-	-	
1374 PADUA GRID BESS	22INR0368		BEXAR	STORAGE	SOUTH	2024	-	-	
1375 PLATINUM STORAGE	22INR0554		FANNIN	STORAGE	NORTH	2024	-	-	Yes
1376 RAMSEY STORAGE	21INR0505		WHARTON	STORAGE	SOUTH	2024	-	-	
1377 RED HOLLY STORAGE	21INR0033		DAWSON	STORAGE	WEST	2024	-	-	
1378 ROCINANTE BESS	23INR0232		GONZALES	STORAGE	SOUTH	2024	-	-	
1379 RODEO RANCH ENERGY STORAGE	23INR0371		REEVES	STORAGE	WEST	2023	-	-	
1380 RYAN ENERGY STORAGE	20INR0246		CORYELL	STORAGE	NORTH	2024	-	-	
1381 SABAL STORAGE	22INR0398		CAMERON	STORAGE	COASTAL	2023	16.4	16.4	
1382 SMT ALAMO (DGR)	23INR0477		HIDALGO	STORAGE	SOUTH	2023	-	-	
1383 SMT LOS FRESNOS (DGR)	23INR0508		CAMERON	STORAGE	COASTAL	2023	-	-	Yes
1384 SMT MISSION (DGR)	23INR0511		CAMERON	STORAGE	COASTAL	2023	-	-	Yes
1385 SMT RIO GRANDE (DGR)	23INR0509		STARR	STORAGE	SOUTH	2023	-	-	Yes
1386 SMT RIO GRANDE II (DGR)	23INR0510		STARR	STORAGE	SOUTH	2023	-	-	Yes
1387 SOHO BESS	23INR0419		BRAZORIA	STORAGE	COASTAL	2024	-	-	
1388 SOWERS STORAGE	22INR0552		KAUFMAN	STORAGE	NORTH	2024	-	-	
1389 SP JAGUAR BESS	24INR0039		MCLENNAN	STORAGE	NORTH	2024	-	-	
1390 ST. GALL I ENERGY STORAGE	22INR0524		PECOS	STORAGE	WEST	2023	-	-	
1391 STAMPEDE BESS	22INR0410		HOPKINS	STORAGE	NORTH	2023	-	-	
1392 STOCKYARD GRID BATT	21INR0492		TARRANT	STORAGE	NORTH	2023	150.6	150.6	
1393 SUN VALLEY BESS	22INR0429		HILL	STORAGE	NORTH	2023	-	-	
1394 TALITHA BESS	23INR0331		JIM WELLS	STORAGE	SOUTH	2024	-	-	
1395 TANZANITE STORAGE	22INR0549		HENDERSON	STORAGE	NORTH	2024	-	-	
1396 TIDWELL PRAIRIE STORAGE 1	21INR0517		ROBERTSON	STORAGE	NORTH	2024	-	-	
1397 TIMBERWOLF BESS 2	22INR0495		CRANE	STORAGE	WEST	2023	-	-	
1398 UMBRA (STOCKYARD) BESS	23INR0156		FRANKLIN	STORAGE	NORTH	2024	-	-	
1399 ZIER STORAGE	21INR0027		KINNEY	STORAGE	SOUTH	2023	-	-	
1400 SMALL GENERATORS WITH SIGNED IAs AND 'MODEL READY DATES' PENDING *							-	-	
1401 Planned Capacity Total (Storage)							257.3	257.3	
1402 Storage Peak Average Capacity Percentage		STORAGE_PL_PEAK_PC	%				100.0	-	
1403									
1404 Inactive Planned Resources									

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
1405 AGATE SOLAR	20INR0023		ELLIS	SOLAR	NORTH	2020	60.0	60.0	
1406 CHILLINGHAM SOLAR	23INR0070		BELL	SOLAR	NORTH	2023	-	-	
1407 CHILLINGHAM STORAGE	23INR0079		BELL	STORAGE	NORTH	2023	-	-	
1408 DONEGAL BESS	23INR0103		DICKENS	STORAGE	PANHANDLE	2024	-	-	
1409 HART WIND	16INR0033		CASTRO	WIND-P	PANHANDLE	2026	-	-	
1410 KONTIKI 1 WIND (ERIK)	19INR0099a		GLASSCOCK	WIND-O	WEST	2023	250.1	250.1	
1411 KONTIKI 2 WIND (ERNEST)	19INR0099b		GLASSCOCK	WIND-O	WEST	2023	250.1	250.1	
1412 MARIAH DEL ESTE	13INR0010a		PARMER	WIND-P	PANHANDLE	2020	152.5	152.5	
1413 NORTHDRAW WIND	13INR0025		RANDALL	WIND-P	PANHANDLE	2020	150.0	150.0	
1414 PARLIAMENT SOLAR	23INR0044		WALLER	SOLAR	HOUSTON	2024	-	-	
1415 PLEASANTON BESS (DGR)	23INR0520		ATASCOSA	STORAGE	SOUTH	2023	9.9	9.9	
1416 RUETER SOLAR	20INR0202		BOSQUE	SOLAR	NORTH	2025	-	-	
1417 SPINEL SOLAR	20INR0025		MEDINA	SOLAR	SOUTH	2024	-	-	
1418 Inactive Planned Capacity Total							872.6	872.6	
1419									
1420 Seasonal Mothballed Resources									
1421 MOUNTAIN CREEK STG 8 (AS OF 3/1/2023, AVAILABLE 6/1 THROUGH 9/30)		MCSES_UNIT8	DALLAS	GAS-ST	NORTH	1967	568.0	568.0	
1422 POWERLANE PLANT STG 1 (AS OF 10/1/2022, AVAILABLE 6/1 THROUGH 9/30)		STEAM1A_STEAM_1	HUNT	GAS-ST	NORTH	1966	18.8	17.5	
1423 SPENCER STG U4 (AS OF 10/24/2022, AVAILABLE 4/2 THROUGH 11/30)		SPNCER_SPNCE_4	DENTON	GAS-ST	NORTH	1966	61.0	57.0	
1424 SPENCER STG U5 (AS OF 10/24/2022, AVAILABLE 4/2 THROUGH 11/30)		SPNCER_SPNCE_5	DENTON	GAS-ST	NORTH	1973	65.0	61.0	
1425 Total Seasonal Mothballed Capacity							712.8	703.5	
1426									
1427 Mothballed Resources									
1428 RAY OLINGER STG 1 (AS OF 4/5/22)		OLINGR_OLING_1	COLLIN	GAS-ST	NORTH	1967	78.0	78.0	
1429 CALENERGY-FALCON SEABOARD STG 3 (AS OF 7/8/22, DUE TO FORCED OUTAGE)		FLCNS_UNIT3	HOWARD	GAS-CC	WEST	1988	62.0	62.0	
1430 Total Mothballed Capacity							140.0	140.0	
1431									
1432 Retiring Resources Unavailable to ERCOT (since last CDR/SARA)									
1433 J T DEELY U1 (INDEFINITE MOTHBALL AS OF 12/31/2018, RETIRING ON 7/7/23)		CALAVERS_JTD1_M	BEXAR	COAL	SOUTH	1977	415.0	420.0	
1434 J T DEELY U2 (INDEFINITE MOTHBALL AS OF 12/31/2018, RETIRING ON 7/7/23)		CALAVERS_JTD2_M	BEXAR	COAL	SOUTH	1978	415.0	420.0	
1435 Total Retiring Capacity							830.0	840.0	

Capacity changes due to planned repower/upgrade projects are reflected in the operational units' ratings upon receipt and ERCOT approval of updated resource registration system information. Interconnection requests for existing resources that involve MW capacity changes are indicated with a code in the "Generation Interconnection Project Code" column.

Although seasonal capacity ratings for battery energy storage systems are reported above, the ratings are not included in the operational/planned capacity formulae. These resources are assumed to provide Ancillary Services rather than sustained capacity available to meet system peak loads.

The capacities of planned projects that have been approved for Initial Synchronization at the time of report creation are assumed to be available for the season regardless of their projected Commercial Operations Dates.

Planned projects for which maximum seasonal sustained capacity ratings have been provided are used in lieu of capacities entered into the online Resource Integration and Ongoing Operations - Interconnection Services (RIOO-IS) system.

Installed capacity ratings are based on the maximum power that a generating unit can produce during normal sustained operating conditions as specified by the equipment manufacturer. These ratings reflect the latest information in the Resource Integration and Ongoing Operations - Reources Services (RIOO-RS) system.

Seasonal Assessment of Resource Adequacy for the ERCOT Region
Summer 2023
Release Date: May 3, 2023

Planning Reserve Margins

	Summer
Peak Demand Forecast, MW	82,739
Rooftop PV Forecast Reduction, MW	(432)
Large Flexible Load Adjustment, MW	1,105
Adjusted Peak Load Forecast, MW	83,412
 Total Resources, MW	 97,138
Emergency Resources Deployed by ERCOT, MW ¹	4,577
 Planning Reserve Margin ²	 23.2%

Formula: $PRM = (Total\ Resources / (Adjusted\ Peak\ Demand - Emergency\ Resources)) - 1$, expressed as a percentage

¹ The derivation of the emergency resource amount is described in the Scenario Assumptions Details tab.

² The Planning Reserve Margin (PRM) is the forecasted capacity reserve that can cover higher-than-expected peak demand and lower-than-expected resource availability when looking at months or longer in the future. This is in contrast to operating reserve measures that focus on actual available capacity during real-time and hour-ahead operating periods. Consequently, the PRM is not an appropriate measure of capacity reserves when operations timeframes are being considered.

	Base & Moderate Risk Scenarios	Extreme Risk Scenarios
Adjusted Peak Load Forecast	Based on average weather conditions from 2007 – 2021 at the time of the summer peak. These baseline forecasts are adjusted downwards to account for peak load reductions from rooftop solar installations that are not already accounted for in the baseline forecasts. The rooftop solar load reductions for the forecasted summer peak load hour (August 10, hour-ending 17 (5 pm) is 432 MW.	
Load Adjustments	Based on the 2011 weather conditions at the time of Summer season peak. These baseline forecasts are adjusted downwards to account for peak load reductions from rooftop solar installations that are not already accounted for in the baseline forecasts. The rooftop solar load reductions for the forecasted summer peak load hour (August 10, hour-ending 17 (5 pm) is 432 MW.	Assumed weather conditions 2% worse than occurred in 2011 at the time of Summer season peak. These baseline forecasts are adjusted downwards to account for peak load reductions from rooftop solar installations that are not already accounted for in the baseline forecasts. The rooftop solar load reductions for the forecasted summer peak load hour (August 10, hour-ending 17 (5 pm) is 432 MW.
Typical Planned Outages, Thermal	Based on the historical average of planned outages for July through August weekdays, hours ending 3 pm - 8 pm, for the last three summer seasons (2020 -2022). Outage history excludes units that are not expected to be available for the peak period of the upcoming seasons. These unavailable units are comprised of units that have retired, have announced upcoming retirements, are under extended outage, are mothballed, or are unavailable switchable generators.	
Typical Unplanned Outages, Thermal	Based on historical average of unplanned outages for June through September weekdays, hours ending 3 pm - 8 pm, for the last three summer seasons (2020 - 2022). Outage history excludes units that are not expected to be in-service for the peak period of the upcoming seasons. These unavailable units are comprised of units that have retired, have announced upcoming retirements, are under extended outage, are mothballed, or are unavailable switchable generators.	
Unplanned Outage Adjustments, Thermal	The High Unplanned Outage Adjustment is based on the 95th percentile of historical unplanned outages for June through September weekdays, hours ending 3 pm - 8 pm, for the last five summer seasons (2018 -2022); the adjustment is the 95th percentile value, 8,364 MW, less the typical unplanned outage amount of 4,975 MW. The outages for the High Unplanned Outage Adjustment include an incremental amount from Private Use Network (PUN) generators; specifically, the 95th percentile amount less the 50th percentile amount. See the Background tab for more information on the treatment of PUN capacity. Outage history excludes units that are not expected to be available for the peak period of the upcoming seasons. These unavailable units are comprised of units that have retired, have announced upcoming retirements, are under extended outage, are mothballed, or are unavailable switchable generators.	Based on the maximum historical unplanned outage level for June through September weekdays, hours ending 3 pm - 8 pm, for the last five summer seasons (2018 -2022); the adjustment is 11,148 MW, less the typical unplanned outage amount of 4,975 MW. The outages for the Extreme Unplanned Outage Adjustment include an incremental amount from Private Use Network (PUN) generators; specifically, the 95th percentile amount less the 50th percentile amount. See the Background tab for more information on the treatment of PUN capacity. Outage history excludes units that are not expected to be available for the peak period of the upcoming seasons. These unavailable units are comprised of units that have retired, have announced upcoming retirements, are under extended outage, are mothballed, or are unavailable switchable generators.
Wind Output Adjustments	The adjustment is based on the 10th percentile of hourly wind capacity for the daily period hour-ending 13 - 20 for the months of June through September. The capacity values are derived from annual hourly simulated wind output profiles for the period 1980 - 2021 inclusive. The profiles reflect hourly weather conditions for each of the 42 simulated weather years. A profile is developed for each current operational wind site as well as each planned wind site included in the 2023 Summer SARA. This low wind output level is 2,894 MW. The adjustment is the summer Peak Average Capacity Contribution, 10,427 MW, less 2,894 MW. The methodology report for profile development is available at: https://www.ercot.com/files/docs/2021/12/07/Report_ERCOT_1980-2020_WindSolarDGPVGenProfiles.pdf	The adjustments are based on the minimum hourly wind capacity value for the daily period hour-ending 13 - 20 for the months of June through September. The capacity values are derived from annual hourly simulated wind output profiles for the period 1980 - 2021. The profiles reflect hourly weather conditions for each of the 42 simulated weather years. A profile is developed for each current operational wind site as well as each planned wind site included in the 2022 Summer SARA. This extreme low wind output level is 61 MW. The adjustment is the summer Peak Average Capacity Contribution, 10,427 MW less 61 MW. Note that a scenario with a combined extreme peak load and extreme-low renewables output is not provided because an extreme peak load is associated with high solar output due to minimal cloud cover serving as a driver for both system conditions.
Solar Output Adjustments	The adjustment is based on the 10th percentile of hourly solar capacity for the daily period hour-ending 13 - 18 for the months of June through August. (Note that September is excluded due to very low output beginning in mid-month and the extremely low likelihood of a summer peak load occurring that late in September.) The capacity values are derived from annual hourly simulated solar output profiles for the period 1980 - 2021 inclusive. The profiles reflect hourly weather conditions for each of the 42 simulated weather years. A profile is developed for each current operational solar site as well as each planned wind site included in the 2023 Summer SARA. This low solar output level is 9,263 MW. The adjustment is the summer Peak Average Capacity Contribution, 12,636 MW, less 9,263 MW. The methodology report for profile development is available at: https://www.ercot.com/files/docs/2021/12/07/Report_ERCOT_1980-2020_WindSolarDGPVGenProfiles.pdf	N/A
Emergency Resources Deployed by ERCOT prior to EEA Declaration	An amount is only shown if Capacity Available for Operating Reserves, line item [g], is at or below 3,000 MW. Consists of the sum of (1) expected Emergency Response Service (873 MW),(2) TDSP Distribution Voltage Reduction (562 MW), and (3) the expected peak consumption by operational LFLs at co-located and standalone sites (488 MW and 837 MW respectively), which is assumed to be available for curtailment based on ERCOT requests to address an imminent capacity reserve shortage. The ERS and Distribution Voltage Reduction amounts reflect a 2% gross-up to account for avoided transmission losses. Other resources that may be available include voluntary customer Demand Response (including customer installation of backup generators), switchable generation resources currently serving the Eastern Interconnection, and additional DC tie imports subject to availability.	
Emergency Resources Deployed by ERCOT	An amount is only shown if Capacity Available for Operating Reserves, line item [g], is at or below 2,300 MW. Consists of the sum of expected Load Resources Available for Responsive Reserves for the summer season (1,438 MW), Load Resources Available for Non-Spinning Responsive Reserves for the summer season (49 MW), Emergency Response Service (873 MW), Transmission and Distribution Service Provider (TDSP) load management programs (330 MW) and TDSP Distribution Voltage Reduction (562 MW). Each of these amounts reflect a 2% gross-up to account for avoided transmission losses. Other resources that may be available include voluntary customer Demand Response (including customer installation of backup generators), switchable generation resources currently serving the Eastern Interconnection, and additional DC tie imports subject to availability.	

Seasonal Assessment of Resource Adequacy for the ERCOT Region

Background

The Seasonal Assessment of Resource Adequacy (SARA) report is a deterministic approach to considering the impact of potential variables that may affect the sufficiency of installed resources to meet the peak electrical demand on the ERCOT System during a particular season.

The standard approach to assessing resource adequacy for one or more years into the future is to account for projected load and resources on a normalized basis and to require sufficient reserves (resources in excess of peak demand, on this normalized basis) to cover the uncertainty in peak demand and resource availability to meet a probabilistic reliability standard.

For seasonal assessments that look ahead less than a year, specific information may be available (for example, an anticipated common-mode event such as a system-wide heat wave) which can be used to consider the range of resource adequacy outcomes in a more deterministic manner.

The SARA report focuses on the availability of sufficient operating reserves to avoid emergency actions such as deployment of voluntary load reduction resources. It uses operating reserve thresholds of 2,300 and 1,000 MW, respectively, to indicate the risk that an Energy Emergency Alert Level 1 (EEA1) and Level 3 (EEA3) may be triggered during the time of the forecasted seasonal peak load. These threshold levels are intended to be roughly analogous to the 2,300 and 1,000 MW Physical Responsive Capability (PRC) thresholds for EEA1 and EEA3 with controlled outages ordered by ERCOT, respectively. However, PRC is a real-time capability measure for Resources that can quickly respond to system disturbances. In contrast, the SARA operating reserve reflects additional capability assumed to be available before energy emergency procedures are initiated, such as from Resources qualified to provide non-spinning reserves. Additionally, the amount of operating reserves available may increase relative to what is included in the SARA report due to the market responding to wholesale market price increases and anticipated capacity scarcity conditions. Given these considerations, ERCOT believes that the 2,300 and 1,000 MW reserve capacity thresholds are reasonable indicators for the risk of Energy Emergency Alerts given the uncertainties in predicting system conditions months in advance.

The SARA report is intended to illustrate the range of resource adequacy outcomes that might occur. It serves as a situational awareness tool for ERCOT operational planning purposes, and helps fulfill the "extreme weather" resource adequacy assessment requirement per Public Utility Commission of Texas rule 25.362(i)(2)(H). In addition to a base scenario, several other scenarios are developed by varying the value of load forecast and resource availability parameters. The variations in these parameters are based on historic ranges of the parameter values, known changes expected in the near-term, or reasonable assumptions regarding potential future events.

Thermal Outage Accounting

Directly comparing SARA thermal unplanned (previously "forced") outage scenario capacity with outage amounts listed in ERCOT outage reports — such as the Unplanned Resource Outages Report — will yield misleading results. The reason is that the SARA report consists of multiple resource availability line items, and thermal outages for certain resource types are reflected elsewhere in the SARA reports rather than the thermal outage scenario line items. As a result, the SARA thermal outage scenario amounts will always be less than what is typically shown in other outage reports. The main differences include the following:

- Outages for Private Use Network (PUN) generators are incorporated in the line item called "Capacity from Private Use Networks." This is an aggregate estimate of the amount of capacity available for the ERCOT grid during the highest 20 seasonal hourly demands for the last three years and incorporates average generator outage amounts over those hourly intervals. Additionally, the aggregate estimate reflects PUN owner decisions to supply power to their industrial loads versus export to the grid. PUN outages are thus already reflected in the SARA available resource capacity estimate.
- Extended outages are reported in the SARA Capacities tab in a line item called "Operational Capacity Unavailable due to Extended Outage or Derate." Extended Outages are those forced outages that are expected to last a minimum of 180 days as reported by the resource owner via submission of a Notice of Suspension of Operations (NSO) form. These outages are thus already reflected in the SARA available resource capacity estimate.
- The capacity of Switchable Generation Resources (SWGRs) that are assumed to serve a neighboring grid for the season is deducted from available resource capacity, so outages associated with these SWGRs are not reflected anywhere in the SARA report.

To more closely align the SARA with other outage reports based on ERCOT Outage Scheduler data, a modification was made to the treatment of outages classified as *Unavoidable Extensions*, or UEs. UEs are defined as "a Planned or Maintenance Outage that is not completed within the ERCOT-approved timeframe and extended." For past SARA reports, if the original outage was classified as Planned in the Outage Scheduler, then the UE would continue to be classified as Planned. If the original outage was classified as Forced, then the UE would continue to be classified as Forced. In contrast, for other ERCOT outage reports, UE outages are all classified as Forced (Unplanned). SARA reports now treat all UEs as Unplanned. While this category change does not impact the total base outage amount, it does increase the high and extreme unplanned thermal adjustments used in several risk scenarios.

Accounting for Large Flexible Loads

Due to a new influx of Large Flexible Loads (LFLs), an interim solution was implemented to better account for the peak consumption of these loads. The new interim methodology utilizes the 20 hours over each of the past three years with the lowest average Physical Responsive Capability. The methodology compares historical load zone prices to an ERCOT determined (and industry backed) estimate of the bitcoin mining breakeven cost. This breakeven cost was estimated at \$96/MWh and is based on the average economics of an Antminer S19 bitcoin mining rig from March 15th, 2023 through April 14th, 2023. If the historical load zone price for the LFL's respective load zone was below the breakeven threshold then the load's peak summer consumption was estimated to be the maximum observed consumption at the site according to internal tracking of LFL projects. If the historical load zone price was greater than the breakeven threshold then the LFL was assumed to be fully curtailed and consuming only 3% of the load's maximum capability. The 3% assumption accounts for the idle power draw of ASIC miners and necessary auxiliary cooling on site. The estimated consumption for each LFL, including both co-located and stand-alone loads, was summed for each of the 60 hours analyzed and then averaged to calculate the total estimated average consumption. This value was calculated to be 837 MW for stand-alone LFLs and 488 MW for co-located LFLs. This is reflected in item [c] as an adjustment to the baseline peak load forecast on the Base, Moderate & Extreme Risk Scenario tabs. The reported adjustment of 1,105 MW is the result of subtracting the 220 MW already allocated for peak LFL consumption in the baseline peak load forecast from the newly calculated average expected peak LFL consumption of 1,325 MW (837 MW + 488 MW). This adjustment reflects ERCOT's continuous effort to better understand and forecast the operations of Large Flexible Loads.



Stand-Alone Battery Storage Projects Based on the June 2023 GIS Report

NOTES:

This table includes Large Generator Battery projects that have requested Full Interconnection Studies. It also includes Small Generator projects that have completed Resource Registration form as indicated by assignment of a "Model Ready Date".

For the purposes of this report, the Battery Energy Storage project is considered stand-alone if there is no other project located at the same POI, with similar project name and same Interconnecting Entity (or same parent or holding company).

The projects are listed in alphabetical order.

Gray-highlighted cells indicate that the information is not applicable because the project is operational.

INR	Project Name	Project Status	Interconnecting Entity	POI Location	County	CDR Reporting Zone	Projected COD	Capacity (MW)
22INR0445	SPC Bloom BESS	Planned	Victoria Battery LLC	8911 Black Bayou 138kV	Victoria	SOUTH	6/1/2023	100.
20INR0290	River Valley Storage 1	Planned	KCE TX 19, LLC	3650 Elgin SS 138kV	Williamson	SOUTH	6/23/2023	51.5
20INR0293	River Valley Storage 2	Planned	KCE TX 21, LLC	3650 Elgin SS 138kV	Williamson	SOUTH	6/23/2023	51.5
22INR0551	Wolf Tank Storage	Planned	Lobo Storage	80221 LOBO 138kV	Webb	SOUTH	7/1/2023	155.48
20INR0281	Queen BESS	Planned	Roadrunner Storage, LLC	842 GPL King Mountain 345kV	Upton	WEST	7/14/2023	51.06
22INR0509	Turquoise Storage	Planned	BT Cunningham Storage, LLC	6950 Wallace Switch 138kV	Hunt	NORTH	7/31/2023	196.21
23INR0514	AEP_N_MERCED_LD01_(SMT Merc	Planned	SMT MERCEDES LLC	Station Name (TDSP Station Code): N_MERCEDLoad/Load Transformer Name: N_MERCED	Hidalgo	SOUTH	8/25/2023	9.99
22INR0495	TIMBERWOLF BESS 2	Planned	Crane 2 BESS, LLC	76635 King Mt 138kV	Crane	WEST	9/1/2023	150.
23INR0477	North Alamo BESS	Planned	SMT Alamo LLC	N_ALAMO / LD02 / BUS#8906 / 138KV	Hidalgo	SOUTH	9/17/2023	9.99
23INR0507	Bay City BESS	Planned	SMT Bay City LLC	BAY_CITY / 138_12_1 / BUS#8113 / 138KV	Matagorda	COASTAL	9/22/2023	9.99
22INR0398	Sabal Storage	Planned	Cameron Wind 1, LLC	5761 Paredes 138kV	Cameron	COASTAL	9/30/2023	18.
23INR0510	Rio Grande City BESS	Planned	SMT RIO GRANDE II LLC	RIO_GRAN / LD02 / BUS#8797 / 69KV	Starr	SOUTH	10/1/2023	9.99
23INR0515	AEP_S_SNRSA_LD01(SMT Santa R	Planned	SMT SANTA ROSA LLC	Station Name (TDSP Station Code): S_SNRSA Load/Load Transformer Name: S_SNRSA	Cameron	COASTAL	10/7/2023	9.99
23INR0569	Weil Tract BESS	Planned	HEN Infrastructure, LLC 2	WEIL_TRC/B482/138_12/WEIL_TRC_LD1	Nueces	COASTAL	10/13/2023	9.9
23INR0512	West Harlingen BESS	Planned	SMT HARLINGEN II LLC	Station Name (TDSP Station Code): W_HARLIN Load/Load Transformer Name: W_HARLIN	Cameron	COASTAL	10/14/2023	9.99
23INR0513	AEP_ELSA_ELSA_L1_(SMT Elsa)	Planned	SMT ELSA LLC	Station Name (TDSP Station Code): ELSALoad/Load Transformer Name: ELSA	Hidalgo	SOUTH	10/22/2023	9.99
22INR0485	House Mountain	Planned	House Mountain LLC	6674 Bronco 69kV	Brewster	WEST	10/26/2023	63.
23INR0511	Mayberry BESS	Planned	SMT MISSION LLC	MAYBERRY / LOAD1 / BUS#8109 / 138KV	Cameron	COASTAL	10/29/2023	9.99
23INR0371	Rodeo Ranch Energy Storage	Planned	Rodeo Ranch Energy Storage, LLC	38021 WORSHAM 138kV	Reeves	WEST	11/6/2023	307.46
23INR0521	Junction BESS	Planned	HEN Infrastructure, LLC 2	JUNCTION/LD1 Bus 6400	Kimble	SOUTH	11/7/2023	9.95
23INR0570	Mineral Wells East BESS	Planned	HEN Infrastructure, LLC 2	MINWLLSE1_8/1584/LDLXFM1	Palo Pinto	NORTH	11/8/2023	9.95
23INR0508	Los Fresnos BESS	Planned	SMT LOS FRESNOS LLC	L_FRESNO / LD1 / BUS#8333 / 138KV	Cameron	COASTAL	11/12/2023	9.99
23INR0509	Garceno BESS	Planned	SMT RIO GRANDE LLC	GARCENO / LD01 / BUS#8923 / 138KV	Starr	SOUTH	11/19/2023	9.99
23INR0522	Diboll Bess	Planned	HEN Infrastructure, LLC 1	Station Name (TDSP Station Code): DIBOLLoad/Load Transformer Name: DIBOL	Angelina	NORTH	11/25/2023	9.95
22INR0366	BRP Libra BESS	Planned	Libra Storage LLC	5133 Elm Creek 345kV	Guadalupe	SOUTH	11/27/2023	206.21
23INR0523	Damon Storage	Planned	Baccharis Storage LLC	Station Name: DALoad/Load Transformer Name: TR1PTI BUS number: 42	Brazoria	COASTAL	12/1/2023	5.
24INR0073	Hyacinth Storage	Planned	Hyacinth Storage, LLC	46500 Tomball 345 kV	Harris	HOUSTON	12/1/2023	103.05
23INR0239	Giga Texas Energy Storage	Planned	Giga Texas Energy, LLC.	7047 Hornsby 345kV	Travis	SOUTH	12/15/2023	131.05
23INR0565	Garden City East BESS	Planned	HEN Infrastructure, LLC 2	GARDCITYE_9/LDLXFM1/GRDNE_LD3	Glasscock	WEST	12/19/2023	9.95
23INR0369	Anemoui Energy Storage	Planned	Anemoui Energy Storage, LLC	8574 POMELO 345kV	Hidalgo	SOUTH	12/20/2023	205.
23INR0543	Continental BESS	Planned	Regis Continental, LLC	Station Name (TDSP Station Code): CONTINENLoad/Load Transformer Name: CONTINEN	Starr	SOUTH	12/20/2023	9.8
22INR0372	Hydra BESS	Planned	BRP Hydra BESS LLC	76002 Bakersfield 345kV	Pecos	WEST	12/21/2023	200.8
22INR0468	Lower Rio BESS	Planned	VESI 38 LLC	5792 Sioux 138kV	Hidalgo	SOUTH	12/30/2023	60.
22INR0325	Dickens BESS	Planned	BRP Dickens BESS LLC	59904 Cottonwood 345kV	Dickens	PANHANDLE	12/31/2023	200.8
23INR0485	Hacienda Storage	Planned	Galveston Energy Storage LLC	38745 Attwater 138kV	Galveston	HOUSTON	12/31/2023	203.
22INR0322	Paleo BESS	Planned	BRP Paleo BESS LLC	23920 Blackwater Draw 345kV	Hale	PANHANDLE	12/31/2023	200.8
23INR0072	Tortolas BESS	Planned	BRP Tortolas BESS LLC	39030 Alvin 138kV	Brazoria	COASTAL	12/31/2023	50.3
23INR0554	Hamilton BESS	Planned	HEN Infrastructure, LLC 1	Station Name (TDSP Station Code): HAMILTONLoad/Load Transformer Name: HAMILTON	Val Verde	WEST	2/15/2024	9.95
23INR0330	BRP Snowdon BESS	Planned	BRP SNOWDON BESS LLC	23914 Tule Canyon Substation 345kV	Briscoe	PANHANDLE	2/16/2024	410.94
22INR0338	Limousin Oak Storage	Planned	KCE TX 15, LLC	44645 Singleton 345kV	Grimes	NORTH	2/23/2024	104.62
22INR0327	Hummingbird Storage	Planned	KCE TX 10, LLC	1730 Krum 345kV	Denton	NORTH	2/24/2024	103.8
23INR0620	Falfurrias BESS	Planned	HEN INFRASTRUCTURE LLC 1	FALFUR2_138_12/8510	Brooks	SOUTH	3/7/2024	9.9

22INR0384	Pavo BESS	Planned	BRP Pavo BESS LLC	38430 TN White Baker 138kV	Pecos	WEST	3/27/2024	175.8
21INR0492	Stockyard Grid Batt	Planned	Stockyard Grid, LLC	2082 Hicks 138kV	Tarrant	NORTH	3/29/2024	150.6
23INR0154	Ebony Energy Storage	Planned	Ebony Energy Storage, LLC	5180 Green Mountain 138kV	Comal	SOUTH	4/1/2024	208.41
23INR0363	Brazos Bend BESS	Planned	Brazos Bend BESS LLC	138 kV Fort Bend Switch (#44280)	Fort Bend	HOUSTON	4/15/2024	101.64
23INR0137	BRP Diran BESS	Planned	BRP Diran BESS LLC	43190 South Lane City 138kV	Wharton	SOUTH	5/1/2024	100.63
22INR0423	BRP Quela BESS	Planned	BRP Quela BESS LLC	Tap 138kV 5110 J.T. Deely - 5294 Martinez	Bexar	SOUTH	5/1/2024	303.74
24INR0147	Citadel BESS	Planned	Citadel BESS LLC	40390 Crosby 138kV	Harris	HOUSTON	5/7/2024	201.32
23INR0348	Aggie Energy storage	Planned	KINGFISHER ENERGY STORAGE LLC	TABOR RD (#32882)	Brazos	NORTH	5/30/2024	104.4
23INR0200	Paradiso BESS	Planned	VESI 13	8203 Pleasanton 138kV	Atascosa	SOUTH	5/30/2024	100.92
22INR0516	Amber Storage	Planned	Belltown Power Texas	730 Wolf Ridge 138kV	Cooke	NORTH	5/31/2024	50.
21INR0507	Arana Creek Batt	Planned	Arana Creek LLC	5648 Loyola 138kV	Kleberg	COASTAL	5/31/2024	153.5
24INR0394	CATHODE BESS	Planned	CED Development Inc.	138kV King Mountain 76635	Upton	WEST	5/31/2024	150.
23INR0372	Cross Trails Storage	Planned	Cross Trails Energy Storage Project, LLC	60090 WKN Breaker 69kV	Scurry	WEST	5/31/2024	38.86
24INR0393	ELECTRODE BESS	Planned	CED Development Inc.	Castillo Substation, Bus number : 76040	Upton	WEST	5/31/2024	150.
23INR0106	Vorsavio Grid BESS	Planned	Vorsavio Grid, LLC	80013 Laredo VFT 138kV	Webb	SOUTH	5/31/2024	100.67
21INR0508	Angels Creek	Planned	Angels Creek LLC	5888 Bruni 69kV	Webb	SOUTH	6/1/2024	31.68
23INR0132	BRP Bonete BESS	Planned	BRP Bonete BESS LLC	8951 Stewart Road 138kV	Hidalgo	SOUTH	6/1/2024	201.13
22INR0347	BRP Crater BESS	Planned	BRP Crater BESS LLC	tap 345kV 1025 Falcon Seaboard - 1021 Midland East	Howard	WEST	6/1/2024	310.31
22INR0365	BRP Mensa BESS	Planned	BRP Mensa BESS LLC	60718 Pecos Valley 138kV	Pecos	WEST	6/1/2024	404.99
22INR0386	BRP Octans BESS	Planned	BRP OCTANS BESS LLC	6671 Tombstone 138kV	Pecos	WEST	6/1/2024	129.57
23INR0431	BRP Pollux BESS	Planned	BRP Pollux BESS LLC	138 kV Olsen Switching Station (#37460)	Bosque	NORTH	6/1/2024	163.42
22INR0490	Callisto I Energy Center	Planned	Callisto I energy center LLC	47150 HO Clarke 138kV	Harris	HOUSTON	6/1/2024	203.04
22INR0558	Callisto II Energy Center	Planned	Saracen III Energy Storage LLC	47150 HO Clarke 138kV	Harris	HOUSTON	6/1/2024	406.06
22INR0401	Eval Storage	Planned	Hecate Grid East Valley Storage LLC	80229 Cavazos 138kV	Cameron	COASTAL	6/1/2024	255.
22INR0469	Harper Energy Storage	Planned	VESI 31 LLC	Tap 138kV 8314 La Palma - 80229 Villa Cavazos	Cameron	COASTAL	6/1/2024	82.42
23INR0318	Marcelina Storage	Planned	Marcelina Solar, LLC	Tap 345 kV 5133 Elm Creek - 5901 San Miguel	Wilson	SOUTH	6/1/2024	203.21
22INR0493	Oscar Storage Project	Planned	Woodlands Energy Renewables LLC	3413 Knob Creek 345kV	Bell	NORTH	6/1/2024	50.
21INR0505	Ramsey Storage	Planned	Hecate Energy Ramsey Storage LLC	44200 Hillje 345kV	Wharton	SOUTH	6/1/2024	510.4
22INR0503	Tidwell Prairie II Batt	Planned	TIDWELL PRAIRIE LLC	Tap 345kV 3400 Twin Oak - 39950 TNP One	Robertson	NORTH	6/2/2024	200.
22INR0504	Tidwell Prairie III Batt	Planned	Tidwell Prairie LLC	Tap 345kV 3400 Twin Oak - 39950 TNP One	Robertson	NORTH	6/2/2024	200.
24INR0544	Wetzel BESS	Planned	Brown ESS, LLC	1654 Zephyr Substation 138kV	Brown	NORTH	6/13/2024	185.57
23INR0219	Dogfish BESS	Planned	Momentum Dogfish LLC	tap 138kV 38331 TN Alamo St – 38455 TN Holiday	Pecos	WEST	6/15/2024	75.
23INR0359	BRP Crios BESS	Planned	BRP Crios BESS LLC	Tap 138 kV 1649 HASSE_P8 - 1684 SABANA_8	Comanche	NORTH	6/16/2024	87.37
24INR0134	BRP Hemera BESS	Planned	BRP Hemera BESS LLC	345 kV Deaf Smith Substation (#23908, Oncor)	Deaf Smith	PANHANDLE	6/18/2024	206.96
23INR0283	Kota Battery	Planned	Kota Storage, LLC	23900 Alibates 345kV	Carson	PANHANDLE	6/20/2024	200.6
23INR0470	BoCo BESS	Planned	BoCo BESS	59906 Long Draw 138kV	Borden	WEST	6/22/2024	153.34
24INR0265	SMT Ironman BESS	Planned	SMT Ironman BESS LLC	43035 Oasis Substation 345kV	Brazoria	COASTAL	6/30/2024	304.25
23INR0474	AP Greenport	Planned	AP Greenport	Austrop – Lost Pines 345 kV transmission line (Bus #7040 – 9041)	Travis	SOUTH	7/1/2024	100.45
22INR0515	Flagtail BESS	Planned	Flagtail LLC	Tap 138kV 5 Sandy Switch - 7 Sandy	Grimes	NORTH	7/1/2024	203.8
24INR0108	Louisa Energy Storage	Planned	Viridity Energy Solutions Inc.	138 kV Helotes (#5200)	Bexar	SOUTH	7/1/2024	102.77
24INR0436	SMT McAllen II	Planned	SMT McAllen II LLC	North Mcallen 138 kV Substation (N_MCALLN, Bus#8368)	Hidalgo	SOUTH	7/1/2024	97.43
22INR0540	Walstrom BESS	Planned	Castleman Power	46220 Peters 138kV	Austin	SOUTH	7/1/2024	200.
21INR0495	Belding 2 Batt	Planned	Triple Butte II LLC	38490 TNBelding 69kV	Pecos	WEST	7/15/2024	51.48
25INR0230	Great Rock BESS	Planned	Black Mountain Energy Storage II	Tap 345kV 46020 Limestone - 967 Gibbon Creek Ckt 18	Leon	NORTH	7/30/2024	307.14
25INR0231	Apache Hill BESS	Planned	Black Mountain Energy Storage II	363 Hood 138kV	Hood	NORTH	8/1/2024	201.2
23INR0094	BRP Pyxis BESS	Planned	BRP Pyxis BESS LLC	tap 138kV 1009 Yucca - 11197 Sand Tank Pod	Ward	WEST	8/1/2024	206.87
23INR0075	BRP Rhine BESS	Planned	BRP Rhine BESS LLC	Tap 345kV 11188 QUARRYFLD - 11010 WOLF	Ward	WEST	8/1/2024	206.89
23INR0166	Great Kiskadee Storage	Planned	Great Kiskadee Storage, LLC	8951 Stewart Rd 138kV	Hidalgo	SOUTH	8/1/2024	103.05
22INR0466	Pajarita BESS	Planned	VESI 29 LLC	8266 Marconi 138kV	Cameron	COASTAL	8/1/2024	205.5
22INR0494	Quail Run Storage System	Planned	to be determined	11016 Quail Run Switch 345kV	Ector	WEST	8/1/2024	50.
23INR0401	Headcamp	Planned	Momentum Energy Storage Partners	tap 138kV 38331 TN Alamo St – 38455 TN Holiday	Pecos	WEST	8/10/2024	150.
23INR0403	Connolly Storage	Planned	BT Connolly Storage, LLC	Tap 138kV 1568 Allison – 11568 Flatwood	Wise	NORTH	8/15/2024	125.36
24INR0435	Moonshine Hill BESS	Planned	Black Mountain Energy Storage II	138kV HUMBLE_B138 40830	Harris	HOUSTON	8/15/2024	201.2
24INR0387	PaleAle BESS	Planned	Momentum Energy Storage Partners,LLC	Tap 138 kV Bus 7506 L_CEDAVA8_1Y - Bus 7507 L_FRIEND8_1Y	Hays	SOUTH	8/15/2024	75.38
24INR0260	Lager Storage	Planned	Momentum Energy Storage Partners,LLC	8031 Gillrina 69kV	Nueces	COASTAL	8/20/2024	30.
24INR0238	Appaloosa Run BESS	Planned	Appaloosa Run BESS	New Palouse 138kV (#60278)	Upton	WEST	8/30/2024	200.5
24INR0458	ORION BRANGUS STORAGE	Planned	ORION BESS	Tap 345kV 3687 BELL COUNTY EAST SWITCH - 39950 TNP ONE PLAN	Milam	SOUTH	8/30/2024	355.21
23INR0381	Soportar ESS	Planned	Bexar ESS LLC	5007 Alamo One 138kV	Bexar	SOUTH	8/30/2024	102.11
24INR0313	Backbone Creek BESS	Planned	Backbone Creek BESS LLC	7351 STARCKE 138kV	Burnet	SOUTH	9/1/2024	120.69
24INR0460	Evelyn Battery Energy Storage System	Planned	BRP Blue Topaz 4, LLC	Hidden Lakes 138kV (38900)	Galveston	HOUSTON	9/1/2024	457.
24INR0572	Harlingen III BESS LLC	Planned	SMT Harlingen III LLC	8320 WEST HARLINGEN 69kV	Cameron	COASTAL	9/1/2024	110.

24INR0312	Wigeon Whistle BESS	Planned	Wigeon Whistle BESS	811 NEVADA 138kV	Collin	NORTH	9/1/2024	120.68
24INR0273	Al Pastor BESS	Planned	Al Pastor BESS LLC	1163 Lamesa Substation 138kV	Dawson	WEST	9/2/2024	100.8
24INR0352	Guinness BESS	Planned	Momentum Energy Storage Partners,LLC	Tap 138kV 7520 BERTRA - 7522 ANDICE	Williamson	SOUTH	9/3/2024	100.51
23INR0312	Hofbrau BESS	Planned	Momentum Energy Storage Partners, LLC	6442 Redcreek 138kV	Tom Green	WEST	9/3/2024	188.1
24INR0491	Gunnar BESS	Planned	BRP Blue Topaz 6, LLC	8029 CLOSNER4A 138kV	Hidalgo	SOUTH	9/11/2024	203.
23INR0310	Dunkel BESS	Planned	Momentum Energy Storage Partners	59156 Yellow House Canyon 115kV	Lubbock	PANHANDLE	9/14/2024	225.
23INR0299	Anole BESS	Planned	Anole Energy Storage, LLC	2432 Tri-Corner 345kV	Dallas	NORTH	9/30/2024	240.71
23INR0343	Guajillo Energy Storage	Planned	Guajillo Energy Storage LLC	80219 Lobo Substation 345kV	Webb	SOUTH	9/30/2024	201.09
24INR0439	Citrus Grove Energy Storage	Planned	SANTA ANA ENERGY STORAGE I LLC	8354 Weslaco Switch 138kV	Hidalgo	SOUTH	10/1/2024	204.93
23INR0220	HOPSLAM BESS	Planned	Momentum LRC Holdco LLC	38430 White Baker TNP 138kV	Pecos	WEST	10/1/2024	156.75
22INR0488	Venture Hill Storage	Planned	KCE TX 24, LLC	7336 Gilleland Creek 138kV	Travis	SOUTH	10/1/2024	70.44
20INR0246	Ryan Energy Storage	Planned	Ryan Storage LLC	37580 TNPancake 69kV	Coryell	NORTH	10/21/2024	50.
24INR0419	High Plains Storage	Planned	ROBP Holdings, LLC	45880 Hockley 138kV	Harris	HOUSTON	10/30/2024	157.7
24INR0446	ASD Gongora Hill TX Storage	Planned	AMP Solar Development, Inc.	Tap 138kV 8796 Roma – 7870 Escobares	Starr	SOUTH	10/31/2024	201.45
23INR0195	Desert Willow BESS	Planned	Desert Willow Energy Storage, LLC	tap 345kV 1906 Venus_S5 - 1916 LiggettA1_5	Ellis	NORTH	10/31/2024	154.4
24INR0185	BRP Kotys BESS	Planned	BRP Kotys BESS LLC	138 kV Argyle Substation (#1984)	Denton	NORTH	11/1/2024	163.41
24INR0111	BRP Triton BESS	Planned	BRP Triton BESS LLC	138 kV Comanche Switch Substation (#1441)	Comanche	NORTH	11/1/2024	205.36
21INR0260	Chariot Storage	Planned	Chariot Storage LLC	tap 69kV 99 Ben Hur - 107 Prairie Hill	Limestone	NORTH	11/1/2024	50.
21INR0280	Edgewater Storage	Planned	Edgewater Battery Storage LLC	210 Reagor Springs 69kV	Ellis	NORTH	11/1/2024	50.
20INR0244	Montezuma Storage	Planned	Montezuma Storage LLC	7258 Gidden 138kV	Colorado	SOUTH	11/1/2024	50.6
23INR0382	Outer Loop BESS	Planned	Black Mountain Energy Storage II	40700 Greens Bayou 345kV	Harris	HOUSTON	11/1/2024	201.2
20INR0245	Volunteer Storage	Planned	Blackjack Storage LLC	7216 Lockhart 138kV	Caldwell	SOUTH	11/1/2024	50.6
23INR0103	Burksol BESS	Planned	Donegal BESS	59904 Cottonwood 345kV	Dickens	PANHANDLE	11/30/2024	100.54
24INR0543	Thomas Cameron BESS	Planned	Thomas Cameron BESS	Tap 345kV 3424 BUCKHORN SWITCH - 3422 KILLEEN SWITCH	Lampasas	NORTH	11/30/2024	200.82
24INR0395	Berkman Storage	Planned	Berkman Storage, LLC	138 kV League City (Bus# 38920)	Galveston	HOUSTON	12/1/2024	150.86
23INR0074	BRP Ampato BESS	Planned	BRP Ampato BESS LLC	10002 NS Crane Switch 138kV	Crane	WEST	12/1/2024	121.56
22INR0349	BRP Antlia BESS	Planned	BRP Antlia BESS LLC	88999 ANTLAPOI4A 138kV	Val Verde	WEST	12/1/2024	70.95
23INR0287	BRP Avila BESS	Planned	BRP Avila BESS LLC	38340 TN Airport 138kV	Pecos	WEST	12/1/2024	164.95
23INR0342	BRP Brizo BESS	Planned	BRP Brizo BESS LLC	138 kV Loop 463 Substation (#5680)	Victoria	SOUTH	12/1/2024	143.85
23INR0358	BRP Castor BESS	Planned	BRP Castor BESS LLC	138 kV West Columbia Local Substation (#39530)	Brazoria	COASTAL	12/1/2024	205.35
23INR0360	BRP Charon BESS	Planned	BRP Charon BESS LLC	Tap Smithers (#44650) and Bellaire (#47000) 345kV	Fort Bend	HOUSTON	12/1/2024	410.81
24INR0142	BRP De Los Santos BESS	Planned	BRP De Los Santos BESS LLC	78015 Rosita Creek Substation 138kV	Maverick	SOUTH	12/1/2024	206.87
24INR0128	BRP Desna BESS	Planned	BRP Desna BESS LLC	39703 TNP FM524 138kV	Brazoria	COASTAL	12/1/2024	205.44
23INR0135	BRP Elbus BESS	Planned	BRP Elbus BESS LLC	9075 Lytton 138kV	Caldwell	SOUTH	12/1/2024	201.11
23INR0073	BRP Galan BESS	Planned	BRP Galan BESS LLC	5007 Alamo One 138kV	Bexar	SOUTH	12/1/2024	75.97
23INR0134	BRP Kailas BESS	Planned	BRP Kailas BESS LLC	6216 Bluff Creek 138kV	Taylor	WEST	12/1/2024	201.29
24INR0135	BRP Mekong BESS	Planned	BRP Mekong BESS LLC	Tap 345 kV line from Twin Oak Switch (#3400) to TPN One Plant Switchyard	Robertson	NORTH	12/1/2024	413.74
22INR0383	BRP Musca BESS	Planned	BRP Musca BESS LLC	60361 Santa Rita 138kV	Reagan	WEST	12/1/2024	100.51
23INR0275	BRP Nile BESS	Planned	BRP Nile BESS LLC	80220 Cenizo 345kV	Webb	SOUTH	12/1/2024	202.34
23INR0274	BRP Parana BESS	Planned	BRP Parana BESS	7178 Marion 138kV	Guadalupe	SOUTH	12/1/2024	303.67
23INR0139	BRP Passu BESS	Planned	BRP Passu BESS LLC	6111 Riley 345kV	Wilbarger	WEST	12/1/2024	301.82
22INR0390	BRP Perseus BESS	Planned	BRP Perseus BESS LLC	8452 Lon Hill 138kV	Nueces	COASTAL	12/1/2024	202.5
23INR0115	BRP Pobeda BESS	Planned	BRP Pobeda BESS LLC	44645 Singleton 345kV	Grimes	NORTH	12/1/2024	301.41
23INR0140	BRP Seine BESS	Planned	BRP Seine BESS LLC	60500 Edith Clarke 345kV	Foard	WEST	12/1/2024	301.69
23INR0143	BRP Sepik BESS	Planned	BRP Sepik BESS LLC	tap 138kV 11342 Lorraine South – 1032 Morgan Creek	Mitchell	WEST	12/1/2024	200.85
23INR0279	BRP Trivor BESS	Planned	BRP Trivor BESS LLC	1272 Fullerton 138kV	Andrews	WEST	12/1/2024	202.34
23INR0071	BRP Volans BESS	Planned	BRP Volans BESS LLC	11189 Quarry Field SW - 1074 Wink 138kV	Winkler	WEST	12/1/2024	206.88
24INR0096	BRP Volga BESS	Planned	BRP Volga BESS LLC	138 kV Seagoville Switch Substation (#2434; ONCOR)	Dallas	NORTH	12/1/2024	174.63
24INR0131	BRP Zelus BESS	Planned	BRP Zelus BESS LLC	the 138 kV Zapata Substation (#8299; AEP)	Zapata	SOUTH	12/1/2024	206.96
23INR0290	BRP Zeya BESS	Planned	BRP Zeya BESS LLC	38740 Heights 138kV	Galveston	HOUSTON	12/1/2024	256.83
24INR0397	Destiny Storage	Planned	Destiny Storage, LLC	Tap 138kV 40390 Crosby - 40680 Placid Ckt 86	Harris	HOUSTON	12/1/2024	201.11
24INR0516	French Riviera Storage	Planned	Arana Creek Battery Storage LLC	5646 Riviera Substation 69kV	Kieberg	COASTAL	12/1/2024	75.
24INR0413	Furay Battery Energy Storage System	Planned	Blue Topaz 1, LLC	Tap 138kV 45660 Jonte substation – 46332 Scenic WoodsTapping both ra	Harris	HOUSTON	12/1/2024	304.
24INR0584	Houston IV BESS	Planned	SMT Houston IV LLC	44140 CLODINE 138kV	Harris	HOUSTON	12/1/2024	168.6
25INR0251	Jerboa Storage	Planned	Jerboa Storage, LLC	Tap 138kV 8906 North Alamo - 8354 Weslaco Switching Station	Hidalgo	SOUTH	12/1/2024	201.08
25INR0252	Papley Storage	Planned	Papley Storage, LLC	Tapping the 138kV line connecting Ganso (Bus# 8267) to Maverick (Bus#	Maverick	SOUTH	12/1/2024	201.07
24INR0081	SANJAC BESS	Planned	Castleman Power	40270 Riverside 138kV	Harris	HOUSTON	12/1/2024	202.37
22INR0552	Sowers Storage	Planned	Sowers Energy Storage LLC	6894 Rose Hill_RC Sub 138 kV	Kaufman	NORTH	12/1/2024	200.83
22INR0549	Tanzanite Storage	Planned	Tanzanite Energy Storage LLC	6867 NORTH ATHENS 138kV	Henderson	NORTH	12/1/2024	257.72
24INR0425	Two Brothers Battery Energy Storage	Planned	Blue Topaz 2, LLC	8911 BLKBYU4A 138kV	Victoria	SOUTH	12/1/2024	152.
23INR0335	BRP Bachman BESS	Planned	BRP Bachman BESS LLC	44040 BAILEY 345kV	Wharton	SOUTH	12/2/2024	411.04

21INR0517	Tidwell Prairie Storage 1	Planned	Tidwell Prairie LLC	39950 TNP ONE PLANT 345kV - 3400 TWIN OAK	Robertson	NORTH	12/2/2024	200.
24INR0528	Blanquilla BESS	Planned	Blanquilla BESS LLC	Tap 138kV 8452 LON_HILL4A - 8441 NUECES_B4ALine is owned by LCR	Nueces	COASTAL	12/11/2024	200.78
23INR0336	Bypass Battery Storage	Planned	Parish Storage	44000 W_A_P_POI5A 345 kV	Fort Bend	HOUSTON	12/15/2024	206.9
24INR0405	Crowned Heron BESS	Planned	RWE Renewables	WA Parish 345 kV Bus #44000	Fort Bend	HOUSTON	12/15/2024	150.
24INR0493	Crowned Heron BESS 2	Planned	RWE Renewables	WA Parish 345 kV Bus #44000	Fort Bend	HOUSTON	12/15/2024	150.
23INR0351	Seven Flags BESS	Planned	Seven Flags BESS LLC	8295 Wormser Substation 138kV	Webb	SOUTH	12/15/2024	100.58
23INR0361	Third Coast BESS	Planned	Third Coast BESS LLC	8125 Lolita substation 138kV	Jackson	SOUTH	12/15/2024	101.21
23INR0364	Tierra Seca BESS	Planned	Tierra Seca BESS LLC	138kV 8255 HAMILTON4A (Hamilton Road Substation)	Val Verde	WEST	12/15/2024	101.21
22INR0467	Bird Dog BESS	Planned	VESI 37 LLC	5668 Mathis 69kV	Live Oak	SOUTH	12/30/2024	60.
24INR0472	Amador Storage	Planned	BT Amador Storage, LLC	6833 Explorer Switching Station 138kV	Van Zandt	NORTH	12/31/2024	100.92
24INR0461	Augie BESS	Planned	BRP Blue Topaz 5, LLC	46560 Waller 138kV	Waller	HOUSTON	12/31/2024	203.
23INR0127	Beacon Storage	Planned	AES Distributed Energy, Inc	40450 Deepwater 345kV	Harris	HOUSTON	12/31/2024	408.7
25INR0039	Borderland ESC	Planned	FRESH AIR ENERGY II, LLC	8368 McAllen 138kV (N_MCALLN4A)	Hidalgo	SOUTH	12/31/2024	200.
22INR0388	BRP Cachi BESS	Planned	BRP Cachi BESS LLC	7680 Clear Springs 138kV	Guadalupe	SOUTH	12/31/2024	202.46
22INR0353	BRP Carina BESS	Planned	BRP Carina BESS LLC	8479 Clarkwood 138kV	Nueces	COASTAL	12/31/2024	151.85
24INR0350	Brushwood Energy Storage	Planned	Flagtail LLC	Tap 345kV 44645 Singleton - 40600 Roans Prairie	Grimes	NORTH	12/31/2024	203.78
24INR0500	Claire BESS	Planned	BRP Blue Topaz 3, LLC	Cedar Bayou 138kV(40011)	Harris	HOUSTON	12/31/2024	406.01
24INR0557	Hovey Energy Storage	Planned	Barilla Solar, LLC	6655 BARL4A 138kV	Pecos	WEST	12/31/2024	23.
25INR0040	McMEXICO STORAGE	Planned	FRESH AIR ENERGY II, LLC	8644 Trade Zone 138kV	Hidalgo	SOUTH	12/31/2024	201.9
22INR0368	Padua Grid BESS	Planned	Padua Grid, LLC	5395 O.W Sommers 138kV	Bexar	SOUTH	12/31/2024	50.84
24INR0533	Padua Grid BESS Unit 2	Planned	Padua Grid, LLC	5395 Sommers 138kV	Bexar	SOUTH	12/31/2024	154.63
24INR0280	Port Bay ESC	Planned	FRESH AIR ENERGY II, LLC	8434 Rockport Substation (ROCKPORT4A) 138kV	Aransas	COASTAL	12/31/2024	200.
24INR0519	Roost Energy Storage	Planned	Bluff Creek Energy Storage LLC	1310 Knapp Substation 138kV	Borden	WEST	12/31/2024	100.
23INR0126	Sigma Storage	Planned	AES Distributed Energy, Inc	40460 Deepwater 138kV	Harris	HOUSTON	12/31/2024	408.4
22INR0332	Brantley Branch Batt	Planned	Brantley Branch LLC	Mt. Enterprise (Bus # 3116) – Martin Lake 345kv Line (Bus # 3100	Rusk	NORTH	1/1/2025	305.1
25INR0310	IEP Blackhawk	Planned	IEP Texas Verde II, llc	38740 Heights Substation 138kV	Galveston	HOUSTON	1/1/2025	100.
23INR0419	SOHO BESS	Planned	Black Mountain Energy Storage II	43035 Oasis 345kV	Brazoria	COASTAL	1/1/2025	206.32
25INR0162	SOHO II BESS	Planned	Black Mountain Energy Storage II	43035 Oasis 345kV	Brazoria	COASTAL	1/1/2025	206.32
23INR0308	Fowler Ranch Storage	Planned	Crane BESS, LLC	76025 Castle Mountain 138kV	Crane	WEST	1/2/2025	26.44
23INR0354	Bordertown BESS	Planned	Bordertown BESS LLC	8796 Roma 138kV	Starr	SOUTH	1/31/2025	106.15
23INR0350	Fort Duncan BESS	Planned	Fort Duncan BESS LLC	78015 Rosita Creek 138kV	Maverick	SOUTH	1/31/2025	106.15
23INR0340	Larkspur Energy Storage	Planned	Larkspur Energy Storage LLC	71213 Benedum 138kV	Upton	WEST	1/31/2025	307.46
24INR0495	Barbers Hill BESS	Planned	Black Mountain Energy Storage II	40850 JORDAN 345kV	Chambers	HOUSTON	2/1/2025	307.72
22INR0408	BRP Pular BESS	Planned	BRP Pular BESS LLC	8963 Hidalgo Energy Center 138kV	Hidalgo	SOUTH	2/1/2025	233.1
25INR0202	East West BESS	Planned	Black Mountain Energy Storage II, LLC	7750 LCRA MOUNTAIN HOME SUB	Kerr	SOUTH	2/1/2025	100.8
25INR0210	Fox Run Energy Storage	Planned	Fox Run Energy Project, LLC	Kirchhoff Substation (PTI#60704)	Jones	WEST	2/1/2025	301.36
25INR0101	Mallard BESS	Planned	North Texas Energy Storage LLC	818 Olinger 138kV	Collin	NORTH	2/17/2025	154.42
24INR0157	BRP Merope BESS	Planned	BRP Merope BESS LLC	345 kV Corn Trail Switch Substation (#11441)	Comanche	NORTH	3/1/2025	413.74
22INR0554	Platinum Storage	Planned	Platinum Energy Storage LLC	1729 Valley South 345kV	Fannin	NORTH	3/14/2025	301.4
23INR0322	Columbus Storage	Planned	EDP Renewables North America LLC	78103 Nada Substation 138kV	Colorado	SOUTH	3/15/2025	51.3
25INR0399	Blossomheath BESS	Planned	Tauberg LLC	Venus 345 kV Substation (Bus #1906)	Ellis	NORTH	3/31/2025	300.78
24INR0402	Inertia BESS 3	Planned	Inertia WS Holdings, LLC	Pendolo #60507 345kV substation	Jones	WEST	3/31/2025	108.44
25INR0222	SMT Olympic BESS	Planned	SMT Olympic BESS LLC	AIRLINE 138 kV Substation (Bus# 8490)	Nueces	COASTAL	4/1/2025	222.81
25INR0301	Van Zandt Energy Storage	Planned	Rocky Mountain Energy Holdings, LLC	11028 Odessa EHV Switch 345 kV	Ector	WEST	4/29/2025	251.5
25INR0300	Wizard BESS	Planned	Rocky Mountain Energy Holdings, LLC	To the 138 kV League City Substation (#38920)	Galveston	HOUSTON	4/29/2025	150.65
25INR0397	Beeman BESS	Planned	Waelder BESS	69kV Waelder Substation (7232)	Gonzales	SOUTH	5/1/2025	50.18
25INR0374	Meridian BESS	Planned	Navitas Energy- Meredian BESS	319 Meridian 69 KV	Bosque	NORTH	5/1/2025	31.23
25INR0394	Orchard Ray BESS	Planned	Pettus BESS	8593 PETTUS2A 69kV	Bee	SOUTH	5/1/2025	51.85
25INR0078	Peregrine BESS 2	Planned	CED Development Inc.	8673 RAPTOR7A 345kV	Goliad	SOUTH	5/1/2025	150.
25INR0396	Stewart Grady BESS	Planned	Grady BESS	23842 Grady138kV	Martin	WEST	5/1/2025	151.2
24INR0348	Best Southwest BESS	Planned	North Texas Energy Storage LLC	2431 DESOTO SW 345kV	Dallas	NORTH	5/31/2025	241.44
24INR0315	Black Springs BESS	Planned	Black Mountain Energy Storage II	1571 ORAN 138kV	Palo Pinto	NORTH	5/31/2025	120.96
25INR0385	Bobcat Cameron BESS	Planned	Bobcat BESS, LLC	5764 East Rio Hondo Substation 138kV	Cameron	COASTAL	5/31/2025	200.78
25INR0432	Brotherton Storage	Planned	Belltown Power Texas 2	6937 Tucker Sub 138kV	Anderson	NORTH	5/31/2025	176.13
24INR0274	Bufflehead BESS	Planned	Black Mountain Energy Storage II	2475 Lavon Switch 138kV	Collin	NORTH	5/31/2025	201.2
25INR0160	Canvasback BESS	Planned	Black Mountain Energy Storage II	8155 SANDCRAB4A	Calhoun	COASTAL	5/31/2025	151.2
22INR0422	Ferdinand Grid BESS	Planned	Ferdinand Grid, LLC	5260 Leon Creek 138kV	Bexar	SOUTH	5/31/2025	202.65
25INR0100	Goldeneye BESS	Planned	Black Mountain Energy Storage II	3423 KILLEEN Switch 138 KV	Bell	NORTH	5/31/2025	201.6
24INR0494	Hana Springs BESS	Planned	Black Mountain Energy Storage II LLC	7064 LAMPASAS 138kV	Lampasas	NORTH	5/31/2025	100.8
23INR0317	Kingfisher Energy Storage	Planned	Nopalosa Energy Storage, LLC	80219 Lobo 345kV	Webb	SOUTH	5/31/2025	204.97
24INR0295	Lucky Bluff BESS	Planned	Black Mountain Energy Storage	tap 138kV 1641 Stephenville - 1636 Dublin	Erath	NORTH	5/31/2025	100.8

251NR0417	Mesa View Storage	Planned	Mesa View Storage, LLC	Tap 345 kV KINGMTSW (#842) to NORTMC (#76000)	Upton	WEST	5/31/2025	501.9
241NR0275	Picadillo BESS	Planned	Black Mountain Energy Storage II	23837 Buffalo 138kV	Martin	WEST	5/31/2025	100.83
231NR0503	Ardesia Storage	Planned	HQC Solar Holdings 1, LLC	Tap 138kV 7325 Mendoza - 7216 Lockhart	Caldwell	SOUTH	6/1/2025	100.97
231NR0469	Big Elm Storage	Planned	Big Elm Storage, LLC	Tap 345 kV 3414 Temple Switch - 3409 Lake Creek	Bell	NORTH	6/1/2025	102.8
251NR0239	Big Five Storage	Planned	TX BESS 3 LLC	Tap 138kV (5784) Redgtss - (8380) Nedina	Hidalgo	SOUTH	6/1/2025	100.
251NR0467	Bocanova BESS	Planned	Bocanova Power LLC	39030 TNALVIN 138kV	Brazoria	COASTAL	6/1/2025	300.92
241NR0130	BRP Artemis BESS	Planned	BRP Artemis BESS LLC	40600 Roans Prairie Substation 345kV	Grimes	NORTH	6/1/2025	414.07
231NR0285	BRP Chena BESS	Planned	BRP Chena BESS LLC	Tap 138 kV 1951 Handley SES – 2246 Lakewood	Tarrant	NORTH	6/1/2025	202.32
221NR0424	BRP Denali BESS	Planned	BRP Denali BESS LLC	Tap 138kV 5395 Sommers - 5030 Braunig East	Bexar	SOUTH	6/1/2025	258.41
241NR0133	BRP Hestia BESS	Planned	BRP Hestia BESS LLC	the 69 kV Rock Springs Substation (#78238, LCRA)	Edwards	SOUTH	6/1/2025	29.05
251NR0347	Cadet Storage	Planned	TX BESS 5, LLC	69kV Bryan Texas Utilities Texas A&M to Shady Lane	Brazos	NORTH	6/1/2025	104.42
231NR0480	Camellia Storage	Planned	HQC Solar Holdings 1, LLC	Tap 138 kV 8358NORTH MERCEDES -8327 HARLINGEN 138 kV	Hidalgo	SOUTH	6/1/2025	90.76
231NR0425	Coneflower Storage Project	Planned	HQC Solar Holdings 1, LLC	40855 JORDON 138 kV	Chambers	HOUSTON	6/1/2025	170.
251NR0402	Driet BESS	Planned	Weimar BESS	7254 WEIMAR8 138kV	Colorado	SOUTH	6/1/2025	150.52
251NR0241	Halcon Storage	Planned	TX BESS A LLC	Tap 138kV 8957 Central Lopeno - 80106 Falcon Dam	Starr	SOUTH	6/1/2025	132.65
231NR0284	Las Moras Battery	Planned	Las Moras Storage, LLC	8252 Brackett 138kV	Kinney	SOUTH	6/1/2025	101.
251NR0238	Little Ridge Storage	Planned	TX BESS B LLC	Tap 138kV Swindell (812) - Olinger (818)	Collin	NORTH	6/1/2025	250.
251NR0375	NavBoot BESS	Planned	1242 Mckinzie Owner	8858 MCKENZIE4A 138kV	Nueces	COASTAL	6/1/2025	303.7
251NR0242	Pato Blanco Storage	Planned	TX BESS 4, LLC	Tap 138 kV 44010 W A Parish - 42980 NASH S02_8	Fort Bend	HOUSTON	6/1/2025	71.78
251NR0405	Pledgor BESS	Planned	Pledgor BESS	43120- Centerpoint Pledgor Substation	Matagorda	COASTAL	6/1/2025	100.33
241NR0281	Red Egret BESS	Planned	Red Egret LLC	38820 FREEWAY PARK 138kV	Galveston	HOUSTON	6/1/2025	309.
251NR0414	Rogers Creek BESS	Planned	Dialville BESS	3160, Oncor Dialville Substation	Cherokee	NORTH	6/1/2025	100.33
251NR0073	Saltillo Storage	Planned	SALTILLO STORAGE	7331 Cedarhill Substation 138kV	Bastrop	SOUTH	6/1/2025	101.
231NR0466	Shoshana Storage	Planned	HQC Solar Holdings 1, LLC	Tap 345kV 5915 South Texas Project (SO_TEX_345A) - 47531 Jones Cre	Matagorda	COASTAL	6/1/2025	221.92
241NR0168	Tejano Storage	Planned	Tejano Storage, LLC	Tap 138kV 8125 Lolita - 8172 Victoria	Victoria	SOUTH	6/1/2025	152.
231NR0123	Vaca Storage	Planned	Long Mount Storage, LLC	138kV 8723 Cangrejo	Calhoun	COASTAL	6/1/2025	101.
251NR0076	Violet Storage	Planned	VIOLET STORAGE	McKenzie Road (8858) 138 kV Substation	Nueces	COASTAL	6/1/2025	151.
231NR0194	Pequin Energy Storage	Planned	Pequin Energy Storage, LLC	39500 TN West Columbia 138kV	Brazoria	COASTAL	6/14/2025	103.4
231NR0494	Cartwheel BESS 1	Planned	RWE Renewables	Sulphur Springs Switch – Cash Switch 345 kV Line [Bus# 1697 to 2464]	Hopkins	NORTH	6/15/2025	156.91
231NR0495	Cartwheel BESS 2	Planned	RWE Renewables	Sulphur Springs Switch – Cash Switch 345 kV Line [Bus# 1697 to 2464]	Hopkins	NORTH	6/15/2025	156.91
231NR0422	Masoor Storage	Planned	Masoor Energy Storage LLC	Bus #1760 Bonham 138kV	Fannin	NORTH	6/26/2025	203.
251NR0329	Project Lynx BESS	Planned	GIGA TEXAS ENERGY LLC	138KV Tap 8921 Terra Verde - 8518 Kingsville	Nueces	COASTAL	6/28/2025	125.36
221NR0555	Guevara Storage	Planned	BT Smith Storage, LLC	2483 Royse Switch 345kV	Rockwall	NORTH	6/30/2025	125.36
231NR0468	Petunia Storage Project	Planned	HQC Solar Holdings 1, LLC	138kV Tap 3675 Rogers - 3485 Tin Roof Pod	Milam	SOUTH	6/30/2025	231.86
241NR0319	Burro Loco Energy Storage	Planned	VESI	8626 Resaca 69kV	Cameron	COASTAL	7/1/2025	25.14
251NR0190	Fortissimo BESS	Planned	Fortissimo BESS, LCC	Dyemound 138kV (Bus#741)	Montague	NORTH	7/1/2025	202.65
251NR0184	Legato BESS	Planned	Legato Storage, LLC	Crafton Substation (#608)	Wise	NORTH	7/1/2025	202.65
241NR0231	Llano Estacado Energy Storage	Planned	VESI 40 LLC	1324 Big Spring West 138 kV	Howard	WEST	7/1/2025	98.
261NR0114	Ochoa Energy Storage	Planned	Ochoa Energy Storage LLC	44420 Katy 138kV	Waller	HOUSTON	7/1/2025	263.2
251NR0192	Palmvalley Storage	Planned	Palmvalley Energy Storage LLC	Frontera (#8980)	Hidalgo	SOUTH	7/1/2025	100.
251NR0185	Sonata BESS	Planned	Sonata Storage, LLC	LCRA Altair Substation (BUS#78106)	Colorado	SOUTH	7/1/2025	83.86
241NR0330	TRAVIS KIMBRO BESS	Planned	Travis pflugerville BESS	7337 Kimbro 138kV	Travis	SOUTH	7/1/2025	36.84
251NR0384	Zorro BESS	Planned	UR-Silo DevCo LLC	138 kV Ben Wheeler (Bus# 6852)	Van Zandt	NORTH	7/1/2025	150.
251NR0253	Whiskey BESS	Planned	UR-Silo DevCo LLC	138 kV Canton Tap (Bus# 6828)	Van Zandt	NORTH	7/2/2025	150.
251NR0262	Shepard Energy Storage	Planned	Shepard Energy Storage LLC	Hidden Lakes 138kV substation (Bus# 38900)	Galveston	HOUSTON	7/9/2025	263.2
251NR0421	Aldrin 138 BESS	Planned	Aldrin Energy Storage LLC	(Bus: 39015) North Alvin TNMP 138kV	Brazoria	COASTAL	7/15/2025	207.
251NR0425	Aldrin 345 BESS	Planned	Aldrin Energy Storage LLC	(Bus: 43030) Meadow 345kV substation	Brazoria	COASTAL	7/15/2025	362.
241NR0294	Citrus Flatts BESS	Planned	Black Mountain Energy Storage II	80022 Oleander 138kV	Cameron	COASTAL	7/15/2025	100.8
231NR0467	Lavender Storage Project	Planned	HQC Solar Holdings 1, LLC	5205 Highland 138 kV Substation	Bexar	SOUTH	7/15/2025	231.9
241NR0301	Merchant BESS	Planned	Black Mountain Energy Storage	46510 TOMBALL 138kV	Harris	HOUSTON	7/15/2025	201.2
241NR0302	Pintail Pass BESS	Planned	Pintail Pass BESS LLC	8249 ANGSTROM 345KV	San Patricio	COASTAL	7/15/2025	201.2
241NR0386	Black & Gold Energy Storage	Planned	RES America Developments Inc.	6364 Yellow Jacket Sub 138kV	Menard	WEST	7/16/2025	254.58
251NR0434	Bluegill BESS	Planned	Bluegill BESS	To 138 kV Atascocita (Bus #40130) Substation	Harris	HOUSTON	7/31/2025	501.9
251NR0135	Hayrick BESS	Planned	Gransolar Texas Five LLC	6351 Nicole 138kV	Coke	WEST	7/31/2025	113.9
231NR0163	Ringtail Ridge Storage	Planned	KCE TX 26, LLC	7150 Kendall 138kV	Kendall	SOUTH	8/1/2025	100.57
241NR0304	Barton Bishop BESS	Planned	Barton Bishop BESS	1599 Barton Chapel Wind Farm station 138kV	Jack	NORTH	8/27/2025	47.34
231NR0479	Taormina Storage	Planned	HQC Solar Holdings 1, LLC	Tap 138kV VH Braunig (5025) to Valley Road 138kV (5465)	Bexar	SOUTH	8/31/2025	231.86
221NR0541	ALWEST BESS	Planned	Castleman Power	3114 Paltalco 138kV	Anderson	NORTH	9/1/2025	208.63
251NR0386	Diaz BESS	Planned	BRP Blue Topaz 10, LLC	8950 Olmito 138kV	Cameron	COASTAL	9/1/2025	244.
251NR0380	Fike BESS	Planned	BRP Blue Topaz 9, LLC	5754 Aderhold 138kV	Hidalgo	SOUTH	9/1/2025	200.83
251NR0208	Iron Belt Energy Storage	Planned	Iron Belt Energy Storage Project, LLC	Long Draw (# 59900) - Volta (#59910) 345kV	Borden	WEST	9/1/2025	401.9

251NR0176	Masa Storage	Planned	Savannah Oaks Solar Project, LLC	tap 345 kV 46020 Limestone Plant - 967 Gibbons Creek ckt 18	Madison	NORTH	9/1/2025	251.14
251NR0131	SOSA Storage	Planned	SOSA Energy Center LLC	Tap 138kV 25 North Zulch - 47 Hilltop Lakes	Madison	NORTH	9/1/2025	150.54
241NR0416	Trelas	Planned	Trelasol, LLC	76006 Bow Wood 345kV Bus	McCulloch	SOUTH	9/1/2025	203.
251NR0376	Hawkins BESS	Planned	BRP BLUE TOPAZ 7, LLC	85005 ELGATO4A 138 kV	Hidalgo	SOUTH	9/8/2025	150.45
251NR0419	Marengo BESS	Planned	BRP BLUE TOPAZ 8, LLC	8640 Kelvin Station 138kV (AEP)	Cameron	COASTAL	9/8/2025	120.72
251NR0418	Palacios BESS	Planned	BRP BLUE TOPAZ 11, LLC	5767 HIWAY511SUB8 138kV	Cameron	COASTAL	9/8/2025	125.69
231NR0324	Fox Pen Storage	Planned	EDP Renewables North America LLC	138 kV Tap 3110 Stryker Creek - 3147 Troup	Cherokee	NORTH	9/15/2025	51.3
241NR0459	Project Exodus (BESS)	Planned	Exodus Solar LLC	Tap 345kV 7040 Austrop -- 7042 Zorn	Caldwell	SOUTH	9/15/2025	202.15
251NR0420	SMT Houston BESS	Planned	SMT Houston	Tap 138 kV LAUDER (#46002) - RITTENHOUSE (#46282) ckt 95	Harris	HOUSTON	9/29/2025	227.9
241NR0243	Solar Star Western Hills Storage	Planned	Solar Star Western Hills Storage, LLC	Tap 138kV 1955 CALMONT SWITCH -- 2087 Western Hills	Tarrant	NORTH	9/30/2025	160.
231NR0456	Bronze Quinta Storage	Planned	KCE TX 28, LLC	S_MCALLN 8371 (S. McAllen 138kV Substation)	Hidalgo	SOUTH	10/1/2025	103.51
241NR0550	SMT Mercedes II BESS	Planned	SMT Mercedes II, LLC	Tap 138kV NORTH MERCEDES STATION (BUS #8358)	Hidalgo	SOUTH	10/9/2025	227.87
241NR0457	JUNO BESS	Planned	JUNO BESS	59906 Long Draw 138 kV	Borden	WEST	10/22/2025	355.21
251NR0346	Cado Storage	Planned	Cado Storage, LLC	5417 STREICH RD 138 kV	Bexar	SOUTH	10/28/2025	205.2
221NR0385	BRP Pictor BESS	Planned	BRP Pictor BESS LLC	60400 Lynx 138kV	Crane	WEST	11/1/2025	201.07
251NR0133	Rose Quartz BESS	Planned	Rose Quartz BESS, LLC	Tap 138kV 8283 Asherton - 8613 Bigwells	Dimmit	SOUTH	11/1/2025	101.41
231NR0421	Tidwell Prairie IV Energy Storage	Planned	Tidwell Prairie LLC	Tap TNP ONE 39950 and Twin Oak 3400	Robertson	NORTH	11/1/2025	200.
241NR0282	Royal River BESS	Planned	Royal River LLC	Tap 138kV 42110 Angleton - 43381 West Columbia	Brazoria	COASTAL	11/28/2025	307.1
231NR0204	GALVANIC BESS	Planned	CED Development Inc	8252 Bracketville 138kV	Kinney	SOUTH	11/30/2025	100.
251NR0054	Sandman Power Storage	Planned	ALPIN HOLDING LLC	1685 Farmersville Switch 345kV	Collin	NORTH	11/30/2025	100.
241NR0378	Solara BESS 1	Planned	CED Development Inc.	60387 Hendrick 138kV	Jones	WEST	11/30/2025	150.
241NR0379	Solara BESS 2	Planned	CED Development Inc.	60387 Hendrick 138kV	Jones	WEST	11/30/2025	150.
231NR0205	SUNSETTER BESS	Planned	CED Development Inc.	5885 Downie 138kV	Uvalde	SOUTH	11/30/2025	100.
231NR0272	BRP Aras BESS	Planned	BRP Aras BESS LLC	76595 North McCamey 138kV	Upton	WEST	12/1/2025	303.59
231NR0131	BRP Batura BESS	Planned	BRP Batura BESS LLC	5260 Leon Creek 138kV	Bexar	SOUTH	12/1/2025	251.65
221NR0427	BRP Kabru BESS	Planned	BRP Kabru BESS LLC	1159 Andrew North - 11284 Blackbird 138kV	Andrews	WEST	12/1/2025	202.45
231NR0104	BRP Kamet BESS	Planned	BRP Kamet BESS LLC	Andrews North -- McKenzie Draw Switch 138 kV	Andrews	WEST	12/1/2025	202.46
231NR0357	BRP Yarra BESS	Planned	BRP Yarra BESS LLC	138 kV Lake Crest bus #12492	Dallas	NORTH	12/1/2025	205.36
231NR0388	White Wing I Energy Storage	Planned	White Wing I Energy Storage LLC	8418 Rincon Station 138 kV	San Patricio	COASTAL	12/1/2025	101.63
231NR0389	White Wing II Energy Storage	Planned	White Wing II Energy Storage LLC	8418 Rincon Station 138 kV	San Patricio	COASTAL	12/1/2025	101.63
241NR0198	Two Forks BESS	Planned	Two Forks LLC	684 SPRING 138kV	Cooke	NORTH	12/4/2025	307.2
251NR0271	City Breeze BESS	Planned	Black Mountain Energy Storage II	8111 MAGILL4A 138KV	Matagorda	COASTAL	12/15/2025	141.2
231NR0496	San Perlita BESS 1	Planned	RWE Renewables	8601 Cebolla 345kV	Willacy	COASTAL	12/15/2025	150.
231NR0497	San Perlita BESS 2	Planned	RWE Renewables	8601 Cebolla 345kV	Willacy	COASTAL	12/15/2025	150.
241NR0442	Midnight Sun Energy Storage	Planned	RES America Developments Inc.	6601 Rio Pecos 138kV	Crockett	WEST	12/23/2025	510.
221NR0443	Bowstring BESS	Planned	Longbow Energy Storage, LLC	8961 White Point 138kV	San Patricio	COASTAL	12/31/2025	155.
251NR0441	Dios BESS	Planned	Dios BESS, LLC	8117 GANADO138kV	Jackson	SOUTH	12/31/2025	201.08
251NR0372	Elan BESS	Planned	Elan BESS, LLC	42380 Needville 138kV	Fort Bend	HOUSTON	12/31/2025	202.65
251NR0444	Peridot Storage	Planned	BT Castro Storage, LLC	5836 North Batesville 69kV	Zavala	SOUTH	12/31/2025	50.48
241NR0514	Rogers Draw BESS	Planned	Rocky Mountain Energy Development, LLC	7751 Headwaters substation 138kV	Gillespie	SOUTH	12/31/2025	145.55
241NR0485	Rutile BESS	Planned	Rutile BESS, LLC	Tap 138kV 6340 BALLINGER - 60399 WEISS	Runnels	WEST	12/31/2025	101.4
251NR0371	Siddiqi Storage	Planned	BT Siddiqi Storage, LLC	1819 Oncor Commerce 138kV	Hunt	NORTH	12/31/2025	178.
251NR0189	Staccato BESS	Planned	Staccato Storage, LLC	138kV WARD A #7312.	Fayette	SOUTH	12/31/2025	202.65
251NR0370	Willis Storage	Planned	BT Willis Storage, LLC	3172 Emory Node 138kV	Rains	NORTH	12/31/2025	178.
251NR0466	Yooperlite Storage	Planned	BT Yooperlite Storage, LLC	(#580) Westbrook 138kV	Wise	NORTH	12/31/2025	175.65
231NR0457	Hive Hollows Storage	Planned	KCE TX 27, LLC	3415 TEMPLE SWITCH 138kV	Bell	NORTH	1/1/2026	103.51
211NR0455	Independence Trail Storage	Planned	KCE TX 16, LLC	60501 Tesla 345kV	Childress	PANHANDLE	1/1/2026	100.
241NR0285	APV Plumwood Storage	Planned	APV Lonestar Energy LLC	Tap 138kV 40171 Baytown - 40015Cedar Bayou Plant	Chambers	HOUSTON	1/15/2026	200.82
251NR0122	Vial BESS	Planned	Gransolar Texas Eleven LLC	Chatt (#234)	Hill	NORTH	1/15/2026	135.12
231NR0216	Venus Mill Storage	Planned	KCE TX 14, LLC	138 kV Tap #442 Rail Port - #1905 Griffith	Ellis	NORTH	1/20/2026	100.61
231NR0278	BRP Tucana BESS	Planned	BRP Tucana BESS LLC	1157 Andrews County South 138kV	Andrews	WEST	1/31/2026	206.98
251NR0391	Purple Sage BESS 1	Planned	Purple Sage, LLC	Anna 345 kV Bus# 2373.	Collin	NORTH	2/1/2026	156.
251NR0392	Purple Sage BESS 2	Planned	Purple Sage, LLC	Anna 345 kV Bus# 2373	Collin	NORTH	2/1/2026	156.
251NR0339	Fort Concho Energy storage	Planned	Rocky Mountain Energy Development, LLC	Tap 138 kV #76320 Schkade - #76011 Twin Buttes Line; LCRA	Tom Green	WEST	2/16/2026	251.15
251NR0338	Les Energy Storage	Planned	Rocky Mountain Energy Development, LLC	1326 Stanton East Substation 138 kV	Martin	WEST	2/16/2026	201.
261NR0083	Zeppelin Energy Storage	Planned	Rocky Mountain Energy Development, LLC	6464 San Angelo North	Tom Green	WEST	2/16/2026	163.93
231NR0502	Adelite Storage	Planned	HQC Solar Holdings 1, LLC	Tap 138kV Thorndale North (bus #3659) -- Rookie Switch (bus #3701)	Milam	SOUTH	2/28/2026	231.88
241NR0498	Fort Watt Storage	Planned	Fort Watt Storage, LLC	Tap 138kV 1933 Kennedale - 2208 Mansfield	Tarrant	NORTH	3/1/2026	201.09
261NR0016	HECATE GRID ROSALITA STORAGE	Planned	HECATE GRID ROSALITA STORAGE LLC	#11305 DERMOTT_5 345kV	Scurry	WEST	3/1/2026	152.83
241NR0417	Sierra Diablo Energy Storage	Planned	SIERRA DIABLO ENERGY STORAGE LLC	Tap 138kV Long Pasture POD (11132) -- Screwbean Tap (1095)	Reeves	WEST	3/1/2026	203.81
231NR0164	Steppe Reserve Storage	Planned	KCE TX 25, LLC	8283 Asherton 138 kV	Dimmit	SOUTH	3/1/2026	51.9

23INR0464	Sloan Storage	Planned	Sloan Energy Storage LLC	3179 Pauline 138kV	Henderson	NORTH	3/27/2026	203.
24INR0252	Kruth Storage	Planned	Martinez Energy Storage LLC	3319 Redland 138kV	Angelina	NORTH	3/31/2026	203.
25INR0363	Emerald Hill Energy Storage	Planned	Emerald Hill Energy Storage LLC	Desoto Switch (2431) - Cedar Hill Switch (2420) 345kV Line	Dallas	NORTH	4/1/2026	261.02
24INR0432	HGP Pacesetter BESS	Planned	HGP Storage, LLC	2431 DESSW1_5 345kV	Dallas	NORTH	4/1/2026	200.83
24INR0174	Solar Star North Herty Storage	Planned	Solar Star North Herty Storage, LLC	3319 Redland Switch 138 kV	Angelina	NORTH	4/20/2026	125.4
25INR0143	Ariji BESS	Planned	Ariji BESS, LLC	Tap 138kV 1394 GTTYVTAP_8 - 1322 BIGSPRIG_8	Howard	WEST	4/21/2026	100.65
25INR0146	Blue Heron BESS	Planned	Blue Heron BESS, LLC	Tap 138kV MANSON (1094) - Riverton (11083)	Reeves	WEST	4/21/2026	201.08
25INR0138	Champaign BESS	Planned	Champaign BESS, LLC	Tap 138kV MCDLD (#1333) – 36 POD (#11227)	Glasscock	WEST	4/21/2026	201.13
25INR0139	Dolce BESS	Planned	Dolce BESS, LLC	Tap 138kV 1189 BARBER_LK1_8 - 19520 CHINAGRVX2_8	Mitchell	WEST	4/21/2026	100.65
24INR0374	Farrier Station Energy Storage	Planned	Farrier Station Energy Storage Project, LLC	MONTICELLO SES (BUS# 1696) - ALLEN SWITCH (BUS# 2514)	Hopkins	NORTH	4/21/2026	401.9
25INR0142	Sagewood BESS	Planned	Sagewood BESS, LLC	Tap 138kV MCDLD (#1333) – 36 POD (#11227)	Glasscock	WEST	4/21/2026	100.57
25INR0140	Seragio BESS	Planned	Seragio BESS, LLC	11140 ECTRCNTYN_8 138kV	Ector	WEST	4/21/2026	201.13
23INR0462	Palladium Storage	Planned	Palladium Energy Storage LLC	Tap 138 kV 8656 Luna - 8033 Pantera	Hidalgo	SOUTH	4/27/2026	152.
25INR0284	Railway BESS	Planned	Grand Reserve Energy, LLC	Martin Lake Switch (3100) – Elkton (3105) 345 kV Line	Rusk	NORTH	5/1/2026	254.8
26INR0149	Blue Bird BESS	Planned	Gigawatt Solar LLC	Tap 345kV 1880 Rocky Creek - 1898 Mitchel Bend	Hood	NORTH	5/29/2026	200.7
26INR0106	Upstream BESS	Planned	Upstream Storage LLC	1902 Johnson Switch	Johnson	NORTH	5/29/2026	461.6
26INR0116	Falcon Zapata Storage 138	Planned	Falcon BESS, LLC	Tap 138kV 8299 Zapata - 8957 Lopeno	Zapata	SOUTH	5/31/2026	200.79
26INR0107	Freedom Falcon BESS	Planned	Falcon BESS, LLC	Tap 345kV 80307 Delsol - 80225 Cenizo CKT#2	Zapata	SOUTH	5/31/2026	501.9
25INR0390	Macho Creek BESS	Planned	Macho Creek BESS, LLC	8793 Rio Grande City 138kV	Starr	SOUTH	5/31/2026	150.56
23INR0391	THUNDER ROAD ENERGY STORAGE	Planned	Hecate Grid Thunder Road Storage LLC	12491 FISH CREEK 138KV	Dallas	NORTH	5/31/2026	153.4
24INR0355	Anatole Renewable Energy Storage	Planned	Eustace Storage LLC	(Bus# 6951) Eustace Southeast 138kV Substation (owned by Rayburn Electric)	Henderson	NORTH	6/1/2026	207.82
23INR0069	Corbin Grid BESS	Planned	Corbin Grid, LLC	44510 Obrien 138kV	Fort Bend	HOUSTON	6/1/2026	202.76
24INR0178	Cumulus Grid BESS	Planned	Cumulus Grid, LLC	1906 Venus Switch Substation 345kV	Ellis	NORTH	6/1/2026	205.88
24INR0102	Seguro Grid	Planned	Val Vista Grid, LLC	Tap 345kV 8383 North Edinburg - 80137 Stewart Road	Hidalgo	SOUTH	6/1/2026	201.33
23INR0217	Snap Jaw BESS	Planned	Moccasin Pointe Grid, LLC	tap 138kV 40941 La Porte - 40200 Bimont (Air Liquide)	Harris	HOUSTON	6/1/2026	201.28
23INR0218	Stump Tail BESS	Planned	Moccasin Pointe Grid, LLC	Tap 345kV 42000 PH Robinson – 40240 Center	Harris	HOUSTON	6/1/2026	301.69
22INR0387	Val Vista Grid BESS	Planned	Val Vista Grid, LLC	8380 North Edinburg 138kV	Hidalgo	SOUTH	6/1/2026	202.85
26INR0035	Country Haven Energy Storage	Planned	174 Power Global Properties, LLC	138 kV Lone Oak substation (Bus #6871)	Rains	NORTH	6/15/2026	72.05
26INR0033	Fairway Storage	Planned	HQC Solar Holdings 1, LLC	Tap 138kV 3503 FAIRWPOD_8 - 196 FAIRFIELD	Freestone	NORTH	6/29/2026	121.03
25INR0288	Buffalo Prairie Storage	Planned	Buffalo Meadow Energy Center, LLC	Tap 345kV 975 Jack Creek - 3400 Twin Oak	Robertson	NORTH	7/31/2026	150.56
25INR0361	Wallie Storage	Planned	Wallie Storage, LLC	11324 Leatherwood POD 138kV	Howard	WEST	8/7/2026	201.08
25INR0313	Staked Plains BESS	Planned	Grand Reserve Energy, LLC	345kV Dunbar Double Mountain Switch (Bus# 23928)	Lubbock	PANHANDLE	9/1/2026	254.8
25INR0141	Fairgreen BESS	Planned	Fairgreen BESS, LLC	Tap 138kV 1322 BIGSPRIG_8 - 11351 HILLCREST_8	Howard	WEST	9/14/2026	201.13
25INR0144	Jasper BESS	Planned	Jasper BESS, LLC	Tap 138kV 71230 Pleasant Farms - 1236 Pegasus South	Midland	WEST	9/14/2026	201.13
25INR0460	Acker BESS	Planned	Ogallala BESS LLC	Ogallala 345 kV (#23912)	Castro	PANHANDLE	9/15/2026	301.04
26INR0154	Pennington Storage	Planned	S&S Renewables LLC	to the 345kV Goddard (#8606) – Tango (#8689) line; AEP	Bee	SOUTH	9/30/2026	511.23
25INR0248	Strawberry Acres Storage	Planned	Strawberry Acres Energy Center, LLC	5132 Eagle Creek Substation 138kV	Wilson	SOUTH	9/30/2026	150.59
24INR0392	Riverwalk BESS	Planned	CED Development Inc.	5294 Martinez Substation 138kV	Bexar	SOUTH	10/31/2026	100.
26INR0024	Becerra Creek Storage 1	Planned	Bordas Renewable Energy, LLC	345 kV Cenizo Substation (#80220)	Webb	SOUTH	12/1/2026	125.62
25INR0159	Mallard II BESS	Planned	North Texas Energy Storage LLC	818 Olinger 138kV	Collin	NORTH	12/1/2026	101.76
24INR0381	Alexandrite Storage	Planned	Johnson Energy Storage, LLC	Santa Rosa (S. SNROSA4A) 138/XX KV Substation (Bus #8359)	Cameron	COASTAL	12/10/2026	203.
27INR0015	Cumbia Energy Center	Planned	Mission Clean Energy LLC	Westside Bulk 138kV substation, owned by AEP Texas Central Co., bus n	Nueces	COASTAL	12/31/2026	200.
26INR0045	LUND STORAGE CENTER 1	Planned	Aelius Solar Corp.	TAP 138 KV LINE AND CREATE NEW BUS BETWEENKIMBRO (7337) AND	Bastrop	SOUTH	12/31/2026	407.55
25INR0250	Oorja Storage	Planned	Oorja Storage, LLC	138 kV 8914 Coffee Port	Cameron	COASTAL	2/27/2027	201.1
27INR0014	Kit Fox Storage	Planned	Kit Fox Storage, LLC	6842 WALTON 138KV	Henderson	NORTH	7/1/2027	153.6
27INR0003	Becerra Creek Storage 2	Planned	Bordas Renewable Energy, LLC	345 kV Cenizo Substation (#80220)	Webb	SOUTH	12/1/2027	125.62

[NEWS \(HTTPS://WWW.ENERGY-STORAGE.NEWS/CATEGORY/NEWS/\)](https://www.energy-storage.news/category/news/)

ERCOT accounted for 70% of US battery storage deployments in Q1

By [Cameron Murray \(https://www.energy-storage.news/author/camersonsolarmedia-co-uk/\)](https://www.energy-storage.news/author/camersonsolarmedia-co-uk/)

May 30, 2023

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The 190MW/380MWh Cunningham BESS, acquired by Acciona in late 2021, was commissioned in the first three months of 2023. Image: Acciona Energia.

Some 710MW of battery storage came online in the US in the first three months of the year, of which around 70% was in the ERCOT, Texas market, S&P Global said.

Overall battery storage capacity in the US grew to 10.777GW by the end of Q1 2023, amounting to a 52% year-on-year increase, the research firm said.

The growth should have been even faster, however, with 2.448GW of projects initially proposed to come online during the first quarter, compared to the 710MW in actual commissionings, S&P added.

Major projects that should have come online but were pushed to Q2 include the 260MW Sonoran Solar Energy and 150MW Arroyo Energy Storage, from NextEra Energy Resources and Enel Green Power in Arizona and New Mexico, respectively.

Battery storage project delays have been seen globally, largely driven by grid connection waits and supply chain-related delays (<https://www.energy-storage.news/no-easy-answer-on-managing-battery-storage-supply-chain-issues-but-things-are-getting-better/>).

The Q1 deployment figures contrast with those of trade body American Clean Power Association,

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As of the end of the quarter, California (or specifically the grid operated by CAISO) now has 5.2GW online, 48.2% of the US' total capacity, while ERCOT's 3.287GW gives it a 30.5% market share. By MWh capacity, CAISO's share is even larger, with two-thirds of the 29.640GW online.

S&P's research also listed the largest projects to have come online during the first quarter. They were:

- Acciona Energy North America's 190-MW BT Cunningham Storage in Texas
- Aypa Power Development's 155.5-MW Wolf Tank Storage facility in Texas
- Key Capture Energy's 51.5-MW KCE TX 19 facility in Texas
- Key Capture Energy's 51.5-MW KCE TX 21 facility in Texas
- NextEra Energy Resources' 50-MW Buena Vista Energy Center facility in New Mexico
- Arizona Public Service's 50-MW El Sol BESS facility in Arizona

For Q2, S&P said 3.177GW of projects are expected to come online, of which 51% would be in the CAISO grid and ERCOT accounting for just 6.3%, with 200MW coming online.

When Acciona acquired the Cunningham project in late 2022 it claimed it would be the largest BESS on the Texas grid when commissioned.

That title may now be held by a [200MW project \(https://www.energy-storage.news/texas-itc-aided-200mw-merchant-project-comes-online-catl-in-5gwh-supply-deal/\)](https://www.energy-storage.news/texas-itc-aided-200mw-merchant-project-comes-online-catl-in-5gwh-supply-deal/) brought online by developer Eolian and system integrator Wärtsilä which *Energy-Storage.news* was told has an energy storage capacity in MWh of over 500. However, it is actually two co-located BESS units sited together with separate grid connections.

S&P also details the largest project owners by operational capacity. They are NextEra Energy Resources top with 1.421GW online, followed by Axium Infrastructure with 733MW, Vistra Energy with 673MW, LS Power with 615MW and Terra-Gen with 581MW.

[annual deployments \(https://www.energy-storage.news/tag/annual-deployments/\)](https://www.energy-storage.news/tag/annual-deployments/), [caiso \(https://www.energy-storage.news/tag/caiso/\)](https://www.energy-storage.news/tag/caiso/), [california \(https://www.energy-storage.news/tag/california/\)](https://www.energy-storage.news/tag/california/), [ercot \(https://www.energy-storage.news/tag/ercot/\)](https://www.energy-storage.news/tag/ercot/), [quarterly deployment figures \(https://www.energy-storage.news/tag/quarterly-deployment-figures/\)](https://www.energy-storage.news/tag/quarterly-deployment-figures/), [texas \(https://www.energy-storage.news/tag/texas/\)](https://www.energy-storage.news/tag/texas/), [usa \(https://www.energy-storage.news/tag/usa/\)](https://www.energy-storage.news/tag/usa/)

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(<https://www.energy-storage.news/eyeing-great-opportunities-in-new-mexico-greenvolt-buys-large-scale-solar-plus-storage-project/>)

Eyeing ‘great opportunities’ in New Mexico, Greenvolt buys large-scale solar-plus-storage project (<https://www.energy-storage.news/eyeing-great-opportunities-in-new-mexico-greenvolt-buys-large-scale-solar-plus-storage-project/>)

July 18, 2023

Renewable energy firm Greenvolt Power has acquired an early-stage co-located project in New Mexico, US, with a

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(<https://www.energy-storage.news/jupiter-power-secures-us70-million-for-320mwh-ercot-projects/>)

Jupiter Power secures US\$70 million for 320MWh ERCOT projects (<https://www.energy-storage.news/jupiter-power-secures-us70-million-for-320mwh-ercot-projects/>)

July 18, 2023

Developer Jupiter Power has announced US\$70.4 million in loan financing for two battery storage projects in ERCOT, Texas, arranged by First Citizens Bank.

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(<https://www.energy-storage.news/d-e-shaw-starts-building-solar-plus-storage-project-with-100mw-bess-in-new-mexico/>)

D.E. Shaw starts building solar-plus-storage project with 100MW BESS in New Mexico (<https://www.energy-storage.news/d-e-shaw-starts-building-solar-plus-storage-project-with-100mw-bess-in-new-mexico/>)

July 13, 2023

US developer D. E. Shaw has broken ground on a 200MW solar, 100MW battery storage project in New Mexico, set to come online in 2024.

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(<https://www.energy-storage.news/california-passes-5gw-of-grid-scale-battery-storage/>)

California passes 5GW of grid-scale battery storage (<https://www.energy-storage.news/california-passes-5gw-of-grid-scale-battery-storage/>)

July 13, 2023

California has passed 5GW of grid-scale battery storage energy storage (BESS) projects, grid operator CAISO has revealed.

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(<https://www.energy-storage.news/flow-battery-technology-milestones-from-pnnl-and-sumitomo-electric/>)

Flow battery technology milestones from PNNL and Sumitomo Electric (<https://www.energy-storage.news/flow-battery-technology-milestones-from-pnnl-and-sumitomo-electric/>)

July 13, 2023

A seven-year observation of a vanadium flow battery in California from Sumitomo Electric has been completed, while US lab PNNL has found an alternative, food-based electrolyte which it said boosted capacity and longevity.

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ORDINANCE O-2023-0004

AN ORDINANCE AMENDING THE CITY OF LA MARQUE 2021-2022 BUDGET FOR VARIOUS EXPENDITURES AT END OF FISCAL YEAR BY DECREASING VARIOUS FUNDS' FUND BALANCES AND INCREASING CERTAIN EXPENDITURES TO INDIVIDUAL BUDGET ACCOUNTS IN VARIOUS FUNDS AND INCREASING CERTAIN REVENUES IN VARIOUS FUNDS AS SET FORTH IN ATTACHED EXHIBIT "A" BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LA MARQUE, TEXAS;

Section 1. That the City La Marque 2021-2022 Fiscal Year Budget is hereby amended for various expenditures at end of fiscal year by decreasing various funds' fund balances and increasing certain expenditures to the individual budget accounts in various funds and increasing certain revenues in various funds as set forth in Exhibit "A" attached hereto and made a part hereof.

Section 2. Open Meetings Act. It is hereby officially found and determined that the meeting at which this ordinance was passed was open to the public as required and that public notice of the time, place and purpose of said meeting was given as required by the Open Meetings Act, *Chapter 551, Tex. Gov't Code*.

PASSED AND APPROVED by City Council of the City of La Marque, Texas, on this the first reading this the **12th** day of **June**, 2023.

PASSED, APPROVED and ADOPTED by City Council of the City of La Marque, Texas, on this the second and final reading this the ____ day of _____, 2023.

CITY OF LA MARQUE, TEXAS

Keith Bell, Mayor

ATTEST:

Kierra K. Nance, TRMC
City Clerk

EXHIBIT A (Revised)

Fiscal Year 2021-22

Funds	Accounts	Descriptions	Expenditure	Revenue	Fund Balance	Reasons
Drug Seizure	12-4040-00-00	Professional services	22,597.00			Contractor help
Drug Seizure	12-4050-00-00	Special operation	35,416.00			Software for narcotic detectives
Drug Seizure	12-2401-00-00	Fund balance			-58,013.00	
TIRZ-Omega Bay	26-9001-00-00	Transfer In from General Fund		62,710.00		FY 2022 Omega Bay TIRZ collection
General Fund	01-8026-00-00	Transfer Out to Fund 26 TIRZ Omega B.	62,710.00			FY 2022 Omega Bay TIRZ collection
TIRZ-Omega Bay	26-2401-00-00	Fund Balance			62,710.00	
General Fund	01-2401-00-00	Fund Balance			-62,710.00	
PID Section 1	17-4040-00-00	Professional service	100,000.00			Developer payment
PID Section 2	21-4040-00-00	Professional service	100,000.00			Developer payment
PID Section 3	22-4040-00-00	Professional service	100,000.00			Developer payment
PID Section 4	23-4040-00-00	Professional service	100,000.00			Developer payment
PID Section 5	25-4040-00-00	Professional service	100,000.00			Developer payment
PID Section 1	17-2401-00-00	Fund balalnce			-100,000.00	
PID Section 2	21-2401-00-00	Fund balalnce			-100,000.00	
PID Section 3	22-2401-00-00	Fund balalnce			-100,000.00	
PID Section 4	23-2401-00-00	Fund balalnce			-100,000.00	
PID Section 5	25-2401-00-00	Fund balalnce			-100,000.00	
CDBG Grant	39-3016-00-00	Mitigation Harvey grant proceeds		3,146,211.00		Grant project
CDBG Grant	39-7114-24-00	Capital project	3,146,211.00			Grant project
2016 CO	47-7001-06-00	Fire Station project	146,137.00			Final payment settlement
2016 CO	47-2401-00-00	Fund balance			-146,137.00	
Sanitation	63-6024-14-00	Residential	165,000.00			September sanitation payment
Sanitation	63-6028-14-00	Commercial	13,000.00			September sanitation payment
Sanitation	63-6031-14-00	Container collection	72,000.00			September sanitation payment
Sanitation	63-2401-00-00	Fund balance			-250,000.00	
Capital projects	65-7021-05-00	Police facility professional services	50,764.00			Architech/engineering serv for police station
Capital projects	65-7001-12-01	Boat Ramp engineering	81,117.00			Texas Parks and Wildlife grant project
Capital projects	65-7040-13-00	PEG capital	43,379.00			Computers and cameras
Capital projects	65-2401-00-00	Fund balance			-175,260.00	
Disaster Fund	70-2010-01-03	COVID supplies	1,065.00			COVID supplies
Disaster Fund	70-2010-05-03	COVID supplies	48.00			COVID supplies
Disaster Fund	70-2010-06-03	COVID supplies	239.00			COVID supplies
Disaster Fund	70-2010-12-07	Storm Nicholas	41,400.00			Debris removal due to storm Nicholas Oct 2021
Disaster Fund	70-2010-12-07	Storm Nicholas	17,956.00			Emergency debris removal at dump site
Disaster Fund	70-3020-24-02	Harvey damages	37,500.00			Duplex lift station pump #8 rehab
Disaster Fund	70-8001-99-00	Transfer out ARPA	2,149,943.01			to General Fund
Disaster Fund	70-8002-99-00	Transfer out ARPA	2,145,702.43			to Utility Fund
Disaster Fund	70-2401-00-00	Fund balance			-98,208.00	
Disaster Fund	20-3700-00-00	ARPA proceeds		4,295,645.44		
PEG	88-7040-13-00	PEG expense	440.00			Software
PEG	88-2401-00-00	Fund balance			-440.00	
General Fund	01-4042-99-00	Legal services	150,000.00			Legal services
General Fund	01-5020-99-00	Utilities	100,000.00			Electricity
General Fund	01-2401-00-00	Fund Balance			-250,000.00	



CITY COUNCIL AGENDA FORM

Meeting Date: July 24, 2023
Prepared by: David Merryman
Department: FIRE Department

Agenda item: _____
Reviewed by: _____

AGENDA ITEM DESCRIPTION:

Discussion possible action relating to authorizing the execution of a contract for Fire Services Billing and Collections with Emergifire LLC.



ATTACHMENTS FOR REFERENCE

1. Addendum to contract attached.
2. Original Emergicon contract attached with highlighted terms for reference.
3. Fire Billing ordinance
4. Emergifire Billing Brochure

STAFF BRIEFING:

The La Marque Fire department has not charged for fire any of its fire services since Revenue Rescue ceased operations in 2015. To move to more to user-based fees as directed and lessen the taxpayer's burden. This service will help with that process.

HISTORY:

Emergifire LLC. Is a Texas based Fire billing and collections company that is subsidiary of Emergicon with 51 clients in Texas alone. They are the preferred provider for 7 southern region Fire departments. The Fire Division of billing was started 8 years ago.

TARGET IMPLEMENTATION: September 1st, 2023

SIGNIFICANT ACTION DATES: September 1st 2023 start live with Fire Billing Services

ACTION:

- | | |
|--|--|
| ☒ Ordinance | ☒ Resolution |
| ☐ Special Presentation | ☐ Proclamation |
| ☐ Finance Report | ☐ Public Hearing |
| ☒ Other - Authorization to execute contract | |
| ☒ Mark if this item does not conflict with any Resolution, Ordinance or City Charter, policies, procedures | |

Cost Details:

Budgeted	
Actual Bid	
Estimated Expenditure	
Acct. Name(s)	
Line Item #	
Other Funding	N/A

STAFF'S RECOMMENDATION:

Authorize the staff to execute contract with Emergifire LLC for Fire Service billing.

FISCAL IMPACT: none at this time

ORDINANCE NO. O-2023-00

AN ORDINANCE OF THE CITY COUNCIL OF LA MARQUE, TEXAS ESTABLISHING AND IMPLEMENTING A PROGRAM TO CHARGE MITIGATION RATES FOR THE DEPLOYMENT OF EMERGENCY AND NON-EMERGENCY SERVICES BY THE FIRE DEPARTMENT FOR SERVICES PROVIDED/RENDERED FOR THE CITY OF LA MARQUE, TEXAS FIRE DEPARTMENT (THE “FIRE DEPARTMENT”).

WHEREAS, the emergency and non-emergency services response activity to incidents continues to increase each year; Environmental Protection requirements involving equipment and training, and Homeland Security regulations involving equipment and training, creating additional demands on all operational aspects of the fire department services; and

WHEREAS, the Fire Department has investigated different methods to maintain a high level of quality of emergency and non-emergency service capability throughout times of constantly increasing service demands, where maintaining an effective response by the fire department decreases the costs of incidents to insurance carriers, businesses, and individuals through timely and effective management of emergency situations, saving lives and reducing property and environmental damage;

WHEREAS, the City Council of the City of La Marque, Texas desires to implement a fair and equitable procedure by which to collect said mitigation rates and shall establish a billing system in accordance with applicable laws, regulations and guidelines.

NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LA MARQUE, TEXAS THAT:

Section 1: The Fire Department shall initiate mitigation rates for the delivery of emergency and non-emergency services by the Fire Department for personnel, supplies and equipment to the scene of emergency and non-emergency incidents as listed in “EXHIBIT A”. The mitigation rates shall be based on actual costs of the services and that which is usual, customary and reasonable (UCR) as shown in “EXHIBIT A”, which may include any services, personnel, supplies, and equipment and with baselines established by addendum to this document.

Section 2: A claim shall be filed to the responsible party(s) through their insurance carrier. In some circumstances, only when the responsible party(s) are nonresidents of the City of La Marque, Texas, the responsible party(s) will be billed directly.

Section 3: The City Council of the City of La Marque, Texas may make rules or regulations and from time to time may amend, revoke, or add rules and regulations, not inconsistent with this Section, as they may deem necessary or expedient in respect to billing for these mitigation rates or the collection thereof.

Section 4: It is found and determined that all formal actions of this City Council concerning and relating to the adoption of this Ordinance were adopted in open meetings of this City Council, and that all deliberations of this City Council and any of its committees that resulted in such formal actions were in accordance with all legal requirements, and the Codified Ordinances of the City Council.

Section 5: It is hereby declared to be the intention of the City Council of the City of La Marque, Texas that the sections, paragraphs, sentences, clauses, and phrases of this Ordinance are severable and, if any phrase, clause, sentence, paragraph or section of this Ordinance should be declared invalid by the final judgment or decree of any court of competent jurisdiction, such invalidity shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Ordinance.

Section 6: The Mitigation Rates lists in Exhibit A will increase by 1.5% annually or based on the annual percentage increase in the Consumer Price Index (CPI), as developed by the Bureau of Labor Statistics of the U.S. Department of Labor, whichever is more. Rate adjustments will occur on the anniversary date of this ordinance/resolution to keep the fire department's cost recovery program in conformity with increasing operating expenses.

Section 7: This Ordinance is intended to be cumulative and shall not repeal any provision of a previous ordinance or City Code provision, except to the extent that a provision is inconsistent and cannot be reconciled with this ordinance.

Section 8: This Ordinance shall be effective on _____, 2023, after final passage by City Council, a public hearing in accordance with Section 2.19 of the City Charter, and publication of this ordinance or a caption that summarizes the purpose of this ordinance.

PASSED AND APPROVED by the City Council of the City of La Marque on First Reading this _____ day of _____, **2023**; and

PASSED, APPROVED AND ADOPTED by the City Council of the City of La Marque on Second and Final Reading this _____ day of _____, **2023**; and

CITY OF LA MARQUE, TEXAS

Keith Bell, Mayor

ATTEST:

Kierra Nance, TRMC, City Clerk

APPROVED AS TO FORM:

Gus Knebel
Consulting City Attorney

EXHIBIT A

MITIGATION RATES

The mitigation rates below are average “billing levels”, and are typical for the incident responses listed, however, when a claim is submitted, it will be itemized and based on the actual services provided.

MOTOR VEHICLE INCIDENTS

Level 1 - \$506.00

Provide hazardous materials assessment and scene stabilization. This will be the most common “billing level”. This occurs almost every time the fire department responds to an accident/incident.

Level 2 - \$576.00

Includes Level 1 services as well as clean up and material used (sorbents) for hazardous fluid clean up and disposal. We will bill at this level if the fire department has to clean up any gasoline or other automotive fluids that are spilled as a result of the accident/incident.

Level 3 - CAR FIRE - \$704.00

Provide scene safety, fire suppression, breathing air, rescue tools, hand tools, hose, TIC use, foam, structure protection, and clean up gasoline or other automotive fluids that are spilled as a result of the accident/incident.

ADD-ON SERVICES:

Extrication - \$1,520.00

Includes heavy rescue tools, ropes, airbags, cribbing etc. This charge will be added if the fire department has to free/remove anyone from the vehicle(s) using any equipment. We will not bill at this level if the patient is simply unconscious and fire department is able to open the door to access the patient. This level is to be billed only if equipment is deployed.

Creating a Landing Zone - \$465.00

Includes Air Care (multi-engine company response, mutual aid, helicopter). We will bill at this level any time a helicopter landing zone is created and/or is utilized to transport the patient(s).

Itemized Response: You have the option to bill each incident as an independent event with custom mitigation rates, for each incident using, itemized rates deemed usual, customary and reasonable (UCR). These incidents will be billed, itemized per apparatus, per personnel, plus products and equipment used.

ADDITIONAL TIME ON-SCENE

Engine billed at \$466 per hour.

Truck billed at \$582 per hour.

Miscellaneous equipment billed at \$341.

HAZMAT

Level 1 - \$816.00

Basic Response: Claim will include engine response, first responder assignment, perimeter establishment, evacuations, set-up and command.

Level 2 - \$2,913.00

Intermediate Response: Claim will include engine response, first responder assignment, hazmat certified team and appropriate equipment, perimeter establishment, evacuations, set-up and command, Level A or B suit donning, breathing air and detection equipment. Set-up and removal of decon center.

Level 3 - \$6,875.00

Advanced Response: Claim will include engine response, first responder assignment, hazmat certified team and appropriate equipment, perimeter establishment, evacuations, first responder set-up and command, Level A or B suit donning, breathing air and detection equipment and robot deployment. Set-up and removal of decon center, detection equipment, recovery and identification of material. Disposal and environment clean up. Includes above in addition to any disposal rates of material and contaminated equipment and material used at scene. Includes 3 hours of on scene time - **each additional hour @ \$336.00 per HAZMAT team.**

ADDITIONAL TIME ON-SCENE (for all levels of service)

Engine billed at \$466 per hour.

Truck billed at \$582 per hour.

Miscellaneous equipment billed at \$341.

FIRE INVESTIGATION

Fire Investigation Team - \$321.00 per hour.

Includes:

- Scene Safety
- Investigation
- Source Identification
- K-9/Arson Dog Unit
- Identification Equipment
- Mobile Detection Unit
- Fire Report

The claim begins when the Fire Investigator responds to the incident and is billed for logged time only.

FIRES

Assignment - \$466.00 per hour, per engine / \$582.00 per hour, per truck

Includes:

Ordinance No. O-2023-00_____

- Scene Safety
- Investigation
- Fire / Hazard Control

This will be the most common “billing level”. This occurs almost every time the fire department responds to an incident.

OPTIONAL: A fire department has the option to bill each fire as an independent event with custom mitigation rates.

Itemized, per person, at various pay levels and for itemized products use.

ILLEGAL FIRES

Assignment - \$466.00 per hour, per engine / \$582.00 per hour, per truck

When a fire is started by any person or persons that requires a fire department response during a time or season when fires are regulated or controlled by local or state rules, provisions or ordinances because of pollution or fire danger concerns, such person or persons will be liable for the fire department response at a cost not to exceed the actual expenses incurred by the fire department to respond and contain the fire. Similarly, if a fire is started where permits are required for such a fire and the permit was not obtained and the fire department is required to respond to contain the fire the responsible party will be liable for the response at a cost not to exceed the actual expenses incurred by the fire department. The actual expenses will include direct labor, equipment costs and any other costs that can be reasonably allocated to the cost of the response.

WATER INCIDENTS

Level 1

Basic Response: Claim will include engine response, first responder assignment, perimeter establishment, evacuations, first responder set-up and command, scene safety and investigation (including possible patient contact, hazard control). This will be the most common “billing level”. This occurs almost every time the fire department responds to a water incident.

Billed at \$466 plus \$58 per hour, per rescue person.

Level 2

Intermediate Response: Includes Level 1 services as well as clean up and material used (sorbents), minor hazardous clean up and disposal. We will bill at this level if the fire department has to clean up small amounts of gasoline or other fluids that are spilled as a result of the incident.

Billed at \$932 plus \$58 per hour, per rescue person.

Level 3

Advanced Response: Includes Level 1 and Level 2 services as well as D.A.R.T. activation, donning breathing apparatus and detection equipment. Set up and removal

of decon center, detection equipment, recovery and identification of material. Disposal and environment clean up. Includes above in addition to any disposal rates of material and contaminated equipment and material used at scene.

Billed at \$2,334 plus \$58 per hour per rescue person, plus \$117 per hour per HAZMAT team member.

Level 4

Itemized Response: You have the option to bill each incident as an independent event with custom mitigation rates for each incident using itemized rates deemed usual, customary and reasonable (UCR). These incidents will be billed, itemized, per trained rescue person, plus rescue products used.

BACK COUNTRY OR SPECIAL RESCUE

Itemized Response: Each incident will be billed with custom mitigation rates deemed usual, customary and reasonable (UCR). These incidents will be billed, itemized per apparatus per hour, per trained rescue person per hour, plus rescue products used.

Minimum billed \$466 for the first response vehicle plus \$58 per rescue person. Additional rates of \$466 per hour per response vehicle and \$58 per hour per rescue person.

CHIEF RESPONSE

This includes the set-up of Command and providing direction of the incident. This could include operations, safety, and administration of the incident.

Billed at \$290 per hour.

MISCELLANEOUS / ADDITIONAL TIME ON-SCENE

Engine billed at \$466 per hour.

Truck billed at \$582 per hour.

Miscellaneous equipment billed at \$341.

GAS LEAKS (Natural)

LEVEL 1

(Natural Gas Leak Outside Without Fire)

Description: Minimal danger to life, property, and the environment, leak typically for mechanical damage to a meter or pipe.

Actions: Evacuate immediate area, notify gas company, evaluate hazards including exposures, environment, vehicular traffic etc. Conduct fence line monitoring to determine control zones. Remove ignition sources from the area, consider non-intervention strategy, if offensive tactics selected, ensure proper PPE, respiratory protection, thermal protection, and tactics are utilized.

Assignment -\$466.00 per hour, per engine / \$582.00 per hour, per truck

LEVEL 2

(Natural Gas Leak Outside with Fire)

Description: Moderate danger to life, property, and the environment, leak typically caused from mechanical damage with nearby operating equipment (car, backhoe, etc) causing a fire.

Actions: Evacuate immediate area, notify gas company, protect hazards from fire damage, do not extinguish the fire unless directed to do so by the gas company, consider water supply options.

Assignment- \$748 per hour, per engine / \$58 per hour, per rescue person.

LEVEL 3

(Natural Gas Leak inside Structure)

Description: Significant danger to life, property, and the environment, leak is typically difficult to identify and locate.

Actions: Evacuate building and nearby structures, notify gas company, position apparatus away from the structure, attempt to control gas where it enters the building, ventilate the building (using intrinsically safe methods), remove ignition sources from inside but shutting off power on the outside of the structure.

Assignment- \$932 per hour, per engine / \$58 per hour, per rescue person.

FIRE MARSHAL INSPECTION AND PERMITTING FEES

a) Fire Marshal Inspections.

- 1) Certificate of Occupancy - \$60.00.
- 2) Temporary Certificate of Occupancy - \$60.00.
- 3) After Hours Inspections (after 5:00 p.m. or on weekend)
 - i. \$150.00 per hour for first two hours.
 - ii. \$50.00 per hour for each additional hour beyond the first two hours.

b) Fire Protection Systems.

- 1) 1-10 devices - \$75.00.
- 2) 11-25 devices - \$100.00.
- 3) 26-100 devices - \$200.00.
- 4) 101-200 devices - \$275.00.
- 5) 201-500 devices - \$500.00.
- 6) Per device for each device over 500 - \$1.00.

c) Fire Sprinkler Systems.

- 1) Underground- \$150.00.
- 2) Aboveground, 1-19 heads - \$75.00
- 3) Aboveground 20-100 heads - \$100.00.

- 4) Aboveground, 101-300 heads - \$200.00.
- 5) Aboveground 301-1,000 heads - \$400.00.
- 6) Per head/or each over 1,000 heads - \$1.00.
- 7) Fire Pump, additional - \$150.00.

d) Access Control.

- 1) 1-10 Doors - \$75.00.
- 2) 11-25 Doors - \$100.00
- 3) 26-100 Doors - \$200.00.
- 4) 101-200 Doors - \$275.00
- 5) 201-500 Doors - \$500.00.
- 6) Per device for each device over 500 - \$1.00.

e) Fire Alarm System Permits.

- 1) *Residential Permit Fee - \$50.00 annually.*

i. This residential fee shall be waived if a burglar alarm permit fee has already been paid.

- 2) *Non-Residential Permit Fee - \$100.00 annually.*

f) False Alarm Billing Fee (Residential).

1) The first three (3) false alarm calls within a twelve (12) month period are free of charge.

2) The fee for the fourth (4th) and fifth (5th) false alarm calls within a twelve (12) month period is \$75.00 per call.

3) The fee for the sixth (6th) and seventh (7th) false alarm calls within a twelve (12) month period is \$250.00 per call.

4) The fee for the eighth (8th) false alarm call and any false alarm call beyond the eighth (8th) within a twelve (12) month period is \$500.00 per call.

g) False Alarm Fee (Non-Residential).

1) The first three (3) false alarm calls within a twelve (12) month period are free of charge.

2) The fee for the fourth (4th) and fifth (5th) false alarm calls within a twelve (12) month period is \$150.00 per call.

3) The fee for the sixth (6th) and seventh (7th) false alarm calls within a twelve (12) month period is \$500.00 per call.

4) The fee for the eighth (8th) false alarm call and any false alarm call beyond the eighth (8th) within a twelve (12) month period is \$1,000.00 per call.

h) Fire Marshal Annual Inspection Fee.

- 1) 1 - 1,500sq.ft. - \$50.00 annually.
- 2) 1,501 - 3,000 sq. ft. - \$55.00 annually.
- 3) 3,001 - 5,000 sq. ft. - \$60.00 annually.
- 4) 5,001 - 10,000 sq. ft. - \$65.00 annually.
- 5) 10,001 - 25,000 sq. ft. - \$70.00 annually.
- 6) 25,001 - 50,000 sq. ft. - \$75.00 annually.
- 7) 50,001 - 75,000 sq. ft. - \$80.00 annually.

- 8) 75,001 - 100,000 sq. Ft. - \$100.00 annually.
- 9) 100,001 - 200,000 sq. ft. - \$120.00 annually.
- 10) 200,001 sq. ft. and greater - \$280.00 annually.

i) Hazardous Materials Annual Permit (includes flammable/combustible liquids).

- 1) Powders and Solids
 - i. 1,000 lbs. and less - \$25 .00
 - ii. 1,001 - 2,000 lbs. - \$37.50.
 - iii. 2,001 - 5,000 lbs. - \$70.00.
 - iv. 5,001 lbs. and over - \$137.50.
- 2) Liquids and Gels.
 - i. 25 gallons or less - \$25.00.
 - ii. 26 -100 gallons - \$37.50.
 - iii. 101- 1,000 gallons - \$70.00.
 - iv. 1,001 gallons or more - \$137.50.

j) Plan Review Fees.

- 1) Plan Review - \$60.00.
- 2) Fire Alarm System - \$70.00.
- 3) Fire Sprinkler System - \$150.00.
- 4) Emergency Lighting- \$37.50.
- 5) Special Lighting - \$30.00.
- 6) Liquid storage tanks, hazardous materials - \$70.00.

k) Reinspection Fee - \$60.00.

l) Special Permits.

- 1) Blasting operation - \$65.00 per day.
- 2) Pyrotechnic display - \$65.00 per day.
- 3) Tent permit.
 - i. 1 - 30 days - \$30.00.
 - ii. Each additional 30 days or portion thereof- \$30.00.

m) Underground Storage Tanks Installation. The fees set forth in this subsection are applicable to both temporary and permanent underground storage tanks.

- 1) 0 - 1,000 gallons - \$50.00.
- 2) More than 1,000 gallons - \$100.00.

n) LPG Tank Installation or Removal - \$50.00.

o) Special Event Fees.

- 1) Fire marshal permit.
 - i. \$125.00 for first day.
 - ii. \$75.00 per each additional day thereafter.
- 2) Fire marshal on premises - \$65.00 per hour.
- 3) Standby fire personnel, no apparatus - \$65 .00 per hour (each, three hour minimum).
- 4) Standby ambulance, with personnel - \$130.00 per hour (three hour minimum).
- 5) Standby engine or truck, with personnel - \$195.00 per hour (three hour minimum).

p) State Mandated Inspections.

- 1) Hospitals - \$100.00
- 2) Nursing and long-term care homes - \$75.00.
- 3) Daycare/Mother's Day out- \$50.00.
- 4) Foster home or adoptive home - \$10.00.

5) Home inspection (insurance) - \$50.00."

MITIGATION RATE NOTES

The mitigation rates above are average "billing levels", and are typical for the incident responses listed, however, when a claim is submitted, it will be itemized and based on the actual services provided.

These average mitigation rates were determined by itemizing costs for a typical run (from the time a fire apparatus leaves the station until it returns to the station) and are based on the actual costs, using amortized schedules for apparatus (including useful life, equipment, repairs, and maintenance) and labor rates (an average department's "actual personnel expense" and not just a firefighter's basic wage). The actual personnel expense includes costs such as wages, retirement, benefits, workers comp, insurance, etc.

ADDENDUM C – FIRE/EMERGENCY RESPONSE BILLING

This Addendum C (this “**Addendum**”) is entered into by and between Emergifire, LLC, a Texas limited liability company (“**Emergifire**”) and City of La Marque (“**Client**”), dated June 1, 2023, and is subject to the terms and conditions of that certain Agreement for Specialized Professional Ambulance Billing Services by and between Emergicon, LLC and Client, dated July 1, 2023 (the “**Services Agreement**”).

RECITALS

WHEREAS, Emergicon, LLC is engaged in the business of providing fire response and cost recovery services as detailed below through a contractor relationship with Emergifire;

WHEREAS, Emergifire is engaged in the business of providing third-party billing and accounts receivable management specialized professional services related to motor vehicle accidents and other emergency responses for emergency service organizations;

WHEREAS, CLIENT desires to utilize Emergifire for billing and claims management services for its organization; and

WHEREAS, Emergifire is willing to provide such specialized professional services upon the terms and conditions provided in this Addendum;

Specialized Professional Services. Emergifire agrees to perform the following duties (collectively referred to as the “Services”) on behalf of CLIENT as a normal course of business:

- a. Promptly prepare and submit claims to the responsible party deemed complete and eligible for submission by Emergifire in conformance with this Agreement.
- b. Provide instructions for the submission of Required Documentation to Emergifire.
- c. Promptly post payments made on CLIENT’s behalf.
- d. Provide monthly reports to CLIENT, which include, at a minimum, cash received and balance summary.
- e. Will not begin litigation against a person, entity, or insurance carrier without prior written approval by the CLIENT.

Specifically Excluded Duties of Emergifire. Notwithstanding any provisions of this Agreement to the contrary, Emergifire shall *not* be responsible to:

- a. Initiate or pursue litigation for the collection of past due accounts.
- b. Making an assignment of any of CLIENT’S claims to third parties.
- c. Making any adverse reports to any credit reporting agencies on behalf of CLIENT.
- d. Provide legal advice or legal services to CLIENT or anyone acting on CLIENT's behalf.

Term and Termination.

This Addendum runs in concurrence to the Specialized Professional Ambulance Billing Services Agreement.

Compensation.

a. In exchange for the Specialized Professional Services described in this Agreement, CLIENT shall pay Emergifire a fee equivalent to fifteen percent (15%) of all revenues collected by Emergifire on behalf of CLIENT. Credit card payments accepted by Emergifire will be charged an additional three percent (3.0%).

b. Emergifire shall submit invoices to CLIENT on a periodic basis established by Emergifire. Invoices are to be paid by the CLIENT within thirty (30) days of the invoice date. Emergifire reserves the right to add simple interest at an annual rate of 10%, , on all where Emergifire has not received payment within thirty (30) days of the date of its invoice.

CLIENT agrees to reimburse Emergifire for any and all sales tax liabilities that may arise as a result of this Agreement.

IN WITNESS WHEREOF, the undersigned have executed this Addendum as of the date written below.

EMERGIFIRE, LLC.

City of La Marque, Texas

By:

By:

Signature

Signature

Christopher Turner, MHA

Print Name

Print Name

Founder & CEO

Title

Title

Date

Date



EMERGIFIRE
fire response billing

OPEN UP A WHOLE NEW REVENUE STREAM

With fire departments nationwide facing increasing costs and decreasing revenues, it's more important than ever to pursue every service charge recovery avenue available.

EMERGIFIRE helps fire departments across Texas shift more cost burdens away from taxpayers by aggressively pursuing insurance reimbursements for services rendered for commercial and industrial-related incidents.

833-BILLFIRE



DID YOU KNOW?

Insurance carriers have long included fire department service charge recovery clauses in their policies to help pay for costs related to fire incident and first response. Unfortunately, many departments do not have the processes and personnel in place to identify and pursue reimbursement claims for commercial and industrial-related incidents. Thus, they lose out on getting paid, and the financial health of their department suffers.

THAT'S WHERE EMERGIFIRE FITS IN.

With a team boasting over 12 years of experience working in emergency services claims recovery, EMERGIFIRE provides the guidance and expertise you need take advantage of this readily available revenue stream.

INSPECTIONS & PERMIT BILLING.

You inspect; we take care of everything else.

WHAT COSTS CAN BE RECOVERED.

Billable fire incident costs include personnel, equipment, and debris removal related to the following:



Motor Vehicle
Incidents



Structure
Fires



Vehicle
Fires



Equipment
Fires



Hazardous Material
Incidents



Industrial/Commercial
Incidents

HERE'S HOW IT WORKS.



Connect

At absolutely zero upfront cost to your department, EMERGIFIRE seamlessly integrates with your existing reporting system to identify and pursue insurance billing opportunities.



Claim

Our fire incident and first response billing team handles all paperwork, filing claims with the insurance company of each incident's responsible party on your behalf.



Collect

Revenue collected from successful claims is forwarded to your department within two to four weeks. Our fee is deducted from all reimbursements received.

AND, IT'S EASY TO GET STARTED.

- 1 Give us a call at **833-BILLFIRE**
- 2 We plug you into our system
- 3 You open up a whole new revenue stream



"After years of working with Emergicon for EMS billing services, we were happy to partner with EmergiFire for incident response billing to further reduce the burden on our tax paying residents."

Chief Ken Swindle
Krum, Texas Fire Department



"As a rural department, I'll be the first to admit I was not familiar with what all a fire service cost recovery could do for our department. After a recent chemical plant explosion in town, EmergiFire made a believer out of me. They really helped recover costs to our budget that we would have otherwise had to absorb and do more with even less.' Thank you EmergiFire!"

Deputy Chief Ryan Dunn
Mineral Wells, Texas Fire Department

833-BILLFIRE
833-245-5347
info@Emergifire.com
www.EMERGIFIRE.com





EMERGIFIRE
emergency response billing

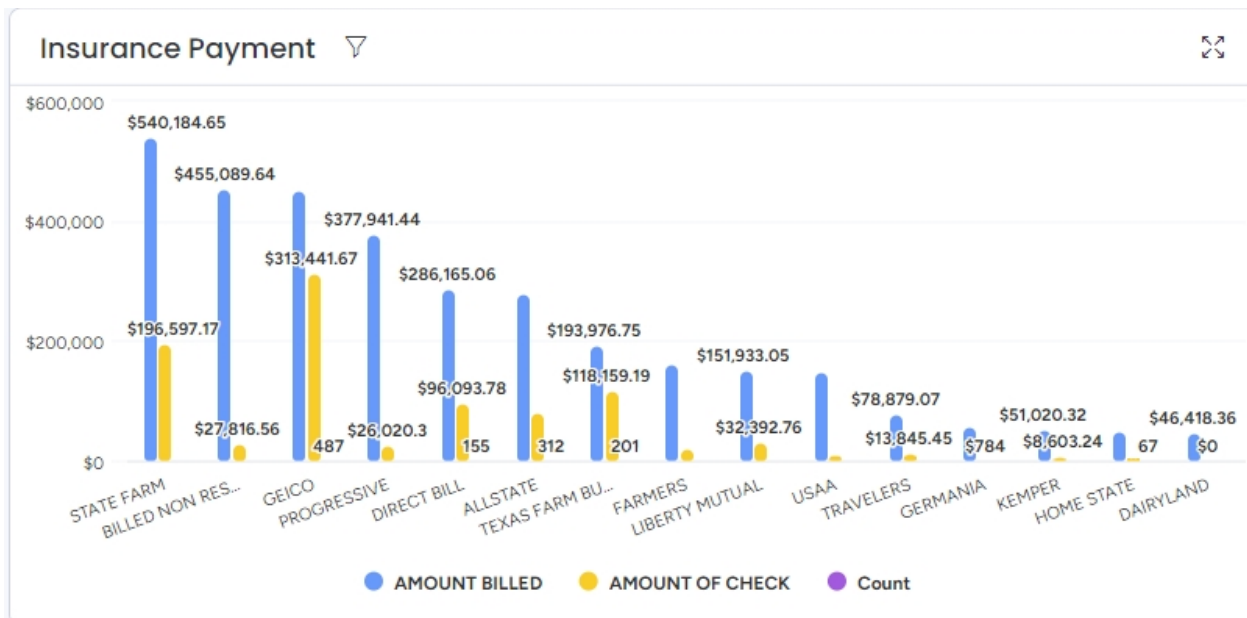
La Marque Fire Billing Data with Comparative City

Here is the order we believe are the highest return.

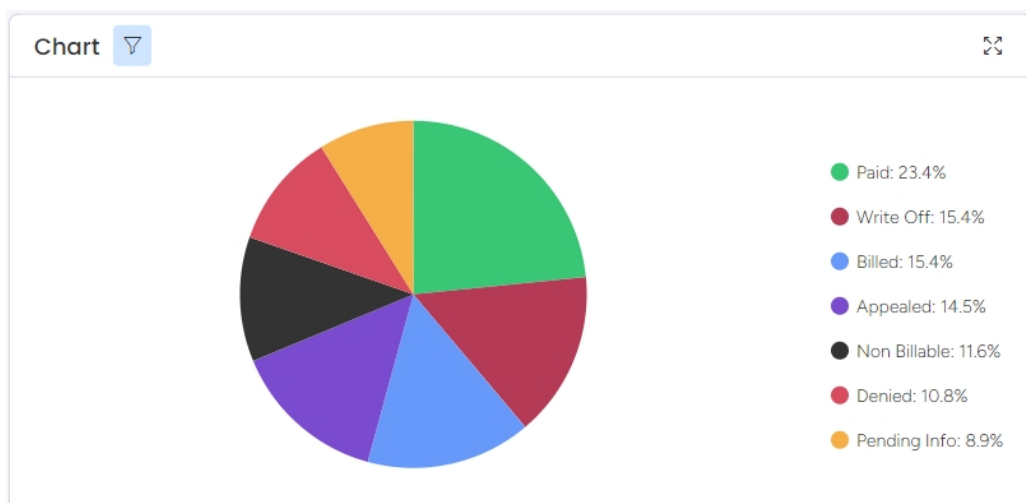
1. Business Claims
2. MVA w/Spill Claims
3. MVAs
4. Car Fires
5. HazMat Gas Leak
6. Grass Fires
7. House Fires

Inspections return varies from 88% to 93% return.

Insurance Billed & Amount Paid – for all Clients.



Percentage by Status – All Clients

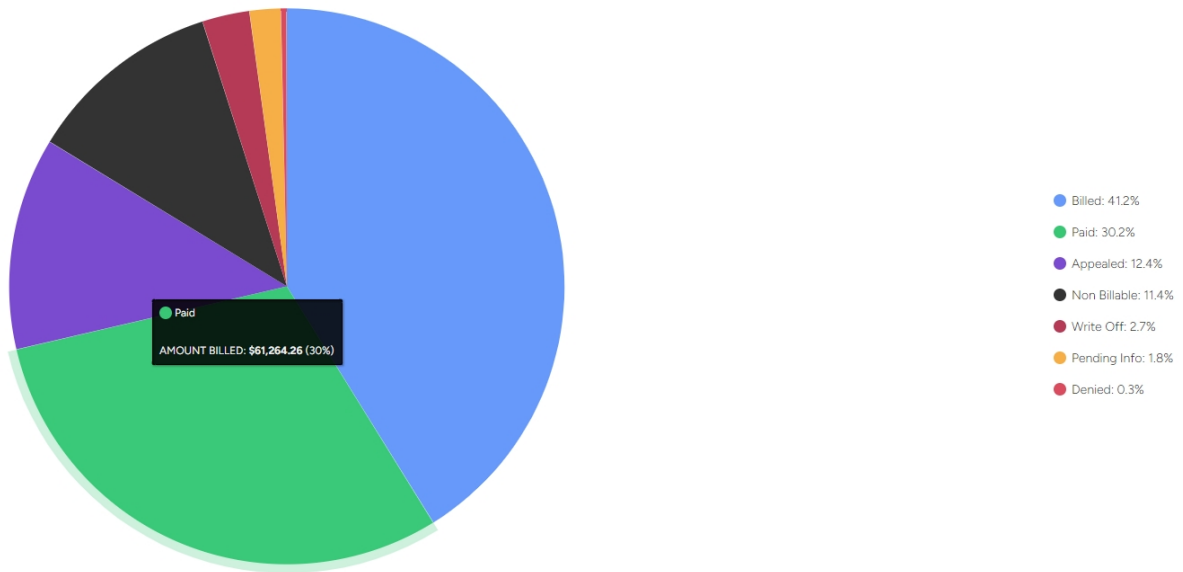




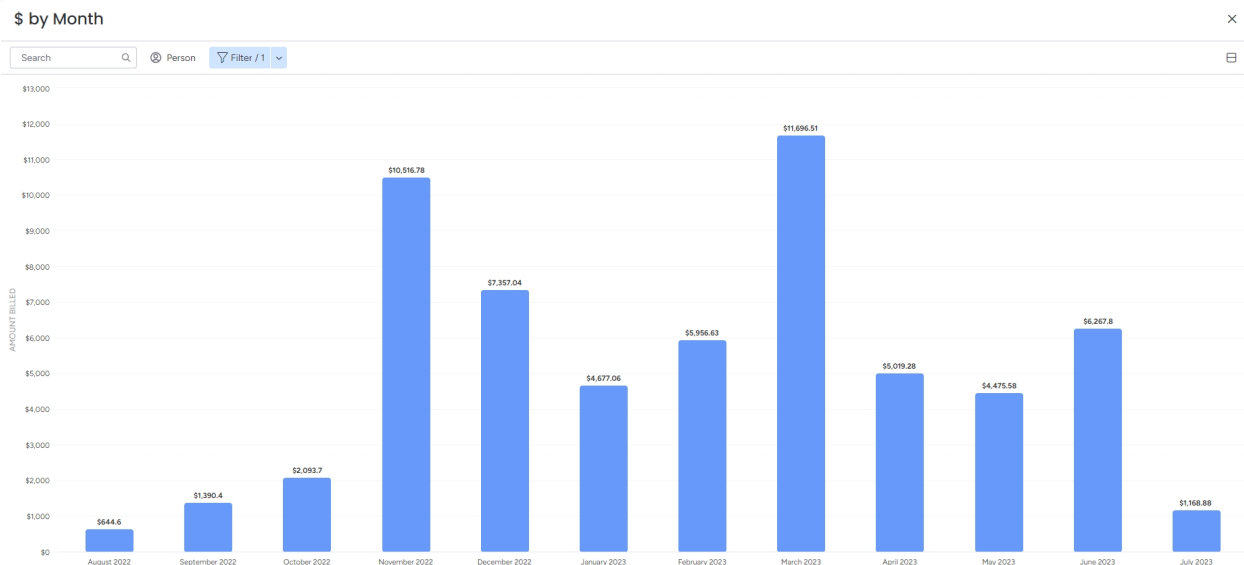
EMERGIFIRE
emergency response billing

La Marque Fire Billing Data with Comparative City

Percentage by Status – Comparative City



Amount Collected for Comparative City





EMERGIFIRE
emergency response billing

La Marque Fire Billing Data with Comparative City

What Comparative City Bills

Incident types

Listed below (in numerical order) are typical calls and codes that we are able to bill for. Please check the boxes of incidents to be billed.

Structure Fire

- ☐ 111 Building Fire
- ☐ 112 Fires in a structure other than a building
- ☐ 113 Cooking fire, confined to container
- ☐ 114 Chimney or flue fire confined
- ☐ 117 Commercial compactor fire, confined to rubbish

Fire in a mobile property used as a fixed structure

- ☐ 121 Fire in a mobile home used as a fixed residence
- ☐ 122 Fire in a motor home, camper, RV fixed location
- ☐ 123 Fire in a portable building

Vehicle Fire

- ☒ 131 Passenger vehicle fire
- ☒ 132 Road freight or transport vehicle fire
- ☒ 133 Rail vehicle fire
- ☒ 134 Water vehicle fire
- ☒ 136 Self-propelled motor home or recreational vehicle
- ☒ 137 Camper or recreational vehicle (RV) fire
- ☒ 138 Off-road vehicle or heavy equipment fire

Natural vegetation fire

- ☐ 141 Forest, woods or wild land fire
- ☐ 142 Brush or brush-grass fire
- ☐ 143 Grass fire

Outside rubbish fire

- ☐ 151 Outside rubbish/trash/waste fire
- ☐ 152 Garbage dump or sanitary landfill fire
- ☐ 153 Construction site fire
- ☐ 154 Dumpster fire
- ☐ 155 Outside fire, other

Vehicle Accidents

- ☒ 322 Vehicle accident with injuries

Extrication/Rescue

- ☒ 350 Extrication/Rescue, other
- ☒ 352 From Vehicle
- ☐ 354 From trench
- ☐ 355 Confined space
- ☐ 356 High-angle
- ☐ 357 From machinery

Water or ice rescue

- ☐ 363 Swift water rescue

Hazardous conditions

- ☒ 410 Flammable gas or liquid condition, other Natural Gas
- ☐ 411 Gasoline or other flammable liquid spill
- ☐ 413 Oil or other combustible liquid spill
- ☐ 422 Chemical spill or leak
- ☐ 451 Biological hazard, confirmed or suspected
- ☒ 463 Vehicle accident, general cleanup

ORDINANCE NO. O-2023 -00__

**A ORDINANCE OF THE CITY COUNCIL OF LA MARQUE, TEXAS ISSUING A
CONDITIONAL USE PERMIT FOR HUNT ENERGY NETWORK BATTERY STORAGE
FACILITY, (GALVESTON COUNTY PROPERTY ID# 363493)**

WHEREAS, The Owner of Block 12 of the William K. Wilson League, Abstract No 208, Section 12 (Galveston County Property ID # 363493) (the “Property”) submitted an application for a Conditional Use Permit for the Property to allow for a battery storage facility.

WHEREAS, the City Council has determined that the establishment, maintenance or operation of this conditional use will not be materially detrimental to, or endanger, the public health, safety, morals, or general welfare;

WHEREAS, the City Council has also determined that the uses, values and enjoyment of other property in the neighborhood, for the purpose already permitted, shall be in no foreseeable manner substantially impaired or diminished by the establishment, maintenance, or operation of the conditional use;

WHEREAS, the City Council has also determined that the establishment of the conditional use will not significantly impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district;

WHEREAS, the City Council has also determined That the uses, values, and enjoyment of other property in the neighborhood, for the purpose already permitted, shall be in no foreseeable manner substantially impaired or diminished by the establishment, maintenance, or operation of the conditional use; and

WHEREAS, the City Council has also determined that adequate utilities, access roads, drainage and other necessary site improvements have been or are being provided;

WHEREAS, the City Council has also determined that adequate measures have been or will be taken to provide ingress or egress, so designed as to minimize traffic congestion in the public streets; and

WHEREAS, the City Council has also determined that the conditional use shall conform to all applicable yard area regulations of the district in which it is located.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LA MARQUE, TEXAS THAT:

Section 1. That the facts and matters set forth in the preamble of this Ordinance are found to be true and correct.

Section 2. That the City of La Marque, Texas will issue a Conditional Use Permit in accordance with Section 71-6 of the City Code for the construction of a single-family residential dwelling.

Section 3. As provided by Section 71-3 of the City Code, any person who shall violate any of the provisions of this Ordinance or the Conditional Use Permit issued hereunder or who shall erect or alter any building, or who shall commence to erect or alter any building in violation of any detailed statement of plan submitted or approved hereunder, shall for each violation or noncompliance be deemed guilty of a misdemeanor, and upon conviction, shall be fined as provided in Section 1-7 of the City Code. The owner of that building or premises or part thereof where anything in violation of this chapter shall be placed or shall exist, and any architect, builder contractor, agent, or corporation employed in connection therewith who may have assisted in the commission of any such violation shall be subject to the penalties herein provided.

Section 4. In the event any clause, phrase, provision sentence, or part of this Ordinance or the application of the same to any person or circumstance for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it is the intention of the City Council that the invalidity or unconstitutionality of the one or more parts shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision other than the part declared to be invalid or unconstitutional; and the City Council of the City of La Marque, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, whether there be one or more parts.

PASSED AND APPROVED this ____ day of _____, 2023.

PASSED, APPROVED, AND ADOPTED this ____ day of _____, 2023.

Keith Bell
Mayor

ATTEST:

Kierra Nance, TRMC
City Clerk

Additional BESS Sites:

Broadreach Power - BESS Locations/ Cities in Texas:

- League City, (Additionally, League City currently has 5 additional BESS projects under active construction or in the permitting process.)
- Texas City,
- Dickinson,
- Victoria,
- Odessa

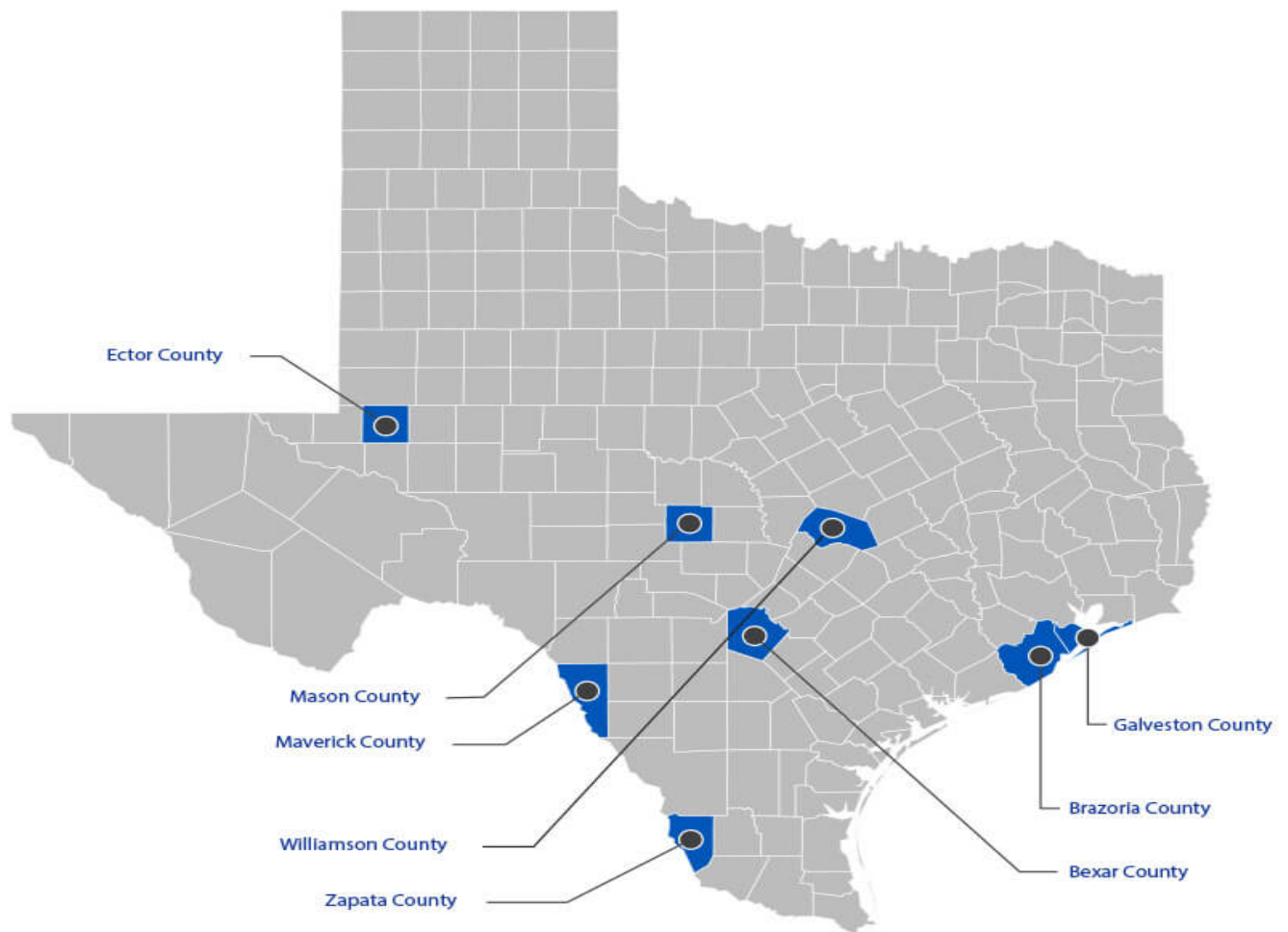
Key Capture Energy - BESS Locations/ Cities in Texas:

- Austin,
- Round Rock,
- Pecos

Hunt Energy Network - BESS Locations/ Cities in Texas:

- Corpus Christi,
- Irving,
- Farmersville,
- Del Rio,
- McAllen,
- Pecos,
- Junction,
- Mineral Wells

Additionally, League City currently has 5 additional BESS projects under active construction or in the permitting process.



Texas Projects

Broad Reach Power operates 17 Battery Energy Storage resources across Texas, providing energy reliability services to the Electric Reliability Council of Texas (ERCOT), electric cooperatives, retail electric providers, and municipal utilities. This portfolio in operation represents nearly \$200 million investment.

The company is presently actively developing, designing and building an additional 800 MW of transmission-level battery projects in ERCOT territory.

In addition, Broad Reach Power leads the ERCOT interconnection queue for large battery projects with 6,000 MW on the boards. These projects represent an estimated \$3 billion in investment potential, with projects being constructed as early as 2022.



Bat Cave Energy Storage

Mason County, TX – Mason County

Capacity: 100-MW / 100-MWH

Status: In Operation

Commercial Operation Date: 2021



North Fork Energy Storage

Williamson County, TX – Williamson County

Capacity: 100-MW / 100-MWH

Status: In Operation

Commercial Operation Date: 2021



BRP Alvin BESS

Alvin, TX – Brazoria County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2020



BRP Angleton BESS

Angleton, TX – Brazoria County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2020



BRP Brazoria BESS

Brazoria, TX – Brazoria County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2020



BRP Dickinson BESS

Dickinson, TX – Galveston County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2021



BRP Loop 463 BESS

Victoria TX-Victoria County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2021



BRP Heights BESS

Texas City, TX – Galveston County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2020



BRP Lopeno BESS

TX – Zapata County

Status: In Operation

Commercial Operation Date: 2021



BRP Magnolia BESS

League City, TX – Galveston County

Capacity: 9.95-MW / 9.95-MWH

Status: In Operation

Commercial Operation Date: 2020



BRP Odessa Southwest BESS

Odessa, TX – Ector

Capacity: 9.95-MW /9.95-MWH

Status: In Operation

Commercial Operation Date: 2020



BRP Pueblo I BESS

Eagle Pass TX – Maverick County

Status: In Operation

Commercial Operation Date: 2021



BRP Pueblo II BESS

Eagle Pass TX – Maverick County

Status: In Operation

Commercial Operation Date: 2021



BRP Ranchtown BESS

Helotes TX – Bexar County

Status: In Operation

Commercial Operation Date: 2021



BRP Sweeny BESS

Sweeny TX – Brazoria County

Status: In Operation

Commercial Operation Date: 2021



BRP Zapata I BESS

TX – Zapata county

Status: In Operation

Commercial Operation Date: 2021



BRP Zapata II BESS

TX – Zapata county

Status: In Operation

Commercial Operation Date: 2021



GALVESTON COUNTY, TEXAS

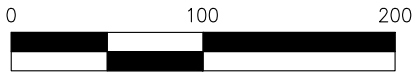
LINE TABLE		
LINE #	BEARING	DISTANCE
L1	N46° 13' 43"E	152.50'
L2	S16° 25' 10"E	223.65'
L3	S86° 56' 42"W	121.15'
L4	N24° 23' 28"W	126.80'

P.O.B.
5/8" IRON ROD W/CAP STAMPED "SAM" FOUND
NAD 83 N: 13712843.70
NAD 83 E: 3228817.31
NAD 83 LAT: 29.39596342
NAD 83 LONG: -095.04110378

EXP-DRAINAGE DITCH #2
ABSTRACT 208, PAGE 7
PART OF LOT 19
WATERMANS SUBDIVISION
F.C. NO. 009-63-0217

JAMES R. PACE SURVEY,
ABSTRACT NO. 161

GRAPHIC SCALE



1 INCH = 100 FT.

LEGEND

	PROPERTY LINE
	BOUNDARY LINE
	ADJOINER LINE
	FOUND IRON ROD
	CAPPED IRON ROD SET
	POWER POLE
	OVERHEAD ELEC. LINE
	FENCE LINE
P.O.B.	POINT OF BEGINNING
O.P.R.G.C.T.	OFFICIAL PUBLIC RECORDS OF GALVESTON COUNTY, TEXAS

FM 1764

ELECTRIC TOWER

GRAVEL

TEXAS NEW MEXICO POWER CO
ABSTRACT 208, PAGE 7
PART OF LOT 19
WATERMANS SUBDIVISION
F.C. NO. 010-35-0532

WILLIAM K. WILSON SURVEY,
ABSTRACT NO. 208
SECTION 12, BLOCK 12

HIGH POINT SELF STORAGE
CALLED 10.3342 ACRES
LOT 1, BLOCK 1
DOCUMENT NO. 2019058650
O.P.R.G.C.T.

5/8" IRON ROD FOUND
NAD 83 N: 13712405.39
NAD 83 E: 3229109.41
NAD 83 LAT: 29.39473148
NAD 83 LONG: -095.04023352

BOUNDARY SURVEY OF A 0.512 ACRE TRACT
SITUATED IN
WILLIAM K. WILSON SURVEY, ABSTRACT NO. 208,
GALVESTON COUNTY, TEXAS

LANDPOINT

4100 INTERNATIONAL PLAZA, SUITE 240
FORT WORTH, TX 76109
FIRM NO. 10193814
PHONE: (318) 226-0100

SHEET 1 OF 2

X:\2022\22-2124\Working\Plats and Field Notes\Plats\M&B PLAT\22-2124_MAINLAND BESS SITE SURVEY_M&B Plat.dwg

METES AND BOUNDS DESCRIPTION OF A 0.512 ACRE SITE

Being a 0.512 acre proposed site, situated in the William K. Wilson Survey, Abstract no. 208, Section 12, Block 12, Galveston County, Texas, and being a portion of a tract of land conveyed to Texas New Mexico Power Co, Recorded in Abstract 208, Page 7, Part of Lot 19 of Watermans Subdivision, F.C. No. 010-35-0532, being more particularly described by metes and bounds as follows:

BEGINNING at a 5/8 inch iron rod with cap stamped "SAM" found for the Northwest corner of said tract [N: 13712843.70, E: 3228817.31] and in the South right-of-way line of FM 1764;

THENCE N 46°13'43" E with the North boundary line of said tract, a distance of 152.50 feet for the Northeast corner of said site;

THENCE S 16°25'10" E, a distance of 223.65 feet for the Southeast corner of said site, from which a 5/8 inch iron rod found for the Southeast corner of said tract bears S 19°49'59" E, a distance of 350.04 feet;

THENCE S 86°56'42" W, a distance of 121.15 feet to a point in the West line of said tract, for the Southwest corner of said site;

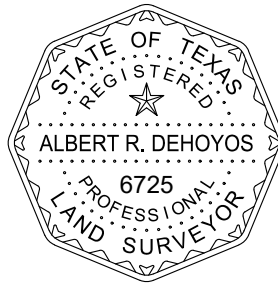
THENCE N 24°23'28" W, with said West line, a distance of 126.80 feet, returning to the **POINT OF BEGINNING**, and containing **0.512 acres** of land more or less.

I, Albert R. DeHoyos, certify that this plat was prepared under my direct supervision from a survey made on the ground on November 10, 2022, that this plat correctly represents the facts found at the time of said survey.



Albert R. DeHoyos
STATE OF TEXAS R.P.L.S. NO. 6725

12/08/22



BOUNDARY SURVEY OF A 0.512 ACRE TRACT
SITUATED IN
WILLIAM K. WILSON SURVEY, ABSTRACT NO. 208,
GALVESTON COUNTY, TEXAS

NOTES:

1. PROPERTY LINES HAVE BEEN ESTABLISHED BASED UPON FOUND MONUMENTS, MEASUREMENTS, AND EVIDENCE OBTAINED IN THE FIELD, ALONG WITH RECORDS AS PROVIDED BY THE CLIENT.
2. ABSTRACT LINES AND INFORMATION SHOWN ARE BASED ON AVAILABLE RECORDS, INCLUDING GENERAL LAND OFFICE (GLO) MAPS.
3. BASIS OF BEARINGS IS GRID NORTH, NAD '83, TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE.
4. ELEVATIONS ARE BASED ON GPS OBSERVATION, NAVD' 88 DATUM.
5. THIS PLAT PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR ABSTRACT OF TITLE; THERE MAY BE ADDITIONAL EASEMENTS THAT ARE NOT SHOWN HEREON.
6. SURVEY BASED UPON CONTROLLING DATA AS SHOWN OR AS FURTHER NOTED ON THIS PLAT.

LANDPOINT

4100 INTERNATIONAL PLAZA, SUITE 240
FORT WORTH, TX 76109
FIRM NO. 10193814
PHONE: (318) 226-0100

SHEET 2 OF 2



Preliminary Training for City of La Marque Fire Department

This training program is provided to aid in the education of battery storage facilities, as well as a guide to ensure adequate safety measures are taken by first responders in case of an emergency. HEN Infrastructure's Emergency Response Fire Training Program was developed to provide remote and on-site training to ensure the City of La Marque Fire Department and Command Staff can perform their duties safely and knowledgeably. Below is a preliminary high-level breakout of the main topics covered during the remote and on-site training, as well as a tentative schedule for when these training courses are to be administered. This training program will be developed with the aide of the Fire Department throughout the permitting process to make certain that it meets the standards and expectations of the City.

Remote/Online Training:

- Remote training course to be conducted by HEN Infrastructure for City of La Marque Fire Department and staff.
- Walkthrough site layout and operation of the battery facility.
- Review technical documentation on site specific safety equipment.
- General understandings and education on the hazards of LFP Batteries.
- Review of site specific UL9540A Test Results.
- **Additional remote training sessions can/will be provided per City's request if necessary.**

On-Site Training:

- 1 day training course for each of the 3 shifts of the La Marque Fire Department.
- Provide overview of site specific safety components.
- Provide a site walkthrough with Fire Department on the location of all emergency related components.

Schedule:

- Remote/ Online Training can be scheduled as early as 30 days after the receipt of all approved permits (est. September 28th, 2023).
- On-Site Training can be scheduled as early as 1 week after mechanical construction is completed (est. December 11th, 2023)
- Annual Training will be scheduled 1 calendar year from the completion of the on-site training of year 1. HEN Infrastructure will coordinate schedule with the Fire Department as the 1 year deadline approaches.

Additions/ Clarifications:

- **All dates listed above are contingent upon HEN Infrastructure obtaining receipt of approval for all permits by the end of August 2023.



Release Date: May 3, 2023

**Seasonal Assessment of Resource Adequacy for the ERCOT Region (SARA)
Summer 2023**

SUMMARY

Assuming that the ERCOT Region experiences typical summer grid conditions, ERCOT anticipates that there will be sufficient installed generating capacity available to serve the system-wide forecasted peak load for the upcoming summer season, June - September 2023.

The base summer peak load is 82,739 MW. This load amount is based on average weather conditions at the time of the summer peaks for years 2007 through 2021, and does not incorporate ERCOT's summer 2023 weather outlook. Weather forecast information, including the 2023 summer weather outlook, is available at:

<https://www.ercot.com/gridmktinfo/dashboards/weatherforecast/>

The peak load also incorporates load adjustments to account for incremental solar rooftop system additions as well as the interconnection of Large Loads (such as crypto-mining facilities) to Transmission Service Provider networks and individual generating units. The background tab includes a detailed description of the methodology used for accounting for these Large Loads.

Over 97,000 MW of summer-rated resource capacity is expected to be available for the summer peak load. This includes 688 MW of planned thermal resources and 372 MW of planned solar resources forecasted to be available by July 2023. The total resource amount also includes 3,544 MW of installed battery storage capacity, with 447 MW of the installed total assumed to be available for dispatch prior to the highest summer net load hours. (Net load is total load minus wind and solar generation.) This capacity estimate serves as a proxy for the amount expected during a tight reserve hour for the upcoming summer and is an interim availability assumption to be used until a formal capacity contribution method is adopted for future SARA reports.

Also noteworthy is a 568 MW coal unit that changed its operations from year-round to summer only. The total amount of capacity associated with units operating only during the summer now stands at 704 MW, which is the highest amount since summer 2016.

ERCOT and thermal generation owners are closely monitoring the potential impacts of the U.S. Environmental Protection Agency's March 15th approval of its "Good Neighbor Plan" for reducing cross-state emissions of ozone-forming nitrogen oxides (NOx). Several generation owners in the ERCOT region indicated the potential that certain generators may face operational constraints in complying with the Program's provisions as soon as July 2023. Texas, Louisiana and other parties filed a motion with the Fifth Circuit court to stay the EPA's regulatory action due to potential reliability impacts. On May 1, 2023, the Court granted the motion to stay the EPA action.

The summer SARA includes a typical thermal generating unit outage assumption of 5,034 MW. This outage assumption is based on historical outage data for the last three summer seasons (2020, 2021, 2022).

The summer SARA includes two Risk Scenario tabs: Base & Moderate Risk Scenarios, and Extreme Risk Scenarios. The most severe Risk Scenario assumes a high peak load, extreme unplanned thermal plant outages based on historic observations, and extreme low wind power production.

Seasonal Assessment of Resource Adequacy for the ERCOT Region
Summer 2023
Release Date: May 3, 2023

Installed and Summer Capacity Ratings, MW

Resources, MW	Installed Capacity Rating 1/	Expected Capacity for Summer Peak Demand 2/	
Thermal Resources, Installed Summer-rated Capacity	73,239	65,091	Based on current Seasonal Maximum Sustainable Limits reported through the unit registration process
Hydroelectric, Peak Average Capacity Contribution	563	478	Based on 84% of installed capacity for hydro resources (Summer season) per ERCOT Nodal Protocols Section 3.2.6.2.2
Switchable Capacity Total	3,840	3,490	Installed capacity of units that can interconnect with other Regions and are available to ERCOT
Less Switchable Capacity Unavailable to ERCOT	(572)	(542)	Based on survey responses of Switchable Resource owners
Available Mothballed Capacity	713	704	Based on seasonal Mothball units plus Probability of Return responses of Mothball Resource owners
Capacity from Private Use Networks	9,575	2,869	Average grid injection during the top 20 Summer peak load hours over the last three years, plus the forecasted net change in generation capacity available to the ERCOT grid pursuant to Nodal Protocols Section 10.3.2.4.
Coastal Wind, Peak Average Capacity Contribution	5,436	3,258	Based on 60% of installed capacity for coastal wind resources (Summer season) per ERCOT Nodal Protocols Section 3.2.6.2.2
Panhandle Wind, Peak Average Capacity Contribution	4,410	1,322	Based on 30% of installed capacity for panhandle wind resources (Summer season) per ERCOT Nodal Protocols Section 3.2.6.2.2
Other Wind, Peak Average Capacity Contribution	27,900	5,847	Based on 21% of installed capacity for other wind resources (Summer season) per ERCOT Nodal Protocols Section 3.2.6.2.2
Solar Utility-Scale, Peak Average Capacity Contribution	15,659	12,264	Based on 79% of rated capacity for solar resources (Summer season) per Nodal Protocols Section 3.2.6.2.2
Storage, Peak Average Capacity Contribution	3,287	415	Based on the amount of battery storage capability assumed to be available for dispatch prior to the highest summer net load hours. (Net load is total load minus wind and solar generation, and represents the demand that must be met with other available resources.) This is an interim availability assumption for use until a formal capacity contribution method is adopted for future reports
RMR Capacity to be under Contract	-	-	
Capacity Pending Retirement	-	-	Announced retired capacity that is undergoing ERCOT grid reliability reviews pursuant to Nodal Protocols Section 3.14.1.2
Non-Synchronous Ties, Capacity Contribution	1,220	850	Based on net imports during summer 2019 Energy Emergency Alert (EEA) intervals
Planned Thermal Resources with Signed IA, Air Permits and Adequate Water Supplies	720	688	Based on in-service dates provided by developers
Planned Coastal Wind with Signed IA, Peak Average Capacity Contribution	-	-	Based on in-service dates provided by developers and 60% Summer capacity contribution for coastal wind resources
Planned Panhandle Wind with Signed IA, Peak Average Capacity Contribution	-	-	Based on in-service dates provided by developers and 30% Summer capacity contribution for panhandle wind resources
Planned Other Wind with Signed IA, Peak Average Capacity Contribution	-	-	Based on in-service dates provided by developers and 21% Summer capacity contribution for other wind resources
Planned Solar Utility-Scale, Peak Average Capacity Contribution	471	372	Based on in-service dates provided by developers and 79% Summer capacity contribution for solar resources
Planned Storage, Peak Average Capacity Contribution	257	32	Based on the amount of battery storage capability assumed to be available for dispatch prior to the highest summer net load hours. This is an interim availability assumption for use until a formal capacity contribution method is adopted for future reports

[a] Total Resources, MW 146,719 97,138

1/ Installed capacity ratings are based on the maximum power that a generating unit can produce during normal sustained operating conditions as specified by the equipment manufacturer.

Seasonal Assessment of Resource Adequacy for the ERCOT Region
Summer 2023
Release Date: May 3, 2023

Base & Moderate Reserve Capacity Risk Scenarios, MW

	Forecasted Peak Load / Typical Unplanned Outages / Typical Wind and Solar	High Peak Load / Typical Unplanned Outages / Typical Wind and Solar	Forecasted Peak Load / High Unplanned Outages / Typical Wind and Solar	Forecasted Peak Load / Typical Unplanned Outages / Low Wind and Solar
Scenario Adjustments				
[a] Peak Load Forecast (Baseline)	82,739	82,739	82,739	82,739
[b] Rooftop PV Forecast Reduction, MW	(432)	(432)	(432)	(432)
[c] Large Flexible Load Adjustment, MW	1,105	1,105	1,105	1,105
[d] Adjusted Peak Load Forecast, [a+b+c]	83,412	83,412	83,412	83,412
[e] Total Resources (from Forecast Capacity tab)	97,138	97,138	97,138	97,138
Uses of Reserve Capacity				
High Peak Load Adjustment	-	3,389	-	-
Typical Planned Outages, Thermal	59	59	59	59
Typical Unplanned Outages, Thermal	4,975	4,975	4,975	4,975
High Unplanned Outage Adjustment, Thermal	-	-	3,389	-
Low Wind Output Reduction to 2,894 MW	-	-	-	7,533
Low Solar Output Reduction to 9,263 MW	-	-	-	3,373
[f] Total Uses of Reserve Capacity	5,034	8,423	8,423	15,940
Capacity Available For Operating Reserves				
[g] Capacity Available for Operating Reserves, Normal Operating Conditions (Scenarios tab e-d-f), MW Less than 2,300 MW indicates risk of EEA1	8,692	5,303	5,303	(2,215)
[h] Pre-EEA Resources available for ERCOT deployment (Emergency Response Service, distribution voltage reduction, LFL curtailment)	-	-	-	2,760
[i] EEA Resources available for ERCOT deployment	-	-	-	1,817
[j] Capacity Available for Operating Reserves, Emergency Conditions (g+h+i), MW Less than 1,000 MW indicates risk of EEA3 Load Shed	8,692	5,303	5,303	2,362

Seasonal Assessment of Resource Adequacy for the ERCOT Region
Summer 2023
Release Date: May 3, 2023

Extreme Reserve Capacity Risk Scenarios, MW
(One or a combination of extreme risk assumptions resulting in low probability, high impact outcomes)

	Extreme Peak Load / Typical Unplanned Outages / Typical Wind and Solar	Extreme Peak Load / Extreme Unplanned Outages / Typical Wind and Solar	High Peak Load / Extreme Unplanned Outages / Extreme Low Wind
Scenario Adjustments			
[a] Peak Load Forecast (Baseline)	82,739	82,739	82,739
[b] Rooftop PV Forecast Reduction, MW	(432)	(432)	(432)
[c] Large Flexible Load Adjustment, MW	1,105	1,105	1,105
[d] Adjusted Peak Load Forecast, [a+b+c]	83,412	83,412	83,412
[e] Total Resources (from Forecast Capacity tab)	97,138	97,138	97,138
Uses of Reserve Capacity			
High/Extreme Peak Load Adjustment	5,114	5,114	3,389
Typical Planned Outages, Thermal	59	59	59
Typical Unplanned Outages, Thermal	4,975	4,975	4,975
Extreme Unplanned Outage Adjustment, Thermal	-	6,173	6,173
Extreme Low Wind Output Adjustment to 61 MW	-	-	10,366
[f] Total Uses of Reserve Capacity	10,148	16,321	24,962

Capacity Available For Operating Reserves

[g] Capacity Available for Operating Reserves, Normal Operating Conditions (Scenarios tab e-d-f), MW Less than 2,300 MW indicates risk of EEA1	3,578	(2,595)	(11,236)
[h] Pre-EEA Resources available for ERCOT deployment (Emergency Response Service, distribution voltage reduction, LFL curtailment)	-	2,760	2,760
[i] EEA Resources available for ERCOT deployment	-	1,817	1,817
[j] Capacity Available for Operating Reserves, Emergency Conditions (g+h+i), MW Less than 1,000 MW indicates risk of EEA3 Load Shed	3,578	1,982	(6,659)

Unit Megawatt Capacities - Summer

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
Operational Resources (Thermal)									
4 COMANCHE PEAK U1		CPSES_UNIT1	SOMERVELL	NUCLEAR	NORTH	1990	1,269.0	1,205.0	
5 COMANCHE PEAK U2		CPSES_UNIT2	SOMERVELL	NUCLEAR	NORTH	1993	1,269.0	1,195.0	
6 SOUTH TEXAS U1		STP_STP_G1	MATAGORDA	NUCLEAR	COASTAL	1988	1,365.0	1,293.2	
7 SOUTH TEXAS U2		STP_STP_G2	MATAGORDA	NUCLEAR	COASTAL	1989	1,365.0	1,280.0	
8 COLETO CREEK		COLETO_COLETOG1	GOLIAD	COAL	SOUTH	1980	650.0	655.0	
9 FAYETTE POWER U1		FPPYD1_FPP_G1	FAYETTE	COAL	SOUTH	1979	615.0	604.0	
10 FAYETTE POWER U2		FPPYD1_FPP_G2	FAYETTE	COAL	SOUTH	1980	615.0	599.0	
11 FAYETTE POWER U2		FPPYD2_FPP_G3	FAYETTE	COAL	SOUTH	1988	460.0	437.0	
12 J K SPRUCE U1		CALAVERS_JKS1	BEXAR	COAL	SOUTH	1992	555.0	560.0	
13 J K SPRUCE U2		CALAVERS_JKS2	BEXAR	COAL	SOUTH	2010	922.0	785.0	
14 LIMESTONE U1		LEG_LEG_G1	LIMESTONE	COAL	NORTH	1985	893.0	824.0	
15 LIMESTONE U2		LEG_LEG_G2	LIMESTONE	COAL	NORTH	1986	956.8	836.0	
16 MARTIN LAKE U1		MLSES_UNIT1	RUSK	COAL	NORTH	1977	893.0	800.0	
17 MARTIN LAKE U2		MLSES_UNIT2	RUSK	COAL	NORTH	1978	893.0	805.0	
18 MARTIN LAKE U3		MLSES_UNIT3	RUSK	COAL	NORTH	1979	893.0	805.0	
19 OAK GROVE SES U1		OGSES_UNIT1A	ROBERTSON	COAL	NORTH	2010	916.8	855.0	
20 OAK GROVE SES U2		OGSES_UNIT2	ROBERTSON	COAL	NORTH	2011	916.8	855.0	
21 SAN MIGUEL U1		SANMIGL_G1	ATASCOSA	COAL	SOUTH	1982	430.0	391.0	
22 SANDY CREEK U1		SCES_UNIT1	MCLENNAN	COAL	NORTH	2013	1,008.0	932.6	
23 TWIN OAKS U1		TNP_ONE_TNP_O_1	ROBERTSON	COAL	NORTH	1990	174.6	155.0	
24 TWIN OAKS U2		TNP_ONE_TNP_O_2	ROBERTSON	COAL	NORTH	1991	174.6	155.0	
25 W A PARISH U5		WAP_WAP_G5	FORT BEND	COAL	HOUSTON	1977	734.1	664.0	
26 W A PARISH U6		WAP_WAP_G6	FORT BEND	COAL	HOUSTON	1978	734.1	663.0	
27 W A PARISH U7		WAP_WAP_G7	FORT BEND	COAL	HOUSTON	1980	614.6	577.0	
28 W A PARISH U8		WAP_WAP_G8	FORT BEND	COAL	HOUSTON	1982	654.0	610.0	
29 ARTHUR VON ROSENBERG 1 CTG 1		BRAUNIG_AVR1_CT1	BEXAR	GAS-CC	SOUTH	2000	195.0	164.0	
30 ARTHUR VON ROSENBERG 1 CTG 2		BRAUNIG_AVR1_CT2	BEXAR	GAS-CC	SOUTH	2000	195.0	164.0	
31 ARTHUR VON ROSENBERG 1 STG		BRAUNIG_AVR1_ST	BEXAR	GAS-CC	SOUTH	2000	222.0	190.0	
32 ATKINS CTG 7		ATKINS_ATKINSG7	BRAZOS	GAS-GT	NORTH	1973	21.0	18.0	
33 BARNEY M DAVIS CTG 3		B_DAVIS_B_DAVIG3	NUECES	GAS-CC	COASTAL	2010	189.6	157.0	
34 BARNEY M DAVIS CTG 4		B_DAVIS_B_DAVIG4	NUECES	GAS-CC	COASTAL	2010	189.6	157.0	
35 BARNEY M DAVIS STG 1		B_DAVIS_B_DAVIG1	NUECES	GAS-ST	COASTAL	1974	352.8	292.0	
36 BARNEY M DAVIS STG 2		B_DAVIS_B_DAVIG2	NUECES	GAS-CC	COASTAL	1976	351.0	319.0	
37 BASTROP ENERGY CENTER CTG 1		BASTEN_GTG1100	BASTROP	GAS-CC	SOUTH	2002	188.0	171.0	
38 BASTROP ENERGY CENTER CTG 2		BASTEN_GTG2100	BASTROP	GAS-CC	SOUTH	2002	188.0	171.0	
39 BASTROP ENERGY CENTER STG		BASTEN_ST0100	BASTROP	GAS-CC	SOUTH	2002	242.0	233.0	
40 BEACHWOOD POWER STATION U1		BCH_UNIT1	BRAZORIA	GAS-GT	COASTAL	2022	60.5	44.6	
41 BEACHWOOD POWER STATION U2		BCH_UNIT2	BRAZORIA	GAS-GT	COASTAL	2022	60.5	44.6	
42 BEACHWOOD POWER STATION U3		BCH_UNIT3	BRAZORIA	GAS-GT	COASTAL	2022	60.5	44.6	
43 BEACHWOOD POWER STATION U4		BCH_UNIT4	BRAZORIA	GAS-GT	COASTAL	2022	60.5	44.6	
44 BEACHWOOD POWER STATION U5		BCH_UNIT5	BRAZORIA	GAS-GT	COASTAL	2022	60.5	44.6	
45 BEACHWOOD POWER STATION U6		BCH_UNIT6	BRAZORIA	GAS-GT	COASTAL	2022	60.5	44.6	
46 BOSQUE ENERGY CENTER CTG 1		BOSQUESW_BSQSU_1	BOSQUE	GAS-CC	NORTH	2000	188.7	143.0	
47 BOSQUE ENERGY CENTER CTG 2		BOSQUESW_BSQSU_2	BOSQUE	GAS-CC	NORTH	2000	188.7	143.0	
48 BOSQUE ENERGY CENTER CTG 3		BOSQUESW_BSQSU_3	BOSQUE	GAS-CC	NORTH	2001	188.7	145.0	
49 BOSQUE ENERGY CENTER STG 4		BOSQUESW_BSQSU_4	BOSQUE	GAS-CC	NORTH	2001	95.0	79.5	
50 BOSQUE ENERGY CENTER STG 5		BOSQUESW_BSQSU_5	BOSQUE	GAS-CC	NORTH	2009	254.2	213.5	
51 BRAZOS VALLEY CTG 1		BVE_UNIT1	FORT BEND	GAS-CC	HOUSTON	2003	198.9	149.7	
52 BRAZOS VALLEY CTG 2		BVE_UNIT2	FORT BEND	GAS-CC	HOUSTON	2003	198.9	149.7	
53 BRAZOS VALLEY STG 3		BVE_UNIT3	FORT BEND	GAS-CC	HOUSTON	2003	275.6	257.9	
54 CALENERGY-FALCON SEABOARD CTG 1		FLCNS_UNIT1	HOWARD	GAS-CC	WEST	1987	75.0	75.0	
55 CALENERGY-FALCON SEABOARD CTG 2		FLCNS_UNIT2	HOWARD	GAS-CC	WEST	1987	75.0	75.0	
56 CALHOUN (PORT COMFORT) CTG 1		CALHOUN_UNIT1	CALHOUN	GAS-GT	COASTAL	2017	60.5	44.0	
57 CALHOUN (PORT COMFORT) CTG 2		CALHOUN_UNIT2	CALHOUN	GAS-GT	COASTAL	2017	60.5	44.0	
58 CASTLEMAN CHAMON CTG 1		CHAMON_CTG_0101	HARRIS	GAS-GT	HOUSTON	2017	60.5	44.0	
59 CASTLEMAN CHAMON CTG 2		CHAMON_CTG_0301	HARRIS	GAS-GT	HOUSTON	2017	60.5	44.0	
60 CEDAR BAYOU 4 CTG 1		CBY4_CT41	CHAMBERS	GAS-CC	HOUSTON	2009	205.0	163.0	
61 CEDAR BAYOU 4 CTG 2		CBY4_CT42	CHAMBERS	GAS-CC	HOUSTON	2009	205.0	163.0	
62 CEDAR BAYOU 4 STG		CBY4_ST04	CHAMBERS	GAS-CC	HOUSTON	2009	205.0	178.0	
63 CEDAR BAYOU STG 1		CBY_CBY_G1	CHAMBERS	GAS-ST	HOUSTON	1970	765.0	745.0	
64 CEDAR BAYOU STG 2		CBY_CBY_G2	CHAMBERS	GAS-ST	HOUSTON	1972	765.0	749.0	
65 COLORADO BEND ENERGY CENTER CTG 1		CBEC_GT1	WHARTON	GAS-CC	SOUTH	2007	86.5	81.5	
66 COLORADO BEND ENERGY CENTER CTG 2		CBEC_GT2	WHARTON	GAS-CC	SOUTH	2007	86.5	74.8	
67 COLORADO BEND ENERGY CENTER CTG 3		CBEC_GT3	WHARTON	GAS-CC	SOUTH	2008	86.5	82.1	
68 COLORADO BEND ENERGY CENTER CTG 4		CBEC_GT4	WHARTON	GAS-CC	SOUTH	2008	86.5	75.9	
69 COLORADO BEND ENERGY CENTER STG 1		CBEC_STG1	WHARTON	GAS-CC	SOUTH	2007	105.0	103.2	
70 COLORADO BEND ENERGY CENTER STG 2		CBEC_STG2	WHARTON	GAS-CC	SOUTH	2008	108.8	107.6	
71 COLORADO BEND II CTG 7		CBECII_CT7	WHARTON	GAS-CC	SOUTH	2017	360.9	329.3	
72 COLORADO BEND II CTG 8		CBECII_CT8	WHARTON	GAS-CC	SOUTH	2017	360.9	335.0	
73 COLORADO BEND II STG 9		CBECII_STG9	WHARTON	GAS-CC	SOUTH	2017	508.5	478.4	
74 CVC CHANNELVIEW CTG 1		CVC_CVC_G1	HARRIS	GAS-CC	HOUSTON	2002	192.1	169.0	
75 CVC CHANNELVIEW CTG 2		CVC_CVC_G2	HARRIS	GAS-CC	HOUSTON	2002	192.1	165.0	
76 CVC CHANNELVIEW CTG 3		CVC_CVC_G3	HARRIS	GAS-CC	HOUSTON	2002	192.1	165.0	
77 CVC CHANNELVIEW STG 5		CVC_CVC_G5	HARRIS	GAS-CC	HOUSTON	2002	150.0	144.0	
78 DANSBY CTG 2		DANSBY_DANSBYG2	BRAZOS	GAS-GT	NORTH	2004	48.0	45.0	
79 DANSBY CTG 3		DANSBY_DANSBYG3	BRAZOS	GAS-GT	NORTH	2010	50.0	47.0	
80 DANSBY STG 1		DANSBY_DANSBYG1	BRAZOS	GAS-ST	NORTH	1978	120.0	107.0	
81 DECKER CREEK CTG 1		DECKER_DPGT_1	TRAVIS	GAS-GT	SOUTH	1989	56.7	48.0	
82 DECKER CREEK CTG 2		DECKER_DPGT_2	TRAVIS	GAS-GT	SOUTH	1989	56.7	48.0	
83 DECKER CREEK CTG 3		DECKER_DPGT_3	TRAVIS	GAS-GT	SOUTH	1989	56.7	48.0	
84 DECKER CREEK CTG 4		DECKER_DPGT_4	TRAVIS	GAS-GT	SOUTH	1989	56.7	48.0	
85 DECORDOVA CTG 1		DCSES_CT10	HOOD	GAS-GT	NORTH	1990	89.5	69.0	
86 DECORDOVA CTG 2		DCSES_CT20	HOOD	GAS-GT	NORTH	1990	89.5	69.0	
87 DECORDOVA CTG 3		DCSES_CT30	HOOD	GAS-GT	NORTH	1990	89.5	68.0	
88 DECORDOVA CTG 4		DCSES_CT40	HOOD	GAS-GT	NORTH	1990	89.5	69.0	
89 DEER PARK ENERGY CENTER CTG 1		DDPEC_GT1	HARRIS	GAS-CC	HOUSTON	2002	190.4	172.0	
90 DEER PARK ENERGY CENTER CTG 2		DDPEC_GT2	HARRIS	GAS-CC	HOUSTON	2002	190.4	182.0	
91 DEER PARK ENERGY CENTER CTG 3		DDPEC_GT3	HARRIS	GAS-CC	HOUSTON	2002	190.4	172.0	
92 DEER PARK ENERGY CENTER CTG 4		DDPEC_GT4	HARRIS	GAS-CC	HOUSTON	2002	190.4	182.0	
93 DEER PARK ENERGY CENTER CTG 6		DDPEC_GT6	HARRIS	GAS-CC	HOUSTON	2014	199.0	156.0	
94 DEER PARK ENERGY CENTER STG 1		DDPEC_ST1	HARRIS	GAS-CC	HOUSTON	2002	274.5	287.0	
95 DENTON ENERGY CENTER IC A		DEC_AGR_A	DENTON	GAS-IC	NORTH	2018	56.5	56.5	
96 DENTON ENERGY CENTER IC B		DEC_AGR_B	DENTON	GAS-IC	NORTH	2018	56.5	56.5	
97 DENTON ENERGY CENTER IC C		DEC_AGR_C	DENTON	GAS-IC	NORTH	2018	56.5	56.5	
98 DENTON ENERGY CENTER IC D		DEC_AGR_D	DENTON	GAS-IC	NORTH	2018	56.5	56.5	
99 ECTOR COUNTY ENERGY CTG 1		ECEC_G1	ECTOR	GAS-GT	WEST	2015	179.4	147.0	
100 ECTOR COUNTY ENERGY CTG 2		ECEC_G2	ECTOR	GAS-GT	WEST	2015	179.4	147.0	
101 ELK STATION IC 3		AEEC_ELK_3	HALE	GAS-IC	PANHANDLE	2016	202.0	190.0	
102 ENNIS POWER STATION CTG 2		ETCCS_CT1	ELLIS	GAS-CC	NORTH	2002	260.0	204.0	
103 ENNIS POWER STATION STG 1		ETCCS_UNIT1	ELLIS	GAS-CC	NORTH	2002	140.0	115.0	
104 EXTEX LAPORTE GEN STN CTG 1		AZ_AZ_G1	HARRIS	GAS-GT	HOUSTON	2009	38.3	36.0	
105 EXTEX LAPORTE GEN STN CTG 2		AZ_AZ_G2	HARRIS	GAS-GT	HOUSTON	2009	38.3	36.0	
106 EXTEX LAPORTE GEN STN CTG 3		AZ_AZ_G3	HARRIS	GAS-GT	HOUSTON	2009	38.3	36.0	
107 EXTEX LAPORTE GEN STN CTG 4		AZ_AZ_G4	HARRIS	GAS-GT	HOUSTON	2009	38.3	36.0	
108 FERGUSON REPLACEMENT CTG 1		FERGCC_FERG GT1	LLANO	GAS-CC	SOUTH	2014	185.3	169.0	
109 FERGUSON REPLACEMENT CTG 2		FERGCC_FERG GT2	LLANO	GAS-CC	SOUTH	2014	185.3	169.0	
110 FERGUSON REPLACEMENT STG 1		FERGCC_FERG ST1	LLANO	GAS-CC	SOUTH	2014	204.0	182.0	
111 FORNEY ENERGY CENTER CTG 11		FRNYPP_GT11	KAUFMAN	GAS-CC	NORTH	2003	196.7	165.0	
112 FORNEY ENERGY CENTER CTG 12		FRNYPP_GT12	KAUFMAN	GAS-CC	NORTH	2003	196.7	157.0	
113 FORNEY ENERGY CENTER CTG 13		FRNYPP_GT13	KAUFMAN	GAS-CC	NORTH	2003	196.7	157.0	
114 FORNEY ENERGY CENTER CTG 21		FRNYPP_GT21	KAUFMAN	GAS-CC	NORTH	2003	196.7	165.0	
115 FORNEY ENERGY CENTER CTG 22		FRNYPP_GT22	KAUFMAN	GAS-CC	NORTH	2003	196.7	157.0	
116 FORNEY ENERGY CENTER CTG 23		FRNYPP_GT23	KAUFMAN	GAS-CC	NORTH	2003	196.7	157.0	
117 FORNEY ENERGY CENTER STG 10		FRNYPP_ST10	KAUFMAN	GAS-CC	NORTH	2003	422.0	406.0	

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118 FORNEY ENERGY CENTER STG 20		FRNYPP_ST20	KAUFMAN	GAS-CC	NORTH	2003	422.0	406.0	
119 FREESTONE ENERGY CENTER CTG 1		FREC_GT1	FREESTONE	GAS-CC	NORTH	2002	179.4	147.0	
120 FREESTONE ENERGY CENTER CTG 2		FREC_GT2	FREESTONE	GAS-CC	NORTH	2002	179.4	147.0	
121 FREESTONE ENERGY CENTER CTG 4		FREC_GT4	FREESTONE	GAS-CC	NORTH	2002	179.4	145.0	
122 FREESTONE ENERGY CENTER CTG 5		FREC_GT5	FREESTONE	GAS-CC	NORTH	2002	179.4	145.0	
123 FREESTONE ENERGY CENTER STG 3		FREC_ST3	FREESTONE	GAS-CC	NORTH	2002	190.7	169.0	
124 FREESTONE ENERGY CENTER STG 6		FREC_ST6	FREESTONE	GAS-CC	NORTH	2002	190.7	168.0	
125 FRIENDSWOOD G CTG 1 (FORMERLY TEJAS POWER GENERATION)		FEGC_UNIT1	HARRIS	GAS-GT	HOUSTON	2018	129.0	119.0	
126 GRAHAM STG 1		GRSES_UNIT1	YOUNG	GAS-ST	WEST	1960	225.0	239.0	
127 GRAHAM STG 2		GRSES_UNIT2	YOUNG	GAS-ST	WEST	1969	387.0	390.0	
128 GREENS BAYOU CTG 73		GBY_GBYGT73	HARRIS	GAS-GT	HOUSTON	1976	72.0	56.0	
129 GREENS BAYOU CTG 74		GBY_GBYGT74	HARRIS	GAS-GT	HOUSTON	1976	72.0	56.0	
130 GREENS BAYOU CTG 81		GBY_GBYGT81	HARRIS	GAS-GT	HOUSTON	1976	72.0	56.0	
131 GREENS BAYOU CTG 82		GBY_GBYGT82	HARRIS	GAS-GT	HOUSTON	1976	72.0	50.0	
132 GREENS BAYOU CTG 83		GBY_GBYGT83	HARRIS	GAS-GT	HOUSTON	1976	72.0	56.0	
133 GREENS BAYOU CTG 84		GBY_GBYGT84	HARRIS	GAS-GT	HOUSTON	1976	72.0	56.0	
134 GREENVILLE IC ENGINE PLANT IC 1		STEAM_ENGINE_1	HUNT	GAS-IC	NORTH	2010	8.4	8.2	
135 GREENVILLE IC ENGINE PLANT IC 2		STEAM_ENGINE_2	HUNT	GAS-IC	NORTH	2010	8.4	8.2	
136 GREENVILLE IC ENGINE PLANT IC 3		STEAM_ENGINE_3	HUNT	GAS-IC	NORTH	2010	8.4	8.2	
137 GREGORY POWER PARTNERS GT1		LGE_LGE_GT1	SAN PATRICIO	GAS-CC	COASTAL	2000	185.0	145.0	
138 GREGORY POWER PARTNERS GT2		LGE_LGE_GT2	SAN PATRICIO	GAS-CC	COASTAL	2000	185.0	145.0	
139 GREGORY POWER PARTNERS STG		LGE_LGE_STG	SAN PATRICIO	GAS-CC	COASTAL	2000	100.0	75.0	
140 GUADALUPE ENERGY CENTER CTG 1		GUADG_GAS1	GUADALUPE	GAS-CC	SOUTH	2000	181.0	143.0	
141 GUADALUPE ENERGY CENTER CTG 2		GUADG_GAS2	GUADALUPE	GAS-CC	SOUTH	2000	181.0	143.0	
142 GUADALUPE ENERGY CENTER CTG 3		GUADG_GAS3	GUADALUPE	GAS-CC	SOUTH	2000	181.0	141.0	
143 GUADALUPE ENERGY CENTER CTG 4		GUADG_GAS4	GUADALUPE	GAS-CC	SOUTH	2000	181.0	141.0	
144 GUADALUPE ENERGY CENTER STG 5		GUADG_STM5	GUADALUPE	GAS-CC	SOUTH	2000	204.0	198.0	
145 GUADALUPE ENERGY CENTER STG 6		GUADG_STM6	GUADALUPE	GAS-CC	SOUTH	2000	204.0	198.0	
146 HANDLEY STG 3		HLSES_UNIT3	TARRANT	GAS-ST	NORTH	1963	395.0	375.0	
147 HANDLEY STG 4		HLSES_UNIT4	TARRANT	GAS-ST	NORTH	1976	435.0	435.0	
148 HANDLEY STG 5		HLSES_UNIT5	TARRANT	GAS-ST	NORTH	1977	435.0	435.0	
149 HAYS ENERGY FACILITY CSG 1		HAYSEN_HAYSENG1	HAYS	GAS-CC	SOUTH	2002	242.0	210.0	
150 HAYS ENERGY FACILITY CSG 2	21INR0527	HAYSEN_HAYSENG2	HAYS	GAS-CC	SOUTH	2002	242.0	211.0	
151 HAYS ENERGY FACILITY CSG 3	21INR0527	HAYSEN_HAYSENG3	HAYS	GAS-CC	SOUTH	2002	252.0	210.0	
152 HAYS ENERGY FACILITY CSG 4		HAYSEN_HAYSENG4	HAYS	GAS-CC	SOUTH	2002	252.0	213.0	
153 HIDALGO ENERGY CENTER CTG 1		DUKE_DUKE_GT1	HIDALGO	GAS-CC	SOUTH	2000	176.6	149.0	
154 HIDALGO ENERGY CENTER CTG 2		DUKE_DUKE_GT2	HIDALGO	GAS-CC	SOUTH	2000	176.6	149.0	
155 HIDALGO ENERGY CENTER STG 1		DUKE_DUKE_ST1	HIDALGO	GAS-CC	SOUTH	2000	198.1	168.0	
156 JACK COUNTY GEN FACILITY CTG 1		JACKCNTY_CT1	JACK	GAS-CC	NORTH	2006	198.9	150.0	
157 JACK COUNTY GEN FACILITY CTG 2		JACKCNTY_CT2	JACK	GAS-CC	NORTH	2006	198.9	150.0	
158 JACK COUNTY GEN FACILITY CTG 3		JCKCNTY2_CT3	JACK	GAS-CC	NORTH	2011	198.9	158.0	
159 JACK COUNTY GEN FACILITY CTG 4		JCKCNTY2_CT4	JACK	GAS-CC	NORTH	2011	198.9	158.0	
160 JACK COUNTY GEN FACILITY STG 1		JACKCNTY_STG	JACK	GAS-CC	NORTH	2006	320.6	289.0	
161 JACK COUNTY GEN FACILITY STG 2		JCKCNTY2_ST2	JACK	GAS-CC	NORTH	2011	320.6	295.0	
162 JOHNSON COUNTY GEN FACILITY CTG 1		TEN_CT1	JOHNSON	GAS-CC	NORTH	1997	185.0	163.0	
163 JOHNSON COUNTY GEN FACILITY STG 1		TEN_STG	JOHNSON	GAS-CC	NORTH	1997	107.0	106.0	
164 LAKE HUBBARD STG 1		LHSES_UNIT1	DALLAS	GAS-ST	NORTH	1970	397.0	392.0	
165 LAKE HUBBARD STG 2		LHSES_UNIT2A	DALLAS	GAS-ST	NORTH	1973	531.0	523.0	
166 LAMAR ENERGY CENTER CTG 11		LPCCS_CT11	LAMAR	GAS-CC	NORTH	2000	186.0	153.0	
167 LAMAR ENERGY CENTER CTG 12		LPCCS_CT12	LAMAR	GAS-CC	NORTH	2000	186.0	145.0	
168 LAMAR ENERGY CENTER CTG 21		LPCCS_CT21	LAMAR	GAS-CC	NORTH	2000	186.0	145.0	
169 LAMAR ENERGY CENTER CTG 22		LPCCS_CT22	LAMAR	GAS-CC	NORTH	2000	186.0	153.0	
170 LAMAR ENERGY CENTER STG 1	23INR0486	LPCCS_UNIT1	LAMAR	GAS-CC	NORTH	2000	216.0	204.0	
171 LAMAR ENERGY CENTER STG 2		LPCCS_UNIT2	LAMAR	GAS-CC	NORTH	2000	216.0	204.0	
172 LAREDO CTG 4		LARDVFTN_G4	WEBB	GAS-GT	SOUTH	2008	98.5	90.1	
173 LAREDO CTG 5		LARDVFTN_G5	WEBB	GAS-GT	SOUTH	2008	98.5	87.3	
174 LEON CREEK PEAKER CTG 1		LEON_CRK_LCPCT1	BEXAR	GAS-GT	SOUTH	2004	48.0	46.0	
175 LEON CREEK PEAKER CTG 2		LEON_CRK_LCPCT2	BEXAR	GAS-GT	SOUTH	2004	48.0	46.0	
176 LEON CREEK PEAKER CTG 3		LEON_CRK_LCPCT3	BEXAR	GAS-GT	SOUTH	2004	48.0	46.0	
177 LEON CREEK PEAKER CTG 4		LEON_CRK_LCPCT4	BEXAR	GAS-GT	SOUTH	2004	48.0	46.0	
178 LIGNIN (CHAMON 2) U1		LIG_UNIT1	HARRIS	GAS-GT	HOUSTON	2022	60.5	41.5	
179 LIGNIN (CHAMON 2) U2		LIG_UNIT2	HARRIS	GAS-GT	HOUSTON	2022	60.5	41.5	
180 LOST PINES POWER CTG 1		LOSTPL_LOSTPGT1	BASTROP	GAS-CC	SOUTH	2001	202.5	170.0	
181 LOST PINES POWER CTG 2		LOSTPL_LOSTPGT2	BASTROP	GAS-CC	SOUTH	2001	202.5	170.0	
182 LOST PINES POWER STG 1		LOSTPL_LOSTPST1	BASTROP	GAS-CC	SOUTH	2001	204.0	188.0	
183 MAGIC VALLEY STATION CTG 1		NEDIN_NEDIN_G1	HIDALGO	GAS-CC	SOUTH	2001	266.9	215.0	
184 MAGIC VALLEY STATION CTG 2		NEDIN_NEDIN_G2	HIDALGO	GAS-CC	SOUTH	2001	266.9	215.0	
185 MAGIC VALLEY STATION STG 3		NEDIN_NEDIN_G3	HIDALGO	GAS-CC	SOUTH	2001	258.4	236.0	
186 MIDLOTHIAN ENERGY FACILITY CTG 1	23INR0489	MDANP_CT1	ELLIS	GAS-CC	NORTH	2001	247.0	229.0	
187 MIDLOTHIAN ENERGY FACILITY CTG 2	21INR0534	MDANP_CT2	ELLIS	GAS-CC	NORTH	2001	247.0	227.0	
188 MIDLOTHIAN ENERGY FACILITY CTG 3	22INR0543	MDANP_CT3	ELLIS	GAS-CC	NORTH	2001	247.0	227.0	
189 MIDLOTHIAN ENERGY FACILITY CTG 4	22INR0523	MDANP_CT4	ELLIS	GAS-CC	NORTH	2001	247.0	227.0	
190 MIDLOTHIAN ENERGY FACILITY CTG 5		MDANP_CT5	ELLIS	GAS-CC	NORTH	2002	260.0	241.0	
191 MIDLOTHIAN ENERGY FACILITY CTG 6		MDANP_CT6	ELLIS	GAS-CC	NORTH	2002	260.0	243.0	
192 MORGAN CREEK CTG 1		MGSES_CT1	MITCHELL	GAS-GT	WEST	1988	89.4	66.0	
193 MORGAN CREEK CTG 2		MGSES_CT2	MITCHELL	GAS-GT	WEST	1988	89.4	65.0	
194 MORGAN CREEK CTG 3		MGSES_CT3	MITCHELL	GAS-GT	WEST	1988	89.4	65.0	
195 MORGAN CREEK CTG 4		MGSES_CT4	MITCHELL	GAS-GT	WEST	1988	89.4	67.0	
196 MORGAN CREEK CTG 5		MGSES_CT5	MITCHELL	GAS-GT	WEST	1988	89.4	67.0	
197 MORGAN CREEK CTG 6		MGSES_CT6	MITCHELL	GAS-GT	WEST	1988	89.4	67.0	
198 MOUNTAIN CREEK STG 6		MCSES_UNIT6	DALLAS	GAS-ST	NORTH	1956	122.0	122.0	
199 MOUNTAIN CREEK STG 7		MCSES_UNIT7	DALLAS	GAS-ST	NORTH	1958	118.0	118.0	
200 NUECES BAY REPOWER CTG 8		NUECES_B_NUECESG8	NUECES	GAS-CC	COASTAL	2010	189.6	157.0	
201 NUECES BAY REPOWER CTG 9		NUECES_B_NUECESG9	NUECES	GAS-CC	COASTAL	2010	189.6	157.0	
202 NUECES BAY REPOWER STG 7		NUECES_B_NUECESG7	NUECES	GAS-CC	COASTAL	1972	351.0	319.0	
203 O W SOMMERS STG 1		CALAVERS_OWS1	BEXAR	GAS-ST	SOUTH	1972	445.0	420.0	
204 O W SOMMERS STG 2		CALAVERS_OWS2	BEXAR	GAS-ST	SOUTH	1974	435.0	410.0	
205 ODESSA-ECTOR POWER CTG 11		OECCS_CT11	ECTOR	GAS-CC	WEST	2001	176.0	166.7	
206 ODESSA-ECTOR POWER CTG 12		OECCS_CT12	ECTOR	GAS-CC	WEST	2001	176.0	158.2	
207 ODESSA-ECTOR POWER CTG 21		OECCS_CT21	ECTOR	GAS-CC	WEST	2001	176.0	166.7	
208 ODESSA-ECTOR POWER CTG 22		OECCS_CT22	ECTOR	GAS-CC	WEST	2001	176.0	158.2	
209 ODESSA-ECTOR POWER STG 1		OECCS_UNIT1	ECTOR	GAS-CC	WEST	2001	224.0	206.0	
210 ODESSA-ECTOR POWER STG 2		OECCS_UNIT2	ECTOR	GAS-CC	WEST	2001	224.0	206.0	
211 OLD BLOOMINGTON ROAD CTG 1 (VICTORIA PORT 2)		VICTPRT2_UNIT1	VICTORIA	GAS-GT	SOUTH	2022	60.5	44.0	
212 OLD BLOOMINGTON ROAD CTG 2 (VICTORIA PORT 2)		VICTPRT2_UNIT2	VICTORIA	GAS-GT	SOUTH	2022	60.5	44.0	
213 PANDA SHERMAN POWER CTG 1		PANDA_S_SHER1CT1	GRAYSON	GAS-CC	NORTH	2014	232.0	199.0	
214 PANDA SHERMAN POWER CTG 2		PANDA_S_SHER1CT2	GRAYSON	GAS-CC	NORTH	2014	232.0	199.0	
215 PANDA SHERMAN POWER STG 1		PANDA_S_SHER1ST1	GRAYSON	GAS-CC	NORTH	2014	353.1	287.0	
216 PANDA TEMPLE I POWER CTG 1	22INR0533	PANDA_T1_TMPL1CT1	BELL	GAS-CC	NORTH	2014	232.0	223.0	
217 PANDA TEMPLE I POWER CTG 2	22INR0533	PANDA_T1_TMPL1CT2	BELL	GAS-CC	NORTH	2014	232.0	220.0	
218 PANDA TEMPLE I POWER STG 1	22INR0533	PANDA_T1_TMPL1ST1	BELL	GAS-CC	NORTH	2014	353.1	326.0	
219 PANDA TEMPLE II POWER CTG 1	23INR0524	PANDA_T2_TMPL2CT1	BELL	GAS-CC	NORTH	2015	232.0	191.2	
220 PANDA TEMPLE II POWER CTG 2	23INR0524	PANDA_T2_TMPL2CT2	BELL	GAS-CC	NORTH	2015	232.0	191.2	
221 PANDA TEMPLE II POWER STG 1	23INR0524	PANDA_T2_TMPL2ST1	BELL	GAS-CC	NORTH	2015	353.1	334.7	
222 PARIS ENERGY CENTER CTG 1		TNSKA_GT1	LAMAR	GAS-CC	NORTH	1989	90.9	76.0	
223 PARIS ENERGY CENTER CTG 2		TNSKA_GT2	LAMAR	GAS-CC	NORTH	1989	90.9	76.0	
224 PARIS ENERGY CENTER STG 1		TNSKA_STG	LAMAR	GAS-CC	NORTH	1990	90.0	87.0	
225 PASADENA COGEN FACILITY CTG 2		PSG_PSG_GT2	HARRIS	GAS-CC	HOUSTON	2000	215.1	164.5	
226 PASADENA COGEN FACILITY CTG 3		PSG_PSG_GT3	HARRIS	GAS-CC	HOUSTON	2000	215.1	164.5	
227 PASADENA COGEN FACILITY STG 2		PSG_PSG_ST2	HARRIS	GAS-CC	HOUSTON	2000	195.5	170.4	
228 PEARSALL ENGINE PLANT IC A		PEARSAL2_AGR_A	FRIO	GAS-IC	SOUTH	2012	50.6	50.6	
229 PEARSALL ENGINE PLANT IC B		PEARSAL2_AGR_B	FRIO	GAS-IC	SOUTH	2012	50.6	50.6	
230 PEARSALL ENGINE PLANT IC C		PEARSAL2_AGR_C	FRIO	GAS-IC	SOUTH	2012	50.6	50.6	
231 PEARSALL ENGINE PLANT IC D		PEARSAL2_AGR_D	FRIO	GAS-IC	SOUTH	2012	50.6	50.6	
232 PERMIAN BASIN CTG 1		PB2SES_CT1	WARD	GAS-GT	WEST	1988	89.4	63.0	
233 PERMIAN BASIN CTG 2		PB2SES_CT2	WARD	GAS-GT	WEST	1988	89.4	64.0	
234 PERMIAN BASIN CTG 3		PB2SES_CT3	WARD	GAS-GT	WEST	1988	89.4	64.0	

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235 PERMIAN BASIN CTG 4		PB2SES_CT4	WARD	GAS-GT	WEST	1990	89.4	64.0	
236 PERMIAN BASIN CTG 5		PB2SES_CT5	WARD	GAS-GT	WEST	1990	89.4	65.0	
237 PROENERGY SOUTH 1 (PES1) CTG 1		PRO_UNIT1	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
238 PROENERGY SOUTH 1 (PES1) CTG 2		PRO_UNIT2	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
239 PROENERGY SOUTH 1 (PES1) CTG 3		PRO_UNIT3	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
240 PROENERGY SOUTH 1 (PES1) CTG 4		PRO_UNIT4	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
241 PROENERGY SOUTH 1 (PES1) CTG 5		PRO_UNIT5	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
242 PROENERGY SOUTH 1 (PES1) CTG 6		PRO_UNIT6	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
243 PROENERGY SOUTH 2 (PES2) CTG 7		PRO_UNIT7	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
244 PROENERGY SOUTH 2 (PES2) CTG 8		PRO_UNIT8	HARRIS	GAS-GT	HOUSTON	2021	60.5	44.5	
245 PHR PEAKERS (BAC) CTG 1		BAC_CTG1	GALVESTON	GAS-GT	HOUSTON	2018	65.0	59.0	
246 PHR PEAKERS (BAC) CTG 2		BAC_CTG2	GALVESTON	GAS-GT	HOUSTON	2018	65.0	61.0	
247 PHR PEAKERS (BAC) CTG 3		BAC_CTG3	GALVESTON	GAS-GT	HOUSTON	2018	65.0	49.0	
248 PHR PEAKERS (BAC) CTG 4		BAC_CTG4	GALVESTON	GAS-GT	HOUSTON	2018	65.0	54.0	
249 PHR PEAKERS (BAC) CTG 5		BAC_CTG5	GALVESTON	GAS-GT	HOUSTON	2018	65.0	54.0	
250 PHR PEAKERS (BAC) CTG 6		BAC_CTG6	GALVESTON	GAS-GT	HOUSTON	2018	65.0	52.0	
251 POWERLANE PLANT STG 2		STEAM_STEAM_2	HUNT	GAS-ST	NORTH	1967	25.0	21.5	
252 POWERLANE PLANT STG 3		STEAM_STEAM_3	HUNT	GAS-ST	NORTH	1978	43.2	36.0	
253 QUAIL RUN ENERGY CTG 1		QALSW_GT1	ECTOR	GAS-CC	WEST	2007	90.6	74.0	
254 QUAIL RUN ENERGY CTG 2		QALSW_GT2	ECTOR	GAS-CC	WEST	2007	90.6	74.0	
255 QUAIL RUN ENERGY CTG 3		QALSW_GT3	ECTOR	GAS-CC	WEST	2008	90.6	72.0	
256 QUAIL RUN ENERGY CTG 4		QALSW_GT4	ECTOR	GAS-CC	WEST	2008	90.6	72.0	
257 QUAIL RUN ENERGY STG 1		QALSW_STG1	ECTOR	GAS-CC	WEST	2007	98.1	98.0	
258 QUAIL RUN ENERGY STG 2		QALSW_STG2	ECTOR	GAS-CC	WEST	2008	98.1	98.0	
259 R W MILLER CTG 4		MIL_MILLERG4	PALO PINTO	GAS-GT	NORTH	1994	115.3	100.0	
260 R W MILLER CTG 5		MIL_MILLERG5	PALO PINTO	GAS-GT	NORTH	1994	115.3	100.0	
261 R W MILLER STG 1		MIL_MILLERG1	PALO PINTO	GAS-ST	NORTH	1968	75.0	70.0	
262 R W MILLER STG 2		MIL_MILLERG2	PALO PINTO	GAS-ST	NORTH	1972	113.6	118.0	
263 R W MILLER STG 3		MIL_MILLERG3	PALO PINTO	GAS-ST	NORTH	1975	216.0	208.0	
264 RAY OLINGER CTG 4		OLINGR_OLING_4	COLLIN	GAS-GT	NORTH	2001	88.4	80.0	
265 RAY OLINGER STG 2		OLINGR_OLING_2	COLLIN	GAS-ST	NORTH	1971	113.6	107.0	
266 RAY OLINGER STG 3		OLINGR_OLING_3	COLLIN	GAS-ST	NORTH	1975	156.6	146.0	
267 RABBS POWER STATION U1		RAB_UNIT1	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
268 RABBS POWER STATION U2		RAB_UNIT2	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
269 RABBS POWER STATION U3		RAB_UNIT3	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
270 RABBS POWER STATION U4		RAB_UNIT4	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
271 RABBS POWER STATION U5		RAB_UNIT5	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
272 RABBS POWER STATION U6		RAB_UNIT6	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
273 RABBS POWER STATION U7		RAB_UNIT7	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
274 RABBS POWER STATION U8		RAB_UNIT8	FORT BEND	GAS-GT	HOUSTON	2022	60.5	44.6	
275 REDGATE IC A		REDGATE_AGR_A	HIDALGO	GAS-IC	SOUTH	2016	56.3	56.3	
276 REDGATE IC B		REDGATE_AGR_B	HIDALGO	GAS-IC	SOUTH	2016	56.3	56.3	
277 REDGATE IC C		REDGATE_AGR_C	HIDALGO	GAS-IC	SOUTH	2016	56.3	56.3	
278 REDGATE IC D		REDGATE_AGR_D	HIDALGO	GAS-IC	SOUTH	2016	56.3	56.3	
279 RIO NOGALES POWER CTG 1		RIONOG_CT1	GUADALUPE	GAS-CC	SOUTH	2002	188.7	165.5	
280 RIO NOGALES POWER CTG 2		RIONOG_CT2	GUADALUPE	GAS-CC	SOUTH	2002	188.7	158.0	
281 RIO NOGALES POWER CTG 3		RIONOG_CT3	GUADALUPE	GAS-CC	SOUTH	2002	188.7	158.0	
282 RIO NOGALES POWER STG 4		RIONOG_ST1	GUADALUPE	GAS-CC	SOUTH	2002	373.2	303.0	
283 SAM RAYBURN POWER CTG 7		RAYBURN_RAYBURG7	VICTORIA	GAS-CC	SOUTH	2003	60.5	50.0	
284 SAM RAYBURN POWER CTG 8		RAYBURN_RAYBURG8	VICTORIA	GAS-CC	SOUTH	2003	60.5	50.0	
285 SAM RAYBURN POWER CTG 9		RAYBURN_RAYBURG9	VICTORIA	GAS-CC	SOUTH	2003	60.5	50.0	
286 SAM RAYBURN POWER STG 10		RAYBURN_RAYBURG10	VICTORIA	GAS-CC	SOUTH	2003	42.0	40.0	
287 SAN JACINTO SES CTG 1		SJS_SJS_G1	HARRIS	GAS-GT	HOUSTON	1995	88.2	80.0	
288 SAN JACINTO SES CTG 2		SJS_SJS_G2	HARRIS	GAS-GT	HOUSTON	1995	88.2	80.0	
289 SANDHILL ENERGY CENTER CTG 1		SANDHSYD_SH1	TRAVIS	GAS-GT	SOUTH	2001	60.5	47.0	
290 SANDHILL ENERGY CENTER CTG 2		SANDHSYD_SH2	TRAVIS	GAS-GT	SOUTH	2001	60.5	47.0	
291 SANDHILL ENERGY CENTER CTG 3		SANDHSYD_SH3	TRAVIS	GAS-GT	SOUTH	2001	60.5	47.0	
292 SANDHILL ENERGY CENTER CTG 4		SANDHSYD_SH4	TRAVIS	GAS-GT	SOUTH	2001	60.5	47.0	
293 SANDHILL ENERGY CENTER CTG 5A		SANDHSYD_SH_5A	TRAVIS	GAS-CC	SOUTH	2004	198.9	142.0	
294 SANDHILL ENERGY CENTER CTG 6		SANDHSYD_SH6	TRAVIS	GAS-GT	SOUTH	2010	60.5	47.0	
295 SANDHILL ENERGY CENTER CTG 7		SANDHSYD_SH7	TRAVIS	GAS-GT	SOUTH	2010	60.5	47.0	
296 SANDHILL ENERGY CENTER STG 5C		SANDHSYD_SH_5C	TRAVIS	GAS-CC	SOUTH	2004	191.0	139.0	
297 SILAS RAY CTG 10		SILASRAY_SILAS_10	CAMERON	GAS-GT	COASTAL	2004	60.5	46.0	
298 SILAS RAY POWER CTG 9		SILASRAY_SILAS_9	CAMERON	GAS-CC	COASTAL	1996	50.0	38.0	
299 SILAS RAY POWER STG 6		SILASRAY_SILAS_6	CAMERON	GAS-CC	COASTAL	1962	25.0	20.0	
300 SIM GIDEON STG 1		GIDEON_GIDEONG1	BASTROP	GAS-ST	SOUTH	1965	136.0	130.0	
301 SIM GIDEON STG 2		GIDEON_GIDEONG2	BASTROP	GAS-ST	SOUTH	1968	136.0	135.0	
302 SIM GIDEON STG 3		GIDEON_GIDEONG3	BASTROP	GAS-ST	SOUTH	1972	351.0	336.0	
303 SKY GLOBAL POWER ONE IC A		SKY1_SKY1A	COLORADO	GAS-IC	SOUTH	2016	25.7	26.7	
304 SKY GLOBAL POWER ONE IC B		SKY1_SKY1B	COLORADO	GAS-IC	SOUTH	2016	25.7	26.7	
305 STRYKER CREEK STG 1		SCSES_UNIT1A	CHEROKEE	GAS-ST	NORTH	1958	177.0	167.0	
306 STRYKER CREEK STG 2		SCSES_UNIT2	CHEROKEE	GAS-ST	NORTH	1965	479.0	502.0	
307 T H WHARTON CTG 1		THW_THWGT_1	HARRIS	GAS-GT	HOUSTON	1967	16.3	14.0	
308 T H WHARTON POWER CTG 31		THW_THWGT31	HARRIS	GAS-CC	HOUSTON	1972	51.3	54.0	
309 T H WHARTON POWER CTG 32		THW_THWGT32	HARRIS	GAS-CC	HOUSTON	1972	51.3	54.0	
310 T H WHARTON POWER CTG 33		THW_THWGT33	HARRIS	GAS-CC	HOUSTON	1972	51.3	54.0	
311 T H WHARTON POWER CTG 34		THW_THWGT34	HARRIS	GAS-CC	HOUSTON	1972	51.3	54.0	
312 T H WHARTON POWER CTG 41		THW_THWGT41	HARRIS	GAS-CC	HOUSTON	1972	51.3	54.0	
313 T H WHARTON POWER CTG 42		THW_THWGT42	HARRIS	GAS-CC	HOUSTON	1972	51.3	54.0	
314 T H WHARTON POWER CTG 43		THW_THWGT43	HARRIS	GAS-CC	HOUSTON	1974	62.0	54.0	
315 T H WHARTON POWER CTG 44		THW_THWGT44	HARRIS	GAS-CC	HOUSTON	1974	62.0	54.0	
316 T H WHARTON POWER CTG 51		THW_THWGT51	HARRIS	GAS-GT	HOUSTON	1975	85.0	56.0	
317 T H WHARTON POWER CTG 52		THW_THWGT52	HARRIS	GAS-GT	HOUSTON	1975	85.0	56.0	
318 T H WHARTON POWER CTG 53		THW_THWGT53	HARRIS	GAS-GT	HOUSTON	1975	85.0	56.0	
319 T H WHARTON POWER CTG 54		THW_THWGT54	HARRIS	GAS-GT	HOUSTON	1975	85.0	56.0	
320 T H WHARTON POWER CTG 55		THW_THWGT55	HARRIS	GAS-GT	HOUSTON	1975	85.0	56.0	
321 T H WHARTON POWER CTG 56		THW_THWGT56	HARRIS	GAS-GT	HOUSTON	1975	85.0	56.0	
322 T H WHARTON POWER STG 3		THW_THWST_3	HARRIS	GAS-CC	HOUSTON	1974	113.1	110.0	
323 T H WHARTON POWER STG 4		THW_THWST_4	HARRIS	GAS-CC	HOUSTON	1974	113.1	110.0	
324 TEXAS CITY POWER CTG A		TXCTY_CTA	GALVESTON	GAS-CC	HOUSTON	2000	129.1	80.3	
325 TEXAS CITY POWER CTG B		TXCTY_CTB	GALVESTON	GAS-CC	HOUSTON	2000	129.1	80.3	
326 TEXAS CITY POWER CTG C		TXCTY_CTC	GALVESTON	GAS-CC	HOUSTON	2000	129.1	80.3	
327 TEXAS CITY POWER STG		TXCTY_ST	GALVESTON	GAS-CC	HOUSTON	2000	143.7	124.9	
328 TEXAS GULF SULPHUR CTG 1		TGS_GT01	WHARTON	GAS-GT	SOUTH	1985	94.0	67.5	
329 TRINIDAD STG 6		TRSES_UNIT6	HENDERSON	GAS-ST	NORTH	1965	239.0	235.0	
330 TOPAZ POWER PLANT U1		TOPAZ_UNIT1	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
331 TOPAZ POWER PLANT U2		TOPAZ_UNIT2	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
332 TOPAZ POWER PLANT U3		TOPAZ_UNIT3	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
333 TOPAZ POWER PLANT U4		TOPAZ_UNIT4	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
334 TOPAZ POWER PLANT U5		TOPAZ_UNIT5	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
335 TOPAZ POWER PLANT U6		TOPAZ_UNIT6	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
336 TOPAZ POWER PLANT U7		TOPAZ_UNIT7	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
337 TOPAZ POWER PLANT U8		TOPAZ_UNIT8	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
338 TOPAZ POWER PLANT U9		TOPAZ_UNIT9	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
339 TOPAZ POWER PLANT U10		TOPAZ_UNIT10	GALVESTON	GAS-GT	HOUSTON	2021	60.5	44.5	
340 V H BRAUNIG CTG 5		BRAUNIG_VHB6CT5	BEXAR	GAS-GT	SOUTH	2009	64.5	48.0	
341 V H BRAUNIG CTG 6		BRAUNIG_VHB6CT6	BEXAR	GAS-GT	SOUTH	2009	64.5	48.0	
342 V H BRAUNIG CTG 7		BRAUNIG_VHB6CT7	BEXAR	GAS-GT	SOUTH	2009	64.5	48.0	
343 V H BRAUNIG CTG 8		BRAUNIG_VHB6CT8	BEXAR	GAS-GT	SOUTH	2009	64.5	47.0	
344 V H BRAUNIG STG 1		BRAUNIG_VHB1	BEXAR	GAS-ST	SOUTH	1966	225.0	217.0	
345 V H BRAUNIG STG 2		BRAUNIG_VHB2	BEXAR	GAS-ST	SOUTH	1968	240.0	230.0	
346 V H BRAUNIG STG 3		BRAUNIG_VHB3	BEXAR	GAS-ST	SOUTH	1970	420.0	412.0	
347 VICTORIA CITY (CITYVICT) CTG 1		CITYVICT_CTG01	VICTORIA	GAS-GT	SOUTH	2020	60.5	44.0	
348 VICTORIA CITY (CITYVICT) CTG 2		CITYVICT_CTG02	VICTORIA	GAS-GT	SOUTH	2020	60.5	44.0	
349 VICTORIA PORT (VICTPORT) CTG 1		VICTPORT_CTG01	VICTORIA	GAS-GT	SOUTH	2019	60.5	44.0	
350 VICTORIA PORT (VICTPORT) CTG 2		VICTPORT_CTG02	VICTORIA	GAS-GT	SOUTH	2019	60.5	44.0	
351 VICTORIA POWER CTG 6		VICTORIA_VICTORG6	VICTORIA	GAS-CC	SOUTH	2009	196.9	160.0	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
352 VICTORIA POWER STG 5		VICTORIA_VICTORG5	VICTORIA	GAS-CC	SOUTH	2009	180.2	125.0	
353 W A PARISH CTG 1		WAP_WAPGT_1	FORT BEND	GAS-GT	HOUSTON	1967	16.3	13.0	
354 W A PARISH STG 1		WAP_WAP_G1	FORT BEND	GAS-ST	HOUSTON	1958	187.9	169.0	
355 W A PARISH STG 2		WAP_WAP_G2	FORT BEND	GAS-ST	HOUSTON	1958	187.9	169.0	
356 W A PARISH STG 3		WAP_WAP_G3	FORT BEND	GAS-ST	HOUSTON	1961	299.2	240.0	
357 W A PARISH STG 4		WAP_WAP_G4	FORT BEND	GAS-ST	HOUSTON	1968	580.5	527.0	
358 WICHITA FALLS CTG 1		WFCOGEN_UNIT1	WICHITA	GAS-CC	WEST	1987	20.0	20.0	
359 WICHITA FALLS CTG 2		WFCOGEN_UNIT2	WICHITA	GAS-CC	WEST	1987	20.0	20.0	
360 WICHITA FALLS CTG 3		WFCOGEN_UNIT3	WICHITA	GAS-CC	WEST	1987	20.0	20.0	
361 WICHITA FALLS STG 4		WFCOGEN_UNIT4	WICHITA	GAS-CC	WEST	1987	20.0	17.0	
362 WINCHESTER POWER PARK CTG 1		WIPOPA_WPP_G1	FAYETTE	GAS-GT	SOUTH	2009	60.5	44.0	
363 WINCHESTER POWER PARK CTG 2		WIPOPA_WPP_G2	FAYETTE	GAS-GT	SOUTH	2009	60.5	44.0	
364 WINCHESTER POWER PARK CTG 3		WIPOPA_WPP_G3	FAYETTE	GAS-GT	SOUTH	2009	60.5	44.0	
365 WINCHESTER POWER PARK CTG 4		WIPOPA_WPP_G4	FAYETTE	GAS-GT	SOUTH	2009	60.5	44.0	
366 WISE-TRACTEBEL POWER CTG 1	20INR0286	WCPP_CT1	WISE	GAS-CC	NORTH	2004	275.0	241.4	
367 WISE-TRACTEBEL POWER CTG 2	20INR0286	WCPP_CT2	WISE	GAS-CC	NORTH	2004	275.0	241.4	
368 WISE-TRACTEBEL POWER STG 1	20INR0286	WCPP_ST1	WISE	GAS-CC	NORTH	2004	290.0	298.0	
369 WOLF HOLLOW POWER CTG 1		WHCCS_CT1	HOOD	GAS-CC	NORTH	2002	264.5	238.5	
370 WOLF HOLLOW POWER CTG 2		WHCCS_CT2	HOOD	GAS-CC	NORTH	2002	264.5	230.5	
371 WOLF HOLLOW POWER STG		WHCCS_STG	HOOD	GAS-CC	NORTH	2002	300.0	268.0	
372 WOLF HOLLOW 2 CTG 4		WHCCS2_CT4	HOOD	GAS-CC	NORTH	2017	360.0	327.8	
373 WOLF HOLLOW 2 CTG 5		WHCCS2_CT5	HOOD	GAS-CC	NORTH	2017	360.0	329.3	
374 WOLF HOLLOW 2 STG 6		WHCCS2_STG6	HOOD	GAS-CC	NORTH	2017	511.2	458.3	
375 NACOGDOCHES POWER		NACPW_UNIT1	NACOGDOCHES	BIOMASS	NORTH	2012	116.5	105.0	
376 BIOENERGY AUSTIN-WALZEM RD LFG		DG_WALZE_4UNITS	BEXAR	BIOMASS	SOUTH	2002	9.8	9.8	
377 BIOENERGY TEXAS-COVEL GARDENS LFG		DG_MEDIN_1UNIT	BEXAR	BIOMASS	SOUTH	2005	9.6	9.6	
378 FARMERS BRANCH LANDFILL GAS TO ENERGY		DG_HBR_2UNITS	DENTON	BIOMASS	NORTH	2011	3.2	3.2	
379 GRAND PRAIRIE LFG		DG_TRIRA_1UNIT	DALLAS	BIOMASS	NORTH	2015	4.0	4.0	
380 NELSON GARDENS LFG		DG_78252_4UNITS	BEXAR	BIOMASS	SOUTH	2013	4.2	4.2	
381 WM RENEWABLE-AUSTIN LFG		DG_SPRIN_4UNITS	TRAVIS	BIOMASS	SOUTH	2007	6.4	6.4	
382 WM RENEWABLE-BIOENERGY PARTNERS LFG		DG_BIOE_2UNITS	DENTON	BIOMASS	NORTH	1988	6.2	6.2	
383 WM RENEWABLE-DFW GAS RECOVERY LFG		DG_BIO2_4UNITS	DENTON	BIOMASS	NORTH	2009	6.4	6.4	
384 WM RENEWABLE-MESQUITE CREEK LFG		DG_FREIH_2UNITS	COMAL	BIOMASS	SOUTH	2011	3.2	3.2	
385 WM RENEWABLE-WESTSIDE LFG		DG_WSTHL_3UNITS	PARKER	BIOMASS	NORTH	2010	4.8	4.8	
386 Operational Capacity Total (Nuclear, Coal, Gas, Biomass)							72,744.8	64,709.9	
387									
388 Operational Resources - Synchronized but not Approved for Commercial Operations (Thermal)									
389 BRANDON (LP&L) (DGR)	21INR0201	BRANDON_UNIT1	LUBBOCK	GAS-GT	PANHANDLE	2021	25.0	20.0	
390 BROTMAN POWER STATION U3	23INR0095	BTM_UNIT3	BRAZORIA	GAS-GT	COASTAL	2023	60.5	44.6	
391 BROTMAN POWER STATION U4	23INR0095	BTM_UNIT4	BRAZORIA	GAS-GT	COASTAL	2023	60.5	44.6	
392 BROTMAN POWER STATION U5	23INR0095	BTM_UNIT5	BRAZORIA	GAS-GT	COASTAL	2023	60.5	44.6	
393 BROTMAN POWER STATION U6	23INR0095	BTM_UNIT6	BRAZORIA	GAS-GT	COASTAL	2023	60.5	44.6	
394 COLORADO BEND ENERGY CENTER CTG 11	21INR0512	CBEC_GT11	WHARTON	GAS-GT	HOUSTON	2023	41.7	39.0	
395 COLORADO BEND ENERGY CENTER CTG 12	21INR0512	CBEC_GT12	WHARTON	GAS-GT	HOUSTON	2023	41.7	39.0	
396 R MASSENGALE CTG 1 (LP&L)	21INR0202	MASSENGL_G6	LUBBOCK	GAS-CC	PANHANDLE	2021	20.0	18.0	
397 R MASSENGALE CTG 2 (LP&L)	21INR0202	MASSENGL_G7	LUBBOCK	GAS-CC	PANHANDLE	2021	20.0	18.0	
398 R MASSENGALE STG (LP&L)	21INR0202	MASSENGL_G8	LUBBOCK	GAS-CC	PANHANDLE	2021	58.9	38.0	
399 TY COOKE CTG 1 (LP&L)	21INR0506	TY_COOKE_GT2	LUBBOCK	GAS-GT	PANHANDLE	2021	18.7	14.0	
400 TY COOKE CTG 2 (LP&L)	21INR0506	TY_COOKE_GT3	LUBBOCK	GAS-GT	PANHANDLE	2021	26.6	17.0	
401 Operational Capacity - Synchronized but not Approved for Commercial Operations Total (Nuclear, Coal, Gas, Biomass)							494.5	381.4	
402									
403 Operational Capacity Thermal Unavailable due to Extended Outage or Derate		THERMAL_UNAVAIL					-	-	
404 Operational Capacity Thermal Total		THERMAL_OPERATIONAL					73,239.3	65,091.3	
405									
406 Operational Resources (Hydro)									
407 AMISTAD HYDRO 1		AMISTAD_AMISTAG1	VAL VERDE	HYDRO	WEST	1983	34.7	37.9	
408 AMISTAD HYDRO 2		AMISTAD_AMISTAG2	VAL VERDE	HYDRO	WEST	1983	34.7	37.9	
409 AUSTIN HYDRO 1		AUSTPL_AUSTING1	TRAVIS	HYDRO	SOUTH	1940	9.0	8.0	
410 AUSTIN HYDRO 2		AUSTPL_AUSTING2	TRAVIS	HYDRO	SOUTH	1940	9.0	9.0	
411 BUCHANAN HYDRO 1		BUCHAN_BUCHANG1	LLANO	HYDRO	SOUTH	1938	18.3	16.0	
412 BUCHANAN HYDRO 2		BUCHAN_BUCHANG2	LLANO	HYDRO	SOUTH	1938	18.3	16.0	
413 BUCHANAN HYDRO 3		BUCHAN_BUCHANG3	LLANO	HYDRO	SOUTH	1950	18.3	17.0	
414 DENISON DAM 1		DNDAM_DENISOG1	GRAYSON	HYDRO	NORTH	1944	50.8	49.5	
415 DENISON DAM 2		DNDAM_DENISOG2	GRAYSON	HYDRO	NORTH	1948	50.8	49.5	
416 EAGLE PASS HYDRO		EAGLE_HY_EAGLE_HY1	MAVERICK	HYDRO	SOUTH	2005	9.6	9.6	
417 FALCON HYDRO 1		FALCON_FALCONG1	STARR	HYDRO	SOUTH	1954	10.5	12.0	
418 FALCON HYDRO 2		FALCON_FALCONG2	STARR	HYDRO	SOUTH	1954	10.5	12.0	
419 FALCON HYDRO 3		FALCON_FALCONG3	STARR	HYDRO	SOUTH	1954	10.5	12.0	
420 GRANITE SHOALS HYDRO 1		WIRTZ_WIRTZ_G1	BURNET	HYDRO	SOUTH	1951	27.0	29.0	
421 GRANITE SHOALS HYDRO 2		WIRTZ_WIRTZ_G2	BURNET	HYDRO	SOUTH	1951	27.0	29.0	
422 GUADALUPE BLANCO RIVER AUTH-CANYON		CANYHY_CANYHYG1	COMAL	HYDRO	SOUTH	1989	6.0	6.0	
423 INKS HYDRO 1		INKSDA_INKS_G1	LLANO	HYDRO	SOUTH	1938	15.0	14.0	
424 MARBLE FALLS HYDRO 1		MARBFA_MARBFAG1	BURNET	HYDRO	SOUTH	1951	19.8	21.0	
425 MARBLE FALLS HYDRO 2		MARBFA_MARBFAG2	BURNET	HYDRO	SOUTH	1951	19.8	20.0	
426 MARSHALL FORD HYDRO 1		MARSFO_MARSFOG1	TRAVIS	HYDRO	SOUTH	1941	36.0	36.0	
427 MARSHALL FORD HYDRO 2		MARSFO_MARSFOG2	TRAVIS	HYDRO	SOUTH	1941	36.0	36.0	
428 MARSHALL FORD HYDRO 3		MARSFO_MARSFOG3	TRAVIS	HYDRO	SOUTH	1941	36.0	36.0	
429 WHITNEY DAM HYDRO		WND_WHITNEY1	BOSQUE	HYDRO	NORTH	1953	21.0	22.0	
430 WHITNEY DAM HYDRO 2		WND_WHITNEY2	BOSQUE	HYDRO	NORTH	1953	21.0	22.0	
431 Operational Capacity Total (Hydro)							549.6	557.4	
432 Hydro Capacity Contribution (Top 20 Hours)		HYDRO_CAP_CONT					549.6	468.0	
433									
434 Operational Hydro Resources, Settlement Only Distributed Generators (SODGs)									
435 ARLINGTON OUTLET HYDROELECTRIC FACILITY		DG_OAKHL_1UNIT	TARRANT	HYDRO	NORTH	2014	1.4	1.4	
436 GUADALUPE BLANCO RIVER AUTH-LAKEWOOD TAP		DG_LKWDTP_2UNITS	GONZALES	HYDRO	SOUTH	1931	4.8	4.8	
437 GUADALUPE BLANCO RIVER AUTH-MCQUEENEY		DG_MCQUE_5UNITS	GUADALUPE	HYDRO	SOUTH	1928	7.7	7.7	
438 GUADALUPE BLANCO RIVER AUTH-SCHUMANSVILLE		DG_SCHUM_2UNITS	GUADALUPE	HYDRO	SOUTH	1928	3.6	3.6	
439 LEWISVILLE HYDRO-CITY OF GARLAND		DG_LWSVL_1UNIT	DENTON	HYDRO	NORTH	1991	2.2	2.2	
440 Operational Hydro Resources Total, Settlement Only Distributed Generators (SODGs)							19.7	19.7	
441 Hydro SODG Capacity Contribution (Highest 20 Peak Load Hours)		DG_HYDRO_CAP_CONT					19.7	15.0	
442									
443 Operational Capacity Hydroelectric Unavailable due to Extended Outage or Derate		HYDRO_UNAVAIL					(6.0)	(5.0)	
444 Operational Capacity Hydroelectric Total		HYDRO_OPERATIONAL					563.3	478.0	
445									
446 Operational Resources (Switchable)									
447 ANTELOPE IC 1		AEEC_ANTLP_1	HALE	GAS-IC	PANHANDLE	2016	56.0	54.0	
448 ANTELOPE IC 2		AEEC_ANTLP_2	HALE	GAS-IC	PANHANDLE	2016	56.0	54.0	
449 ANTELOPE IC 3		AEEC_ANTLP_3	HALE	GAS-IC	PANHANDLE	2016	56.0	54.0	
450 ELK STATION CTG 1		AEEC_ELK_1	HALE	GAS-GT	PANHANDLE	2016	202.0	190.0	
451 ELK STATION CTG 2		AEEC_ELK_2	HALE	GAS-GT	PANHANDLE	2016	202.0	190.0	
452 TENASKA FRONTIER STATION CTG 1		FTR_FTR_G1	GRIMES	GAS-CC	NORTH	2000	185.0	160.0	
453 TENASKA FRONTIER STATION CTG 2		FTR_FTR_G2	GRIMES	GAS-CC	NORTH	2000	185.0	160.0	
454 TENASKA FRONTIER STATION CTG 3		FTR_FTR_G3	GRIMES	GAS-CC	NORTH	2000	185.0	160.0	
455 TENASKA FRONTIER STATION STG 4		FTR_FTR_G4	GRIMES	GAS-CC	NORTH	2000	400.0	400.0	
456 TENASKA GATEWAY STATION CTG 1		TGCCS_CT1	RUSK	GAS-CC	NORTH	2001	179.0	156.0	
457 TENASKA GATEWAY STATION CTG 2		TGCCS_CT2	RUSK	GAS-CC	NORTH	2001	179.0	135.0	
458 TENASKA GATEWAY STATION CTG 3		TGCCS_CT3	RUSK	GAS-CC	NORTH	2001	179.0	153.0	
459 TENASKA GATEWAY STATION STG 4		TGCCS_UNIT4	RUSK	GAS-CC	NORTH	2001	400.0	402.0	
460 TENASKA KIAMICHI STATION 1CT101		KMCHI_1CT101	FANNIN	GAS-CC	NORTH	2003	185.0	151.0	
461 TENASKA KIAMICHI STATION 1CT201		KMCHI_1CT201	FANNIN	GAS-CC	NORTH	2003	185.0	148.0	
462 TENASKA KIAMICHI STATION 1ST		KMCHI_1ST	FANNIN	GAS-CC	NORTH	2003	318.0	310.0	
463 TENASKA KIAMICHI STATION 2CT101		KMCHI_2CT101	FANNIN	GAS-CC	NORTH	2003	185.0	150.0	
464 TENASKA KIAMICHI STATION 2CT201		KMCHI_2CT201	FANNIN	GAS-CC	NORTH	2003	185.0	152.0	
465 TENASKA KIAMICHI STATION 2ST		KMCHI_2ST	FANNIN	GAS-CC	NORTH	2003	318.0	311.0	
466 Switchable Capacity Total							3,840.1	3,490.0	
467									
468 Switchable Capacity Unavailable to ERCOT									

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
469 ANTELOPE IC 1		AEEC_ANTLP_1_UNAVAIL	HALE	GAS-IC	PANHANDLE	2017	(56.0)	(54.0)	
470 ANTELOPE IC 2		AEEC_ANTLP_2_UNAVAIL	HALE	GAS-IC	PANHANDLE	2017	(56.0)	(54.0)	
471 ANTELOPE IC 3		AEEC_ANTLP_3_UNAVAIL	HALE	GAS-IC	PANHANDLE	2017	(56.0)	(54.0)	
472 ELK STATION CTG 1		AEEC_ELK_1_UNAVAIL	HALE	GAS-GT	PANHANDLE	2017	(202.0)	(190.0)	
473 ELK STATION CTG 2		AEEC_ELK_2_UNAVAIL	HALE	GAS-GT	PANHANDLE	2017	(202.0)	(190.0)	
474 Switchable Capacity Unavailable to ERCOT Total							(572.0)	(542.0)	
475									
476 Available Mothball Capacity based on Owner's Return Probability		MOTH_AVAIL					712.8	703.5	
477									
478 Private-Use Network Capacity Contribution (Top 20 Hours)		PUN_CAP_CONT					9,575.0	2,940.0	
479 Private-Use Network Forecast Adjustment (per Protocol 10.3.2.4)		PUN_CAP_ADJUST						(71.0)	
480									
481 Operational Resources (Wind)									
482 WESTERN TRAIL WIND (AJAX WIND) U1		AJAXWIND_UNIT1	WILBARGER	WIND-O	WEST	2022	225.6	225.6	
483 WESTERN TRAIL WIND (AJAX WIND) U2		AJAXWIND_UNIT2	WILBARGER	WIND-O	WEST	2022	141.0	141.0	
484 AMADEUS WIND 1 U1		AMADEUS1_UNIT1	FISHER	WIND-O	WEST	2021	36.7	36.7	
485 AMADEUS WIND 1 U2		AMADEUS1_UNIT2	FISHER	WIND-O	WEST	2021	35.8	35.8	
486 AMADEUS WIND 2 U1		AMADEUS2_UNIT3	FISHER	WIND-O	WEST	2021	177.7	177.7	
487 ANACACHO WIND		ANACACHO_ANA	KINNEY	WIND-O	SOUTH	2012	99.8	99.8	
488 AQUILLA LAKE WIND U1		AQUILLA_U1_23	HILL & LIMESTONE	WIND-O	NORTH	2023	13.9	13.9	
489 AQUILLA LAKE WIND U2		AQUILLA_U1_28	HILL & LIMESTONE	WIND-O	NORTH	2023	135.4	135.4	
490 AQUILLA LAKE 2 WIND U1		AQUILLA_U2_23	HILL & LIMESTONE	WIND-O	NORTH	2023	7.0	7.0	
491 AQUILLA LAKE 2 WIND U2		AQUILLA_U2_28	HILL & LIMESTONE	WIND-O	NORTH	2023	143.8	143.8	
492 AVIATOR WIND U1		AVIATOR_UNIT1	COKE	WIND-O	WEST	2021	180.1	180.1	
493 AVIATOR WIND U2		AVIATOR_UNIT2	COKE	WIND-O	WEST	2021	145.6	145.6	
494 AVIATOR WIND U3		DEWOLF_UNIT1	COKE	WIND-O	WEST	2021	199.3	199.3	
495 BAFFIN WIND UNIT1		BAFFIN_UNIT1	KENEDY	WIND-C	COASTAL	2016	100.0	100.0	
496 BAFFIN WIND UNIT2		BAFFIN_UNIT2	KENEDY	WIND-C	COASTAL	2016	102.0	102.0	
497 BARROW RANCH (JUMBO HILL WIND) 1		BARROW_UNIT1	ANDREWS	WIND-O	WEST	2021	90.2	90.2	
498 BARROW RANCH (JUMBO HILL WIND) 2		BARROW_UNIT2	ANDREWS	WIND-O	WEST	2021	70.5	70.5	
499 BARTON CHAPEL WIND		BRTSW_BCW1	JACK	WIND-O	NORTH	2007	120.0	120.0	
500 BLUE SUMMIT WIND 1 A	22INR0550	BLSUMMIT_BLSMT1_5	WILBARGER	WIND-O	WEST	2013	132.8	132.8	
501 BLUE SUMMIT WIND 1 B	22INR0550	BLSUMMIT_BLSMT1_6	WILBARGER	WIND-O	WEST	2013	7.0	6.9	
502 BLUE SUMMIT WIND 2 A		BLSUMMIT_UNIT2_25	WILBARGER	WIND-O	WEST	2020	92.5	6.9	
503 BLUE SUMMIT WIND 2 B		BLSUMMIT_UNIT2_17	WILBARGER	WIND-O	WEST	2020	6.9	92.5	
504 BLUE SUMMIT WIND 3 A		BLSUMIT3_UNIT_17	WILBARGER	WIND-O	WEST	2020	13.7	13.4	
505 BLUE SUMMIT WIND 3 B		BLSUMIT3_UNIT_25	WILBARGER	WIND-O	WEST	2020	186.5	182.4	
506 BOBCAT BLUFF WIND		BCATWIND_WIND_1	ARCHER	WIND-O	WEST	2020	162.0	162.0	
507 BRISCOE WIND		BRISCOE_WIND	BRISCOE	WIND-P	PANHANDLE	2015	149.9	149.8	
508 BRUENNING'S BREEZE A		BBREEZE_UNIT1	WILLACY	WIND-C	COASTAL	2017	120.0	120.0	
509 BRUENNING'S BREEZE B		BBREEZE_UNIT2	WILLACY	WIND-C	COASTAL	2017	108.0	108.0	
510 BUCKTHORN WIND 1 A		BUCKTHRN_UNIT1	ERATH	WIND-O	NORTH	2017	44.9	44.9	
511 BUCKTHORN WIND 1 B		BUCKTHRN_UNIT2	ERATH	WIND-O	NORTH	2017	55.7	55.7	
512 BUFFALO GAP WIND 1		BUFF_GAP_UNIT1	TAYLOR	WIND-O	WEST	2006	120.6	120.6	
513 BUFFALO GAP WIND 2_1		BUFF_GAP_UNIT2_1	TAYLOR	WIND-O	WEST	2007	115.5	115.5	
514 BUFFALO GAP WIND 2_2		BUFF_GAP_UNIT2_2	TAYLOR	WIND-O	WEST	2007	117.0	117.0	
515 BUFFALO GAP WIND 3		BUFF_GAP_UNIT3	TAYLOR	WIND-O	WEST	2008	170.2	170.2	
516 BULL CREEK WIND U1		BULLCRK_WND1	BORDEN	WIND-O	WEST	2009	89.0	88.0	
517 BULL CREEK WIND U2		BULLCRK_WND2	BORDEN	WIND-O	WEST	2009	91.0	90.0	
518 CABEZON WIND (RIO BRAVO I WIND) 1 A		CABEZON_WIND1	STARR	WIND-O	SOUTH	2019	115.2	115.2	
519 CABEZON WIND (RIO BRAVO I WIND) 1 B		CABEZON_WIND2	STARR	WIND-O	SOUTH	2019	122.4	122.4	
520 CACTUS FLATS WIND U1		CFLATS_U1	CONCHO	WIND-O	WEST	2022	148.4	148.4	
521 CALLAHAN WIND		CALLAHAN_WND1	CALLAHAN	WIND-O	WEST	2004	123.1	123.1	
522 CAMERON COUNTY WIND		CAMWIND_UNIT1	CAMERON	WIND-C	COASTAL	2016	165.0	165.0	
523 CAMP SPRINGS WIND 1		CSEC_CSECG1	SCURRY	WIND-O	WEST	2007	134.4	130.5	
524 CAMP SPRINGS WIND 2		CSEC_CSECG2	SCURRY	WIND-O	WEST	2007	123.6	120.0	
525 CANADIAN BREAKS WIND		CN_BRKS_UNIT_1	OLDHAM	WIND-P	PANHANDLE	2019	210.1	210.1	
526 CAPRICORN RIDGE WIND 1	17INR0054	CAPRIDGE_CR1	STERLING	WIND-O	WEST	2007	231.7	231.7	
527 CAPRICORN RIDGE WIND 2	17INR0054	CAPRIDGE_CR2	STERLING	WIND-O	WEST	2007	149.5	149.5	
528 CAPRICORN RIDGE WIND 3	17INR0054	CAPRIDGE_CR3	STERLING	WIND-O	WEST	2008	200.9	200.9	
529 CAPRICORN RIDGE WIND 4	17INR0061	CAPRIDG4_CR4	STERLING	WIND-O	WEST	2008	121.5	121.5	
530 CEDRO HILL WIND 1		CEDROHIL_CHW1	WEBB	WIND-O	SOUTH	2010	75.0	75.0	
531 CEDRO HILL WIND 2		CEDROHIL_CHW2	WEBB	WIND-O	SOUTH	2010	75.0	75.0	
532 CHALUPA WIND		CHALUPA_UNIT1	CAMERON	WIND-C	COASTAL	2021	173.3	173.3	
533 CHAMPION WIND		CHAMPION_UNIT1	NOLAN	WIND-O	WEST	2008	126.5	126.5	
534 CHAPMAN RANCH WIND IA (SANTA CRUZ)		SANTACRU_UNIT1	NUECES	WIND-C	COASTAL	2017	150.6	150.6	
535 CHAPMAN RANCH WIND IB (SANTA CRUZ)		SANTACRU_UNIT2	NUECES	WIND-C	COASTAL	2017	98.4	98.4	
536 COTTON PLAINS WIND		COTPLNS_COTTONPL	FLOYD	WIND-P	PANHANDLE	2017	50.4	50.4	
537 CRANELL WIND		CRANELL_UNIT1	REFUGIO	WIND-C	COASTAL	2022	220.0	220.0	
538 DERMOTT WIND 1_1		DERMOTT_UNIT1	SCURRY	WIND-O	WEST	2017	126.5	126.5	
539 DERMOTT WIND 1_2		DERMOTT_UNIT2	SCURRY	WIND-O	WEST	2017	126.5	126.5	
540 DESERT SKY WIND 1 A	17INR0070	DSKYWND1_UNIT_1A	PECOS	WIND-O	WEST	2022	65.8	53.1	
541 DESERT SKY WIND 1 B	17INR0070	DSKYWND2_UNIT_2A	PECOS	WIND-O	WEST	2022	65.8	50.4	
542 DESERT SKY WIND 2 A	17INR0070	DSKYWND1_UNIT_1B	PECOS	WIND-O	WEST	2022	23.9	18.7	
543 DESERT SKY WIND 2 B	17INR0070	DSKYWND2_UNIT_2B	PECOS	WIND-O	WEST	2022	14.7	8.0	
544 DOUG COLBECK'S CORNER (CONWAY) A		GRANDVW1_COLA	CARSON	WIND-P	PANHANDLE	2016	100.2	100.2	
545 DOUG COLBECK'S CORNER (CONWAY) B		GRANDVW1_COLB	CARSON	WIND-P	PANHANDLE	2016	100.2	100.2	
546 EAST RAYMOND WIND (EL RAYO) U1		EL_RAYO_UNIT1	WILLACY	WIND-C	COASTAL	2021	101.2	98.0	
547 EAST RAYMOND WIND (EL RAYO) U2		EL_RAYO_UNIT2	WILLACY	WIND-C	COASTAL	2021	99.0	96.0	
548 ELBOW CREEK WIND		ELB_ELBECREEK	HOWARD	WIND-O	WEST	2008	121.9	121.9	
549 ELECTRA WIND 1		DIGBY_UNIT1	WILBARGER	WIND-O	WEST	2017	101.3	98.9	
550 ELECTRA WIND 2		DIGBY_UNIT2	WILBARGER	WIND-O	WEST	2017	134.3	131.1	
551 EL ALGODON ALTO W U1		ALGODON_UNIT1	WILLACY	WIND-C	COASTAL	2022	171.6	171.6	
552 EL ALGODON ALTO W U2		ALGODON_UNIT2	WILLACY	WIND-C	COASTAL	2022	28.6	28.6	
553 ESPIRITU WIND		CHALUPA_UNIT2	CAMERON	WIND-C	COASTAL	2021	25.2	25.2	
554 FALVEZ ASTRA WIND		ASTRA_UNIT1	RANDALL	WIND-P	PANHANDLE	2017	163.2	163.2	
555 FLAT TOP WIND I		FTWIND_UNIT_1	MILLS	WIND-O	NORTH	2018	200.0	200.0	
556 FLUVANNA RENEWABLE 1 A		FLUVANNA_UNIT1	SCURRY	WIND-O	WEST	2017	79.8	79.8	
557 FLUVANNA RENEWABLE 1 B		FLUVANNA_UNIT2	SCURRY	WIND-O	WEST	2017	75.6	75.6	
558 FOARD CITY WIND 1 A		FOARDCTY_UNIT1	FOARD	WIND-O	WEST	2019	186.5	186.5	
559 FOARD CITY WIND 1 B		FOARDCTY_UNIT2	FOARD	WIND-O	WEST	2019	163.8	163.8	
560 FOREST CREEK WIND		MCDLD_FCW1	GLASSCOCK	WIND-O	WEST	2007	124.2	124.2	
561 GOAT WIND		GOAT_GOATWIND	STERLING	WIND-O	WEST	2008	80.0	80.0	
562 GOAT WIND 2		GOAT_GOATWIN2	STERLING	WIND-O	WEST	2010	69.6	69.6	
563 GOLDTHWAITE WIND 1		GWEC_GWEC_G1	MILLS	WIND-O	NORTH	2014	148.6	148.6	
564 GOPHER CREEK WIND 1		GOPHER_UNIT1	BORDEN	WIND-O	WEST	2020	82.0	82.0	
565 GOPHER CREEK WIND 2		GOPHER_UNIT2	BORDEN	WIND-O	WEST	2020	76.0	76.0	
566 GRANDVIEW WIND 1 (CONWAY) GV1A		GRANDVW1_GV1A	CARSON	WIND-P	PANHANDLE	2014	107.4	107.4	
567 GRANDVIEW WIND 1 (CONWAY) GV1B		GRANDVW1_GV1B	CARSON	WIND-P	PANHANDLE	2014	103.8	103.8	
568 GREEN MOUNTAIN WIND (BRAZOS) U1	21INR0532	BRAZ_WND_WND1	SCURRY	WIND-O	WEST	2003	99.0	99.0	
569 GREEN MOUNTAIN WIND (BRAZOS) U2	21INR0532	BRAZ_WND_WND2	SCURRY	WIND-O	WEST	2003	61.0	61.0	
570 GREEN PASTURES WIND I		GPASTURE_WIND_I	BAYLOR	WIND-O	WEST	2015	150.0	150.0	
571 GRIFFIN TRAIL WIND U1		GRIF_TRL_UNIT1	KNOX	WIND-O	WEST	2021	98.7	98.7	
572 GRIFFIN TRAIL WIND U2		GRIF_TRL_UNIT2	KNOX	WIND-O	WEST	2021	126.9	126.9	
573 GULF WIND I		TGW_T1	KENEDY	WIND-C	COASTAL	2021	141.6	141.6	
574 GULF WIND II		TGW_T2	KENEDY	WIND-C	COASTAL	2021	141.6	141.6	
575 GUNSIGHT MOUNTAIN WIND		GUNMTN_G1	HOWARD	WIND-O	WEST	2016	119.9	119.9	
576 HACKBERRY WIND		HWF_HWFG1	SHACKELFORD	WIND-O	WEST	2008	165.6	163.5	
577 HEREFORD WIND G		HRFDWIND_WIND_G	DEAF SMITH	WIND-P	PANHANDLE	2015	99.9	99.9	
578 HEREFORD WIND V		HRFDWIND_WIND_V	DEAF SMITH	WIND-P	PANHANDLE	2015	100.0	100.0	
579 HICKMAN (SANTA RITA WIND) 1		REAGAN_G1	REAGAN	WIND-O	WEST	2018	152.5	152.5	
580 HICKMAN (SANTA RITA WIND) 2		HICKMAN_G2	REAGAN	WIND-O	WEST	2018	147.5	147.5	
581 HIDALGO & STARR WIND 11		MIRASOLE_MIR11	HIDALGO	WIND-O	SOUTH	2016	52.0	52.0	
582 HIDALGO & STARR WIND 12		MIRASOLE_MIR12	HIDALGO	WIND-O	SOUTH	2016	98.0	98.0	
583 HIDALGO & STARR WIND 21		MIRASOLE_MIR21	HIDALGO	WIND-O	SOUTH	2016	100.0	100.0	
584 HIDALGO II WIND		MIRASOLE_MIR13	HIDALGO	WIND-O	SOUTH	2021	50.4	50.4	
585 HIGH LONESOME W 1A		HI_LONE_WGR1A	CROCKETT	WIND-O	WEST	2021	46.0	46.0	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
586 HIGH LONESOME W 1B		HI_LONE_WGR1B	CROCKETT	WIND-O	WEST	2021	51.9	52.0	
587 HIGH LONESOME W 1C		HI_LONE_WGR1C	CROCKETT	WIND-O	WEST	2021	25.3	25.3	
588 HIGH LONESOME W 2		HI_LONE_WGR2	CROCKETT	WIND-O	WEST	2021	122.4	122.5	
589 HIGH LONESOME W 2A		HI_LONE_WGR2A	CROCKETT	WIND-O	WEST	2021	25.3	25.3	
590 HIGH LONESOME W 3		HI_LONE_WGR3	CROCKETT	WIND-O	WEST	2021	127.5	127.6	
591 HIGH LONESOME W 4		HI_LONE_WGR4	CROCKETT	WIND-O	WEST	2021	101.5	101.6	
592 HORSE CREEK WIND 1		HORSECRK_UNIT1	HASKELL	WIND-O	WEST	2017	134.8	131.1	
593 HORSE CREEK WIND 2		HORSECRK_UNIT2	HASKELL	WIND-O	WEST	2017	101.7	98.9	
594 HORSE HOLLOW WIND 1	17INR0052	H_HOLLOW_WND1	TAYLOR	WIND-O	WEST	2005	230.0	230.0	
595 HORSE HOLLOW WIND 2	17INR0053	HHOLLOW2_WND1	TAYLOR	WIND-O	WEST	2006	184.0	184.0	
596 HORSE HOLLOW WIND 3	17INR0053	HHOLLOW3_WND_1	TAYLOR	WIND-O	WEST	2006	241.4	241.4	
597 HORSE HOLLOW WIND 4	17INR0053	HHOLLOW4_WND1	TAYLOR	WIND-O	WEST	2006	115.0	115.0	
598 INADALE WIND 1		INDL_INADALE1	NOLAN	WIND-O	WEST	2008	95.0	95.0	
599 INADALE WIND 2		INDL_INADALE2	NOLAN	WIND-O	WEST	2008	102.0	102.0	
600 INDIAN MESA WIND	18INR0069	INDNNWP_INDNNWP2	PECOS	WIND-O	WEST	2001	91.8	91.8	
601 JAVELINA I WIND 18		BORDAS_JAVEL18	WEBB	WIND-O	SOUTH	2015	19.7	19.7	
602 JAVELINA I WIND 20		BORDAS_JAVEL20	WEBB	WIND-O	SOUTH	2015	230.0	230.0	
603 JAVELINA II WIND 1		BORDAS2_JAVEL2_A	WEBB	WIND-O	SOUTH	2017	96.0	96.0	
604 JAVELINA II WIND 2		BORDAS2_JAVEL2_B	WEBB	WIND-O	SOUTH	2017	74.0	74.0	
605 JAVELINA II WIND 3		BORDAS2_JAVEL2_C	WEBB	WIND-O	SOUTH	2017	30.0	30.0	
606 JUMBO ROAD WIND 1		HRFDWIND_JRDWIND1	DEAF SMITH	WIND-P	PANHANDLE	2015	146.2	146.2	
607 JUMBO ROAD WIND 2		HRFDWIND_JRDWIND2	DEAF SMITH	WIND-P	PANHANDLE	2015	153.6	153.6	
608 KARANKAWA WIND 1A		KARAKAW1_UNIT1	SAN PATRICIO	WIND-C	COASTAL	2019	103.3	103.3	
609 KARANKAWA WIND 1B		KARAKAW1_UNIT2	SAN PATRICIO	WIND-C	COASTAL	2019	103.3	103.3	
610 KARANKAWA WIND 2		KARAKAW2_UNIT3	SAN PATRICIO	WIND-C	COASTAL	2019	100.4	100.4	
611 KEECHI WIND		KEECHI_U1	JACK	WIND-O	NORTH	2015	110.0	110.0	
612 KING MOUNTAIN WIND (NE)		KING_NE_KINGNE	UPTON	WIND-O	WEST	2001	79.7	79.7	
613 KING MOUNTAIN WIND (NW)		KING_NW_KINGNW	UPTON	WIND-O	WEST	2001	79.7	79.7	
614 KING MOUNTAIN WIND (SE)		KING_SE_KINGSE	UPTON	WIND-O	WEST	2001	40.5	40.5	
615 KING MOUNTAIN WIND (SW)		KING_SW_KINGSW	UPTON	WIND-O	WEST	2001	79.7	79.7	
616 LANGFORD WIND POWER		LGD_LANGFORD	TOM GREEN	WIND-O	WEST	2009	160.0	160.0	
617 LOCKETT WIND FARM		LOCKETT_UNIT1	WILBARGER	WIND-O	WEST	2019	183.7	183.7	
618 LOGANS GAP WIND I U1		LGW_UNIT1	COMANCHE	WIND-O	NORTH	2015	106.3	106.3	
619 LOGANS GAP WIND I U2		LGW_UNIT2	COMANCHE	WIND-O	NORTH	2015	103.9	103.8	
620 LONE STAR WIND 1 (MESQUITE)		LNCRK_G83	SHACKELFORD	WIND-O	WEST	2006	194.0	194.0	
621 LONE STAR WIND 2 (POST OAK) U1		LNCRK2_G871	SHACKELFORD	WIND-O	WEST	2007	98.0	98.0	
622 LONE STAR WIND 2 (POST OAK) U2		LNCRK2_G872	SHACKELFORD	WIND-O	WEST	2007	100.0	100.0	
623 LONGHORN WIND NORTH U1		LHORN_N_UNIT1	FLOYD	WIND-P	PANHANDLE	2015	100.0	100.0	
624 LONGHORN WIND NORTH U2		LHORN_N_UNIT2	FLOYD	WIND-P	PANHANDLE	2015	100.0	100.0	
625 LORAIN WINDPARK I		LONEWOLF_G1	MITCHELL	WIND-O	WEST	2010	48.0	48.0	
626 LORAIN WINDPARK II		LONEWOLF_G2	MITCHELL	WIND-O	WEST	2010	51.0	51.0	
627 LORAIN WINDPARK III		LONEWOLF_G3	MITCHELL	WIND-O	WEST	2011	25.5	25.5	
628 LORAIN WINDPARK IV		LONEWOLF_G4	MITCHELL	WIND-O	WEST	2011	24.0	24.0	
629 LOS VIENTOS III WIND		LV3_UNIT_1	STARR	WIND-O	SOUTH	2015	200.0	200.0	
630 LOS VIENTOS IV WIND		LV4_UNIT_1	STARR	WIND-O	SOUTH	2016	200.0	200.0	
631 LOS VIENTOS V WIND		LV5_UNIT_1	STARR	WIND-O	SOUTH	2016	110.0	110.0	
632 LOS VIENTOS WIND I		LV1_LV1A	WILLACY	WIND-C	COASTAL	2013	200.1	200.1	
633 LOS VIENTOS WIND II		LV2_LV2	WILLACY	WIND-C	COASTAL	2013	201.6	201.6	
634 MAGIC VALLEY WIND (REDFISH) 1A		REDFISH_MV1A	WILLACY	WIND-C	COASTAL	2012	99.8	99.8	
635 MAGIC VALLEY WIND (REDFISH) 1B		REDFISH_MV1B	WILLACY	WIND-C	COASTAL	2012	103.5	103.5	
636 MARIAH DEL NORTE 1		MARIAH_NORTE1	PARMER	WIND-P	PANHANDLE	2017	115.2	115.2	
637 MARIAH DEL NORTE 2		MARIAH_NORTE2	PARMER	WIND-P	PANHANDLE	2017	115.2	115.2	
638 MAVERICK CREEK WIND WEST U1		MAVCRK_W_UNIT1	CONCHO	WIND-O	WEST	2022	201.6	201.6	
639 MAVERICK CREEK WIND WEST U2		MAVCRK_W_UNIT2	CONCHO	WIND-O	WEST	2022	11.1	11.1	
640 MAVERICK CREEK WIND WEST U3		MAVCRK_W_UNIT3	CONCHO	WIND-O	WEST	2022	33.6	33.6	
641 MAVERICK CREEK WIND WEST U4		MAVCRK_W_UNIT4	CONCHO	WIND-O	WEST	2022	22.2	22.2	
642 MAVERICK CREEK WIND EAST U1		MAVCRK_E_UNIT5	CONCHO	WIND-O	WEST	2022	71.4	71.4	
643 MAVERICK CREEK WIND EAST U2		MAVCRK_E_UNIT6	CONCHO	WIND-O	WEST	2022	33.3	33.3	
644 MAVERICK CREEK WIND EAST U3		MAVCRK_E_UNIT7	CONCHO	WIND-O	WEST	2022	22.0	22.0	
645 MAVERICK CREEK WIND EAST U4		MAVCRK_E_UNIT8	CONCHO	WIND-O	WEST	2022	20.0	20.0	
646 MAVERICK CREEK WIND EAST U5		MAVCRK_E_UNIT9	CONCHO	WIND-O	WEST	2022	76.8	76.8	
647 MCADOO WIND		MWEC_G1	DICKENS	WIND-P	PANHANDLE	2008	150.0	150.0	
648 MESQUITE CREEK WIND 1		MESQCRK_WND1	DAWSON	WIND-O	WEST	2015	105.6	105.6	
649 MESQUITE CREEK WIND 2		MESQCRK_WND2	DAWSON	WIND-O	WEST	2015	105.6	105.6	
650 MIAMI WIND G1		MIAM1_G1	GRAY	WIND-P	PANHANDLE	2014	144.3	144.3	
651 MIAMI WIND G2		MIAM1_G2	GRAY	WIND-P	PANHANDLE	2014	144.3	144.3	
652 MIDWAY WIND		MIDWIND_UNIT1	SAN PATRICIO	WIND-C	COASTAL	2019	162.8	162.8	
653 NIELS BOHR WIND A (BEARKAT WIND A)		NBOHR_UNIT1	GLASSCOCK	WIND-O	WEST	2018	196.6	196.6	
654 NOTREES WIND 1		NWF_NWF1	WINKLER	WIND-O	WEST	2009	92.6	92.6	
655 NOTREES WIND 2		NWF_NWF2	WINKLER	WIND-O	WEST	2009	60.0	60.0	
656 OCOTILLO WIND		OWF_OWF	HOWARD	WIND-O	WEST	2008	58.8	54.6	
657 OLD SETTLER WIND		COTPLNS_OLDSETLR	FLOYD	WIND-P	PANHANDLE	2017	151.2	151.2	
658 OVEJA WIND U1		OVEJA_G1	IRION	WIND-O	WEST	2021	151.2	151.2	
659 OVEJA WIND U2		OVEJA_G2	IRION	WIND-O	WEST	2021	151.2	151.2	
660 PALMAS ALTAS WIND		PALMWIND_UNIT1	CAMERON	WIND-C	COASTAL	2020	144.9	144.9	
661 PANHANDLE WIND 1 U1		PH1_UNIT1	CARSON	WIND-P	PANHANDLE	2014	109.2	109.2	
662 PANHANDLE WIND 1 U2		PH1_UNIT2	CARSON	WIND-P	PANHANDLE	2014	109.2	109.2	
663 PANHANDLE WIND 2 U1		PH2_UNIT1	CARSON	WIND-P	PANHANDLE	2014	94.2	94.2	
664 PANHANDLE WIND 2 U2		PH2_UNIT2	CARSON	WIND-P	PANHANDLE	2014	96.6	96.6	
665 PANTHER CREEK WIND 1		PC_NORTH_PANTHER1	HOWARD	WIND-O	WEST	2008	142.5	142.5	
666 PANTHER CREEK WIND 2		PC_SOUTH_PANTHER2	HOWARD	WIND-O	WEST	2019	115.5	115.5	
667 PANTHER CREEK WIND 3 A		PC_SOUTH_PANTH31	HOWARD	WIND-O	WEST	2022	106.9	106.9	
668 PANTHER CREEK WIND 3 B		PC_SOUTH_PANTH32	HOWARD	WIND-O	WEST	2022	108.5	108.5	
669 PAPALOTE CREEK WIND		PAP1_PAP1	SAN PATRICIO	WIND-C	COASTAL	2009	179.9	179.9	
670 PAPALOTE CREEK WIND II		COTTON_PAP2	SAN PATRICIO	WIND-C	COASTAL	2010	200.1	200.1	
671 PECOS WIND 1 (WOODWARD)		WOODWRD1_WOODWR	PECOS	WIND-O	WEST	2001	91.7	91.7	
672 PECOS WIND 2 (WOODWARD)		WOODWRD2_WOODWR	PECOS	WIND-O	WEST	2001	86.0	85.8	
673 PENASCAL WIND 1		PENA_UNIT1	KENEDY	WIND-C	COASTAL	2009	160.8	160.8	
674 PENASCAL WIND 2		PENA_UNIT2	KENEDY	WIND-C	COASTAL	2009	141.6	141.6	
675 PENASCAL WIND 3		PENA3_UNIT3	KENEDY	WIND-C	COASTAL	2011	100.8	100.8	
676 PEYTON CREEK WIND		PEY_UNIT1	MATAGORDA	WIND-C	COASTAL	2020	151.2	151.2	
677 PYRON WIND 1	23INR0525	PYR_PYRON1	NOLAN	WIND-O	WEST	2008	121.5	121.5	
678 PYRON WIND 2	23INR0525	PYR_PYRON2	NOLAN	WIND-O	WEST	2008	127.5	127.5	
679 RANCHERO WIND		RANCHERO_UNIT1	CROCKETT	WIND-O	WEST	2020	150.0	150.0	
680 RANCHERO WIND		RANCHERO_UNIT2	CROCKETT	WIND-O	WEST	2020	150.0	150.0	
681 RATTLESNAKE I WIND ENERGY CENTER G1		RSNAKE_G1	GLASSCOCK	WIND-O	WEST	2015	109.2	104.6	
682 RATTLESNAKE I WIND ENERGY CENTER G2		RSNAKE_G2	GLASSCOCK	WIND-O	WEST	2015	109.2	102.7	
683 RED CANYON WIND		RDCANYON_RDCNY1	BORDEN	WIND-O	WEST	2006	89.6	89.6	
684 RELOJ DEL SOL WIND U1		RELOJ_UNIT1	ZAPATA	WIND-O	SOUTH	2022	55.4	55.4	
685 RELOJ DEL SOL WIND U2		RELOJ_UNIT2	ZAPATA	WIND-O	SOUTH	2022	48.0	48.0	
686 RELOJ DEL SOL WIND U3		RELOJ_UNIT3	ZAPATA	WIND-O	SOUTH	2022	83.1	83.1	
687 RELOJ DEL SOL WIND U4		RELOJ_UNIT4	ZAPATA	WIND-O	SOUTH	2022	22.8	22.8	
688 ROCK SPRINGS VAL VERDE WIND (FERMI) 1		FERMI_WIND1	VAL VERDE	WIND-O	WEST	2017	121.9	121.9	
689 ROCK SPRINGS VAL VERDE WIND (FERMI) 2		FERMI_WIND2	VAL VERDE	WIND-O	WEST	2017	27.4	27.4	
690 ROSCOE WIND		TKWSW1_ROSCOE	NOLAN	WIND-O	WEST	2008	114.0	114.0	
691 ROSCOE WIND 2A		TKWSW1_ROSCOE2A	NOLAN	WIND-O	WEST	2008	95.0	95.0	
692 ROUTE 66 WIND		ROUTE_66_WIND1	CARSON	WIND-P	PANHANDLE	2015	150.0	150.0	
693 RTS 2 WIND (HEART OF TEXAS WIND) U1		RTS2_U1	MCCULLOCH	WIND-O	SOUTH	2021	89.9	89.9	
694 RTS 2 WIND (HEART OF TEXAS WIND) U2		RTS2_U2	MCCULLOCH	WIND-O	SOUTH	2021	89.9	89.9	
695 RTS WIND		RTS_U1	MCCULLOCH	WIND-O	SOUTH	2018	160.0	160.0	
696 SAGE DRAW WIND U1		SAGEDRAW_UNIT1	LYNN	WIND-O	WEST	2022	169.2	169.2	
697 SAGE DRAW WIND U2		SAGEDRAW_UNIT2	LYNN	WIND-O	WEST	2022	169.2	169.2	
698 SALT FORK 1 WIND U1		SALTFORK_UNIT1	DONLEY	WIND-P	PANHANDLE	2017	64.0	64.0	
699 SALT FORK 1 WIND U2		SALTFORK_UNIT2	DONLEY	WIND-P	PANHANDLE	2017	110.0	110.0	
700 SAN ROMAN WIND		SANROMAN_WIND_1	CAMERON	WIND-C	COASTAL	2017	95.3	95.2	
701 SAND BLUFF WIND U1		MCDLD_SB1_2	GLASSCOCK	WIND-O	WEST	2022	71.4	71.4	
702 SAND BLUFF WIND U2		MCDLD_SB3_282	GLASSCOCK	WIND-O	WEST	2022	14.1	14.1	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
703 SAND BLUFF WIND U3		MCDLD_SB4_G87	GLASSCOCK	WIND-O	WEST	2022	4.0	4.0	
704 SENATE WIND		SENATEWD_UNIT1	JACK	WIND-O	NORTH	2012	150.0	150.0	
705 SENDERO WIND ENERGY		EXGNSND_WIND_1	JIM HOGG	WIND-O	SOUTH	2015	78.0	78.0	
706 SEYMOUR HILLS WIND (S_HILLS WIND)		S_HILLS_UNIT1	BAYLOR	WIND-O	WEST	2019	30.2	30.2	
707 SHAFFER (PATRIOT WIND/PETRONILLA)		SHAFFER_UNIT1	NUECES	WIND-C	COASTAL	2021	226.1	226.1	
708 SHANNON WIND		SHANNONW_UNIT_1	CLAY	WIND-O	WEST	2015	204.1	204.1	
709 SHERBINO 2 WIND	19INR0120	KEO_SHRBINO2	PECOS	WIND-O	WEST	2011	132.0	132.0	
710 SILVER STAR WIND	18INR0064	FLTCK_SSI	ERATH	WIND-O	NORTH	2008	52.8	52.8	
711 SOUTH PLAINS WIND 1 U1		SPLAIN1_WIND1	FLOYD	WIND-P	PANHANDLE	2015	102.0	102.0	
712 SOUTH PLAINS WIND 1 U2		SPLAIN1_WIND2	FLOYD	WIND-P	PANHANDLE	2015	98.0	98.0	
713 SOUTH PLAINS WIND 2 U1		SPLAIN2_WIND21	FLOYD	WIND-P	PANHANDLE	2016	148.5	148.5	
714 SOUTH PLAINS WIND 2 U2		SPLAIN2_WIND22	FLOYD	WIND-P	PANHANDLE	2016	151.8	151.8	
715 SOUTH TRENT WIND		STWF_T1	NOLAN	WIND-O	WEST	2008	101.2	98.2	
716 SPINNING SPUR WIND TWO A		SSPURTWO_WIND_1	OLDHAM	WIND-P	PANHANDLE	2014	161.0	161.0	
717 SPINNING SPUR WIND TWO B		SSPURTWO_SS3WIND2	OLDHAM	WIND-P	PANHANDLE	2015	98.0	98.0	
718 SPINNING SPUR WIND TWO C		SSPURTWO_SS3WIND1	OLDHAM	WIND-P	PANHANDLE	2015	96.0	96.0	
719 STANTON WIND ENERGY		SWEC_G1	MARTIN	WIND-O	WEST	2008	123.6	120.0	
720 STELLA WIND		STELLA_UNIT1	KENEDY	WIND-C	COASTAL	2018	201.0	201.0	
721 STEPHENS RANCH WIND 1		SRWE1_UNIT1	BORDEN	WIND-O	WEST	2014	213.8	211.2	
722 STEPHENS RANCH WIND 2		SRWE1_SRWE2	BORDEN	WIND-O	WEST	2015	166.5	164.7	
723 SWEETWATER WIND 1	18INR0073	SWEETWND_WND1	NOLAN	WIND-O	WEST	2003	37.5	42.5	
724 SWEETWATER WIND 2A	17INR0068	SWEETWN2_WND24	NOLAN	WIND-O	WEST	2006	16.0	16.8	
725 SWEETWATER WIND 2B	17INR0068	SWEETWN2_WND2	NOLAN	WIND-O	WEST	2004	105.3	110.8	
726 SWEETWATER WIND 3A		SWEETWN3_WND3A	NOLAN	WIND-O	WEST	2011	30.8	33.6	
727 SWEETWATER WIND 3B		SWEETWN3_WND3B	NOLAN	WIND-O	WEST	2011	108.5	118.6	
728 SWEETWATER WIND 4-4A		SWEETWN4_WND4A	NOLAN	WIND-O	WEST	2007	119.0	125.0	
729 SWEETWATER WIND 4-4B		SWEETWN4_WND4B	NOLAN	WIND-O	WEST	2007	105.8	112.0	
730 SWEETWATER WIND 4-5		SWEETWN5_WND5	NOLAN	WIND-O	WEST	2007	80.5	85.0	
731 TAHOKA WIND 1		TAHOKA_UNIT_1	LYNN	WIND-O	WEST	2019	150.0	150.0	
732 TAHOKA WIND 2		TAHOKA_UNIT_2	LYNN	WIND-O	WEST	2019	150.0	150.0	
733 TEXAS BIG SPRING WIND A		SGMTN_SIGNALMT	HOWARD	WIND-O	WEST	1999	27.7	27.7	
734 TEXAS BIG SPRING WIND B		SGMTN_SIGNALM2	HOWARD	WIND-O	WEST	1999	6.6	6.6	
735 TG EAST WIND U1		TRUSGILL_UNIT1	KNOX	WIND-O	WEST	2022	42.0	42.0	
736 TG EAST WIND U2		TRUSGILL_UNIT2	KNOX	WIND-O	WEST	2022	44.8	44.8	
737 TG EAST WIND U3		TRUSGILL_UNIT3	KNOX	WIND-O	WEST	2022	42.0	42.0	
738 TG EAST WIND U4		TRUSGILL_UNIT4	KNOX	WIND-O	WEST	2022	207.2	207.2	
739 TORRECILLAS WIND 1		TORR_UNIT1_25	WEBB	WIND-O	SOUTH	2019	150.0	150.0	
740 TORRECILLAS WIND 2		TORR_UNIT2_23	WEBB	WIND-O	SOUTH	2019	23.0	23.0	
741 TORRECILLAS WIND 3		TORR_UNIT2_25	WEBB	WIND-O	SOUTH	2019	127.5	127.5	
742 TRENT WIND 1 A	17INR0069	TRENT_TRENT	NOLAN	WIND-O	WEST	2001	38.3	38.3	
743 TRENT WIND 1 B		TRENT_UNIT_1B	NOLAN	WIND-O	WEST	2018	15.6	15.6	
744 TRENT WIND 2		TRENT_UNIT_2	NOLAN	WIND-O	WEST	2018	50.5	50.5	
745 TRENT WIND 3 A		TRENT_UNIT_3A	NOLAN	WIND-O	WEST	2018	38.3	38.3	
746 TRENT WIND 3 B		TRENT_UNIT_3B	NOLAN	WIND-O	WEST	2018	13.8	13.8	
747 TRINITY HILLS WIND 1	20INR0019	TRINITY_TH1_BUS1	ARCHER	WIND-O	WEST	2012	103.4	103.4	
748 TRINITY HILLS WIND 2	20INR0019	TRINITY_TH1_BUS2	ARCHER	WIND-O	WEST	2012	94.6	94.6	
749 TSTC WEST TEXAS WIND		DG_ROSC2_1UNIT	NOLAN	WIND-O	WEST	2008	2.0	2.0	
750 TURKEY TRACK WIND		TTWEC_G1	NOLAN	WIND-O	WEST	2008	174.6	169.5	
751 TYLER BLUFF WIND		TYLRWIND_UNIT1	COOKE	WIND-O	NORTH	2017	125.6	125.6	
752 VENADO WIND U1		VENADO_UNIT1	ZAPATA	WIND-O	SOUTH	2021	105.0	105.0	
753 VENADO WIND U2		VENADO_UNIT2	ZAPATA	WIND-O	SOUTH	2021	96.6	96.6	
754 VERA WIND 1		VERAWIND_UNIT1	KNOX	WIND-O	WEST	2021	12.0	12.0	
755 VERA WIND 2		VERAWIND_UNIT2	KNOX	WIND-O	WEST	2021	7.2	7.2	
756 VERA WIND 3		VERAWIND_UNIT3	KNOX	WIND-O	WEST	2021	100.8	100.8	
757 VERA WIND 4		VERAWIND_UNIT4	KNOX	WIND-O	WEST	2021	22.0	22.0	
758 VERA WIND 5		VERAWIND_UNIT5	KNOX	WIND-O	WEST	2021	100.8	100.8	
759 VERTIGO WIND (FORMERLY GREEN PASTURES WIND 2)		VERTIGO_WIND_I	BAYLOR	WIND-O	WEST	2015	150.0	150.0	
760 WAKE WIND 1		WAKEWE_G1	DICKENS	WIND-P	PANHANDLE	2016	114.9	114.9	
761 WAKE WIND 2		WAKEWE_G2	DICKENS	WIND-P	PANHANDLE	2016	142.4	142.3	
762 WEST RAYMOND (EL TRUENO) WIND U1		TRUENO_UNIT1	WILLACY	WIND-C	COASTAL	2021	116.6	116.6	
763 WEST RAYMOND (EL TRUENO) WIND U2		TRUENO_UNIT2	WILLACY	WIND-C	COASTAL	2021	123.2	123.2	
764 WHIRLWIND ENERGY		WEC_WECG1	FLOYD	WIND-P	PANHANDLE	2007	59.8	57.0	
765 WHITETAIL WIND		EXGNWTL_WIND_1	WEBB	WIND-O	SOUTH	2012	92.3	92.3	
766 WHITE MESA WIND U1		WHMESA_UNIT1	CROCKETT	WIND-O	WEST	2022	152.3	152.3	
767 WHITE MESA 2 WIND U1		WHMESA_UNIT2_23	CROCKETT	WIND-O	WEST	2022	13.9	13.9	
768 WHITE MESA 2 WIND U2		WHMESA_UNIT2_28	CROCKETT	WIND-O	WEST	2022	183.3	183.3	
769 WHITE MESA 2 WIND U3		WHMESA_UNIT3_23	CROCKETT	WIND-O	WEST	2022	18.6	18.6	
770 WHITE MESA 2 WIND U4		WHMESA_UNIT3_28	CROCKETT	WIND-O	WEST	2022	132.5	132.5	
771 WILLOW SPRINGS WIND A		SALVTION_UNIT1	HASKELL	WIND-O	WEST	2017	125.0	125.0	
772 WILLOW SPRINGS WIND B		SALVTION_UNIT2	HASKELL	WIND-O	WEST	2017	125.0	125.0	
773 WILSON RANCH (INFINITY LIVE OAK WIND)		WL_RANCH_UNIT1	SCHLEICHER	WIND-O	WEST	2020	199.5	199.5	
774 WINDTHORST 2 WIND		WNDTHST2_UNIT1	ARCHER	WIND-O	WEST	2014	67.6	67.6	
775 WKN MOZART WIND		MOZART_WIND_1	KENT	WIND-O	WEST	2012	30.0	30.0	
776 WOLF RIDGE WIND	21INR0511	WHTTAIL_WR1	COOKE	WIND-O	NORTH	2008	112.5	112.5	
777 Operational Capacity Total (Wind)							31,562.3	31,494.7	
778									
779 Operational Wind Capacity Sub-total (Coastal Counties)		WIND_OPERATIONAL_C					4,862.3	4,856.1	
780 Wind Peak Average Capacity Percentage (Coastal)		WIND_PEAK_PCT_C	%				100.0	60.0	
781									
782 Operational Wind Capacity Sub-total (Panhandle Counties)		WIND_OPERATIONAL_P					4,410.4	4,407.7	
783 Wind Peak Average Capacity Percentage (Panhandle)		WIND_PEAK_PCT_P	%				100.0	30.0	
784									
785 Operational Wind Capacity Sub-total (Other Counties)		WIND_OPERATIONAL_O					22,289.6	22,230.9	
786 Wind Peak Average Capacity Percentage (Other)		WIND_PEAK_PCT_O	%				100.0	21.0	
787									
788 Operational Resources (Wind) - Synchronized but not Approved for Commercial Operations									
789 AGUAYO WIND U1	20INR0250	AGUAYO_UNIT1	MILLS	WIND-O	NORTH	2023	193.5	192.9	
790 ANCHOR WIND U1	21INR0546	ANCHOR_WIND1	CALLAHAN	WIND-O	WEST	2023	16.0	16.0	
791 ANCHOR WIND U2	21INR0387	ANCHOR_WIND2	CALLAHAN	WIND-O	WEST	2023	98.9	98.9	
792 ANCHOR WIND U3	21INR0539	ANCHOR_WIND3	CALLAHAN	WIND-O	WEST	2023	90.0	90.0	
793 ANCHOR WIND U4	21INR0539	ANCHOR_WIND4	CALLAHAN	WIND-O	WEST	2023	38.7	38.7	
794 ANCHOR WIND U5	22INR0562	ANCHOR_WIND5	CALLAHAN	WIND-O	WEST	2023	19.3	19.3	
795 APPALOOSA RUN WIND U1	20INR0249	APPALOSA_UNIT1	UPTON	WIND-O	WEST	2023	157.9	157.9	
796 APPALOOSA RUN WIND U2	20INR0249	APPALOSA_UNIT2	UPTON	WIND-O	WEST	2023	13.9	13.9	
797 APOGEE WIND U1	21INR0467	APOGEE_UNIT1	THROCKMORTON	WIND-O	WEST	2023	25.0	25.0	
798 APOGEE WIND U2	21INR0467	APOGEE_UNIT2	THROCKMORTON	WIND-O	WEST	2023	14.0	14.0	
799 APOGEE WIND U3	21INR0467	APOGEE_UNIT3	THROCKMORTON	WIND-O	WEST	2023	30.2	30.2	
800 APOGEE WIND U4	21INR0467	APOGEE_UNIT4	THROCKMORTON	WIND-O	WEST	2023	115.0	115.0	
801 APOGEE WIND U5	21INR0467	APOGEE_UNIT5	THROCKMORTON	WIND-O	WEST	2023	110.0	110.0	
802 APOGEE WIND U6	21INR0467	APOGEE_UNIT6	THROCKMORTON	WIND-O	WEST	2023	24.0	24.0	
803 APOGEE WIND U7	21INR0467	APOGEE_UNIT7	THROCKMORTON	WIND-O	WEST	2023	75.0	75.0	
804 BAIRD NORTH WIND U1	20INR0083	BAIRDWND_UNIT1	CALLAHAN	WIND-O	WEST	2023	195.0	195.0	
805 BAIRD NORTH WIND U2	20INR0083	BAIRDWND_UNIT2	CALLAHAN	WIND-O	WEST	2023	145.0	145.0	
806 BLACKJACK CREEK WIND U1	20INR0068	BLACKJAK_UNIT1	BEE	WIND-O	SOUTH	2023	120.0	120.0	
807 BLACKJACK CREEK WIND U2	20INR0068	BLACKJAK_UNIT2	BEE	WIND-O	SOUTH	2023	120.0	120.0	
808 BOARD CREEK WP U1	21INR0324	BOARDCRK_UNIT1	NAVARRO	WIND-O	NORTH	2023	108.8	108.8	
809 BOARD CREEK WP U2	21INR0324	BOARDCRK_UNIT2	NAVARRO	WIND-O	NORTH	2023	190.4	190.4	
810 COYOTE WIND U1	17INR0027b	COYOTE_W_UNIT1	SCURRY	WIND-O	WEST	2023	90.0	90.0	
811 COYOTE WIND U2	17INR0027b	COYOTE_W_UNIT2	SCURRY	WIND-O	WEST	2023	26.6	26.6	
812 COYOTE WIND U3	17INR0027b	COYOTE_W_UNIT3	SCURRY	WIND-O	WEST	2023	126.0	126.0	
813 EL SUAZ RANCH U1	20INR0097	ELSAUZ_UNIT1	WILLACY	WIND-C	COASTAL	2023	153.0	153.0	
814 EL SUAZ RANCH U2	20INR0097	ELSAUZ_UNIT2	WILLACY	WIND-C	COASTAL	2023	148.5	148.5	
815 FOXTROT WIND U1	20INR0129	FOXTROT_UNIT1	BEE	WIND-O	SOUTH	2023	130.2	130.2	
816 FOXTROT WIND U2	20INR0129	FOXTROT_UNIT2	BEE	WIND-O	SOUTH	2023	84.0	84.0	
817 FOXTROT WIND U3	20INR0129	FOXTROT_UNIT3	BEE	WIND-O	SOUTH	2023	54.0	54.0	
818 HARALD (BEARKAT WIND B)	15INR0064b	HARALD_UNIT1	GLASSCOCK	WIND-O	WEST	2023	162.1	162.1	
819 INERTIA WIND U1	22INR0326	INRT_W_UNIT1	HASKELL	WIND-O	WEST	2023	67.7	67.7	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
820 INERTIA WIND U2	22INR0326	INRT_W_UNIT2	HASKELL	WIND-O	WEST	2023	27.7	27.7	
821 INERTIA WIND U3	22INR0326	INRT_W_UNIT3	HASKELL	WIND-O	WEST	2023	205.9	205.9	
822 LACY CREEK WIND U1	18INR0043	LACY_CRK_UNIT1	GLASSCOCK	WIND-O	WEST	2023	135.4	135.4	
823 LACY CREEK WIND U2	18INR0043	LACY_CRK_UNIT2	GLASSCOCK	WIND-O	WEST	2023	15.1	15.1	
824 LACY CREEK WIND U3	18INR0043	LACY_CRK_UNIT3	GLASSCOCK	WIND-O	WEST	2023	138.2	138.2	
825 LACY CREEK WIND U4	18INR0043	LACY_CRK_UNIT4	GLASSCOCK	WIND-O	WEST	2023	12.6	12.6	
826 LAS MAJADAS WIND U1	17INR0035	LMAJADAS_UNIT1	WILLACY	WIND-C	COASTAL	2023	110.0	110.0	
827 LAS MAJADAS WIND U2	17INR0035	LMAJADAS_UNIT2	WILLACY	WIND-C	COASTAL	2023	24.0	24.0	
828 LAS MAJADAS WIND U3	17INR0035	LMAJADAS_UNIT3	WILLACY	WIND-C	COASTAL	2023	138.6	138.6	
829 MARYNEAL WINDPOWER	18INR0031	MARYNEAL_UNIT1	NOLAN	WIND-O	WEST	2023	182.4	182.4	
830 MESTENO WIND	16INR0081	MESTENO_UNIT_1	STARR	WIND-O	SOUTH	2023	201.6	201.6	
831 PRAIRIE HILL WIND U1	19INR0100	PHILLWND_UNIT1	LIMESTONE	WIND-O	NORTH	2023	153.0	153.0	
832 PRAIRIE HILL WIND U2	19INR0100	PHILLWND_UNIT2	LIMESTONE	WIND-O	NORTH	2023	147.0	147.0	
833 PRIDDY WIND U1	16INR0085	PRIDDY_UNIT1	MILLS	WIND-O	NORTH	2023	187.2	187.2	
834 PRIDDY WIND U2	16INR0085	PRIDDY_UNIT2	MILLS	WIND-O	NORTH	2023	115.2	115.2	
835 VORTEX WIND U1	20INR0120	VORTEX_WIND1	THROCKMORTON	WIND-O	WEST	2023	153.6	153.6	
836 VORTEX WIND U2	20INR0120	VORTEX_WIND2	THROCKMORTON	WIND-O	WEST	2023	24.2	24.2	
837 VORTEX WIND U3	20INR0120	VORTEX_WIND3	THROCKMORTON	WIND-O	WEST	2023	158.4	158.4	
838 VORTEX WIND U4	20INR0120	VORTEX_WIND4	THROCKMORTON	WIND-O	WEST	2023	14.0	14.0	
839 WHITEHORSE WIND U1	19INR0080	WH_WIND_UNIT1	FISHER	WIND-O	WEST	2023	209.4	209.4	
840 WHITEHORSE WIND U2	19INR0080	WH_WIND_UNIT2	FISHER	WIND-O	WEST	2023	209.5	209.5	
841 WILDWIND U1	20INR0033	WILDWIND_UNIT1	COOKE	WIND-O	NORTH	2023	18.4	18.4	
842 WILDWIND U2	20INR0033	WILDWIND_UNIT2	COOKE	WIND-O	NORTH	2023	48.0	48.0	
843 WILDWIND U3	20INR0033	WILDWIND_UNIT3	COOKE	WIND-O	NORTH	2023	6.3	6.3	
844 WILDWIND U4	20INR0033	WILDWIND_UNIT4	COOKE	WIND-O	NORTH	2023	54.6	54.6	
845 WILDWIND U5	20INR0033	WILDWIND_UNIT5	COOKE	WIND-O	NORTH	2023	52.8	52.8	
846 YOUNG WIND U1	21INR0401	YNG_WND_UNIT1	YOUNG	WIND-O	WEST	2023	197.4	197.4	
847 YOUNG WIND U2	21INR0401	YNG_WND_UNIT2	YOUNG	WIND-O	WEST	2023	152.3	152.3	
848 YOUNG WIND U3	21INR0401	YNG_WND_UNIT3	YOUNG	WIND-O	WEST	2023	149.5	149.5	
849 Operational Capacity - Synchronized but not Approved for Commercial Operations Total (Wind)							6,184.9	6,184.4	
850									
851 Operational Wind Capacity Synchronized but not Approved for Commercial Operations Sub-total (Coastal Counties)	WIND_SYNCHRONIZED_C						574.1	574.1	
852 Wind Peak Average Capacity Percentage (Coastal)	WIND_SYNC_PEAK_PCT_						100.0	60.0	
853									
854 Operational Wind Capacity Synchronized but not Approved for Commercial Operations Sub-total (Panhandle Counti	WIND_SYNCHRONIZED_P						-	-	
855 Wind Peak Average Capacity Percentage (Panhandle)	WIND_SYNC_PEAK_PCT_						100.0	30.0	
856									
857 Operational Wind Capacity Synchronized but not Approved for Commercial Operations Sub-total (Other Counties)	WIND_SYNCHRONIZED_O						5,610.8	5,610.3	
858 Wind Peak Average Capacity Percentage (Other)	WIND_SYNC_PEAK_PCT_						100.0	21.0	
859									
860 Operational Resources (Solar)									
861 ACACIA SOLAR	ACACIA_UNIT_1	PRESIDIO	SOLAR	WEST	2012		10.0	10.0	
862 ALEXIS SOLAR	DG_ALEXIS_ALEXIS	BROOKS	SOLAR	SOUTH	2019		10.0	10.0	
863 ANSON SOLAR U1	ANSON1_UNIT1	JONES	SOLAR	WEST	2022		100.8	100.0	
864 ANSON SOLAR U2	ANSON1_UNIT2	JONES	SOLAR	WEST	2022		100.8	100.0	
865 ARAGORN SOLAR	ARAGORN_UNIT1	CULBERSON	SOLAR	WEST	2021		188.2	185.0	
866 AZURE SKY SOLAR U1	AZURE_SOLAR1	HASKELL	SOLAR	WEST	2021		74.9	74.9	
867 AZURE SKY SOLAR U2	AZURE_SOLAR2	HASKELL	SOLAR	WEST	2021		153.5	153.5	
868 BECK 1	DG_CECsOLAR_DG_BEC	BEXAR	SOLAR	SOUTH	2016		1.0	1.0	
869 BHE SOLAR PEARL PROJECT (SIRIUS 2)	SIRIUS_UNIT2	PECOS	SOLAR	WEST	2017		50.0	49.1	
870 BLUE WING 1 SOLAR	DG_BR00K_1UNIT	BEXAR	SOLAR	SOUTH	2010		7.6	7.6	
871 BLUE WING 2 SOLAR	DG_ELME_N_UNIT	BEXAR	SOLAR	SOUTH	2010		7.3	7.3	
872 BLUEBELL SOLAR (CAPRICORN RIDGE SOLAR)	CAPRIDG4_BB_PV	STERLING	SOLAR	WEST	2019		30.0	30.0	
873 BLUEBELL SOLAR II 1 (CAPRICORN RIDGE 4)	CAPRIDG4_BB2_PV1	STERLING	SOLAR	WEST	2021		100.0	100.0	
874 BLUEBELL SOLAR II 2 (CAPRICORN RIDGE 4)	CAPRIDG4_BB2_PV2	STERLING	SOLAR	WEST	2021		15.0	15.0	
875 BNB LAMESA SOLAR (PHASE I)	LMESASLR_UNIT1	DAWSON	SOLAR	WEST	2018		101.6	101.6	
876 BNB LAMESA SOLAR (PHASE II)	LMESASLR_IVORY	DAWSON	SOLAR	WEST	2018		50.0	50.0	
877 BOVINE SOLAR LLC	DG_BOVINE_BOVINE	AUSTIN	SOLAR	SOUTH	2018		5.0	5.0	
878 BOVINE SOLAR LLC	DG_BOVINE2_BOVINE2	AUSTIN	SOLAR	SOUTH	2018		5.0	5.0	
879 BRIGHTSIDE SOLAR	BRIGHTSD_UNIT1	BEE	SOLAR	SOUTH	2022		53.4	50.0	
880 BRONSON SOLAR I	DG_BRNSN_BRNSN	FORT BEND	SOLAR	HOUSTON	2018		5.0	5.0	
881 BRONSON SOLAR II	DG_BRNSN2_BRNSN2	FORT BEND	SOLAR	HOUSTON	2018		5.0	5.0	
882 CASCADE SOLAR I	DG_CASCADE_CASCADE	WHARTON	SOLAR	SOUTH	2018		5.0	5.0	
883 CASCADE SOLAR II	DG_CASCADE2_CASCADE	WHARTON	SOLAR	SOUTH	2018		5.0	5.0	
884 CASTLE GAP SOLAR	CASL_GAP_UNIT1	UPTON	SOLAR	WEST	2018		180.0	180.0	
885 CATAN SOLAR	DG_CS10_CATAN	KARNES	SOLAR	SOUTH	2020		10.0	10.0	
886 CHISUM SOLAR	DG_CHISUM_CHISUM	LAMAR	SOLAR	NORTH	2018		10.0	10.0	
887 COMMERCE_SOLAR	DG_X443PV1_SWRI_PV1	BEXAR	SOLAR	SOUTH	2019		5.0	5.0	
888 CONIGLIO SOLAR	CONIGLIO_UNIT1	FANNIN	SOLAR	NORTH	2021		125.7	125.7	
889 CORAZON SOLAR PHASE I	CORAZON_UNIT1	WEBB	SOLAR	SOUTH	2021		202.6	202.6	
890 DANCIGER SOLAR U1	DAG_UNIT1	BRAZORIA	SOLAR	COASTAL	2023		101.4	100.0	
891 DANCIGER SOLAR U2	DAG_UNIT2	BRAZORIA	SOLAR	COASTAL	2023		101.4	100.0	
892 EAST BLACKLAND SOLAR (PFLUGERVILLE SOLAR)	E_BLACK_UNIT_1	TRAVIS	SOLAR	SOUTH	2021		144.0	144.0	
893 EDDY SOLAR II	DG_EDDYII_EDDYII	MCLENNAN	SOLAR	NORTH	2018		10.0	10.0	
894 ELARA SOLAR	ELARA_SL_UNIT1	FRIO	SOLAR	SOUTH	2022		132.4	132.4	
895 EMERALD GROVE SOLAR (PECOS SOLAR POWER I)	EGROVESL_UNIT1	CRANE	SOLAR	WEST	2023		109.5	108.0	
896 EUNICE SOLAR U1	EUNICE_PV1	ANDREWS	SOLAR	WEST	2021		189.6	189.6	
897 EUNICE SOLAR U2	EUNICE_PV2	ANDREWS	SOLAR	WEST	2021		237.1	237.1	
898 FIFTH GENERATION SOLAR 1	DG_FIFTHGS1_FGSOLAR	TRAVIS	SOLAR	SOUTH	2016		6.8	6.8	
899 FOWLER RANCH	FWLR_SLR_UNIT1	CRANE	SOLAR	WEST	2020		152.5	150.0	
900 FS BARILLA SOLAR-PECOS	HOVEY_UNIT1	PECOS	SOLAR	WEST	2015		22.0	22.0	
901 FS EAST PECOS SOLAR	BOOTLEG_UNIT1	PECOS	SOLAR	WEST	2017		126.0	121.1	
902 GALLOWAY 1 SOLAR	GALLOWAY_SOLAR1	CONCHO	SOLAR	WEST	2021		251.4	250.0	
903 GREASEWOOD SOLAR 1	GREASWOD_UNIT1	PECOS	SOLAR	WEST	2021		126.3	124.6	
904 GREASEWOOD SOLAR 2	GREASWOD_UNIT2	PECOS	SOLAR	WEST	2021		132.2	130.4	
905 GRIFFIN SOLAR	DG_GRIFFIN_GRIFFIN	MCLENNAN	SOLAR	NORTH	2019		5.0	5.0	
906 HIGHWAY 56	DG_HWY56_HWY56	GRAYSON	SOLAR	NORTH	2017		5.3	5.3	
907 HM SEALY SOLAR 1	DG_SEALY_1UNIT	AUSTIN	SOLAR	SOUTH	2015		1.6	1.6	
908 HOLSTEIN SOLAR 1	HOLSTEIN_SOLAR1	NOLAN	SOLAR	WEST	2020		102.2	102.2	
909 HOLSTEIN SOLAR 2	HOLSTEIN_SOLAR2	NOLAN	SOLAR	WEST	2020		102.3	102.3	
910 IMPACT SOLAR	IMPACT_UNIT1	LAMAR	SOLAR	NORTH	2021		198.5	198.5	
911 JUNO SOLAR PHASE I	JUNO_UNIT1	BORDEN	SOLAR	WEST	2021		162.1	162.1	
912 JUNO SOLAR PHASE II	JUNO_UNIT2	BORDEN	SOLAR	WEST	2021		143.5	143.5	
913 KELLAM SOLAR	KELAM_SL_UNIT1	VAN ZANDT	SOLAR	NORTH	2020		59.8	59.8	
914 LAMPWICK SOLAR	DG_LAMPWICK_LAMPWI	MENARD	SOLAR	WEST	2019		7.5	7.5	
915 LAPETUS SOLAR	LAPETUS_UNIT_1	ANDREWS	SOLAR	WEST	2020		100.7	100.7	
916 LEON	DG_LEON_LEON	HUNT	SOLAR	NORTH	2017		10.0	10.0	
917 LILY SOLAR	LILY_SOLAR1	KAUFMAN	SOLAR	NORTH	2021		147.6	147.6	
918 LONGBOW SOLAR	LON_SOLAR1	BRAZORIA	SOLAR	HOUSTON	2022		78.2	77.0	
919 LONG DRAW SOLAR U1	LGDRAW_S_UNIT1_1	BORDEN	SOLAR	WEST	2021		98.5	98.5	
920 LONG DRAW SOLAR U2	LGDRAW_S_UNIT1_2	BORDEN	SOLAR	WEST	2021		128.3	128.3	
921 MARLIN	DG_MARLIN_MARLIN	FALLS	SOLAR	NORTH	2017		5.3	5.3	
922 MARS SOLAR (DG)	DG_MARS_MARS	WEBB	SOLAR	SOUTH	2019		10.0	10.0	
923 MISAE SOLAR U1	MISAE_UNIT1	CHILDRESS	SOLAR	PANHANDLE	2021		121.4	121.4	
924 MISAE SOLAR U2	MISAE_UNIT2	CHILDRESS	SOLAR	PANHANDLE	2021		118.6	118.6	
925 NEBULA SOLAR (RAYOS DEL SOL) U1	NEBULA_UNIT1	CAMERON	SOLAR	COASTAL	2022		137.5	137.5	
926 NOBLE SOLAR U1	NOBLESRL_SOLAR1	DENTON	SOLAR	NORTH	2022		148.8	146.7	
927 NOBLE SOLAR U2	NOBLESRL_SOLAR2	DENTON	SOLAR	NORTH	2022		130.2	128.3	
928 NORTH GAINESVILLE	DG_NGNSVL_NGAINESV	COOKE	SOLAR	NORTH	2017		5.2	5.2	
929 OBERON SOLAR	OBERON_UNIT_1	ECTOR	SOLAR	WEST	2020		180.0	180.0	
930 OCI ALAMO 1 SOLAR	OCI_ALM1_UNIT1	BEXAR	SOLAR	SOUTH	2013		39.2	39.2	
931 OCI ALAMO 2 SOLAR-ST. HEDWIG	DG_STHWG_UNIT1	BEXAR	SOLAR	SOUTH	2014		4.4	4.4	
932 OCI ALAMO 3-WALZEM SOLAR	DG_WALZM_UNIT1	BEXAR	SOLAR	SOUTH	2014		5.5	5.5	
933 OCI ALAMO 4 SOLAR-BRACKETVILLE	ECLIPSE_UNIT1	KINNEY	SOLAR	SOUTH	2014		37.6	37.6	
934 OCI ALAMO 5 (DOWNIE RANCH)	HELIOS_UNIT1	UVALDE	SOLAR	SOUTH	2015		100.0	100.0	
935 OCI ALAMO 6 (SIRIUS/WEST TEXAS)	SIRIUS_UNIT1	PECOS	SOLAR	WEST	2017		110.2	110.2	
936 OCI ALAMO 7 (PAINT CREEK)	SOLARA_UNIT1	HASKELL	SOLAR	WEST	2016		112.0	112.0	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
937 PHOEBE SOLAR 1		PHOEBE_UNIT1	WINKLER	SOLAR	WEST	2019	125.0	125.1	
938 PHOEBE SOLAR 2		PHOEBE_UNIT2	WINKLER	SOLAR	WEST	2019	128.0	128.1	
939 PHOENIX SOLAR		PHOENIX_UNIT1	FANNIN	SOLAR	NORTH	2021	83.9	83.9	
940 POWERFIN KINGSBERY		DG_PFK_PFKPV	TRAVIS	SOLAR	SOUTH	2017	2.6	2.6	
941 PROSPERO SOLAR 1 U1		PROSPERO_UNIT1	ANDREWS	SOLAR	WEST	2020	153.6	153.6	
942 PROSPERO SOLAR 1 U2		PROSPERO_UNIT2	ANDREWS	SOLAR	WEST	2020	150.0	150.0	
943 PROSPERO SOLAR 2 U1		PRSPERO2_UNIT1	ANDREWS	SOLAR	WEST	2021	126.5	126.5	
944 PROSPERO SOLAR 2 U2		PRSPERO2_UNIT2	ANDREWS	SOLAR	WEST	2021	126.4	126.4	
945 QUEEN SOLAR PHASE I		QUEEN_SL_SOLAR1	UPTON	SOLAR	WEST	2020	102.5	102.5	
946 QUEEN SOLAR PHASE I		QUEEN_SL_SOLAR2	UPTON	SOLAR	WEST	2020	102.5	102.5	
947 QUEEN SOLAR PHASE II		QUEEN_SL_SOLAR3	UPTON	SOLAR	WEST	2020	97.5	97.5	
948 QUEEN SOLAR PHASE II		QUEEN_SL_SOLAR4	UPTON	SOLAR	WEST	2020	107.5	107.5	
949 RAMBLER SOLAR		RAMBLER_UNIT1	TOM GREEN	SOLAR	WEST	2020	211.2	200.0	
950 RE ROSEROCK SOLAR 1		REROCK_UNIT1	PECOS	SOLAR	WEST	2016	78.8	78.8	
951 RE ROSEROCK SOLAR 2		REROCK_UNIT2	PECOS	SOLAR	WEST	2016	78.8	78.8	
952 REDBARN SOLAR 1 (RE MAPLEWOOD 2A SOLAR)		REDBARN_UNIT_1	PECOS	SOLAR	WEST	2021	222.0	222.0	
953 REDBARN SOLAR 2 (RE MAPLEWOOD 2B SOLAR)		REDBARN_UNIT_2	PECOS	SOLAR	WEST	2021	28.0	28.0	
954 RENEWABLE ENERGY ALTERNATIVES-CCS1		DG_COSERVSS_CSS1	DENTON	SOLAR	NORTH	2015	2.0	2.0	
955 RIGGINS (SE BUCKTHORN WESTEX SOLAR)		RIGGINS_UNIT1	PECOS	SOLAR	WEST	2018	155.4	150.0	
956 RIPPEY SOLAR		RIPPEY_UNIT1	COOKE	SOLAR	NORTH	2020	59.8	59.8	
957 SOLAIREHOLMAN 1		LASSO_UNIT1	BREWSTER	SOLAR	WEST	2018	50.0	50.0	
958 SP-TX-12-PHASE B		SPTX12B_UNIT1	UPTON	SOLAR	WEST	2017	157.5	157.5	
959 STERLING		DG_STRLING_STRLING	HUNT	SOLAR	NORTH	2018	10.0	10.0	
960 STRATEGIC SOLAR 1		STRATEGC_UNIT1	ELLIS	SOLAR	NORTH	2022	135.0	135.0	
961 SUNEDISON RABEL ROAD SOLAR		DG_VALL1_1UNIT	BEXAR	SOLAR	SOUTH	2012	9.9	9.9	
962 SUNEDISON VALLEY ROAD SOLAR		DG_VALL2_1UNIT	BEXAR	SOLAR	SOUTH	2012	9.9	9.9	
963 SUNEDISON CPS3 SOMERSET 1 SOLAR		DG_SOME1_1UNIT	BEXAR	SOLAR	SOUTH	2012	5.6	5.6	
964 SUNEDISON SOMERSET 2 SOLAR		DG_SOME2_1UNIT	BEXAR	SOLAR	SOUTH	2012	5.0	5.0	
965 TAYGETE SOLAR 1 U1		TAYGETE_UNIT1	PECOS	SOLAR	WEST	2021	125.9	125.9	
966 TAYGETE SOLAR 1 U2		TAYGETE_UNIT2	PECOS	SOLAR	WEST	2021	128.9	128.9	
967 TITAN SOLAR (IP TITAN) U1		TI_SOLAR_UNIT1	CULBERSON	SOLAR	WEST	2021	136.8	136.8	
968 TITAN SOLAR (IP TITAN) U2		TI_SOLAR_UNIT2	CULBERSON	SOLAR	WEST	2021	131.1	131.1	
969 TPE ERATH SOLAR		DG_ERATH_ERATH21	ERATH	SOLAR	NORTH	2021	10.0	10.0	
970 VANCOURT SOLAR		VANCOURT_UNIT1	CAMERON	SOLAR	COASTAL	2023	45.7	45.7	
971 VISION SOLAR 1		VISION_UNIT1	NAVARRO	SOLAR	NORTH	2022	129.2	127.0	
972 WAGYU SOLAR		WGU_UNIT1	BRAZORIA	SOLAR	COASTAL	2021	120.0	120.0	
973 WALNUT SPRINGS		DG_WLNTSPRG_1UNIT	BOSQUE	SOLAR	NORTH	2016	10.0	10.0	
974 WAYMARK SOLAR		WAYMARK_UNIT1	UPTON	SOLAR	WEST	2018	182.0	182.0	
975 WEBBERVILLE SOLAR		WEBBER_S_WSP1	TRAVIS	SOLAR	SOUTH	2011	26.7	26.7	
976 WEST MOORE II		DG_WMOOREII_WMOOR	GRAYSON	SOLAR	NORTH	2018	5.0	5.0	
977 WEST OF PECOS SOLAR		W_PECOS_UNIT1	REEVES	SOLAR	WEST	2019	100.0	100.0	
978 WESTORIA SOLAR U1		WES_UNIT1	BRAZORIA	SOLAR	COASTAL	2022	101.6	101.6	
979 WESTORIA SOLAR U2		WES_UNIT2	BRAZORIA	SOLAR	COASTAL	2022	101.6	101.6	
980 WHITESBORO		DG_WBORO_WHTSBOR	GRAYSON	SOLAR	NORTH	2017	5.0	5.0	
981 WHITESBORO II		DG_WBOROI_WHBORO	GRAYSON	SOLAR	NORTH	2017	5.0	5.0	
982 WHITEWRIGHT		DG_WHTRT_WHTRGHT	FANNIN	SOLAR	NORTH	2017	10.0	10.0	
983 WHITNEY SOLAR		DG_WHITNEY_SOLAR1	BOSQUE	SOLAR	NORTH	2017	10.0	10.0	
984 YELLOW JACKET SOLAR		DG_YLWJACKET_YLWJA	BOSQUE	SOLAR	NORTH	2018	5.0	5.0	
985 Operational Capacity Total (Solar)							9,991.3	9,941.9	
986 Solar Peak Average Capacity Percentage		SOLAR_PEAK_PCT	%				100.0	79.0	
987									
988 Operational Resources (Solar) - Synchronized but not Approved for Commercial Operations									
989 BIG STAR SOLAR U1	21INR0413	BIG_STAR_UNIT1	BASTROP	SOLAR	SOUTH	2023	132.3	130.0	
990 BIG STAR SOLAR U2	21INR0413	BIG_STAR_UNIT2	BASTROP	SOLAR	SOUTH	2023	70.8	70.0	
991 BLUE JAY SOLAR I	21INR0538	BLUEJAY_UNIT1	GRIMES	SOLAR	NORTH	2023	69.0	69.0	
992 BLUE JAY SOLAR II	19INR0085	BLUEJAY_UNIT2	GRIMES	SOLAR	NORTH	2023	141.0	141.0	
993 BPL FILES SOLAR	20INR0164	FILESLR_PV1	HILL	SOLAR	NORTH	2023	146.1	145.0	
994 BUFFALO CREEK (OLD 300 SOLAR CENTER) U1	21INR0406	BCK_UNIT1	FORT BEND	SOLAR	HOUSTON	2023	217.5	217.5	
995 BUFFALO CREEK (OLD 300 SOLAR CENTER) U2	21INR0406	BCK_UNIT2	FORT BEND	SOLAR	HOUSTON	2023	221.3	221.3	
996 CROWN SOLAR	21INR0323	CRWN_SLR_UNIT1	FALLS	SOLAR	NORTH	2023	101.3	100.7	
997 FIGHTING JAYS SOLAR U1	21INR0278	JAY_UNIT1	FORT BEND	SOLAR	HOUSTON	2023	179.5	179.6	
998 FIGHTING JAYS SOLAR U2	21INR0278	JAY_UNIT2	FORT BEND	SOLAR	HOUSTON	2023	171.8	171.9	
999 GOLINDA SOLAR	21INR0434	GOLINDA_UNIT1	FALLS	SOLAR	NORTH	2023	101.1	100.5	
1000 GRIZZLY RIDGE SOLAR	21INR0375	GRIZZLY_SOLAR1	HAMILTON	SOLAR	NORTH	2023	101.7	100.0	
1001 HOVEY (BARILLA SOLAR 1B)	12INR0059b	HOVEY_UNIT2	PECOS	SOLAR	WEST	2023	7.4	7.4	
1002 JADE SOLAR UNIT 1	22INR0360	JADE_SLR_UNIT1	SCURRY	SOLAR	WEST	2023	158.8	158.0	
1003 JADE SOLAR UNIT 2	22INR0360	JADE_SLR_UNIT2	SCURRY	SOLAR	WEST	2023	162.4	162.0	
1004 MCLEAN (SHAKES) SOLAR	19INR0073	MCLNSLR_UNIT1	DIMMIT	SOLAR	SOUTH	2023	207.4	200.0	
1005 MUSTANG CREEK SOLAR U1	18INR0050	MUSTNGCK_SOLAR1	JACKSON	SOLAR	SOUTH	2023	60.2	60.0	
1006 MUSTANG CREEK SOLAR U2	18INR0050	MUSTNGCK_SOLAR2	JACKSON	SOLAR	SOUTH	2023	90.3	90.0	
1007 MYRTLE SOLAR U1	19INR0041	MYR_UNIT1	BRAZORIA	SOLAR	COASTAL	2023	171.6	167.2	
1008 MYRTLE SOLAR U2	19INR0041	MYR_UNIT2	BRAZORIA	SOLAR	COASTAL	2023	149.6	145.8	
1009 PISGAH RIDGE SOLAR U1	22INR0254	PISGAH_SOLAR1	NAVARRO	SOLAR	NORTH	2023	189.4	186.5	
1010 PISGAH RIDGE SOLAR U2	22INR0254	PISGAH_SOLAR2	NAVARRO	SOLAR	NORTH	2023	64.4	63.5	
1011 PLAINVIEW SOLAR (RAMSEY SOLAR) U1	20INR0130	PLN_UNIT1	WHARTON	SOLAR	SOUTH	2023	270.0	257.0	
1012 PLAINVIEW SOLAR (RAMSEY SOLAR) U2	20INR0130	PLN_UNIT2	WHARTON	SOLAR	SOUTH	2023	270.0	257.0	
1013 RADIAN SOLAR U1	21INR0205	RADN_SLR_UNIT1	BROWN	SOLAR	NORTH	2023	161.4	158.9	
1014 RADIAN SOLAR U2	21INR0205	RADN_SLR_UNIT2	BROWN	SOLAR	NORTH	2023	166.0	162.9	
1015 RATLIFF SOLAR (CONCHO VALLEY SOLAR)	21INR0384	RATLIFF_SOLAR1	TOM GREEN	SOLAR	WEST	2023	162.4	159.8	
1016 ROSELAND SOLAR U1	20INR0205	ROSELAND_SOLAR1	FALLS	SOLAR	NORTH	2023	254.0	250.0	
1017 ROSELAND SOLAR U2	20INR0205	ROSELAND_SOLAR2	FALLS	SOLAR	NORTH	2023	167.9	165.3	
1018 ROSELAND SOLAR U3	22INR0506	ROSELAND_SOLAR3	FALLS	SOLAR	NORTH	2023	86.1	84.7	
1019 ROWLAND SOLAR I	19INR0131	ROW_UNIT1	FORT BEND	SOLAR	HOUSTON	2023	101.7	100.0	
1020 TAYGETE II SOLAR U1	21INR0233	TAYGETE2_UNIT1	PECOS	SOLAR	WEST	2023	101.9	101.9	
1021 TAYGETE II SOLAR U2	21INR0233	TAYGETE2_UNIT2	PECOS	SOLAR	WEST	2023	101.9	101.9	
1022 TAVENER (FORT BEND SOLAR)	18INR0053	TAV_UNIT1	FORT BEND	SOLAR	HOUSTON	2023	143.6	143.6	
1023 SAMSON SOLAR 1 U1	21INR0221	SAMSON_1_G1	LAMAR	SOLAR	NORTH	2023	128.4	125.0	
1024 SAMSON SOLAR 1 U2	21INR0221	SAMSON_1_G2	LAMAR	SOLAR	NORTH	2023	128.4	125.0	
1025 SAMSON SOLAR 3 U1	21INR0491	SAMSON_3_G1	LAMAR	SOLAR	NORTH	2023	128.4	125.0	
1026 SAMSON SOLAR 3 U2	21INR0491	SAMSON_3_G2	LAMAR	SOLAR	NORTH	2023	128.4	125.0	
1027 SUN VALLEY U1	19INR0169	SUNVASLR_UNIT1	HILL	SOLAR	NORTH	2023	165.8	165.8	
1028 SUN VALLEY U2	19INR0169	SUNVASLR_UNIT2	HILL	SOLAR	NORTH	2023	86.2	86.2	
1029 Operational Capacity - Synchronized but not Approved for Commercial Operations Total (Solar)							5,667.5	5,581.9	
1030 Solar Peak Average Capacity Percentage		SOLAR_SYNC_PEAK_PC	%				100.0	79.0	
1031									
1032 Operational Resources (Storage)									
1033 AZURE SKY BESS		AZURE_BESS1	HASKELL	STORAGE	WEST	2022	77.6	77.6	
1034 BAT CAVE		BATCAVE_BES1	MASON	STORAGE	SOUTH	2021	100.5	100.5	
1035 BLUE SUMMIT BATTERY		BLSUMMIT_BATTERY	WILBARGER	STORAGE	WEST	2017	30.0	30.0	
1036 BRP ALVIN (DGR)		ALVIN_UNIT1	BRAZORIA	STORAGE	COASTAL	2022	10.0	10.0	
1037 BRP ANGELTON (DGR)		ANGLETON_UNIT1	BRAZORIA	STORAGE	COASTAL	2022	10.0	10.0	
1038 BRP BRAZORIA		BRAZORIA_UNIT1	BRAZORIA	STORAGE	COASTAL	2020	10.0	10.0	
1039 BRP DICKINSON (DGR)		DICKNSON_UNIT1	GALVESTON	STORAGE	HOUSTON	2022	10.0	10.0	
1040 BRP HEIGHTS (DGR)		HEIGHTTN_UNIT1	GALVESTON	STORAGE	HOUSTON	2022	10.0	10.0	
1041 BRP LOOP 463 (DGR)		L_463S_UNIT1	VICTORIA	STORAGE	SOUTH	2023	10.0	10.0	
1042 BRP LOPENO (DGR)		BRP_LOP1_UNIT1	ZAPATA	STORAGE	SOUTH	2022	10.0	9.9	
1043 BRP MAGNOLIA (DGR)		MAGNO_TN_UNIT1	GALVESTON	STORAGE	HOUSTON	2022	10.0	10.0	
1044 BRP ODESSA SW (DGR)		ODESW_UNIT1	ECTOR	STORAGE	WEST	2020	10.0	9.9	
1045 BRP PUEBLO I (DGR)		BRP_PBL1_UNIT1	MAVERICK	STORAGE	SOUTH	2022	10.0	9.9	
1046 BRP PUEBLO II (DGR)		BRP_PBL2_UNIT1	MAVERICK	STORAGE	SOUTH	2022	10.0	9.9	
1047 BRP RANCHTOWN (DGR)		BRP_RNC1_UNIT1	BEXAR	STORAGE	SOUTH	2021	10.0	9.9	
1048 BRP SWEENY (DGR)		SWEENY_UNIT1	BRAZORIA	STORAGE	COASTAL	2022	10.0	10.0	
1049 BRP ZAPATA I (DGR)		BRP_ZPT1_UNIT1	ZAPATA	STORAGE	SOUTH	2022	10.0	9.9	
1050 BRP ZAPATA II (DGR)		BRP_ZPT2_UNIT1	ZAPATA	STORAGE	SOUTH	2022	10.0	9.9	
1051 BYRD RANCH STORAGE		BYRDR_ES_BESS1	BRAZORIA	STORAGE	COASTAL	2022	50.6	50.0	
1052 CASTLE GAP BATTERY		CASL_GAP_BATTERY1	UPTON	STORAGE	WEST	2018	9.9	9.9	
1053 CATARINA BESS (DGR)		CATARINA_BESS	DIMMIT	STORAGE	SOUTH	2022	10.0	9.9	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
1054 CEDARVALE BESS (DGR)		CEDRVALE_BESS	REEVES	STORAGE	WEST	2022	10.0	9.9	
1055 CHISHOLM GRID		CHISMGRD_BES1	TARRANT	STORAGE	NORTH	2021	101.7	100.0	
1056 COMMERCE ST ESS (DGR)		X443ESS1_SWRI	BEXAR	STORAGE	SOUTH	2020	10.0	10.0	
1057 COYOTE SPRINGS BESS (DGR)		COYOTSPR_BESS	REEVES	STORAGE	WEST	2022	10.0	9.9	
1058 CROSSETT POWER U1		CROSSETT_BES1	CRANE	STORAGE	WEST	2022	101.5	100.0	
1059 CROSSETT POWER U2		CROSSETT_BES2	CRANE	STORAGE	WEST	2022	101.5	100.0	
1060 DECORDOVA BESS U1		DCSES_BES1	HOOD	STORAGE	NORTH	2022	67.3	66.5	
1061 DECORDOVA BESS U2		DCSES_BES2	HOOD	STORAGE	NORTH	2022	67.3	66.5	
1062 DECORDOVA BESS U3		DCSES_BES3	HOOD	STORAGE	NORTH	2022	64.2	63.5	
1063 DECORDOVA BESS U4		DCSES_BES4	HOOD	STORAGE	NORTH	2022	64.2	63.5	
1064 ENDURANCE PARK STORAGE		ENDPARKS_ESS1	SCURRY	STORAGE	WEST	2022	51.5	50.0	
1065 EUNICE STORAGE		EUNICE_BES1	ANDREWS	STORAGE	WEST	2021	40.3	40.3	
1066 FAULKNER BESS (DGR)		FAULKNER_BESS	REEVES	STORAGE	WEST	2022	10.0	9.9	
1067 FLAT TOP BATTERY (DGR)		FLAT_TOP_BESS1	REEVES	STORAGE	WEST	2023	9.9	9.9	
1068 FLOWER VALLEY BATTERY (DGR)		FLVABES1_FLATU1	REEVES	STORAGE	WEST	2021	9.9	9.9	
1069 FLOWER VALLEY II BATT		FLOWERII_BESS1	REEVES	STORAGE	WEST	2022	101.5	100.0	
1070 GAMBIT BATTERY		GAMBIT_BESS1	BRAZORIA	STORAGE	COASTAL	2021	102.4	100.0	
1071 HOEFSROAD BESS (DGR)		HRBESS_BESS	REEVES	STORAGE	WEST	2020	2.0	2.0	
1072 HOLCOMB BESS (DGR)		HOLCOMB_BESS	LA SALLE	STORAGE	SOUTH	2023	10.0	9.9	
1073 INADALE ESS		INDL_ESS	NOLAN	STORAGE	WEST	2018	9.9	9.9	
1074 JOHNSON CITY BESS (DGR)		JC_BAT_UNIT_1	BLANCO	STORAGE	SOUTH	2020	2.3	2.3	
1075 KINGSBERY ENERGY STORAGE SYSTEM		DG_KB_ESS_KB_ESS	TRAVIS	STORAGE	SOUTH	2017	1.5	1.5	
1076 LILY STORAGE		LILY_BESS1	KAUFMAN	STORAGE	NORTH	2021	51.7	51.7	
1077 LONESTAR BESS (DGR)		LONESTAR_BESS	WARD	STORAGE	WEST	2022	10.0	9.9	
1078 MADERO GRID U1		MADERO_UNIT1	HIDALGO	STORAGE	SOUTH	2023	100.8	100.0	
1079 MADERO GRID U2 (IGNACIO GRID)		MADERO_UNIT2	HIDALGO	STORAGE	SOUTH	2023	100.8	100.0	
1080 MU ENERGY STORAGE SYSTEM		DG_MU_ESS_MU_ESS	TRAVIS	STORAGE	SOUTH	2018	1.5	1.5	
1081 NOBLE STORAGE U1		NOBLES1R_BESS1	DENTON	STORAGE	NORTH	2022	63.5	62.5	
1082 NOBLE STORAGE U2		NOBLES1R_BESS2	DENTON	STORAGE	NORTH	2022	63.5	62.5	
1083 NOTREES BATTERY FACILITY		NWF_NBS	WINKLER	STORAGE	WEST	2013	36.0	33.7	
1084 NORTH COLUMBIA (ROUGHNECK STORAGE)		NCO_ESS1	BRAZORIA	STORAGE	COASTAL	2022	51.8	50.0	
1085 NORTH FORK		NF_BRP_BES1	WILLIAMSON	STORAGE	SOUTH	2021	100.5	100.5	
1086 PORT LAVACA BATTERY (DGR)		PRTLAVS_BESS1	CALHOUN	STORAGE	COASTAL	2020	9.9	9.9	
1087 PROSPECT STORAGE (DGR)		WCOLLDG_BSS_U1	BRAZORIA	STORAGE	COASTAL	2020	9.9	9.9	
1088 PYRON ESS		PYR_ESS	SCURRY	STORAGE	WEST	2018	9.9	9.9	
1089 RABBIT HILL ENERGY STORAGE PROJECT (DGR)		RHES2_ESS_1	WILLIAMSON	STORAGE	SOUTH	2020	9.9	9.9	
1090 RATTLESNAKE BESS (DGR)		RTLSNAKE_BESS	WARD	STORAGE	WEST	2022	10.0	9.9	
1091 REPUBLIC ROAD STORAGE		RPUBRDS_ESS1	ROBERTSON	STORAGE	NORTH	2022	51.8	50.0	
1092 SADDLEBACK BESS (DGR)		SADLBACK_BESS	REEVES	STORAGE	WEST	2022	10.0	9.9	
1093 SARAGOSA BESS (DGR)		SGSA_BESS1	REEVES	STORAGE	WEST	2022	10.0	9.9	
1094 SCREWBEAN BESS (DGR)		SBEAN_BESS	CULBERSON	STORAGE	WEST	2023	10.0	9.9	
1095 SILICON HILL STORAGE U1		SLCNHLS_ESS1	TRAVIS	STORAGE	SOUTH	2023	51.8	50.0	
1096 SILICON HILL STORAGE U2		SLCNHLS_ESS2	TRAVIS	STORAGE	SOUTH	2023	51.8	50.0	
1097 SNYDER (DGR)		SNY_BESS_UNIT1	SCURRY	STORAGE	WEST	2021	10.0	9.9	
1098 SWEETWATER BESS (DGR)		SWT_BESS_UNIT1	NOLAN	STORAGE	WEST	2021	10.0	9.9	
1099 SWOOSE BATTERY (PYOTE) (DGR)		SWOOSE1_SWOOSEU1	WARD	STORAGE	WEST	2021	9.9	9.9	
1100 SWOOSE II		SWOOSEII_BESS1	WARD	STORAGE	WEST	2022	101.5	100.0	
1101 TOS BATTERY STORAGE (DGR)		TOSBATT_UNIT1	MIDLAND	STORAGE	WEST	2017	2.0	2.0	
1102 TOYAH POWER STATION (DGR)		TOYAH_BESS	REEVES	STORAGE	WEST	2021	10.0	9.9	
1103 TRIPLE BUTTE (DGR)		TRIPBUT1_BELU1	PECOS	STORAGE	WEST	2021	9.2	7.5	
1104 WESTOVER BESS (DGR)		WOV_BESS_UNIT1	ECTOR	STORAGE	WEST	2021	10.0	9.9	
1105 WORSHAM BATTERY (DGR)		WORSHAM_BESS1	REEVES	STORAGE	WEST	2023	9.9	9.9	
1106 YOUNICOS FACILITY		DG_YOUNICOS_YINC1_1	TRAVIS	STORAGE	SOUTH	2015	2.0	2.0	
1107 Operational Capacity Total (Storage)							2,365.5	2,335.0	
1108 Storage Peak Average Capacity Percentage		STORAGE_PEAK_PCT	%				100.0	-	
1109									
1110 Operational Resources (Storage) - Synchronized but not Approved for Commercial Operations									
1111 ANCHOR BESS U1	21INR0474	ANCHOR_BESS1	CALLAHAN	STORAGE	WEST	2023	35.2	35.2	
1112 ANCHOR BESS U2	21INR0474	ANCHOR_BESS2	CALLAHAN	STORAGE	WEST	2023	36.3	36.3	
1113 BLUE JAY BESS	23INR0019	BLUEJAY_BESS1	GRIMES	STORAGE	NORTH	2023	51.6	50.0	
1114 GOMEZ BESS (DGR)	23INR0519	GOMZ_BESS	REEVES	STORAGE	WEST	2023	10.0	9.9	
1115 HIGH LONESOME BESS	20INR0280	HI_LONEB_BESS1	CROCKETT	STORAGE	WEST	2023	51.1	50.0	
1116 OLNEY BESS (DGR)	22INR0603	OLNEYTN_BESS	YOUNG	STORAGE	WEST	2023	10.0	9.9	
1117 PYRON BESS 2A	20INR0268	PYR_ESS2A	NOLAN	STORAGE	WEST	2023	15.1	15.1	
1118 PYRON BESS 2B	20INR0268	PYR_ESS2B	NOLAN	STORAGE	WEST	2023	15.1	15.1	
1119 QUEEN BESS	20INR0281	QUEEN_BA_BESS1	UPTON	STORAGE	WEST	2023	51.1	50.0	
1120 RIVER VALLEY STORAGE U1	20INR0290	RVRVLYS_ESS1	WILLIAMSON	STORAGE	SOUTH	2023	51.5	50.0	
1121 RIVER VALLEY STORAGE U2	20INR0293	RVRVLYS_ESS2	WILLIAMSON	STORAGE	SOUTH	2023	51.5	50.0	
1122 ROSELAND STORAGE	22INR0280	ROSELAND_BESS1	FALLS	STORAGE	NORTH	2023	51.6	50.0	
1123 SP TX-12B BESS	21INR0357	SPTX12B_BES1	UPTON	STORAGE	WEST	2023	22.7	22.7	
1124 TURQUOISE STORAGE	22INR0509	TURQBESS_BESS1	HUNT	STORAGE	NORTH	2023	196.2	190.0	
1125 VORTEX BESS	21INR0473	VORTEX_BESS1	THROCKMORTON	STORAGE	WEST	2023	121.8	121.8	
1126 WOLF TANK STORAGE	22INR0551	WFTANK_ESS1	WEBB	STORAGE	SOUTH	2023	150.4	150.0	
1127 Operational Capacity - Synchronized but not Approved for Commercial Operations Total (Storage)							921.1	906.0	
1128 Storage Peak Average Capacity Percentage		STORAGE_SYNC_PEAK_	%				100.0	-	
1129									
1130 Reliability Must-Run (RMR) Capacity		RMR_CAP_CONT					-	-	
1131									
1132 Capacity Pending Retirement		PENDRETIRE_CAP					-	-	
1133									
1134 Non-Synchronous Tie Resources									
1135 EAST TIE		DC_E	FANNIN	OTHER	NORTH		600.0	600.0	
1136 NORTH TIE		DC_N	WILBARGER	OTHER	WEST		220.0	220.0	
1137 LAREDO VFT TIE		DC_L	WEBB	OTHER	SOUTH		100.0	100.0	
1138 SHARYLAND RAILROAD TIE		DC_R	HIDALGO	OTHER	SOUTH		300.0	300.0	
1139 Non-Synchronous Ties Total							1,220.0	1,220.0	
1140 Non-Synchronous Ties Peak Average Capacity Percentage		DCTIE_PEAK_PCT	%				100.0	69.7	
1141									
1142 Planned Thermal Resources with Executed SGIA, Air Permit, GHG Permit and Proof of Adequate Water Supplies									
1143 AIR PRODUCTS GCA	21INR0012		GALVESTON	GAS-ST	HOUSTON	2023	60.0	60.0	
1144 BEACHWOOD II POWER STATION (U7-U8)	23INR0506		BRAZORIA	GAS-GT	COASTAL	2024	-	-	
1145 BROTMAN POWER STATION (U1 - U2)	23INR0613		BRAZORIA	GAS-GT	COASTAL	2024	-	-	Yes
1146 BROTMAN II POWER STATION (U7- U8)	23INR0551		BRAZORIA	GAS-GT	COASTAL	2023	121.0	89.2	
1147 FRONTERA ENERGY CENTER	23INR0472		HIDALGO	GAS-CC	SOUTH	2023	538.5	538.5	
1148 MIRAGE CTG 1	17INR0022		HARRIS	GAS-GT	HOUSTON	2023	-	-	
1149 REMY JADE POWER STATION	23INR0339		HARRIS	GAS-GT	HOUSTON	2024	-	-	
1150 REMY JADE II POWER STATION	24INR0382		HARRIS	GAS-GT	HOUSTON	2025	-	-	Yes
1151 SKY SEALY	21INR0500		AUSTIN	GAS-IC	SOUTH	2024	-	-	Yes
1152 TECO GTG2	23INR0408		HARRIS	GAS-GT	HOUSTON	2024	-	-	
1153 Planned Thermal Resources Total (Nuclear, Coal, Gas, Biomass)							719.5	687.7	
1154									
1155 Planned Wind Resources with Executed SGIA									
1156 BIG SAMPSON WIND	16INR0104		CROCKETT	WIND-O	WEST	2024	-	-	
1157 CANYON WIND	18INR0030		SCURRY	WIND-O	WEST	2023	-	-	
1158 CAROL WIND	20INR0217		POTTER	WIND-P	PANHANDLE	2024	-	-	
1159 CRAWFISH	19INR0177		WHARTON	WIND-O	SOUTH	2023	-	-	
1160 GOODNIGHT WIND	14INR0033		ARMSTRONG	WIND-P	PANHANDLE	2023	-	-	
1161 LOMA PINTA WIND	16INR0112		LA SALLE	WIND-O	SOUTH	2024	-	-	
1162 LORAIN WINDPARK PHASE III	18INR0068		MITCHELL	WIND-O	WEST	2024	-	-	
1163 MONARCH CREEK WIND	21INR0263		THROCKMORTON	WIND-O	WEST	2025	-	-	
1164 MONTE ALTO 2 WIND	19INR0023		WILLACY	WIND-C	COASTAL	2024	-	-	
1165 MONTE ALTO I WIND	19INR0022		WILLACY	WIND-C	COASTAL	2024	-	-	
1166 MONTGOMERY RANCH WIND	20INR0040		FOARD	WIND-O	WEST	2023	-	-	
1167 PIONEER DJ WIND	23INR0387		MIDLAND	WIND-O	WEST	2024	-	-	Yes
1168 RAY GULF WIND	22INR0517		WHARTON	WIND-O	SOUTH	2023	-	-	
1169 ROADRUNNER CROSSING WIND 1	19INR0117		EASTLAND	WIND-O	NORTH	2023	-	-	
1170 SHAMROCK	22INR0502		CROCKETT	WIND-O	WEST	2024	-	-	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
1171 SHEEP CREEK WIND	21INR0325		CALLAHAN	WIND-O	WEST	2023	-	-	
1172 SIETE	20INR0047		WEBB	WIND-O	SOUTH	2024	-	-	
1173 Planned Capacity Total (Wind)							-	-	
1174									
1175 Planned Wind Capacity Sub-total (Coastal Counties)		WIND_PLANNED_C					-	-	
1176 Wind Peak Average Capacity Percentage (Coastal)		WIND_PL_PEAK_PCT_C	%				100.0	60.0	
1177									
1178 Planned Wind Capacity Sub-total (Panhndle Counties)		WIND_PLANNED_P					-	-	
1179 Wind Peak Average Capacity Percentage (Panhndle)		WIND_PL_PEAK_PCT_P	%				100.0	30.0	
1180									
1181 Planned Wind Capacity Sub-total (Other counties)		WIND_PLANNED_O					-	-	
1182 Wind Peak Average Capacity Percentage (Other)		WIND_PL_PEAK_PCT_O	%				100.0	21.0	
1183									
1184 Planned Solar Resources with Executed SGIA									
1185 TV SOLAR	21INR0351		FAYETTE	SOLAR	SOUTH	2024	-	-	
1186 ADAMSTOWN SOLAR	21INR0210		WICHITA	SOLAR	WEST	2025	-	-	
1187 ALILA SOLAR	23INR0093		SAN PATRICIO	SOLAR	COASTAL	2024	-	-	
1188 AMSTERDAM SOLAR	21INR0256		BRAZORIA	SOLAR	COASTAL	2024	-	-	
1189 ANDROMEDA SOLAR	22INR0412		SCURRY	SOLAR	WEST	2023	320.0	320.0	
1190 ANGELO SOLAR	19INR0203		TOM GREEN	SOLAR	WEST	2024	-	-	
1191 ANGUS SOLAR	20INR0035		BOSQUE	SOLAR	NORTH	2024	-	-	
1192 ARMADILLO SOLAR	21INR0421		NAVARRO	SOLAR	NORTH	2024	-	-	
1193 ARROYO SOLAR	20INR0086		CAMERON	SOLAR	COASTAL	2024	-	-	
1194 ASH CREEK SOLAR	21INR0379		HILL	SOLAR	NORTH	2024	-	-	
1195 BAKER BRANCH SOLAR	23INR0026		LAMAR	SOLAR	NORTH	2024	-	-	
1196 BIG ELM SOLAR	21INR0353		BELL	SOLAR	NORTH	2024	-	-	
1197 BLUE SKY SOL	22INR0455		CROCKETT	SOLAR	WEST	2024	-	-	
1198 BRASS FORK SOLAR	22INR0270		HASKELL	SOLAR	WEST	2025	-	-	
1199 BRIGHT ARROW SOLAR	22INR0242		HOPKINS	SOLAR	NORTH	2023	-	-	
1200 BUCKEYE CORPUS FUELS SOLAR	22INR0397		NUECES	SOLAR	COASTAL	2025	-	-	
1201 CACHENA SOLAR	23INR0027		WILSON	SOLAR	SOUTH	2025	-	-	
1202 CAROL SOLAR	21INR0274		POTTER	SOLAR	PANHANDLE	2025	-	-	
1203 CASTRO SOLAR	20INR0050		CASTRO	SOLAR	PANHANDLE	2025	-	-	
1204 CHARGER SOLAR	23INR0047		REFUGIO	SOLAR	COASTAL	2025	-	-	
1205 CLUTCH CITY SOLAR	22INR0279		BRAZORIA	SOLAR	COASTAL	2025	-	-	
1206 COMPADRE SOLAR	24INR0023		HILL	SOLAR	NORTH	2024	-	-	
1207 CORAL SOLAR	22INR0295		FALLS	SOLAR	NORTH	2023	-	-	
1208 CORAZON SOLAR PHASE II	22INR0257		WEBB	SOLAR	SOUTH	2025	-	-	
1209 COTTONWOOD BAYOU SOLAR I	19INR0134		BRAZORIA	SOLAR	COASTAL	2024	-	-	
1210 CRADLE SOLAR	23INR0150		BRAZORIA	SOLAR	COASTAL	2025	-	-	Yes
1211 CROWDED STAR SOLAR	20INR0241		JONES	SOLAR	WEST	2025	-	-	
1212 CROWDED STAR SOLAR II	22INR0274		JONES	SOLAR	WEST	2025	-	-	
1213 DANISH FIELDS SOLAR I	20INR0069		WHARTON	SOLAR	SOUTH	2023	-	-	
1214 DAWN SOLAR	20INR0255		DEAF SMITH	SOLAR	PANHANDLE	2024	-	-	
1215 DELILAH SOLAR 1	22INR0202		LAMAR	SOLAR	NORTH	2024	-	-	
1216 DELILAH SOLAR 2	22INR0203		LAMAR	SOLAR	NORTH	2024	-	-	
1217 DELILAH SOLAR 3	23INR0042		LAMAR	SOLAR	NORTH	2023	-	-	
1218 DELILAH SOLAR 4	23INR0060		LAMAR	SOLAR	NORTH	2023	-	-	
1219 DESERT VINE SOLAR	22INR0307		ZAPATA	SOLAR	SOUTH	2024	-	-	
1220 DILEO SOLAR	22INR0359		BOSQUE	SOLAR	NORTH	2023	71.4	71.4	
1221 DONEGAL SOLAR	23INR0089		DICKENS	SOLAR	PANHANDLE	2024	-	-	
1222 DORI BQ SOLAR	23INR0040		HARRIS	SOLAR	HOUSTON	2024	-	-	Yes
1223 DR SOLAR	22INR0454		CULBERSON	SOLAR	WEST	2024	-	-	
1224 EASTBELL MILAM SOLAR	21INR0203		MILAM	SOLAR	SOUTH	2023	-	-	
1225 EIFFEL SOLAR	22INR0223		LAMAR	SOLAR	NORTH	2023	-	-	
1226 ELIZA SOLAR	21INR0368		KAUFMAN	SOLAR	NORTH	2024	-	-	
1227 ELLIS SOLAR	21INR0493		ELLIS	SOLAR	NORTH	2023	80.0	80.0	
1228 EQUINOX SOLAR 1	21INR0226		STARR	SOLAR	SOUTH	2026	-	-	
1229 ESTONIAN SOLAR FARM	22INR0335		DELTA	SOLAR	NORTH	2024	-	-	
1230 FAGUS SOLAR PARK (MISAE SOLAR II)	20INR0091		CHILDRESS	SOLAR	PANHANDLE	2024	-	-	
1231 FENCE POST SOLAR	22INR0404		NAVARRO	SOLAR	NORTH	2024	-	-	
1232 FIVE WELLS SOLAR	24INR0015		BELL	SOLAR	NORTH	2023	-	-	
1233 FRYE SOLAR	20INR0080		SWISHER	SOLAR	PANHANDLE	2024	-	-	
1234 GALACTIC SOLAR	23INR0144		GRAYSON	SOLAR	NORTH	2024	-	-	
1235 GALLOWAY 2 SOLAR	21INR0431		CONCHO	SOLAR	WEST	2023	-	-	
1236 GARCITAS CREEK SOLAR	23INR0223		JACKSON	SOLAR	SOUTH	2024	-	-	
1237 GP SOLAR	23INR0045		VAN ZANDT	SOLAR	NORTH	2024	-	-	
1238 GRANDSLAM SOLAR	21INR0391		ATASCOSA	SOLAR	SOUTH	2024	-	-	
1239 GRANSOLAR TEXAS ONE	22INR0511		MILAM	SOLAR	SOUTH	2024	-	-	
1240 GREATER BRYANT G SOLAR	23INR0300		MIDLAND	SOLAR	WEST	2024	-	-	
1241 GREEN HOLLY SOLAR	21INR0021		DAWSON	SOLAR	WEST	2024	-	-	
1242 GREYHOUND SOLAR	21INR0268		ECTOR	SOLAR	WEST	2025	-	-	
1243 GRIMES COUNTY SOLAR	23INR0160		GRIMES	SOLAR	NORTH	2025	-	-	
1244 GULF STAR SOLAR SLF (G-STAR SOLAR)	23INR0111		WHARTON	SOLAR	SOUTH	2024	-	-	
1245 HALO SOLAR	21INR0304		BELL	SOLAR	NORTH	2023	-	-	
1246 HAYHURST TEXAS SOLAR	22INR0363		CULBERSON	SOLAR	WEST	2023	-	-	
1247 HOPKINS SOLAR	20INR0210		HOPKINS	SOLAR	NORTH	2023	-	-	
1248 HORIZON SOLAR	21INR0261		FRIO	SOLAR	SOUTH	2023	-	-	
1249 HORNET SOLAR	23INR0021		SWISHER	SOLAR	PANHANDLE	2024	-	-	
1250 HOWLE SOLAR	20INR0075		ELLIS	SOLAR	NORTH	2024	-	-	
1251 HOYTE SOLAR	23INR0235		MILAM	SOLAR	SOUTH	2024	-	-	
1252 INDIGO SOLAR	21INR0031		FISHER	SOLAR	WEST	2024	-	-	
1253 INERTIA SOLAR	22INR0374		HASKELL	SOLAR	WEST	2025	-	-	
1254 JACKALOPE SOLAR	23INR0180		SAN PATRICIO	SOLAR	COASTAL	2024	-	-	
1255 JUNGSMANN SOLAR	22INR0356		MILAM	SOLAR	SOUTH	2024	-	-	
1256 LAVACA BAY SOLAR	23INR0084		MATAGORDA	SOLAR	COASTAL	2024	-	-	
1257 LONG POINT SOLAR	19INR0042		BRAZORIA	SOLAR	COASTAL	2024	-	-	
1258 LUNIS CREEK SOLAR 1	21INR0344		JACKSON	SOLAR	SOUTH	2024	-	-	
1259 MALEZA SOLAR	21INR0220		WHARTON	SOLAR	SOUTH	2024	-	-	
1260 MARKUM SOLAR	20INR0230		MCLENNAN	SOLAR	NORTH	2024	-	-	
1261 MATAGORDA SOLAR	22INR0342		MATAGORDA	SOLAR	COASTAL	2023	-	-	
1262 MERCURY I SOLAR	21INR0257		HILL	SOLAR	NORTH	2024	-	-	
1263 MERCURY II SOLAR	23INR0153		HILL	SOLAR	NORTH	2024	-	-	
1264 MORROW LAKE SOLAR	19INR0155		FRIO	SOLAR	SOUTH	2024	-	-	
1265 NABATOTO SOLAR NORTH	21INR0428		LEON	SOLAR	NORTH	2025	-	-	
1266 NAZARETH SOLAR	16INR0049		CASTRO	SOLAR	PANHANDLE	2025	-	-	
1267 NEPTUNE SOLAR	21INR0499		JACKSON	SOLAR	SOUTH	2023	-	-	
1268 NORIA SOLAR DCC	23INR0061		NUECES	SOLAR	COASTAL	2024	-	-	
1269 NORTON SOLAR	19INR0035		RUNNELS	SOLAR	WEST	2024	-	-	
1270 OLD HICKORY SOLAR	20INR0236		JACKSON	SOLAR	SOUTH	2025	-	-	
1271 ORIANA SOLAR	24INR0093		VICTORIA	SOLAR	SOUTH	2024	-	-	
1272 OUTPOST SOLAR	23INR0007		WEBB	SOLAR	SOUTH	2024	-	-	
1273 OYSTERCATCHER SOLAR	21INR0362		ELLIS	SOLAR	NORTH	2024	-	-	
1274 PEREGRINE SOLAR	22INR0283		GOLIAD	SOLAR	SOUTH	2024	-	-	
1275 PINE FOREST SOLAR	20INR0203		HOPKINS	SOLAR	NORTH	2024	-	-	
1276 PINK SOLAR	22INR0281		HUNT	SOLAR	NORTH	2023	-	-	
1277 PITTS DUDIK SOLAR	20INR0074		HILL	SOLAR	NORTH	2023	-	-	
1278 PORTER SOLAR	21INR0458		DENTON	SOLAR	NORTH	2024	-	-	
1279 RED HOLLY SOLAR	21INR0022		DAWSON	SOLAR	WEST	2024	-	-	
1280 REDONDA SOLAR	23INR0162		ZAPATA	SOLAR	SOUTH	2024	-	-	
1281 RED-TAILED HAWK SOLAR	21INR0389		WHARTON	SOLAR	SOUTH	2024	-	-	
1282 ROCINANTE SOLAR	23INR0231		GONZALES	SOLAR	SOUTH	2024	-	-	
1283 RODEO SOLAR	19INR0103		ANDREWS	SOLAR	WEST	2025	-	-	
1284 ROWLAND SOLAR II	22INR0482		FORT BEND	SOLAR	HOUSTON	2024	-	-	
1285 SAMSON SOLAR 2	21INR0490		LAMAR	SOLAR	NORTH	2024	-	-	
1286 SBRANCH SOLAR PROJECT	22INR0205		WHARTON	SOLAR	SOUTH	2024	-	-	
1287 SCHOOLHOUSE SOLAR	22INR0211		LEE	SOLAR	SOUTH	2025	-	-	

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
1288 SECOND DIVISION SOLAR	20INR0248		BRAZORIA	SOLAR	COASTAL	2024	-	-	
1289 SHAULA I SOLAR	22INR0251		DEWITT	SOLAR	SOUTH	2025	-	-	
1290 SHAULA II SOLAR	22INR0267		DEWITT	SOLAR	SOUTH	2026	-	-	
1291 SIGNAL SOLAR	20INR0208		HUNT	SOLAR	NORTH	2024	-	-	
1292 SODA LAKE SOLAR 1 SLF	23INR0080		CRANE	SOLAR	WEST	2023	-	-	
1293 SODA LAKE SOLAR 2	20INR0143		CRANE	SOLAR	WEST	2024	-	-	
1294 SP JAGUAR SOLAR	24INR0038		MCLENNAN	SOLAR	NORTH	2024	-	-	
1295 SPACE CITY SOLAR	21INR0341		WHARTON	SOLAR	SOUTH	2025	-	-	
1296 SPARTA SOLAR	22INR0352		BEE	SOLAR	SOUTH	2023	-	-	
1297 STAMPEDE SOLAR	22INR0409		HOPKINS	SOLAR	NORTH	2023	-	-	
1298 STARLING SOLAR	23INR0035		GONZALES	SOLAR	SOUTH	2024	-	-	
1299 STARR SOLAR RANCH	20INR0216		STARR	SOLAR	SOUTH	2024	-	-	
1300 SUNRAY	21INR0395		UVALDE	SOLAR	SOUTH	2024	-	-	
1301 TALITHA SOLAR	21INR0393		JIM WELLS	SOLAR	SOUTH	2024	-	-	
1302 TANGLEWOOD SOLAR	23INR0054		BRAZORIA	SOLAR	COASTAL	2025	-	-	
1303 TEXANA SOLAR	18INR0058		WHARTON	SOLAR	SOUTH	2024	-	-	
1304 TEXAS SOLAR NOVA	19INR0001		KENT	SOLAR	WEST	2023	-	-	
1305 TEXAS SOLAR NOVA 2	20INR0269		KENT	SOLAR	WEST	2023	-	-	
1306 TIERRA BONITA SOLAR	21INR0424		PECOS	SOLAR	WEST	2024	-	-	
1307 TRES BAHIAS SOLAR	20INR0266		CALHOUN	SOLAR	COASTAL	2023	-	-	
1308 TROJAN SOLAR	23INR0296		COOKE	SOLAR	NORTH	2024	-	-	
1309 TULSITA SOLAR	21INR0223		GOLIAD	SOLAR	SOUTH	2024	-	-	
1310 TYSON NICK SOLAR	20INR0222		LAMAR	SOLAR	NORTH	2024	-	-	
1311 ULYSSES SOLAR	21INR0253		COKE	SOLAR	WEST	2024	-	-	
1312 UMBRA (STOCKYARD) SOLAR	23INR0155		FRANKLIN	SOLAR	NORTH	2024	-	-	
1313 XE MURAT SOLAR	22INR0354		HARRIS	SOLAR	HOUSTON	2024	-	-	
1314 ZIER SOLAR	21INR0019		KINNEY	SOLAR	SOUTH	2023	-	-	
1315 Planned Capacity Total (Solar)							471.4	471.4	
1316 Solar Peak Average Capacity Percentage		SOLAR_PL_PEAK_PCT	%				100.0	79.0	
1317									
1318 Planned Storage Resources with Executed SGIA									
1319 ADAMSTOWN STORAGE	21INR0209		WICHITA	STORAGE	WEST	2025	-	-	
1320 AEP_N_ALAMO_LD02(SMT ALAMO)	23INR0477		HIDALGO	STORAGE	SOUTH	2023	-	-	
1321 AL PASTOR BESS	24INR0273		DAWSON	STORAGE	WEST	2024	-	-	
1322 AMSTERDAM STORAGE	22INR0417		BRAZORIA	STORAGE	COASTAL	2024	-	-	
1323 ANEMOI ENERGY STORAGE	23INR0369		HIDALGO	STORAGE	SOUTH	2023	-	-	
1324 ARROYO STORAGE SLF	24INR0306		CAMERON	STORAGE	COASTAL	2024	-	-	
1325 BIG STAR STORAGE	21INR0469		BASTROP	STORAGE	SOUTH	2023	-	-	
1326 BOCO BESS	23INR0470		BORDEN	STORAGE	WEST	2024	-	-	
1327 BORDERTOWN BESS	23INR0354		STARR	STORAGE	SOUTH	2025	-	-	
1328 BRAZOS BEND BESS	23INR0363		FORT BEND	STORAGE	HOUSTON	2024	-	-	
1329 BRIGHT ARROW STORAGE	22INR0302		HOPKINS	STORAGE	NORTH	2023	-	-	
1330 BRP ANTLIA BESS	22INR0349		VAL VERDE	STORAGE	WEST	2023	-	-	
1331 BRP AVILA BESS	23INR0287		PECOS	STORAGE	WEST	2024	-	-	
1332 BRP CACHI BESS	22INR0388		GUADALUPE	STORAGE	SOUTH	2024	-	-	
1333 BRP CARINA BESS	22INR0353		NUECES	STORAGE	COASTAL	2024	-	-	
1334 BRP DICKENS BESS	22INR0325		DICKENS	STORAGE	PANHANDLE	2023	-	-	
1335 BRP HYDRA BESS	22INR0372		PECOS	STORAGE	WEST	2023	-	-	
1336 BRP LIBRA BESS	22INR0366		GUADALUPE	STORAGE	SOUTH	2023	-	-	
1337 BRP PALEO BESS	22INR0322		HALE	STORAGE	PANHANDLE	2023	-	-	
1338 BRP PAVO BESS	22INR0384		PECOS	STORAGE	WEST	2023	-	-	
1339 BRP TORTOLAS BESS	23INR0072		BRAZORIA	STORAGE	COASTAL	2023	-	-	
1340 BRP ZEYA BESS	23INR0290		GALVESTON	STORAGE	HOUSTON	2024	-	-	
1341 CALLISTO I ENERGY CENTER	22INR0490		HARRIS	STORAGE	HOUSTON	2024	-	-	
1342 CITADEL BESS	24INR0147		HARRIS	STORAGE	HOUSTON	2024	-	-	
1343 CONNOLLY STORAGE	23INR0403		WISE	STORAGE	NORTH	2024	-	-	Yes
1344 CORAL STORAGE	23INR0124		FALLS	STORAGE	NORTH	2023	-	-	
1345 COTTONWOOD BAYOU STORAGE	21INR0443		BRAZORIA	STORAGE	COASTAL	2024	-	-	
1346 DAMON STORAGE	23INR0523		BRAZORIA	STORAGE	COASTAL	2023	-	-	
1347 DANISH FIELDS STORAGE	21INR0450		WHARTON	STORAGE	SOUTH	2023	-	-	
1348 DIBOLL BESS (DGR)	23INR0522		ANGELINA	STORAGE	NORTH	2023	-	-	
1349 EBONY ENERGY STORAGE	23INR0154		COMAL	STORAGE	SOUTH	2024	-	-	
1350 ELIZA STORAGE	22INR0260		KAUFMAN	STORAGE	NORTH	2024	-	-	
1351 ESTONIAN ENERGY STORAGE	22INR0336		DELTA	STORAGE	NORTH	2024	-	-	
1352 EVAL STORAGE	22INR0401		CAMERON	STORAGE	COASTAL	2024	-	-	
1353 FENCE POST BESS	22INR0405		NAVARRO	STORAGE	NORTH	2023	-	-	
1354 FERDINAND GRID BESS	22INR0422		BEXAR	STORAGE	SOUTH	2025	-	-	
1355 FIVE WELLS STORAGE	23INR0159		BELL	STORAGE	NORTH	2023	-	-	
1356 FORT DUNCAN BESS	23INR0350		MAVERICK	STORAGE	SOUTH	2025	-	-	Yes
1357 GIGA TEXAS ENERGY STORAGE	23INR0239		TRAVIS	STORAGE	SOUTH	2023	-	-	
1358 GREAT KISKADEE STORAGE	23INR0166		HIDALGO	STORAGE	SOUTH	2024	-	-	
1359 GREEN HOLLY STORAGE	21INR0029		DAWSON	STORAGE	WEST	2024	-	-	
1360 GRIZZLY RIDGE BESS (DGR)	22INR0596		HAMILTON	STORAGE	NORTH	2023	9.9	9.9	
1361 GUAJILLO ENERGY STORAGE	23INR0343		WEBB	STORAGE	SOUTH	2024	-	-	
1362 HOUSE MOUNTAIN 2 BATT	22INR0485		BREWSTER	STORAGE	WEST	2023	-	-	
1363 HUMMINGBIRD STORAGE	22INR0327		DENTON	STORAGE	NORTH	2023	-	-	
1364 INERTIA BESS	22INR0328		HASKELL	STORAGE	WEST	2023	-	-	
1365 INERTIA BESS 2	22INR0375		HASKELL	STORAGE	WEST	2025	-	-	
1366 IRON BELT ENERGY STORAGE	25INR0208		DAWSON	STORAGE	WEST	2025	-	-	
1367 JUNCTION BESS (DGR)	23INR0521		KIMBLE	STORAGE	SOUTH	2023	9.9	9.9	
1368 LARKSPUR ENERGY STORAGE	23INR0340		UPTON	STORAGE	WEST	2025	-	-	
1369 LIMOUSIN OAK STORAGE	22INR0338		GRIMES	STORAGE	NORTH	2023	-	-	
1370 MUSTANG CREEK STORAGE	21INR0484		JACKSON	STORAGE	SOUTH	2023	70.5	70.5	
1371 MYRTLE STORAGE	21INR0442		BRAZORIA	STORAGE	COASTAL	2023	-	-	
1372 NORIA STORAGE	23INR0062		NUECES	STORAGE	COASTAL	2024	-	-	
1373 ORIANA BESS	24INR0109		VICTORIA	STORAGE	SOUTH	2024	-	-	
1374 PADUA GRID BESS	22INR0368		BEXAR	STORAGE	SOUTH	2024	-	-	
1375 PLATINUM STORAGE	22INR0554		FANNIN	STORAGE	NORTH	2024	-	-	Yes
1376 RAMSEY STORAGE	21INR0505		WHARTON	STORAGE	SOUTH	2024	-	-	
1377 RED HOLLY STORAGE	21INR0033		DAWSON	STORAGE	WEST	2024	-	-	
1378 ROCINANTE BESS	23INR0232		GONZALES	STORAGE	SOUTH	2024	-	-	
1379 RODEO RANCH ENERGY STORAGE	23INR0371		REEVES	STORAGE	WEST	2023	-	-	
1380 RYAN ENERGY STORAGE	20INR0246		CORYELL	STORAGE	NORTH	2024	-	-	
1381 SABAL STORAGE	22INR0398		CAMERON	STORAGE	COASTAL	2023	16.4	16.4	
1382 SMT ALAMO (DGR)	23INR0477		HIDALGO	STORAGE	SOUTH	2023	-	-	
1383 SMT LOS FRESNOS (DGR)	23INR0508		CAMERON	STORAGE	COASTAL	2023	-	-	Yes
1384 SMT MISSION (DGR)	23INR0511		CAMERON	STORAGE	COASTAL	2023	-	-	Yes
1385 SMT RIO GRANDE (DGR)	23INR0509		STARR	STORAGE	SOUTH	2023	-	-	Yes
1386 SMT RIO GRANDE II (DGR)	23INR0510		STARR	STORAGE	SOUTH	2023	-	-	Yes
1387 SOHO BESS	23INR0419		BRAZORIA	STORAGE	COASTAL	2024	-	-	
1388 SOWERS STORAGE	22INR0552		KAUFMAN	STORAGE	NORTH	2024	-	-	
1389 SP JAGUAR BESS	24INR0039		MCLENNAN	STORAGE	NORTH	2024	-	-	
1390 ST. GALL I ENERGY STORAGE	22INR0524		PECOS	STORAGE	WEST	2023	-	-	
1391 STAMPEDE BESS	22INR0410		HOPKINS	STORAGE	NORTH	2023	-	-	
1392 STOCKYARD GRID BATT	21INR0492		TARRANT	STORAGE	NORTH	2023	150.6	150.6	
1393 SUN VALLEY BESS	22INR0429		HILL	STORAGE	NORTH	2023	-	-	
1394 TALITHA BESS	23INR0331		JIM WELLS	STORAGE	SOUTH	2024	-	-	
1395 TANZANITE STORAGE	22INR0549		HENDERSON	STORAGE	NORTH	2024	-	-	
1396 TIDWELL PRAIRIE STORAGE 1	21INR0517		ROBERTSON	STORAGE	NORTH	2024	-	-	
1397 TIMBERWOLF BESS 2	22INR0495		CRANE	STORAGE	WEST	2023	-	-	
1398 UMBRA (STOCKYARD) BESS	23INR0156		FRANKLIN	STORAGE	NORTH	2024	-	-	
1399 ZIER STORAGE	21INR0027		KINNEY	STORAGE	SOUTH	2023	-	-	
1400 SMALL GENERATORS WITH SIGNED IAs AND 'MODEL READY DATES' PENDING *							-	-	
1401 Planned Capacity Total (Storage)							257.3	257.3	
1402 Storage Peak Average Capacity Percentage		STORAGE_PL_PEAK_PC	%				100.0	-	
1403									
1404 Inactive Planned Resources									

UNIT NAME	GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	IN SERVICE YEAR	INSTALLED CAPACITY RATING	SUMMER CAPACITY (MW)	NEW PLANNED PROJECT ADDITIONS TO REPORT
1405 AGATE SOLAR	20INR0023		ELLIS	SOLAR	NORTH	2020	60.0	60.0	
1406 CHILLINGHAM SOLAR	23INR0070		BELL	SOLAR	NORTH	2023	-	-	
1407 CHILLINGHAM STORAGE	23INR0079		BELL	STORAGE	NORTH	2023	-	-	
1408 DONEGAL BESS	23INR0103		DICKENS	STORAGE	PANHANDLE	2024	-	-	
1409 HART WIND	16INR0033		CASTRO	WIND-P	PANHANDLE	2026	-	-	
1410 KONTIKI 1 WIND (ERIK)	19INR0099a		GLASSCOCK	WIND-O	WEST	2023	250.1	250.1	
1411 KONTIKI 2 WIND (ERNEST)	19INR0099b		GLASSCOCK	WIND-O	WEST	2023	250.1	250.1	
1412 MARIAH DEL ESTE	13INR0010a		PARMER	WIND-P	PANHANDLE	2020	152.5	152.5	
1413 NORTHDRAW WIND	13INR0025		RANDALL	WIND-P	PANHANDLE	2020	150.0	150.0	
1414 PARLIAMENT SOLAR	23INR0044		WALLER	SOLAR	HOUSTON	2024	-	-	
1415 PLEASANTON BESS (DGR)	23INR0520		ATASCOSA	STORAGE	SOUTH	2023	9.9	9.9	
1416 RUETER SOLAR	20INR0202		BOSQUE	SOLAR	NORTH	2025	-	-	
1417 SPINEL SOLAR	20INR0025		MEDINA	SOLAR	SOUTH	2024	-	-	
1418 Inactive Planned Capacity Total							872.6	872.6	
1419									
1420 Seasonal Mothballed Resources									
1421 MOUNTAIN CREEK STG 8 (AS OF 3/1/2023, AVAILABLE 6/1 THROUGH 9/30)		MCSES_UNIT8	DALLAS	GAS-ST	NORTH	1967	568.0	568.0	
1422 POWERLANE PLANT STG 1 (AS OF 10/1/2022, AVAILABLE 6/1 THROUGH 9/30)		STEAM1A_STEAM_1	HUNT	GAS-ST	NORTH	1966	18.8	17.5	
1423 SPENCER STG U4 (AS OF 10/24/2022, AVAILABLE 4/2 THROUGH 11/30)		SPNCER_SPNCE_4	DENTON	GAS-ST	NORTH	1966	61.0	57.0	
1424 SPENCER STG U5 (AS OF 10/24/2022, AVAILABLE 4/2 THROUGH 11/30)		SPNCER_SPNCE_5	DENTON	GAS-ST	NORTH	1973	65.0	61.0	
1425 Total Seasonal Mothballed Capacity							712.8	703.5	
1426									
1427 Mothballed Resources									
1428 RAY OLINGER STG 1 (AS OF 4/5/22)		OLINGR_OLING_1	COLLIN	GAS-ST	NORTH	1967	78.0	78.0	
1429 CALENERGY-FALCON SEABOARD STG 3 (AS OF 7/8/22, DUE TO FORCED OUTAGE)		FLCNS_UNIT3	HOWARD	GAS-CC	WEST	1988	62.0	62.0	
1430 Total Mothballed Capacity							140.0	140.0	
1431									
1432 Retiring Resources Unavailable to ERCOT (since last CDR/SARA)									
1433 J T DEELY U1 (INDEFINITE MOTHBALL AS OF 12/31/2018, RETIRING ON 7/7/23)		CALAVERS_JTD1_M	BEXAR	COAL	SOUTH	1977	415.0	420.0	
1434 J T DEELY U2 (INDEFINITE MOTHBALL AS OF 12/31/2018, RETIRING ON 7/7/23)		CALAVERS_JTD2_M	BEXAR	COAL	SOUTH	1978	415.0	420.0	
1435 Total Retiring Capacity							830.0	840.0	

Capacity changes due to planned repower/upgrade projects are reflected in the operational units' ratings upon receipt and ERCOT approval of updated resource registration system information. Interconnection requests for existing resources that involve MW capacity changes are indicated with a code in the "Generation Interconnection Project Code" column.

Although seasonal capacity ratings for battery energy storage systems are reported above, the ratings are not included in the operational/planned capacity formulae. These resources are assumed to provide Ancillary Services rather than sustained capacity available to meet system peak loads.

The capacities of planned projects that have been approved for Initial Synchronization at the time of report creation are assumed to be available for the season regardless of their projected Commercial Operations Dates.

Planned projects for which maximum seasonal sustained capacity ratings have been provided are used in lieu of capacities entered into the online Resource Integration and Ongoing Operations - Interconnection Services (RIOO-IS) system.

Installed capacity ratings are based on the maximum power that a generating unit can produce during normal sustained operating conditions as specified by the equipment manufacturer. These ratings reflect the latest information in the Resource Integration and Ongoing Operations - Reources Services (RIOO-RS) system.

Seasonal Assessment of Resource Adequacy for the ERCOT Region
Summer 2023
Release Date: May 3, 2023

Planning Reserve Margins

	Summer
Peak Demand Forecast, MW	82,739
Rooftop PV Forecast Reduction, MW	(432)
Large Flexible Load Adjustment, MW	1,105
Adjusted Peak Load Forecast, MW	83,412
 Total Resources, MW	 97,138
Emergency Resources Deployed by ERCOT, MW ¹	4,577
 Planning Reserve Margin ²	 23.2%

Formula: $PRM = (Total\ Resources / (Adjusted\ Peak\ Demand - Emergency\ Resources)) - 1$, expressed as a percentage

¹ The derivation of the emergency resource amount is described in the Scenario Assumptions Details tab.

² The Planning Reserve Margin (PRM) is the forecasted capacity reserve that can cover higher-than-expected peak demand and lower-than-expected resource availability when looking at months or longer in the future. This is in contrast to operating reserve measures that focus on actual available capacity during real-time and hour-ahead operating periods. Consequently, the PRM is not an appropriate measure of capacity reserves when operations timeframes are being considered.

	Base & Moderate Risk Scenarios	Extreme Risk Scenarios
Adjusted Peak Load Forecast	Based on average weather conditions from 2007 – 2021 at the time of the summer peak. These baseline forecasts are adjusted downwards to account for peak load reductions from rooftop solar installations that are not already accounted for in the baseline forecasts. The rooftop solar load reductions for the forecasted summer peak load hour (August 10, hour-ending 17 (5 pm) is 432 MW.	
Load Adjustments	Based on the 2011 weather conditions at the time of Summer season peak. These baseline forecasts are adjusted downwards to account for peak load reductions from rooftop solar installations that are not already accounted for in the baseline forecasts. The rooftop solar load reductions for the forecasted summer peak load hour (August 10, hour-ending 17 (5 pm) is 432 MW.	Assumed weather conditions 2% worse than occurred in 2011 at the time of Summer season peak. These baseline forecasts are adjusted downwards to account for peak load reductions from rooftop solar installations that are not already accounted for in the baseline forecasts. The rooftop solar load reductions for the forecasted summer peak load hour (August 10, hour-ending 17 (5 pm) is 432 MW.
Typical Planned Outages, Thermal	Based on the historical average of planned outages for July through August weekdays, hours ending 3 pm - 8 pm, for the last three summer seasons (2020 -2022). Outage history excludes units that are not expected to be available for the peak period of the upcoming seasons. These unavailable units are comprised of units that have retired, have announced upcoming retirements, are under extended outage, are mothballed, or are unavailable switchable generators.	
Typical Unplanned Outages, Thermal	Based on historical average of unplanned outages for June through September weekdays, hours ending 3 pm - 8 pm, for the last three summer seasons (2020 - 2022). Outage history excludes units that are not expected to be in-service for the peak period of the upcoming seasons. These unavailable units are comprised of units that have retired, have announced upcoming retirements, are under extended outage, are mothballed, or are unavailable switchable generators.	
Unplanned Outage Adjustments, Thermal	The High Unplanned Outage Adjustment is based on the 95th percentile of historical unplanned outages for June through September weekdays, hours ending 3 pm - 8 pm, for the last five summer seasons (2018 -2022); the adjustment is the 95th percentile value, 8,364 MW, less the typical unplanned outage amount of 4,975 MW. The outages for the High Unplanned Outage Adjustment include an incremental amount from Private Use Network (PUN) generators; specifically, the 95th percentile amount less the 50th percentile amount. See the Background tab for more information on the treatment of PUN capacity. Outage history excludes units that are not expected to be available for the peak period of the upcoming seasons. These unavailable units are comprised of units that have retired, have announced upcoming retirements, are under extended outage, are mothballed, or are unavailable switchable generators.	Based on the maximum historical unplanned outage level for June through September weekdays, hours ending 3 pm - 8 pm, for the last five summer seasons (2018 -2022); the adjustment is 11,148 MW, less the typical unplanned outage amount of 4,975 MW. The outages for the Extreme Unplanned Outage Adjustment include an incremental amount from Private Use Network (PUN) generators; specifically, the 95th percentile amount less the 50th percentile amount. See the Background tab for more information on the treatment of PUN capacity. Outage history excludes units that are not expected to be available for the peak period of the upcoming seasons. These unavailable units are comprised of units that have retired, have announced upcoming retirements, are under extended outage, are mothballed, or are unavailable switchable generators.
Wind Output Adjustments	The adjustment is based on the 10th percentile of hourly wind capacity for the daily period hour-ending 13 - 20 for the months of June through September. The capacity values are derived from annual hourly simulated wind output profiles for the period 1980 - 2021 inclusive. The profiles reflect hourly weather conditions for each of the 42 simulated weather years. A profile is developed for each current operational wind site as well as each planned wind site included in the 2023 Summer SARA. This low wind output level is 2,894 MW. The adjustment is the summer Peak Average Capacity Contribution, 10,427 MW, less 2,894 MW. The methodology report for profile development is available at: https://www.ercot.com/files/docs/2021/12/07/Report_ERCOT_1980-2020_WindSolarDGPVGenProfiles.pdf	The adjustments are based on the minimum hourly wind capacity value for the daily period hour-ending 13 - 20 for the months of June through September. The capacity values are derived from annual hourly simulated wind output profiles for the period 1980 - 2021. The profiles reflect hourly weather conditions for each of the 42 simulated weather years. A profile is developed for each current operational wind site as well as each planned wind site included in the 2022 Summer SARA. This extreme low wind output level is 61 MW. The adjustment is the summer Peak Average Capacity Contribution, 10,427 MW less 61 MW. Note that a scenario with a combined extreme peak load and extreme-low renewables output is not provided because an extreme peak load is associated with high solar output due to minimal cloud cover serving as a driver for both system conditions.
Solar Output Adjustments	The adjustment is based on the 10th percentile of hourly solar capacity for the daily period hour-ending 13 - 18 for the months of June through August. (Note that September is excluded due to very low output beginning in mid-month and the extremely low likelihood of a summer peak load occurring that late in September.) The capacity values are derived from annual hourly simulated solar output profiles for the period 1980 - 2021 inclusive. The profiles reflect hourly weather conditions for each of the 42 simulated weather years. A profile is developed for each current operational solar site as well as each planned wind site included in the 2023 Summer SARA. This low solar output level is 9,263 MW. The adjustment is the summer Peak Average Capacity Contribution, 12,636 MW, less 9,263 MW. The methodology report for profile development is available at: https://www.ercot.com/files/docs/2021/12/07/Report_ERCOT_1980-2020_WindSolarDGPVGenProfiles.pdf	N/A
Emergency Resources Deployed by ERCOT prior to EEA Declaration	An amount is only shown if Capacity Available for Operating Reserves, line item [g], is at or below 3,000 MW. Consists of the sum of (1) expected Emergency Response Service (873 MW),(2) TDSP Distribution Voltage Reduction (562 MW), and (3) the expected peak consumption by operational LFLs at co-located and standalone sites (488 MW and 837 MW respectively), which is assumed to be available for curtailment based on ERCOT requests to address an imminent capacity reserve shortage. The ERS and Distribution Voltage Reduction amounts reflect a 2% gross-up to account for avoided transmission losses. Other resources that may be available include voluntary customer Demand Response (including customer installation of backup generators), switchable generation resources currently serving the Eastern Interconnection, and additional DC tie imports subject to availability.	
Emergency Resources Deployed by ERCOT	An amount is only shown if Capacity Available for Operating Reserves, line item [g], is at or below 2,300 MW. Consists of the sum of expected Load Resources Available for Responsive Reserves for the summer season (1,438 MW), Load Resources Available for Non-Spinning Responsive Reserves for the summer season (49 MW), Emergency Response Service (873 MW), Transmission and Distribution Service Provider (TDSP) load management programs (330 MW) and TDSP Distribution Voltage Reduction (562 MW). Each of these amounts reflect a 2% gross-up to account for avoided transmission losses. Other resources that may be available include voluntary customer Demand Response (including customer installation of backup generators), switchable generation resources currently serving the Eastern Interconnection, and additional DC tie imports subject to availability.	

Seasonal Assessment of Resource Adequacy for the ERCOT Region

Background

The Seasonal Assessment of Resource Adequacy (SARA) report is a deterministic approach to considering the impact of potential variables that may affect the sufficiency of installed resources to meet the peak electrical demand on the ERCOT System during a particular season.

The standard approach to assessing resource adequacy for one or more years into the future is to account for projected load and resources on a normalized basis and to require sufficient reserves (resources in excess of peak demand, on this normalized basis) to cover the uncertainty in peak demand and resource availability to meet a probabilistic reliability standard.

For seasonal assessments that look ahead less than a year, specific information may be available (for example, an anticipated common-mode event such as a system-wide heat wave) which can be used to consider the range of resource adequacy outcomes in a more deterministic manner.

The SARA report focuses on the availability of sufficient operating reserves to avoid emergency actions such as deployment of voluntary load reduction resources. It uses operating reserve thresholds of 2,300 and 1,000 MW, respectively, to indicate the risk that an Energy Emergency Alert Level 1 (EEA1) and Level 3 (EEA3) may be triggered during the time of the forecasted seasonal peak load. These threshold levels are intended to be roughly analogous to the 2,300 and 1,000 MW Physical Responsive Capability (PRC) thresholds for EEA1 and EEA3 with controlled outages ordered by ERCOT, respectively. However, PRC is a real-time capability measure for Resources that can quickly respond to system disturbances. In contrast, the SARA operating reserve reflects additional capability assumed to be available before energy emergency procedures are initiated, such as from Resources qualified to provide non-spinning reserves. Additionally, the amount of operating reserves available may increase relative to what is included in the SARA report due to the market responding to wholesale market price increases and anticipated capacity scarcity conditions. Given these considerations, ERCOT believes that the 2,300 and 1,000 MW reserve capacity thresholds are reasonable indicators for the risk of Energy Emergency Alerts given the uncertainties in predicting system conditions months in advance.

The SARA report is intended to illustrate the range of resource adequacy outcomes that might occur. It serves as a situational awareness tool for ERCOT operational planning purposes, and helps fulfill the "extreme weather" resource adequacy assessment requirement per Public Utility Commission of Texas rule 25.362(i)(2)(H). In addition to a base scenario, several other scenarios are developed by varying the value of load forecast and resource availability parameters. The variations in these parameters are based on historic ranges of the parameter values, known changes expected in the near-term, or reasonable assumptions regarding potential future events.

Thermal Outage Accounting

Directly comparing SARA thermal unplanned (previously "forced") outage scenario capacity with outage amounts listed in ERCOT outage reports — such as the Unplanned Resource Outages Report — will yield misleading results. The reason is that the SARA report consists of multiple resource availability line items, and thermal outages for certain resource types are reflected elsewhere in the SARA reports rather than the thermal outage scenario line items. As a result, the SARA thermal outage scenario amounts will always be less than what is typically shown in other outage reports. The main differences include the following:

- Outages for Private Use Network (PUN) generators are incorporated in the line item called "Capacity from Private Use Networks." This is an aggregate estimate of the amount of capacity available for the ERCOT grid during the highest 20 seasonal hourly demands for the last three years and incorporates average generator outage amounts over those hourly intervals. Additionally, the aggregate estimate reflects PUN owner decisions to supply power to their industrial loads versus export to the grid. PUN outages are thus already reflected in the SARA available resource capacity estimate.
- Extended outages are reported in the SARA Capacities tab in a line item called "Operational Capacity Unavailable due to Extended Outage or Derate." Extended Outages are those forced outages that are expected to last a minimum of 180 days as reported by the resource owner via submission of a Notice of Suspension of Operations (NSO) form. These outages are thus already reflected in the SARA available resource capacity estimate.
- The capacity of Switchable Generation Resources (SWGRs) that are assumed to serve a neighboring grid for the season is deducted from available resource capacity, so outages associated with these SWGRs are not reflected anywhere in the SARA report.

To more closely align the SARA with other outage reports based on ERCOT Outage Scheduler data, a modification was made to the treatment of outages classified as *Unavoidable Extensions*, or UEs. UEs are defined as "a Planned or Maintenance Outage that is not completed within the ERCOT-approved timeframe and extended." For past SARA reports, if the original outage was classified as Planned in the Outage Scheduler, then the UE would continue to be classified as Planned. If the original outage was classified as Forced, then the UE would continue to be classified as Forced. In contrast, for other ERCOT outage reports, UE outages are all classified as Forced (Unplanned). SARA reports now treat all UEs as Unplanned. While this category change does not impact the total base outage amount, it does increase the high and extreme unplanned thermal adjustments used in several risk scenarios.

Accounting for Large Flexible Loads

Due to a new influx of Large Flexible Loads (LFLs), an interim solution was implemented to better account for the peak consumption of these loads. The new interim methodology utilizes the 20 hours over each of the past three years with the lowest average Physical Responsive Capability. The methodology compares historical load zone prices to an ERCOT determined (and industry backed) estimate of the bitcoin mining breakeven cost. This breakeven cost was estimated at \$96/MWh and is based on the average economics of an Antminer S19 bitcoin mining rig from March 15th, 2023 through April 14th, 2023. If the historical load zone price for the LFL's respective load zone was below the breakeven threshold then the load's peak summer consumption was estimated to be the maximum observed consumption at the site according to internal tracking of LFL projects. If the historical load zone price was greater than the breakeven threshold then the LFL was assumed to be fully curtailed and consuming only 3% of the load's maximum capability. The 3% assumption accounts for the idle power draw of ASIC miners and necessary auxiliary cooling on site. The estimated consumption for each LFL, including both co-located and stand-alone loads, was summed for each of the 60 hours analyzed and then averaged to calculate the total estimated average consumption. This value was calculated to be 837 MW for stand-alone LFLs and 488 MW for co-located LFLs. This is reflected in item [c] as an adjustment to the baseline peak load forecast on the Base, Moderate & Extreme Risk Scenario tabs. The reported adjustment of 1,105 MW is the result of subtracting the 220 MW already allocated for peak LFL consumption in the baseline peak load forecast from the newly calculated average expected peak LFL consumption of 1,325 MW (837 MW + 488 MW). This adjustment reflects ERCOT's continuous effort to better understand and forecast the operations of Large Flexible Loads.



Stand-Alone Battery Storage Projects Based on the June 2023 GIS Report

NOTES:

This table includes Large Generator Battery projects that have requested Full Interconnection Studies. It also includes Small Generator projects that have completed Resource Registration form as indicated by assignment of a "Model Ready Date".

For the purposes of this report, the Battery Energy Storage project is considered stand-alone if there is no other project located at the same POI, with similar project name and same Interconnecting Entity (or same parent or holding company).

The projects are listed in alphabetical order.

Gray-highlighted cells indicate that the information is not applicable because the project is operational.

INR	Project Name	Project Status	Interconnecting Entity	POI Location	County	CDR Reporting Zone	Projected COD	Capacity (MW)
22INR0445	SPC Bloom BESS	Planned	Victoria Battery LLC	8911 Black Bayou 138kV	Victoria	SOUTH	6/1/2023	100.
20INR0290	River Valley Storage 1	Planned	KCE TX 19, LLC	3650 Elgin SS 138kV	Williamson	SOUTH	6/23/2023	51.5
20INR0293	River Valley Storage 2	Planned	KCE TX 21, LLC	3650 Elgin SS 138kV	Williamson	SOUTH	6/23/2023	51.5
22INR0551	Wolf Tank Storage	Planned	Lobo Storage	80221 LOBO 138kV	Webb	SOUTH	7/1/2023	155.48
20INR0281	Queen BESS	Planned	Roadrunner Storage, LLC	842 GPL King Mountain 345kV	Upton	WEST	7/14/2023	51.06
22INR0509	Turquoise Storage	Planned	BT Cunningham Storage, LLC	6950 Wallace Switch 138kV	Hunt	NORTH	7/31/2023	196.21
23INR0514	AEP_N_MERCED_LD01_(SMT Merc	Planned	SMT MERCEDES LLC	Station Name (TDSP Station Code): N_MERCEDLoad/Load Transformer	Hidalgo	SOUTH	8/25/2023	9.99
22INR0495	TIMBERWOLF BESS 2	Planned	Crane 2 BESS, LLC	76635 King Mt 138kV	Crane	WEST	9/1/2023	150.
23INR0477	North Alamo BESS	Planned	SMT Alamo LLC	N_ALAMO / LD02 / BUS#8906 / 138KV	Hidalgo	SOUTH	9/17/2023	9.99
23INR0507	Bay City BESS	Planned	SMT Bay City LLC	BAY_CITY / 138_12_1 / BUS#8113 / 138KV	Matagorda	COASTAL	9/22/2023	9.99
22INR0398	Sabal Storage	Planned	Cameron Wind 1, LLC	5761 Paredes 138kV	Cameron	COASTAL	9/30/2023	18.
23INR0510	Rio Grande City BESS	Planned	SMT RIO GRANDE II LLC	RIO_GRAN / LD02 / BUS#8797 / 69KV	Starr	SOUTH	10/1/2023	9.99
23INR0515	AEP_S_SNRSA_LD01(SMT Santa R	Planned	SMT SANTA ROSA LLC	Station Name (TDSP Station Code): S_SNRSA Load/Load Transformer	Cameron	COASTAL	10/7/2023	9.99
23INR0569	Weil Tract BESS	Planned	HEN Infrastructure, LLC 2	WEIL_TRC/B482/138_12/WEIL_TRC_LD1	Nueces	COASTAL	10/13/2023	9.9
23INR0512	West Harlingen BESS	Planned	SMT HARLINGEN II LLC	Station Name (TDSP Station Code): W_HARLIN Load/Load Transformer	Cameron	COASTAL	10/14/2023	9.99
23INR0513	AEP_ELSA_ELSA_L1_(SMT Elsa)	Planned	SMT ELSA LLC	Station Name (TDSP Station Code): ELSALoad/Load Transformer Name:	Hidalgo	SOUTH	10/22/2023	9.99
22INR0485	House Mountain	Planned	House Mountain LLC	6674 Bronco 69kV	Brewster	WEST	10/26/2023	63.
23INR0511	Mayberry BESS	Planned	SMT MISSION LLC	MAYBERRY / LOAD1 / BUS#8109 / 138KV	Cameron	COASTAL	10/29/2023	9.99
23INR0371	Rodeo Ranch Energy Storage	Planned	Rodeo Ranch Energy Storage, LLC	38021 WORSHAM 138kV	Reeves	WEST	11/6/2023	307.46
23INR0521	Junction BESS	Planned	HEN Infrastructure, LLC 2	JUNCTION/LD1 Bus 6400	Kimble	SOUTH	11/7/2023	9.95
23INR0570	Mineral Wells East BESS	Planned	HEN Infrastructure, LLC 2	MINWLLSE1_8/1584/LDLXFM1	Palo Pinto	NORTH	11/8/2023	9.95
23INR0508	Los Fresnos BESS	Planned	SMT LOS FRESNOS LLC	L_FRESNO / LD1 / BUS#8333 / 138KV	Cameron	COASTAL	11/12/2023	9.99
23INR0509	Garceno BESS	Planned	SMT RIO GRANDE LLC	GARCENO / LD01 / BUS#8923 / 138KV	Starr	SOUTH	11/19/2023	9.99
23INR0522	Diboll Bess	Planned	HEN Infrastructure, LLC 1	Station Name (TDSP Station Code): DIBOLLoad/Load Transformer Name:	Angelina	NORTH	11/25/2023	9.95
22INR0366	BRP Libra BESS	Planned	Libra Storage LLC	5133 Elm Creek 345kV	Guadalupe	SOUTH	11/27/2023	206.21
23INR0523	Damon Storage	Planned	Baccharis Storage LLC	Station Name: DALoad/Load Transformer Name: TR1PTI BUS number: 42	Brazoria	COASTAL	12/1/2023	5.
24INR0073	Hyacinth Storage	Planned	Hyacinth Storage, LLC	46500 Tomball 345 kV	Harris	HOUSTON	12/1/2023	103.05
23INR0239	Giga Texas Energy Storage	Planned	Giga Texas Energy, LLC.	7047 Hornsby 345kV	Travis	SOUTH	12/15/2023	131.05
23INR0565	Garden City East BESS	Planned	HEN Infrastructure, LLC 2	GARDCITYE_9/LDLXFM1/GRDNE_LD3	Glasscock	WEST	12/19/2023	9.95
23INR0369	Anemoui Energy Storage	Planned	Anemoui Energy Storage, LLC	8574 POMELO 345kV	Hidalgo	SOUTH	12/20/2023	205.
23INR0543	Continental BESS	Planned	Regis Continental, LLC	Station Name (TDSP Station Code): CONTINENLoad/Load Transformer	Starr	SOUTH	12/20/2023	9.8
22INR0372	Hydra BESS	Planned	BRP Hydra BESS LLC	76002 Bakersfield 345kV	Pecos	WEST	12/21/2023	200.8
22INR0468	Lower Rio BESS	Planned	VESI 38 LLC	5792 Sioux 138kV	Hidalgo	SOUTH	12/30/2023	60.
22INR0325	Dickens BESS	Planned	BRP Dickens BESS LLC	59904 Cottonwood 345kV	Dickens	PANHANDLE	12/31/2023	200.8
23INR0485	Hacienda Storage	Planned	Galveston Energy Storage LLC	38745 Attwater 138kV	Galveston	HOUSTON	12/31/2023	203.
22INR0322	Paleo BESS	Planned	BRP Paleo BESS LLC	23920 Blackwater Draw 345kV	Hale	PANHANDLE	12/31/2023	200.8
23INR0072	Tortolas BESS	Planned	BRP Tortolas BESS LLC	39030 Alvin 138kV	Brazoria	COASTAL	12/31/2023	50.3
23INR0554	Hamilton BESS	Planned	HEN Infrastructure, LLC 1	Station Name (TDSP Station Code): HAMILTONLoad/Load Transformer	Val Verde	WEST	2/15/2024	9.95
23INR0330	BRP Snowdon BESS	Planned	BRP SNOWDON BESS LLC	23914 Tule Canyon Substation 345kV	Briscoe	PANHANDLE	2/16/2024	410.94
22INR0338	Limousin Oak Storage	Planned	KCE TX 15, LLC	44645 Singleton 345kV	Grimes	NORTH	2/23/2024	104.62
22INR0327	Hummingbird Storage	Planned	KCE TX 10, LLC	1730 Krum 345kV	Denton	NORTH	2/24/2024	103.8
23INR0620	Falfurrias BESS	Planned	HEN INFRASTRUCTURE LLC 1	FALFUR2_138_12/8510	Brooks	SOUTH	3/7/2024	9.9

22INR0384	Pavo BESS	Planned	BRP Pavo BESS LLC	38430 TN White Baker 138kV	Pecos	WEST	3/27/2024	175.8
21INR0492	Stockyard Grid Batt	Planned	Stockyard Grid, LLC	2082 Hicks 138kV	Tarrant	NORTH	3/29/2024	150.6
23INR0154	Ebony Energy Storage	Planned	Ebony Energy Storage, LLC	5180 Green Mountain 138kV	Comal	SOUTH	4/1/2024	208.41
23INR0363	Brazos Bend BESS	Planned	Brazos Bend BESS LLC	138 kV Fort Bend Switch (#44280)	Fort Bend	HOUSTON	4/15/2024	101.64
23INR0137	BRP Diran BESS	Planned	BRP Diran BESS LLC	43190 South Lane City 138kV	Wharton	SOUTH	5/1/2024	100.63
22INR0423	BRP Quela BESS	Planned	BRP Quela BESS LLC	Tap 138kV 5110 J.T. Deely - 5294 Martinez	Bexar	SOUTH	5/1/2024	303.74
24INR0147	Citadel BESS	Planned	Citadel BESS LLC	40390 Crosby 138kV	Harris	HOUSTON	5/7/2024	201.32
23INR0348	Aggie Energy storage	Planned	KINGFISHER ENERGY STORAGE LLC	TABOR RD (#32882)	Brazos	NORTH	5/30/2024	104.4
23INR0200	Paradiso BESS	Planned	VESI 13	8203 Pleasanton 138kV	Atascosa	SOUTH	5/30/2024	100.92
22INR0516	Amber Storage	Planned	Belltown Power Texas	730 Wolf Ridge 138kV	Cooke	NORTH	5/31/2024	50.
21INR0507	Arana Creek Batt	Planned	Arana Creek LLC	5648 Loyola 138kV	Kleberg	COASTAL	5/31/2024	153.5
24INR0394	CATHODE BESS	Planned	CED Development Inc.	138kV King Mountain 76635	Upton	WEST	5/31/2024	150.
23INR0372	Cross Trails Storage	Planned	Cross Trails Energy Storage Project, LLC	60090 WKN Breaker 69kV	Scurry	WEST	5/31/2024	38.86
24INR0393	ELECTRODE BESS	Planned	CED Development Inc.	Castillo Substation, Bus number : 76040	Upton	WEST	5/31/2024	150.
23INR0106	Vorsavio Grid BESS	Planned	Vorsavio Grid, LLC	80013 Laredo VFT 138kV	Webb	SOUTH	5/31/2024	100.67
21INR0508	Angels Creek	Planned	Angels Creek LLC	5888 Bruni 69kV	Webb	SOUTH	6/1/2024	31.68
23INR0132	BRP Bonete BESS	Planned	BRP Bonete BESS LLC	8951 Stewart Road 138kV	Hidalgo	SOUTH	6/1/2024	201.13
22INR0347	BRP Crater BESS	Planned	BRP Crater BESS LLC	tap 345kV 1025 Falcon Seaboard - 1021 Midland East	Howard	WEST	6/1/2024	310.31
22INR0365	BRP Mensa BESS	Planned	BRP Mensa BESS LLC	60718 Pecos Valley 138kV	Pecos	WEST	6/1/2024	404.99
22INR0386	BRP Octans BESS	Planned	BRP OCTANS BESS LLC	6671 Tombstone 138kV	Pecos	WEST	6/1/2024	129.57
23INR0431	BRP Pollux BESS	Planned	BRP Pollux BESS LLC	138 kV Olsen Switching Station (#37460)	Bosque	NORTH	6/1/2024	163.42
22INR0490	Callisto I Energy Center	Planned	Callisto I energy center LLC	47150 HO Clarke 138kV	Harris	HOUSTON	6/1/2024	203.04
22INR0558	Callisto II Energy Center	Planned	Saracen III Energy Storage LLC	47150 HO Clarke 138kV	Harris	HOUSTON	6/1/2024	406.06
22INR0401	Eval Storage	Planned	Hecate Grid East Valley Storage LLC	80229 Cavazos 138kV	Cameron	COASTAL	6/1/2024	255.
22INR0469	Harper Energy Storage	Planned	VESI 31 LLC	Tap 138kV 8314 La Palma - 80229 Villa Cavazos	Cameron	COASTAL	6/1/2024	82.42
23INR0318	Marcelina Storage	Planned	Marcelina Solar, LLC	Tap 345 kV 5133 Elm Creek - 5901 San Miguel	Wilson	SOUTH	6/1/2024	203.21
22INR0493	Oscar Storage Project	Planned	Woodlands Energy Renewables LLC	3413 Knob Creek 345kV	Bell	NORTH	6/1/2024	50.
21INR0505	Ramsey Storage	Planned	Hecate Energy Ramsey Storage LLC	44200 Hillje 345kV	Wharton	SOUTH	6/1/2024	510.4
22INR0503	Tidwell Prairie II Batt	Planned	TIDWELL PRAIRIE LLC	Tap 345kV 3400 Twin Oak - 39950 TNP One	Robertson	NORTH	6/2/2024	200.
22INR0504	Tidwell Prairie III Batt	Planned	Tidwell Prairie LLC	Tap 345kV 3400 Twin Oak - 39950 TNP One	Robertson	NORTH	6/2/2024	200.
24INR0544	Wetzel BESS	Planned	Brown ESS, LLC	1654 Zephyr Substation 138kV	Brown	NORTH	6/13/2024	185.57
23INR0219	Dogfish BESS	Planned	Momentum Dogfish LLC	tap 138kV 38331 TN Alamo St – 38455 TN Holiday	Pecos	WEST	6/15/2024	75.
23INR0359	BRP Crios BESS	Planned	BRP Crios BESS LLC	Tap 138 kV 1649 HASSE_P8 - 1684 SABANA_8	Comanche	NORTH	6/16/2024	87.37
24INR0134	BRP Hemera BESS	Planned	BRP Hemera BESS LLC	345 kV Deaf Smith Substation (#23908, Oncor)	Deaf Smith	PANHANDLE	6/18/2024	206.96
23INR0283	Kota Battery	Planned	Kota Storage, LLC	23900 Alibates 345kV	Carson	PANHANDLE	6/20/2024	200.6
23INR0470	BoCo BESS	Planned	BoCo BESS	59906 Long Draw 138kV	Borden	WEST	6/22/2024	153.34
24INR0265	SMT Ironman BESS	Planned	SMT Ironman BESS LLC	43035 Oasis Substation 345kV	Brazoria	COASTAL	6/30/2024	304.25
23INR0474	AP Greenport	Planned	AP Greenport	Austrop – Lost Pines 345 kV transmission line (Bus #7040 – 9041)	Travis	SOUTH	7/1/2024	100.45
22INR0515	Flagtail BESS	Planned	Flagtail LLC	Tap 138kV 5 Sandy Switch - 7 Sandy	Grimes	NORTH	7/1/2024	203.8
24INR0108	Louisa Energy Storage	Planned	Viridity Energy Solutions Inc.	138 kV Helotes (#5200)	Bexar	SOUTH	7/1/2024	102.77
24INR0436	SMT McAllen II	Planned	SMT McAllen II LLC	North Mcallen 138 kV Substation (N_MCALLN, Bus#8368)	Hidalgo	SOUTH	7/1/2024	97.43
22INR0540	Walstrom BESS	Planned	Castleman Power	46220 Peters 138kV	Austin	SOUTH	7/1/2024	200.
21INR0495	Belding 2 Batt	Planned	Triple Butte II LLC	38490 TNBelding 69kV	Pecos	WEST	7/15/2024	51.48
25INR0230	Great Rock BESS	Planned	Black Mountain Energy Storage II	Tap 345kV 46020 Limestone - 967 Gibbon Creek Ckt 18	Leon	NORTH	7/30/2024	307.14
25INR0231	Apache Hill BESS	Planned	Black Mountain Energy Storage II	363 Hood 138kV	Hood	NORTH	8/1/2024	201.2
23INR0094	BRP Pyxis BESS	Planned	BRP Pyxis BESS LLC	tap 138kV 1009 Yucca - 11197 Sand Tank Pod	Ward	WEST	8/1/2024	206.87
23INR0075	BRP Rhine BESS	Planned	BRP Rhine BESS LLC	Tap 345kV 11188 QUARRYFLD - 11010 WOLF	Ward	WEST	8/1/2024	206.89
23INR0166	Great Kiskadee Storage	Planned	Great Kiskadee Storage, LLC	8951 Stewart Rd 138kV	Hidalgo	SOUTH	8/1/2024	103.05
22INR0466	Pajarita BESS	Planned	VESI 29 LLC	8266 Marconi 138kV	Cameron	COASTAL	8/1/2024	205.5
22INR0494	Quail Run Storage System	Planned	to be determined	11016 Quail Run Switch 345kV	Ector	WEST	8/1/2024	50.
23INR0401	Headcamp	Planned	Momentum Energy Storage Partners	tap 138kV 38331 TN Alamo St – 38455 TN Holiday	Pecos	WEST	8/10/2024	150.
23INR0403	Connolly Storage	Planned	BT Connolly Storage, LLC	Tap 138kV 1568 Allison – 11568 Flatwood	Wise	NORTH	8/15/2024	125.36
24INR0435	Moonshine Hill BESS	Planned	Black Mountain Energy Storage II	138kV HUMBLE_B138 40830	Harris	HOUSTON	8/15/2024	201.2
24INR0387	PaleAle BESS	Planned	Momentum Energy Storage Partners,LLC	Tap 138 kV Bus 7506 L_CEDAVA8_1Y - Bus 7507 L_FRIEND8_1Y	Hays	SOUTH	8/15/2024	75.38
24INR0260	Lager Storage	Planned	Momentum Energy Storage Partners,LLC	8031 Gillrina 69kV	Nueces	COASTAL	8/20/2024	30.
24INR0238	Appaloosa Run BESS	Planned	Appaloosa Run BESS	New Palouse 138kV (#60278)	Upton	WEST	8/30/2024	200.5
24INR0458	ORION BRANGUS STORAGE	Planned	ORION BESS	Tap 345kV 3687 BELL COUNTY EAST SWITCH - 39950 TNP ONE PLAN	Milam	SOUTH	8/30/2024	355.21
23INR0381	Soportar ESS	Planned	Bexar ESS LLC	5007 Alamo One 138kV	Bexar	SOUTH	8/30/2024	102.11
24INR0313	Backbone Creek BESS	Planned	Backbone Creek BESS LLC	7351 STARCKE 138kV	Burnet	SOUTH	9/1/2024	120.69
24INR0460	Evelyn Battery Energy Storage System	Planned	BRP Blue Topaz 4, LLC	Hidden Lakes 138kV (38900)	Galveston	HOUSTON	9/1/2024	457.
24INR0572	Harlingen III BESS LLC	Planned	SMT Harlingen III LLC	8320 WEST HARLINGEN 69kV	Cameron	COASTAL	9/1/2024	110.

24INR0312	Wigeon Whistle BESS	Planned	Wigeon Whistle BESS	811 NEVADA 138kV	Collin	NORTH	9/1/2024	120.68
24INR0273	Al Pastor BESS	Planned	Al Pastor BESS LLC	1163 Lamesa Substation 138kV	Dawson	WEST	9/2/2024	100.8
24INR0352	Guinness BESS	Planned	Momentum Energy Storage Partners,LLC	Tap 138kV 7520 BERTRA - 7522 ANDICE	Williamson	SOUTH	9/3/2024	100.51
23INR0312	Hofbrau BESS	Planned	Momentum Energy Storage Partners, LLC	6442 Redcreek 138kV	Tom Green	WEST	9/3/2024	188.1
24INR0491	Gunnar BESS	Planned	BRP Blue Topaz 6, LLC	8029 CLOSNER4A 138kV	Hidalgo	SOUTH	9/11/2024	203.
23INR0310	Dunkel BESS	Planned	Momentum Energy Storage Partners	59156 Yellow House Canyon 115kV	Lubbock	PANHANDLE	9/14/2024	225.
23INR0299	Anole BESS	Planned	Anole Energy Storage, LLC	2432 Tri-Corner 345kV	Dallas	NORTH	9/30/2024	240.71
23INR0343	Guajillo Energy Storage	Planned	Guajillo Energy Storage LLC	80219 Lobo Substation 345kV	Webb	SOUTH	9/30/2024	201.09
24INR0439	Citrus Grove Energy Storage	Planned	SANTA ANA ENERGY STORAGE I LLC	8354 Weslaco Switch 138kV	Hidalgo	SOUTH	10/1/2024	204.93
23INR0220	HOPSLAM BESS	Planned	Momentum LRC Holdco LLC	38430 White Baker TNP 138kV	Pecos	WEST	10/1/2024	156.75
22INR0488	Venture Hill Storage	Planned	KCE TX 24, LLC	7336 Gilleland Creek 138kV	Travis	SOUTH	10/1/2024	70.44
20INR0246	Ryan Energy Storage	Planned	Ryan Storage LLC	37580 TNPancake 69kV	Coryell	NORTH	10/21/2024	50.
24INR0419	High Plains Storage	Planned	ROBP Holdings, LLC	45880 Hockley 138kV	Harris	HOUSTON	10/30/2024	157.7
24INR0446	ASD Gongora Hill TX Storage	Planned	AMP Solar Development, Inc.	Tap 138kV 8796 Roma – 7870 Escobares	Starr	SOUTH	10/31/2024	201.45
23INR0195	Desert Willow BESS	Planned	Desert Willow Energy Storage, LLC	tap 345kV 1906 Venus_S5 - 1916 LiggettA1_5	Ellis	NORTH	10/31/2024	154.4
24INR0185	BRP Kotys BESS	Planned	BRP Kotys BESS LLC	138 kV Argyle Substation (#1984)	Denton	NORTH	11/1/2024	163.41
24INR0111	BRP Triton BESS	Planned	BRP Triton BESS LLC	138 kV Comanche Switch Substation (#1441)	Comanche	NORTH	11/1/2024	205.36
21INR0260	Chariot Storage	Planned	Chariot Storage LLC	tap 69kV 99 Ben Hur - 107 Prairie Hill	Limestone	NORTH	11/1/2024	50.
21INR0280	Edgewater Storage	Planned	Edgewater Battery Storage LLC	210 Reagor Springs 69kV	Ellis	NORTH	11/1/2024	50.
20INR0244	Montezuma Storage	Planned	Montezuma Storage LLC	7258 Gidden 138kV	Colorado	SOUTH	11/1/2024	50.6
23INR0382	Outer Loop BESS	Planned	Black Mountain Energy Storage II	40700 Greens Bayou 345kV	Harris	HOUSTON	11/1/2024	201.2
20INR0245	Volunteer Storage	Planned	Blackjack Storage LLC	7216 Lockhart 138kV	Caldwell	SOUTH	11/1/2024	50.6
23INR0103	Burksol BESS	Planned	Donegal BESS	59904 Cottonwood 345kV	Dickens	PANHANDLE	11/30/2024	100.54
24INR0543	Thomas Cameron BESS	Planned	Thomas Cameron BESS	Tap 345kV 3424 BUCKHORN SWITCH - 3422 KILLEEN SWITCH	Lampasas	NORTH	11/30/2024	200.82
24INR0395	Berkman Storage	Planned	Berkman Storage, LLC	138 kV League City (Bus# 38920)	Galveston	HOUSTON	12/1/2024	150.86
23INR0074	BRP Ampato BESS	Planned	BRP Ampato BESS LLC	10002 NS Crane Switch 138kV	Crane	WEST	12/1/2024	121.56
22INR0349	BRP Antlia BESS	Planned	BRP Antlia BESS LLC	88999 ANTLAPOI4A 138kV	Val Verde	WEST	12/1/2024	70.95
23INR0287	BRP Avila BESS	Planned	BRP Avila BESS LLC	38340 TN Airport 138kV	Pecos	WEST	12/1/2024	164.95
23INR0342	BRP Brizo BESS	Planned	BRP Brizo BESS LLC	138 kV Loop 463 Substation (#5680)	Victoria	SOUTH	12/1/2024	143.85
23INR0358	BRP Castor BESS	Planned	BRP Castor BESS LLC	138 kV West Columbia Local Substation (#39530)	Brazoria	COASTAL	12/1/2024	205.35
23INR0360	BRP Charon BESS	Planned	BRP Charon BESS LLC	Tap Smithers (#44650) and Bellaire (#47000) 345kV	Fort Bend	HOUSTON	12/1/2024	410.81
24INR0142	BRP De Los Santos BESS	Planned	BRP De Los Santos BESS LLC	78015 Rosita Creek Substation 138kV	Maverick	SOUTH	12/1/2024	206.87
24INR0128	BRP Desna BESS	Planned	BRP Desna BESS LLC	39703 TNP FM524 138kV	Brazoria	COASTAL	12/1/2024	205.44
23INR0135	BRP Elbus BESS	Planned	BRP Elbus BESS LLC	9075 Lytton 138kV	Caldwell	SOUTH	12/1/2024	201.11
23INR0073	BRP Galan BESS	Planned	BRP Galan BESS LLC	5007 Alamo One 138kV	Bexar	SOUTH	12/1/2024	75.97
23INR0134	BRP Kailas BESS	Planned	BRP Kailas BESS LLC	6216 Bluff Creek 138kV	Taylor	WEST	12/1/2024	201.29
24INR0135	BRP Mekong BESS	Planned	BRP Mekong BESS LLC	Tap 345 kV line from Twin Oak Switch (#3400) to TPN One Plant Switchyard	Robertson	NORTH	12/1/2024	413.74
22INR0383	BRP Musca BESS	Planned	BRP Musca BESS LLC	60361 Santa Rita 138kV	Reagan	WEST	12/1/2024	100.51
23INR0275	BRP Nile BESS	Planned	BRP Nile BESS LLC	80220 Cenizo 345kV	Webb	SOUTH	12/1/2024	202.34
23INR0274	BRP Parana BESS	Planned	BRP Parana BESS	7178 Marion 138kV	Guadalupe	SOUTH	12/1/2024	303.67
23INR0139	BRP Passu BESS	Planned	BRP Passu BESS LLC	6111 Riley 345kV	Wilbarger	WEST	12/1/2024	301.82
22INR0390	BRP Perseus BESS	Planned	BRP Perseus BESS LLC	8452 Lon Hill 138kV	Nueces	COASTAL	12/1/2024	202.5
23INR0115	BRP Pobeda BESS	Planned	BRP Pobeda BESS LLC	44645 Singleton 345kV	Grimes	NORTH	12/1/2024	301.41
23INR0140	BRP Seine BESS	Planned	BRP Seine BESS LLC	60500 Edith Clarke 345kV	Foard	WEST	12/1/2024	301.69
23INR0143	BRP Sepik BESS	Planned	BRP Sepik BESS LLC	tap 138kV 11342 Lorraine South – 1032 Morgan Creek	Mitchell	WEST	12/1/2024	200.85
23INR0279	BRP Trivor BESS	Planned	BRP Trivor BESS LLC	1272 Fullerton 138kV	Andrews	WEST	12/1/2024	202.34
23INR0071	BRP Volans BESS	Planned	BRP Volans BESS LLC	11189 Quarry Field SW - 1074 Wink 138kV	Winkler	WEST	12/1/2024	206.88
24INR0096	BRP Volga BESS	Planned	BRP Volga BESS LLC	138 kV Seagoville Switch Substation (#2434; ONCOR)	Dallas	NORTH	12/1/2024	174.63
24INR0131	BRP Zelus BESS	Planned	BRP Zelus BESS LLC	the 138 kV Zapata Substation (#8299; AEP)	Zapata	SOUTH	12/1/2024	206.96
23INR0290	BRP Zeya BESS	Planned	BRP Zeya BESS LLC	38740 Heights 138kV	Galveston	HOUSTON	12/1/2024	256.83
24INR0397	Destiny Storage	Planned	Destiny Storage, LLC	Tap 138kV 40390 Crosby - 40680 Placid Ckt 86	Harris	HOUSTON	12/1/2024	201.11
24INR0516	French Riviera Storage	Planned	Arana Creek Battery Storage LLC	5646 Riviera Substation 69kV	Kieberg	COASTAL	12/1/2024	75.
24INR0413	Furay Battery Energy Storage System	Planned	Blue Topaz 1, LLC	Tap 138kV 45660 Jonte substation – 46332 Scenic WoodsTapping both ra	Harris	HOUSTON	12/1/2024	304.
24INR0584	Houston IV BESS	Planned	SMT Houston IV LLC	44140 CLODINE 138kV	Harris	HOUSTON	12/1/2024	168.6
25INR0251	Jerboa Storage	Planned	Jerboa Storage, LLC	Tap 138kV 8906 North Alamo - 8354 Weslaco Switching Station	Hidalgo	SOUTH	12/1/2024	201.08
25INR0252	Papley Storage	Planned	Papley Storage, LLC	Tapping the 138kV line connecting Ganso (Bus# 8267) to Maverick (Bus#	Maverick	SOUTH	12/1/2024	201.07
24INR0081	SANJAC BESS	Planned	Castleman Power	40270 Riverside 138kV	Harris	HOUSTON	12/1/2024	202.37
22INR0552	Sowers Storage	Planned	Sowers Energy Storage LLC	6894 Rose Hill_RC Sub 138 kV	Kaufman	NORTH	12/1/2024	200.83
22INR0549	Tanzanite Storage	Planned	Tanzanite Energy Storage LLC	6867 NORTH ATHENS 138kV	Henderson	NORTH	12/1/2024	257.72
24INR0425	Two Brothers Battery Energy Storage	Planned	Blue Topaz 2, LLC	8911 BLKBYU4A 138kV	Victoria	SOUTH	12/1/2024	152.
23INR0335	BRP Bachman BESS	Planned	BRP Bachman BESS LLC	44040 BAILEY 345kV	Wharton	SOUTH	12/2/2024	411.04

21INR0517	Tidwell Prairie Storage 1	Planned	Tidwell Prairie LLC	39950 TNP ONE PLANT 345kV - 3400 TWIN OAK	Robertson	NORTH	12/2/2024	200.
24INR0528	Blanquilla BESS	Planned	Blanquilla BESS LLC	Tap 138kV 8452 LON_HILL4A - 8441 NUECES_B4ALine is owned by LCR	Nueces	COASTAL	12/11/2024	200.78
23INR0336	Bypass Battery Storage	Planned	Parish Storage	44000 W_A_P_POI5A 345 kV	Fort Bend	HOUSTON	12/15/2024	206.9
24INR0405	Crowned Heron BESS	Planned	RWE Renewables	WA Parish 345 kV Bus #44000	Fort Bend	HOUSTON	12/15/2024	150.
24INR0493	Crowned Heron BESS 2	Planned	RWE Renewables	WA Parish 345 kV Bus #44000	Fort Bend	HOUSTON	12/15/2024	150.
23INR0351	Seven Flags BESS	Planned	Seven Flags BESS LLC	8295 Wormser Substation 138kV	Webb	SOUTH	12/15/2024	100.58
23INR0361	Third Coast BESS	Planned	Third Coast BESS LLC	8125 Lolita substation 138kV	Jackson	SOUTH	12/15/2024	101.21
23INR0364	Tierra Seca BESS	Planned	Tierra Seca BESS LLC	138kV 8255 HAMILTON4A (Hamilton Road Substation)	Val Verde	WEST	12/15/2024	101.21
22INR0467	Bird Dog BESS	Planned	VESI 37 LLC	5668 Mathis 69kV	Live Oak	SOUTH	12/30/2024	60.
24INR0472	Amador Storage	Planned	BT Amador Storage, LLC	6833 Explorer Switching Station 138kV	Van Zandt	NORTH	12/31/2024	100.92
24INR0461	Augie BESS	Planned	BRP Blue Topaz 5, LLC	46560 Waller 138kV	Waller	HOUSTON	12/31/2024	203.
23INR0127	Beacon Storage	Planned	AES Distributed Energy, Inc	40450 Deepwater 345kV	Harris	HOUSTON	12/31/2024	408.7
25INR0039	Borderland ESC	Planned	FRESH AIR ENERGY II, LLC	8368 McAllen 138kV (N_MCALLN4A)	Hidalgo	SOUTH	12/31/2024	200.
22INR0388	BRP Cachi BESS	Planned	BRP Cachi BESS LLC	7680 Clear Springs 138kV	Guadalupe	SOUTH	12/31/2024	202.46
22INR0353	BRP Carina BESS	Planned	BRP Carina BESS LLC	8479 Clarkwood 138kV	Nueces	COASTAL	12/31/2024	151.85
24INR0350	Brushwood Energy Storage	Planned	Flagtail LLC	Tap 345kV 44645 Singleton - 40600 Roans Prairie	Grimes	NORTH	12/31/2024	203.78
24INR0500	Claire BESS	Planned	BRP Blue Topaz 3, LLC	Cedar Bayou 138kV(40011)	Harris	HOUSTON	12/31/2024	406.01
24INR0557	Hovey Energy Storage	Planned	Barilla Solar, LLC	6655 BARL4A 138kV	Pecos	WEST	12/31/2024	23.
25INR0040	McMEXICO STORAGE	Planned	FRESH AIR ENERGY II, LLC	8644 Trade Zone 138kV	Hidalgo	SOUTH	12/31/2024	201.9
22INR0368	Padua Grid BESS	Planned	Padua Grid, LLC	5395 O.W Sommers 138kV	Bexar	SOUTH	12/31/2024	50.84
24INR0533	Padua Grid BESS Unit 2	Planned	Padua Grid, LLC	5395 Sommers 138kV	Bexar	SOUTH	12/31/2024	154.63
24INR0280	Port Bay ESC	Planned	FRESH AIR ENERGY II, LLC	8434 Rockport Substation (ROCKPORT4A) 138kV	Aransas	COASTAL	12/31/2024	200.
24INR0519	Roost Energy Storage	Planned	Bluff Creek Energy Storage LLC	1310 Knapp Substation 138kV	Borden	WEST	12/31/2024	100.
23INR0126	Sigma Storage	Planned	AES Distributed Energy, Inc	40460 Deepwater 138kV	Harris	HOUSTON	12/31/2024	408.4
22INR0332	Brantley Branch Batt	Planned	Brantley Branch LLC	Mt. Enterprise (Bus # 3116) – Martin Lake 345kv Line (Bus # 3100	Rusk	NORTH	1/1/2025	305.1
25INR0310	IEP Blackhawk	Planned	IEP Texas Verde II, llc	38740 Heights Substation 138kV	Galveston	HOUSTON	1/1/2025	100.
23INR0419	SOHO BESS	Planned	Black Mountain Energy Storage II	43035 Oasis 345kV	Brazoria	COASTAL	1/1/2025	206.32
25INR0162	SOHO II BESS	Planned	Black Mountain Energy Storage II	43035 Oasis 345kV	Brazoria	COASTAL	1/1/2025	206.32
23INR0308	Fowler Ranch Storage	Planned	Crane BESS, LLC	76025 Castle Mountain 138kV	Crane	WEST	1/2/2025	26.44
23INR0354	Bordertown BESS	Planned	Bordertown BESS LLC	8796 Roma 138kV	Starr	SOUTH	1/31/2025	106.15
23INR0350	Fort Duncan BESS	Planned	Fort Duncan BESS LLC	78015 Rosita Creek 138kV	Maverick	SOUTH	1/31/2025	106.15
23INR0340	Larkspur Energy Storage	Planned	Larkspur Energy Storage LLC	71213 Benedum 138kV	Upton	WEST	1/31/2025	307.46
24INR0495	Barbers Hill BESS	Planned	Black Mountain Energy Storage II	40850 JORDAN 345kV	Chambers	HOUSTON	2/1/2025	307.72
22INR0408	BRP Pular BESS	Planned	BRP Pular BESS LLC	8963 Hidalgo Energy Center 138kV	Hidalgo	SOUTH	2/1/2025	233.1
25INR0202	East West BESS	Planned	Black Mountain Energy Storage II, LLC	7750 LCRA MOUNTAIN HOME SUB	Kerr	SOUTH	2/1/2025	100.8
25INR0210	Fox Run Energy Storage	Planned	Fox Run Energy Project, LLC	Kirchhoff Substation (PTI#60704)	Jones	WEST	2/1/2025	301.36
25INR0101	Mallard BESS	Planned	North Texas Energy Storage LLC	818 Olinger 138kV	Collin	NORTH	2/17/2025	154.42
24INR0157	BRP Merope BESS	Planned	BRP Merope BESS LLC	345 kV Corn Trail Switch Substation (#11441)	Comanche	NORTH	3/1/2025	413.74
22INR0554	Platinum Storage	Planned	Platinum Energy Storage LLC	1729 Valley South 345kV	Fannin	NORTH	3/14/2025	301.4
23INR0322	Columbus Storage	Planned	EDP Renewables North America LLC	78103 Nada Substation 138kV	Colorado	SOUTH	3/15/2025	51.3
25INR0399	Blossomheath BESS	Planned	Tauberg LLC	Venus 345 kV Substation (Bus #1906)	Ellis	NORTH	3/31/2025	300.78
24INR0402	Inertia BESS 3	Planned	Inertia WS Holdings, LLC	Pendolo #60507 345kV substation	Jones	WEST	3/31/2025	108.44
25INR0222	SMT Olympic BESS	Planned	SMT Olympic BESS LLC	AIRLINE 138 kV Substation (Bus# 8490)	Nueces	COASTAL	4/1/2025	222.81
25INR0301	Van Zandt Energy Storage	Planned	Rocky Mountain Energy Holdings, LLC	11028 Odessa EHV Switch 345 kV	Ector	WEST	4/29/2025	251.5
25INR0300	Wizard BESS	Planned	Rocky Mountain Energy Holdings, LLC	To the 138 kV League City Substation (#38920)	Galveston	HOUSTON	4/29/2025	150.65
25INR0397	Beeman BESS	Planned	Waelder BESS	69kV Waelder Substation (7232)	Gonzales	SOUTH	5/1/2025	50.18
25INR0374	Meridian BESS	Planned	Navitas Energy- Meredian BESS	319 Meridian 69 KV	Bosque	NORTH	5/1/2025	31.23
25INR0394	Orchard Ray BESS	Planned	Pettus BESS	8593 PETTUS2A 69kV	Bee	SOUTH	5/1/2025	51.85
25INR0078	Peregrine BESS 2	Planned	CED Development Inc.	8673 RAPTOR7A 345kV	Goliad	SOUTH	5/1/2025	150.
25INR0396	Stewart Grady BESS	Planned	Grady BESS	23842 Grady138kV	Martin	WEST	5/1/2025	151.2
24INR0348	Best Southwest BESS	Planned	North Texas Energy Storage LLC	2431 DESOTO SW 345kV	Dallas	NORTH	5/31/2025	241.44
24INR0315	Black Springs BESS	Planned	Black Mountain Energy Storage II	1571 ORAN 138kV	Palo Pinto	NORTH	5/31/2025	120.96
25INR0385	Bobcat Cameron BESS	Planned	Bobcat BESS, LLC	5764 East Rio Hondo Substation 138kV	Cameron	COASTAL	5/31/2025	200.78
25INR0432	Brotherton Storage	Planned	Belltown Power Texas 2	6937 Tucker Sub 138kV	Anderson	NORTH	5/31/2025	176.13
24INR0274	Bufflehead BESS	Planned	Black Mountain Energy Storage II	2475 Lavon Switch 138kV	Collin	NORTH	5/31/2025	201.2
25INR0160	Canvasback BESS	Planned	Black Mountain Energy Storage II	8155 SANDCRAB4A	Calhoun	COASTAL	5/31/2025	151.2
22INR0422	Ferdinand Grid BESS	Planned	Ferdinand Grid, LLC	5260 Leon Creek 138kV	Bexar	SOUTH	5/31/2025	202.65
25INR0100	Goldeneye BESS	Planned	Black Mountain Energy Storage II	3423 KILLEEN Switch 138 KV	Bell	NORTH	5/31/2025	201.6
24INR0494	Hana Springs BESS	Planned	Black Mountain Energy Storage II LLC	7064 LAMPASAS 138kV	Lampasas	NORTH	5/31/2025	100.8
23INR0317	Kingfisher Energy Storage	Planned	Nopalosa Energy Storage, LLC	80219 Lobo 345kV	Webb	SOUTH	5/31/2025	204.97
24INR0295	Lucky Bluff BESS	Planned	Black Mountain Energy Storage	tap 138kV 1641 Stephenville - 1636 Dublin	Erath	NORTH	5/31/2025	100.8

251NR0417	Mesa View Storage	Planned	Mesa View Storage, LLC	Tap 345 kV KINGMTSW (#842) to NORTMC (#76000)	Upton	WEST	5/31/2025	501.9
241NR0275	Picadillo BESS	Planned	Black Mountain Energy Storage II	23837 Buffalo 138kV	Martin	WEST	5/31/2025	100.83
231NR0503	Ardesia Storage	Planned	HQC Solar Holdings 1, LLC	Tap 138kV 7325 Mendoza - 7216 Lockhart	Caldwell	SOUTH	6/1/2025	100.97
231NR0469	Big Elm Storage	Planned	Big Elm Storage, LLC	Tap 345 kV 3414 Temple Switch - 3409 Lake Creek	Bell	NORTH	6/1/2025	102.8
251NR0239	Big Five Storage	Planned	TX BESS 3 LLC	Tap 138kV (5784) Redgtss - (8380) Nedina	Hidalgo	SOUTH	6/1/2025	100.
251NR0467	Bocanova BESS	Planned	Bocanova Power LLC	39030 TNALVIN 138kV	Brazoria	COASTAL	6/1/2025	300.92
241NR0130	BRP Artemis BESS	Planned	BRP Artemis BESS LLC	40600 Roans Prairie Substation 345kV	Grimes	NORTH	6/1/2025	414.07
231NR0285	BRP Chena BESS	Planned	BRP Chena BESS LLC	Tap 138 kV 1951 Handley SES – 2246 Lakewood	Tarrant	NORTH	6/1/2025	202.32
221NR0424	BRP Denali BESS	Planned	BRP Denali BESS LLC	Tap 138kV 5395 Sommers - 5030 Braunig East	Bexar	SOUTH	6/1/2025	258.41
241NR0133	BRP Hestia BESS	Planned	BRP Hestia BESS LLC	the 69 kV Rock Springs Substation (#78238, LCRA)	Edwards	SOUTH	6/1/2025	29.05
251NR0347	Cadet Storage	Planned	TX BESS 5, LLC	69kV Bryan Texas Utilities Texas A&M to Shady Lane	Brazos	NORTH	6/1/2025	104.42
231NR0480	Camellia Storage	Planned	HQC Solar Holdings 1, LLC	Tap 138 kV 8358NORTH MERCEDES -8327 HARLINGEN 138 kV	Hidalgo	SOUTH	6/1/2025	90.76
231NR0425	Coneflower Storage Project	Planned	HQC Solar Holdings 1, LLC	40855 JORDON 138 kV	Chambers	HOUSTON	6/1/2025	170.
251NR0402	Driet BESS	Planned	Weimar BESS	7254 WEIMAR8 138kV	Colorado	SOUTH	6/1/2025	150.52
251NR0241	Halcon Storage	Planned	TX BESS A LLC	Tap 138kV 8957 Central Lopeno - 80106 Falcon Dam	Starr	SOUTH	6/1/2025	132.65
231NR0284	Las Moras Battery	Planned	Las Moras Storage, LLC	8252 Brackett 138kV	Kinney	SOUTH	6/1/2025	101.
251NR0238	Little Ridge Storage	Planned	TX BESS B LLC	Tap 138kV Swindell (812) - Olinger (818)	Collin	NORTH	6/1/2025	250.
251NR0375	NavBoot BESS	Planned	1242 Mckinzie Owner	8858 MCKENZIE4A 138kV	Nueces	COASTAL	6/1/2025	303.7
251NR0242	Pato Blanco Storage	Planned	TX BESS 4, LLC	Tap 138 kV 44010 W A Parish - 42980 NASH S02_8	Fort Bend	HOUSTON	6/1/2025	71.78
251NR0405	Pledgor BESS	Planned	Pledgor BESS	43120- Centerpoint Pledgor Substation	Matagorda	COASTAL	6/1/2025	100.33
241NR0281	Red Egret BESS	Planned	Red Egret LLC	38820 FREEWAY PARK 138kV	Galveston	HOUSTON	6/1/2025	309.
251NR0414	Rogers Creek BESS	Planned	Dialville BESS	3160, Oncor Dialville Substation	Cherokee	NORTH	6/1/2025	100.33
251NR0073	Saltillo Storage	Planned	SALTILLO STORAGE	7331 Cedarhill Substation 138kV	Bastrop	SOUTH	6/1/2025	101.
231NR0466	Shoshana Storage	Planned	HQC Solar Holdings 1, LLC	Tap 345kV 5915 South Texas Project (SO_TEX_345A) - 47531 Jones Cre	Matagorda	COASTAL	6/1/2025	221.92
241NR0168	Tejano Storage	Planned	Tejano Storage, LLC	Tap 138kV 8125 Lolita - 8172 Victoria	Victoria	SOUTH	6/1/2025	152.
231NR0123	Vaca Storage	Planned	Long Mount Storage, LLC	138kV 8723 Cangrejo	Calhoun	COASTAL	6/1/2025	101.
251NR0076	Violet Storage	Planned	VIOLET STORAGE	McKenzie Road (8858) 138 kV Substation	Nueces	COASTAL	6/1/2025	151.
231NR0194	Pequin Energy Storage	Planned	Pequin Energy Storage, LLC	39500 TN West Columbia 138kV	Brazoria	COASTAL	6/14/2025	103.4
231NR0494	Cartwheel BESS 1	Planned	RWE Renewables	Sulphur Springs Switch – Cash Switch 345 kV Line [Bus# 1697 to 2464]	Hopkins	NORTH	6/15/2025	156.91
231NR0495	Cartwheel BESS 2	Planned	RWE Renewables	Sulphur Springs Switch – Cash Switch 345 kV Line [Bus# 1697 to 2464]	Hopkins	NORTH	6/15/2025	156.91
231NR0422	Masoor Storage	Planned	Masoor Energy Storage LLC	Bus #1760 Bonham 138kV	Fannin	NORTH	6/26/2025	203.
251NR0329	Project Lynx BESS	Planned	GIGA TEXAS ENERGY LLC	138KV Tap 8921 Terra Verde - 8518 Kingsville	Nueces	COASTAL	6/28/2025	125.36
221NR0555	Guevara Storage	Planned	BT Smith Storage, LLC	2483 Royse Switch 345kV	Rockwall	NORTH	6/30/2025	125.36
231NR0468	Petunia Storage Project	Planned	HQC Solar Holdings 1, LLC	138kV Tap 3675 Rogers - 3485 Tin Roof Pod	Milam	SOUTH	6/30/2025	231.86
241NR0319	Burro Loco Energy Storage	Planned	VESI	8626 Resaca 69kV	Cameron	COASTAL	7/1/2025	25.14
251NR0190	Fortissimo BESS	Planned	Fortissimo BESS, LCC	Dyemound 138kV (Bus#741)	Montague	NORTH	7/1/2025	202.65
251NR0184	Legato BESS	Planned	Legato Storage, LLC	Crafton Substation (#608)	Wise	NORTH	7/1/2025	202.65
241NR0231	Llano Estacado Energy Storage	Planned	VESI 40 LLC	1324 Big Spring West 138 kV	Howard	WEST	7/1/2025	98.
261NR0114	Ochoa Energy Storage	Planned	Ochoa Energy Storage LLC	44420 Katy 138kV	Waller	HOUSTON	7/1/2025	263.2
251NR0192	Palmvalley Storage	Planned	Palmvalley Energy Storage LLC	Frontera (#8980)	Hidalgo	SOUTH	7/1/2025	100.
251NR0185	Sonata BESS	Planned	Sonata Storage, LLC	LCRA Altair Substation (BUS#78106)	Colorado	SOUTH	7/1/2025	83.86
241NR0330	TRAVIS KIMBRO BESS	Planned	Travis pflugerville BESS	7337 Kimbro 138kV	Travis	SOUTH	7/1/2025	36.84
251NR0384	Zorro BESS	Planned	UR-Silo DevCo LLC	138 kV Ben Wheeler (Bus# 6852)	Van Zandt	NORTH	7/1/2025	150.
251NR0253	Whiskey BESS	Planned	UR-Silo DevCo LLC	138 kV Canton Tap (Bus# 6828)	Van Zandt	NORTH	7/2/2025	150.
251NR0262	Shepard Energy Storage	Planned	Shepard Energy Storage LLC	Hidden Lakes 138kV substation (Bus# 38900)	Galveston	HOUSTON	7/9/2025	263.2
251NR0421	Aldrin 138 BESS	Planned	Aldrin Energy Storage LLC	(Bus: 39015) North Alvin TNMP 138kV	Brazoria	COASTAL	7/15/2025	207.
251NR0425	Aldrin 345 BESS	Planned	Aldrin Energy Storage LLC	(Bus: 43030) Meadow 345kV substation	Brazoria	COASTAL	7/15/2025	362.
241NR0294	Citrus Flatts BESS	Planned	Black Mountain Energy Storage II	80022 Oleander 138kV	Cameron	COASTAL	7/15/2025	100.8
231NR0467	Lavender Storage Project	Planned	HQC Solar Holdings 1, LLC	5205 Highland 138 kV Substation	Bexar	SOUTH	7/15/2025	231.9
241NR0301	Merchant BESS	Planned	Black Mountain Energy Storage	46510 TOMBALL 138kV	Harris	HOUSTON	7/15/2025	201.2
241NR0302	Pintail Pass BESS	Planned	Pintail Pass BESS LLC	8249 ANGSTROM 345KV	San Patricio	COASTAL	7/15/2025	201.2
241NR0386	Black & Gold Energy Storage	Planned	RES America Developments Inc.	6364 Yellow Jacket Sub 138kV	Menard	WEST	7/16/2025	254.58
251NR0434	Bluegill BESS	Planned	Bluegill BESS	To 138 kV Atascocita (Bus #40130) Substation	Harris	HOUSTON	7/31/2025	501.9
251NR0135	Hayrick BESS	Planned	Gransolar Texas Five LLC	6351 Nicole 138kV	Coke	WEST	7/31/2025	113.9
231NR0163	Ringtail Ridge Storage	Planned	KCE TX 26, LLC	7150 Kendall 138kV	Kendall	SOUTH	8/1/2025	100.57
241NR0304	Barton Bishop BESS	Planned	Barton Bishop BESS	1599 Barton Chapel Wind Farm station 138kV	Jack	NORTH	8/27/2025	47.34
231NR0479	Taormina Storage	Planned	HQC Solar Holdings 1, LLC	Tap 138kV VH Braunig (5025) to Valley Road 138kV (5465)	Bexar	SOUTH	8/31/2025	231.86
221NR0541	ALWEST BESS	Planned	Castleman Power	3114 Paltalco 138kV	Anderson	NORTH	9/1/2025	208.63
251NR0386	Diaz BESS	Planned	BRP Blue Topaz 10, LLC	8950 Olmito 138kV	Cameron	COASTAL	9/1/2025	244.
251NR0380	Fike BESS	Planned	BRP Blue Topaz 9, LLC	5754 Aderhold 138kV	Hidalgo	SOUTH	9/1/2025	200.83
251NR0208	Iron Belt Energy Storage	Planned	Iron Belt Energy Storage Project, LLC	Long Draw (# 59900) - Volta (#59910) 345kV	Borden	WEST	9/1/2025	401.9

251NR0176	Masa Storage	Planned	Savannah Oaks Solar Project, LLC	tap 345 kV 46020 Limestone Plant - 967 Gibbons Creek ckt 18	Madison	NORTH	9/1/2025	251.14
251NR0131	SOSA Storage	Planned	SOSA Energy Center LLC	Tap 138kV 25 North Zulch - 47 Hilltop Lakes	Madison	NORTH	9/1/2025	150.54
241NR0416	Trelas	Planned	Trelasol, LLC	76006 Bow Wood 345kV Bus	McCulloch	SOUTH	9/1/2025	203.
251NR0376	Hawkins BESS	Planned	BRP BLUE TOPAZ 7, LLC	85005 ELGATO4A 138 kV	Hidalgo	SOUTH	9/8/2025	150.45
251NR0419	Marengo BESS	Planned	BRP BLUE TOPAZ 8, LLC	8640 Kelvin Station 138kV (AEP)	Cameron	COASTAL	9/8/2025	120.72
251NR0418	Palacios BESS	Planned	BRP BLUE TOPAZ 11, LLC	5767 HIWAY511SUB8 138kV	Cameron	COASTAL	9/8/2025	125.69
231NR0324	Fox Pen Storage	Planned	EDP Renewables North America LLC	138 kV Tap 3110 Stryker Creek - 3147 Troup	Cherokee	NORTH	9/15/2025	51.3
241NR0459	Project Exodus (BESS)	Planned	Exodus Solar LLC	Tap 345kV 7040 Austrop -- 7042 Zorn	Caldwell	SOUTH	9/15/2025	202.15
251NR0420	SMT Houston BESS	Planned	SMT Houston	Tap 138 kV LAUDER (#46002) - RITTENHOUSE (#46282) ckt 95	Harris	HOUSTON	9/29/2025	227.9
241NR0243	Solar Star Western Hills Storage	Planned	Solar Star Western Hills Storage, LLC	Tap 138kV 1955 CALMONT SWITCH -- 2087 Western Hills	Tarrant	NORTH	9/30/2025	160.
231NR0456	Bronze Quinta Storage	Planned	KCE TX 28, LLC	S_MCALLN 8371 (S. McAllen 138kV Substation)	Hidalgo	SOUTH	10/1/2025	103.51
241NR0550	SMT Mercedes II BESS	Planned	SMT Mercedes II, LLC	Tap 138kV NORTH MERCEDES STATION (BUS #8358)	Hidalgo	SOUTH	10/9/2025	227.87
241NR0457	JUNO BESS	Planned	JUNO BESS	59906 Long Draw 138 kV	Borden	WEST	10/22/2025	355.21
251NR0346	Cado Storage	Planned	Cado Storage, LLC	5417 STREICH RD 138 kV	Bexar	SOUTH	10/28/2025	205.2
221NR0385	BRP Pictor BESS	Planned	BRP Pictor BESS LLC	60400 Lynx 138kV	Crane	WEST	11/1/2025	201.07
251NR0133	Rose Quartz BESS	Planned	Rose Quartz BESS, LLC	Tap 138kV 8283 Asherton - 8613 Bigwells	Dimmit	SOUTH	11/1/2025	101.41
231NR0421	Tidwell Prairie IV Energy Storage	Planned	Tidwell Prairie LLC	Tap TNP ONE 39950 and Twin Oak 3400	Robertson	NORTH	11/1/2025	200.
241NR0282	Royal River BESS	Planned	Royal River LLC	Tap 138kV 42110 Angleton - 43381 West Columbia	Brazoria	COASTAL	11/28/2025	307.1
231NR0204	GALVANIC BESS	Planned	CED Development Inc	8252 Bracketville 138kV	Kinney	SOUTH	11/30/2025	100.
251NR0054	Sandman Power Storage	Planned	ALPIN HOLDING LLC	1685 Farmersville Switch 345kV	Collin	NORTH	11/30/2025	100.
241NR0378	Solara BESS 1	Planned	CED Development Inc.	60387 Hendrick 138kV	Jones	WEST	11/30/2025	150.
241NR0379	Solara BESS 2	Planned	CED Development Inc.	60387 Hendrick 138kV	Jones	WEST	11/30/2025	150.
231NR0205	SUNSETTER BESS	Planned	CED Development Inc.	5885 Downie 138kV	Uvalde	SOUTH	11/30/2025	100.
231NR0272	BRP Aras BESS	Planned	BRP Aras BESS LLC	76595 North McCamey 138kV	Upton	WEST	12/1/2025	303.59
231NR0131	BRP Batura BESS	Planned	BRP Batura BESS LLC	5260 Leon Creek 138kV	Bexar	SOUTH	12/1/2025	251.65
221NR0427	BRP Kabru BESS	Planned	BRP Kabru BESS LLC	1159 Andrew North - 11284 Blackbird 138kV	Andrews	WEST	12/1/2025	202.45
231NR0104	BRP Kamet BESS	Planned	BRP Kamet BESS LLC	Andrews North -- McKenzie Draw Switch 138 kV	Andrews	WEST	12/1/2025	202.46
231NR0357	BRP Yarra BESS	Planned	BRP Yarra BESS LLC	138 kV Lake Crest bus #12492	Dallas	NORTH	12/1/2025	205.36
231NR0388	White Wing I Energy Storage	Planned	White Wing I Energy Storage LLC	8418 Rincon Station 138 kV	San Patricio	COASTAL	12/1/2025	101.63
231NR0389	White Wing II Energy Storage	Planned	White Wing II Energy Storage LLC	8418 Rincon Station 138 kV	San Patricio	COASTAL	12/1/2025	101.63
241NR0198	Two Forks BESS	Planned	Two Forks LLC	684 SPRING 138kV	Cooke	NORTH	12/4/2025	307.2
251NR0271	City Breeze BESS	Planned	Black Mountain Energy Storage II	8111 MAGILL4A 138KV	Matagorda	COASTAL	12/15/2025	141.2
231NR0496	San Perlita BESS 1	Planned	RWE Renewables	8601 Cebolla 345kV	Willacy	COASTAL	12/15/2025	150.
231NR0497	San Perlita BESS 2	Planned	RWE Renewables	8601 Cebolla 345kV	Willacy	COASTAL	12/15/2025	150.
241NR0442	Midnight Sun Energy Storage	Planned	RES America Developments Inc.	6601 Rio Pecos 138kV	Crockett	WEST	12/23/2025	510.
221NR0443	Bowstring BESS	Planned	Longbow Energy Storage, LLC	8961 White Point 138kV	San Patricio	COASTAL	12/31/2025	155.
251NR0441	Dios BESS	Planned	Dios BESS, LLC	8117 GANADO138kV	Jackson	SOUTH	12/31/2025	201.08
251NR0372	Elan BESS	Planned	Elan BESS, LLC	42380 Needville 138kV	Fort Bend	HOUSTON	12/31/2025	202.65
251NR0444	Peridot Storage	Planned	BT Castro Storage, LLC	5836 North Batesville 69kV	Zavala	SOUTH	12/31/2025	50.48
241NR0514	Rogers Draw BESS	Planned	Rocky Mountain Energy Development, LLC	7751 Headwaters substation 138kV	Gillespie	SOUTH	12/31/2025	145.55
241NR0485	Rutile BESS	Planned	Rutile BESS, LLC	Tap 138kV 6340 BALLINGER - 60399 WEISS	Runnels	WEST	12/31/2025	101.4
251NR0371	Siddiqi Storage	Planned	BT Siddiqi Storage, LLC	1819 Oncor Commerce 138kV	Hunt	NORTH	12/31/2025	178.
251NR0189	Staccato BESS	Planned	Staccato Storage, LLC	138kV WARD A #7312.	Fayette	SOUTH	12/31/2025	202.65
251NR0370	Willis Storage	Planned	BT Willis Storage, LLC	3172 Emory Node 138kV	Rains	NORTH	12/31/2025	178.
251NR0466	Yooperlite Storage	Planned	BT Yooperlite Storage, LLC	(#580) Westbrook 138kV	Wise	NORTH	12/31/2025	175.65
231NR0457	Hive Hollows Storage	Planned	KCE TX 27, LLC	3415 TEMPLE SWITCH 138kV	Bell	NORTH	1/1/2026	103.51
211NR0455	Independence Trail Storage	Planned	KCE TX 16, LLC	60501 Tesla 345kV	Childress	PANHANDLE	1/1/2026	100.
241NR0285	APV Plumwood Storage	Planned	APV Lonestar Energy LLC	Tap 138kV 40171 Baytown - 40015Cedar Bayou Plant	Chambers	HOUSTON	1/15/2026	200.82
251NR0122	Vial BESS	Planned	Gransolar Texas Eleven LLC	Chatt (#234)	Hill	NORTH	1/15/2026	135.12
231NR0216	Venus Mill Storage	Planned	KCE TX 14, LLC	138 kV Tap #442 Rail Port - #1905 Griffith	Ellis	NORTH	1/20/2026	100.61
231NR0278	BRP Tucana BESS	Planned	BRP Tucana BESS LLC	1157 Andrews County South 138kV	Andrews	WEST	1/31/2026	206.98
251NR0391	Purple Sage BESS 1	Planned	Purple Sage, LLC	Anna 345 kV Bus# 2373.	Collin	NORTH	2/1/2026	156.
251NR0392	Purple Sage BESS 2	Planned	Purple Sage, LLC	Anna 345 kV Bus# 2373	Collin	NORTH	2/1/2026	156.
251NR0339	Fort Concho Energy storage	Planned	Rocky Mountain Energy Development, LLC	Tap 138 kV #76320 Schkade - #76011 Twin Buttes Line; LCRA	Tom Green	WEST	2/16/2026	251.15
251NR0338	Les Energy Storage	Planned	Rocky Mountain Energy Development, LLC	1326 Stanton East Substation 138 kV	Martin	WEST	2/16/2026	201.
261NR0083	Zeppelin Energy Storage	Planned	Rocky Mountain Energy Development, LLC	6464 San Angelo North	Tom Green	WEST	2/16/2026	163.93
231NR0502	Adelite Storage	Planned	HQC Solar Holdings 1, LLC	Tap 138kV Thorndale North (bus #3659) -- Rookie Switch (bus #3701)	Milam	SOUTH	2/28/2026	231.88
241NR0498	Fort Watt Storage	Planned	Fort Watt Storage, LLC	Tap 138kV 1933 Kennedale - 2208 Mansfield	Tarrant	NORTH	3/1/2026	201.09
261NR0016	HECATE GRID ROSALITA STORAGE	Planned	HECATE GRID ROSALITA STORAGE LLC	#11305 DERMOTT_5 345kV	Scurry	WEST	3/1/2026	152.83
241NR0417	Sierra Diablo Energy Storage	Planned	SIERRA DIABLO ENERGY STORAGE LLC	Tap 138kV Long Pasture POD (11132) -- Screwbean Tap (1095)	Reeves	WEST	3/1/2026	203.81
231NR0164	Steppe Reserve Storage	Planned	KCE TX 25, LLC	8283 Asherton 138 kV	Dimmit	SOUTH	3/1/2026	51.9

23INR0464	Sloan Storage	Planned	Sloan Energy Storage LLC	3179 Pauline 138kV	Henderson	NORTH	3/27/2026	203.
24INR0252	Kruth Storage	Planned	Martinez Energy Storage LLC	3319 Redland 138kV	Angelina	NORTH	3/31/2026	203.
25INR0363	Emerald Hill Energy Storage	Planned	Emerald Hill Energy Storage LLC	Desoto Switch (2431) - Cedar Hill Switch (2420) 345kV Line	Dallas	NORTH	4/1/2026	261.02
24INR0432	HGP Pacesetter BESS	Planned	HGP Storage, LLC	2431 DESSW1_5 345kV	Dallas	NORTH	4/1/2026	200.83
24INR0174	Solar Star North Herty Storage	Planned	Solar Star North Herty Storage, LLC	3319 Redland Switch 138 kV	Angelina	NORTH	4/20/2026	125.4
25INR0143	Ariji BESS	Planned	Ariji BESS, LLC	Tap 138kV 1394 GTTYVTAP_8 - 1322 BIGSPRIG_8	Howard	WEST	4/21/2026	100.65
25INR0146	Blue Heron BESS	Planned	Blue Heron BESS, LLC	Tap 138kV MANSON (1094) - Riverton (11083)	Reeves	WEST	4/21/2026	201.08
25INR0138	Champaign BESS	Planned	Champaign BESS, LLC	Tap 138kV MCDLD (#1333) – 36 POD (#11227)	Glasscock	WEST	4/21/2026	201.13
25INR0139	Dolce BESS	Planned	Dolce BESS, LLC	Tap 138kV 1189 BARBER_LK1_8 - 19520 CHINAGRVX2_8	Mitchell	WEST	4/21/2026	100.65
24INR0374	Farrier Station Energy Storage	Planned	Farrier Station Energy Storage Project, LLC	MONTICELLO SES (BUS# 1696) - ALLEN SWITCH (BUS# 2514)	Hopkins	NORTH	4/21/2026	401.9
25INR0142	Sagewood BESS	Planned	Sagewood BESS, LLC	Tap 138kV MCDLD (#1333) – 36 POD (#11227)	Glasscock	WEST	4/21/2026	100.57
25INR0140	Seragio BESS	Planned	Seragio BESS, LLC	11140 ECTRCNTYN_8 138kV	Ector	WEST	4/21/2026	201.13
23INR0462	Palladium Storage	Planned	Palladium Energy Storage LLC	Tap 138 kV 8656 Luna - 8033 Pantera	Hidalgo	SOUTH	4/27/2026	152.
25INR0284	Railway BESS	Planned	Grand Reserve Energy, LLC	Martin Lake Switch (3100) – Elkton (3105) 345 kV Line	Rusk	NORTH	5/1/2026	254.8
26INR0149	Blue Bird BESS	Planned	Gigawatt Solar LLC	Tap 345kV 1880 Rocky Creek - 1898 Mitchel Bend	Hood	NORTH	5/29/2026	200.7
26INR0106	Upstream BESS	Planned	Upstream Storage LLC	1902 Johnson Switch	Johnson	NORTH	5/29/2026	461.6
26INR0116	Falcon Zapata Storage 138	Planned	Falcon BESS, LLC	Tap 138kV 8299 Zapata - 8957 Lopeno	Zapata	SOUTH	5/31/2026	200.79
26INR0107	Freedom Falcon BESS	Planned	Falcon BESS, LLC	Tap 345kV 80307 Delsol - 80225 Cenizo CKT#2	Zapata	SOUTH	5/31/2026	501.9
25INR0390	Macho Creek BESS	Planned	Macho Creek BESS, LLC	8793 Rio Grande City 138kV	Starr	SOUTH	5/31/2026	150.56
23INR0391	THUNDER ROAD ENERGY STORAGE	Planned	Hecate Grid Thunder Road Storage LLC	12491 FISH CREEK 138KV	Dallas	NORTH	5/31/2026	153.4
24INR0355	Anatole Renewable Energy Storage	Planned	Eustace Storage LLC	(Bus# 6951) Eustace Southeast 138kV Substation (owned by Rayburn Electric)	Henderson	NORTH	6/1/2026	207.82
23INR0069	Corbin Grid BESS	Planned	Corbin Grid, LLC	44510 Obrien 138kV	Fort Bend	HOUSTON	6/1/2026	202.76
24INR0178	Cumulus Grid BESS	Planned	Cumulus Grid, LLC	1906 Venus Switch Substation 345kV	Ellis	NORTH	6/1/2026	205.88
24INR0102	Seguro Grid	Planned	Val Vista Grid, LLC	Tap 345kV 8383 North Edinburg - 80137 Stewart Road	Hidalgo	SOUTH	6/1/2026	201.33
23INR0217	Snap Jaw BESS	Planned	Moccasin Pointe Grid, LLC	tap 138kV 40941 La Porte - 40200 Bimont (Air Liquide)	Harris	HOUSTON	6/1/2026	201.28
23INR0218	Stump Tail BESS	Planned	Moccasin Pointe Grid, LLC	Tap 345kV 42000 PH Robinson – 40240 Center	Harris	HOUSTON	6/1/2026	301.69
22INR0387	Val Vista Grid BESS	Planned	Val Vista Grid, LLC	8380 North Edinburg 138kV	Hidalgo	SOUTH	6/1/2026	202.85
26INR0035	Country Haven Energy Storage	Planned	174 Power Global Properties, LLC	138 kV Lone Oak substation (Bus #6871)	Rains	NORTH	6/15/2026	72.05
26INR0033	Fairway Storage	Planned	HQC Solar Holdings 1, LLC	Tap 138kV 3503 FAIRWPOD_8 - 196 FAIRFIELD	Freestone	NORTH	6/29/2026	121.03
25INR0288	Buffalo Prairie Storage	Planned	Buffalo Meadow Energy Center, LLC	Tap 345kV 975 Jack Creek - 3400 Twin Oak	Robertson	NORTH	7/31/2026	150.56
25INR0361	Wallie Storage	Planned	Wallie Storage, LLC	11324 Leatherwood POD 138kV	Howard	WEST	8/7/2026	201.08
25INR0313	Staked Plains BESS	Planned	Grand Reserve Energy, LLC	345kV Dunbar Double Mountain Switch (Bus# 23928)	Lubbock	PANHANDLE	9/1/2026	254.8
25INR0141	Fairgreen BESS	Planned	Fairgreen BESS, LLC	Tap 138kV 1322 BIGSPRIG_8 - 11351 HILLCREST_8	Howard	WEST	9/14/2026	201.13
25INR0144	Jasper BESS	Planned	Jasper BESS, LLC	Tap 138kV 71230 Pleasant Farms - 1236 Pegasus South	Midland	WEST	9/14/2026	201.13
25INR0460	Acker BESS	Planned	Ogallala BESS LLC	Ogallala 345 kV (#23912)	Castro	PANHANDLE	9/15/2026	301.04
26INR0154	Pennington Storage	Planned	S&S Renewables LLC	to the 345kV Goddard (#8606) – Tango (#8689) line; AEP	Bee	SOUTH	9/30/2026	511.23
25INR0248	Strawberry Acres Storage	Planned	Strawberry Acres Energy Center, LLC	5132 Eagle Creek Substation 138kV	Wilson	SOUTH	9/30/2026	150.59
24INR0392	Riverwalk BESS	Planned	CED Development Inc.	5294 Martinez Substation 138kV	Bexar	SOUTH	10/31/2026	100.
26INR0024	Becerra Creek Storage 1	Planned	Bordas Renewable Energy, LLC	345 kV Cenizo Substation (#80220)	Webb	SOUTH	12/1/2026	125.62
25INR0159	Mallard II BESS	Planned	North Texas Energy Storage LLC	818 Olinger 138kV	Collin	NORTH	12/1/2026	101.76
24INR0381	Alexandrite Storage	Planned	Johnson Energy Storage, LLC	Santa Rosa (S. SNROSA4A) 138/XX KV Substation (Bus #8359)	Cameron	COASTAL	12/10/2026	203.
27INR0015	Cumbia Energy Center	Planned	Mission Clean Energy LLC	Westside Bulk 138kV substation, owned by AEP Texas Central Co., bus n	Nueces	COASTAL	12/31/2026	200.
26INR0045	LUND STORAGE CENTER 1	Planned	Aelius Solar Corp.	TAP 138 KV LINE AND CREATE NEW BUS BETWEENKIMBRO (7337) AND	Bastrop	SOUTH	12/31/2026	407.55
25INR0250	Oorja Storage	Planned	Oorja Storage, LLC	138 kV 8914 Coffee Port	Cameron	COASTAL	2/27/2027	201.1
27INR0014	Kit Fox Storage	Planned	Kit Fox Storage, LLC	6842 WALTON 138KV	Henderson	NORTH	7/1/2027	153.6
27INR0003	Becerra Creek Storage 2	Planned	Bordas Renewable Energy, LLC	345 kV Cenizo Substation (#80220)	Webb	SOUTH	12/1/2027	125.62

[NEWS \(HTTPS://WWW.ENERGY-STORAGE.NEWS/CATEGORY/NEWS/\)](https://www.energy-storage.news/category/news/)

ERCOT accounted for 70% of US battery storage deployments in Q1

By [Cameron Murray \(https://www.energy-storage.news/author/camersonsolarmedia-co-uk/\)](https://www.energy-storage.news/author/camersonsolarmedia-co-uk/)

May 30, 2023

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The 190MW/380MWh Cunningham BESS, acquired by Acciona in late 2021, was commissioned in the first three months of 2023. Image: Acciona Energia.

Some 710MW of battery storage came online in the US in the first three months of the year, of which around 70% was in the ERCOT, Texas market, S&P Global said.

Overall battery storage capacity in the US grew to 10.777GW by the end of Q1 2023, amounting to a 52% year-on-year increase, the research firm said.

The growth should have been even faster, however, with 2.448GW of projects initially proposed to come online during the first quarter, compared to the 710MW in actual commissionings, S&P added.

Major projects that should have come online but were pushed to Q2 include the 260MW Sonoran Solar Energy and 150MW Arroyo Energy Storage, from NextEra Energy Resources and Enel Green Power in Arizona and New Mexico, respectively.

Battery storage project delays have been seen globally, largely driven by grid connection waits and supply chain-related delays (<https://www.energy-storage.news/no-easy-answer-on-managing-battery-storage-supply-chain-issues-but-things-are-getting-better/>).

The Q1 deployment figures contrast with those of trade body American Clean Power Association,

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As of the end of the quarter, California (or specifically the grid operated by CAISO) now has 5.2GW online, 48.2% of the US' total capacity, while ERCOT's 3.287GW gives it a 30.5% market share. By MWh capacity, CAISO's share is even larger, with two-thirds of the 29.640GW online.

S&P's research also listed the largest projects to have come online during the first quarter. They were:

- Acciona Energy North America's 190-MW BT Cunningham Storage in Texas
- Aypa Power Development's 155.5-MW Wolf Tank Storage facility in Texas
- Key Capture Energy's 51.5-MW KCE TX 19 facility in Texas
- Key Capture Energy's 51.5-MW KCE TX 21 facility in Texas
- NextEra Energy Resources' 50-MW Buena Vista Energy Center facility in New Mexico
- Arizona Public Service's 50-MW El Sol BESS facility in Arizona

For Q2, S&P said 3.177GW of projects are expected to come online, of which 51% would be in the CAISO grid and ERCOT accounting for just 6.3%, with 200MW coming online.

When Acciona acquired the Cunningham project in late 2022 it claimed it would be the largest BESS on the Texas grid when commissioned.

That title may now be held by a [200MW project \(https://www.energy-storage.news/texas-itc-aided-200mw-merchant-project-comes-online-catl-in-5gwh-supply-deal/\)](https://www.energy-storage.news/texas-itc-aided-200mw-merchant-project-comes-online-catl-in-5gwh-supply-deal/) brought online by developer Eolian and system integrator Wärtsilä which *Energy-Storage.news* was told has an energy storage capacity in MWh of over 500. However, it is actually two co-located BESS units sited together with separate grid connections.

S&P also details the largest project owners by operational capacity. They are NextEra Energy Resources top with 1.421GW online, followed by Axium Infrastructure with 733MW, Vistra Energy with 673MW, LS Power with 615MW and Terra-Gen with 581MW.

[annual deployments \(https://www.energy-storage.news/tag/annual-deployments/\)](https://www.energy-storage.news/tag/annual-deployments/), [caiso \(https://www.energy-storage.news/tag/caiso/\)](https://www.energy-storage.news/tag/caiso/), [california \(https://www.energy-storage.news/tag/california/\)](https://www.energy-storage.news/tag/california/), [ercot \(https://www.energy-storage.news/tag/ercot/\)](https://www.energy-storage.news/tag/ercot/), [quarterly deployment figures \(https://www.energy-storage.news/tag/quarterly-deployment-figures/\)](https://www.energy-storage.news/tag/quarterly-deployment-figures/), [texas \(https://www.energy-storage.news/tag/texas/\)](https://www.energy-storage.news/tag/texas/), [usa \(https://www.energy-storage.news/tag/usa/\)](https://www.energy-storage.news/tag/usa/)

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Eyeing ‘great opportunities’ in New Mexico, Greenvolt buys large-scale solar-plus-storage project (<https://www.energy-storage.news/eyeing-great-opportunities-in-new-mexico-greenvolt-buys-large-scale-solar-plus-storage-project/>)

July 18, 2023

Renewable energy firm Greenvolt Power has acquired an early-stage co-located project in New Mexico, US, with a

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(<https://www.energy-storage.news/jupiter-power-secures-us70-million-for-320mwh-ercot-projects/>)

Jupiter Power secures US\$70 million for 320MWh ERCOT projects (<https://www.energy-storage.news/jupiter-power-secures-us70-million-for-320mwh-ercot-projects/>)

July 18, 2023

Developer Jupiter Power has announced US\$70.4 million in loan financing for two battery storage projects in ERCOT, Texas, arranged by First Citizens Bank.

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(<https://www.energy-storage.news/d-e-shaw-starts-building-solar-plus-storage-project-with-100mw-bess-in-new-mexico/>)

D.E. Shaw starts building solar-plus-storage project with 100MW BESS in New Mexico (<https://www.energy-storage.news/d-e-shaw-starts-building-solar-plus-storage-project-with-100mw-bess-in-new-mexico/>)

July 13, 2023

US developer D. E. Shaw has broken ground on a 200MW solar, 100MW battery storage project in New Mexico, set to come online in 2024.

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(<https://www.energy-storage.news/california-passes-5gw-of-grid-scale-battery-storage/>)

California passes 5GW of grid-scale battery storage (<https://www.energy-storage.news/california-passes-5gw-of-grid-scale-battery-storage/>)

July 13, 2023

California has passed 5GW of grid-scale battery storage energy storage (BESS) projects, grid operator CAISO has revealed.

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(<https://www.energy-storage.news/flow-battery-technology-milestones-from-pnnl-and-sumitomo-electric/>)

Flow battery technology milestones from PNNL and Sumitomo Electric (<https://www.energy-storage.news/flow-battery-technology-milestones-from-pnnl-and-sumitomo-electric/>)

July 13, 2023

A seven-year observation of a vanadium flow battery in California from Sumitomo Electric has been completed, while US lab PNNL has found an alternative, food-based electrolyte which it said boosted capacity and longevity.

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CITY COUNCIL AGENDA FORM

Meeting Date: July 24, 2023

Prepared by: Gus Knebel

Department: Legal

Agenda item: _____

Reviewed by: _____

AGENDA ITEM DESCRIPTION: AN ORDINANCE OF THE CITY OF LA MARQUE, TEXAS REPEALING SECTION 44-2 OF THE CODE OF ORDINANCES, CITY OF LA MARQUE, TEXAS; MAKING VARIOUS FINDINGS RELATED TO THE SUBJECT AND PROVIDING FOR AN EFFECTIVE DATE.

Attachment:

1. Ordinance Repealing Section 44-2 of The Code of Ordinances City of La Marque, Texas.
2. House Bill 1819 of the 88th Regular Legislative Session.

STAFF BRIEFING:

House Bill 1819 prevents the enforcement of curfews for minors. Staff proposes to repeal the conflicting portion of the City of La Marque's Code of Ordinances.

HISTORY:

TARGET IMPLEMENTATION:

August 31, 2023.



CITY COUNCIL AGENDA FORM

SIGNIFICANT ACTION DATES:

ACTION:

- | | |
|---|---|
| ☒ Ordinance | ☐ Resolution |
| ☐ Special Presentation | ☐ Proclamation |
| ☐ Finance Report | ☐ Public Hearing |
| ☐ Recognition. | |
| ☐ Mark if this item does not conflict with any Resolution, Ordinance or City Charter, policies, procedures | |

Cost Details:

Budgeted	
Actual Bid Estimated Expenditure	
Acct. Name(s)	
Line Items #	
Other Funding	

STAFF'S RECOMMENDATION:

Pass Ordinance repealing Section 44-2 of the Code of Ordinances City of La Marque, Texas.

FISCAL IMPACT:

None

ORDINANCE NO. O-2023-00

AN ORDINANCE OF THE CITY OF LA MARQUE, TEXAS REPEALING SECTION 44-2 OF THE CODE OF ORDINANCES, CITY OF LA MARQUE, TEXAS; MAKING VARIOUS FINDINGS RELATED TO THE SUBJECT AND PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, the Section 44-2 of the Code of Ordinances, City of La Marque, Texas establishes a curfew for minors under 17 years of age;

WHEREAS, House Bill 1819 of the 88th Regular Legislative Session of the Texas Legislature prohibits the enforcement of curfews for individuals under 18 years of age;

WHEREAS, House Bill 1819 is effective September 1, 2023; and

WHEREAS, the City Council of the City of La Marque, Texas desires to repeal its curfew for minors under 17 years of age.

NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LA MARQUE, TEXAS THAT:

Section 1. The findings and recitals set out in the preamble to this Ordinance are found to be true and correct and they are hereby adopted by the City Council and made a part hereof for all purposes.

Section 2. Section 44-2 of the Code of Ordinances, City of La Marque, Texas, is repealed in its entirety.

Section 3. Repeal. This ordinance is intended to be cumulative and shall not repeal any provision of a previous ordinance or City Code provision, except to the extent that a provision is inconsistent and cannot be reconciled with this ordinance.

Section 4. Severability. In the event any clause, phrase, provision sentence, or part of this Ordinance or the application of the same to any person or circumstance for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it is the intention of the City Council that the invalidity or unconstitutionality of the one or more parts shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision other than the part declared to be invalid or unconstitutional; and the City Council of the City of La Marque, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of

any such part thus declared to be invalid or unconstitutional, whether there be one or more parts.

Section 5. Publication and Effective Date. This Ordinance shall be effective on August 31, 2023, after final passage by City Council, a public hearing in accordance with Section 2.19 of the City Charter, and publication of this ordinance or a caption that summarizes the purpose of this ordinance.

PASSED AND APPROVED by the City Council of the City of La Marque on First Reading this ____ day of _____, **2023**; and

PASSED, APPROVED AND ADOPTED by the City Council of the City of La Marque on Second and Final Reading this ____ day of _____, **2023**.

CITY OF LA MARQUE, TEXAS

Keith Bell, Mayor

ATTEST:

Kierra Nance, TRMC
City Clerk

APPROVED AS TO FORM:

Gus Knebel
Consulting City Attorney

AN ACT

relating to the repeal of the authority of political subdivisions to adopt or enforce juvenile curfews.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Article 45.045(c), Code of Criminal Procedure, is amended to read as follows:

(c) This article does not limit the authority of a court to order a child taken into custody under Article 45.058 [~~or 45.059~~].

SECTION 2. Article 45.060(a), Code of Criminal Procedure, is amended to read as follows:

(a) Except as provided by Article [~~Articles~~] 45.058 [~~and 45.059~~], an individual may not be taken into secured custody for offenses alleged to have occurred before the individual's 17th birthday.

SECTION 3. Section 51.02(15), Family Code, is amended to read as follows:

(15) "Status offender" means a child who is accused, adjudicated, or convicted for conduct that would not, under state law, be a crime if committed by an adult, including:

(A) running away from home under Section 51.03(b)(2);

(B) a fineable only offense under Section 51.03(b)(1) transferred to the juvenile court under Section 51.08(b), but only if the conduct constituting the offense would

not have been criminal if engaged in by an adult;

(C) a violation of standards of student conduct as described by Section 51.03(b)(4);

(D) ~~[a violation of a juvenile curfew ordinance or order];~~

~~[(E)]~~ a violation of a provision of the Alcoholic Beverage Code applicable to minors only; or

(E) ~~[(F)]~~ a violation of any other fineable only offense under Section 8.07(a)(4) or (5), Penal Code, but only if the conduct constituting the offense would not have been criminal if engaged in by an adult.

SECTION 4. Section 38.003(a), Government Code, is amended to read as follows:

(a) The judge of a county, justice, or municipal court, in accordance with Section 38.002, may award money from a judicial donation trust fund established under Section 38.001 to eligible children or families who appear before the court for a truancy ~~or~~ ~~curfew~~ violation or in another misdemeanor offense proceeding before the court.

SECTION 5. Section 71.0352, Government Code, is amended to read as follows:

Sec. 71.0352. JUVENILE DATA: JUSTICE, MUNICIPAL, AND TRUANCY COURTS. As a component of the official monthly report submitted to the Office of Court Administration of the Texas Judicial System:

(1) a justice court, municipal court, or truancy court shall report the number of cases filed for:

(A) truant conduct under Section 65.003(a),
Family Code; and

(B) the offense of parent contributing to
nonattendance under Section 25.093, Education Code; and

~~[(C) a violation of a local daytime curfew
ordinance adopted under Section 341.905 or 351.903, Local
Government Code; and]~~

(2) in cases in which a child fails to obey an order of
a justice court, municipal court, or truancy court under
circumstances that would constitute contempt of court, the justice
court, municipal court, or truancy court shall report the number of
incidents in which the child is:

(A) referred to the appropriate juvenile court
for delinquent conduct as provided by Article 45.050(c)(1), Code of
Criminal Procedure, or Section 65.251, Family Code; or

(B) held in contempt, fined, or denied driving
privileges as provided by Article 45.050(c)(2), Code of Criminal
Procedure, or Section 65.251, Family Code.

SECTION 6. Chapter 370, Local Government Code, is amended
by adding Section 370.007 to read as follows:

Sec. 370.007. JUVENILE CURFEWS PROHIBITED. (a)
Notwithstanding any other law, a political subdivision may not
adopt or enforce an order, ordinance, or other measure that imposes
a curfew to regulate the movements or actions of persons younger
than 18 years of age.

(b) This section does not apply to a curfew implemented
under Chapter 418, Government Code, for purposes of emergency

1 management.

2 SECTION 7. Section 8.07(e), Penal Code, is amended to read
3 as follows:

4 (e) A person who is at least 10 years of age but younger than
5 15 years of age is presumed incapable of committing an offense
6 described by Subsection (a)(4) or (5) [~~other than an offense under~~
7 ~~a juvenile curfew ordinance or order~~]. This presumption may be
8 refuted if the prosecution proves to the court by a preponderance of
9 the evidence that the actor had sufficient capacity to understand
10 that the conduct engaged in was wrong at the time the conduct was
11 engaged in. The prosecution is not required to prove that the actor
12 at the time of engaging in the conduct knew that the act was a
13 criminal offense or knew the legal consequences of the offense.

14 SECTION 8. The following provisions are repealed:

- 15 (1) Article 45.059, Code of Criminal Procedure;
16 (2) Section 341.905, Local Government Code;
17 (3) Section 351.903, Local Government Code; and
18 (4) Section 370.002, Local Government Code.

19 SECTION 9. A violation of a juvenile curfew ordinance or
20 order may not be prosecuted or adjudicated after the effective date
21 of this Act. If on the effective date of this Act a criminal or
22 civil action is pending for a violation of a juvenile curfew
23 ordinance or order, the action is dismissed on that date. However,
24 a final conviction or adjudication for a violation of a juvenile
25 curfew ordinance or order that exists on the effective date of this
26 Act is unaffected by this Act.

27 SECTION 10. This Act takes effect September 1, 2023.

President of the Senate

Speaker of the House

I certify that H.B. No. 1819 was passed by the House on May 4, 2023, by the following vote: Yeas 114, Nays 28, 1 present, not voting.

Chief Clerk of the House

I certify that H.B. No. 1819 was passed by the Senate on May 17, 2023, by the following vote: Yeas 31, Nays 0.

Secretary of the Senate

APPROVED: _____

Date

Governor

CITY OF LA MARQUE
WESTSIDE
WASTEWATER TREATMENT FACILITY
ASSESSMENT

PREPARED FOR

CITY OF LA MARQUE

PREPARED BY

SANDER ENGINEERING CORPORATION
1120 W SAM HOUSTON PKWY SOUTH, SUITE 400
HOUSTON, TEXAS 77042
TBPE FIRM REGISTRATION # 517

JUNE 2016

CITY OF LA MARQUE
WESTSIDE WASTEWATER TREATMENT PLANT FACILITY
ASSESSMENT

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CITY OF LA MARQUE WESTSIDE WASTEWATER TREATMENT PLANT FACILITY ASSESSMENT

I. EXECUTIVE SUMMARY

The City of La Marque Westside Wastewater Treatment Facility serves the City of La Marque and has been experiencing ongoing operational problems, high flows, Enterococci, total Copper and effluent Ammonia Nitrogen violations.

This evaluation focused on the areas of treatment capacity and plant operations. Preliminary recommendations have been prepared which focus on the items that can be done immediately to address the operational problems. The final recommendations address the treatment plant deficiencies and modifications to provide a more permanent solution to the various problems identified at the wastewater treatment plant. Also included in the recommendations are items to address issues that are not directly operational or plant problems.

At the Westside WWTP, the majority of the problems being experienced are effluent ammonia nitrogen violations.

Other significant problems and deficiencies include the following:

1. Lack of operational testing equipment, specifically a field DO meter.
2. Head-work weirs are not even resulting in uneven flow distribution to the two treatment trains.
3. Procurement issues for City Staff and Departments.
4. Significant inflow and infiltration (I&I) in the collection system.
5. Total Copper limit will decrease in October 2016 from 0.020 to 0.0162 mg/l.

To alleviate some of the immediate operational problems at the plant, the following recommendations are made:

1. Purchase a field DO meter and take daily measurements of the DO levels in the aeration basin.
2. Adjust blower output and number of blowers in operation to maintain a 2.0 mg/l dissolved oxygen level in both aeration basins.
3. Adjust the weirs at the head works to evenly distribute the influent flows to each treatment train.

CITY OF LA MARQUE
WESTSIDE WASTEWATER TREATMENT PLANT FACILITY
ASSESSMENT

4. Conduct more frequent testing of the landfill leachate and have landfill operator work at reducing the ammonia nitrogen concentration which exceeded the allowed concentrations in the two samples taken in May 2016.

To provide a permanent solution to the treatment plant deficiencies, the following recommendations are made:

1. Address the I&I problems in the collection system to reduce the peak flows into the treatment plant and peak flow violations.
2. Promote awareness of wastewater system issues to foster a more open and cooperative working partnership among the City Staff and streamline the procurement process.
3. Determine ways of reducing the copper entering the collection system in order to reduce the copper levels in the treatment plant effluent.
4. Conduct regular cleaning of outfall flume structure to reduce Enterococci violations.

CITY OF LA MARQUE WESTSIDE WASTEWATER TREATMENT PLANT FACILITY ASSESSMENT

II. PURPOSE

This evaluation and assessment is intended to 1) determine the plant's ability and capacity to treat the current and design influent conditions; 2) make an assessment to determine the plant's capability to comply with the limitations of its permit; 3) address effluent violations being experienced at the treatment plant and 4) make recommendations on repairs, improvements, and/or operational procedures that can be implemented so the wastewater treatment plant can maintain consistent compliance with the terms of the TPDES Waste Discharge Permit.

III. SCOPE OF WORK

Perform an evaluation and assessment of the City of La Marque's Westside Wastewater Treatment Plant serving the City of La Marque in Galveston County Texas.

The work will include the following:

1. Trip(s) to the wastewater treatment plant site for plant and mechanical equipment assessments and verification of unit sizes and equipment ratings.
2. The existing operations and process control data for the past 12 months will be reviewed and evaluated. Owner to provide a copy of this information for review.
3. The influent, effluent and flow data for the previous 36 months will be evaluated if available. Owner to provide a copy of this information for review.
4. Work with the owner and operator to determine influent sources and identify potential chemical and biological contributions that could be toxic to, inhibiting or overloading the biological treatment processes at the wastewater treatment plant.
5. The mechanical equipment which is used for the treatment process will be inspected and evaluated. This includes blowers, process pumps, clarifier, chlorine system, etc.
6. The nominal rating of all treatment units for the plant will be determined based on the state design criteria in effect at the time of design and based on a rational design approach. Owner to provide copies of construction drawings, technical specifications, engineering design report and O&M manual. These items can be returned upon project completion.

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7. A summary report of the evaluation and assessment findings for the wastewater treatment plant, including recommendations for repairs, improvements, and/or operational procedures that can be implemented to achieve permit compliance, will be prepared. Three copies of this report shall be provided to the owner.
8. The summary report will be reviewed with the Owner.
9. Meet with TCEQ as requested by owner to discuss report findings or other issues as needed.

IV. FINDINGS

Site visits were conducted to get information on the process equipment and treatment units and to make general observations concerning the wastewater treatment facilities. The evaluation worksheet is included in Attachment A. This worksheet shows the sizes and capacities of the existing treatment units and the minimum size requirements for the permit limitations at the governing flow conditions. A summary of this information is presented below. Permit Excerpts are included in Attachment B

The nominal rating of the wastewater treatment plant was determined in two ways. The first was based on the State Design Criteria for Sewerage Systems 30TAC Chapter 317 which was in effect at the time the facility was designed and constructed. The second was based on a rational design approach which integrates the treatment processes based on average and peak flows. This approach gives a better determination of the true treatment capacity than the minimum standards set forth in the 317 State Design Criteria. This approach also optimizes the aeration basin and secondary clarifier interaction utilizing volume flux and a predetermined peaking factor. The peaking factor used for the evaluation was four which is the peaking factor in the permit.

The State Design Criteria was revised effective August 28, 2008. A significant part of the revision was aimed at integrating treatment units in the design criteria and providing a rational design approach.

The influent BOD₅ concentrations appear to be less than the influent loading used for the design of the plant which was based on 200 mg/l BOD₅ for unit sizing. The influent BOD₅ concentration significantly impacts the sizing of the aeration basin, aerobic digester and blowers. Based on influent analysis, the plant is running at about 72% of its rated organic loading capacity and about 87% of its hydraulic capacity.

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However, the dissolved oxygen levels in the Aeration Basins appear to be below 2.0 mg/l for significant periods of time. When the D.O. levels in the aeration basins are below 2.0 mg/l, nitrification will be incomplete or virtually nonexistent. Few DO reading have been available because there is no field DO meter at the plant and staff is waiting for the approval of a purchase order to get the Dissolved Oxygen meter. The influent and effluent analysis shows inconsistent ammonia nitrogen removal even though the influent ammonia nitrogen is fairly consistent.

The influent data that was collected shows the following for BOD₅, TSS, Ammonia Nitrogen (NH₃-N) and Total Copper:

Westside WWTP	BOD₅	TSS	NH₃-N	COPPER
Minimum	10.3 mg/l	11.0 mg/l	6.50 mg/l	0.0010 mg/l
Maximum	614.9 mg/l	918.0 mg/l	55.40mg/l	0.2640 mg/l
Average	109.8 mg/l	118.8 mg/l	22.98 mg/l	0.0361 mg/l
1 Std Deviation	55.1 mg/l	74.1 mg/l	7.67 mg/l	0.02297 mg/l
Avg + 1 Std Dev.	164.9 mg/l	192.9 mg/l	30.65 mg/l	0.05906 mg/l

Excerpts from State Design Criteria for Sewerage Systems 30TAC Chapter 317, which was in effect at the time the facility was designed and constructed, are included in Attachment C. The lab data is summarized in tables which have been included in Attachment D.

A. NOMINAL RATING BASED ON STATE DESIGN CRITERIA

The following tables summarize the nominal ratings of the primary treatment elements at the wastewater treatment plant. The nominal rating is represented by average daily flow and two hour peak flow. Calculations are shown in Attachment A.

WESTSIDE WWTP		AVG FLOW	2 hr PEAK FLOW
1.	Aeration Basin	2.866 MGD	N/A
2.	Clarifier	N/A	13.618 MGD
2.	Chlorine Basin	N/A	14.977 MGD
3.	Blowers	3.00 MGD	N/A
4.	Aerobic Digester	3.029 MGD	N/A
TPDES Permit Values		3.00 MGD	12.00 MGD

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B. NOMINAL RATING BASED ON RATIONAL DESIGN

The nominal rating of the aeration basin and secondary clarifier is shown in the table below. A peaking factor of 4.0 was used for the treatment plant. Calculations are shown in Attachment A.

WESTSIDE WWTP		AVG FLOW	2 hr PEAK FLOW
1.	Aeration Basin	3.006 MGD	N/A
2.	Clarifier	N/A	12.025 MGD

C. GENERAL OBSERVATIONS

There are also several important non-technical problems that were identified during this evaluation. These problems are associated with the collection system and a cumbersome purchasing process.

It appears that additional education and awareness is needed to help the staff understand the impacts they can have on the plant. The Public Works Director is responsible for the water and wastewater plants and can effectively use the personnel in his department as needed but he needs additional support when getting critical supplies and equipment.

WESTSIDE WASTEWATER TREATMENT PLANT

The City of La Marque Westside Wastewater Treatment Facility serves the City of La Marque and has been experiencing ongoing operational problems, high flows, Enterococci, total Copper and effluent Ammonia Nitrogen violations. The plant is configured for single stage nitrification and is rated at 3.0 MGD. The treatment plant is a partially buried concrete plant with two parallel treatment trains. The first train was constructed in 1995 and the second train was completed in 1999. The plant has a head works structure with a flow splitter, aeration basin, circular clarifier, chlorine contact basin and aerobic digesters. The air is supplied by a total of five multi-stage centrifugal blowers. Disinfection is provided using chlorine gas and dechlorination is done using sulphur dioxide. There are a total of six submersible pumps in the on-site plant lift station.

The plant is experiencing problems meeting the effluent ammonia nitrogen (NH₃-N), Enterococci and Total Copper limitations in the waste discharge permit. The effluent NH₃-N problems being experienced are the result of low dissolved oxygen concentrations in the aeration basins and to some extent high flows associated with I&I.

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The overall condition of the wastewater treatment plant and equipment is fair to good considering the age of this facility.

The influent strength at the Westside wastewater treatment plant appears to be fairly typical based on the data available. In addition, the Westside treatment plant experiences significant Inflow and Infiltration (I&I) during rainfall events. The amount of I&I hydraulically overloads the collection system lift stations, the treatment plant itself. These hydraulic overloads can result in high effluent TSS and partially treated CBOD₅ and NH₃-N in the effluent. In addition, the high flows can result in Enterococci violations as well.

D. PROBLEMS IDENTIFIED

The following items are specific problems that were noted or identified as part of the site investigations, design and sizing calculations, and records review. The identified problems are listed separately for each of the wastewater treatment plants.

1. A field Dissolved Oxygen meter is needed at the wastewater treatment plant to measure the plant DO so that it can be maintained at the levels needed for consistent nitrification.
2. The return sludge flow rate is low resulting in longer solids retention in the clarifier which also suppresses the DO, creates a higher immediate oxygen demand, and stresses the nitrifying bacteria resulting in inconsistent ammonia nitrogen removal in the biological treatment process.
3. The weirs at the head works that split the flow between the two trains are not level with each other and flow is not being equally divided between the two trains. This problem will be worse during peak flow events and could result in the hydraulic capacity of the clarifier or chlorine contact basin being exceeded. The organic capacity of the train receiving more flow could also be exceeded.
4. More needs to be done to help the City promote cooperation between departments regarding the procurement of equipment needed that impacts the wastewater treatment plant operation. The procurement process needs to be stream lined.
5. There is a significant inflow and infiltration problem in the collection system serving the wastewater treatment plant. The high flows are causing effluent quality problems as well as operational problems.

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6. The effluent Total Copper limits will decrease effective October 2016. The Daily Maximum limit is going from 0.020 mg/l to 0.0162 mg/l. Since the plant is experiencing total copper violations now, this reduction will result in more violations unless the copper in the influent can be reduced.

E. MODIFICATIONS NEEDED

The actual plant capacity is adequate for the existing permit limitations based on an influent strength of 200 mg/l of BOD₅ and a typical ammonia concentration of 40 mg/l or less. The plant is experiencing ongoing operational problems and effluent quality violations. As a result, steps need to be taken to solve these interim operational problems.

The modifications to solve the operational problems and optimize the capacity of the plant for its current permit limitations should be done in two phases. The first phase would involve making some immediate improvements to the plant to relieve the operational problems. The second phase would be the modifications needed to optimize and improve the overall treatment capacity of the facility and to provide the treatment capabilities necessary to meet the effluent quality limits called for in the TPDES permit.

PRELIMINARY MODIFICATIONS

1. A field DO meter is needed to monitor the dissolved oxygen levels in the aeration basins and the clarifiers. The DO in the aeration basins need to be maintained above 2.0 mg/l to provide for consistent nitrification. The blowers will need to be adjusted to maintain the DO level needed.
2. The return sludge flow needs to be increased to 250 gpd/sqft of clarifier surface area which is approximately 1.4 MGD per clarifier.
3. The weirs at the head works which splits the flow between the treatment trains need to be leveled such that the flow is split evenly between the two trains.
4. More testing is needed to ensure compliance with the discharge limitations in the landfill service agreement. The Ammonia Nitrogen limit is being exceeded.

LONG TERM MODIFICATIONS

1. The inflow and infiltration into the City collection system needs to be reduced significantly to prevent flow violations and treatment violations at the wastewater treatment plant.

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2. The procurement process needs to be streamlined so that necessary equipment and testing supplies can be ordered and received in a timely manner.
3. The City needs to determine ways of reducing the amount of copper entering the collection system either through the water supply or through discharges in the collection system.
4. The effluent flume structure needs to be cleaned regularly to help reduce the potential for Enterococci violations which could be associated with algae breaking loose and releasing accumulated bacteria into the effluent.

These modifications are listed and incorporated into the recommendations presented in the following sections.

V. PRELIMINARY RECOMMENDATIONS

The following recommendations are intended to address the operational problems currently being experienced at the plant. These are items that need to be done immediately in order to stabilize operations at the plant and address the immediate operational problems. These recommendations should be performed as soon as possible.

1. Purchase a field DO meter and take daily measurements of the DO levels in the aeration basin.
2. Adjust blower output and number of blowers in operation to maintain a 2.0 mg/l dissolved oxygen level in both aeration basins.
3. Increase return sludge flow to 1.4 MGD for each clarifier.
4. Adjust the weirs at the head works to evenly distribute the influent flows to each treatment train.
5. Conduct more frequent testing of the landfill leachate and have landfill operator work at reducing the ammonia nitrogen concentration which exceeded the allowed concentrations in the two samples taken in May 2016.

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VI. FINAL RECOMMENDATIONS

The following recommendations are intended to address the optimization of the overall treatment capacity of the wastewater treatment plant.

1. Address the I&I problems in the collection system to reduce the peak flows into the treatment plant and peak flow violations.
2. Promote awareness of wastewater system issues to foster a more open and cooperative working partnership among the City Staff and streamline the procurement process.
3. Determine ways of reducing the copper entering the collection system in order to reduce the copper levels in the treatment plant effluent.
4. Conduct regular cleaning of outfall flume structure to reduce Enterococci violations.

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ATTACHMENT A
DESIGN EVALUATION REPORT
(CALCULATIONS)

PROCESS CONTROL AND NOMINAL RATING WORK SHEET
WASTEWATER TREATMENT PLANT EVALUATION
CITY OF LA MARQUE - WESTSIDE WASTEWATER TREATMENT PLANT

PROJECT NAME: CITY OF LA MARQUE - WESTSIDE WWTP ASSESSMENT
PROJECT No. 16-057 TPDES PERMIT No. WQ0010410-003

PROJECT SUMMARY

BASIN VOLUMES AND SURFACE AREAS BEING USED

AERATION BASIN VOLUME: 136606 cu.ft.
REAERATION BASIN VOLUME: 0 cu.ft.
PRIMARY CLARIFIER SURFACE AREA: 0 sq.ft.
SECONDARY CLARIFIER SURF. AREA: 11349 sq.ft.
CHLORINE CONTACT BASIN VOLUME: 27810 cu.ft.
AEROBIC DIGESTER VOLUME: 101079 cu.ft.
ANAEROBIC DIGESTER VOLUME: 0 cu.ft.

TPDES PERMIT LIMITS	
(C)BOD5:	10 mg/l
TSS:	15 mg/l
NH3-N:	3 mg/l
	0 mg/l
AVERAGE FLOW:	3.0000 MGD
2hr PEAK FLOW:	11.9995 MGD
	8333 gpm

RECOMMENDED PROCESS CONTROL VALUES FOR 2.6100 MGD

BOD5 LOADING: 4353 lbs./day
FOOD TO MICROORGANISM RATIO: 0.170 per day
SLUDGE VOLUME INDEX: 100 ml/g
CLARIFIER UNDERFLOW RATE: 200-300 gpd/sq.ft.
AERATION MLSS CONCENTRATION: 3005 mg/l
REAERATION CONCENTRATION: 5769 mg/l
SLUDGE AGE: 11.3 days
SLUDGE WASTED PER WEEK: 15797 lbs.
WASTE SLUDGE VOLUME PER WEEK: 344836 gallons

CLARIFIER UNDERFLOW RATE PER CLARIFIER RANGE			
#1	788	1182	gpm
#2	788	1182	gpm

DEPTH PER AEROBIC DIGESTER
#1 (ft.) #2 (ft.)
35.55 35.55

PROCESS HYDRAULIC CAPACITY WITH 2 CLARIFIER(S) IN SERVICE
AT RECOMMENDED CONTROL POINT: 14.596 MGD SVI = 100
AT CURRENT CONTROL POINT: 12.376 MGD SVI = 100

NOMINAL RATING OF PLANT AS CURRENTLY CONFIGURED AND OPERATED

TYPE OF FLOW: AVG. PEAK
PRIMARY CLARIFIER: NA NA MGD = NA gpm
BIOLOGICAL PROCESS: 2.8664 MGD NA
SECONDARY CLARIFIER: NA 12.6100 MGD 3450 gpm

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TPDES PERMIT LIMITATIONS

FLOW	
AVERAGE:	3.0000 MGD
2 hr PEAK:	11.9995 MGD
	8333 gpm

EFFLUENT	
(C)BOD5:	10 mg/l
TSS:	15 mg/l
NH3-N:	3 mg/l
	mg/l
D.O.:	4 mg/l
pH:	6 - 9 S.U.
Cl2:	1 - 4 mg/l

*CURRENT OPERATING DATA FOR INFLUENT
USED FOR CALCULATIONS*

ESTIMATED

BOD5: 200 mg/l
TSS: 200 mg/l
NH3-N: 40 mg/l

MEASURED VALUES	(Y or N)
BOD5: 200 mg/l	N
TSS: 200 mg/l	N
NH3-N: 40 mg/l	N

AERATED SOLIDS PROCESS CONTROL PARAMETERS

ESTIMATED (Y or N)

AERATION BASIN SOLIDS (MLSS):	3300 mg/l	N
RETURN OR REAERATION SOLIDS:	7700 mg/l	N
FLOC / SETTLED VOLUME (SV30):	415 ml/l	N
SLUDGE VOLUME INDEX:	126 ml/g	N
PERCENT VOLATILES:	65.0 %	N

CURRENT PLANT FLOWS

AVERAGE INFLUENT FLOW:	2.610 MGD	
2-hr PEAK INFLUENT FLOW:	10.440 MGD	7250 gpm
AVERAGE CLARIFIER UNDERFLOW:	1.958 MGD	CALCULATED
CLARIFIER UNDERFLOW RATE:	0.947 MGD	MEASURED
PRIMARY CLARIFIER UNDERFLOW:	0 gpd	0 days per week
WASTE ACTIVATED SLUDGE FLOW:	177451 gallons in	4 day(s)
RAW SLUDGE FLOW:	0 gpd	0 days per week

PROCESS CONTROL AND NOMINAL RATING WORK SHEET
WASTEWATER TREATMENT PLANT EVALUATION
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BIOLOGICAL PROCESS UNIT SIZES

AERATION BASIN

(DIMENSIONS GIVEN IN FEET)

RECTANGULAR SECTION

LENGTH

WIDTH

WATER DEPTH

#1	#2
85	85
41.9559	41.9559
19.5	19.5

CIRCULAR SECT.

INNER DIA.

OUTER DIA.

WATER DEPTH

TOTAL DEG.

#1	#2
0	0
0	0
0	0
0	0

AERATION BASIN VOLUME

NUMBER OF BASINS IN USE:

NUMBER AVAILABLE:

#1	#2
1	1
1	1

UNUSABLE VOLUME

#1	#2
1225 cu ft	
1252.7 cu ft	

AERATION BASIN #1 VOLUME: 68317 CUBIC FEET

AERATION BASIN #2 VOLUME: 68289 CUBIC FEET

TOTAL VOLUME OF AERATION: 136606 CUBIC FEET BEING USED

REAERATION BASINS

(DIMENSIONS GIVEN IN FEET)

RECTANGULAR SECTION

LENGTH

WIDTH

WATER DEPTH

#1	#2
0	0
0	0
0	0

CIRCULAR SECT.

INNER DIA.

OUTER DIA.

WATER DEPTH

TOTAL DEG.

#1	#2
0	0
0	0
0	0
0	0

REAERATION BASIN VOLUME

NUMBER OF BASINS IN USE:

NUMBER AVAILABLE:

#1	#2
0	0
0	0

UNUSABLE VOLUME

#1	#2
0 cu ft	
0 cu ft	

REAERATION BASIN #1 VOLUME: 0 CUBIC FEET

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SECONDARY CLARIFIERS	LENGTH	WIDTH OR DIAMETER
DIMENSIONS OF CLARIFIER #1:	0 FEET	85 FEET
DIMENSIONS OF CLARIFIER #2:	0 FEET	85 FEET

SECONDARY CLARIFIERS	#1	#2
NUMBER OF CLARIFIERS IN USE:	1	1
NUMBER AVAILABLE:	1	1

		SWD (ft)
SURFACE AREA CLARIFIER #1:	5675 SQUARE FEET	12.66
SURFACE AREA CLARIFIER #2:	5675 SQUARE FEET	11.78

TOTAL CLARIFIER SURFACE AREA: 11349 SQUARE FEET BEING USED

VOLUME OF HOPPER OR CONE:

	MEASURED		SLOPE OF BOTTOM		
CALCULATION OF THE CONE OR HOPPER HEIGHT	#1	N/A FEET	12	TO	1
	#2	N/A FEET	12	TO	1

CONE OR HOPPER HEIGHT: CLARIFIER #1: 3.54 FEET
CLARIFIER #2: 3.54 FEET

CONE OR HOPPER VOLUME: CLARIFIER #1: 6699 CUBIC FEET
(SLUDGE BLANKET VOL.) CLARIFIER #2: 6699 CUBIC FEET

TYPE OF CONE OR HOPPER: #1 #2
CO = CIRCULAR CONE BOTTOM WITH SLUDGE RAKES CO CO
FH = RECTANGULAR BOTTOM WITH SLUDGE RAKES
HO = HOPPER BOTTOM, NO RAKES BOTTOM AREA IN SQ FT = 1 1

TOTAL CLARIFIER VOLUME: CLARIFIER #1: 6699 CUBIC FEET

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DISINFECTION SYSTEM

<i>CHLORINE CONTACT BASIN</i>	(DIMENSIONS GIVEN IN FEET)			
RECTANGULAR SECTION	#1	#2	CIRCULAR SECT.	#1 #2
LENGTH	85	85	INNER DIA.	0 0
WIDTH	9.72278	9.72278	OUTER DIA.	0 0
WATER DEPTH	18.1	18.1	WATER DEPTH	0 0
			TOTAL DEG.	0 0

CHLORINE CONTACT BASIN	#1	#2	UNUSABLE VOLUME	
NUMBER OF BASINS IN USE:	1	1	#1	1150.75 cu ft
NUMBER AVAILABLE:	1	1	#2	956.27 cu ft

			SURFACE AREA (sq.ft.)
CL2 CONTACT BASIN #1 VOLUME:	13808 CUBIC FEET		826
CL2 CONTACT BASIN #2 VOLUME:	14002 CUBIC FEET		826
TOTAL CL2 CONTACT VOLUME:	27810 CUBIC FEET		BEING USED

WEIR TYPE: FL CRITICAL DIMENSION: 90 Degree or Feet
(V-NOTCH-VN; RECTANGULAR-RE; CIPOLLETTI-CI; FLUME or OTHER-FL)

FLOW DEPTH OVER WEIR AT PERMITTED 2hr PEAK FLOW: 0.000 ft.
CORRECTED CL2 CONTACT VOLUME: 27810 CUBIC FEET @ PERMITTED PEAK FLOW

FLOW DEPTH OVER WEIR AT EXISTING 2hr PEAK FLOW: 0.000 ft.
CORRECTED CL2 CONTACT VOLUME: 27810 CUBIC FEET @ CURRENT PEAK FLOWS

ALTERNATIVE MEANS OF DISINFECTION USED: NA

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AEROBIC DIGESTERS UNIT SIZES

AEROBIC DIGESTER RECTANGULAR SECTION	(DIMENSIONS GIVEN IN FEET)		CIRCULAR SECT.	#1	#2
LENGTH	41.833	41.833	INNER DIA.	0	0
WIDTH	31	31	OUTER DIA.	0	0
WATER DEPTH	20	20	WATER DEPTH	0	0
			TOTAL DEG.	0	0

AEROBIC DIGESTERS	#1	#2	UNUSABLE VOLUME	
NUMBER OF BASINS IN USE:	2	2	#1	728.33 cu ft
NUMBER AVAILABLE:	2	2	#2	605.25 cu ft

		SURFACE AREA (sq.ft.)	
AEROBIC DIGESTER #1 VOLUME:	25208 CUBIC FEET	1297	
AEROBIC DIGESTER #2 VOLUME:	25331 CUBIC FEET	1297	

TOTAL AEROBIC DIGESTER VOLUME: 101079 CUBIC FEET BEING USED

VOLUME OF HOPPER OR CONE:

	MEASURED		SLOPE OF BOTTOM		
CALCULATION OF THE	#1	0 FEET	12	TO	1.5
CONE OR HOPPER HEIGHT	#2	0 FEET	12	TO	1.5

CONE OR HOPPER HEIGHT: DIGESTER #1: 0.00 FEET
DIGESTER #2: 0.00 FEET

CONE OR HOPPER VOLUME: DIGESTER #1: 0 CUBIC FEET
DIGESTER #2: 0 CUBIC FEET

TYPE OF CONE OR HOPPER: #1 #2

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SLUDGE WASTING RATES AND UNIT PROCESS DETENTION TIMES

WASTE ACTIVATED SLUDGE (WAS)		THE (RSSS-MLSS) DIFFERENCE
WASTE SLUDGE CONCENTRATION:	7700 mg/l	IS REDUCED DURING WASTING
EFFECTIVE WAS CONCENTRATION:	7260 mg/l	AN AVERAGE OF 10 %
GALLONS WASTED PER WEEK:	310539.3 gallons	
AVERAGE WASTING RATE:	44363 gal/day =	2686 pounds per day
SOURCE OF WASTE SLUDGE:	RS	
AERATION BASIN:	AB	
RETURN SLUDGE LINE:	RS	

ESTIMATED SLUDGE AGE FROM WASTING RATES: 10.47 days

PRIMARY CLARIFIER UNDERFLOW

SLUDGE CONCENTRATION:	0 mg/l	
GALLONS WASTED PER WEEK:	0 gallons	
AVERAGE WASTING RATE:	0 gal/day =	0 pounds per day
RAW SLUDGE FLOW ONLY:	0 gallons per week =	0 gpd
RAW SLUDGE WASTING RATE:	0 pounds per day	

DOES THE UNDERFLOW FROM THE PRIMARY CLARIFIER INCLUDE
WASTE ACTIVATED SLUDGE (Y or N): N PERCENTAGE OF W.A.S.: 0 %

PERCENT OF WASTE ACTIVATED SLUDGE TO AEROBIC DIGESTER: 100 %
PERCENT OF PRIMARY CLARIFIER UNDERFLOW TO ANAEROBIC DIGESTER: 0 %

DETENTION TIMES FOR THE EXISTING FLOW CONDITIONS

DETENTION TIMES	AVERAGE FLOW	PEAK FLOW	OVERFLOW AT PEAK gpd/sq.ft.
PRIMARY CLARIFIER	NA	NA	NA

PROCESS CONTROL AND NOMINAL RATING WORK SHEET
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PROCESS CONTROL SUMMARY

THE INFLUENT BOD5 CONCENTRATION USED FOR THE RECOMMENDED
PROCESS CONTROL POINT CALCULATIONS IS: 200 mg/l

RECOMMENDED PROCESS CONTROL VALUES

BOD5 LOADING:	4353 lbs./day	FOR CALCULATIONS ONLY	
FOOD TO MICROORGANISM RATIO:	0.170 per day		
SLUDGE VOLUME INDEX:	100 ml/g	FOR CALCULATIONS ONLY	
CLARIFIER UNDERFLOW RATE:	200-300 gpd/sq.ft.	250	FOR CALCULATIONS
AERATION MLSS CONCENTRATION:	3005 mg/l	80.0	PERCENT VOLATILES
REAERATION CONCENTRATION:	5769 mg/l		
SLUDGE AGE:	11.3 days	DEPTH PER AEROBIC DIGESTER	
SLUDGE WASTED PER WEEK:	15797 lbs.	#1 (ft.)	#2 (ft.)
WASTE SLUDGE VOLUME PER WEEK:	344836 gallons	35.55	35.55

WAS VOLUME ASSUMES A REDUCTION IN THE RETURN SLUDGE CONCENTRATION

CURRENT PROCESS CONTROL VALUES

STATUS LEGEND

BOD5 LOADING:	4353 lbs./day	NA	1 = EXCELLENT
FOOD TO MICROORGANISM RATIO:	0.155 per day	1	2 = GOOD
SLUDGE VOLUME INDEX:	126 ml/g	4	3 = OKAY
CLARIFIER UNDERFLOW RATE:	83 gpd/sq.ft.	4	4 = NEEDS WORK
AERATION MLSS CONCENTRATION:	3300 mg/l	1	
REAERATION CONCENTRATION:	7700 mg/l	4	
SLUDGE AGE:	9.5 days	2	
SLUDGE WASTED PER WEEK:	18803 lbs.	2	

WAS VOLUME ASSUMES A REDUCTION IN THE RETURN SLUDGE CONCENTRATION

PROCESS HYDRAULIC CAPACITY WITH	2 CLARIFIER(S) IN SERVICE		
AT RECOMMENDED CONTROL POINT:	14.596 MGD	SVI =	100
AT CURRENT CONTROL POINT:	12.276 MGD	SVI =	100

PROCESS CONTROL AND NOMINAL RATING WORK SHEET
WASTEWATER TREATMENT PLANT EVALUATION
CITY OF LA MARQUE - WESTSIDE WASTEWATER TREATMENT PLANT

PROJECT NAME: CITY OF LA MARQUE - WESTSIDE WWTP ASSESSMENT
PROJECT No. 16-057 TPDES PERMIT No. WQ0010410-003

NOMINAL RATING CALCULATIONS

THE NOMINAL RATING CALCULATIONS ARE BASED ON THE CURRENT
STATE DESIGN CRITERIA STANDARDS SHOWN BELOW

DESIGN CRITERIA MINIMUM DESIGN STANDARDS - 30 TAC, CHAPTER 317

BIOLOGICAL PROCESS	DESIGN ORGANIC LOADINGS
CONVENTIONAL OR COMPLETE MIX:	45 lb BOD5/day/1000 cu.ft.
CONTACT STABILIZATION:	50 lb BOD5/day/1000 cu.ft.
EXTENDED AERATION:	15 lb BOD5/day/1000 cu.ft.
SINGLE STAGE NITRIFICATION:	35 lb BOD5/day/1000 cu.ft.

CLARIFIER RATINGS FOR PLANT PEAKING FACTORS GREATER THAN TWO

	OVERFLOW RATE	DETENTION TIME
PRIMARY CLARIFIER:	1800 gal/day/sq.ft.	NA hr.

ACTIVATED SLUDGE EXCEPT EXTENDED AERATION

SECONDARY:	1400 gal/day/sq.ft.	1.3 hr.
ENHANCED SECONDARY:	1200 gal/day/sq.ft.	1.5 hr.

ACTIVATED SLUDGE EXTENDED AERATION

SECONDARY:	1000 gal/day/sq.ft.	1.8 hr.
ENHANCED SECONDARY:	800 gal/day/sq.ft.	2.2 hr.

CHLORINE CONTACT BASIN

PEAK FLOW DETENTION TIME OF: 20 minutes

DIGESTERS

HEATED UNHEATED

ANAEROBIC DIGESTER

PRIMARY CLARIFIER SLUDGE ONLY:	14.5	20.5	1.5 lb BOD5/cu.ft.
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PROCESS CONTROL AND NOMINAL RATING WORK SHEET
WASTEWATER TREATMENT PLANT EVALUATION
CITY OF LA MARQUE - WESTSIDE WASTEWATER TREATMENT PLANT

PROJECT NAME: CITY OF LA MARQUE - WESTSIDE WWTP ASSESSMENT
PROJECT No. 16-057 TPDES PERMIT No. WQ0010410-003

WASTEWATER TREATMENT PLANT CONFIGURATION INFORMATION

TREATMENT PROCESS AND CODES

BIOLOGICAL PROCESS	CODE
CONVENTIONAL OR COMPLETE MIX	CO
CONTACT STABILIZATION	CS
EXTENDED AERATION	EA
SINGLE STAGE NITRIFICATION	SN

CLARIFIER	
SECONDARY	SE
ENHANCED SECONDARY	EH

DIGESTERS	HEATED	UNHEATED
ANAEROBIC PRIMARY SLUDGE ONLY:	HNP	UNP
ANAEROBIC PRIMARY AND W.A.S.:	HNW	UNW
AEROBIC DIGESTER:		AD

SPECIFIC TREATMENT PLANT CONFIGURATION

PLANT NUMBER:	1	2	IN OPERATION
BIOLOGICAL PROCESS:	SN	SN	SN
SECONDARY CLARIFIER:	EH	EH	EH
AEROBIC DIGESTER:	AD	AD	AD
ANAEROBIC DIGESTER:	NA	NA	NA

CORRECTION OF OVERFLOW RATES BASED ON DETENTION TIME IN THE CLARIFIER

DOES THE CLARIFIER HAVE A HOPPER BOTTOM (YES or NO)?	NO	
	SEC. CLARIFIER	
	#1	#2
MINIMUM QWR (%)	10.00	10.00
ACTUAL QWR (%)	12.00	11.70

PROCESS CONTROL AND NOMINAL RATING WORK SHEET
WASTEWATER TREATMENT PLANT EVALUATION
CITY OF LA MARQUE - WESTSIDE WASTEWATER TREATMENT PLANT

PROJECT NAME: CITY OF LA MARQUE - WESTSIDE WWTP ASSESSMENT
PROJECT No. 16-057 TPDES PERMIT No. WQ0010410-003

NOMINAL RATING SUMMARY:

NOTE: ALL VALUES IN SUMMARY ARE REPRESENTED AS FLOW IN MGD

INFLUENT BOD5 CONCENTRATION USED FOR NOMINAL RATING: 200 mg/l
BOD5 CONCENTRATION TO BIOLOGICAL PROCESS (35% REMOVAL): 200 mg/l

PLANT NUMBER:	1		2	
TYPE OF FLOW:	AVG.	PEAK	AVG.	PEAK
PRIMARY CLARIFIER:	NA	NA	NA	NA
BIOLOGICAL PROCESS:	1.4335	NA	1.4329	NA
SECONDARY CLARIFIER:	NA	6.8094	NA	6.8094
CHLORINE CONTACT BASIN:	NA	7.4363	NA	7.5410
AEROBIC DIGESTER:	0.7556	NA	0.7593	NA
ANAEROBIC DIGESTER	NA	NA	NA	NA

*NOMINAL RATING OF THE WASTEWATER TREATMENT PLANT AS
CURRENTLY CONFIGURED AND OPERATED*

TYPE OF FLOW:	AVG.	PEAK			
PRIMARY CLARIFIER:	NA	NA	MGD =	NA	gpm
BIOLOGICAL PROCESS:	2.8664	MGD	NA		
SECONDARY CLARIFIER:	NA	13.6188	MGD =	9458	gpm
CHLORINE CONTACT BASIN:	NA	14.9773	MGD =	10401	gpm
AEROBIC DIGESTER:	3.0299	MGD	NA		
ANAEROBIC DIGESTER:	NA	MGD	NA		

PROCESS CONTROL AND NOMINAL RATING WORK SHEET
WASTEWATER TREATMENT PLANT EVALUATION
CITY OF LA MARQUE - WESTSIDE WASTEWATER TREATMENT PLANT

PROJECT NAME: CITY OF LA MARQUE - WESTSIDE WWTP ASSESSMENT
PROJECT No. 16-057 TPDES PERMIT No. WQ0010410-003

**RATIONAL DESIGN RATING OF THE WASTEWATER TREATMENT AS
CURRENTLY CONFIGURED AND OPERATED**

TARGET PEAKING FACTOR: 4 times average flow
ORGANIC LOADING RATIO: 0.170 per day
SLUDGE VOLUME INDEX: 100 ml/g
INFLUENT BOD5: 200 mg/l
BOD5 TO PROCESS: 200 mg/l

CLARIFIER LOADING CRITERIA

INITIALLY THE CLARIFIER LOADING IS DETERMINED BY THE CHLORINE CONTACT
BASIN SIZING OR THE STATE DESIGN CRITERIA ALLOWABLE CLARIFIER LOADING.

CLARIFIER LOADING

CHLORINE CONTACT BASIN BASIS:	1320 gpd/sq.ft.	
CRITERIA ALLOWABLE LOADINGS:	1200 gpd/sq.ft.	Current Configuration
CRITERIA ALLOWABLE LOADINGS:	1219 gpd/sq.ft.	1.8 hr Detention Time Basis
PRACTICAL MAXIMUM:	1800 gpd/sq.ft.	
OPTIMIZED CLARIFIER LOADING:	1060 gpd/sq.ft.	

BIOLOGICAL PROCESS OPTIMIZATION

ALLOWABLE FLOC VOLUME: 33.50 percent
FLOC VOLUME MUST BE LESS THAN 40 PERCENT

AERATION MLSS CONCENTRATION: 3350 mg/l
REAERATION CONCENTRATION: 6900 mg/l

CITY OF LA MARQUE
WESTSIDE WASTEWATER TREATMENT PLANT FACILITY
ASSESSMENT

ATTACHMENT B
PERMIT EXCERPTS



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

TPDES PERMIT NO.
WQ0010410003
*[For TCEQ office use only - EPA I.D.
No. TX0114821]*

This is a renewal that replaces TPDES
Permit No. WQ0010410003 issued
October 23, 2008.

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

City of La Marque

whose mailing address is

1111 Bayou Road
La Marque, Texas 77568

is authorized to treat and discharge wastes from the Westside Wastewater Treatment Facility,
SIC Code 4952

located at 2701 Woodland Street, adjacent to Mahan Park approximately 1,300 feet southwest of
the intersection of Woodland and Lake Streets, on the North Bank of Highland Bayou in
Galveston County, Texas 77568

to a drainage ditch; thence to Highland Bayou; thence to West Bay in Segment No. 2424 of the
the Bays and Estuaries

only according with effluent limitations, monitoring requirements and other conditions set forth
in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ),
the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does
not grant to the permittee the right to use private or public property for conveyance of
wastewater along the discharge route described in this permit. This includes, but is not limited
to, property belonging to any individual, partnership, corporation, or other entity. Neither does
this permit authorize any invasion of personal rights nor any violation of federal, state, or local
laws or regulations. It is the responsibility of the permittee to acquire property rights as may be
necessary to use the discharge route.

This permit shall expire at midnight, **October 1, 2016.**

ISSUED DATE: May 22, 2013


For the Commission

INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 001

1. During the period beginning upon the date of issuance and lasting through two years and three hundred sixty five days, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 3.0 million gallons per day (MGD); nor shall the average discharge during any two-hour period (2-hour peak) exceed 8,333 gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Min. Self-Monitoring Requirements</u>	
	Daily Avg. mg/l (lbs/day)	7-day Avg. mg/l	Daily Max. mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (250)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (375)	25	40	60	Two/week	Composite
Ammonia Nitrogen	3 (75)	6	10	15	Two/week	Composite
Total Copper	0.009 (0.23)	N/A	0.020	0.028	Two/week	Composite
Enterococci, CFU or MPN/100 ml	35	N/A	104	N/A	One/week	Grab

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and shall monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 001

1. During the period beginning upon three years from the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 3.0 million gallons per day (MGD); nor shall the average discharge during any two-hour period (2-hour peak) exceed 8,333 gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Min. Self-Monitoring Requirements</u>	
	Daily Avg. mg/l (lbs/day)	7-day Avg. mg/l	Daily Max. mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (250)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (375)	25	40	60	Two/week	Composite
Ammonia Nitrogen	3 (75)	6	10	15	Two/week	Composite
Total Copper	0.00766 (0.19)	N/A	0.0162	0.020	Two/week	Composite
Enterococci, CFU or MPN/100 ml	35	N/A	104	N/A	One/week	Grab

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and shall monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

OTHER REQUIREMENTS

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

This Category B facility must be operated by a chief operator or an operator holding a Category B license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift that does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The Executive Director has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the Coastal Coordination Council (CCC) and has determined that the action is consistent with the applicable CMP goals and policies.
3. The permittee shall comply with the requirements of 30 TAC § 309.13 (a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).
4. The permittee shall provide facilities for the protection of its wastewater treatment facilities from a 100-year flood.
5. There is no mixing zone established for this discharge to an intermittent stream. Acute toxic criteria apply at the point of discharge.
6. The permittee is hereby placed on notice that this permit may be reviewed by the TCEQ after the completion of any new intensive water quality survey on Segment No. 2424 of the the Bays and Estuaries and any subsequent updating of the water quality model for Segment No. 2424, in order to determine if the limitations and conditions contained herein are consistent with any such revised model. The permit may be amended, pursuant to 30 TAC §305.62, as a result of such review. The permittee is also hereby placed on notice that effluent limits may be made more stringent at renewal based on, for example, any change to modeling protocol approved in the TCEQ Continuing Planning Process.
7. Violations of daily maximum limitations for the following pollutants shall be reported orally or by facsimile to TCEQ Region 12 within 24 hours from the time the permittee becomes aware of the violation followed by a written report within five working days to TCEQ Region 12 and the Enforcement Division (MC 224).

<u>POLLUTANT</u>	<u>MAL (µg/l)</u>
Total Copper	10

Test methods utilized shall be sensitive enough to demonstrate compliance with the permit

effluent limitations. Permit compliance/noncompliance determinations will be based on the effluent limitations contained in this permit with consideration given to the MAL for the parameters specified above.

When an analysis of an effluent sample for any of the parameters listed above indicates no detectable levels above the MAL and the test method detection level is as sensitive as the specified MAL, a value of zero (0) shall be used for that measurement when determining calculations and reporting requirements for the self-reporting form. This applies to determinations of daily maximum concentration, calculations of loading and daily averages, and other reportable results.

When a reported value is zero (0) based on this MAL provision, the permittee shall submit the following statement with the self-reporting form either as a separate attachment to the form or as a statement in the comments section of the form. "The reported value(s) of zero (0) for Total Copper on the self-reporting form for **monitoring period date range** is based on the following conditions: 1) the analytical method used had a method detection level as sensitive as the MAL specified in the permit and 2) the analytical results contained no detectable levels above the specified MAL."

When an analysis of an effluent sample for a parameter indicates no detectable levels and the test method detection level is not as sensitive as the MAL specified in the permit, or an MAL is not specified in the permit for that parameter, the level of detection achieved shall be used for that measurement when determining calculations and reporting requirements for the self-reporting form. A zero (0) may not be used.

8. In accordance with 30 TAC §319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max./Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, 1/week may be reduced to 2/month. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule**, and the permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.
9. A certified operator shall inspect the facility daily and maintain at the plant site a record of these inspections. These records shall be available at the plant site for inspection by authorized representatives of the commission for at least three years.
10. The permittee shall comply with the following schedule of activities for the attainment of water quality-based final effluent limitations on page 2a for Total Copper at Outfall 001:
 - a. Determine exceedance cause(s);
 - b. Develop control options;
 - c. Evaluate and select control mechanisms;

- d. Implement corrective action; and
- e. Attain final effluent limitations no later than three years from the date of permit issuance.

The permittee shall submit quarterly progress reports in accordance with the following schedule. The requirement to submit quarterly progress reports shall expire three years from the date of permit issuance.

PROGRESS REPORT DATES

January 1
April 1
July 1
October 1

The quarterly progress reports shall include a discussion of the interim requirements that have been completed at the time of the report and shall address the progress towards attaining the water quality-based final effluent limitations on page 2a for Total Copper at Outfall 001 no later than three years from the date of permit issuance.

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

All reports shall be submitted to the TCEQ Regional Office (MC Region 12) and the Water Quality Compliance Monitoring Team of the Enforcement Division (MC 224) of the TCEQ.

CITY OF LA MARQUE
WESTSIDE WASTEWATER TREATMENT PLANT FACILITY
ASSESSMENT

ATTACHMENT C

30 TAC CHAPTER 317 EXCERPTS
(EXISTING PLANT DESIGN CRITERIA)

infectious waste; therefore, containers must provide vector control if wastes are not disposed of daily at a Type 1 landfill.

(5) Preaeration. Because preaeration may be proposed when a particular problem is anticipated, evaluation of these units will be on a case-by-case basis. Diffuser equipment shall be arranged for greatest efficiency, with consideration given to maintenance and inspection.

(6) Flow equalization. Equalization should be considered to minimize random or cyclic peaking of organic or hydraulic loadings. Equalization units should be provided after screening and grit removal.

(A) Aeration. Aeration may be required for odor control. When required, air supply must be sufficient to maintain 1.0 mg/l of dissolved oxygen in the wastewater.

(B) Volume. A diurnal flow graph with supporting calculations used for sizing the equalization facility must be provided in the engineering report. Generally, an equalization facility requires a volume equivalent to 10 % to 20 % of the anticipated dry weather 30-day average flow. Tankage should be divided into separate compartments to allow for operational flexibility, repair and cleaning.

(c) Flow measuring devices and sampling points. A means for measuring effluent flow shall be provided at all plants. Consideration should be given to providing a means to monitor influent flow. Where average influent and effluent flows are significantly different, e.g., plants with large water surfaces located in areas of high rainfall or evaporation or plants using a portion of effluent for irrigation, both influent and effluent must be measured. Consideration should be given to internal flow monitoring devices to measure returned activated sludge and/or to facilitate splitting flows between units with special attention being given when units are of unequal size. All plants shall be provided with a readily accessible area for sampling effluent.

(d) Clarifiers.

(1) Inlets. Clarifier inlets shall be designed to provide uniform flow and stilling. Vertical flow velocity through the inlet stilling well shall not exceed 0.15 feet per second at peak flow. Inlet distribution channels shall not have deadened corners and shall be designed to prevent the settling of solids in the channels. Inlet structures should be designed to allow floating material to enter the clarifier.

(2) Scum removal. Scum baffles and a means for the collection and disposal of scum shall be provided for primary and final clarifiers. Scum collected from final clarifiers in plants utilizing the activated sludge process, or any modification thereof, and aerated lagoons may be discharged to aeration basin(s) and/or digester or disposed of by other approved methods. Scum from all other final clarifiers and from primary clarifiers shall be discharged to the sludge digester or other approved method of disposal. Discharge of scum to any open drying area is not acceptable. Mechanical skimmers shall be used in units with a design flow greater than 25,000 gallons per day. Smaller systems may use hydraulic differential skimming provided that the scum pickup is capable of removing

scum from the entire operating surface of the clarifier. Scum pumps shall be specifically designed for this purpose.

(3) Effluent weirs. Effluent weirs shall be designed to prevent turbulence or localized high vertical flow velocity in the clarifiers. Weirs shall be located to prevent short circuiting flow through the clarifier and shall be adjustable for leveling. Weir loadings shall not exceed 20,000 gallons per day peak design flow per linear foot of weir length for plants with a design flow of 1.0 mgd or less. Special consideration will be given to weir loadings for plants with a design flow in excess of 1.0 mgd, but such loadings shall not exceed 30,000 gallons per day peak flow per linear foot of weir.

(4) Sludge lines. Means for transfer of sludge from primary, intermediate, or final clarifiers for subsequent processing shall be provided so that treatment efficiency will not be adversely affected. Gravity sludge transfer lines shall not be less than eight inches in diameter.

(5) Basin sizing. Overflow rates are based on surface area of clarifiers. The surface areas required shall be computed using the following criteria. The actual clarifier size shall be based on whichever is the larger size from the two surface area calculations (peak flow and design flow surface loading rates). The final clarifier solids loading for all activated sludge treatment processes shall not exceed 50 pounds of solids per day per square foot of surface area at peak flow rate. The following design criteria for clarifiers are based upon a side water depth of 10 feet and shall be considered acceptable:

Clarifier	Maximum Surface ^a Loading @ Peak Flow (gal/day/sq ft)	Minimum Effective ^c Detention Time @ Peak Flow (hrs)	Maximum Surface ^a Loading @ Design Flow (gal/day/sq ft)	Minimum Effective ^c Detention Time @ Design Flow (hrs)
Primary & Intermediate	1800	----	1000	----
Final:				
Fixed Film Secondary	1600	1.1	800	2.2
Fixed Film Enhanced Secondary ^b	1400	1.3	700	3.0
Activated Sludge (except extended air)				
Secondary	1400	1.3	700	2.6
Enhanced Secondary ^b	1200	1.5	600	3.0
Extended Air Secondary	1000	1.8	500	3.6
Extended Air Enhanced Secondary ^b	800	2.2	400	4.5
Second Stage Nitrification	1200	1.5	600	3.0

a Does not include recirculation

b Enhanced Secondary Treatment refers to enhanced solids removal achieved through reducing the hydraulic and solids loading to the clarifier

c Overflow rate and side water depth (SWD) may be adjusted, keeping the detention time unchanged, over a range of 8 ft. to 16 ft. of SWD. The detention time is based on the effective volume and the overflow rate of the circular or rectangular clarifier. (The effective volume includes all liquid above the sludge blanket). For cone bottom tanks, the top of the sludge blanket is considered to be at the top of the cone. For flat bottom tanks, a sludge blanket of 3 ft. should be allowed for development of maximum return sludge concentration.

(6) Sidewater depth. The minimum sidewater depth for conventional primary and intermediate clarifiers is seven feet. All final clarifiers shall have a minimum side-water depth of 8 feet. Final clarifiers having a surface area equal to or greater than 1,250 square feet (diameter equal to or greater than 40 feet) must be provided with a minimum sidewater depth of 10 feet.

(7) Hopper bottom clarifiers. Hopper bottom clarifiers without mechanical sludge collecting equipment will only be approved for those facilities with a permitted design flow of less than 25,000 gallons per day. The required sidewater depth (SWD) for hopper bottom clarifiers may be computed using the following equation: $SWD = 160 QD + 4$, where SWD equals required sidewater depth in feet and QD equals design flow in million gallons per day. Furthermore, SWD as computed above for any flow may be reduced by crediting the upper one-third of the hopper as effective sidewater depth if the following conditions are met:

(A) clarifier surface loading rate is reduced by at least 15 % from maximum loading rate as per paragraph (5) of this subsection;

(B) influent stilling baffle and effluent weir are designed to prevent short circuiting;

(C) detention time at peak flow is at least 1.8 hours for secondary treatment and 2.4 hours for advanced treatment; and

(D) an appropriate form of flow equalization is used.

(8) Sludge collection equipment. All conventional clarifier units that treat flow from a treatment plant facility with a design flow of 25,000 gallons per day or greater shall be provided with mechanical sludge collecting equipment. Hopper bottom clarifiers must have a smooth wall finish and a hopper slope of not less than 60 degrees.

(9) BOD₅ removal. It shall be assumed that the BOD₅ removal in a primary clarifier is 35 percent, unless satisfactory evidence is presented to indicate that the efficiency will be otherwise. In plant efficiency calculations, it shall be assumed that the BOD₅ removal in intermediate and final clarifiers is included in the calculation for the efficiency of the treatment unit preceding the intermediate or final clarifier.

(e) Trickling filters.

(1) General. Trickling filters are secondary aerobic biological processes which are used for treatment of sewage.

(2) Basic design parameters. Trickling filters are classified according to applied hydraulic loading in million gallons per day per acre of filter media surface area, (mgd/acre) and organic loadings in pounds BOD per day per 1000 cubic feet of filter media, (lb BOD/day - 1000 cu ft). The following factors should be considered in the selection of the design hydraulic and organic loadings: strength of the influent sewage, effectiveness of pretreatment, type of filter media, and treatment efficiency required. Typical ranges of applied hydraulic and organic loadings for the different classes of trickling filters are presented in the following table for illustrative purposes. The design engineer shall submit sufficient operating data from existing trickling filters of similar construction and operation to justify his efficiency calculations for the filters, and a filter efficiency formula from a reliable source acceptable to the commission. The formula of the National Research Council may be used when rock media is used in the trickling filter(s).

(III) Supplemental diffused air should be considered for mechanical drive systems to help remove excess biomass from the media and to help maintain the minimum dissolved oxygen concentration.

(ii) Air Drives.

(I) Each RBC unit shall have air diffusers mounted below the media and off-center from the vertical axis of the RBC unit. Air cups mounted on the outside of the media shall collect the air to provide the driving force and maintain the required rpm.

(II) Blowers shall provide enough air flow for each RBC unit plus additional capacity to double the air flow rate to any one unit while the others are running normally.

(III) The blowers shall be capable of providing the required air flow with the largest unit out of service.

(IV) The air diffuser line to each unit shall be mounted such that it can be removed without draining the tank or removing the RBC media.

(V) An air control valve shall be installed on the air diffuser line to each RBC unit.

(E) Dissolved oxygen. The RBC plant shall be designed to maintain a minimum dissolved oxygen concentration of one milligram per liter at all stages during the peak organic flow rate. Supplemental aeration may be required.

(F) Nitrification. The design of a RBC plant to achieve nitrification is dependent upon a number of factors including the concentration of ammonia in the influent, effluent ammonia concentration required, BOD₅ removal required, minimum operational temperatures, and ratio of peak to design hydraulic flow. Each of these factors will impact the number of stages of treatment required and the allowable ammonia nitrogen loading (lb NH₃/day/1,000 ft² media) required to achieve the desired levels of nitrification for a given facility. The engineer shall submit appropriate data supporting the design.

(G) Design flexibility. The designer of a RBC plant should consider provisions to provide additional operational flexibility such as controlled flow to multiple first stages, alternate flow and staging arrangements, removable baffles between stages, and provision for step feed and supplemental aeration.

(g) Activated sludge facilities.

(1) Organic loading rates. Aeration tank volumes should be based upon full scale experience, pilot scale studies, or rational calculations based upon commonly accepted design parameters such as food to microorganism ratio, mixed liquor suspended solids, and the solids retention time. Other factors to be considered include size of the treatment plant, diurnal load variations, return

flows and soluble organic loads from digesters or sludge dewatering operations and degree of treatment required. Temperature, pH, and dissolved oxygen concentration are particularly important to consider when designing for nitrification. As a general rule, minimum aeration tank volumes shall be as set forth in the following table. Calculations must be submitted to fully justify the basis of design for any aeration basins not conforming to these minimum recommendations.

DESIGN ORGANIC LOADINGS

Process	Aeration Tank Organic Loading lb BOD ₅ /day/1000 cu ft
Conventional ^A	45
Complete Mix	45
Contact Stabilization ^B	50
Extended Aeration	15
Oxidation Ditch ^C	15
Single Stage Nitrification	35

(A) The conventional activated sludge process is characterized by having a plug flow hydraulic regime wherein particles are discharged in the same sequence in which they enter the aeration basin. Plug flow may be approximated in long tanks with a high length-to-width ratio.

(B) The contact stabilization process divides the aeration tank volume between the reaeration zone and the contact zone. The ratio of reaeration volume to contact volume ranges from 1:1 to 2:1. The hydraulic detention time in the contact zone shall be sufficient to provide removals of soluble substrates to the required levels. For domestic flows normally two hours is sufficient in the contact zone. Contact zone volume shall be based upon acceptable removal kinetics for soluble BOD₅ and ammonia nitrogen.

(C) Oxidation ditches (which are organically loaded consistent with §317.4(g)(1) of this title (relating to Wastewater Treatment Facilities.)) shall have a minimum hydraulic retention time of 20 hrs. based on design flow. These oxidation ditch systems shall provide final clarification and return sludge capability equal to that required for the extended aeration process. There shall be a minimum of two rotors per ditch, each capable of supplying the required oxygenation capacity and maintaining a minimum channel velocity of 1.0 fps with one rotor out of service. The ditch shall be lined with reinforced concrete or other acceptable erosion resistant liner material. Provision shall be made to easily vary the liquid level in the ditch to control the immersion depth of the rotor for flexibility of operation. A motor of sufficient size to maintain the proper rotor speed for continuous operation shall be provided. Rotor bearings should have grease fittings that are readily accessible to maintenance personnel. Gear housing and outboard bearings should be shielded from rotor splash.

(2) Aeration basin general design considerations. Aeration tank geometry shall be arranged to provide optimum oxygen transfer and mixing for the type aeration device proposed. Aeration tanks must be constructed of reinforced concrete, steel with corrosion resistant linings or

coatings, or lined earthen basins. Liquid depths shall not be less than 8.0 feet when diffused air is used. All aeration tanks shall have a freeboard of not less than 18 inches at peak flow. Access walkways with properly designed safety handrails shall be provided to all areas that require routine maintenance. Where operators would be required to climb heights greater than four (4) feet, properly designed stairways with safety handrails should be provided. The shape of the tank and the installation of aeration equipment should provide a means to control short circuiting through the tank. For plants designed for design flows greater than 2.0 mgd the total aeration basin volume shall be divided among two or more basins. Each treatment facility shall be designed to hydraulically pass the design two-hour peak flow with one basin out of service.

(3) Sludge pumps, piping, and return sludge flow measurement. The pumps and piping for return activated sludge shall be designed to provide variable underflow rates of 200 to 400 gallons per day per square foot for each clarifier. If mechanical pumps are used, sufficient pumping units shall be provided to maintain design pumping rates with the largest single unit out of service. Sludge piping and/or channels shall be so arranged that flushing can be accomplished. A minimum pipe line velocity of 3 feet per second should be provided at an underflow rate of 200 gallons per day per square foot. Some method shall be provided to measure the return sludge flow from each clarifier.

(4) Aeration system design.

(A) General design consideration. Aeration systems shall be designed to maintain a minimum dissolved oxygen concentration of 2.0 mg/l throughout the basin at the maximum diurnal organic loading rate and to provide thorough mixing of the mixed liquor. The design oxygen requirements for activated sludge facilities are presented in the following table. The minimum air volume requirements may be reduced with appropriate supporting performance evaluations from the manufacturer.

Process	Minimum O ₂ Required lb O ₂ /lb BOD ₅	Minimum ⁱ Air Required SCF/lb BOD ₅
Conventional	1.2	1800
Complete Mix	1.2	1800
Contact Stabilization	1.2	1800
Extended Aeration	2.2	2850
Oxidation Ditch	1.6(2.2) ⁱⁱ	----
Nitrification	2.2	3200

(i) Minimum air volume requirements are based upon a transfer efficiency of 4.0 percent in wastewater for all activated sludge processes except extended aeration, for which a wastewater transfer efficiency of 4.5 percent is assumed.

(ii) Value in parentheses represents the minimum oxygen requirement for ditch type systems which will achieve nitrification.

(B) Diffused air systems.

(i) Volumetric aeration requirements. Volumetric aeration requirements shall be as determined from the preceding table unless certified diffuser performance data is presented which demonstrates transfer efficiencies greater than those used in the preparation of the table. Wastewater transfer efficiencies may be estimated for:

(I) coarse bubble diffusers by multiplying the clean water transfer efficiency by 0.65;

(II) fine bubble diffusers by multiplying the clean water transfer efficiency by 0.45. The maximum allowable wastewater transfer efficiency shall be 12.0 percent. Plants treating greater than 10 percent industrial wastes shall provide data to justify actual wastewater transfer efficiencies. Wastewater oxygen transfer efficiencies greater than 12% are considered innovative technology. See §317.1(a)(2)(C) of this title (relating to General Provisions) for performance bond requirements. Clean water transfer efficiencies obtained at 20 degrees Celsius shall be adjusted to reflect field conditions (i.e., wastewater transfer efficiencies) by use of the following equation:

$$\text{Air Flowrate} = \frac{(\text{lbs. BOD}_5/\text{day})}{(\text{lbs. O}_2 \text{ Req'd/lb. BOD}_5)}$$

$$\text{Required (scfm)} = \text{Wastewater T.E.} \times 0.23 \times 0.075 \times 1440$$

Where: Wastewater T.E. = Wastewater Transfer Efficiency, %

$$0.23 = \text{lb O}_2/\text{lb air @ 20 degrees C}$$

$$1440 = \text{minutes/day}$$

$$0.075 = \text{lb air/(cubic foot)}$$

(ii) Mixing requirement. Air requirements for mixing should be considered along with those required for the design organic loading. The designer is referred to Table 14-V, aerator mixing requirements in WASTEWATER TREATMENT PLANT DESIGN, a joint publication of the American Society of Civil Engineers and the Water Pollution Control Federation.

(iii) Blowers and compressors. Blowers and compressors shall be of such capacity to provide the required aeration rate as well as the requirements of all supplemental units such as airlift pumps. Multiple compressor units shall be provided and shall be arranged so the capacity of the total air supply may be adjusted to meet the variable organic load to be placed on the treatment facility. The compressors shall be designed so that the maximum design air requirements can be met with the largest single unit out of service. The blower/compressor units shall automatically restart after a period of power outage or the operator or owner shall be notified by some method such as telemetry or an auto-dialer. The specified capacity of the blowers or air compressors, particularly centrifugal blowers, should take into account that the air intake temperature may reach 104 degrees F (40 degrees C) or higher and the pressure may be less than standard (14.7 pounds per square inch absolute). The capacity of the motor drive should also take into account that the intake air may be 10 degrees F (-12

degrees C) or less and may require oversizing of the motor or a means of reducing the rate of air delivery to prevent overheating or damage to the motor.

(iv) Diffusers and piping. Each diffuser header shall include a control valve. These valves are basically for open/close operation but should be of the throttling type. The depth of each diffuser shall be adjustable. The air diffuser system, including piping, shall be capable of delivering 150 percent of design air requirements. The aeration system piping should be designed to minimize headlosses. Typical air velocities in air delivery piping systems are presented in the following table.

Pipe Diameter (Inches)	Velocity (Feet/min.-Std.Air)
1 - 3	1,200 - 1,800
4 - 10	1,800 - 3,000
12 - 24	2,700 - 4,000
30 - 60	3,800 - 6,500

(5) Mechanical aeration systems. Mechanical aeration devices shall be of such capacity to provide oxygen transfer to and mixing of the tank contents equivalent to that provided by compressed air. A minimum of two mechanical aeration devices shall be provided. Two speed or variable speed drive units should be considered. The oxygen transfer capability of mechanical surface aerators shall be calculated by the use of a generally accepted formula and the calculations presented in the engineering report. Proposed clean water transfer rates in excess of 2.0 lbs. per horsepower-hour shall be justified by performance data. In addition to providing sufficient oxygen transfer capability for oxygen transfer, the mechanical aeration devices shall also be required to provide sufficient mixing to prevent deposition of mixed liquor suspended solids under any flow condition. A minimum of 100 horsepower per million gallons of aeration basin volume shall be furnished.

(h) Nutrient removal.

(1) Nitrogen removal. Biological systems designed for nitrification and denitrification may be utilized for the conversion/removal of nitrogen. Various physical/chemical processes may be considered on a case-by-case basis.

(2) Phosphorous removal.

(A) Chemical treatment. Addition of lime or the salts of aluminum or iron may be used for the chemical removal of soluble phosphorous. The phosphorous reacts with the calcium, aluminum or iron ions to form insoluble compounds. These insoluble compounds may be flocculated with or without the addition of a coagulant aid such as a polyelectrolyte to facilitate separation by sedimentation. When adding salts of aluminum or iron, the designer should evaluate the wastewater to ensure sufficient alkalinity is available to prevent excessive depression of the wastewater or effluent pH. This is of particular importance when the system will also be required to achieve nitrification. The designer is referred to NUTRIENT CONTROL, Manual of Practice FD-7 Facilities

(4) Sludge pumps. Selection of sludge transfer pumps shall be based on both the quantity and character of the anticipated solids load to be handled by them. Where mechanical pumps are used, a sufficient number of pumps shall be provided so that the design pumping capacity is available with the largest sludge pump out of service. Air lift pumps are an acceptable mechanism for sludge transfer. Duplicate design pumping capacity is not required when air lift pumps are used. Pumps used for pumping sludge shall be specifically designed for that purpose. Centrifugal sludge pumps shall have a positive suction head unless they are self-priming or equipped with some other priming device acceptable to the commission.

(5) Sludge stabilization. Sludge stabilization is required for all biological treatment processes with the exception of extended aeration processes (with a solids retention time of 20 days or more) in which case the sludge may be drawn directly to a sludge dewatering facility.

(6) Sizing. Sizing requirements must be determined using the BOD₅ and design flow of the raw sewage influent to the plant.

(b) Aerobic digesters.

(1) Sludge thickening. Aerobic digesters should be provided with sludge thickening capability.

(2) Aeration. Air supplied from air compressors or blowers through diffusers shall be not less than 30 scfm per 1,000 cubic feet of aerobic digester volume. If a separate system of air compressors or blowers will supply air to the digester, then the compressor or blower system shall be designed so that the air requirements can be met with the largest single unit out of service. If mechanical aerators are used, a minimum of 1.5 horsepower per 1000 cubic feet must be provided.

(3) Mixing. Adequate mixing of the sludge shall be provided to keep the solids in suspension and to bring the deoxygenated liquid continuously to the aeration device. The amount of mixing shall be based upon the sludge characteristics, the tank geometry and type of aeration/mixing devices.

(4) Volume. A digester shall provide a minimum sludge retention time of 15 days. The design volume of the aerobic digesters may be calculated using 20 cubic feet per lb BOD₅ per day. This volume should be provided in two cells capable of operating as a single or two-step unit.

(5) Sludge withdrawal. Provisions shall be made to include an effective means of removing solids from the digester.

(c) Anaerobic digesters.

(1) Volume. The following minimum design criteria shall be used in computing the capacity of digesters with and without facilities for heating the sludge undergoing digestion and without sludge thickening ahead of the digester. Variances to the below-referenced table for minimum digester volume may be granted provided that it can be demonstrated to the satisfaction of the commission that a minimum solids retention time (SRT) of 30 days will be provided for unheated digesters and a

(E) Media. A minimum depth of 12 inches of filtering material, of which four to six inches is coarse sand, is required. To exclude surface water and eroded earth, the bed shall be protected by a permanent wall which shall extend at least 12 inches but not more than 24 inches above the finished surface of the beds.

(2) Vacuum filters, belt filters, belt filter presses, and other mechanical dewatering filters.

(A) Multiple units. Where dewatering of sludge is proposed, the design engineer shall provide data to document sufficient capacity, alternate disposal means or storage facilities capable of maintaining normal daily operations during breakdowns, upsets, etc.

(B) Filtrate. The filtrate from the filters shall be returned to the head of the treatment works or to the aeration system. Consideration shall be given to the impact of the returned filtrate on the treatment units and to providing odor and insect control facilities.

(3) Portable dewatering units. If sludge is to be treated using portable mechanical dewatering units, provisions shall be made in the facility plan or preliminary engineering report for the location and connection of the portable dewatering unit(s) during facility operation.

§317.6. Disinfection.

(a) General policy. Facilities for disinfection shall be provided to protect the public health and as an aid to plant operation.

(b) Chlorination facilities.

(1) Chlorination equipment. Chlorination equipment shall be selected and installed which is capable of applying desired amounts of chlorine continuously to the effluent. Chlorination equipment may also be installed to control odors and generally assist treatment. To accomplish these objectives, points of chlorine application may be established at the head of the plant for prechlorination, in the effluent chlorine contact chamber or other suitable locations.

(A) Capacity. Chlorination equipment shall have a capacity greater than the highest expected dosage to be applied. Chlorination systems shall be capable of operating under all design hydraulic conditions. Duplicate equipment with automatic switch over should be considered for standby service, so that continuous chlorination can be provided.

(B) Controls. Means for automatic proportioning of the chlorine amount to be applied in accordance with the rate of effluent being treated is encouraged for all plants and may be required if a maximum chlorine residual is required in the applicable discharge permit. Manual control will be permitted where the rate of effluent flow is relatively constant and for pre-chlorination applications. Consideration shall also be given to controlling chlorine feed by use of demand.

(C) Measurements. A scale for determining the amount of chlorine used daily, as well as the amount of chlorine remaining in the container, shall be provided.

(D) Safety equipment. Self contained breathing apparatus shall be available for use by plant personnel. The equipment should be located at a safe distance from the chlorine facilities to insure accessibility. Self-contained breathing apparatus shall be located outside the entrance to the chlorine facility.

(E) Housing. Housing of chlorination equipment and cylinders of chlorine shall be in separate rooms above ground level, with the door opening to the outside, as a measure of safety. Doors should be equipped with panic hardware. The chlorination room should be separated from other rooms by gas tight partitions and should be equipped with a clear glass, gas-tight window which permits the chlorinator to be viewed without entering the room. Forced mechanical ventilation shall be included in chlorination rooms which will provide a complete air change a minimum of every three minutes. The exhaust equipment should be automatically activated by external light switches and gas detectors that are provided with contact closures or relays. No other equipment shall be installed or stored in the chlorinator room. Vents from chlorinators, vaporizers, and pressure reducing valves should be piped to the outdoors at a point not frequented by personnel, nor near a fresh air intake. Detectors and alarms should be located in each area containing chlorine gas under pressure. If gas withdrawal chlorine storage cylinders are subjected to direct sun, pressure reducing devices must be provided at the cylinders. Fire protection devices and fireproof construction is required for all chlorine storage areas. Electrical controls in chlorine facilities must be replaceable or protected against corrosion. Separate, trapless floor drains or a drain to an ample dilution point shall be provided from the chlorine storage room and from liquid feed chlorinator rooms.

(F) Emergency chlorination. Emergency power should be provided for chlorination facilities.

(G) Other. Chlorine rooms shall maintain a minimum temperature of 65 degrees F. Chlorinate solution should be prepared using treated effluent. If potable water is used, the potable water supply system must be protected by an adequate backflow prevention device. When a booster pump is required, duplicate equipment should be provided.

(2) Pellets. The use of pellet systems will be considered for approval on a case-by-case basis.

(3) Chlorine contact chamber design criteria.

(A) Initial mixing. Rapid initial mixing of the chlorine solution and wastewater is essential for effective disinfection. Effective initial mixing can be accomplished by applying the chlorine solution in a highly turbulent flow regime created by in-line diffusers, submerged hydraulic structures, mechanical mixers or jet mixers. The mean velocity gradient in the area of turbulent flow, or G value, shall exceed 500 sec^{-1} with residence times of three to 15 seconds. Calculations supporting the design G value shall be presented in the engineering report. Mixing devices for which the mean velocity gradient is difficult to verify shall be justified by pilot or full-scale performance data.

(B) Contact time. Contact chambers shall be designed to provide a minimum average hydraulic residence time (chamber volume divided by flow) of 20 minutes at the design peak hydraulic flow.

(C) Contact chamber configuration. Pipe contact chambers shall be sized so that a scour velocity of at least one foot per second will be obtained at the existing maximum daily dry weather flow rate. If adequate initial mixing is not provided, contact chambers shall have a flow pathway length-to-width ratio of at least 40 and a maximum depth-to-width ratio of no greater than 1.0. This length-to-width ratio may be accomplished by baffling.

(D) Sludge and scum removal. Contact chambers shall either be provided with a means to remove sludge and scum, such as a small hydraulic dredge and skimmers, without taking the contact tank out of service, or shall be configured so that one-half of the contact chamber can be drained for cleaning without interrupting flow through the other half.

(c) Other means of disinfection.

(1) Chemical disinfection is not normally required when the total residence time in the wastewater treatment system (based on design flow) is at least 21 days.

(2) Ultraviolet light (U.V.) disinfection.

(A) General. Ultraviolet disinfection systems are considered applicable to treated wastewaters with daily average BOD₅ and TSS concentrations consistently less than 20 mg/l.

(B) Definitions:

(i) Ultraviolet Module - A grouping of UV germicidal lamps of a specified arc length in a quartz or teflon sleeve, sealed and supported in a single stainless steel or some other non-corrosive frame.

(ii) Ultraviolet Bank - A grouping of UV modules which span the entire width and depth (of flow) of the reactor.

(C) Sizing, configuration and required dosage. Ultraviolet disinfection units will be designed in accordance with methodologies presented in the U.S. Environmental Protection Agency Design Manual, Municipal Disinfection, EPA/625/1-86/021. Turbulent flow is necessary due to non-uniform intensity fields in an ultraviolet reactor. Proposed design shall have a Reynolds' number of greater than 6,000 at average design flows. Disinfection systems shall consist of a minimum of two ultraviolet banks in series and shall be capable of providing disinfection to permitted fecal coliform levels at the design daily average flow with the largest bank out of service.

(D) System details. The ultraviolet unit shall be configured so that there is adequate space for the removal and maintenance of lamps. One person should be able to replace lamps without the aid of mechanical lifting devices, special tools or equipment. Drains shall be provided to completely drain the ultraviolet reactor unless the equipment can be easily removed from the effluent

CITY OF LA MARQUE
WESTSIDE WASTEWATER TREATMENT PLANT FACILITY
ASSESSMENT

ATTACHMENT D
SUMMARY TABLES OF LABORATORY DATA

City of La Marque
Wastewater Treatment Plant Evaluation
3/1/2010 thru 5/31/2016
Influent and Effluent Data
6/9/2016

EFFLUENT

DATE	FLOW	Enterococci	CBOD	CBOD	DO	NH3-N	NH3-N	pH	TSS	TSS	Copper	Copper
mm/dd/yyyy	MGD	MPN/100 mL	mg/l	lbs/day	mg/L	mg/l	lbs/day	S.U.	mg/l	lbs/day	mg/l	lbs/day
Average	1.916	39	2.6	46.56	7.8	1.62	35.24	7.00	3.0	58.26	0.00401	0.07
Median	1.484	6	2.0	27.33	7.7	0.19	3.49	7.02	2.0	29.09	0.00290	0.04
Minimum	0.778	1	1.0	11.82	4.7	0.10	0.65	5.80	2.0	12.98	0.00100	0.01
Maximum	10.970	2420	25.7	870.24	10.1	32.90	1919.06	7.80	23.4	1084.94	0.06180	0.88
Std Dev	1.332	216	1.8	70.46	0.8	3.65	108.17	0.26	2.3	106.52	0.00431	0.11
Avg + Std Dev	3.247	255	4.4	117.02	8.5	5.27	143.41	7.25	5.3	164.78	0.00832	0.18
75 Percentile	1.941	16	2.4	40.42	8.3	1.42	22.91	7.18	3.0	44.71	0.00500	0.07
80 Percentile	2.131	21	2.7	47.07	8.5	1.96	33.76	7.22	3.4	54.07	0.00500	0.08
85 Percentile	2.374	27	3.1	59.22	8.6	2.65	62.00	7.26	3.8	71.01	0.00587	0.10
90 Percentile	2.984	34	4.0	88.00	8.8	4.31	97.26	7.30	4.8	101.31	0.00730	0.16
93 Percentile	3.742	55	4.5	108.00	8.9	5.74	134.53	7.34	5.6	134.26	0.00900	0.24
95 Percentile	4.755	76	4.9	123.96	9.0	8.08	170.70	7.37	6.8	203.10	0.01046	0.27
96 Percentile	5.241	82	5.7	137.75	9.0	9.92	196.76	7.39	7.6	238.20	0.01201	0.32
97 Percentile	5.788	95	6.1	163.12	9.2	11.90	220.72	7.41	8.3	290.38	0.01391	0.37
98 Percentile	6.320	145	7.0	233.69	9.4	13.77	303.79	7.42	8.8	336.27	0.01651	0.45
99 Percentile	7.945	744	10.6	336.72	9.7	17.50	344.27	7.48	15.4	549.70	0.02122	0.59
Count	576	154	650	574	650	651	575	651	650	574	650	575

City of La Marque
Wastewater Treatment Pla
3/1/2010 thru 5/31/2016
Influent and Effluent Data
6/9/2016

INFLUENT												
DATE	FLOW	BOD5	BOD5	COD	NH3-N	NH3-N	pH	TSS	TSS	VSS	ORG. CONC.	Copper
mm/dd/yyyy	MGD	mg/l	lbs/day	mg/l	mg/l	lbs/day	Units	mg/l	lbs/day	mg/l	%	mg/l
Average	1.916	109.8	1653.9	211.5	22.98	321.8	8.20	118.8	1859.9	84.8	72.0	0.03610
Median	1.484	102.0	1326.1	208.5	22.90	292.8	7.10	106.0	1345.2	76.0	72.1	0.03110
Minimum	0.778	10.3	132.4	42.0	6.50	98.1	4.40	11.0	313.5	6.0	15.2	0.00100
Maximum	10.970	614.9	11237.7	493.0	55.40	2397.4	719.00	918.0	23780.4	596.0	107.1	0.26400
Std Dev	1.332	55.1	1158.6	75.8	7.67	157.9	27.99	74.1	1962.5	50.1	10.8	0.02297
Avg + Std Dev	3.247	164.9	2812.5	287.3	30.65	479.6	36.18	192.9	3822.5	134.9	82.8	0.05906
75 Percentile	1.941	128.0	1935.2	259.5	27.60	337.6	7.23	145.5	1924.9	104.5	79.2	0.04615
80 Percentile	2.131	142.0	2092.2	278.0	28.90	358.5	7.27	156.0	2170.8	112.0	80.5	0.04970
85 Percentile	2.374	155.0	2437.2	288.0	30.10	389.5	7.30	170.0	2569.9	123.0	82.5	0.05600
90 Percentile	2.984	170.1	2910.0	301.1	32.20	435.4	7.34	196.0	3237.3	136.2	85.2	0.06250
93 Percentile	3.742	181.3	3319.7	320.2	33.96	504.7	7.36	213.5	4095.9	151.0	87.0	0.06850
95 Percentile	4.755	194.0	3729.8	335.4	34.90	566.7	7.40	228.5	5504.4	164.3	89.3	0.07765
96 Percentile	5.241	202.6	4190.5	341.7	35.70	595.2	7.42	248.0	5894.3	173.3	90.7	0.08000
97 Percentile	5.788	216.5	4610.4	362.7	37.77	671.7	7.45	270.0	6708.8	186.0	92.1	0.08530
98 Percentile	6.320	228.1	5467.9	389.7	40.81	746.4	7.46	288.0	8580.7	202.6	94.0	0.09100
99 Percentile	7.945	302.5	6321.7	426.2	46.03	893.1	7.56	343.0	9881.6	249.3	96.5	0.10050
Count	576	650	574	370	649	575	647	651	575	635	635	651



PUBLIC WORKS DEPARTMENT

WASTEWATER DISCHARGE QUESTIONNAIRE

Please print or type legibly. Ineligible questionnaires will be returned to customer.

1. Name of business or industry: Galveston County Landfill
Mailing address: 3935 Avenue A
City, State, Zip Code: Santa Fe TX 77510
Telephone Number: 281-337-3022

2. Location of Business:
Address: 3935 Avenue A Santa Fe TX 77510

3. Principle Service or Product of Business or Industry at this Facility:
Landfill - solid waste disposal

4. Person and Title within Business or Industry to be Contacted Concerning Wastewater Discharge to the Sewer:

Name: Darla Baier
Title: Operations Manager
Telephone Number: 409 316 6581

5. Is any non-domestic wastewater discharged into the sewer system? ☒ YES ☐ NO (circle)

(Non-domestic wastewater is classified as discharge from other than a washroom, toilet or shower.)

IF THE ANSWER FOR QUESTION #5 IS NO, STOP HERE.

You do not need to complete the rest of the questionnaire but must still submit the questionnaire to the City.

Please Remit Questionnaire to: s.breaux@cityoflamarque.org & r.sailer@cityoflamarque.org

6. Check below if the facility fits into one (or more) of the following categories:

- ☐ Restaurant
- ☐ Cafe
- ☐ Facility that uses cookware, flatware or dishes in any stage of food preparation
- ☐ Food Processing / Preparation
- ☐ Facility that uses or discharges any fats, oil or grease
- ☐ Vehicle maintenance facility
- ☐ Film processing
- ☐ Chemical usage or processing
- ☐ Concrete production or processing
- ☐ Facility where motor vehicles are washed
- ☐ Public storage garage with floor drainage
- ☐ Facility where parts are washed to remove oil or greasy substances
- ☐ Facility where oil, gasoline or other volatile liquids can be discharged into the sanitary sewer system.

☐ Other: Solid waste disposal

7. Describe the operation(s) at this facility that result(s) in the discharge to the sewer of non-domestic wastes. Include description of raw materials, catalysts or intermediates, if applicable. Describe any manufacturing operation at this location. (Attach additional sheets if necessary)

See attached

8. Describe any water conditioning processes used at this facility (such as waster softening, reverse osmosis, filtration):

none

9. If the facility is currently using or designed to use any type of wastewater pretreatment device, such as a grease interceptor or sand/oil separator, please check type of device.

- ☐ Under-sink Grease Trap Model _____ Size _____
- ☐ Grease Interceptor (outside) # of Compartments _____ Capacity _____
- ☐ Sand/Oil Separator (outside) # of Compartments _____ Capacity _____
- ☐ Other (please describe) _____

none

10. Is the business open 24 hrs/day? YES ☒ NO Normal Operating Hours _____

11. Is production seasonal? YES ☒ NO

11. Type of flow of discharge of wastewater: Continuous ☒ YES NO

Batch YES NO Quantity per batch _____ gals Total gals per day _____

Intermittent YES NO Quantity per discharge _____ gals Total per day _____

If batch or intermittent discharge, average number of batches or intermittent discharges per day: _____; day(s) of the week _____; time of day _____

12. Describe the characteristics and constituents of wastewater discharge(s).

95% water + 5% solids, see attached analytical analysis

The Utilities Department may require that a discharge water sample is taken and analyzed for any heavy metals or chemicals that may be present.

Prohibited Discharges: No person shall contribute or cause to be contributed, either directly or indirectly, any pollutant which will interfere with the operation of the wastewater treatment facility. These substances would include any liquids, solids, or gases which are considered flammable or explosion such as gasoline, fuel oil, kerosene or any other prohibited substance listed in City Ordinance 68-41, 68-42, 68-44 and 68-47.

13. Statement of responsible official:

The information contained in this questionnaire is familiar to me, and to the best of my knowledge and belief, such information is true, complete, and accurate.

Name of person completing:

Darla Baier Title Operations Manager

Signature Darla Baier

*Attach additional sheets if more space is needed for responses to individual questions.

Please Remit Questionnaire to: s.breaux@cityoflamarque.org & r.sailer@cityoflamarque.org

7. Description of Operation:

Galveston County Landfill is a Type 1 disposal facility that accepts MSW, construction debris, Class II material, asbestos, and special waste as defined by 30 TAC 330 (148) for both industrial and non-industrial facilities.

Leachate is collected over time as liquids percolate through the waste stream (wastes described above). Special wastes can include sludge, ash, treated medical waste, food/animal waste, and out of date or off-spec non-hazardous products. These wastes decompose under pressure in the landfill and produce a liquid (leachate) that is collected and stored on-site prior to transportation and off-site disposal. There are no contaminants of concern with this waste stream.

ANALYTICAL REPORT

Eurofins Houston
4145 Greenbriar Dr
Stafford, TX 77477
Tel: (281)240-4200

Laboratory Job ID: 860-34575-1

Client Project/Site: Republic Serv - Galveston County

For:

Republic Services Inc. fka Allied Waste
2200 FM 521 -Almeda Rd
Fresno, Texas 77545

Attn: Christi Markuten



Authorized for release by:

10/17/2022 4:13:58 PM

Sachin Kudchadkar, Senior Project Manager
(281)748-9025

Sachin.Kudchadkar@et.eurofinsus.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Job ID: 860-34575-1

Laboratory: Eurofins Houston

Narrative

Job Narrative 860-34575-1

Receipt

The sample was received on 10/6/2022 3:15 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

GC VOA

Method RSK_175: The following sample was diluted to bring the concentration of target analytes within the calibration range: Leachate Tank #3 (860-34575-1). Elevated reporting limits (RLs) are provided.

Method RSK_175: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of 7: Leachate Tank #3 (860-34575-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Client Sample ID: Leachate Tank #3

Lab Sample ID: 860-34575-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	2500		100	9.1	ug/L	20		RSK-175	Total/NA
Chromium	0.0060	J	0.010	0.0040	mg/L	1		200.7 Rev 4.4	Total Recoverable
Copper	0.12		0.020	0.0039	mg/L	1		200.7 Rev 4.4	Total Recoverable
Nickel	0.024		0.010	0.0019	mg/L	1		200.7 Rev 4.4	Total Recoverable
Zinc	0.12		0.030	0.012	mg/L	1		200.7 Rev 4.4	Total Recoverable
Ammonia	190		10	3.5	mg/L	100		350.1	Total/NA
Chemical Oxygen Demand	440		100	17	mg/L	5		8000	Total/NA
Total Suspended Solids	78		13	13	mg/L	1		SM 2540D	Total/NA
pH	7.1	HF			SU	1		SM 4500 H+ B	Total/NA
Temperature	17.9	HF			Degrees C	1		SM 4500 H+ B	Total/NA
Biochemical Oxygen Demand	81		40	40	mg/L	1		SM 5210B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

Client Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Client Sample ID: Leachate Tank #3

Lab Sample ID: 860-34575-1

Date Collected: 10/06/22 13:30

Matrix: Water

Date Received: 10/06/22 15:15

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	2500		100	9.1	ug/L			10/12/22 11:09	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluoroethane	92		70 - 130					10/10/22 14:22	1
Trifluoroethane	100		70 - 130					10/12/22 11:09	20

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.010	U	0.020	0.010	mg/L		10/14/22 09:16	10/16/22 23:26	1
Arsenic	0.0092	U	0.010	0.0092	mg/L		10/14/22 09:16	10/16/22 23:26	1
Beryllium	0.0011	U	0.0040	0.0011	mg/L		10/14/22 09:16	10/16/22 23:26	1
Cadmium	0.0024	U	0.0050	0.0024	mg/L		10/14/22 09:16	10/16/22 23:26	1
Chromium	0.0060	J	0.010	0.0040	mg/L		10/14/22 09:16	10/16/22 23:26	1
Copper	0.12		0.020	0.0039	mg/L		10/14/22 09:16	10/16/22 23:26	1
Lead	0.0042	U	0.010	0.0042	mg/L		10/14/22 09:16	10/16/22 23:26	1
Nickel	0.024		0.010	0.0019	mg/L		10/14/22 09:16	10/16/22 23:26	1
Selenium	0.012	U	0.030	0.012	mg/L		10/14/22 09:16	10/16/22 23:26	1
Silver	0.0041	U	0.020	0.0041	mg/L		10/14/22 09:16	10/16/22 23:26	1
Thallium	0.0094	U	0.020	0.0094	mg/L		10/14/22 09:16	10/16/22 23:26	1
Zinc	0.12		0.030	0.012	mg/L		10/14/22 09:16	10/16/22 23:26	1

Method: EPA 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000052	U	0.00020	0.000052	mg/L		10/07/22 07:36	10/07/22 13:14	1

General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.1	HF			SU			10/11/22 16:40	1
Temperature (SM 4500 H+ B)	17.9	HF			Degrees C			10/11/22 16:40	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (MCAWW 350.1)	190		10	3.5	mg/L			10/11/22 22:15	100
Chemical Oxygen Demand (Hach 8000)	440		100	17	mg/L			10/06/22 19:01	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (SM 2540D)	78		13	13	mg/L			10/13/22 11:45	1
Biochemical Oxygen Demand (SM 5210B)	81		40	40	mg/L			10/07/22 17:22	1

Eurofins Houston

Surrogate Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Method: RSK-175 - Dissolved Gases (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	fluoroethar (70-130)
860-34575-1	Leachate Tank #3	92
860-34575-1	Leachate Tank #3	100
LCS 860-72504/5	Lab Control Sample	103
LCS 860-72815/5	Lab Control Sample	104
LCSD 860-72504/6	Lab Control Sample Dup	105
LCSD 860-72815/6	Lab Control Sample Dup	105
MB 860-72504/4	Method Blank	105
MB 860-72815/4	Method Blank	106
Surrogate Legend		
Trifluoroethane = Trifluoroethane		

QC Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 860-72504/4

Matrix: Water

Analysis Batch: 72504

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.45	U	5.0	0.45	ug/L			10/10/22 10:21	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluoroethane	105		70 - 130					10/10/22 10:21	1

Lab Sample ID: LCS 860-72504/5

Matrix: Water

Analysis Batch: 72504

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Methane	19.9	18.5		ug/L		93	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
Trifluoroethane	103		70 - 130					

Lab Sample ID: LCSD 860-72504/6

Matrix: Water

Analysis Batch: 72504

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methane	19.9	18.5		ug/L		93	70 - 130	0	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
Trifluoroethane	105		70 - 130						

Lab Sample ID: MB 860-72815/4

Matrix: Water

Analysis Batch: 72815

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.45	U	5.0	0.45	ug/L			10/12/22 09:46	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluoroethane	106		70 - 130					10/12/22 09:46	1

Lab Sample ID: LCS 860-72815/5

Matrix: Water

Analysis Batch: 72815

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Methane	19.9	18.2		ug/L		91	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
Trifluoroethane	104		70 - 130					

Eurofins Houston

QC Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 860-72815/6

Matrix: Water

Analysis Batch: 72815

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methane	19.9	18.3		ug/L		92	70 - 130	1	30
Surrogate	%Recovery	LCSD Qualifier	Limits						
Trifluoroethane	105		70 - 130						

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 860-73206/1-A

Matrix: Water

Analysis Batch: 73433

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 73206

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.010	U	0.020	0.010	mg/L		10/14/22 09:16	10/14/22 23:58	1
Arsenic	0.0092	U	0.010	0.0092	mg/L		10/14/22 09:16	10/14/22 23:58	1
Beryllium	0.0011	U	0.0040	0.0011	mg/L		10/14/22 09:16	10/14/22 23:58	1
Cadmium	0.0024	U	0.0050	0.0024	mg/L		10/14/22 09:16	10/14/22 23:58	1
Chromium	0.0040	U	0.010	0.0040	mg/L		10/14/22 09:16	10/14/22 23:58	1
Copper	0.0039	U	0.020	0.0039	mg/L		10/14/22 09:16	10/14/22 23:58	1
Lead	0.0042	U	0.010	0.0042	mg/L		10/14/22 09:16	10/14/22 23:58	1
Nickel	0.0019	U	0.010	0.0019	mg/L		10/14/22 09:16	10/14/22 23:58	1
Selenium	0.012	U	0.030	0.012	mg/L		10/14/22 09:16	10/14/22 23:58	1
Silver	0.0041	U	0.020	0.0041	mg/L		10/14/22 09:16	10/14/22 23:58	1
Thallium	0.0094	U	0.020	0.0094	mg/L		10/14/22 09:16	10/14/22 23:58	1
Zinc	0.012	U	0.030	0.012	mg/L		10/14/22 09:16	10/14/22 23:58	1

Lab Sample ID: LCS 860-73206/2-A

Matrix: Water

Analysis Batch: 73433

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 73206

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	1.00	1.03		mg/L		103	85 - 115
Arsenic	1.00	1.05		mg/L		105	85 - 115
Beryllium	1.00	1.05		mg/L		105	85 - 115
Cadmium	1.00	1.01		mg/L		101	85 - 115
Chromium	1.00	1.07		mg/L		107	85 - 115
Copper	1.00	1.05		mg/L		105	85 - 115
Lead	1.00	1.03		mg/L		103	85 - 115
Nickel	1.00	1.03		mg/L		103	85 - 115
Selenium	1.00	1.11		mg/L		111	85 - 115
Silver	0.500	0.509		mg/L		102	85 - 115
Thallium	1.00	1.07		mg/L		107	85 - 115
Zinc	1.00	1.06		mg/L		106	85 - 115

Lab Sample ID: LCSD 860-73206/3-A

Matrix: Water

Analysis Batch: 73433

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 73206

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	1.00	1.04		mg/L		104	85 - 115	1	20

Eurofins Houston

QC Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCSD 860-73206/3-A

Matrix: Water

Analysis Batch: 73433

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 73206

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits			
Arsenic	1.00	1.04		mg/L		104	85 - 115		1	20
Beryllium	1.00	1.04		mg/L		104	85 - 115		1	20
Cadmium	1.00	1.01		mg/L		101	85 - 115		0	20
Chromium	1.00	1.06		mg/L		106	85 - 115		1	20
Copper	1.00	1.04		mg/L		104	85 - 115		1	20
Lead	1.00	1.02		mg/L		102	85 - 115		1	20
Nickel	1.00	1.03		mg/L		103	85 - 115		0	20
Selenium	1.00	1.10		mg/L		110	85 - 115		1	20
Silver	0.500	0.515		mg/L		103	85 - 115		1	20
Thallium	1.00	1.07		mg/L		107	85 - 115		0	20
Zinc	1.00	1.06		mg/L		106	85 - 115		0	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 860-72263/10-A

Matrix: Water

Analysis Batch: 72400

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 72263

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.000052	U	0.00020	0.000052	mg/L		10/07/22 07:35	10/07/22 12:56	1

Lab Sample ID: LCS 860-72263/11-A

Matrix: Water

Analysis Batch: 72400

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 72263

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Mercury	0.00200	0.00206		mg/L		103	85 - 115	

Lab Sample ID: LCSD 860-72263/12-A

Matrix: Water

Analysis Batch: 72400

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 72263

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits			
Mercury	0.00200	0.00202		mg/L		101	85 - 115		2	20

Lab Sample ID: LLCS 860-72263/13-A

Matrix: Water

Analysis Batch: 72400

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 72263

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Mercury	0.000200	0.000141	J	mg/L		71	50 - 150	

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 860-72872/125

Matrix: Water

Analysis Batch: 72872

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ammonia	0.035	U	0.10	0.035	mg/L			10/11/22 21:22	1

Eurofins Houston

QC Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: MB 860-72872/30

Matrix: Water

Analysis Batch: 72872

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.035	U	0.10	0.035	mg/L			10/11/22 16:52	1

Lab Sample ID: LCS 860-72872/126

Matrix: Water

Analysis Batch: 72872

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	1.00	1.01		mg/L		101	90 - 110

Lab Sample ID: LCSD 860-72872/127

Matrix: Water

Analysis Batch: 72872

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	1.00	1.04		mg/L		104	90 - 110	3	20

Lab Sample ID: LLCS 860-72872/31

Matrix: Water

Analysis Batch: 72872

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	0.100	0.102		mg/L		102	50 - 150

Method: 8000 - COD

Lab Sample ID: MB 860-72244/3

Matrix: Water

Analysis Batch: 72244

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	3.4	U	20	3.4	mg/L			10/06/22 19:01	1

Lab Sample ID: LCS 860-72244/4

Matrix: Water

Analysis Batch: 72244

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	100	102		mg/L		102	90 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 860-73070/1

Matrix: Water

Analysis Batch: 73070

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L			10/13/22 11:45	1

Eurofins Houston

QC Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 860-73070/2

Matrix: Water

Analysis Batch: 73070

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	107		mg/L		107	80 - 120

Lab Sample ID: LCSD 860-73070/3

Matrix: Water

Analysis Batch: 73070

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Suspended Solids	100	105		mg/L		105	80 - 120	2	10

Lab Sample ID: 860-34575-1 DU

Matrix: Water

Analysis Batch: 73070

Client Sample ID: Leachate Tank #3

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	78		77.3		mg/L		0.9	10

Method: SM 4500 H+ B - pH

Lab Sample ID: 860-34575-1 DU

Matrix: Water

Analysis Batch: 72788

Client Sample ID: Leachate Tank #3

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.1	HF	7.1		SU		0	20
Temperature	17.9	HF	17.3		Degrees C		3	20

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: SCB 860-73076/2

Matrix: Water

Analysis Batch: 73076

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.738		0.0000020	0.0000020	mg/L			10/07/22 15:46	1

Lab Sample ID: USB 860-73076/1

Matrix: Water

Analysis Batch: 73076

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.0400		0.0000020	0.0000020	mg/L			10/07/22 15:44	1

Lab Sample ID: LCS 860-73076/3

Matrix: Water

Analysis Batch: 73076

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	206		mg/L		104	85 - 115

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QC Association Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

GC VOA

Analysis Batch: 72504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-34575-1	Leachate Tank #3	Total/NA	Water	RSK-175	
MB 860-72504/4	Method Blank	Total/NA	Water	RSK-175	
LCS 860-72504/5	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 860-72504/6	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 72815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-34575-1	Leachate Tank #3	Total/NA	Water	RSK-175	
MB 860-72815/4	Method Blank	Total/NA	Water	RSK-175	
LCS 860-72815/5	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 860-72815/6	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Metals

Prep Batch: 72263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-34575-1	Leachate Tank #3	Total/NA	Water	245.1	
MB 860-72263/10-A	Method Blank	Total/NA	Water	245.1	
LCS 860-72263/11-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 860-72263/12-A	Lab Control Sample Dup	Total/NA	Water	245.1	
LLCS 860-72263/13-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 72400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-34575-1	Leachate Tank #3	Total/NA	Water	245.1	72263
MB 860-72263/10-A	Method Blank	Total/NA	Water	245.1	72263
LCS 860-72263/11-A	Lab Control Sample	Total/NA	Water	245.1	72263
LCSD 860-72263/12-A	Lab Control Sample Dup	Total/NA	Water	245.1	72263
LLCS 860-72263/13-A	Lab Control Sample	Total/NA	Water	245.1	72263

Prep Batch: 73206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-34575-1	Leachate Tank #3	Total Recoverable	Water	200.7	
MB 860-73206/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 860-73206/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
LCSD 860-73206/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7	

Analysis Batch: 73433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-73206/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	73206
LCS 860-73206/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	73206
LCSD 860-73206/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7 Rev 4.4	73206

Analysis Batch: 73473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-34575-1	Leachate Tank #3	Total Recoverable	Water	200.7 Rev 4.4	73206

General Chemistry

Analysis Batch: 72244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-34575-1	Leachate Tank #3	Total/NA	Water	8000	

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QC Association Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

General Chemistry (Continued)

Analysis Batch: 72244 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-72244/3	Method Blank	Total/NA	Water	8000	
LCS 860-72244/4	Lab Control Sample	Total/NA	Water	8000	

Analysis Batch: 72788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-34575-1	Leachate Tank #3	Total/NA	Water	SM 4500 H+ B	
860-34575-1 DU	Leachate Tank #3	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 72872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-34575-1	Leachate Tank #3	Total/NA	Water	350.1	
MB 860-72872/125	Method Blank	Total/NA	Water	350.1	
MB 860-72872/30	Method Blank	Total/NA	Water	350.1	
LCS 860-72872/126	Lab Control Sample	Total/NA	Water	350.1	
LCSD 860-72872/127	Lab Control Sample Dup	Total/NA	Water	350.1	
LLCS 860-72872/31	Lab Control Sample	Total/NA	Water	350.1	

Analysis Batch: 73070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-34575-1	Leachate Tank #3	Total/NA	Water	SM 2540D	
MB 860-73070/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 860-73070/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 860-73070/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
860-34575-1 DU	Leachate Tank #3	Total/NA	Water	SM 2540D	

Analysis Batch: 73076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-34575-1	Leachate Tank #3	Total/NA	Water	SM 5210B	
SCB 860-73076/2	Method Blank	Total/NA	Water	SM 5210B	
USB 860-73076/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 860-73076/3	Lab Control Sample	Total/NA	Water	SM 5210B	

Lab Chronicle

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Client Sample ID: Leachate Tank #3

Lab Sample ID: 860-34575-1

Date Collected: 10/06/22 13:30

Matrix: Water

Date Received: 10/06/22 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	33 mL	33 mL	72504	10/10/22 14:22	CZT	EET HOU
Total/NA	Analysis	RSK-175		20	33 mL	33 mL	72815	10/12/22 11:09	CZT	EET HOU
Total Recoverable	Prep	200.7			50 mL	50 mL	73206	10/14/22 09:16	AGR	EET HOU
Total Recoverable	Analysis	200.7 Rev 4.4		1			73473	10/16/22 23:26	JDM	EET HOU
Total/NA	Prep	245.1			50 mL	50 mL	72263	10/07/22 07:36	MCA	EET HOU
Total/NA	Analysis	245.1		1			72400	10/07/22 13:14	PB	EET HOU
Total/NA	Analysis	350.1		100	10 mL	10 mL	72872	10/11/22 22:15	YGG	EET HOU
Total/NA	Analysis	8000		5	2 mL	2 mL	72244	10/06/22 19:01	JP	EET HOU
Total/NA	Analysis	SM 2540D		1	300 mL	1000 mL	73070	10/13/22 11:45	BSR	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			72788	10/11/22 16:40	TL	EET HOU
Total/NA	Analysis	SM 5210B		1			73076	10/07/22 17:22	JP	EET HOU

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Laboratory: Eurofins Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-22-47	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
200.7 Rev 4.4	200.7	Water	Thallium
SM 2540D		Water	Total Suspended Solids
SM 4500 H+ B		Water	Temperature

Method Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Method	Method Description	Protocol	Laboratory
RSK-175	Dissolved Gases (GC)	RSK	EET HOU
200.7 Rev 4.4	Metals (ICP)	EPA	EET HOU
245.1	Mercury (CVAA)	EPA	EET HOU
350.1	Nitrogen, Ammonia	MCAWW	EET HOU
8000	COD	Hach	EET HOU
SM 2540D	Solids, Total Suspended (TSS)	SM	EET HOU
SM 4500 H+ B	pH	SM	EET HOU
SM 5210B	BOD, 5-Day	SM	EET HOU
200.7	Preparation, Total Recoverable Metals	EPA	EET HOU
245.1	Preparation, Mercury	EPA	EET HOU

Protocol References:

EPA = US Environmental Protection Agency

Hach = Hach Company

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175,
Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-34575-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-34575-1	Leachate Tank #3	Water	10/06/22 13:30	10/06/22 15:15

1

2

3

4

5

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11

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15

Chain of Custody Record

Client Information		Sampler: <u>Uziel Rendon</u>		Lab PM: <u>Kudchadkar Sachin G</u>		Carrier Tracking No(s): <u>860-757-265.1</u>		Page: <u>Page 1 of 1</u>	
Client Contact: <u>Christi Markuten</u>		Phone: _____		E-Mail: <u>Sachin.Kudchadkar@Eurofinset.com</u>		State of Origin: _____		Job #: _____	
Company: <u>Republic Services Inc. fka Allied Waste</u>		Address: <u>2200 FM 521 -Alameda Rd</u>		City: <u>Fresno</u>		State: <u>TX, 77545</u>		Preservation Codes:	
City: <u>Fresno</u>		State: <u>TX, 77545</u>		Phone: _____		PO #: _____		A HCL B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Amchlor H Ascorbic Acid I Ice J DI Water K EDTA L EDA Other _____	
Email: <u>CMarkuten@republicservices.com</u>		Project #: <u>86000527</u>		SSOW#: _____		Matrix (Inorganic, Organic, Semisolid, Other): _____		Special Instructions/Note: _____	
Project Name: <u>Republic Serv Galveston County</u>		Sample Date: <u>10-6-22</u>		Sample Time: <u>1330</u>		Sample Type (C=Comp, G=grab): <u>G</u>		Water	
Site: _____		Barcode: 		860-34575 Chain of Custody		Temp: <u>2.0</u> IR ID: <u>HOU-344</u>		Corrected Temp: <u>3.2</u>	
Possible Hazard Identification		☐ Non-Hazard		☐ Flammable		☐ Skin Irritant		☐ Poison B	
Deliverable Requested: I, II, III, IV Other (specify) _____		☐ Unknown		☐ Radiological		☐ Return To Client		☐ Disposal By Lab	
Empty Kit Relinquished by		Date/Time: <u>10-6-22/15:18</u>		Company: _____		Date/Time: <u>10-6-23 15:18</u>		Company: <u>Reena</u>	
Relinquished by: <u>Uziel Rendon</u>		Date/Time: _____		Company: _____		Date/Time: _____		Company: _____	
Relinquished by: _____		Date/Time: _____		Company: _____		Date/Time: _____		Company: _____	
Custody Seals Intact: <u>Yes</u>		Custody Seal No. _____		Cooler Temperature(s) °C and Other Remarks: _____		Date/Time: _____		Company: _____	

Login Sample Receipt Checklist

Client: Republic Services Inc. fka Allied Waste

Job Number: 860-34575-1

Login Number: 34575

List Source: Eurofins Houston

List Number: 1

Creator: Palmar, Pedro

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

ANALYTICAL REPORT

PREPARED FOR

Attn: Christi Markuten
Republic Services Inc. fka Allied Waste
2200 FM 521 -Almeda Rd
Fresno, Texas 77545

Generated 1/9/2023 5:39:25 PM

JOB DESCRIPTION

Republic Serv - Galveston County

JOB NUMBER

860-39690-1

Eurofins Houston

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
1/9/2023 5:39:25 PM

Authorized for release by
Sachin Kudchadkar, Senior Project Manager
Sachin.Kudchadkar@et.eurofinsus.com
(281)748-9025

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Definitions/Glossary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Job ID: 860-39690-1

Laboratory: Eurofins Houston

Narrative

Job Narrative 860-39690-1

Receipt

The sample was received on 12/20/2022 2:06 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Client Sample ID: Leachate Tank #3

Lab Sample ID: 860-39690-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	92		0.50	0.11	mg/L	1		300.0	Total/NA
Arsenic	0.0061		0.0040	0.00034	mg/L	1		200.8	Total Recoverable
Chromium	0.0050		0.0040	0.00033	mg/L	1		200.8	Total Recoverable
Copper	0.59		0.0040	0.00069	mg/L	1		200.8	Total Recoverable
Lead	0.00023	J	0.0020	0.00014	mg/L	1		200.8	Total Recoverable
Nickel	0.017		0.0020	0.00049	mg/L	1		200.8	Total Recoverable
Selenium	0.013		0.0020	0.00069	mg/L	1		200.8	Total Recoverable
Zinc	0.11		0.0040	0.00089	mg/L	1		200.8	Total Recoverable
Ammonia	52		10	3.5	mg/L	100		350.1	Total/NA
Nitrogen, Kjeldahl	160		10	4.5	mg/L	50		351.2	Total/NA
Chemical Oxygen Demand	250		100	17	mg/L	5		8000	Total/NA
Total Dissolved Solids	2600		40	40	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	43		13	13	mg/L	1		SM 2540D	Total/NA
pH	7.0	HF			SU	1		SM 4500 H+ B	Total/NA
Temperature	14.8	HF			Degrees C	1		SM 4500 H+ B	Total/NA
Biochemical Oxygen Demand	17		6.0	6.0	mg/L	1		SM 5210B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

Client Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Client Sample ID: Leachate Tank #3

Lab Sample ID: 860-39690-1

Date Collected: 12/20/22 12:00

Matrix: Water

Date Received: 12/20/22 14:06

Method: MCAWW 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	92		0.50	0.11	mg/L			01/02/23 18:56	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0011	U	0.0020	0.0011	mg/L		01/07/23 09:17	01/09/23 02:27	1
Arsenic	0.0061		0.0040	0.00034	mg/L		01/07/23 09:17	01/09/23 02:27	1
Beryllium	0.00015	U	0.0020	0.00015	mg/L		01/07/23 09:17	01/09/23 02:27	1
Cadmium	0.000085	U	0.0020	0.000085	mg/L		01/07/23 09:17	01/09/23 02:27	1
Chromium	0.0050		0.0040	0.00033	mg/L		01/07/23 09:17	01/09/23 02:27	1
Copper	0.59		0.0040	0.00069	mg/L		01/07/23 09:17	01/09/23 02:27	1
Lead	0.00023	J	0.0020	0.00014	mg/L		01/07/23 09:17	01/09/23 02:27	1
Nickel	0.017		0.0020	0.00049	mg/L		01/07/23 09:17	01/09/23 02:27	1
Selenium	0.013		0.0020	0.00069	mg/L		01/07/23 09:17	01/09/23 02:27	1
Silver	0.00012	U	0.0020	0.00012	mg/L		01/07/23 09:17	01/09/23 02:27	1
Thallium	0.000096	U	0.0020	0.000096	mg/L		01/07/23 09:17	01/09/23 02:27	1
Zinc	0.11		0.0040	0.00089	mg/L		01/07/23 09:17	01/09/23 02:27	1

Method: EPA 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000052	U	0.00020	0.000052	mg/L		01/06/23 11:02	01/06/23 18:15	1

General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.0	HF			SU			12/29/22 12:44	1
Temperature (SM 4500 H+ B)	14.8	HF			Degrees C			12/29/22 12:44	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (MCAWW 350.1)	52		10	3.5	mg/L			01/02/23 17:08	100
Nitrogen, Kjeldahl (MCAWW 351.2)	160		10	4.5	mg/L		12/27/22 14:59	12/28/22 18:02	50
Chemical Oxygen Demand (Hach 8000)	250		100	17	mg/L			12/29/22 16:54	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2600		40	40	mg/L			12/27/22 20:00	1
Total Suspended Solids (SM 2540D)	43		13	13	mg/L			12/27/22 11:34	1
Biochemical Oxygen Demand (SM 5210B)	17		6.0	6.0	mg/L			12/21/22 18:45	1

Eurofins Houston

QC Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-84067/3

Matrix: Water

Analysis Batch: 84067

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.11	U	0.50	0.11	mg/L			01/02/23 17:03	1

Lab Sample ID: MB 860-84067/39

Matrix: Water

Analysis Batch: 84067

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.11	U	0.50	0.11	mg/L			01/03/23 00:57	1

Lab Sample ID: LCS 860-84067/4

Matrix: Water

Analysis Batch: 84067

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	10.0	9.86		mg/L		99	90 - 110

Lab Sample ID: LCSD 860-84067/41

Matrix: Water

Analysis Batch: 84067

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	10.0	9.85		mg/L		98	90 - 110	0	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 860-84799/1-A

Matrix: Water

Analysis Batch: 84968

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 84799

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0011	U	0.0020	0.0011	mg/L		01/07/23 09:17	01/09/23 01:26	1
Arsenic	0.00034	U	0.0040	0.00034	mg/L		01/07/23 09:17	01/09/23 01:26	1
Beryllium	0.00015	U	0.0020	0.00015	mg/L		01/07/23 09:17	01/09/23 01:26	1
Cadmium	0.000085	U	0.0020	0.000085	mg/L		01/07/23 09:17	01/09/23 01:26	1
Chromium	0.00033	U	0.0040	0.00033	mg/L		01/07/23 09:17	01/09/23 01:26	1
Copper	0.00069	U	0.0040	0.00069	mg/L		01/07/23 09:17	01/09/23 01:26	1
Lead	0.00014	U	0.0020	0.00014	mg/L		01/07/23 09:17	01/09/23 01:26	1
Nickel	0.00049	U	0.0020	0.00049	mg/L		01/07/23 09:17	01/09/23 01:26	1
Selenium	0.00069	U	0.0020	0.00069	mg/L		01/07/23 09:17	01/09/23 01:26	1
Silver	0.00012	U	0.0020	0.00012	mg/L		01/07/23 09:17	01/09/23 01:26	1
Thallium	0.000096	U	0.0020	0.000096	mg/L		01/07/23 09:17	01/09/23 01:26	1
Zinc	0.00089	U	0.0040	0.00089	mg/L		01/07/23 09:17	01/09/23 01:26	1

Lab Sample ID: LCS 860-84799/2-A

Matrix: Water

Analysis Batch: 84968

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 84799

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.100	0.0857		mg/L		86	85 - 115
Arsenic	0.100	0.0900		mg/L		90	85 - 115

Eurofins Houston

QC Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 860-84799/2-A

Matrix: Water

Analysis Batch: 84968

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 84799

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	
	Added	Result	Qualifier				Limits	
Beryllium	0.100	0.0862		mg/L		86	85 - 115	
Cadmium	0.100	0.0913		mg/L		91	85 - 115	
Chromium	0.100	0.0909		mg/L		91	85 - 115	
Copper	0.100	0.0920		mg/L		92	85 - 115	
Lead	0.100	0.0910		mg/L		91	85 - 115	
Nickel	0.100	0.0902		mg/L		90	85 - 115	
Selenium	0.100	0.0905		mg/L		90	85 - 115	
Silver	0.0500	0.0502		mg/L		100	85 - 115	
Thallium	0.100	0.0906		mg/L		91	85 - 115	
Zinc	0.100	0.0911		mg/L		91	85 - 115	

Lab Sample ID: LCSD 860-84799/3-A

Matrix: Water

Analysis Batch: 84968

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 84799

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec		RPD	
	Added	Result	Qualifier				Limits		RPD	Limit
Antimony	0.100	0.0877		mg/L		88	85 - 115		2	20
Arsenic	0.100	0.0912		mg/L		91	85 - 115		1	20
Beryllium	0.100	0.0860		mg/L		86	85 - 115		0	20
Cadmium	0.100	0.0924		mg/L		92	85 - 115		1	20
Chromium	0.100	0.0912		mg/L		91	85 - 115		0	20
Copper	0.100	0.0941		mg/L		94	85 - 115		2	20
Lead	0.100	0.0914		mg/L		91	85 - 115		0	20
Nickel	0.100	0.0907		mg/L		91	85 - 115		1	20
Selenium	0.100	0.0918		mg/L		92	85 - 115		1	20
Silver	0.0500	0.0509		mg/L		102	85 - 115		1	20
Thallium	0.100	0.0904		mg/L		90	85 - 115		0	20
Zinc	0.100	0.0917		mg/L		92	85 - 115		1	20

Lab Sample ID: LLCS 860-84799/4-A

Matrix: Water

Analysis Batch: 84968

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 84799

Analyte	Spike	LLCS	LLCS	Unit	D	%Rec	%Rec	
	Added	Result	Qualifier				Limits	
Antimony	0.00200	0.00202		mg/L		101	50 - 150	
Arsenic	0.00400	0.00341	J	mg/L		85	50 - 150	
Beryllium	0.00200	0.00177	J	mg/L		88	50 - 150	
Cadmium	0.00200	0.00184	J	mg/L		92	50 - 150	
Chromium	0.00400	0.00351	J	mg/L		88	50 - 150	
Copper	0.00400	0.00374	J	mg/L		94	50 - 150	
Lead	0.00200	0.00179	J	mg/L		90	50 - 150	
Nickel	0.00200	0.00182	J	mg/L		91	50 - 150	
Selenium	0.00200	0.00145	J	mg/L		73	50 - 150	
Silver	0.00200	0.00190	J	mg/L		95	50 - 150	
Thallium	0.00200	0.00180	J	mg/L		90	50 - 150	
Zinc	0.00400	0.00342	J	mg/L		85	50 - 150	

Eurofins Houston

QC Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 860-84691/10-A

Matrix: Water

Analysis Batch: 84786

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 84691

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000052	U	0.00020	0.000052	mg/L		01/06/23 11:02	01/06/23 18:03	1

Lab Sample ID: LCS 860-84691/11-A

Matrix: Water

Analysis Batch: 84786

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 84691

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00200	0.00203		mg/L		102	85 - 115

Lab Sample ID: LCSD 860-84691/12-A

Matrix: Water

Analysis Batch: 84786

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 84691

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.00200	0.00200		mg/L		100	85 - 115	2	20

Lab Sample ID: LLCS 860-84691/13-A

Matrix: Water

Analysis Batch: 84786

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 84691

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.000200	0.000231		mg/L		116	50 - 150

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 860-84170/16

Matrix: Water

Analysis Batch: 84170

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.035	U	0.10	0.035	mg/L			01/02/23 15:23	1

Lab Sample ID: MB 860-84170/58

Matrix: Water

Analysis Batch: 84170

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.035	U	0.10	0.035	mg/L			01/02/23 17:22	1

Lab Sample ID: LCS 860-84170/17

Matrix: Water

Analysis Batch: 84170

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	1.00	0.944		mg/L		94	90 - 110

Eurofins Houston

QC Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 860-84170/59

Matrix: Water

Analysis Batch: 84170

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	1.00	0.976		mg/L		98	90 - 110

Lab Sample ID: LCSD 860-84170/18

Matrix: Water

Analysis Batch: 84170

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	1.00	0.937		mg/L		94	90 - 110	1	20

Lab Sample ID: LCSD 860-84170/60

Matrix: Water

Analysis Batch: 84170

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	1.00	1.00		mg/L		100	90 - 110	3	20

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 860-83453/44-A

Matrix: Water

Analysis Batch: 83733

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 83453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.089	U	0.20	0.089	mg/L		12/27/22 14:59	12/28/22 17:40	1

Lab Sample ID: MB 860-83453/4-A

Matrix: Water

Analysis Batch: 83733

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 83453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.089	U	0.20	0.089	mg/L		12/27/22 14:59	12/28/22 17:20	1

Lab Sample ID: LCS 860-83453/45-A

Matrix: Water

Analysis Batch: 83733

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 83453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.00	1.91		mg/L		96	90 - 110

Lab Sample ID: LCSD 860-83453/46-A

Matrix: Water

Analysis Batch: 83733

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 83453

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	2.00	1.87		mg/L		94	90 - 110	2	20

Eurofins Houston

QC Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Method: 351.2 - Nitrogen, Total Kjeldahl (Continued)

Lab Sample ID: LLCS 860-83453/5-A

Matrix: Water

Analysis Batch: 83733

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 83453

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	0.200	0.224		mg/L		112	50 - 150

Method: 8000 - COD

Lab Sample ID: MB 860-83862/3

Matrix: Water

Analysis Batch: 83862

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	3.4	U	20	3.4	mg/L			12/29/22 16:54	1

Lab Sample ID: LCS 860-83862/4

Matrix: Water

Analysis Batch: 83862

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	100	96.0		mg/L		96	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-83497/1

Matrix: Water

Analysis Batch: 83497

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			12/27/22 20:00	1

Lab Sample ID: LCS 860-83497/2

Matrix: Water

Analysis Batch: 83497

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	1030		mg/L		103	80 - 120

Lab Sample ID: LCSD 860-83497/3

Matrix: Water

Analysis Batch: 83497

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	1020		mg/L		102	80 - 120	1	10

Lab Sample ID: LLCS 860-83497/4

Matrix: Water

Analysis Batch: 83497

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	5.00	5.0	U	mg/L		90	50 - 150

Eurofins Houston

QC Sample Results

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 860-39690-1 DU

Matrix: Water

Analysis Batch: 83497

Client Sample ID: Leachate Tank #3

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	2600		2740		mg/L		4	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 860-83400/1

Matrix: Water

Analysis Batch: 83400

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L			12/27/22 11:34	1

Lab Sample ID: LCS 860-83400/2

Matrix: Water

Analysis Batch: 83400

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	103		mg/L		103	80 - 120

Lab Sample ID: LCSD 860-83400/3

Matrix: Water

Analysis Batch: 83400

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Total Suspended Solids	100	103		mg/L		103	80 - 120	0	10

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: SCB 860-83423/2

Matrix: Water

Analysis Batch: 83423

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.612		0.0000020	0.0000020	mg/L			12/21/22 18:20	1

Lab Sample ID: USB 860-83423/1

Matrix: Water

Analysis Batch: 83423

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.0900		0.0000020	0.0000020	mg/L			12/21/22 18:17	1

Lab Sample ID: LCS 860-83423/3

Matrix: Water

Analysis Batch: 83423

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	206		mg/L		104	85 - 115

Eurofins Houston

QC Association Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

HPLC/IC

Analysis Batch: 84067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total/NA	Water	300.0	
MB 860-84067/3	Method Blank	Total/NA	Water	300.0	
MB 860-84067/39	Method Blank	Total/NA	Water	300.0	
LCS 860-84067/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-84067/41	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 84691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total/NA	Water	245.1	
MB 860-84691/10-A	Method Blank	Total/NA	Water	245.1	
LCS 860-84691/11-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 860-84691/12-A	Lab Control Sample Dup	Total/NA	Water	245.1	
LLCS 860-84691/13-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 84786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total/NA	Water	245.1	84691
MB 860-84691/10-A	Method Blank	Total/NA	Water	245.1	84691
LCS 860-84691/11-A	Lab Control Sample	Total/NA	Water	245.1	84691
LCSD 860-84691/12-A	Lab Control Sample Dup	Total/NA	Water	245.1	84691
LLCS 860-84691/13-A	Lab Control Sample	Total/NA	Water	245.1	84691

Prep Batch: 84799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total Recoverable	Water	200.8	
MB 860-84799/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 860-84799/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 860-84799/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
LLCS 860-84799/4-A	Lab Control Sample	Total Recoverable	Water	200.8	

Analysis Batch: 84968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total Recoverable	Water	200.8	84799
MB 860-84799/1-A	Method Blank	Total Recoverable	Water	200.8	84799
LCS 860-84799/2-A	Lab Control Sample	Total Recoverable	Water	200.8	84799
LCSD 860-84799/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	84799
LLCS 860-84799/4-A	Lab Control Sample	Total Recoverable	Water	200.8	84799

General Chemistry

Analysis Batch: 83400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total/NA	Water	SM 2540D	
MB 860-83400/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 860-83400/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 860-83400/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 83423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total/NA	Water	SM 5210B	

Eurofins Houston

QC Association Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

General Chemistry (Continued)

Analysis Batch: 83423 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
SCB 860-83423/2	Method Blank	Total/NA	Water	SM 5210B	
USB 860-83423/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 860-83423/3	Lab Control Sample	Total/NA	Water	SM 5210B	

Prep Batch: 83453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total/NA	Water	351.2	
MB 860-83453/44-A	Method Blank	Total/NA	Water	351.2	
MB 860-83453/4-A	Method Blank	Total/NA	Water	351.2	
LCS 860-83453/45-A	Lab Control Sample	Total/NA	Water	351.2	
LCSD 860-83453/46-A	Lab Control Sample Dup	Total/NA	Water	351.2	
LLCS 860-83453/5-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 83497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total/NA	Water	SM 2540C	
MB 860-83497/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-83497/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-83497/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-83497/4	Lab Control Sample	Total/NA	Water	SM 2540C	
860-39690-1 DU	Leachate Tank #3	Total/NA	Water	SM 2540C	

Analysis Batch: 83733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total/NA	Water	351.2	83453
MB 860-83453/44-A	Method Blank	Total/NA	Water	351.2	83453
MB 860-83453/4-A	Method Blank	Total/NA	Water	351.2	83453
LCS 860-83453/45-A	Lab Control Sample	Total/NA	Water	351.2	83453
LCSD 860-83453/46-A	Lab Control Sample Dup	Total/NA	Water	351.2	83453
LLCS 860-83453/5-A	Lab Control Sample	Total/NA	Water	351.2	83453

Analysis Batch: 83827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 83862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total/NA	Water	8000	
MB 860-83862/3	Method Blank	Total/NA	Water	8000	
LCS 860-83862/4	Lab Control Sample	Total/NA	Water	8000	

Analysis Batch: 84170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-39690-1	Leachate Tank #3	Total/NA	Water	350.1	
MB 860-84170/16	Method Blank	Total/NA	Water	350.1	
MB 860-84170/58	Method Blank	Total/NA	Water	350.1	
LCS 860-84170/17	Lab Control Sample	Total/NA	Water	350.1	
LCS 860-84170/59	Lab Control Sample	Total/NA	Water	350.1	
LCSD 860-84170/18	Lab Control Sample Dup	Total/NA	Water	350.1	
LCSD 860-84170/60	Lab Control Sample Dup	Total/NA	Water	350.1	

Eurofins Houston

Lab Chronicle

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Client Sample ID: Leachate Tank #3

Lab Sample ID: 860-39690-1

Date Collected: 12/20/22 12:00

Matrix: Water

Date Received: 12/20/22 14:06

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	0 mL	1.0 mL	84067	01/02/23 18:56	RBNS	EET HOU
Total Recoverable	Prep	200.8			50 mL	50 mL	84799	01/07/23 09:17	AGR	EET HOU
Total Recoverable	Analysis	200.8		1			84968	01/09/23 02:27	DP	EET HOU
Total/NA	Prep	245.1			50 mL	50 mL	84691	01/06/23 11:02	AGR	EET HOU
Total/NA	Analysis	245.1		1			84786	01/06/23 18:15	SHZ	EET HOU
Total/NA	Analysis	350.1		100	10 mL	10 mL	84170	01/02/23 17:08	ADL	EET HOU
Total/NA	Prep	351.2			20 mL	20 mL	83453	12/27/22 14:59	CL	EET HOU
Total/NA	Analysis	351.2		50			83733	12/28/22 18:02	YVD	EET HOU
Total/NA	Analysis	8000		5	2 mL	2 mL	83862	12/29/22 16:54	JP	EET HOU
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	83497	12/27/22 20:00	YGG	EET HOU
Total/NA	Analysis	SM 2540D		1	300 mL	1000 mL	83400	12/27/22 11:34	ADL	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			83827	12/29/22 12:44	TL	EET HOU
Total/NA	Analysis	SM 5210B		1			83423	12/21/22 18:45	JP	EET HOU

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Laboratory: Eurofins Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-22-48	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM 2540D		Water	Total Suspended Solids
SM 4500 H+ B		Water	Temperature

Method Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	EET HOU
200.8	Metals (ICP/MS)	EPA	EET HOU
245.1	Mercury (CVAA)	EPA	EET HOU
350.1	Nitrogen, Ammonia	MCAWW	EET HOU
351.2	Nitrogen, Total Kjeldahl	MCAWW	EET HOU
8000	COD	Hach	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 2540D	Solids, Total Suspended (TSS)	SM	EET HOU
SM 4500 H+ B	pH	SM	EET HOU
SM 5210B	BOD, 5-Day	SM	EET HOU
200.8	Preparation, Total Recoverable Metals	EPA	EET HOU
245.1	Preparation, Mercury	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	MCAWW	EET HOU

Protocol References:

EPA = US Environmental Protection Agency

Hach = Hach Company

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Republic Services Inc. fka Allied Waste
Project/Site: Republic Serv - Galveston County

Job ID: 860-39690-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-39690-1	Leachate Tank #3	Water	12/20/22 12:00	12/20/22 14:06

1

2

3

4

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14

Login Sample Receipt Checklist

Client: Republic Services Inc. fka Allied Waste

Job Number: 860-39690-1

Login Number: 39690

List Source: Eurofins Houston

List Number: 1

Creator: Torres, Sandra

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

City of La Marque POTW SERVICE AGREEMENT CONTRACT

This Service Agreement Contract (the "Contract"), dated 2.8, 2016 is entered into between Galveston County Landfill TX, L.P. d/b/a Galveston County LF doing business in the State of Texas (herein "Galveston County LF" or "Owner"), and the City of La Marque, a municipal corporation of the State of Texas (herein "City") for the provision of disposal capacity at the City publicly-owned treatment works ("POTW") for wastewater from the operation of the Galveston County LF.

WHEREAS, the City and Galveston County LF desire to enter into this Contract for the provision of disposal capacity at the City POTW for wastewater from the operation of the Galveston County LF, and agree as follows:

- I. Owner agrees to install and maintain, free of charge to the City, the approximate sixty foot 6" x 4" dual containment force main, including any portions or segments that ownership may be assigned to the City as a requirement by any other State or Federal agency, department, commission, law or rule (the "Force Main"). The City's responsibility shall begin at the agreed upon point where the Force Main enters the City's manhole adjacent to FM 1764 below the ground.
- II. The City shall have the right to enter on the property or premises for any purposes reasonably incidental to or necessitated by the terms and provisions of this Contract.
- III. Owner agrees to maintain a flow meter and sample station, the Force Main, and a meter pump to pump their wastewater for monitoring the quantity of sewage delivered to the City's collection system. The type and model of meter shall be approved by the City. Owner further agrees to test the accuracy and calibrate the meter upon installation and annually thereafter, in a manner approved by the City, with the results submitted to the City. Owner shall bear all costs associated with installation and maintenance of the flow meter and sample station, the Force Main, and a meter pump. Until the meter is installed and tested or in the event of a malfunction of the meter, Owner agrees to pay for a volume of sewage which is equivalent to previous billing actually provided to Owner for the billing period. In the event that the City questions the accuracy of the meter, the City shall have the right, at its own expense, to test the accuracy of the meter. If the meter is inaccurate by 5 percent or more, Owner agrees to repair and re-calibrate the meter at Owner's expense.
- IV. Owner agrees to comply with applicable City Code of Ordinances including the Article II Sewage Disposal Standards regarding the discharge of wastewater.

Owner will only discharge leachate and/or any other wastewater when approved and authorized by the City, including as approved or provided for within this Contract, and in accordance with local, state, and federal requirements.

- V. In the event of an overflow, bypass, or other noncompliance from the Owner's sanitary sewage collection system, Owner agrees to promptly report the noncompliance as required by State and Federal authorities. Owner also agrees to promptly mitigate any environmental hazard created by the noncompliance and to correct the problem which led to the noncompliance as required by State and Federal authorities. Owner also agrees to submit a copy of the notification and report of the mitigation to the City. Owner's collection system is defined as all of the pipes within Owner's facility transporting sewage from individual connections to the flow meter and sample station and pump discharge piping. The City's responsibility shall begin at the point where the Force Main enters the City's manhole adjacent to FM 1764 below the ground.
- VI. The City agrees to accept wastewater at a flow volume rate as determined in Attachment A, Section I for Owner under normal operating conditions. Additional flow volumes must be approved by the City prior to discharging to the City collection system. The City reserves the right to reject any additional flow.
- VII. The Owner agrees to pay to the City all charges for sewer service within thirty (30) days after receipt of a statement from the City. In the event of failure of Owner to pay said charges, City shall have the right, upon thirty (30) days' written notice to Owner, to refuse to accept further sewage from Owner.
- VIII. Owner will pay a rate of \$0.04/gallon for sewer services as established by this Contract, on a per gallon rate, for authorized pollutants and sanitary sewage discharge limits and applicable surcharges. Owner agrees to pay an additional surcharge for wastewater that exceeds the discharge limits set forth and as provided in Attachment A of this Contract. Determination of the concentrations of the Owner's waste shall be made by the City based on tests conducted on representative samples collected in accordance with this Contract. The Owner will be responsible for the charges incurred for all testing required by Appendix A, Section I.
- IX. Contemporaneously with the execution of this Contract, Owner shall deposit with the City the sum of five thousand dollars (\$5,000) (the "Security Deposit") to be held by the City as security for the performance of Owner's obligations under this Contract. In the event of any default in the payment when due of any amounts owing by Owner to the City pursuant to this Contract, the City may apply the Security Deposit towards the payment of the same. Upon the expiration or termination of this Contract and the payment in full of all amounts to be paid by

Owner to the City pursuant to this Contract, the balance of the Security Deposit that has not been applied to any amounts owing by Owner to the City pursuant to this Contract shall be promptly returned by the City to Owner.

- X. Owner agrees to enter into such contracts or agreements as may be reasonably required to carry out the purpose and intent of this Contract. The term of this Contract shall be for a period of five (5) years from and after the date of execution.
- XI. Owner may, from time to time, convey or assign this Contract with respect to all or any part of the land contained within Owner's boundaries upon prior approval by the City of the assignee or assignees and only upon the condition that the assignee or assignees assume the liabilities, responsibilities, and obligations under this Contract with respect to the land involved in the assignment or assignments, or as may be otherwise approved by the City. Notwithstanding the foregoing, Owner may assign this Contract without the consent of the City, to an affiliate of Owner or to any person or entity that purchases any operations from Owner.
- XII. EFFECTIVE DATE AND TERM - This contract shall become effective, and performance shall begin on December 1, 2015. The Contract shall be for a five (5) year period beginning on December 1, 2015 and remain in full force until November 30, 2020. The initial term of the Contract may be extended for an additional five (5) years, upon the Mutual agreement of the Contractor and the City. Request for extension by the Contractor shall be submitted in writing, on or before March 1, 2020. The request for extension shall contain the proposed rate, including proposed formula for price increases, and any additional terms or conditions not contained in the original Contract Documents.

In connection with this agreement, notifications shall be sent to:

Galveston County Landfill TX, L.P.
3935 Avenue A
Santa Fe, TX 77510

Republic Services
General Counsel
18500 N. Allied Way
Phoenix, AZ 85054

Director of Public Services
City of La Marque POTW

1111 Bayou Road
La Marque, TX 77568

Any changes in said addresses may be made by notifying the other parties by certified mail of the new or changed address.

This Contract shall constitute a permit from the City to Owner for, and the City agrees that the Owner is authorized to, discharge into the City's collection system raw liquid waste in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this Contract at the following location:

Proposed Manhole located on the Southeast side of FM 1764
approximately 60 feet from Avenue A
La Marque, TX 77568-4299

Executed in duplicate originals at La Marque, Texas on this 8th day of February, 2016, the City of La Marque acting herein by and through its City Manager and Galveston County LF, acting herein by and through its Authorized Representative, hereunto duly authorized.

ATTEST:

Robri Eldridge

CITY OF La MARQUE, TEXAS

By: Carla Butler
City Manager

ATTEST:

Nazam M. Mune

GALVESTON COUNTY LANDFILL TX, L.P.

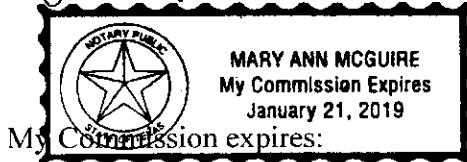
By: B. C. J.
Authorized Representative

STATE OF TEXAS

COUNTY OF HARRIS

BEFORE ME, the undersigned, a Notary Public in and for the said county and on this day personally appeared Brandon Rogers, Authorized Representative of GALVESTON COUNTY LANDFILL TX, L.P., known to me to be the person and officer whose name is subscribed to the foregoing instrument, and acknowledged to me that the same was the act of the said GALVESTON COUNTY LANDFILL TX, L.P., and that he executed the same as the act of such limited partnership for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 25th day of January, 2016.



Mary Ann McGuire
Notary Public

STATE OF TEXAS

COUNTY OF Galveston

BEFORE ME, the undersigned, a Notary Public in and for the said county and on this day personally appeared Carol J. Butler, City Manager of the City of LaMarque, Texas, known to me to be the person and officer whose name is subscribed to the foregoing instrument, and acknowledged to me that the same was the act of the said City of LaMarque, Texas, and that he executed the same as the act of such municipal corporation for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 8th day of February, 2016.



Robin Eldridge
Notary Public

City of La Marque
POTW

1111 Bayou Road
La Marque, TX 77568

ATTACHMENT A

SECTION I

PERMIT LIMITS

Parameter/Pollutant	Base Permit Limit	Maximum Permit Limit	Testing Schedule*
**** Dissolved Oxygen		Minimum of 1.0 mg/l	Prior to Discharge
Flow Volume	20,000 gpd monthly avg.	40,000 gpd maximum	Daily
pH	5.5	9.5	Monthly
Temperature	-	150°F	Monthly
Dissolved Methane	-	8.0 mg/l	Monthly
Metals: (Grab Sample)	-	-	-
Arsenic (As)	-	0.3 mg/l	Quarterly
Barium (Ba)	-	4.0 mg/l	Quarterly
Cadmium (Cd)	-	0.2 mg/l	Quarterly
Chromium (Cr)	-	5.0 mg/l	Quarterly
Copper (Cu)	-	2.0 mg/l	Quarterly
Lead (Pb)	-	1.5 mg/l	Quarterly
Manganese (Mn)	-	3.0 mg/l	Quarterly
Mercury (Hg)	-	0.02 mg/l	Quarterly
Nickel (Ni)	-	3.0 mg/l	Quarterly
Selenium (Se)	-	0.2 mg/l	Quarterly
Silver (Ag)	-	0.2 mg/l	Quarterly
Zinc (Zn)	-	6.0 mg/l	Quarterly
Cyanide	-	1.0 ppm	Quarterly
Phenols	-	1.0 ppm	Quarterly
Tin (Sn)	-	1.0 ppm	Quarterly
Iron (Fe)	-	5 ppm	Quarterly
Radioactive	-		Once a Year
	COLUMN 1	COLUMN 2	
**Biochemical Oxygen Demand (BOD)	350 mg/l	700 mg/l	Monthly
Total Suspended Solids (COD)	400 mg/l	800 mg/l	Monthly
**Ammonia as Nitrogen	100 mg/l	200 mg/l	Monthly
**Chemical Oxygen Demand (COD)	700 mg/l	1400 mg/l	Monthly
***Total Toxic Organics (TTO)	None	None	Once a Year

Sanitary Sewer Surcharge

A sanitary sewer surcharge shall be imposed under this section for discharges containing concentrations of pollutants above the Base Permit Limits in Column 1 of Appendix A, for those pollutants with Base Permit Limits. The City will calculate a sanitary sewer surcharge based on the monthly flow rate and mg/l, for every mg/l exceeding the Base Permit Limits (Column 1) up to the Maximum Permit Limits (Column 2). The surcharge will be at a rate of (\$0.397) per pound.

All discharge sampling will be in accordance with State and Federal requirements. This testing will be conducted at the frequencies listed in the Testing Schedule of Appendix A. All testing will be conducted by a laboratory that is approved by the City and the Owner. Laboratory acceptance documentation will be retained on site by Owner and submitted to City. The contract laboratory will be required to perform turn key sampling, collection, pick up and provide all test results to the City and the Owner.

All discharges shall comply with all other applicable laws, regulations, standards, and requirements of the City of La Marque and any other applicable Federal and/or State laws, regulations, standards, and requirements, including any such laws, regulations, standards and requirements that become effective during the term of this Contract.

* Alternate or increased sampling may be scheduled by the City on an as-needed basis. The City shall be responsible for charges incurred by additional sampling and analyses beyond the frequency indicated in Section I of Attachment A, unless such sampling and analysis is directly related to an ongoing investigation into an exceedance of the landfill discharge of one or more of the Maximum Permit Limits parameters as defined in Attachment A, Section I. In the event such an exceedance occurs, Owner shall be responsible for the charges incurred during the additional sampling and analyses.

**Demand Parameter Frequency may be reduced to Quarterly after the first year, with prior approval from the City.

***TTO=Total Toxic Organics is defined as the summation of all quantifiable values greater than 0.01 mg/l of the toxic organics listed in 40 CFR Part 433.11(e), including VOCs, BNA and Pesticides. TTO analyses will be performed annually for the first 3 years of discharge, then will be discontinued if no detectable levels of TTOs have been identified.

**** Dissolved Oxygen – Testing for Dissolved Oxygen shall be performed prior to any discharge. Should Dissolved Oxygen levels fall below 1.0 mg/l, discharge is prohibited.

- SECTION II

**PENALTY SCHEDULE
DISCHARGE EXCEEDANCE**

A penalty will be assessed for pollutant values that exceed the Maximum Permit Limits in Section I as follows:

<u>DEGREE OF PENALTY</u>	<u>AMOUNT PER PENALTY</u>
A. 1 to 25% outside of the Maximum Permit Limits-----	\$200.00
B. Greater than 25% outside of the Maximum Permit Limits up to 50%-----	\$400.00
C. Greater than 50% outside of the Maximum Permit Limits up to 75%-----	\$800.00
D. Greater than 75% outside of the Maximum Permit Limits-----	\$1600.00

The fees assessed per PENALTY will be based on monthly and quarterly test results. All quarterly tests with pollutant values that exceed the Maximum Permit Limits in Section I will be 3X (times) the amount per violation.

The City reserves the right to stop all discharge into the City's collection system in the event the waste stream becomes detrimental to the treatment and operation of the City's Wastewater Treatment Plant. Neither the assessment or payment of any penalty, nor the determination of the City to continue service after the assessment or payment of a penalty, nor the failure of the City to assess or collect a penalty, or to discontinue service, shall prevent the City from terminating service at any time where Maximum Permit Limits are or have been exceeded.



CITY COUNCIL AGENDA FORM

Meeting Date: July 24, 2023
Prepared by: Chief R.Aragon
Department: Police

Agenda item: _____
Reviewed by: _____

AGENDA ITEM DESCRIPTION: Annual Renewal Fee for Central Square.

Attachment: Annual Renewal Fee (Invoice) from Central Square (AKA OSSI).

STAFF BRIEFING:

This annual renewal fee (currently at \$27,249.27) is for the services provided by Central Square for the police department's overall records management system.

This fee will cover services from October 1, 2023 through September 30, 2024.

HISTORY: This item is a budgeted expense; however, because it exceeds \$25,000 it must be approved by City Council.

TARGET IMPLEMENTATION: Request approval by City Council City Council Meeting at this of July 24, 2023 council meeting.

SIGNIFICANT ACTION DATES: City Council Meeting of July 24, 2023.

ACTION:

- | | |
|--|--|
| ☐ Ordinance | ☒ Resolution |
| ☐ Special Presentation | ☐ Proclamation |
| ☐ Finance Report | ☐ Public Hearing |
| ☐ Recognition. | |
| ☒ Mark if this item does not conflict with any Resolution, Ordinance or City Charter, policies, procedures | |

Cost Details:	
Budgeted	\$27,249.27
Actual Bid	
Estimated Expenditure	0
Acct. Name(s)	Software Maintenance -OSSI
Line Items #	01-2035-05-00
Other Funding	

STAFF'S RECOMMENDATION: Chief Aragon, his Command Staff, and IT Manager Kyle Hunter, recommend that City Council approve the invoice from Central Square.

FISCAL IMPACT: As noted in the attached invoice from Central Square.

Renewal Order #: Q-141502
Start Date: October 1, 2023
End Date: September 30, 2024
Billing Frequency: Yearly
Subsidiary: Superior, LLC**Renewal Order prepared for:**
Randall Aragon, Police Chief
La Marque Police Department
1111 Bayou Road
La Marque, TX 77568
(409) 938-9220

Thank you for your continued business. We at CentralSquare appreciate and value our relationship and look forward to serving you in the future. CentralSquare provides software that powers over 8,000 communities. More information about all of our products can be found at www.centralsquare.com.

WHAT SOFTWARE IS INCLUDED?

	PRODUCT NAME	QUANTITY	TOTAL
1.	JMS-MS DISPLAY Annual Maintenance Fee	1	2,062.97 USD
2.	ONESolution Accident Wizard Annual Maintenance Fee	6	277.68 USD
3.	ONESolution Accident Wizard Annual Maintenance Fee	6	277.68 USD
4.	ONESolution Accident Wizard Annual Maintenance Fee	5	193.35 USD
5.	ONESolution Barcoding Hand-Held Client License Annual Maintenance Fee	1	410.99 USD
6.	ONESolution CAD Client AVL License Annual Maintenance Fee	2	1,160.44 USD
7.	ONESolution CAD Console License Annual Maintenance Fee	2	1,508.56 USD
8.	ONESolution CAD Map Display & Map Maintenance Software License Annual Maintenance Fee	2	580.18 USD
9.	ONESolution CAD Resource Monitor Display License With Maps Annual Maintenance Fee	2	580.18 USD
10.	ONESolution MCT Client AVL License Annual Maintenance Fee	6	138.78 USD
11.	ONESolution MCT Client AVL License Annual Maintenance Fee	12	464.04 USD
12.	ONESolution MCT Client AVL License Annual Maintenance Fee	1	25.27 USD
13.	ONESolution MCT Client AVL License Annual Maintenance Fee	6	138.78 USD
14.	ONESolution MCT Client License for Message Switch Annual	10	870.30 USD

Maintenance Fee			
15.	ONESolution MCT Client-Digital Dispatch Annual Maintenance Fee	6	971.70 USD
16.	ONESolution MCT Client-Digital Dispatch Annual Maintenance Fee	1	176.96 USD
17.	ONESolution MCT Client-Digital Dispatch Annual Maintenance Fee	6	1,000.92 USD
18.	ONESolution MCT Client-Digital Dispatch Annual Maintenance Fee	12	3,078.48 USD
19.	ONESolution MCT Client-MAPS Annual Maintenance Fee	6	138.78 USD
20.	ONESolution MCT Client-MAPS Annual Maintenance Fee	1	25.27 USD
21.	ONESolution MCT Client-MAPS Annual Maintenance Fee	6	138.78 USD
22.	ONESolution MCT Client-MAPS Annual Maintenance Fee	12	619.08 USD
23.	ONESolution MFR Client Annual Maintenance Fee	6	832.86 USD
24.	ONESolution MFR Client Annual Maintenance Fee	6	857.88 USD
25.	ONESolution MFR Client Annual Maintenance Fee	12	3,078.48 USD
26.	ONESolution MFR Client-Accident Reporting Annual Maintenance Fee	12	1,547.28 USD
27.	ONESolution MFR Client-Accident Reporting Annual Maintenance Fee	6	416.52 USD
28.	ONESolution MFR Client-Accident Reporting Annual Maintenance Fee	6	416.52 USD
29.	ONESolution RMS Map Display & Pin Mapping License Annual Maintenance Fee	12	619.08 USD
30.	ONESolution RMS Workstation Annual Maintenance Fee	12	4,641.48 USD
Renewal Order Total:			27,249.27 USD

Billing Information

Fees will be payable within 30 days of invoicing.

Please note that the Unit Price shown above has been rounded to the nearest two decimal places for display purposes only. The actual price may include as many as five decimal places. For example, an actual price of \$21.37656 will be shown as a Unit Price of \$21.38. The Total for this quote has been calculated using the actual prices for the product and/or service, rather than the Unit Price displayed above.

Prices shown do not include any taxes that may apply. Any such taxes are the responsibility of the Customer. This is not an invoice.

For customers based in the United States or Canada, any applicable taxes will be determined based on the laws and regulations of the taxing authority(ies) governing the "Ship To" location provided by Customer on the Renewal Order Form.



Office of the City Manager

COUNCIL MEMORANDUM

Agenda #:

To: City Commission **Date:** June 24, 2023

From: Cesar Garcia, City Manager

Re: Coastal Community Federal Credit Union Request for Fee Waiver/Assistance

- Back to School event to be held on Saturday, August 5, 2023, at Coastal Community Federal Credit Union
 - Waiver of City Special Event Fee of \$250.00
 - Other requested assistance & fee waiver considerations include:
 - Promotional assistance through city's website & social media.
 - Barricades as available from city's inventory
 - Trash Cans – Cardboard boxed – to be requested through Waste Management.
 - Waiver of City Vendor Fees
 - Participation from PD & Fire at the event as community involvement (not for security)
 - Consideration on next year's budget for subsequent events and years including holiday event and back to school event.
- City Manager has reviewed the special event permit, which is pending approval. The above is a list of items that Coastal Community Federal Credit Union has requested of Council to waive.

END OF MEMORANDUM



Coastal Community FCU / LULAC Mainland Council 22427

Proposal to The City of La Marque

Date: July 24th, 2023

Council Chamber
1109B Bayou Road
La Marque Texas 77568

Coastal Community FCU
6708 Gulf Freeway
La Marque, Tx 77568

LULAC Mainland Council 2242
2709 John Street
La Marque, Tx 77568

This Proposal request to the City of La Marque, Texas is regarding the **CCFCU/ LULAC Mainland Council 22427 2nd Annual Back 2 School Bash** - Location: 6708 Gulf Frwy, La Marque, TX 77568, Date: Aug. 5, 2023 Time: 2pm-5pm - following is **REQUESTED**:

- *Partner with Coastal Community FCU & LULAC Mainland council making this an annual city community event
- *Waive ALL, if any **SPECIAL EVENT fee of \$225**
- *Waive ALL, if any City **Temp Food Vendor permit fee of \$150.00** -
 - ON the way A/C Mobile Free Snow Cones
 - Texas BBQ Pit Stop Mobile -Free Hot dogs / chips
- *Provide 1 Police Officer to help with traffic cross guard
- * Barricades 4 qty
- *Provide 1st responders on site - Fire Truck, EMS, La Marque PD (booths if possible)
- *Waste Management- provide disposable cardboard trash cans with liners.
- *Advertising through social media, billboards etc., including permission to use COLM logo.

Proposal to the city on behalf of Coastal Community FCU / LULAC Mainland Council 22427 will include but not limited to the following-on August 5, 2023.....

- *Advertise City of La Marque in all advertisement information regarding the Back 2 school Bash
- *Provide a safe place for the citizens of La Marque and surrounding communities
- *Provide community information to the public (see organizations booths attached)
- *Provide distribute over than 500 string backpacks with school supplies for the community
- *Provide children's haircuts & physicals with **certified** cosmetology and Nurse physicians

Our aim and objective as a **NOT FOR PROFIT**- organization -Coastal Community FCU, LULAC Mainland Council 22427 is to give back to our youth of surrounding communities of Galveston County and to bring the community of all cultures together to help local parents with school aged children. This community event will be 3 hours long with DJ entertainment, community booths, food, drinks, snow cones, crafts, and children's activities. We are excited and look forward to partnering with you. Thank you in advance.

Carol Gaylord / JoAnna Alvarado
President / HR Director

Mary Limones
President



CITY COUNCIL AGENDA FORM

Meeting Date: **July 24, 2023**

Prepared by: Rick Sailer

Department: Public Works

Agenda item: _____

Reviewed by: _____

AGENDA ITEM DESCRIPTION: Discussion/possible action regarding Highland Bayou Park Pavilion Reservation Fee waiver for Coastal Conservation Association -Texas, Mainland Chapter

ATTACHMENTS FOR REFERENCE:

1. Event Flyer
2. C-501 Document

STAFF BRIEFING:

- The Coastal Conservation Association (CCA) -Texas, Mainland Chapter approached the Parks Board regarding a Kid's Fish Event on August 12, 2023.
- The CCA is a C-501 organization and made a request to the Parks Board for consideration to waive the Reservation Fee for the Pavilion at Highland Bayou Park.
- The CCA anticipates 50-60 kids will be attending the Event.

- City Manager reviewed and approved.
- Parks Board Chairman reviewed and approved

ACTION: Approve Fee Waiver for the Pavilion at Highland Bayou Park for CCA to hold a Kid's Fish on August 12, 2023.

STAFF'S RECOMMENDATION:

Motion to approve Fee Waiver for CCA to use the Pavilion at HBP.

Highland Bayou Park - Reservation 08/12/2023 8:00am - 11:30 am

Lisa Perez <l.perez@cityoflamarque.org>

Mon 7/17/2023 5:03 PM

To:Treym642004@aol.com <Treym642004@aol.com>

Cc:Shirley Trahan <s.trahan@cityoflamarque.org>

I received your rental application for Highland Bayou Park Pavilion.

To reserve your day, you will need to pay the \$225 refundable deposit and \$200 rental fee.

We will also need:

1. An insurance policy in the amount of \$100,000 protecting the City from any liability and to have the city named as co-insured in the said policy.
2. Copy of your Driver's License

You can pay by cash, check or card.

There is a 3% processing fee if using a VISA/MC and we do accept payment over the phone, or you can come in our office from 7:30-5:30 Monday-Thursday or Fridays from 7:30-Noon. Please let me know ahead of time if you are coming to the office so I can assure there will be someone available to accept the payment.

According to your rental application, the hours you requested are from 8:00 am until 12:00 pm. The pavilion is already reserved beginning at noon. Per our discussion you will change your time and leave by 11:30 am.

If you have any questions, please contact me.

Lisa Perez

Public Works Receptionist

City Of La Marque

4916 Texas Ave (Suite C)

La Marque, Texas 77568

(409) 938-9280

l.perez@cityoflamarque.org

Online Form Submittal: RESERVING HIGHLAND BAYOU PARK PAVILION

noreply@civicplus.com <noreply@civicplus.com>

Mon 7/17/2023 12:41 PM

To: Venisha Henderson <v.henderson@cityoflamarque.org>; Lisa Perez <l.perez@cityoflamarque.org>

RESERVING HIGHLAND BAYOU PARK PAVILION

Pavilion Rental Requirements	I understand and agree
------------------------------	------------------------

Resident Definition and Fees	I understand
------------------------------	--------------

Non-resident Definition and Fees	I understand
----------------------------------	--------------

Commercial Group Definition and Fees	I understand
--------------------------------------	--------------

My reservation type is	Non-resident
------------------------	--------------

Electrical & Water Disclaimer	I understand and agree
-------------------------------	------------------------

Advance Reservation Disclaimer	I understand and agree
--------------------------------	------------------------

Park Hours Acknowledgment	I understand and agree
---------------------------	------------------------

Cleanup Expectations	I understand and agree
----------------------	------------------------

Damages Disclaimer	I understand and agree
--------------------	------------------------

Application Date	7/17/2023
------------------	-----------

Responsible Party	CCA Texas- Mainland Chapter
-------------------	-----------------------------

Address of Responsible Party	6919 Portwest Dr #100
------------------------------	-----------------------

Address of Responsible Party	Houston
------------------------------	---------

Address of Responsible Party	Tx 77024
------------------------------	----------

Home/Cell Phone Number	2816362165
------------------------	------------

Work Phone Number	2816362165
-------------------	------------

Applicant Email	<u>Treym642004@aol.com</u>
-----------------	----------------------------

Reservation Date Requested	8/12/2023
----------------------------	-----------

Reservation Start Time	8:00 AM
------------------------	---------

Reservation Finish Time	12:00 PM
Purpose of Pavilion Use	Sign in kids for fishing tournament, lunch and awards
Type of Entertainment	Kid fishing tournament
Number of People Expected	100
Number of Uniformed Officers Hired	0
Non-Profits and Groups	I understand and agree

Email not displaying correctly? [View it in your browser.](#)

RE: Highland Bayou Park - 08/12/2023

Cesar Garcia <c.garcia@cityoflamarque.org>

Mon 7/17/2023 2:39 PM

To: Lisa Perez <l.perez@cityoflamarque.org>

Cc: Shirley Trahan <s.trahan@cityoflamarque.org>; Mikala Halbrook <m.halbrook@cityoflamarque.org>; Kierra Nance <k.nance@cityoflamarque.org>; Rick Sailler <r.sailler@cityoflamarque.org>

I do not have this authority to waive said fees but have them formally make this request to me (or you) in writing and I will bring to Council for review. Also, has this already gone to Parks Board. These have to go to them first since the event is at a park. They meet this Thursday and the agenda is already posted so you would need to repost this request.

Thanks,

7/20 @ 6:00 pm
8/17

Cesar Garcia

City Manager

City of La Marque

1111 Bayou Road

La Marque, Texas 77568

O: 409-938-9211

C: 409-254-7370

www.cityoflamarque.org



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From: Lisa Perez <l.perez@cityoflamarque.org>

Sent: Monday, July 17, 2023 2:22 PM

To: Cesar Garcia <c.garcia@cityoflamarque.org>

Cc: Shirley Trahan <s.trahan@cityoflamarque.org>

Subject: Highland Bayou Park - 08/12/2023

The CCA (Coastal Conservation Association) Texas - Mainland Chapter is having a kid's fishing tournament on 08/12/2023 from 8:00 - 12:00 p.m.

They are non-profit. The requester, Trey Mitchiner, is requesting the fees be waived.

Can you approve this?

Lisa Perez

Public Works Receptionist

City Of La Marque

4916 Texas Ave (Suite C)

La Marque, Texas 77568

(409) 938-9280

l.perez@cityoflamarque.org



CITY OF LA MARQUE
AMENDED
PARKS BOARD
MEETING
AGENDA
Of
July 20, 2023

Notice is hereby given that the City of La Marque Parks Board will conduct a Meeting in the Council Chambers at 1109-B Bayou Road, La Marque, Texas as well as via teleconference hosted through ZOOM (<https://zoom.us/j/92887385489>) on Thursday, JULY 20, 2023, beginning at 6:00 P.M., for the purpose of considering and taking action on the following agenda:

- (1) CALL MEETING TO ORDER**
- (2) ROLL CALL**
- (3) APPROVAL/DISAPPROVAL OF ABSENCES**
- (4) INVOCATION AND PLEDGE OF ALLEGIANCE**
- (5) APPROVAL OF MONTHLY FINANCIAL REPORT**
 - a. Financial Report Ending June 2023
- (6) APPROVAL OF MONTHLY MINUTES**
 - a. Parks Board Regular Minutes May 2023
- (7) CITIZENS PARTICIPATION**

Comments from the Public (At this time, any person with Parks Board-related business who has signed up may speak to the Parks Board (limited to three (3) minutes). In compliance with the Texas Open Meetings Act, the Parks Board may not deliberate on comments. Personal attacks will not be allowed, and personnel matters should be addressed to the City Manager during normal business hours.
- (8) OLD BUSINESS**
 - a. Discussion/possible action regarding the cost of supplies needed for tree planting at Mahan Park
 - b. Discussion/possible action regarding the purchasing and placement of four (4) lockers from "rent.fun"
 - c. Discussion/possible action regarding the purchasing of Park Boards shirts
 - d. Discussion/possible action regarding the status of Geocaches around the parks

- e. Discussion/possible action regarding adopting a Park/Spot
- f. Discussion/possible action regarding the status of Lagana Park contract
- g. Discussion/possible action regarding an agreement with La Marque Chargers
- h. Discussion/possible action regarding Champion Outdoors event- July 23, 2023
- i. Discussion/possible action regarding Champion Outdoors event- August 13, 2023
- j. Discussion/possible action regarding the Parks Board submission of the special events forms for the schedule events
- k. Discussion/possible action regarding removal of delapidated equipment at Mahan Park
- l. Discussion/possible action regarding scheduling a Parks Board Retreat

(9) NEW BUSINESS

- a. Discussion/possible action regarding Public Works Updates
- b. Discussion/possible action regarding City Manager Updates
- c. Discussion/possible action regarding purchasing bike racks for Highland Bayou Park, Mahan Sportsplex, MLK Park and Westlawn
- d. Discussion /possible action regarding adding additional park signage
- e. Discussion /possible action regarding City Engineer drawings for the 3 parks' playground installation
- f. Discussion / possible action regarding attendance at the 2023 National Recreation and Park Association Conference
- g. Discussion / possible action regarding the Parks Board desire to obtain Birds, Parks, and Wildlife Certifications
- h. Discussion / possible action regarding various Grants and Playground Funding opportunities
- i. Discussion / Possible action regarding fee waiver request from Coastal Conservation Association Texas Mainland Chapter

(10) REQUESTS AND ANNOUNCEMENTS

Requests by Parks Board Members for items to be placed on future agendas and announcements on city events/community interests TEX. GOV'T CODE §551.415. (b), items of community interest" includes:

- (1) expressions of thanks, congratulations, or condolence.
- (2) information regarding holiday schedules.
- (3) an honorary or salutary recognition of a public official, public employee, or other citizen, except that a discussion regarding a change in the status of a person's public office or public employment is not an honorary or salutary recognition for purposes of this subdivision.
- (4) a reminder about an upcoming event organized or sponsored by the governing body.
- (5) information regarding a social, ceremonial, or community event organized or sponsored by an entity other than the governing body that was attended or is scheduled to be attended by a member of the governing body or an official or employee of the municipality or county; and
- (6) announcements involving an imminent threat to the public health and safety of people in the municipality or county that has arisen after posting

(11) ADJOURNMENT

CERTIFICATION:

I hereby certify that the above notice of meeting was posted at 1109-B Bayou Road, La Marque, Texas on or before Monday, July 17, 2023 before 5:45 p.m.

Kierra Nance, TRMC, City Clerk

RE: Highland Bayou Park - 08/12/2023

Cesar Garcia <c.garcia@cityoflamarque.org>

Mon 7/17/2023 5:42 PM

To: Rick Sailler <r.sailler@cityoflamarque.org>

Cc: Shirley Trahan <s.trahan@cityoflamarque.org>; Mikala Halbrook <m.halbrook@cityoflamarque.org>; Kierra Nance <k.nance@cityoflamarque.org>; gknebel@millsshirley.com <gknebel@millsshirley.com>; Lisa Perez <l.perez@cityoflamarque.org>

Kierra is making changes to the agenda as we speak to include this item for you and will have to repost both on board and online. Please make sure the board members have the new updated agenda and that the non profit is aware so they can consider having a member present.

Cesar Garcia

City Manager

City of La Marque

1111 Bayou Road

La Marque, Texas 77568

O: 409-938-9211

C: 409-254-7370

www.cityoflamarque.org



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From: Rick Sailler <r.sailler@cityoflamarque.org>

Sent: Monday, July 17, 2023 3:07 PM

To: Cesar Garcia <c.garcia@cityoflamarque.org>

Cc: Shirley Trahan <s.trahan@cityoflamarque.org>; Mikala Halbrook <m.halbrook@cityoflamarque.org>; Kierra Nance <k.nance@cityoflamarque.org>; gknebel@millsshirley.com; Lisa Perez <l.perez@cityoflamarque.org>

Subject: RE: Highland Bayou Park - 08/12/2023

Could they speak at the meeting and ask the Board to consider recommendation, which could be handled during the meeting at the end in the requests section?

If not, we can him know that it is too late to request this waiver.

Rick Sailler

Public Works Director

City of La Marque

(o) 409-938-9213

(c) 409-944-8886

From: Cesar Garcia <c.garcia@cityoflamarque.org>

Sent: Monday, July 17, 2023 2:39 PM

To: Lisa Perez <l.perez@cityoflamarque.org>

Cc: Shirley Trahan <s.trahan@cityoflamarque.org>; Mikala Halbrook <m.halbrook@cityoflamarque.org>; Kierra Nance <k.nance@cityoflamarque.org>; Rick Sailler <r.sailler@cityoflamarque.org>
Subject: RE: Highland Bayou Park - 08/12/2023

I do not have this authority to waive said fees but have them formally make this request to me (or you) in writing and I will bring to Council for review. Also, has this already gone to Parks Board. These have to go to them first since the event is at a park. They meet this Thursday and the agenda is already posted so you would need to repost this request.

Thanks,

Cesar Garcia
City Manager
City of La Marque
1111 Bayou Road
La Marque, Texas 77568
O: 409-938-9211
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Sent: Monday, July 17, 2023 2:22 PM
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The CCA (Coastal Conservation Association) Texas - Mainland Chapter is having a kid's fishing tournament on 08/12/2023 from 8:00 - 12:00 p.m.

They are non-profit. The requester, Trey Mitchiner, is requesting the fees be waived.

Can you approve this?

Lisa Perez
Public Works Receptionist
City Of La Marque
4916 Texas Ave (Suite C)
La Marque, Texas 77568
(409) 938-9280
l.perez@cityoflamarque.org



MAINLAND CHAPTER

Annual Kid Fish

SATURDAY, AUGUST 12, 2023

8 AM - 12PM

HARBORWALK MARINA

1445 HARBORWALK BLVD | HITCHCOCK, TX 77563

THIS IS A FREE EVENT

Kids must be 16 & under.

Rods and reels will be provided, welcome to bring own gear.

Register by [CLICKING HERE](#) or scanning the QR Code below. Both will direct you to a registration form.

Academy
SPORTS • OUTDOORS



FOR MORE INFORMATION

Trey Mitchiner

trey642004@aol.com



CITY COUNCIL AGENDA FORM

Meeting Date: **July 24, 2023**

Prepared by: Rick Sailer

Department: Public Works

Agenda item: _____

Reviewed by: _____

AGENDA ITEM DESCRIPTION: Discussion/ possible action regarding approving new Street Name sign design for intersections within the City

ATTACHMENTS FOR REFERENCE:

1. New Street Name Signs
2. KLMB Recommendation Letter

STAFF BRIEFING:

- The existing Street Name signs located at intersections are in need of replacement in most of the older sections of the City.
- The recommended new sign design is Sign # 1; the sign design was reviewed by Keep La Marque Beautiful Commission and they recommend Sign # 1.
- The existing Street Name signs are 4" in height, which is smaller than the regulatory height of 9", with 6" lettering for upper-case letters and 4" for small-case letters.
- Residential Street Name signs could use 6" height sign with 4" upper-case lettering and 3" small-case letters, but only if speed limits are 25mph or less; the maximum speed limit in residential areas of the City is 30mph.
- The Manual of Uniform Traffic Control Devices (MUTCD) for the State of Texas recommends that Street Name signs have green color for background, but a City may select blue based on jurisdictional preference.
- New Street Name signs will be replaced over the next 2-3 years, beginning on Collector streets and then residential streets within each District.

- City Manager reviewed and approved
- City Engineer reviewed and approved

ACTION: Approve Sign #1 design for new Street Name signs

STAFF'S RECOMMENDATION:

Motion to approve Sign #1 design for new Street Names signs throughout the City.



Keep La Marque Beautiful Commission

Thursday, July 13, 2023

Honorable Mayor Bell, City Council and City Manager Cesar Garcia,

I am proud to announce that Keep La Marque Beautiful has approved the blue street sign with the round city logo on it that was displayed to our commission during the July 12th meeting.

Keep La Marque Beautiful strives to beautify our city and these new street signs are one of many projects to improve our city we are currently involved in. These new signs show pride in our community as well as functionality.

Keep La Marque Beautiful would like to replace all the street signs in our community, but we understand the cost of such an undertaking would tax city resources and budgets, so we would like to suggest starting these sign replacements on Cedar Drive or Bayou Road first and upon completion of the street that is chosen, KLMBC will review the time and cost of sign replacement then hopefully with the assistance of the City Manager and Rick Sailer create a timeline for future replacements.

We cannot wait to see these BEAUTIFUL street signs in our city!

Thank you for your continued support in our mission to make La Marque beautiful.

Warm Regards,

Lyndsey Gonzales (Jul 14, 2023 09:53 CDT)

Lyndsey Gonzales

Chairperson

Keep La Marque Beautiful Commission



KLMBC letter to Mayor and council for street signs_

Final Audit Report

2023-07-14

Created:	2023-07-14
By:	Kathern Vanstavern (k.vanstavern@cityoflamarque.org)
Status:	Signed
Transaction ID:	CBJCHBCAABAAGVqOApF9IIvIm281cNU2eTdAUHdVqz6

"KLMBC letter to Mayor and council for street signs_" History

-  Document created by Kathern Vanstavern (k.vanstavern@cityoflamarque.org)
2023-07-14 - 2:41:02 PM GMT
-  Document emailed to lynzgonzales2012@gmail.com for signature
2023-07-14 - 2:41:55 PM GMT
-  Email viewed by lynzgonzales2012@gmail.com
2023-07-14 - 2:52:24 PM GMT
-  Signer lynzgonzales2012@gmail.com entered name at signing as Lyndsey Gonzales
2023-07-14 - 2:53:19 PM GMT
-  Document e-signed by Lyndsey Gonzales (lynzgonzales2012@gmail.com)
Signature Date: 2023-07-14 - 2:53:21 PM GMT - Time Source: server
-  Agreement completed.
2023-07-14 - 2:53:21 PM GMT

NEW STREET NAME SIGNS



SIGN # 1



SIGN # 2

Smith Municipal Supplies

5567 Maudlin Street
Houston, Tx 77087
713-847-8000
sales@smithmunicipal.com

Quotation

DATE	QUOTE #
5/11/2023	00-20689

BILL TO
LAMARQUE, CITY OF 1111 BAYOU ROAD LAMARQUE, TX 77568 Email Invoices

SHIP TO
LAMARQUE, CITY OF 1500 MUNICIPAL DRIVE LAMARQUE, TX 77568

QUOTE	TERMS	REP	SHIP	VIA	F.O.B.
	Net 30	DP	5/11/2023	CPU	

QUANTITY	ITEM CODE	DESCRIPTION	PRICE EACH	AMOUNT
4	SNS 0924F	9 x 24 Flat Custom Street Name Sign (1.5), APW / Blue EC with Logo	34.95	139.80
36	SNS 0930F	9 x 30 Flat Custom Street Name Sign (1.88), APW / Blue EC with Logo	43.35	1,560.60
27	SNS 0936F	9 x 36 Flat Custom Street Name Sign (2.25), APW / Blue EC with Logo	51.98	1,403.46
1	SNS 1860	18 x 60 Custom Overhead Street Name Sign (7.50), APW / Blue EC with Logo	149.89	149.89
2	SNS 1872	18 x 72 Custom Overhead Street Name Sign (9.0), APW / Blue EC with Logo	176.87	353.74

Quotation valid for 30 days. Thanks for This Opportunity!

Total \$3,607.49

ADD ARROW(S) IF NEEDED

D3-1 (IF REQ'D.)
D3-1 (VARIES)
D3-1 (VARIES)



R1-1
(30" x 30")

DIAMOND GRADE OR APPROVED EQUAL
(GREEN BACKGROUND WITH
6" WHITE LETTERING)
24" MIN.

THIS PORTION OF SIGN
YELLOW BACKGROUND
WITH BLACK LETTERS
(IF REQUIRED)

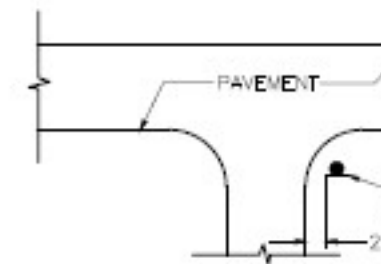


NOTES:

1. SIGNS ARE TO BE MADE OF ALUMINUM, .125" THICK, FLAT BLADE, DOUBLE FACED.

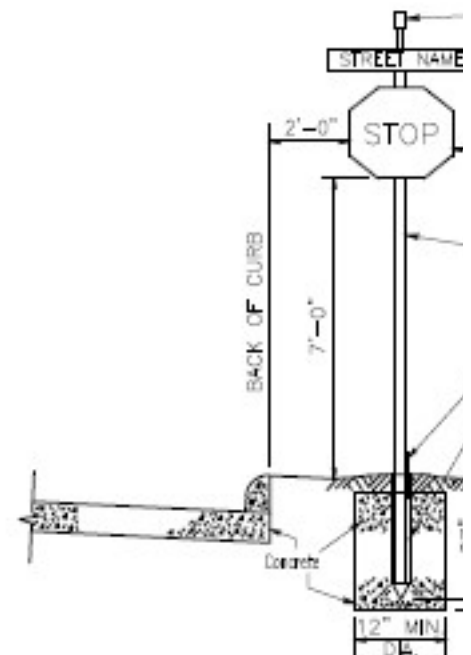
DETAIL OF STANDARD STREET NAME SIGN

N.T.S.



STOP SIGN LOCATION

N.T.S.



TYPICAL SIGN MOUNT

N.T.S.



STREET SIGN DETAILS



CITY COUNCIL AGENDA FORM

Meeting Date: **July 24, 2023**

Prepared by: R. Sailler

Department: Public Works

Agenda item: _____

Reviewed by: _____

AGENDA ITEM DESCRIPTION: Discussion/possible action regarding Council approval of the Advertisement and Request for Proposal for Citywide Lift Station Upgrade - Package 1

X

ATTACHMENTS FOR REFERENCE

- Adverstiment and Invitation to Bid
- Authority to Use Grant Funds
- Project Performance Statement
- Project Manual
- Construction Contract
- Engineer's Construction Cost Estimate
- Bid Process Schedule

STAFF BRIEFING:

- The Citywide Lift Station Project funded through U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) Mitigation (MIT) Contract # 22-085-003-D223 is ready for Construction Phase.
- The City received Authorization to proceed on January 25, 2023
- The Project defined in the Project Performance Statement pertains to infrastructure improvements to the Wastewater Treatment Plant (WWTP) and twenty-one (21) Sanitary Sewer Lift Stations.
- The Lift Station Project is being advertised and constructed separately from the WWTP, since the scope of work is distinct from the various tasks that will be required at the WWTP expansion. We are also sub-grouping the Lift Stations to control timeline and expenses on this multi-station Project. Phase I includes five (5) of the most critical lift stations.
- The Project Manual provides the Bid Submittal and specifics regarding the Project, including mandatory construction documents for Federally funded projects and Technical Specifications.
- The Bid Proposal includes Base Bid items, Supplemental Items, Extra Items, and Add-Alternate Items; allowing the City the option to accept the bid and delete some items to ensure the bid amount does not exceed the funding.
- Adico Engineers is acting as subcontractor to Ardurra (Contract Engineer) for the Lift Station Project phase of the overall awarded Project.



CITY COUNCIL AGENDA FORM

- City Manager reviewed and approved.
- Finance Director reviewed and approved.
- City Attorney reviewed and approved.
- City Engineer reviewed and approved.
- Project Engineer reviewed and approved.
- Grant Administrator reviewed and approved.

HISTORY:

- Grant Administrator Contract with GrantWorks signed on July 13, 2020
- Engineering Agreement with Ardurra (formally - LNV, LLC) signed on August 24, 2020
- The Project Budget Justification was submitted to Texas General Land Office (GLO) on 10/20/2020
- The Funding was accepted on December 13, 2021 - Resolution R-2021-0033
- Environment Review Record was completed on November 29, 2022
- Request for Release of Funds was submitted on November 15, 2022
- Authority to Use Grant Funds was received on January 9, 2023

SIGNIFICANT ACTION DATES:

ACTIVITY	End Date	Calendar Days
Bid Phase:		
City Council Authorization For Bidding	July 24, 2023	2
1 st Advertisement	July 26, 2023	7
2 nd Advertisement	August 2, 2023	14
Pre-Bid	August 16, 2023	14
Last Date For Questions	August 30, 2023	7
Last Date for Addendums	September 6, 2023	14
Bid Date – Receiving Sealed Proposals (2:00)	September 20, 2023	12
Recommendation to City Council	October 2, 2023	7
City Council Approval	October 9, 2023	



CITY COUNCIL AGENDA FORM

ACTION:

FISCAL IMPACT: \$2,800,000.00 for the Construction - Phase 1. Total Project cost funded through HUD - CDBG - MIT was \$49,394,004.00, including Construction, Engineering, Environmental, and Administration (City Share = \$490,000)

STAFF'S RECOMMENDATION: Motion to approve the Advertisement and Invitation to Bid for the Citywide Lift Station Project - Phase 1.

City of La Marque
COLM Lift Station Upgrades Package 1
ADICO Project No. 21033-01

Bidding Schedule

ACTIVITY	End Date	Calendar Days
Bid Phase:		
1 st Advertisement	July 19, 2023	7
2 nd Advertisement	July 26, 2023	12
Pre-Bid	August 7, 2023	9
Last Date For Questions	August 16, 2023	8
Last Date for Addendums	August 24, 2023	7
Bid Date – Receiving Sealed Proposals (10:00)	August 31, 2023	11
Recommendation to City Council	September 11, 2023	14
City Council Approval	September 25, 2023	

CONSTRUCTION CONTRACT

THIS AGREEMENT made this the _____ day of _____, _____, by and between _____ (a corporation organized and existing under the laws of the State of _____) (a partnership consisting of _____) (an individual trading as _____) [Note 1] hereinafter called the "Contractor", and _____ hereinafter called the "City/County."

WITNESSETH, that the Contractor and the City/County for the considerations stated herein mutually agree as follows:

ARTICLE 1. Statement of Work. The Contractor shall furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment and services, including utility and transportation services, and perform and complete all work required for the construction of the Improvements embraced in the Project; namely, _____ [Note 2] for the _____ Texas Community Development Block Grant (TxCDBG) project, all in strict accordance with the contract documents including all addenda thereto, numbered _____, dated _____ and _____, all as prepared by _____ acting and in these contract documents preparation, referred to as the "**Engineer**".

Special Notes:

Note 1. Strike out the terms not applicable.

Note 2. Identify the principal items of Contract such as grading, paving, water mains, sewer lines, treatment facilities, etc.

ARTICLE 2. The Contract Price. The City/County will pay the Contractor for the performance of the Contract in current funds, for the total quantities of work performed at the *unit prices* stipulated in the Bid for the several respective items of work completed subject to additions and deductions as provided in _____ hereof.

ARTICLE 3. The Contract. The executed contract documents shall consist of the following components:

- | | |
|------------------------------|--|
| a. This Agreement (pgs. 1-3) | f. General Conditions, Part I |
| b. Addenda | g. Special Conditions |
| c. Invitation for Bids | h. Technical Specifications |
| d. Instructions to Bidders | i. Drawings (<i>as listed in the Schedule of Drawings</i>) |
| e. Signed Copy of Bid | j. [Add any applicable documents] |

ARTICLE 4. Performance. Work, in accordance with the Contract dated _____, _____, shall commence on or before _____, _____, and Contractor shall complete the WORK within _____ consecutive calendar days thereafter. The date of completion of all WORK is therefore _____, _____.

This Agreement, together with other documents enumerated in this ARTICLE 3, which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto. In the event that any provision in any component part of this Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this ARTICLE 3 shall govern, except as otherwise specifically stated.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in triplicate (Note 3) original copies on the day and year first above written. (Note 3)

(The Contractor)

By _____ [Note 4]

Title _____

(City/County)

By _____

Title _____

Special Notes:

Note 3. The number of copies to be executed by the parties should be stated in the agreement in the space provided. Such additional signed copies shall be prepared as may be required by the surety companies and others.

Note 4. Supply a description of the Contractor (e.g., proprietorship, partnership, and corporation).

Corporate Certifications

I, _____, certify that I am the _____ of the corporation named as Contractor herein; that _____, who signed this Agreement on behalf of the Contractor, was then _____ of said corporation; that said Agreement was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

Corporate
Seal

(Corporate Secretary)

GENERAL CONDITIONS - PART I FOR CONSTRUCTION

1. Contract and Contract Documents

- a. The project to be constructed pursuant to this contract will be financed with assistance from the General Land Office (GLO) through the Community Development Block Grant – Mitigation (CDBG-MIT) fund and is subject to all applicable Federal and State laws and regulations.
- b. The Plans, Specifications and Addenda shall form part of this contract and the provisions thereof shall be binding upon the parties as if they were herein fully set forth.

2. Definitions

Whenever used in any of the Contract Documents, the following meanings shall be given to the terms here in defined:

- (a) The term "Contract" means the Contract executed between the (Name of City/County), hereinafter called the "City/County" and (Name of Construction Co.), hereinafter called "Contractor", of which these GENERAL CONDITIONS, form a part.
- (b) The term "Project Area" means the area within the specified Contract limits of the Improvements contemplated to be constructed in whole or in part under this contract.
- (c) The term "Engineer" means (name of engineering firm), Engineer in charge, serving the City/County with architectural or engineering services, his successor, or any other person or persons, employed by the City/County for the purpose of directing or having in charge the work embraced in this Contract.
- (d) The term "Contract Documents" means and shall include the following: Executed Contract, Addenda (if any), Invitation for Bids, Instructions to Bidders, Signed Copy of Bid, General Conditions, Special Conditions, Technical Specifications, and Drawings (as listed in the Schedule of Drawings).

3. Supervision By Contractor

- (a) Except where the Contractor is an individual and personally supervises the work, the Contractor shall provide a competent superintendent, satisfactory to the Engineer, on the work at all times during working hours with full authority to act as Contractor's agent. The Contractor shall also provide adequate staff for the proper coordination and expediting of his work.
- (b) The Contractor shall be responsible for all work executed under the Contract. Contractor shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

4. Subcontracts

- (a) The Contractor shall not execute an agreement with any subcontractor or permit any subcontractor to perform any work included in this contract until Contractor has verified the subcontractor has been cleared (not suspended or debarred) to participate in federally funded contracts.
- (b) No proposed subcontractor shall be disapproved by the City/County except for cause.
- (c) The Contractor shall be as fully responsible to the City/County for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them.

- (d) The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work and required compliance by each subcontractor with the applicable provisions of the Contract.
- (e) Nothing contained in the Contract shall create any contractual relation between any subcontractor and the City/County.
- (f) Contractors are encouraged to subcontract with Minority Business Enterprises, Small Business Enterprises, Women Business Enterprises, and labor surplus area firms.

5. Fitting and Coordination of Work

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, subcontractors, or material suppliers engaged upon this Contract.

6. Payments to Contractor

(a) Partial Payments

- 1) The Contractor shall prepare the requisition for partial payment as of the last day of the month and submit it, with the required number of copies, to the Engineer for approval. The amount of the payment due the Contractor shall be determined by adding to the total value of work completed to date, the value of materials properly stored on the site and deducting (1) five percent (5%) of the total amount, to be retained until final payment, and (2) the amount of all previous payments. The total value of work completed to date shall be based on the estimated quantities of work completed and on the unit prices contained in the agreement. The value of materials properly stored on the site shall be based upon the estimated quantities of such materials and the invoice prices. Copies of all invoices shall be available for inspection of the Engineer.
- 2) Monthly or partial payments made by the City/County to the Contractor are advanced for the purpose of assisting the contractor to expedite the work of construction. The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the City/County. Such payments shall not constitute a waiver of the right of the City/County to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the City/County in all details.

(b) Final Payment

- 1) After final inspection and the acceptance by the City/County of all work under the Contract, the Contractor shall prepare the requisition for final payment which shall be based upon the careful inspection of each item of work at the applicable unit prices stipulated in the Contract. The total amount of the final payment due the Contractor under this Contract shall be the amount computed as described above less all previous payments.
- 2) Before paying the final estimate, City/County shall require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the Project) and services to the Contractor. The City/County may make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments made shall in no way impair the obligations of any surety or sureties furnished under this Contract.
- 3) Any amount due the City/County under Liquidated Damages, shall be deducted from the final payment due the contractor.

(c) Payments Subject to Submission of Certificates

Each payment to the Contractor by the City/County shall be made subject to submission by the Contractor of all written certifications required of it and its subcontractors.

(d) Withholding Payments

The City/County may withhold any payment due the Contractor as deemed necessary to protect the City/County, and if so elects, may also withhold any amounts due from the Contractor to any subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the City/County and will not require the City/County to determine or adjust any claims or disputes between the Contractor and its subcontractors or material dealers, or to withhold any moneys for their protection unless the City/County elects to do so. The failure or refusal of the City/County to withhold any moneys from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

7. Changes in the Work

- (a) The City/County may make changes in the scope of work required to be performed by the Contractor under the Contract without relieving or releasing the Contractor from any obligations under the Contract or any guarantee given pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise. Additionally, all such change orders must be approved by CDBG-MIT prior to execution of same.
- (b) Except for the purpose of affording protection against any emergency endangering health, life, limb or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the City/County authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract Price will be valid unless so ordered.
- (c) If applicable unit prices are contained in the Contract, the City/County may order the Contractor to proceed with desired unit prices specified in the Contract; provided that in case of a unit price contract the net value of all changes does not increase the original total amount of the agreement by more than twenty-five percent (25%) or decrease the original total amount by more than twenty-five percent (25%) for municipalities and eighteen percent (18%) for counties without the written consent of the contractor. [Texas Local Government Code Section 252.048(d) and Section 262.031(b)]
- (d) Each change order shall include in its final form:
 - 1) A detailed description of the change in the work.
 - 2) The Contractor's proposal (if any) or a confirmed copy thereof.
 - 3) A definite statement as to the resulting change in the contract price and/or time.
 - 4) The statement that all work involved in the change shall be performed in accordance with contract requirements except as modified by the change order.
 - 5) The procedures as outlined in this Section for a unit price contract also apply in any lump sum contract.

8. Claims for Extra Cost

- (a) If the Contractor claims that any instructions by Drawings or otherwise involve extra cost or extension of time, he shall, within ten days after the receipt of such instructions, and in any event before proceeding to execute the work, submit his protest thereto in writing to the City/County, stating clearly and in detail the basis of his objections. No such claim will be considered unless so made.

- (b) Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.
- (c) Any discrepancies which may be discovered between actual conditions and those represented by the Drawings and maps shall be reported at once to the City/County and work shall not proceed except at the Contractor's risk, until written instructions have been received from the City/County.
- (d) If, on the basis of the available evidence, the City/County determines that an adjustment of the Contract Price and/or time is justifiable, a change order shall be executed.

9. Termination, Delays, and Liquidated Damages

Right of the City/County to Terminate Contract for Convenience

City/County may at any time and for any reason terminate Contractor's services and work at City/County's convenience upon providing written notice to the Contractor specifying the extent of termination and the effective date. Upon receipt of such notice, Contractor shall, unless the notice directs otherwise, immediately discontinue the work and placing of orders for materials, facilities and supplies in connection with the performance of this Agreement.

Upon such termination, Contractor shall be entitled to payment only as follows: (1) the actual cost of the work completed in conformity with this Agreement plus (2) such other costs actually incurred by Contractor as are permitted by the prime contract and approved by City/County. There shall be deducted from such sums as provided in this subparagraph the amount of any payments made to Contractor prior to the date of the termination of this Agreement. Contractor shall not be entitled to any claim or claim of lien against City/County for any additional compensation or damages in the event of such termination and payment.

Right of the City/County to Terminate Contract for Cause

If the Contractor fails to fulfill in a timely and proper manner its obligations under this Agreement, or if the Contractor violates any of the covenants, conditions, agreements, or stipulations of this Agreement, the City/County shall have the right to terminate this Agreement by giving written notice to the Contractor of such termination and specifying the effective date thereof, which shall be at least five days before the effective date of such termination. In the event of termination for cause, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared by the Contractor pursuant to this Agreement shall, at the option of the City/County, be turned over to the City / County and become the property of the City / County. In the event of termination for cause, the Contractor shall be entitled to receive reasonable compensation for any necessary services actually and satisfactorily performed prior to the date of termination.

Notwithstanding the above, the Contractor shall not be relieved of liability to the City/County for damages sustained by the City/County by virtue of any breach of contract by the Contractor, and the City/County may set-off the damages it incurred as a result of the Contractor's breach of contract from any amounts it might otherwise owe the Contractor. 2 CFR 200 APPENDIX II(B)

(a) Liquidated Damages for Delays.

If the work is not completed within the time stipulated in the applicable bid for Lump Sum or Unit Price Contract provided, the Contractor shall pay to the City/County as fixed, agreed, and liquidated damages (it being impossible to determine the actual damages occasioned by the delay) the amount of \$500 for each calendar day of delay, until the work is completed. The Contractor and Contractor's sureties shall be liable to the City/County for the amount thereof.

(b) Excusable Delays.

- 1) The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due to:
- 2) Any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, national defense, or any other national emergency;
- 3) Any acts of the City/County;
- 4) Causes not reasonably foreseeable by the parties to this Contract at the time of execution which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God, terrorism, war, acts of another Contractor in the performance of some other contract with the City/County, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions.
- 5) Provided, however, that the Contractor promptly notifies the City/County within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the City/County shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this contract, the delay is properly excusable, the City/County shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

10. Assignment or Novation

The Contractor shall not assign nor transfer, whether by assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the City/County. No assignment or novation of this Contract shall be valid unless the assignment or novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools, and equipment supplied for the performance of the work under this Contract in favor of all persons, Contractors, or corporations rendering such labor or services or supplying such materials, tools, or equipment.

11. Technical Specifications and Drawings

Anything mentioned in the Technical Specifications and not shown on the Drawings or vice versa, shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in Drawings, or Technical Specifications, the matter shall be immediately submitted to the City/County for review. Contractor shall be liable for any issues or expenses in the event the discrepancy is not submitted to the City/County.

12. Shop Drawings

- (a) All required shop drawings, machinery details, layout drawings, etc. shall be submitted to the Engineer in one (1) electronic copy for approval sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking if necessary. The Contractor may proceed, only at Contractor's own risk, with manufacture or installation of any equipment or work covered by said shop drawings, etc. until they are approved and no claim, by the Contractor, for extension of the contract time shall be granted by reason of his failure in this respect.
- (b) Any drawings submitted without the Contractor's stamp of approval will not be considered and will be returned to him for proper resubmission. If any drawings show variations from the requirements of the Contract because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of contract price and/or time, otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been approved.

- (c) If a shop drawing is in accordance with the contract or involves only minor adjustment in the interest of the City/County not involving a change in contract price or time, the engineer may approve the drawing. The approval shall not relieve the Contractor from responsibility to adhere to the contract or for any error in the drawing.

13. Requests for Supplementary Information

It shall be the responsibility of the Contractor to make timely requests of the City/County for any additional information which should be furnished by the City/County under the terms of this Contract, and which is required in the planning and execution of the work. Such requests may be submitted from time to time as the need approaches, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and the latest date by which each will be required by the Contractor. The first list shall be submitted within two weeks after Contract award and shall be as complete as possible at that time. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provision of this section.

14. Materials and Workmanship

- (a) Unless otherwise specifically provided for in the technical specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the technical specifications as "equal to" any particular standard, the Engineer shall decide the question of equality.
- (b) The Contractor shall furnish to the City/County for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics, and all other pertinent information as required, and shall likewise submit for approval full information concerning all other materials or articles which he proposes to incorporate.
- (c) Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- (d) Materials specified by reference to the number or symbol of a specific standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to type, class or grade, or modified in the technical specifications shall have full force and effect as though printed therein.
- (e) The City/County may require the Contractor to dismiss from the work such employee or employees as the City/County or the Engineer may deem unqualified.

15. Samples, Certificates and Tests

- (a) The Contractor shall submit all material or equipment samples, certificates, affidavits, etc., as called for in the contract documents or required by the Engineer, promptly after award of the contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time.
- (b) Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed

information which will assist the Engineer in making a prompt decision regarding the acceptability of the sample. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.

- (c) Approval of any materials shall be general only and shall not constitute a waiver of the City/County's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.
- (d) Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:
 - 1) The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, except those samples taken on the project by the Engineer;
 - 2) The Contractor shall assume all costs of re-testing materials which fail to meet contract requirements;
 - 3) The Contractor shall assume all costs of testing materials offered in substitution for those found deficient;
 - 4) The City/County will pay all other expenses.

16. Permits and Codes

- (a) The Contractor shall give all notices required by and comply with all applicable federal and state laws, ordinances, and codes of the Local Government. All construction work and/or utility installations shall comply with all applicable ordinances, and codes including all written waivers. Before installing any work, the Contractor shall examine the drawings and technical specifications for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the City/County. Where the requirements of the drawings and technical specifications fail to comply with such applicable ordinances or codes, the City/County will adjust the Contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices.
- (b) Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility at variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the drawings and technical specifications), the Contractor shall remove such work without cost to the City/County.
- (c) The Contractor shall at his own expense, secure and pay for all permits for street pavement, sidewalks, shed, removal of abandoned water taps, sealing of house connection drains, pavement cuts, buildings, electrical, plumbing, water, gas and sewer permits required by the local regulatory body or any of its agencies.
- (d) The Contractor shall comply with applicable local laws and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the Improvements contained in this Contract.
- (e) The Contractor will be required to make arrangements for and pay the water, electrical power, or any other utilities required during construction.
- (f) During construction of this project, the Contractor shall use every means possible to control the amount of dust created by construction. Prior to the close of a day's work, the Contractor, if directed by the City/County, shall moisten the surrounding area to prevent a dusty condition.

17. Care of Work

- (a) The Contractor shall be responsible for all damages to person or property that occur as a result of its fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance.
- (b) The Contractor shall provide sufficient competent watchmen, both day and night, including Saturdays, Sundays, and holidays, from the time the work is commenced until final completion and acceptance.
- (c) In an emergency affecting the safety of life, limb or property, including adjoining property, the Contractor, without special instructions or authorization from the City/County is authorized to act to prevent such threatened loss or injury. Contractor shall follow all instructions of City/County.
- (d) The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and shall be responsible for completely repairing any damage thereto caused by the operations.
- (e) The Contractor shall shore up, brace, underpin, secure, and protect as maybe necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the improvements included in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the City/County from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the City/County may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

18. Accident Prevention

- (a) No laborer or mechanic employed in the performance of this Contract shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety as determined under construction safety and health standards promulgated by the Department of Labor.
- (b) The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work.
- (c) The Contractor shall maintain an accurate record of all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the City/County with reports concerning these matters.
- (d) The Contractor shall indemnify and hold harmless the City/County from any claims for damages resulting from property damage, personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this contract.
- (e) The Contractor shall provide trench safety for all excavations more than five feet deep prior to excavation. All OSHA Standards for trench safety must be adhered to by the Contractor.
- (f) The contractor shall at all times conduct work in such a manner as to ensure the least possible inconvenience to vehicular and pedestrian traffic. At the close of the work each day, all streets where possible in the opinion of the City/County, shall be opened to the public in order that persons living in the area may have access to their homes or businesses by the use of the streets. Barricades, warning signs, and necessary lighting shall be provided to the satisfaction of the City/County at the expense of the Contractor.

19. Sanitary Facilities

The Contractor shall furnish, install and maintain ample sanitary facilities for laborers. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

20. Use of Premises

- (a) The Contractor shall confine equipment, storage of materials, and construction operations to the contract limits as shown on the drawings and as prescribed by ordinances or permits, or as may be desired by the City/County, and shall not unreasonably encumber the site or public rights of way with materials and construction equipment.
- (b) The Contractor shall comply with all reasonable instructions of the City/County and all existing federal, state and local regulations regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

21. Removal of Debris, Cleaning, Etc.

The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights of way reasonably clear. Upon completion of the work, he shall remove all temporary construction facilities, debris and unused materials provided for work, and put the whole site of the work and public rights of way in a neat and clean condition.

22. Inspection

- (a) All materials and workmanship shall be subject to inspection, examination, or test by the City/County and Engineer at any and all times during manufacture or construction and at any and all places where such manufacture or construction occurs. The City/County shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected. Rejected material shall be promptly segregated and removed from the Project Area and replaced with material of specified quality without charge. If the Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the City/County may by contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any Monies which may be due the Contractor, without prejudice to any other rights or remedies of the City/County.
- (b) The Contractor shall furnish promptly all materials reasonably necessary for any tests which may be required. All tests by the City/County will be performed in such manner as not to delay the work unnecessarily and will be made in accordance with the provisions of the technical specifications.
- (c) The Contractor shall notify the City/County sufficiently in advance of back filling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the City/County, the Contractor shall uncover for inspection and recover such facilities at Contractor's expense, when so requested by the City/County.
- (d) Should it be considered necessary or advisable by the City/County at any time before final acceptance of the entire work to make an examination of work already completed, the Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any important or essential respect, due to fault of the Contractor or subcontractors, the Contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, shall be reimbursable and if completion of the work of the entire Contract has been delayed, a suitable extension of time will be approved.

- (e) Inspection of materials and appurtenances to be incorporated in the improvements included in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such inspection and acceptance, unless otherwise stated in the technical specifications, shall be final, except as regards to: (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the inspection of materials as a whole or in part will be made at the Project Site.
- (f) Neither inspection, testing, approval nor acceptance of the work in whole or in part, by the City/County or its agents shall relieve the Contractor or its sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

23. Review by City/County

The City/County and its authorized representatives and agents shall have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however that all instructions and approval with respect to the work will be given to the Contractor only by the City/County through its authorized representatives or agents.

24. Final Inspection

When the Improvements included in this Contract are substantially completed, the Contractor shall notify the City/County in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The City/County will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable.

25. Deduction for Uncorrected Work

If the City/County deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the City/County and subject to settlement, in case of dispute, as herein provided.

26. Insurance

The Contractor shall not commence work under this contract until all required insurance under this paragraph has been secured and approved by the City/County.

- (a) Worker's Compensation Insurance: The Contractor shall procure and shall maintain during the life of this contract Worker's Compensation Insurance as required by the State of Texas for all of his employees to be engaged in work at the site of the project under this contract and, in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Worker's Compensation Insurance.
- (b) Contractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance. The Contractor shall procure and shall maintain during the life of this contract Contractor's Public Liability Insurance, Contractor's Property Damage Insurance and Vehicle Liability Insurance in the following amounts: One Million Dollars (\$1,000,000).
- (c) Proof of Insurance: The Contractor shall furnish the City/County with certificates showing the type, amount, class of operations covered, effective dates and date of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered, except after ten (10) days written notice has been received by the City/County."

27. Warranty of Title

No material, supplies, or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease-purchase or other agreement by which an interest is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same, together with all improvements and appurtenances constructed or placed by Contractor, to the City/County free from any claims, liens, or charges. Neither the Contractor nor any person, firm, or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any law permitting such persons to look to funds due the Contractor. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

28. Warranty of Workmanship and Materials

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the improvements included in this Contract by the City/County or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of 12 months from the date of final acceptance of the work.

29. Job Offices

- (a) The Contractor and its subcontractors may maintain such office and storage facilities on the site as are necessary for the proper conduct of the work. These shall be located so as to cause no interference to any work to be performed on the site. The City/County shall be consulted with regard to locations.
- (b) Upon completion of the improvements, or as directed by the City/County, the Contractor shall remove all such temporary structures and facilities from the site, and leave the site of the work in the condition required by the Contract.

30. Partial Use of Site Improvements

The City/County may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the technical specifications and if in its opinion, each such section is reasonably safe, fit, and convenient for the use and accommodation for which it was intended, provided:

- (a) The use of such sections of the Improvements shall in no way impede the completion of the remainder of the work by the Contractor.
- (b) The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.

31. Contract Documents and Drawings

The City/County will furnish the Contractor without charge 1 copy of the Contract Documents, including Technical Specifications and Drawings. Additional copies requested by the Contractor will be furnished at cost.

32. Contract Period

The work to be performed under this contract shall commence within the time stipulated by the City/County in the Notice to Proceed, and shall be fully completed within 180 calendar days thereafter.

33. Liquidated Damages

Since the actual damages for any delay in completion of the work under this contract are impossible to determine, the Contractor and his Sureties shall be liable for and shall pay to the City/County the sum of Five Hundred Dollars (\$ 500) as fixed, agreed and liquidated damages for each calendar day of delay from the above stipulated time for completion.

ADMINISTRATIVE REQUIREMENTS

34. Local Program Liaison

For purposes of this Agreement, the [e.g. City Manager/County Judge] or equivalent authorized person will serve as the Local Program Liaison and primary point of contact for the Contractor. All required progress reports and communication regarding the project shall be directed to this liaison and other local personnel as appropriate.

35. Access to Information

(a) The U.S. Department of Housing and Urban Development (HUD), Inspectors General, the Comptroller General of the United States, the General Land Office (GLO), and the City/County, or any of their authorized representatives, shall have access to any documents, papers, or other records of the Contractor which are pertinent to the CDBG-MIT award, in order to make audits, examinations, excerpts, and transcripts, and to closeout the City's/County's CDBG-MIT contract with GLO. **2 CFR 200.336 (former 24 CFR 85.36(i)(10))**

The Office of the Comptroller General of the United States, the Government Accountability Office, the Office of Inspector General, or any authorized representative of the U.S. Government shall also have this right of inspection.

(b) Contractor shall include the substance of this clause in all subcontracts it awards.

36. Records Retention

(a) The Contractor shall retain all required records for three years after the City/County makes its final payment and all pending matters are closed. 2 CFR 200.333 (former 24 CFR (85.36(i)(11))

(b) Contractor shall include the substance of this clause in all subcontracts it awards.

FEDERAL REQUIREMENTS

37. Resolution of Program Non-Compliance and Disallowed Costs

In the event of any dispute, claim, question, or disagreement arising from or relating to this Contract, or the breach thereof, including determination of responsibility for any costs disallowed as a result of non-compliance with federal, state or CDBG-MIT program requirements, the parties hereto shall use their best efforts to settle the dispute, claim, question or disagreement. To this effect, the parties shall consult and negotiate with each other in good faith within 30 days of receipt of a written notice of the dispute or invitation to negotiate, and attempt to reach a just and equitable solution satisfactory to both parties. If the matter is not resolved by negotiation within 30 days of receipt of written notice or invitation to negotiate, the parties agree first to try in good faith to settle the matter by mediation administered by the American Arbitration Association under its Commercial Mediation Procedures before resorting to arbitration, litigation, or some other dispute resolution procedure. The parties may enter into a written amendment to this Contract and choose a mediator that is not affiliated with the American Arbitration Association. The parties shall bear the costs of such mediation equally. *[This section may also provide for the qualifications of the mediator(s), the locale of meetings, time limits, or any other item of concern to the parties.]* If the matter is not resolved through such mediation within 60 days of the initiation of that procedure, either party may proceed to file suit.

38. Compliance with Davis-Bacon Act

All laborers and mechanics employed upon the work covered by this Contract shall be paid unconditionally and not less often than once each week, and without subsequent deduction or rebate on any account (except such payroll deductions as are made mandatory by law and such other payroll deductions as are permitted by the applicable regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to the Anti-Kickback Act hereinafter identified), the full amount due at time of payment computed at wage rates not less than those contained in the wage determination decision of said Secretary of Labor (**a copy of which is attached as Attachment 23 and herein incorporated by reference**), regardless of any contractual relationship which may be alleged to exist between the Contractor or any subcontractor and such laborers and mechanics. All laborers and mechanics employed upon such work shall be paid in cash, except that payment may be by check if the employer provides or secures satisfactory facilities approved by the City/County for the cashing of the same without cost or expense to the employee. For the purpose of this clause, contributions made or costs reasonably anticipated under Section 1 (b) (2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section 5.5 (a) (1) (iv) of Title 29, Code of Federal Regulations. Also for the purpose of this clause, regular contributions made or costs incurred for more than a weekly period under plans, funds, or programs, but covering the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

The Contractor and its subcontractors shall not, by any means, induce any person employed in the construction, completion, or repair of public work, give up any part of the compensation to which he or she is otherwise entitled. The City/County must report all suspected or reported violations to GLO.

39. Conflicts of Interest

- (a) Governing Body. No member of the governing body of the City/County and no other officer, employee, or agent of the City/County, who exercises any functions or responsibilities in connection with administration, construction, engineering, or implementation of CDBG-MIT award between GLO and the City / County, shall have any personal financial interest, direct or indirect, in the Contractor or this Contract; and the Firm shall take appropriate steps to assure compliance.
- (b) Other Local Public Officials. No other public official, who exercises any functions or responsibilities in connection with the planning and carrying out of administration, construction, engineering or implementation of the CDBG-MIT award between GLO and the City/County, shall have any personal financial interest, direct or indirect, in the Contractor or this Contract; and the Contractor shall take appropriate steps to assure compliance.
- (c) The Contractor and Employees. The Contractor warrants and represents that it has no conflict of interest associated with the CDBG-MIT award between GLO and the City/County or this Contract. The Contractor further warrants and represents that it shall not acquire an interest, direct or indirect, in any geographic area that may benefit from the CDBG-MIT award between GLO and the City/County or in any business, entity, organization or person that may benefit from the award. The Contractor further agrees that it will not employ an individual with a conflict of interest as described herein.

40. Debarment and Suspension (Executive Orders 12549 and 12689)

The Contractor certifies, by entering into this Contract, that neither it nor its principals are presently debarred, suspended, or otherwise excluded from or ineligible for participation in federally-assisted programs under Executive Orders 12549 (1986) and 12689 (1989). The term "principal" for purposes of this Contract is defined as an officer, director, owner, partner, key employee, or other person with primary management or supervisory responsibilities, or a person who has a critical influence on or substantive control over the operations of the Contractor. The Contractor understands that it must not make any award or permit any award (or contract) at

any tier to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in Federal assistance programs under Executive Order 12549, "Debarment and Suspension."

A contract award (see 2 CFR 180.220) must not be made to parties listed on the government-wide Excluded Parties List System in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR Part 1986 Comp., p. 189) and 12689 (3 CFR Part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. 2 CFR 200 APPENDIX II (H)

41. [For Contracts that exceed \$100,000] Byrd Anti-Lobbying

Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award of \$100,000 or more must 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 must 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 non-Federal award.

Contractor shall file the required certification: The undersigned certifies, to the best of his or her knowledge and belief, that:

- (a) 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.
- (b) 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.
- (c) 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. 2 CFR 200 APPENDIX II (I) and 24 CFR §570.303

42. [For Contracts > \$100K] 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, including watchmen and guards, shall require or permit any laborer or mechanic in any workweek in which he is employed on such work to work in excess of 40 hours in such work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of 40 hours in such work week, as the case may be. 2 CFR 200 APPENDIX II (E)

43. Equal Opportunity Clause

Comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other non-discrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply.

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

- (a.) 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.
- (b.) 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 considerations for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (c.) The Contractor will not discourage 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.
- (d.) 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.
- (e.) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, "Equal Employment Opportunity," and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (f.) 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.
- (g.) 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.

- (h.) The Contractor will include the portion of the sentence immediately preceding paragraph (a) and the provisions of paragraphs (a) through (h) 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. 41 CFR §60-1.4(b) And 2 CFR 200 APPENDIX II (C)

44. Section 109 of the Housing and Community Development Act of 1974.

The Contractor shall comply with the provisions of Section 109 of the Housing and Community Development Act of 1974. No person in the United States shall on the ground of race, color, national origin, religion, or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title.

45. Davis-Bacon Act, as amended (40 U.S.C. 3141-3148).

When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. 2 CFR 200 APPENDIX II (D)

46. Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708).

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 (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, 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. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or

materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence. 2 CFR 200 APPENDIX II (E)

47. Section 504 Rehabilitation Act of 1973, as amended.

The Contractor agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.

48. Age Discrimination Act of 1975.

The Contractor shall comply with the Age Discrimination Act of 1975 which provides that no person in the United States shall on the basis of age be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

49. Non Segregated Facilities

The Contractor certifies that he does not and will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not and will not permit his employees any segregated facilities at any of his establishments, or permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. As used in this paragraph the term "segregated facilities" means any waiting rooms, work areas, rest rooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise.

50. The Provision of Local Training, Employment, and Business Opportunities

(a) To the greatest extent feasible opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by persons residing in the area of the project. See also GLO Section 3 Policy and "Exhibit G" on the GLO-DR website.

(b) The Contractor will include this clause in every subcontract for work in connection with the project.

51. [If this Contract is greater than \$100,000] Economic Opportunities for Section 3 Residents and Section 3 Business Concerns.

(a) The work to be performed under this Contract is subject to the requirements of section 3 of the Housing and Urban Development (HUD) Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

(b) The parties to this Contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this Contract, the parties to this Contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

(c) The Contractor agrees to send to each labor organization or representative of workers with which the Contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor

organization or workers' representative of the Contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

- (d) The Contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The Contractor will not subcontract with any subcontractor where the Contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.
- (e) The Contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the Contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the Contractor's obligations under 24 CFR part 135.
- (f) Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this Contract for default, and debarment or suspension from future HUD assisted contracts.
- (g) With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this Contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b). 24 CFR §135.38

52. Gender Neutral - Gender References

When necessary, unless the context clearly requires otherwise, any gender-specific or gender-neutral term in this Contract (for example, he, she, it, etc.) is to be read as referring to any other gender or to no gender.

53. Patent Rights and Inventions

Contractor shall comply with the requirements and regulations pertaining to patent rights with respect to any discovery or invention which arises or is developed in the course of or under such contract. (2 CFR 200 Appendix II (f) and Rights to Inventions in 37 CFR Part 401).

Rights to Inventions Made Under a Contract or Agreement - If the Federal award meets the definition of "funding agreement" under 37 CFR §401.2 (a) and the Subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the Subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

54. Energy Efficiency

The Contractor shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201). (2 CFR 200 Appendix II (h)).

55. System for Award Management (SAM)

All contractors and subcontractors must be searched AND cleared (not suspended or debarred) prior to authorization to work on the project.

56. Solid Waste Disposal Act

Contractor 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.

57. Procurement of Recovered Materials

(a) 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—

1. Competitively within a timeframe providing for compliance with the contract performance schedule;
2. Meeting contract performance requirements; or
3. At a reasonable price.

(c) Information about this requirement, along with the list of EPA-designate items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/>

58. Domestic Preference

a. As appropriate and to the extent consistent with law, 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 (including but not limited to iron, aluminum, steel, cement, and other manufactured products).

b. For purposes of section (a) above:

i. "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.

ii. "Manufactured products" means 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.

STATE REQUIREMENTS

58. Verification No Boycott Israel.

As required by Chapter 2270, Government Code, CONTRACTOR hereby verifies that it does not boycott Israel and will not boycott Israel through the term of this Agreement. For purposes of this verification, "boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or

entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes.

59. Foreign Terrorist Organizations.

Pursuant to Chapter 2252, Texas Government Code, [Company] represents and certifies that, at the time of execution of this Agreement neither [Company], nor any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of the same (i) engages in business with Iran, Sudan, or any foreign terrorist organization as described in Chapters 806 or 807 of the Texas Government Code, or Subchapter F of Chapter 2252 of the Texas Government Code, or (ii) is a company listed by the Texas Comptroller of Public Accounts under Sections 806.051, 807.051, or 2252.153 of the Texas Government Code. The term "foreign terrorist organization" in this paragraph has the meaning assigned to such term in Section 2252.151 of the Texas Government Code.

ENVIRONMENTAL CONDITIONS

60. [For Contracts > \$150K] Clean Air Act and the Federal Water Pollution Control Act

The Contractor or subcontractor shall 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). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). 2 CFR 200 APPENDIX II (G)

61. Lead-Based Paint

The Subrecipient agrees that any construction or rehabilitation of residential structures with assistance provided under this Agreement shall be subject to HUD Lead-Based Paint Regulations at 24 CFR 570.608, and 24 CFR Part 35, Subpart B. Such regulations pertain to all CDBG-assisted housing and require that all owners, prospective owners, and tenants of properties constructed prior to 1978 be properly notified that such properties may include lead-based paint. Such notification shall point out the hazards of lead-based paint and explain the symptoms, treatment and precautions that should be taken when dealing with lead-based paint poisoning and the advisability and availability of blood lead level screening for children under seven. The notice should also point out that if lead-based paint is found on the property, abatement measures may be undertaken. The regulations further require that, depending on the amount of Federal funds applied to a property, paint testing, risk assessment, treatment and/or abatement may be conducted.

62. Flood Disaster Protection

In accordance with the requirements of the Flood Disaster Protection Act of 1973 (42 U.S.C. 4001), the Subrecipient shall assure that for activities located in an area identified by the Federal Emergency Management Agency (FEMA) as having special flood hazards, flood insurance under the National Flood Insurance Program is obtained and maintained as a condition of financial assistance for acquisition or construction purposes (including rehabilitation).

63. Other Conditions

Any special conditions such as mitigation measures will be carried out as instructed by the Environmental Review Record. Enter Mitigation Measures from City/County Environmental Review Record as applicable

CITY OF LA MARQUE

22-085-003-D223

PERFORMANCE STATEMENT

The U.S. Department of Housing and Urban Development's Community Development Block Grant Mitigation ("CDBG-MIT") program to provide financial assistance with funds appropriated under Public Law 115-123, was enacted on August 30, 2019, to facilitate disaster recovery, restoration, mitigation, and economic revitalization and to affirmatively further fair housing, in accordance with Executive Order 12892, in areas affected by 2015, 2016, and 2017 disasters, which are Presidentially-declared major disaster areas under Title IV of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. § 5121, *et seq.*).

In strict conformance with the terms and conditions of the Hurricane Harvey HUD Most Impacted and Distressed (HMID) Competition and this Contract, City of La Marque (Subrecipient) shall perform, or cause to be performed, the Infrastructure Activities defined below.

The Subrecipient has identified sewer facility activities that will increase resilience to disasters and reduce or eliminate the long-term risk of loss of life, injury, damage to and loss of property, and suffering and hardship, by lessening the impact of future disasters.

Subrecipient shall perform the activities identified herein for the target area specified in its approved Texas Community Development Block Grant Mitigation Grant Application to provide a long-lasting investment that increases resiliency in the community. The persons to benefit from the activities described herein must receive the prescribed service or benefit, and all eligibility requirements must be met to fulfill contractual obligations.

The grant total is \$48,904,004.00. Subrecipient will be required to maintain a detailed budget breakdown in the official system of record of the GLO's Community Development and Revitalization (GLO-CDR) division.

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Sewer Facilities

Subrecipient shall elevate, enclose, and floodproof the existing wastewater treatment plant walls; install and construct additional equipment for the WWTP to increase capacity by 2.25 million gallons per day of sewage flow. Subrecipient shall also convert 21 lift stations to self-priming pumps, increase the capacity of the lift stations, elevate and install emergency backup pumps, and complete all associated appurtenances. Construction shall take place at the following locations, including mid-point coordinates for each segment.

Street Improvements	Location Approximate Lat/Long	Proposed HUD Performance Measures	Census Tract	Block Group
Lift Station #1	Southwest Corner of Bayou Road and Scott Street 29.362789, -94.971741	One (1) Public Facility	7233.00 7232.00 7230.00 7229.00 7228.00 7238.00 7262.00 7231.00	1, 2 1,2 1,2,3 1,2 1,2 1,2 2 1
Lift Station #2	39' South of 1022 Walnut Street 29.357184, -94.960890	One (1) Public Facility		
Lift Station #3	1026 Hathaway Street 29.364330, -94.957514	One (1) Public Facility		
Lift Station #4	430' south of the intersection of 6 th Avenue and Beech Street 29.355182, -94.954394	One (1) Public Facility		
Lift Station #5	Directly south of 146 Main Street between 1 st Avenue and Oak Street 29.358225, -94.949082	One (1) Public Facility		
Lift Station #6	722 Shady Lane 29.368034, -94.954682	One (1) Public Facility		
Lift Station #7	Ross Avenue 29.374782, -94.951026	One (1) Public Facility		
Lift Station #8	907 1 st Street 29.377703, -94.965922	One (1) Public Facility		
Lift Station #9	720 TX Highway 3 29.372158, -94.963979	One (1) Public Facility		
Lift Station #10	202 Beatrice 50' South of the intersection of Bayou Road and Beatrice 29.377864, -94.971807	One (1) Public Facility		
Lift Station #11	2418 Jackson St., Intersection of Lake Road and Jackson Street 29.370856, -94.979574	One (1) Public Facility		

Lift Station #12	100' West From the intersection of West Camp Circle and Cedar Drive Directly North of 2809 Cedar Drive 29.368433, -94.985473	One (1) Public Facility		
Lift Station #13	466 Vauthier Street 29.375112, -94.992798	One (1) Public Facility		
Lift Station #14	3901 McKinney Ext 29.373092, -94.999583	One (1) Public Facility		
Lift Station #15	FM 1764 338' Northeastward of the intersection of Autry Road and FM-1764 29.396146, -95.042138	One (1) Public Facility		
Lift Station #16	FM 2004 between 1000 FM 2004 and Gulf Freeway 29.395053, -95.030871	One (1) Public Facility	7233.00	1, 2
Lift Station #17	Delany Road between Texas Avenue and Lawndale Street 29.377042, -95.020914	One (1) Public Facility	7232.00	1,2
Lift Station #18	1115 Volney Street 29.368401, -95.006256	One (1) Public Facility	7230.00	1,2,3
Lift Station #19	Saltgrass Point Road Between Saltcreek Bend Land and Pacific Point Court 29.374513, -95.028605	One (1) Public Facility	7229.00	1,2
Lift Station #20	2412 Duroux Road 29.353957, -94.995434	One (1) Public Facility	7228.00	1,2
Lift Station #21	Getty Road 802' Southeast of Mac McGaffey Highland Bayou Park 29.344225, -94.968940	One (1) Public Facility	7238.00	1,2
Wastewater Treatment Plant	Woodland St. Southeast of Mahan Park From the intersection of Lake Rd. and Woodland Street west 692' thence south 738' 29.349246, -94.982212	One (1) Public Facility	7262.00	2
			7231.00	1
These Activities shall benefit fifteen thousand one hundred five (15,105) persons. Of these persons, eight thousand one hundred fifty-five (8,155), or fifty-three and ninety-nine hundredths percent (53.99%), are of low to moderate income.				

PROJECT MANUAL

FOR

**CITYWIDE LIFT STATION UPGRADE PACKAGE 1
HURRICANE HARVEY FLOODS
HUD MITIGATION COMPETITION (HMID)**

**GLO-CDR CONTRACT NO. 22-085-003-D223
LA MARQUE, TEXAS**



ADICO PROJECT NO. 21033-01

JUNE 2023

INTERIM REVIEW

Not to be used for construction,
bidding or permit purposes.

Engineer: BRENT BERTHIER, P.E.

PE License No.: 108493

Date: 6-23-2023



TBPE FIRM NO. 16423
2114 El Dorado Blvd., Suite 400
Friendswood, TX 77546
(832) 895-1093

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Technical Specifications

<u>Document</u>	<u>Title</u>	<u>No. Of Pages</u>
DIVISION 1 - GENERAL REQUIREMENTS		
01010	Summary of Work	1
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01090	Reference Specifications	1
01100	Storm Water Management	1
01300	Submittals	2
01310	Construction Schedule	2
01340	Shop Drawings, Product Data and Samples	4
01370	Schedule of Values	2
01410	Testing Laboratory Services	2
01420	Inspection Services	1
01500	Temporary Facilities & Controls	2
01570	Traffic Control and Regulation	3
01578	Control of Ground Water and Surface Water	8
01600	Materials & Equipment	5
01700	Contract Closeout	3
01710	Cleaning & Adjusting	3
01720	Project Record Documents	2
01740	Site Restoration	4
01782	Operations & Maintenance Data	1
DIVISION 2 - SITE WORK		
02076	Removing Existing Pavements and Structures	3
02105	Erosion Control	5
02110	Demolition	3
02160	Trench Safety Systems	3
02200	Earthwork	4
02201	Stripping and Fill	4
02235	Waste Material Disposal	2
02252	Cement Stabilized Sand	3
02523	Concrete Joints	3
02532	Curb, Curb and Gutter, and Headers	3
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05500	Metal Fabrications	6
05521	Aluminum Handrails	2
DIVISION 6 – WOODS AND PLASTICS		
06632	Fiberglass and Reinforced Grating	4
DIVISION 11 - EQUIPMENT		
11402	Reliaprime Back-up Pump System	12
11403	Triplex Self Primer Pumps	22

DIVISION 15 - MECHANICAL

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15051	Piping and Related Items	9
15052	Gates and Valves	5
15260	Piping Insulation	2

CITY OF HOUSTON SPECIFICATIONS

01 578	Control of Ground Water and Surface Water	10
01 740	Site Restoration	4
01 755	Starting Systems	3
02 086	Adjusting Manholes, Valve Boxes, and Inlets to Grade	3
02 090	Frames, Gates, Rings, and Covers	3
02 221	Removing Existing Pavement and Structures	4
02 316	Excavation and Backfill for Structures	9
02 317	Excavation and Backfill for Utilities	17
02 320	Utility Backfill Materials	10
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02 506	Polyvinyl Chloride Pipe	12
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<i>555</i>	<i>Chain Link Fencing</i>	<i>7</i>
<i>724</i>	<i>Stabilized Construction Access</i>	<i>4</i>
<i>725</i>	<i>General Source Controls (SWPPP)</i>	<i>5</i>

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02 921	<i>Turf Establishments</i>	5

Note: Bold specification sections are included in the “City of Houston Standard Construction Specifications for Wastewater Collections Systems, Water Lines, Storm Drainage, and Street Paving and Traffic” dated October 2022 and are incorporated herein by reference as if copied verbatim including any supplementary specification or amendments thereto and related specifications referenced therein unless indicated otherwise in the Drawings or Specifications.

Italicized specification sections are included in the “Harris County Public Infrastructure Specifications” and the “Harris County Flood Control Standard Specification Book” dated June 2020 and are incorporated herein by reference as if copied verbatim including any supplementary specification or amendments thereto and related specifications referenced therein unless indicated otherwise in the Drawings or Specifications.

Advertisement and Invitation to Bid

The City of La Marque will receive bids for the Citywide Lift Station Upgrade Hurricane Harvey Floods HUD Mitigation Competition until (time) on (day and date) at 1111 Bayou Road, La Marque, TX 77568. The bids will be publicly opened and read aloud at (time) on (day and date) at City of La Marque, City Hall, 1111 Bayou Road, La Marque, TX 77568.

Bids are invited for several items and quantities of work as follows:

1. Rehabilitation of Lift Station No. 1 (1810 Bayou Road, La Marque, TX 77568)
2. Rehabilitation of Lift Station No. 15. (6090 FM1765, La Marque, TX 77568)
3. Rehabilitation of Lift Station No. 17. (4318 Delany Road, La Marque, TX 77568)
4. Rehabilitation of Lift Station No. 18. (1111 Volney Street, La Marque, TX 77568)

Bid/Contract Documents, including Drawings and Technical Specifications are on file at City of La Marque, City Hall, 1111 Bayou Road, La Marque, TX 77568.

Copies of the Bid/Contract Documents may be obtained by depositing \$100 with the Engineer, Adico, LLC for each set of documents obtained. The deposit will be refunded if the documents and drawings are returned in good condition within 10 days following the bid opening.

A bid bond in the amount of 5 percent of the bid issued by an acceptable surety shall be submitted with each bid [for those contracts that exceed \$100,000]. A certified check or bank draft payable to the City of La Marque or negotiable U.S. Government Bonds (as par value) may be submitted in lieu of the Bid Bond.

Attention is called to the fact that not less than, the federally determined prevailing (Davis-Bacon and Related Acts) wage rate, as issued by the Texas Department of Agriculture Office of Rural Affairs and contained in the contract documents, must be paid on this project. In addition, the successful bidder must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex, sexual identity, gender identity, or national origin.

The City of La Marque reserves the right to reject any or all bids or to waive any informalities in the bidding.

Bids may be held by City of La Marque for a period not to exceed 90 days from the date of the bid opening for the purpose of reviewing the bids and investigating the bidder's qualifications prior to the contract award.

City of La Marque (Contracting officer), (title) (date)

All contractors/subcontractors that are debarred, suspended or otherwise excluded from or ineligible for participation on federal assistance programs may not undertake any activity in part or in full under this project.

Instruction to Bidders for Construction

1. Use of Separate Bid Forms

These contract documents include a complete set of bid and contract forms which are for the convenience of the bidders and are not to be detached from the contract document, completed or executed. Separate bid forms are provided for your use.

2. Interpretations or Addenda

No oral interpretations will be made to any bidder. Each request for clarification shall be made in writing to the Grant Recipient or engineer no less than seven (7) days prior to the bid opening. Each interpretation made will be in the form of an Addendum to the contract documents and will be distributed to all parties holding contract documents no less than seven (7) days prior to the bid opening. It is, however, the bidder's responsibility to make inquiry as to any addenda issued. All such addenda shall become part of the contract documents and all bidders shall be bound by such addenda, whether or not received by the bidders.

If an addendum to the bid package is necessary, it must be distributed to each potential bidder. The distribution of an addendum shall be verified either by statements of receipt or registered/certified mail receipts, which shall be included in the public works construction file. The addendum shall allow adequate time for consideration in bid preparation (usually at least one week). If adequate time is not available, the bid opening date must be extended and the Grant Recipient must republish the invitation for bids containing the place, time, and date for the new bid opening. Note that any change to the original bid opening date will require republication of the invitation for bids at least once in a locally published newspaper. The republished notice will include the place, time and date for the new bid opening and must be published at least seven days prior to the new bid opening date.

3. Inspection of Site

Each bidder should visit the site of the proposed work and should become acquainted with the existing conditions and facilities, the difficulties and restrictions pertaining to the performance of the contract. The bidder should thoroughly examine and become familiar with the drawings, technical specifications and all other contract documents. The contractor by the execution of the contract shall in no way be relieved of any obligation under it due to failure to receive or examine any form or legal document or to visit the site or the conditions existing at the site. The City/ County will be justified in rejecting any claim based on lack of inspection of the site prior to the bid.

4. Alternate bid items

No alternate bids or bid items will be considered unless they are specifically requested by the technical specifications.

5. Bids

- a. All bids must be submitted on the forms provided and are subject to all requirements of the Contract Documents, including the Drawings.
- b. All bids must be regular in every respect and no interlineation, excisions or special conditions may be made or included by the bidder.
- c. Bid documents, including but not limited to the bid, the bid bond(s), the contractor's certifications, local opportunity plan, and the statement of the bidder's qualifications, shall be sealed in an envelope and clearly labeled with the words "Bid Documents", the project number, name of bidder and the date and time of bid opening.
- d. The City / County may consider as irregular any bid on which there is an alteration of or departure from the bid form and, at its option, may reject any irregular bid.
- e. If a contract is awarded, it will be awarded to a responsible bidder on the basis of the lowest/best bid and the selected alternate bid items, if any. The contract will require the completion of the work in accordance with the contract documents.

6. Bid Modifications Prior to Bid Opening

- a. Any bidder may modify its bid by submitting a modification or supplemental bid at any time prior to the scheduled closing time for receipt of bids, provided such modification or supplemental bid is received by the locality prior to the closing time. The modification or supplemental bid should not reveal the original bid price but should provide only the addition, subtractions or other modifications to the original bid so that the final prices or terms will not be known by the locality until the sealed bid is open.

7. Bid Bond

- a. A bid bond in the amount of 5% of the bid issued by an acceptable surety shall be submitted with each bid [for contracts greater than \$100,000]. A certified check or bank draft payable to the locality or negotiable U.S. Government Bonds (as par value) may be submitted in lieu of the Bid Bond.
- b. The bid bond or its comparable will be returned to the bidder as soon as practical after the opening of the bids.

8. Statement of Bidders Qualifications

Each bidder shall submit on the form furnished for that purpose a statement of the bidder's qualifications. The Grant Recipient shall have the right to take such steps as it deems necessary to determine the ability of the bidder to perform its obligations under the contract, and the bidder shall furnish the Grant Recipient all such information and data for this purpose as it may request. The right is reserved to reject any bid where an investigation of the available data does not satisfy the Grant Recipient that the bidder is qualified to carry out properly the terms of the contract.

9. Unit Price

The unit price for each of the several items in the bid shall include its pro rata share of overhead so that the sum of the products obtained by multiplying the quantity shown for each item by the unit price bid represents the total bid. Any bid not conforming to this requirement may be rejected as informal. Special attention is drawn to this condition, as the unit prices will be used to determine the amount of any change orders resulting from an increase or decrease in quantities.

10. Corrections

Erasures or other corrections in the bid must be noted over the signature of the bidder.

11. Time for Receiving Bids

Bids received prior to the advertised hour of opening shall be kept securely sealed. The officer appointed to open the bids shall decide when the specified time has arrived and no bid received thereafter will be considered; except that when a bid arrives by mail after the time fixed for opening, but before the reading of all other bids is completed, and it is shown to the satisfaction of the Grant Recipient that the late arrival of the bid was solely due to delay in the mail for which the bidder was not responsible, such bid will be received and considered.

12. Opening of Bids

The City/County shall, at the time and place fixed for the opening of bids, open each bid and publicly read it aloud, irrespective of any irregularities therein. Bidders and other interested individuals may be present.

13. Withdrawal of Bids

Bidder may withdraw the bid before the time fixed for the opening of bids, by communicating its purpose in writing to the Grant Recipient. Upon receipt of such notice, the unopened bid will be returned to the bidder. The bid guaranty of any bidder withdrawing his bid will be returned promptly.

14. Award of Contract/Rejection of Bids

- a. The contract will be awarded to the responsive, responsible Bidder submitting the lowest/best bid. The bidder selected will be notified at the earliest possible date. The locality reserves the right to

reject any or all bids and to waive any informality in bids received where such rejection or waiver is in its interest.

- b. The Grant Recipient reserves the right to consider as unqualified to do the work any bidder who does not habitually perform with his own forces the major portions of the work involved in construction of the improvements embraced in this contract.

15. Execution of Agreement/Performance and Payment Bonds

- a. Performance Bonds - Requires all prime contractors which enter into a formal contract in excess of \$100,000 with the State, a county, or a municipality; a department, board, or agency of the state, a county, or a municipality; and a school district or a subdivision thereof, to obtain a Performance Bond in the amount of the contract before commencing with work
- b. Payment Bonds- Requires all prime contractors which enter into a formal contract with the State, a county, or a municipality; a department, board, or agency of the state, a county, or a municipality; and a school district or a subdivision thereof, to furnish to the governmental entity a payment bond in the amount of the contract. The payment bond must be filed within 30 days from the date of the Notice of Award:
 - o Municipalities: If the contract is in excess of \$50,000, a payment bond is required.
 - o Counties: If the contract is in excess of \$25,000, a payment bond is required.
- c. The failure of the successful bidder to execute the agreement and supply the required bonds within thirty (30) days from the date of the notice of award-or within such extended period as the locality may grant, shall constitute a default and the locality may, at its option, either award the contract to the next lowest responsible bidder, or re-advertise for bids. In either case, the locality may charge against the bidder the difference between the amount of the bid, and the amount for which a contract is subsequently executed irrespective of whether this difference exceeds the amount of the bid bond. If a more favorable bid is received through re-advertisement, the defaulting bidder shall have no claim against the locality for a refund.

16. Wages and Salaries

Attention is particularly called to the requirement of paying not less than the prevailing Davis Bacon Related Acts (DBRA) wage rates specified in the Contract Documents. These rates are minimums to be paid during the life of the contract. It is therefore the responsibility of the Bidder to inform themselves as to local labor conditions.

17. Equal Employment Opportunity

Attention is called to the requirements for ensuring that employees and applicants for employment are not discriminated against because of race, color, religion, sex, sexual identity, gender identity, or national origin, and other civil rights requirements.

18. Certification Regarding Lobbying –

Contractors who apply or bid for an award of \$100,000 or more shall provide the required certification 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 USC § 1352.

Equal Opportunity Guidelines for Construction Contractors

Note: To be included in bid packet and distributed at the preconstruction conference (optional)

1. What are the responsibilities of the offeror or bidder to ensure equal employment opportunity?

For contracts over \$ 10,000, the offeror or bidder must comply with the "Equal Opportunity Clause" and the "Standard Federal Equal Opportunity Construction Contract Specifications."

2. Are construction contractors required to ensure a legal working environment for all employees?

Yes, it is the construction contractor's responsibility to provide an environment free of harassment, intimidation, and coercion to all employees and to notify all foremen and supervisors to carry out this obligation, with specific attention to minority or female individuals.

3. To alleviate developing separate facilities for men and women on all sites, can a construction contractor place all women employees on one site?

No, two or more women should be assigned to each site when possible.

4. Are construction contractors required to make special outreach efforts to Section 3 or minority and female recruitment sources?

Yes, construction contractors must establish a current list of Section 3, minority and female recruitment sources. Notification of employment opportunities, including the availability of on-the-job training and apprenticeship programs, should be given to these sources. The efforts of the construction contractors should be kept in file.

5. Should records be maintained on the number of Section 3 residents, minority and females applying for positions with construction contractors?

Yes, records must be maintained to include a current list of names, addresses and telephone numbers of all Section 3, minority and female applicants. The documentation should also include the results of the applications submitted.

6. What happens if a woman or minority is sent to the union by the Contractor and is not referred back to the Contractor for employment?

If the unions impede the construction contractor's responsibility to provide equal employment opportunity, a written notice should be submitted to GLO.

7. What efforts are made by construction contractors to create entry-level positions for Section 3 residents, women and minorities?

Construction contractors are required to develop on-the-job training programs, or participate in training programs, especially those funded by the Department of Labor, to create positions for Section 3 residents, women and minorities and to meet employment needs.

8. Are any efforts made by the Contractor to publicize their Equal Employment Opportunity (EEO) policy?

Yes, the construction contractor is responsible for notifying unions and sources of training programs of their equal employment opportunity policy. Unions should be requested to cooperate in the effort of equal opportunity. The policy should be included in any appropriate manuals, or collective bargaining agreements. The construction contractor is encouraged to publicize the equal employment opportunity policy in the company newspaper and annual report. The Contractor is also responsible to include the EEO policy in all media advertisement.

9. Are any in-service training programs provided for staff to update the EEO policy?

At least annually a review of the EEO policy and the affirmative action obligations are required of all personnel employees of a decision-making status. A record of the meeting including date, time, location, persons present, subject matter discussed, and disposition of the subject matter should be maintained.

10. What recruitment efforts are made for Section 3 residents, minorities and women?

The construction contractor must notify, both orally and in writing, Section 3, minority and female recruitment sources one month prior to the date of acceptance for apprenticeship or other training programs.

11. Are any measures taken to encourage promotions for minorities and women?

Yes, an annual evaluation should be conducted for all minority and female personnel to encourage these employees to seek higher positions.

12. What efforts are taken to insure that personnel policies are in accordance with the EEO policy?

Personnel policies in regard to job practices, work assignments, etc. should be continually monitored to insure that the EEO policy is carried out.

13. Can women be excluded from utilizing any facilities available to men?

No, all facilities and company activities are non-segregated except for bathrooms or changing facilities to ensure privacy.

14. What efforts should be utilized to include minority and female contractors and suppliers?

Take affirmative steps to ensure that small, minority, and women owned businesses are included on all lists for contractors/service providers. Solicit these businesses when issuing RFPs and RFQs and soliciting construction bids. Divide project activities into small tasks to allow participation. Keep records of all offers to minority and female construction contractors.

15. If a construction contractor participates in a business related association that does not comply with equal opportunity affirmative action standards, does that show his/her failure to comply?

No, the construction contractor is responsible for its own compliance.

16. Can a construction contractor hire a subcontractor who has been debarred from government contracts pursuant to EEO?

No. The construction contractor must suspend, terminate or cancel its contract with any Subcontractor who is in violation of the EEO policy.

17. What effort has been taken by the construction contractor to monitor all employment to insure the company EEO policy is being carried out?

The construction contractor must designate a responsible individual to keep accurate records of all employees that includes specific information required by the government.

[INSERT City/County's Executed Section 3 Plan]

SECTION 3 POLICY

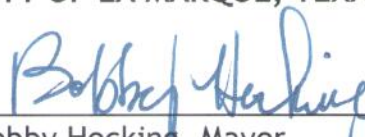
In accordance with 12 U.S.C. 1701u the City of La Marque agrees to implement the following steps, which, to *the greatest extent feasible*, will provide job training, employment and contracting opportunities for Section 3 residents and Section 3 businesses of the areas in which the program/project is being carried out.

- A. Introduce and pass a resolution adopting this plan as a policy to strive to attain goals for compliance to Section 3 regulations by increasing opportunities for employment and contracting for Section 3 residents and businesses.
- B. Assign duties related to implementation of this plan to the designated Civil Rights Officer.
- C. Notify Section 3 residents and business concerns of potential new employment and contracting opportunities as they are triggered by CDBG-DR grant awards through the use of: Public Hearings and related advertisements; public notices; bidding advertisements and bid documents; notification to local business organizations such as the Chamber(s) of Commerce or the Urban League; local advertising media including public signage; project area committees and citizen advisory boards; local HUD offices; regional planning agencies; and all other appropriate referral sources. Include Section 3 clauses in all covered solicitations and contracts.
- D. Maintain a list of those businesses that have identified themselves as Section 3 businesses for utilization in CDBG-DR funded procurements, notify those businesses of pending contractual opportunities, and make this list available for general Grant Recipient procurement needs.
- E. Maintain a list of those persons who have identified themselves as Section 3 residents and contact those persons when hiring/training opportunities are available through either the Grant Recipient or contractors.
- F. Require that all Prime contractors and subcontractors with contracts over \$100,000 commit to this plan as part of their contract work. Monitor the contractors' performance with respect to meeting Section 3 requirements and require that they submit reports as may be required by HUD or GLO to the Grant Recipient.
- G. Submit reports as required by HUD or GLO regarding contracting with Section 3 businesses and/or employment as they occur; and submit reports within 20 days of the federal fiscal year end (by October 20) which identify and quantify Section 3 businesses and employees.
- H. Maintain records, including copies of correspondence, memoranda, etc., which document all actions taken to comply with Section 3 regulations.

As officers and representatives of City of La Marque, we the undersigned have read and fully agree to this plan and become a party to the full implementation of this program.

PASSED, APPROVED AND ADOPTED by the City Council of the City of La Marque the
8th day of July, 2019.

CITY OF LA MARQUE, TEXAS



Bobby Hocking, Mayor

STATEMENT OF BIDDER'S QUALIFICATIONS

All questions must be answered and the data given must be clear and comprehensive. **This statement must be notarized.** If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information it desires.

Date: _____

Bidder (Legal Name of Firm): _____

Date Organized: _____

Name of Owner(s): _____

Address: _____

Date Incorporated _____

Federal ID Number: _____

Number of Years in contracting business under present name _____

List all other names under which your business has operated in the last 10 years:

Work Presently Under Contract:

Contract	Amount \$	Completion Date
----------	-----------	-----------------

Type of work performed by your company: _____

Total Staff employed by Firm (Break down by Managers and Trades on separate sheet):

Have you ever failed to complete any work awarded to you? ☐ Yes ☐ No

(If yes, please attach summary of details on a separate sheet. Include brief explanation of cause and resolution)

Have you ever defaulted on a contract? ☐ Yes ☐ No

(If yes, please attach summary of details on a separate sheet.)

Has your organization had any disbarments or suspensions that have been imposed in the past five years or that was still in effect during the five-year period or is still in effect? ☐ Yes ☐ No

(If yes, list and explain; such list must include disbarments and suspensions of officers, principals, partners, members, and employees of your organization.)

List the projects most recently completed by your firm (include project of similar importance):

Project	Amount \$	Mo/Yr Completed
---------	-----------	-----------------

Major equipment available for **this** contract: _____

Are you in compliance with all applicable EEO requirements? ☐ Yes ☐ No

(If no, please attach summary of details on a separate sheet.)

(Optional) Minority Business Reporting Information:

Owner's Race: _____

Owner's Ethnicity: _____
Owner's Gender: _____

Are you a Section 3 business? (see below) ☐ Yes ☐ No

Section 3 Business Concerns:

- a) Businesses that are 51 percent or more owned by Section 3 residents;
- b) Businesses whose permanent, full-time employees include persons, at least 30 percent of whom are currently Section 3 residents, or within three years of the date of first employment with the firm were Section 3 residents;
- c) Businesses that provide evidence of a commitment to subcontract in excess of 25 percent of the dollar amount of all subcontracts to be awarded to businesses that meet the qualifications described above; or
- d) Businesses located within the City/County's jurisdiction that identifies themselves as Section 3 Business Concerns because they provide economic opportunities for low- and very low-income persons.

Bank References

Address: _____ Contact Name: _____
City & State: _____ Zip: _____ Phone Number: _____
Credit available: \$ _____

Has the firm or predecessor firm been involved in a bankruptcy or reorganization? ☐ Yes ☐ No
(If yes, please attach summary of details on a separate sheet.)

List on a sheet attached hereto all judgements, claims, arbitration proceedings, or suits pending or outstanding against bidder over the last five (5) years with amount of claim and brief description.

List on a sheet attached hereto all lawsuits or requested arbitration with regard to construction contracts which bidder has initiated within the last five (5) years and brief explanation of claim and outcome.

Attach resume(s) for the principal member(s) of your organization, including the officers as well as the proposed superintendent for the project.

Signed this _____ day of _____, 20____.

Signature

Printed Name and Title

Company Name

Notary Statement:

_____ being duly sworn, says that he/she is the _____ Position/Title
_____ of _____ (Firm Name), and hereby swears that the answers to the foregoing
questions and all statements therein contained are true and correct. He/she hereby authorizes and requests any person,
firm, or corporation to furnish any information requested City/County of _____ in verification of the
recitals comprising this Statement of Bidder's Qualifications.

Subscribed and sworn before me this _____ day of _____, 20____.

Notary Public

Signature

Printed Name

My Commission Expires: _____,

The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.

CONFLICT OF INTEREST QUESTIONNAIRE

For vendor doing business with local governmental entity

FORM CIQ

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of vendor who has a business relationship with local governmental entity.

2 ☐ Check this box if you are filing an update to a previously filed questionnaire. (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 Name of local government officer about whom the information is being disclosed.

Name of Officer

4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes

☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes

☐ No

5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7

Signature of vendor doing business with the governmental entity

Date

CONFLICT OF INTEREST QUESTIONNAIRE

For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

- (1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);
- (2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or
- (3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

- (A) begins discussions or negotiations to enter into a contract with the local governmental entity; or
- (B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

- (A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);
- (B) that the vendor has given one or more gifts described by Subsection (a); or
- (C) of a family relationship with a local government officer.

CONTRACTOR'S CERTIFICATION of RECOVERED MATERIAL

ACKNOWLEDGEMENT

I, _____ (Principal's Name) of _____ (Company Name) _____, (hereinafter called "Contractor"), acknowledge the recovered material bidding requirements found in 2 CFR 200.322 that requires the Contractor to procure those items designated in the guidelines of the Environmental Protection Agency (EPA) at 40 CFR 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition.

I also acknowledge that this requirement shall apply to items purchased (1) where the Contractor purchases in excess of \$10,000 of the item under this contract; or (2) where during the preceding fiscal year, the value of the quantity acquired was in excess of \$10,000.

Finally, I acknowledge the attached list of recovered materials included in the bid documents.
(For up-to-date listing, please go to <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program#directory>)

Printed Name and Title

Signature

Date

USE OF RECOVERED MATERIAL

Please check one:

- ☐ Recovered materials are included in this bid:
Materials included _____
- ☐ Recovered materials are not reasonably available in a reasonable period of time.
- ☐ Recovered materials fail to meet reasonable performance standards, which are determined on the basis of the guidelines of the National Institute of Standards and Technology, if applicable.
- ☐ Recovered materials are only available at an unreasonable price.

Printed Name and Title

Signature

Date

NONCOLLUSION AFFIDAVIT OF PRIME BIDDER

State of Texas)

County of _____)

_____, being first duly sworn, deposes and says that:

(1) He/She is _____ of _____, the Bidder that has submitted the attached Bid;

(2) He/She is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with another Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix an overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the _____ (Local Public Agency) or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

Title

Subscribed and sworn to me this _____ day of _____.

By: _____
Notary Public

My commission expires _____

CONTRACTOR CERTIFICATIONS

U.S. Department of Housing and Urban Development

CERTIFICATION OF BIDDER REGARDING CIVIL RIGHTS LAWS AND REGULATIONS

INSTRUCTIONS

CERTIFICATION OF BIDDER REGARDING Executive Order 11246 and Federal Laws Requiring Federal Contractor to adopt and abide by equal employment opportunity and affirmative action in their hiring, firing, and promotion practices. This includes practices related to race, color, gender, religion, national origin, disability, and veterans' rights.

NAME AND ADDRESS OF BIDDER (include ZIP Code)

CERTIFICATION BY BIDDER

Bidder has participated in a previous contract or subcontract subject to Civil Rights Laws and Regulations.

☐ Yes

☐ No

The undersigned hereby certifies that:

- ☐ The Provision of Local Training, Employment, and Business Opportunities clause (Section 3 provision) is included in the Contract. A written Section 3 plan (Local Opportunity Plan) was prepared and submitted as part of the bid proceedings (if bid equals or exceeds \$100,000).
- ☐ The Equal Opportunity clause is included in the Contract (if bid equals or exceeds \$10,000).

Have you ever been or are you being considered for sanction due to violation of Executive Order 11246, as amended?

☐ Yes

☐ No

NAME AND TITLE OF SIGNER (Please type)

SIGNATURE

DATE

CONTRACTOR'S LOCAL OPPORTUNITY PLAN

(name of company) agrees to implement the following specific affirmative action steps directed at increasing the utilization of lower income residents and businesses within the (City/County) of _____.

- A. To ascertain from the City/County's CDBG program official the exact boundaries of the project area and where advantageous, seek the assistance of local officials in preparing and implementing the affirmative action plan.
- B. To attempt to recruit from within the city the necessary number of lower income residents through: local advertising media, signs placed at the proposed site for the project, and community organizations and public or private institutions operating within and servicing the project area such as Service Employment and Redevelopment (SER), Opportunities Industrialization Center (OIC), Urban League, Concentrated Employment Program, Hometown Plan, or the U.S. Employment Service.
- C. To maintain a list of all lower income residents who have applied either on their own or on referral from any source, and to employ such persons, if otherwise eligible and if a vacancy exists.
- D. To insert this plan in all bid documents and to require all bidders on subcontracts to submit an affirmative action plan including utilization goals and the specific steps planned to accomplish these goals.
- E. To ensure that subcontracts (greater than \$10,000), which are typically let on a negotiated rather than a bid basis in areas other than the covered project area, are also let on a negotiated basis, whenever feasible, in a covered project area.
- F. To formally contact unions, subcontractors, and trade associations to secure their cooperation in this effort.
- G. To ensure that all appropriate project area business concerns are notified of pending sub-contractual opportunities.
- H. To maintain records, including copies of correspondence, memoranda, etc., which document that all of the above affirmative action steps have been taken.
- I. To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of this plan.
- J. To maintain records concerning the amount and number of contracts, subcontracts, and purchases which contribute to objectives.
- K. To maintain records of all projected work force needs for all phases of the project by occupation, trade, skill level, and number of positions and to update these projections based on the extent to which hiring meets these Local Opportunity objectives.

As officers and representatives of (name of company), we the undersigned have read and fully agree to this Plan and the City/County's Section 3 Plan, and become a party to the full implementation of the program and its provisions.

Signature

Printed Name

Title

Date

Instructions for Proposed Contracts Breakdown and Estimated Project Workforce Breakdown

Proposed Contracts Breakdown

Type of Contracts – list all construction, materials, or other types of subcontracts (for example: electrical, plumbing, concrete, boring, etc.)

No. of Contracts – Number of contracts under this category

Approximate Total Dollar Amount – Total amount of each contract

Estimated No. to Local Business – Number of contracts awarded to local businesses and Section 3 businesses

Estimated \$ Amount to Local Business - How many dollars will be spent locally for each type of contract? For example: will you hire any local employees or subcontractors?

Estimated Project Workforce Breakdown

Work Classifications – Classification of project employees as defined on Wage Rate

Total Estimated Positions – List the number employees for each work classification will you need on this project

Number of Positions Currently Filled – List the number of estimated positions you currently have filled

Number of Positions Not Filled – List the number of estimated positions you currently do not have filled

Number of Positions to Fill with Low to Moderate Income (Section 3) Residents – List the number of local residents earning low to moderate incomes that you plan to employ to fill the estimated positions not filled

PROPOSED CONTRACTS BREAKDOWN

Type of Contracts	No. of Contracts	Approx. Total Dollar Amount	Estimated No. to local Business	Estimated \$ Amount Local Business

ESTIMATED PROJECT WORKFORCE BREAKDOWN

Work Classifications	Total Estimated Positions	No. of Positions Currently Filled	No. of Positions not Filled	No. of Positions to fill with LMI Residents (Section 3)
Totals				



Texas General Land Office
Community Development Block Grant (CDBG)
Disaster Recovery Program

CERTIFICATION FOR BUSINESS CONCERNS
Seeking Section 3 Preference in Contracting and
Demonstration of Capability

Economic Opportunities for Low and Very Low-Income Persons

Grantee/Subrecipient:	Contract Number:	Date:

CONTRACTOR INFORMATION

Name of Business

Address of Business

Type of Business: ☐ Corporation ☐ Partnership ☐ Non-Profit
☐ Sole Proprietorship ☐ Joint Venture Consortium

Attach the following documentation as evidence of Section 3 eligible status:
(Definition of "Section 3 Business Concern" in 24 CFR 135 describes the three alternative qualifications.)

For Business claiming status as a Section 3 resident-owned enterprise:

- | | |
|---|---|
| ☐ Copy of resident lease | ☐ Copy of receipt of public assistance |
| ☐ Copy of evidence of participation in a public assistance program | ☐ Other evidence |

For business entity as applicable:

- | | |
|---|---|
| ☐ Copy of Articles of Incorporation | ☐ Certificate of Good Standing |
| ☐ Assumed Business Name Certificate | ☐ Partnership Agreement |
| ☐ List of owners/stockholders and % ownership of each appointed officers | ☐ Corporation Annual Report |
| ☐ Organization chart with names and titles and brief function statement | ☐ Latest Board minutes |
| | ☐ Additional documentation |

For business entity claiming Section 3 status by subcontracting 25 percent of the dollar awarded to qualified Section 3 business(es):

- ☐ List of subcontracted Section 3 business(es) and subcontract amount

For business claiming Section 3 status, by claiming at least 30 percent of their workforce are currently Section 3 residents or were Section 3 eligible residents within 3 years of date of first employment with the business:

- | | |
|---|---|
| ☐ List of all current full-time employees | ☐ List of employees claiming Section 3 status |
| ☐ PHA/IHA Residential lease less than 3 years from day of employment | ☐ Other evidence of Section 3 status less than 3 years from date of employment |

Evidence of ability to perform successfully under the terms and conditions of the proposed contract:

- | | |
|---|--|
| ☐ Current financial statement | ☐ Statement of ability to comply with public policy |
| ☐ List of owned equipment | |
| ☐ List of all contracts for the past two years | |

Authorized Name and Signature _____

Date _____

(Corporate Seal)

Attested By: _____

CERTIFICATION REGARDING LOBBYING
COMPLIANT WITH APPENDIX A TO 24 C.F.R. PART 87*

(To be submitted with each bid or offer exceeding \$100,000)

Certification for Contracts, Grants, Loans, and Cooperative Agreements:

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

(1) 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.

(2) 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.

(3) 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.

Statement for Loan Guarantees and Loan Insurance:

The undersigned states, to the best of his or her knowledge and belief, that: If any 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 commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions. Submission of this statement 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 statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the duly authorized representative of the Contractor, I hereby certify that the applicant will comply with the above applicable certification.

Signature of Contractor's Authorized Official

Printed Name and Title of Contractor's Authorized Official

Date

*24 C.F.R. 87 App. A, available at <https://www.gpo.gov/fdsys/granule/CFR-2011-title24-vol1/CFR-2011-title24-vol1-part87-appA>. Published Apr. 1, 2011. Accessed Aug. 1, 2018.

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity 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 a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 4040-0013. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (4040-0013), Washington, DC 20503

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure)

1. Type of Federal Action: _____ a. contract _____ b. grant _____ c. cooperative agreement _____ d. loan _____ e. loan guarantee _____ f. loan insurance	2. Status of Federal Action: _____ a. bid/offer/application _____ b. initial award _____ c. post-award	3. Report Type: _____ a. initial filing _____ b. material change For material change only: Year _____ quarter _____ Date of last report _____
4. Name and Address of Reporting Entity: _____ Prime _____ Subawardee Tier _____, if Known: Congressional District, if known:		5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime: Congressional District, if known:
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, if applicable: _____	
8. Federal Action Number, if known:	9. Award Amount, if known: \$ _____	
10. a. Name and Address of Lobbying Registrant <i>(if individual, last name, first name, MI):</i>	b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i>	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____	
Federal Use Only	Authorized for Local Reproduction Standard Form - LLL (Rev. 7-97)	

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we the undersigned, _____ as
PRINCIPAL, and _____, as SURETY are held and firmly bound unto
(City/County) hereinafter called the "Local Public Agency", in the penal sum of _____
_____ Dollars, (\$_____), lawful money of the United States, for the payment of which sum well and truly to be
made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by
these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted the Accompanying Bid,
dated _____, for _____

NOW, THEREFORE, the Principal shall not withdraw said Bid within the period specified therein after the opening of the
same, or, if no period be specified, within thirty (60) days after the said opening, and shall within the period specified therefor,
or if no period be specified, within ten (10) days after the prescribed forms are presented to him for signature, enter into a
written contract with the Local Public Agency in accordance with the Bid as accepted, and give bond with good and sufficient
surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract; or in the event of
the withdrawal of said Bid within the period specified, or the failure to enter into such Contract and give such bond within
the time specified, if the Principal shall pay the Local Public Agency the difference between the amount specified in said Bid
and the amount for which the local Public Agency may procure the required work or supplies or both, if the latter be in
excess of the former, then the above obligation shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS THEREOF, the above parties have executed this instrument this _____ day of _____
_____, the name and corporate seal of each corporate party being hereto affixed and these present signed by its
undersigned representative, pursuant to authority of its governing body.

(SEAL)

(SEAL)

Attest:

By: _____

Affix
Corporate
Seal

Attest:

By: _____

Affix
Corporate
Seal

Attest:

By: _____

Countersigned

By _____

* Attorney-in-Fact, State of Texas

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the Secretary of the Corporation named as Principal in the bid bond; that _____
_____, who signed the said bond on behalf of the Principal was then _____ of said corporation; that
I know his/her signature, and his/her signature thereto is genuine; and that said bond was duly signed, sealed, and
attested to, on behalf of said corporation by authority of its governing body.

Corporate
Seal

Title: _____

* Power-of-attorney for person signing for Surety Company must be attached to bond.

CONSTRUCTION CONTRACT

THIS AGREEMENT made this the _____ day of _____, _____, by and between _____ (a corporation organized and existing under the laws of the State of _____) (a partnership consisting of _____) (an individual trading as _____) [Note 1] hereinafter called the "Contractor", and _____ hereinafter called the "City/County."

WITNESSETH, that the Contractor and the City/County for the considerations stated herein mutually agree as follows:

ARTICLE 1. Statement of Work. The Contractor shall furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment and services, including utility and transportation services, and perform and complete all work required for the construction of the Improvements embraced in the Project; namely, _____ [Note 2] for the _____ Texas Community Development Block Grant (TxCDBG) project, all in strict accordance with the contract documents including all addenda thereto, numbered _____, dated _____ and _____, all as prepared by _____ acting and in these contract documents preparation, referred to as the "Engineer".

Special Notes:

Note 1. Strike out the terms not applicable.

Note 2. Identify the principal items of Contract such as grading, paving, water mains, sewer lines, treatment facilities, etc.

ARTICLE 2. The Contract Price. The City/County will pay the Contractor for the performance of the Contract in current funds, for the total quantities of work performed at the *unit prices* stipulated in the Bid for the several respective items of work completed subject to additions and deductions as provided in _____ hereof.

ARTICLE 3. The Contract. The executed contract documents shall consist of the following components:

- | | |
|------------------------------|---|
| a. This Agreement (pgs. 1-3) | f. General Conditions, Part I |
| b. Addenda | g. Special Conditions |
| c. Invitation for Bids | h. Technical Specifications |
| d. Instructions to Bidders | i. Drawings (as listed in the Schedule of Drawings) |
| e. Signed Copy of Bid | j. [Add any applicable documents] |

ARTICLE 4. Performance. Work, in accordance with the Contract dated _____, _____, shall commence on or before _____, _____, and Contractor shall complete the WORK within _____ consecutive calendar days thereafter. The date of completion of all WORK is therefore _____, _____.

This Agreement, together with other documents enumerated in this ARTICLE 3, which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto. In the event that any provision in any component part of this Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this ARTICLE 3 shall govern, except as otherwise specifically stated.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in triplicate (Note 3) original copies on the day and year first above written. (Note 3)

(The Contractor)

By _____ [Note 4]

Title _____

(City/County)

By _____

Title _____

Special Notes:

Note 3. The number of copies to be executed by the parties should be stated in the agreement in the space provided. Such additional signed copies shall be prepared as may be required by the surety companies and others.

Note 4. Supply a description of the Contractor (e.g., proprietorship, partnership, and corporation).

Corporate Certifications

I, _____, certify that I am the _____ of the corporation named as Contractor herein; that _____, who signed this Agreement on behalf of the Contractor, was then _____ of said corporation; that said Agreement was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

Corporate
Seal

(Corporate Secretary)

GENERAL CONDITIONS - PART I FOR CONSTRUCTION

1. Contract and Contract Documents

- a. The project to be constructed pursuant to this contract will be financed with assistance from the General Land Office (GLO) through the Community Development Block Grant – Mitigation (CDBG-MIT) fund and is subject to all applicable Federal and State laws and regulations.
- b. The Plans, Specifications and Addenda shall form part of this contract and the provisions thereof shall be binding upon the parties as if they were herein fully set forth.

2. Definitions

Whenever used in any of the Contract Documents, the following meanings shall be given to the terms here in defined:

- (a) The term "Contract" means the Contract executed between the (Name of City/County), hereinafter called the "City/County" and (Name of Construction Co.), hereinafter called "Contractor", of which these GENERAL CONDITIONS, form a part.
- (b) The term "Project Area" means the area within the specified Contract limits of the Improvements contemplated to be constructed in whole or in part under this contract.
- (c) The term "Engineer" means (name of engineering firm), Engineer in charge, serving the City/County with architectural or engineering services, his successor, or any other person or persons, employed by the City/County for the purpose of directing or having in charge the work embraced in this Contract.
- (d) The term "Contract Documents" means and shall include the following: Executed Contract, Addenda (if any), Invitation for Bids, Instructions to Bidders, Signed Copy of Bid, General Conditions, Special Conditions, Technical Specifications, and Drawings (as listed in the Schedule of Drawings).

3. Supervision By Contractor

- (a) Except where the Contractor is an individual and personally supervises the work, the Contractor shall provide a competent superintendent, satisfactory to the Engineer, on the work at all times during working hours with full authority to act as Contractor's agent. The Contractor shall also provide adequate staff for the proper coordination and expediting of his work.
- (b) The Contractor shall be responsible for all work executed under the Contract. Contractor shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

4. Subcontracts

- (a) The Contractor shall not execute an agreement with any subcontractor or permit any subcontractor to perform any work included in this contract until Contractor has verified the subcontractor has been cleared (not suspended or debarred) to participate in federally funded contracts.
- (b) No proposed subcontractor shall be disapproved by the City/County except for cause.
- (c) The Contractor shall be as fully responsible to the City/County for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them.

- (d) The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work and required compliance by each subcontractor with the applicable provisions of the Contract.
- (e) Nothing contained in the Contract shall create any contractual relation between any subcontractor and the City/County.
- (f) Contractors are encouraged to subcontract with Minority Business Enterprises, Small Business Enterprises, Women Business Enterprises, and labor surplus area firms.

5. Fitting and Coordination of Work

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, subcontractors, or material suppliers engaged upon this Contract.

6. Payments to Contractor

(a) Partial Payments

- 1) The Contractor shall prepare the requisition for partial payment as of the last day of the month and submit it, with the required number of copies, to the Engineer for approval. The amount of the payment due the Contractor shall be determined by adding to the total value of work completed to date, the value of materials properly stored on the site and deducting (1) five percent (5%) of the total amount, to be retained until final payment, and (2) the amount of all previous payments. The total value of work completed to date shall be based on the estimated quantities of work completed and on the unit prices contained in the agreement. The value of materials properly stored on the site shall be based upon the estimated quantities of such materials and the invoice prices. Copies of all invoices shall be available for inspection of the Engineer.
- 2) Monthly or partial payments made by the City/County to the Contractor are advanced for the purpose of assisting the contractor to expedite the work of construction. The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the City/County. Such payments shall not constitute a waiver of the right of the City/County to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the City/County in all details.

(b) Final Payment

- 1) After final inspection and the acceptance by the City/County of all work under the Contract, the Contractor shall prepare the requisition for final payment which shall be based upon the careful inspection of each item of work at the applicable unit prices stipulated in the Contract. The total amount of the final payment due the Contractor under this Contract shall be the amount computed as described above less all previous payments.
- 2) Before paying the final estimate, City/County shall require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the Project) and services to the Contractor. The City/County may make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments made shall in no way impair the obligations of any surety or sureties furnished under this Contract.
- 3) Any amount due the City/County under Liquidated Damages, shall be deducted from the final payment due the contractor.

(c) Payments Subject to Submission of Certificates

Each payment to the Contractor by the City/County shall be made subject to submission by the Contractor of all written certifications required of it and its subcontractors.

(d) Withholding Payments

The City/County may withhold any payment due the Contractor as deemed necessary to protect the City/County, and if so elects, may also withhold any amounts due from the Contractor to any subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the City/County and will not require the City/County to determine or adjust any claims or disputes between the Contractor and its subcontractors or material dealers, or to withhold any moneys for their protection unless the City/County elects to do so. The failure or refusal of the City/County to withhold any moneys from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

7. Changes in the Work

- (a) The City/County may make changes in the scope of work required to be performed by the Contractor under the Contract without relieving or releasing the Contractor from any obligations under the Contract or any guarantee given pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise. Additionally, all such change orders must be approved by CDBG-MIT prior to execution of same.
- (b) Except for the purpose of affording protection against any emergency endangering health, life, limb or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the City/County authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract Price will be valid unless so ordered.
- (c) If applicable unit prices are contained in the Contract, the City/County may order the Contractor to proceed with desired unit prices specified in the Contract; provided that in case of a unit price contract the net value of all changes does not increase the original total amount of the agreement by more than twenty-five percent (25%) or decrease the original total amount by more than twenty-five percent (25%) for municipalities and eighteen percent (18%) for counties without the written consent of the contractor. [Texas Local Government Code Section 252.048(d) and Section 262.031(b)]
- (d) Each change order shall include in its final form:
 - 1) A detailed description of the change in the work.
 - 2) The Contractor's proposal (if any) or a confirmed copy thereof.
 - 3) A definite statement as to the resulting change in the contract price and/or time.
 - 4) The statement that all work involved in the change shall be performed in accordance with contract requirements except as modified by the change order.
 - 5) The procedures as outlined in this Section for a unit price contract also apply in any lump sum contract.

8. Claims for Extra Cost

- (a) If the Contractor claims that any instructions by Drawings or otherwise involve extra cost or extension of time, he shall, within ten days after the receipt of such instructions, and in any event before proceeding to execute the work, submit his protest thereto in writing to the City/County, stating clearly and in detail the basis of his objections. No such claim will be considered unless so made.

- (b) Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.
- (c) Any discrepancies which may be discovered between actual conditions and those represented by the Drawings and maps shall be reported at once to the City/County and work shall not proceed except at the Contractor's risk, until written instructions have been received from the City/County.
- (d) If, on the basis of the available evidence, the City/County determines that an adjustment of the Contract Price and/or time is justifiable, a change order shall be executed.

9. Termination, Delays, and Liquidated Damages

Right of the City/County to Terminate Contract for Convenience

City/County may at any time and for any reason terminate Contractor's services and work at City/County's convenience upon providing written notice to the Contractor specifying the extent of termination and the effective date. Upon receipt of such notice, Contractor shall, unless the notice directs otherwise, immediately discontinue the work and placing of orders for materials, facilities and supplies in connection with the performance of this Agreement.

Upon such termination, Contractor shall be entitled to payment only as follows: (1) the actual cost of the work completed in conformity with this Agreement plus (2) such other costs actually incurred by Contractor as are permitted by the prime contract and approved by City/County. There shall be deducted from such sums as provided in this subparagraph the amount of any payments made to Contractor prior to the date of the termination of this Agreement. Contractor shall not be entitled to any claim or claim of lien against City/County for any additional compensation or damages in the event of such termination and payment.

Right of the City/County to Terminate Contract for Cause

If the Contractor fails to fulfill in a timely and proper manner its obligations under this Agreement, or if the Contractor violates any of the covenants, conditions, agreements, or stipulations of this Agreement, the City/County shall have the right to terminate this Agreement by giving written notice to the Contractor of such termination and specifying the effective date thereof, which shall be at least five days before the effective date of such termination. In the event of termination for cause, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared by the Contractor pursuant to this Agreement shall, at the option of the City/County, be turned over to the City / County and become the property of the City / County. In the event of termination for cause, the Contractor shall be entitled to receive reasonable compensation for any necessary services actually and satisfactorily performed prior to the date of termination.

Notwithstanding the above, the Contractor shall not be relieved of liability to the City/County for damages sustained by the City/County by virtue of any breach of contract by the Contractor, and the City/County may set-off the damages it incurred as a result of the Contractor's breach of contract from any amounts it might otherwise owe the Contractor. 2 CFR 200 APPENDIX II(B)

(a) Liquidated Damages for Delays.

If the work is not completed within the time stipulated in the applicable bid for Lump Sum or Unit Price Contract provided, the Contractor shall pay to the City/County as fixed, agreed, and liquidated damages (it being impossible to determine the actual damages occasioned by the delay) the amount of \$500 for each calendar day of delay, until the work is completed. The Contractor and Contractor's sureties shall be liable to the City/County for the amount thereof.

(b) Excusable Delays.

- 1) The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due to:
- 2) Any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, national defense, or any other national emergency;
- 3) Any acts of the City/County;
- 4) Causes not reasonably foreseeable by the parties to this Contract at the time of execution which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God, terrorism, war, acts of another Contractor in the performance of some other contract with the City/County, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions.
- 5) Provided, however, that the Contractor promptly notifies the City/County within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the City/County shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this contract, the delay is properly excusable, the City/County shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

10. Assignment or Novation

The Contractor shall not assign nor transfer, whether by assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the City/County. No assignment or novation of this Contract shall be valid unless the assignment or novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools, and equipment supplied for the performance of the work under this Contract in favor of all persons, Contractors, or corporations rendering such labor or services or supplying such materials, tools, or equipment.

11. Technical Specifications and Drawings

Anything mentioned in the Technical Specifications and not shown on the Drawings or vice versa, shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in Drawings, or Technical Specifications, the matter shall be immediately submitted to the City/County for review. Contractor shall be liable for any issues or expenses in the event the discrepancy is not submitted to the City/County.

12. Shop Drawings

- (a) All required shop drawings, machinery details, layout drawings, etc. shall be submitted to the Engineer in one (1) electronic copy for approval sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking if necessary. The Contractor may proceed, only at Contractor's own risk, with manufacture or installation of any equipment or work covered by said shop drawings, etc. until they are approved and no claim, by the Contractor, for extension of the contract time shall be granted by reason of his failure in this respect.
- (b) Any drawings submitted without the Contractor's stamp of approval will not be considered and will be returned to him for proper resubmission. If any drawings show variations from the requirements of the Contract because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of contract price and/or time, otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been approved.

- (c) If a shop drawing is in accordance with the contract or involves only minor adjustment in the interest of the City/County not involving a change in contract price or time, the engineer may approve the drawing. The approval shall not relieve the Contractor from responsibility to adhere to the contract or for any error in the drawing.

13. Requests for Supplementary Information

It shall be the responsibility of the Contractor to make timely requests of the City/County for any additional information which should be furnished by the City/County under the terms of this Contract, and which is required in the planning and execution of the work. Such requests may be submitted from time to time as the need approaches, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and the latest date by which each will be required by the Contractor. The first list shall be submitted within two weeks after Contract award and shall be as complete as possible at that time. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provision of this section.

14. Materials and Workmanship

- (a) Unless otherwise specifically provided for in the technical specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the technical specifications as "equal to" any particular standard, the Engineer shall decide the question of equality.
- (b) The Contractor shall furnish to the City/County for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics, and all other pertinent information as required, and shall likewise submit for approval full information concerning all other materials or articles which he proposes to incorporate.
- (c) Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- (d) Materials specified by reference to the number or symbol of a specific standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to type, class or grade, or modified in the technical specifications shall have full force and effect as though printed therein.
- (e) The City/County may require the Contractor to dismiss from the work such employee or employees as the City/County or the Engineer may deem unqualified.

15. Samples, Certificates and Tests

- (a) The Contractor shall submit all material or equipment samples, certificates, affidavits, etc., as called for in the contract documents or required by the Engineer, promptly after award of the contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time.
- (b) Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed

information which will assist the Engineer in making a prompt decision regarding the acceptability of the sample. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.

- (c) Approval of any materials shall be general only and shall not constitute a waiver of the City/County's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.
- (d) Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:
 - 1) The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, except those samples taken on the project by the Engineer;
 - 2) The Contractor shall assume all costs of re-testing materials which fail to meet contract requirements;
 - 3) The Contractor shall assume all costs of testing materials offered in substitution for those found deficient;
 - 4) The City/County will pay all other expenses.

16. Permits and Codes

- (a) The Contractor shall give all notices required by and comply with all applicable federal and state laws, ordinances, and codes of the Local Government. All construction work and/or utility installations shall comply with all applicable ordinances, and codes including all written waivers. Before installing any work, the Contractor shall examine the drawings and technical specifications for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the City/County. Where the requirements of the drawings and technical specifications fail to comply with such applicable ordinances or codes, the City/County will adjust the Contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices.
- (b) Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility at variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the drawings and technical specifications), the Contractor shall remove such work without cost to the City/County.
- (c) The Contractor shall at his own expense, secure and pay for all permits for street pavement, sidewalks, shed, removal of abandoned water taps, sealing of house connection drains, pavement cuts, buildings, electrical, plumbing, water, gas and sewer permits required by the local regulatory body or any of its agencies.
- (d) The Contractor shall comply with applicable local laws and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the Improvements contained in this Contract.
- (e) The Contractor will be required to make arrangements for and pay the water, electrical power, or any other utilities required during construction.
- (f) During construction of this project, the Contractor shall use every means possible to control the amount of dust created by construction. Prior to the close of a day's work, the Contractor, if directed by the City/County, shall moisten the surrounding area to prevent a dusty condition.

17. Care of Work

- (a) The Contractor shall be responsible for all damages to person or property that occur as a result of its fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance.
- (b) The Contractor shall provide sufficient competent watchmen, both day and night, including Saturdays, Sundays, and holidays, from the time the work is commenced until final completion and acceptance.
- (c) In an emergency affecting the safety of life, limb or property, including adjoining property, the Contractor, without special instructions or authorization from the City/County is authorized to act to prevent such threatened loss or injury. Contractor shall follow all instructions of City/County.
- (d) The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and shall be responsible for completely repairing any damage thereto caused by the operations.
- (e) The Contractor shall shore up, brace, underpin, secure, and protect as maybe necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the improvements included in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the City/County from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the City/County may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

18. Accident Prevention

- (a) No laborer or mechanic employed in the performance of this Contract shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety as determined under construction safety and health standards promulgated by the Department of Labor.
- (b) The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work.
- (c) The Contractor shall maintain an accurate record of all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the City/County with reports concerning these matters.
- (d) The Contractor shall indemnify and hold harmless the City/County from any claims for damages resulting from property damage, personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this contract.
- (e) The Contractor shall provide trench safety for all excavations more than five feet deep prior to excavation. All OSHA Standards for trench safety must be adhered to by the Contractor.
- (f) The contractor shall at all times conduct work in such a manner as to ensure the least possible inconvenience to vehicular and pedestrian traffic. At the close of the work each day, all streets where possible in the opinion of the City/County, shall be opened to the public in order that persons living in the area may have access to their homes or businesses by the use of the streets. Barricades, warning signs, and necessary lighting shall be provided to the satisfaction of the City/County at the expense of the Contractor.

19. Sanitary Facilities

The Contractor shall furnish, install and maintain ample sanitary facilities for laborers. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

20. Use of Premises

- (a) The Contractor shall confine equipment, storage of materials, and construction operations to the contract limits as shown on the drawings and as prescribed by ordinances or permits, or as may be desired by the City/County, and shall not unreasonably encumber the site or public rights of way with materials and construction equipment.
- (b) The Contractor shall comply with all reasonable instructions of the City/County and all existing federal, state and local regulations regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

21. Removal of Debris, Cleaning, Etc.

The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights of way reasonably clear. Upon completion of the work, he shall remove all temporary construction facilities, debris and unused materials provided for work, and put the whole site of the work and public rights of way in a neat and clean condition.

22. Inspection

- (a) All materials and workmanship shall be subject to inspection, examination, or test by the City/County and Engineer at any and all times during manufacture or construction and at any and all places where such manufacture or construction occurs. The City/County shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected. Rejected material shall be promptly segregated and removed from the Project Area and replaced with material of specified quality without charge. If the Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the City/County may by contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any Monies which may be due the Contractor, without prejudice to any other rights or remedies of the City/County.
- (b) The Contractor shall furnish promptly all materials reasonably necessary for any tests which may be required. All tests by the City/County will be performed in such manner as not to delay the work unnecessarily and will be made in accordance with the provisions of the technical specifications.
- (c) The Contractor shall notify the City/County sufficiently in advance of back filling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the City/County, the Contractor shall uncover for inspection and recover such facilities at Contractor's expense, when so requested by the City/County.
- (d) Should it be considered necessary or advisable by the City/County at any time before final acceptance of the entire work to make an examination of work already completed, the Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any important or essential respect, due to fault of the Contractor or subcontractors, the Contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, shall be reimbursable and if completion of the work of the entire Contract has been delayed, a suitable extension of time will be approved.

- (e) Inspection of materials and appurtenances to be incorporated in the improvements included in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such inspection and acceptance, unless otherwise stated in the technical specifications, shall be final, except as regards to: (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the inspection of materials as a whole or in part will be made at the Project Site.
- (f) Neither inspection, testing, approval nor acceptance of the work in whole or in part, by the City/County or its agents shall relieve the Contractor or its sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

23. Review by City/County

The City/County and its authorized representatives and agents shall have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however that all instructions and approval with respect to the work will be given to the Contractor only by the City/County through its authorized representatives or agents.

24. Final Inspection

When the Improvements included in this Contract are substantially completed, the Contractor shall notify the City/County in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The City/County will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable.

25. Deduction for Uncorrected Work

If the City/County deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the City/County and subject to settlement, in case of dispute, as herein provided.

26. Insurance

The Contractor shall not commence work under this contract until all required insurance under this paragraph has been secured and approved by the City/County.

- (a) Worker's Compensation Insurance: The Contractor shall procure and shall maintain during the life of this contract Worker's Compensation Insurance as required by the State of Texas for all of his employees to be engaged in work at the site of the project under this contract and, in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Worker's Compensation Insurance.
- (b) Contractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance. The Contractor shall procure and shall maintain during the life of this contract Contractor's Public Liability Insurance, Contractor's Property Damage Insurance and Vehicle Liability Insurance in the following amounts: One Million Dollars (\$1,000,000).
- (c) Proof of Insurance: The Contractor shall furnish the City/County with certificates showing the type, amount, class of operations covered, effective dates and date of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered, except after ten (10) days written notice has been received by the City/County."

27. Warranty of Title

No material, supplies, or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease-purchase or other agreement by which an interest is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same, together with all improvements and appurtenances constructed or placed by Contractor, to the City/County free from any claims, liens, or charges. Neither the Contractor nor any person, firm, or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any law permitting such persons to look to funds due the Contractor. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

28. Warranty of Workmanship and Materials

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the improvements included in this Contract by the City/County or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of 12 months from the date of final acceptance of the work.

29. Job Offices

- (a) The Contractor and its subcontractors may maintain such office and storage facilities on the site as are necessary for the proper conduct of the work. These shall be located so as to cause no interference to any work to be performed on the site. The City/County shall be consulted with regard to locations.
- (b) Upon completion of the improvements, or as directed by the City/County, the Contractor shall remove all such temporary structures and facilities from the site, and leave the site of the work in the condition required by the Contract.

30. Partial Use of Site Improvements

The City/County may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the technical specifications and if in its opinion, each such section is reasonably safe, fit, and convenient for the use and accommodation for which it was intended, provided:

- (a) The use of such sections of the Improvements shall in no way impede the completion of the remainder of the work by the Contractor.
- (b) The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.

31. Contract Documents and Drawings

The City/County will furnish the Contractor without charge 1 copy of the Contract Documents, including Technical Specifications and Drawings. Additional copies requested by the Contractor will be furnished at cost.

32. Contract Period

The work to be performed under this contract shall commence within the time stipulated by the City/County in the Notice to Proceed, and shall be fully completed within 180 calendar days thereafter.

33. Liquidated Damages

Since the actual damages for any delay in completion of the work under this contract are impossible to determine, the Contractor and his Sureties shall be liable for and shall pay to the City/County the sum of Five Hundred Dollars (\$ 500) as fixed, agreed and liquidated damages for each calendar day of delay from the above stipulated time for completion.

ADMINISTRATIVE REQUIREMENTS

34. Local Program Liaison

For purposes of this Agreement, the [e.g. *City Manager/County Judge* _____] or equivalent authorized person will serve as the Local Program Liaison and primary point of contact for the Contractor. All required progress reports and communication regarding the project shall be directed to this liaison and other local personnel as appropriate.

35. Access to Information

(a) The U.S. Department of Housing and Urban Development (HUD), Inspectors General, the Comptroller General of the United States, the General Land Office (GLO), and the City/County, or any of their authorized representatives, shall have access to any documents, papers, or other records of the Contractor which are pertinent to the CDBG-MIT award, in order to make audits, examinations, excerpts, and transcripts, and to closeout the City's/County's CDBG-MIT contract with GLO. **2 CFR 200.336 (former 24 CFR 85.36(i)(10))**

The Office of the Comptroller General of the United States, the Government Accountability Office, the Office of Inspector General, or any authorized representative of the U.S. Government shall also have this right of inspection.

(b) Contractor shall include the substance of this clause in all subcontracts it awards.

36. Records Retention

(a) The Contractor shall retain all required records for three years after the City/County makes its final payment and all pending matters are closed. 2 CFR 200.333 (former 24 CFR (85.36(i)(11))

(b) Contractor shall include the substance of this clause in all subcontracts it awards.

FEDERAL REQUIREMENTS

37. Resolution of Program Non-Compliance and Disallowed Costs

In the event of any dispute, claim, question, or disagreement arising from or relating to this Contract, or the breach thereof, including determination of responsibility for any costs disallowed as a result of non-compliance with federal, state or CDBG-MIT program requirements, the parties hereto shall use their best efforts to settle the dispute, claim, question or disagreement. To this effect, the parties shall consult and negotiate with each other in good faith within 30 days of receipt of a written notice of the dispute or invitation to negotiate, and attempt to reach a just and equitable solution satisfactory to both parties. If the matter is not resolved by negotiation within 30 days of receipt of written notice or invitation to negotiate, the parties agree first to try in good faith to settle the matter by mediation administered by the American Arbitration Association under its Commercial Mediation Procedures before resorting to arbitration, litigation, or some other dispute resolution procedure. The parties may enter into a written amendment to this Contract and choose a mediator that is not affiliated with the American Arbitration Association. The parties shall bear the costs of such mediation equally. *[This section may also provide for the qualifications of the mediator(s), the locale of meetings, time limits, or any other item of concern to the parties.]* If the matter is not resolved through such mediation within 60 days of the initiation of that procedure, either party may proceed to file suit.

38. Compliance with Davis-Bacon Act

All laborers and mechanics employed upon the work covered by this Contract shall be paid unconditionally and not less often than once each week, and without subsequent deduction or rebate on any account (except such payroll deductions as are made mandatory by law and such other payroll deductions as are permitted by the applicable regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to the Anti-Kickback Act hereinafter identified), the full amount due at time of payment computed at wage rates not less than those contained in the wage determination decision of said Secretary of Labor (**a copy of which is attached as Attachment 23 and herein incorporated by reference**), regardless of any contractual relationship which may be alleged to exist between the Contractor or any subcontractor and such laborers and mechanics. All laborers and mechanics employed upon such work shall be paid in cash, except that payment may be by check if the employer provides or secures satisfactory facilities approved by the City/County for the cashing of the same without cost or expense to the employee. For the purpose of this clause, contributions made or costs reasonably anticipated under Section 1 (b) (2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section 5.5 (a) (1) (iv) of Title 29, Code of Federal Regulations. Also for the purpose of this clause, regular contributions made or costs incurred for more than a weekly period under plans, funds, or programs, but covering the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

The Contractor and its subcontractors shall not, by any means, induce any person employed in the construction, completion, or repair of public work, give up any part of the compensation to which he or she is otherwise entitled. The City/County must report all suspected or reported violations to GLO.

39. Conflicts of Interest

- (a) Governing Body. No member of the governing body of the City/County and no other officer, employee, or agent of the City/County, who exercises any functions or responsibilities in connection with administration, construction, engineering, or implementation of CDBG-MIT award between GLO and the City / County, shall have any personal financial interest, direct or indirect, in the Contractor or this Contract; and the Firm shall take appropriate steps to assure compliance.
- (b) Other Local Public Officials. No other public official, who exercises any functions or responsibilities in connection with the planning and carrying out of administration, construction, engineering or implementation of the CDBG-MIT award between GLO and the City/County, shall have any personal financial interest, direct or indirect, in the Contractor or this Contract; and the Contractor shall take appropriate steps to assure compliance.
- (c) The Contractor and Employees. The Contractor warrants and represents that it has no conflict of interest associated with the CDBG-MIT award between GLO and the City/County or this Contract. The Contractor further warrants and represents that it shall not acquire an interest, direct or indirect, in any geographic area that may benefit from the CDBG-MIT award between GLO and the City/County or in any business, entity, organization or person that may benefit from the award. The Contractor further agrees that it will not employ an individual with a conflict of interest as described herein.

40. Debarment and Suspension (Executive Orders 12549 and 12689)

The Contractor certifies, by entering into this Contract, that neither it nor its principals are presently debarred, suspended, or otherwise excluded from or ineligible for participation in federally-assisted programs under Executive Orders 12549 (1986) and 12689 (1989). The term "principal" for purposes of this Contract is defined as an officer, director, owner, partner, key employee, or other person with primary management or supervisory responsibilities, or a person who has a critical influence on or substantive control over the operations of the Contractor. The Contractor understands that it must not make any award or permit any award (or contract) at

any tier to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in Federal assistance programs under Executive Order 12549, "Debarment and Suspension."

A contract award (see 2 CFR 180.220) must not be made to parties listed on the government-wide Excluded Parties List System in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR Part 1986 Comp., p. 189) and 12689 (3 CFR Part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. 2 CFR 200 APPENDIX II (H)

41. [For Contracts that exceed \$100,000] Byrd Anti-Lobbying

Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award of \$100,000 or more must 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 must 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 non-Federal award.

Contractor shall file the required certification: The undersigned certifies, to the best of his or her knowledge and belief, that:

- (a) 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.
- (b) 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.
- (c) 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. 2 CFR 200 APPENDIX II (I) and 24 CFR §570.303

42. [For Contracts > \$100K] 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, including watchmen and guards, shall require or permit any laborer or mechanic in any workweek in which he is employed on such work to work in excess of 40 hours in such work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of 40 hours in such work week, as the case may be. 2 CFR 200 APPENDIX II (E)

43. Equal Opportunity Clause

Comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other non-discrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply.

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

- (a.) 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.
- (b.) 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 considerations for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (c.) The Contractor will not discourage 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.
- (d.) 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.
- (e.) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, "Equal Employment Opportunity," and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (f.) 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.
- (g.) 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.

- (h.) The Contractor will include the portion of the sentence immediately preceding paragraph (a) and the provisions of paragraphs (a) through (h) 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. 41 CFR §60-1.4(b) And 2 CFR 200 APPENDIX II (C)

44. Section 109 of the Housing and Community Development Act of 1974.

The Contractor shall comply with the provisions of Section 109 of the Housing and Community Development Act of 1974. No person in the United States shall on the ground of race, color, national origin, religion, or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title.

45. Davis-Bacon Act, as amended (40 U.S.C. 3141-3148).

When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. 2 CFR 200 APPENDIX II (D)

46. Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708).

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 (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, 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. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or

materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence. 2 CFR 200 APPENDIX II (E)

47. Section 504 Rehabilitation Act of 1973, as amended.

The Contractor agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.

48. Age Discrimination Act of 1975.

The Contractor shall comply with the Age Discrimination Act of 1975 which provides that no person in the United States shall on the basis of age be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

49. Non Segregated Facilities

The Contractor certifies that he does not and will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not and will not permit his employees any segregated facilities at any of his establishments, or permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. As used in this paragraph the term "segregated facilities" means any waiting rooms, work areas, rest rooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise.

50. The Provision of Local Training, Employment, and Business Opportunities

(a) To the greatest extent feasible opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by persons residing in the area of the project. See also GLO Section 3 Policy and "Exhibit G" on the GLO-DR website.

(b) The Contractor will include this clause in every subcontract for work in connection with the project.

51. *[If this Contract is greater than \$100,000]* Economic Opportunities for Section 3 Residents and Section 3 Business Concerns.

(a) The work to be performed under this Contract is subject to the requirements of section 3 of the Housing and Urban Development (HUD) Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

(b) The parties to this Contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this Contract, the parties to this Contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

(c) The Contractor agrees to send to each labor organization or representative of workers with which the Contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor

organization or workers' representative of the Contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

- (d) The Contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The Contractor will not subcontract with any subcontractor where the Contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.
- (e) The Contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the Contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the Contractor's obligations under 24 CFR part 135.
- (f) Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this Contract for default, and debarment or suspension from future HUD assisted contracts.
- (g) With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this Contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b). 24 CFR §135.38

52. Gender Neutral - Gender References

When necessary, unless the context clearly requires otherwise, any gender-specific or gender-neutral term in this Contract (for example, he, she, it, etc.) is to be read as referring to any other gender or to no gender.

53. Patent Rights and Inventions

Contractor shall comply with the requirements and regulations pertaining to patent rights with respect to any discovery or invention which arises or is developed in the course of or under such contract. (2 CFR 200 Appendix II (f) and Rights to Inventions in 37 CFR Part 401).

Rights to Inventions Made Under a Contract or Agreement - If the Federal award meets the definition of "funding agreement" under 37 CFR §401.2 (a) and the Subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the Subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

54. Energy Efficiency

The Contractor shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201). (2 CFR 200 Appendix II (h)).

55. System for Award Management (SAM)

All contractors and subcontractors must be searched AND cleared (not suspended or debarred) prior to authorization to work on the project.

56. Solid Waste Disposal Act

Contractor 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.

57. Procurement of Recovered Materials

(a) 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—

1. Competitively within a timeframe providing for compliance with the contract performance schedule;
2. Meeting contract performance requirements; or
3. At a reasonable price.

(c) Information about this requirement, along with the list of EPA-designate items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/>

58. Domestic Preference

a. As appropriate and to the extent consistent with law, 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 (including but not limited to iron, aluminum, steel, cement, and other manufactured products).

b. For purposes of section (a) above:

i. "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.

ii. "Manufactured products" means 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.

STATE REQUIREMENTS

58. Verification No Boycott Israel.

As required by Chapter 2270, Government Code, CONTRACTOR hereby verifies that it does not boycott Israel and will not boycott Israel through the term of this Agreement. For purposes of this verification, "boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or

entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes.

59. Foreign Terrorist Organizations.

Pursuant to Chapter 2252, Texas Government Code, [Company] represents and certifies that, at the time of execution of this Agreement neither [Company], nor any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of the same (i) engages in business with Iran, Sudan, or any foreign terrorist organization as described in Chapters 806 or 807 of the Texas Government Code, or Subchapter F of Chapter 2252 of the Texas Government Code, or (ii) is a company listed by the Texas Comptroller of Public Accounts under Sections 806.051, 807.051, or 2252.153 of the Texas Government Code. The term "foreign terrorist organization" in this paragraph has the meaning assigned to such term in Section 2252.151 of the Texas Government Code.

ENVIRONMENTAL CONDITIONS

60. [For Contracts > \$150K] Clean Air Act and the Federal Water Pollution Control Act

The Contractor or subcontractor shall 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). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). 2 CFR 200 APPENDIX II (G)

61. Lead-Based Paint

The Subrecipient agrees that any construction or rehabilitation of residential structures with assistance provided under this Agreement shall be subject to HUD Lead-Based Paint Regulations at 24 CFR 570.608, and 24 CFR Part 35, Subpart B. Such regulations pertain to all CDBG-assisted housing and require that all owners, prospective owners, and tenants of properties constructed prior to 1978 be properly notified that such properties may include lead-based paint. Such notification shall point out the hazards of lead-based paint poisoning and the advisability and availability of blood lead level screening for children under seven. The notice should also point out that if lead-based paint is found on the property, abatement measures may be undertaken. The regulations further require that, depending on the amount of Federal funds applied to a property, paint testing, risk assessment, treatment and/or abatement may be conducted.

62. Flood Disaster Protection

In accordance with the requirements of the Flood Disaster Protection Act of 1973 (42 U.S.C. 4001), the Subrecipient shall assure that for activities located in an area identified by the Federal Emergency Management Agency (FEMA) as having special flood hazards, flood insurance under the National Flood Insurance Program is obtained and maintained as a condition of financial assistance for acquisition or construction purposes (including rehabilitation).

63. Other Conditions

Any special conditions such as mitigation measures will be carried out as instructed by the Environmental Review Record. Enter Mitigation Measures from City/County Environmental Review Record as applicable

MINORITY/FEMALE GOALS AND TIMETABLES

The female employment goal is effective as of April 1980 and is currently 6.9%. The percentages for minority participation in Texas are:

Texarkana Area:

Texarkana & Bowie Co.	19.7
Non-MSA Counties of Camp, Cass, Lamar, Morris, Red River & Titus	20.2

Tyler-Longview Area:

Longview, Gregg Co. & Harrison Co.	22.8
Tyler & Smith Co.	23.5
Non-MSA Counties of Anderson, Angelina, Cherokee, Henderson, Marion, Nacogdoches, Panola, Rusk, San Augustine, Shelby, Upshur & Wood	22.5

Beaumont-Port Arthur Area:

Beaumont, Port Arthur, Orange, Hardin Co., Jefferson Co., & Orange Co.	22.6
Non-MSA Counties of Jasper, Houston, Newton, Sabine, & Tyler	22.6

Houston Area:

Bryan, College Station & Brazos Co.	23.7
Galveston, Texas City & Galveston Co.	28.9
Houston, Brazoria Co., Fort Bend Co., Harris Co., Liberty Co., Montgomery Co. & Waller Co.	27.3
Non-MSA Counties of Austin, Burleson, Calhoun, Chambers, Colorado, DeWitt, Fayette, Goliad, Grimes, Jackson, Lavaca, Leon, Madison, Matagorda, Polk, Robertson, San Jacinto, Trinity, Victoria, Walker, Washington, & Wharton	27.4

Austin Area:

Austin, Hays Co., Travis Co., & Williamson Co.	24.1
Non-MSA Counties of Bastrop, Blanco, Burnet, Caldwell, Lee & Llano	24.2

Waco, Killeen, Temple Area:

Killeen, Temple, Bell Co. & Coryell Co.	16.4
Waco & McLennan Co.	20.7
Non-MSA Counties of Bosque, Falls, Freestone, Hamilton, Hill, Lampasas, Limestone, Milam & Mills	18.6

Dallas, Fort Worth Area:

Dallas, Fort Worth, Collin Co., Dallas Co., Denton Co., Ellis Co., Hood Co., Johnson Co., Kaufman Co., Parker Co., Rockwall Co., Tarrant Co. & Wise Co.	18.2
Sherman, Denison & Grayson Co.	9.4
Non-MSA Counties of Cooke, Delta, Erath, Fannin, Franklin, Hopkins, Hunt, Jack, Montague, Navarro, Palo Pinto, Rains, Somervell, & Van Zandt	17.2

Wichita Falls Area:

Wichita Falls, Clay Co. & Wichita Co.	12.4
Non-MSA Counties of Archer, Baylor, Cottle, Foard, Hardeman, Wilbarger & Young	11.0

Abilene Area:

Abilene, Callaghan Co., Jones Co. & Taylor Co.	11.6
Non-MSA Counties of Brown, Coleman, Comanche, Eastland, Fisher, Haskell, Kent, Knox, Mitchell, Nolan, Scurry, Shackelford, Stephens, Stonewall & Throckmorton	10.9

San Angelo Area:

San Angelo & Tom Green Co.	19.2
Non-MSA Counties of Coke, Concho, Crockett, Irion, Kimble, McCullough, Mason, Menard, Reagan, Runnels, San Saba, Schleicher, Sterling, Sutton & Terrell	20.0

San Antonio Area:

Laredo & Webb Co.	87.3
San Antonio, Bexar Co., Comal Co. & Guadalupe Co.	47.8

Non-MSA Counties of Atascosa, Bandera, Dimmit, Edwards, Frio, Gillespie, Gonzales, Jim Hogg, Karnes, Kendall, Kerr, Kinney, La Salle, McMullen, Maverick, Medina, Real, Uvalde, Val Verde, Wilson, Zapata & Zavala	49.4
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Corpus Christi Area:

Corpus Christi, Nueces Co. & San Patricio Co.	41.7
Non-MSA Counties of Aransas, Bee, Brooks, Duval, Jim Wells, Kenedy, Kleberg, Live Oak & Refugio	44.2

Brownsville, McAllen, Harlingen Area:

Brownsville, Harlingen, San Benito & Cameron Co.	71.0
McAllen, Pharr, Edinburg & Hidalgo Co.	72.8
Non-MSA Counties of Starr & Willacy	72.9

Odessa, Midland Area:

Midland & Midland Co.	19.1
Odessa & Ector Co.	15.1
Non-MSA Counties of Andrews, Crane, Glasscock, Howard, Loving, Martin, Pecos, Reeves, Upton, Ward & Winkler	18.9

El Paso Area:

El Paso & El Paso Co.	57.8
Non-MSA Counties of Brewster, Culbertson, Hudspeth, Jeff Davis & Presidio	49.0

Lubbock Area:

Lubbock & Lubbock Co.	19.6
Non-MSA Counties of Bailey, Borden, Cochran, Crosby, Dawson, Dickens, Floyd, Gaines, Garza, Hale, Hockley, King, Lamb, Lynn, Motley, Terry & Yoakum	19.5

Amarillo Area:

Amarillo, Potter Co. & Randall Co.	9.3
Non-MSA Counties of Armstrong, Briscoe, Carson, Castro, Childress, Collingsworth, Dallam, Deaf Smith, Donley, Gray, Hall, Hansford, Hartley, Hemphill, Hutchinson, Lipscomb, Moore, Ochiltree, Oldham, Parmer, Roberts, Sherman, Swisher, & Wheeler	11.0

Federal Labor Standards Provisions

U.S. Department of Housing and Urban Development Office of Labor Relations

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination.

The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part

of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee 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 the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been

communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee.

(Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A. 3. (ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who

is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification.

If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by

the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(III) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also 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 the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be

awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration . . . makes, utters or publishes any statement knowing the same to be false . . . shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(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 the individual is employed on such work to work in excess of 40 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 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, 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 subparagraph (1) of this paragraph, in the sum of **\$25** for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee 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 contract, 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 subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph 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 subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

Title 29: Labor

PART 3—CONTRACTORS AND SUBCONTRACTORS ON PUBLIC BUILDING OR PUBLIC WORK FINANCED IN WHOLE OR IN PART BY LOANS OR GRANTS FROM THE UNITED STATES

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AUTHORITY: R.S. 161, sec. 2, 48 Stat. 848; Reorg. Plan No. 14 of 1950, 64 Stat. 1267; 5 U.S.C. 301; 40 U.S.C. 3145; Secretary's Order 01-2008; and Employment Standards Order No. 2001-01.

SOURCE: 29 FR 97, Jan. 4, 1964, unless otherwise noted.

§3.1 Purpose and scope.

This part prescribes “anti-kickback” regulations under section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c), popularly known as the Copeland Act. This part applies to any contract which is subject to Federal wage standards and which is for the construction, prosecution, completion, or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States. The part is intended to aid in the enforcement of the minimum wage provisions of the Davis-Bacon Act and the various statutes dealing with federally assisted construction that contain similar minimum wage provisions, including those provisions which are not subject to Reorganization Plan No. 14 (e.g., the College Housing Act of 1950, the Federal Water Pollution Control Act, and the Housing Act of 1959), and in the enforcement of the overtime provisions of the Contract Work Hours Standards Act whenever they are applicable to construction work. The part details the obligation of contractors and subcontractors relative to the weekly submission of statements regarding the wages paid on work covered thereby; sets forth the circumstances and procedures governing the making of payroll deductions from the wages of those employed on such work; and delineates the methods of payment permissible on such work.

§3.2 Definitions.

As used in the regulations in this part:

(a) The terms *building* or *work* generally include construction activity as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work. The terms include, without limitation, buildings, structures, and improvements of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, powerlines, pumping stations, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals; dredging, shoring, scaffolding, drilling, blasting, excavating, clearing, and landscaping. Unless conducted in connection with and at the site of such a building or work as is described in the foregoing sentence, the manufacture or furnishing of materials, articles, supplies, or equipment (whether or not a Federal or State agency acquires title to such materials, articles, supplies, or equipment during the course of the manufacture or furnishing, or owns the materials from which they are manufactured or furnished) is not a *building* or *work* within the meaning of the regulations in this part.

(b) The terms *construction*, *prosecution*, *completion*, or *repair* mean all types of work done on a particular building or work at the site thereof, including, without limitation, altering, remodeling, painting and decorating, the transporting of materials and supplies to or from the building or work by the employees of the construction contractor or construction

subcontractor, and the manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the building or work, by persons employed at the site by the contractor or subcontractor.

(c) The terms *public building* or *public work* include building or work for whose construction, prosecution, completion, or repair, as defined above, a Federal agency is a contracting party, regardless of whether title thereof is in a Federal agency.

(d) The term *building or work financed in whole or in part by loans or grants from the United States* includes building or work for whose construction, prosecution, completion, or repair, as defined above, payment or part payment is made directly or indirectly from funds provided by loans or grants by a Federal agency. The term includes building or work for which the Federal assistance granted is in the form of loan guarantees or insurance.

(e) Every person paid by a contractor or subcontractor in any manner for his labor in the construction, prosecution, completion, or repair of a public building or public work or building or work financed in whole or in part by loans or grants from the United States is *employed* and receiving *wages*, regardless of any contractual relationship alleged to exist between him and the real employer.

(f) The term *any affiliated person* includes a spouse, child, parent, or other close relative of the contractor or subcontractor; a partner or officer of the contractor or subcontractor; a corporation closely connected with the contractor or subcontractor as parent, subsidiary, or otherwise, and an officer or agent of such corporation.

(g) The term *Federal agency* means the United States, the District of Columbia, and all executive departments, independent establishments, administrative agencies, and instrumentalities of the United States and of the District of Columbia, including corporations, all or substantially all of the stock of which is beneficially owned by the United States, by the District of Columbia, or any of the foregoing departments, establishments, agencies, and instrumentalities.

[29 FR 97, Jan. 4, 1964, as amended at 38 FR 32575, Nov. 27, 1973]

§3.3 Weekly statement with respect to payment of wages.

(a) As used in this section, the term *employee* shall not apply to persons in classifications higher than that of laborer or mechanic and those who are the immediate supervisors of such employees.

(b) Each contractor or subcontractor engaged in the construction, prosecution, completion, or repair of any public building or public work, or building or work financed in whole or in part by loans or grants from the United States, shall furnish each week a statement with respect to the wages paid each of its employees engaged on work covered by this part 3 and part 5 of this title during the preceding weekly payroll period. This statement shall be executed by the contractor or subcontractor or by an authorized officer or employee of the contractor or subcontractor who supervises the payment of wages, and shall be on the back of Form WH 347, "Payroll (For Contractors Optional Use)" or on any form with identical wording. Copies of Form WH 347 may be obtained from the Government contracting or sponsoring agency or from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site.

(c) The requirements of this section shall not apply to any contract of \$2,000 or less.

(d) Upon a written finding by the head of a Federal agency, the Secretary of Labor may provide reasonable limitations, variations, tolerances, and exemptions from the requirements of this section subject to such conditions as the Secretary of Labor may specify.

[29 FR 97, Jan. 4, 1964, as amended at 33 FR 10186, July 17, 1968; 47 FR 23679, May 28, 1982; 73 FR 77511, Dec. 19, 2008]

§3.4 Submission of weekly statements and the preservation and inspection of weekly payroll records.

(a) Each weekly statement required under §3.3 shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work, or, if there is no representative of a Federal or State agency at the site of the building or work, the statement shall be mailed by the contractor or subcontractor, within such time, to a Federal or State agency contracting for or financing the building or work. After such examination and check as may be made, such statement, or a copy thereof, shall be kept available, or shall be transmitted together with a report of any violation, in accordance with applicable procedures prescribed by the United States Department of Labor.

(b) Each contractor or subcontractor shall preserve his weekly payroll records for a period of three years from date of completion of the contract. The payroll records shall set out accurately and completely the name and address of each laborer and mechanic, his correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Such payroll records shall be made available at all times for inspection by the contracting officer or his authorized representative, and by authorized representatives of the Department of Labor.

(Reporting and recordkeeping requirements in paragraph (b) have been approved by the Office of Management and Budget under control number 1215-0017)

[29 FR 97, Jan. 4, 1964, as amended at 47 FR 145, Jan. 5, 1982]

§3.5 Payroll deductions permissible without application to or approval of the Secretary of Labor.

Deductions made under the circumstances or in the situations described in the paragraphs of this section may be made without application to and approval of the Secretary of Labor:

(a) Any deduction made in compliance with the requirements of Federal, State, or local law, such as Federal or State withholding income taxes and Federal social security taxes.

(b) Any deduction of sums previously paid to the employee as a bona fide prepayment of wages when such prepayment is made without discount or interest. A *bona fide prepayment of wages* is considered to have been made only when cash or its equivalent has been advanced to the person employed in such manner as to give him complete freedom of disposition of the advanced funds.

(c) Any deduction of amounts required by court process to be paid to another, unless the deduction is in favor of the contractor, subcontractor, or any affiliated person, or when collusion or collaboration exists.

(d) Any deduction constituting a contribution on behalf of the person employed to funds established by the employer or representatives of employees, or both, for the purpose of providing either from principal or income, or both, medical or hospital care, pensions or annuities on retirement, death benefits, compensation for injuries, illness, accidents, sickness, or disability, or for insurance to provide any of the foregoing, or unemployment benefits, vacation pay, savings accounts, or similar payments for the benefit of employees, their families and dependents: *Provided, however,* That the following standards are met:

(1) The deduction is not otherwise prohibited by law;

(2) It is either:

(i) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of or for the continuation of employment, or

(ii) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees;

(3) No profit or other benefit is otherwise obtained, directly or indirectly, by the contractor or subcontractor or any affiliated person in the form of commission, dividend, or otherwise; and

(4) The deductions shall serve the convenience and interest of the employee.

(e) Any deduction contributing toward the purchase of United States Defense Stamps and Bonds when voluntarily authorized by the employee.

(f) Any deduction requested by the employee to enable him to repay loans to or to purchase shares in credit unions organized and operated in accordance with Federal and State credit union statutes.

(g) Any deduction voluntarily authorized by the employee for the making of contributions to governmental or quasi-governmental agencies, such as the American Red Cross.

(h) Any deduction voluntarily authorized by the employee for the making of contributions to Community Chests, United Givers Funds, and similar charitable organizations.

(i) Any deductions to pay regular union initiation fees and membership dues, not including fines or special assessments: *Provided, however,* that a collective bargaining agreement between the contractor or subcontractor and representatives of its employees provides for such deductions and the deductions are not otherwise prohibited by law.

(j) Any deduction not more than for the "reasonable cost" of board, lodging, or other facilities meeting the requirements of section 3(m) of the Fair Labor Standards Act of 1938, as amended, and part 531 of this title. When such a deduction is made the additional records required under §516.25(a) of this title shall be kept.

(k) Any deduction for the cost of safety equipment of nominal value purchased by the employee as his own property for his personal protection in his work, such as safety shoes, safety glasses, safety gloves, and hard hats, if such equipment is not required by law to be furnished by the employer, if such deduction is not violative of the Fair Labor Standards Act or prohibited by other law, if the cost on which the deduction is based does not exceed the actual cost to the employer where the equipment is purchased from him and does not include any direct or indirect monetary return to the employer where the equipment is purchased from a third person, and if the deduction is either

(1) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance; or

(2) Provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees.

[29 FR 97, Jan. 4, 1964, as amended at 36 FR 9770, May 28, 1971]

§3.6 Payroll deductions permissible with the approval of the Secretary of Labor.

Any contractor or subcontractor may apply to the Secretary of Labor for permission to make any deduction not permitted under §3.5. The Secretary may grant permission whenever he finds that:

(a) The contractor, subcontractor, or any affiliated person does not make a profit or benefit directly or indirectly from the deduction either in the form of a commission, dividend, or otherwise;

(b) The deduction is not otherwise prohibited by law;

(c) The deduction is either (1) voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance, or (2) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees; and

(d) The deduction serves the convenience and interest of the employee.

§3.7 Applications for the approval of the Secretary of Labor.

Any application for the making of payroll deductions under §3.6 shall comply with the requirements prescribed in the following paragraphs of this section:

(a) The application shall be in writing and shall be addressed to the Secretary of Labor.

(b) The application need not identify the contract or contracts under which the work in question is to be performed. Permission will be given for deductions on all current and future contracts of the applicant for a period of 1 year. A renewal of permission to make such payroll deduction will be granted upon the submission of an application which makes reference to the original application, recites the date of the Secretary of Labor's approval of such deductions, states affirmatively that there is continued compliance with the standards set forth in the provisions of §3.6, and specifies any conditions which have changed in regard to the payroll deductions.

(c) The application shall state affirmatively that there is compliance with the standards set forth in the provisions of §3.6. The affirmation shall be accompanied by a full statement of the facts indicating such compliance.

(d) The application shall include a description of the proposed deduction, the purpose to be served thereby, and the classes of laborers or mechanics from whose wages the proposed deduction would be made.

(e) The application shall state the name and business of any third person to whom any funds obtained from the proposed deductions are to be transmitted and the affiliation of such person, if any, with the applicant.

[29 FR 97, Jan. 4, 1964, as amended at 36 FR 9771, May 28, 1971]

§3.8 Action by the Secretary of Labor upon applications.

The Secretary of Labor shall decide whether or not the requested deduction is permissible under provisions of §3.6; and shall notify the applicant in writing of his decision.

§3.9 Prohibited payroll deductions.

Deductions not elsewhere provided for by this part and which are not found to be permissible under §3.6 are prohibited.

§3.10 Methods of payment of wages.

The payment of wages shall be by cash, negotiable instruments payable on demand, or the additional forms of compensation for which deductions are permissible under this part. No other methods of payment shall be recognized on work subject to the Copeland Act.

§3.11 Regulations part of contract.

All contracts made with respect to the construction, prosecution, completion, or repair of any public building or public work or building or work financed in whole or in part by loans or grants from the United States covered by the regulations in this part shall expressly bind the contractor or subcontractor to comply with such of the regulations in this part as may be applicable. In this regard, see §5.5(a) of this subtitle.

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM
CONTRACTOR'S CERTIFICATION

CONCERNING LABOR STANDARDS AND PREVAILING WAGE REQUIREMENTS

TO (appropriate recipient)	DATE
	PROJECT NUMBER (if any)
C/O	PROJECT NAME

1. The undersigned, having executed a contract with _____
_____ for the construction of the above-identified project, acknowledges that:

- (a) The Labor Standards provisions are included in the aforesaid contract,
- (b) Correction of any infractions of the aforesaid conditions, including infractions by any subcontractors and any lower tier subcontractors, is Contractor's responsibility.

2. Certifies that:

- (a) Neither Contractor nor any firm, partnership or association in which it has substantial interest is designated as an ineligible contractor by the Comptroller General of the United States pursuant to Section 5.6(b) of the Regulations of the Secretary of Labor, Part 5 (29 CFR, Part 5) or pursuant to Section 3(a) of the Davis-Bacon Act, as amended.
- (b) No part of the aforementioned contract has been or will be subcontracted to any subcontractor if such subcontractor or any firm, corporation, partnership or association in which such subcontractor has a substantial interest is designated as an ineligible contractor pursuant to any of the aforementioned regulatory or statutory provisions.

3. Contractor agrees to obtain and forward to the aforementioned recipient within ten days after the execution of any subcontract, including those executed by subcontractors and any lower tier subcontractors, a Subcontractor's Certification Concerning Labor Standards and Prevailing Wage Requirements executed by the subcontractors.

4. Certifies that:

- (a) The legal name and the business address of the undersigned are:

(b) The undersigned is (choose one):

(1) A SINGLE PROPRIETORSHIP	(3) A CORPORATION ORGANIZED IN THE STATE OF _____
(2) A PARTNERSHIP	(4) OTHER ORGANIZATION (Describe) _____

(c) The name, title and address of the owner, partners or officers of the undersigned are:

NAME	TITLE	ADDRESS

- (d) The names and addresses of all other persons having a substantial interest in the undersigned, and the nature of the interest are:

NAME	ADDRESS	NATURE OF INTEREST

(e) The names, addresses and trade classifications of all other building construction contractors in which the undersigned has a substantial interest are:

NAME	ADDRESS	TRADE CLASSIFICATION

(Contractor)

Date

By

[INSERT Project Specific Wage Decision]

GLO SIGNAGE REQUIREMENTS

All signs shall be placed in a prominent, visible public location at the construction site, and legible from at least three (3) feet distance.

Permanent signage is required on any public building or facility funded under this Contract. Please refer to the plans and specifications for further details.

For other construction projects (e.g., water transmission lines, sewer collection lines, drainage, roadways, housing rehabilitation) funded under this Contract, temporary signage shall be placed in a prominent location at the construction project site or along a major thoroughfare within the locality.

All signage required shall contain the following:

*“This project is funded by the Texas General Land Office of the State of Texas, to provide for disaster recovery and restoration of infrastructure for communities impacted by the (**Floods of 2015/Hurricane Harvey, whichever is applicable**). Funds allocated by the United States Department of Housing and Urban Development through the Community Development Block Grant Program.”*

SECTION 504 CERTIFICATION

POLICY OF NONDISCRIMINATION ON THE BASIS OF DISABILITY

The _____ does not discriminate on the basis of disability status in the admission or access to, or treatment or employment in, its federally assisted programs or activities.

(Name) _____

(Address) _____

City State Zip

Telephone Number () _____ - _____ Voice

() _____ - _____ TDD

_____ has been designated to coordinate compliance with the nondiscrimination requirements contained in the Department of Housing and Urban Development's (HUD) regulations implementing Section 504 (24 CFR Part 8. dated June 2, 1988).

CHILD SUPPORT STATEMENT FOR NEGOTIATED CONTRACTS AND GRANTS

Under Section 231.006, Family Code, the vendor or applicant certifies that the individual or business entity named in this contract, bid, or application is eligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated and payment may be withheld if this certification is inaccurate.

Section 231.006, Family Code, specifies that a child support obligor who is more than 30 days delinquent in paying child support and a business entity in which the obligor is a sole proprietor, partner, shareholder, or owner with an ownership interest of at least 25% is not eligible to receive payments from state funds under a contract to provide property, materials, or services; or receive a state-funded grant or loan.

List below the name and ownership percentage of the individual or sole proprietor and each partner, shareholder, or owner with an ownership interest of at least 25% of the business entity submitting the bid or application.

NAME	OWNERSHIP BY %

A child support obligor or business entity ineligible to receive payments described above remains ineligible until all arrearage have been paid or the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency.

The undersigned proposer certifies that he or she, is the proposing individual, or the sole proprietor of the proposing business, and is eligible under Section 231.006 of the Texas Family Code, to receive the payments of State funds which may be disbursed in connection with a contract arising from this solicitation, The undersigned each further acknowledges that a contract resulting from this solicitation may be terminated and payment may be withheld if the certification provided herein is found to be inaccurate.

Signature – Company Official

Printed/Type Firm Name

Printed/Typed Name and Title

Date

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS that:

(Name of Contractor or Company)

(Address)

a _____, hereinafter called Principal,
(Corporation / Partnership)

and _____
(Name of Surety Company)

(Address)

hereinafter called Surety, are held and firmly bound unto

(Name of Recipient)

(Recipient's Address)

hereinafter called OWNER, in the penal sum of \$ _____

Dollars, \$ _____ in lawful money of the United States, for this payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONFIDENTIALITY OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the ____ day of _____, a copy of which is hereto attached and made a part hereof for the construction of:

(Project Name)

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUB-CONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUB-CONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counter-parts, each on of _____ (Number) which shall be deemed an original, this the _____ day of _____.

ATTEST:

(Principal)

____ By _____ (s)
(Principal Secretary)

(SEAL)

____ (Witness as to Principal) _____ (Address)

____ (Address) _____

ATTEST:

(Surety)

____ By _____
(Witness as to Surety) (Attorney in Fact)

____ (Address) _____ (Address)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute BOND.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS that:

(Name of Contractor or Company)

(Address)

a _____ hereinafter called Principal, and

(Name of Surety Company)

(Address)

hereinafter called Surety, are held and firmly bound unto

(Name of City/County)

(City/County's Address)

hereinafter called OWNER, in the penal sum of \$ _____

Dollars (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, successors, and assigns, jointly and severally, firmly in these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER dated the _____ day of _____, a copy of which is hereto attached and made a part hereof for the construction of:

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its duties in all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the Principal shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts,
each one of which shall be deemed an original, this the _____ day of _____
_____.

ATTEST:

(Principal)

(Principal Secretary) By _____(s)

(SEAL)

(Witness as to Principal)

(Address)

(Address)

ATTEST:

(Surety)

(Witness as to Surety)

By _____
(Attorney in Fact)

(Address)

(Address)

NOTE: Date of BOND must not be prior to date of Contract. If PRINCIPAL/CONTRACTOR is Partnership, all partners should execute BOND.

[INSERT Contractor's Liability Insurance]

ADDITIONAL CONDITION OF AWARD —

DISCLOSURE OF INTERESTED PARTY FORM:

NEW OBLIGATION OF THE CITY/COUNTY TO RECEIVE INFORMATION FROM WINNING BIDDER

Effective January 1, 2016, pursuant to Texas Government Code, Section 2252.908 (the “Interested Party Disclosure Act”), the City/County may not award a contract to a bidder unless the bidder submits a Certificate of Interested Parties Form 1295 (the “Disclosure Form”) to the City/County as prescribed by the Texas Ethics Commission (“TEC”). In the event that the bidder’s bid for the City/County is the best bid received, the City/County or its consultant, will promptly notify the bidder. That notification will serve as the conditional verbal acceptance of the bid. Upon this acceptance, the winning bidder must promptly, not later than **TIME** (CST) on the **DATE**, file the materials described below.

PROCESS FOR COMPLETING THE DISCLOSURE FORM¹

The Disclosure Form can be found at <https://www.ethics.state.tx.us/forms/1295.pdf>, and reference should be made to the following information in order to complete it:

- (a) item 2 – Name of City/County (“City/County, Texas”)
- (b) item 3 – the identification number (“CDBG-MIT City/County”), and
- (c) item 3 – description of the goods or services assigned to this contract by the City (“Construction Services for City/County”)

You must:

- 1) complete the Disclosure Form electronically at the TEC’s “electronic portal”, and
- 2) print, sign and deliver a copy (scanned and emailed is fine) of the Disclosure Form and Certification of Filing that is generated by the TEC’s “electronic portal.”

The following link will take you to the electronic portal for filing:

<https://www.ethics.state.tx.us/TECCertInt/pages/login/certLogin.jsf>

Also, a detailed instruction video may be found here:

https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

Neither the City/County nor its consultants have the ability to verify the information included in a Disclosure Form, and neither have an obligation nor undertake responsibility for advising any business entity with respect to the proper completion of the Disclosure Form.

¹ A completed Form 1295 is not required for:

- a sponsored research contract of an institution of higher education;
- an interagency contract of a state agency or an institution of higher education;
- a contract related to health and human services if:
 - the value of the contract cannot be determined at the time the contract is executed; and
 - any qualified vendor is eligible for the contract;
- a contract with a publicly traded business entity, including a wholly owned subsidiary of the business entity;
- a contract with an electric utility, as that term is defined by Section 31.002, Utilities Code; or
- a contract with a gas utility, as that term is defined by Section 121.001, Utilities Code.

CERTIFICATE OF INTERESTED PARTIES**FORM 1295**

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. ☐

6 UNSWORN DECLARATION

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20_____.
(month) (year)

Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY



Texas General Land Office
Community Development Block Grant (CDBG)
Disaster Recovery Program

Code of Federal Regulations
Title 24- Housing and Urban Development

Volume: 1

Date: 2003-04-01

Original Date: 2003-04-01

Title: Section 135.38- Section 3 Clause

Context: Title 24- Housing and Urban Development. Subtitle B- Relating to Housing and Urban Development . Chapter 1- Office of Assistant Secretary for Equal Opportunity, Department. Part 135 Economic Opportunities for Low-and Very Low-Income Persons. Subpart B- Economic Opportunities for Section 3 Residents and Section 3 Business Concerns.

§ 135.38 Section 3 clause.

All section 3 covered contracts shall include the following clause (referred to as the section 3 clause):

- A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.
- C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

- E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.
- F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).



Texas General Land Office
Community Development Block Grant (CDBG)
Disaster Recovery Program

[Code of Federal Regulations]
[Title 24, Volume 1]
[Revised as of April 1, 2003]
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[Page 704-707]

TITLE 24--HOUSING AND URBAN DEVELOPMENT
CHAPTER I--OFFICE OF ASSISTANT SECRETARY FOR EQUAL OPPORTUNITY,
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
PART 135--ECONOMIC OPPORTUNITIES FOR LOW- and VERY LOW-INCOME PERSONS

Table of Contents

Appendix to Part 135

**I. EXAMPLES OF EFFORTS TO OFFER TRAINING AND EMPLOYMENT OPPORTUNITIES TO
SECTION 3 RESIDENTS**

- (1) Entering into ``first source'' hiring agreements with organizations representing Section 3 residents.
- (2) Sponsoring a HUD-certified ``Step-Up'' employment and training program for section 3 residents.
- (3) Establishing training programs, which are consistent with the requirements of the Department of Labor, for public and Indian housing residents and other section 3 residents in the building trades.
- (4) Advertising the training and employment positions by distributing flyers (which identify the positions to be filled, the qualifications required, and where to obtain additional information about the application process) to every occupied dwelling unit in the housing development or developments where category 1 or category 2 persons (as these terms are defined in Sec. 135.34) reside.
- (5) Advertising the training and employment positions by posting flyers (which identify the positions to be filled, the qualifications required, and where to obtain additional information about the application process) in the common areas or other prominent areas of the housing development or developments. For HAs, post such advertising in the housing development or developments where category 1 or category 2 persons reside; for all other recipients, post such advertising in the housing development or developments and transitional housing in the neighborhood or service area of the section 3 covered project.
- (6) Contacting resident councils, resident management corporations, or other resident organizations, where they exist, in the housing development or developments where category 1 or category 2 persons reside, and community organizations in HUD assisted neighborhoods, to request the assistance of these organizations in notifying residents of the training and employment positions to be filled.

- (7) Sponsoring (scheduling, advertising, financing or providing in-kind services) a job informational meeting to be conducted by an HA or contractor representative or representatives at a location in the housing development or developments where category 1 or category 2 persons reside or in the neighborhood or service area of the section 3 covered project.
- (8) Arranging assistance in conducting job interviews and completing job applications for residents of the housing development or developments where category 1 or category 2 persons reside and in the neighborhood or service area in which a section 3 project is located.
[[Page 705]]
- (9) Arranging for a location in the housing development or developments where category 1 persons reside, or the neighborhood or service area of the project, where job applications may be delivered to and collected by a recipient or contractor representative or representatives.
- (10) Conducting job interviews at the housing development or developments where category 1 or category 2 persons reside, or at a location within the neighborhood or service area of the section 3 covered project.
- (11) Contacting agencies administering HUD Youthbuild programs, and requesting their assistance in recruiting HUD Youthbuild program participants for the HA's or contractor's training and employment positions.
- (12) Consulting with State and local agencies administering training programs funded through JTPA or JOBS, probation and parole agencies, unemployment compensation programs, community organizations and other officials or organizations to assist with recruiting Section 3 residents for the HA's or contractor's training and employment positions.
- (13) Advertising the jobs to be filled through the local media, such as community television networks, newspapers of general circulation, and radio advertising.
- (14) Employing a job coordinator, or contracting with a business concern that is licensed in the field of job placement (preferably one of the section 3 business concerns identified in part 135), that will undertake, on behalf of the HA, other recipient or contractor, the efforts to match eligible and qualified section 3 residents with the training and employment positions that the HA or contractor intends to fill.
- (15) For an HA, employing section 3 residents directly on either a permanent or a temporary basis to perform work generated by section 3 assistance. (This type of employment is referred to as "force account labor" in HUD's Indian housing regulations. See 24 CFR 905.102, and Sec. 905.201(a)(6).)
- (16) Where there are more qualified section 3 residents than there are positions to be filled, maintaining a file of eligible qualified section 3 residents for future employment positions.
- (17) Undertaking job counseling, education and related programs in association with local educational institutions.
- (18) Undertaking such continued job training efforts as may be necessary to ensure the continued employment of section 3 residents previously hired for employment opportunities.
- (19) After selection of bidders but prior to execution of contracts, incorporating into the contract a negotiated provision for a specific number of public housing or other section 3 residents to be trained or employed on the section 3 covered assistance.
- (20) Coordinating plans and implementation of economic development (e.g., job training and preparation, business development assistance for residents) with the planning for housing and community development.



Texas General Land Office
Community Development Block Grant (CDBG)
Disaster Recovery Program

**NEW HIRES SECTION 3
MONTHLY COMPLIANCE REPORT**

Reporting Month:

Economic Opportunities for Low and Very Low-Income Persons

This form is distributed to the General Contractor (GC) at the Pre-Construction Meeting. GC is also required to provide this form to any subcontractor firms that they anticipate hiring for this project.

CONTRACTOR INFORMATION

Name of Business:

Address of Business:

Authorized Representative for this contract:

Authorized Signatory:

ADDITIONALLY, PLEASE REVIEW AND COMPLY WITH STEPS 1 - 3 BELOW:

1. You must **sign and date** this form for the each applicable reporting month in connection with awarded project and deliver to:

2. When you **hire** a Section 3 resident in connection with this project, you must also complete this form and submit it to the Section 3 Coordinator identified above. Even if there were no **new hires** this form **must be completed and submitted to the Section 3 Coordinator identified above.**

☐ I have not hired any new employees during the reporting Month specified.

I have hired Section 3 employees and/or non-Section 3 employees during the reporting month shown here.

The following is a list of the new hires and the trades:

	New Hire Name	Job Category/Trade	Full-time? Yes or No
1.			
2.			
3.			
4.			

I have taken one or more of the following recruitment steps to hire a Section 3 Resident with the highest training and employment priority ranking. **Provide a brief description of actions taken:**

I have taken steps to find a Section 3 Resident in the applicable targeted areas where the project(s)/assistance will take place. **List areas:**

- ☐ Placed signs or posters at prominent places in each of the above listed areas. *Photographs were taken to document this action.*

I have advertised to fill vacancy(ies) at the site(s), where work is taking place, in connection with this project.

List advertisements (name publication, e.g. Work in Texas, Houston Chronicle, and/or website(s)):

- ☐ Distributed employment flyers to the administrative office of the local Public Housing Authority.
- ☐ Provided notice of positions available to the Texas Workforce Commission for potential applicants. *Provide copy of notice.*
- ☐ Contacted employment referrals or Youthbuild Program referrals. **List contacts:**

- ☐ Contacted with applicable parties to ensure that any HUD Youthbuild programs currently operating in the project(s) area/ assistance will take place.
- ☐ Kept a log of all applicants and indicate the reasons why Section 3 Residents who applied were not hired.
- ☐ Retained copies of any employment applications completed by public housing, Section 8 certificate or voucher holders or other Section 3 Residents.
- ☐ Sent a notice about Section 3 training and employment requirements and opportunities to labor organizations or to worker representatives with whom our firm has a collective bargaining or other agreement.

3. Verification

- ☐ I have attached proof of all checked items.

Authorized Name and Signature

Attested By:

Date/Time Field

Text

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Section 3

Economic Opportunity

A Piece of the American Dream

This project is federally funded and Section 3 compliance and reporting applies to all executed prime or sub contracts over \$100,000.

About Section 3

Section 3 of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701u) (as amended), requires that economic opportunities generated by certain HUD financial assistance for housing (including Public and Indian Housing) and community development programs shall, to the greatest extent feasible, be given to low and very low-income persons, particularly those who are recipients of government assistance for housing, and to businesses that provide economic opportunities for these persons.

Other HUD programs covered by Section 3 (to distinguish between HUD Public and Indian housing programs) are those that provide housing or community development assistance for housing rehabilitation, housing construction, or other public construction project.

Who are Section 3 residents?

Public housing residents including persons with disabilities. Low and very low income persons who live in the area where a HUD assisted project is located.

What is a Section 3 Business?

A section 3 business is one:
That is owned by Section 3 residents
Employs Section 3 residents or,

Subcontracts with businesses that provide opportunities to low and very low income persons.

Who receives Economic Opportunities under Section 3?

For training and employment:

- ✓ persons in public and assisted housing;
- ✓ persons in the affected project neighborhood;
- ✓ participants in HUD Youth-build programs;
- ✓ homeless persons.

For contracting:

- ✓ businesses which fit the definition of a Section 3 business.

How can individuals and businesses find out more about Section 3?

Contact GrantWorks at 512-420-0303 ext.334 or Fair Housing and Equal Opportunity representative at your nearest HUD Office.

What am I required to do as a contractor?

- ✓ Submit monthly new hires report (pg7-8)
- ✓ Post any job vacancies at www.workintexas.com
- ✓ Keep a log of all applicants and indicate why
- ✓ Section 3 Residents who applied were not hired
- ✓ Retain copies of any employment applications completed by public housing, Section 8, voucher holders, Section 3 Residents

How to Post Job Vacancies

As required by the GLO Section 3 Policy, all Grantees and contractors receiving DR funding **must** post all job vacancies with the state's free job matching system – WorkIn Texas.com. There are two ways to do this. Self-register with an employer account and post jobs directly online or contact your local Workforce Solutions Office. Staff is available to assist with account registration and/or can post jobs on your behalf at WorkInTexas.com. **The job title and job description must include the word SEC3.**

More ways to find Section 3 Applicants

- ✓ Advertising in other publications such as newspapers and websites
- ✓ Placing posters in prominent places in target areas
- ✓ Distributing flyers to the local Public Housing Authority

Where can I find my local Workforce Solution Center?

You may search for one here:

<http://www.twc.state.tx.us/directories/directory-offices-services.htm?mid=0.07262226541895678>

HUD Compliance and Monitoring?

HUD monitors the performance of recipients and contractors. HUD examines employment and contract records for evidence of actions taken to train and employ Section 3 residents and to award contracts to Section 3 businesses. HUD provides technical assistance to recipients and contractors in order to obtain compliance with Section 3 requirements.

What if it appears that an entity is not complying?

There is a complaint process. Section 3 residents and business concerns may file complaints if they think a violation of Section 3 requirements has occurred where a HUD-funded project is planned or underway. Complaints will be investigated; if appropriate, voluntary resolutions will be sought. There are appeal rights to the Secretary. Section 3 residents and businesses may also seek judicial relief.

How can Section 3 businesses or residents complain about a violation of Section 3 requirements?

By filing a complaint in writing to the local HUD FHEO Office or to:

The Assistant Secretary for Fair Housing and Equal Opportunity

U.S. Department of Housing and Urban Development
451 Seventh Street, SW, Room 5100
Washington, DC 20410-2000
1-800-669-9777
1-800-927-9276 (TTY)

www.hud.gov www.espanol.hud.gov

A written complaint should contain:

1. Name and address of the person filing the complaint;
2. Name and address of subject of complaint (HUD recipient or contractor);
3. Description of acts or omissions in alleged violation of Section 3;
4. Statement of corrective actions sought

ASSURANCES - CONSTRUCTION PROGRAMS

OMB Approval No. 4040-0009
Expiration Date: 02/28/2022

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET.
SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other non-discrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333) regarding labor standards for federally-assisted construction subagreements.
14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.
20. Will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from (1) Engaging in severe forms of trafficking in persons during the period of time that the award is in effect (2) Procuring a commercial sex act during the period of time that the award is in effect or (3) Using forced labor in the performance of the award or subawards under the award.

General Affirmations

To the extent they apply, Provider affirms and agrees to the following, without exception:

1. Provider represents and warrants that, in accordance with Section 2155.005 of the Texas Government Code, neither Provider nor the firm, corporation, partnership, or institution represented by Provider, or anyone acting for such a firm, corporation, partnership, or institution has (1) violated any provision of the Texas Free Enterprise and Antitrust Act of 1983, Chapter 15 of the Texas Business and Commerce Code, or the federal antitrust laws, or (2) communicated directly or indirectly the contents of this Contract or any solicitation response upon which this Contract is based to any competitor or any other person engaged in the same line of business as Provider.
2. If the Contract is for services, Provider shall comply with Section 2155.4441 of the Texas Government Code, requiring the purchase of products and materials produced in the State of Texas in performing service contracts.
3. Under Section 231.006 of the Family Code, the vendor or applicant [Provider] certifies that the individual or business entity named in this Contract, bid or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this Contract may be terminated and payment may be withheld if this certification is inaccurate.
4. A bid or an application for a contract, grant, or loan paid from state funds must include the name and social security number of the individual or sole proprietor and each partner, shareholder, or owner with an ownership interest of at least 25 percent of the business entity submitting the bid or application. Provider certifies it has submitted this information to the GLO.
5. If the Contract is for the purchase or lease of computer equipment, as defined by Texas Health and Safety Code Section 361.952(2), Provider certifies that it is in compliance with Subchapter Y, Chapter 361 of the Texas Health and Safety Code, related to the Computer Equipment Recycling Program and the Texas Commission on Environmental Quality rules in Title 30 Texas Administrative Code Chapter 328.
6. Pursuant to Section 2155.003 of the Texas Government Code, Provider represents and warrants that it has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the Contract.
7. Payments due under the Contract shall be directly applied towards eliminating any debt or delinquency Provider owes to the State of Texas including, but not limited to, delinquent taxes, delinquent student loan payments, and delinquent child support.
8. Upon request of the GLO, Provider shall provide copies of its most recent business continuity and disaster recovery plans.

9. If the Contract is for consulting services governed by Texas Government Code Chapter 2254, Subchapter B, in accordance with Section 2254.033 of the Texas Government Code, relating to consulting services, Provider certifies that it does not employ an individual who has been employed by The GLO or another agency at any time during the two years preceding the Provider's submission of its offer to provide consulting services to the GLO or, in the alternative, Provider, in its offer to provide consulting services to the GLO, disclosed the following: (i) the nature of the previous employment with the GLO or other state agency; (ii) the date the employment was terminated; and (iii) the annual rate of compensation for the employment at the time of its termination.
10. If the Contract is not for architecture, engineering, or construction services, Provider must use the dispute resolution process provided for in Chapter 2260 of the Texas Government Code to attempt to resolve any dispute arising under the Contract.
11. If the Contract is for architecture, engineering, or construction services, subject to Texas Government Code, Section 2260.002 and Texas Civil Practice and Remedies Code Chapter 114, Provider shall use the dispute resolution process provided for in Chapter 2260 of the Texas Government Code to attempt to resolve all disputes arising under this Contract. In accordance with the Texas Civil Practice and Remedies Code, Section 114.005, claims encompassed by Texas Government Code, Section 2260.002(3) and Texas Civil Practice and Remedies Code Section 114.002 shall be governed by the dispute resolution process set forth below in subsections (a)-(d).
 - a. Notwithstanding Texas Government Code, Chapter 2260.002(3) and Chapter 114.012 and any other statute or applicable law, if the Provider's claim for breach of contract cannot be resolved by the parties in the ordinary course of business, Provider may make a claim against the GLO for breach of contract and the GLO may assert a counterclaim against the Provider as is contemplated by Texas Government Code, Chapter 2260, Subchapter B. In such event, Provider must provide written notice to the GLO of a claim for breach of the Contract not later than the 180th day after the date of the event giving rise to the claim. The notice must state with particularity: (1) the nature of the alleged breach; (2) the amount the Provider seeks as damages; and (3) the legal theory of recovery.
 - b. The chief administrative officer, or if designated in the Contract, another officer of the GLO, shall examine the claim and any counterclaim and negotiate with the Provider in an effort to resolve them. The negotiation must begin no later than the 120th day after the date the claim is received, as is contemplated by Texas Government Code, Chapter 2260, Section 2260.052.
 - c. If the negotiation under paragraph (b) above results in the resolution of some disputed issues by agreement or in a settlement, the parties shall reduce the agreement or settlement to writing and each party shall sign the agreement or settlement. A partial settlement or resolution of a claim does not waive a party's rights under this Contract as to the parts of the claim that are not resolved.

- d. If a claim is not entirely resolved under paragraph (b) above, on or before the 270th day after the date the claim is filed with the GLO, unless the parties agree in writing to an extension of time, the parties may agree to mediate a claim made under this dispute resolution procedure. This dispute resolution procedure is the Provider's sole and exclusive process for seeking a remedy for an alleged breach of contract by the GLO if the parties are unable to resolve their disputes as described in this section.
 - e. Nothing in the Contract shall be construed as a waiver of the state's or the GLO's sovereign immunity. This Contract shall not constitute or be construed as a waiver of any of the privileges, rights, defenses, remedies, or immunities available to the State of Texas. The failure to enforce, or any delay in the enforcement, of any privileges, rights, defenses, remedies, or immunities available to the State of Texas under this Contract or under applicable law shall not constitute a waiver of such privileges, rights, defenses, remedies or immunities or be considered as a basis for estoppel. The GLO does not waive any privileges, rights, defenses, or immunities available to it by entering into this Contract or by its conduct, or by the conduct of any representative of the GLO, prior to or subsequent to entering into this Contract.
 - f. Compliance with the dispute resolution process provided for in Texas Government Code, Chapter 2260, subchapter B and incorporated by reference in subsection (a)-(d) above is a condition precedent to the Provider: (1) filing suit pursuant to Chapter 114 of the Civil Practices and Remedies Code; or (2) initiating a contested case hearing pursuant to Subchapter C of Chapter 2260 of the Texas Government Code.
12. Provider represents and warrants that, pursuant to Section 2270.002 of the Texas Government Code, Provider does not boycott Israel and will not boycott Israel during the term of the Contract.
13. This Contract is contingent upon the continued availability of lawful appropriations by the Texas Legislature. Provider understands that all obligations of the GLO under this Contract are subject to the availability of state funds. If such funds are not appropriated or become unavailable, the GLO may terminate the Contract. The Contract shall not be construed as creating a debt on behalf of the GLO in violation of Article III, Section 49a of the Texas Constitution.
14. Provider certifies that it is not listed on the federal government's terrorism watch list as described in Executive Order 13224.
15. In accordance with Section 669.003 of the Texas Government Code, relating to contracting with the executive head of a state agency, Provider certifies that it is not (1) the executive head of the GLO, (2) a person who at any time during the four years before the effective date of the Contract was the executive head of the GLO, or (3) a person who employs a current or former executive head of the GLO.

16. Provider represents and warrants that all statements and information prepared and submitted in connection with this Contract are current, complete, true, and accurate. Submitting a false statement or making a material misrepresentation during the performance of this Contract is a material breach of contract and may void the Contract or be grounds for its termination.
17. Pursuant to Section 2155.004(a) of the Texas Government Code, Provider certifies that neither Provider nor any person or entity represented by Provider has received compensation from the GLO to participate in the preparation of the specifications or solicitation on which this Contract is based. Under Section 2155.004(b) of the Texas Government Code, Provider certifies that the individual or business entity named in this Contract is not ineligible to receive the specified contract and acknowledges that the Contract may be terminated and payment withheld if this certification is inaccurate. This Section does not prohibit Provider from providing free technical assistance.
18. Provider represents and warrants that it is not engaged in business with Iran, Sudan, or a foreign terrorist organization, as prohibited by Section 2252.152 of the Texas Government Code.
19. If the Contract is for professional or consulting services governed by Texas Government Code Chapter 2254, Provider represents and warrants that none of its employees including, but not limited to, those authorized to provide services under the Contract, were former employees of the GLO during the twelve (12) month period immediately prior to the date of execution of the Contract.
20. The Contract shall be governed by and construed in accordance with the laws of the State of Texas, without regard to the conflicts of law provisions. The venue of any suit arising under the Contract is fixed in any court of competent jurisdiction of Travis County, Texas, unless the specific venue is otherwise identified in a statute which directly names or otherwise identifies its applicability to the GLO.
21. IF THE CONTRACT IS NOT FOR ARCHITECTURE OR ENGINEERING SERVICES GOVERNED BY TEXAS GOVERNMENT CODE CHAPTER 2254, PROVIDER SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS THE STATE OF TEXAS AND THE GLO, AND/OR THEIR OFFICERS, AGENTS, EMPLOYEES, REPRESENTATIVES, CONTRACTORS, ASSIGNEES, AND/OR DESIGNEES FROM ANY AND ALL LIABILITY, ACTIONS, CLAIMS, DEMANDS, OR SUITS, AND ALL RELATED COSTS, ATTORNEY FEES, AND EXPENSES ARISING OUT OF, OR RESULTING FROM ANY ACTS OR OMISSIONS OF PROVIDER OR ITS AGENTS, EMPLOYEES, SUBCONTRACTORS, ORDER FULFILLERS, OR SUPPLIERS OF SUBCONTRACTORS IN THE EXECUTION OR PERFORMANCE OF THE CONTRACT AND ANY PURCHASE ORDERS ISSUED UNDER THE CONTRACT. THE DEFENSE SHALL BE COORDINATED BY PROVIDER WITH THE OFFICE OF THE TEXAS ATTORNEY GENERAL WHEN Texas STATE AGENCIES ARE NAMED DEFENDANTS IN ANY LAWSUIT AND PROVIDER MAY NOT AGREE TO ANY SETTLEMENT WITHOUT FIRST OBTAINING THE

CONCURRENCE FROM THE OFFICE OF THE TEXAS ATTORNEY GENERAL. PROVIDER AND THE GLO SHALL FURNISH TIMELY WRITTEN NOTICE TO EACH OTHER OF ANY SUCH CLAIM.

22. IF THE CONTRACT IS FOR ARCHITECTURE OR ENGINEERING SERVICES GOVERNED BY TEXAS GOVERNMENT CODE CHAPTER 2254, PROVIDER SHALL INDEMNIFY AND HOLD HARMLESS THE STATE OF TEXAS AND THE GLO, AND/OR THEIR OFFICERS, AGENTS, EMPLOYEES, REPRESENTATIVES, CONTRACTORS, ASSIGNEES, AND/OR DESIGNEES FROM ANY AND ALL LIABILITY, ACTIONS, CLAIMS, DEMANDS, OR SUITS, AND ALL RELATED DAMAGES, COSTS, ATTORNEY FEES, AND EXPENSES TO THE EXTENT CAUSED BY, ARISING OUT OF, OR RESULTING FROM ANY ACTS OF NEGLIGENCE, INTENTIONAL TORTS, WILLFUL MISCONDUCT, PERSONAL INJURY OR DAMAGE TO PROPERTY, AND/OR OTHERWISE RELATED TO PROVIDER'S PERFORMANCE, AND/OR FAILURES TO PAY A SUBCONTRACTOR OR SUPPLIER BY THE PROVIDER OR ITS AGENTS, EMPLOYEES, SUBCONTRACTORS, ORDER FULFILLERS, CONSULTANTS UNDER CONTRACT TO PROVIDER, OR ANY OTHER ENTITY OVER WHICH THE CONTRACTOR EXERCISES CONTROL, OR SUPPLIERS OF SUBCONTRACTORS IN THE EXECUTION OR PERFORMANCE OF THE CONTRACT. THE DEFENSE SHALL BE COORDINATED BY PROVIDER WITH THE OFFICE OF THE TEXAS ATTORNEY GENERAL WHEN Texas STATE AGENCIES ARE NAMED DEFENDANTS IN ANY LAWSUIT AND PROVIDER MAY NOT AGREE TO ANY SETTLEMENT WITHOUT FIRST OBTAINING THE CONCURRENCE FROM THE OFFICE OF THE TEXAS ATTORNEY GENERAL. PROVIDER AND THE GLO SHALL FURNISH TIMELY WRITTEN NOTICE TO EACH OTHER OF ANY SUCH CLAIM
23. PROVIDER SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE GLO AND THE STATE OF TEXAS FROM AND AGAINST ANY AND ALL CLAIMS, VIOLATIONS, MISAPPROPRIATIONS OR INFRINGEMENT OF ANY PATENT, TRADEMARK, COPYRIGHT, TRADE SECRET OR OTHER INTELLECTUAL PROPERTY RIGHTS AND/OR OTHER INTANGIBLE PROPERTY, PUBLICITY OR PRIVACY RIGHTS, AND/OR IN CONNECTION WITH OR ARISING FROM: (1) THE PERFORMANCE OR ACTIONS OF PROVIDER PURSUANT TO THIS CONTRACT; (2) ANY DELIVERABLE, WORK PRODUCT, CONFIGURED SERVICE OR OTHER SERVICE PROVIDED HEREUNDER; AND/OR (3) THE GLO'S AND/OR PROVIDER'S USE OF OR ACQUISITION OF ANY REQUESTED SERVICES OR OTHER ITEMS PROVIDED TO THE GLO BY PROVIDER OR OTHERWISE TO WHICH THE GLO HAS ACCESS AS A RESULT OF PROVIDER'S PERFORMANCE UNDER THE CONTRACT. PROVIDER AND THE GLO shall FURNISH TIMELY WRITTEN NOTICE TO EACH OTHER OF ANY SUCH CLAIM. PROVIDER SHALL BE LIABLE TO PAY ALL COSTS OF DEFENSE, INCLUDING ATTORNEYS' FEES. THE DEFENSE SHALL BE COORDINATED BY PROVIDER WITH THE OFFICE OF THE TEXAS ATTORNEY GENERAL (OAG) WHEN TEXAS STATE AGENCIES ARE NAMED DEFENDANTS IN ANY LAWSUIT AND

PROVIDER MAY NOT AGREE TO ANY SETTLEMENT WITHOUT FIRST OBTAINING THE CONCURRENCE FROM OAG. IN ADDITION, PROVIDER WILL REIMBURSE THE GLO AND THE STATE OF TEXAS FOR ANY CLAIMS, DAMAGES, COSTS, EXPENSES OR OTHER AMOUNTS, INCLUDING, BUT NOT LIMITED TO, ATTORNEYS' FEES AND COURT COSTS, ARISING FROM ANY SUCH CLAIM. IF THE GLO DETERMINES THAT A CONFLICT EXISTS BETWEEN ITS INTERESTS AND THOSE OF PROVIDER OR IF THE GLO IS REQUIRED BY APPLICABLE LAW TO SELECT SEPARATE COUNSEL, THE GLO WILL BE PERMITTED TO SELECT SEPARATE COUNSEL AND PROVIDER WILL PAY ALL REASONABLE COSTS OF THE GLO'S COUNSEL.

24. Provider has disclosed in writing to the GLO all existing or potential conflicts of interest relative to the performance of the Contract.
25. Sections 2155.006 and 2261.053 of the Texas Government Code, prohibit state agencies from accepting a solicitation response or awarding a contract that includes proposed financial participation by a person who, in the past five years, has been convicted of violating a federal law or assessed a penalty in connection with a contract involving relief for Hurricane Rita, Hurricane Katrina, or any other disaster, as defined by Section 418.004 of the Texas Government Code, occurring after September 24, 2005. Under Sections 2155.006 and 2261.053 of the Texas Government Code, Provider certifies that the individual or business entity named in this Contract is not ineligible to receive the specified contract and acknowledges that this Contract may be terminated and payment withheld if this certification is inaccurate.
26. Provider understands that the GLO will comply with the Texas Public Information Act (Chapter 552 of the Texas Government Code) as interpreted by judicial rulings and opinions of the Attorney General of the State of Texas. Information, documentation, and other material related to this Contract may be subject to public disclosure pursuant to the Texas Public Information Act. In accordance with Section 2252.907 of the Texas Government Code, Provider shall make any information created or exchanged with the State/GLO pursuant to the Contract, and not otherwise excepted from disclosure under the Texas Public Information Act, available in a format that is accessible by the public at no additional charge to the State or the GLO.
27. The person executing this Contract certifies that he/she is duly authorized to execute this Contract on his/her own behalf or on behalf of Provider and legally empowered to contractually bind Provider to the terms and conditions of the Contract and related documents.
28. If the Contract is for architectural or engineering services, pursuant to Section 2254.0031 of the Texas Government Code, which incorporates by reference Section 271.904(d) of the Texas Local Government Code, Provider shall perform services (1) with professional skill and care ordinarily provided by competent engineers or architects practicing under the same or similar circumstances and professional license, and (2) as expeditiously as is

prudent considering the ordinary professional skill and care of a competent engineer or architect.

29. The state auditor may conduct an audit or investigation of any entity receiving funds from the state directly under the Contract or indirectly through a subcontract under the Contract. The acceptance of funds directly under the Contract or indirectly through a subcontract under the Contract acts as acceptance of the authority of the state auditor, under the direction of the legislative audit committee, to conduct an audit or investigation in connection with those funds. Under the direction of the legislative audit committee, an entity that is the subject of an audit or investigation by the state auditor must provide the state auditor with access to any information the state auditor considers relevant to the investigation or audit. Provider shall ensure that this paragraph concerning the authority to audit funds received indirectly by subcontractors through the Contract and the requirement to cooperate is included in any subcontract it awards. The GLO may unilaterally amend the Contract to comply with any rules and procedures of the state auditor in the implementation and enforcement of Section 2262.154 of the Texas Government Code.
30. Provider certifies that neither it nor its principals are debarred, suspended, proposed for debarment, declared ineligible, or otherwise excluded from participation in the Contract by any state or federal agency.
31. Provider expressly acknowledges that state funds may not be expended in connection with the purchase of an automated information system unless that system meets certain statutory requirements relating to accessibility by persons with visual impairments. Accordingly, Provider represents and warrants to the GLO that any technology provided to the GLO for purchase pursuant to this Contract is capable, either by virtue of features included within the technology or because it is readily adaptable by use with other technology, of: providing equivalent access for effective use by both visual and non-visual means; presenting information, including prompts used for interactive communications, in formats intended for non-visual use; and being integrated into networks for obtaining, retrieving, and disseminating information used by individuals who are not blind or visually impaired. For purposes of this Section, the phrase "equivalent access" means a substantially similar ability to communicate with or make use of the technology, either directly by features incorporated within the technology or by other reasonable means such as assistive devices or services which would constitute reasonable accommodations under the Americans With Disabilities Act or similar state or federal laws. Examples of methods by which equivalent access may be provided include, but are not limited to, keyboard alternatives to mouse commands and other means of navigating graphical displays, and customizable display appearance.
32. If the Contract is for the purchase or lease of covered television equipment, as defined by Section 361.971(3) of the Texas Health and Safety Code, Provider certifies its compliance with Subchapter Z, Chapter 361 of the Texas Health and Safety Code, related to the Television Equipment Recycling Program.

ATTORNEY'S REVIEW CERTIFICATION

I, the undersigned, _____, the duly authorized and acting legal representative of the _____, do hereby certify as follows:

I have examined the attached contract(s) and surety bonds and am of the opinion that each of the agreements may be duly executed by the proper parties, acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties; and that the agreements shall constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

Attorney's signature: _____ Date: _____

Print Attorney's Name: _____

Texas State Bar Number: _____



COMMUNITY DEVELOPMENT & REVITALIZATION
The Texas General Land Office
Certificate of Construction Completion

Subrecipient: Contract #: Date:

This is to certify that a final inspection of the project described below was conducted on

Contract was entered into on between the city/county of and

Allstate Tower for the construction of

This is to further certify that:

1. The work has been completed in accordance with the plans and specifications and all addenda, change orders, and supplemental agreements thereto, with the following exceptions:

2. The sum of , deducted from the final payment to the Contractor is a fair and equitable settlement for the foregoing excepted work.

3. The Contractor has presented on behalf of itself and its sureties, satisfactory evidence that he or she will repair, replace or make good any faulty workmanship and/or materials discovered in the work within a period of from this date, as provided in the Contract.

4. Amount of Original Contract:

Cumulative Change Orders:

Final Amount of Contract:

Less Previous Payments:

Less Deductions (from #2 above):

FINAL PAYMENT (Balance):

5. The Final Payment in the amount above is now due and payable.

6. Final Quantities:

Activity Code (dropdown)	Project Name (from Performance Standard)	Description (What is your Activity?)	Quantity	Metric (dropdown)



COMMUNITY DEVELOPMENT & REVITALIZATION
The Texas General Land Office
Certificate of Construction Completion

Activity Code (dropdown)	Project Name (from Performance Standard)	Description (What is your Activity?)	Quantity	Metric (dropdown)
Certified by :				
N/A				
Engineer's Signature		Contractor's Signature		Subrecipient's Signature
N/A		Mark Peters, Project Manager		Ray Garza, County Judge
Engineer's Name and Title (Printed)		Contractor's Name and Title (Printed)		Subrecipient Name and Title (Printed)
N/A		Allstate Tower		Aransas
Firm		Firm		City/County of

Disclaimer: The Texas General Land Office has made every effort to ensure the information contained on this form is accurate and in compliance with the most up-to-date CDBG-DR and/or CDBG-MIT federal rules and regulations, as applicable. It should be noted that the Texas General Land Office assumes no liability or responsibility for any error or omission on this form that may result from the interim period between the publication of amended and/or revised federal rules and regulations and the Texas General Land Office's standard review and update schedule.



COMMUNITY DEVELOPMENT & REVITALIZATION
The Texas General Land Office
Construction Change Order Request

NOTE: Texas Local Government Code Sec. 262.031 "CHANGES IN PLANS AND SPECIFICATIONS" regulations apply. Generally, a cumulative increase in the contract price in excess of 25% or a cumulative decrease in excess of 18% are disallowed.

Subrecipient: GLO Contract Number: Date:

Engineer Name Address & Phone Subrecipient Name, Address, & Phone Number: Contractor Name, Address & Phone Number:

Project #: Bid Package #: Change Order #:
 Contract Origination Date: Project Description:

You are hereby requested to comply with the following changes from the contract plans and specifications.

Item No.	Description of Changes: Quantities, Units, Unit Prices, Change in Completion Schedule, etc.	Decrease in Contract Price	Increase in Contract Price

See sheet 2 to add additional entries

Change in Construction Contract Price

Original Contract Price:
 Cumulative Previous Change Order(s) Total:
 Contract Price Prior to this Change Order:
 Net Increase/Decrease of this Change Order:

Change in Contract Time (Calendar Days)

Original Contract Time in Days:
 Net Change from Previous Change Order(s) in Days:
 Contract Time Prior to this Change Order in Days:
 Net Increase/Decrease of this Change Order in Days:



COMMUNITY DEVELOPMENT & REVITALIZATION
The Texas General Land Office
Construction Change Order Request

Contract Price with All Approved Change Orders:
 Cumulative Percent Change in Contract Price:
 Construction Contract Start Date:

Contract Time with All Approved Change Orders in Days:
 Subrecipient Contract End Date:
 Construction Contract End Date:

Reimbursements of costs included in this change order are subject to review by GLO-CDR.

***This document may be executed prior to submission for GLO-CDR review, but all parties involved will be held responsible if the change order or amendment warranted as a result of this change order is not in compliance with CDBG or HUD Requirements**

Subrecipient Signature	Engineer Signature	Contractor Signature
Subrecipient Name and Title (Printed)	Engineer Name and Title (Printed)	Contractor Name and Title (Printed)
Subrecipient Signature	Engineer Signature	Contractor Signature

Justification for Change Order

1. Will this change order increase or decrease the number of beneficiaries?	Increase	Decrease	No Change
If there is a change, how many beneficiaries will be affected? Total LMI 			
2. Effect of this change on the scope of work:	Increase	Decrease	No Change
3. Effect on operation and maintenance costs:	Increase	Decrease	No Change
4. Are all prices in the change order dependent upon unit prices found in the original bid?	Yes	No	
If "no", explain:			

5. Has the change created new circumstances or environmental conditions which may affect the project's impact, such as concealed or unexpected conditions discovered during	Yes	No
If "yes", is an environmental assessment required?		



COMMUNITY DEVELOPMENT & REVITALIZATION
The Texas General Land Office
Construction Change Order Request

6. Is the Texas Council on Environmental Quality (TCEQ) clearance still valid (if applicable)?	Yes	No
7. Is the CCN permit still valid? (sewer projects only)	Yes	No
8. Are the disability access requirements/approval still valid (if applicable)?	Yes	No
9. Are other Disaster Recovery contractual special condition clearances still valid?	Yes	No
If "no", explain:		

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SECTION 01 010

SUMMARY OF WORK

1.0 WORK COVERED BY CONTRACT DOCUMENTS

- A. The work of this contract includes rehabilitation of Lift Station No. 18 located at 1115 Volney St, La Marque, TX 77568.

2.0 CONTRACTS

- A. Construct the work under a single unit price contract.

3.0 WORK SEQUENCE

- A. Construct the work in stages to provide for district convenience. Do not close off public use of facilities until completion of one stage of construction will provide alternate usage.
- B. Coordinate use of premises under direction of Engineer.
- C. Assume full responsibility for the protection and safekeeping of products under this contract, stored at the site.
- D. Move any stored products under Contractor's control which interfere with operations of the Owner of separate contractor.
- E. Obtain and pay for the use of additional storage or work areas needed for operations.

4.0 OWNER OCCUPANCY

- A. Owner may occupy the premises during the entire period of construction for the conduct of his normal operations. Cooperate with Owner's representative in all construction operations to minimize conflict, and to facilitate Owner usage.
- B. Contractor shall at all times conduct his operations to ensure the least inconvenience to the general public.

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SECTION 01 045

CUTTING AND PATCHING

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Contractor shall be responsible for all cutting, fitting and patching, including attendant excavation and backfill, required to complete the work or to:
 - 1. Make its several parts fit together properly.
 - 2. Uncover portions of the work to provide for installation of ill-timed work.
 - 3. Remove and replace defective work.
 - 4. Remove and replace work not conforming to requirements of contract documents.
 - 5. Remove samples of installed work as specified for testing.
 - 6. Provide routine penetrations of nonstructural surfaces for installation of piping and electrical conduit.
- B. Related Requirements in Other Parts of the Project Manual. Basic responsibilities of parties: Condition of the Contract.
- C. Related Requirements Specified in Other Sections.
 - 1. 01010 Summary of Work
 - 2. 02200 Earthwork
 - 3. Mechanical General Provisions: Division 15 - Mechanical.
 - 4. Electrical General Provisions: Division 16 - Electrical.

1.02 SUBMITTALS

- A. Submit a written request to Engineer well in advance of executing any cutting or alteration which affects:
 - 1. The work of the Owner or any separate Contractor.
 - 2. The structural value or integrity of any element of the project.

CUTTING & PATCHING

3. The integrity or effectiveness of weather-exposed or moisture resistant elements or systems.
 4. The efficiency, operational life, maintenance, or safety of operational elements.
 5. The visual qualities of sight-exposed elements.
- B. The request shall include:
1. Identification of the project.
 2. Description of the affected work.
 3. The necessity for cutting, alteration or excavation.
 4. The effect on the work of the Owner or any separate Contractor, or on the structural or weatherproof integrity of the project.
 5. Description of the proposed work.
 - a. The scope of cutting, patching, alteration, or excavation.
 - b. The trades who will execute the work.
 - c. Products proposed to be used.
 - d. The extent of refinishing to be done.
 6. Alternatives to cutting and patching.
 7. Cost proposal, when applicable.
 8. Written permission of any separate Contractor whose work will be affected.
- C. Should conditions of the work or the schedule indicate a change of products from the original installation, Contractor shall submit a request for substitution as specified in Section 01 600 - Materials and Equipment.
- D. Submit a written notice to Engineer designating the date and the time the work will be uncovered.

2.0 PRODUCTS

Comply with specifications and standards for each specific product involved.

3.0 EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions of the project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, inspect the conditions affecting the installation of products or performance of the work.
- C. Report unsatisfactory or questionable conditions to the Architect/Engineer in writing; do not proceed with the work until the Architect/Engineer has provided further instructions.

3.02 PREPARATION

- A. Provide adequate temporary support as necessary to assure the structural value or integrity of the affected portion of the work.
- B. Provide devices and methods to protect other portions of the project from damage.
- C. Provide protection from the elements for that portion of the project which may be exposed by cutting and patching work, and maintain excavations free from water.

3.03 PERFORMANCE

- A. Execute fitting and adjustment of products to provide finished installation to comply with specified tolerances and finishes.
- B. Execute cutting, demolition, excavating and backfilling by methods which will prevent damage to other work and will prevent settlement.
- C. Restore work which has been cut or removed and install new products to provide completed work in accord with requirements of the contract documents.
- D. Refinish entire surfaces as needed to provide an even finish. On continuous surfaces, refinish to the nearest intersections. For an assembly, refinish the entire item.

END OF SECTION

SECTION 01 090

REFERENCE SPECIFICATIONS

1.0 GENERAL

1.01 SUMMARY

- A. Section includes modifications of City of Houston Standard Construction Specifications for Wastewater Collection Systems, Water Lines, Storm Drainage and Street Paving, which pertain to the Work described in the Contract Documents.
- B. Except as modified herein, City of Houston Standard Construction Specifications for Wastewater Collection Systems, Water Lines, Storm Drainage and Street Paving, latest edition, are incorporated herein by reference as if copied verbatim including any supplementary specification or amendments thereto unless indicated otherwise in the Drawings or Specifications.
- C. Where a portion of the reference specification is modified or deleted herein, the unaltered portions of the specification shall remain in effect.
- D. Whenever the term “City Engineer”, “Design Consultant”, or “Project Manager” is used therein, it is intended to refer to the ENGINEER as defined in the Contract Documents.
- E. Whenever the term “City of Houston” or “City” is used therein, it is intended to refer to the OWNER as defined in the Contract Documents.
- F. Change all references to Section 01330-Submittals Procedures to Section 01 300 – Submittals.
- G. Change all references to Section 01454-Testing Laboratory Services to Section 01410 – Testing Laboratory Services.
- H. Change all references to Section 01504-Temporary Facilities and Controls to Section 01500 – Temporary Facilities and Controls.
- I. Delete all references to Section 01270 – Measurement and Payment.

END OF SECTION

REFERENCE SPECIFICATIONS

01 090-1

SECTION 01 100

STORM WATER MANAGEMENT

1.0 GENERAL

1.1 DESCRIPTION

Storm Water Management consists of all permitting and implementation activities necessary to conform to the requirements of the Environmental Protection Agency (EPA) Storm Water NPDES Permit Regulations as outlined in Federal Register Volume 57, No. 175 and Texas Commission on Environmental Quality (TCEQ) Regulation.

1.2 RELATED WORK

- A. Division 2 - Site Work. All sections in Division 2.

1.3 REFERENCE STANDARDS

- A. Storm Water Management Handbook for Construction Activities - Prepared by Harris County, Harris County Flood Control District and City of Houston; 2001 Edition.

1.4 SUBMITTALS

- A. NOT USED

1.5 PAYMENT

Work performed under this section will be paid for as indicated in the Bid Proposal.

2.0 PRODUCTS

All products used to implement the PPP shall conform to the Technical Specifications as outlined in Appendix 'C' of the Storm Water Management Handbook for Construction Activities.

3.0 EXECUTION

3.1 POLLUTION PREVENTION PLAN

The PPP shall be developed and implemented in accordance with Section III, Section IV and the Technical Specifications of the Storm Water Management Handbook for Construction Activities.

3.2 NOTICE OF INTENT (NOI)

The NOI shall be completed by the Contractor and submitted to the TCEQ two days prior to beginning work that involved the initial disturbance of soils associated with clearing, grading, excavation or other construction activities. The PPP must be reviewed and approved by the Engineer prior to submitting NOI.

3.3 NOTICE OF TERMINATION (NOT)

The NOT shall be completed by the Contractor and submitted to the TCEQ upon obtaining stabilization of the soils on the site as determined by the Engineer.

END OF SECTION

SECTION 01 300

SUBMITTALS

1.0 PRIOR TO BEGINNING WORK

Submit the following items with the signed agreement form as a prerequisite to starting the work. The number of copies required of each submittal is six (6). The location of information concerning each submittal is referenced.

- A. Performance Bond. Bidding Documents, Contract Forms, General and Supplementary Conditions.
- B. Payment Bond. Bidding Documents, Contract Forms, General and Supplementary Conditions.
- C. Certificate of Insurance. General and Supplementary Conditions.
- D. List of Subcontractors. General and Supplementary Conditions.
- E. Material and Equipment List. Specifications sections.
- F. Construction Schedule. General Conditions and as specified in the section on Construction Schedule.
- G. Maintenance Bond. Bidding Documents, Contract Forms, General and Supplementary Conditions.

2.0 DURING CONSTRUCTION

During the progress of the work, make the following submittals in a timely manner to prevent any delay in the work.

- A. Work Schedules. Submit progress schedules monthly as evidence that the project will be ready for occupancy by the date of substantial completion. Six (6) copies are required.
- B. Shop Drawings, Product Data and Samples. Submit in accordance with the section on Shop Drawings, Product Data and Samples.
- C. Mill Certificates. Submit mill certificates on the following items as required by the specifications.
 - 1. Reinforcing Steel
 - 2. Bulk Cement

SUBMITTALS

- D. Application for Payment. Submit application for partial payment as specified in the General and Supplementary Conditions and within the time specified in the agreement.
- E. Change Order Proposal. A proposal for change order may be submitted to the Engineer whenever a need arises. The request must be in writing and must include sufficient information to assess the need for a change in the work, the contract time, or the contract sum.

3.0 PROJECT CLOSEOUT

With a written notice of completion, submit the following items in the proper form as a condition of final acceptance of the work.

- A. Project Record Documents. Submit in accordance with the section on Project Record Documents included in SECTION 01720 - Project Record Documents.
- B. Guarantees, Warranties and Bonds. Submit as required in the General and Supplementary Conditions and listed in various sections of the specifications.
- C. Certificates of Inspection. Deliver evidence of compliance with requirements of governing authorities and the specifications as specified in various sections of the specifications.
- D. Operation and Maintenance Data. As specified in various sections of the specifications.
- E. Spare Parts and Maintenance Materials. As specified in the various specification sections.
- F. Keys and Keying Schedule. As required.

END OF SECTION

SECTION 01 310

CONSTRUCTION SCHEDULES

1.0 GENERAL

- A. Promptly after award of the contract, the Contractor shall prepare and submit to the Architect/Engineer estimated construction progress schedules for the work, with sub-schedules of related activities which are essential to its progress.
- B. Submit revised progress schedules periodically.
- C. Related Requirements in Other Parts of the Project Manual. Conditions of the Contract.
- D. Related Requirements Specified in Other Sections.
 - 1. 01010 Summary of Work
 - 2. 01340 Shop Drawings, Product Data and Samples

1.01 FORM OF SCHEDULES

- A. Prepare schedules in the form of a horizontal bar chart.
 - 1. Provide separate horizontal bar for each trade or operation.
 - 2. Horizontal Time Scale. Identify first workday of each week.
 - 3. Scale and Spacing. To allow space for notations and future revisions.
- B. Identification of Listings. By major specification section numbers.

1.02 CONTENT OF SCHEDULES

- A. Construction Progress Schedule.
 - 1. Show complete sequence of construction by activity.
 - 2. Show dates of beginning and completion of each major element of construction.
 - 3. Show projected percentages of completion for each item, as of the first day of each month.
- B. Submittals Schedule for Shop Drawings, Product Data and Samples.

CONSTRUCTION SCHEDULES

Show:

1. The dates for Contractor's submittals.
 2. The dates approved submittals will be required from the Engineer.
- C. Prepare and submit sub-schedules for each separate stage or work specified in Section 01010 Summary of Work.
- D. Provide sub-schedules to define critical portions of prime schedules.

1.03 PROGRESS REVISIONS

- A. Indicate progress of each activity to date of submission.
- B. Show changes occurring since previous submission of schedule.
1. Major changes in scope.
 2. Activities modified since previous submission.
 3. Revised projections in progress and completion.
 4. Other identifiable changes.

1.04 SUBMISSIONS

- A. Submit initial schedules within 15 days after award of contract.
1. Engineer will review schedules and return review copy within 10 days after receipt.
 2. If required, resubmit within seven days after return of review copy.
- B. Submit revised progress schedules with each application for payment.

1.05 DISTRIBUTION

- A. Distribute copies of reviewed documents to:
1. Job site file.
 2. Subcontractors.
 3. Other concerned parties.
- B. Instruct recipients to report promptly to Contractor, in writing, any problems anticipated by the projections shown in the schedules.

END OF SECTION

CONSTRUCTION SCHEDULES

SECTION 01 340

SHOP DRAWINGS, PRODUCT DATA & SAMPLES

1.0 GENERAL

- A. Submit shop drawings, product data and samples required by the contract documents.
- B. Designate in the construction, or in a separate coordinated schedule, the dates for submission and the dates that reviewed shop drawings, product data and samples will be needed.
- C. Shop drawings, product data and samples are not considered a part of contract documents.

2.0 PREPARATION REQUIREMENTS

2.1 SHOP DRAWINGS

- A. Preparation by a qualified detailer is required.
- B. Where necessary for clarity, identify details by reference to sheet and detail numbers, schedule or room numbers as shown on the contract drawings.
- C. Include on the drawing all information required for submission or submit transmittal letter containing required information.
- D. Submit the number of copies which the Contractor requires, plus three (3) copies to be retained by the Engineer.

2.2 PRODUCT DATA

- A. Modify the manufacturer's standard schematic drawings to delete or supplement information as applicable.
- B. For manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other descriptive data:
 - 1. Clearly mark each copy to identify pertinent materials, products or models.
 - 2. Show dimensions and clearances required.
 - 3. Show performance characteristics and capacities.
 - 4. Show wiring diagrams and controls.

- C. Include on the data all information required for submission or submit transmittal letter containing required information.
- D. Submit the number of copies which the Contractor requires, plus three (3) copies to be retained by the Engineer.

2.3 SAMPLES

- A. Submit office samples of sufficient size and quantity to clearly illustrate:
 - 1. Functional characteristics of product or materials with integrally related parts and attachment devices.
 - 2. Full range of color samples.
- B. Erect field samples and mock-ups at the project site in an acceptable location. Construct each sample complete, including work of all trades required in finished work.
- C. Include in transmittal letter all information required for submission.
- D. Prepare the number of samples specified.

3.0 SUBMISSION REQUIREMENTS

- A. Accompany submittals with a transmittal letter.
- B. Include the following information for each submittal.
 - 1. Date and revision dates.
 - 2. Project title and number.
 - 3. The names of:
 - a. Engineer.
 - b. Contractor.
 - c. Subcontractor.
 - d. Supplier.
 - e. Manufacturer.
 - 4. Identification of product or material.

5. Relation to adjacent structure or materials.
 6. Field dimensions clearly identified as such.
 7. Specification section number.
 8. Applicable standards, such as ASTM number or Federal Specification.
 9. A blank space on each shop drawing, approximately 5" x 5", for the Engineer's stamp.
 10. Identification of deviations from contract documents.
 11. Contractor's stamp, initialed or signed, certifying review of submittal, verification of field measurements and compliance with contract documents.
- C. Submit all required shop drawings, product data and samples for the following work at one time. Suitably organize and index 8-1/2" x 11", 11" x 17" and other compatibly sized material in the 3-ring binder, if necessary. Larger shop drawings may be submitted together either rolled or folded. Include an index.

4.0 RESUBMISSION REQUIREMENTS

4.1 SHOP DRAWINGS

- A. Revise initial drawings as required and resubmit as specified for initial submittal.
- B. Indicate on drawings any changes which have been made, including those requested by the Engineer.

4.2 PRODUCT DATA AND SAMPLES

Submit new data and samples as required for initial submission.

5.0 DISTRIBUTION AFTER REVIEW

- A. Distribute copies of shop drawings and product data which carry the Engineer's stamp to:
 1. Contractor's file.
 2. Job site file.
 3. Record document file.

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4. Other prime contractors.
 5. Subcontractors.
 6. Supplier.
 7. Fabricator.
- B. Distribute samples as directed. After review, samples may be used in construction.

6.0 ENGINEER DUTIES

- A. Review submittals with reasonable promptness and in accordance with schedule.
- B. Affix stamp and initials or signature, and indicate requirements for resubmittal or approval of submittal.
- C. Return submittals to Contractor for distribution or for resubmission.

END OF SECTION

SECTION 01 370

SCHEDULE OF VALUES

1.0 GENERAL

1.01 SECTION INCLUDES

A. Preparation and submittal of schedule of values for:

1. Submit a schedule of values at least 10 days prior to submitting the first application for payment. Upon request, support values given with data that will substantiate the amounts. Use schedule of values only as basis for application for payment.
2. Submit quantities of designated materials. List quantities of materials specified under unit price allowances.
3. Payment for materials stored on-site will be limited to those materials listed in a schedule of unit material values.

2.0 FORM OF SUBMITTAL

Submit typewritten schedule of values on 8-1/2" x 11", plain bond, white paper. Use the table of contents of this project manual as a format for listing costs of work by sections under Divisions 2 through 16.

3.0 PREPARATION

3.01 PREPARING SCHEDULE OF VALUES

A. Itemize separate line-item cost for each of following general costs items:

1. Performance and payment bonds.
2. Field supervision and layout.
3. Temporary facilities and controls.

B. Itemize separate line-item cost for work required by each section of this specification.

C. Break down installed costs into:

1. Delivered cost of material, with taxes paid.

SCHEDULE OF VALUES

2. Total installed cost, with overhead and profit.
- D. Break down costs to list major products or operations for each line item which has an installed value of more than \$10,000.
- E. Round off figures to nearest dollar.
- F. Make sum of total costs for all items listed in the schedule equal to the total contract sum.

3.02 PREPARING SCHEDULE OF UNIT MATERIAL VALUES

- A. Submit separate schedule of unit prices for materials to be stored on which partial payments will be made.
- B. Make a submittal form parallel to the schedule of values, with line items identified the same as line items in the schedule of values.
- C. Include in unit prices only:
 1. Cost of material.
 2. Delivery and unloading at site.
 3. Sales taxes.
- D. Make sure that the unit price multiplied by the quantity given equals the material cost of that item in the schedule of values.

3.03 REVIEW AND RESUBMITTAL

After review by the Engineer, revise and resubmit the schedule of values or material values, if required. Resubmit revised schedules in the same manner as the original schedules.

END OF SECTION

SECTION 01 410

TESTING LABORATORY SERVICES

1.0 GENERAL

1.1 PAYMENT

- A. Payment for services of an independent testing laboratory to perform specified testing shall be as directed in the Special Conditions to the Standard General Conditions.

1.2 RELATED WORK

- A. General Conditions of the Contract for Construction

Inspections and testing required by laws, ordinances, rules and regulations or orders of public authorities are the responsibility of the Owner.

- B. Specification Sections

Contained in the various specification sections are requirements for certification of products, testing, adjusting and balancing of equipment; and other tests and standards.

1.3 WORK INCLUDED

Testing is required for the following items of work, if applicable:

- A. Soils compaction control.
- B. Asphalt concrete paving.
- C. Asphalt densities.
- D. Portland cement concrete paving.
- E. Concrete reinforcement.
- F. Cast-in-place concrete.
- H. Other testing as required by local governing authority.

2.0 TESTING LABORATORY

2.1 DUTIES

- A. Cooperate with the Engineer and Contractor; provide qualified personnel promptly on notice.
- B. Perform specified inspections, sampling and testing of materials and methods of construction:
 - 1. Comply with specified standards; ASTM, other recognized authorities, and as specified.
 - 2. Ascertain compliance with requirements of the contract documents.
- C. Promptly notify the Engineer and Contractor by fax or email of irregularities or deficiencies of work which are observed during performance of services.
- D. Prepare and distribute reports of inspections and tests within three days of test completion or weekly on continuous work as follows:
 - 1. Engineer: One copy by fax, email or certified mail unless otherwise directed by Engineer.

2. Contractor: One copy by fax, email or certified mail unless otherwise directed by Contractor.
 3. Owner: One copy by fax, email or certified mail unless otherwise directed by Owner.
- E. Include the following information for each test as well as additional data specified in the applicable section.
1. Date of test.
 2. Location of test.
 3. Specified standards.
 4. Test results.
 5. Remarks.

2.2 LIMITS OF AUTHORITY

The laboratory is not authorized to:

- A. Release, revoke, alter, or enlarge on requirements of the contract documents.
- B. Approve or accept any portion of the work.
- C. Perform any duties of the Contractor.

3.0 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel; provide access to the work or to manufacturer's operations.
- B. Provide to laboratory, preliminary representative samples of materials to be tested, in required quantities.
- C. Furnish labor and equipment:
 1. To provide access to the work to be tested in accordance with OSHA requirements.
 2. To obtain and handle samples at the site.
 3. To facilitate inspections and tests.
 4. For laboratory's exclusive use for storage and curing of test samples.
- D. Notify the laboratory at least 48 hours in advance of operations to allow for his assignment of personnel and scheduling of tests.
- E. Arrange with the laboratory and pay for additional samples and tests required for the Contractor's convenience.
- F. Testing type and frequency will be specified within the Supplementary Conditions to the General Conditions and project specifications

END OF SECTION

SECTION 01 420

INSPECTION SERVICES

1.0 GENERAL

1.1 SCOPE

This section summarizes the duties, responsibilities and limitations of authority of the inspector in connection with his observation and inspection of the work.

1.2 AUTHORITY

- A. Services of the inspector are set forth in the General Conditions of the Contract for Construction. In particular, the definitions of the Engineer's duties provide authority for observation and inspection of the work.
- B. The inspector's authority to require special inspection or testing in connection with rejected work is also provided in the General Conditions. Furthermore, the provision that upon request by the Contractor the inspector inspect and accept or reject any material furnished, is also granted in the General Conditions.
- C. The provision for removing work for inspection by the inspector is set forth in the General Conditions.

2.0 DEFINITIONS

- A. Inspector. A representative of the Engineer or Owner will be assigned authority to observe and inspect the work.
- B. Working Day. Inspectors are not required to work on Saturdays, Sundays, or legal holidays. If the Contractor plans work on a Saturday, Sunday, or legal holiday, prior arrangements should be made for an inspector not later than 2:00 p.m. on the working day before the Saturday, Sunday or legal holiday.
- C. Uninspected Work. Any work performed on a Saturday, Sunday, or legal holiday without benefit of an inspection may require removal and replacement if so directed by the inspector. Removal and replacement will be completed at no additional cost to the Owner.

END OF SECTION

SECTION 01 500

TEMPORARY FACILITIES AND CONTROLS

1.0 GENERAL

The facilities and controls specified in this section are considered minimum for the project. The Contractor may provide additional facilities and controls which he considers necessary for the proper execution of the work and to meet his responsibilities for protection of persons and property.

2.0 UTILITIES

- A. No land line is required. Superintendent is to have cell phone available at all times.
- B. Temporary Connections. Arrange and secure all temporary connections for water, electricity, gas and other services needed to perform the work. The cost of connection and use shall be arranged for and paid by the Contractor.
- C. The Contractor shall provide all power and fuel for equipment tests.

3.0 SANITATION

- A. Provide and maintain sanitary conveniences to satisfy requirements of local, state and Federal authorities, ordinances and laws. Obtain approval for location secluded from view.
- B. Personnel on this work will not be permitted to use the Owner's facilities normally used by Owner's staff and occupants.

4.0 ACCESS AND PARKING

Access and parking at the site are not limited by provisions other than those concerning free access and protection of adjoining property.

5.0 SECURITY AND TEMPORARY PROTECTIONS

Furnish, install and maintain suitable barriers and protections to prevent public entry, and to protect the work, existing facilities, trees and plants from construction operations.

6.0 CONSTRUCTION AIDS

Furnish, install and maintain construction aids required by personnel to facilitate the execution of the work including: scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes, and other such facilities and equipment.

7.0 CONTROLS

Protect equipment, newly finished areas and connected finished areas from dust and moisture. Use temporary walls, dust curtains or other enclosures, as necessary, to prevent damage.

- A. Provide temporary weather tight enclosure of exterior walls as necessary to provide acceptable working conditions, provide weather protection for interior materials, allow for effective temporary treating, and prevent entry of unauthorized persons.
 - 1. Provide temporary exterior doors with hardware and padlocks.
 - 2. Other enclosures shall be removable as necessary for work and for handling of materials.
- B. Temporary Heat. Provide temporary heat, fuel and services necessary to protect work and materials from injury from dampness and cold weather.
- C. Use rigid or semi-rigid pipe for bypass piping. Use of soft hose shall not be permitted for bypass piping.

Provide adequate temporary piping and equipment to maintain continuous flow. Under no circumstances shall flow be interrupted or stopped.

Location of temporary facilities shall be approved by the ENGINEER.

8.0 PROJECT SIGNS

Signs other than those specified, will not be permitted on the project site without approval.

9.0 REMOVAL OF TEMPORARY FACILITIES AND CONTROLS

Prior to final inspection, remove all temporary buildings, sanitary conveniences, signs and other items. Remove or restore, as required, all temporary roads and parking areas. Clean up the entire area as specified in the section on Cleaning and Adjusting.

10.0 MEASUREMENT AND PAYMENT

No separate payment will be made for Work under this section unless indicated otherwise in the Bid Proposal form.

END OF SECTION

SECTION 01 570

TRAFFIC CONTROL AND REGULATION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Section includes general requirements for signs, signals, control devices, flagmen (uniformed traffic control personnel), flares, lights and traffic signals as well as construction parking control and designated haul routes.

1.02 UNIT PRICES

- A. Payment for this item is on a lump sum basis for all work described in this section.

1.03 TRAFFIC CONTROL PLAN

- A. An alternate Traffic Control Plan (TCP), responsive to the Texas Manual on Uniform Traffic Control Devices (TMUTCD), may be developed and submitted to the Owner's Representative for approval. The Contractor's plan must be sealed by a Registered Professional Engineer, who is proficient in the field of Traffic Engineering.
- B. For all work within TxDOT Right-Of-Way, the Contractor shall submit a Traffic Control Plan to Texas Department of Transportation for review and approval.
- C. Submit Traffic Control Plan within 30 days following the Notice to Proceed.

1.04 SIGNS, SIGNALS, AND DEVICES

- A. Comply with Texas State Manual on Uniform Traffic Control Devices.
- B. Traffic Cones and Drums, Flares and Lights: As approved by local jurisdictions.

1.05 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Owner's operations.
- B. Monitor parking of construction personnel's vehicles in existing facilities. Maintain vehicular access to and through parking areas.

- C. Prevent parking on or adjacent to access roads or in non-designated areas.

1.06 FLAGMEN

- A. Provide personnel and take such steps Contractor deems necessary to protect the Work and public. Use of flagmen will not relieve contractor of his responsibility for any damage for which he would otherwise be liable.

1.07 FLARES AND LIGHTS

- A. Provide flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

1.08 HAUL ROUTES

- A. Utilize haul routes designated by authorities or shown on the Drawings for construction traffic.
- B. Confine construction traffic to designated haul routes.
- C. Provide traffic control at critical areas of haul routes to regulate traffic, and minimize interference with public traffic.

1.09 TRAFFIC SIGNS AND SIGNALS

- A. Install traffic control devices at approaches to site and on site, at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
- B. Install and operate traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control, and areas affected by Contractor's operations.
- C. Relocate traffic signs and signals as Work progresses to maintain effective traffic control.

1.10 REMOVAL

- A. Remove equipment and devices when no longer required.
- B. Repair damage caused by installation.
- C. Remove post settings to a depth of 2 feet.

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PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION

TRAFFIC CONTROL AND REGULATION

01 570 - 3

SECTION 01 578

CONTROL OF GROUND WATER AND SURFACE WATER

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Dewatering, depressurizing, draining, and maintaining trenches, shaft excavations, structural excavations, and foundation beds in a stable condition, and controlling ground water conditions for tunnel excavations.
- B. Protecting work against surface runoff and rising flood waters.
- C. Disposing of removed water.

1.02 METHOD OF PAYMENT

- A. No separate payment will be made for control of ground water and surface water. Include the cost to control ground water and surface water in unit price for work requiring such controls.

1.03 REFERENCES

- A. ASTM D 698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5-lb (2.49 kg) Rammer and 12-inch (304.8 mm) Drop.
- B. Federal Regulations, 29 CFR Part 1926, Standards-Excavation, Occupational Safety and Health Administration (OSHA).
- C. Federal Register 40 CFR (Vol. 55, No. 222) Part 122, EPA Administered Permit Programs (NPDES), Para.122.26(b)(14) Storm Water Discharge.

1.04 DEFINITIONS

- A. Ground water control includes both dewatering and depressurization of water-bearing soil layers.
 - 1. Dewatering includes lowering the water table and intercepting seepage which would otherwise emerge from slopes or bottoms of excavations, or into tunnels and shafts, and disposing of removed water. The intent of dewatering is to increase stability of tunnel excavations and excavated slopes; prevent dislocation of material from slopes or bottoms of excavations; reduce lateral loads on sheeting and bracing; improve excavating and hauling characteristics of excavated material; prevent failure or heaving of the bottom of excavations; and to provide suitable conditions for placement of backfill materials and construction of structures and other installations.

2. Depressurization includes reduction in piezometric pressure within strata not controlled by dewatering alone, as required to prevent failure or heaving of excavation bottom or instability of tunnel excavations.
- B. Excavation drainage includes keeping excavations free of surface and seepage water.
- C. Surface drainage includes use of temporary drainage ditches and dikes and installation of temporary culverts and sump pumps with discharge lines as required to protect the Work from any source of surface water.
- D. Equipment and instrumentation for monitoring and control of the ground water control system includes piezometers and monitoring wells, and devices, such as flow meters, for observing and recording flow rates.

1.05 PERFORMANCE REQUIREMENTS

- A. Conduct subsurface investigations to identify groundwater conditions and to provide parameters for design, installation, and operation of groundwater control systems.
- B. Design a ground water control system, compatible with requirements of Federal Regulations 29 CFR Part 1926 and Section 01561 - Trench Safety Systems, to produce the following results:
 1. Effectively reduce the hydrostatic pressure affecting:
 - a. Excavations.
 - b. Tunnel excavation, face stability or seepage into tunnels.
 2. Develop a substantially dry and stable subgrade for subsequent construction operations.
 3. Preclude damage to adjacent properties, buildings, structures, utilities, installed facilities, and other work.
 4. Prevent the loss of fines, seepage, boils, quick condition, or softening of the foundation strata.
 5. Maintain stability of sides and bottom of excavations.
- C. Provide ground water control systems may include single-stage or multiple-stage well point systems, eductor and ejector-type systems, deep wells, or combinations of these equipment types.
- D. Provide drainage of seepage water and surface water, as well as water from any other source entering the excavation. Excavation drainage may include placement of drainage materials, such as crushed stone and filter fabric, together with sump pumping.
- E. Provide ditches, berms, pumps and other methods necessary to divert and drain surface water from excavation and other work areas.

- F. Locate ground water control and drainage systems so as not to interfere with utilities, construction operations, adjacent properties, or adjacent water wells.
- G. Assume sole responsibility for ground water control systems and for any loss or damage resulting from partial or complete failure of protective measures and any settlement or resultant damage caused by the ground water control operations. Modify ground water control systems or operations if they cause or threaten to cause damage to new construction, existing site improvements, adjacent property, or adjacent water wells, or affect potentially contaminated areas. Repair damage caused by ground water control systems or resulting from failure of the system to protect property as required.
- H. Provide an adequate number of piezometers installed at the proper locations and depths as required to provide meaningful observations of the conditions affecting the excavation, adjacent structures, and water wells.
- I. Provide environmental monitoring wells installed at the proper locations and depths as required to provide adequate observations of hydrostatic conditions and possible contaminant transport from contamination sources into the work area or into the ground water control system.
- J. Decommission piezometers and monitoring wells installed during design phase studies and left for Contractors monitoring and use.

1.06 SUBMITTALS

- A. Submittals shall conform to requirements of Section 01330 - Submittals.
- B. Submit a Ground Water and Surface Water Control Plan for review by the City Engineer prior to start of any field work. The Plan shall be signed by a Professional Engineer registered in the State of Texas. Submit a plan to include the following:
 - 1. Results of subsurface investigation and description of the extent and characteristics of water bearing layers subject to ground water control.
 - 2. Names of equipment suppliers and installation subcontractors.
 - 3. A description of proposed ground water control systems indicating arrangement, location, depth and capacities of system components, installation details and criteria, and operation and maintenance procedures.
 - 4. A description of proposed monitoring and control system indicating depths and locations of piezometers and monitoring wells, monitoring installation details and criteria, type of equipment and instrumentation with pertinent data and characteristics.
 - 5. A description of proposed filters including types, sizes, capacities and manufacturer's application recommendations.

6. Design calculations demonstrating adequacy of proposed systems for intended applications. Define potential area of influence of ground water control operation near contaminated areas.
7. Operating requirements, including piezometric control elevations for dewatering and depressurization.
8. Excavation drainage methods including typical drainage layers, sump pump application and other necessary means.
9. Surface water control and drainage installations.
10. Proposed methods and locations for disposing of removed water.

C. Submit the following records upon completed initial installation:

1. Installation and development reports for well points, eductors, and deep wells.
2. Installation reports and baseline readings for piezometers and monitoring wells.
3. Baseline analytical test data of water from monitoring wells.
4. Initial flow rates.

D. Submit the following records on a weekly basis during operations:

1. Records of flow rates and piezometric elevations obtained during monitoring of dewatering and depressurization. Refer to Paragraph 3.02, Requirements for Eductor, Well Points, or Deep Wells.
2. Maintenance records for ground water control installations, piezometers, and monitoring wells.

E. Submit the following records at end of work. Decommissioning (abandonment) reports for monitoring wells and piezometers installed by other during the design phase and left for Contractor's monitoring and use.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Comply with requirements of agencies having jurisdiction.
- B. Comply with Texas Natural Resource Conservation Commission regulations and Texas Water Well Drillers Association for development, drilling, and abandonment of wells used in dewatering system.
- C. Obtain permit from EPA under the National Pollutant Discharge Elimination System (NPDES), for storm water discharge from construction sites. Refer to Section 01571 - NPDES Permit Requirements.

- D. Obtain all necessary permits from agencies with control over the use of groundwater and matters affecting well installation, water discharge, and use of existing storm drains and natural water sources. Because the review and permitting process may be lengthy, take early action to pursue and submit for the required approvals.
- E. Monitor ground water discharge for contamination while performing pumping in the vicinity of potentially contaminated sites.

PART 2 PRODUCTS

2.01 EQUIPMENT AND MATERIALS

- A. Equipment and materials are at the option of Contractor as necessary to achieve desired results for dewatering. Selected equipment and materials are subject to review of the City Engineer through submittals required in Paragraph 1.06, Submittals.
- B. Eductors, well points, or deep wells, where used, must be furnished, installed and operated by an experienced contractor regularly engaged in ground water control system design, installation, and operation.
- C. All equipment must be in good repair and operating order.
- D. Sufficient standby equipment and materials shall be kept available to ensure continuous operation, where required.

PART 3 EXECUTION

3.01 GROUND WATER CONTROL

- A. Perform a subsurface investigation by borings as necessary to identify water bearing layers, piezometric pressures, and soil parameters for design and installation of ground water control systems. Perform pump tests, if necessary to determine the drawdown characteristics of the waterbearing layers. The results shall be presented in the Ground Water and Surface Water Control Plan (See Paragraph 1.06B.1).
- B. Provide labor, material, equipment, techniques and methods to lower, control and handle ground water in a manner compatible with construction methods and site conditions. Monitor effectiveness of the installed system and its effect on adjacent property.
- C. Install, operate, and maintain ground water control systems in accordance with the Ground Water and Surface Water Control Plan. Notify City Engineer in writing of any changes made to accommodate field conditions and changes to the Work. Provide revised drawings and calculations with such notification.

- D. Provide for continuous system operation, including nights, weekends, and holidays. Arrange for appropriate backup if electrical power is primary energy source for dewatering system.
- E. Monitor operations to verify that the system lowers ground water piezometric levels at a rate required to maintain a dry excavation resulting in a stable subgrade for prosecution of subsequent operations.
- F. Where hydrostatic pressures in confined water bearing layers exist below excavation, depressurize those zones to eliminate risk of uplift or other instability of excavation or installed works. Allowable piezometric elevations shall be defined in the Ground Water and Surface Water Control Plan.
- G. Remove ground water control installations.
 - 1. Remove pumping system components and piping when ground water control is no longer required.
 - 2. Remove piezometers, including piezometers installed during the design phase investigations and left for Contractor's use, upon completion of testing, in accordance with Section 02533 - Acceptance Testing of Sanitary Sewers.
 - 3. Remove monitoring wells when directed by the City Engineer.
 - 4. Grout abandoned well and piezometer holes. Fill piping that is not removed with cement-bentonite grout or cement-sand grout.
- H. During backfilling, dewatering may be reduced to maintain water level a minimum of 5 feet below prevailing level of backfill. However, do not allow that water level to result in uplift pressures in excess of 80 percent of downward pressure produced by weight of structure or backfill in place. Do not allow water levels to rise into cement stabilized sand until at least 48 hour after placement.
- I. Provide a uniform diameter for each pipe drain run constructed for dewatering. Remove pipe drain when it has served its purpose. If removal of pipe is impractical, provide grout connections at 50-foot intervals and fill pipe with cement-bentonite grout or cement-sand grout when pipe is removed from service.
- J. Extent of construction ground water control for structures with a permanent perforated underground drainage system may be reduced, such as for units designed to withstand hydrostatic uplift pressure. Provide a means of draining the affected portion of underground system, including standby equipment. Maintain drainage system during operations and remove it when no longer required.
- K. Remove system upon completion of construction or when dewatering and control of surface or ground water is no longer required.
- L. Compact backfill to not less than 95 percent of the maximum dry density in accordance with ASTM D 698.

3.02 REQUIREMENTS FOR EDUCTOR, WELL POINTS, OR DEEP WELLS

- A. For aboveground piping in ground water control system, include a 12-inch minimum length of clear, transparent piping between every eductor well or well point and discharge header so that discharge from each installation can be visually monitored.
- B. Install sufficient piezometers or monitoring wells to show that all trench or shaft excavations in water bearing materials are predrained prior to excavation. Provide separate piezometers for monitoring of dewatering and for monitoring of depressurization. Install piezometers and monitoring wells for tunneling as appropriate for Contractor's selected method of work.
- C. Install piezometers or monitoring wells not less than one week in advance of beginning the associated excavation.
- D. Dewatering may be omitted for portions of underdrains or other excavations, but only where auger borings and piezometers or monitoring wells show that soil is predrained by an existing system such that the criteria of the ground water control plan are satisfied.
- E. Replace installations that produce noticeable amounts of sediments after development.
- F. Provide additional ground water control installations, or change the methods, in the event that the installations according to the ground water control plan does not provide satisfactory results based on the performance criteria defined by the plan and by the specification. Submit a revised plan according to Paragraph 1.06B.

3.03 EXCAVATION DRAINAGE

- A. Contractor may use excavation drainage methods if necessary to achieve well drained conditions. The excavation drainage may consist of a layer of crushed stone and filter fabric, and sump pumping in combination with sufficient wells for ground water control to maintain stable excavation and backfill conditions.

3.04 MAINTENANCE AND OBSERVATION

- A. Conduct daily maintenance and observation of piezometers or monitoring wells while the ground water control installations or excavation drainage are operating in an area or seepage into tunnel is occurring. Keep system in good condition.
- B. Replace damaged and destroyed piezometers or monitoring wells with new piezometers or wells as necessary to meet observation schedule.
- C. Cut off piezometers or monitoring wells in excavation areas where piping is exposed, only as necessary to perform observation as excavation proceeds. Continue to maintain and make observations, as specified.

- D. Remove and grout piezometers inside or outside the excavation area when ground water control operations are complete. Remove and grout monitoring wells when directed by the City Engineer.

3.05 MONITORING AND RECORDING

- A. Monitor and record average flow rate of operation for each deep well, or for each wellpoint or eductor header used in dewatering system. Also monitor and record water level and ground water recovery. These records shall be obtained daily until steady conditions are achieved, and twice weekly thereafter.
- B. Observe and record elevation of water level daily as long as ground water control system is in operation, and weekly thereafter until the Work is completed or piezometers or wells are removed, except when City Engineer determines that more frequent monitoring and recording are required. Comply with City Engineer's direction for increased monitoring and recording and take measures as necessary to ensure effective dewatering for intended purpose.

3.06 SURFACE WATER CONTROL

- A. Intercept surface water and divert it away from excavations through use of dikes, ditches, curb walls, pipes, sumps or other approved means. The requirement includes temporary works required to protect adjoining properties from surface drainage caused by construction operations.
- B. Divert surface water and seepage water into sumps and pump it into drainage channels or storm drains, when approved by agencies having jurisdiction. Provide settling basins when required by such agencies.

END OF SECTION

SECTION 01 600

MATERIALS & EQUIPMENT

1.0 GENERAL

A. Material and Equipment Incorporated into the Work

1. Conform to applicable specifications and standards.
2. Comply with size, make, type and quality specified, or as specified approved in writing by the Engineer.
3. Manufactured and Fabricated Products.
 - a. Design, fabricate and assemble in accord with the best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gages, to be interchangeable.
 - c. Two or more items of the same kind shall be identical, by the same manufacturer.
 - d. Products shall be suitable for service conditions.
 - e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

B. Related Requirements in Other Parts of the Project Manual

Conditions of the Contract.

C. Related Requirements Specified in Other Sections

SECTION 01010 – SUMMARY OF WORK

SECTION 01340 – SHOP DRAWINGS, PRODUCT DATA & SAMPLES

SECTION 01710 – CLEANING & ADJUSTING

2.0 REUSE OF EXISTING MATERIAL

- A. Except as specifically indicated or specified, materials and equipment removed from the existing structure shall not be used in the completed work.

MATERIALS & EQUIPMENT

- B. For material and equipment specifically indicated or specified to be reused in the work.
 - 1. Use special care in removal, handling, storage and reinstallation, to assure proper function in the completed work.
 - 2. Arrange for transportation, storage and handling of products which require off-site storage, restoration or renovation. Pay all costs for such work.

3.0 MANUFACTURER'S INSTRUCTIONS

- A. When contract documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including two copies to Engineer. Maintain one set of complete instructions at the job site during installation and until completion.
- B. Handle, install, connect, clean, condition and adjust products in strict accordance with such instructions and in conformity with specified requirements.
 - 1. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Engineer for further instructions.
 - 2. Do not proceed with work without clear instructions.
- C. Perform work in accordance with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by contract documents.

4.0 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accordance with construction schedules; coordinate to avoid conflict with work and conditions at the site.
 - 1. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
 - 2. Immediately on delivery, inspect shipments to assure compliance with requirements of contract documents and approved submittals, and that products are properly protected and undamaged.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.

5.0 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.
 - 1. Store products subject to damage by the elements in weather-tight enclosures.
 - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
- B. Exterior Storage
 - 1. Store fabricated products above the ground, on blocking or skids; prevent soiling or staining. Cover products which are subject to deterioration with impervious sheet coverings; provide adequate ventilation to avoid condensation.
 - 2. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- C. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.
- D. Protection After Installation

Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove when no longer needed.

6.0 SUBSTITUTIONS AND PRODUCT OPTIONS

- A. Products List

Within 30 days after contract date, submit to Engineer a complete list of major products proposed to be used, with the name of the manufacturer and the installing subcontractor.
- B. Contractor's Options
 - 1. For products specified only by reference standard, select any product meeting that standard.
 - 2. For products specified by naming several products or manufacturers, select any one of the products or manufacturers named, which complies with the specifications.

3. For products specified by naming one or more products or manufacturers and "or equal", Contractor must submit a request as for substitutions for any product or manufacturer not specifically named.
4. For products specified by naming only one product and manufacturer, there is no option.

C. Substitutions

1. For a period of 30 days after contract date, Engineer will consider written requests from Contractor for substitution of products.
2. Submit a separate request for each product, supported with complete data, with drawings and samples as appropriate, including:
 - a. Comparison of the qualities of the proposed substitution with that specified.
 - b. Changes required in other elements of the work because of the substitution.
 - c. Effect on the construction schedule.
 - d. Cost data comparing the proposed substitution with the product specified.
 - e. Any required license fees or royalties.
 - f. Availability of maintenance service, and source of replacement materials.
3. Engineer shall be the judge of the acceptability of the proposed substitution.
4. Engineer will review requests for substitutions with reasonable promptness, and notify Contractor, in writing, of the decision to accept or reject the requested substitution.

D. Contractor's Representation

A request for a substitution constitutes a representation that Contractor:

1. Has investigated the proposed product and determined that it is equal to or superior in all respects to that specified.
2. Will provide the same warranties or bonds for the substitution as for the product specified.

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3. Will coordinate the installation of an accepted substitution into the work, and make such other changes as may be required to make the work complete in all respects.
4. Waives all claims for additional costs, under his responsibility, which may subsequently become apparent.

END OF SECTION

SECTION 01 700

CONTRACT CLOSEOUT

1.0 GENERAL

A. Comply with requirements stated in the Conditions of the Contract and in specifications for administrative procedures in closing out the work.

B. Related Requirements in Other Parts of the Project Manual

Fiscal provisions, legal submittals and additional administrative requirements.

1.1 SUBSTANTIAL COMPLETION

A. When Contractor considers the work substantially complete, he shall submit to Engineer:

1. A written notice that the work is substantially complete.

2. A list of items to be completed or corrected.

B. Within a reasonable time after receipt of such notice, Engineer will make an inspection to determine the status of completion.

C. Should the Engineer determine that the work is not substantially complete:

1. Engineer will promptly notify the Contractor in writing, giving the reasons therefore.

2. Contractor shall remedy the deficiencies in the work, and send a second written notice of substantial completion to the Engineer.

3. Engineer will re-inspect the work.

D. When Engineer finds that the work is substantially complete, he will:

1. Prepare and deliver to Owner a tentative Certificate of Substantial Completion with a tentative list of items to be completed or corrected before final payment. 2. After due consideration of any objections to the tentative certificate that have been made by the Owner as provided in the General Conditions, the Engineer will execute and deliver to the Owner and Contractor a definite Certificate of Substantial Completion with a revised list of items to be completed or corrected.

CONTRACT CLOSEOUT

1.2 FINAL INSPECTION

- A. When Contractor considers the work complete, he shall submit written certification that:
 - 1. Contract documents have been reviewed.
 - 2. Work has been inspected for compliance with contract documents.
 - 3. Work has been completed in accordance with the contract documents.
 - 4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.
 - 5. Work is completed and ready for final inspection.
- B. Engineer will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should the Engineer consider the work is incomplete or defective:
 - 1. Engineer will promptly notify the contractor in writing, listing the incomplete or defective work.
 - 2. Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to Engineer that the work is complete.
 - 3. Engineer will re-inspect the work.
- D. When the Engineer finds the work is acceptable under the contract documents, he shall request the Contractor to make closeout submittals.

1.3 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ENGINEER

- A. Project Record Documents
Refer to SECTION 01720 – Project Record Drawings.
- B. Operation and Maintenance Data, Instructions to Owner's Personnel
To requirements of respective sections in specifications.
- C. Keys and Keying Schedule
As required.

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D. Spare Parts and Maintenance Materials

As specified in respective sections of specifications.

E. Evidence of Payment and Release of Liens

Submit the following in such form as approved by Owner.

1. Contractor's affidavit of payment of debts and claims.
2. Contractor's affidavit of release of liens, with:
 - a. Consent of surety to final payment.
 - b. Separate releases or waivers of liens for subcontractors and other with lien rights against property of Owner with a list of those parties.
3. All submittals shall be duly executed before delivery to Engineer.

F. Certificate of Insurance for Products and Completed Operations

G. Maintenance Bond

Submit as specified in the Supplementary Conditions.

END OF SECTION

SECTION 01 710

CLEANING & ADJUSTING

1.0 GENERAL

1.1 RESPONSIBILITY

- A. The Contractor is responsible for cleaning and adjusting the work. If the Contractor fails to clean and adjust the work, the Owner may do so and charge the resulting costs to the Contractor.
- B. Detailed cleaning and adjusting requirements for specific trades or work are specified in sections pertaining to that trade or work.

1.2 REQUIREMENTS OF REGULATORY AGENCIES

A. Fire Protection

Store volatile waste in covered metal containers and remove from premises daily.

B. Pollution Control

Conduct cleaning and disposal operations in compliance with local ordinances and antipollution laws.

- 1. Burning or burying of rubbish and materials on the project site is not permitted.
- 2. Disposal of volatile fluid wastes and other chemical wastes in storm or sanitary sewer systems or into streams or waterways is not permitted.

C. Safety Standards

Maintain the project in accordance with insurance and safety standards.

2.0 PRODUCTS

Use only cleaning materials recommended by the manufacturer of the surface to be cleaned. Employ cleaning materials as recommended by the cleaning material manufacturer.

3.0 EXECUTION

3.1 DURING CONSTRUCTION

- A. Oversee cleaning and ensure that the premises are maintained free from accumulations of waste material and rubbish. Do not allow waste materials, rubbish and debris to accumulate and become unsightly or create a hazard. Provide containers and locate on site for collection of waste material, rubbish, and debris.
- B. At reasonable intervals during progress of the work, collect and dispose of waste material, rubbish and debris. Handle waste in a controlled manner; do not drop or throw materials from heights.
- C. Remove waste materials, rubbish and debris from the site and legally dispose at public and private dumping areas off the project site.
- D. If applicable, vacuum clean interior building areas when ready to receive finish painting and continue vacuum cleaning as needed until the building is ready for acceptance or occupancy. Schedule cleaning operations so that resulting dust and other contaminants will not fall on wet, newly painted surfaces.

3.2 FINAL CLEANING AND ADJUSTING

- A. Use experienced workmen or professional cleaners for final cleaning.
- B. Remove grease, dust, stains, paint, oil, labels, fingerprints and other foreign materials from interior and exterior surfaces. Repair, patch and touch-up marred surfaces to match adjacent finishes.
- C. Broom clean paved surfaces; rake clean other surfaces of grounds.
- D. Clean and service all air filters and pipe strainers. Replace disposable air filters if dirty. Clean ducts, blowers and coils if air conditioning units were operated without filters.
- E. If installed features of the work fail to operate or operate improperly, make the necessary adjustments to prevent damage and ensure proper operation. Remove and repair or replace maladjusted items if necessary, for proper adjustment.
- F. Remove all waste material and rubbish from the project area, as well as all tools, construction equipment, machinery, surplus materials and temporary facilities.
- G. Immediately prior to acceptance, conduct a final inspection of exposed interior and exterior surfaces to verify that the work is properly cleaned. Maintain cleaning until the premises are occupied by the Owner.

3.3 ADJACENT AREAS

To the Owner's satisfaction, clean or repair adjacent areas affected by the construction. Remove dust and debris in the adjacent area. Repair, patch and touch-up marred surfaces to match adjacent finishes.

END OF SECTION

SECTION 01 720

PROJECT RECORD DOCUMENTS

1.0 GENERAL

Prepare and maintain record documents for the project to accurately reflect the construction as built. Documents must be submitted at work completion as a condition of final acceptance.

2.0 MAINTENANCE OF RECORD DOCUMENTS

- A. Maintain at the job site, one copy of:
 - 1. Contract drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Reviewed shop drawings.
 - 5. Change orders and field numbers.
 - 6. Other contract modifications.
 - 7. Field test records.
 - 8. Correspondence.
- B. Store record documents in an approved location apart from documents used for construction. Do not use record documents for construction purposes. Provide files and racks for orderly storage. Maintain documents in clean, dry, legible condition. Make documents and samples available at all times for inspection by the Architect/Engineer.

3.0 MARKING DEVICES

Mark all changes with red ink pen.

4.0 RECORDING

- A. Keep record documents current. Do not permanently conceal any work until required information has been recorded.
- B. Label each document "PROJECT RECORD" in neat, large, printed letters. Legibly mark contract drawings to record actual construction:

PROJECT RECORD DOCUMENTS

1. Depths of various elements of foundations or structures in relation to survey data.
 2. Horizontal and vertical location of underground and underslab utilities and appurtenances referenced to permanent surface improvements.
 3. Location of internal utilities and appurtenances referenced to permanent surface improvements.
 4. Field changes of dimension and detail.
 5. Changes made by change order or field order.
 6. Details not on original drawings.
- C. Legibly mark specifications and addenda to record:
1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
 2. Changes made by change order or field order.
 3. Other matters not originally specified.

5.0 SUBMITTAL

- A. At project completion, deliver record documents to the Architect/Engineer. Place all letter-sized material in a 3-ring binder, neatly indexed. Bind contract drawings and shop drawings in rolls of convenient size for ease of handling.
- B. Accompany the submittal with a transmittal letter, containing:
1. Date.
 2. Project title and number.
 3. Contractor's name and address.
 - a. Title and number of each record document.
 - b. Certification that each document as submitted is complete and accurate.
 - c. Signature of Contractor.

END OF SECTION

PROJECT RECORD DOCUMENTS

SECTION 01 740

SITE RESTORATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Restoration of site affected by the Work in public or private property, including pavement, esplanades, sidewalks, driveways, fences, lawns and landscaping.
- B. Restoration of all disturbed areas including excavated areas, areas designated for fill placement to improve site drainage, and areas disturbed by vehicular traffic and/or construction equipment as specified herein.
- C. Place on-site fill to be provided by others as directed by the ENGINEER and specified herein.

1.02 MEASUREMENT AND PAYMENT

- D. Unit Prices
 - 1. Payment for site restoration will be made under this section on a unit price basis as stipulated in the Bid Proposal form.
 - 2. Payment for fill placement will be made under this section on a unit price basis as stipulated in the Bid Proposal form.
 - 3. Payment for increasing height of sprinkler heads will be made under this section on a unit price basis as stipulated in the Bid Proposal form.
- E. Stipulated Price (Lump Sum) Contracts. If Contract is Stipulated Price Contract, include payment for work under this section in total Stipulated Price.

1.03 DEFINITIONS

- A. Phase: Locations identified on the plans and listed in Section 01010 – Summary of Work under Work Sequence.
- B. Site Restoration: Replacement or reconstruction of Site Improvements located in rights-of-way, easements, public property, and private property affected or altered by the Work.
- C. Site Improvement: Includes pavement, curbs and gutters, esplanades, sidewalks, driveways, fences, lawns, irrigation systems, landscaping, and other

SITE RESTORATION

improvements in existence at the Project site before commencement of construction operations.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01300 – Submittal Procedures.
- B. Schedule of testing, service connections, abandonment, backfill, and site restoration.
- C. Sample of notices to residents outlining their responsibility for maintenance of site improvements adjacent to the Project that are not disturbed by construction operations.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Seeding and sodding: Sod specified in Section 02922 – Sodding and Seed specified in Section 02921 – Hydromulch Seeding.

PART 3 - EXECUTION

3.01 PREPARATORY WORK

- A. Provide cleanup and restoration crews to work closely behind pipe laying and roadway construction crews, and where necessary, during testing, service restoration, abandonment, backfill and surface restoration.
- B. Water Lines: Unless otherwise approved by Project Manager, comply with the following:
 - 1. Once Project manager approves work within a Phase, immediately begin preparatory work for disinfection effort.
 - 2. No later than three days after completing disinfection preparatory work, submit to City appropriate request for disinfection.
 - 3. If City fails to perform initial disinfection of lines in accordance with Section 2514 – Disinfection of Water Lines, within seven days from submission of appropriate request, and if approved by Project Manager, pipe laying operations may continue beyond approved limits until the City responds.

4. Immediately after transfer of services, begin abandonment of old water lines and site restoration.

C. Wastewater Lines:

1. Once Project Manager approves work within a Line Segment, immediately begin preparatory work for testing effort.
2. No later than three days after completing preparatory work for testing, initiate testing work.
3. Immediately after transfer of service connections, begin abandonment of old wastewater lines, and site restoration.

D. Street Construction and Paving Projects

1. Once Project Manager approves work within a Line Segment of block, immediately begin preparatory work for testing effort.
2. No later than three days after completing preparatory work for testing, initiate testing work.
3. Immediately after testing begin site restoration.

E. Street Construction and Paving Projects

1. Once Project Manager approves work within a block, immediately begin preparatory work for sidewalk construction, sodding and hydromulching and tree planting.
2. No later than seven days after completing preparatory work, initiate construction.

3.02 CLEANING

- A. Remove debris and trash to maintain a clean and orderly site in accordance with requirements of General Conditions and Section 01576 – Waste Material Disposal.

3.03 LANDSCAPING AND FENCING

A. Seeding and Sodding.

1. Remove construction debris and level area with bank sand so that new grass surface matches level of existing grass and maintains pre-construction drainage patterns. Level and fill minor ruts or depressions caused by construction operations with bank sand, where grass is still

SITE RESTORATION

viable.

2. Restore previously existing turfed areas with sod and fertilize in accordance with Section 02922 – Sodding. Sod to match existing turf.
3. Restore unpaved areas not requiring sodding with hydromulch seeding conforming to Section 02921 – Hydromulch Seeding.

B. Fence Replacement

1. Replace removed or damaged fencing to equal or better condition than existed prior to construction, including concrete footings and mow strips. Provide new wood posts, top and bottom railing and panels. Metal fencing material, not damaged by the Work, may be reused.
2. Remove and dispose of damaged or substandard material.

3.04 MAINTENANCE

- A. Maintain shrubs, plantings, sodded areas and seeded areas.
- B. Replace shrubs, plantings and seeded or sodded areas that fail to become established.
- C. Refer to Section Section 02922 – Sodding and Section 02921 – Hydromulch Seeding.

END OF SECTION

SECTION 01 782

OPERATIONS & MAINTENANCE DATA

1.0 GENERAL

1.1 SCOPE

- A. This section describes submittal requirements for equipment and facility Operations and Maintenance (O&M) Manuals.

1.2 REFERENCE STANDARD

- A. City of Houston, Texas, Department of Public Works. Specification 01782, Standard Construction Specifications for Wastewater Collection Systems, Water Lines, Storm Drainage and Street Paving, and all applicable amendments.

1.3 MEASUREMENT AND PAYMENT

- A. Work will be paid as part of the lump sum price of related work.

1.4 SUBMITTALS

- A. Conform to requirements of Reference Standard specification with the following exceptions: Submit four (4) final copies of O&M manuals.

1.5 EQUIPMENT O&M DATA

- A. Conform to requirements of Reference Standard specification for data requirements. In addition, provide in electronic format all PLC programs with related O&M volumes.
- B. Bind all O&M manuals into standard 3-inch (max.), 3-ring, loose-leaf, vinyl-covered binders with matching colors. Print the following information on the cover of each binder: (1) project title; (2) "Operation and Maintenance Manual"; (3) owner's name; (4) engineer's name, address, and phone number; (5) contractor's name, address and phone number; and (6) volume number. Provide labeled, tabbed dividers between each section of the manual and include a table of contents with titles and section numbers. Provide four (4) copies of each volume (i.e., binder) of the O&M Manual. Include an electronic copy of the PLC program with each manual.

2.0 PRODUCTS – NOT USED

3.0 EXECUTION – NOT USED

END OF SECTION

OPERATIONS & MAINTENANCE DATA

01 782 - 1

SECTION 02 076

REMOVING EXISTING PAVEMENTS AND STRUCTURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Removing concrete paving, asphaltic concrete pavement, and base courses.
- B. Removing concrete curbs, concrete curb and gutters, sidewalks and driveways.
- C. Removing pipe culverts and sewers.
- D. Removing miscellaneous structures of concrete, masonry, or combination of concrete and masonry.

1.02 UNIT PRICES

- A. No separate payment will be made for removing existing pavements and structures under this Section unless included in bid documents. Include payment in unit price for work in appropriate sections.
- B. Measurement, when included in bid documents will be as follows:
 - 1. Measurement for removing and disposing of concrete base and surfacing, and removing asphaltic surfacing, is on a square yard basis measured between lips of gutters.
 - 2. Measurement for removing and disposing of cement stabilized shell base course, with or without asphalt surfacing, is on a square yard basis.
 - 3. Measurement for removing and disposing of concrete base and surfacing with curbs, is on a square yard basis measured from back to back of curbs. Payment includes removal of all base, asphaltic surfacing, concrete pavement, esplanade curbs, curb and gutters, and paving headers.
 - 4. Measurement for removing and disposing of concrete pavement is on a square yard basis measured from back to back of curbs.
 - 5. Measurement for removing and disposing of monolithic curb and gutter, removing monolithic concrete curb, and removing concrete curb, is on a lineal foot basis measured along the face of the curb.

REMOVING EXISTING PAVEMENTS AND STRUCTURES

- 6. Measurement for removing and disposing of concrete sidewalk and driveway is on a square yard basis.
- 7. Measurement for removing and disposing of miscellaneous concrete and masonry removal is on a cubic yard basis of the structure in place.
- 8. Measurement for removing and disposing of pipe culverts and sewers is on a lineal foot basis for each diameter of type of pipe removed.
- C. No payment will be made for work outside maximum payment limits indicated on Drawings, or in areas removed for Contractor's convenience.

1.03 REGULATORY REQUIREMENTS

- A. Conform to applicable codes for disposal of debris.
- B. Coordinate removal work with utility companies.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION

3.01 PREPARATION

- A. Obtain advance approval from Owner's Representative for dimensions and limits of removal work.
- B. Identify known utilities below grade. Stake and flag locations.

3.02 PROTECTION

- A. Protect utilities that remain from damage.
- B. Protect trees and other plant growth, and features designated to remain.
- C. Protect adjacent public and private property from damage.
- D. Protect benchmarks, monuments, and existing structures designated to remain, from damage or displacement.

3.03 REMOVALS

- A. Remove by methods that will not damage underground utilities. Do not use a drop hammer near existing underground utilities.
- B. Minimize amount of earth loaded during removal operations.

REMOVING EXISTING PAVEMENTS AND STRUCTURES

- C. Where existing pavement is to remain, make straight saw cuts in existing pavement to provide clean breaks prior to removal. Do not break concrete pavement or base with drop hammer unless concrete or base has been saw cut minimum depth of 2 inches.
- D. Where street and driveway saw cut locations coincide or fall within three feet of existing construction or expansion joints, break-out to existing joint.
- E. Remove sidewalks and curbs to nearest existing dummy, expansion, or construction joint.

3.04 DISPOSAL

- A. Remove debris resulting from Work under this section from site in accordance with requirements of Section 02227 - Waste Material Disposal.

END OF SECTION

SECTION 02 105

EROSION CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work to be performed under this item shall pertain to the protection of downstream watercourses (i.e., storm sewer system, ditches, wetlands, etc.) from sediment runoff caused by construction activities. The structures and protection shall be as shown on the plans or as directed by the Owner's Representative at various locations.
- B. Contractor is responsible for implementation of the Storm Water Pollution Prevention Plan included in the contract documents, the requirements of the National Pollutant Discharge Elimination System General Permit for Industrial Activities - Construction, and local storm water quality regulations.

PART 2 - PRODUCTS

2.01 SAFETY FENCE

- A. Safety fence shall be a minimum of 4 feet in height, orange or yellow in color, and shall have a break load of at least 300 lb/ft and a yield strength of at least 400 lb/ft. Safety fence is to be "Tenax Sentry" or approved equal.

2.02 SAFETY FENCE POST

- A. Safety fence posts are to be Medium Duty No. 1.25, 6-foot metal "Tee" posts.

2.03 FILTER FABRIC FENCE

- A. Filter fabric shall meet the requirements of City of Houston Standard Specification Section 02621 - Geotextile.

2.04 FILTER FABRIC FENCE POSTS

- A. Filter fabric fence posts are to be 1" x 2" wood or equivalent metal with a minimum length of 3 feet.

2.05 STABILIZED CONSTRUCTION EXIT

- A. Coarse aggregates shall consist of either crushed stone, gravel, crushed blast furnace slag, or combinations thereof. Aggregate particles shall be composed of clean, hard, durable materials free from adherent coatings, salt, alkali, dirt, clay, loam, shale, soft or flaky materials, or organic or injurious matter.

EROSION CONTROL

- B. Coarse aggregates shall conform to the following gradation requirements:

Sieve Size (<u>Square Mesh</u>)	Percent Retained (<u>By Weight</u>)
2-1/2"	0
2"	0 - 20
1-1/2"	15 - 20
3/4"	60 - 80
No. 4	95 - 100

PART 3 - EXECUTION

3.01 PLACEMENT

- A. Erosion control structures and erosion control protection shall be provided at all storm sewer inlets, at those locations where construction activities are adjacent to wetland and/or drainage ditches, and at other such points as may be designated by the Owner's Representative or shown on the Plans.

3.02 RESPONSIBILITY OF THE CONTRACTOR FOR EROSION CONTROL

- A. The Contractor shall install erosion control measures at the earliest possible time during construction. If the Contractor fails to construct an erosion control structure after having been directed to do so by the Owner's Representative, this shall be cause for stopping construction on all parts of the project if, in the opinion of the Owner's Representative, the conditions warrant such action.

3.03 SAFETY FENCE

- A. Contractor shall install a 4-foot-high orange or yellow safety fence at the direction of the Owner's Representative. Fence posts shall be spaced a maximum of 10 feet and are to be bedded 2 feet minimum. The top of the post is to be level with the top of the fence. A 9-gage galvanized wire is to be installed and fastened to the top and bottom of the fence and wire ties shall be used to secure the fence to the posts. Contractor shall be responsible for maintaining this fence.

3.04 FILTER FABRIC FENCE

- A. Contractor shall install filter fabric fences as specified on the Plans or at the direction of the Owner's Representative. A trench should be excavated approximately 6 inches wide and 6 inches deep along the line of posts, upslope from the fence. The filter fabric should be stapled or wired to the fence posts with 6 inches of fabric extending into the trench. The fabric should extend a minimum of 15 inches and a maximum of 18 inches above original ground surface.

EROSION CONTROL

- B. The filter fabric should be purchased as a continuous roll cut to the length of the fence to avoid the use of joints. When joints are necessary, the fabric should be spliced together only at a support post, with a minimum 6-inch overlap, and sealed securely. When construction is complete, the trench should be backfilled and compacted over the filter material.
- C. The filter fabric fence shall be stapled to the wooden stakes with minimum 1/2" long heavy-duty wire staples. Filter fabric fence shall not be stapled to existing trees.

3.05 STABILIZED CONSTRUCTION EXIT

- A. Provide stabilized construction exit, including truck washing area when authorized by Owner, of the sizes and at locations specified on the Plans. Stabilized construction exit shall be constructed in accordance with City of Houston Dwg. No. 01571-01.
- B. Wheels must be cleaned prior to exiting the project site to avoid tracking sediment onto public right-of-way. When truck washing is needed to remove sediment, Contractor shall construct a truck washing area. Truck washing shall be done on stabilizing area which drains into an earth outlet sediment trap.
- C. Construct stabilized construction exit and truck washing area in such a manner as to prevent sediment from entering public right-of-way, storm drain, ditch or watercourse through the use of sandbags, gravel, boards, or other similar methods.
- D. The stabilized construction exit, and truck washing area shall be inspected and maintained daily by the Contractor. Provide top dressing with additional coarse aggregates as required to maintain the minimum berm depth. Repair and cleanout damaged measures used to trap sediment. All sediment spilled, dropped, washed, or tracked onto public right-of-way must be removed immediately.

3.06 VEGETATIVE BUFFER STRIPS

- A. All existing vegetation within areas designated on the plans as "vegetative buffer strips" shall be preserved in its natural condition. Areas shall not be disturbed by construction equipment traffic, materials storage, parking of worker's vehicles, or other construction related activities.

3.07 SOD

- A. When directed by the Owner or noted in the Bid Proposal, Saint Augustine sod (16-inch-wide single row, 32-inch double row) will be placed behind the back of curb after placement of the pavement.
- B. Sod strips shall be watered to promote a healthy growth. Portions of sod strips which fail to thrive shall be replaced at the Contractor's expense.

3.08 BURLAP SANDBAGS

- A. After placement of pavement, inlet protection devices (burlap sandbags) will be placed on either side and the back of Stage II storm inlets as shown on the plans.
- B. Sandbags shall be removed upon final acceptance by the Owner, or when the Owner's Representative so directs.

3.09 INLET PROTECTION BARRIER

- A. The entire perimeter of unfinished storm sewer inlets (Stage 1) will be protected with filter fabric and board covers as shown on the plans.
- B. Inlet protection barriers shall be removed prior to construction of Stage II of the storm sewer inlets.
- C. Sandbags will be placed in gutters on each side of existing inlets at locations shown on the plans.

3.10 MAINTENANCE

- A. Contractor shall inspect all structural controls within 24 hours after any storm event that meets or exceeds 0.5 inches of rainfall in a 24-hour period. During prolonged rainfall events, Contractor shall inspect structural controls on a daily basis. At a minimum, structural controls should be inspected once every 14 calendar days. A qualified representative of the Contractor, as approved by the Owner, shall provide these inspections. Should controls become ineffective, necessary repairs shall be performed to return the integrity of the structural controls.
- B. Sediment deposits shall be removed and spread evenly on surrounding ground upslope from the fence when deposits reach approximately 1/3 the height of the filter fabric fence.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Filter fabric fence will be measured by the linear feet of completed and accepted filter fabric fence between the limits of the beginning and ending wooden stakes.
- B. Stabilized construction exit, and truck washing area if provided, will be measured by the square yard of aggregate placed in 8-inch layer and including the beginning and ending tapered sections.

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- C. Sod will be measured by the linear foot of curb protected (single or double row as indicated on the bid sheet).
- D. Stage I inlet protection barriers will be measured by each inlet protected.
- E. Stage II inlet protection barriers will be measured by each inlet protected.
- F. Sandbags will be measured per each sand bag placed in the gutter.

4.02 PAYMENT

- A. Unless indicated in the bid sheet as a pay item, no separate payment for work performed under this Item, including Pollution Prevention Plan implementation, maintenance, and inspection. Include cost of work performed under this Item in Contract prices bid for items of which this work is a component.

END OF SECTION

SECTION 02 110

DEMOLITION

1.0 GENERAL

1.01 DESCRIPTION

The work includes demolition and disposal of existing structures, materials and equipment.

1.02 JOINT INSPECTION

Prior to demolition, a joint inspection by the owner's representative and contractor will be made to determine condition of existing improvements adjacent to items being demolished. Adjacent improvements damaged by demolition operations must be restored satisfactorily at no expense to the owner.

1.03 DISPOSITION OF MATERIALS AND EQUIPMENT

- A. Ownership of Material and Equipment. Certain materials and equipment may be designated for reuse or salvage and will remain the Owner's property. If the designated items are damaged during demolition, handling or storage, the items must be restored satisfactorily at no expense to the Owner. Materials and equipment not designated for reuse or salvage become the Contractor's property and shall be removed from the site in a timely manner and disposed in accordance with applicable regulations. Remove debris daily to avoid clutter.
- B. Reuse. Certain items may be reused if they are compatible with the work and will provide performance equal to new materials. Materials and equipment designated for reuse will be stored and protected until time of installation.
- C. Salvage. Deliver items to be salvaged to a designated storage area.

2.0 PRODUCTS

The Contractor shall use equipment and materials suitable for properly completing the demolition without damage to existing structures designated to remain.

3.0 EXECUTION

3.01 PROTECTION OF PERSONS AND PROPERTY

- A. Provide protection of persons and property, including safe working conditions throughout work progress. Install and maintain enclosures, barriers, warning lights, and other required protective devices.
- B. Minimize the spread of dust and flying particles. Execute demolition in a manner to prevent damage from falling debris or other sources to Owner's property or adjacent property.
- C. Do not interfere with use of adjacent buildings; maintain free and safe access at all times. Guard against movement or settlement of adjacent structures. The Contractor is responsible for safety and integrity of adjacent structures and, consequently, is liable for any movement or settlement and any resulting injuries or damage. Provide proper bracing and shoring necessary for support. If safety of adjacent structures appears to be endangered, cease operations. Do not resume demolition until proper protective measures have been taken.

3.02 BLASTING

Blasting is not permitted on this project.

3.03 FIRES

Fires are not permitted on this project.

3.04 UTILITY SERVICES

- A. Interruption. When temporary interruption of utility service is required by the work, properly coordinate the outage to prevent untimely or damaging interruptions to Owner or adjacent occupants.
- B. Follow rules and regulations of authorities or companies having jurisdiction over communications, pipelines, and electrical distribution services.

3.05 GENERAL WORK ITEMS

- A. Operational procedures are at the Contractor's option but must not interfere with the execution of other work. Materials or equipment designated for reuse or salvage will be carefully removed, transported and stored in approved storage areas.
- B. Structures. Remove structures as shown on the plans. Where no limits are shown, the limits shall be 4 inches outside new items to be installed. Removals beyond these limits shall be at the Contractor's expense; satisfactorily reconstruct excess

removals. Demolish piping and structures to a minimum of 3 feet below grade, unless otherwise indicated on the drawings.

C. Removing and Replacing Concrete. Use these procedures where existing concrete must be removed to facilitate operations but will be replaced subsequently.

1. Make initial cut with a concrete saw exercising care to avoid cutting reinforcement.
2. After removing concrete, cut cross bars at center of breakout and bend back.
3. Before replacing concrete, bend bars back to the original position and provide a splice bar for each cut bar. Splice bars must be the size of cut bars and of a length to lap each cut end a minimum of 20 diameters of the bar, unless restricted by the job conditions.
4. Immediately before placing new concrete, thoroughly clean old concrete and apply a heaving coat of bonding agent.
5. Replace concrete as specified.

D. Backfill.

1. Backfill holes resulting from demolition with an approved material to the density of adjacent soil as specified.
2. Backfilling with rubbish or burying rubbish on the site is not permitted.

3.06 MECHANICAL WORK ITEM

1. Remove existing process, water, chemical, gas, fuel oil and other piping designated for removal. Take out piping to the limits shown or to a point where it will not interfere with new work. Piping not indicated to be removed or which does not interfere with new work shall be removed to 3 feet below grade or to the nearest solid support, capped, and the remainder left in place. Purge chemical and fuel lines and tanks. Verify that such lines are safe prior to removal or capping.
2. Where piping that is to be removed passes through existing walls, cut and cap piping on each side of the wall. Use cap appropriate for pipe material to be capped. Provide fire-rated sealant for walls classified as fire rated.

END OF SECTION

SECTION 02 160

TRENCH SAFETY SYSTEMS

PART 1 GENERAL

1.01 Scope

- A. This section provides for furnishing, installing, and maintaining trench safety systems that meet the minimum of OSHA 29 CFR Safety and Health Regulations, Part 1926, Subpart P, including Final Rule, published in the Federal Register Vol. 54, No. 209 on Tuesday, October 31, 1989. The sections that are incorporated into these specifications by reference include, but are not limited to, 29CFR Sections 1226-650 through 29 CFR 1926-652.
- B. Legislation enacted by the Texas Legislature regarding Trench Safety Systems is hereby incorporated into these specifications by reference. Contractor shall comply with the requirements of Texas Health and Safety Code Ann., §756.021 (Vernon 1991) and any subsequent amendments.

1.02 Related Sections

SECTION 01300 - Submittals

SECTION 01340 – Shop drawings, Product Data and Samples

1.03 Related Information

A. Soil Borings

- 1. Soil borings or other geotechnical information for the design of the utilities or structure may be included with the specifications. If soil borings are included, they are for Contractor information only, and do not replace any geotechnical explorations required by State or Federal regulations.

1.04 Quality Assurance

- A. Trench safety system shall meet the current standards established by the Occupational Safety and Health Administration (OSHA) Safety and Health Regulations, Part 1926, Subpart P. - Excavations, Trenching and Shoring.
- B. The Engineer's Field Representative will inform the Contractor, Owner, and/or OSHA should the Representative observe actions not in accordance with OSHA regulations. Any construction not in accordance with OSHA regulations may not be eligible for payment, and any delays in construction to bring the project within OSHA regulations will not be the responsibility of the Owner or Engineer.

1.05 Definitions

- A. A trench shall be defined as a narrow excavation (in relation to its depth) made below the surface of the ground. In general, the depth is greater than the width, but the width of the trench (measured at the bottom) is not greater than 15 feet.
- B. The trench safety systems requirements apply to larger open excavation if the erection of structures or other installations limits the space between the excavation slope and the installation to dimensions equivalent to a trench as defined.
- C. Trench Safety Systems include but are not limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, or shoring.
- D. Dewatering, or diversion of water to provide adequate drainage is covered elsewhere in these specifications and is not subject to payment through Trench Safety Systems.

PART 2 PRODUCTS (not used)

PART 3 EXECUTION

3.01 Description:

- A. The work covered by this item shall govern for the Trench Safety Systems required for the construction of all trench excavation to be utilized on the project. The definition of a trench is included in the OSHA documentation referenced below.

3.02 Construction Methods:

- A. Trench safety systems shall meet the requirements of Occupational Safety and Health Standards; Proposed Rule (29 CFR Part 1926) as published in the Federal Register Vol. 52, No. 72, and dated Wednesday, April 15, 1987. The sections that are incorporated into these specifications include Sections 1926-650 through 1926-653. Legislation that has been enacted by the Texas Legislature (H.B. No. 1569) and the Polk County (Ordinance 18-94) with regard to Trench Safety Systems, is hereby incorporated, by reference, into these specifications.
- B. A reproduction of "Subpart P-- Excavations" from the Federal Register Vol. 52 no. 72 is available and may be examined at the office of ADICO Consulting Engineers. The Contractor is responsible for obtaining a copy of this section of The Federal Register for his use.
- C. The limits of trench excavation shall be confined to the limits of the applicable right-of-way and/or easement designated for the utility in question and, with the exception of those utilities designed to cross the paving, shall not encroach into the limits of the proposed pavement.

3.03 Geotechnical Methods:

- A. The contractor is responsible for obtaining borings and soil analysis as required for the system design. The types of shoring that may be utilized in the Trench Safety Systems, selected and specified by the Contractor, can include but not be limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, dewatering or diversion of water to provide adequate drainage.

3.04 Submittals

- A. Submittals shall conform to the requirements of SECTION 01300 - Submittals and SECTION 01340 - Shop Drawings, Product Data and Samples.
- B. Contractor shall submit a safety program specifically for the construction, installation and maintenance of trench excavation or structural excavation. Design the trench safety program in accordance with OSHA 29 CFR regulation governing the presence and activities of individuals working in and around trench excavations.
- C. Submittals and shop drawings which contain deviations from OSHA standards or contain special designs shall be sealed by a Professional Engineer registered in the State of Texas. Cost for Professional Engineer's design shall be paid by Contractor.
- D. Review of the safety program by the Engineer will only be in regard to compliance with these specifications and will not constitute approval by the Engineer nor will the review relieve the Contractor of obligations under State and Federal trench safety laws.

3.05 Indemnification

- A. Contractor shall indemnify and hold harmless the Owner and Engineer, its employees and agents, from any and all damages, costs (including, without limitation, legal fees, court costs, and the cost of investigation), judgments or claims by anyone for injury or death of persons resulting from the collapse or failure of trenches or structural excavations covered under this Contract.
- B. Contractor acknowledges and agrees that this indemnity provision provides indemnity for the Owner and Engineer in case the Owner or Engineer is negligent either by act or omission in providing for trench safety, including, but not limited to, safety program and design reviews, inspections, failures to issue stop orders, and the hiring of the Contractor.

3.06 Installation

- A. Provide, install and maintain trench safety system in accordance with provisions of OSHA 29CFR.
- B. Specially designed trench safety system shall be installed in accordance with the trench safety drawings produced for the locations and conditions identified on the Shop Drawings and Submittals.
- C. A competent person, as identified in the Contractor's Trench Safety Program, shall verify that trench boxes and other premanufactured systems are certified for actual installation conditions and are in a properly maintained condition.

3.07 Inspection

- A. Contractor, or qualified consultant retained independently by Contractor, shall make daily inspections of the trench safety system to ensure that the installed system and operations meet OSHA 29CFR, State of Texas regulations, and other personnel protection regulation requirements.
- B. If evidence of possible cave-ins or slides is apparent, Contractor shall immediately stop work in the trench and move personnel to safe locations until the necessary precautions have been taken by Contractor to safeguard personnel entering the trench.
- C. Maintain a permanent record of daily inspections.

3.08 Field Quality Control

- A. Contractor shall verify specific applicability of the selected or specially designed trench safety system to each field condition encountered on the project.
- B. Should field conditions change during the progress of the work, Contractor shall revise the trench safety system accordingly.

PART 4 MEASUREMENT AND PAYMENT

- A. Measurement and payment for trench safety system used on utility excavation is per linear foot measured along the centerline of the trench, including manholes and other structures.
- B. Measurement and payment for special shoring requirements use in trench excavations, if included in the unit price bid schedule, is per square foot of the vertical face of the special shoring installed.
- C. Separate payment for trench safety system for structural excavation will not be made. Include cost of shoring in the cost of the structure.

END OF SECTION

SECTION 02 200

EARTHWORK

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section specifies the requirements for earthwork, including roadway excavation, providing and placing roadway embankment fill, rough and fine grading, compacting and disposing of unacceptable and surplus excavated material.

1.02 QUALITY ASSURANCE

- A. The Engineer will have the following tests performed, as he determines necessary, to determine the suitability of materials and compliance with these Specifications.
 - 1. Moisture-density relationship: ASTM D 1557 or ASTM D 698.
 - 2. Moisture content: ASTM D 2216 or D 3017.
 - 3. In-place density: ASTM D 2167, D 1556 or D 2922.
 - 4. Liquid Limit: ASTM D 423.
 - 5. Plastic limit and plasticity index: ASTM D 424.
- B. Tolerances
 - 1. Finished surfaces of grades and subgrades shall be within plus or minus 1/2 in. of the line and grade indicated.
 - 2. Moisture content of fill and embankment material, during placement, shall be at - 1% to +3% points of optimum moisture content.
- C. Reference Standards Applicable to this Section
 - 1. ASTM: American Society for Testing and Materials.
 - a. D 423: Test Method Liquid Limit of Soils.
 - b. D 424: Test Method for Plastic Limit and Plasticity Index of Soils.

- c. D 698: Test Method for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures using 5.5-lb (2.49-kg) Ram and 12-in. (305 mm) drop.
- d. D 1556: Test Method for Density of Soil in Place by the Sand Cone Method.
- e. D 1557: Test Method for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54-kg) Ram and 18-in. (457-mm) drop.
- f. D 2167: Test Method for Density of Soil in Place by the Rubber Balloon Method.
- g. D 2216: Test Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock and Soil-Aggregate Mixtures.
- h. D 2922: Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- i. D 3017: Test Method for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

PART 2 - PRODUCTS

2.01 MATERIALS

A. General Material Requirements

1. Material may be existing excavated material available from the site, salvage material from excavations or an off-site borrow source approved by the Engineer. Acceptable material shall be free from debris, roots, humus and other organic material.

B. Regular Fill: Regular fill shall consist of on-site material or borrow material similar to the on-site material and have equal or better engineering properties. The Contractor shall submit the Soil Classification, Moisture Content (ASTM D-2216), Plasticity Index (ASTM D-424), and Liquid Limit (ASTM D-423) of any proposed borrow material to the Engineer for review and approval.

C. Select Fill: Select fill shall consist of on-site or borrow material with plasticity index between 7 and 20. The Contractor shall submit an analysis of any proposed borrow material to the Engineer for review and approval. Analysis submitted shall be prepared by a certified independent testing laboratory employed and paid by the Contractor, and shall include the Soil Classification, Moisture Content (ASTM D-

2216), Plasticity Index (ASTM D-424), Liquid Limit (ASTM D-423), and a moisture-density relationship curve.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

- A. Erosion shall be prevented at all times. Temporary swales shall be cut where necessary to allow natural drainage of the site. Site will be shaped so that at no time will water pond. Provide surface drainage during the period of construction to protect the work and to avoid nuisance to adjoining property.
- B. Construction traffic shall be distributed evenly over compacted areas, where practical, to aid in obtaining uniform compaction. Exposed areas, containing a high moisture content, shall be protected from excessive wheel loads.
- C. The Contractor shall remove all muck and spongy materials which will not consolidate from the subgrade to a depth to be determined by the Engineer and refill the space with acceptable material excavated within the limits of the project. Backfill material shall be placed in accordance with the requirements of Paragraph 3.03.C.
- D. Earthwork materials shall not be placed, spread, rolled or compacted during inclement weather. If such operations are interrupted by rain, operations shall not resume until it has been determined that the moisture content and density of the previously placed material are within the specified limits.

3.02 EXCAVATION

- A. All roadway excavation shall conform to the established alignment, grades and cross-sections.
- B. Excess excavated material shall be disposed of in accordance with Section 02235 - Waste Material Disposal.
- C. All unacceptable material shall be removed and the resulting depressions shall be filled to bring the site to the rough grading elevations indicated, prior to starting excavations, embankments or any other structural earthwork.

3.03 EMBANKMENTS

- A. Embankment shall be constructed as follows: Prior to starting the initial layer of earth fill, the entire area occupied by the fill shall be stripped of vegetation and topsoil and be thoroughly scarified for bonding of the existing and new material. The embankments or fills shall be constructed in successive horizontal layers not exceeding eight (8) inches in thickness. Each layer shall extend across the entire fill

and be compacted to an apparent dry density of not less than the requirements stated in paragraph 3.03.C.

- B. On all streets if a spongy, wet or unstable subgrade condition is encountered, the Contractor will be required to stabilize, roll, or do the work necessary to get the required compaction of the base course at no additional cost.
- C. Embankments shall be compacted to a uniform density of at least 95 percent of the maximum dry density of soil as determined by ASTM D698.

3.04 REQUIRED COMPACTION TESTING

- A. Standard Proctor Compaction Tests. ASTM D-698 will be required for each type of embankment or backfill material used.
- B. In Place Field Density Tests, ASTM D-2167, D-1556 or D-2922 will be required as follows:
 - 1. Embankments shall be tested at intervals not to exceed 300 linear feet of roadway and/or as conditions may require in each lift.
- C. Embankment and Backfill materials not meeting specified density requirements will be removed, recompact, and retested at no additional cost to the Owner. Costs for initial density tests will be borne by the Owner. Costs for all subsequent density tests, necessitated by failure of backfill materials to meet specification requirements, shall be borne by the Contractor.

END OF SECTION

SECTION 02 201

STRIPPING AND FILL

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This item shall consist of stripping and fill of designated areas outside County Right-of-way.

1.02 QUALITY ASSURANCE

- A. The Engineer will have the following tests performed, as he determines necessary, to determine the suitability of materials and compliance with these Specifications.
 - 1. Moisture-density relationship: ASTM D 698.
 - 2. Moisture content: ASTM D 2216 or D 3017.
 - 3. In-place density: ASTM D 2167, D 1556 or D 2922.
 - 4. Liquid limit: ASTM D 423.
 - 5. Plastic limit and plasticity index: ASTM D 424.
- B. Tolerances
 - 1. Finished surfaces of grades shall meet grades indicated on the drawings within 0.1 feet. Grades may only exceed those specified if authorized in writing from the Owner's Representative prior to fill placement.
 - 2. Moisture content of fill, backfill and embankment material, during placement, shall be within 2 percentage points of optimum moisture content.
- C. Reference Standards
 - 1. ASTM: American Society for Testing and Materials.
 - a. D 423: Test Method Liquid Limit of Soils.
 - b. D 424: Test Method for Plastic Limit and Plasticity Index of Soils.
 - c. D 698: Test Method for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures using 5.5-lb (2.49-kg) Ram and 12-in. (305 mm) drop.

STRIPPING AND FILL

- d. D 1556: Test Method for Density of Soil in Place by the Sand Cone Method.
- e. D 2167: Test Method for Density of Soil in Place by the Rubber Balloon Method.
- f. D 2216: Test Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock and Soil-Aggregate Mixtures.
- g. D 2922: Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- h. D 3017: Test Method for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

PART 2 - PRODUCTS

2.01 FILL MATERIAL

A. General Material Requirements

1. Material may be existing excavated material available from the site, salvage material from excavations or an off-site borrow source approved by the Engineer. Acceptable material shall be free from excess silt, debris, roots, humus and other organic material.
2. If requested by the Engineer, the Contractor shall submit the Soil Classification, Moisture Content (ASTM D-2216), Plasticity Index (ASTM D-424), Liquid Limit (ASTM D-423), and a moisture-density relationship curve of any proposed borrow material to the Engineer for review and approval. Analysis submitted shall be prepared by a certified independent testing laboratory employed and paid by the Contractor.
3. Unless otherwise indicated on the drawings, all fill material shall be select fill.

B. Regular Fill: Regular fill shall consist of on-site material or borrow material similar to the on-site material and have equal or better engineering properties.

C. Select Fill: Select fill shall consist of on-site or borrow material with plasticity index between 7 and 20. Analysis submitted shall be prepared by a certified independent testing laboratory employed and paid by the Contractor, and shall include the Soil Classification, Moisture Content (ASTM D-2216), Plasticity Index (ASTM D-424), Liquid Limit (ASTM D-423), and a moisture-density relationship curve.

STRIPPING AND FILL

- D. Top Soil: In accordance with Section 02911 Topsoil.

PART 3 - EXECUTION

3.01 STRIPPING

Area to receive fill shall be stripped to a minimum depth of four (4) inches to below natural ground to remove topsoil, vegetation and organic matter. Stockpile or remove and dispose of as directed by Engineer. Exposed roots larger than 1/4-inch in diameter shall be removed from surface of subgrade prior to fill placement. Exposed areas shall be proof-rolled with a heavy piece of equipment such as a fully loaded dump truck to detect any soft areas. If encountered, such soils shall be under cut and replaced with compacted select fill. The ground surface should be appropriately graded throughout construction to prevent ponding of rainfall runoff.

3.02 FILL

Place select fill, in layers not to exceed 8 inches measured loose prior to compaction. Compact fill to 95 percent of maximum dry density at plus or minus two (2) percentage points of optimum moisture content. Add water or dry out to maintain $\pm 2\%$ optimum moisture content. Maximum dry density and optimum moisture content to be determined in accordance with ASTM D698. The Contractor shall place excavated utility trench and roadway material meeting the requirements of select fill for lot fill when identified on the Plans.

3.03 TOPSOIL PLACEMENT

Place topsoil in accordance with Section 02911 – Topsoil.

3.04 DISCING AND RAKING

Discing and raking consists of the entire site that is identified to receive fill material be mowed or bush-hogged before any placement of fill occurs. Upon completion of mowing operations and/or shredding the existing light vegetation and brush, the contractor is required to disc the entire area using equipment sufficient to achieve a finely disced surface free from large and medium-sized roots, clumps of vegetation, and any visible debris. If the disced surface prevents the placement and compaction of fill material to achieve standard density requirements, additional discing is required. If the site is not free from surface debris, vegetation and roots, the contractor will need to rake the surface in order to remove any surface defects. The raked material is to be disposed of according to Section 02235 - Waste Material Disposal.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. The quantity of fill shall be measured by the cubic yard compacted-in-place as noted on the bid sheet.
- B. If the Contractor believes there is an error in the estimated quantity for fill, as shown in the bid proposal form, he shall provide at no cost to the Owner, sufficient documentation of recoverable topographic information and supporting computations. This documentation shall be provided prior to proceeding with any excavation of fill material. No adjustments to the fill quantity will be allowed once excavation of fill material has begun.
- C. The quantity of stripping to be paid for shall be measured by the acre as noted on the bid sheet.
- D. The quantity of mowing, shredding, discing and raking shall be measured by the acre as noted on the bid sheet.

4.02 PAYMENT

- A. Payment for "Compacted Fill" shall be at the bid unit price per cubic yard. Bid unit price shall include all labor, equipment and material.
- B. Payment for "Lot Stripping" shall be at the bid unit price per acre. Bid unit price shall include all labor, equipment, and material. Bid shall include replacement of stripped topsoil upon completion of fill operations to the depth specified. No additional payment for replacement of top soil, or imported top soil.
- C. Payment for "Discing and Raking" shall be at the bid unit price per acre. Bid unit price shall include all labor, equipment, and material.

END OF SECTION

SECTION 02 235

WASTE MATERIAL DISPOSAL

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Waste material disposal consists of the following:
 - 1. Disposal of trees, stumps, logs, brush, roots, grass, vegetation, humus, rubbish and other objectionable matter from operations such as clearing and grubbing, excavation and grading.
 - 2. Disposal of unsuitable material or excess material from roadway excavation, road side-ditch excavation, open cut excavation, tunnel excavation, site construction and/or ditch/pond excavation.
 - 3. Disposal of material from work specified in the Plans or Specifications as removal and disposal.
- B. This section shall not apply to the disposal of contaminated material.
- C. Unless otherwise specified, the Contractor is responsible for removal and disposal of waste material. No separate payment will be made for work performed under this section.

PART 2 – PRODUCTS - Not Used.

PART 3 - EXECUTION

3.01 DISPOSAL AREA

- A. Waste material must be removed from the work site and disposed of in a manner not to damage the Owner or other persons.
 - 1. The Contractor shall not dispose of any excavated materials within an area designated as being within the 100-Year Flood Hazard Area. It shall be the Contractor's responsibility to verify the flood plain status of any proposed disposal site.
 - 2. If excess soil is deposited on private property, the Contractor must secure written permission from the property owner to do so. Written permission must include a description of the property on which the soil is deposited, and a copy furnished to the Engineer.

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- B. Excess suitable material may not be deposited on-site.

END OF SECTION

SECTION 02 252

CEMENT STABILIZED SAND

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Cement stabilized sand for backfill and bedding of structures and utilities.
- B. Cement stabilized sand for placement as roadway subgrade course where lime stabilization of subgrade is impractical.

1.02 REFERENCES

- A. ASTM C31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
- B. ASTM C33 - Standard Specification for Concrete Aggregates (Fine Aggregate).
- C. ASTM C40 - Standard Test Method for Organic Impurities in Fine Aggregates for Concrete.
- D. ASTM C94 - Standard Specification for Ready-Mixed Concrete.
- E. ASTM C123 - Standard Test Method for Lightweight Pieces in Aggregate.
- F. ASTM C142 - Standard Test Method for Clay Lumps and Friable Particles in Aggregates.
- G. ASTM C150 - Specification for Portland Cement.
- H. ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil- Aggregate Mixtures Using 5.5-lb. (2.49-kg) Rammer and 12-in. (304.8 mm) Drop.
- I. ASTM D1633 - Standard Test Method for Compressive Strength of Molded Soil- Cement Cylinders.
- J. ASTM D2487 - Standard Test Method for Classification of Soils for Engineering Purposes (Unified Soil Classification System).
- K. ASTM D4318 - Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.03 SUBMITTALS

- A. Submit proposed design mix and test data for sand-cement mixture.

1.04 DESIGN REQUIREMENTS

- A. Design sand-cement mixture to produce a minimum unconfined compressive strength of 100 pounds per square inch in 48 hours when compacted to 95 percent of ASTM D698 and when cured in accordance with ASTM C31, item 9, and tested in accordance with ASTM C31. Mix shall contain a minimum of 1-1/2 sacks of cement per cubic yard.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cement: Type 1 Portland cement conforming to ASTM C150.
- B. Sand: Clean, durable sand meeting grading requirements for fine aggregates of ASTM C33, and the following requirements:
 - 1. Classified as SW, SP or SM by the United Soil Classification System of ASTM D2487.
 - 2. Verify through referenced tests that content of deleterious materials in sand is within following limits:
 - a) Clay lumps, ASTM C142; less than 0.5 percent.
 - b) Lightweight pieces, ASTM C123; less than 5.0 percent.
 - c) Organic impurities, ASTM C40; color no darker than the standard color.
 - 3. Plasticity index of 4 or less when tested in accordance with ASTM D4318.
- C. Water: Potable water, free of oils, acids, alkalis, organic matter or other deleterious substances, meeting requirements of ASTM C94.

2.02 MIXING MATERIALS

- A. Add required amount of water and mix it thoroughly in a pugmill-type mixer.
- B. Stamp batch ticket at plant with time of loading. Material not placed and compacted within 4 hours after loading shall be rejected.

PART 3 - EXECUTION

3.01 PLACING

- A. Place sand-cement mixture in 8-inch thick loose lifts and compact to 95 percent of ASTM D698. Perform compaction of sand-cement mixture within 4 hours after addition of water to mix at the plant.
- B. Do not place sand-cement mixture in standing or free water.

3.02 FIELD QUALITY CONTROL

- A. Testing will be performed by a qualified testing laboratory selected by the Owner.
- B. Random samples of delivered product will be taken in the field at point of delivery and tested in accordance with ASTM D1633.

PART 4 - MEASUREMENT AND PAYMENT

4.01 PAYMENT

- A. No payment will be made for cement stabilized sand for backfill and bedding of structures and utilities unless specifically noted in bid documents. Include payment for cement stabilized sand in unit price for applicable utility or structure installation section.
- B. Where cement stabilized sand for roadway subgrade is used in lieu of lime stabilized subgrade in accordance with Section 02241 - Lime Stabilized Subgrade, all costs for furnishing and installing cement stabilized sand shall be paid for at the bid unit price for Lime Stabilized Subgrade.
- C. Where use of cement stabilized sand is called for by Owner's Representative under Extra Work items, it shall be measured and paid by the cubic yard.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Section includes joints for concrete paving; concrete sidewalks; and curbs, and curb and gutter.
- B. Section includes saw-cutting existing concrete or asphalt pavements for new joints.

1.02 REFERENCES

- A. ASTM A615 - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
- B. ASTM D994 - Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
- C. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
- D. ASTM D3405 - Standard Specification for Joint Sealants, Hot-Poured, for Concrete and Asphalt Pavements.

1.03 SUBMITTALS

- A. Submit product data for joint sealing compound and proposed sealing equipment for approval.
- B. Submit samples of dowel cup, metal supports, and deformed metal strip for approval.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Board Expansion Joint Material: Filler board of selected stock. Use clear, all-heart redwood weighing no more than 30 pounds per cubic foot, after being oven dried to constant weight.
- B. Preformed Expansion Joint Material: Bituminous fiber and bituminous mastic composition material conforming to ASTM D994 and ASTM D1751.
- C. Joint Sealing Compound: Hot-poured rubber-asphalt compound conforming to ASTM D3405.
- D. Load Transmission Devices:
 - 1. Smooth, steel dowel bars conforming to ASTM A615, Grade 60. When indicated on Drawings, encase one end of dowel bar in approved cap having inside diameter 1/16 inch greater than diameter of dowel bar.
 - 2. Deformed steel tie bars conforming to ASTM A615, Grade 60.
- E. Metal Supports for Reinforcing Steel and Joint Assembly: Employ metal supports of approved shape and size that will secure reinforcing steel and joint assembly in correct position during placing and finishing of concrete. Space supports as directed by Owner's Representative.

PART 3 - EXECUTION

3.01 PLACEMENT

- A. When new work is adjacent to existing concrete, place joints at same location as existing joints in adjacent pavement.
- B. If the limit of removal of existing concrete or asphaltic pavement does not fall on existing joint, saw cut existing pavement minimum of 1-1/2 inches deep to provide straight, smooth joint surface without chipping, spalling or cracks.

3.02 CONSTRUCTION JOINTS

- A. Place transverse construction joint wherever concrete placement must be stopped for more than 30 minutes.

3.03 EXPANSION JOINTS

- A. Place 3/4-inch expansion joints at radius points of curb returns for cross street intersections, or as located in adjacent pavement but no further than 80 feet apart. Use no boards shorter than 6 feet. When pavement is 24 feet or narrower, use not more than 2 lengths of board. Secure pieces to form straight joint. Shape board filler accurately to cross section of concrete slab. Use load transmission devices of type and size shown on Drawings. Seal with joint sealing compound.

3.04 CONTRACTION JOINTS

- A. Place contraction joints at same locations as in adjacent pavement or at spaces indicated on Drawings. Place smoothed, painted and oiled dowels accurately and normal to joint. Seal groove with joint sealing compound.

3.05 LONGITUDINAL WEAKENED PLANE JOINTS

- A. Place longitudinal weakened plane joints at spaces indicated on Drawings. Seal groove with joint sealing compound.

3.06 SAWED JOINTS

- A. Contractor may use sawed joints as an alternate to contraction and weakened plane joints. Circular cutter shall be capable of cutting straight line groove minimum of 1/2 inch wide. Depth shall be one quarter of pavement thickness plus 1/2 inch. Commence sawing as soon as concrete has hardened sufficiently to permit cutting without chipping, spalling or tearing and prior to initiation of cracks. Once sawing has commenced, it shall be continued until completed. Make saw cut with one pass. Complete sawing within 24 hours of concrete placement. Saw joints at required spacing consecutively in sequence of concrete placement.
- B. Concrete Saw: Provide sawing equipment adequate in power to complete sawing to required dimensions and within required time. Provide at least one standby saw in good working order. Maintain an ample supply of saw blades at work site at all times during sawing operations. Sawing equipment shall be on job at all times during concrete placement.

3.07 JOINTS FOR CURB, CURB AND GUTTER

- A. Place 3/4-inch preformed expansion joints through curb and gutters at locations of expansion and contraction joints in pavement; at end of radius returns at street intersections and driveways; and at curb inlets. Maximum spacing shall be 120-foot centers.

3.08 JOINTS FOR CONCRETE SIDEWALKS

- A. Provide 3/4-inch expansion joints conforming to ASTM A1751 along and across sidewalk at back of curbs, at intersections with driveways, steps, and walls; and across walk at intervals not to exceed 36 feet. Provide expansion joint material conforming to ASTM D994 for small radius curves and around fire hydrants and utility poles. Extend the expansion joint material full depth of the slab.

3.09 JOINTS FOR CONCRETE DRIVEWAYS

- A. Provide 3/4-inch expansion joints conforming to ASTM D1751 across driveway in line with street face of sidewalks, at existing concrete driveways, and along intersections with sidewalks and other structures. Extend expansion joint material full depth of slab.

3.10 JOINT SEALING

- A. Seal joints only when surface and joints are dry, ambient temperature is above 50 degrees F and less than 85 degrees F, and weather is not foggy or rainy.
- B. Joint sealing equipment shall be in first-class working condition, and be approved by the Engineer. Use concrete grooving machine or power-operated wire brush and other equipment such as plow, brooms, brushes, blowers or hydro or abrasive cleaning as required to produce satisfactory joints.
- C. Clean joints of loose scale, dirt, dust and curing compound. Term joint includes wide joint spaces, expansion joints, dummy groove joints or cracks, either preformed or natural. Remove loose material from concrete surfaces adjacent to joints.
- D. Fill joints neatly with joint sealer to depth shown. Pour sufficient joint sealer into joints so that, upon completion, surface of sealer within joint will be at elevation as shown on Drawings.

3.11 PROTECTION

- A. Maintain joints in good condition until completion of Work.
- B. Replace damaged joints material with new material as required by this Section.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Section includes reinforced concrete curb, reinforced monolithic concrete curb and gutter, and mountable curb.
- B. Section includes paving headers and railroad headers placed monolithically with concrete base or pavement.

1.02 UNIT PRICES

- A. Measurement and payment of curb and curb and gutter is on a linear foot basis for each type installed.
- B. Measurement and payment of paving headers and railroad headers is on a linear foot basis for each type installed.

1.03 SUBMITTALS

- A. Submit details of proposed formwork for approval.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Concrete: Conform to material and proportion requirements for concrete of Section 03310 - Portland Cement Concrete.
- B. Reinforcing steel: Conform to material requirements for welded wire fabric of Section 03200 - Reinforcing Steel.
- C. Grout: Nonmetallic, nonshrink grout containing no chloride producing agents conforming to the following requirements.

Compressive strength, psi
 at 7 days..... 3500
 at 28 days..... 8000

Initial set time, minutes 45

Final set time, hours..... 1.5
- D. Preformed expansion joint material: Conform to material requirements for preformed expansion joint material of Section 02523 - Concrete Joints.
- E. Expansion joint filler: Conform to material requirements for expansion joint filler of Section 02523 - Concrete Joints.
- F. Mortar: Mortar finish composed of one part Portland cement and 1-1/2 parts of fine aggregate. Use only when approved by Owner's Representative.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Prepare subgrade in accordance with Drawings and Specifications.

3.02 PLACEMENT

- A. Guideline: Set to follow top line of curb. Attach indicator to provide constant comparison between top of curb and guideline. Ensure flow lines for monolithic curb and gutters conform to slopes indicated on Drawings.
- B. Forms: Brace sufficiently to maintain position during pour. Use metal templates cut to section shown on Drawings.
- C. Reinforcement: Secure in proper position so that steel will remain in place throughout placement.
- D. Joints: Place in accordance with Section 02523 - Concrete Joints. Place dummy groove joints at 6-foot centers at right angles to curb lines. Cut dummy grooves 1/4-inch deep using an approved edging tool.
- E. Place concrete in forms to required depth. Consolidate thoroughly. Do not permit rock pockets in form. Entirely cover top surfaces with mortar.

3.03 MANUAL FINISHING

- A. After concrete is in place, remove front curb forms. Form exposed portions of curb, and of curb and gutter, using mule which conforms to curb shape, as shown on Drawings.
- B. Thin coat of mortar may be worked into exposed face of curb using mule and two-handled wooden darby at least 3 feet long.
- C. Before applying final finish move 10-foot straightedge across gutter and up curb to back form of curb. Repeat until curb and gutter are true to grade and section. Lap straightedge every 5 feet.
- D. Steel trowel finish surfaces to smooth, even finish. Make face of finished curb true and straight.
- E. Edge outer edge of gutter with 1/4-inch edger. Finish edges with tool having 1/4-inch radius.
- F. Finish visible surfaces and edges of finished curb and gutter free from blemishes, form marks and tool marks. Finished curb or curb and gutter shall have uniform color, shape and appearance.

3.04 MECHANICAL FINISHING

- A. Mechanical curb forming and finishing machines may be used instead of, or in conjunction with, previously described methods, if approved by Owner's Representative. Use of mechanical methods shall provide specified curb design and finish.

3.05 CURING

- A. Immediately after finishing operations, cure exposed surfaces of curbs and gutters in accordance with Section 03370 - Concrete Curing.

3.06 TOLERANCES

- A. Top surfaces of curb and gutter shall have uniform width and shall be free from humps, sags or other irregularities. Surfaces of curb top, curb face and gutter shall not vary more than 1/8 inch from edge of 10-foot straightedge laid along them, except at grade changes.

3.07 PROTECTION

- A. Maintain curbs and gutters in good condition until completion of Work.
- B. Replace damaged curbs and gutters to comply with this Section.

END OF SECTION

METAL GRATINGS

1.0 GENERAL

1.01 SECTION INCLUDES

Grating for framed floor and stair tread.

1.02 UNIT PRICES

Unless noted in the Bidsheet, no separate payment will be made for work under this section. Include payment in unit price for applicable work as noted on the Bidsheet.

1.03 REFERENCES

- A. ASTM A36 - Structural Steel.
- B. ASTM A123 - Zinc (Hot Galvanized) Coatings on Fabricated from Rolled, Pressed and Forged Steel Shapes, Plates, Bars, and Strip.
- C. AWA D1.1 - Structural Welding Code.
- D. AWS A2.0 - Standard Welding Symbols.
- E. NAAMM A202.1 - Metal Bar Grating Manual.

1.04 PERFORMANCE REQUIREMENTS

- A. Maximum Allowable Deflection under Live Load: $1/240$ of span: Components shall be sized for single span.

1.05 SUBMITTALS

- A. Product Data: Provide span and deflection tables.
- B. Shop Drawings: Indicate details of gratings, component supports, openings, perimeter construction details, and tolerances.

2.0 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Klemp Corporation.
- B. Irving Grating - IKG Industries.
- C. Or approved equal.

2.02 MATERIALS

- A. Formed Steel for Welding ASTM A36 of shapes indicated.
- B. Cross Bars shall conform to ASTM A510.
- C. Welding Materials: AWS D1.1, type required for materials being welded.
- D. Preparation for galvanized surfaces shall be in accordance with Section 09878 – Protective Coatings for Wastewater.

2.03 ACCESSORIES

- A. Fasteners and Saddle Clips shall be Galvanized Steel.
- B. Perimeter Closure shall be of same material as grating.
- C. Edge Banding shall be required at all cut edges.

2.04 FABRICATION

- A. Grating Type: NAAMM A202.1, Welded Type.
- B. Top Surface: Shall be Serrated.
- C. Bearing Bar: 1-1/2 X 3/16 inch size, space 3 inches. Match existing bearing bars where grating is removed and replaced.

2.05 FINISHES

- A. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- B. Do not prime surfaces in direct contact with concrete or where field welding is required.
- C. Galvanizing: ASTM A123 to 2.5 oz/sq. ft.

3.0 EXECUTION

3.01 EXAMINATION

- A. Verify that opening sizes and dimensional tolerances are acceptable.
- B. Verify that supports are correctly positioned.

3.02 INSTALLATION

- A. Install components in accordance with manufacturer's directions.
- B. Field modifications shall be mechanically cut. Do not flame cut. Cuts shall be smooth, square, and of minimal size so as not to present trip or fall hazards. Repair galvanized finish surfaces with galvanizing compound per manufacturer's recommendations.
- C. Anchor by bolting through saddle clips.
- D. Set perimeter closure flush with top of grating and surrounding construction.
- E. Secure to prevent movement.
- F. Conform to NAAMM A202.1.
- G. Maximum Space Between Adjacent Sections: 1/4 inch.
- H. Maximum Variation from Top Surface Plane of Adjacent Sections: 1/8 inch.

3.03 CLEANING

- A. Clean welds and damaged coatings and apply one coat of touch-up primer.

END OF SECTION

METAL FABRICATIONS

1.0 GENERAL

1.01 SECTION INCLUDES

- A. Bolts, anchors, nuts, sleeves, concrete anchors, scheduled items, and other miscellaneous metal items not specifically included under other sections of these specifications.

1.02 UNIT PRICES

- A. No separate payment will be made for work performed under this section. Include the cost of such work in pay item for which this work is required.
- B. Refer to Section 01270 - Measurement and Payment for unit price procedures and Section 01292 - Schedule of Values.

1.03 REFERENCES

- A. ASTM A36 - Carbon Structural Steel.
- B. ASTM A53 - Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- C. ASTM A123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
- D. ASTM A153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- E. ASTM A276 - Stainless Steel Bars and Shapes.
- F. ASTM A307 - Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
- G. ASTM A500 - Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- H. ASTM A501 - Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
- I. ASTM F593 - Stainless Steel Bolts, Hex Cap Screws, and Studs.
- J. ASTM F594 - Stainless Steel Nuts.
- K. AWS A2.0 - Standard Welding Symbols.

L. AWS D1.1 - Structural Welding Code.

M. SSPC - Steel Structures Painting Council.

1.04 SUBMITTALS

A. Submit under provisions of Section 01330 - Submittal Procedures.

B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.

C. Indicate welded connections using standard AWS A2.0 welding symbols. Indicate net weld lengths.

D. Submit manufacturers' technical literature and test reports showing certified capacities for concrete anchors.

E. All steel design shall be consistent with AISC Manual of Steel Construction, latest edition, and Uniform Building Code, latest edition.

1.05 QUALIFICATIONS

A. Prepare Shop Drawings under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State of Texas.

B. Welders' Certificates: Submit under provisions of Section 01330 - Submittal Procedures, certifying welders employed on the Work, verifying AWS qualification within the previous 12 months.

1.06 FIELD MEASUREMENTS

A. Verify that field measurements are as indicated on Drawings.

2.0 PRODUCTS

2.01 MATERIALS

A. Steel Shapes and Plate: ASTM A36.

B. Stainless Steel Sections: ASTM A276, Type 316 for non-welded items and Type 316L for welded items.

C. Steel Tubing: ASTM A500 or A501, Grade B.

- D. Pipe: ASTM A53, Grade B, Schedule 40.
- E. Bolts, Nuts, and Washers: ASTM A307, galvanized to ASTM A153 for galvanized components.
- F. Stainless Steel Bolts and Nuts: Bolts per ASTM F593, Type 316; nuts per ASTM F594, Type 316; UNC coarse threads.
- G. Concrete Anchors: Concrete anchors are inserted into holes drilled in hardened concrete and shall be one of the following types:
 - 1. Adhesive Anchors: Concrete anchors that are submerged, in splash zones, in enclosed spaces over liquids, or anchoring vibrating equipment shall be epoxy adhesive anchors. Adhesive anchors may be used at all locations where concrete anchors are required. Epoxy systems shall be Sika/FI System with Sikadur Injection Gel Epoxy, Master Builders Concrecive Epoxy Cartridge Dispensing System and Concrecive Paste LPL, or equal. Threaded rods shall be ASTM F593 Type 316 studs. Where adhesive anchors, or connected metal, are exposed to direct sunlight, the anchors shall be certified to maintain at least 90 percent of their rated strength (tested at 73 degrees F) when tested at 160 degrees F.
 - 2. Expansion Anchors: Where concrete anchors are indicated and adhesive anchors are not required, wedge type anchors made with ASTM A276, Type 316 Stainless Steel shall be used. Anchors shall be KWIK Bolt II By Hilti, Inc. or approved equal.
- H. Welding Materials: AWS D1.1; type required for materials being welded.
- I. Steel members in contact with liquids either continuously or intermittently must have a minimum thickness of 1/4".
- J. All aluminum must be type 5052, 6061, 6063, or 214 alloy unless otherwise noted or approved.
- K. Shop and Touch-Up Primer: Compatible with systems specified in Section 09900 - Painting or Section 09915 - Protective Coatings.
- L. Metal Grating shall be new and undamaged. Grating shall conform to Fed Spec RR-G-661, Type I, and shall be rectangular, welded, and galvanized after fabrication. Gratings shall be designed for not more than 1/360 deflection with a uniform live load of 100 pounds per square foot. Fastening devices shall be galvanized steel saddle clips.

Grating shall be 1 inch in depth unless otherwise indicated on the drawings. Bearing bars shall be at least 3/16-inch thick, and spaced at 1-3/16 centers, and tied with transverse bars spaced no more than 4 inches on center.

- M. Handrail pipe shall be standard, galvanized, seamless pipe of the size and weight shown on the plans.

2.02 FABRICATION

- A. Fit and shop assemble in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- D. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- E. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- F. Gratings shall be of one piece resistance welded construction and shall be accurately fabricated, free from warps, twists, or other defects which affect the appearance and serviceability of the grating. The tops of the bearing bars and cross bars shall be in the same plane, and there shall be no acute angles at joints between bearing and transverse bars.

Panels shall be within 3/16-inch plus or minus of authorized length, within 1/8-inch plus or minus of authorized width, and shall have a maximum difference in length of opposite diagonals of 1/4-inch. The spacing of bearing bars shall be within 1/32-inch or authorized spacing. Cross bars and edge bars of adjacent panels shall align. After installation there shall be no more than 1/4-inch clearance between panels. Bearing bars shall be parallel.

Openings shall be provided for the passage of pipes or for other purposes. Grating shall be laid out so that openings are centered on a joint between sections. Ends of bearing bars shall be banded to the full depth of the grating with steel bars 3/16-inch thick. Bands on end bearing bars shall be welded to the first, last, and every fourth intermediate bar unless the panel has been cut for reasons of placement around objects, in which case the bands shall be welded to

all intersecting members. Transverse bars shall be cut off flush with the outside face of side bars.

2.03 FINISHES

- A. Prepare surfaces to be primed in accordance with SSPC SP 2.
- B. Do not prime surfaces in direct contact with concrete or where field welding is required.
- C. After fabrication and prior to galvanizing, all sharp edges and corners of cut or sheared edges shall be dulled by at least one pass of a power grinder.
- D. Galvanize, after completion of welded fabrication, in accordance with ASTM A123, structural steel members. Provide minimum 1.25 oz/sq ft galvanized coating.

3.0 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.
- B. Beginning of installation means erector accepts existing conditions.

3.02 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Supply items required to be cast into concrete or embedded in masonry with setting templates, to appropriate sections.
- C. All stainless steel threads to be coated with an anti-seizing compound prior to installing the nuts.
- D. Metal Grating panels shall be stored on blocking so that no metal touches the ground and water cannot collect thereon. The panels shall be protected against bending under their own weight or superimposed loads.

3.03 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Allow for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

- C. Field weld components indicated on shop drawings.
- D. Perform field welding in accordance with AWS D1.1.
- E. Obtain Engineer approval prior to site cutting or making adjustments not scheduled.
- F. After erection, prime welds, abrasions, and surfaces not shop primed except surfaces to be in contact with concrete.
- G. Gratings shall be installed with each section readily removable and replaceable. Adjacent panels shall be neatly fitted together. Minimum clearance shall be 3/16-inch.

Grating shall lie flat with no tendency to rock when installed. Poorly fitted or damaged grating will be rejected.

Fastening devices shall be provided for grating sections that are not installed in angle frames forming a recess.

H. Handrails

1. Splices. In general, the railings shall be fabricated in the lengths shown on the Plans and in accordance with details shown thereon. If the Contractor wishes to splice pipe in a single panel unit for the purpose of handling or adoption of available pipe, the splice must be approved by the Engineer. Splices, whether field or shop, shall be full butt welded splices.
2. Alignment. The rail shall be set up and nuts loosely tightened. The rail shall then be aligned both horizontally and vertically and the nuts tightened firmly. After the rail is aligned and the nuts tightened, all nuts shall be tack-welded to the base plates.
3. Anchor Bolts. Anchor bolts shall be set to the exact positions shown on the Plans. Templates shall be used to hold the anchor bolts in place during concreting operations.
4. Completed handrail shall be painted with two coats of aluminum paint.

3.04 ERECTION TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.

END OF SECTION

METAL FABRICATIONS

05 500 - 6

ALUMINUM HANDRAILS

1.0 GENERAL

1.01 SECTION INCLUDES

Aluminum mechanical sub-assembled handrails and fittings.

1.02 REFERENCES

ASTM 6061-T6 and/or ASTM 6063-T6.

1.03 DESIGN REQUIREMENTS

- A. Railing assembly and attachments to resist a concentrated load of 200 pounds applied in any direction at any point and a uniform load of 50 pounds per linear foot applied to the horizontal rails in any direction. The loads shall not be applied simultaneously.
- B. Space support posts 6 feet on center, maximum.
- C. All base plates shall have a minimum of 3 bolts.

1.04 SUBMITTALS

Submit Shop Drawings: Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.

1.05 ACCEPTABLE MANUFACTURERS

- A. Golden Railings, Inc.
- B. Enerco Metal Products, "Alumrail"
- C. Julius Bloom, "Connectorail"
- D. Reynolds Metals, "Reynorail #2"
- E. Denier
- F. Or Approved Equal.

2.0 PRODUCTS

2.01 RAILING SYSTEM

- A. Railings shall be constructed 1-1/2 inch diameter aluminum pipe schedule 40 with anodized satin finish. Finish to be clear anodized (0.7 mil). All fittings shall be extruded aluminum pre-engineered for railing application.
- B. All railing shall be mounted as shown on the plans using 1/2 inch diameter stainless steel anchors.
- C. All hardware used on the railing system shall be stainless steel.
- D. All railing surfaces in contact with concrete or dissimilar metals shall receive one coat of zinc chromate.
- E. All fittings shall be secured to the post and railing with #17 x 1" stainless steel set screws.
- F. Railings shall be provided with two horizontal rails and a 4-inch high toe board.
- G. Toe boards shall be 4 inch extruded aluminum "Z" shape. Toe boards shall be connected to each railing post with a minimum of two fasteners in horizontal slotted holes. Splices shall be located and detailed to allow for thermal expansion and contraction.
- H. Openings in rail shall be provided for access to gates and valves. Provide double strand 3/16 inch diameter stainless steel chain.
- I. Provide expansion joints at maximum 24 ft. centers using splice sleeves.

3.0 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.
- B. Beginning of installation means erector accepts existing conditions.

3.02 INSTALLATION

- A. Install components plumb and level, accurately fitted, free from distortion or defects.
- B. Provide anchors and sockets required for connecting railings to concrete.

END OF SECTION

ALUMINUM HANDRAILS

05 521 - 2

FIBERGLASS REINFORCED GRATING

1.0 GENERAL

1.01 SECTION INCLUDES

This section specifies requirements for all materials, fabrication and erection of fiberglass reinforced plastic (FRP) grating including all necessary accessories required for a complete installation as shown or specified. See the plans for where FRP grating is required. Provide supports, fasteners and appurtenances for a complete system meeting performance requirements of this specification.

1.02 UNIT PRICES

Unless noted in the Bidsheet, no separate payment will be made for work under this section. Include payment in unit price for applicable work as noted on the Bidsheet.

1.03 REFERENCES

- A. Metal Fabrications, Section 05 500

1.04 PERFORMANCE REQUIREMENTS

- A. Maximum allowable deflection under live load shall be 1/240 of span. Components shall be sized for single span.

1.05 SUBMITTALS

- A. Product Data: Provide span and deflection tables.
- B. Shop Drawings: Indicate details of thickness and spacing of bars, top surface treatment, color, hold-down clip, side clips, manufacturer's name and grating type. Show fabrication details, component supports, openings, perimeter construction details, and tolerances.
- C. Submit two 12" x 12" section of grating taken from the manufacturer's stock.

2.0 PRODUCTS

2.01 GRATING

- A. Grating shall be of a one piece molded construction with tops and bottoms of bearing bars and cross bars in the same plane. Grating shall have a square mesh pattern providing bidirectional strength. Grating shall be reinforced with continuous rovings of equal number of layers in each direction. Percentage of glass (by weight) shall not exceed 35% so as to achieve maximum corrosion resistance, and as required to maintain the structural requirements of the CONTRACT. After molding, no dry glass fibers shall be visible on any surface of bearing bars or cross bars. All bars shall be smooth and uniform with no evidence of fiber orientation irregularities, resin rich or resin starved areas.
- C. The resin matrix shall be fire retardant isophthalic polyester with a polyester surfacing veil wrap over the continuous strand mat meeting Class 1 flame spread rating (tunnel test) of 25 or less per ASTM E 84 and shall meet self-extinguishing requirements of ASTM D 635.
- D. The grating shall be resistant to the effects of ultraviolet light attack in an outdoor environment. This shall be accomplished by providing a UV stabilizer in the resin and surface veil, and by a UV coating of UV stabilized polyurethane based paint.
- E. The walking surface of the grating shall be a nonskid surface of quartz grit.
- F. The grating shall be capable of supporting a uniform live load of 100 psf or a concentrated load of 300 plf. Maximum deflection under live load shall be span length/240 but not to exceed 0.25 inches.
- G. Color shall be gray unless otherwise indicated on the drawings.
- H. Solid FRP plate shall be ¼ inch plate bonded to 1 ¾ inch grating for a total thickness of 2 inches.

2.02 ANCILLARY MATERIALS

- A. Clips and Bolts. Provide 316 stainless steel saddle type clip hold-down fasteners and side panel clips with stainless steel bolts or studs. 316 stainless steel self-drilling screws or power actuated fastening with FCM grating disc (SS) may be substituted for bolts or studs. Provide a minimum of two hold-down clips on each end of each piece of grating. For grating continuous over intermediate supports, provide a minimum of two hold-down clips at each intermediate support.

- B. Curb Angle. Provide fiberglass curb angle unless noted otherwise. The curb angle shall have a built-in continuous anchor for placement in concrete. The resin shall be a fire-retardant vinyl ester with a UV inhibitor. The angle shall have a surface veil with a UV coating.

2.03 FABRICATION

- A. Work must be performed in accordance with reviewed shop drawings as modified for actual field measurements.
- B. Form grating into sections of sizes indicated or as necessary for proper access and handling. Unless otherwise shown on the drawings, all panels shall be removable and shall not exceed 100 pounds in weight. Maximum width shall be 48 inches; maximum length shall be three spans. Provide for a maximum of ¼-inch spacing between adjacent sections.
- C. Provide accurately cut openings in gratings to suit penetration of piping, equipment and other items of work. Where possible, grating shall be laid out so that openings are centered on a joint between adjacent sections of grating. Cutouts with dimensions of 4 inches or less may be made in the field.
- D. Cuts shall be clean and smooth without fins, beads, or other projections. Crossbars shall be cut off flush with the outside face of the bearing bar.
- E. All cuts or sanded surfaces shall be liberally coated with resin containing air-inhibiting additives and compatible with the resin matrix used in the bars.
- F. Banding of supported ends of grating will not be required.
- G. Provide abrasive nosing at edges of grating which form the top tread of stairs.

3.0 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with reviewed shop drawings. Verify that supports are correctly positioned. Grating shall fit on seats and support beams without binding or rocking. Fasten grating with hold-down clips as specified and detailed. Where required, sides of adjacent panels shall be tied together, with removable clips, to prevent differential deflections between adjacent panels.
- B. Crossbars and bearing bars of adjacent panels shall align. After installation, there shall be no more than ¼ inch clearance between panels. All bearing bars shall be parallel.

- C. After installation, the grating shall be protected as required to prevent damage during completion of the contract. Any damaged material must be replaced without additional cost to the Owner.
- E. Install components in accordance with manufacturer's directions.

END OF SECTION

BACKUP PUMP SYSTEM

PART 1 - GENERAL

- 1.01 The contractor shall provide a stationary self-priming centrifugal pump for each lift station. The back-up pump shall be driven by a liquid cooled Natural Gas or LPG fueled engine. Pump unit to include an enclosure for noise abatement and a liquid level control system. The pump unit shall be suitable for permanent mounting on a concrete slab for lift station back-up.
- 1.02 The primary purpose of the pump shall be for sanitary sewer use, lift station emergency standby, or pump station bypass.
- 1.03 The pump manufacturer shall be ISO 9001:2008 revision certified, with scope of registration including design control and service after sales activities.
- 1.04 The pumps and pump station manufacturer shall be registered to the ISO 14001 Environmental Management System standard and as such is committed to minimizing the impact of its activities on the environment and promoting environmental sustainability by the use of best management practices, technological advances, promoting environmental awareness and continual improvement.
- 1.05 The pump manufacturer shall be a current member of the Contractors Pump Bureau (CPB) with supporting documentation available upon request.
- 1.06 Performance Criteria
 - A. Pumps must be designed to handle raw unscreened domestic sanitary sewage.
 - B. Pump Performance Certifications
 1. Solids Handling Capability
 - a. All internal passages, impeller vanes, and recirculation ports shall pass a 3" spherical solid. Screens or smaller internal passages that create a maintenance nuisance or interfere with priming and pump performance shall not be permitted. Upon request from the engineer, the manufacturer's certified drawings showing size and location of the recirculation port(s) shall be submitted for approval.
 - C. Reprime Performance
 1. Consideration shall be given to the service anticipated, in which debris is expected to lodge between the suction check valve and its seat, resulting in the loss of the pump suction leg, and siphoning of liquid from the pump casing to the approximate center line of the impeller. Such an occurrence shall be considered normal, and the pump must be capable of automatic, unattended operation with an air release line installed.
 2. During unattended operation, the pump shall retain adequate liquid in the casing to ensure automatic repriming while operating at its rated speed in a completely open

system. The need for a suction check valve or external priming device shall not be required.

3. The pump shall reprime 25 vertical feet at the maximum continuous speed and impeller diameter. Reprime lift is defined as the static height of the pump suction above the liquid, while operating with only one-half of the liquid remaining in the pump casing. The pump must reprime and deliver full capacity within five minutes after the pump is energized in the reprime condition. Additional standards under which reprime tests shall be conducted are:
 - a. Piping shall incorporate an open discharge line.
 - b. A length of air release pipe shall be installed between pump and the discharge check valve. This line shall be open to atmosphere at all times duplicating the air displacement rate anticipated at a typical pump station fitted with an air release valve.
 - c. The pump suction check valve shall be removed. No restrictions in the pump or suction piping will prevent the siphon drop of the suction leg. Suction pipe configuration for reprime test shall incorporate a 2 feet minimum horizontal run, a 90° elbow and vertical run at the specified lift. Pipe size shall be equal to the pump suction diameter.
 - d. Impeller clearances shall be set as recommended in the pump service manual.
 - e. Repeatability of performance shall be demonstrated by testing five consecutive reprime cycles. Full pump capacity (flow) shall be achieved within five minutes during each cycle.
 - f. Liquid to be used for repriming test shall be water.
 - g. Upon request from the engineer, certified reprime performance test results, prepared by the manufacturer, and certified by a registered professional engineer, shall be submitted for approval prior to shipment.

D. Certified Pump Performance Test

1. Tests shall be conducted in accordance with Hydraulic Institute Standards 14.6.3.4 Acceptance Grade 2B at the specified head, capacity, rated speed and horsepower. The performance tests will validate the correct performance of the equipment at the design head, capacity and speed.
2. For pumps utilizing up to (13 HP) motors; but larger than (1.3 HP), tests shall be conducted in accordance with Hydraulic Institute Standards 14.6.3.4.1, as the specified head, capacity, rated speed and horsepower.

1.07 Manufacturer's Warranty

- A. The pump manufacturer shall warrant the pump equipment to be of quality construction, free of defects in material and workmanship. The written warranty shall consist of no less than 100% for 5 years and shall include specific details described below. Pro-Rated warranties shall not be accepted.

- B. All equipment, apparatus, and parts furnished shall be warranted 100% for sixty (60) months, excepting only those items that are normally consumed in service, such as oils, grease, packing, gaskets, O-rings, etc. The pump manufacturer shall be solely responsible for the warranty of the pump equipment and all components.
- C. Components failing to perform as specified by the engineer, or as represented by the manufacturer, or as proven defective in service during the warranty period, shall be replaced, repaired, or satisfactorily modified by the manufacturer.
- D. It is not intended that the pump manufacturer assume liability for consequential damages or contingent liabilities arising from failure of any vendor supplied product or part which fails to properly operate, however caused. Consequential damage resulting from defects in design, or delays in delivery are also beyond the manufacturer's scope of liability.
- E. This limited warranty shall be valid only when installation is made and used, and maintenance is performed in accordance with manufacturer recommendations. The warranty shall become effective on the date of acceptance by the purchaser or the purchaser's authorized agent, or sixty (60) days after installation, or ninety (90) days after shipment from the factory, whichever occurs first.

PART 2 - PRODUCT

2.01 Manufacturer

- A. In order to unify responsibility for proper operation, it is the intent of these Specifications that all system components be furnished by a single supplier (unitary source) and that source shall be the pump manufacturer. The pumps must be of standard catalog design, totally warranted by the manufacturer. Under no circumstances will a system consisting of parts compiled and assembled by a manufacturer's representative or distributor be accepted.
- B. Manufacturer must show proof of original product design and testing. Products violating intellectual property regulations shall not be allowed, as they may violate international law and expose the user or engineer to unintended liabilities. "Reverse-engineered" products fabricated to substantially duplicate the design of original product shall not be allowed, as they may contain substantial differences in tolerances and material applications addressed in the original design, which may contribute to product failure.
- C. The term "pump manufacturer" shall be defined as the entity which designs, machines, assembles, hydraulically tests, and warranties the final product. Any entity that does not meet this definition will not be considered a "pump manufacturer" and is not an acceptable supplier. For quality control reasons and future pump and parts availability, all major castings of the pump shall be sourced and machined in North America.

2.02 Pump Design

- A. The pump shall be a horizontal, self-priming centrifugal type, designed specifically for pumping raw unscreened domestic sanitary sewage, industrial waste, trash or debris. Pump solids handling capability and performance criteria shall be in accordance with requirements listed under PART 1 – GENERAL of this section.
- B. Pumps that require external priming devices such as compressors or vacuum pumps will not be considered.

C. Materials and Construction Features

1. Pump casing: Casing shall be cast iron Class 30 with integral volute scroll. Casing shall incorporate following features:
 - a. Mounting feet sized to prevent tipping or binding when pump is completely disassembled for maintenance.
 - b. Fill port cover plate, 3½" diameter, shall be opened after loosening a hand nut/clamp bar assembly. In consideration for safety, hand nut threads must provide slow release of pressure, and the clamp bar shall be retained by detente lugs. A Teflon gasket shall prevent adhesion of the fill port cover to the casing.
 - c. The casing drain plug shall be at least 1 1/4" NPT to insure complete and rapid draining.
 - d. Liquid volume and recirculation port design shall be consistent with performance criteria listed under PART 1 - GENERAL of this section.
2. Cover plate: Cover plate shall be cast iron Class 30. Design must incorporate following maintenance features:
 - a. Retained by hand nuts for complete access to pump interior. Cover plate removal must provide ample clearance for removal of stoppages, and allow service to the impeller, seal, wear plate or check valve without removing suction or discharge piping.
 - b. A replaceable wear plate secured to the cover plate by weld studs and nuts shall be AISI 1015 HRS.
 - c. In consideration for safety, a pressure relief valve shall be supplied in the cover plate. Relief valve shall open at 75-200 PSI.
 - d. Two O-rings of Buna-N material shall seal cover plate to pump casing.
 - e. Pusher bolt capability to assist in removal of cover plate. Pusher bolt threaded holes shall be sized to accept the same retaining cap screws as used in rotating assembly.
 - f. Easy-grip handle shall be mounted to face of cover plate.
3. Rotating Assembly: A rotating assembly, which includes impeller, shaft, mechanical shaft seal, lip seals, bearings, seal plate and bearing housing, must be removable as a single unit without disturbing the pump casing or piping. Design shall incorporate following features:
 - a. Seal plate and bearing housing shall be cast iron Class 30. Separate oil filled cavities, vented to atmosphere, shall be provided for shaft seal and bearings. Cavities must be cooled by the liquid pumped. Three lip seals will prevent leakage of oil.
 - 1) The bearing cavity shall have an oil level sight gauge and fill plug check valve. The clear sight gauge shall provide easy monitoring of the bearing cavity oil level

and condition of oil without removal of the fill plug check valve. The check valve shall vent the cavity but prevent introduction of moist air to the bearings.

- 2) The seal cavity shall have an oil level sight gauge and fill/vent plug. The clear sight gauge shall provide easy monitoring of the seal cavity oil level and condition of oil without removal of the fill/vent plug.
 - 3) Double lip seal shall provide an atmospheric path providing positive protection of bearings, with capability for external drainage monitoring.
- b. Impeller shall be ductile iron, two-vane, semi-open, non-clog, with integral pump out vanes on the back shroud. Impeller shall thread onto the pump shaft.
 - c. The shaft shall be AISI 17-4 pH stainless steel.
 - d. Bearings shall be an anti-friction ball type of proper size and design to withstand all radial and thrust loads expected during normal operation. Bearings shall be oil lubricated from a dedicated reservoir. Pump designs which use the same oil to lubricate the bearings and shaft seal shall not be acceptable.
 - e. Shaft seal shall be oil lubricated mechanical type. The stationary and rotating seal faces shall be silicon carbide alloy. Each mating surface shall be lapped to within three light bands flatness (35 millionths of an inch), as measured by an optical flat under monochromatic light. The stationary seal seat shall be double floating by virtue of a dual O-ring design; an external O-ring secures the stationary seat to the seal plate, and an internal O-ring holds the faces in alignment during periods of mechanical or hydraulic shock (loads which cause shaft deflection, vibration, and axial/radial movement). Elastomers shall be viton; cage and spring to be stainless steel. Seal shall be oil lubricated from a dedicated reservoir. The same oil shall not lubricate both shaft seal and shaft bearings. Seal shall be warranted in accordance with requirements listed under PART 1 - GENERAL of this section.
 - f. Pusher bolt capability to assist in removal of rotating assembly. Pusher bolt threaded holes shall be sized to accept the same cap screws as used for retaining rotating assembly.
4. Adjustment of the impeller face clearance (distance between impeller and wear plate) shall be accomplished by external means.
 - a. Clearances shall be maintained by a four-point external shimless cover plate adjustment system, utilizing a four collar and four adjusting screw design allowing for incremental adjustment of clearances by hand as required. Each of the four points shall be lockable to prevent inadvertent clearance increases or decreases due to equipment vibration or accidental operator contact. The four-point system also allows for equal clearance gaps at all points between the impeller and wear plate. The requirement of realignment of belts, couplings, etc., shall not be acceptable. The cover plate shall be capable of being removed without disturbing clearance settings. Clearance adjustment systems that utilize less than four points will not be considered.

- b. There shall be provisions for additional clearance adjustment in the event that adjustment tolerances have been depleted from the cover plate side of the pump. The removal of stainless-steel shims from the rotating assembly side of the pump shall allow for further adjustment as described above.
 - c. Clearance adjustment which requires movement of the shaft only, thereby adversely affecting seal working length or impeller back clearance, shall not be acceptable.
- 5. The suction check valve shall be molded Neoprene with integral steel and nylon reinforcement. A blow-out center shall protect pump casing from hydraulic shock or excessive pressure. Removal or installation of the check valve must be accomplished through the cover plate opening, without disturbing the suction piping. The sole function of the check valve shall be to save energy by eliminating the need to reprime after each pumping cycle. Pumps requiring a suction check valve to assist reprime will not be acceptable.
- 6. The pump suction and discharge will have threaded pipe nipples extending outside of the sound attenuating enclosure.
- D. The pump manufacturer shall demonstrate to the engineer's satisfaction that due consideration has been given to reducing maintenance costs by incorporating the following features:
 - 1. No special tools shall be required for the replacement of any components within the pump.
 - 2. The unit shall be provided with a pump drain to the outside of the enclosure.
- E. The pump shall include G-R Hard Iron impeller, seal plate and wear plate hardened to 400 Brinell.
- F. Gauge Kit
 - 1. A gauge kit shall be supplied for the pump. Suction pressure must be monitored by a glycerin-filled compound gauge, and discharge pressure by a glycerin-filled pressure gauge. Gauges to be at least 2.5 inches in diameter, graduated in feet water column. Rated accuracy shall be 1.5% of full-scale reading. Compound gauge shall be graduated -34 to +34 feet water column minimum. Pressure gauge to be graduated 0 to 140 feet water column minimum.
 - 2. Gauges to be factory mounted adjacent to the engine control panel. Gauge installations shall be complete with all hoses and fittings, including a shutoff valve for each gauge line behind the control panel.
- G. The pump shall be equipped with a discharge swing check valve and automatic air release valve assembly integrally mounted within the sound attenuated enclosure.
- H. The full flow type check valve capable of passing a 3" spherical solid. Valve shall be constructed with flanged ends and fitted with an external lever and torsional spring. Valve seats shall be constructed of stainless steel, secured to the body to ensure concentricity, sealed by an O-ring, and shall be replaceable. The valve body shall be cast iron

incorporating a clean-out port large enough to allow removal and/or replacement of the valve clapper without removing valve or piping from the line. Valve clapper shall have a molded neoprene seating surface incorporating low pressure sealing rings. Valve hinge pin and internal hinge arm shall be stainless steel supported on each end in brass bushings. Shaft nut shall have double O-rings which shall be easily replaceable without requiring access to interior of valve body. All internal hardware shall be stainless steel. Valve shall be rated at 175 PSI water working pressure, 350 PSI hydrostatic test pressure. Valves other than full flow type or valves mounted in such a manner that prevents the passage of a 3" spherical solid shall not be acceptable.

I. Automatic Air Release Valves

1. Each pump shall be equipped with an automatic air release valve designed to vent air to atmosphere during initial priming or unattended repriming cycles. Upon completion of the priming or repriming cycle, the valve shall automatically close operating solely on discharge pressure to prevent excess recirculation. A visible indication of valve closure shall be evident. Valves which connect to the suction line or rely on vacuum pumps shall not be acceptable.
2. The air release valve shall be constructed of UV-inhibiting, high impact composite polyester containing not less than 30% glass-filler. The valve body shall incorporate an internal passageway that allows all debris to pass through the valve chamber between operational cycles, thus making the valve self-cleaning upon sequential cycles. The valve diaphragms shall be Buna-N or EPDM and shall incorporate a polyester mesh sufficient to withstand 250 PSI of pressure. Diaphragm materials of lesser-rated durability will not be deemed equal.
3. The vertical valve plunger shall be constructed of Acetal. The independent, dual diaphragms and single, vertical valve plunger shall incorporate a media fluid that passes through an orifice and separates the actions of each. This media fluid will impart sufficient energy for each diaphragm to act on the other to cause a metered stroke, allowing for predictable mechanical movement, thus opening, and closing the valve smoothly, preventing chatter and harsh ramming forces. Valves with a single horizontal shaft or that do not incorporate straight-through passageways or media-limiting orifices will not be acceptable. The valve "seat" shall permit a prescribed bypass of the liquid being pumped to ensure that the valve does not become hydraulically locked in submerged discharge piping configurations.
4. The valve shall employ an externally adjustable restrictor for applications below five feet of static discharge head. Valves having no means to accurately adjust their action, or which require spring selection and lubrication are unacceptable. Being mechanically maintenance-free, provisions for clearing debris in the internal passageway normally associated with valves of this type are incorporated in the valve design and are accessible with only normal hand tools.
5. The valve body shall incorporate passageways having minimal constrictions and no directional course changes integral to the body of the valve. The inlet shall be 1 inch NPT female and the discharge outlet shall be 1-1/4-inch NPT female, assuring that any debris that makes its way through the valve body will have unobstructed passage back to the source. Valves having smaller throughput, bends or turns that restrict or impede flow and create pockets or traps for debris shall not be acceptable. The valve shall be

mounted horizontally, 90 degrees to the vertical plunger by means of an integral mounting bracket.

6. The valve shall be able to operate on applications ranging from five to 400 feet of water column without the need for adjustment or interchange of springs or other parts.
7. Connection of the air release valves to pump station piping shall include stainless steel fittings.

2.03 Engine

- A. The engine shall be a Zenith Model 2.8 Liter (4) cylinder four cycle liquid cooled (natural gas fueled) (LPG fueled) engine or approved equal. The engine shall have the following minimum design characteristics:

1. Displacement shall be 171 cubic inches.
2. Maximum continuous BHP shall be 64 @ 3000 RPM.
3. The governor shall be electronic.
4. Forced circulation lubrication.
5. Dry type air cleaner.
6. Oil reservoir shall be 5 U.S. quarts (4,7 liters) dry.
7. The starter shall be 12 volts electric.

- B. Engine AutoStart Control Panel to include the following features:

1. LCD display with backlighting.
2. Safety shutdown switches / indicators for low oil pressure, engine overcrank, and high coolant temperature.
3. Displayed values for:
 - a. Engine RPM
 - b. Run Time
 - c. Battery Voltage
 - d. Coolant Temperature
 - e. Oil Pressure
4. Fault indication for:
 - a. Low oil pressure
 - b. High temperature
 - c. Overcrank
5. Engine MANUAL/STOP/AUTO key switch with key removable in any position.
6. Warning alarm for eight seconds prior to start-up.
7. I.D. tags or equal applied:
 - a. Throttle
 - b. Float switch and Micro EPS inputs
 - c. MANUAL/OFF/AUTO
8. 10 Amp Fuse
9. Float switch and Micro EPS connector in bottom of box adjacent to wiring harness connector.

- C. Additional features shall include:

1. Radiator with drain valve on bottom of radiator with hose running to outside of the unit in

the containment base.

2. Engine oil drain provisions utilizing ball valve with ½ inch I.D. hose extending to outside of the unit in the containment base.
 3. The unit shall be equipped with a residential grade muffler designed to limit noise to a level acceptable in a residential area.
- D. Because the engine shall be required to operate during emergency situations, the following minimum performance standards shall be used for engine selection:
1. Engine speed shall be controlled by an electronically adjustable throttle control which shall maintain the preset speed over the range of expected pumping loads. This speed shall not be less than 1000 RPM to ensure adequate cooling, nor more than 1700 RPM so that internal engine wear is held to a minimum.
 2. The engine shall develop approximately 95 percent of manufacturer's published performance after a reasonable run-in period.
 3. For selection of engine size, engine performance shall be de-rated according to manufacturer's specifications to allow for decreased performance if installed at elevations more than 1000 feet above sea level.
 4. For selection of engine size, engine performance shall be de-rated according to manufacturer's specifications to allow for decreased performance in an ambient temperature of 100 degrees F.
 5. Engine rating shall be further reduced to conform to engine manufacturer's recommendations for continuous service applications.
 6. The engine shall be specifically designed to operate continuously in an enclosed area.

2.04 Enclosure

A. Description

1. The entire pump unit shall be enclosed by a soundproof lightweight aluminum enclosure to reduce operating noise to an average of 63 dBA at 23 feet (7 meters) per the CPB testing standards, while pumping under full load.
2. The enclosure shall be removable for maintenance of pump or engine.
3. The enclosure shall be equipped with two padlockable side access panels with a minimum opening of 34" x 46" to facilitate pump and engine servicing.
4. The enclosure shall incorporate a removable keylockable panel to allow access to the pump clean-out cover plate.
5. The enclosure shall be secured to an environmentally safe spill containment type base that includes integral drain ports and forklift pockets.
6. A keyed weathertight positive engagement 4-pin socket for float switch connection shall be provided for use with or without the enclosure in place.

2.05 Control System

A. Description

1. The engine shall be equipped with all controls and components required for manual and automatic operation when used with the engine controls and DC level control system described herein. Such components shall include, but not limited to, the following:
 - a. 12-volt DC electrical system including starter and alternator.
 - b. Digital elapsed running time meter.
 - c. Shutdown sensors for engine temperature, oil pressure, and overspeed.
 - d. Keyed switch for manual, off, or automatic operation of the engine.
2. The electrical control components shall be provided by the pump supplier and shall include the following:
 - a. Indicating lights shall be LED type and shall be provided for engine overcrank, engine low oil pressure, high coolant temperature, and engine overspeed. LED emitting the color Yellow shall indicate "Warning"; LED emitting the color Red shall indicate "Fault".
 - b. A six-digit elapsed time display shall be provided to indicate the total running time in "hours" and "tenths of hours".
 - c. Controls shall include a microprocessor-based controller with 40-character two row LCD backlit display. It shall be housed in a lockable polycarbonate clear cover enclosure visible from the outside of the sound attenuated enclosure.

B. Dual Float Switch Liquid Level Control System

1. The liquid level control system shall utilize individual float switches to start and stop the pump unit in response to changes in wet well level. They shall be mechanical non-mercury type float switches housed in a hermetically sealed polypropylene enclosure designed to extend into the wet well. The float switch cable shall be 50 feet minimum length for proper installation into the wet well without splicing.
2. The level control system shall continuously monitor the wet well level. Upon operator selection of automatic operation, the level controller shall start the pump unit when the liquid level in the wet well rises to the pump start level. When the liquid is lowered to the pump stop level, the level controller shall stop this pump.

C. Engine control system

1. The engine control system shall be designed to accomplish the following tasks:
 - a. Permit the operator to select mode of engine operation, providing manual start and stop of the engine to override the level control system.

- b. Crank the engine upon start command from the level control system and stop the engine upon a stop command.
 - c. Stop the cranking sequence if the engine fails to start after a reasonable number of attempts and provide an audible alarm indication of failure to start.
 - d. While the engine is operating, continuously monitor engine speed, temperature, and oil pressure.
 - e. Stop the engine for excessive speed, excessive coolant temperature, or insufficient oil pressure, and provide an alarm indication of shutdown and its cause. If any of these parameters approach a shutdown condition, an audible alarm will sound and the parameter in question will flash before an actual shutdown occurs.
2. Sequence of operation
- a. Upon operator selection of automatic operation, when the level control system provides a start command, the engine control system shall start the engine cranking motor for a short period of time. If the engine does not start, the system shall stop the cranking motor for a short period of time, then resume cranking. Typically, five 10-second cranking periods, each followed by a 10-second rest period, should be considered a reasonable effort to start the engine. When the engine starts, a sensor shall stop the cranking cycle and reset the cranking circuit for the next start.
 - b. If the engine does not start within the preset number of attempts, the cranking circuit shall be de-energized, and an overcrank status indication shall be displayed on the LCD panel.
 - c. Once the engine has started normally, the engine control system shall monitor and display engine speed, coolant temperature, system voltage, run time, and oil pressure. Upon engine failure from any cause, the system shall provide an alarm indication, and illuminate an indicator.
3. Circuit details
- a. Switches or other devices shall be provided and connected to perform as follows:
 - 1) When automatic operation is selected, the engine shall start and stop under control of the level control and engine control system.
 - 2) When manual operation is selected, the operator will be prompted to push and hold the “enter” button on the control panel to start the engine. Once started, the engine shall run until “OFF” is selected, or the engine failure circuit stops the engine.
 - 3) Operators can stop the engine if it is running and prevent it from starting during maintenance or repair.
 - 4) Engine failure circuits shall stop the engine, illuminate an LED, and display on LCD display on the control panel, for each of the following conditions:

- a) Engine speed exceeds maximum overspeed setting.
 - b) Engine temperature exceeds safe operating temperature as specified by the engine manufacturer.
 - c) Engine oil pressure falls below engine manufacturer's specified recommendations.
 - d) The engine fails to start after several attempts.
- b. Operating power for the engine and level control system shall be provided by the storage battery furnished with the engine.
- D. Battery shall be 75-amp hour industrial type with 900 cold cranking amps.

END OF SECTION

PART 1 - GENERAL

1.01 Work under this section includes, but is not limited to, furnishing, and installing a factory built triplex pump station as indicated on the project drawings, herein specified, as necessary for proper and complete performance.

1.02 REFERENCES

A. Publications listed below form part of this specification to extent referenced in the text by basic designation only. Consult latest edition of publication unless otherwise noted.

1. American National Std. Institute (ANSI) / American Water Works Assoc. (AWWA)
 - a. ANSI B16.1 Cast iron pipe flanges and flanged fittings.
 - b. ANSI/AWWA C115/A21.51 Cast/ductile iron pipe with threaded flanges.
 - c. ANSI 253.1 Safety Color Code for Marking Physical Hazards.
 - d. ANSI B40.1 Gages, Pressure and Vacuum.
 - e. AWWA C508 Single Swing Check Valves.
2. American Society for Testing and Materials (ASTM)
 - a. ASTM A48 Gray Iron Castings.
 - b. ASTM A126 Valves, Flanges, and Pipe Fittings.
 - c. ASTM A307 Carbon Steel Bolts and Studs.
 - d. ASTM A36 Structural Steel.
3. Institute of Electrical and Electronics Engineers (IEEE)
 - a. ANSI/IEEE Std 100 Standard Dictionary of Electrical Terms.
 - b. ANSI/IEEE Std 112 Test Procedure for Polyphase Induction Motors.
 - c. IEEE Std 242 Protection of Industrial and Control Power Systems.
4. National Electric Code (NEC) / National Electrical Manufacturers Assoc. (NEMA)
 - a. NEC National Electric Code.
 - b. NEC 701 National Electric Code article 701.
 - c. NEMA Std MG1 Motors and Generators.
5. Miscellaneous References
 - a. Ten-State Standards Recommended Standards for Sewage Works.
 - b. Hydraulic Institute Std for Centrifugal, Rotary and Reciprocating Pumps.
 - c. NMTBA and JIC Std National Machine Tool Builders Association and Joint Industrial Council Standards
 - d. ISO 9001 International Organization for Standardization.

1.03 SYSTEM DESCRIPTION

A. Contractor shall furnish and install one factory built base mounted, automatic pump station. The station shall be complete with all equipment specified herein; factory assembled on a common steel base.

- B. Principal items of equipment shall include three horizontal, self priming, centrifugal sewage pumps, V-belt drives, motors, piping, valves, motor control panel, automatic liquid level control system, and integral wiring.
- C. Factory built pump station design, including materials of construction, pump features, valves and piping, and motor controls shall be in accordance with requirements listed under PART 2 - PRODUCTS of this section.

1.04 PERFORMANCE CRITERIA

- A. Pumps must be designed to handle raw, unscreened, domestic sanitary sewage. Pumps shall have 8" suction connection, and 8" discharge connection. Each pump shall be selected to perform under following operating conditions:

1. Capacity (GPM each pump)	1,452
2. Total Dynamic Head (FT)	50
3. Minimum Hydraulic Efficiency (%)	63
4. Maximum NPSHr (FT)	5.7
5. Maximum Repriming Lift (FT)	21
6. Minimum TDH (FT)	25
7. Maximum TDH (FT)	80
8. Maximum Pump Speed (RPM)	1,086
9. Minimum Impeller Diameter (IN)	1,475
10. Minimum Submergence Depth (FT)	1.5
- B. Site power furnished to pump station shall be 3 phase, 60 hertz, 480 volts, 4 wire, maintained within industry standards. Voltage tolerance shall be plus or minus 10 percent. Phase-to-phase unbalance shall not exceed 1% average voltage as set forth in NEMA Standard MG-1. Control voltage shall not exceed 132 volts.

1.05 SUBMITTALS

- A. Product Data
 - 1. Prior to fabrication, pump station manufacturer shall submit electronic copies of submittal data for review and approval.
 - 2. Submittal shall include shop drawings, electrical ladder logic drawings, and support data as follows: Catalog cuts sheets reflecting characteristics for major items of equipment, materials of construction, major dimensions, motor and v-belt drive data, pump characteristic curves showing the design duty point capacity (GPM), head (FT), net positive suction head required (NPSHr), and hydraulic brake horsepower (BHP). Electrical components used in the motor branch and liquid level control shall be fully described.
- B. Shop drawings shall provide layout of mechanical equipment and anchor bolt locations for station. Contractor piping connections and station access clearances shall be dimensioned relative to the station centerline. The electrical ladder logic drawings shall illustrate motor branch and liquid level control circuits to extent necessary to validate function and integration of circuits to form a complete working system.

C. Operations Maintenance Manuals

1. Installation shall be in accordance with written instructions provided by the pump station manufacturer. Comprehensive instructions supplied at time of shipment shall enable personnel to properly operate and maintain all equipment supplied. Content and instructions shall assume operating personnel are familiar with pumps, motors, piping and valves, but lack experience with exact equipment supplied.
2. Documentation shall be specific to the pump station supplied and collated in functional sections. Each section shall combine to form a complete system manual covering all aspects of equipment supplied by the station manufacturer. Support data for any equipment supplied by others, even if mounted or included in overall station design, shall be provided by those supplying the equipment. Instructions shall include the following as a minimum:
 - a. Functional description of each major component, complete with operating instructions.
 - b. Instructions for operating pumps and pump controls in all modes of operation.
 - c. Calibration and adjustment of equipment for initial start-up, replacement of level control components, or as required for routine maintenance.
 - d. Support data for commercially available components not produced by the station manufacturer, but supplied in accordance with the specifications, shall be supported by literature from the prime manufacturer and incorporated as appendices.
 - e. Electrical schematic diagram of the pump station circuits shall be in accordance with NMTBA and JIC standards. Schematics shall illustrate, to the extent of authorized repair, pump motor branch, control and alarm system circuits including interconnections. Wire numbers and legend symbols shall be shown. Schematic diagrams for individual components, not normally repairable by the station operator, need not be included. Details for such parts shall not be substituted for an overall system schematic. Partial schematics, block diagrams, and simplified schematics shall not be provided in lieu of an overall system diagram.
 - f. Mechanical layout drawing of the pump station and components, prepared in accordance with good commercial practice, shall provide installation dimensions and location of all pumps, motors, valves, and piping.
3. Operation and maintenance instructions which rely on vendor cut-sheets and literature which include general configurations or require operating personnel to selectively read portions of the manual shall not be acceptable. Operation and maintenance instructions must be specific to equipment supplied in accordance with these specifications.

1.06 QUALITY ASSURANCE

- A. The pumps and pump station manufacturer must be ISO 9001:2000 revision certified, with scope of registration including design control and service after sales activities.
- B. Upon request from the engineer, the pump station manufacturer shall prove financial stability and ability to produce the station within the specified delivery schedules. Evidence

of facilities, equipment and expertise shall demonstrate the manufacturer's commitment to long term customer service and product support.

- C. All internal passages, impeller vanes, and recirculation ports shall pass a 3" spherical solid. Smaller internal passages that create a maintenance nuisance or interfere with priming and pump performance shall not be permitted. Upon request from the engineer, manufacturer's certified drawings showing size and location of the recirculation port(s) shall be submitted for approval.
- D. Manufacturer must show proof of original product design and testing. Products violating intellectual property regulations shall not be allowed, as they may violate international law and expose the user or engineer to unintended liabilities. "Reverse-engineered" products fabricated to substantially duplicate the design of original product shall not be allowed, as they may contain substantial differences in tolerances and material applications addressed in the original design, which may contribute to product failure.
- E. The term "pump manufacturer" or "pump station manufacturer" shall be defined as the entity which designs, machines, assembles, hydraulically tests, and warrants the final product. Any entity that does not meet this definition will not be considered a "pump manufacturer" or "pump station manufacturer" and is not an acceptable supplier. For quality control reasons and future pump and parts availability, all major castings of the pump shall be sourced and machined in North America.
- F. Reprime Performance
 - 1. Consideration shall be given to the sanitary sewage service anticipated, in which debris is expected to lodge between the suction check valve and its seat, resulting in the loss of the pump suction leg, and siphoning of liquid from the pump casing to the approximate center line of the impeller. Such occurrence shall be considered normal, and the pump must be capable of automatic, unattended operation with an air release line installed.
 - 2. During unattended operation, the pump shall retain adequate liquid in the casing to insure automatic repriming while operating at its rated speed in a completely open system. The need for a suction check valve or external priming device shall not be required.
 - 3. Pump must reprime ABOVE SPECIFIED vertical ft. at the specified speed and impeller diameter. Reprime lift is defined as the static height of the pump suction above the liquid, while operating with only one-half of the liquid remaining in the pump casing. The pump must reprime and deliver full capacity within five minutes after the pump is energized in the reprime condition. Reprime performance must be confirmed with the following test set-up:
 - a. A check valve to be installed down stream from the pump discharge flange. The check valve size shall be equal (or greater than) the pump discharge diameter.
 - b. A length of air release pipe shall be installed between pump and the discharge check valve. This line shall be open to atmosphere at all times duplicating the air displacement rate anticipated at a typical pump station fitted with an air release valve.

- c. The pump suction check valve shall be removed. No restrictions in the pump or suction piping will prevent the siphon drop of the suction leg. Suction pipe configuration for reprime test shall incorporate a 2 feet minimum horizontal run, a 90-degree elbow and vertical run at the specified lift. Pipe size shall be equal to the pump suction diameter.
 - d. Impeller clearances shall be set as recommended in the pump service manual.
 - e. Repeatability of performance shall be demonstrated by testing five consecutive reprime cycles. Full pump capacity (flow) shall be achieved within five minutes during each cycle.
 - f. Liquid to be used for reprime test shall be water.
4. Upon request from the engineer, certified reprime performance test results, prepared by the manufacturer, and certified by a registered professional engineer, shall be submitted for approval prior to shipment.

G. Certified Pump Performance Test

- 1. Tests shall be conducted in accordance with Hydraulic Institute Standards 14.6.3.4 Acceptance Grade 2B at the specified head, capacity, rated speed, and horsepower. The performance tests will validate the correct performance of the equipment at the design head, capacity, and speed.
- 2. For pumps utilizing up to (13 HP) motors; but larger than (1.3 HP), tests shall be conducted in accordance with Hydraulic Institute Standards 14.6.3.4.1, as the specified head, capacity, rated speed, and horsepower.

H. Factory System Test

- 1. All components including the pumps, motors, valves, piping and controls will be tested as a complete working system at the manufacturer's facility. Tests shall be conducted in accordance with Hydraulic Institute Standards at the specified head, capacity, rated speed and horsepower. Factory operational test shall duplicate actual performance anticipated for the complete station.
 - 2. Upon request from the engineer, the operational test may be witnessed by the engineer, and/or representatives of his choice, at the manufacturer's facility.
- I. The manufacturer's technical representative shall inspect the completed installation, correct, or supervise the correction of any defect or malfunction, and instruct operating personnel in the proper operation and maintenance of the equipment as described in Part 3 of this section.

1.07 MANUFACTURER'S WARRANTY

- A. The pump station manufacturer shall warrant all equipment to be of quality construction, free of defects in material and workmanship 100% for a period of 5 years (60 months). A written warranty shall include specific details described below. Pro-Rated or Third-Party warranties shall not be acceptable.

1. In addition to defects in material and workmanship, fiberglass reinforced polyester station enclosures (where applicable) are warranted 100 % for sixty (60) months to be resistant to rust, corrosion, corrosive soils, effects of airborne contamination or physical failures occurring in normal service for the period of the pump station warranty.
 2. All other equipment, apparatus, and parts furnished shall be warranted 100% for sixty (60) months, excepting only those items that are normally consumed in service, such as light bulbs, oils, grease, packing, gaskets, O-rings, etc. The pump station manufacturer shall be solely responsible for warranty of the station and all components.
- B. Components failing to perform as specified by the engineer, or as represented by the manufacturer, or as proven defective in service during the warranty period, shall be replaced, repaired, or satisfactorily modified by the manufacturer.
 - C. It is not intended that the station manufacturer assume liability for consequential damages or contingent liabilities arising from failure of any vendor supplied product or part which fails to properly operate, however caused. Consequential damages resulting from defects in design, or delays in delivery are also beyond the manufacturer's scope of liability.
 - D. Equipment supplied by others and incorporated into a pump station or enclosure is not covered by this limited warranty. Any warranty applicable to equipment selected or supplied by others will be limited solely to the warranty, if any, provided by the manufacturer of the equipment.
 - E. This limited warranty shall be valid only when installation is made and use, and maintenance is performed in accordance with manufacturer recommendations. A start-up report completed by an authorized manufacturer's representative must be received by manufacturer within thirty (30) days of the initial date the unit is placed into service. The warranty shall become effective on the date of acceptance by the purchaser or the purchaser's authorized agent, or sixty (60) days after installation, or ninety (90) days after shipment from the factory, whichever occurs first.

PART 2 - PRODUCT

2.01 UNITARY RESPONSIBILITY

- A. In order to unify responsibility for proper operation of the complete pumping station, it is the intent of these Specifications that all system components be furnished by a single supplier (unitary source). The pumping station must be of standard catalog design, totally warranted by the manufacturer. Under no circumstances will a system consisting of parts compiled and assembled by a manufacturer's representative or distributor be accepted.

2.02 MANUFACTURER

- A. The pump station system integrator must be ISO 9001:2000 revision certified, with scope of registration including design control and service after sales activities.
- B. The specifications and project drawings depict equipment and materials manufactured by The Gorman-Rupp Company which are deemed most suitable for the service anticipated. It is not intended, however, to eliminate other products of equal quality and performance. The contractor shall prepare his bid based on the specified equipment for purposes of

determining low bid. Award of a contract shall constitute an obligation to furnish the specified equipment and materials.

2.03 MODULAR PUMP STATION ENCLOSURE

A. Enclosure Construction and Design:

1. The enclosure is to be rectangular with outside dimensions of 20' long by 12' wide and having a maximum outside height of 9' at the roof peak.
2. A minimum of (4) four lifting eyes arranged on the corners shall be provided to ease handling and installation onto a concrete pad furnished by the contractor.
3. Enclosure walls and roof shall be seamless, one-piece sprayed fiberglass panels laminated to form a structural composite as follows: 1/8" thick fiberglass outside surface, 1" thick urea-foam polyurethane core, 7/16" oriented strand board (OSB), and 3/32" thick fiberglass inside surface. OSB shall replace foam at all cut-out openings and penetration points.
4. Each wall panel shall overlap at the corner and form an internal connection joint using stainless steel hardware. All panel joints shall be thoroughly sealed with silicone caulk. The enclosure shall have a minimum R-10 insulation factor and shall be capable of withstanding 150 mph wind loads.
5. All exterior surfaces shall be textured (green, tan, or gray colored) isophthalic gel coat finish incorporating ultra-violet inhibitors.
6. All interior surfaces shall be sprayed white isophthalic gel coat finish offering the same characteristics as the exterior surfaces.
7. The roof panel shall be an arched, one-piece design incorporating the same materials of construction as the side walls. The roof shall be removable as a unit, allowing for complete access to the pumping equipment with a crane. The pitch of the roof shall be sufficient for good moisture drainage and withstand a minimum snow load of 40 pounds per square foot.
8. The 3'0" wide x 6'8" high entrance door(s) shall be constructed of the same laminated fiberglass and foam core materials as the remainder of the station. OSB will replace the insulation in areas where auxiliary equipment will be mounted. Each door shall be hung with (3) three stainless steel ball bearing type hinges incorporating a three-point closure system with a lockable door handle. An adjustable door positioner and holder shall be mounted at the top of the door. A gasket consisting of solid rubber and sponge shall seal the door while closed. The door and all hardware shall be mounted to withstand 150 MPH winds. A wall mounted drip molding will be installed above each door.
9. After the pumping equipment is installed, the fully assembled station enclosure shall be positioned on the concrete mounting pad and sealed with butyl sealant tape as furnished by the pump station manufacturer. The interior base flange shall be drilled positioning and fastened to the pad using expansion anchors on 24" maximum centers.

B. Enclosure Functional Equipment:

1. The interior of the station shall be illuminated by factory installed 120-volt fluorescent light fixtures. All lights will be prewired and run to a load center through PVC conduit and a weatherproof switch shall be installed adjacent to each station entrance. The lighting circuit shall be protected by a thermal-magnetic circuit breaker.
2. A thermostatically controlled 120 VAC exhaust fan with screen and weatherproof shutters shall be installed in the wall approximately opposite the fresh air intake vent. The fan shall have a minimum capacity of 1600 CFM at free air and be capable of changing the air in the enclosure a minimum of six times per hour. The exhaust fan shall be protected by a thermal-magnetic circuit breaker.
3. The enclosure will be complete with one (1) set of intake louvers. The intake louvers will be completely self-contained and shall not require the use of motors, solenoids, or other electrically operated devices. Intake louver will consist of two (2) 15" wide and 18-7/8" high shutters that open automatically at 75° F, and close at 60° F. Shutter operation will be the result of the expansion and contraction of wax in an enclosed plunger which shall drive the louver vanes through a mechanical linkage. The intake shutters will have the actuator mounted out of the flow of the intake air and shall maintain the shutter vanes in the open position. Intake shutter frame will be constructed of anodized aluminum with zinc plated steel actuator mounting and linkage. The shutter vanes will pivot on plastic bearings. The two (2) intake shutters will be mounted in an aluminum fixed vane louver assembly to prevent the entrance of rain or snow.

C. Enclosure Insulation

1. The pump station enclosure shall incorporate an insulation package for standard R10 insulation rating on the urea-foam polyurethane core in the wall and roof panels.

D. Enclosure Entrance Door

1. The station enclosure shall be furnished with extra wide doors. A double hung door design with 3-point locking hardware, door closer, and hinges on each section shall allow complete access to the 6'-0" x 6'-8" full door opening without the need for a center sill.

E. Duplex Receptacle

1. A wall mounted duplex GFI utility receptacle providing 120-volt AC power shall be installed and prewired through PVC conduit with the station lighting. The receptacle shall be protected by thermal magnetic circuit breaker.

2.03 UNIT BASE

- A. The unit base shall comprise a base plate, perimeter flange, and reinforcements. Base plate shall be fabricated of steel not less than 1/4" thick. Perimeter flange and reinforcements shall be designed to prevent flexing or warping under operating conditions. Base plate and/or flange shall be drilled for hardware used to secure unit base to concrete pad as shown on the contract drawings. Unit base shall contain provisions for lifting the complete pump unit during shipping and installation.

2.04

2.05 PUMP DESIGN

- A. Pumps shall be horizontal, self-priming centrifugal type, designed specifically for handling raw, unscreened, domestic sanitary sewage. Pump solids handling capability and performance criteria shall be in accordance with requirements listed under PART 1 - GENERAL of this section.
- B. The manufacturer of the pumps must be ISO 9001:2000 revision certified, with scope of registration including design control and service after sales activities.
- C. Materials and Construction Features
 - 1. Pump casing: Casing shall be cast iron Class 30 with integral volute scroll. Casing shall incorporate following features:
 - a. Mounting feet sized to prevent tipping or binding when pump is completely disassembled for maintenance.
 - b. Fill port coverplate, 3 1/2" diameter, shall be opened after loosening a hand nut/clamp bar assembly. In consideration for safety, hand nut threads must provide slow release of pressure, and the clamp bar shall be retained by detente lugs. A Teflon gasket shall prevent adhesion of the fill port cover to the casing.
 - c. Casing drain plug shall be at least 1 1/4" NPT to insure complete and rapid draining.
 - d. Liquid volume and recirculation port design shall be consistent with performance criteria listed under PART 1 - GENERAL of this section.
 - 2. Coverplate: Coverplate shall be cast iron Class 30. Design must incorporate following maintenance features:
 - a. Retained by hand nuts for complete access to pump interior. Coverplate removal must provide ample clearance for removal of stoppages, and allow service to the impeller, seal, wearplate or check valve without removing suction or discharge piping.
 - b. A replaceable wearplate secured to the coverplate by weld studs and nuts shall be AISI 1015 HRS.
 - c. In consideration for safety, a pressure relief valve shall be supplied in the coverplate. Relief valve shall open at 75-200 PSI.
 - d. Two O-rings of Buna-N material shall seal coverplate to pump casing.
 - e. Pusher bolt capability to assist in removal of coverplate. Pusher bolt threaded holes shall be sized to accept same retaining capscrews as used in rotating assembly.
 - f. Easy-grip handle shall be mounted to face of coverplate.
 - 3. Rotating Assembly: A rotating assembly, which includes impeller, shaft, mechanical shaft seal, lip seals, bearings, sealplate and bearing housing, must be removable as a single unit without disturbing the pump casing or piping. Design shall incorporate following features:

- a. Sealplate and bearing housing shall be cast iron Class 30. Separate oil filled cavities, vented to atmosphere, shall be provided for shaft seal and bearings. Cavities must be cooled by the liquid pumped. Three lip seals will prevent leakage of oil.
 - 1) The bearing cavity shall have an oil level sight gauge and fill plug check valve. The clear sight gauge shall provide easy monitoring of the bearing cavity oil level and condition of oil without removal of the fill plug check valve. The check valve shall vent the cavity but prevent introduction of moist air to the bearings.
 - 2) The seal cavity shall have an oil level sight gauge and fill/vent plug. The clear sight gauge shall provide easy monitoring of the seal cavity oil level and condition of oil without removal of the fill/vent plug.
 - 3) Double lip seal shall provide an atmospheric path providing positive protection of bearings, with capability for external drainage monitoring.
 - b. Impeller shall be ductile iron, two-vane, semi-open, non-clog, with integral pump out vanes on the back shroud. Impeller shall thread onto the pump shaft and be secured with a lockscrew and conical washer.
 - c. Shaft shall be AISI 4140 alloy steel unless otherwise specified by the engineer, in which case AISI 17-4 pH stainless steel shall be supplied.
 - d. Bearings shall be anti-friction ball type of proper size and design to withstand all radial and thrust loads expected during normal operation. Bearings shall be oil lubricated from a dedicated reservoir. Pump designs which use the same oil to lubricate the bearings and shaft seal shall not be acceptable.
 - e. Shaft seal shall be oil lubricated mechanical type. The stationary and rotating seal faces shall be tungsten titanium carbide alloy. Each mating surface shall be lapped to within three light bands flatness (35 millionths of an inch), as measured by an optical flat under monochromatic light. The stationary seal seat shall be double floating by virtue of a dual O-ring design; an external O-ring secures the stationary seat to the sealplate, and an internal O-ring holds the faces in alignment during periods of mechanical or hydraulic shock (loads which cause shaft deflection, vibration, and axial/radial movement). Elastomers shall be viton. Cage and spring to be stainless steel. Seal shall be oil lubricated from a dedicated reservoir. The same oil shall not lubricate both shaft seal and shaft bearings. Seal shall be warranted in accordance with requirements listed under PART 1 - GENERAL of this section.
 - f. Pusher bolt capability to assist in removal of rotating assembly. Pusher bolt threaded holes shall be sized to accept same capscrews as used for retaining rotating assembly.
4. Adjustment of the impeller face clearance (distance between impeller and wearplate) shall be accomplished by external means.
- a. Clearances shall be maintained by a four-point external shimless coverplate adjustment system, utilizing a four collar and four adjusting screw design allowing for incremental adjustment of clearances by hand as required. Each of the four points shall be lockable to prevent inadvertent clearance increases or decreases

due to equipment vibration or accidental operator contact. The four-point system also allows for equal clearance gaps at all points between the impeller and wear plate. Requirement of realignment of belts, couplings, etc., shall not be acceptable. Coverplate shall be capable of being removed without disturbing clearance settings. Clearance adjustment systems that utilize less than four points will not be considered.

- b. There shall be provisions for additional clearance adjustment in the event that adjustment tolerances have been depleted from the coverplate side of the pump. The removal of stainless-steel shims from the rotating assembly side of the pump shall allow for further adjustment as described above
 - c. Clearance adjustment which requires movement of the shaft only, thereby adversely affecting seal working length or impeller back clearance, shall not be acceptable.
- 5. Suction check valve shall be molded Neoprene with integral steel and nylon reinforcement. A blow-out center shall protect pump casing from hydraulic shock or excessive pressure. Removal or installation of the check valve must be accomplished through the coverplate opening, without disturbing the suction piping. Sole function of check valve shall be to save energy by eliminating need to reprime after each pumping cycle. Pumps requiring a suction check valve to assist reprime will not be acceptable.
 - 6. Spool flanges shall be one-piece cast iron, class 30 fitted to suction and/or discharge ports. Each spool shall have one 1-1/4" NPT and one 1/4" NPT tapped hole with pipe plugs for mounting gauges or other equipment.

D. Serviceability

- 1. The pump manufacturer shall demonstrate to the engineer's satisfaction that consideration has been given to reducing maintenance costs.
- 2. No special tools shall be required for replacement of any components within the pump.

E. Drain Kit

- 1. Pumps to be supplied with a drain kit for ease of maintenance. The kit to contain 10' length of reinforced plastic hose with a female quick connect fitting at one end, and factory installed drain fittings in each pump. Fittings include a stainless-steel pipe nipple, stainless steel bushing, stainless steel gate valve and aluminum male quick connect fitting.

F. Spare Parts Kit

- 1. The following minimum spare parts shall be furnished with the pump station:
 - a. One spare pump mechanical seal (complete with shaft sleeve).
 - b. One cover plate O-Ring.
 - c. One rotating assembly O-Ring.
 - d. One set of impeller clearance adjustment shims.

2.06 VALVES AND PIPING

- A. Each pump shall be equipped with a full flow type check valve, capable of passing a 3" spherical solid, with flanged ends and be fitted with an external lever and spring. 316 stainless steel body ring shall be threaded into the valve port. Valve clapper shall be cast iron, rubber face, and shall swing completely clear of waterway when valve is full open. The seating shall be by a resilient field replaceable ring on the valve disc contacting a bronze or stainless seat ring in the valve body. Hinge pin shall be of 18-8 stainless steel construction and shall be utilized with bronze bushings and packing type seal. Valves shall be equipped with removable cover plate to permit entry or for complete removal of internal components without removing the valve from the line. Valve shall be rated at 175 psi water working pressure, 350 psi hydrostatic test pressure. Valves other than full flow type or valves mounted in such a manner that prevents the passage of a 3" spherical solid shall not be acceptable.
- B. A 2-way plug valve must allow either or all pumps to be isolated from the force main. Valve shall pass 3" spherical solids. The plug valve shall be non-lubricated, tapered type. Valve body shall be semi-steel with flanged end connections drilled to 125-pound standard. The drip-tight shutoff plug shall be mounted in stainless steel bearings and shall have a resilient facing bonded to the sealing surface. Valve shall be operated with a single lever actuator providing lift, turn, and reseal action. The lever shall have a locking device to hold the plug in the desired position.
- C. Automatic air release valves:
 - 1. An automatic air release valve shall be furnished for each pump designed to permit the escape of air to the atmosphere during initial priming or unattended repriming cycles. Upon completion of the priming cycle or repriming cycle, the valve shall close to prevent recirculation. Valves shall provide visual indication of valve closure and shall operate solely on discharge pressure. Valves which require connection to the suction line shall not be acceptable.
 - 2. All valve parts exposed to sewage shall be constructed of cast iron, stainless steel, or similar corrosion resistant materials. Diaphragms, if used, shall be of fabric reinforced neoprene or similar inert material.
 - 3. A cleanout port, three inches in diameter, shall be provided for ease of inspection, cleanout, and service.
 - 4. Valves shall be field adjustable for varying discharge heads.
 - 5. Connection of the air release valves to the station piping shall include stainless steel fittings.
 - 6. Contractor shall be responsible for supplying and connecting the ARV drain lines back to the wet well.
- D. Gauge Kit
 - 1. A gauge kit shall be supplied for each pump. Suction pressure must be monitored by a glycerin-filled compound gauge, and discharge pressure by a glycerin-filled pressure gauge. Gauges to be at least 4 inches in diameter, graduated in feet water column. Rated accuracy shall be 1% of full-scale reading. Compound gauge shall be graduated -

34 to +34 feet water column minimum. Pressure gauge to be graduated 0 to 140 feet water column minimum.

2. Gauges to be factory mounted on a resilient panel with frame assembly secured to pumps or piping. Gauge installations shall be complete with all hoses and stainless-steel fittings, including a shutoff valve for each gauge line at the point of connection to suction and discharge pipes.

E. Piping

1. Flanged header pipe shall be centrifugally cast, ductile iron, complying with ANSI/AWWA A21.51/C115 and class 53 thickness.
2. Flanges shall be cast iron class 125 and comply with ANSI B16.1.
3. Pipe and flanges shall be threaded, and suitable thread sealant applied before assembling flange to pipe.
4. Bolt holes shall be in angular alignment within 1/2 degrees between flanges. Flanges shall be faced with a gasket finish having concentric grooves a minimum of 0.01 inch deep by approximately 0.03 inch wide, with a minimum of three grooves on any given surface spaced a maximum of 1/4 inch apart.

F. Supports and Thrust Blocks

1. Contractor must ensure all pipes connected to the pump station are supported to prevent piping loads from being transmitted to pumps or station piping. Pump station discharge force main piping shall be anchored with thrust blocks where shown on the contract drawings.

2.07 DRIVE UNIT

- A. Pump motors shall be 40 HP, horizontal TEFC, 1800 RPM, NEMA design B with cast iron frame with copper windings, induction type, with normal starting torque and low starting current characteristics, suitable for continuous service. The motors shall not overload at the design condition or at any head in the operating range as specified.

B. Drive Transmission

1. Power to pumps transmitted V-belt drive assemblies. The sheave/belt combination shall provide the speed ratio needed to achieve the specified pump operating conditions.
2. Each drive assembly shall utilize at least two V-belts providing minimum a combined safety factor of 1.5. Single belt drives or systems with a safety factor of less than 1.5 are not acceptable. Computation of safety factors shall be based on performance data published by the drive manufacturer.
3. Precise alignment tolerances of the drive assemblies shall be achieved by means of a belt/sheave laser alignment system resulting in the reduction of vibration, accelerated wear, and premature failure.
4. The pump manufacturer shall submit power transmission calculations which document the following:

- a. Ratio of pump/motor speed.
 - b. Pitch diameter of driver and driven sheaves.
 - c. Number of belts required per drive.
 - d. Theoretical horsepower transmitted per belt, based on vendor's data.
 - e. Center distance between pump and motor shafts.
 - f. Arc-length correction factor applied to theoretical horsepower transmitted.
 - g. Service factor applied to established design horsepower.
 - h. Safety factor ratio of power transmitted/brake horsepower required.
5. Belt guards
- a. Pump drives to be enclosed on all sides by a guard constructed of fabricated steel or combination of materials including expanded, perforated, or solid sheet metal. No opening to a rotating member shall exceed 1/2 inch.
 - b. Guards must be completely removable without interference from any unit component and shall be securely fastened and braced to the unit base.
 - c. Metal to be free from burrs and sharp edges. Structural joints shall be continuously welded. Rivet spacing on panels shall not exceed five inches. Tack welds shall not exceed four inch spacing.
 - d. The guard shall be finished with one coat of gray W.R. non-lift primer and one coat of orange acrylic alkyd W.R. enamel in accordance with section 3, Color Definitions of ANSI 253.1: Safety Color Code for Marking Physical Hazards.

2.08 FINISH

- A. Pumps, piping, and exposed steel framework shall be cleaned prior to coating using an approved solvent wipe or phosphatizing cleaner. The part must thoroughly dry before paint application. Open joints shall be caulked with an approved polyurethane sealant. Exposed surfaces shall be applied with one coat of Tnemec Series 69 Polyimide Epoxy Primer and one finish coat of Series 73 Aliphatic Acrylic Polyurethane for a total dry film thickness of 4-6 mils. Finish coat shall be semi-gloss white for optimum illumination and enhancement. The coating shall be corrosion, moisture, oil, and solvent resistant when completely dry. The factory finish shall allow for over-coating and touch-up for 6 months after coating. Thereafter, it will generally require sanding to accept a topcoat or touch-up coating. See Product Data Sheet for additional information.

2.09 ELECTRICAL CONTROL COMPONENTS

- A. The pump station control panel will be tested as an integral unit by the pump station manufacturer. The control panel shall also be tested with the pump station as a complete working system at the pump station manufacturer's facility.

B. Panel Enclosure

1. Electrical control equipment shall be mounted within a NEMA 4X Stainless steel, dead front type, control enclosure. Door shall be hinged and sealed with a neoprene gasket and equipped with captive closing hardware. Control components shall be mounted on a removable steel back panel secured to enclosure with collar studs.
2. All control devices and instruments shall be secured to the sub-plate with machine screws and lock washers. Mounting holes shall be drilled and tapped; self-tapping screws shall not be used to mount and component. All control devices shall be clearly labeled to indicate function.

C. UL Label Requirement

1. Pump station controls shall conform to third party safety certification. The panel shall bear a serialized UL label listed for "Enclosed Industrial Control Panels". The enclosure, and all components mounted on the sub-panel or control cover shall conform to UL descriptions and procedures.

D. UL Label Requirement

1. Pump station components and controls shall conform to third party safety certification. The station shall bear a UL label listed for "Packaged Pumping System". The panel shall bear a serialized UL label listed for "Enclosed Industrial Control Panels". The pump station components, panel enclosure, and all components mounted on the sub-panel or control cover shall conform to UL descriptions and procedures.

E. Branch Components

1. All motor branch and power circuit components shall be of highest industrial quality. The short circuit current rating of all power circuit devices shall be a tested combination or evaluated per the National Electrical Code Article 409. the lowest rated power circuit component shall be the overall control panel short circuit rating and shall not be less than the fault current available. The minimum control panel rating shall not be less than 10 kA, rms symmetrical. Control assemblies operating at 120 volts nominal or less may be provided with transformers which limit the fault current and may be rated less than the minimum required short circuit rating.
2. Circuit Breakers and Operating Mechanisms
 - a. A properly sized heavy duty circuit breaker shall be furnished for each pump motor. The circuit breakers must be sealed by the manufacturer after calibration to prevent tampering.
 - b. An operating mechanism installed on each motor circuit breaker shall penetrate the control panel door. A padlockable operator handle shall be secured on the exterior surface. Interlocks must prevent opening the door until circuit breakers are in "OFF" position. An additional mechanism(s) shall be provided on the circuit breaker permitting the breaker to be operated and/or locked with the control panel door in the open position.
3. Starter: A reduced voltage, solid state motor starter shall be furnished for each pump motor. The starter construction shall be modular with separately replaceable power and

control sections. The power section shall consist of six back-to-back SCR's rated 208 to 480 volts, 50/60 hertz. The SCR's shall have a minimum repetitive peak inverse voltage rating of 1400 volts at 480 volts. The enclosed operating temperature range shall be 0 to 40 degrees C at altitudes up to 2000 meters without derating.

- a. Starting Modes: Starting modes shall be selectable soft start, current limit, or full voltage. Soft starting the pump shall include an adjustable initial torque value of 0 to 90 %. The acceleration ramp shall be adjustable from 0 to 30 seconds. The starter shall include a selectable kick start providing a current pulse at start. Kick start level shall be adjustable from 0 to 90% of locked rotor torque. Kick start time shall be adjustable from 0 to 2 seconds. Current limit mode shall provide means for limiting the starting current to a programmable value between 50 and 600% of full load current. Full voltage start shall provide across the line starting with a ramp time of less than 0.25 seconds.
- b. Pump Control Mode: Ramp time will be dependent on pump torque requirements. The starter shall provide smooth acceleration and deceleration, which approximates the flow rate of a centrifugal pump. The starter's microcomputer shall analyze motor variables and generate control commands, which will minimize surges in the system. Pump stop time shall be adjustable from 0 to 120 seconds. Pump control provides reduced hydraulic shock.
- c. Bypass: When the start ramp time is complete, the starter shall energize an integral bypass contactor. When in the bypass mode, the bypass contactor shall carry the motor load to minimize internal heating in the electrical enclosure.
- d. Protection: The starter shall include protective features: Communication fault, control temperature, excess starts/hour, stall, jam, line fault, open gate, overload, overvoltage, phase reversal, power loss, underload, undervoltage, shorted SCR, open bypass and voltage unbalance.
 - 1) An integral electronic overload relay equipped with thermal memory shall be included and shall utilize three phase current sensing. Adjustments shall include trip current, service factor and 10, 15, 20 or 30 trip class.
 - 2) Jam trip shall be adjustable 0-1,000% of the nominal motor current with a delay time adjustment of 0-99 seconds.
 - 3) Stall protection senses that the motor is not up-to-speed at end of ramp and will shut down after a user-selected delay time has elapsed. Stall delay shall be adjustable from 0-10 seconds.
 - 4) Fault diagnostics shall be displayed on the starter and shall include temperature fault, line fault, open gate and power loss.
- e. Display: The starter shall include a keypad and display on the front of the control module. The display is equipped with a built-in four-line, 16-character backlit LCD. The LCD displays metering, faults, and parameter settings in English. Faults will display in English and fault code. A fault buffer will store the last five faults. Metering capabilities shall include: Three phase current, three phase voltage, power factor, motor thermal usage, wattmeter, kilowatt hours, and elapsed time meter. Digital parameter adjustments shall be made using the keypad.

- f. Door Mounted Display: Each starter shall be furnished with a display and keypad mounted to the door of the control panel. The door mounted display will duplicate the functions of the starter display and allow the operator to monitor or change parameters without opening the control panel door.

F. Phase Monitor

1. The control panel shall be equipped to monitor the incoming power and shut down the pump motors when required to protect the motor(s) from damage caused by phase reversal, phase loss, low voltage, and voltage unbalance. An integral time delay shall be provided to minimize nuisance trips. The motor(s) shall automatically restart when power conditions return to normal.

G. Transient Voltage Surge Suppressor

- a. The control panel shall be equipped with a modular surge arrestor to minimize damage to the pump motors and control from transient voltage surges. The suppressor shall utilize thermally protected by heavy duty zinc oxide varistors encapsulated in a nonconductive housing. Mechanical indicators shall be provided on each phase to indicate protection has been lost. The suppressor shall have a short circuit current rating of 200,000 Amps and a Maximum Discharge current rating [I_{max}] of 40,000 Amperes. Nominal discharge current [I_n] is 20,000 Amperes. Surge arrestor according to UL 1449 3rd Edition, Type 2 component assembly.

H. Control Circuit

1. A normal duty thermal-magnetic circuit breaker shall protect all control circuits by interrupting control power.
2. Pump mode selector switches shall permit manual start or stop of each pump individually or permit automatic operation under control of the liquid level control system. Manual operation shall override all shutdown systems, except the motor overload relays. Selector switches to be oil-tight design with contacts rated NEMA A300 minimum.
3. Control logic shall be accomplished using relay logic.
4. Electromechanical relays and timers shall be equipped with 120VAC coils and contacts rated NEMA A-300 minimum. Timers shall be pneumatic or synchronous motor driven.
5. Six-digit elapsed time meter shall be displayed on panel door to indicate total running time of each pump in "hours" and "tenths of hours".
6. A high pump temperature protection circuit shall override the level control and shut down the pump motor(s) when required to protect the pump from excessive temperature. A thermostat shall be mounted on each pump casing and connected to the pump logic system. If casing temperature rises to a level sufficient to cause damage, the thermostat causes a relay will interrupt power to the motor. An alarm light will display on panel door indicating the motor stopped due to high pump temperature. The motor shall remain locked out until the pump has cooled and circuit has been manually reset. Automatic reset of this circuit is not acceptable.

7. A duplex ground fault receptacle providing 115 VAC, 60 Hz, single phase current, will be mounted on the side of the control enclosure. Receptacle circuit shall be protected by a 15-ampere thermal-magnetic circuit breaker.
8. Auxiliary Power Transformer
 - a. The lift station shall be equipped with a 3 KVA stepdown transformer to supply 115-volt, AC, single phase for the control and auxiliary equipment. The primary and secondary side of the transformer to be protected by a thermal magnetic circuit breaker, sized to meet the power requirements of the transformer. An operating mechanism shall penetrate the control panel door. and a padlockable operator handle shall be secured on the exterior surface. Interlocks must prevent opening the door until circuit breakers are in "OFF" position. An additional mechanism(s) shall be provided on the circuit breaker permitting the breaker to be operated and/or locked with the control panel door in the open position.
9. Wiring
 - a. The pump station, as furnished by the manufacturer, shall be completely wired, except for power feed lines to the branch circuit breakers and final connections to remote alarm devices.
 - b. All wiring, workmanship, and schematic wiring diagrams shall comply with applicable standards and specifications of the National Electric Code (NEC).
 - c. All user serviceable wiring shall be type MTW or THW, 600 volts, color coded as follows:
 - 1) Line and Load Circuits, AC or DC power.....Black
 - 2) AC Control Circuit Less Than Line Voltage.....Red
 - 3) DC Control Circuit.....Blue
 - 4) Interlock Control Circuit from external source.....Yellow
 - 5) Equipment Grounding Conductor.....Green
 - 6) Current Carrying Ground.....White
 - 7) Hot With Circuit Breaker Open.....Orange
 - d. Control circuit wiring inside the panel, with exception of internal wiring of individual components, shall be 16 gauge minimum, type MTW or THW, 600 volts. Power wiring to be 14 gauge minimum. Motor branch wiring shall be 10 gauge minimum.
 - e. Motor branch and other power conductors shall not be loaded above the temperature rating of the connected termination. Wires must be clearly numbered at each end in conformance with applicable standards. All wire connectors in the control panel shall be ring tongue type with nylon insulated shanks. All wires on the sub-plate shall be bundled and tied. All wires extending from components mounted on door shall terminate at a terminal block mounted on the back panel. All wiring outside the panel shall be routed through conduit.
 - f. Control wires connected to door mounted components must be tied and bundled in accordance with good commercial practice. Bundles shall be made flexible at the hinged side of the enclosure. Adequate length and flex shall allow the door to swing full open without undue stress or abrasion. Bundles shall be held on each side of hinge by mechanical fastening devices.

10. Conduit

- a. Factory installed conduit shall conform to following requirements:
 - 1) All conduit and fittings to be UL listed.
 - 2) Liquid tight flexible metal conduit to be constructed of smooth, flexible galvanized steel core with smooth abrasion resistant, liquid tight polyvinyl chloride cover.
 - 3) Conduit to be supported in accordance with articles 346, 347, and 350 of the National Electric Code.
 - 4) Conduit shall be sized according to the National electric Code.

11. Grounding

- a. Station manufacturer shall ground all electrical equipment inside the pump station to the control panel back plate. All paint must be removed from the grounding mounting surface before making final connection.
- b. The contractor shall provide an earth driven ground connection to the pump station at the main grounding lug in accordance with the National Electric Code (NEC).

12. Equipment Marking

- a. Permanent corrosion resistant name plate(s) shall be attached to the control and include following information:
 - 1) Equipment serial number
 - 2) Control panel short circuit rating
 - 3) Supply voltage, phase and frequency
 - 4) Current rating of the minimum main conductor
 - 5) Electrical wiring diagram number
 - 6) Motor horsepower and full load current
 - 7) Motor overload heater element
 - 8) Motor circuit breaker trip current rating
 - 9) Name and location of equipment manufacturer
- b. Control components shall be permanently marked using the same identification keys shown on the electrical diagram. Labels shall be mounted adjacent to device being identified.
- c. Switches, indicators, and instruments mounted through the control panel door shall be labeled to indicate function, position, etc. Labels shall be mounted adjacent to, or above the device.

2.10 LIQUID LEVEL CONTROL

- A. The manufacturer of the liquid level control system must be ISO 9001:2000 revision certified, with scope of registration including design control and service after sales activities.

- B. The level control system shall start and stop the pump motors in response to changes in wet well level, as set forth herein.
- C. The level control system shall utilize alternation to select first one pump, then the second pump, then the third pump, to run as lead pump for a pumping cycle. Alternation shall occur at the end of a pumping cycle, or in the event of excessive run time.

2.11 LIQUID LEVEL CONTROL (Float Switch Type)

- A. The level control system shall start and stop pump motors in response to changes in wet well level. It shall be the non-mercury float switch type with floats to be secured to a vertical pipe in the wet well. Rising and falling liquid level in the wet well causes switches within the floats to open and close, providing start and stop signals to the remainder of the level control system.
- B. The level control system shall start and stop the pumps in accordance with the wet well level. Upon operator selection of automatic operation, a float switch shall start one pump motor when water rises to the "lead pump start level". When the water is lowered to the "lead pump stop level", the system shall stop this pump. These actions shall constitute one pumping cycle. Should the water continue to rise, an additional float switch will start the second pump after reaching the "lag pump start level" so that two pumps operate together. All pumps shall stop at the same "all pumps off level". Circuit design in which application of power to the lag pump motor starter is contingent upon completion of the lead pump circuit shall not be acceptable.
- C. The level control system shall work in conjunction with an alternator to select first one pump, then the second pump, then the third pump, to run as "Lead" pump. Alternation will occur at the end of each pumping cycle.
- D. Float switches shall be supplied for installation by the contractor. Each float shall contain a non-mercury switch sealed in a polypropylene housing, with 30 feet of power cord, and polypropylene mounting hardware. A PVC or stainless-steel mounting pipe shall be furnished by the contractor to secure the switches in the wet well.
- E. A junction box shall be supplied for installation in the wet well by the contractor. Junction box shall be NEMA 4X, non-corrosive type incorporating terminal blocks match-marked to terminals in the control panel.
- F. A separate float switch and relay shall be used to alert maintenance personnel to a high-water level in the wet well (low level float switch is optional). Should the water level rise to the "high water alarm" level, the float switch shall energize a 115-volt AC circuit for an external alarm device. An indicator, visible from front of control panel, shall indicate high level condition exists. The alarm signal shall be maintained until wet well level is lowered and alarm circuit manually reset.
- G. An alarm silence switch and relay shall provide maintenance personnel a means to de-energize the external alarm device while corrective actions are under way. After silencing the alarm, manual reset of the alarm signal shall provide automatic reset of the alarm silence relay.

H. Alarm Light (External)

1. Station manufacturer will supply one 115-volt AC alarm light fixture with vapor-tight red globe, guard, conduit box, and mounting base. The design must prevent rainwater from collecting in the gasketed area of the fixture, between the base and globe. The alarm light will be shipped loose for installation by the contractor.

I. Alarm Horn (External)

1. Station manufacturer will supply one 115-volt AC weatherproof alarm horn with projector, conduit box, and mounting base. The design must prevent rainwater from collecting in any part of the horn. The alarm horn will be shipped loose for installation by the contractor.

2.12 WEB BASED CELLULAR MONITORING SYSTEM

- A. The RACO (ALARM AGENT) cellular based auto-dialer shall be supplied and installed by the station manufacturer.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Contractor shall off-load equipment at installation site using equipment of sufficient size and design to prevent injury or damage. Station manufacturer shall provide written instruction for proper handling. Immediately after off-loading, contractor shall inspect complete pump station and appurtenances for shipping damage or missing parts. Any damage or discrepancy shall be noted in written claim with shipper prior to accepting delivery. Validate all station serial numbers and parts lists with shipping documentation. Notify the manufacturer's representative of any unacceptable conditions noted with shipper.

3.02 INSTALLATION

- A. Install, level, align, and lubricate pump station as indicated on project drawings. Installation must be in accordance with written instructions supplied by the manufacturer at the time of delivery.
- B. Suction pipe connections are vacuum tight. Fasteners at all pipe connections must be tight. Install pipe with supports and thrust blocks to prevent strain and vibration on pump station piping. Install and secure all service lines (level control, air release valve or pump drain lines) as required in wet well.
- C. Check motor and control data plates for compatibility to site voltage. Install and test the station ground prior to connecting line voltage to station control panel.
- D. Prior to applying electrical power to any motors or control equipment, check all wiring for tight connection. Verify that protective devices (fuses and circuit breakers) conform to project design documents. Manually operate circuit breakers and switches to ensure operation without binding. Open all circuit breakers and disconnect before connecting utility power. Verify line voltage, phase sequence and ground before actual start-up.

3.03 FIELD QUALITY CONTROL

A. Operational Test

1. Prior to acceptance by the owner, an operational test of all pumps, drives, and control systems shall be conducted to determine if the installed equipment meets the purpose and intent of the specifications. Tests shall demonstrate that all equipment is electrically, mechanically, structurally, and otherwise acceptable; it is safe and in optimum working condition; and conforms to the specified operating characteristics.
2. After construction debris and foreign material has been removed from the wet well, contractor shall supply clear water volume adequate to operate station through several pumping cycles. Observe and record operation of pumps, suction and discharge gage readings, ampere draw, pump controls, and liquid level controls. Check calibration of all instrumentation equipment, test manual control devices, and automatic control systems. Be alert to any undue noise, vibration, or other operational problems.

B. Manufacturer's Start-up Services

1. Co-ordinate station start-up with manufacturer's technical representative. The representative or factory service technician will inspect the completed installation. He will calibrate and adjust instrumentation, correct, or supervise correction of defects or malfunctions, and instruct operating personnel in proper operation and maintenance procedures.

3.04 CLEANING

- A. Prior to acceptance, inspect interior and exterior of pump station for dirt, splashed material or damaged paint. Clean or repair accordingly. Remove from the job site all tools, surplus materials, scrap and debris.

3.05 PROTECTION

- A. The pump station should be placed into service immediately. If operation is delayed, drain water from pumps and piping. Open motor circuit breakers and protect station controls and interior equipment from cold and moisture.

END OF SECTION

MECHANICAL GENERAL PROVISIONS

1.0 GENERAL

- 1.01. Except as modified in this section, General Conditions, Supplementary Conditions, applicable provisions of Division 1, General Requirements, and other provisions and requirement of the contract documents apply to work of Division 15 - Mechanical.
- 1.02. Applicable provisions of this section apply to all sections of Division 11 – Major Equipment and Division 15 - Mechanical.

2.0 PRODUCTS

2.01. SUBSTITUTIONS

Substitution of products, materials, or methods must be requested of the Engineer in writing and approved by the Engineer in writing.

3.0 EXECUTION

3.01. CONTRACT DRAWINGS

The drawings indicate certain information pertaining to surface and subsurface obstructions which has been taken from available drawings. Such information is not guaranteed, however, as to accuracy of location of complete information. Determine exact locations from field measurements.

3.02. SPACE REQUIREMENTS

Consider space limitations imposed by contiguous work in selection and location of equipment and material. Do not provide equipment or material which is not suitable in this respect.

3.03 OPENINGS

Framed, cast or masonry openings for ductwork, equipment and piping are specified under other divisions. However, drawings and layout work for exact size and location of all such openings are included under this division.

3.04 CONCEALED WORK

Where the word "concealed" is used in connection with insulating, painting, piping, ducts and the like, the word is understood to mean hidden from sight as in chases, furred spaces or suspended ceilings. "Exposed" is understood to mean open to view.

3.05 SERVICE

Perform service work required during the guarantee period including lubrication of bearings. Perform service monthly, and provide the Owner with a written report. Cleaning of air filters and pipe strainers is not included.

3.06 NOISE AND VIBRATION

Select equipment to operate with minimum noise and vibration. If objectionable noise or vibration is produced or transmitted to or through the building structure by equipment, piping, ducts, or other parts of work, rectify such conditions without cost to Owner. If item of equipment is judged to produce objectionable noise or vibration, demonstrate without cost to the Owner that equipment performs within designated limits on the vibration chart included at end of the section.

3.07 ACCEPTABLE MANUFACTURERS

The acceptable manufacturers are listed in individual sections. Where two or more units of same type of class of equipment are required, provide units of a single manufacturer. Manufacturers' names specified under sections of Division 11 and 15 are used to establish standards of design, performance, quality and serviceability and not to limit competition.

4.0 OPERATING AND MAINTENANCE INSTRUCTIONS

- A. Secure three copies of operating and maintenance instructions, service manuals, and part lists applicable to each item of equipment furnished. Deliver three bound sets of same for Owner's use. Delivery of required documents is a condition of final acceptance. Operation and maintenance instructions should include all nameplate data and design parameters. Clearly distinguish between information that pertains to the particular equipment and information which does not.
- B. Upon completion of work, and at a time designated by the Engineer, provide services of competent representative of the Contractor for period of at least 4 hours to instruct the Owner's representative in the operation and maintenance of the entire system.

5.0 OPERATING TESTS

After all mechanical systems have been completed and put into operation, subject each system to an operating test under design conditions to ensure proper sequence and operation throughout the range of operation. Make adjustments as required to ensure proper functioning of all systems. Special tests on individual systems are specified under individual sections.

6.0 LUBRICATION

- A. Provide a complete charge of the correct lubricant for each item of equipment requiring lubrication.
- B. Provide a complete and working charge of the proper refrigerant, free of contaminants, in each refrigerant system. After each piece of equipment has been in operation for a sufficient length of time, check the oil and modify for proper operation as required.

END OF SECTION

PIPING AND RELATED ITEMS

1.0 GENERAL

1.01 SCOPE

This section provides requirements for furnishing and installing piping. Refer to related work specified in other sections to coordinate the complete installation.

1.02 MEASUREMENTS

Make measurements of previously installed construction before fabrication of connecting work, so that all work will fit properly.

1.03 PROJECT RECORD DOCUMENTS

Upon completion of all work, furnish as-built drawings showing location and principal details and modifications of piping systems as built.

1.04 SUBMITTALS

- A. Submit product data and shop drawings on each type of pipe, valves, fittings, and accessories in accordance with Section 01300.
- B. Provide product data for linings, coatings, and polyethylene wrap in accordance with Section 01300.

2.0 PRODUCTS

2.01 PIPING

A. General.

- 1. Unless otherwise indicated, conform to applicable requirements of City of Houston Standard Specifications 02501.
- 2. Use Type 316 stainless steel bolts for submerged and below grade applications.
- 3. Ductile iron pipe and fittings shall be ceramic epoxy- lined with Protecto 401 or equal. Provide manufacturer's standard bituminous coating inside and outside of all ductile iron pipe and fittings except on above ground piping to be painted. Above ground piping shall be coated in accordance with Section 09878.
- 4. Furnish an expansion/contraction system Dependo-Lok or approved equal for

all air headers to allow for 125°F temperature change. Dependo-Lok couplings shall be provided with one fixed end. Expansion joints shall be provided on all continuous lengths of header between two (2) restraining points and where shown on the plans.

5. Use flange insulating kits for connecting dissimilar metals including galvanized steel to ductile iron connections.
6. Where wall pipes are shown on the drawings, use Adeka Waterstop or approved equal to provide a water tight seal.
7. At a minimum install thrust blocks or restrained joints at all locations shown on the drawings. Install additional thrust blocks or restrained joints as required to counter unbalanced thrust.
8. Unless otherwise indicated, use long radius 90 degree bends for all gravity drain and scum lines.
9. Use Class 52 ductile iron pipe below structures and pavement. Provide restrained push-on joints under all structures and pavement.

B. Ductile Iron Pipe – Above Grade.

1. For ductile iron pipe installed above ground and inside the wet well, valve box, or dry well, use thickness Class 53 flanged end ductile pipe unless otherwise indicated.

C. Ductile Iron Pipe – Below Grade.

1. For ductile iron pipe installed below ground, use thickness class 52 with push-on joints. No mechanical joints shall be allowed unless approved by the engineer.

D. Galvanized Steel Pipe

1. Galvanized steel pipe of the type designated on the plans shall be Schedule 40 steel pipe in conformance with ASTM A53 Grade B.
2. No field welding of galvanized steel piping shall be allowed. Provide expansion couplings or flanged connections to connect galvanized steel piping components.
3. Galvanized steel pipe components shall be hot-dip galvanized after fabrication.
4. Cold galvanize any damage to galvanized pipe.
5. All above grade non-potable or potable water piping smaller than three inches diameter shall be Schedule 40 steel pipe.

E. Polyvinyl Chloride (PVC) Pipe.

1. Provide PVC pipe in accordance with the designations shown on the plans.
2. Joints shall be solvent welded, screwed or flanged. All fittings shall be manufactured by the same company that manufactures the pipe, and rated for the same working pressure as the pipe or higher.
3. Gaskets for PVC pipe shall conform to ASTM F477. Gaskets for gravity PVC joints shall conform to ASTM F477 and ASTM 3212 or ASTM 3139.

F. Pipe Supports.

1. For vertical pipes larger than 3-inch diameter, provide at least one Type I concrete pipe support as shown on the plans mounted horizontally near the top of the wall. Place epoxy dowels into existing concrete walls where required to provide equivalent reinforcement.
2. Maximum spacing for all pipe supports shall be 10 feet.
3. Construct concrete pipe supports where shown on the plans and for piping with 9 inches or more clearance from the supporting surface, unless other indicated.
4. For piping with less than 9 inches clearance from the supporting surface and 3 inches or greater in diameter, provide roller stand Piping Technology and Products Figure 230 or approved equal.
5. Unless indicated otherwise, support pipe less than 3 inches diameter using Unistrut pipe clamp systems. Insulate above grade pipe per Section 15260.

2.02 FITTINGS

A. Use fittings of same size as pipe they serve. Reducers are not permitted to facilitate an off-size fitting. Reducing bushings are also prohibited. Reduction in piping size will be made by reducing fittings unless otherwise noted on the plans. Fittings shall be lined and coated as specified for pipe they serve. Fittings for use with galvanized pipe shall be galvanized in accordance with ASTM A 153.

B. Ductile Iron Fittings

1. Unless otherwise indicated in the Drawings or Specifications, ductile iron fittings shall conform to requirements of City of La Marque Engineering Design Criteria.
2. Use type 316 stainless steel bolts, studs and nuts for flanged joints and mechanical joints in wet wells and below ground or submerged applications.

3. Use ASTM A 307, Grade B square head bolts and heavy hex nuts, ANSI B1.1 and ANSI B18.2 for above ground, non-submerged, flanged joints
4. For ductile iron pipe installed above ground and inside wet wells, valve boxes, or dry wells, use flanged fittings conforming to ANSI/AWWA C115/A21.15.
5. Use push-on fittings conforming to ANSI/AWWA C153/A21.53 for ductile iron fittings installed below ground.
6. Unless otherwise indicated in the Drawings or Specifications, use restrained push-on fittings for all below ground applications underneath structures or slabs.
7. Unless otherwise indicated in the Drawings or Specifications or approved by the Engineer, mechanical joints shall only be used for below ground connections to existing piping, fittings, or valves with mechanical joints.

C. PVC Fittings

1. Unless otherwise indicated in the Drawings or Specifications, polyvinyl chloride fittings for gravity piping shall conform to requirements of City of La Marque Engineering Design Criteria.
2. Unless otherwise indicated in the Drawings or Specifications, fittings for PVC pressure piping shall be ductile iron in conformance with City of La Marque Engineering Design Criteria.
3. All PVC fittings shall be manufactured by the same company that manufactures the pipe and rated for the same working pressure as the pipe or higher.
4. All PVC pipe to be threaded shall be Schedule 80 or thicker. Joints in small diameter PVC pipe shall be solvent welded.

D. Mechanical Joint Fittings: Shall not be allowed unless approved by the Engineer.

E. Welding Fittings. Welding fittings for use with welded steel pipe shall be forged steel fittings in accordance with ANSI B16.9, standard weight.

2.03 COUPLINGS

A. Flexible Couplings.

1. Flexible couplings shall be installed where shown on the drawings or elsewhere where allowed by the Engineer for the Contractor's convenience. Provide control units for all flexible couplings and expansion joints.

2. Couplings between structures shall be Dresser Style 38 or approved equal with a 7" middle ring that provides 4° of deflection.
3. Where flexible couplings are installed underground, Type 316 stainless steel bolts shall be used. The entire coupling shall be given a 20-mil coat of T.C. Mastic as manufactured by the Tape Coat Company, Inc., Bitumastic No. 50 as manufactured by Koppers Company, Inc., or equal.

B. Flanged Coupling Adapters

1. Provide control units for all flanged coupling adapters.
2. Flanged coupling adapter for pipe less than 14" in diameter shall be of the bolted compression type for joining plain end pipe to adjoining flange. Adapter shall consist of one flange body, follower ring, compression gasket, and all necessary bolting. Bolting pattern shall match adjacent mating flange. Bolts and nuts shall be made of a high grade, high strength steel. Flanged coupling adapters shall be Dresser Style 127 or approved equal. Provide control units for all flanged coupling adapters.
3. Flanged coupling adapters for pipes 14" in diameter and greater shall be of the bolted compression type for joining plain end pipe to adjoining flange. Adapter shall consist of one flange body, follower ring, compression gasket, and all necessary bolting. Bolting pattern shall match adjacent mating flange. Bolts and nuts shall be made of a high grade, high strength steel. Flanged coupling adapters shall be Dresser Style 128 or approved equal.
4. Provide a dismantling joint for blower discharge piping Dresser Style 131 or approved equal.

C. Expansion Couplings

1. Furnish expansion couplings with one fixed end, Dependo-Lok or approved equal, for all headers to allow for 125°F temperature change. Expansion joints shall be provided on all continuous lengths of header between two (2) restraining points.

2.04 GASKETS

1. Provide and install transition gaskets or hub x hub adapter for a leak proof connection between different pipe classes.
2. Gaskets for flexible couplings shall be Buna-N.
3. All gaskets and seals on piping and valves for compressed air service shall be EPDM or equal rated for 250°F minimum.

2.05 JOINTS

- A. All above ground piping shall have flanged joints with stainless steel bolts, unless otherwise noted on the drawings.
- B. All below ground piping underneath a structure shall have restrained push-on joints as manufactured by Super-Lock Joint by Clow Corporation, Flex-Ring or Lok-Ring by American Iron Pipe Company, or TR-Flex or Field-Lok by U.S. Pipe and Foundry Company.
- C. All other below ground piping shall have push-on joints unless otherwise specified as manufactured by Joint Tyton by U.S. Pipe, Super Bell-Tite Joint by Clow Corporation, or Fastite by American Cast Iron Pipe Company. Air supply pipe joints shall be installed with heat resistant EPDM gaskets rated at 250° F. Submit gaskets for approval prior to installation.
- D. Maximum allowable deflection for push-on type joints shall be as follows:

<u>Size (in)</u>	<u>Deflection (degree)</u>
12	5
14, 16	4
18-36	3

3.0 EXECUTION

3.01 JOINTS

- A. Threaded Joints. Make threaded joints using suitable joint compound applied to male threads only. Thoroughly ream field cuts. Make connections carefully so that thread engagement will be secured. Machine cut threads to American National taper pipe thread sizes. For screwed joints on PVC pipe, use Teflon tape.
- B. Welded Joints. Make welded joints as recommended by standards of the American Welding Society. Ensure complete penetration of deposited metal with base metal. The filler metal must be suitable for use with the base metal. The inside of fittings must be free from globules of weld metal which would restrict the flow or become loose. Do not use mitered joints.
- C. Flanged Joints. Accurately center and align flanged joints prior to the installation of bolts to prevent mechanical prestressing of flanges, pipe and equipment. Gaskets shall be 1/16-inch full face compressed asbestos conforming to ASTM D 1170-P1161A, except the gaskets for use with PVC flanges shall be full face neoprene 1/8 inch thick.

3.02 HANDLING

Handle pipe, fittings and accessories to ensure their installation in a sound, undamaged condition. Use equipment, tools and methods to prevent damage in unloading, hauling, and laying pipe and fittings. When using hooks in pipe ends, be sure that the contact surfaces are broad and well padded.

3.03 CUTTING

Cut pipe in a neat manner, without damage to the pipe or to the interior lining, if any. Make cuts smooth, straight, and at right angles to the pipe axis. Use mechanical pipe cutters of an approved type, except in locations where the use of mechanical cutters would be difficult or impracticable. In such locations, cut the pipe with diamond point chisels, saws, or other tools which will cut pipe without damaging impact or shock.

3.04 CLEANING

Thoroughly clean the interior of the pipe and fittings of foreign matter before installation. Keep the interior clean until the work has been accepted. Remove lumps, blisters, and excess coating from the exterior spigot and interior bell surfaces. Wire brush such surfaces clean until jointing is completed. Take every precaution to prevent foreign material from entering the pipe during installation. Do not place debris, tools, clothing or other materials in the pipe.

3.05 INSPECTION

During installation, while the pipe is suspended and hanging free, inspect each pipe and fitting for defects. Tap the pipe with a light hammer to detect cracks. Reject defective, damaged or unsound pipe and fittings and remove them from the site.

3.06 LAYING PIPE

- A. Protect the pipe from lateral displacement by means of pipe embedment material installed.
- B. Under no circumstances should pipe be laid in water. Do not lay pipe under unsuitable weather or trench conditions.
- C. Lay pipe with bell ends facing the direction of the laying except when making closures.
- D. Buried ductile iron pipe and fittings shall be polyethylene wrapped in accordance with AWWA C105. Polyethylene film shall be Class C.

3.07 JOINTING

- A. Push-on Joints. Follow instructions and recommendations of the pipe manufacturer, relative to gasket installation and other jointing operations. Lubricate joint surfaces with heavy vegetable soap solution immediately before joint is completed. Suitably bevel each spigot end to facilitate assembly.
- B. Mechanical Joints. Mechanical joints may be used only with the approval of the Engineer. If approved, carefully assemble mechanical joints in accordance with the manufacturer's recommendations. Lubricate joint surfaces with heavy vegetable soap solution immediately prior to installing gasket on spigot end. If seal is defective, disassemble the joint, thoroughly clean it, and reassemble the joint. Do not overtighten bolts to compensate for poor installation practice.
- C. Flanged Joints. When bolting, take care to ensure that there is no restraint on the opposite end of the pipe or fittings which would prevent uniform gasket compression or which would cause unnecessary stress in the flanges. Leave one flange free to move in any direction while flange bolts are being tightened. Tighten bolts gradually and at a uniform rate, in such manner that gasket compression is uniform over the entire area of gasket.
 - 1. Take special care when attaching suction and discharge piping to pumping equipment. Ensure that no stresses are transmitted to or imposed on the pump suction and discharge flanges by connection piping. Install and permanently support piping to provide accurate matching of bolt holes and uniform contact over the entire flange. In addition, leave pump connection piping free to move paralleled to its longitudinal center line while the bolts in pump connection flanges are tightened.
 - 2. Provide maximum flexibility and ease of alignment correction by taking advantage of the slack between the flange bolts and bolt holes for slight angular rotation of connecting flanges. Assemble pump connecting piping with gaskets in place, with only a portion of the flange bolts (no fewer than four per joint) installed. After final alignment and before final bolting, test pump connections for applied piping stresses by loosening flange bolts which, if piping is properly installed, should result in no movement of piping relative to the pump, or opening of the pump connection joints.

3.08 REACTION ANCHORAGE AND BLOCKING

- A. Install suitable reaction blocking, struts, anchors, clamps, joint harness or other adequate means for preventing movement of pipe caused by unbalanced internal liquid pressure. Pressure can be expected at unplugged tees, Y-branches and bends deflecting 11-1/4 degrees or more which are installed in piping subjected to

internal hydrostatic heads in excess of fifteen feet in exposed piping or 30 feet in buried piping. Refer to lift station drawings.

1. In trenches, fittings must be provided with concrete thrust blocking between the fitting and solid, undisturbed ground in each case, except where solid ground blocking support is not available. At tops of slopes, anchor vertical angle bends with concrete of sufficient weight to resist hydraulic thrust to which pipe will be subjected at maximum pressures. Install the concrete block and anchors so that joints between the pipe and the fittings are accessible for repair. The bearing area of the concrete reaction block against the ground or the trench bank shall be as shown or as directed by the Engineer in each case. In the event that adequate support against undisturbed ground cannot be obtained, install metal harness anchorages consisting of steel rods or bolts across the joint and securely anchored to the pipe and fittings or other adequate anchorage facilities to provide necessary support. Should the lack of solid vertical excavation face be due to careless or otherwise improper trench excavation, no additional payment will be made for furnishing and installing metal harness anchorage in excess of contract value of concrete blocking replaced by such anchorages.
 2. Provide in locations other than trenches, as shown or directed, reaction blocking, struts, anchorages, or other supports for fittings installed in fills or exposed within structures.
 3. Adequately protect from corrosion steel clamps, rods, bolts, and other metal accessories used in reaction anchorages or joint harness where subject to submergence or contact with earth or other fill material and not encased in concrete. Apply not less than two heavy coats of coal-tar mastic coating material to clean, dry metal surfaces. Allow the first coat to become dry and hard before the second coat is applied.
- B. Substitution. In lieu of reaction anchorages and blocking for underground valves and fittings, use locking-type, push-on or mechanical joints such as Lok-Tyton or Lock-Type mechanical joints as manufactured by United States Pipe and Foundry Company. Equip Lok-Tyton joints with special Lok-Tyton gaskets. Groove the pipe in strict accordance with the manufacturer's recommendations.

3.09 PAINTING

Paint all metal surfaces in accordance with the section 09878 or as directed by the Engineer.

END OF SECTION

1.0 GENERAL

1.01 SCOPE

This work includes furnishing all labor, equipment and materials and performing of all operations required for proper completion, installation and fabrication of all gates, valves, and accessories required to complete the work as shown on drawings and specified herein.

This section provides for furnishing and installing gates and valves for a sewage treatment plant and lift stations. Refer to related work specified in other sections to coordinate the complete installation.

1.02 QUALITY ASSURANCE

Provide highest quality workmanship and materials throughout. Furnish equipment manufactured by a manufacturer with at least five years of experience in the design and building of water and waste treatment equipment.

1.03 MISCELLANEOUS ITEMS

Include all supplementary parts necessary to complete each item even though such work may not be definitely shown or specified.

1.04 STANDARD MANUFACTURED PRODUCTS

Details and specifications, for which standard manufactured products are available, are representative guides for requirements of these items. Standard manufactured products conforming to these general requirements will be acceptable if details of construction and installation are approved by Engineer.

1.05 MEASUREMENTS

Make measurements of previously installed construction before fabrication of connecting work, so that all work will fit properly.

1.06 PROJECT RECORD DOCUMENT

Upon completion of all work, furnish prints and tracings showing location and principal details and modifications of piping systems as built.

1.07 SHOP DRAWINGS

Submit shop drawings, product data, and samples as specified in Division I, General Requirements.

2.0 PRODUCTS

2.01 SLUICE GATES

- A. Gate Frame and Guide: Gate frame and guides shall be cast in one piece and shall be Flat Back. Size of openings shall be as noted on drawings. Back of frame shall be machined to a plane and drilled to mate anchor bolts. Guides shall be cast as an integral part of frame and be sufficiently long to retain at least one-half of vertical height of slide when it is in full opened position. Guides shall be capable of safely withstanding full thrust due to water pressure and wedging action. Guide grooves shall be accurately machined to provide free movement of slide tongues and to insure proper engagement of wedging devices. Pads shall be cast on guides, and machined and drilled for mounting of wedging devices. Assembly bolts shall be stainless steel Type 302 or 304.
- B. Gate Slide: Gate slide shall be cast in one piece with vertical and horizontal ribs, pads for attaching wearing devices, a stem block pocket and a reinforced section around perimeter to provide for mounting of seating faces. Casting shall be of ample section to safely withstand the maximum seating head of 50' and unseating head of 20'. Provide a threaded stem block to attach gate slide to stem; provide with a means of locking it to lowering stem after it is installed. Pads for mounting wedging devices shall be machined and drilled. A groove shall be cut in each pad to receive the mounting tongue on side wedge.
- C. Rising Stem: Gates shall be rising stem, unless otherwise noted.
- D. Seating Faces: All seating faces shall be machined bronze.
- E. Wedging Devices: Provide each gate with sufficient adjustable wedging devices designed to wedge seating faces of slide against those on frame when gate is fully closed, to obtain a practical degree of watertightness. Provide with positive means of locking. Individual parts of each wedging device shall be removable and replaceable without complete disassembly of gate or guide. Equip all gates with side wedging devices for seating head application and side, top and bottom wedges for unseating applications.
- F. Fasteners: All anchor bolts, assembly bolts, screws, nuts, etc., shall be ample section to safely withstand forces created by operation of gate while subjected to maximum head. Provide quantity and size of fasteners recommended by manufacturer. Anchor bolts shall be furnished with two nuts to facilitate installation. Provide full wall depth cast thimbles Type "E" or "F".
- G. Gates: Provide gates of size and model indicated on drawings as manufactured by Waterman, Rodney-Hunt, or preapproved equivalent.

- H. Stem: Stems shall be manufactured from round bar stock. Stem diameter shall be adequate to safely withstand forces created during gate operation under unbalanced heads, with proper thread length for complete opening of gates. Gates shall open with clockwise rotation of stem. The stem shall be designed to transmit in compression a minimum of two times the rated output of the floor stand or bench stand with a 40-pound effort on the crank or handwheel.

Stems may be furnished in more than one piece at manufacturer's option, to facilitate manufacturer and handling during installation. Stem materials shall be Type 304 stainless steel.

- I. Floor Stands: Floor stands or bench stands shall operate the gates under the specified operating head with not greater than a 40-pound pull on the crank or handwheel. Floor stand shall be approximately 36 inches high.
- J. Painting of Floor Stands: Clean surfaces by sandblasting to base metal. Surfaces shall be dry and free of grease before painting. Provide protective coating in accordance with Division 9 - Finishes.

2.02 SLIDE GATE

Furnish and install self-contained fabricated aluminum slide gates as detailed on the plans and described herein, Series 760 as manufactured by Rodney Hunt or preapproved equivalent.

The disc shall be a flat plate suitably reinforced to withstand the required head conditions. The frame shall consist of guide rails along the sides and extending above the wall to support a structural yoke. The frame length and seal gasket will be such to allow inverted operation of the gate as an adjustable weir. The gate will be operated by a stainless steel rising stem attached to the disc and passing through a handwheel-type bench stand mounted on the yoke.

2.03 VALVES

A. Gate Valves:

- 1) Gate valves 1-3/4" and smaller: Provide 125-pound standard (200-pound WOG) bronze, double disc, rising stem gate valves with union hornel and threaded connections, Stockham B-106 or preapproved equivalent.
- 2) Gate valves 2" and larger: Provide flanged ANSI Class 125, right hand close valves in accordance with A WW A C-500-61, Standard for Gate Valve for Ordinary Water Works Service, Mueller A-24S0-6 or preapproved equivalent.

- B. Eccentric Plug Valves: Valves shall be non-lubricated eccentric plug valve with semi-steel body and semi-steel resilient face plug. Above ground valves ten inches and larger shall be worm gear operated. Equip buried valves with

extended waterproof gear operators. Provide DeZurik eccentric Fig. 118 valves with stainless bushings or preapproved equivalent.

- C. Check Valves: Provide iron body, rubber faced disc, external weight and lever, ANSI Class 125 flanged end valves, Mueller Fig. A-2602-6-01, Golden Anderson 250, or preapproved equivalent.
- D. Butterfly Air Control Valves: Provide DeZurik Fig. No.632, W, B, RS66, 2 airtight resilient seat wafer body butterfly valves or preapproved equivalent. Lever operated 4-inch through 12-inch enclosed worm gear operated 14-inch and larger.
- E. Air Check Valves: Provide Technocheck or preapproved equivalent. Valves are to have an aluminum/bronze body and plate with Viton-A seals with 316 stainless steel spring and retaining pin.
- F. Ball Valves: Provide full port bronze ball valves as manufactured by Stockham, Watts or preapproved equivalent. Valves are to have glass reinforced durafill seats, hard chrome plated brass ball and bottom loaded pressure retaining stem. The valves are to have a minimum WOG pressure rating of 400 psi and a minimum operating temperature of 230 degrees C.
- G. Telescoping Valves: Supply telescoping valve assemblies of the size and travel length as indicated on the plans, consisting of a steel rack and pinion crank operator with locking device, mounted in a cast iron floor stand, connected by a steel stem to a seamless brass valve tube of minimum 1/8-inch wall thickness. The valve tube will have two V-notch weirs cut into the top at opposite sides, and will be fitted into the vertical piping with a flange plate guide collar with a neoprene seal. Telescoping valves to be as manufactured by Envirex, Inc. or preapproved equivalent.
- H. Air and Vacuum Release Valves: Provide a sewage air and vacuum release valve as indicated on the plans. The valve shall have a have a minimum of 3/4 inch threaded inlet or alternate size as indicated on the plans. Other accessories include a primary shut-off valve between the inlet and valve body; blow-off valve with a flexible back flushing hose and a quick disconnect coupling with an integral shut-off valve. The air and vacuum valve shall be as manufactured by Apco, Val-Matic, Golden Anderson, or preapproved equivalent.
- I. Backflow Preventer: Provide one anti-syphon, reduced pressure principle, backflow preventer as manufactured by Watts (Series 909), Febco (Series 825Y) or preapproved equivalent. The unit is to have a bronze body with multiple rubber check valves. The check valve seats, shafts and flange bolts are to be 316 stainless steel. The relief valve is to be rubber with 316 stainless steel seats. The minimum valve operating conditions are to be 175 psi and 95 degrees C.

- J. Knife Gate Valve: Provide a 316 stainless steel wafer bodied knife gate valve, Fig. 825, as manufactured by DeZurik or preapproved equivalent. The valve is to have a beveled edge, 316 stainless steel gate with a 316 stainless steel stem and raised 316 stainless steel face seat. Provide a hand wheel actuator unless noted otherwise.
- K. Electric Actuators: Provide electric valve and gate actuators as manufactured by EIM, Limitorque or preapproved equivalent. The actuator shall open and close valves within 30 seconds without strain, binding or motor overload. The motor should be of the extended duty type and shall operate on 120 VAC/60 HZ/ single phase power unless noted otherwise. The enclosure shall be NEMA 4 and have a back shaft operating nut for manual wrench operation. The unit shall have a minimum of two adjustable open and close, SPDT limit switches; additional switches are to be provided as required for proper unit function. When operating as a function of an analog or dc input signal the unit shall have infinite position settings proportional to the input signal. Also, the unit shall be potted for a like output signal indicating valve position.

3.0 EXECUTION

3.01 INSTALLATION

Install all items to be embedded in concrete by template when structure is poured. Oil and grease moving parts. Install all gates, valves, and accessories in accordance with manufacturer's printed instructions, in such manner as to insure a watertight fit, complete and ready for operation. Operate gates and valves through one cycle, i.e., "open, close, open" or "close, open, close" to assure they have been properly lubricated and adjusted. All gates shall be installed to open upward unless otherwise noted.

4.0 PAYMENT

No separate payment will be made for work performed under this section. Include the cost of such work in the bid form and as specified in other sections of this work.

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PIPING INSULATION

1.0 GENERAL

1.01 SUMMARY

This Section includes the furnishing and installation of insulation for water piping, chemical piping, instrument tubing containing water, and piping subject to condensation.

1.02 SUBMITTALS

Submit bulletins and certified data describing material to be used for insulation. Include manufacturer's printed installation instructions.

1.03 DELIVERY, STORAGE, AND HANDLING

All insulation components to be delivered, stored, and handled per manufacturer's printed instructions.

1.04 ACCEPTABLE MANUFACTURERS

A. Insulation

Owens Corning Fiberglass, Knauf Fiber Glass, or Certainteed

B. Exterior Service Weather Jacket

Premetco or Childers Products Co.

2.0 PRODUCTS

2.01 MATERIALS AND/OR EQUIPMENT

A. General: All insulation system components to be asbestos free.

B. Pipe Insulation: Molded heavy density one-piece insulation made from inorganic glass fibers bonded with a thermo-setting resin. Insulation to include an all service jacket (ASJ) with vapor barrier, a self sealing lap (SSL) for longitudinal joint, and similar factory furnished butt joint sealing strip. Minimum insulation thickness to be 1-inch for pipes 2-inch and smaller, 2 inches for lines 2-1/2 inches and larger.

C. Weather Jacket: All exterior insulation to be protected by minimum 0.016-inch thick aluminum jacket with laminated vapor barrier of polyethylene-Kraft paper thermally bonded to the inside surface. Valves, fittings, and flanges to have equal jacketing and moisture barrier protection.

- D. Vapor Barrier Sealant: Non-shrinking permanently flexible vapor barrier sealant, Childers CP-70 or equal.
- E. Strapping: Stainless steel bands, minimum 0.020-inches thick by 3/4-inches wide with 0.034-inch thick wing seals.

3.0 EXECUTION

3.01 GENERAL

- A. Pipes and tubing 4 inches and smaller shall be insulated and jacketed when exposed to outside temperatures. All hot water lines 1/2 inch and larger shall be insulated.
- B. Furnish all accessories required to complete the work.

3.02 INSTALLATION

- A. Install insulation after piping has been installed, tested, and painted. Install in a neat manner, following manufacturer's printed instructions. All fittings and valves shall be carefully insulated and sealed. All joints shall be completely waterproof. Use only workman skilled in this trade.
- B. Pipe Insulation: Butt all joints firmly together and secure self seal lap in accordance with manufacturer's recommendations. Ends of pipe insulation shall be sealed with vapor barrier sealant at all fittings, valves, and intervals not exceeding 21 feet on straight run pipe.
- C. Valves and Fittings: Preformed insulation and fitting covers to be used where possible. Where necessary, segments of pipe insulation to be carefully fitted, secured by 20 gauge corrosion resistant wire, and finished with vapor barrier sealant, so as not to interfere with operation of valve actuator.
- D. Weather Jacket: Piping, valves, and fittings to be protected by preformed aluminum jacketing with vapor barrier installed in accordance with manufacturer's recommendations. All joints shall be made watertight with sealant.
- E. Termination: Insulation to extend 6-inches below finish grade and terminate flush with all walls and slabs. All termination points to be completely waterproof.

END OF SECTION

Advertisement and Invitation to Bid

The City of La Marque will receive bids for the Citywide Lift Station Upgrade Hurricane Harvey Floods HUD Mitigation Competition until (time) on (day and date) at 1111 Bayou Road, La Marque, TX 77568. The bids will be publicly opened and read aloud at (time) on (day and date) at City of La Marque, City Hall, 1111 Bayou Road, La Marque, TX 77568.

Bids are invited for several items and quantities of work as follows:

1. Rehabilitation of Lift Station No. 1 (1810 Bayou Road, La Marque, TX 77568)
2. Rehabilitation of Lift Station No. 15. (6090 FM1765, La Marque, TX 77568)
3. Rehabilitation of Lift Station No. 17. (4318 Delany Road, La Marque, TX 77568)
4. Rehabilitation of Lift Station No. 18. (1111 Volney Street, La Marque, TX 77568)

Bid/Contract Documents, including Drawings and Technical Specifications are on file at City of La Marque, City Hall, 1111 Bayou Road, La Marque, TX 77568.

Copies of the Bid/Contract Documents may be obtained by depositing \$100 with the Engineer, Adico, LLC for each set of documents obtained. The deposit will be refunded if the documents and drawings are returned in good condition within 10 days following the bid opening.

A bid bond in the amount of 5 percent of the bid issued by an acceptable surety shall be submitted with each bid [for those contracts that exceed \$100,000]. A certified check or bank draft payable to the City of La Marque or negotiable U.S. Government Bonds (as par value) may be submitted in lieu of the Bid Bond.

Attention is called to the fact that not less than, the federally determined prevailing (Davis-Bacon and Related Acts) wage rate, as issued by the Texas Department of Agriculture Office of Rural Affairs and contained in the contract documents, must be paid on this project. In addition, the successful bidder must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex, sexual identity, gender identity, or national origin.

The City of La Marque reserves the right to reject any or all bids or to waive any informalities in the bidding.

Bids may be held by City of La Marque for a period not to exceed 90 days from the date of the bid opening for the purpose of reviewing the bids and investigating the bidder's qualifications prior to the contract award.

City of La Marque (Contracting officer), (title) (date)

All contractors/subcontractors that are debarred, suspended or otherwise excluded from or ineligible for participation on federal assistance programs may not undertake any activity in part or in full under this project.

Authority to Use Grant Funds

U.S. Department of Housing and Urban Development Office of Community Planning and Development

To: (name & address of Grant Recipient & name & title of Chief Executive Officer)		Copy To: (name & address of SubRecipient)
Mayor Keith Bell City of La Marque 1111 Bayou Road, La Marque, TX 77568-4160		
We received your Request for Release of Funds and Certification, form HUD-7015.15 on		1/9/2023
Your Request was for HUD/State Identification Number		B-18-DP-48-0002/22-085-003-D223

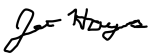
All objections, if received, have been considered. And the minimum waiting period has transpired.
You are hereby authorized to use funds provided to you under the above HUD/State Identification Number.
File this form for proper record keeping, audit, and inspection purposes.

Project Name: City of La Marque Sewer Improvements

Project Location: Lift Station #1 – 29.362789, -94.971741, Lift Station #2 – 29.357184, -94.960890, Lift Station #3 – 29.364330, -94.957514, Lift Station #4 – 29.355182, -94.954394, Lift Station #5 – 29.358225, -94.949082, Lift Station #6 – 29.368034, -94.954682, Lift Station #7 – 29.374782, -94.951026, Lift Station #8 – 29.377703, -94.965922, Lift Station #9 – 29.372158, -94.963979, Lift Station #10 – 29.377864, -94.971807, Lift Station #11 – 29.370856, -94.979574, Lift Station #12 – 29.368433, -94.985473, Lift Station #13 – 29.375112, -94.992798, Lift Station #14 – 29.373092, -94.999583, Lift Station #15 – 29.396146, -95.042138, Lift Station #16 – 29.395053, -95.030871, Lift Station #17 – 29.377042, -95.020914, Lift Station #18 – 29.368401, -95.006256, Lift Station #19 – 29.374513, -95.028605, Lift Station #20 – 29.353957, -94.995434, Lift Station #21 – 29.344225, -94.968940, Wastewater Treatment Plant – Woodland St. Southeast of Mahan Park From the intersection of Lake Rd. and Woodland Street west 692' thence south 738' – 29.349246, -94.982212

Project Description: The City of La Marque proposes to elevate, enclose, and floodproof an existing wastewater treatment plant walls; install and construct additional equipment for the wastewater treatment plant (WWTP) to increase capacity by 2.25 million gallons per day of sewage flow to handle the flows from the lift stations during flooding events and to prevent backups and overflows. In addition, the city will convert and elevate 21 lift stations to self-priming pumps, increase the capacity of the lift stations to keep up with I/I and eliminate the backing up of wastewater into residences and eliminate the overflow into City ditches; install emergency backup pumps to operate during times of power outages, and complete all associated appurtenances. Ground disturbance for each lift station will not exceed 1-foot below ground surface (bgs) and will have an approximate area of 150 sqft. Ground disturbance for the WWTP improvements will have an approximate maximum depth of 20-feet and an area of approximately 1.75 acres. This project does not involve acquisition

CDBG-MIT Funds: \$48,904,004

Typed Name of Authorizing Officer	Signature of Authorizing Officer	Date (mm/dd/yyyy)
Jet Hays	X 	1/25/2023
Title of Authorizing Officer		
Senior Deputy Director		