

Fort Bend County Levee Improvement District No. 2

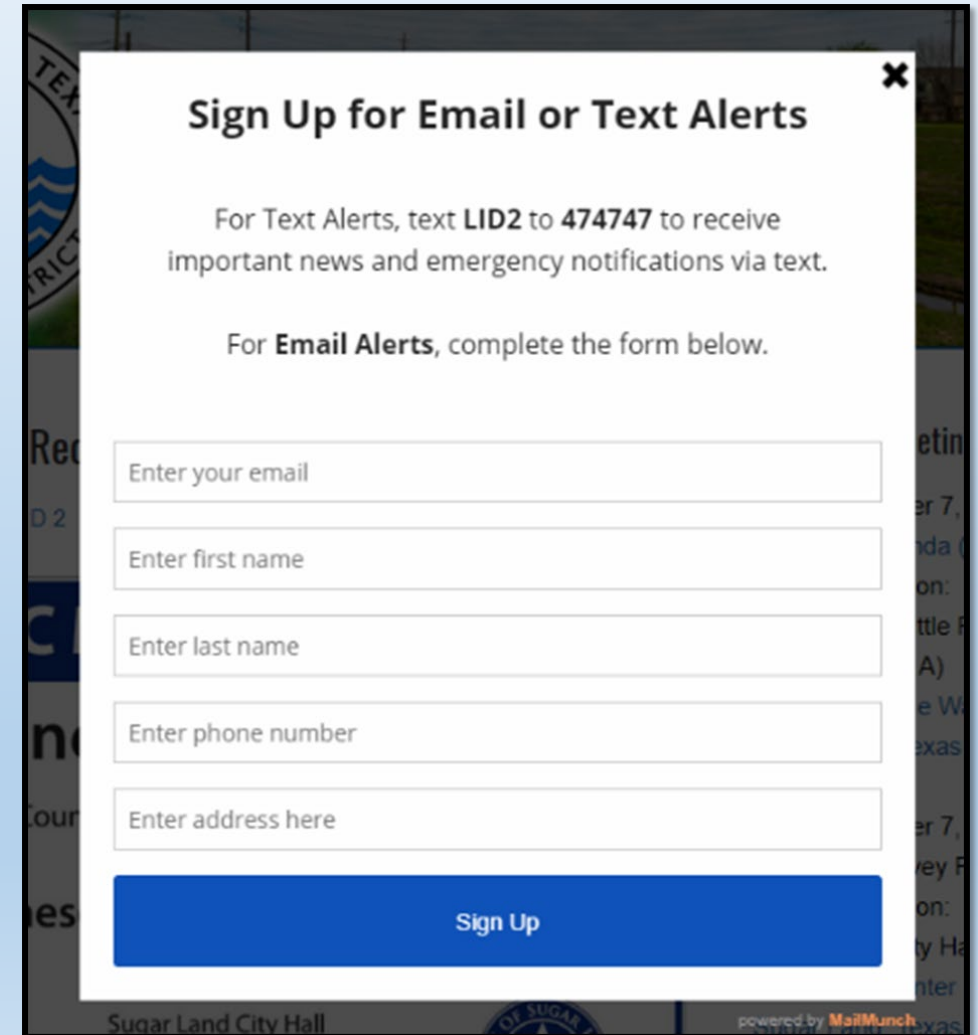


Austin Meadows Neighborhood Meeting
Third Pump Station Construction
Wednesday, June 5, 2019

Fort Bend County Levee Improvement District No. 2

Sign up for Email and
Text Alerts

Visit: www.fbclid2.com

A screenshot of a web form titled "Sign Up for Email or Text Alerts". The form is white with a black border and a close button (X) in the top right corner. It contains instructions for text alerts and a form for email alerts. The form fields are: "Enter your email", "Enter first name", "Enter last name", "Enter phone number", and "Enter address here". A blue "Sign Up" button is at the bottom. The background shows a blurred image of a levee and a city hall sign.

Sign Up for Email or Text Alerts

For Text Alerts, text **LID2** to **474747** to receive important news and emergency notifications via text.

For **Email Alerts**, complete the form below.

Enter your email

Enter first name

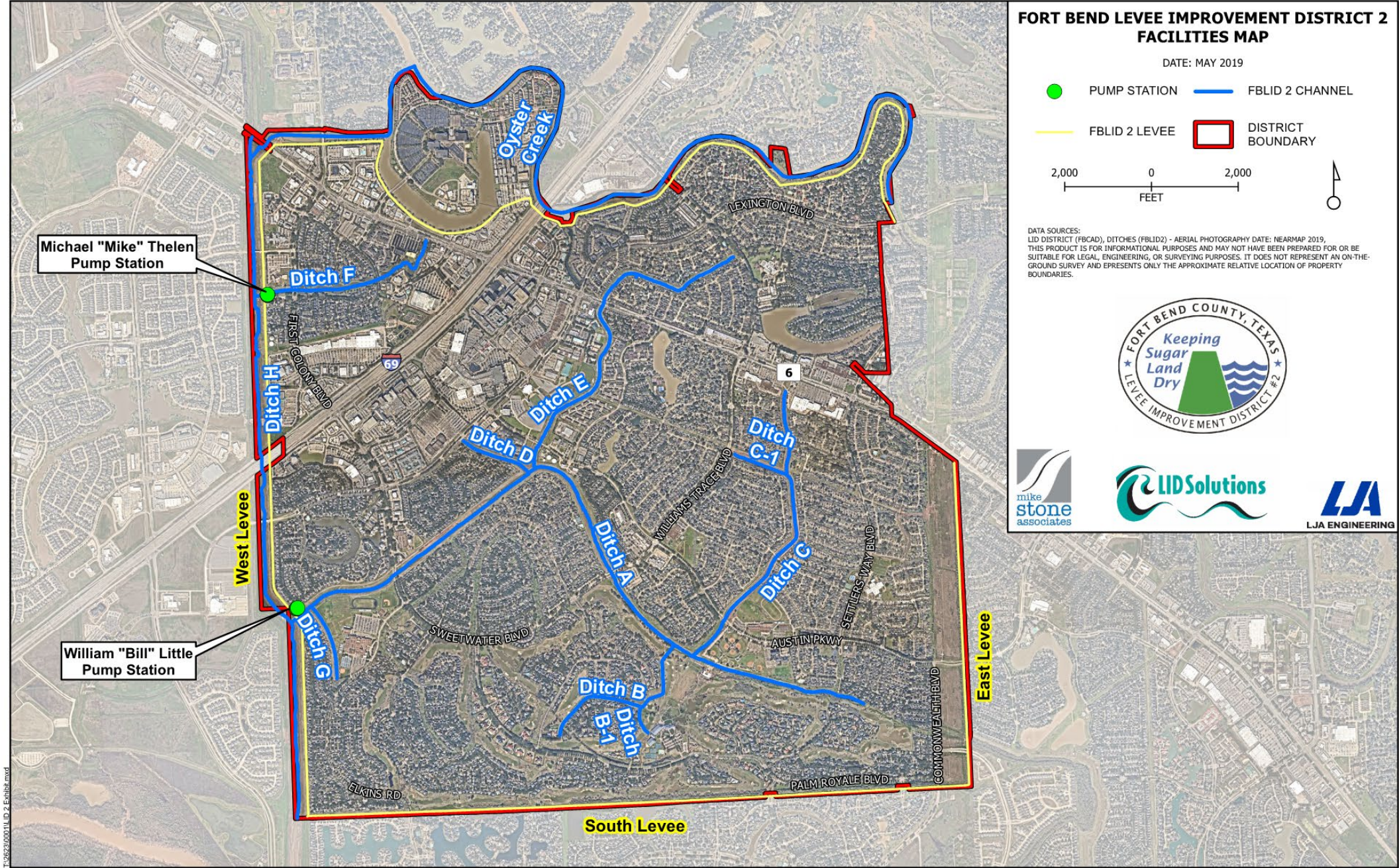
Enter last name

Enter phone number

Enter address here

Sign Up

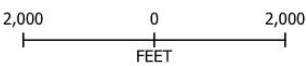
Sugar Land City Hall powered by MailMunch



**FORT BEND LEVEE IMPROVEMENT DISTRICT 2
FACILITIES MAP**

DATE: MAY 2019

- PUMP STATION
- FBLID 2 CHANNEL
- FBLID 2 LEVEE
- DISTRICT BOUNDARY



DATA SOURCES:
LID DISTRICT (FBCAD), DITCHES (FBLID2) - AERIAL PHOTOGRAPHY DATE: NEARMAP 2019,
THIS PRODUCT IS FOR INFORMATIONAL PURPOSES AND MAY NOT HAVE BEEN PREPARED FOR OR BE
SUITABLE FOR LEGAL, ENGINEERING, OR SURVEYING PURPOSES. IT DOES NOT REPRESENT AN ON-THE-
GROUND SURVEY AND EPRESENTS ONLY THE APPROXIMATE RELATIVE LOCATION OF PROPERTY
BOUNDARIES.



FBCLID 2 Normal Operations

UNPROTECTED AREA OUTSIDE FBCLID2 LEVEL

PROTECTED AREA INSIDE FBCLID2 LEVEL

Levee Top = 80 feet
(~62' Brazos River Gage)

Levee Toe = 70 feet
(~51' Brazos River Gage)

Levee

Pump Stations
OFF

Pump Outfall

Flood Gate
OPEN

Gravity Outfall

Ditch "A"
(Drainage Channel)

Lowest
Streets
= 63'

Lowest
Homes
= 65.8'

Storm Sewer

Ditch "H"
(To Brazos River)

Brazos River Gage: <https://water.weather.gov/ahps2/hydrograph.php?wfo=HGX&gage=RMOT2>

FBCLID 2 Gages: <https://www.harriscountyfws.org/?regionId=10®ionId=4>

All elevations reference NAVD88, 2001 adj. Drawing not to scale.



WWW.FBCLID2.COM

FBCLID 2 Emergency Operations

UNPROTECTED AREA OUTSIDE FBCLID2 LEVEL

PROTECTED AREA INSIDE FBCLID2 LEVEL

Record Water Level Outside Levee
72 feet (55.2' Brazos River Gage)
Aug. 31, 2017

7.7 feet
freeboard

Levee

Pump Stations ON
330,000 GPM

Record Water Level
Inside Levee
66.4 feet
Aug. 29, 2017

2 feet water on levee

Pump Outfall

Flood Gate
CLOSED

Gravity Outfall

Ditch "H"
(To Brazos River)

Lowest
Streets
= 63'

Lowest
Homes
= 65.8'

Storm Sewer

Ditch "A"
(Drainage Channel)

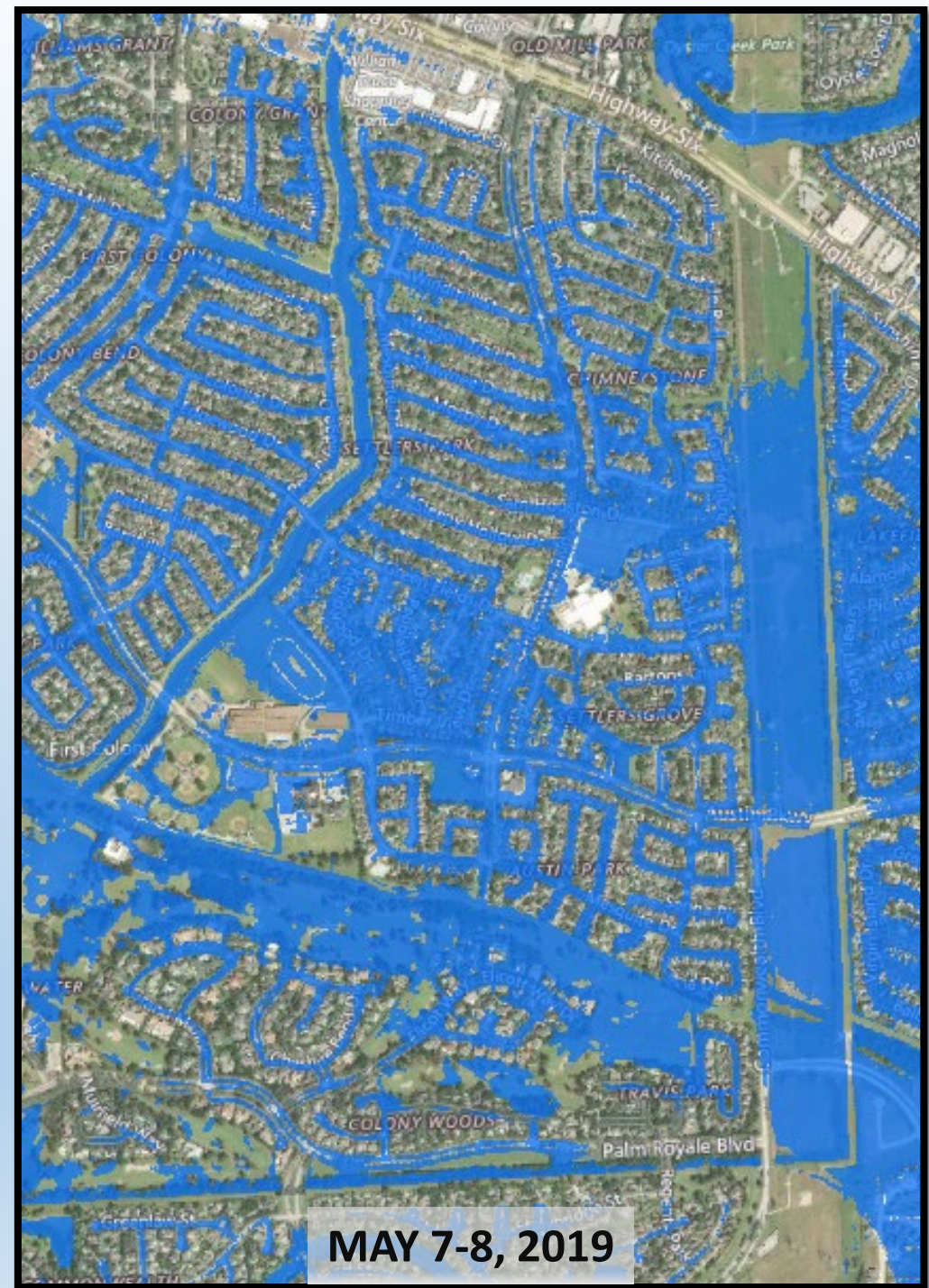
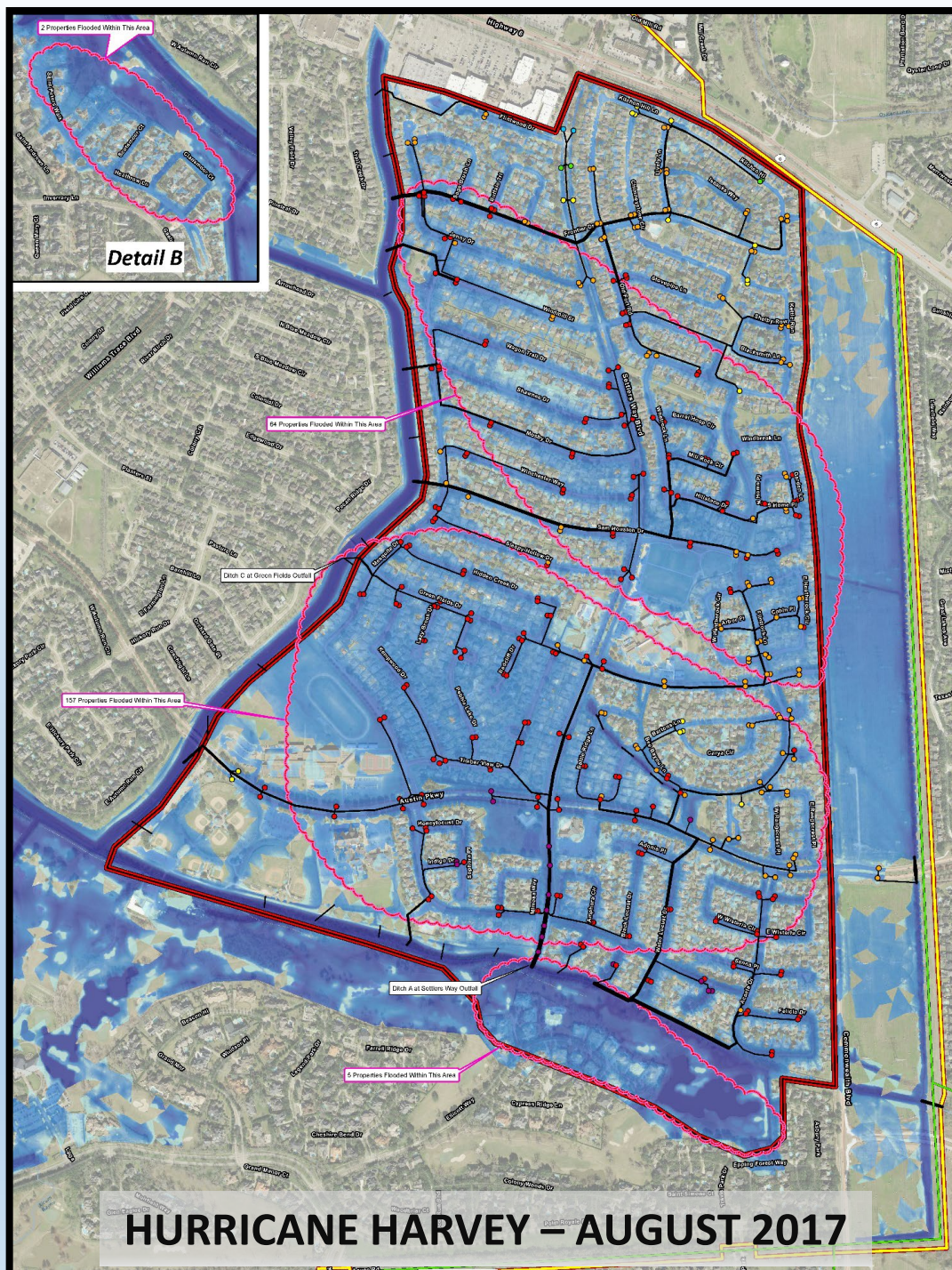


WWW.FBCLID2.COM

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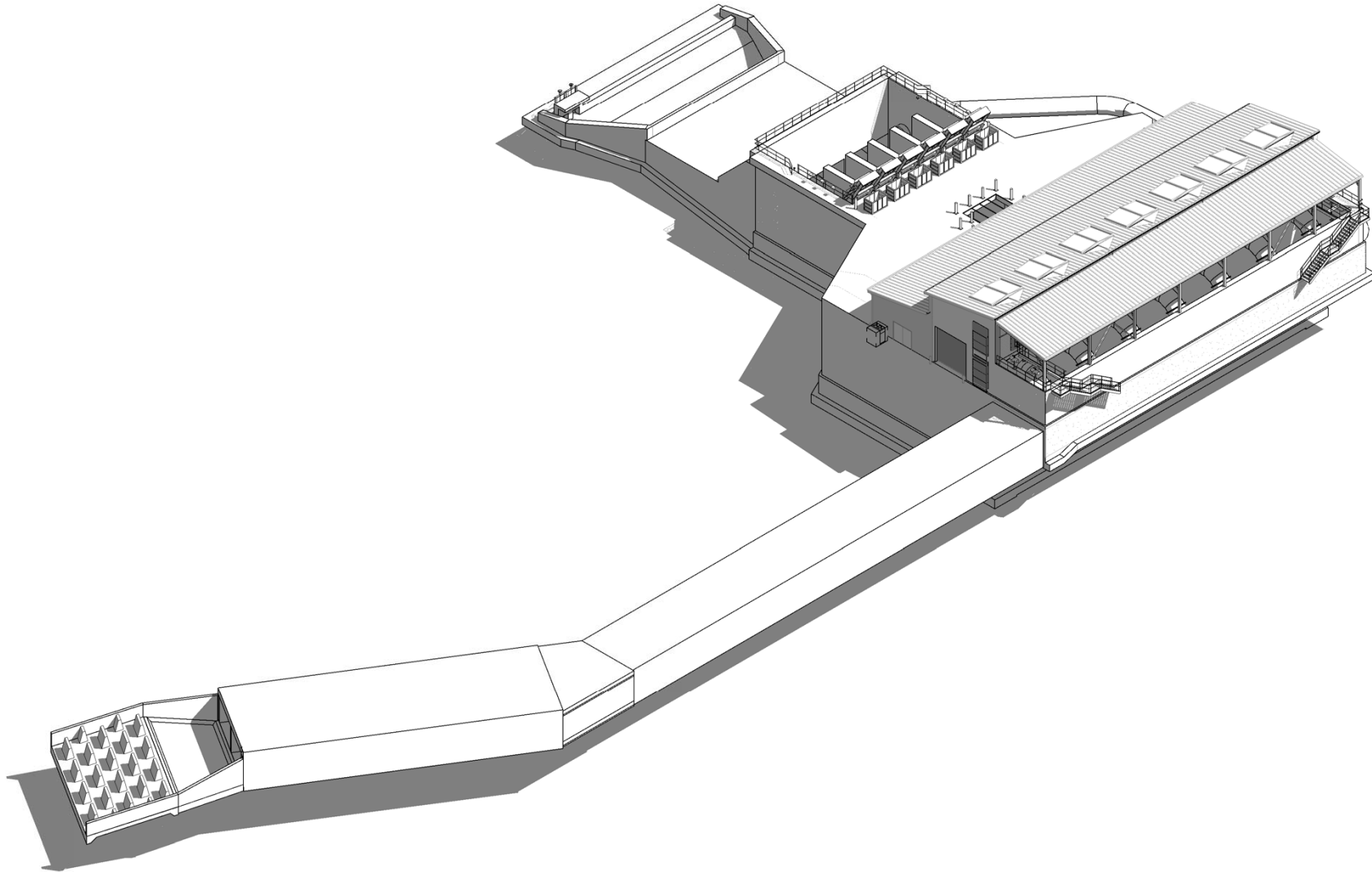


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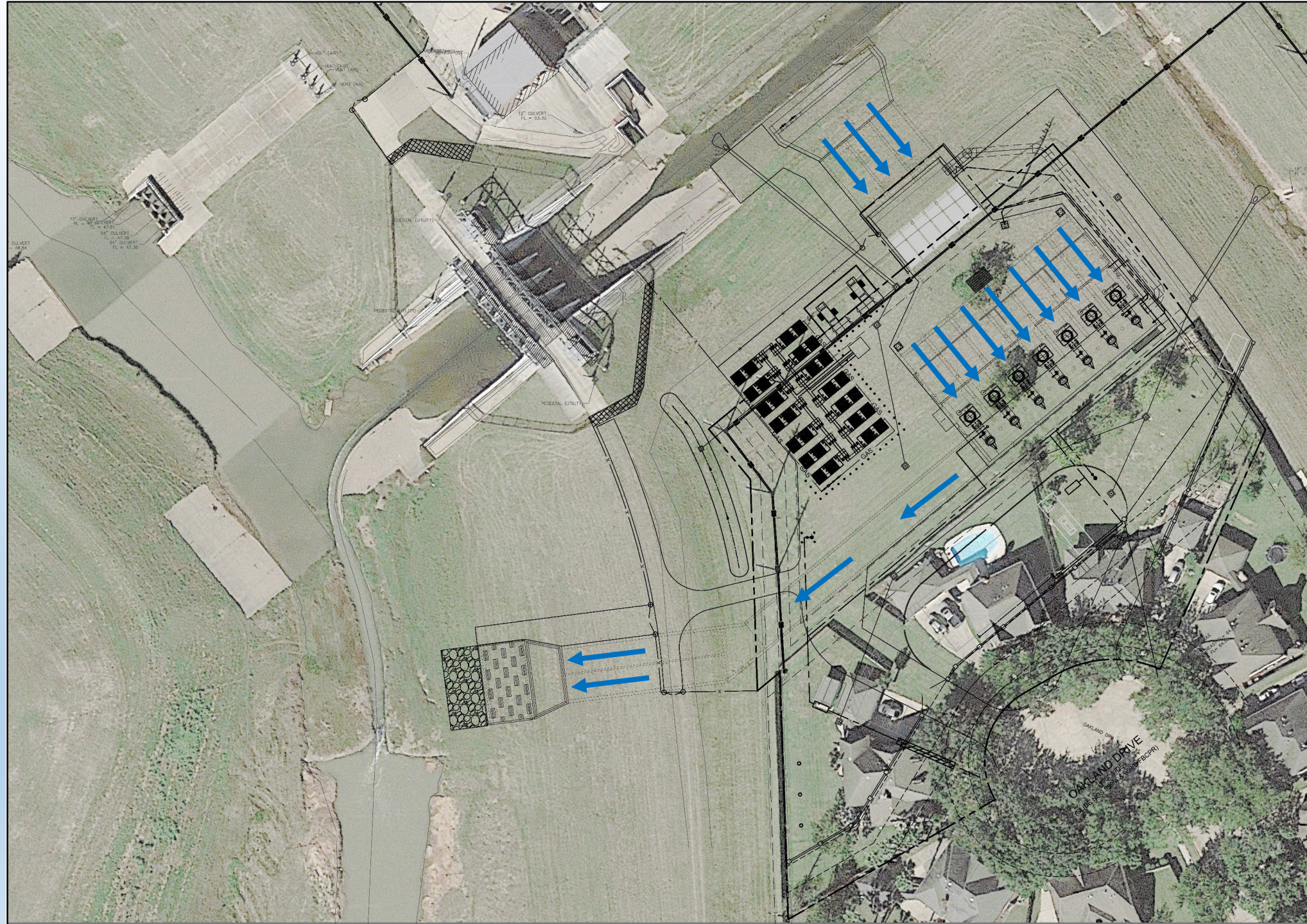
Water Levels Inside the Levee: Hurricane Harvey & May 2019

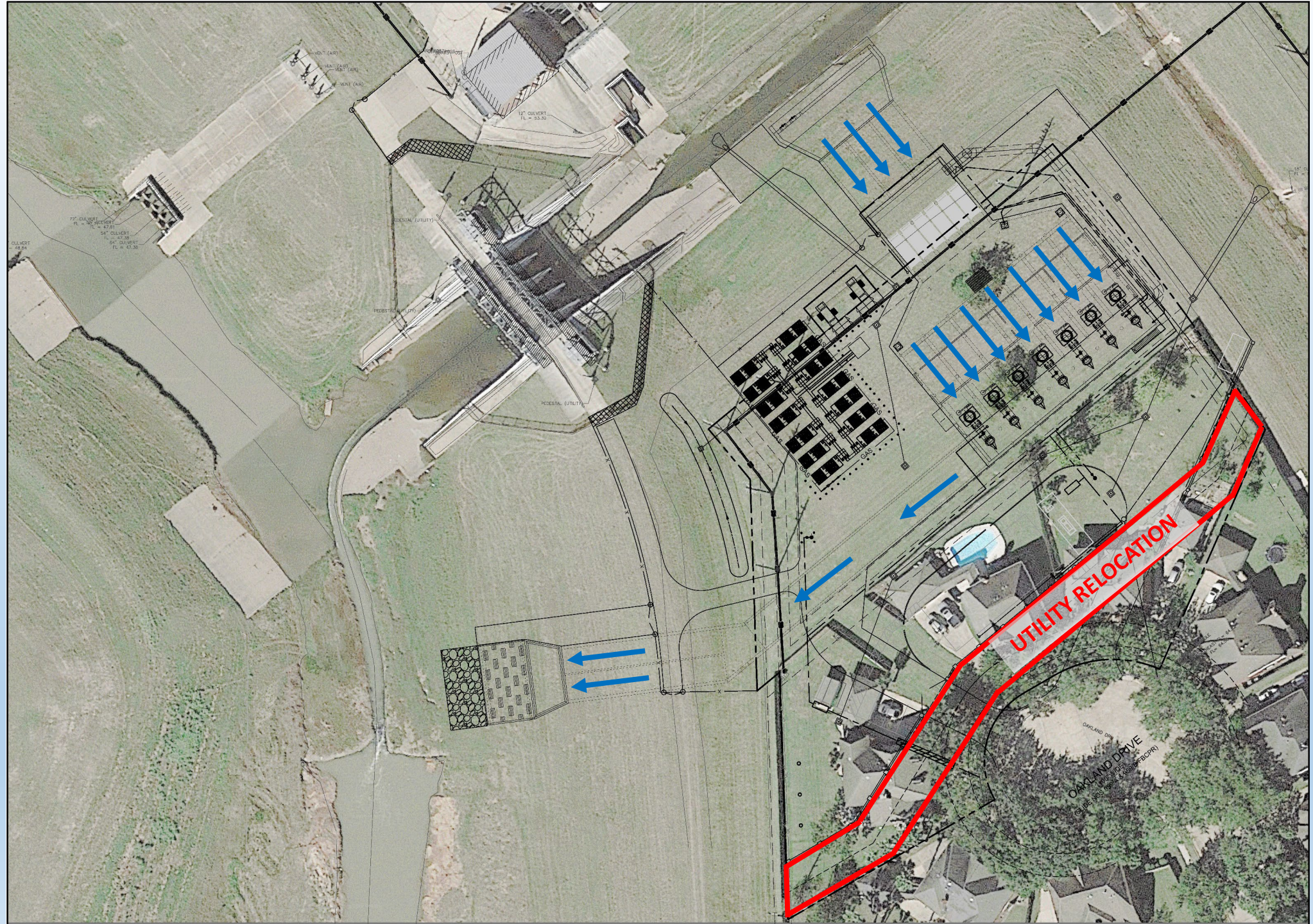


Timing of the Hurricane Harvey event was adjusted to allow for comparison.



FBCLID 2 Third Pump Station







Third Pump Station - Pump Building



Third Pump Station – Administration/Operations Building



Third Pump Station – View from Oakland Drive cul-de-sac

Construction Schedule

- March 2019
 - Approved order for 7 pumps and motors
- August 2019
 - Install security fence
 - Remove 3 existing homes
 - Begin utility relocations
- October 2019
 - Major construction expected to begin
- Spring 2021
 - Construction Complete & New Pump Station Operating

Construction Expectations

- Demolition of existing homesites
- Deep excavation (40+ feet) required to construct pump intake
- Deep excavation will require installation of shoring
- Several large concrete pours requiring continuous delivery
- Large cranes will be delivered and assembled on site
- Pump delivery will require multiple trucks for each pump
- General work hours:
 - 7:00 am to 7:00 pm
 - Monday - Saturday

Neighborhood Concerns

- Construction Traffic & Parking
 - Temporary Road or Alternate Route
 - On-site parking for contractor employees
 - Large vehicles on Oakland Drive: Concrete trucks, dump trucks, material delivery
- Street cleaning & sweeping
 - Daily cleaning of streets required for all construction contracts
- Safety & Security
 - Temporary: Security fencing and cameras will be installed when construction begins.
 - Permanent: Brick wall will be installed in front of facility at end of cul-de-sac.

Neighborhood Concerns

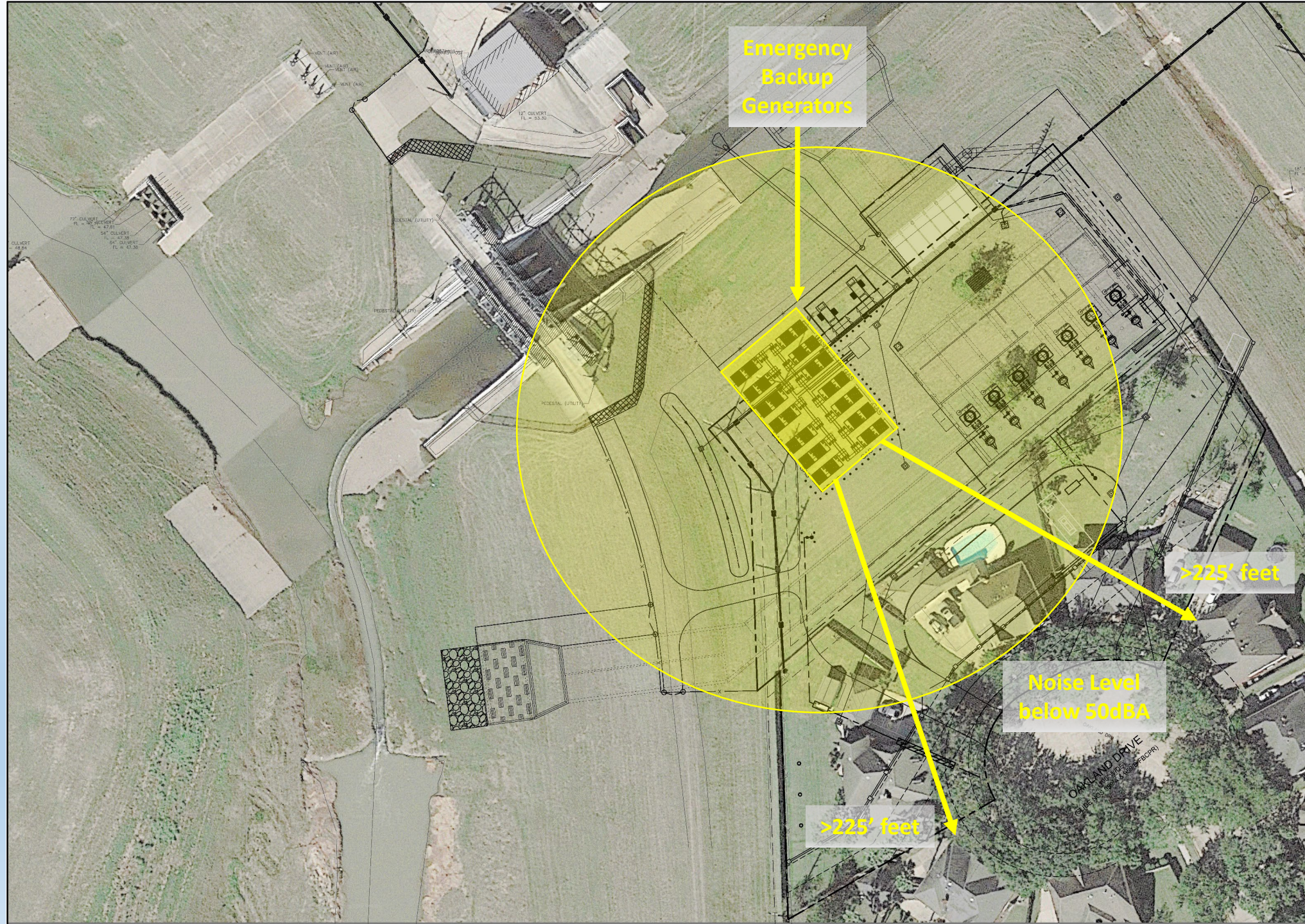
- Property Values
 - FBCLID 2 currently protects over \$5 billion in assessed taxable value.
 - Protecting all property values is highest priority for FBCLID 2 Board of Directors.
 - Pump Station buildings and fences designed to resemble neighborhoods homes and other buildings in FBCLID 2
 - Red brick building
 - Standing seam metal roof
 - Architectural features added to pump building
 - Landscaping and street trees in front of pump station
 - Improved flood protection will benefit all residents and maintain property values

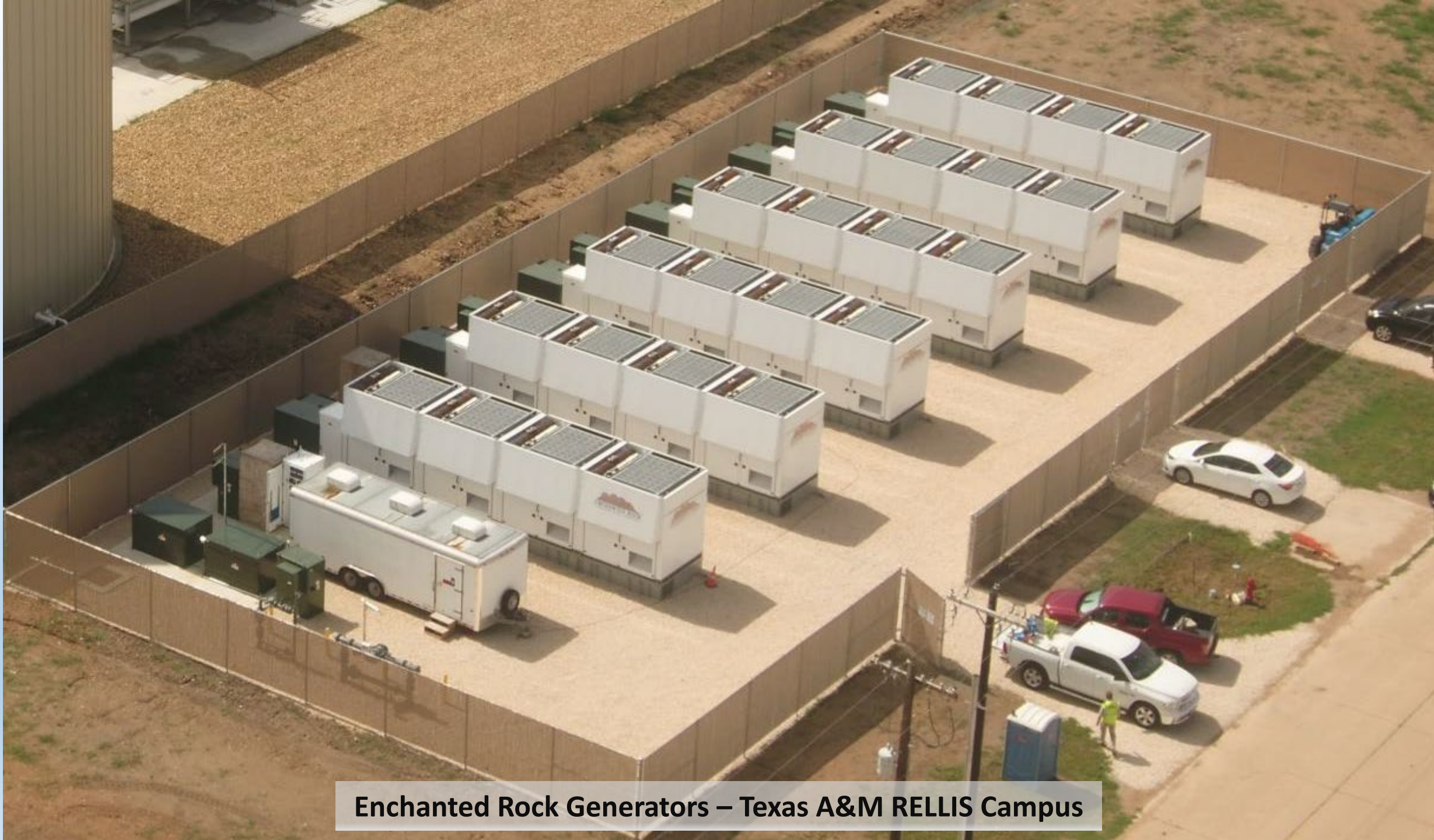


Mike Thelen Pump Station

Neighborhood Concerns

- Backup Power Generation
- Enchanted Rock
 - Provide backup power as a service to FBCLID 2
 - Reduces capital cost by \$6-7 million
 - No Maintenance cost to FBCLID 2
 - Enchanted Rock will operate generators to sell power back to grid
 - Site visit to Texas A&M RELLIS Campus
 - Generator system will operate <5% of available time to sell power to the grid
 - Estimated at 200 hours per year.
 - Over last 8 years comparable units operated 2.2% of the time
 - Enchanted Rock's smaller generators are substantially quieter than larger generators at existing pump station





Enchanted Rock Generators – Texas A&M RELLIS Campus

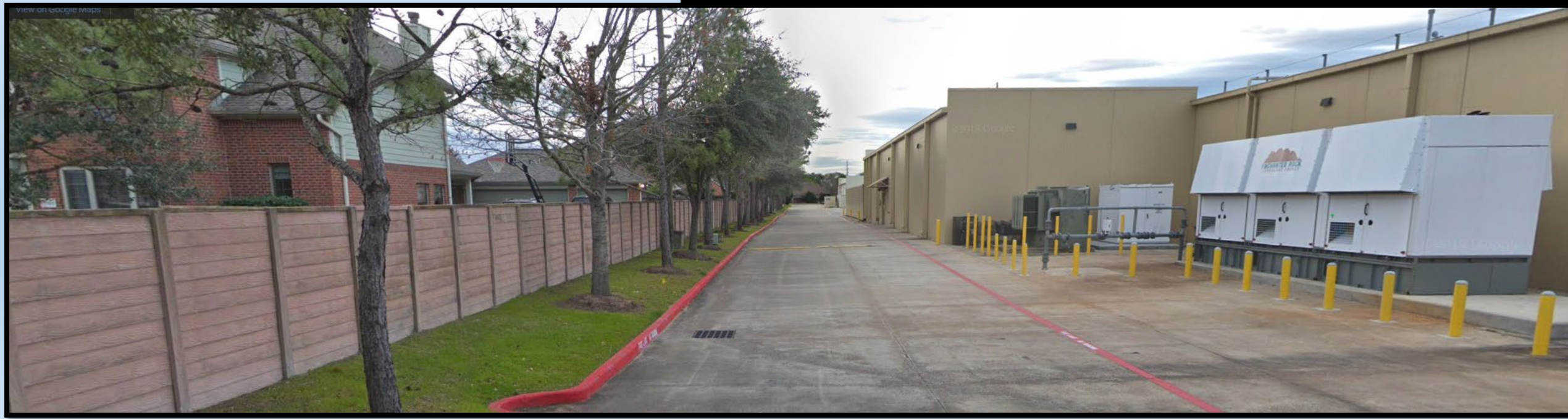
Sample Noise Levels (dBA)

At distances beyond 150 feet, generators will be at or below ambient sound and not audible. Items closer to homes will be heard over generators: air conditioners, pool pumps, traffic, lawn mowers.

Noise Source	Decibel Level	Decibel Effect
Jet take-off (at 25 meters)	150	Eardrum rupture
Aircraft carrier deck	140	
Military jet aircraft take-off from aircraft carrier with afterburner at 50 ft (130 dB).	130	
Thunderclap, chain saw. Oxygen torch (121 dB).	120	Painful. 32 times as loud as 70 dB.
Steel mill, auto horn at 1 meter. Turbo-fan aircraft at takeoff power at 200 ft (118 dB). Riveting machine (110 dB); live rock music (108 - 114 dB).	110	Average human pain threshold. 16 times as loud as 70 dB.
Jet take-off (at 305 meters), use of outboard motor, power lawn mower, motorcycle, farm tractor, jackhammer, garbage truck. Boeing 707 or DC-8 aircraft at one nautical mile (6080 ft) before landing (106 dB); jet flyover at 1000 feet (103 dB); Bell J-2A helicopter at 100 ft (100 dB).	100	8 times as loud as 70 dB. Serious damage possible in 8 hr exposure.
Boeing 737 or DC-9 aircraft at one nautical mile (6080 ft) before landing (97 dB); power mower (96 dB); motorcycle at 25 ft (90 dB). Newspaper press (97 dB).	90	4 times as loud as 70 dB. Likely damage in 8 hour exposure.
Garbage disposal, dishwasher, average factory, freight train (at 15 meters). Car wash at 20 ft (89 dB); propeller plane flyover at 1000 ft (88 dB); diesel truck 40 mph at 50 ft (84 dB); diesel train at 45 mph at 100 ft (83 dB). Food blender (88 dB); milling machine (85 dB); garbage disposal (80 dB).	80	2 times as loud as 70 dB. Possible damage in 8 hour exposure.
Passenger car at 65 mph at 25 ft (77 dB); freeway at 50 ft from pavement edge 10 a.m. (76 dB). Living room music (76 dB); radio or TV-audio, vacuum cleaner (70 dB).	70	Arbitrary base of comparison. Upper 70s are annoyingly loud to some people.
Conversation in restaurant, office, background music, Air conditioning unit at 100 feet.	60	Half as loud as 70 dB. Fairly quiet.
Quiet suburb, conversation at home. Large electrical transformers at 100 feet.	50	One-fourth as loud as 70 dB.
Library, bird calls (44 dB); lowest limit of urban ambient sound	40	One-eighth as loud as 70 dB.
Quiet rural area.	30	One-sixteenth as loud as 70 dB. Very Quiet.
Whisper, rustling leaves	20	
Breathing	10	Barely audible

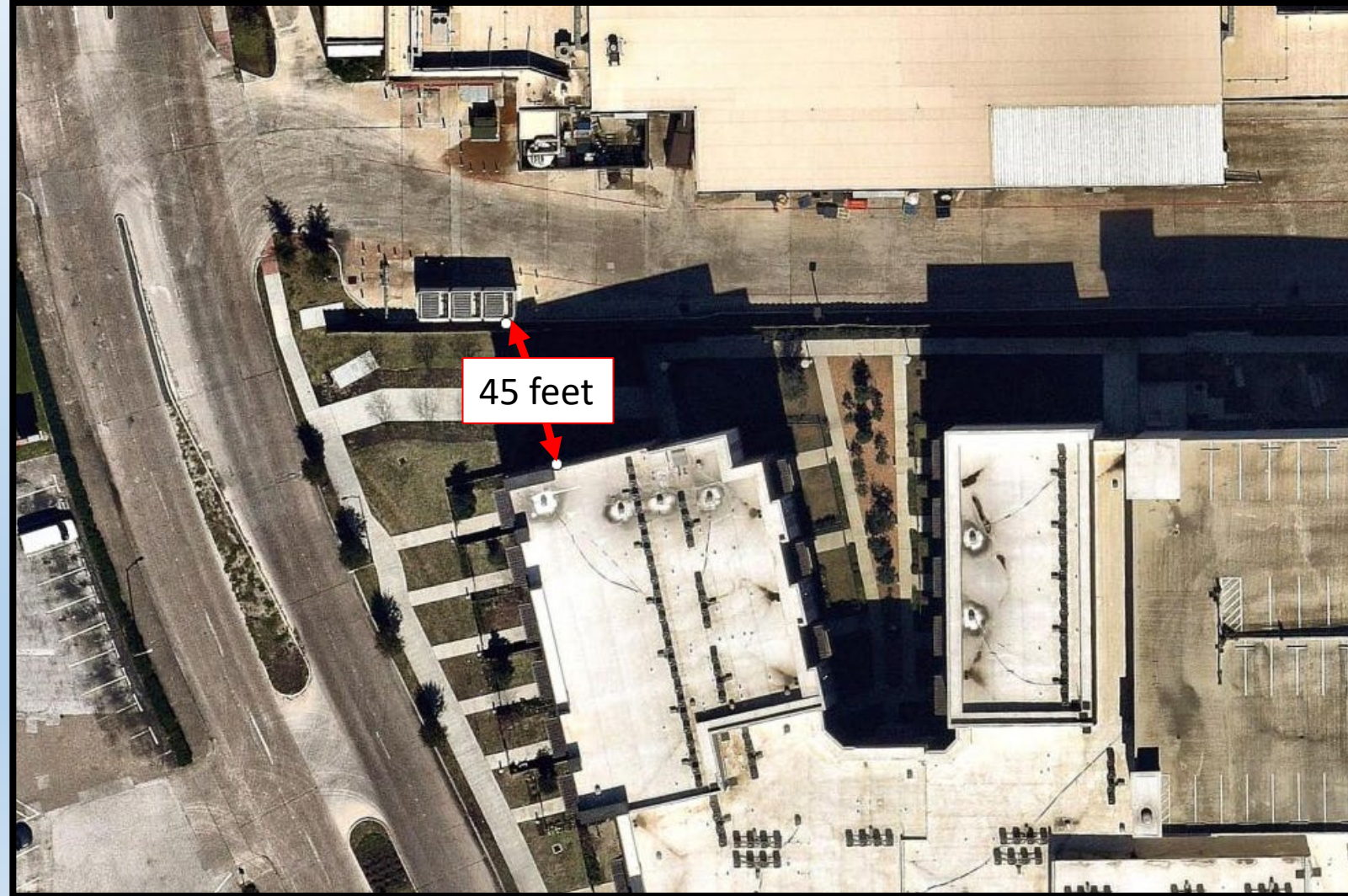
Enchanted Rock Generator Installation

80 feet from homes



Enchanted Rock Generator Installation

45 feet from apartments



Questions?

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www.fbclid2.com

