Document 00910

ADDENDUM NO. 4

Date of Addendum: 8-5-14

PROJECT NAME: **Remediation, Removal and Installation of Underground Storage Tanks at Fire Station No.19 and Fire Station No. 44.**

PROJECT NO: WBS Nos. C-000170-0025-4, C-000170-0027-4

BID DATE: **August 28, 2014**

FROM: City of Houston, General Services Department
900 Bagby, 2nd Floor, City Hall Annex
Houston, Texas 77002
Attn: Farooq Kirmani, P.G., Project Manager

TO: Prospective Bidders

This Addendum forms a part of the Bidding Documents and will be incorporated into the Contract, as applicable. Insofar as the original Project Manual and Drawings are inconsistent, this Addendum governs.

CHANGE IN BID DATE

The Bid Date for this Project is changed from **August 14, 2014 to August 28, 2014.** Time of day and place for submittal of bid remains the same.

SPECIFICATIONS:

1. **Section 33 56 16,** Underground Storage Tank Removal and Installation Specifications– Fire Station No. 19 and Fire Station No. 44

   Add Leak Detection: Display and printer units for leak detection system will be installed in the Apparatus Bay instead of the Watch Office. A WHITE switch and stainless steel plate engraved "gasoline" and a GREEN switch with stainless steel plate engraved "diesel" to control the submersible pumps in each tank compartments will be installed in the apparatus bay.

CHANGES TO DRAWINGS

2. **Fire Station No. 19:**
   - Delete Drawing No. 1- Cover Sheet and replace with attached revised Drawing No. 1.
   - Delete Drawing No. 3 – Proposed Site Plan and replace with attached revised Drawing No. 3.

- Delete Drawing No. 10- Electrical Load Analysis Panel/L2 and replace with attached revised Drawing No. 10.
- Delete Drawing No. 11- Electrical Load Analysis Panel/E2 and replace with attached revised Drawing No. 11.
- Add Drawing No. 12 – Electrical One-Line Diagram.

3. **Fire Station No. 44:**
   - Delete Drawing No. 1- Cover Sheet and replace with attached revised Drawing No. 1.
   - Delete Drawing No. 3 – Proposed Site Plan and replace with attached revised Drawing No. 3.
   - Delete Drawing No. 10- Electrical Load Analysis Panel/E and replace with attached revised Drawing No. 10.
   - Add Drawing No. 11 – Electrical One-Line Diagram.

END OF ADDENDUM NO. 4

(CRC:) _____ DATED: 8-5-14

Humberto Bautista, P.E.
Assistant Director
General Services Department

END OF DOCUMENT

CONSTRUCTION DRAWINGS OF:

UNDERGROUND STORAGE TANK INSTALLATION

HOUSTON FIRE DEPARTMENT
FIRE STATION 19
1801 GREGG STREET
HOUSTON, TEXAS 77020
FACILITY ID NO. 33405

PREPARED FOR:

HOUSTON FIRE DEPARTMENT
C/O CITY OF HOUSTON GENERAL SERVICES DEPARTMENT
P.O. BOX 1562
HOUSTON, TEXAS 77251-1562

DRAWING NUMBER	TITLE
1	COVER SHEET
2	EXISTING SITE PLAN
3	PROPOSED SITE PLAN
4	PIPING PLAN
5	UST PLAN AND PROFILE
6	DISPENSER PLAN AND PROFILE
7	PIPING AND TRENCHING DETAIL
8	UST AND DISPENSER ELECTRICAL CLASSIFICATION
9	ELECTRICAL WIRING PLAN
10	ELECTRICAL LOAD ANALYSIS - PANELA/L2
11	ELECTRICAL LOAD ANALYSIS - PANELB/E2
12	ELECTRICAL ONE-LINE DIAGRAM

ADDENDUM NO. 4
08-05-2014

STATE OF TEXAS
PAUL MICHAEL SCHULTZ
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REGISTERED PROFESSIONAL ENGINEER
8/11/14

ska
SKA CONSULTING, L.P.
1515 WITTE ROAD, SUITE 150
HOUSTON TEXAS 77080
Texas Registered Engineering Firm F-005009
Texas Registered Geoscience Firm 50011

COVER SHEET

UNDERGROUND STORAGE TANK INSTALLATION
CITY OF HOUSTON FIRE STATION 19
1801GREGG STREET
HOUSTON, HARRIS COUNTY, TEXAS
FACILITY ID NO. 33405

REVISIONS		DATE
5	FIFTH_REVISION	-
4	FOURTH_REVISION	-
3	THIRD_REVISION	-
2	SECOND_REVISION	-
1	FIRST_REVISION	-

DESIGNED BY: CS
DRAWN BY: WPS
CHECKED BY: PMS
DATE: JULY 2014
SCALE: AS SHOWN

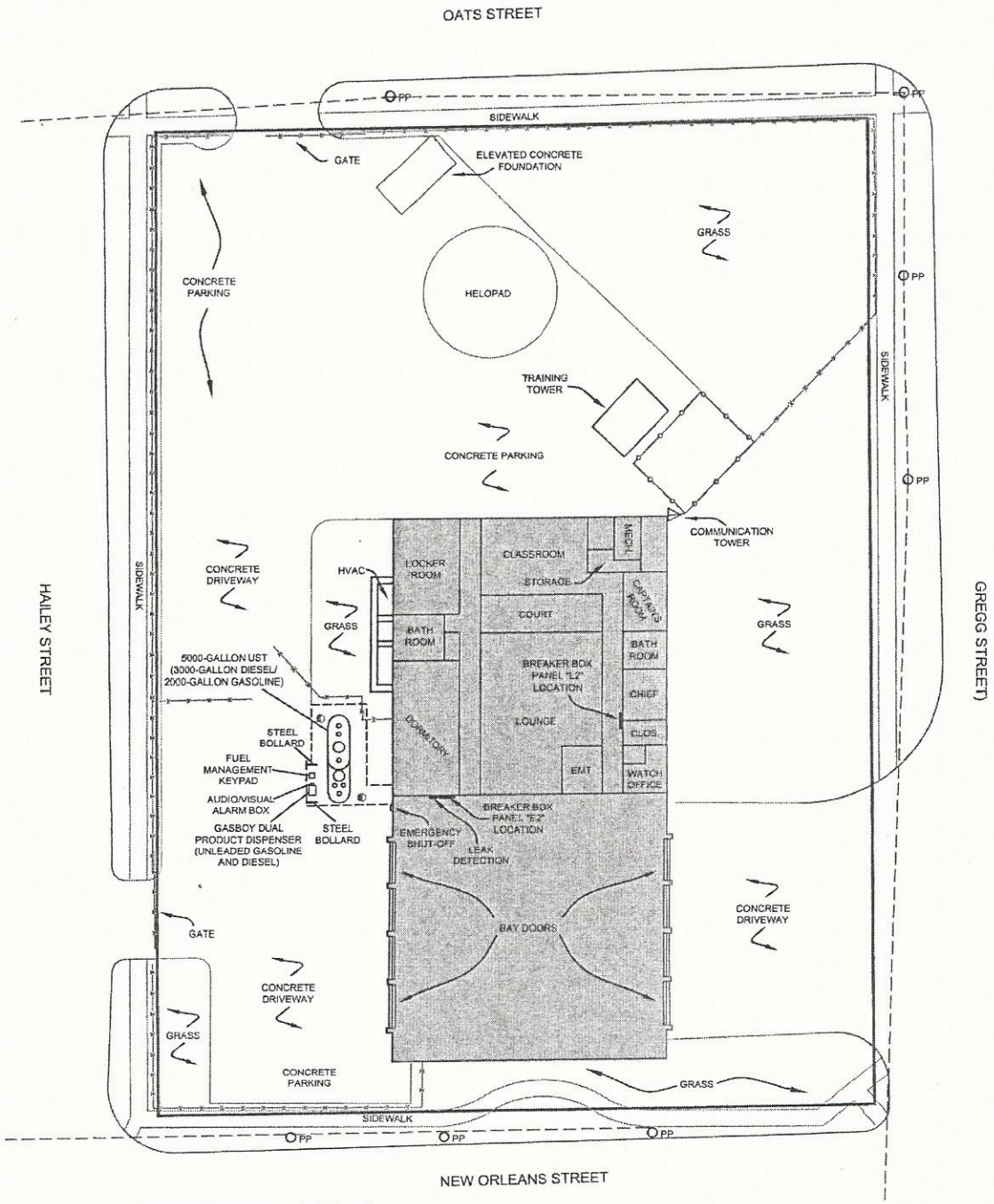
APPROVED: DATE:
CITY OF HOUSTON

PROJECT NO. 5008-0020

DRAWING NO. 1

SHEET NO. 1 OF 11

FILE INFO: G:\2008\5008-0005\Dwg\FS19\fig1.dwg statfarwp NO XREFS ATTACHED



ADDENDUM NO. 4
08-05-2014

LEGEND

- SUBJECT PROPERTY BOUNDARY
- EXISTING ON-SITE BUILDING
- LOT BOUNDARY
- CHAIN-LINK FENCE
- WOODEN-FENCE
- OVERHEAD ELECTRICAL POWER LINE
- PP POWER POLE
- OBSERVATION WELL

0 10 20 30 60
APPROXIMATE SCALE: 1"=30'

NOTE: THE EXISTING DRAINAGE PATTERN WILL BE MAINTAINED DURING PAVEMENT RESTORATION.

STATE OF TEXAS
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PROPOSED SITE PLAN

UNDERGROUND STORAGE TANK INSTALLATION
CITY OF HOUSTON FIRE STATION 19
1801 GREGG STREET
HOUSTON, HARRIS COUNTY, TEXAS
FACILITY ID NO. 33405

REVISIONS		DATE
5 FIFTH_REVISION	-	
4 FOURTH_REVISION	-	
3 THIRD_REVISION	-	
2 SECOND_REVISION	-	
1 FIRST_REVISION	-	

DESIGNED BY: CS
DRAWN BY: WPG
CHECKED BY: PMS
DATE: AUGUST 2014
SCALE: AS SHOWN

APPROVED DATE:
CITY OF HOUSTON

PROJECT NO 5008-0020

DRAWING NO. 3

SHEET NO 3 of 11

FILE INFO: G:\2014\12014-0001\DWG\FS19\fig3.dwg steffenwp NO XREFS ATTACHED

(EXISTING) PANEL "L2"

Service: 120/240V, GE Type "NLAB Panelboard, 225A, 42 circuits, 1Φ, 3 wire, 22,000 AIC Short Circuit Rating

Load Description (A Phase)	Circuit No.	Breaker Pole	Breaker Amps	Breaker Pole	Breaker Amps	Circuit No.	Load Description (C Phase)
Lights	1	1	20	1	20	2	Lights
Lights	3	1	20	1	20	4	Lights
Lights	5	1	20	1	20	6	Lights
Lights	7	1	20	1	20	8	Lights
Lights	9	1	20	1	20	10	Lights
Contr. Holding	11	1	20	1	20	12	Refrigerators
Station Radio and Fire	13	1	20	1	20	14	Refrigerators
Timer and Relax	15	1	20	1	20	16	Tele Term Bd.
Satelite Rec	17	1	20	1	20	18	UHF Radio
Microwave	19	1	20	1	20	20	Door Motor
Door Motor	21	1	20	1	20	22	Door Motor
Door Motor	23	1	20	1	20	24	Exh. Fan and Recepts.
AHU	25	1	20	1	20	26	AHU
AHU	27	1	20	1	20	28	AHU
Spare	29	2	20	2	100	24	Panel "E2"
Spare	31					26	Switched Neutral
Lights	33	1	20	1	20	34	Spot and Aviation Lights Tower
Lights	35	1	20	1	20	36	Unit Heater
Recept.	37	1	20	1	20	38	Unit Heater
Oven	39	1	20	1	20	40	Pollert System
Oven	41	1	20	1	20	42	Spare

SHORT CIRCUIT CURRENTS

1. PANEL-E2 SHORT CIRCUIT POWER
= kVA / 0.2
= 4.5 KVA / 0.2
= 22.7kVA

2. PANEL EP-E SHORT CIRCUIT POWER
=kVA ALL LOADS / 0.2

= 54.8 kVA / 0.2
= 274.2 kVA

3. FAULT CURRENT AT PANEL EP-E
= kVA / (V / 1000)
= (274.2 kVA + 22.7 kVA) / (240 /1000)
= 1237.1 A

ELECTRICAL LOAD ANALYSIS FOR NEW WORK ON PANEL "L2"

Item Description	Quantity	Voltage	Phase Current A (amps)	Phase Current C (amps)	Phase Current Neutral (amps)	Breaker Size (amps)	Wire Size	Conduit
Panel "E2"	1	240	16.0	14.0	4.0	100 (double pole)	3-#2 awg. 1-#2 awg grd	1"
Sum of New Amp Loads			16.0	14.0	4.0			
25% of Largest New Amp Load			4.0	3.5	1.0			
Current Amp Load			57.4	35.6	93.0			
Removed Amp Load			7.2	7.2	0.0			
Total Amp Load			77.4	53.1	98.0			
Max KVA of all loads			18.6	12.7	23.5			
Panel Rating			225	225	225			
Panel Available Ampacity			147.6	171.9	127.0			
Feeder Conductor Rating (1/0 THW AWG)			150	150	150			
Feeder Conductor Available Ampacity			72.6	96.9	52.0			

Note:
New Work

REFERENCE: LOAD MEASUREMENT PROVIDED BY TIM MANSELL (CITY OF HOUSTON) ON APRIL 18, 2014.

ADDENDUM NO. 4
08-05-2014

STATE OF TEXAS
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Texas Registered Geoscience Firm 50011

ELECTRICAL LOAD ANALYSIS PANEL/L2

UNDERGROUND STORAGE TANK INSTALLATION
CITY OF HOUSTON FIRE STATION 19
1801 GREGG STREET
HOUSTON, HARRIS COUNTY, TEXAS
FACILITY ID NO. 33405

REVISIONS	DATE
5 FIFTH_REVISION	-
4 FOURTH_REVISION	-
3 THIRD_REVISION	-
2 SECOND_REVISION	-
1 FIRST_REVISION	-

DESIGNED BY: CS
DRAWN BY: WPG
CHECKED BY: PMS
DATE: JULY 2014
SCALE: AS SHOWN
APPROVED: DATE:
CITY OF HOUSTON
PROJECT NO 5008-0020
DRAWING NO. 10
SHEET NO. 10 OF 11

FILE INFO: G:\2012\21012-0001\Dwg\FS19\D010.dwg steffenwp NO XREFS ATTACHED

NEW ELECTRICAL PANEL "E2"

Service: 120/240V, 60 Hz, Minimum 100A, 16 circuits, 1Φ, 3 wire, #2 Cu AWG, Minimum ISCA 7,100

Load Description (A Phase)	Circuit No.	Breaker Pole	Breaker Amps	Breaker Pole	Breaker Amps	Circuit No.	Load Description (C Phase)
Diesel Fuel Pump	1	2	20	1	20	2	Dispenser
Switched Neutral	3			1	20	4	Incon Controller
Gasoline Fuel Pump	5	2	20	1	20	6	Fuel Force Controller
Switched Neutral	7					8	Spare
Spare	9					10	Spare
Spare	11					12	Spare
Spare	13					14	Spare
Spare	15					16	Spare

ELECTRICAL LOAD ANALYSIS FOR PANEL "E2"

Item Description	Quantity	Voltage	Phase Current A (amps)	Phase Current C (amps)	Phase Current Neutral (amps)	Breaker Size (amps)	Wire Size	Conduit
Diesel Pump Motor (3/4 Hp)	1	240	6.5	6.5		20 (double pole)	3-#12 awg, 1-#12 awg grd	1"
Gasoline Pump Motor (3/4 Hp)	1	240	6.5	6.5		20 (double pole)	3-#12 awg, 1-#12 awg grd	1"
Dispenser	1	120	2.0		2.0	20 (single pole)	2-#12 awg, 1-#12 awg grd	1"
Incon Controller	1	120		1.0	1.0	20 (single pole)	2-#12 awg, 1-#12 awg grd	1"
Fuel Force Controller	1	120	1.0		1.0	20 (single pole)	2-#12 awg, 1-#12 awg grd	1"
Sum of Amp Loads			16.0	14.0	4.0			
25% of Largest Amp Load			1.6	1.6	0.5			
Total Amp Load			17.6	15.6	4.5			
Max KVA of all loads			2.1	1.9	0.5			
Panel Rating			100	100	100			
Panel Available Ampacity			82.4	84.4	95.5			
Feeder Conductor Rating (#2 Cu AWG)			115	115	115			
Feeder Conductor Available Ampacity			97.4	99.4	110.5			

Note:
New Work
All Demand Factors equial 100%

SHORT CIRCUIT CURRENTS

1. PUMP SHORT CIRCUIT POWER
= kVA / 0.2
= 0.56 KVA / 0.2
= 2.8 kVA

3/4 HP MOTOR = 0.56 kVA

2. PANEL EP-E2 SHORT CIRCUIT POWER
=kVA ALL LOADS / 0.2

= 4.5 kVA / 0.2
= 22.7 kVA

3. FAULT CURRENT AT PANEL EP-E
= kVA / (V / 1000)
= (22.7 kVA + 2.8 kVA) / (240 /1000)
=106.3 A

ADDENDUM NO. 4
08-05-2014

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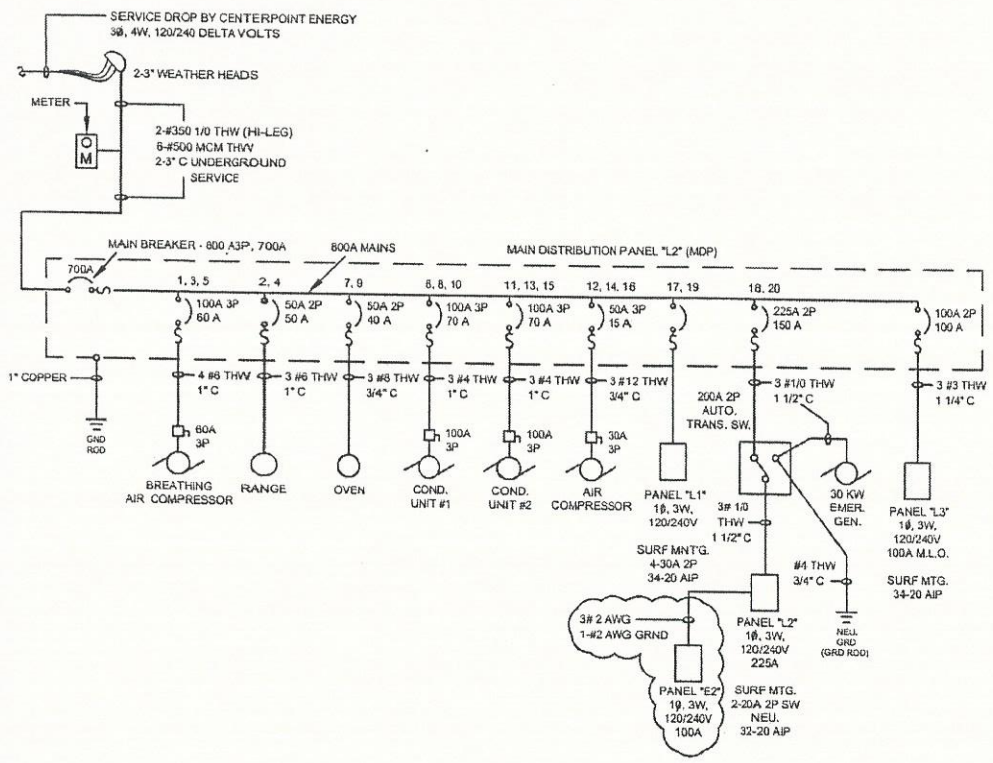
UNDERGROUND STORAGE TANK INSTALLATION
CITY OF HOUSTON FIRE STATION 19
1801 GREGG STREET
HOUSTON, HARRIS COUNTY, TEXAS
FACILITY ID NO. 33405

ELECTRICAL LOAD ANALYSIS PANEL/E2

REVISIONS		DATE
5 FIFTH REVISION	-	
4 FOURTH REVISION	-	
3 THIRD REVISION	-	
2 SECOND REVISION	-	
1 FIRST REVISION	-	

DESIGNED BY: CS
DRAWN BY: WPS
CHECKED BY: PMS
DATE: JULY 2014
SCALE: AS SHOWN
APPROVED: DATE:
CITY OF HOUSTON
PROJECT NO. 5008-0020
DRAWING NO. 11
SHEET NO. 11 of 11

FILE INFO: G:\2008\5008-0020\Dwg\FS19\fig11.dwg wpsteffen NO XREFS ATTACHED



Item Description	Phase Current			
	A	B	C	Neutral
Sum of New Amp Loads, Panel "E2" (amps)	16.0	--	14.0	4.0
25% of Largest New Amp Load, Panel "E2" (amps)	1.6	--	1.6	0.5
Removed Loads, Panel "L2"	7.2		7.2	
Current kVA Peak Demand Load	58.0			
125% of Current kVA Peak Demand Load	72.5			
Three Phase Amp Load (35% * 125% Peak Demand Load *1000/240 Volts) (amps)	105.7	105.7	105.7	105.7
Single Phase Amp Load (65% * 125% Peak Demand Load *1000/240 Volts) (amps)	196.4	--	196.4	196.4
Max Amp Load on Service Conductors	326.9	105.7	324.9	306.6
Service Conductor Rating (Existing Service Feeder 6-#500 MCM THW A, C and Neutral, 2-#1/0 THW B) (amps)	760	300	760	760
Service Conductor Available Ampacity (amps)	433	194	435	453

Note:
New Work
Current peak demand provided by Centerpoint

ADDENDUM NO. 4
08-05-2014

NOTE:
ALL NEW WORK CONTAINED WITHIN PANELS "L2" AND "E2". . ALL OTHER ELECTRICAL EQUIPMENT DEPICTED IN THIS FIGURE IS EXISTING AND WILL NOT BE CHANGED.

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UNDERGROUND STORAGE TANK INSTALLATION
CITY OF HOUSTON FIRE STATION 19
1801 GREGG STREET
HOUSTON, HARRIS COUNTY, TEXAS
FACILITY ID NO. 33405

ELECTRICAL ONE-LINE DIAGRAM

REVISIONS		DATE
5 FIFTH REVISION	-	
4 FOURTH REVISION	-	
3 THIRD REVISION	-	
2 SECOND REVISION	-	
1 FIRST REVISION	-	

DESIGNED BY: WPS
DRAWN BY: JCS
CHECKED BY: PMS
SCALE: AS SHOWN
DATE: JULY 2014
PROJECT NO. 5008-0020
DRAWING NO. 12
SHEET NO. 12 OF 12

FILE INFO: G:\2008\5008-0020\Dwg\FS19\FIG12.dwg steffanwp NO XREFS ATTACHED

CONSTRUCTION DRAWINGS OF:

UNDERGROUND STORAGE TANK INSTALLATION

HOUSTON FIRE DEPARTMENT
FIRE STATION 44
675 MAXEY ROAD
HOUSTON, TEXAS 77013
FACILITY ID NO. 33422

PREPARED FOR:

HOUSTON FIRE DEPARTMENT
C/O CITY OF HOUSTON GENERAL SERVICES DEPARTMENT
P.O. BOX 1562
HOUSTON, TEXAS 77251-1562

DRAWING NUMBER	TITLE
1	COVER SHEET
2	EXISTING SITE PLAN
3	PROPOSED SITE PLAN
4	PIPING PLAN
5	UST PLAN AND PROFILE
6	DISPENSER PLAN AND PROFILE
7	PIPING AND TRENCHING DETAIL
8	UST AND DISPENSER ELECTRICAL CLASSIFICATION
9	ELECTRICAL WIRING PLAN
10	ELECTRICAL LOAD ANALYSIS - PANEL/E
11	ELECTRICAL ONE-LINE DIAGRAM

ADDENDUM NO. 4
08-05-2014

STATE OF TEXAS
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Texas Registered Geoscience Firm 50011

COVER SHEET

UNDERGROUND STORAGE TANK INSTALLATION
CITY OF HOUSTON FIRE STATION 44
675 MAXEY ROAD
HOUSTON, HARRIS COUNTY, TEXAS
FACILITY ID NO. 33422

REVISIONS		DATE
5 FIFTH REVISION	-	
4 FOURTH REVISION	-	
3 THIRD REVISION	-	
2 SECOND REVISION	-	
1 FIRST REVISION	-	

DESIGNED BY: CS
DRAWN BY: WPS
CHECKED BY: PMS
DATE: AUGUST 2014
SCALE: AS SHOWN

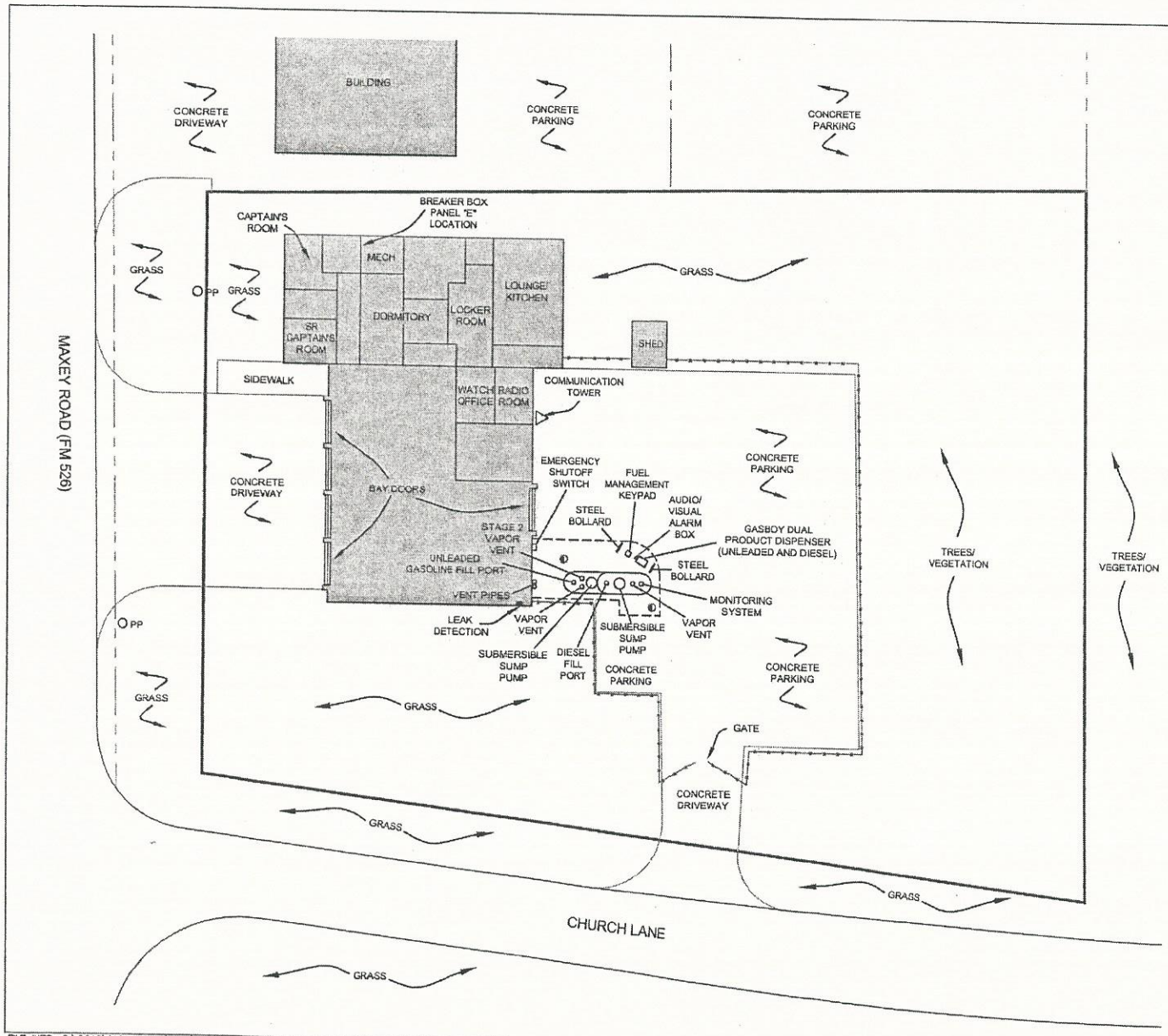
APPROVED: DATE:
CITY OF HOUSTON

PROJECT NO. 5008-0020

DRAWING NO. 1

SHEET NO. 1 OF 10

FILE INFO: G:\2008\5008-0005\Dwg\FS44\fig1.dwg steffenwp NO XREFS ATTACHED



LEGEND

- SUBJECT PROPERTY BOUNDARY
- EXISTING ON-SITE BUILDING
- LOT BOUNDARY
- CHAIN-LINK FENCE
- PP POWER POLE
- TANKHOLD OBSERVATION WELL

ADDENDUM NO. 4
08-05-2014

NOTE: THE EXISTING DRAINAGE PATTERN WILL BE MAINTAINED DURING PAVEMENT RESTORATION.

0 10 20 30 60
APPROXIMATE SCALE: 1"=30'

STATE OF TEXAS
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HOUSTON, TEXAS 77055
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Texas Registered Geoscience Firm 50011

PROPOSED SITE PLAN

UNDERGROUND STORAGE TANK INSTALLATION
CITY OF HOUSTON FIRE STATION 44
675 MAXEY ROAD
HOUSTON, HARRIS COUNTY, TEXAS
FACILITY ID NO. 33422

REVISIONS		DATE
5	FIFTH REVISION	-
4	FOURTH REVISION	-
3	THIRD REVISION	-
2	SECOND REVISION	-
1	FIRST REVISION	-

DESIGNED BY: CS
DRAWN BY: WPS
CHECKED BY: PMS
DATE: AUGUST 2014
SCALE: AS SHOWN
APPROVED: DATE:
CITY OF HOUSTON
PROJECT NO. 5008-0020
DRAWING NO. 3
SHEET NO. 3 OF 11

FILE INFO: G:\2012\21012-0001\Dwg\FS44\003.dwg steffenwp NO XREFS ATTACHED

(EXISTING) EMERGENCY PANEL "E"

Service: 120/240V, GE Type *NLAB Panelboard, 225A, 42 circuits, 1Φ, 3 wire, 22,000 AIC Short Circuit Rating

Load Description (A Phase)	Circuit No.	Breaker Pole	Breaker Amps	Breaker Pole	Breaker Amps	Circuit No.	Load Description (C Phase)
Lounge Lights	1	1	20	1	20	2	Study Rm. Receptacles
Locker Room Lights and Fan	3	1	20	1	20	4	Capt. Rm. Desk Receptacles
Storage Room, Exits, Hallway, and Lounge Night Lights	5	1	20	1	20	6	Sr. Capt. Rm. Desk Receptacles
Front Hallway Exits and Night Light, Flag Pole, Emergency Alert, and Front Canopy Lights	7	1	20	1	20	8	Battery Charging Station
Women's Restroom Lights, Receptacles, and Fan	9	1	20	1	20	10	Kitchen Island Receptacles
Crew Restroom Lights, Receptacles, and Fan	11	1	20	1	20	12	Rear Lounge Area Receptacles
Mech/Elect Rooms and Dormitory Lights	13	1	20	1	20	14	Refrigerators
Study, Capt., SR Capt., and Hallway Lights	15	1	20	1	20	16	Refrigerators
Capt. And Sr. Capt. Restroom Lights, Receptacles, and Fan	17			1	20	18	Microwave and Gas Oven
Side and Rear Outside Lights, Rear Canopy	19	1	20	1	20	20	Kitchen Vent Hood
Watch Office Restroom Lights, Receptacles, and Fan	21	1	20	2	20	22	Gasoline Pump
Watch Office, Hallway, Radio Rm. and Rear Apparatus Bay Night Lights	23	1	20			24	Switched Neutral
Apparatus Bay Lights	25	1	20	1	20	26	Spare
Apparatus Bay Lights	27	1	20	1	20	28	Telephone Rm. Receptacles
Radio Rm. A/C - Bard Unit	29	2	30	1	20	30	Radio Rm. Comm. Rack Receptacles
Switched Neutral	31			1	20	32	Radio Rm. Comm. Rack Receptacles
Smoke Detectors	33	1	20	1	20	34	Ice Machine
Diesel Pump	35	2	20	1	20	36	Watch Office Receptacles
Switched Neutral	37			1	20	38	Watch Office Receptacles
Dispenser	39	1	20	1	20	40	Incon Controller
Spare	41	1	20	1	20	42	Fuel Force Controller

ELECTRICAL LOAD ANALYSIS FOR NEW WORK ON PANEL "E"

Item Description	Quantity	Voltage	Phase Current A (amps)	Phase Current C (amps)	Phase Current Neutral (amps)	Breaker Size (amps)	Wire Size	Conduit
Diesel Pump Motor (3/4 Hp)	1	240	6.5	6.5		20 (double pole)	3-#12 awg, 1-#12 awg grd	1"
Gasoline Pump Motor (3/4 Hp)	1	240	6.5	6.5		20 (double pole)	3-#12 awg, 1-#12 awg grd	1"
Dispenser	1	120	2.0		2.0	20 (single pole)	2-#12 awg, 1-#12 awg grd	1"
Incon Controller	1	120	1.0		1.0	20 (single pole)	2-#12 awg, 1-#12 awg grd	1"
Fuel Force Controller	1	120		1.0	1.0	20 (single pole)	2-#12 awg, 1-#12 awg grd	1"
Sum of New Amp Loads			16.0	14.0	4.0			
25% of Largest New Amp Load			1.6	1.6	0.5			
Current Amp Load			141.6	138.0	241.5			
Removed Amp Load			11.3	9.8	21.1			
Total Amp Load			159.2	153.6	224.9			
Max KVA of all loads			19.1	18.4	27.0			
Panel Rating			225	225	225			
Panel Available Ampacity			65.8	71.4	0.1			
Feeder Conductor Rating (2- 4/0 A and C Phases, 1-4/0 Neutral, 1-#6 Ground)			230	230	230			
Feeder Conductor Available Ampacity			70.8	76.4	5.1			

Note:
New Work

SHORT CIRCUIT CURRENTS

1. PUMP SHORT CIRCUIT POWER
= kVA / 0.2
= 0.56 KVA / 0.2
= 2.8 kVA

3/4 HP MOTOR = 0.56 kVA

2. PANEL EP-E SHORT CIRCUIT POWEF
=kVA ALL LOADS / 0.2

= 64.4 kVA / 0.2
= 322.0 kVA

3. FAULT CURRENT AT PANEL EP-E

= kVA / (V / 1000)

= (322.0 kVA + 2.8 kVA) / (240 /1000)
=1353.3 A

ADDENDUM NO. 4
08-05-2014

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8/1/14

SKA CONSULTING, L.P.
1515 WITTE ROAD, SUITE 150
HOUSTON, TEXAS 77080
Texas Registered Engineering Firm F-005009
Texas Registered Geoscience Firm 50011

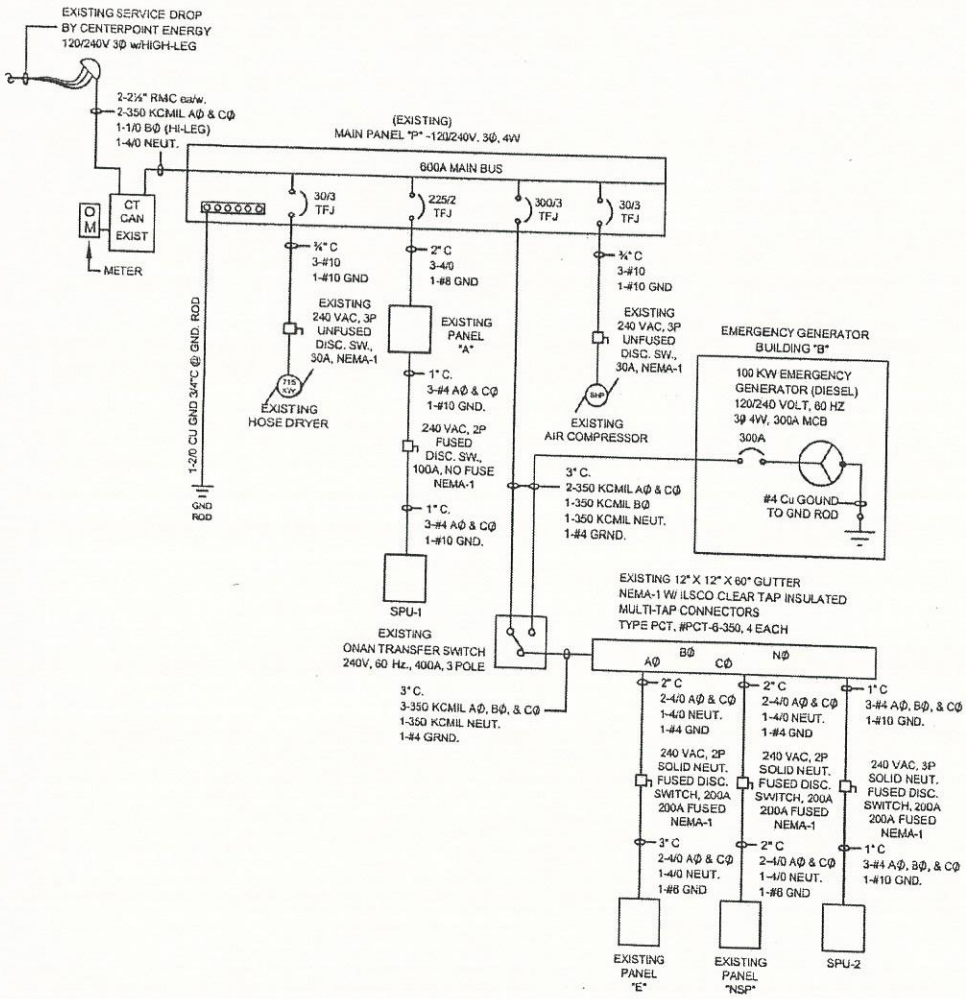
ELECTRICAL LOAD ANALYSIS PANEL/E

UNDERGROUND STORAGE TANK INSTALLATION
CITY OF HOUSTON FIRE STATION 44
675 MAXEY ROAD
HOUSTON, HARRIS COUNTY, TEXAS
FACILITY ID NO. 33422

REVISIONS		DATE
5	FIFTH_REVISION	-
4	FOURTH_REVISION	-
3	THIRD_REVISION	-
2	SECOND_REVISION	-
1	FIRST_REVISION	-

DESIGNED BY: CS
DRAWN BY: WPS
CHECKED BY: PMS
DATE: AUGUST 2014
SCALE: AS SHOWN
APPROVED: DATE
CITY OF HOUSTON
PROJECT NO 5008-0020
DRAWING NO. 10
SHEET NO. 10 OF 11

FILE INFO: G:\2012\21012-0001\Dwg\FS44\D010.dwg steffanwp NO XREFS ATTACHED



Item Description	Phase Current			
	A	B	C	Neutral
Sum of New Amp Loads, Panel "E" (amps)	18.0	--	14.0	4.0
25% of Largest New Amp Load, Panel "E" (amps)	1.6	--	1.6	0.5
Current kVA Peak Demand Load	36.0			
125% of Current kVA Peak Demand Load	45.0			
Three Phase Amp Load (35% * 125% Peak Demand Load *1000/240 Volts) (amps)	65.6	65.6	65.6	65.6
Single Phase Amp Load (65% * 125% Peak Demand Load *1000/240 Volts) (amps)	121.9		121.9	121.9
Max Amp Load on Service Conductors	205.1	65.6	203.1	192.0
Service Conductor Rating (Existing Service Feeder 4-350 KCMIL A and C, 2-1/0 B, 2- 4/0 Neutral) (amps)	620	300	620	460
Service Conductor Available Ampacity (amps)	415	234	417	268

Note:
New Work
Current peak demand provided by Centerpoint

ADDENDUM NO. 4
08-05-2014

NOTE:

ALL NEW WORK CONTAINED WITHIN PANEL "E". ALL OTHER ELECTRICAL EQUIPMENT DEPICTED IN THIS FIGURE IS EXISTING AND WILL NOT BE CHANGED.

STATE OF TEXAS
PAUL MICHAEL SCHULTZ
68765
REGISTERED PROFESSIONAL ENGINEER

SKA CONSULTING, L.P.
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UNDERGROUND STORAGE TANK INSTALLATION
CITY OF HOUSTON FIRE STATION 44
675 MAXEY ROAD
HOUSTON, HARRIS COUNTY, TEXAS
FACILITY ID NO. 33422

ELECTRICAL ONE-LINE DIAGRAM

REVISIONS		
5	FIFTH REVISION	-
4	FOURTH REVISION	-
3	THIRD REVISION	-
2	SECOND REVISION	-
1	FIRST REVISION	-
		DATE

DESIGNED BY: WPS
DRAWN BY: JCS
CHECKED BY: PMS
SCALE: AS SHOWN
DATE: AUGUST 2014
PROJECT NO. 5008-0020
DRAWING NO. 11
SHEET NO. 11 OF 11

FILE INFO: G:\2008\5008-0020\Dwg\FS44\FIG11.dwg steffenwp NO XREFS ATTACHED