



612 Nolana, Suite 520  
 McAllen, Texas 78504  
 Tel. 956.687.LEMC  
 Fax. 956.687.5363

# Invoice

Date	Invoice #
8/25/2014	Aug 14-6

Texas Registered Engineering Firm F-11722

Bill To
Commissioner Joseph Palacios Hidalgo County PCT. 4 1051 N. Doolittle Rd. Edinburg, TX 78541

P.O. No.	Terms	Project
P159 SF LS Offsite		

Item	Description	Est Amt	Prior Amt	Prior %	Qty	Rate	Curr %	Total %	Amount
Service	Offsite - Lift Station: Project Startup	2,990.00	2,990.00	100.00%	0	2,990.00	0.00%	100.00%	0.00
Service	Preliminary Phase (30% Submittal)	17,532.00	17,532.00	100.00%	0	17,532.00	0.00%	100.00%	0.00
Service	Design Phase (60%-90% Submittal)	18,294.00			1	18,294.00	100.00%	100.00%	18,294.00
Service	Final Design and Specifications (100% Submittal)	4,504.00			1	4,504.00	100.00%	100.00%	4,504.00
Service	MEP Design - Amendment No. 1 to WA #1 Sigma Invoice \$2,700.00 (attached) plus \$270.00 LEMC Administrative Charge	2,970.00			1	2,970.00	100.00%	100.00%	2,970.00

<b>Total</b>	\$25,768.00
<b>Payments/Credits</b>	\$0.00
<b>Balance Due</b>	\$25,768.00

# INVOICE

March 28, 2014

<b>CLIENT:</b>  LeFEVRE Environmental & Management Consulting, LLC 612 Nolana, Ste.520 McAllen, TX 78501	<b>PROJECT # 13038.1</b>  Hidalgo County Pct. 4 Sun Flower Lift Station SCADA and Telecommunication Tower
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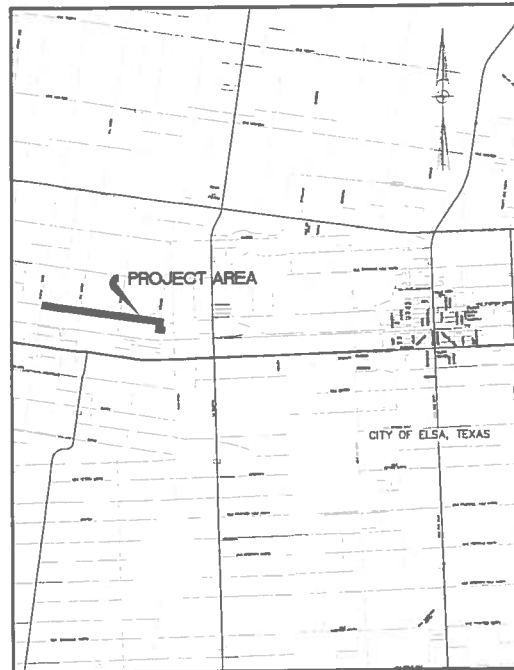
**INVOICE FOR PROFESSIONAL SERVICES PERFORMED TO DATE**

<b>MEP Engineering Fee</b>	<b>\$2,700.00</b>		
Total Work to Date	=	\$2,700.00	
Less previous payment	=	\$0.00	
<b>Total Due</b>	=	<b>\$2,700.00</b>	

Please make check payable to **SIGMA HN Engineers, PLLC** in the amount of **\$2,700.00**

# HIDALGO COUNTY PRECINCT NO. 4 PUBLIC IMPROVEMENTS TO: SUNFLOWER PARK - OFFSITE LIFT STATION AND FORCEMAIN

HIDALGO COUNTY, TEXAS



SCALE 1"=2000'

MARCH 2014

## INDEX OF SHEETS

Sheet No.	Description
1	COVER SHEET
2	GENERAL CONSTRUCTION NOTES
3	SURVEY CONTROL PLAN
4-6	FORCEMAIN PLAN AND PROFILE SHEETS
7	LIFT STATION PLAN AND DETAILS
8	MISCELLANEOUS DETAILS
ES-1.0	ELECTRICAL POWER PLAN
E-1.0	ONE-LINE DIAGRAM
E-1.1	SCADA RTU PANEL AND EQUIPMENT SCHEDULE
E-1.2	WALL MOUNTED SINGLE-PORT GROUND BAR DETAIL
S1.0	STRUCTURAL TOWER DETAIL



*Wesley R. Lefevre*  
WESLEY RICHARD LEFEVRE, PE

3/11/14  
DATE

LeFEVRE

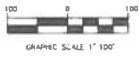
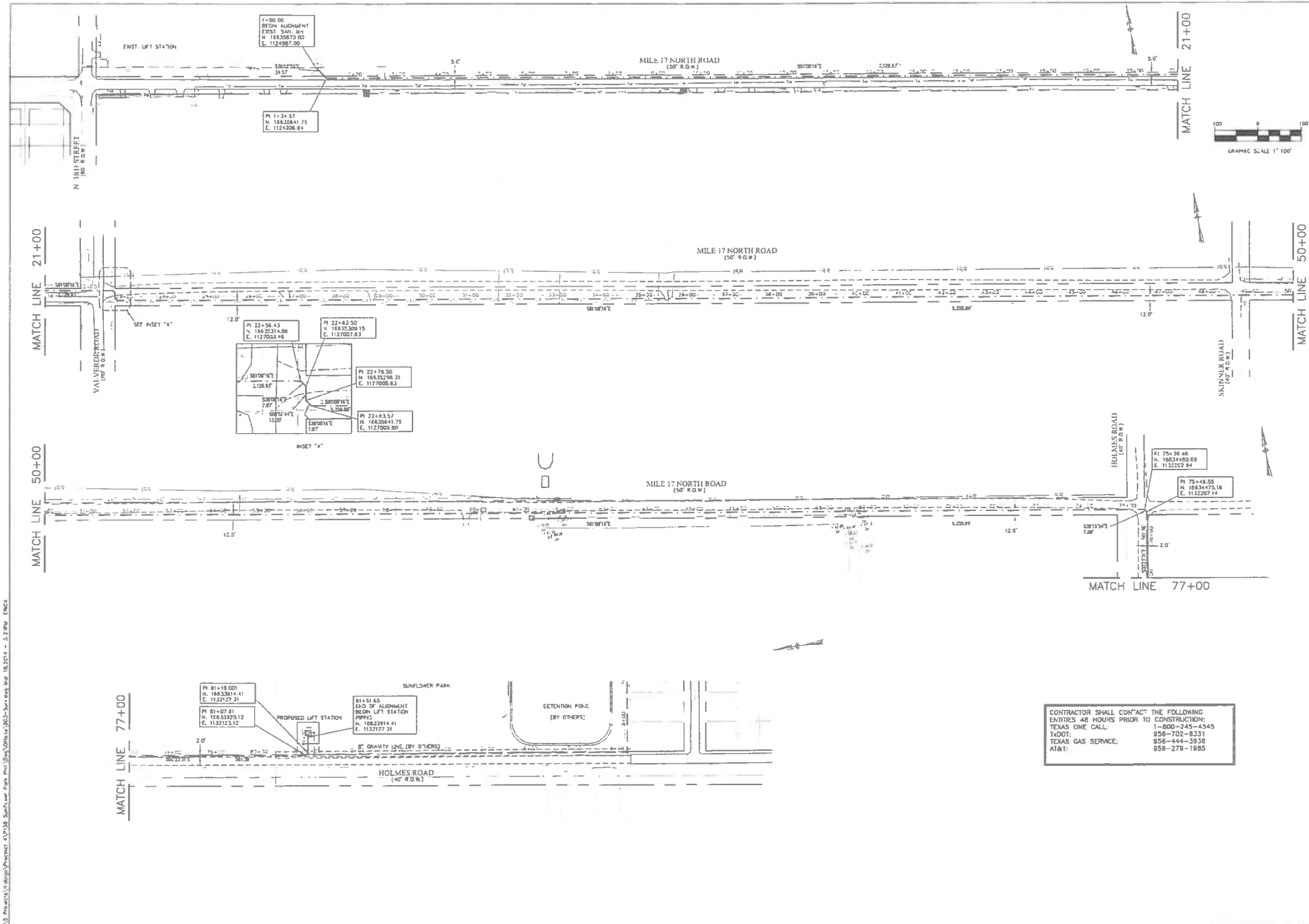
ENGINEERING &  
MANAGEMENT CONSULTING, L.L.C.

Texas Registered Engineering Firm F-11722

612 Nolana, Suite 520  
McAllen, Texas 78504  
Tel. 956.687.LEMC  
Fax. 956.687-5363

Drawn	H.O.	Date	MARCH 2014
Checked	H.O.	Job No.	P159
Approved	R.R.L.	Sheet	1 of 11






CONTRACTOR SHALL CONTACT THE FOLLOWING  
 ENTITIES 48 HOURS PRIOR TO CONSTRUCTION:  
 TEXAS ONE CALL: 1-800-745-4545  
 TxDOT: 956-702-8331  
 TEXAS GAS SERVICE: 956-444-3936  
 AT&T: 956-279-1985

REV.	DATE	REVISION	APPROVED
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HIDALGO COUNTY PRECINCT NO. 4  
 SUNFLOWER PARK - PHASE ONE  
 HIDALGO COUNTY, TEXAS

SURVEY CONTROL PLAN



L. J. LeFevre  
 State of Texas  
 License No. 113220714

CONTRACTOR SHALL CONTACT THE FOLLOWING ENTITIES 48 HOURS PRIOR TO CONSTRUCTION: TEXAS ONE CALL: 1-800-745-4545 TxDOT: 956-702-8331 TEXAS GAS SERVICE: 956-444-3936 AT&T: 956-279-1985

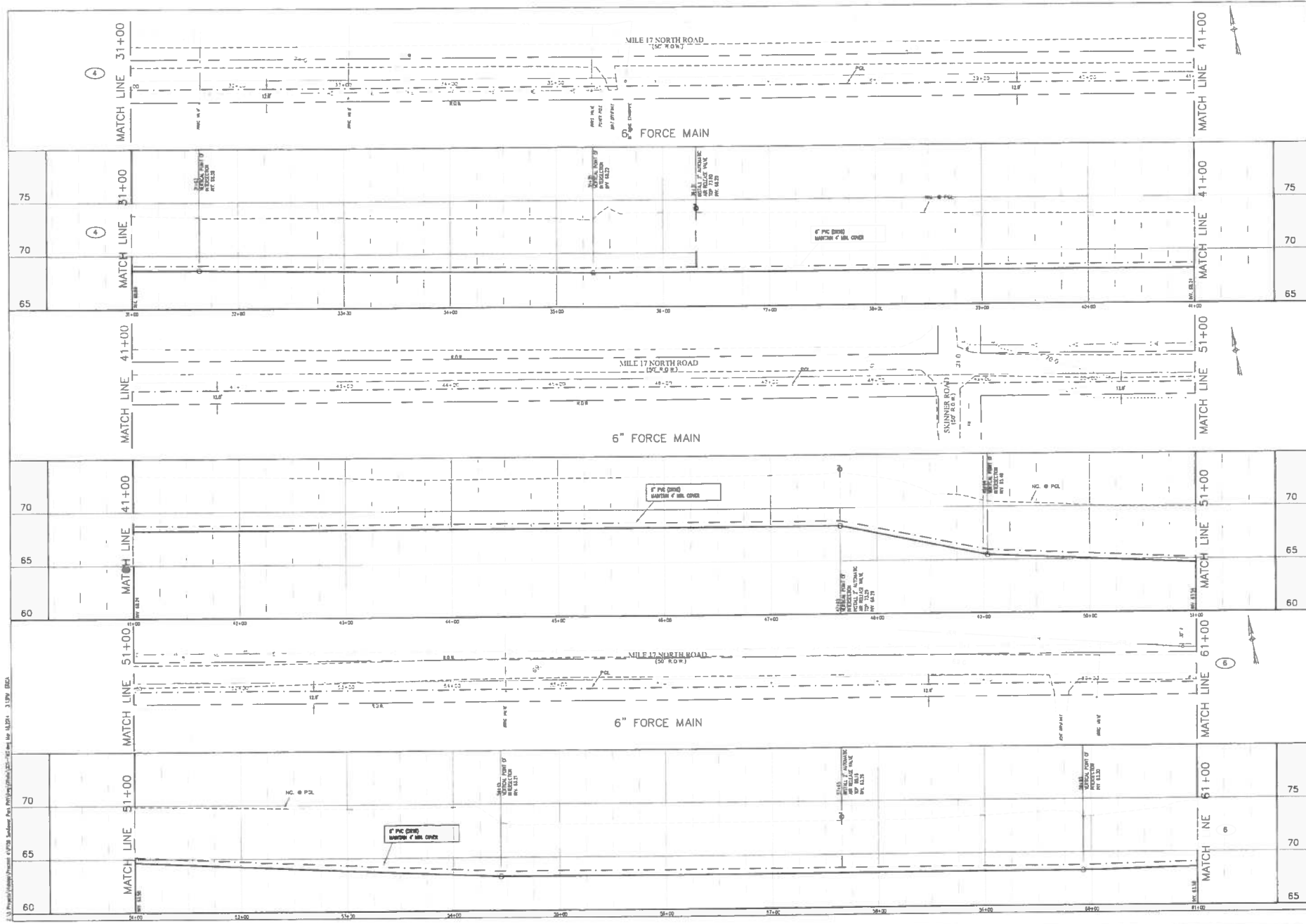
**LeFEVRE**  
 ENGINEERING &  
 MANAGEMENT CONSULTING, L.L.C.

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 Date: MARCH 2014  
 Job No: P159  
 Sheet: 3 of 11

2:13 Project: C:\img\Projects\412158\_Sunfl.cad Page: 001 of 001 Date: 03-10-2014 10:25:41 AM



I:\3 - Projects\Hidalgo Precinct 4\0708 - Sidewalk - Plan.dwg (2/15/14) 3:15 PM, 3/15/14



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HIDALGO COUNTY PRECINCT NO. 4	
SUNFLOWER PARK - PHASE ONE	
HIDALGO COUNTY, TEXAS	
6" FORCE MAIN - PLAN AND PROFILE	
STA. 31+00 TO STA. 61+00	

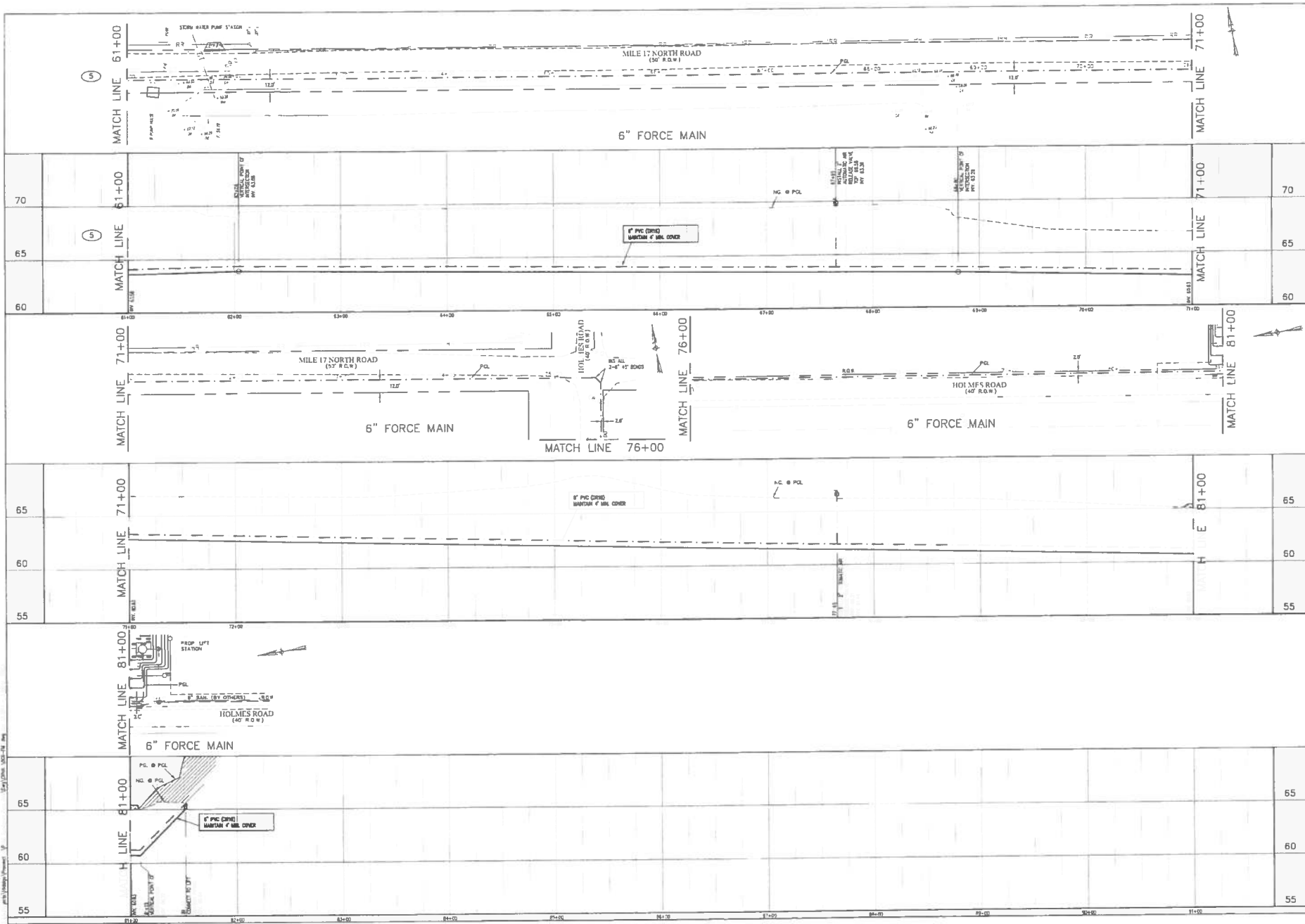
W. L. LeFevre Professional Engineer State of Texas No. 10220	

L. E. LeFevre 10000 North Loop West Suite 100 Houston, Texas 77037 Phone: 281-460-1111 Fax: 281-460-1112 Email: info@lefevre.com	
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<b>LEFEVRE</b> ENGINEERING & MANAGEMENT CONSULTING, LLC	
Drawn	H. ORTIZ
Scale	As Shown
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Date	MARCH 2014
Job No.	P159
Sheet	5 of 11



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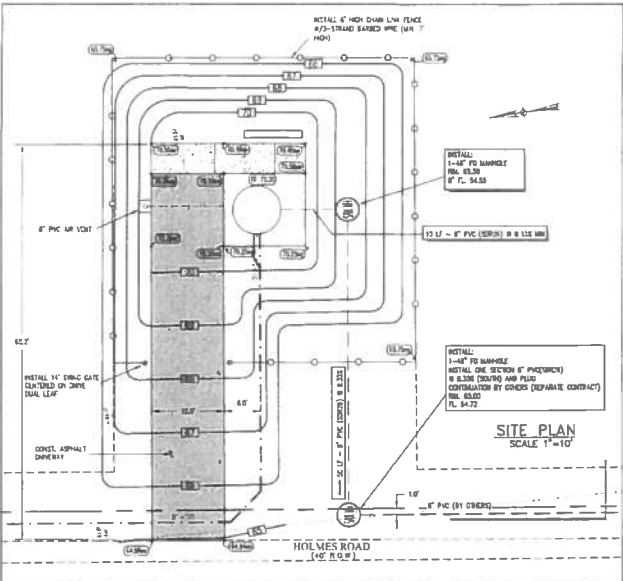
HIDALGO COUNTY PRECINCT NO. 4  
 SUNFLOWER PARK - PHASE ONE  
 HIDALGO COUNTY, TEXAS

6" FORCE MAIN - PLAN AND PROFILE  
 STA. 61+00 TO STA. 81+02

  
 H. CRITZ  
 State of Texas  
 License No. 10422

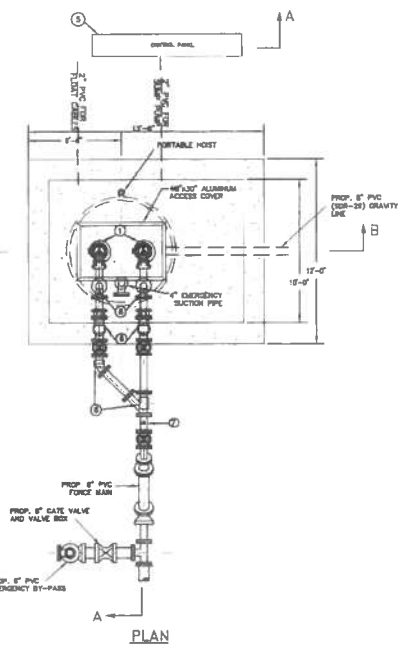
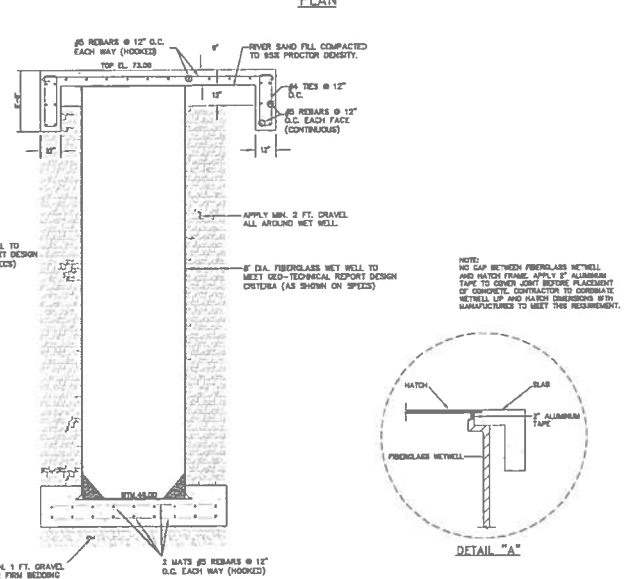
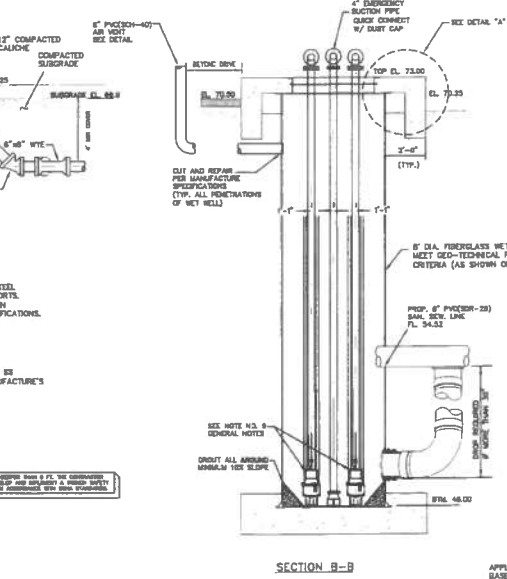
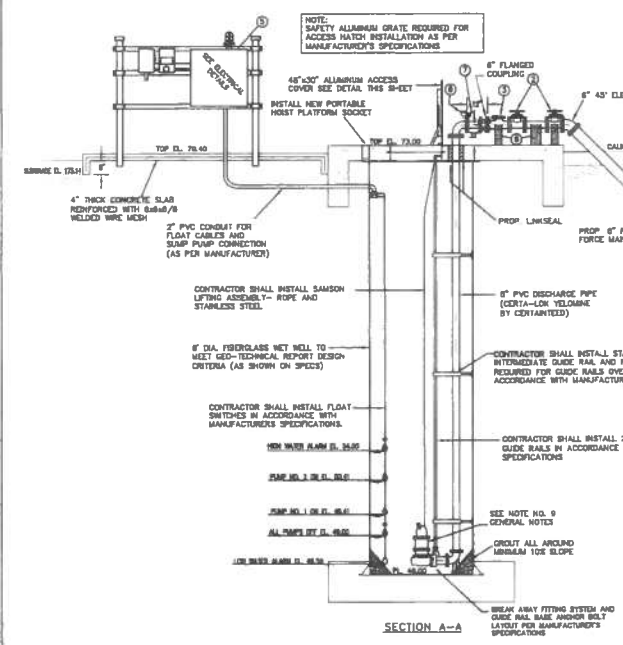
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 ENGINEERING &  
 MANAGEMENT CONSULTING, LLC

Drawn: H. CRITZ  
 Scale: HORIZ. 1"=40'  
 VERT. 1"=4'  
 Checked: WRL  
 Date: MARCH 2014  
 Job No.: P155  
 Sheet: 6 of 11



- GENERAL NOTES:**
1. ALL CONCRETE SHALL BE 8 SACK (8 SACK CEMENTITIOUS MATERIAL 230# OF WHICH MAY BE FLY ASH) 4,000 P.S.I. DESIGN MAXIMUM WATER/CEMENT RATIO: 0.43
  2. ALL CONCRETE SHALL BE CURED A MINIMUM OF 7 DAYS. CURING SHALL CONSIST OF NON-DISRUPTIVE AND ONE OF THE FOLLOWING TREATMENTS OF EXPOSED SURFACES: A) FLOODING WITH WATER, B) SURLAP SACKS KEPT WET AT ALL TIMES, OR C) USE OF CURING COMPOUND.
  3. ALL CONCRETE EDGES SHALL BE CHAMFERED OR CHAMFERED 3/4"
  4. ALL REBAR SHALL BE GRADE 60 AND TIED AT EACH JUNCTION. REBAR SPICES, IF REQUIRED SHALL HAVE A MINIMUM OVER-LAP OF 36 TIMES THE DIAMETER.
  5. EPOXY BONDING AGENT SHALL BE USED AT JOINT BETWEEN GROUT AND LOWER SLAB.
  6. NOT USED
  7. ALL CONNECTIONS TO THE WELL BY MEANS OF FACTORY INSTALLED SUBROUTS. THE PEE PENETRATIONS AT ROOF OF WEL WELL WHICH MUST BE CUT WITH A HOLD SAW. ONCE PIPING IS INSTALLED IN THE FINAL PLACE. FINAL FIBERGLASS REPAIR TO SEAL WEL WELL TO PVC PIPE SHALL BE MADE BY WEL WELLFACTORY FIELD SERVICE TECHNICIAN ONLY.
  8. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE LINED WITH PROTECT TO 407.
  9. ALL ELECTRICAL CONDUITS SHALL BE SEALED TOP-T WITH A SEALANT FOR PREVENTION OF MOISTURE.
  10. THE DIMENSIONS SHOWN FOR PIPES AND PIPING LAYOUT ARE BASED ON ONE OR MORE MANUFACTURER'S DESIGN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY DIMENSIONS OF PARTICULAR EQUIPMENT BEING PURCHASED IN SPACE PROVIDED.
  11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH POWER COMPANY FOR SETTING UP POWER SERVICE TO LIFT STATION SITE.
  12. DISCHARGE AND EMERGENCY DISCHARGE PIPE TO BE CERTA-LOK YELLOWING PVC PIPE BY CERTAVENTED.

ITEM	DESCRIPTION	MATERIAL & REQ.
1	PUMP	CAST IRON (C) 1 HP.
2	CAST VALVE	CAST IRON (C)
3	CAST VALVE	CAST IRON (C)
4	WEL WELL	STAINLESS STEEL
5	CONTROL PANEL	STAINLESS STEEL
6	PIPE SUPPORTS	CONCRETE / GALV. PIPE
7	ALL WELLS	STAINLESS STEEL
8	PROTECTIVE GROUND	



**PROPOSED LIFT STATION**  
SCALE: N.T.S.

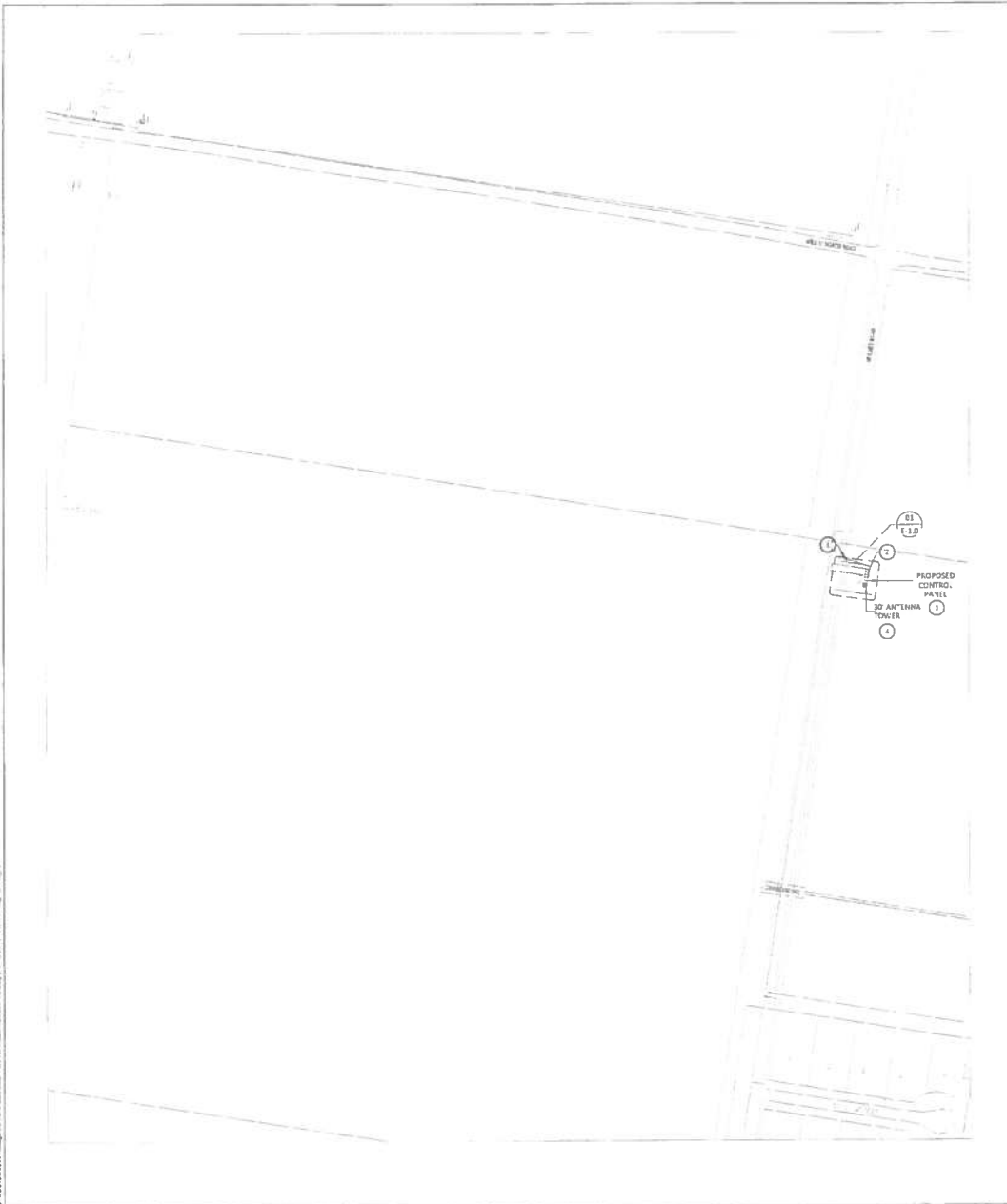
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HIDALGO COUNTY PRECINCT NO. 4  
SUNFLOWER PARK — PHASE ONE  
HIDALGO COUNTY, TEXAS  
LIFT STATION PLAN AND DETAILS

**LeFEVRE**  
ENGINEERING &  
MANAGEMENT CONSULTING, LLC

Drawn: H Q112  
Scale: Horiz: 1/4"  
Vert: 1/4"  
Checked: KRL  
Date: MARCH 2014  
Job No.: P159  
Sheet: 7 of 11





1 ELECTRICAL POWER PLAN  
SCALE: 3" = 100'-0"

### ELECTRICAL GENERAL LEGEND

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.

SYMBOL	DESCRIPTION	MTG. HT. (IND. SEE NOTE 1)
POWER		
⊙	SINGLE RECEPTACLE 250/125V/3P/3W NEMA 5-20A	15" AFF
⊕	DUPLEX RECEPTACLE 250, 240/120 GROUND FAULT INT. RECEPTOR IS = INSULATED GROUND DEVICE WITH INSULATED GROUNDING CONDUCTOR. C = CEILING MOUNTED.	15" AFF
⊕ x	QUADPLEX RECEPTACLE 250, 240/120 GROUND FAULT INTERCEPTOR IS = INSULATED GROUND DEVICE WITH INSULATED GROUNDING CONDUCTOR. C = CEILING MOUNTED.	15" AFF
⊕ E	DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT	15" AFF
⊕	SPECIAL PURPOSE RECEPTACLE; MOTOR OR EQUIPMENT CONNECTION	AS REQD.
⊕ ⊕ ⊕	JUNCTION BOX - SIZE & MOUNTING AS REQUIRED	15" AFF
⊕ ⊕ ⊕	MULTI-OUTLET ASSEMBLY - LENGTH AND OUTLET SPACING AS INDICATED	
⊕	DISCONNECT SWITCH 30/7.5 INDICATES 30A, 3-POLE, NON-FUSE; 30/30/3 INDICATES 30A, 3-POLE, 30A FUSE	AS REQD.
⊕	CIRCUIT BREAKER/DISCONNECT SWITCH - THERMAL MAGNETIC CB IN NEMA 1 ENC., AMPS/POLES AS INDICATED	AS REQD.
⊕	DISCONNECT SWITCH 30/30/3 INDICATES 30A, 3-POLE, 30A FUSE	AS REQD.
⊕	MOTOR STARTER (VARIABLE VOLTAGE); NUMBER INDICATES NEMA SIZE	AS REQD.
⊕	COMBINATION MOTOR CONTROLLER/DISCONNECT SWITCH	AS REQD.
—	SINGLE LINE CONTINUATION	
—	CIRCUIT HOME RUN TO PANELBOARD (2 #12, 1 #12G, 1/4" C. 20A/1P CB LOAD)	
—	THREE SINGLE POLE DEVICE CIRCUIT NUMBERS	
—	MULTI-POLE DEVICE CIRCUIT NUMBERS	
—	PANELBOARD	
⊕	TRANSFORMER	

NOTES:  
 1 48" AFF INDICATES "TO TOP OF DEVICE.  
 15" AFF INDICATES "TO BOTTOM OF DEVICE.  
 ALL OTHER MOUNTING HEIGHTS REFER "TO CENTERLINE OF DEVICE"

### GENERAL NOTES

#### ELECTRICAL

**GENERAL ELECTRICAL SITE NOTES:**

- ELECTRICAL CONTRACTOR SHALL CONTACT UTILITY COMPANY SERVICE REPRESENTATIVE AND COORDINATE SERVICE INSTALLATION PRIOR TO COMMENCING WORK.
- ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER ALL FEES AND CONSTRUCTION COSTS CHARGED BY THE POWER, TELEPHONE AND CABLE UTILITY PROVIDERS FOR MAIN LINE EXTENSIONS OF SERVICE FOR A NEW INSTALLATION.
- ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR REQUIRED TO COORDINATE AND RECORD UTILITY EASEMENTS FOR POWER, TELEPHONE AND CABLE.
- ELECTRICAL CONTRACTOR SHALL INSTALL ALL UNDERGROUND CONDUIT, CONDUCTIONS AND CABLES AS SPECIFIED. REFER TO SPECIFICATION SECTIONS FOR REQUIREMENTS.
- ELECTRICAL CONTRACTOR SHALL REFER TO DETAILS FOR INSTALLATION REQUIREMENTS OF UTILITY PAD MOUNTED TRANSFORMER, GROUNDING AND BONDING, ANTENNA TOWER FOOTING, UNDERGROUND CONDUITS, AND ROUGH IN.
- ALL EXTERIOR MOUNTING ENCLOSURES/CABINETS FOR SWITCHBOARDS, PANELBOARDS, DRY-TYPE TRANSFORMERS, CT ENCLOSURES, BORDERS, WIRE WAYS/WIRE GUTTERS, SAFETY DISCONNECT SWITCHES, AUTOMATIC TRANSFER SWITCHES, AND GENERATORS SHALL BE NEMA 4X 316 STAINLESS STEEL, UNLESS NOTED OTHERWISE.

**GENERAL ELECTRICAL POWER NOTES:**

- ELECTRICAL CONTRACTOR SHALL FURNISH SHOP DRAWINGS SHOWING ALL ROUGH IN FOR UNDERGROUND CONDUIT, CONDUCTIONS AND CABLES PRIOR TO COMMENCING WORK.

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E-1.0	ELECTRICAL LINE AND RISER DIAGRAMS
F-1.1	SCADA RTU PANEL AND EQUIPMENT SCHEDULE
E-1.2	ELECTRICAL DETAILS
S-1.0	FOUNDING DETAILS

2 ELECTRICAL GENERAL LEGEND AND NOTES  
SCALE: N.T.S.

- KEY NOTES:**
- APPROXIMATE LOCATION OF 120V AEP POWER RISER POLE. COORDINATE EXACT LOCATION WITH AEP PRIOR TO COMMENCING WORK.
  - APPROXIMATE LOCATION OF AEP 25- FOOT PENTA POLE. COORDINATE EXACT LOCATION WITH AEP PRIOR TO COMMENCING WORK.
  - APPROXIMATE LOCATION OF NEW PUMP CENTRAL EQUIPMENT RACK. REFER TO RISER DIAGRAM FOR REQUIREMENTS.
  - REFER TO DETAIL 02, SHEET E-2 FOR ANTENNA TOWER SECTION.

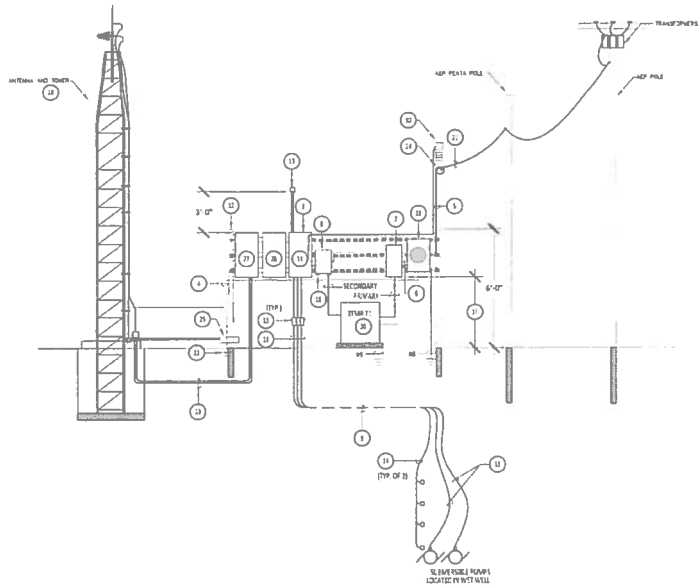
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HIDALGO COUNTY PRECINCT NO. 4  
 SUNFLOWER PARK - PHASE ONE  
 HIDALGO COUNTY, TEXAS  
 LIFT STATION PLAN AND DETAILS

**LEFEVRE**  
 ENGINEERING &  
 MANAGEMENT CONSULTING, LLC

**SIGMA**  
 ENGINEERS, PLLC

TBPE Firm No. F-14767 701 S. 15 <sup>th</sup> Street McAllen, Texas 78501	Drawn: JY Scale: Checked: JAN Date: MARCH, 2014 Author: 13038 Sheet: ES-1.0
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1 MAIN SERVICE DISCONNECT AND CONTROL PANEL RISER  
SCALE: N.T.S.

**ELECTRICAL LOAD ANALYSIS FOR SUNFLOWER LIFT STATION**

40 MAIN DISCONNECT	40C277	100/15	1 PHASE 4 WIRE	
220 SERVICE LOAD			1W AT 120V	C 153
240 RECEIVABLE LOAD			1W AT 276V	C 183

ITEM	DESCRIPTION	AMOUNT	TYPE	AMPLIFAGE
1	F. AMP 1	5	6	17.5
2	F. AMP 2	5	6	17.5

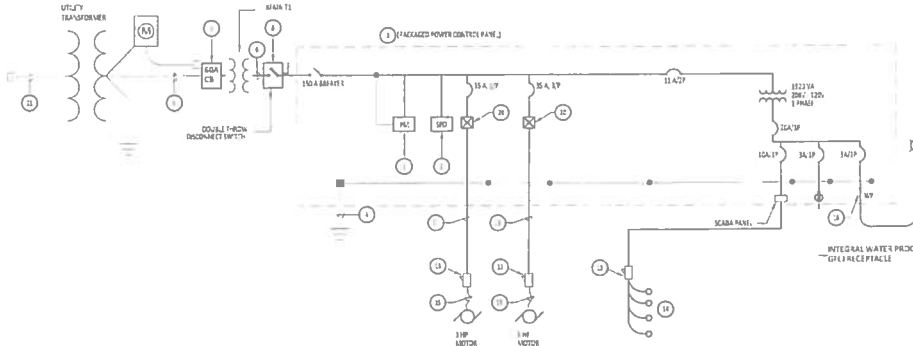
  

DESCRIPTION	AMOUNT	TYPE	AMPLIFAGE
LARGEST MOTOR LOAD	5	1-P	61.125%
			6
			2.0

TOTAL CONNECTED LOAD	15	6-0
TOTAL AMP LEAD CAP	17	40/95 AT 480 VOLTS 3 PHASE 4 WIRE

2 LOAD ANALYSIS  
SCALE: N.T.S.



3 ONE-LINE DIAGRAM  
SCALE: N.T.S.

**GENERAL NOTES:**

1. REFER TO SHEETS 1-D FOR GENERAL NOTES.

2. ALL CONDUIT FITTINGS, BONES AND CONTROL PANELS SHALL BE WATER PROOF TYPE.

**KEY NOTES:**

1. POWER FAILURE MONITOR.

2. TRANSIENT VOLTAGE SURGE SUPPRESSION.

3. PUMP CONTROL PANEL FURNISHED BY PUMP SUPPLIER AND INSTALLED BY ELECTRICAL CONTRACTOR.

4. FURNISH AND INSTALL 186.7/4" C.

5. FURNISH AND INSTALL 384, 1810S, 1/2" 1/4" C.

6. FURNISH AND INSTALL 484, 1810S, 1/2" 1/4" C.

7. FURNISH AND INSTALL SERVICE RATED 60A/1P CIRCUIT BREAKER WITH 50K ARC RATING IN A NEMA 4X 316 STAINLESS STEEL ENCLOSURE AND INTERLOCKING KEY BREAKERS SHALL BE ACCESSIBLE WITHOUT OPENING COVER.

8. FURNISH AND INSTALL 3-POLE DOUBLE THROW 250-AMPERE SWITCH BOARD TYPE 220V 155A MANUAL TRANSFER CLASS 314 NEMA 4X 116-15.

9. PVC COATED RIGID METAL CONDUIT.

10. FURNISH AND INSTALL AREA LIGHT, ULTRAVIOLET RAY, 100W, POLE SHALL BE 14'-00".

11. 2" 3/4" GFCI (1) SUBMERSIBLE POWER CABLE AND 500' FOR SEA. FAILURE IN EACH CONDUIT SUBMERSIBLE POWER CABLE FURNISHED BY THE PUMP SUPPLIER, INSTALLED BY THE ELECTRICAL CONTRACTOR.

12. FURNISH AND INSTALL 4" GALVANIZED POST AND CAP HEIGHT AS INDICATED. FURNISH AND INSTALL STRAPS AND EPOXY COATED STEEL MANHOLE SUPPORT FOR EQUIPMENT INDICATED.

13. SEAL FITTINGS LISTED FOR CLASS I, GROUP D, DIVISION 1, BELOW PACKAGE PUMP CONTROL PANEL FOR CONDUITS PENETRATING BARRIER BETWEEN CLASSIFIED AND UNCLASSIFIED AREAS AS PER 2008 NFPA 70A.

14. FLOAT SWITCHES BY PUMP CONTROL SUPPLIER CABLE FURNISHED WITH LOADS.

15. POWER CABLES FURNISHED AND FACTORY INSTALLED WITH PUMPS.

16. FURNISH AND INSTALL HUBBELL MS10087R 15CA 277/480V 1P-5W PWR AND SUPPLY OR AS SPECIFIED BY OWNER.

17. 2" MINIMUM FOR ANY ELECTRICAL EQUIPMENT.

18. INTEGRAL WATERPROOF LIGHT SWITCH.

19. MOUNT HIGH ALARM LIGHT 36" ABOVE FENCE.

20. FURNISH AND INSTALL WYE-DELTA STARTER (CLOSE TRANSITION) 220V NEMA SIZE 1.

21. CONTINUES TO PENTA POLE.

22. FURNISH AND INSTALL 1/2" COLE FIT GROUNDING SYSTEM REFER TO DETAILS FOR REQUIREMENTS.

23. 400 POWER METER.

24. WEATHER HEAD AND SUPPORT FOR POWER AND TELEPHONE UTILITIES.

25. FURNISH AND INSTALL INTERSYSTEMS GROUNDING BUS BAR (TRAB); REFER TO DETAILS FOR REQUIREMENTS. ALL BONDING TERMINATIONS SHALL BE GALVANIZED.

26. FURNISH AND INSTALL 2"x2" NEMA 4, 316 STAINLESS STEEL ENCLOSURE WITH TERMINAL BLOCKS FOR INTERFACE BETWEEN THE POWER AND COMMUNICATIONS AND THE SCADA RTU. ENCLOSURE SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. ALL CONNECTORS FROM THE INTERFACE ENCLOSURE TO THE RTU SHALL BE BY THE SCADA MANUFACTURER. REFER TO LIFT STATION CONTROLS SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

27. FURNISH AND INSTALL SCADA RTU. REFER TO DETAILS FOR REQUIREMENTS.

28. REFER TO DETAILS FOR ANTI-EMF AND TOWNSHIP REQUIREMENTS.

29. FURNISH AND INSTALL LOW LOSS, ULTRA FLEX 50-DHM COAXIAL CABLE (LIFTED FOR 500-1000 FEET) EQUAL TO COMMENSURE 1/2" W/HEAR SMOOTHWALL ALUMINUM CABLE OR EQUIVALENT A 3/4" RIGID METAL CONDUIT BOND CONDUIT AT BOTH ENDS. KEEP CABLE LENGTH TO A MINIMUM TO AVOID SIGNAL LOSS.

30. FURNISH AND INSTALL 48V/48-BAY TYPE TRANSFORMER, WITH NEMA 4X 154 50A/155 1" FEET ENCLOSURE. PRIMARY FEEDERS CONSIST OF 384, 1810S, 1/2" CONDUIT SECONDARY FEEDERS CONSIST OF 48/30, 1850, 1/2" 1/4" C.

HIDALGO COUNTY PRECINCT NO. 4  
**SUNFLOWER PARK - PHASE ONE**  
HIDALGO COUNTY, TEXAS  
LIFT STATION PLAN AND DETAILS

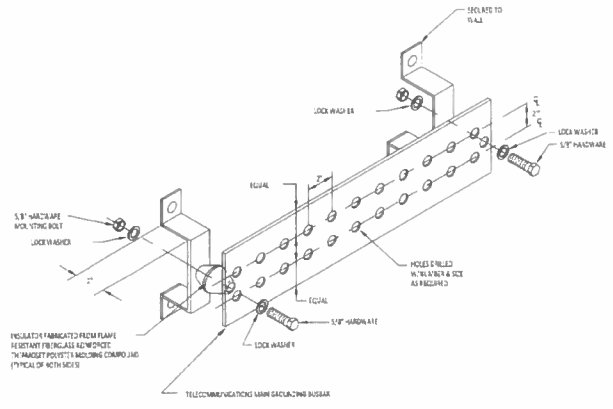
**LEFEVRE**  
ENGINEERING &  
MANAGEMENT CONSULTING LLC.

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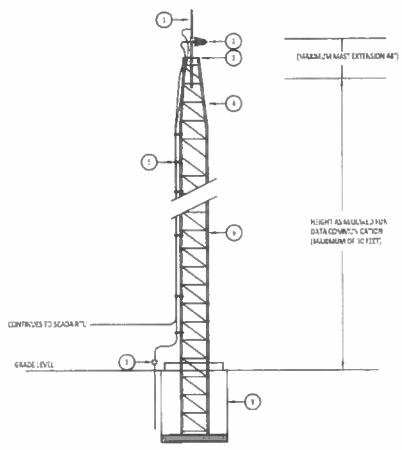
**SIGMA**  
ENGINEERS

TBPE Firm No. F-14767  
701 S. 15th Street  
McAllen, Texas 78501





**1 WALL MOUNTED SINGLE-PORT GROUND BAR DETAIL**  
SCALE: N.T.S.



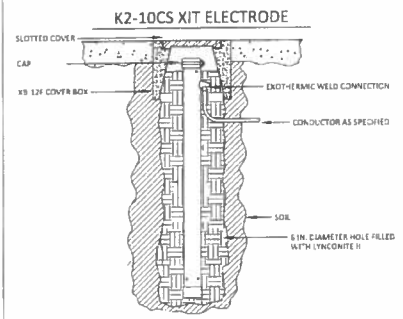
**2 YAGI ANTENNA AND 30 FOOT TOWER DETAIL**  
SCALE: N.T.S.

**KEY NOTES:**

1. FURNISH AND INSTALL 5 FOOT COPPER CLAD AIR TERMINAL EQUAL TO AOHM-14CL. FURNISH WITH GROUNDING KIT.
2. FURNISH AND INSTALL YAGI-YUDA (QJA) TO AOH RADW BROTHERS. FURNISH WITH MOUNTING CLAMP, AND 50 OHM COAX CABLE CONNECTOR AND JUMPER.
3. FURNISH AND INSTALL LIGHTNING ROD MOUNTING PLATE EQUAL TO AOHM-AP125G.
4. FURNISH AND INSTALL QTY (1) 9'-8" ANTENNA TOP SECTION EQUAL TO AOHM-25AG2.
5. COAX CLAMP AND HANGER, CLAMP COAX CABLE TO MAST AT 3-FOOT INTERVALS.
6. FURNISH AND INSTALL QTY (2) 25G-10 FOOT SECTIONS.
7. FURNISH AND INSTALL ELECTRODE CONDUCTOR W/EP. MAKE CONNECTIONS TO LYRICITE AIR GROUNDING SYSTEM. REFER TO ELEC-RDDE XIT GROUNDING DETAIL FOR REQUIREMENTS.
8. REFER TO STRUCTURAL DRAWINGS FOR DETAILS REGARDING THE TOWER CONCRETE PIER.

**NOTES:**

- STRAIGHT SHAFT MODEL: INFORMATION & SPECIFICATIONS:
- A. SHAFT CONFIGURATION: STRAIGHT, STANDARD LENGTH: 10 FEET
  - B. UL AND CSA LISTING: 467
  - C. LYRICITE BACKFILL MEETS ANHUSVET ENVIRONMENTAL STANDARD 63
  - D. MATERIAL: TYPE 6 COPPER 0.087 NOMINAL WALL THICKNESS.
  - E. CONSTRUCTION: HOLLOW TUBE, 2 1/2" O.D., FILLED WITH NON HAZARDOUS SALTS (CALSOITE).
  - F. WEIGHT: 3.5 LBS PER LINEAL FOOT.
  - G. GROUND WIRE TERMINATION: EXOTHERMIC CONNECTION TO CONDUCTOR. FRYW #8 SOLID AWG TO 750 MCM. U-BOLT WITH PRESSURE PLATE PROVIDED AS TEST POINT.
  - H. MINIMUM LIFE EXPECTANCY: 50 YEARS. WARRANTY: 20 YEARS.
  - I. STRAIGHT SHAFT MODEL NO: K2-10CS



**3 XIT ELECTRODE INSTALLATION**  
SCALE: N.T.S.

**GENERAL NOTES:**  
1. REFER TO SHEET ES-1 FOR GENERAL NOTES  
2. ALL EXHIBIT FITTINGS, METALS AND LITERALS PANELS SHALL BE WATER PROOF TYPE.

REV.	DATE	DESCRIPTION	APPROVED
1			
2			
3			
4			

HIDALGO COUNTY PRECINCT NO. 4  
SUNFLOWER PARK - PHASE ONE  
HIDALGO COUNTY, TEXAS  
LIFT STATION PLAN AND DETAILS



JEFFERY L. LEFEVRE  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF TEXAS  
LICENSE NO. 10412

**LEFEVRE**  
ENGINEERING &  
MANAGEMENT CONSULTING, LLC

**SIGMA**

TBPE Firm No. F-14767  
701 S. 15<sup>th</sup> Street  
McAllen, Texas 78501

Drawn	JV
Scale	
Checked	JAN
Date	MARCH, 2014
Job No.	13038
Sheet	E-1.2

Y:\PROJ\13038\13038\_McAllen\_TBPE\14-000001\_Plan\_Lift Station.dwg: 11/23/14 11:28:14 AM 4:01PM Jlgp@sigma\_je



PO Number	394985	Vendor No	390526	PO Total	92,240.00
PO Date	07-10-2013	Vendor Name	LEFEVRE ENGINEERING & MANAGEMENT	Payment Total	66,472.00
Requisition No	00238895	Address	CONSULTING, LLC		
Owner	VLOPEZ		612 NOLANA, SUITE 520		
PO Type			MCALLEN, TX 78504		

Detail		Header	Payment Info	Journals		
Line No	Ordered	Quantity Received	Canceled	Description	Unit Price	Amount
1	1			WA #1- Professional Engineering Services for Sunflower Road Par	89,270.000	89,270.00
2	1	0	0	09/23/14 INCREASE SUPPLEMENTAL AGREEMENT #1 APPROVED (	2,970.000	2,970.00
					<b>Total</b>	<b>92,240.00</b>
Account Number				Description	Amount	Amount Liq
4-1336-452-00-124-132-0-739				CO2006-PCT4 SUNFLOWER PARK-OTHER STRUC	45,950.00	45,950.00
4-1100-452-00-124-149-0-843				PCT4 LIFT STATION- SCCRC-AID TO NONGOVT	46,290.00	20,522.00

Purchase Order Inquiry - FLINQ01A		04/16/14 4:10 PM																					
PO Number	694985	Vendor No	390526																				
PO Date	07-10-2013	Vendor Name	LEFEVRE ENGINEERING & MANAGEMENT																				
Requisition No	00238895	Address	CONSULTING, LLC																				
Owner	VLOPEZ		612 NOLANA, SUITE 520																				
PO Type			MCALLEN, TX 78504																				
		<b>PO Total</b>	<b>89,270.00</b>																				
		<b>Payment Total</b>	<b>66,472.00</b>																				
<table border="1"> <thead> <tr> <th>Detail</th> <th>Header</th> <th>Payment Info</th> <th>Journals</th> </tr> </thead> <tbody> <tr> <td>Line No</td> <td>Ordered</td> <td>Quantity Received</td> <td>Canceled</td> </tr> <tr> <td>1</td> <td>1</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td colspan="2"></td> <td><b>Total</b></td> <td><b>89,270.00</b></td> </tr> </tbody> </table>				Detail	Header	Payment Info	Journals	Line No	Ordered	Quantity Received	Canceled	1	1			2	1	0	0			<b>Total</b>	<b>89,270.00</b>
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4-1100-452-00-124-149-0-843	PCT4 LIFT STATION- SCCRC-AID TO NONGOV	43,320.00	20,522.00																				

0.\*

Budget 89,270.00+  
 Onsite 45,950.00-  
 Offsite 20,522.00-  
 -0.1  
 Available Offsite 22,798.00\*  
  
 Available balance 22,798.00+  
 Amendment increase 2,970.00+  
 PO 002  
 Available Offsite 25,768.00\*

