

HIDALGO COUNTY PRECINCT NO. 04

EDINBURG, TX

SITE LIGHTING FOR SAN MANUEL - LINN REST STOP

COMMISSIONER'S COURT

HON. RAMON GARCIA
A.C. CUELLAR, JR.
HECTOR (TITO) PALACIOS
JOE M. FLORES
JOSEPH PALACIOS

COUNTY JUDGE
COMMISSIONER PCT .1
COMMISSIONER PCT .2
COMMISSIONER PCT .3
COMMISSIONER PCT .4

PROJECT TEAM

INDEX OF DRAWINGS

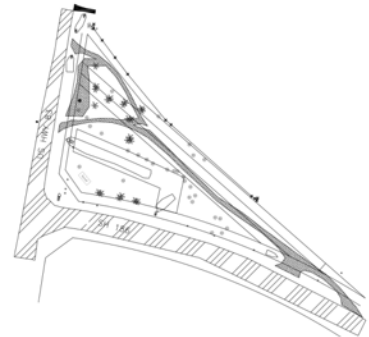
KEY PLAN

LOCATION

OWNER:
HIDALGO COUNTY
PRECINCT No. 04
1051 N. DOOLITTLE RD.
EDINBURG, TEXAS 78542
TEL: 956.383.3112
FAX: 956.381.5905
JOSEPH PALACIOS,
COMMISSIONER PCT.4

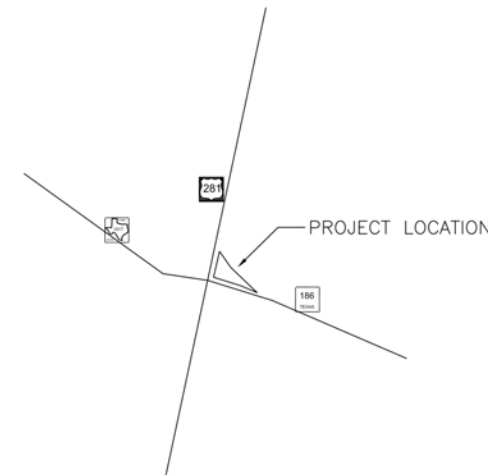
CONTRACTOR
FACILITY SOLUTIONS GROUP
8018 W. EXPRESSWAY 83
HARLINGEN, TX 78552
T: 956.797.4191
F: 956.797.4198
ANTONIO OLIVARES

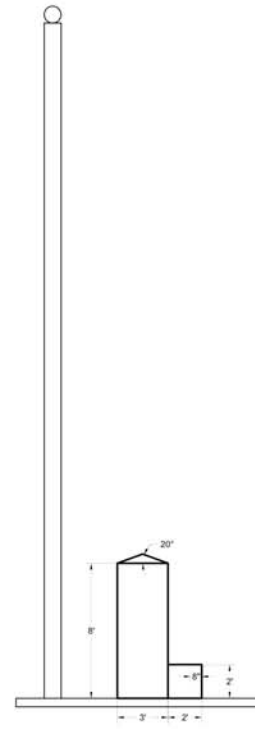
A0 COVER
A1 MONUMENT LAYOUT
E1 SITE LIGHTING
E2 ELECTRICAL SCHEDULES/DETAILS



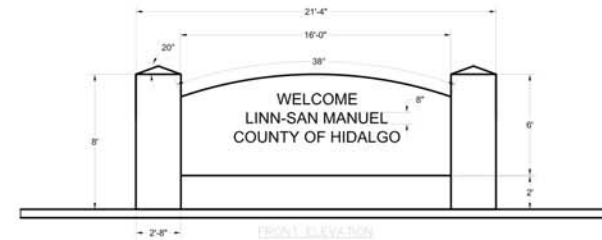
MEP ENGINEER:
HALFF ASSOCIATES
5000 W. MILITARY HWY
MCALLEN, TX 78503
T: 956.664.0286
F: 956.664.0282
THOMAS E. DEARMIN P.E.

PRODIGY CONSTRUCTION MANAGMENT, LLC
1335 E. JASMINE AVE
MCALLEN, TX 78501
T: 956.800.1122
F: 956.664.1832
HUGO H. AVILA, P.E.

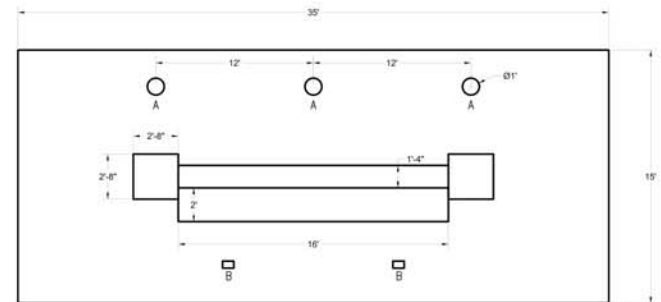




LEFT SIDE VIEW



FRONT ELEVATION



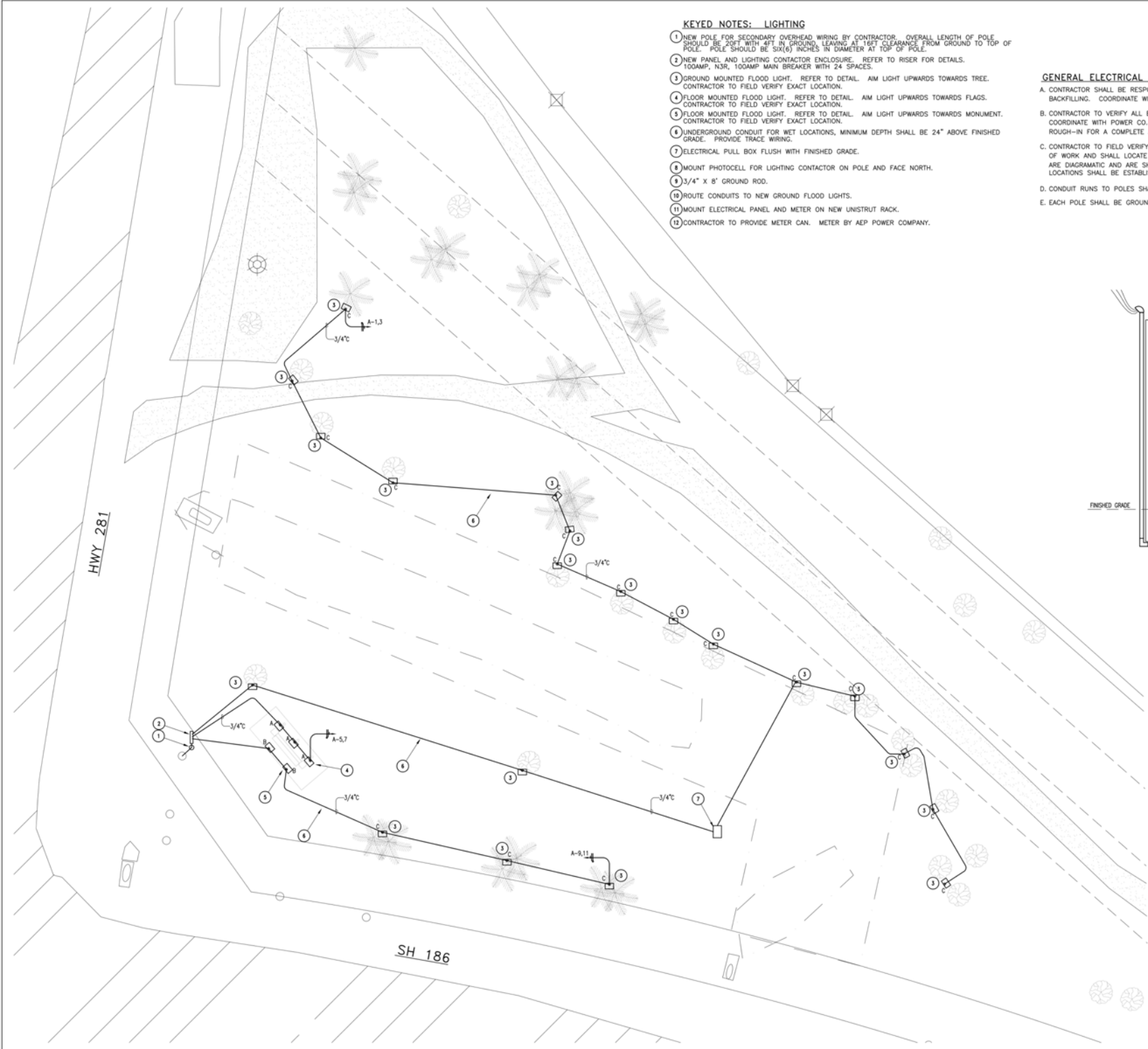
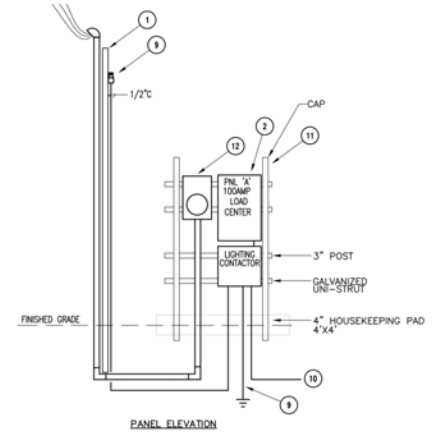
TOP VIEW

KEYED NOTES: LIGHTING

- 1 NEW POLE FOR SECONDARY OVERHEAD WIRING BY CONTRACTOR. OVERALL LENGTH OF POLE SHOULD BE 20FT WITH 4FT IN GROUND, LEAVING AT 16FT CLEARANCE FROM GROUND TO TOP OF POLE. POLE SHOULD BE SIX(6) INCHES IN DIAMETER AT TOP OF POLE.
- 2 NEW PANEL AND LIGHTING CONTACTOR ENCLOSURE. REFER TO RISER FOR DETAILS. 100AMP, N3R, 100AMP MAIN BREAKER WITH 24 SPACES.
- 3 GROUND MOUNTED FLOOD LIGHT. REFER TO DETAIL. AIM LIGHT UPWARDS TOWARDS TREE. CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
- 4 FLOOR MOUNTED FLOOD LIGHT. REFER TO DETAIL. AIM LIGHT UPWARDS TOWARDS FLAGS. CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
- 5 FLOOR MOUNTED FLOOD LIGHT. REFER TO DETAIL. AIM LIGHT UPWARDS TOWARDS MONUMENT. CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
- 6 UNDERGROUND CONDUIT FOR WET LOCATIONS, MINIMUM DEPTH SHALL BE 24" ABOVE FINISHED GRADE. PROVIDE TRACE WIRING.
- 7 ELECTRICAL PULL BOX FLUSH WITH FINISHED GRADE.
- 8 MOUNT PHOTOCELL FOR LIGHTING CONTACTOR ON POLE AND FACE NORTH.
- 9 3/4" X 8' GROUND ROD.
- 10 ROUTE CONDUITS TO NEW GROUND FLOOD LIGHTS.
- 11 MOUNT ELECTRICAL PANEL AND METER ON NEW UNISTRUT RACK.
- 12 CONTRACTOR TO PROVIDE METER CAN. METER BY AEP POWER COMPANY.

GENERAL ELECTRICAL NOTES

- A. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION, TRENCHING AND BACKFILLING. COORDINATE WITH ALL UTILITIES PRIOR TO EXCAVATION.
- B. CONTRACTOR TO VERIFY ALL EXISTING MAIN POWER AND OTHER UTILITIES. COORDINATE WITH POWER CO. FOR ALL REQUIREMENTS PRIOR TO ANY ROUGH-IN FOR A COMPLETE AND OPERABLE SYSTEM.
- C. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK AND SHALL LOCATE ALL CONDUITS ACCORDINGLY. CONDUIT LOCATIONS ARE DIAGRAMATIC AND ARE SHOWN FOR GENERAL ROUTING. EXACT CONDUIT LOCATIONS SHALL BE ESTABLISHED PER EXISTING CONDITIONS.
- D. CONDUIT RUNS TO POLES SHALL BE A MINIMUM DEPTH OF 24" DEEP.
- E. EACH POLE SHALL BE GROUNDED WITH A 5/8" X 8' GROUND ROD WITH A #6 SOLID GROUNDING WIRE.



ELECTRICAL LEGEND

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

SYMBOL	DESCRIPTION	MNTG. HT. UNO (SEE NOTE 1)
	2'x4' FLUORESCENT LIGHT FIXTURE	SEE FIX. SCH.
	1'x4' FLUORESCENT LIGHT FIXTURE	SEE FIX. SCH.
	GROUND MOUNTED FLOOD LIGHT	SEE FIX. SCH.
	CLG. OR WALL MTD.	
	EXIT LIGHT, CEILING OR WALL MOUNTED -- SHADING INDICATING SINGLE OR DOUBLE FACE, DIRECTIONAL ARROWS AS INDICATED	9" BFC
	WALL SWITCH SPST, 20A/120/277V	48" AFF
	DOUBLE POLE TOGGLE SWITCH, 20A/120/277V	48" AFF
	3-WAY WALL SWITCH, 20A/120/277V	48" AFF
	WALL DIMMER SWITCH(1000 WATTS)	48" AFF
	DUPLEX RECEPTACLE -- 20A/125V/2P/3W/G NEMA 5-20R	15" AFF
	DUPLEX RCPT. GFI -- 20A/125V/2P/3W/G NEMA 5-20R	15" AFF
	QUADRAPLEX RECEPTACLE	15" AFF
	FLOOR MOUNTED RECEPTACLE	
	208V RECEPTACLE, VERIFY NEMA NO. WITH EQUIPMENT SUPPLIER	
	SPECIAL PURPOSE RECEPTACLE (NEMA NO. AS INDICATED)	15" AFF
	JUNCTION BOX -- SIZE & MOUNTING AS REQUIRED	AS REQD.
	WALL MOUNTED TELEPHONE/DATA OUTLET, FURNISH AND INSTALL 3/4" C., WITH PULLSTRING AND INSULATED BUSHING, STUBBED ABOVE CEILING.	15" AFF
	TELEPHONE BOARD	----
	PHOTO CELL	ON ROOF
	LIGHTING CONTACTOR	54" AFF
	HEAVY DUTY DISCONNECT SWITCH FUSED	AS REQD.
	HEAVY DUTY DISCONNECT SWITCH NONFUSED	AS REQD.
	MOTOR	AS REQD.
	PANELBOARD, CLEARANCE AS PER LATEST NEC	AS REQD.
	SWITCH LEG	----
	ELECTRICAL CONDUIT	----
	UNDERGROUND ELECTRICAL CONDUIT	----
	MULTI-POLE DEVICE CIRCUIT NUMBERS	----
	THREE SINGLE POLE DEVICE CIRCUIT NUMBERS	----
	CONDUIT AND WIRE HOMERUN TO PANEL. SHORT HATCH INDICATES NEUTRAL CONDUCTOR, LONG HATCHES INDICATE PHASE CONDUCTORS, AND LONG HATCH WITH GIRCLE INDICATES ISOLATES OR INSULATED GROUND. ALPHANUMERIC DESCRIPTION INDICATES PANEL AND BREAKER.	⊕
	UNDERGROUND CONDUIT AND WIRE HOMERUN TO PANEL. SHORT HATCH INDICATES NEUTRAL CONDUCTOR, LONG HATCHES INDICATE PHASE CONDUCTORS, AND LONG HATCH WITH GIRCLE INDICATES ISOLATED OR INSULATED GROUND. ALPHANUMERIC DESCRIPTION INDICATES PANEL AND BREAKER.	⊕
	DETAIL NUMBER	
	SHEET NUMBER	

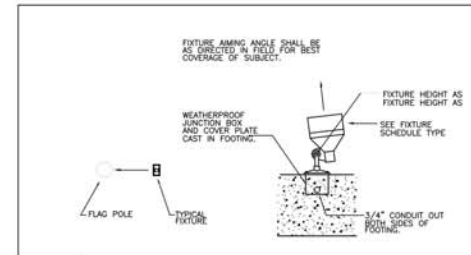
ELECTRICAL ABBREVIATIONS:

ABBY:	DESCRIPTION	ABBY:	DESCRIPTION
AFB	ABOVE FINISHED FLOOR	(S.C.)	SHARE CIRCUIT
BFC	BELOW FINISHED CEILING	RCPT(S)	RECEPTACLE(S)
C	CONDUIT	PNL	PANEL
CB	CIRCUIT BREAKER	SO (S.O.)	SPACE ONLY
EC	EMPTY CONDUIT	SP	SPARE
EX	EXISTING	ST (S.T.)	SHUNT TRIP
F	FUSE	SW	SWITCH
G	GROUND (EQUIPMENT)	UF	UNDERFLOOR
GFI	GROUND FAULT INTERRUPTER	UG	UNDERGROUND
MFD	MOUNT OR MOUNTED	UNO(U.N.O.)	UNLESS NOTED OTHERWISE
NF	NONFUSED	WG	WIRE GUARD
NC	NOT IN CONTACT	WP	WEATHERPROOF
H.O.	HEAVY DUTY	KFR	TRANSFORMER
NL	NIGHT LIGHT	AFDI	ARC FAULT CIRCUIT INTERRUPTER
AC	ABOVE COUNTER		
HT.	MOUNTING		

PANEL A LOCATION: EXTERIOR	AMP(LUGS/NEMA VILL)		(P)		(W)		V(LN)		MNT		KAC		FOR	
	100	MB	1	240	1	3W	120	S	10	1-RUN	3MS	1MSG	1 1/2"	C
LOAD SERVED	OCT	LOAD	BKR	POLE	FEEDER		FEEDER		POLE	BKR	LOAD	OCT	LOAD SERVED	
FLOOD LIGHTS	1	0.4	20	2	2#12, 1#12G, 3/4"		2#12, 1#12G, 1/2"		1	20	2	SPARE (IRRIGATION) LIGHTING CONTACTOR		
FLOOD LIGHTS	5	0.1	20	2	2#12, 1#12G, 3/4"		2#12, 1#12G, 1/2"		1	20	0.1	4		
FLOOD LIGHTS	7	0.1			-		-					8		
FLOOD LIGHTS	9	0.2	20	2	2#12, 1#12G, 3/4"		-					10		
	11	0.2			-		-					12		
	13				-		-					14		
	15				-		-					16		
	17				-		-					18		
	19				-		-					20		
	21				-		-					22		
	23				-		-					24		
LOADS	-- (KVA)				1		1				(KVA)		DESCRIPTIVE LOADS	
CONNECTED LOAD	-- 2										1		LIGHTING	
RESERVE	25 % 0										0		RECEPTACLES	
TOTAL LOAD	2										0		COOLING	
											0		HEATING	
											0		OTHER	
TOTAL AMPS	8													

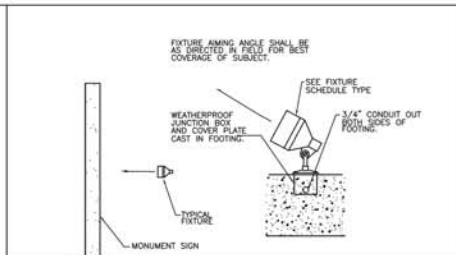
LIGHT FIXTURE SCHEDULE

MARK	VOLTAGE	WATTAGE	LAMP	MOUNTING	DESCRIPTION	MANUFACTURER	MODEL NO
A	240	78	LED	GROUND	HIGH POWER, WIDE DISTRIBUTION LED FLOOD LIGHT	RAB LIGHTING	FXLED78SF
B	240	18	LED	GROUND	RECTANGULAR SHAPED LED FLOOD LIGHT	RAB LIGHTING	FFLED18
C	240	39	LED	GROUND	RECTANGULAR SHAPED LED FLOOD LIGHT	RAB LIGHTING	FFLED39



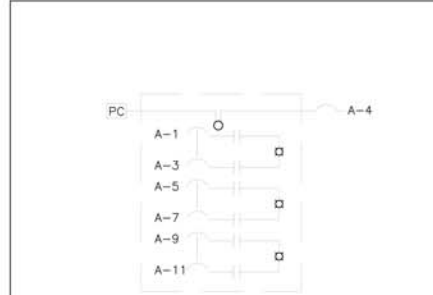
02 FIXTURE MOUNTING DETAIL - TYPE 'A'

SCALE: NONE



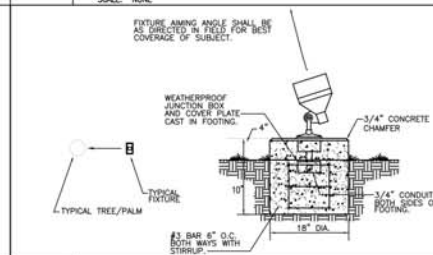
03 FIXTURE MOUNTING DETAIL - TYPE 'B'

SCALE: NONE



01 LIGHTING CONTACTOR SCHEMATIC

SCALE: NONE



04 FIXTURE MOUNTING DETAIL - TYPE 'C'

SCALE: NONE

I. GROUND BOX

A. MATERIAL AND CONSTRUCTION GENERAL NOTES

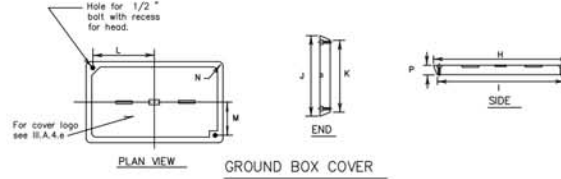
- Ground boxes 16x30x24 inches (WxDxH) or smaller shall be polymer concrete of the type required by the descriptive code shown elsewhere. Larger ground boxes shall be as shown elsewhere in the plans.
- All ground boxes and covers shall be permanently marked either by impress or by permanent ink, with manufacturer's model number and manufacturer's name or logo.
- Covers shall be bolted down, and bolt holes in the box shall be arranged to drain dirt.
- Ground box Types P AND C shall meet the following requirements:
 - Ground boxes and covers be manufactured from polymer concrete reinforced with continuous strands of woven or stitched borosilicate fiberglass cloth. The polymer concrete shall be made from catalyzed polyester resin, sand and aggregate, and shall have a minimum compressive strength of 11,000 psi. Polymer concrete containing chopped fiberglass or fiberglass reinforced plastic is not acceptable.
 - Minimum inside dimensions shall be as follows (width x length x depth):
 - Type C shall be 24 inches x 24 inches x 18 inches. TYPE P shall be 24 inches x 36 inches x 24 inches.
 - Ground boxes shall withstand 600 lbs. per sq. ft. applied over the entire sidewall with less than 1/4 inch deflection per foot length of box. Ground boxes and covers shall withstand a test loading of 20,000 lbs. over a 10 inch by 10 inch area centered on the cover with less than 1/2 inch deflection.
 - Covers shall be 2 inch (nominal) thick polymer concrete. Cover shall be secured. Covers shall be solid resistant, minimum 0.5 coefficient of friction. Covers shall be interchangeable between manufacturers and shall conform to the dimensions shown herein. Unless otherwise stated.

B. CONSTRUCTION METHODS

- Ground boxes shall be set on a 9 inch (minimum) bed of coarse No. 1 aggregate as defined by item 421. Gravel shall be in place prior to setting box and conduits shall be copped. Any gravel or dirt in conduit shall be removed.
- Reinforcing steel may be field bent. Concrete for apron shall be cast in place.

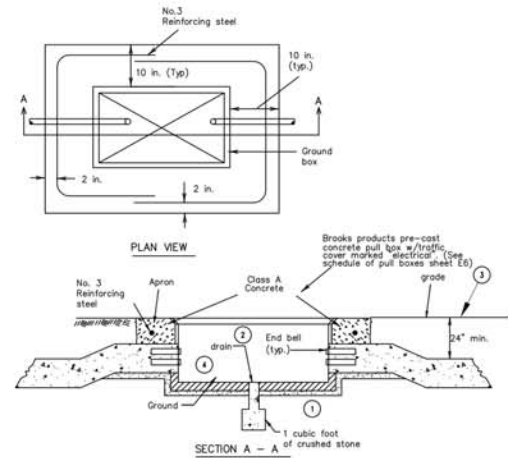
C. GROUND BOX SUPPLIER INFORMATION

- Similar to Brooks box type 67PBB, concrete electrical cover type 67PBC230, base 67MBBS, extension 67MBB. Contact phone number: Contact phone number (688) 307-7470.



GROUND BOX COVER

BOX SIZE	GROUND BOX COVER DIMENSIONS (INCHES)							
	H	I	J	K	L	M	N	P
A	23 1/4	23	13 3/4	13 1/2	9 7/8	5 1/8	1 3/8	2



APRON FOR GROUND BOXES

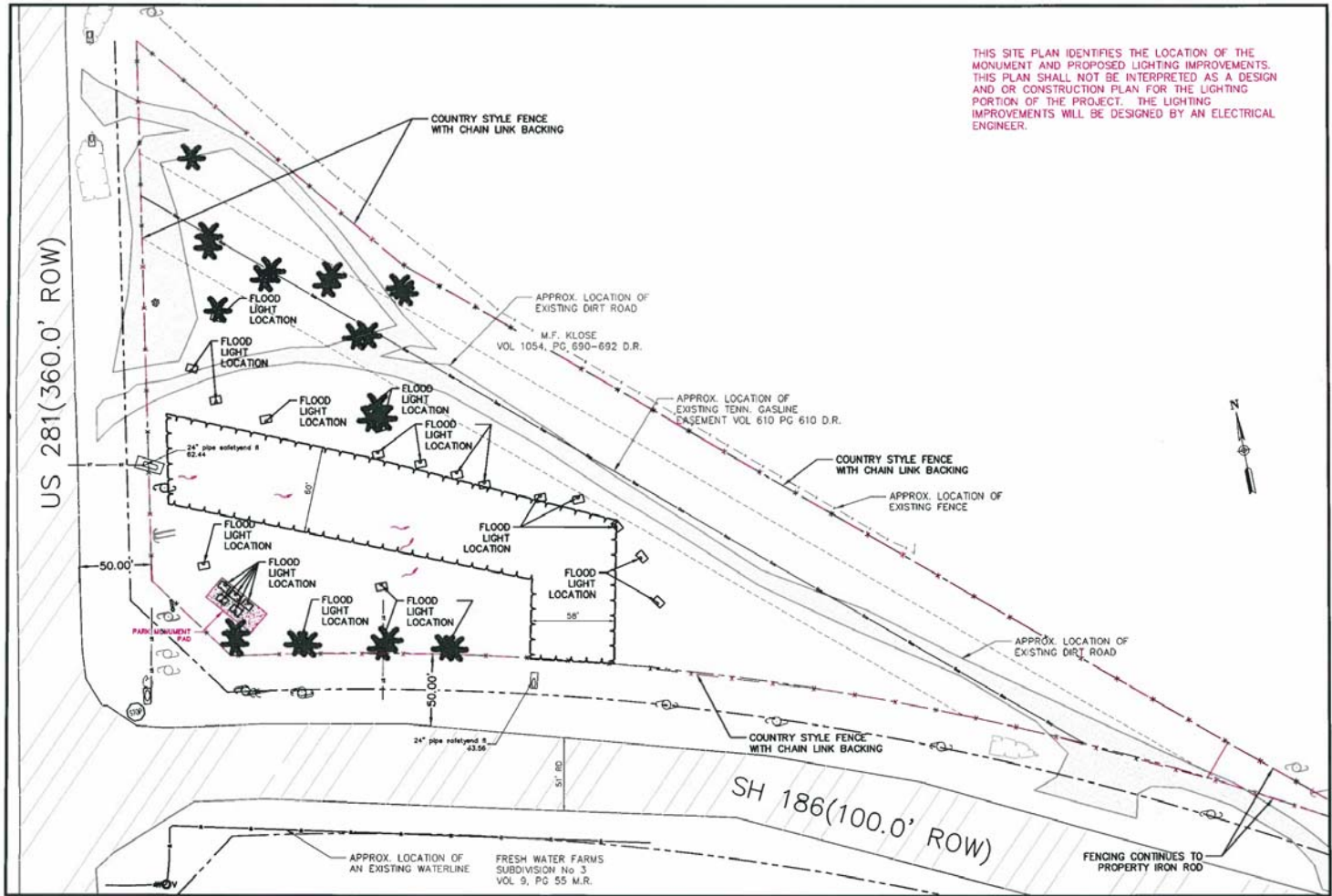
(Where required)

- Place gravel "under" the box, not "in" the box. Gravel should not encroach on the interior volume of the box.
- Maintain sufficient space between all conduits so as to allow for proper installation of bushings.
- All conduits shall be installed in a neat and workmanlike manner.
- All conduits installed in the ground box shall be sealed after completion of conductor installation and any required pull tests. Silicone shall not be used as sealant.

05 ELECTRICAL PULL BOX DETAIL

SCALE: NONE

THIS SITE PLAN IDENTIFIES THE LOCATION OF THE MONUMENT AND PROPOSED LIGHTING IMPROVEMENTS. THIS PLAN SHALL NOT BE INTERPRETED AS A DESIGN AND OR CONSTRUCTION PLAN FOR THE LIGHTING PORTION OF THE PROJECT. THE LIGHTING IMPROVEMENTS WILL BE DESIGNED BY AN ELECTRICAL ENGINEER.



HIDALGO COUNTY
PLANNING DEPARTMENT
1000 W. 10TH ST. SUITE 100
SAN ANTONIO, TEXAS 78205
TEL: 214-343-2200 FAX: 214-343-2201
WWW.HIDALGOCOUNTYTX.GOV

COMMISSIONER
JOSEPH PALADIOS
HIDALGO COUNTY PCT 4
DRAINAGE IMPROVEMENTS PROJECT

SAN MANUEL PROJECT
(US 281 AND SH 186)
SITE IMPROVEMENT PLAN

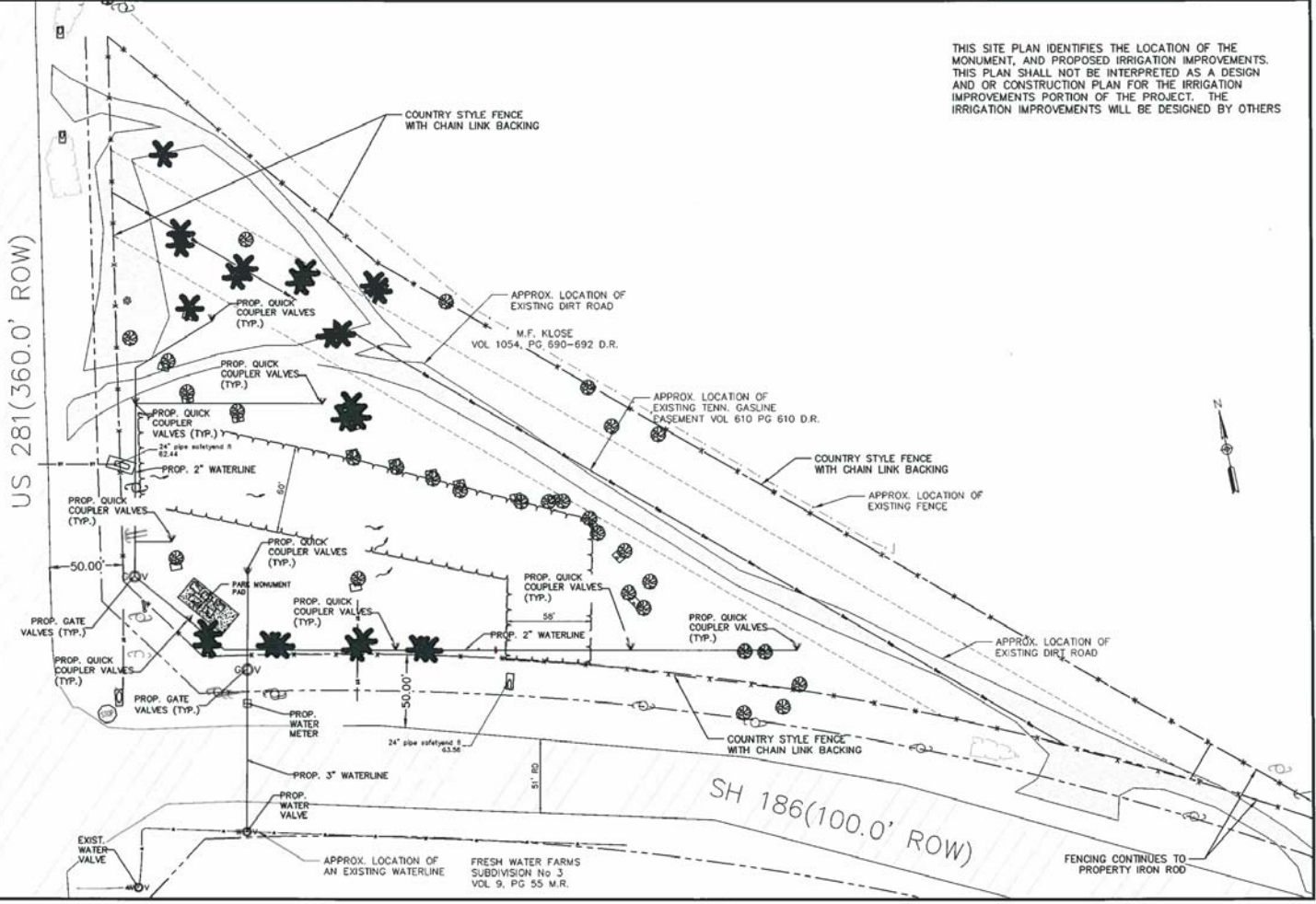
SCALE: 1"=100'
DRAWN BY: CYNTHIA PEREZ
CHECKED BY: RAUL E. SESIN
DATE: 02/20/13

APP. NO. 13-000001
DATE: 02/20/13

S-3

THIS SITE PLAN IDENTIFIES THE LOCATION OF THE MONUMENT, AND PROPOSED IRRIGATION IMPROVEMENTS. THIS PLAN SHALL NOT BE INTERPRETED AS A DESIGN AND OR CONSTRUCTION PLAN FOR THE IRRIGATION IMPROVEMENTS PORTION OF THE PROJECT. THE IRRIGATION IMPROVEMENTS WILL BE DESIGNED BY OTHERS

US 281(360.0' ROW)



SH 186(100.0' ROW)



COMMISSIONER
 JOSEPH PALACIOS
 HIDALGO COUNTY PCT 4
 DRAINAGE IMPROVEMENTS
 PROJECT

SAN MANUEL PROJECT
 (US 281 AND SH 186)
 IRRIGATION
 IMPROVEMENT LAYOUT

SCALE: 1"=100'
 DRAWN BY: CYNTHIA PEREZ
 CHECKED BY: RAJA E. SEGAN
 DATE: 08/11/2010
 SHEET: S-4