

ALL PANELBOARDS, TRANSFORMERS, TRANSFER SWITCH KIT AND DISCONNECTS WILL BE SUPPLIED BY THE OWNER (O'REILLY). ELECTRICAL GEAR SHALL BE DIRECT ORDERED AND/OR RELEASED FROM THE LISTED ELECTRICAL EQUIPMENT DISTRIBUTOR. SEE "ELECTRIC SERVICE RESPONSIBILITIES" FOR ADDITIONAL CLARIFICATION.

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GRAYBAR O'REILLY TEAM  
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MP EXISTING PANELBOARD SCHEDULE											
MAINS: 400A MAIN LUGS ONLY		VOLTAGE: 240		ACCESSORIES:							
TYPE: SQUARE D, NQOD	PHASE: 1#, 3#	EQUIPMENT GROUND BAR		ISOLATED GROUND BAR		3. ** GFI BREAKER CKT. #11 & #17		4. * MUST BE TYPE "HACR" BREAKER			
MOUNTING: SURFACE		WIDTH: 20									
SCCR: EXISTING		SPACE(S): 42									
CKT	CKT BRK	WIRE	LOAD DESCRIPTION	(KVA)	(A)(KVA)	(B)(KVA)	(C)(KVA)	LOAD DESCRIPTION	WIRE	CKT BRK	CKT
1	20A/1P		SPARE	0	3.50		3.50	CDU-1	#6s	60A/2P	2
3	20A/1P		SPARE	0		3.50	3.50				4
5	20A/1P		SPARE	0	3.50		3.50				6
7	20A/1P	#12s	CHECK IN RECP. (E.G.)	0.50		4.00	3.50	CDU-2	#6s	60A/2P	8
9	20A/1P		SPARE	0	3.50		3.50				10
11	**20A/1P	#12s	WATER COOLER RECEPT.	0.90		4.40	3.50	CDU-3	#6s	60A/2P	12
13	20A/1P	#12s	CDU RECEPTABLES	0.54	4.04		3.50	CDU-4	#6s	60A/2P	14
15	20A/1P		SPACE	0		3.50	3.50				16
17	**20A/1P	#12s	RECEPTABLES	0.36	0.36		0	SPACE			18
19	15A/1P		SPARE	0	0.00		0	SPACE			20
21	20A/1P		SPARE	0	0.00		0	SPACE			22
23	60A/2P	#6s	EFU-1	5.65	5.65		0	SPACE			24
25				5.65	5.65		0	SPACE			26
27	125A/2P		PANEL "PLP"	10.13	10.13		0	SPACE			28
29				8.84	8.84		0	SPACE			30
31	60A/2P	#6s	EFU-2	5.65	5.65		0	SPACE			32
33				5.65	5.65		0	SPACE			34
35	15A/2P	#12s	EX. ADM-1204	0.05	5.70	5.65		EFU-3	#6s	60A/2P	36
37				0.05	5.70	5.65					38
39	15A/1P	#12s	LIGHTING CONTROL PANEL-1	0.70		6.35	5.65	EFU-4	#6s	60A/2P	40
41	15A/1P	#12s	AUX. TRANSFORMER BOX	0.60	6.25		5.65				42
TOTAL PHASE A (KVA)		TOTAL PHASE B (KVA)		TOTAL CONNECTED LOAD (KVA)		TOTAL AMPS					
46.99		48.98		95.87		399.46					

PLP EXISTING PANELBOARD SCHEDULE											
MAINS: 225A MAIN LUGS ONLY		VOLTAGE: 240		ACCESSORIES:							
TYPE: SQUARE D, NQOD	PHASE: 1#, 3#	EQUIPMENT GROUND BAR		ISOLATED GROUND BAR		3. * "SO. D" #001PAF CKT. #13 & #15		5. * MUST BE TYPE "HACR" BREAKER			
MOUNTING: SURFACE		WIDTH: 20									
SCCR: EXISTING		SPACE(S): 42									
CKT	CKT BRK	WIRE	LOAD DESCRIPTION	(KVA)	(A)(KVA)	(B)(KVA)	(C)(KVA)	LOAD DESCRIPTION	WIRE	CKT BRK	CKT
1	20A/1P	#12s	BUILDING LIGHTING	0.22	1.68		1.46	LIGHTING	#12s	20A/1P	2
3	20A/1P	#12s	LIGHTING	1.01	1.99	0.98		LIGHTING	#12s	20A/1P	4
5	20A/1P	#12s	LIGHTING	0.90	1.43	0.63		LIGHTING/EXHAUST FAN	#12s	20A/1P	6
7	20A/1P	#12s	LIGHTING	1.34	2.14	0.60		LIGHTING	#12s	20A/1P	8
9	**20A/1P	#12s	LED BLDG. SIGN	1.20	1.56	0.36		ISOLATED GRD. RECEPT.	#12s	20A/1P	10
11	20A/1P	#12s	ISOLATED GRD. RECEPT.	0.22	0.36	0.72		ISOLATED GRD. RECEPT.	#12s	20A/1P	12
13	20A/1P	#12s	ISOLATED GRD. RECEPT.	0.36	0.72	0.36		ISOLATED GRD. RECEPT.	#12s	20A/1P	14
15	20A/1P	#12s	PHONE EQUIP. RECEPT.	0.72	1.08	0.36		RECEPTABLES	#10s	30A/1P	16
17	20A/1P	#12s	RECEPTABLES	0.36	0.72	0.36		RECEPTABLES	#12s	20A/1P	18
19	20A/1P	#12s	BREAK AREA RECEPT.	0.36	1.08	0.72		RECEPTABLES	#12s	20A/1P	20
21	20A/1P		SPACE	0	0.36	0.36		BREAK AREA RECEPT.	#12s	20A/1P	22
23	20A/1P	#12s	RECEPTABLES	0.54	1.04	0.50		FRINTER RECEPTABLE	#12s	20A/1P	24
25	20A/1P	#12s	ISOLATED GRD. RECEPT.	0.90	0.90	0		SPACE			26
27	20A/1P	#12s	LAWN SPRINKLER CTRL	1.00	1.00	0		SPACE			28
29	20A/1P	#12s	SECURITY SYSTEM	0.25	0.75	0.50		SECURITY-FIRE ALARM	#12s	20A/1P	30
31			SPACE	0	0.36	0.36		ISOLATED GRD. RECEPT.	#12s	20A/1P	32
33			SPACE	0	0.36	0.36		ISOLATED GRD. RECEPT.	#12s	20A/1P	34
35			SPACE	0	0.36	0.36		ISOLATED GRD. RECEPT.	#12s	20A/1P	36
37			SPACE	0	0.36	0.36		ISOLATED GRD. RECEPT.	#12s	20A/1P	38
39			SPACE	0	0.36	0.36		ISOLATED GRD. RECEPT.	#12s	20A/1P	40
41			SPACE	0	0.00	0		SPACE			42
TOTAL PHASE A (KVA)		TOTAL PHASE B (KVA)		TOTAL CONNECTED LOAD (KVA)		TOTAL AMPS					
8.84		10.13		18.97		79.04					

PL1 NEW PANELBOARD SCHEDULE											
MAINS: 225A MAIN LUGS ONLY		VOLTAGE: 240		ACCESSORIES:							
TYPE: SQUARE D, NQOD	PHASE: 1#, 3#	EQUIPMENT GROUND BAR		ISOLATED GROUND BAR		3. ** GFI BREAKER CKT. #11 & #17		5. * MUST BE TYPE "HACR" BREAKER			
MOUNTING: SURFACE		WIDTH: 20									
SCCR: 22K AIC		SPACE(S): 42									
CKT	CKT BRK	WIRE	LOAD DESCRIPTION	(KVA)	(A)(KVA)	(B)(KVA)	(C)(KVA)	LOAD DESCRIPTION	WIRE	CKT BRK	CKT
1	20A/1P	#12s	LIGHTING	1.30	5.24		3.94	RTU-1 HP	#6s	+60A/2P	2
3	20A/1P	#12s	LIGHTING	1.04	4.96		3.94				4
5	20A/1P	#10s	LATHE	1.70	5.64		3.84	RTU-2 HP	#6s	+60A/2P	6
7	20A/1P	#10s	BATTERY RACK RECEPT.	0.18		4.12	3.94	RTU-3 HP	#6s	+60A/2P	8
9	20A/1P	#10s	BATTERY RACK RECEPT.	0.18		4.12	3.94				10
11	20A/1P	#12s	RECEPTABLES	0.36	4.30	3.94		RTU RECEPTABLES	#12s	20A/1P	12
13	**30A/2P	#10s	TANK WATER HEATER 2B GAL.	2.25	2.79	0.54		REC'TABLES	#12s	20A/1P	14
15				2.25	2.97	0.72					16
17	20A/1P	#10s	STARTER/ALT. TESTER	1.68	1.83	0.15		SITE LIGHTING	#8s	30A/2P	18
19	20A/1P	#10s	STARTER/ALT. TESTER	1.68	1.83	0.15		SITE SIGN	#10s	20A/1P	20
21	20A/1P	#10s	STARTER/ALT. TESTER	1.64	2.94	1.30		SITE SIGN	#10s	20A/1P	22
23	20A/1P	#12s	RECEPTABLES	0.36	1.66	1.30		SITE LIGHTING	#12s	20A/1P	24
25	20A/1P	#12s	LIGHTING	1.36	1.51	0.15					26
27			SPACE	0	0.00	0		SPACE			28
29			SPACE	0	0.00	0		SPACE			30
31			SPACE	0	0.00	0		SPACE			32
33			SPACE	0	0.00	0		SPACE			34
35			SPACE	0	0.00	0		SPACE			36
37			SPACE	0	0.00	0		SPACE			38
39			SPACE	0	0.00	0		SPACE			40
41			SPACE	0	0.00	0		SPACE			42
TOTAL PHASE A (KVA)		TOTAL PHASE B (KVA)		TOTAL CONNECTED LOAD (KVA)		TOTAL AMPS					
24.07		19.86		43.93		183.3					

E TRANSFER SWITCH SCHEDULE				
POSITION	CIRCUIT BREAKER	LOAD DESCRIPTION	(KVA)	BREAKER
A	20A/1P	PRINTER	0.50	PLP-24
B	20A/1P	TELEPHONE EQUIPMENT RECEPTABLE	0.72	PLP-15
C	20A/1P	LIGHTING OFFICE/BATHROOMS (100% ON)	0.83	PLP-6
D	20A/1P	LIGHTING SECURITY (100% ON)	0.80	PLP-8
E	20A/1P	LIGHTING HARD PARTS (DAMAGED TO 80% ON)	0.80	PL1-25
F	20A/1P	LIGHTING HARD PARTS (DAMAGED TO 80% ON)	0.88	PLP-2
G	20A/1P	RECEPTABLES	0.54	PLP-23
H	20A/1P	SPACE	0	
I	20A/1P	SPACE	0	
J	20A/1P	SPACE	0	
GENERATOR (6,000 WATTS) RATED, MAX KVA=5.0 LOAD			4.87	TOTAL

E TRANSFER SWITCH SCHEDULE				
POSITION	CIRCUIT BREAKER	LOAD DESCRIPTION	(KVA)	BREAKER
A	20A/1P	INSTALLER (ISOLATED GRD. RECEPTABLE)	0.90	PLP-25
B	20A/1P	INSTALLER (RECEPTABLE)	0.72	PLP-23
C	20A/1P	LIGHTING HARD PARTS (DAMAGED TO 80% ON)	0.80	PLP-4
D	20A/1P	LIGHTING HARD PARTS (DAMAGED TO 80% ON)	0.88	PL1-1
E	20A/1P	LIGHTING HARD PARTS (DAMAGED TO 80% ON)	0.82	PL1-3
F	20A/1P	OFFICE COMPUTER	0.36	PLP-10
G	20A/1P	COUNTER RECEPTABLES	0.36	PLP-32
H	20A/1P	ISOLATED GRD. RECEPT.	0.90	PLP-25
I	20A/1P	SPACE	0	
J	20A/1P	SPACE	0	
GENERATOR (6,000 WATTS) RATED, MAX KVA=5.0 LOAD			4.90	TOTAL

**WIRING & LABELING OF EXIT & EMERGENCY LIGHT CIRCUITS**

- SEE DETAIL 1/E1 FOR WIRING OF EXIT & EMERGENCY LIGHTS ON THESE CIRCUITS.
- ALL EXIT & EMERGENCY LIGHTING CIRCUITS SHALL BE LABELED BY THE CONTRACTOR ON THE "PANEL DIRECTORY". (SPEC: NEPA 79-498.4 & 700.12)

NOTE: ALL BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR ROUTED WITH THE CIRCUIT CONDUCTORS. THIS MEANS ALL CONDUITS MUST HAVE 4 GREEN WIRE INSTALLED IN THE CONDUIT SIZED IN ACCORDANCE WITH TABLE 250.122 OF THE N.E.C.

**EQUIPMENT LABELS CHART**

NOTE: DOT-HATCH REPRESENTS CIRCUITS THAT ARE ASSOCIATED WITH OPTIONAL STANDBY GENERATOR CONTROL. SEE ELECTRICAL SERVICE DIAGRAM.

EQUIPMENT	SERVICE DISCONNECT	OPTIONAL STANDBY GENERATOR SERVICE	GENERATOR POWER INLET	AVAILABLE CURRENT
MP	X	X		
PLP				
PL1				
GENERATOR POWER INLET			X	
CT CABINET				

**ELECTRIC SERVICE RESPONSIBILITIES**

SEE SITE PLAN FOR UTILITY COMPANY CONTACT.

ITEM NO.	DESCRIPTION (IF APPLICABLE)	FURNISHED BY	UTILTY CO.	CONTRACTOR	UTILTY CO.	CONTRACTOR
▲	SERVICE LATERAL					
▲	SERVICE LATERAL RACEWAY					
▲	METER BASE	X				X
▲	METER	X		X		X
▲	CT CABINET			X		X
▲	OH SERVICE RISER @ BUILDING		X			X
▲	SERVICE DROP POLE					
▲	SERVICE RISER @ POLE					
▲	TRANSFORMER PAD					
▲	PAD MOUNT TRANSFORMER					

**OPTIONAL STANDBY SOURCE LABEL**

PERMANENT LABEL SHALL BE 2 x 3 IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. LABEL TO BE PLACED ON DISCONNECT DOOR.

**CAUTION**

TWO SOURCES OF SUPPLY

STANDBY POWER SOURCE: PORTABLE 6kw GENERATOR LOCATION: OVERHEAD DOOR.

EXAMPLE OF OPTIONAL STANDBY SOURCE LABEL SHOWN ABOVE.

**GENERATOR POWER INLET LABEL**

PERMANENT LABEL SHALL BE 2 x 3 IN SIZE. LABEL SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. LABEL TO BE PLACED 6 INCHES ABOVE GENERATOR RECEPTABLE.

**WARNING:**

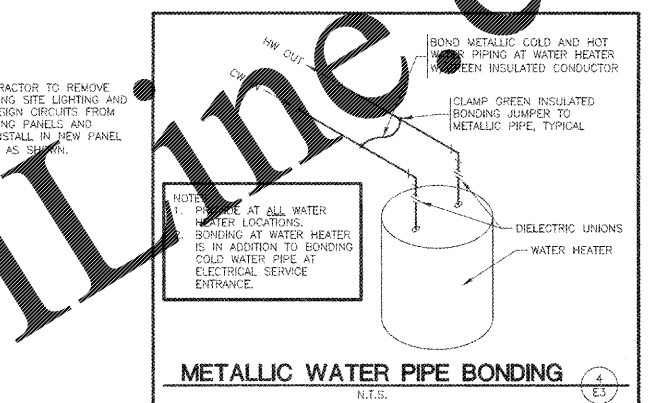
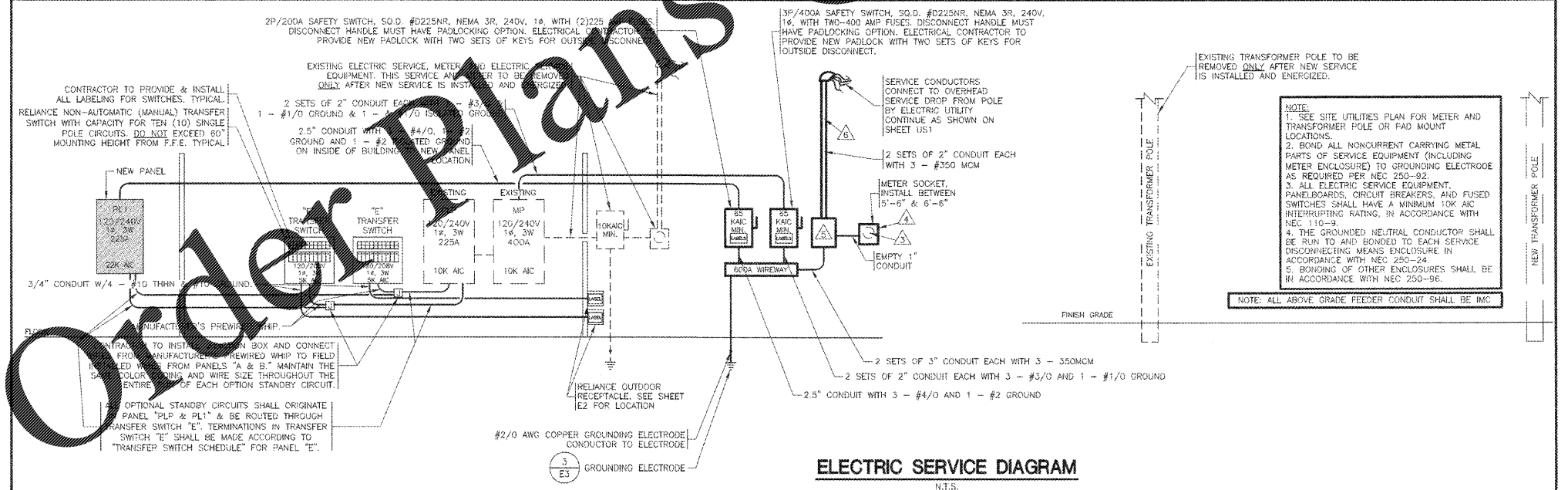
FOR CONNECTION OF A NON-SEPARATELY DERIVED (FLOATING NEUTRAL) SYSTEM ONLY

MAX. 6,000 WATT GENERATOR

EXAMPLE OF LABELING ABOVE.

**SERVICE DISCONNECT LABEL**

THE SERVICE DISCONNECTING MEANS SHALL BE PROPERLY MARKED "SERVICE DISCONNECT". REFER TO SPEC SECTION 26 00 20 FOR FURTHER IDENTIFICATION PLATE REQUIREMENTS.

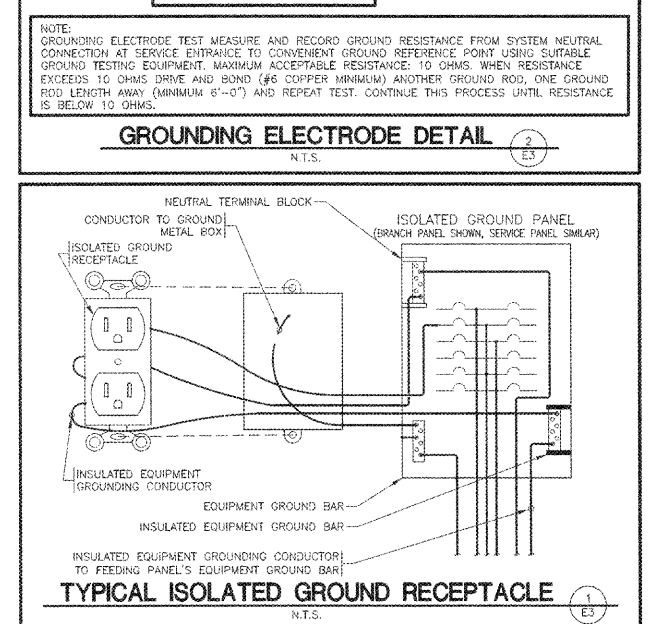
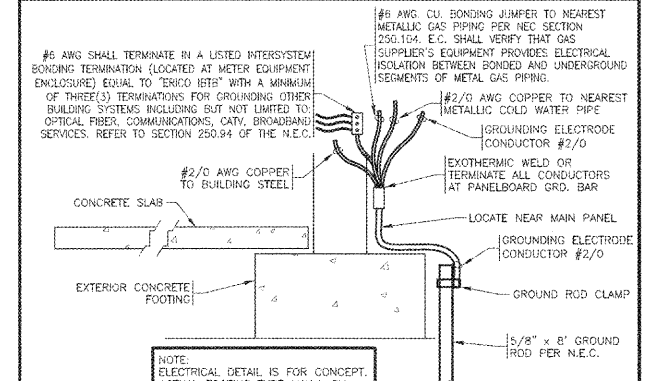


**BONDING REQUIREMENTS**

N.T.S.

NOTE: 1. BOND ALL NONCURRENT CARRYING METAL PARTS OF SERVICE EQUIPMENT (INCLUDING METER ENCLOSURE) TO GROUNDING ELECTRODE AS REQUIRED, PER NEC 250-92. 2. THE GROUNDED NEUTRAL CONDUCTOR SHALL BE RUN TO AND BONDED TO EACH SERVICE DISCONNECTING MEANS ENCLOSURE IN ACCORDANCE WITH NEC 250-24c. 3. BONDING OF OTHER ENCLOSURES SHALL BE IN ACCORDANCE WITH NEC 250-96.

SERVICE EQUIPMENT GROUNDING & BONDING SHALL BE IN ACCORDANCE WITH: \*NEC 250-24 \*NEC 250-28 \*NEC 250-53 \*NEC 250-66 \*NEC 250-90 \*NEC 250-92 \*NEC 250-130



2P/200A SAFETY SWITCH, S.O.D. #D225NR, NEMA 3R, 240V, 1Ø WITH (2)225 DISCONNECT HANDLE MUST HAVE PADLOCKING OPTION. ELECTRICAL CONTRACTOR TO PROVIDE NEW PADLOCK WITH TWO SETS OF KEYS FOR OUTSIDE DISCONNECT.

EXISTING ELECTRICAL SERVICE, METER AND DISCONNECT TO BE REMOVED AND REPLACED WITH NEW SERVICE. CONTRACTOR TO PROVIDE NEW PADLOCK WITH TWO SETS OF KEYS FOR OUTSIDE DISCONNECT.

CONTRACTOR TO PROVIDE & INSTALL ALL LABELING FOR SWITCHES, TYPICAL.

RELIANCE NON-AUTOMATIC (MANUAL) TRANSFER SWITCH WITH CAPACITY FOR TEN (10) SINGLE POLE CIRCUITS. DO NOT EXCEED 80% MOUNTING HEIGHT FROM F.F.E. TYPICAL.

2 SETS OF 2" CONDUIT EACH WITH 3 - #3/0 AND 1 - #1/0 GROUND

2.5" CONDUIT WITH 3 - #4/0 AND 1 - #2 GROUND AND 1 - #2 GROUND ON INSIDE OF BUILDING (NEW PANEL LOCATION)

EXISTING TRANSFORMER POLE TO BE REMOVED ONLY AFTER NEW SERVICE IS INSTALLED AND ENERGIZED.

SERVICE CONDUCTORS CONNECT TO OVERHEAD SERVICE DROP FROM POLE BY ELECTRIC UTILITY. CONTINUE AS SHOWN ON SHEET U51.

2 SETS OF 2" CONDUIT EACH WITH 3 - #3/0 MCM

METER SOCKET, INSTALL BETWEEN 15'-6" & 6'-6"

EMPTY 1" CONDUIT

2 SETS OF 3" CONDUIT EACH WITH 3 - 350MCM

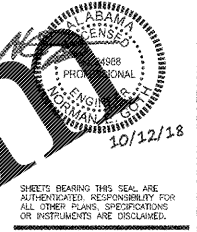
2 SETS OF 2" CONDUIT EACH WITH 3 - #3/0 AND 1 - #1/0 GROUND

2.5" CONDUIT WITH 3 - #4/0 AND 1 - #2 GROUND

OPTIONAL STANDBY CIRCUITS SHALL ORIGINATE PANEL "PLP" & "PL1" & BE ROUTED THROUGH TRANSFER SWITCH "E". TERMINATIONS IN TRANSFER SWITCH "E" SHALL BE MADE ACCORDING TO "TRANSFER SWITCH SCHEDULE" FOR PANEL "E".

RELIANCE OUTDOOR RECEPTACLE, SEE SHEET E2 FOR LOCATION

#2/0 AWG COPPER GROUNDING ELECTRODE CONDUCTOR TO ELECTRODE



**O'Reilly AUTO PARTS**

CORPORATE OFF