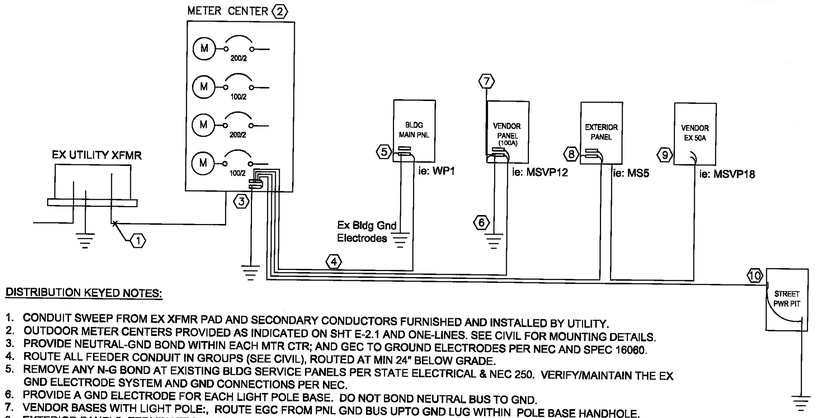
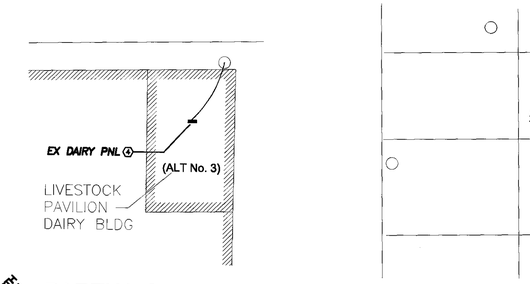


DISTRIBUTION KEYED NOTES:

1. CONDUIT SWEEP FROM EX XFMR PAD AND SECONDARY CONDUCTORS FURNISHED AND INSTALLED BY UTILITY.
2. OUTDOOR METER CENTERS PROVIDED AS INDICATED ON SHT E-2.1 AND ONE-LINES. SEE CIVIL FOR MOUNTING DETAILS.
3. PROVIDE NEUTRAL-GND BOND WITHIN EACH MTR CTR; AND GEC TO GROUND ELECTRODES PER NEC AND SPEC 16060.
4. ROUTE ALL FEEDER CONDUIT IN GROUPS (SEE CIVIL), ROUTED AT MIN 24" BELOW GRADE.
5. REMOVE ANY N-G BOND AT EXISTING BLDG SERVICE PANELS PER STATE ELECTRICAL & NEC 250. VERIFY/MAINTAIN THE EX GND ELECTRODE SYSTEM AND GND CONNECTIONS PER NEC.
6. PROVIDE A GND ELECTRODE FOR EACH LIGHT POLE BASE. DO NOT BOND NEUTRAL BUS TO GND.
7. VENDOR BASES WITH LIGHT POLE:, ROUTE EGC FROM PNL GND BUS UPTO GND LUG WITHIN POLE BASE HANDHOLE.
8. EXTERIOR PANELS: TERMINATE THE FEEDER NEUTRAL (FULL SIZE) AND GND (TABLE 250.122) TO PANEL N & G. NO GND ELECTRODE.
9. FOR DEVICES SERVED BY A BRANCH CIRCUIT, PROVIDE PHASE/NEUTRAL AND GND(TABLE 250.122) AS SHOWN ON SHT. E2.2.
10. PIT OUTLET: TERMINATE CIRCUIT NEUTRAL (FULL SIZE) AND GND (TABLE 250.122) TO ASSOC OUTLET TERMINALS. BOND CONDUIT/OUTLET TO LOCAL GROUND ROD.

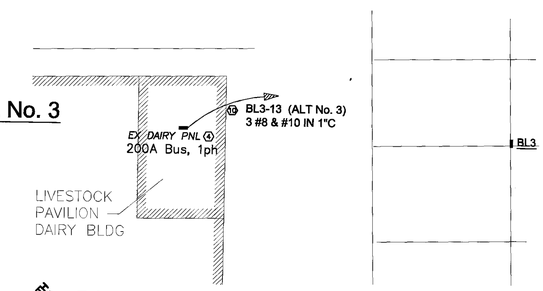
DISTRIBUTION & GROUNDING SCHEMATIC

NO SCALE



PARTIAL SITE PLAN - ELEC DEMO

SCALE: 1:30



PARTIAL SITE PLAN - ELEC DISTRIBUTION

SCALE: 1:30

SECONDARY LATERAL SCHEDULE				
ID	XFMR SIZE	CABLE SIZE & TYPE	CONDUIT	%Z
S1	25kVA, 1Ph	3 #4/0 AL	4"	1.1%
S2	50kVA, 1Ph	3 350kcmil AL	4"	1.5%
S3	75kVA, 1Ph	3 500kcmil AL	4"	2.2%
S4	75kVA, 3Ph	4 #4/0 AL	4"	2.2%

BLACK HILLS WILL PROVIDE AND INSTALL THE SECONDARY CABLES AND CONDUIT SWEEPS OUT OF EACH PAD MTD XFMR TO EACH METER CENTER. TERMINATED AT THE MC BY EC.

BLACK HILLS WILL SELECT THE SIZE OF WIRE AND CONDUIT USED FOR ALL SECONDARY LATERALS.

FEEDER SCHEDULE				
SYMBOL	NO AND WIRE TYPE	GND	CONDUIT	AMPS 75degC
1	3#1 XHHW AL*	1#8 CU	1 1/4"	100
2	3#1/0 XHHW AL*	1#6 CU	1 1/2"	120
3	3#2/0 XHHW AL*	1#6 CU	1 1/2"	135
4	3#3/0 XHHW AL*	1#6 CU	2"	155
5	3#4/0 XHHW AL*	1#4 CU	3"	180
6	4#250 XHHW AL*	1#6 CU	3"	205
7	4#350 XHHW AL*	1#3 CU	3"	250
8	4#1 XHHW AL*	1#8 CU	1 1/4"	100
9	4#1/0 XHHW AL*	1#6 CU	1 1/2"	120
10	4#2/0 XHHW AL*	1#6 CU	2"	135
11	4#3/0 XHHW AL*	1#6 CU	2"	155
12	4#4/0 XHHW AL*	1#4 CU	3"	180
13	4#250 XHHW AL*	1#6 CU	3"	205
14	4#350 XHHW AL*	1#3 CU	3"	250
15	EMPTY CONDUIT/PULLSTRING	–	1 1/4"	
16	EMPTY CONDUIT/PULLSTRING	–	2"	

NOTES:
1. ALUM WIRE IS DUAL-RATED STABILOY, SEE 16120.

KEY: ELEC GEAR ID

example ID: MS VP 1

LOCATION
MS: MAIN STREET
WP: WPA BARNS
BL: BLOCK3
CC: COLO CONCOURSE

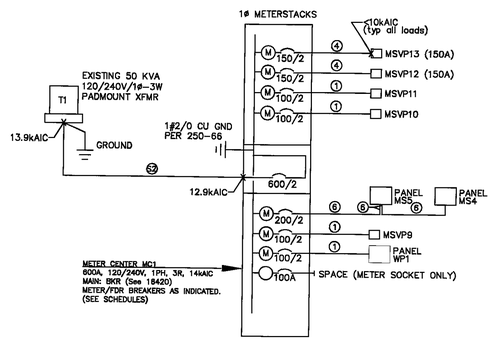
GEAR TYPE
MC: METER CENTER
VP: VENDOR PNL*
P: POWER PIT
P: PANEL

ID NUMBER
#: No. in Series

* "150A" denotes a 150A version of Vendor Panel per 16470.

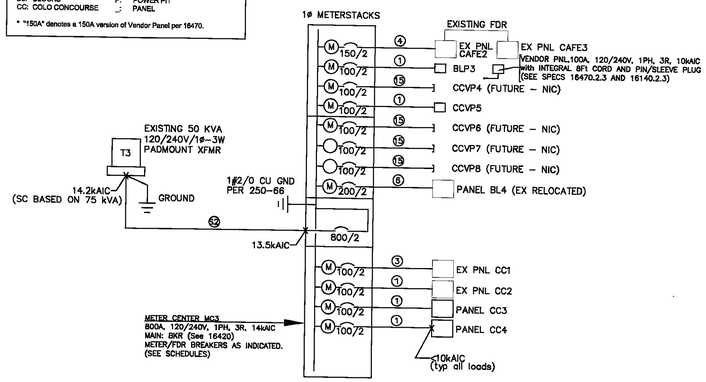
ONE-LINE NOTES:

1. SCHEDULES HAVE NOT BEEN PROVIDED FOR EXISTING PANELS THAT HAVE NO BRANCH CIRCUIT WORK UNDER THIS PROJECT, THESE PANELS ARE RE-FED WITH FEEDERS TO MATCH ORIGINAL SIZES. INCL PANELS WP1, WP2, CAFE1, CAFE2, BL1, etc.
2. VENDOR PANELS : SEE DETAIL FOR 100A VENDOR PANELS. EXISTING 50A VENDOR PANELS ARE MLO 'RV' STYLE PNL WITH INTEGRAL 50/2, 30/2 AND 20/1 BREAKERS AND OUTLETS.
3. UTILITY INTENDS TO UPSIZE EX PAD-MOUNT TRANSFORMERS AT SOME LOCATIONS.



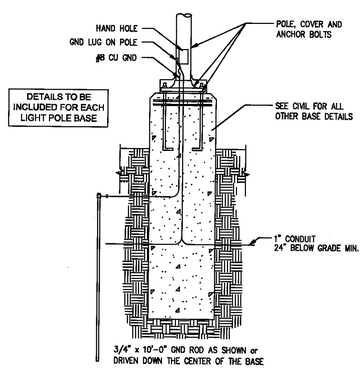
MC1 ONE-LINE DIAGRAM

NO SCALE



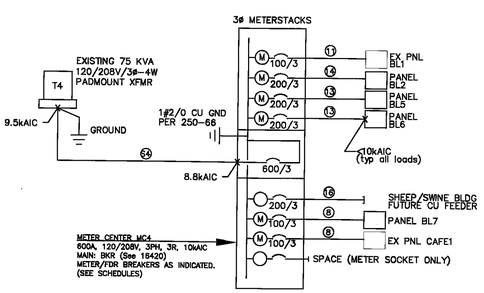
MC3 ONE-LINE DIAGRAM

NO SCALE



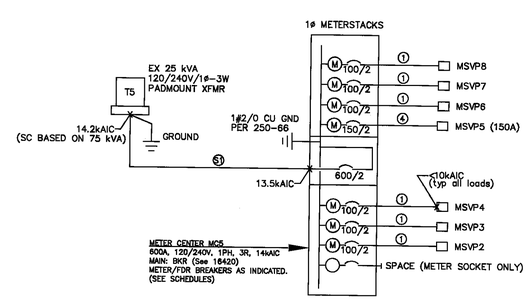
POLE BASE ELEC

NO SCALE



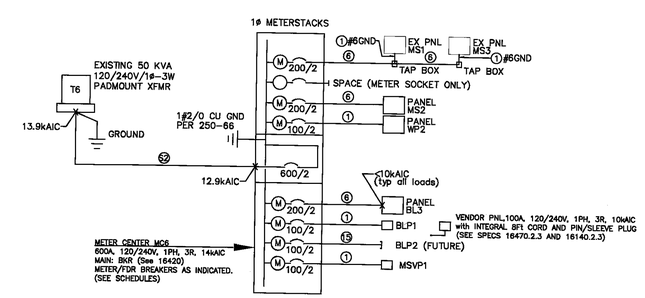
MC4 ONE-LINE DIAGRAM

NO SCALE



MC5 ONE-LINE DIAGRAM

NO SCALE



MC6 ONE-LINE DIAGRAM

NO SCALE

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COLORADO REGISTERED PROFESSIONAL ENGINEER JERRY B. TANNER 28627

STATE OF COLORADO 1876

Colorado State Fair
Project M-09003

COLORADO STATE FAIR REPLACE SECONDARY ELECTRICAL

1001 BEULAH AVE., PUEBLO, CO

ONE-LINE DIAGRAMS

MARK	REVISION	DATE

PROJECT NO: 09050
STATE PROJ: M-09003
DRAWN: CAD
CHECKED: JBT
ISSUE DATE: 10/7/2010

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E-3.1