CITY OF SPARKS
PUBLIC WORKS DEPARTMENT

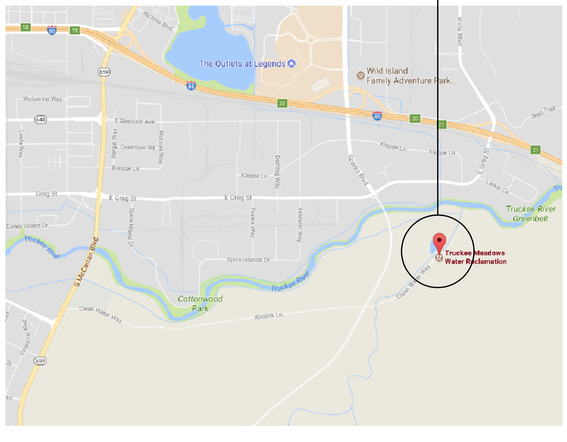
TMWRF BLOWER SOFT STARTER RETROFIT

PROJECT BID NO. 17/18-015

BID SET
JANUARY 18, 2018

LOCATION

PROJECT LOCATION



OWNER

CITY OF SPARKS
TRUCKEE MEADOWS WATER
RECLAMATION FACILITY
8500 Clean Water Way
Reno, NV 89502

ENGINEER

PK Electrical, Inc.
Engineering · Design · Consulting
681 Sierra Rose Dr., Ste. B | Reno, Nevada 89511 | 775.826.9010
4600 South Syracuse, 9th Floor | Denver, Colorado 80237 | 303.256.6598
pkelectrical.com

DRAWING SCHEDULE

SHEET	DESCRIPTION	BID DOCUMENTS, JANUARY 18, 2018
G1	COVER SHEET	●
E1	ELECTRICAL LEGEND	●
E2	OVERALL SITE PLAN	●
E3	EXISTING AND NEW ONELINE DIAGRAMS	●
E4	SOLCON STARTER CONCEPTUAL LAYOUT	●
E5	SOLCON STARTER FRONT VIEW CONTROL PANEL	●
E6	SOLCON STARTER POWER SCHEMATIC DIAGRAM	●
E7	SOLCON STARTER CONTROL SCHEMATIC DIAGRAM	●
E8	SOLCON STARTER TERMINAL BLOCK LAYOUT	●
	TOTAL SHEETS IN ISSUE:	9

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PROFESSIONAL ENGINEER — JOSEPH E. GANSER — STATE OF NEVADA — No.21011 — ELECTRICAL — EXP: 06/30/19

1/18/18

TMWRF BLOWER SOFT STARTER RETROFIT
8500 Clean Water Way
Reno, NV 89502

BID SET

REVISIONS

SHEET TITLE
COVER SHEET

DRAWN:	TPT
CHECKED:	JEG
DATE:	01/18/18
JOB NUMBER:	17038
PROJECT MGR:	BCD

G1

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH 2011 NEC AND LOCAL CODES.
2. DATA PRESENTED ON THESE DRAWINGS ARE AS ACCURATE AS PLANNING CAN DETERMINE, BUT FIELD VERIFICATION OF ALL DIMENSIONS, LOCATIONS, LEVELS, ETC. TO SUIT FIELD CONDITIONS IS REQUIRED. REVIEW ALL CIVIL DETAILS AND ADJUST WORK TO MEET THE REQUIREMENTS OF CONDITIONS SHOWN. DISCREPANCIES BETWEEN DIFFERENT PLANS OR BETWEEN DRAWINGS AND SPECIFICATIONS, OR REGULATIONS AND CODES GOVERNING THE INSTALLATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING.
3. ALL WORK SHALL BE COMPLETED IN A NEAT AND WORKMANLIKE MANNER AND IN ACCORDANCE WITH NECA STANDARDS.
4. ALL WORK SHALL BE SUBJECT TO INSPECTION AND POSSIBLE REJECTION IF NOT IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS AND INSTALLED IN A NEAT AND WORKMANLIKE MANNER.
5. ANY REJECTED WORK SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
6. PROVIDE REPRODUCIBLE RECORD DRAWINGS OF ALL COMPLETED WORK.
7. MINIMUM SEPARATIONS FOR OTHER UTILITIES ARE AS FOLLOWS UNLESS OTHERWISE REQUIRED BY THE LOCAL UTILITIES. POWER OR OTHER FOREIGN CONDUIT: 3" CONCRETE, 4" MASONRY, 12" WELL TAMPED EARTH. PIPES (OIL, GAS, ETC.) 6" WHEN CROSSING, 12" WHEN PARALLEL. STORM DRAIN: 6" WHEN CROSSING, 12" WHEN PARALLEL. WATER, SANITARY SEWER: 18" WHEN CROSSING, 5' WHEN PARALLEL.
8. THE EXISTING FACILITY WILL REMAIN OPERATIONAL DURING ALL PHASES OF WORK. EXTREME CARE SHALL BE EXERCISED DURING ANY ELECTRICAL CHANGE-OVER TO MINIMIZE NORMAL ELECTRICAL OUTAGE. THE MAXIMUM ALLOWABLE POWER OUTAGE WILL BE MINIMAL, THEREFORE, COORDINATION AND SCHEDULING BETWEEN AT&T AND THE CONTRACTOR IS MANDATORY. THE CONTRACTOR SHALL COORDINATE WITH AT&T FOR ALL POWER OUTAGES, EQUIPMENT REMOVAL AND REPLACEMENT.
9. THE CONTRACTOR SHALL REMOVE FROM THE JOB SITE ALL DISCARD AND ABANDONED MATERIALS FROM DEMOLITION AND INSTALLATION. THIS INCLUDES BUT IS NOT LIMITED TO CONDUIT, FASTENERS, BOXES, & ETC. MATERIALS EMBEDDED IN GRADE AND / OR CONCRETE MAY BE ABANDONED IN PLACE. ALL ABANDONED CONDUIT SHALL BE CAPPED.
10. THE CONTRACTOR IS RESPONSIBLE FOR INCLUDING IN BID ALL WORK AND MATERIALS NEEDED TO EXTEND BRANCH CIRCUIT CONDUIT, WIRES, PATCHING / REPAIRING OF WALLS, FIRE STOPPING AND TEMPORARY EQUIPMENT INSTALLATIONS.
11. DO NOT SPLICE FEEDER CONDUCTORS UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER.
12. THE MAXIMUM NUMBER OF CONDUIT BENDS SHALL NOT BE GREATER THAN 270 DEGREES BETWEEN PULLING STRUCTURES. THIS INCLUDES THE AGGREGATE OF ALL HORIZONTAL AND VERTICAL CHANGES.
13. ALL CONDUIT, INNERDUCT, PULLBOXES AND VAULTS SHALL BE LABELED PER THE SPECIFICATIONS.
14. EACH CONDUIT AND INNERDUCT SHALL BE PROVIDED WITH A 1250 LBS. PULL ROPE.
15. A METHOD OF PROCEDURE (MOP) IS MANDATORY AND SHALL BE PROVIDED FOR THIS JOB. WORK SHALL NOT BE STARTED WITHOUT A APPROVED MOP.
16. CLEAN ALL INTERIOR AND EXTERIOR SURFACES OF PANELS AND CABINETS. VACUUM ALL MATERIAL AND METAL SHAVINGS FROM PANEL AND CABINET INTERIORS. APPLY TOUCH-UP SPRAY PAINT WHERE NEEDED.
17. ADEQUATELY STRAP AND SUPPORT ALL CONDUIT WORK PER NATIONAL ELECTRICAL CODE AND IJAH STANDARDS. IN GENERAL, SUPPORT ALL CONDUIT WITHIN THREE FEET (3') OF OUTLET BOX, CABINET OR PANEL AND MAXIMUM TEN FEET (10') ON CENTER THEREAFTER.
18. SEAL ALL CONDUIT OPENINGS THROUGH WALLS AND CEILINGS. INSTALL ESCUTCHEON PLATES AT BUILDING INTERIOR. WHERE EQUIPMENT IS INSTALLED ON THE EXTERIOR WALLS, STUB CONDUITS THROUGH WALL AND SEAL CONDUIT OPENINGS, THEN INSTALL EXTERIOR EQUIPMENT. ALSO, SEAL AROUND THE PERIMETER EDGE OF THE EQUIPMENT ENCLOSURE BETWEEN THE ENCLOSURE AND THE BUILDING.
19. ALL CONDUCTORS INSTALLED IN HOUSE SERVICE PANEL, PANELBOARDS, ETC., SHALL BE TRAINED, LACED, AND INSTALLED WITH PHASE TAPE ON ALL CONDUCTORS.
20. INSTALL NAMEPLATE ON ALL EQUIPMENT AS INDICATED ON DRAWINGS. NAMEPLATES SHALL READ EXACTLY AS DESCRIBED ON THE DRAWINGS. IN GENERAL NAMEPLATE LETTERING SIZE SHALL BE 3/16" HIGH FOR ALL NAMEPLATES SERVING FEEDER AND BRANCH CIRCUIT BREAKERS ON HOUSE SERVICE PANEL AND ALL OTHER NAMEPLATES SHALL HAVE 1/4" HIGH LETTERING.
21. COORDINATE EQUIPMENT LOCATIONS, CONTROL AND POWER WIRING REQUIREMENTS AND CONNECTION POINTS.

SUMMARY OF WORK

1. RETROFIT BLOWER MOTOR #4 SOFT STARTER USING MATERIALS PREVIOUSLY PURCHASED BY TMWFR. INSTALL PER SOLCON SHOP DRAWINGS. COORDINATE WITH SOLCON FOR INSTALLATION, COMMISSIONING AND START-UP. CONTRACTOR SHALL COORDINATE WITH SOLCON AT COMPLETION FOR UL FIELD INSPECTION AND CERTIFICATION.
2. RETROFIT BLOWER MOTOR #3 SOFT STARTER WITH SOLCON SOFT STARTER CONVERSION KIT PART # HRVSDN40023-S0170362. CONTRACTOR SHALL PURCHASE MATERIALS AS PART OF THIS BID, INCLUDING COMMISSIONING. INSTALL PER SOLCON SHOP DRAWINGS. COORDINATE WITH SOLCON FOR INSTALLATION, COMMISSIONING AND START-UP. CONTRACTOR SHALL COORDINATE WITH SOLCON AT COMPLETION FOR UL FIELD INSPECTION AND CERTIFICATION.
3. RETROFIT BLOWER MOTOR #2 SOFT STARTER WITH SOLCON SOFT STARTER CONVERSION KIT PART #HRVS-DN-400-2300-115-3M-CONV-KIT. CONTRACTOR SHALL PURCHASE MATERIALS AS PART OF THIS BID, INCLUDING COMMISSIONING. INSTALL PER SOLCON SHOP DRAWINGS. COORDINATE WITH SOLCON FOR INSTALLATION, COMMISSIONING AND START-UP. CONTRACTOR SHALL COORDINATE WITH SOLCON AT COMPLETION FOR UL FIELD INSPECTION AND CERTIFICATION.
4. CONTRACTOR SHALL INCLUDE COORDINATION WITH SOLCON AT COMPLETION OF PROJECT FOR UL FIELD INSPECTION AND CERTIFICATION OF EXISTING BLOWER MOTOR #1 SOFT STARTER.
5. SOFT START REPLACEMENTS SHALL BE SOLE SOURCED TO SOLCON AND SHALL BE CONVERSION KIT PART NUMBER: HRVSDN40023-S0170362, DESCRIPTION: HRVSDN-400-2.3-115-3M-CONVKIT S0170362, NO EXCEPTIONS.
6. AN ARC FLASH STUDY WILL BE PERFORMED BY OTHERS AND IS NOT A PART OF THIS PROJECT. ANY PLACEMENT OF LABELS AND REVISION IN BREAKER SETTINGS DUE TO THE STUDY WILL ALSO BE DONE BY OTHERS. THE EQUIPMENT SUPPLIER SHALL PROVIDE THE DIMENSIONAL DATA REQUIRED FOR THE ARC FLASH STUDY.

ELECTRICAL LEGEND

AUGUST 2011

- PANELBOARD: SURFACE MOUNTED
- PANELBOARD: FLUSH MOUNTED
- SWITCHBOARD OR DISTRIBUTION PANEL
- XF TRANSFORMER
- PULLBOX / VAULT
- MOTOR STARTER
- COMBINATION MOTOR STARTER
- COMBINATION MOTOR STARTER PROVIDED BY OTHERS
- F DISCONNECT SWITCH - FUSIBLE (FUSED PER EQUIP. NAMEPLATE)
- N DISCONNECT SWITCH - NON-FUSIBLE
- DISCONNECT SWITCH PROVIDED BY OTHERS
- VARIABLE FREQUENCY DRIVE
- VARIABLE FREQUENCY DRIVE PROVIDED BY OTHERS
- CB ENCLOSED CIRCUIT BREAKER
- GROUND ROD
- SHUNT TRIP STATION OR EMERGENCY PUSHBUTTON
- M REMOTE METER

- S SINGLE POLE SWITCH 48" AFF (UNO)
- S_3 THREE WAY SWITCH 48" AFF (UNO)
- S_4 FOUR WAY SWITCH 48" AFF (UNO)
- S_K KEY OPERATED SWITCH 48" AFF (UNO)
- S_L SWITCH WITH LIGHTED HANDLE
- S_M MANUAL MOTOR STARTER
- S_P SWITCH WITH PILOT LIGHT 48" AFF (UNO)
- S_T TIME WALL SWITCH 48" AFF (UNO)
- D DIMMER OPERATED SWITCH 48" AFF (UNO)
- OCCUPANCY SENSOR - WALL MOUNTED 48" AFF (UNO)
- OS = 360°
- OS = 180°
- OS = 90°

  OCCUPANCY SENSOR - CEILING MOUNTED. ARROWS INDICATE COVERAGE, DIRECTION & PATTERN. PROVIDE WITH POWER PACK PER MFG REQUIREMENTS.
- CONTROL STATION
- CONTACTOR OR RELAY
- PC PHOTOELECTRIC CELL (ON ROOF FACING NORTH UNO)
- TC TIMECLOCK

- CONDUIT/RACEWAY IN WALL OR ABOVE CEILING
- CONDUIT/RACEWAY BELOW GRADE OR BELON FLOOR
- CONDUIT/RACEWAY UP
- CONDUIT/RACEWAY DOWN
- BREAK OR RUN CONTINUES
- —OH— OVERHEAD SERVICE
- — P — PRIMARY
- — S — SECONDARY
- — C — COMMUNICATIONS OR SIGNAL
- — T — TELEPHONE
- —TV— TELEVISION
- — · — LOW VOLTAGE AND/OR CONTROL WIRING
- -✳-✳- EMERGENCY CIRCUIT
- CONDUIT/RACEWAY STUB OUT: MARK AND CAP (SITE)
- CONDUIT/RACEWAY SLEEVE

- SINGLE RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF (UNO)
- DUPLEX RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF (UNO)
- DUPLEX RECEPTACLE: HALF SWITCHED
- DUPLEX RECEPTACLE: FLOOR MOUNTED
- QUAD RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF (UNO)
- QUAD RECEPTACLE: FLOOR MOUNTED
- ISOLATED GROUND TYPE RECEPTACLE (ORANGE TRIANGLE) - 20A, 125V, NEMA 5-20IG, +18" AFF (UNO)
- DUPLEX RECEPTACLE GFI TYPE - 20A, 125V, NEMA 5-20 GFI +18" AFF (UNO)
- DUPLEX RECEPTACLE: ABOVE COUNTER (VERIFY HEIGHT)
- SPECIAL PURPOSE RECEPT.: SEE DWGS FOR NEMA CONFIG.
- DUPLEX RECEPTACLE: CEILING MOUNTED
- MULTI-OUTLET ASSEMBLY: SPACING PER DWGS

- DATA / VOICE OUTLET: 18" AFF (UNO) - 1 VOICE, 1 DATA JACK, 2 BLANKS
- DATA / VOICE OUTLET: FLOOR MOUNTED
- DATA / VOICE OUTLET: ABOVE COUNTER (VERIFY HEIGHT)
- MULTI-OUTLET ASSEMBLY: SPACING PER DWGS
- TELEPHONE OUTLET: 18" AFF (UNO)
- DATA OUTLET: 18" AFF (UNO)
- S SPEAKER
- TV TELEVISION OUTLET: 18" AFF (UNO)
- TELEPHONE TERMINAL BOARD (TTB)
- VC VOLUME CONTROL
- GROUNDING BAR

- a b LIGHTING FIXTURE - LOWERCASE LETTER DENOTES SWITCHING (a = CENTER LAMP, b = OUTER LAMPS)
- WALL MOUNTED FIXTURE
- RECESSED DOWNLIGHT
- SURFACE LUMINAIRE
- POLE MOUNTED LIGHT (# OF HEADS INDICATED ON DRAWING)
- FLUORESCENT STRIP FIXTURE
- BOLLARD
- RECESSED DOWNLIGHT (WALL WASH)
- TRACK LIGHTING
- EMERGENCY LIGHTING UNIT
- EXIT SIGN FIXTURE - SHADED AREA DENOTES LIGHTED FACE - ARROWS DENOTE DIRECTION
- EMERGENCY FIXTURE

- T THERMOSTAT (PROVIDED BY MECH. CONTRACTOR UNO)
- J JUNCTION BOX (SIZE AS REQUIRED UNO)
- 3 SHEET NOTE DESIGNATION
- FI FIXTURE DESIGNATION: FI=TYPE (SEE FIXTURE SCH.)
- 3 REVISION DELTA: NUMBER REPRESENTS REVISION
- 1255 FEEDER DESIGNATION
- AHU 2 EQUIPMENT CONNECTION

20	SINGLE POLE CIRCUIT BREAKER
20/2	TWO POLE CIRCUIT BREAKER
20/3	THREE POLE CIRCUIT BREAKER
20A	ARC FAULT CIRCUIT BREAKER
20C	CONTROLLABLE CIRCUIT BREAKER
20G	GFI CIRCUIT BREAKER

L	= LIGHTING
R	= RECEPTACLES
E	= EQUIPMENT
M	= MOTOR
MI	= LARGEST MOTOR
K	= KITCHEN EQUIP
H	= ELECTRIC HEAT

- GFI GROUND FAULT INTERRUPTER DEVICE
- M METERING DEVICE
- M REMOTE METER
- ST SHUNT TRIP DEVICE
- TRANSFORMER
- CURRENT TRANSFORMER
- G GENERATOR
- # MOTOR - # INDICATES HP
- INTERRUPTER SWITCH
- GFI GROUND FAULT RELAY W/ CT OR SENSOR
- FUSE
- CIRCUIT BREAKER
- DRAWOUT CIRCUIT BREAKER
- A M / B TRANSFER SWITCH (A=AUTOMATIC, M=MANUAL) # FOR POLES 2, 3 OR 4
- SPD SURGE PROTECTION DEVICE

- NORMALLY OPEN (NO) CONTACT
- NORMALLY CLOSED (NC) CONTACT
- C COIL - VOLTAGE PER CONTROL DIAGRAMS
- R PILOT LIGHT (LED) PUSH-TO-TEST. LETTER INDICATES COLOR (R=RED, G=GREEN, A=AMBER, Y=YELLOW)
- R PILOT LIGHT (LED) NON PUSH-TO-TEST
- THERMAL OVERLOAD
- MAGNETIC OVERLOAD
- PUSH BUTTON NORMALLY OPEN (NO)
- PUSH BUTTON NORMALLY CLOSED (NC)
- H O A HAND-OFF-AUTO (HOA) SELECTOR SWITCH
- LIMIT SWITCH NORMALLY OPEN (NO)
- LIMIT SWITCH NORMALLY CLOSED (NC)
- R PUSH BUTTON ILLUMINATED (LED)

- TICS = NO. OF #12 WIRES (UNO) IF MORE THAN TWO WITHIN RACEWAY. GROUNDING CONDUCTOR (NOT SHOWN) ALWAYS REQUIRED.
- ISOLATED GROUNDING CONDUCTOR
- NEUTRAL CONDUCTOR
- PHASE CONDUCTOR(S)
- BRANCH CIRCUIT (WHEN TIC MARKS ARE NOT SHOWN) = (1) PHASE, (1) NEUTRAL AND (1) GROUNDING CONDUCTOR
- HOMERUN TO PANELBOARD OR DEVICE
- HA-(1,3,5,3N)G HOMERUN CIRCUIT DESIGNATION
- GROUNDING CONDUCTOR
- NEUTRAL CONDUCTOR (N=1, 2N=2 NEUTRALS, 3N=3 NEUTRALS)
- PHASE CONDUCTOR(S)
- PANELBOARD DESIGNATION
- HA-(1,3,5)G HOMERUN CIRCUIT DESIGNATION (3 PHASE CIRCUIT SHOWN)
- GROUNDING CONDUCTOR
- PHASE CONDUCTOR(S)
- PANELBOARD DESIGNATION

A	AMPS
ADA	AMERICANS WITH DISABILITIES ACT
AFC	ABOVE FINISHED CEILING
AFCI	ARC-FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMP INTERRUPTING CAPACITY
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BKR	BREAKER
C	CONDUIT/RACEWAY
CEC	CALIFORNIA ENERGY COMMISSION
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT/RACEWAY ONLY
CT	CURRENT TRANSFORMER
CU	COPPER
DB	DISTRIBUTION BOARD
DDC	DIRECT DIGITAL CONTROLLER
DPDT	DOUBLE-POLE, DOUBLE-THROW
DPST	DOUBLE-POLE, SINGLE-THROW
DWG	DRAWING
(E)	EXISTING TO REMAIN
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
(F)	FUTURE
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT (STEEL)
FPEN	FUSE PER EQUIP. NAMEPLATE
GFI	GROUND FAULT INTERRUPT
GFR	GROUND FAULT RELAY
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO SWITCH
HP	HORSEPOWER
HSKP	HOUSEKEEPING
IMC	INTERMEDIATE METAL CONDUIT
J-BOX	JUNCTION BOX
K	kcmil (300K = 300 kcmil)
KVA	KILOVOLT AMPS
KW	KILOWATT
LTG	LIGHTING
IG	ISOLATED GROUND
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MILS
MFG	MANUFACTURER
MLO	MAIN LUGS ONLY
MS	MOTOR STARTER
MSB	MAIN SWITCHBOARD
MTS	MANUAL TRANSFER SWITCH
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHTLIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
NVE	NV ENERGY
P	POLE
PH/Φ	PHASE
PV	PHOTOVOLTAIC
PNL	PANEL
PTC	PV USA TEST CONDITIONS
PWR	POWER
(R)	RELOCATED
RAC	RIGID ALUMINUM CONDUIT
RFG	RIGID FIBERGLASS CONDUIT
RSC	RIGID STEEL CONDUIT
SE	SERVICE ENTRANCE
SPD	SURGE PROTECTION DEVICE
SPDT	SINGLE-POLE, DOUBLE-THROW
SPST	SINGLE-POLE, SINGLE-THROW
STC	STANDARD TEST CONDITIONS
SW	SWITCH
TE	TELECOM
TTB	TELEPHONE TERMINATION BOARD
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORY
UNO	UNLESS NOTED OTHERWISE
UNSW	UNSWITCHED
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLTS
VA	VOLT AMPS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WP	WEATHER PROOF
(X)	EXISTING TO BE REMOVED
XFMR OR XF	TRANSFORMER

NOTE: THIS IS A MASTER SYMBOL LIST. IT MAY BE THAT NOT ALL SYMBOLS SHOWN ARE USED WITHIN THIS SET OF PLANS. HEIGHTS GIVEN ARE TO CENTER LINE OF DEVICE.

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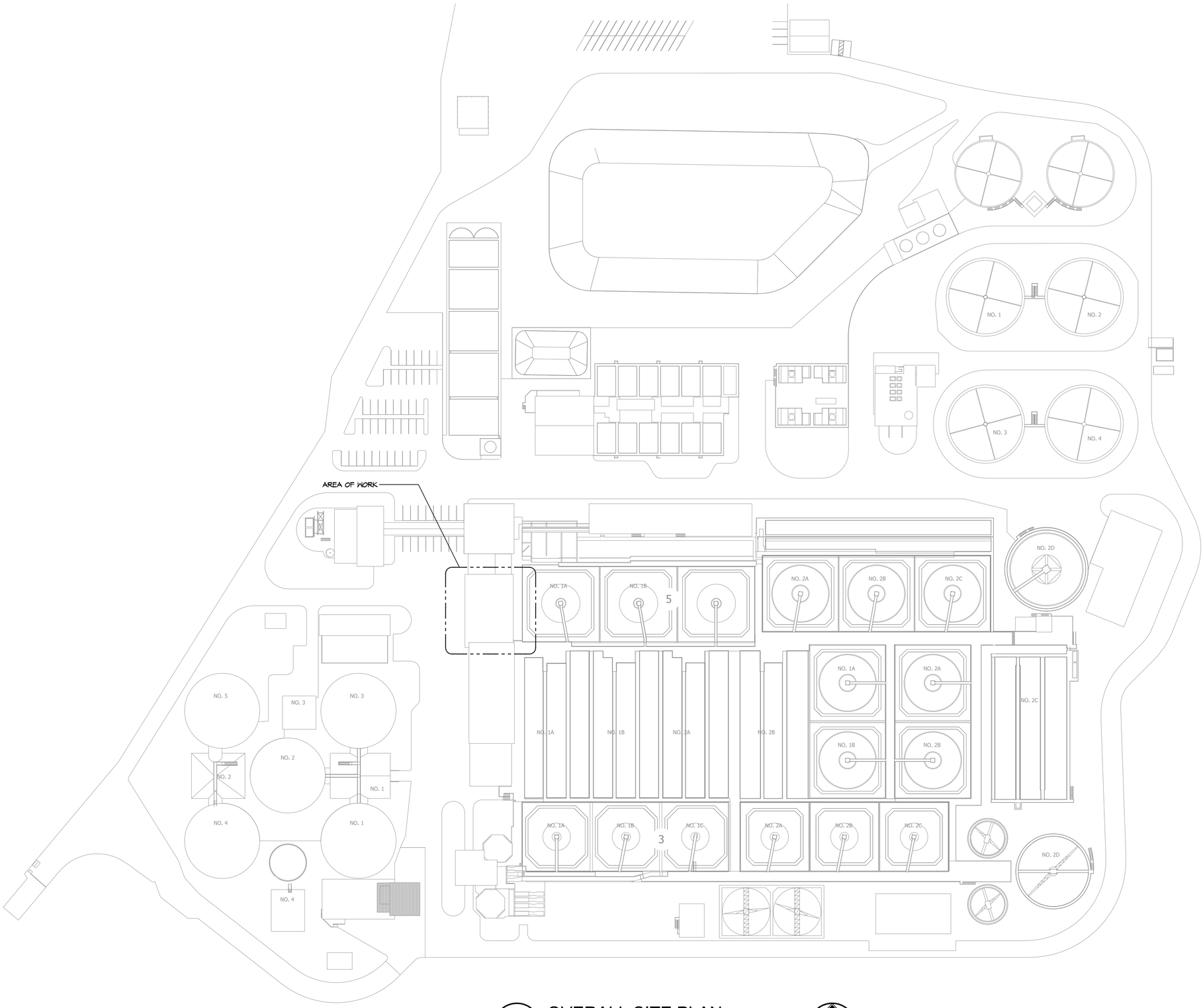

A
E2

OVERALL SITE PLAN

SCALE: 1" = 60'-0"

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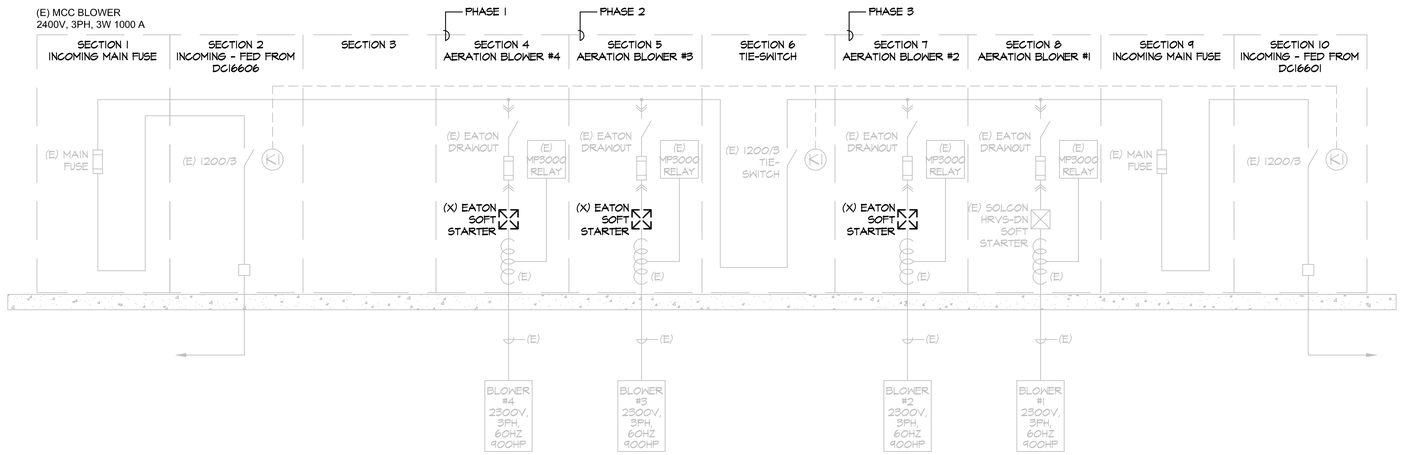
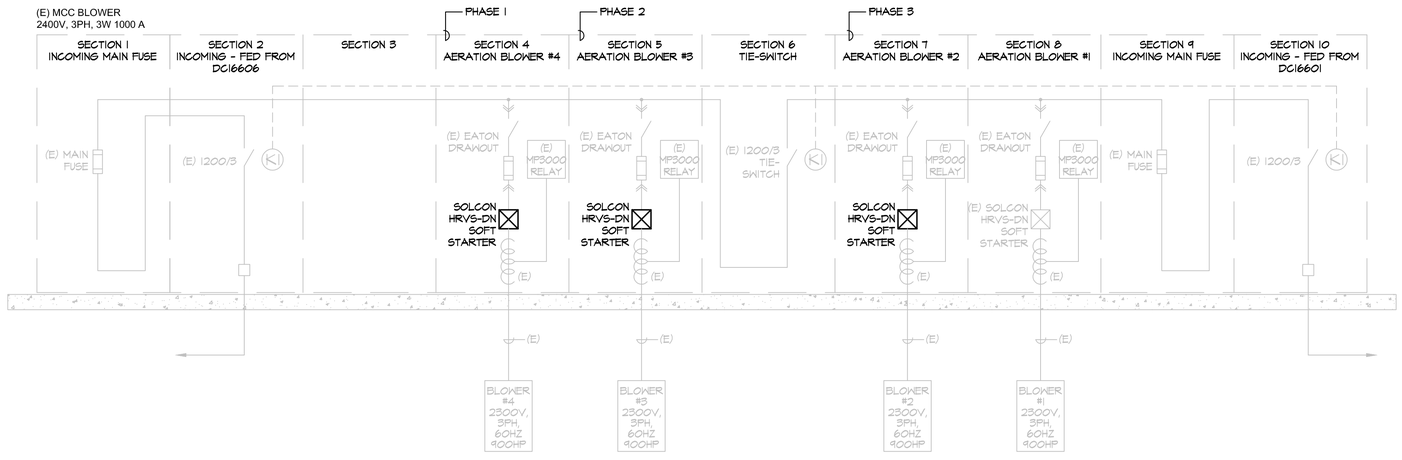


A / E4 EXISTING ONELINE DIAGRAM - DEMOLITION

SCALE: NONE



B / E4 EXISTING ONELINE DIAGRAM - NEW WORK

SCALE: NONE

GENERAL NOTES

1. (X) AND/OR DASHED LINES INDICATE EXISTING EQUIPMENT TO BE REMOVED, (E) AND/OR SOLID LINES INDICATE EXISTING EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.
2. SALVAGEABLE ITEMS REMOVED DURING DEMOLITION SHALL BE OFFERED TO OWNER PRIOR TO DISPOSAL OR REMOVAL FROM SITE.

PHASING NOTES

1. DEMOLISH AND RETROFIT BLOWER #4, USING MATERIALS PREVIOUSLY PURCHASED BY TMWRF. INSTALL PER SOLCON SHOP DRAWINGS. COORDINATE WITH SOLCON FOR COMMISSIONING, START-UP, AND UL TESTING AND CERTIFICATION.
2. DEMOLISH AND RETROFIT BLOWER #3. CONTRACTOR SHALL PURCHASE MATERIALS AS PART OF THIS BID, INCLUDING COMMISSIONING. INSTALL PER SOLCON SHOP DRAWINGS. COORDINATE WITH SOLCON FOR COMMISSIONING, START-UP, AND UL TESTING AND CERTIFICATION.
3. DEMOLISH AND RETROFIT BLOWER #2. INSTALL SPARE SOFT STARTER CHASSIS. CONTRACTOR SHALL PURCHASE MATERIALS AS PART OF THIS BID, INCLUDING COMMISSIONING. INSTALL PER SOLCON SHOP DRAWINGS. COORDINATE WITH SOLCON FOR COMMISSIONING, START-UP, AND UL TESTING AND CERTIFICATION.

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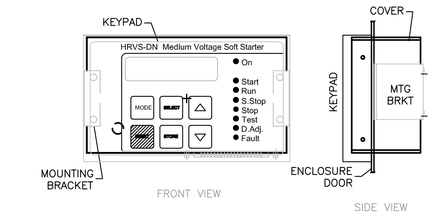
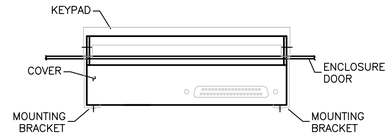


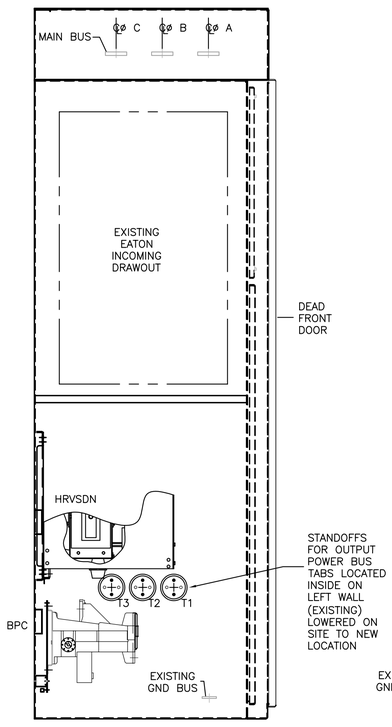
A / E5 ENLARGED REMOTE HVSDN KEYPAD

SCALE: NONE



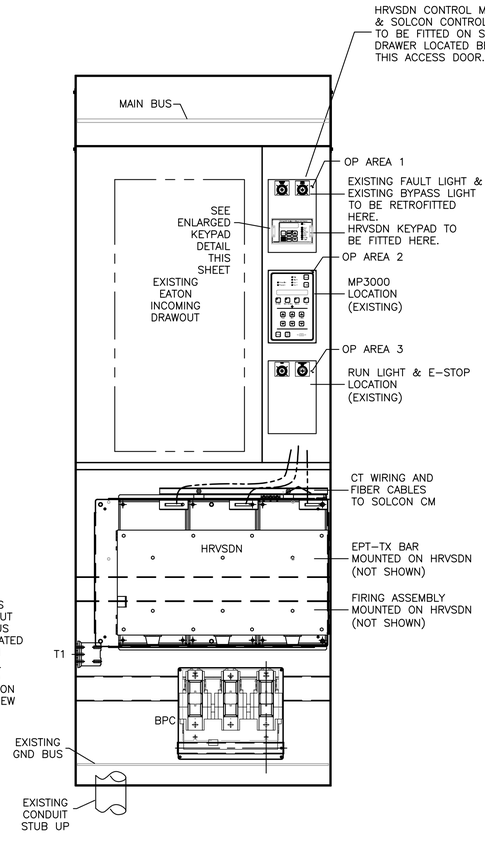
B / E5 BOTTOM VIEW REMOTE HVSDN KEYPAD

SCALE: NONE



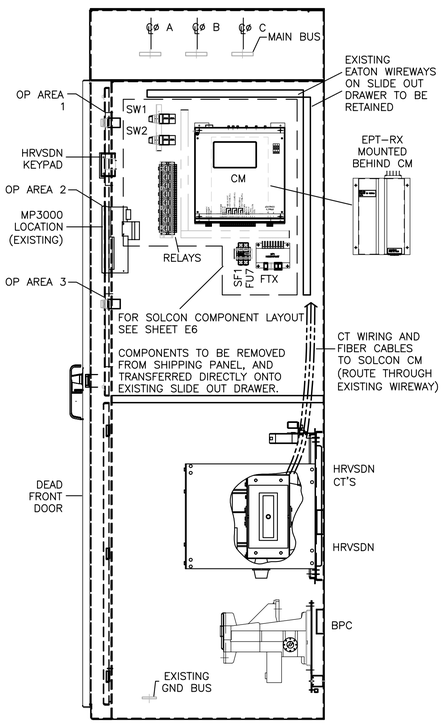
F / E5 LEFT SIDE VIEW

SCALE: NONE



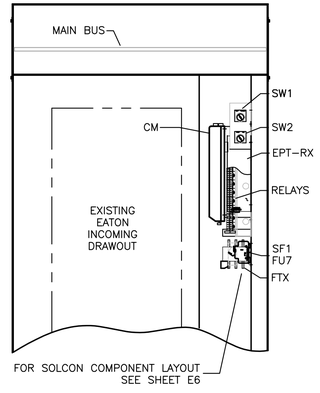
E / E5 EQUIPMENT LAYOUT FRONT VIEW WITHOUT DOORS

SCALE: NONE



D / E5 RIGHT SIDE VIEW

SCALE: NONE



C / E5 FRONT VIEW CM & SWITCHES

SCALE: NONE

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PROFESSIONAL ENGINEER JOSEPH C. GANSER EXP. 06/30/19 ELECTRICAL No.21011 STATE OF NEVADA 1/18/18

TMWRF BLOWER SOFT STARTER RETROFIT

8500 Clean Water Way
Reno, NV 89502

BID SET

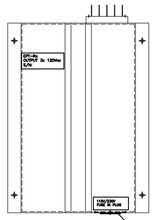
REVISIONS

SHEET TITLE

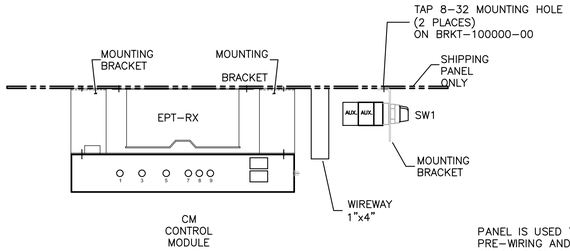
SOLCON STARTER CONCEPTUAL LAYOUT

DRAWN:	TPT
CHECKED:	JEG
DATE:	01/18/18
JOB NUMBER:	17038
PROJECT MGR:	BCD

E4

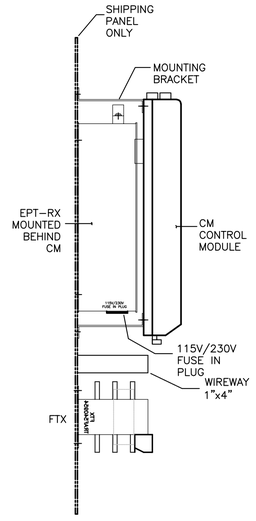


FRONT VIEW
EPT–RX
MOUNED BEHIND CM

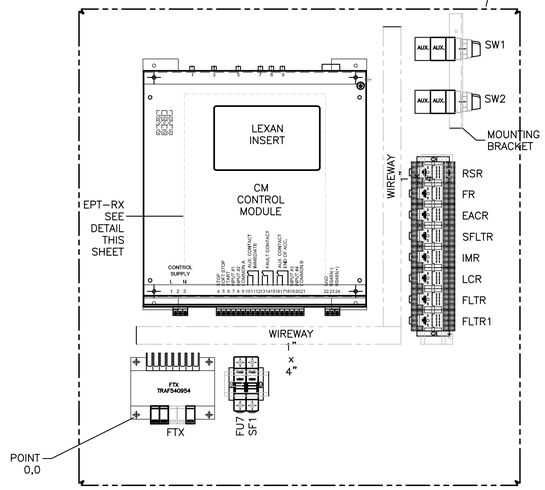


TOP VIEW
SHIPPING PANEL

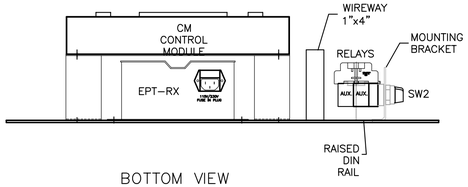
PANEL IS USED TO FACILITATE FACTORY PRE–WIRING AND SHIPMENT OF THESE CONTROL COMPONENTS. PANEL IS NOT BE MOUNTED TO THE EXISTING SLIDE OUT DRAWER OF THE EATON STARTER.
COMPONENTS ARE TO BE DIRECTLY TRANSFERRED ON SITE ONTO THE EXISTING DRAWER LOCATION (SEE SHEET E5)



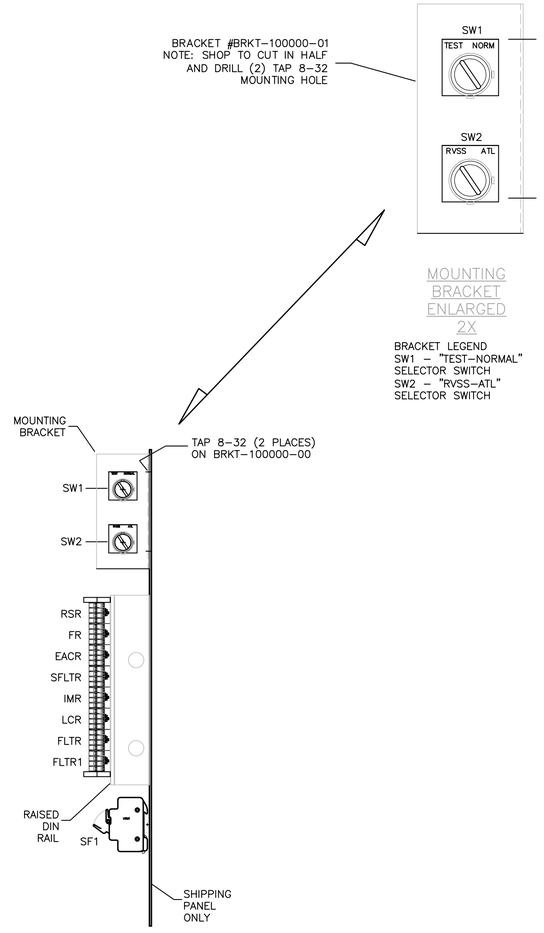
LEFT SIDE VIEW
SHIPPING PANEL



FRONT VIEW
SHIPPING PANEL



BOTTOM VIEW
SHIPPING PANEL
WITHOUT FTX & FUSES



BRACKET LEGEND
SW1 – "TEST–NORMAL" SELECTOR SWITCH
SW2 – "RVSS–ATL" SELECTOR SWITCH

RIGHT SIDE
VIEW
SHIPPING
PANEL

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REVISIONS

SHEET TITLE
SOLCON STARTER FRONT VIEW CONTROL PANEL

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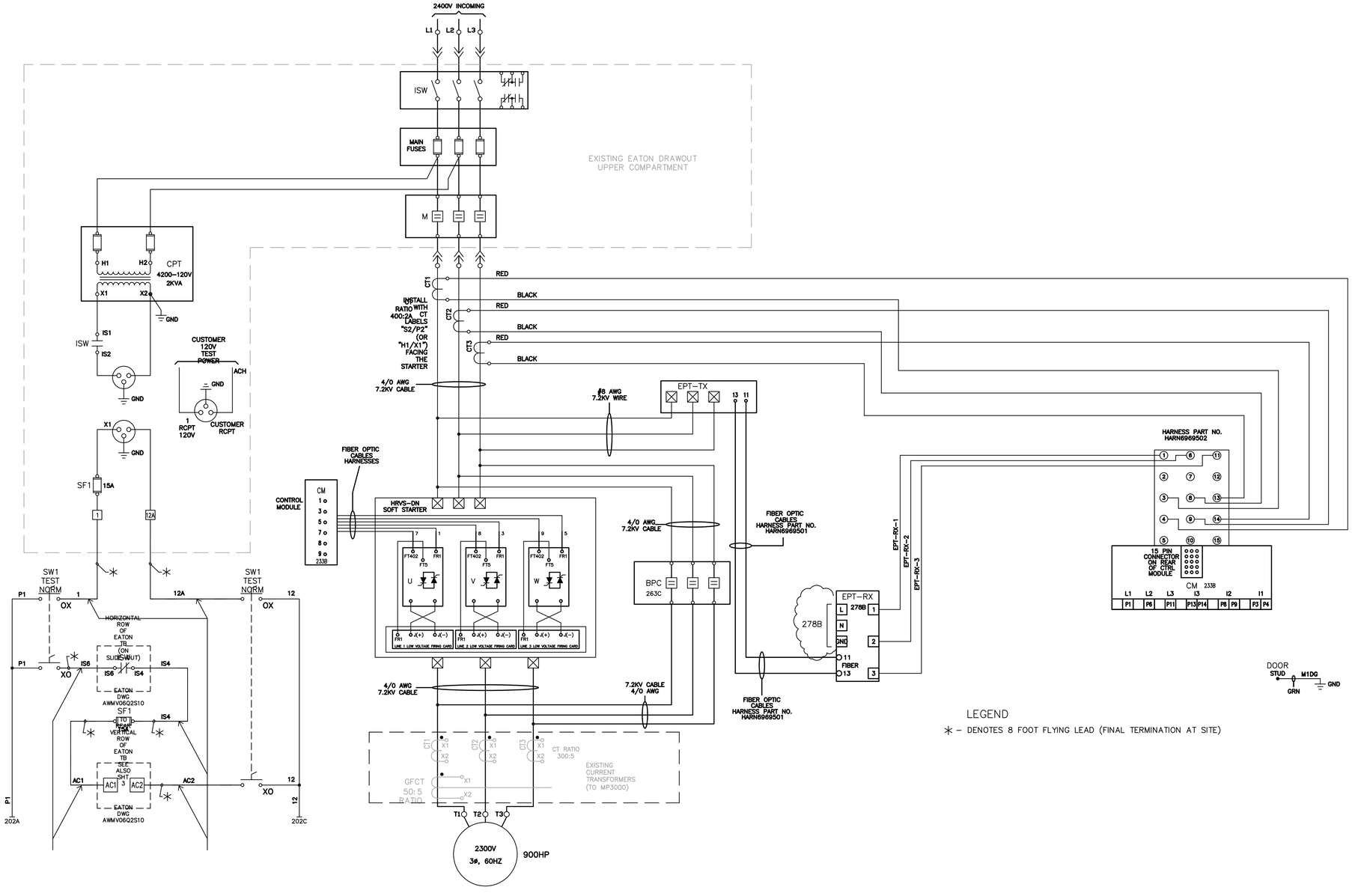
PROJECT MGR:	BGD

E5



LEGEND

✳ – DENOTES 8 FOOT FLYING LEAD (FINAL TERMINATION AT SITE)

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SHEET TITLE

SOLCON STARTER POWER SCHEMATIC DIAGRAM

DRAWN:	TPT
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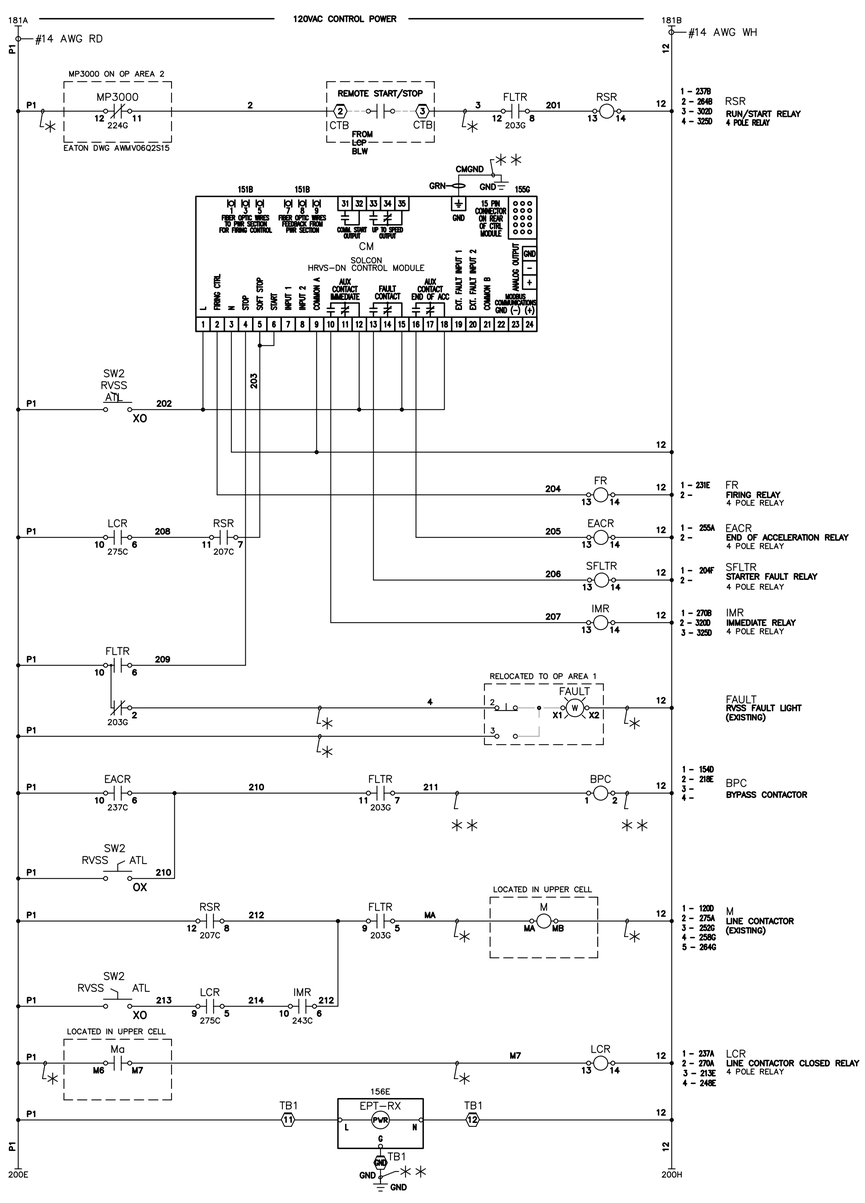
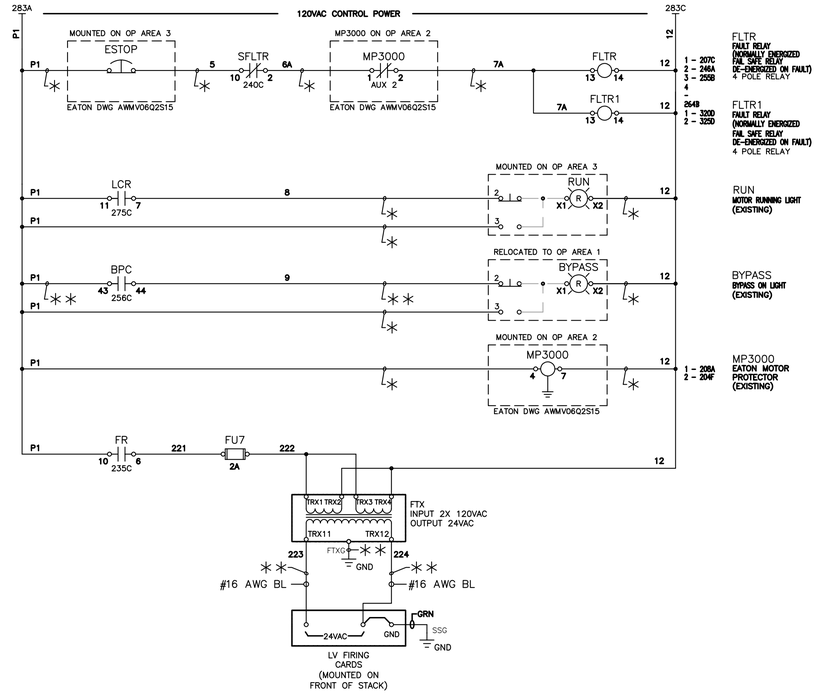
PROJECT MGR:	BCD

E6





LEGEND

∗ – DENOTES 8 FOOT FLYING LEAD (FINAL TERMINATION AT SITE)

∗∗ – DENOTES 13 FOOT FLYING LEAD (FINAL TERMINATION AT SITE)

NOTES
1. REMOTE START SIGNAL TO BE A MAINTAINED SIGNAL, CLOSE TO START, OPEN TO STOP
2. REMOTE START SIGNAL SHOULD BE REMOVED FOR FAULT AND RE-INITIATED MANUALLY AFTER FAULT HAS CLEARED.

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SHEET TITLE

SOLCON STARTER CONTROL SCHEMATIC DIAGRAM

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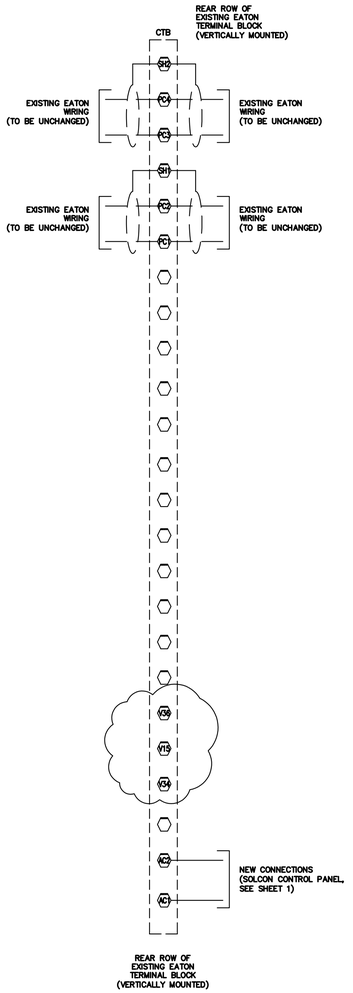
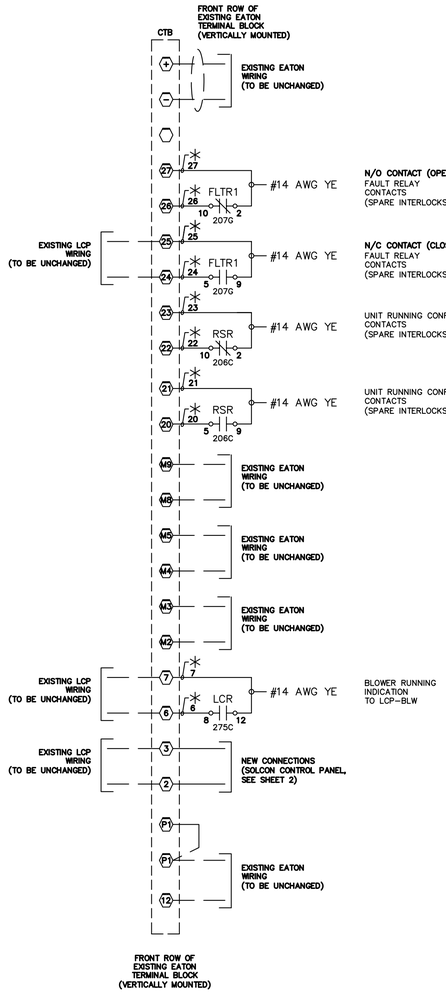
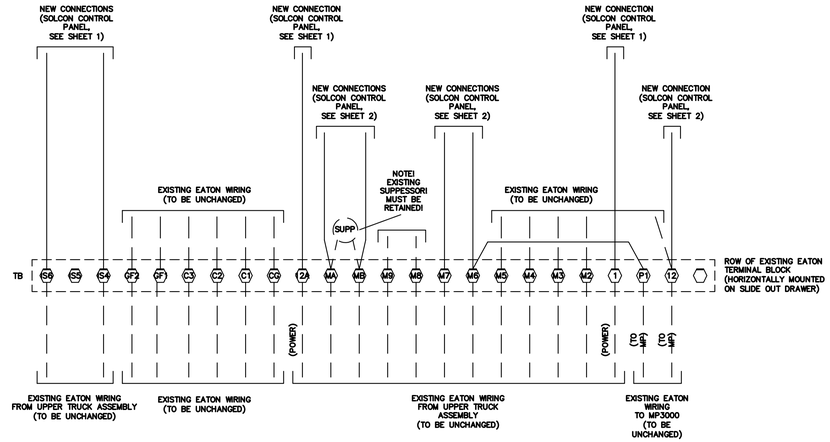
PROJECT MGR:	BCD

E7







LEGEND

✳ – DENOTES 8 FOOT FLYING LEAD (FINAL TERMINATION AT SITE)

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REVISIONS

SHEET TITLE

SOLCON STARTER TERMINAL BLOCK LAYOUT

DRAWN:	TPT
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DATE:	01/18/18
JOB NUMBER:	17038
PROJECT MGR:	BCD

E8