## ORANGE COUNTY CONVENTION CENTER

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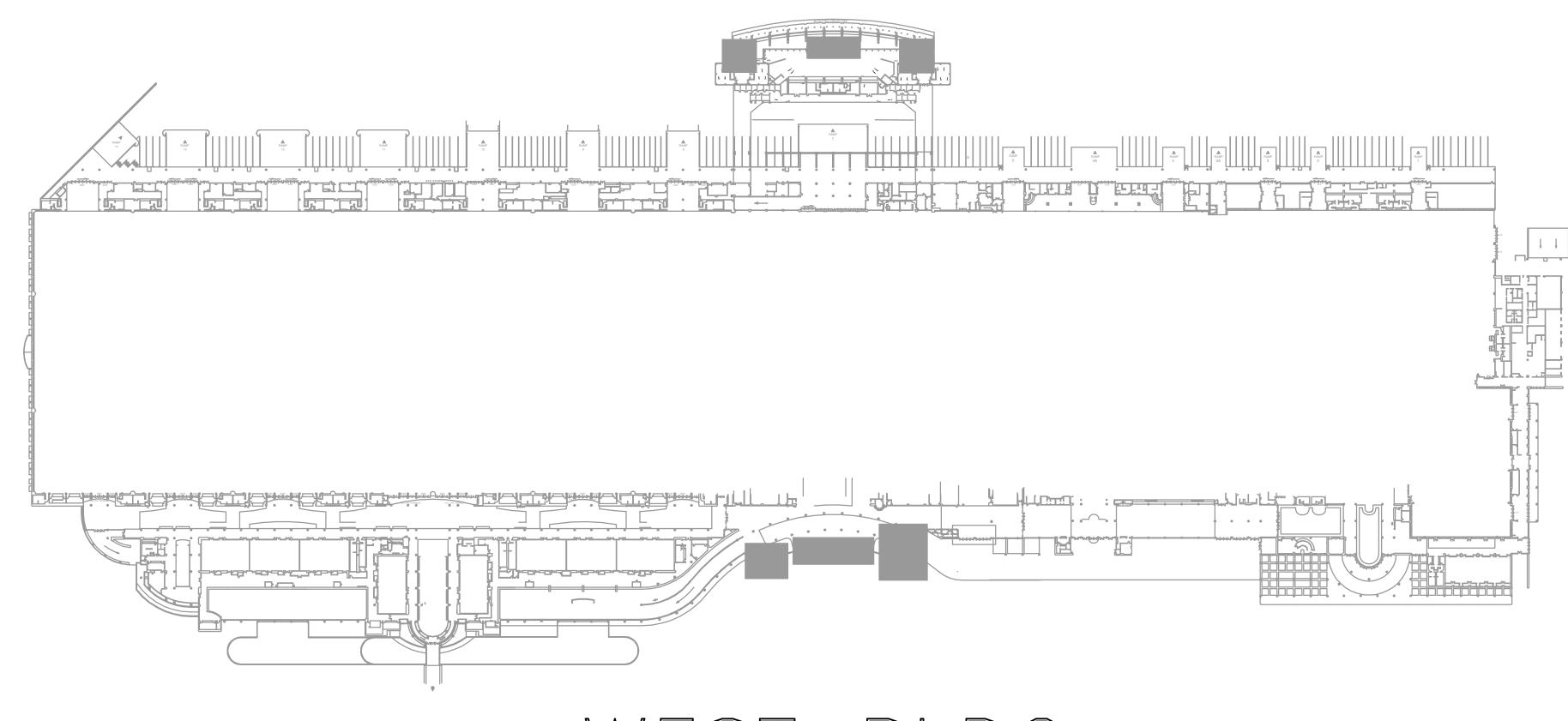
DISTRICT 5 COMMISSIONER

TED EDWARDS

DISTRICT 6 COMMISSIONER

TIFFANY MOORE RUSSELL

## WEST BUILDING PHASE III & IV POWER REDISTRIBUTION









BID DOCUMENTS JUNE 17, 2014

## GENERAL NOTES

- 1. 120 VOLT BRANCH CIRCUITS, WHERE THE LENGTH OF CIRCUIT CONDUCTORS COMPLETE FROM CIRCUIT BREAKER IN SOURCE PANEL TO ANY DEVICE ON THE CIRCUIT IS 0-100 FEET FROM THE PANEL, ARE TO HAVE #12 MINIMUM BRANCH CIRCUIT WIRING THROUGHOUT CIRCUIT. (CONDUIT SIZE PER SPECIFICATION AND NEC).
- 2. 120 VOLT BRANCH CIRCUITS, WHERE THE LENGTH OF CIRCUIT CONDUCTORS COMPLETE FROM CIRCUIT BREAKER IN SOURCE PANEL TO ANY DEVICE ON THE CIRCUIT IS 101-175 FEET FROM THE PANEL, ARE TO HAVE #10 MINIMUM BRANCH CIRCUIT WIRING HOMERUN (3/4"C.) FROM PANEL CIRCUIT BREAKER TO FIRST DEVICE AND #12 BRANCH CIRCUIT WIRING THROUGHOUT THE REMAINDER OF THE CIRCUIT. (CONDUIT SIZE PER SPECIFICATION AND NEC). FIRST 75 FEET OF COMBINED HOMERUN AND BRANCH CIRCUIT TO BE MINIMUM #10 WIRE. (3/4°C).
- 3. 120 VOLT BRANCH CIRCUITS, WHERE THE LENGTH OF CIRCUIT CONDUCTORS COMPLETE FROM CIRCUIT BREAKER IN SOURCE PANEL TO ANY DEVICE ON THE CIRCUIT IS 176-225 FEET FROM THE PANEL, ARE TO HAVE #10 MINIMUM BRANCH CIRCUIT WIRING HOMERUN (3/4°C.) FROM PANEL CIRCUIT BREAKER TO FIRST DEVICE AND #10 BRANCH CIRCUIT WIRING THROUGHOUT THE REMAINDER OF THE CIRCUIT (3/4"C.)
- 4. 120 VOLT BRANCH CIRCUITS, WHERE THE LENGTH OF CIRCUIT CONDUCTORS COMPLETE FROM CIRCUIT BREAKER IN SOURCE PANEL TO ANY DEVICE ON THE CIRCUIT IS 226 FEET OR MORE FROM THE PANEL, ARE TO HAVE #8 MINIMUM BRANCH CIRCUIT WIRING HOMERUN (1"C.) FROM PANEL CIRCUIT BREAKER TO FIRST DEVICE AND #10 BRANCH CIRCUIT WIRING THROUGHOUT THE REMAINDER OF THE CIRCUIT (3/4"C.). FIRST 125 FEET OF COMBINED HOMERUN AND BRANCH CIRCUIT TO BE MINIMUM #8 WIRE (1"C.)
- 5. ALL 277V, 20A CIRCUIT HOMERUNS OVER 100 FT. SHALL BE #10 CU. MINIMUM, UNLESS OTHERWISE
- 6. ALL 277V, 20A CIRCUITS WITH HOMERUNS OVER 150 FT. SHALL BE #10 CU. THROUGHOUT ENTIRE CIRCUIT MINIMUM, UNLESS OTHERWISE NOTED.
- 7. NO MULTI-WIRE BRANCH CIRCUITS ARE TO BE USED. EACH CIRCUIT IS TO HAVE SEPARATE INDIVIDUAL NEUTRAL.
- 8. VISIT AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AND SITE AFFECTED BY THIS WORK BEFORE SUBMITTING PROPOSALS, SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT EXECUTION OF THE WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.
- 9. READ SPECIFICATIONS.
- 10. WHERE CONDUIT ROUTING IS SHOWN, THE CONDUITS ARE SHOWN FOR DIAGRAMMATIC PURPOSES AND ARE NOT NECESSARILY REPRESENTATIVE OF EXACT PLACEMENT. THE ROUTINGS SHOWN ARE PROPOSED CONDUIT ROUTINGS. CONTRACTOR TO COORDINATE ALL ROUTING WITH OTHER TRADES PRIOR TO BID. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND ROUTING OF CONDUIT PRIOR TO BID. CONTRACTOR IS RESPONSIBLE FOR RELOCATING CONDUIT FROM THE PROPOSED ROUTING SHOWN TO THE ROUTING REQUIRED TO FACILITATE INSTALLATION PER SPECIFICATIONS AND APPLICABLE CODES, COMPLETE WITH ALL COORDINATION AND EXISTING CONDITIONS TAKEN INTO ACCOUNT. CONTRACTOR IS RESPONSIBLE FOR ALL CEILING AND WALL REPAIR/REPLACEMENT AFTER ROUTING OF CONDUIT.
- 11. SPLICES IN POWER AND POWER OUTLET BOXES SHALL BE KEPT TO A MINIMUM, PULL CONDUCTORS THROUGH TO DEVICES, EQUIPMENT CABINETS/PANELBOARDS. SPLICING IN WIREWAYS IS NOT PERMITTED UNLESS SPECIAL WRITTEN PERMISSION IS GRANTED BY A/E.
- 12. CONTRACTOR SHALL INCLUDE IN HIS BID THE TRANSPORT AND DISPOSAL OR RECYCLING OF ALL WASTE MATERIALS GENERATED BY THIS PROJECT IN ACCORDANCE WITH ALL RULES, REGULATIONS AND GUIDELINES APPLICABLE. CONTRACTOR SHALL COMPLY FULLY WITH FLORIDA STATUTE 403.7186 REGARDING MERCURY CONTAINING DEVICES AND LAMPS. LAMPS, BALLASTS AND OTHER MATERIALS SHALL BE TRANSPORTED AND DISPOSED OF IN ACCORDANCE WITH ALL DEP AND EPA GUIDELINES APPLICABLE AT TIME OF DISPOSAL. CONTRACTOR SHALL PROVIDE OWNER WITH WRITTEN CERTIFICATION OF ACCEPTED DISPOSAL.
- 13. EXISTING CONDITIONS AND UTILITIES INDICATED ARE TAKEN FROM EXISTING CONSTRUCTION DOCUMENTS, VARIOUS SURVEYS, AND FIELD INVESTIGATIONS. IT IS TO BE UNDERSTOOD THAT UNFORESEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON THE DRAWINGS. COOPERATION WITH OTHER TRADES IN ROUTING AND DEPTHS AS DETERMINED DURING CONSTRUCTION AND AS DIRECTED BY THE ARCHITECT/ENGINEER MAY BE NECESSARY AND IT IS INTENDED THAT SUCH DEVIATIONS SHALL BE CONSIDERED A PART OF THIS CONTRACT. IT IS ALSO UNDERSTOOD THAT THE PLANS ARE NOT COMPLETELY TO SCALE. THIS CONTRACTOR IS TO FIELD VERIFY DIMENSIONS OF ALL SITE UTILITIES, ETC., PRIOR TO BID AND INCLUDE ANY DEVIATIONS IN THE CONTRACT.
- 14. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON PLANS OR NOT AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE COMPLETION OF THIS WORK. THE CONTRACTOR SHALL LOCATE ALL UTILITIES (BOTH KNOWN AND UNKNOWN) IN AREA OF WORK PRIOR TO EXCAVATION WITH THE USE OF ELECTRONIC LOCATOR/TRACER DEVICES AND EQUIPMENT SUITABLE FOR SUCH USE. REFLECT LOCATED UTILITIES ON AS-BUILT DOCUMENTS.
- 15. ALL EXISTING ELECTRICAL IS NOT SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO BID, AND INCLUDE IN HIS BID THE REMOVAL OF ALL ELECTRICAL EQUIPMENT, WIRE, CONDUIT, DEVICES, FIXTURES, ETC. THAT IS NOT BEING REUSED, BACK TO ITS SOURCE.
- 16. ELECTRICAL CONTRACTOR SHALL INCLUDE ALL EXISTING PANELBOARD SCHEDULES FOR PANELBOARDS RELATED/ASSOCIATED WITH OR WITHIN CONTRACT LIMITS WHETHER SHOWN ON PLANS OR NOT AS PART OF A COMPLETE AS-BUILT SET OF DRAWINGS. SCHEDULES SHALL SHOW FINAL CONFIGURATION, ETC. OF CIRCUITS, CIRCUIT BREAKERS, DIRECTORY, ETC.
- 17. PROVIDE NEW TYPED PANEL DIRECTORIES FOR ALL EXISTING AND NEW PANELBOARDS FOR PANELBOARDS ASSOCIATED WITH CONTRACT WHETHER SHOWN ON PLANS OR NOT REGARDLESS IF SCHEDULES/CIRCUITRY HAS BEEN CHANGED.
- 18. PROVIDE NEW PHENOLIC LABELS (PER SPEC'S) ON ALL (2) TWO POLE AND (3) THREE POLE CIRCUIT BREAKERS WITHIN ALL EXISTING AND NEW PANELBOARDS ASSOCIATED WITH CONTRACT WHETHER SHOWN ON PLANS OR NOT REGARDLESS IF SCHEDULES/CIRCUITRY HAS BEEN CHANGED.
- 19. ALL EXISTING AND NEW CIRCUIT BREAKERS WITHIN EACH EXISTING PANELBOARD SHALL BE THE SAME MFG. TYPE, STYLE AND A.I.C. RATING OF EXISTING PANELBOARD REGARDLESS OF WHAT IS SHOWN ON PANEL SCHEDULE. FIELD VERIFY ALL EXISTING PANELBOARD(S) RELATED WITH CONTRACT AND REPLACE CIRCUIT BREAKERS AS NECESSARY TO COMPLY WITH THIS REQUIREMENT.
- 20. PAINT ALL EXPOSED CONDUIT, BOXES, ETC. TO MATCH WALL SURFACE. IN CATWALK AREA ALL CONDUIT, RACKS, BOXES, ETC SHALL BE PAINTED MATTE BLACK TO MATCH EXISTING STRUCTURE.
- 21. ALL OPENINGS IN FIRE RATED WALLS AND FLOORS, ETC. MADE BY RENOVATION SHALL BE SEALED AND FIREPROOFED. PROVIDE AND INSTALL FIRESTOPPING ON ALL NEW OR EXISTING CONDUIT AND/OR CABLE THAT PENETRATES ANY FIRE RATED NEW OR EXISTING WALL IN ALL AREAS AFFECTED BY THIS PROJECT. VERIFY LOCATION OF FIRE RATED WALLS WITH ARCHITECTURAL PLANS PRIOR TO BID. FIRESTOPPING SYSTEM SHALL BE AS REQUIRED BY UL FOR RATING OF WALL AND CONDUIT/CABLE PENETRATION.
- 22. ALL ITEMS REMOVED AND NOT RE-USED SHALL BE IMMEDIATELY TURNED OVER TO OWNER AS THEY ARE MADE AVAILABLE BY RENOVATION. REMOVE ITEMS FROM JOB SITE AND DELIVER TO OWNERS STORAGE LOCATION(S) AS DIRECTED BY PROJECT MANAGER. DISCARD COMPLETE ITEMS WHICH OWNER ELECTS TO REFUSE.
- 23. WORK TO BE PERFORMED IN STRICT COMPLIANCE WITH ESTABLISHED WORK SCHEDULE BEING SET FORTH BY ORANGE COUNTY CONVENTION CENTER PROJECT MANAGER. COORDINATE ALL WORK. THE CONTRACTOR SHALL FURNISH ADEQUATE FORCES. CONSTRUCTION PLANT. AND EQUIPMENT. AND SHALL WORK SUCH HOURS, INCLUDING NIGHT SHIFTS, OVERTIME OPERATIONS, SUNDAY, AND HOLIDAYS IN ACCORDANCE WITH THE OWNERS OPERATIONAL SCHEDULE. IF THE CONTRACTOR FALLS BEHIND PROGRESS REQUIRED IN THE OPERATIONAL SCHEDULE, THE CONTRACTOR SHALL TAKE SUCH STEPS AS MAY BE NECESSARY TO IMPROVE HIS PROGRESS, AND THE OWNER MAY REQUIRE HIM TO INCREASE THE NUMBER OF SHIFTS AND/OR OVERTIME OPERATIONS, DAY OF WORK AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AT NO ADDITIONAL COST TO THE OWNER UNDER THIS CONTRACT.
- 24. CONTRACTOR MAY REUSE EXISTING CONDUIT (MIN. OF 10' LENGTHS) AND ASSOCIATED FITTINGS, PULL BOXES, ETC., WHICH ARE IN "LIKE NEW CONDITION" AND WHICH MEET THE INTENT OF THE SPECIFICATIONS FOR NEW PRODUCTS. WHERE EXISTING RACEWAYS ARE REUSED, THE CONTRACTOR SHALL REMOVE EXISTING WIRING, PULL IN NEW WIRING, AND CONNECT TO NEW DEVICES AS SHOWN ON THE DRAWINGS AND CALLED FOR IN THE SPECIFICATIONS. REUSE OF EXISTING DEVICES AND WIRING SHALL NOT BE ALLOWED UNLESS SPECIFICALLY NOTED OTHERWISE. ALL EXISTING CONDUITS THAT ARE REUSED SHALL BE PERMANENTLY IDENTIFIED IN ACCORDANCE WITH THE SPECIFICATIONS.

SYMBOL LEGEND									
SYMBOL	DESCRIPTION	DESIGN SELECTION	APPROVED SUBSTITUTION	APPROVED SUBSTITUTION	REMARK				
	BUSBAR								
	DISCONNECT SWITCH, SIZE AS NOTED	SQUARE "D"	G.E.	SIEMENS	g, i				
邼	TRANSFORMER	SQUARE "D"	G.E.	SIEMENS	i				
	AUTOMATIC TRANSFER SWITCH	RUSSELECTRIC	ASC0		i				
<b>@</b>	FLUSH WALL JUNCTION BOX AND BLANK PLATE	STEEL CITY	RACO		d				
<b>②</b>	JUNCTION BOX AND BLANK PLATE ABOVE CEILING	STEEL CITY	RACO		b,d				
	120/208V BRANCH CIRCUIT PANELBOARD SURFACE MOUNTED	EXISTING							
_	120/208V BRANCH CIRCUIT PANELBOARD FLUSH MOUNTED	EXISTING							
<b>////</b>	277/480V BRANCH CIRCUIT PANELBOARD SURFACE MOUNTED	EXISTING							
<i>777</i> 7	277/480V BRANCH CIRCUIT PANELBOARD FLUSH MOUNTED	EXISTING							
酉	TRANSFORMER	EXISTING							
/#\	BRANCH CIRCUIT CONDUIT CONCEALED ABOVE CEILING OR IN WALL. SLASH MARKS INDICATE NUMBER OF CONDUCTORS (GROUND WIRE NOT SHOWN). TWO CONDUCTORS PLUS GROUND REQUIRED (UNLESS OTHERWISE NOTED OR MARKED)								
	BRANCH CIRCUIT CONDUIT EXPOSED								
	HOME RUN WIRING. ONE CIRCUIT PER ARROW HEAD								
E	EMERGENCY SYSTEM BRANCH CIRCUIT CONDUIT, CONCEALED (LIFE SAFETY BRANCH)								
$\dashv$	CONDUIT CAPPED OFF								
<u> </u>	CONDUIT CONTINUED								
۰	CONDUIT RUN UP								
•	CONDUIT RUN DOWN								
—G—	GROUND WIRE, CONCEALED								
—— ı·	GROUND OR GROUND ROD AS NOTED								

1) ALL DEVICES TO BE GREY WITH SMOOTH METAL #302 S.S. PLATES UNLESS OTHERWISE NOTED.

2) THIN LINEWORK ITEM DENOTES "EXISTING".

3) "R" BY DEVICE DENOTES EXISTING TO BE REMOVED COMPLETELY.

4) "H" BY DEVICE DENOTES DEVICE TO BE MOUNTED HORIZONTALLY.

5) MOUNT SWITCHES AT 48" AFF TO TOP.

6) SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

7) ALL ITEMS NOTED ON THE LEGENDS DO NOT NECESSARILY APPEAR ON PLANS.

E-900 DETAILS ELECTRICAL

b) SUPPORT OUTLET BOX FROM STRUCTURE WITH (1) 3/8" ALL THREADS MINIMUM. BOXES LARGER THAN 25 SQUARE INCHES SHALL BE SUPPORTED WITH (2) 3/8" ALL THREADS MINIMUM. d) JUNCTION/OUTLET BOX SHALL BE SIZED AS REQUIRED FOR CONDUCTOR/DEVICE FILL PER N.E.C.

ORANGE COUNTY

CONVENTION CENTER WEST BUILDING PHASE III & IV **POWER** REDISTRIBUTION

ORLANDO I Fort Myers I Jacksonville I Tampa

Matern Professional Engineering, Inc.

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130 Candace Drive

Maitland, FI 32751-3331

Professional

ENGINEERING

Consultants - A Solutions

Revisions No.| Date Description **ELECTRICAL SHEET INDEX** E-001 GENERAL NOTES, SYMBOL LEGEND & SHEET INDEX NONE PARTIAL WEST BUILDING PLAN - CATWALK - POWER 1"=40'-0"

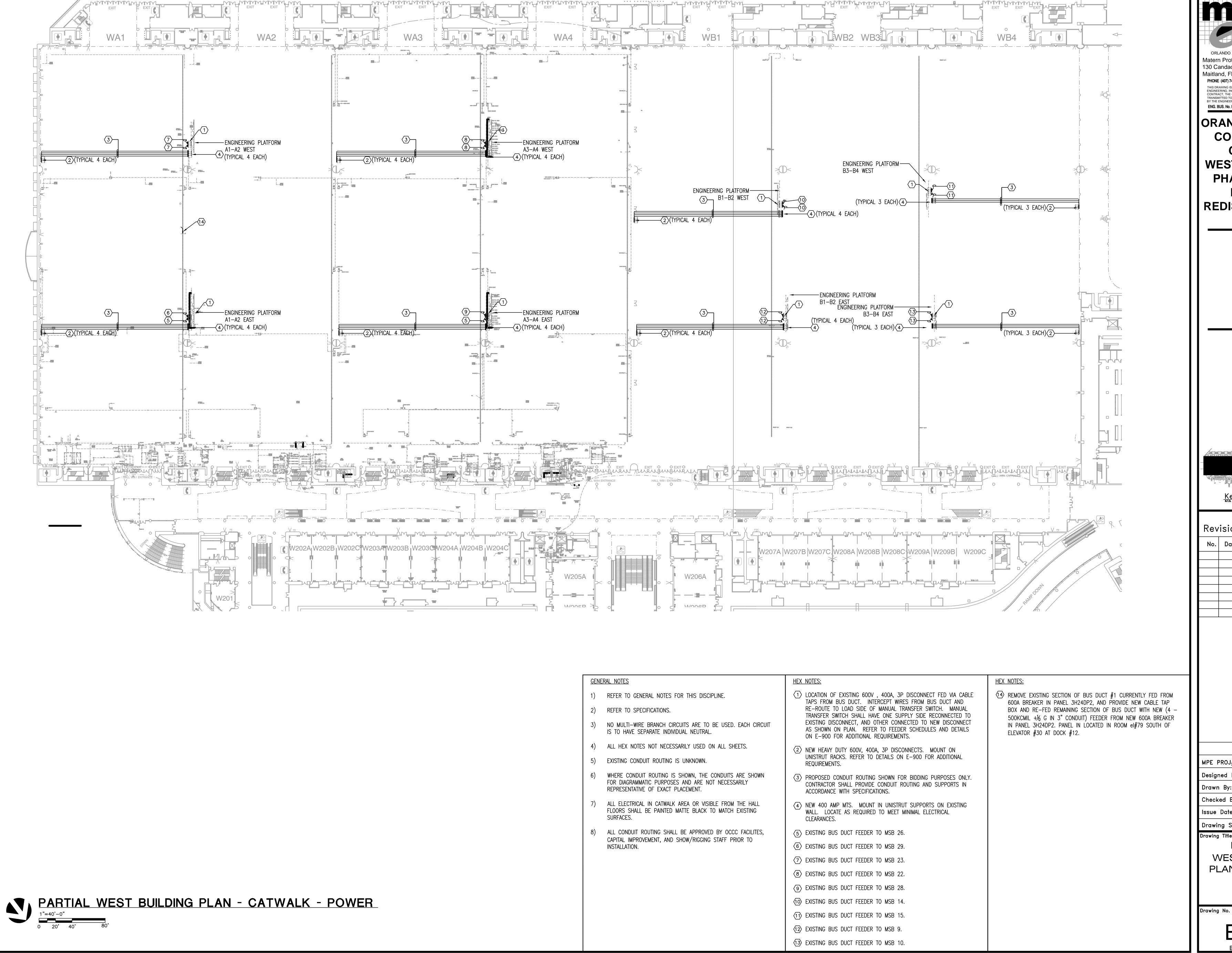
> MPE PROJ#: 2014-036 Designed By: Drawn By: CT Checked By: JUNE 17, 2014 Issue Date: Drawing Scale:

> > GENERAL NOTES,

SYMBOL LEGEND, & SHEET INDEX

Drawing No.

E-001



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Key Plan—West

Revisions No. Date Description

MPE PROJ#: 2014-036

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Drawn By:

Checked By:

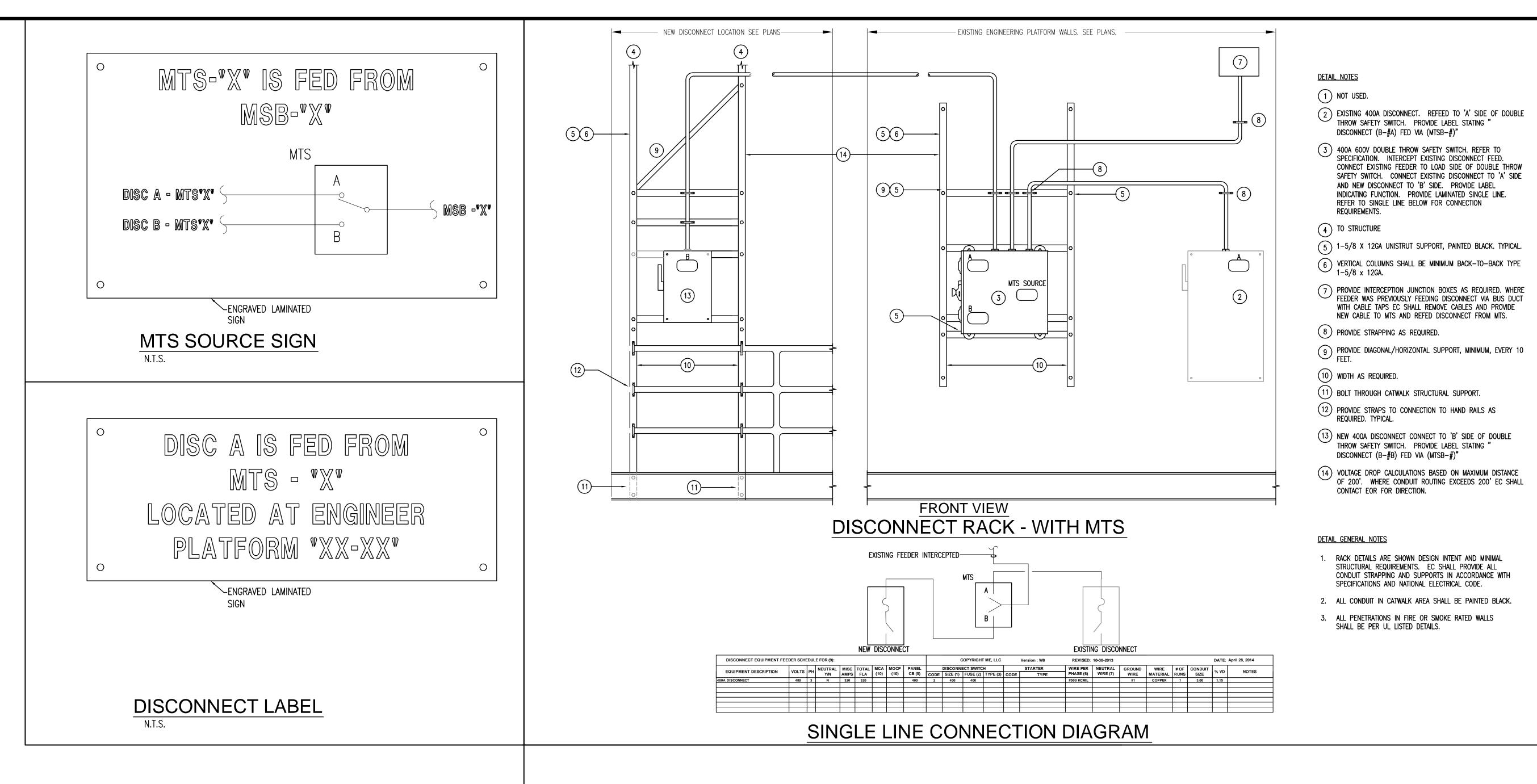
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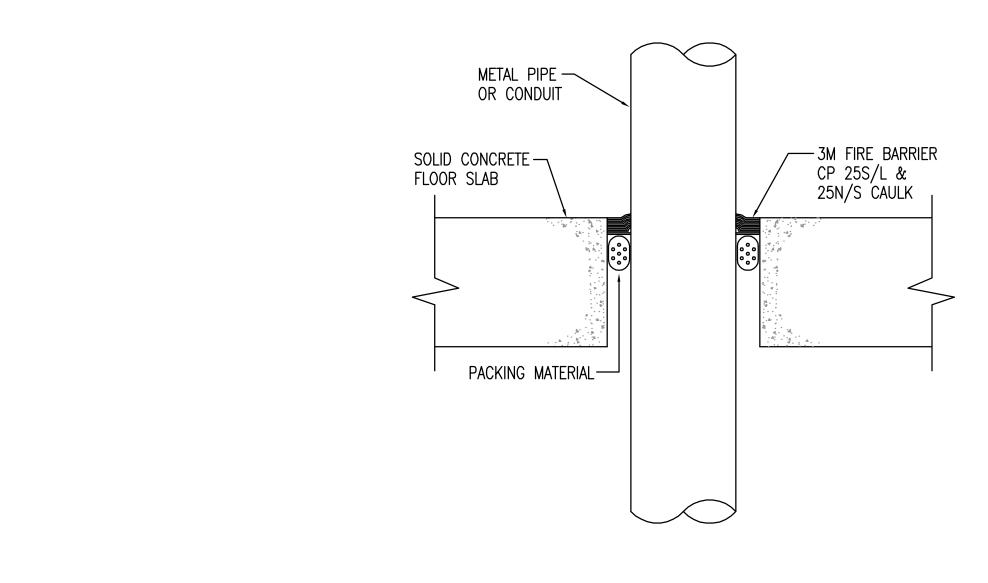
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PARTIAL WEST BUILDING

PLAN - CATWALK **POWER** 

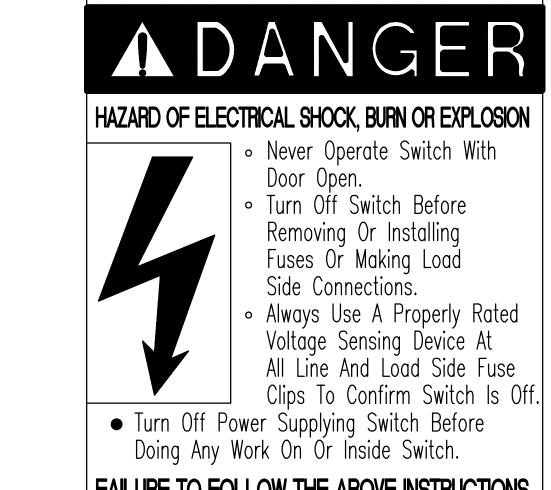
E-101 BID DOCUMENTS





PENETRATION FIRESTOP FOR 6" MAX. DIA. METAL PIPE/CONDUIT THROUGH A CONCRETE FLOOR

N.T.S. UL SYSTEM #49 (2 HOUR RATING) FIREST6

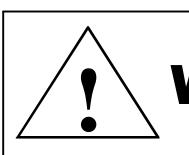


NOTE:

AFFIX THIS SELF ADHESIVE FILM LABEL TO ALL FUSIBLE DISCONNECT ELECTRICAL EQUIPMENT ON BOTH THE INSIDE AND OUTSIDE COVER

FAILURE TO FOLLOW THE ABOVE INSTRUCTIONS WILL RESULT IN ELECTRICAL SHOCK, SEVERE PERSONAL INJURY OR DEATH.

FUSIBLE DISCONNECT LABEL 'FDL'



**WARNING** 

Arc Flash and Shock Hazard Appropriate PPE Required

<u>NOTES</u>

PROVIDE/INSTALL SIGN ON ALL EQUIPMENT PER ANSI, NEC, AND OSHA. ANSI Z535.4-1998, PRODUCT SAFETY SIGNS AND LABELS, PROVIDES GUIDELINES FOR

THE DESIGN OF SAFETY SIGNS AND LABELS FOR APPLICATION TO PRODUCTS.

"ARC FLASH AND SHOCK HAZARD" SIGN

	MPE PROJ#: 2014-036						
	Designed By:			CET			
	Drawn By:			CET			
	Checked By:			CET			
	Issue Date:	JUNE	17,	2014			
	Drawing Scale:			NONE			
	Drawing Title:						
ELECTRICAL							
	DETAILS						

Revisions

No. Date

Description

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WEST BUILDING

PHASE III & IV

**POWER** 

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