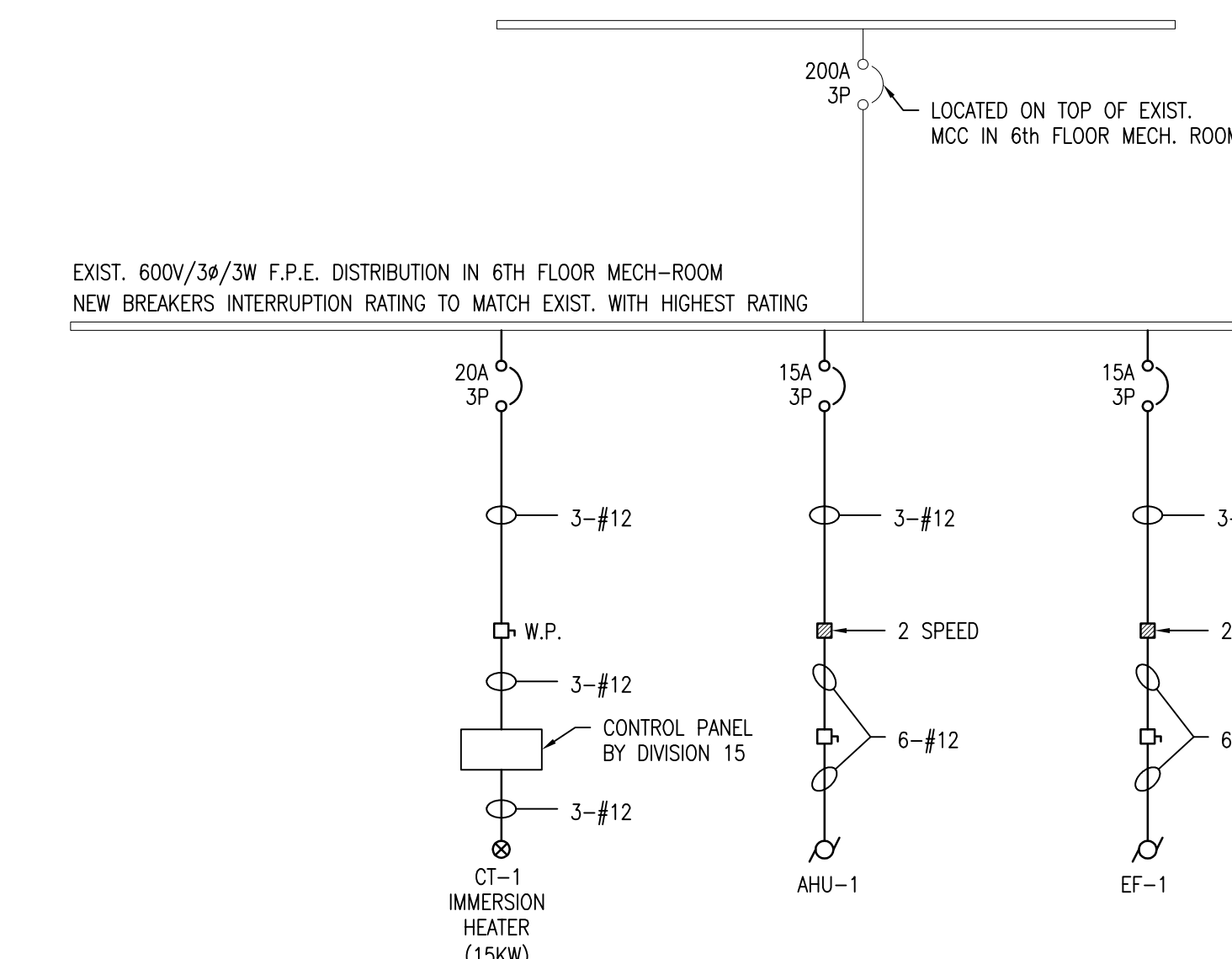


**DRAWING NOTES (DEMO) (E)**

- EXISTING 20HP. COOLING TOWER TO BE DISCONNECTED. REMOVE ALL EXISTING CONDUIT & WIRE NO LONGER REQUIRED.
- EXISTING CHILLER TO BE DISCONNECTED. REMOVE ALL EXISTING CONDUIT & WIRE NO LONGER REQUIRED.
- EXISTING FUSED STARTER FOR EXISTING CHILLER (SEE NOTE 2) TO BE REMOVED ALONG WITH ALL WIRING & CONDUIT FROM STARTER TO CHILLER. EXISTING SINGLE CONDUCTOR CABLE TO PRIMARY SIDE OF STARTER TO REMAIN & BE RE-USED (SEE ELECTRICAL DISTRIBUTION RISER #2).

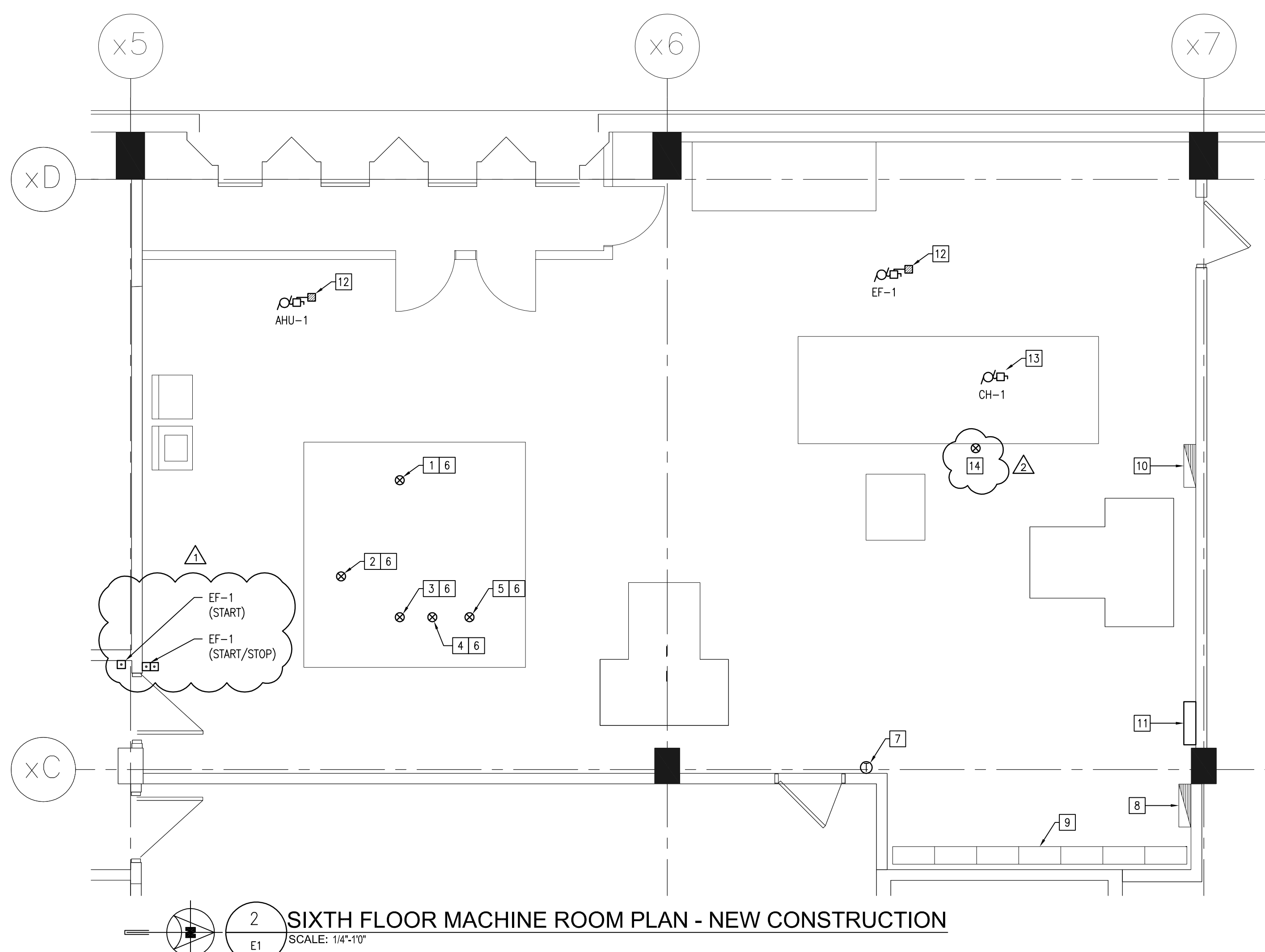
| SYMBOL LEGEND |   |
|---------------|---|
|               | 20A GFI RECEPTACLE CONNECTED TO 20A GFI CIRCUIT |
|               | JUNCTION BOX                                    |
|               | DISCONNECT                                      |
|               | MOTOR   |
|               | MAGNETIC STARTER                                |
|               | THERMOSTAT                                      |
|               | WEATHER PROOF                                   |

\* PLEASE NOTE \*  
ALL EQUIPMENT SHOWN "FADED BACK" IS EXISTING TO REMAIN UNLESS OTHERWISE NOTED.  
ALL EQUIPMENT SHOWN "DASHED" IS EXISTING TO BE REMOVED UNLESS OTHERWISE NOTED.

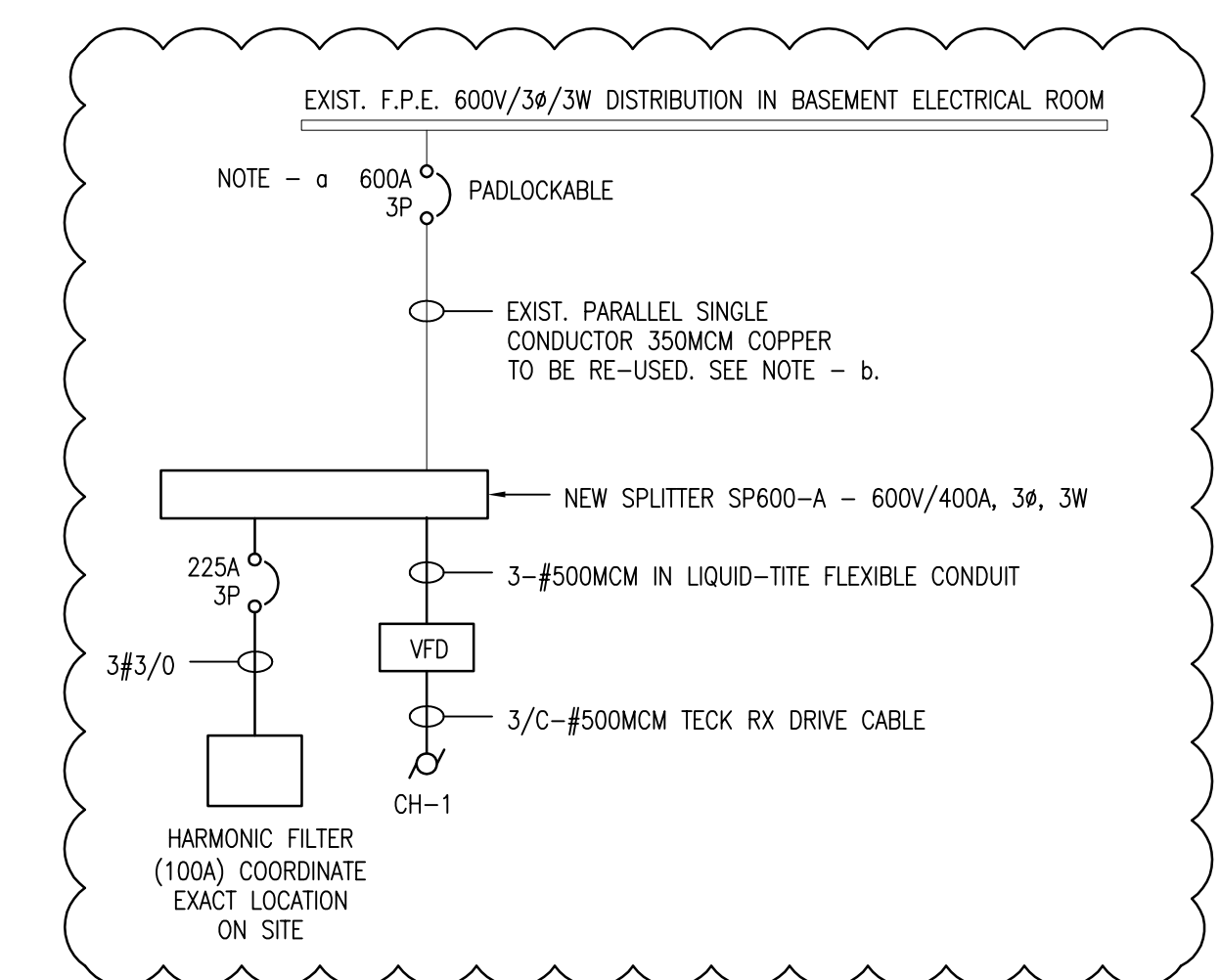


**DRAWING NOTES (NEW CONSTRUCTION) (E)**

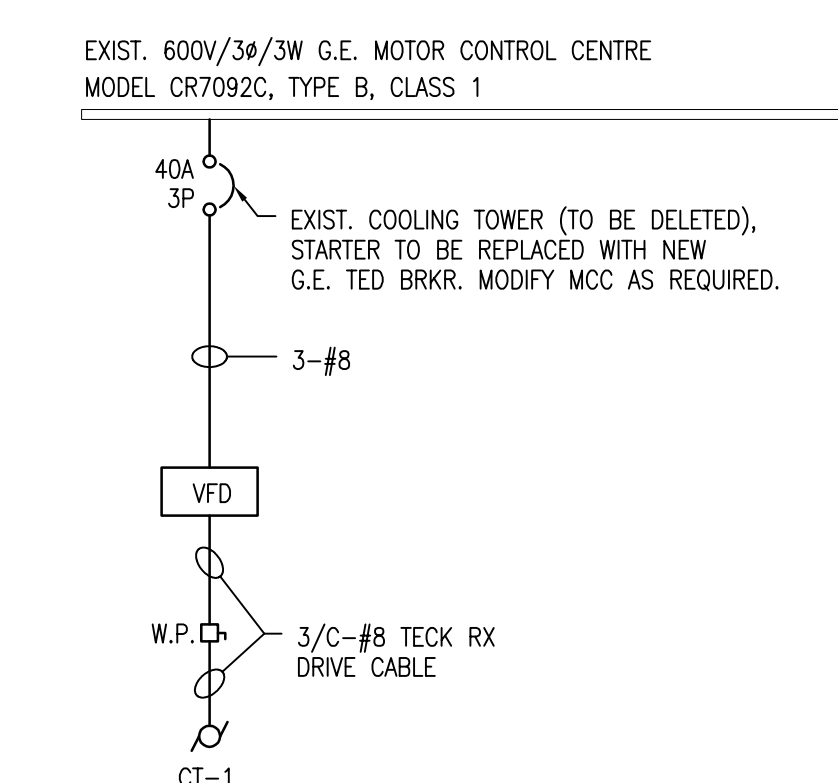
- DIVISION 16 TO HEAT TRACE MECH. 8" RETURN LINE (1" INSULATION). HEAT TRACE CABLE TO BE 2 RUNS OF TYCO #8XL1-CR (260 WATTS) C/W ALL REQUIRED COMPONENTS. MINIMUM 13' OF EACH CABLE.
- DIVISION 16 TO HEAT TRACE MECH. 8" SUPPLY LINE (1" INSULATION). HEAT TRACE CABLE TO BE 2 RUNS OF TYCO #8XL1-CR (260 WATTS) C/W ALL REQUIRED COMPONENTS. MINIMUM 13' OF EACH CABLE.
- DIVISION 16 TO HEAT TRACE MECH. 1" DRAIN LINE (1" INSULATION). HEAT TRACE CABLE TO BE TYCO #8XL1-CR (130 WATTS) C/W ALL REQUIRED COMPONENTS. MINIMUM OF 13' OF CABLE.
- DIVISION 16 TO HEAT TRACE MECH. 1" DRAIN LINE (1" INSULATION). HEAT TRACE CABLE TO BE TYCO #8XL1-CR (130 WATTS) C/W ALL REQUIRED COMPONENTS. MINIMUM OF 13' OF CABLE.
- DIVISION 16 TO HEAT TRACE MECH. 1" WATERLINE (2" INSULATION). HEAT TRACE CABLE TO BE TYCO #8XL1-CR (130 WATTS) C/W ALL REQUIRED COMPONENTS. MINIMUM OF 13' OF CABLE.
- DIVISION 16 TO HEAT TRACE MECH. PIPING MINIMUM 2" INTO BUILDING WRM SPACE.
- DIVISION 16 TO SUPPLY & INSTALL A TYCO #EC-TS STAT TO CONTROL ALL HEATING CABLES. WIRE & CONNECT THERMOSTAT & HEATING CABLES TO A DEDICATED 120 VOLT CIRCUIT IN EXIST. PANEL 'C'. THERMOSTAT SENSING BULB TO BE EXTENDED TO EXTERIOR OF BUILDING. SUPPLY & INSTALL ALUMINUM GUARD OVER SENSING BULB. COORDINATE THERMOSTAT FINAL LOCATION WITH SENSING BULB CABLE LENGTH. WIRE AND CONNECT ALL HEATING CABLES AND CONTROLLER WITH 2#12 IN CONDUIT. PROVIDE 15AMP. SINGLE POLE GROUND FAULT BREAKER IN PANEL.
- EXIST. 120/208/34/4W, F.P.E. 24 CKT. PANEL 'C'. MODIFY AS REQUIRED TO ACCEPT NEW BREAKERS. SUPPLY & INSTALL NEW UPDATED TYPED DIRECTORY.
- EXIST. GENERAL ELECTRIC MODEL CR7092C, TYPE B, CLASS 1 MOTOR CONTROL CENTRE.
- EXIST. 600V/34/3W F.P.E. DISTRIBUTION.
- NEW 600V/34/3W SPLITTER SP600-A.
- MOUNT STARTERS & DISCONNECTS ON VERTICAL UNI-STRUT SUPPORTS. SECURE UNI-STRUT TO FLOOR & CEILING SYSTEM.
- CHILLER CONTROL PANEL AND VFD ARE LOCATED ON OR ADJACENT TO CHILLER. PROVIDE WIRING FROM 600V SPLITTER TO VFD AND FROM VFD TO CHILLER.
- 20A-120V OCT. FOR DDC PANEL MOUNTED ON EQUIPMENT. COORDINATE LOCATION ON SITE WITH EQUIPMENT SUPPLIER.



**4 ELECTRICAL DISTRIBUTION RISER #1**  
SCALE: NTS



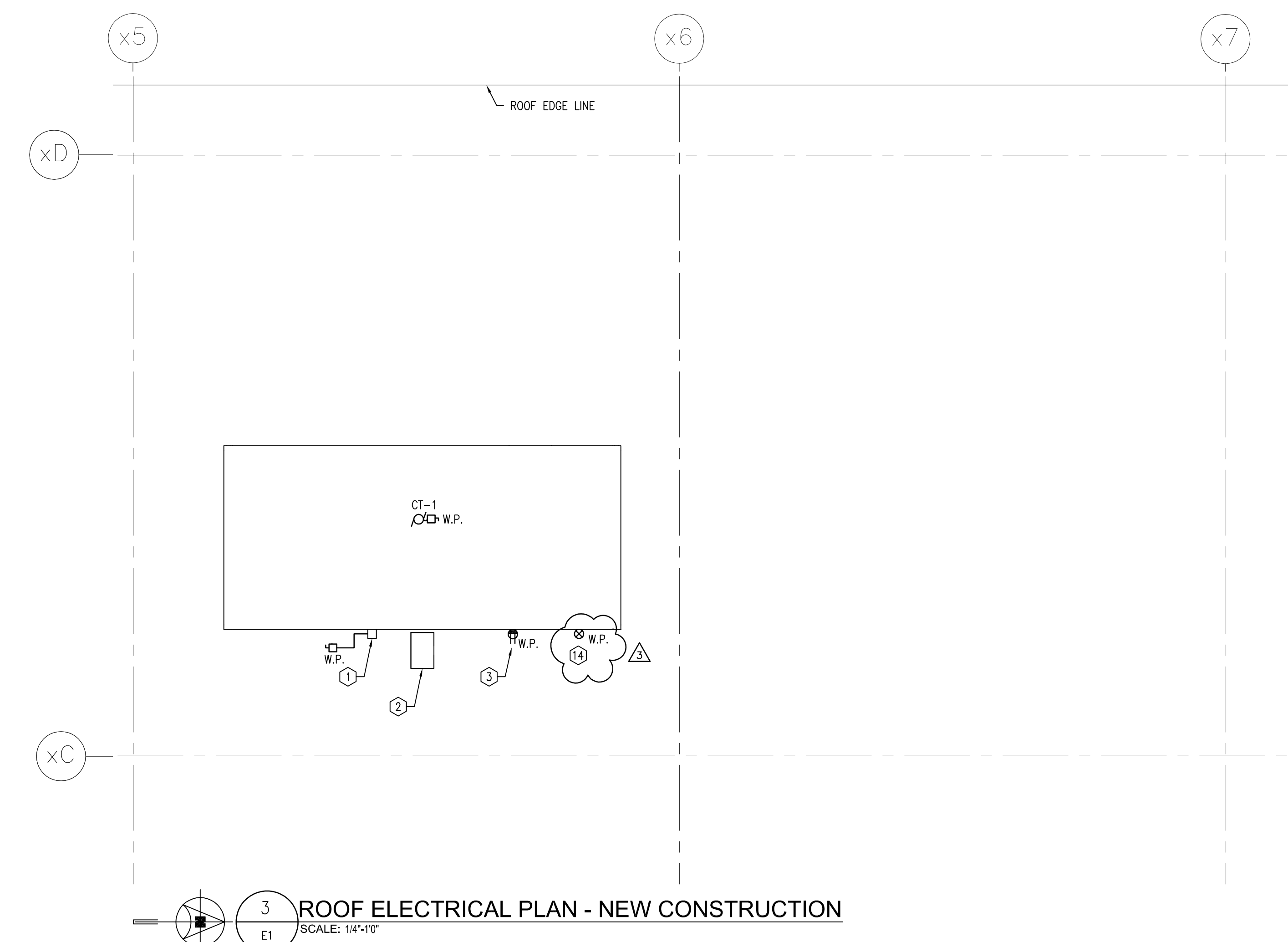
**5 ELECTRICAL DISTRIBUTION RISER #2**  
SCALE: NTS



**6 MOTOR CONTROL CENTRE RISER**  
SCALE: NTS

**DRAWING NOTES (ROOF CONSTRUCTION) (E)**

- IMMERSION HEATER CONTROL PANEL BY DIVISION 15. DIVISION 16 TO WIRE & CONNECT FROM CONTROL PANEL TO 15KW, 600V/34/3W CT-1 ELECTRIC IMMERSION HEATER. INSTALL WIRE AND CONNECT SENSOR PROBE/CORD ASSEMBLY IN SUITABLE LOCATION ON COOLING TOWER.
- CT-1 VFD BY DIVISION 15. MOUNTED ON UNIT. VERIFY EXACT LOCATION WITH DIVISION 15.
- PROVIDE WEATHERPROOF 20AMP 1-SLOT RECEPTACLE AND MOUNT IN SUITABLE LOCATION AT COOLING TOWER CT-1. WIRE AND CONNECT TO PANEL 'C' WITH 2#12 IN CONDUIT AND PROVIDE 20A GFI BREAKER IN PANEL.

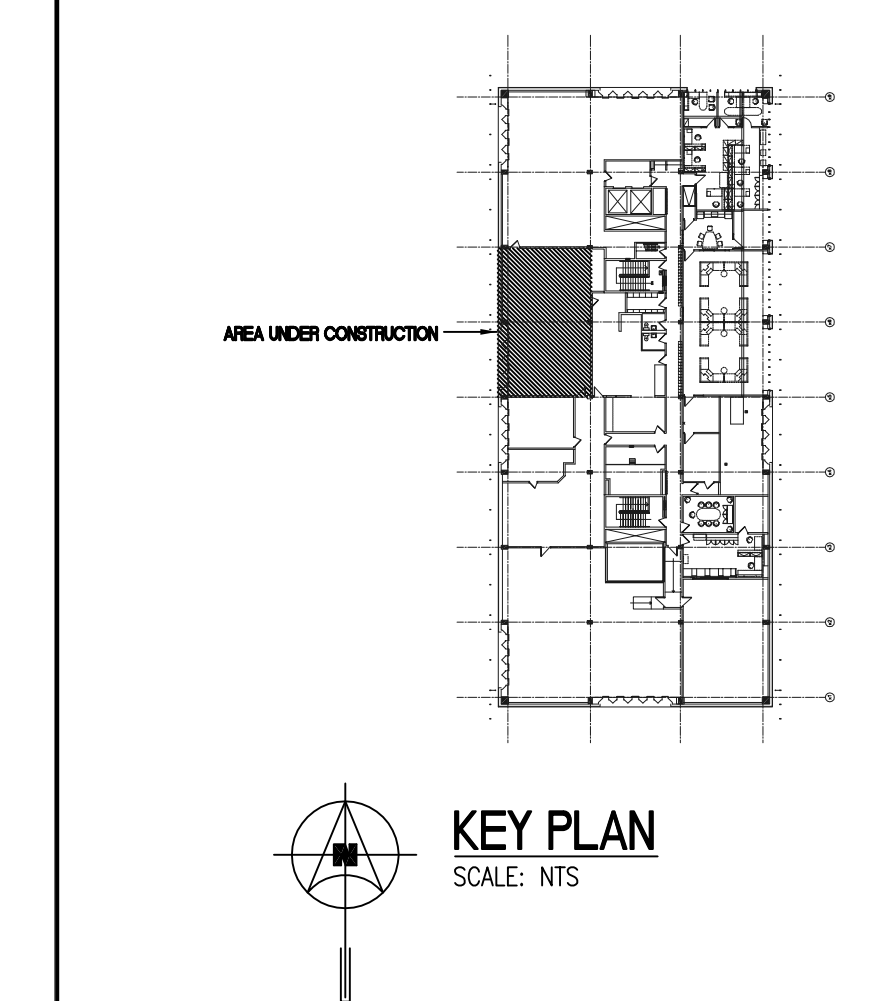


**ELECTRICAL DISTRIBUTION RISER NOTES**

- EXISTING F.P.E. HF-1 (100A RATING) 600A-3P BREAKER. PROVIDE NEW 50A STATE FULLY ADJUSTABLE LSI OVER CURRENT RELAY FOR EXISTING BREAKER. SET LONG-TIME TRIP AT 35AMPS. MODIFY EXISTING TRIP UNIT TO OPERATE WITH NEW RELAY. SET AS PER COORDINATION STUDY.
- EXISTING PARALLEL SINGLE CONDUCTOR COPPER FEEDERS PRESENTLY INSTALLED FROM EXISTING 600A BREAKER TO EXISTING CHILLER STARTER IN 6th FLOOR MECH-ROOM.

**ADDENDUM #1**

- PROVIDE A REMOTE START-STOP PUSHBUTTON STATION FOR EF-1. LOCATE ADJACENT TO LOCKDOWN LOCATED AT CRILING 45'AC. INSIDE THE MACHINE ROOM. PROVIDE A REMOTE "START" PUSHBUTTON STATION FOR EF-1. LOCATE ADJACENT TO LOCKDOWN LOCATED AT CRILING 45'AC. OUTSIDE THE MACHINE ROOM. REFER TO DRAWING M1 FOR LOCATIONS.
- PROVIDE 15A-120V CIRCUIT FOR DDC CONTROL PANEL LOCATED ON NEW CHILLER CH-1. COORDINATE EXACT LOCATION WITH CHILLER SUPPLIER'S SHOP DRAWINGS. FEED FROM PANEL 'C', 2#12 IN EMT.
- PROVIDE 15A-120V CIRCUIT FOR DDC CONTROL PANEL LOCATED ON NEW CHILLER CH-1. COORDINATE EXACT LOCATION WITH CHILLER SUPPLIER'S SHOP DRAWINGS. FEED FROM PANEL 'C', 2#12 IN EMT.
- REFER TO NEW SPLITTER SP600-A, 600V-600A, 3 PHASE, 3 WIRE. PROVIDE A 225A-3P BREAKER C/W 3#3/0 IN EMT TO A NEW 100AMP-600V HARMONIC FILTER. APPROXIMATE DIMENSIONS OF HARMONIC FILTER ARE 86" H X 26" W X 20" D. COORDINATE EXACT LOCATION ON SITE WITH CONSULTANT.



|     |                        |    |          |
|-----|------------------------|----|----------|
| 7.  |                        |    |          |
| 6.  |                        |    |          |
| 5.  |                        |    |          |
| 4.  |                        |    |          |
| 3.  |                        |    |          |
| 2.  |                        |    |          |
| 1.  | ISSUED FOR ADDENDUM #1 | CB | 29/11/12 |
| NO. | Revisions              | BY | DD/MM/YY |

**APEGM**  
Certificate of Authorization  
SME Engineering Ltd.  
No. 968 Expiry April 30, 2015

**ORIGINAL CONTRACT DRAWING SIGNED AND SEALED BY**  
A.M. LOHSE, P. ENG  
NOVEMBER 08, 2012

**SMS ENGINEERING**  
SMS Engineering Ltd. Consulting Engineers  
775 Dundas Street West, Suite 1000, Toronto, Ontario  
Telephone: 248.775.0291 Fax: 248.772.2155  
sms@smseng.com

Project Title  
**CITY OF WINNIPEG COOLING PLANT REPLACEMENT 151 PRINCESS STREET BID OPPORTUNITY 887-2012**

Drawing Title  
**MACHINE ROOM COOLING PLANT ELECTRICAL PLANS**

|                             |                             |                          |
|-----------------------------|-----------------------------|--------------------------|
| Drawn By<br>wpd             | Checked By<br>AML           | Approved By<br>AML       |
| Scale<br>AS NOTED           | Date<br>NOV. 2012           | Project No.<br>09-307-02 |
| Revision Number<br><b>1</b> | Drawing Number<br><b>E1</b> | Sheet Order<br>1 OF 1    |