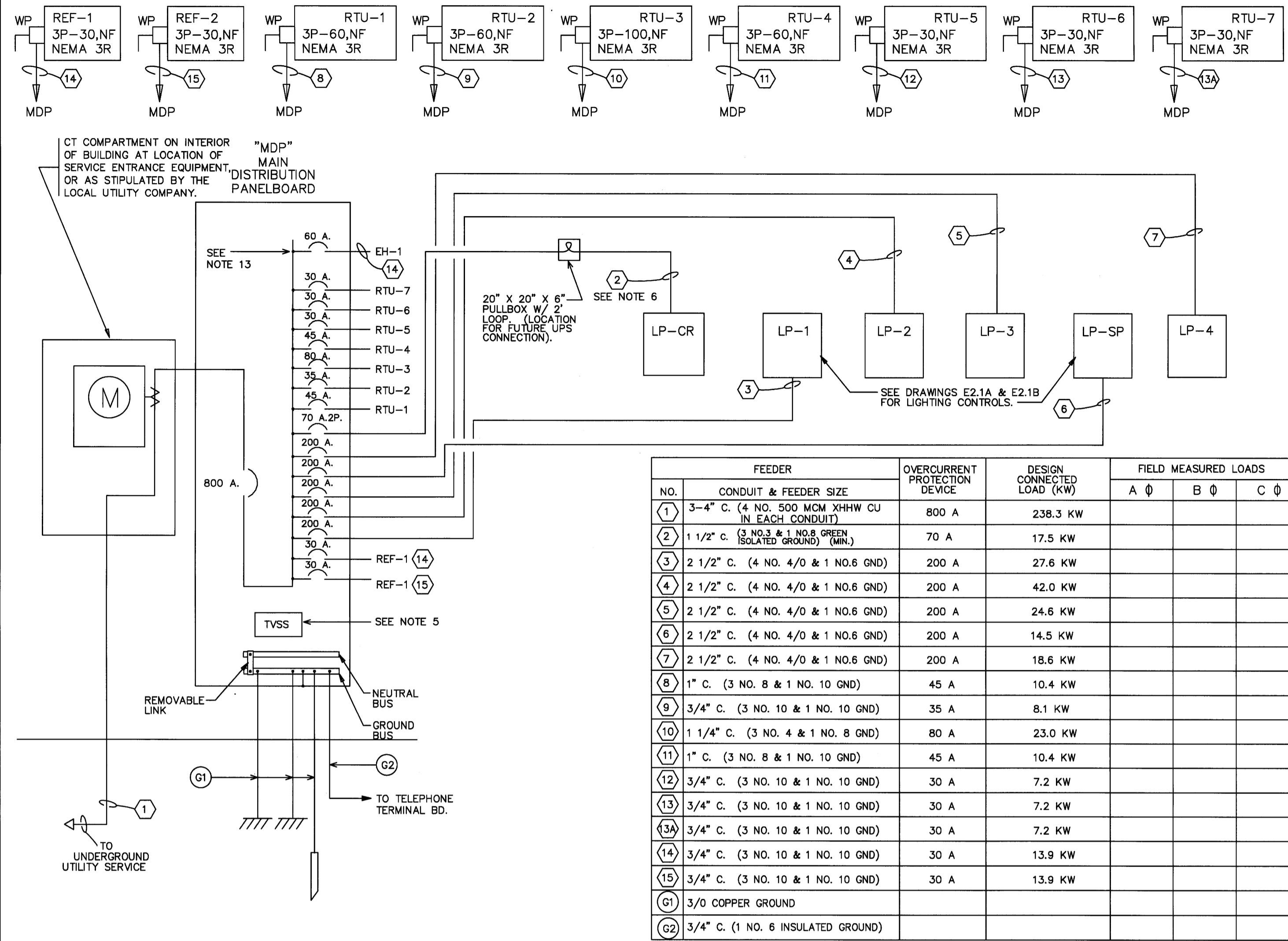
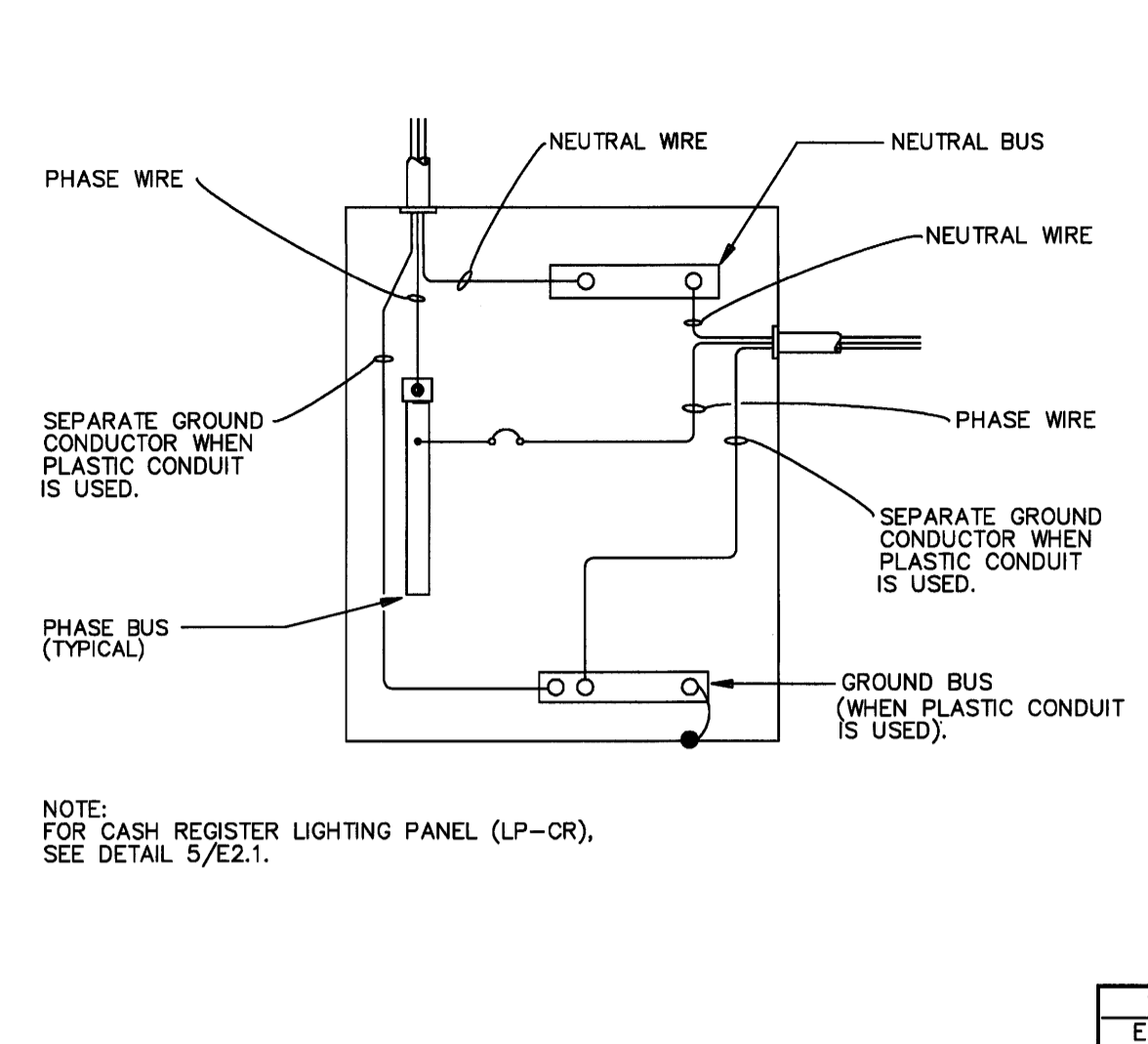


FEEDER DIAGRAM FOR 208Y/120V.3Ø, 4W. MAIN SERVICE



TYPICAL ELECTRICAL PANEL DETAIL



NOTES

- CONDUIT SHALL BE ELECTRICAL METALLIC TUBING (EMT), RIGID STEEL (1/2" MIN.), OR MC CABLE WHERE ALLOWED BY CODE. WHERE MC CABLE IS USED, PROPER SECUREMENT AND SUPPORT (AT INTERVALS NOT EXCEEDING 6 FEET) SHALL BE FOLLOWED PER NEC. ART. 330.
- MAIN DISTRIBUTION PANELBOARD SHALL BE CIRCUIT BREAKER TYPE.
- EXIT SIGNS AND EMERGENCY LIGHTS SHALL HAVE THEIR OWN SELF-CONTAINED STANDBY BATTERY POWER SUPPLY. IF LOCAL CODE REQUIRES A DIRECT TAP BEFORE ANY CIRCUIT BREAKERS THEN INCORPORATE INTO THE FEEDER DIAGRAM AT LEFT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE THIS INSTALLATION IN COMPLIANCE WITH ALL ELECTRICAL AND FIRE PREVENTION CODES, SUPERCEDING ALL SPECIFICATIONS, DRAWINGS AND NOTES.
- MDP IS SHIPPED WITH FACTORY MOUNTED TVSS. REFER TO SPECIFICATIONS SECTION 16400, PARAGRAPH #2.01F.
- PANEL 'LP-CR' FEEDER AND BRANCH CIRCUIT CONDUCTORS MUST BE RUN SEPARATE FROM OTHER PANEL CONDUCTORS. (DO NOT RUN THROUGH A COMMON RACEWAY OR TROUGH).
- FEEDERS TO BE SIZED UTILIZING A 25% SPARE CONSIDERATION FACTOR FOR FUTURE LOADS.
- FOR PANELS 'LP-1' AND 'LP-SP' LIGHTING CONTROLS SEE DRAWINGS E2.1A, E2.1B AND E2.1C.
- THE AVAILABLE SHORT CIRCUIT CURRENT FROM THE ELECTRICAL UTILITY COMPANY IS AMPERES. INTERRUPTING RATING WILL BE OBTAINED FROM THE CONTRACTOR AFTER UTILITY COMPANY SIZES TRANSFORMER FOR SITE.
- ALL BUSES IN ELECTRICAL SERVICE EQUIPMENT, DISTRIBUTION PANELS, ETC., ARE TO BE TIN-PLATED COPPER. ALL FEEDERS AND BRANCH CIRCUITS ARE TO BE COPPER.
- FOR LEGEND OF SYMBOLS SEE DRAWING E1.2.
- PANELBOARDS SHALL NOT BE USED AS RACEWAY OR JUNCTION BOX.
- WALGREENS PROTOTYPICAL MASTER-BILT WALK-IN COOLER/FREEZER IS 6-CLASS FREEZER DOORS AND 9-CLASS COOLER DOORS, WITH DIMENSION 37'-5 1/2"W x 9'-8"D x 8'-6"H. THE MAXIMUM OVERCURRENT PROTECTION (MOP) REQUIREMENT FOR PROTOTYPICAL MASTER-BILT CONDENSING UNIT IS 60A. FOR NON-PROTOTYPICAL MASTER-BILT WALK-IN COOLER/FREEZER, CONTACT MASTER-BILT (862) 534-9081 EXT. 234, FOR THE MAXIMUM OVERCURRENT PROTECTION (MOP) REQUIREMENT.

MOESER & ASSOCIATES ARCHITECT

206 AYER ROAD HARVARD, MA 978-456-6905

DRAWINGS/SPECIFICATIONS BY:  
 WALGREENS'  
 LANDLORD'S CONSULTANT

ALL CONSTRUCTION WORK, UNLESS NOTED OTHERWISE, BY:  
 WALGREENS' CONTRACTOR  
 LANDLORD'S CONTRACTOR (TURNKEY CONSTRUCTION)

STORE	BUILDING
NEW	NEW
REMODELING	EXISTING
RELOCATION	NEW SHELL ONLY
OTHERS	

NATIONAL ACCOUNTS

I. ELECTRICAL POWER DISTRIBUTION EQUIPMENT

A. THE GENERAL CONTRACTOR WILL SELECT AN ELECTRICAL CONTRACTOR TO PURCHASE AND INSTALL THE ELECTRICAL POWER DISTRIBUTION EQUIPMENT AND LIGHTING CONTROL SYSTEM. PURCHASE ORDERS WILL BE ISSUED BY THE ELECTRICAL CONTRACTOR.

1. STORES LOCATED IN CONNECTICUT, GEORGIA, MAINE, MASSACHUSETTS, NEW HAMPSHIRE, NEW YORK, RHODE ISLAND, AND VERMONT SHALL USE GENERAL ELECTRIC POWER DISTRIBUTION EQUIPMENT AND LIGHTING CONTROL SYSTEM.

B. WALGREENS, ITS DEVELOPERS AND THEIR CONTRACTORS WORKING ON WALGREENS PROJECTS MUST PURCHASE ELECTRICAL POWER DISTRIBUTION EQUIPMENT THROUGH THE NATIONAL ACCOUNTS PROGRAM. CALL GENERAL ELECTRIC, NATIONAL ACCOUNTS DEPARTMENT FOR PRICE QUOTES AND BILL OF MATERIAL CONFIRMATION FOR THEIR SPECIFIC PROJECT.

1. FOR GENERAL ELECTRIC CALL (630) 718-6529

PANEL 'LP-CR' BRANCH CIRCUITING

ELECTRICAL CIRCUITS OF THE STORE CASH REGISTERS AND RELATED COMPUTER/ELECTRONIC SYSTEMS, MUST BE PROVIDED AND INSTALLED IN A SPECIFICALLY PRESCRIBED MANNER. THE INTENT OF THIS TEXT IS TO EXPLAIN THE NEW TERMINOLOGY AS WELL AS WHAT IS NEEDED FOR A SUCCESSFUL INSTALLATION IN TERMS THAT EVERYONE CAN UNDERSTAND.

A.C. ELECTRICAL POWER REQUIRED TO OPERATE COMPUTERS AND THEIR RELATED EQUIPMENT MUST BE AS CLEAN AS POSSIBLE; I.E., NO OTHER EQUIPMENT (NON-COMPUTER RELATED) CAN BE CONNECTED TO THESE CIRCUITS. THIS IS KNOWN AS A DEDICATED CIRCUIT. THIS WILL INSURE THAT NO OTHER EQUIPMENT CAN INDUCE NOISE OR LINE SPIKES INTO THE CASH REGISTERS, OFFICE SYSTEM EQUIPMENT, PHARMACY TERMINALS, TIME/ATTENDANCE SYSTEM, SATELLITE ANTENNA SYSTEM, BURGLAR ALARM SYSTEMS AND TELEPHONE SYSTEM. IN ADDITION, COMPUTER-TYPE CIRCUITS MUST NEVER BE RUN IN CONDUITS, TROUGHS OR JUNCTION BOXES TOGETHER WITH NON-COMPUTER RELATED CIRCUITS. PHYSICAL CONTACT BETWEEN THESE TWO TYPES WOULD ALLOW FOR NOISE OR LINE SPIKES TO BE MAGNETICALLY INDUCED TO THE COMPUTER-TYPE CIRCUITS.

INSTALL A CONDUIT (1/2" MIN.) FROM EACH SYSTEMS EQUIPMENT OUTLETS (AS MENTIONED ABOVE) TO THE CRITICAL (DEDICATED) PANEL "LP-CR". EACH 1/2" CONDUIT "HOMERUN" SHALL CONSIST OF A MAXIMUM OF THREE CIRCUITS. THE PANEL "LP-CR" WILL RECEIVE ELECTRICAL POWER FROM THE MAIN DISTRIBUTION PANEL.

THE GROUND WIRE FOR THIS CIRCUIT SHALL BE RUN BACK TO THE MAIN DISTRIBUTION PANELBOARD GROUND (EARTH GROUND). ALL CIRCUIT BREAKERS (IN "LP-CR") FOR THE COMPUTER SYSTEMS MUST BE LOCKED IN THE "ON" POSITION AND MUST BE CLEARLY IDENTIFIED AT THE PANEL.

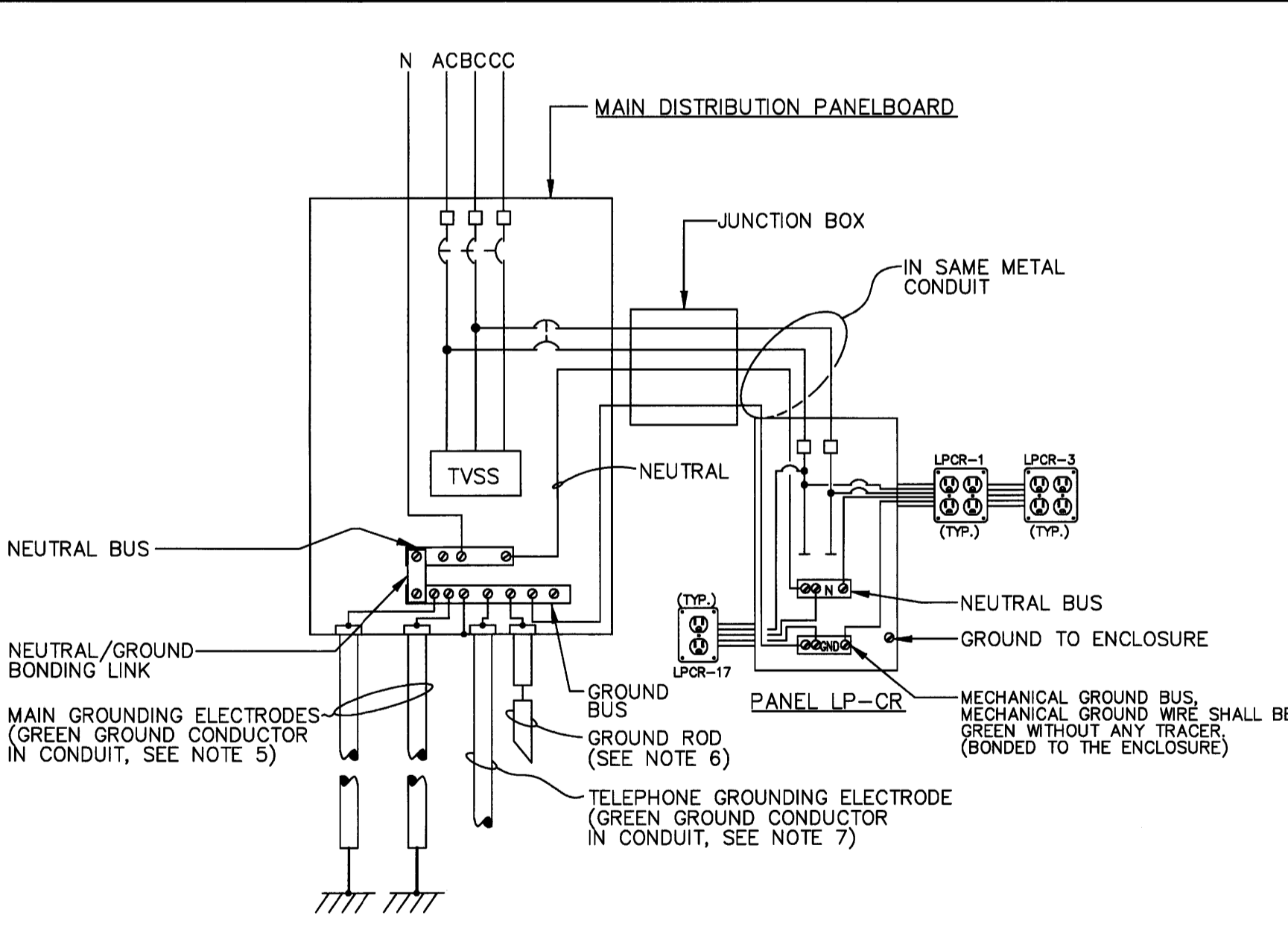
**CASH REGISTER NOTE**

DEDICATED DUPLEX RECEPTACLE SYMBOL: RECEPTACLES ARE FED FROM PANEL "LP-CR". PROVIDE "LOCK-ON" HARDWARE FOR EACH "LP-CR" CIRCUIT. CIRCUITS AND JUNCTION BOXES ARE NOT TO SERVE OTHER LOADS (eg. LIGHTING, GENERAL PURPOSE RECEPTACLES, ETC.). RECEPTACLES ARE TO BE HUBBELL #HBL5252. WALGREENS SUPERINTENDENT TO HAVE HOLE CUT IN CASH REGISTER COUNTER TO INSERT CORD DOWN TO OUTLET BELOW (AS REQUIRED), CORD NOT TO BE EXPOSED.

( NO SUBSTITUTIONS ACCEPTED FOR HUBBELL )

- NOTES:
- A.C. BRANCH CIRCUITING: #12 WIRE, 1/2" CONDUIT.
  - ALL CIRCUIT BREAKERS AND PANELS MUST BE CLEARLY LABELED WITH ELECTRICAL DECALS.
  - SEE DRAWING E3.1 FOR PANEL LP-CR SCHEDULE.
  - SEE POWER AND SYSTEMS PLAN (E1.2) FOR QUANTITY AND LOCATION OF EACH SYSTEM.
  - UTILIZE CONVENTIONAL WIRING METHODS (I.E. NETWORK HOMERUNS FOR ALL WIRING SHOWN).

SERVICE CONFIGURATION - LP-CR PANEL (FOR 120/208 VOLT MAIN SERVICE)



- UNOTES:
- ALL EQUIPMENT, CONDUCTOR AND RACEWAY SIZES SHALL BE IN ACCORDANCE WITH FACILITIES PLANNING, DRAWINGS AND SPECIFICATIONS.
  - INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, LOCAL REQUIREMENTS AND ALL APPLICABLE LAWS AND REGULATIONS.
  - GROUND CONDUCTOR FROM MAIN DISTRIBUTION PANELBOARD TO EARTH GROUND MUST BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL AND LOCAL CODES.
  - FEEDER AND GROUND CONDUCTOR FROM PANEL LP-CR TO MAIN DISTRIBUTION PANELBOARD SHALL BE INSTALLED IN ONE CONTINUOUS LENGTH WITHOUT SPLICES OR JOINTS IN THE SAME RACEWAY.
  - MAIN GROUNDING ELECTRODES:  
 A. METAL UNDERGROUND WATER PIPE  
 B. METAL FRAME OF BUILDING WITH CADWELD CONNECTION.  
 C. IF ONE OF THE ABOVE TWO ITEMS ARE NOT AVAILABLE, THEN FURNISH A CONCRETE ENCASED ELECTRODE. [SEE NEC 250.52 (A) (3)].
  - GROUND ROD WITH CADWELD CONNECTION.
  - TELEPHONE GROUNDING ELECTRODE, SEE DETAIL 1 ON DRAWING E1.5.

GROUNDING NOTES

- GROUNDING (ELECTRICAL SYSTEM)
  - ONE OF THE MOST IMPORTANT PARTS IN THE INSTALLATION OF ELECTRICAL SYSTEMS IS GROUNDING. PROPER GROUNDING WILL PROVIDE PROTECTION OF PERSONNEL, EQUIPMENT, AND CIRCUITS BY ELIMINATING THE POSSIBILITY OF DANGEROUS OR EXCESSIVE VOLTAGES.
  - GROUNDING SYSTEM MUST BE IN ACCORDANCE WITH APPLICABLE NATIONAL, STATE OR LOCAL ELECTRICAL CODES.
  - THE GROUND PATH MUST BE PERMANENT AND CONTINUOUS, AND THE RESISTANCE OF THE GROUND PATHS MUST NOT EXCEED TWO (2) OHMS.
  - ALL GROUNDING ELECTRODES OF DIFFERENT SYSTEMS MUST BE BONDED TOGETHER.
  - METALLIC CONDUIT USED TO ENCLOSE A GROUNDING CONDUCTOR MUST BE BONDED TO THE GROUNDING CONDUCTOR AT BOTH ENDS TO REDUCE IMPEDANCE.
  - ALL ISOLATED GROUNDING TYPE RECEPTACLES MUST BE INDIVIDUALLY CONNECTED TO GROUND (NOT SERIALY) TO ASSURE THE CONTINUITY OF THE GROUND PATH.
  - RECEPTACLE BOXES MUST BE GROUND BY RACEWAY BACK TO THE GROUND LP-CR PANEL.
  - IF FLEXIBLE OR PVC CONDUIT IS USED, OR WHERE REQUIRED BY LOCAL CODE, THEN A SEPARATE MECHANICAL GROUND WIRE MUST CONNECT THE OUTLET BOX TO THE LP-CR PANEL MECHANICAL GROUND BUS.
  - ISOLATED GROUNDING SYSTEM FOR THE LP-CR PANEL MUST BE BONDED TO THE MAIN DISTRIBUTION PANELBOARD GROUNDING SYSTEM AND IN TURN BONDED TO THE SYSTEM'S NEUTRAL.
- GROUNDING TESTS
  - AFTER INSTALLATION OF THE LP-CR PANEL, TESTS MUST BE PERFORMED TO CHECK THE FOLLOWING:
  - EXCESSIVE GROUND POTENTIAL DIFFERENCES BETWEEN DIFFERENT AREAS, DO NOT EXIST.
  - GROUNDING SYSTEM INTEGRITY.
  - TESTS TO BE PERFORMED ARE:
    - GROUND LOOP CONTINUITY
    - GROUND LOOP RESISTANCE
    - GROUND POTENTIAL DIFFERENCE MEASUREMENT

NO.	DATE	BY	DESCRIPTION	CONST
REVISIONS				

CERTIFICATION AND SEAL

I HEREBY CERTIFY THAT THIS PLAN AND SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT OR ENGINEER UNDER THE LAWS OF THE STATE OF MAINE AS SIGNIFIED BY MY HAND AND SEAL.

FISCAL 2007 CRITERIA - STORE #12325

WALGREENS  
 616 FOREST AVENUE  
 PORTLAND, MAINE

FEEDER DIAGRAM (120/208V) ELECTRICAL DETAILS

CADD PLOT: \_\_\_\_\_ SCALE: AS NOTED  
 VOID PLOT: \_\_\_\_\_ DRAWN BY: RJV  
 RELEASED TO CONSTRUCTION: \_\_\_\_\_ DATE: 12-10-08  
 REVIEWED BY: SAM

E2.1