GENERAL CRITERIA:

1. DESIGN MAY BE USED AS A STAND-ALONE PACKAGE OR AS PART OF A LARGER DRAWING PACKAGE. ENGINEERING REVIEW AND APPROVAL SHALL BE OBTAINED FOR SITE-SPECIFIC CONDITIONS.
2. PLAN AND SECTIONS ARE SHOWN ON SHEETS ST-D5020-3-2 AND ST-D5020-3-3.
3. ANY DISCREPANCIES SHALL BE REPORTED TO THE RESPONSIBLE ENGINEER PRIOR TO CONSTRUCTION.
4. DO NOT SCALE DRAWINGS TO DETERMINE DIMENSIONS.
5. NEW CONSTRUCTION SHALL BE COORDINATED WITH EXISTING SITE CONDITIONS.
6. THE PROJECT SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROTECT CONCEALED CONSLUTING, PLUMBING, OR OTHER UTILITIES.
7. WHERE DIMENSIONS OR SPACING SHOWN ON SHEETS ST-D5020-3-2 AND ST-D5020-3-3 ARE NOT SPECIFIED SUCH AS ANCHORAGE OF HOUSEKEEPING PADS, SUBCONTRACTOR SHALL MAKE NECESSARY FIELD MEASUREMENTS AND PROVIDE REQUIRED DIMENSIONS.
8. SHEET NUMBERS AND CALL-OUT REFERENCE WILL NEED TO BE UPDATED TO FOLLOW LANL STANDARDS AND INTEGRATE INTO DRAWING PACKAGES.
9. THIS STANDARD IS NOT APPLICABLE TO MTS' THAT DO NOT MEET ALL THE CRITERIA, DIMENSIONS, ETC. CONTAINED IN THESE DRAWINGS.
10. IT IS ASSUMED HEREIN THAT MOTOR CONTROL CENTERS (MCC) ARE INSTALLED ON A HOUSEKEEPING PAD THAT IS EITHER NEW OR EXISTING, AND THAT THE PAD IS SUPPORTED BY AN EXISTING CONCRETE SLAB IN A DRY INTERIOR LOCATION. NEW PADS SUPPORTED BY AN EXISTING CONCRETE SLAB IN A DRY INTERIOR LOCATION.
11. MCC WILL BE MOUNTED ON THE SLAB-ON-GRADE (UNLESS A PROJECT-SPECIFIC STRUCTURAL CONDITION EXISTS). INSTALL PER MPII USING ADDITIONAL HARDWARE RECOMMENDED BY MANUFACTURER.

DESIGN CRITERIA:

1. APPLICABLE CODES AND STANDARDS:
   A. INTERNATIONAL BUILDING CODE (IBC) 2015
   B. AMERICAN SOCIETY OF CIVIL ENGINEERS - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES 2015 (ASCE 7-10)
   C. AMERICAN CONCRETE INSTITUTE - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14)
   D. LANL ENGINEERING STANDARDS MANUAL STD-342-100.
2. THIS DESIGN IS FOR ML-4 FOR ML-1, ML-2 AND ML-3 ADDITIONAL REQUIREMENTS MAY BE REQUIRED.
3. RISK CATEGORY: RC IV
4. CALCULATIONS:
   A. CAL-C-12-00-03000-0016-S-01
5. DESIGN LOADS:
   A. DEAD LOADS: SELF WEIGHT OF MCC
   B. SEISMIC DESIGN BASED ON LANL ESM CHAPTER 5 SECTION II REV 10. SEISMIC DESIGN PARAMETERS
   \[ \sigma_s = 0.75g \]
   \[ \sigma_s = 1.5g \]
   \[ \sigma_s = 2.5g \]
6. MATERIAL CRITERIA:
   1. CONCRETE (EXISTING SLAB AND HOUSEKEEPING PAD):
      A. CONCRETE WORK PER LANL MASTER SPEC FOR REINFORCED CONCRETE.
      B. CONCRETE CONSIDERATIONS FOR CONCRETE SHEET SHALL BE DRY OR WATER SATURATED AT TEMP. RANGE A PER ICC ESR 3814.
      C. EXISTING REBAR:
         1. CONCRETE COMPRESSION STRENGTH (28 DAY): \( f'c = 2500 \text{ PSI} \).
         2. EXISTING CONCRETE WITH A MINIMUM OF 4" THICKNESS.
      D. NEW HOUSEKEEPING PAD:
         1. STRENGTH AND THICKNESS PER C.1 AND C.2
         2. THE CONCRETE SHALL HAVE CURLED FOR AT LEAST SEVEN (7) DAYS PRIOR TO INSTALLATION AND SHALL HAVE ATTAINED ITS MINIMUM DESIGN STRENGTH PRIOR TO LOADING OF THE ANCHORS. UNLESS OTHERWISE INDICATED IN MANUFACTURER’S PRINTED INSTALLATION INSTRUCTIONS (MPS).
   2. POST-INSTALLED ANCHORS:
      A. POST-INSTALLED ANCHORS PER LANL MASTER SPEC FOR NORMAL CONCRETE CONSIDERATIONS
      B. POST-INSTALLED ANCHORS SHALL BE INSTALLED PER MPII AND ICC-ESR 3814 IN HOLES MADE USING HAMMER DRILL AND CAMBER SET OR HILTI HOLLOW DRILL BIT.
      C. EMBEDMENT DEPTH SHOWN ON THE DRAWINGS ARE MINIMUM
      D. POST-INSTALLED ANCHORS SHALL NOT CONFLICT WITH OR DAMAGE CONCRETE REBAR.
   3. MOTOR CONTROL CENTER:
      A. WEIGHT OF EACH MCC UNIT AND BUS BARS MAY NOT EXCEED 650 LBS.
      B. MCC WILL BE MOUNTED ON THE SLAB-ON-GRADE (UNLESS A PROJECT-SPECIFIC STRUCTURAL CONDITION EXISTS). INSTALL PER MPII USING ADDITIONAL HARDWARE RECOMMENDED BY MANUFACTURER.
      C. INSTALL PER MPII USING ADDITIONAL HARDWARE RECOMMENDED BY MANUFACTURER.

NOTES FOR EOR:
- EDIT TO BE PROJECT SPECIFIC
- ADD REQUIRED SHEET & DRAWING NUMBER PER THE CURRENT LANL CAD STANDARDS MANUAL.