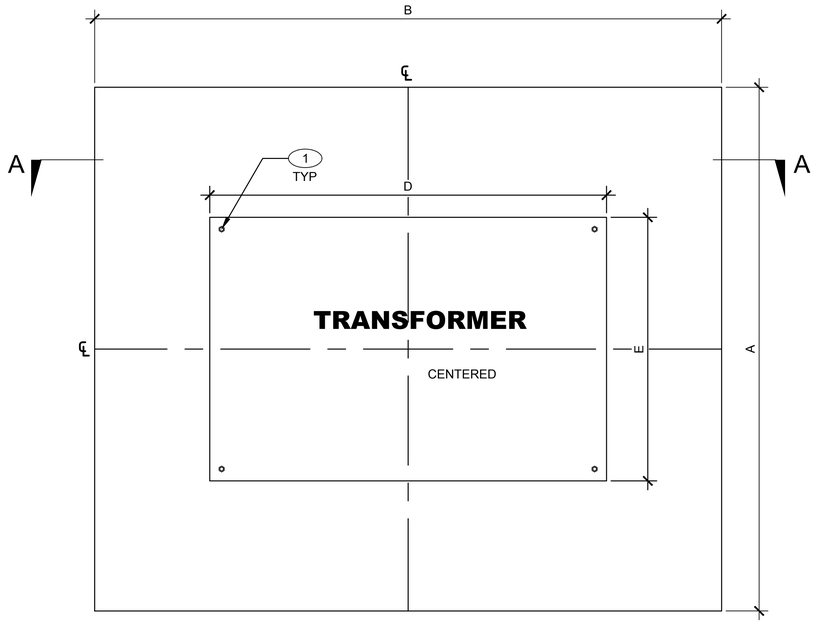
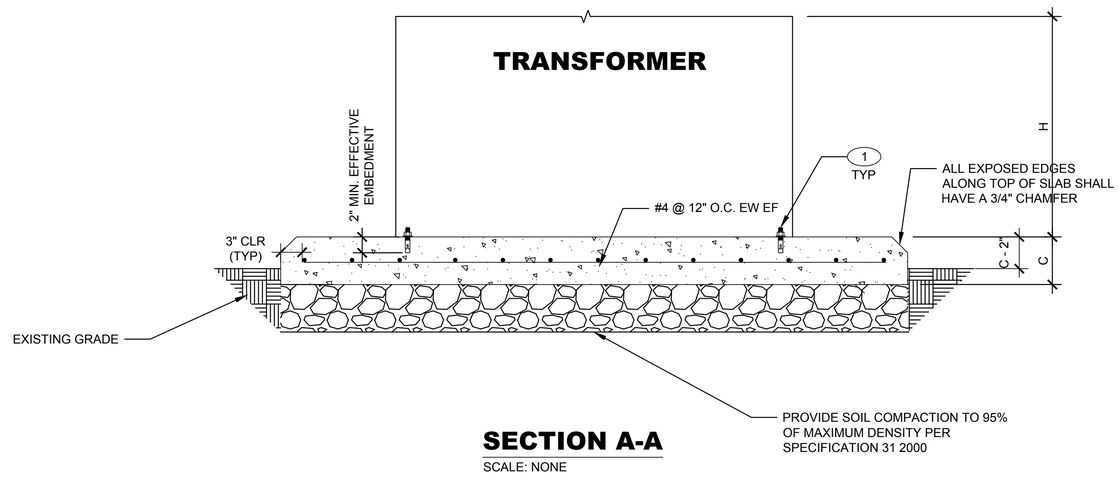
TABLE A								
3-PHASE TRANSFORMER KVA	WEIGHT (LBS)	MAX PAD DIMENSIONS			MAX TRANSFORMER DIMENSIONS			# OF ANCHORS
		A	B	C	D	E	H	
15, 30, 45, 75, & 112	≤ 900	3'-6"	4'-6"	0'-6"	2'-6"	2'-0"	3'-2"	4
150, 225, & 300	> 900 - ≤ 1600	4'-0"	5'-6"	0'-6"	3'-5"	2'-8"	4'-2"	4
500 & 750	> 1600 - ≤ 3800	5'-0"	7'-0"	0'-6"	4'-8"	3'-5"	6'-2"	4



PLAN
SCALE: NONE



SECTION A-A
SCALE: NONE

KEYED NOTES:

(1) POST-INSTALLED ANCHOR

NOTES FOR EOR:
(DO NOT INCLUDE ON CONSTRUCTION DRAWING/ WHEN INSERTED INTO A DRAWING PACKAGE)

CONNECTION FROM TRANSFORMER TO BUILDING, *e.g.*, CABLE CONDUIT, *etc.*, SHALL TOLERATE DISPLACEMENT RELATED TO POTENTIAL FROST HEAVE OF THE TRANSFORMER SINCE SLAB IS FOUNDED ABOVE FROST DEPTH.

EDIT TO BE PROJECT SPECIFIC - SHOW DIMENSIONS.

THE ASSOCIATED CALCULATION FOR THIS DETAIL ASSUMES THAT THE TRANSFORMER IS CENTERED ON THE SLAB. HOWEVER, THE CALCULATION SHOWS THAT THE ANCHORS HAVE SUFFICIENT CAPACITY TO ALLOW FOR A 1" RELOCATION TO AVOID REBAR.

COMPLY WITH CURRENT EDITION OF LANL CAD STANDARDS MANUAL FOR CALLOUTS PROTOCOL AND LOCATION OF SCHEDULES/MATERIAL.

ASSIGN AN APPROPRIATE DRAWING NUMBER PER CURRENT EDITION OF LANL CAD STANDARDS MANUAL PROTOCOL FOR DETAILS.

DRAWING DEVELOPED FOR ML-4 PROJECTS. FOR ML-1/ML-2/ML-3, ADDITIONAL REQUIREMENTS AND QA REVIEWS ARE REQUIRED.

SPECIAL INSPECTIONS PER ICC-ESR 1917 ARE REQUIRED.

GENERAL NOTES:

1. IF THIS SHEET IS NOT 24"X36" USE GRAPHIC SCALE ACCORDINGLY.
2. CONCRETE:
   - A. MINIMUM REQUIREMENTS:
     - A.A. MINIMUM CONCRETE COMPRESSIVE STRENGTH (28 DAY): f'c = 3500 PSI.
     - A.B. 6% ENTRAINED AIR
     - A.C. 3/4" MAXIMUM SIZE AGGREGATE.
     - A.D. 3" CLEAR COVER
     - A.E. THICKNESS PER TABLE A AND SECTION A-A
     - A.F. BEFORE POURING SLABS, COORDINATE WITH UTILITIES FOR PLACEMENT OF RACEWAYS.
   - B. RELATED SPECIFICATION:
     - B.A. 03 30[53]
3. REINFORCING STEEL:
   - A. ASTM-A615 GRADE 60
   - B. PLACE AS INDICATED AND SECURELY TIED TOGETHER
   - C. RELATED SPECIFICATION:
     - C.A. 03 30[53]
4. POST-INSTALLED ANCHORS:
   - A. 1/2" Ø STAINLESS STEEL HILTI KWIK BOLT-TZ
   - B. ESTABLISH THE EXISTING REBAR PATTERN W/ GPR AROUND CONCRETE ANCHORS TO PROVIDE A MINIMUM OF 1-1/2 INCHES CLEAR TO AVOID CONFLICT WITH REINFORCING WHEN INSTALLING POST-INSTALLED ANCHORS.
   - C. INSTALL PER ICC-ESR 1917
   - D. 3 1/4" MIN. EFFECTIVE EMBEDMENT
   - E. 6" MIN. EDGE DISTANCE
   - F. RELATED SPECIFICATION:
     - F.A. 05 0520
5. SOIL FOR CONCRETE SLABS
   - A. PER SPECIFICATION 31 2000
6. APPLICABLE CODES AND STANDARDS:
   - C. INTERNATIONAL BUILDING CODE (IBC) 2015
   - D. AMERICAN SOCIETY OF CIVIL ENGINEERS - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES 2010 (ASCE 7-10).
   - E. AMERICAN CONCRETE INSTITUTE - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14).
   - F. LANL ENGINEERING STANDARDS MANUAL STD-342-100.
8. RISK CATEGORY: RC I-IV
9. CALCULATIONS:

   CAL-12-00-0000-0017-S
10. DESIGN LOADS:
    - A. DEAD LOADS: SELF WEIGHT OF TRANSFORMER (FROM 0 LBS - 3800 LBS.)
    - B. SEISMIC DESIGN PARAMETERS BASED ON LANL ESM CHAPTER 5 SECTION II REV. 10 SEISMIC :

      S_{DS} = 0.75 g
      I_P = 1.5
      a_P = 1.0
      R_P = 2.5
      Ω_O = 2.5
    - C. WIND DESIGN PARAMETERS BASED ON LANL ESM CHAPTER 5 SECTION II REV. 10:

      V_S = 120 MPH
      k_{zt} = 2.95

NO	DATE	CLASS REV	DC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
3	4-16-18	UNCLASS	TO	CHANGED TITLE; COMBINED INFORMATION REGARDING EQUIPMENT ANCHORAGE FROM ST-G4010-40 SERIES; REMOVED TRANSFORMER SIZES NO LONGER USED; DETAILED PAD PLACEMENT; AND UPDATED CALCS & DRAWINGS TO COMPLY WITH IBC 2015 & TO CAD STDS MANUAL REV 5. CHANGED SHEET # FROM S-4000.	BW	BW	GP	GP	TO
2	5-16-17	UNCLASS	TO	REMOVED BLOCKED OUT AREA FOR CONDUITS & ADDED NOTE FOR CONTRACTOR TO COORDINATE WITH UTILITIES FOR RACEWAY LOCATIONS	AM	AM	ES	ES	TO
1	9-3-08	UNCLASS		ADDED PERIMETER BEAM TO PAD. ADDED NOTE TO SHOW ACTUAL DIMENSIONS	LT	DP	JS	DP	TO

00% REVIEW
NOT FOR CONSTRUCTION

ENGINEERING SERVICES

ELECTRICAL DISTRIBUTION

SQUARE D THREE PHASE TRANSFORMER ANCHORAGE AND CONCRETE SLABS ON GRADE

TA-XX BLDG XXXX

DRAWN	M.DEUTSCH
DESIGN	M.DEUTSCH
CHECKED	J.LANDMAN
DATE	9/30/02

SUBMITTED
DISCIPLINE POC: DAVID POWELL

APPROVED FOR RELEASE
STANDARDS MANAGER: TOBIN ORUCH

Los Alamos NATIONAL LABORATORY
P0 Box 1663
Los Alamos, New Mexico 87545

SHEET E-1
1 OF 1

D.C.: U | REVIEWER: MICHAEL LADACH | DATE: 9/30/02

PROJECT ID: CHAPTER 7
DRAWING NO: ST-G4010-38
REV: 3