PLAN VIEW
SCALE:

SECTION VIEW
SCALE:

GENERAL NOTES

1. THE TOP 12" OF SUBGRADE BENEATH THE SLAB SHALL BE THOROUGHLY COMPACTED TO 90% OF MAXIMUM DENSITY PER ASTM D698. IF TOP 36" OF SUBGRADE IS SUBJECT TO HIGH WATER TABLE OR PERIODIC SATURATION, COMPACT SUBGRADE TO 90% PER ASTM D2039 AND D1556. NO FROZEN BACKFILL SHALL BE USED.
2. SLAB TO BE MADE OF SG-6 CONCRETE WITH A MINIMUM 28 DAY STRENGTH OF 3,500 PSI.
3. TOP OF PAD TO BE SMOOTH, LEVEL AND CLEARED OF ALL FRAMING MATERIAL AFTER CONCRETE SETS.
4. NO WALLS SHALL BE BUILT AROUND TRANSFORMER, NOR CANOPIES ABOVE TRANSFORMER.
5. ALL CONDUIT ENTERING SLAB TO BE VERTICAL AND AT A 90° ANGLE WITH TOP OF SLAB. STUB ALL CONDUITS 1" ABOVE TOP OF CONCRETE PAD. PROVIDE ALL SPARE CONDUITS WITH PULLSTRINGS AND PLASTIC CAPS.
6. COORDINATE WITH UNL UTILITIES TO ALLOW ANY AND ALL INSPECTIONS BEFORE, DURING AND AFTER CONSTRUCTION OF PAD.
7. PAD SHALL BE LOCATED A MINIMUM OF 3' FROM ANY GAS METER AND A MINIMUM OF 10' FROM ANY FUEL TANK.
8. LOCATE PAD A MINIMUM OF 12" ABOVE THE 100 YEAR FLOODPLAIN.

KEY NOTES

1. DUCTS ARE NOT TO BE INSTALLED IN CONCRETE WITHIN THE DUCT SLOT.
2. LOCATION AND DIMENSIONS OF DUCT SLOT AND CONDUITS WITHIN SLOT MUST BE MAINTAINED IN RELATION TO OVERALL SLAB DIMENSIONS.
3. FINAL GRADE AROUND PAD TO SLOPE AWAY FROM TRANSFORMER PAD (ALL SIDES) AND FROM THE ADJACENT BUILDING EXTERIOR WALLS..
4. INSTALL CONDUITS IN DUCT SLOT TIGHT TO BACK OF DUCT SLOT AS MUCH AS POSSIBLE TO ALLOW SPACE FOR FUTURE DUCT INSTALLATION.
5. 5/8" X 8' COPPER CLAD GROUND ROD. STUB 6" ABOVE TOP OF CONCRETE PAD. TIE GROUND ROD TO CONC. REBAR WITH (1) 3/0 BARE CU CONDUCTOR. BOND USING ENCASED MEANS UL LISTED FOR SUCH USES.
6. CONCRETE BOLLARDS WILL BE REQUIRED IF PAD IS WITHIN 6' OF AN AREA SUBJECT TO VEHICULAR TRAFFIC.
7. 1-1/2" SPARE CONDUIT FOR METER CABLING. EXTEND INTO BUILDING PER UNL DIRECTION.
8. PROVIDE THE NUMBER OF LAYERS OF REBAR AND STEEL MESH PER TABLE 'A' ON THIS SHEET.
9. PROVIDE CONDUITS WITH MINIMUM 36" RADIUS SWEEPS. QUANTITY & SIZES OF CONDUITS PER PROJECT REQUIREMENTS.
10. A MINIMUM OF 10' SHALL BE MAINTAINED BETWEEN PAD AND BUILDING EXTERIOR WALL WHERE WALL IS MADE OF COMBUSTIBLE MATERIAL. FOR NON-COMBUSTIBLE WALLS, PROVIDE 12" MINIMUM CLEARANCE BETWEEN PAD AND BUILDING. TRANSFORMERS BELOW WINDOWS SHALL HAVE A MINIMUM 15' VERTICAL DISTANCE BETWEEN TOP OF TRANSFORMER AND BOTTOM OF WINDOW.
11. SEE TABLE 'A', THIS SHEET, FOR SPECIFIC DIMENSIONS BASED ON TRANSFORMER KVA RATING.

TABLE A

TRANSFORMER RATING	PAD FOOTPRINT (NOTE 1)	PAD THICKNESS	PAD REINFORCING (NOTE 2)	PIER QUANTITY & POSITIONS (NOTE 3)	PIER DIAMETER	PRIMARY & SECONDARY SLEEVE	OVERALL SLEEVE POSITION
1500 - 2500 kVA	110" x 110"	12" NOM.	(2) LAYERS #8 6X6 MESH (TOP), (2) LAYERS #4 REBAR (2 WAYS) + PIER REBARS	4 PIERS @ 19" FROM SIDES, 24" BETWEEN PIERS & 19" FROM BACK OF PAD	1'-6"	POSITION SLEEVE CENTERED & 2" INSIDE OF TRANSFORMER CONDUIT WINDOW ALL SIDES. EXACT WINDOW WIDTH & DEPTH SPECIFIC TO PROJECT REQUIREMENTS.	
< 1500 kVA	90" x 90"	8" NOM.	(1) LAYER #8 6X6 MESH (TOP), (1) LAYER #4 REBAR (2 WAYS) + PIER BARS	4 PIERS @ 18" FROM SIDES, 27" BETWEEN PIERS & 19" FROM BACK OF PAD	1'-0"		

TABLE A NOTES:

1. PAD FOOTPRINT PROVIDED GENERIC AND FOR BIDDING PURPOSES ONLY. FINAL PAD FOOTPRINT PER PROJECT TRANSFORMER REQUIREMENTS.
2. LAYER REINFORCING (FROM TOP TO BOTTOM) AS: MESH (TOP), REBAR (BOTTOM). MULTIPLE LAYERS OF REINFORCING AS REQUIRED HEREIN.
3. VERIFY PRIOR TO PIER CONCRETE POUR THAT THE BOTTOM AREA OF THE FORM IS FLAT & FREE OF LOOSE DEBRIS AND LOOSE SOILS.
4. IN ALL CASES TRANSFORMER PAD SHALL EXTEND A 6" BEYOND EDGE OF TRANSFORMER ON ALL SIDES. THIS DISTANCE IS TO BE MEASURED FROM THE FURTHEST PROTRUDING PORTION OF THE TRANSFORMER ON ANY GIVEN SIDE.

1 / E1.01 TRANSFORMER PAD ELECTRICAL DETAIL

SCALE: 1/8" = 1'-0"

University of Nebraska

Facilities Planning & Construction Standard Detail

Detail No.: 33 70 00 - 03
Scale: N.T.S.
Date: October 2020

Detail Title: Transformer Pad Electrical Detail