CODES & SYMBOLS

DRAWING NUMBER	SHT.	DRAWING TITLE	DWG REV.	BOM REV.
B-02-01	**1**	**CODE FOR LINE IDENTIFICATION**	**0**	**-**
B-02-01	**2**	**CODE FOR LINE IDENTIFICATION**	**0**	**-**
B-02-01	**3**	**CODE FOR LINE IDENTIFICATION**	**0**	**-**
B-02-01	**4**	**CODE FOR LINE IDENTIFICATION**	**0**	**-**
B-02-02	**1**	**SYMBOLS**	**B**	**-**
B-02-02	**2**	**SYMBOLS**	**C**	**-**

*Sask**Power*** **-** DISTRIBUTION STANDARDS

APPROVAL	DESIGN CHK	DRN. **ARU**	**INDEX**
L. MOEN	**A. UHREN**	CHKD.	
		2016-10-20	

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UNDERGROUND PRIMARY CABLE IDENTIFICATION

UNDERGROUND PRIMARY CABLES ARE DESCRIBED USING 12 BLOCKS. THESE BLOCKS ARE EXPLAINED BELOW.

1	2	3	4	5	6	7	-	8	9	10	11	-	12

BLOCK NO. 1
INDICATES THE NUMBER OF PHASES IN THE GROUP. OMITTED IF NUMBER OF PHASES IS '1'.

BLOCK NO. 2
INDICATES THE NUMBER OF CONDUCTORS IN EACH CABLE. OMITTED IF NUMBER OF CONDUCTORS PER CABLE IS '1'.

BLOCK NO. 3
INDICATES THE PHASE CONDUCTOR SIZE.

BLOCK NO. 4
INDICATES THE PHASE CONDUCTOR MATERIAL.

BLOCK NO. 5
INDICATES THE INSULATION MATERIAL.

BLOCK NO. 6
INDICATES IF A CONCENTRIC NEUTRAL IS PRESENT ON THE PHASE CABLE, SHOWN WITH A 'c'. OMITTED IF NOT PRESENT.

BLOCK NO. 7
INDICATES THE TYPE OF PHASE CABLE JACKET. OMITTED IF NOT PRESENT.

BLOCK NO. 8
INDICATES THE NUMBER OF NEUTRAL CABLES IN THE CIRCUIT, FOLLOWED BY AN 'x'. OMITTED IF NOT PRESENT.

BLOCK NO. 9
INDICATES THE SIZE OF THE NEUTRAL CONDUCTOR. OMITTED IF NEUTRAL CONDUCTOR IS NOT PRESENT.

BLOCK NO. 10
INDICATES THE NEUTRAL CONDUCTOR MATERIAL. OMITTED IF NEUTRAL CONDUCTOR NOT PRESENT.

BLOCK NO. 11
INDICATES THE NEUTRAL CONDUCTOR INSULATION TYPE. OMITTED IF NEUTRAL CONDUCTOR NOT PRESENT.

BLOCK NO. 12
INDICATES THE TYPE OF NEUTRAL CONDUCTOR JACKET. OMITTED IN NEUTRAL CONDUCTOR NOT PRESENT.

APPLICATION OF LINE IDENTIFICATION CODE FOR UNDERGROUND PRIMARY CABLES

BLOCK NUMBER	2	3	4	5	6	7	13
DESCRIPTION	NUMBER OF CONDUCTOR PER CABLE	PHASE CONDUCTOR SIZE	PHASE CONDUCTOR MATERIAL	PHASE CABLE INSULATION	PHASE CABLE CONCENTRIC NEUTRAL INDICATION	PHASE CABLE JACKET TYPE	OPERATING VOLTAGE
EXAMPLE	**3C**	**500**	**Cu**	**XLPE**	**c**	**J**	**25**
EXPLANATION OF EXAMPLE	3 CONDUCTOR PER CABLE	500 MCM FOR PHASE CABLE	PHASE CONDUCTOR MATERIAL IS COPPER	PHASE CABLE INSULATION TYPE XLPE	PHASE CABLE HAS CONCENTRIC NEUTRAL	PHASE CABLE JACKET PRESENT	OPERATING VOLTAGE IS 25 kV LINE TO LINE

3C500CuXLPEcJ - 25

OTHER EXAMPLES:

#1AlXLPEcJ - 25 = **SINGLE PHASE, #1 ALUMINUM CONDUCTOR, XLPE INSULATION, JACKETED CABLE WITH CONCENTRIC NEUTRAL, OPERATING VOLTAGE OF 25 kV LINE TO LINE.**

3x#1CuPILC – 1/0CuTWU – 25 = **THREE #1 COPPER PHASE CONDUCTORS, PILC NSULATION, NO JACKET, NO CONCENTRIC NEUTRAL. 1/0 COPPER NEUTRAL CONDUCTOR, TWU INSULATION, NO JACKET. OPERATING VOLTAGE OF 25 kV LINE TO LINE.**

NOTES:

1. **IF CIRCUIT IS ABANDONED, CIRCUIT DESCRIPTOR IS PREFIXED WITH 'ABND'.**
2. **IF CIRCUIT IS DIRECT BURIED WITH SPARE DUCT, CIRCUIT DESCRIPTOR IS APPENDED WITH 'DR'.**

UNDERGROUND SECONDARY CABLE IDENTIFICATION

UNDERGROUND SECONDARY CABLES ARE DESCRIBED USING 10 BLOCKS. THESE BLOCKS ARE EXPLAINED BELOW.

1	-	2	3	4	+	5	6	-	7	8	9	10

BLOCK NO. 1
INDICATES IF THE CIRCUIT TYPE IS STREET LIGHT, NEUTRAL, OR SECONDARY. OMITTED FOR CIRCUIT TYPE SECONDARY

BLOCK NO. 2
INDICATES NUMBER OF RUNS OF CONDUCTORS PER PHASE, FOLLOWED BY AN 'x'. OMITTED IF NUMBER OF RUNS IS '1'.

BLOCK NO. 3
INDICATES THE NUMBER OF PHASES IN GROUP. OMITTED FOR SINGLE PHASE CIRCUITS.

BLOCK NO. 4
INDICATES THE PHASE CONDUCTOR SIZE.

BLOCK NO. 5
INDICATES THE NUMBER OF NEUTRAL CONDUCTORS, FOLLOWED BY AN 'x'. OMITTED IF NUMBER OF NEUTRAL CONDUCTORS IS '1'.

BLOCK NO. 6
INDICATES THE NEUTRAL CONDUCTOR SIZE. OMITTED IF NEUTRAL CONDUCTOR NOT PRESENT.

BLOCK NO. 7
INDICATES THE PHASE AND NEUTRAL CONDUCTOR MATERIAL.

BLOCK NO. 8
INDICATES THE PHASE AND NEUTRAL INSULATION MATERIAL.

BLOCK NO. 9
INDICATES IF A CONCENTRIC NEUTRAL IS PRESENT, SHOWN WITH A 'c'.

BLOCK NO. 10
INDICATES THE PRESENCE OF A JACKET ON THE CABLE, SHOWN WITH A 'J'.

APPLICATION OF LINE IDENTIFICATION CODE FOR UNDERGROUND SECONDARY CABLES

BLOCK NUMBER	2	3	4	6	7	8
DESCRIPTION	CONDUCTORS PER PHASE	NUMBER OF PHASES	PHASE CONDUCTOR SIZE	NEUTRAL CONDUCTOR SIZE	PHASE AND NEUTRAL CONDUCTOR MATERIAL	CABLE INSULATION
EXAMPLE	**2x**	**3x**	**4/0**	**2/0**	**Al**	**PE**
EXPLANATION OF EXAMPLE	TWO SECONDARY CONDUCTORS PER PHASE	THREE PHASE RUN	PHASE CONDUCTOR IS 4/0	NEUTRAL CONDUCTOR IS A SINGLE 2/0	PHASE AND NEUTRAL CONDUCTOR MATERIAL IS ALUMINUM	CABLE INSULATION IS TYPE PE

2x(3x4/0 + 2/0) - AlPE

OTHER EXAMPLES:

ST - #4 + #4 - AlPE = **STREET LIGHT SECONDARY WITH #4 Al FOR PHASE AND NEUTRAL CABLE. CABLE INSULATION IS TYPE PE.**

2x500 + 500 - AlPEJ = **SECONDARY WITH TWO ALUMINUM 500 MCM PHASE CABLES AND A 500 MCM ALUMINUM NEUTRAL. CABLE INSULATION IS TYPE PE.**

N – 1/0 - CuTWU = **NEUTRAL CONSISTING OF 1/0 COPPER. CABLE INSULATION IS TYPE TWU.**

NOTES:

1. **IF CIRCUIT IS ABANDONED, CIRCUIT DESCRIPTOR IS PREFIXED WITH 'ABND'.**
2. **IF CIRCUIT IS DIRECT BURIED WITH SPARE DUCT, CIRCUIT DESCRIPTOR IS APPENDED WITH 'DR'.**

KEY TO LINE IDENTIFICATION

– U/G PRIMARY SINGLE PHASE

– U/G PRIMARY THREE PHASE

– U/G SECONDARY, U/G STREET LIGHT SECONDARY, AND U/G SERVICES

-------FO-------- – U/G FIBRE OPTICS

METERING POINTS

■ – METERING POINT(COMMERCIAL & RESIDENTIAL)

□ – METERING POINT (PRIMARY)

DUCTING

------DUCT------ – DUCT BANK (DRAWN ON TOP OF U/G CIRCUIT)

EXAMPLE CONFIGURATIONS

 – DUCT BANK, 1/1 CONFIG

 – DUCT BANK, 3/1 CONFIG

 – DUCT BANK, 3/2 CONFIG

 – DUCT BANK, 3/3 CONFIG

 – DUCT BANK, 4/4 CONFIG

 – DUCT BANK END

CODE ABBREVIATIONS

AL – ALUMINUM
Cu – COPPER
XL – CROSS LINKED
PE – POLYETHYLENE
PILC – PAPER INSULATED LEAD COVER
PVC – POLYVINYL CHLORIDE

TWU – THERMOPLASTIC INSULATED CABLE
RWU – RUBBER (THERMOSET) INSULATED CABLE
c – CONCENTRIC NEUTRAL
J – JACKETED
E – ENCAPSULATED

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APPARATUS


– 3ø PADMOUNTED SWITCH CUBICLE


– 1ø PADMOUNTED TRANSFORMER; BASE OF DARK TRIANGLE INDICATES DOOR


– 3ø PADMOUNT TRANSFORMER; BASE OF WHITE TRIANGLE INDICATES DOOR


– 1ø SWITCH CUBICLE; BASE OF LARGE TRIANGLE INDICATES DOOR


– TRANSFORMER WITH ELBOWS

– TRANSFORMER WITH ELBOWS (ONE N/O)


– 1ø PADMOUNTED TRANSFORMER WITH SWITCH; BASE OF TRIANGLE INDICATES DOOR


– TRANSFORMER BANK – GROUND MOUNT

– REACTOR; KVAR RATING SHOWN INSIDE SYMBOL

MISCELLANEOUS

– MANHOLE; INCLUDES MANHOLE NUMBER

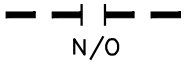
– SPLICE (SHOWN ON U/G PRIMARY)

– FAULT INDICATOR

– CONDUCTOR CHANGE (SHOWN ON U/G PRIMARY)


– HANDHOLE


– SPLITTER



– OPEN POINT (SHOWN ON U/G PRIMARY)
– ON PRIMARY; NORMAL STATE LABELED AS N/O OR N/C.
ON SECONDARY; IF NORMAL STATE IS N/O, THEN NOT LABELED.
IF NORMAL STATE IS N/C, THEN LABELED N/C.


– U/G TAKEOFF


– CABLE MARKER

– OVERSIZED PEDESTAL

– PEDESTAL, DARK PORTION INDICATES NORMAL DIRECTION OF FEED


– COMBINATION STREET LIGHT PEDESTAL; DARK PORTION INDICATES NORMAL DIRECTION OF FEED

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