Ŵ	Vinnipeg			-	PECTION R CABLE	-					Page Cable ID	1 of 1		
ect	Facility:				Project I	Name:								
Project	Area :				Bid Opp	Bid Opportunity:								
	Source:					Dest. / L	ood							
	Manufact	uror		Tur		Dest. / L	.0au.		Condu	otor			iminum	
Data	No. of	urer.	<u>.</u>	Тур	AWG	1.] Measi			ous Data	
Cable Data	Conducto	rs:	Size:			Leng	h:		m [Markings			
Ö	Rated Vo	ltage: V	Operating Voltage:	-	V		Installe							
	Installatio	n: Cable Tra] EMT] Steel Con			n. Conduit Direct Buried Other:							
E	Physical I	Damage on Expose	ed Ends:	🗌 Yes	🗌 No	Cable I	dentifi	cation Ta	ag Insta	alled:		□ Yes	s 🗌 No	
Visual Inspection	Visual Sig	ins of Overheating	:	🗌 Yes	🗌 No	Cable	Suppor	rted App	ropriate	ely:		☐ Yes	s 🗌 No	
/ v	Bend Rad	lius Acceptable:		☐ Yes	🗌 No	Comme	ents:							
		Sourco			Cabla D	oot /Loo	d.			Noto	Approval	of Citudo Boo	rocontativo	
	Test Source: Ca Preparation: Disconnected Disconnected						Disconnected is rec					te: Approval of City's Representative equired, prior to leaving cables unected during the test.		
Test	Cable Te	mperature:	℃ Ter	mperature C	Correction F	actor for	20°C:			ound all iding.	conducto	rs not under t	est for each	
Insulation Resistance Test	Test			In	sulation Re	esistance	e (MΩ))		Ŭ	ummary			
Resist	Voltage		A-G	ND	B-GND	C-G	ND	N-G	SND		t Passed			
tion I		Reading								🗌 Tes	st Inconclu	usive stigation Req	uired.	
nsula	V	Corrected to 20°	с								t Failed	5		
_	Utilize 10	00VDC Test Voltag	ge for 600	V rated cab	oles, 500VD	C for cab	les rat	ted <= 30	00V.					
	Comment	S:												
[Note: Tor	que check required	d for all ca	ables Conr	ection Res	istance T	est rec	nuired fo	r cables	s 4/0 AV	VG or larg	ier		
ance	11010. 101	que encon requirer			ion Resista						ie or larg			
esista	Τe	ermination	A		В	 C	-	N	N		То	rque Check		
Connection Resistance		Source										□ ок		
necti	D	est. / Load										□ ок		
Cor	Comments:													
al sis		turned to Service:		□ Ye		Comr	nents:							
Final Analysis	Monitorin	es 🗌 No	_											
	Repair / F	Replacement Requ	es 🗌 No											
		Company		Name			Sigr	nature				Date (yyyy/r	mm/dd)	
Perfor	med By													
Check	ed By													

Form CBL-LV Rev 00, Created by SNC-Lavalin Inc. L:\40ENG\Clients\City of Winnipeg\Electrical\Forms\F-CBL-LV.doc

INSPECTION FORM	
MOLDED CASE CIRCUIT BREAKER,	< 1000V

Page 1 of 2

ID:

Facility:	·	Project Name:
Area :		Bid Opportunity:

Winnipeg

a	Location:			Panelboard/MCC:		Cell #:		
er Data	Manufacturer:			Туре:	Serial #:			
reaker	Rated Voltage:	V	Frame Size:	А	Trip Unit:			
Br	Interrupting Rating:	k	κA	Comments:				

/ uo	Breaker Identification Tag Inst	alled:	Yes	🗌 No	Visual Signs of Overhe	eating:	🗌 Yes	🗌 No
	Cleanliness (As Found):	Good 🗌	Acceptable	Poor	Cables Supported App	propriately:	🗌 Yes	🗌 No
Inspection eaning	Connections:	Good 🗌	Acceptable	Poor	Electro/Mechanical Interlock:	□ N/A □ Good	Acceptable	Poor
Ca	Ground Connection:	Good 🗌	Acceptable	Poor	Exercise Circuit Break	er:	🗌 Yes	
Visu	Door Mechanical:	Good 🗌	Acceptable	Poor	Other:			
	Comments:							

	Trip Unit Rating: A	Trip Unit Ty	/pe: 🗌 None 🗌	e: None Thermal Magnetic Electronic LI LSI LSIG							
sốu	Breaker Setting (As Left)		Range	Setpoint	Delay	I ² T					
Settings	Long Time	🗌 Fixed 🔲 Adj.	-	X A = A	sec	🗌 On 🔲 Off					
Breaker	Short Time	🗌 Fixed 🔲 Adj.	-	X A = A	sec	🗌 On 🔲 Off					
Bre	Instantaneous	🗌 Fixed 🔲 Adj.	-	X A = A	N/A						
	Ground Fault	🗌 Fixed 🔲 Adj.	-	A	sec	🗌 On 🔲 Off					

	Perform ins	sulation res	ista	nce measure	ements for brea	kers >= 250A	A, or as specii	fied.				
Test	Tomporatu		°C	Source:	Disconnec	Approval is required, prior to leaving						
	Temperatur	ie.	C	Load:	Disconnec	ted 🗌 Co	nnected (Loa	cables connected during the test.				
tanc	Test					ce (MΩ)						
Resistance	Voltage	Phase	То	GND (Break	(er Closed)	Phase To	Phase (Brea	ker Closed)	Line to Load (Breaker Open)			
	(VDC)	A B C				A – B	B – C	B-C A-C		В	С	
atio			Γ									
Insulation	Test Sumn	nary		Test Passe	d 🗌 Test Ir	nconclusive. I	Further Invest	tigation Require	ed.	Test Failed		
	Comments:	:										

е	Perform contact measurements	for breakers >= 25	0A, or as specified	<i>I.</i>	
act		А	В	С	Test Summary
Contact esistance	Resistance (μΩ)				Test Passed Test Inconclusive
C Re	Comments:	Further Investigation Required.			

Winnipeg

INSPECTION FORM MOLDED CASE CIRCUIT BREAKER, < 1000V

Page 2 of 2

ID:

<u>s</u>	Returned to Service:	☐ Yes	🗌 No	Comments:
Final nalys	Monitoring / Further Inspection Required:	🗌 Yes	🗌 No	
A	Repair / Replacement Required:	🗌 Yes	🗌 No	

	Company	Name	Signature	Date (yyyy/mm/dd)
Performed By				
Checked By				

Note: The person(s) performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.

	Winnin				_	-			ON FOF					Pag	e 1 of 2		
	Winnip	beg			PA	NELB		D, L	-OW V	OLT	AGE			ID:			
Project	Faci	lity:					I	Proje	ct Name	•							
Pro	Area	:					I	Bid C)pportuni	ty:							
									_								
	Loca	ition:						Fed From:						No. of Circuits:			
ata	Man	ufacture	er:					Мо	del:				Serial	No:			
ard D	Rate	d Volta	ge:	V	Currei	nt Rating				A	1	Withsta	nd Rating:		A		
Panelboard Data	□s	ingle Pl	nase	🗌 3 Pł	nase, 3 V	/ire	□ 3	Phas	e, 4 Wire	e	Neu	tral Bondeo	to Groun	d	☐ Yes [] No	
Pan		lain Lug	js														
		lain Bre	aker:	Rating:	А	Manuf	factur	er:			I	Model:			Inst. S	etting:	
	Com	plete se	eparate	inspectio	n form (F	-BKR-MC	C-LV)	for m	ain brea	ker if	>= 25	0A, or has	long, shor	t, or g	round fau	lt settings.	
	Iden	tificatior	n Tag In:	stalled:		[Yes	s [] No	Visu	al Sigr	ns of Overh	eating:			🗌 Yes	🗌 No
/ uo	Visu	al signs	of Mois	ture:		[] Yes	6 [] No	Visu	al Sigr	ns of Coror	a:			🗌 Yes	🗌 No
Visual Inspection / Cleaning	Fuse	e/Breake	er Sizes	Match D	awings:	[Yes	s [] No	Cabl	es Su	pported Ap	propriately	:		🗌 Yes	🗌 No
al Inspect Cleaning	Clea	nliness	(As Fou	ind):	Goo	od 🗌 Ac	cepta	ble [] Poor	Con	nectior	าร:			Good 🔲 /	Acceptable	Poor
Visua	Door	Mecha	nical:		Goo	od 🗌 Ac	cepta	ble [] Poor	Grou	ind Co	onnection:			Good 🔲 /	Acceptable	Poor
	Exercise All Circuit Breakers:] Yes	s [] No	Com	ments	:					
	Test							val o	f City's R leaving c	Repre	sentat	ive is ected	Equipme	nt Te	mperature):	C
Fest	Prepai	ration:		Connecte Source I		during							Tempera Factor to		Correction :		
Resistance Test	Tes	•											Test Summary				
esista	Volta		A-GI	ND				not under test!			GND	Test Passed					
			RDG	20℃	RDG	20℃	RD	G	20℃	RD	G	20℃		ner Inv	vestigatior	n Required.	
Insulation														anou			
lns	Test V	oltages	: 120	-300∨ →	500 VD	C Test Vo	oltage		I	301-	600V	→ 1000 VE	C Test Vo	ltage			
	Comm	ents:															
						Bre	akors	10	NA and	With	out In	st. Setting	I				
	List by	, model	of break	er. Multi	ple break	ers of va											
kers	Туре	Ма	anufacti	urer	Мос	del Serie	s	In R	terruptir ating (k/	ng A)	Р	ositions/C	rcuits	Note	es		
Breal	А									,							
eder	В																
Load/Feeder Breakers	С																
Loã	D																
	E F																
								I I						1			

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Form F-PNL-LV Rev 01, Created by SNC-Lavalin Inc. L:\40ENG\Clients\City of Winnipeg\Electrical\Forms\F-PNL-LV.doc Winnipeg

INSPECTION FORM PANELBOARD, LOW VOLTAGE

Page 2 of 2

ID:

				Breakers	s >= 100A	or with In	st. Setting						
Breakers	List each bre fault settings.	List each breaker individually. Complete separate inspection form (F-BKR-MC-LV) for breaker if >= 250A, or has long, short, or ground fault settings.											
	ID	ID Pos. Manufacturer		Model	Trip Rating (A)	Int. Rating (kA)	Inst. Setting	Separate Form	Notes				
eeder													
Load/Feeder													
Ľ													
					0								
ll sis	Returned to	Service:		□ Yes □	No Con	nments:							

is.			
Final	Monitoring / Inspection Required:	🗌 Yes	🗌 No
Ā	Repair / Replacement Required:	🗌 Yes	🗌 No

	Company	Name	Signature	Date (yyyy/mm/dd)
Performed By				
Checked By				

Note: The person performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.

		INSPECTION FO											Page	Page 1 of 2			
V	Winnipeg TRANSFORMER,				, DR`	DRY TYPE, LOW VOLTAGE						ID:	ID:				
Project	Facility:						Proj	Project Name:									
Pro	Area :						Bid (Bid Opportunity:									
							D	Drimon / Voltogo									
_	KVA: Phase:							Primary Voltage: V					V	Voltage:			
Data		Manufacturer:					Type:						Serial Number:				
Transformer Data	Primary Winding:	□ Δ Secondary □ Y Winding:					A YImpedance:%ZTemp Rise:						C	K Factor:			
ansfo	Winding Material: Copper Aluminum																
1	No Load Tap			1	2	2 3			4		5						ap Setting
	Changer	Voltage	•													(/	As Found):
	Transformer Identification Tag Installed: Yes No Visual Signs of Overheating: Yes No																
jing	Bushings:									Sup	Support Insulators: Good Cacceptable Poor						
/ Clea	Paint: Good Acce						otable Deor No Load Tap Dhanger:					Goo	Good Acceptable Poor				
ction	Fans: N/A Good Acceptable Poor Fan Controls: N/A Good Acceptable Poor																
lnspe	Temp. Gauge: N/A Good Acceptable Poor Connections: Good Acceptable Poor																
Visual Inspection / Cleaning	Ground Ground Good Acceptable Poor Neutral Bonded to Ground: N/A Yes No									/A 🗌 Yes 🗌 No							
					ptable	table 🗌 Poor Unit Cleaned: 🗌 Yes Photograph Taken: 🗌 Yes						en: 🗌 Yes					
	Operational C	onditions	s / Not	es:													
ion	Primary Volta						V H2:H3:			V H3:H1: V			V Measu	/ Measured at:			
nal Inspection	Secondary Vo	ary Voltage: X1::			V	V X2::			V X3:: V N			V Measu	Measured at:				
al In	Current:		Ph A:		A	Ph I	B:		A P	h C:			A Measured at:				
Operatio	Tap Setting:	Image: Tap Setting: Image: Appears Satisfactory Image: Tap Setting: Image: Further Monitoring Recommended. Image: Tap Setting: Image: Tap Setting (As Left): Image: Tap Setting: Image: Tap Setting (As Left):															
	Thermographic Inspection Yes Attach Performed: Yes separa																
e	Test				Voltage Vdc)			Resistance (N			(MΩ) Dielectric Absorption Ratio						
Insulation Resistance								30 sec					60s/30s				
on Re	Primary to Ground, Secondary Guarded																
ulatic	Secondary to Ground, Primary Guarded																
lns	Primary to Secondary, Ground Guarded																

Winnipeg

INSPECTION FORM TRANSFORMER, DRY TYPE, LOW VOLTAGE

ID:

	Returned to Service:	🗌 Yes	🗌 No	Comments:
	Monitoring / Further Inspection Required:	☐ Yes	🗌 No	
A	Repair / Replacement Required:	🗌 Yes	🗌 No	

	Company	Name	Signature	Date (yyyy/mm/dd)
Performed By				
Checked By				

Note: The person(s) performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.