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April 22, 2002

Our Project: IRES 7777 777

Mr. John Smith
Best Project Management Inc.
345 Any Road East, Suite 400
Yourtown, Ontario
L6N 1X5

Subject: Infrared Condition Analysis Report of Electrical Services at Your Church, 811 First Avenue West, Yourtown, Ontario, April 22, 2002

Dear Mr. Smith:

As per your request, The King North Group has completed an IR (infrared) condition assessment of the electrical services at the above noted facility.

This report has been prepared for Best Project Management Inc. and third party use of this report without the consent of The King North Group is prohibited.

The enclosed report outlines in detail, and assigns repair priorities to the **four (4) thermal anomalies (electrical faults)** revealed during our site inspection and testing.

We trust that this information is clear, however if you should you have any questions on the contents of this report, please do not hesitate to call.

Yours truly,

KingNorth Building Sciences

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INFRARED CONDITION ANALYSIS REPORT

OF

ELECTRICAL SERVICE

AT

YOUR CHURCH
811 FIRST AVENUE WEST

YOURTOWN, ONTARIO

PREPARED FOR

BEST PROJECT MANAGEMENT INC.

Prepared By:

THE KING NORTH GROUP
380 Kettleby Road
Kettleby, Ontario
L0G 1J0

Project No. IRES 7777 777

April, 2002

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1.0 EXECUTIVE SUMMARY SPREADSHEET

At the request of Best Project Management Inc., The King North Group, performed an infrared inspection of the electrical service at the church building identified as Your Church located at 811 First Avenue West, in the City of Yourtown, Ontario. Our report reflects the conditions in effect on Monday April 22, 2002 during our infrared inspection and visual observations.

Our findings revealed **four (4) thermal anomalies (electrical faults)** in the electrical service. The remaining equipment in the various locations throughout the building was found to be in good operating condition.

Below is a Summary Spreadsheet of our findings:

811 FIRST AVENUE WEST

LOCATION (ROOM I.D.)	ANOMALY (Electrical Fault)	MAINTENANCE REQ'D (BY PRIORITY)				YEAR WORK REQUIRED
		P1	P2	P3	P4	2002
1.0 ELECTRICAL AREA (Rectory Basement)	None.	None.	None.	None.	None.	None.
2.0 ELECTRICAL PANEL (Church Basement by Kitchen)	1. 70A (assumed) FEDERAL PACIFIC Distribution Panel. No Label. Bottom lug and cable at main feed.	None.	Clean and tighten.	None.	None.	As soon as possible.
	2. 70A (assumed) FEDERAL PACIFIC Distribution Panel. No Label. Circuit breakers 14, 16, 18, 20.	None.	Redistribute loads.	None.	None.	As soon as possible.
3.0 MAIN ELECTRICAL ROOM (Church Basement)	3. 200A LANGLEY ELECTRIC Disconnect. No Label. B Phase top in gear blades.	Clean and tighten.	None.	None.	None.	Immediately.
	4. No Spec. Disconnect "KITCHEN FUSE BASEMENT". A Phase top in gear and fuse clip.	None.	Clean and tighten.	None.	None.	As soon as possible.
4.0 ELECTRICAL CLOSET (Church Basement by bar)	None.	None.	None.	None.	None.	None.

2.0 OBSERVATIONS

Following is our information of our field observations at the building.

Thermal images were revealed by way of an infrared thermal imaging system camera (Model Thermovision 470 manufactured by AGEMA Infrared). Where detected, all thermal anomalies were recorded. Corresponding conventional photographs of the anomalies were taken with an automatic 35mm camera.

A detailed description of the imaging equipment used to capture the information can be found in Appendix 2 attached at the back of this report. A listing of the equipment inspected can be found in Appendix 1 at the back of this report.

Four (4) thermal anomalies (electrical faults) ***were revealed in the course of our inspection. The faults are itemized in the Summary Spreadsheet/Chart provided in the EXECUTIVE SUMMARY Section of this report. Specific information about the faults is located in Section 3.0 Photographic Summary.***

Our scope of work involved performing a general overview of the existing conditions of electrical main and sub panels located in various areas of the basement in the building including the rectory and the church.

This equipment included all known lighting and power distribution panels.

Any anomalies (electrical faults) revealed in the course of inspection were documented and included with the report. This would include a description of the subject item, its location, identification of the fault and load readings (ampacity).

In general, the level of housekeeping and maintenance in the various areas containing electrical services is satisfactory. The majority of the equipment, which was scanned, is in good operating condition (with the exception of the noted faults) requiring only routine maintenance at this time. A general cleaning of the panels' interiors is recommended as they are filled with various types of construction related dust and debris which could affect the performance of the electrical components.

PRIORITY RATINGS OF ELECTRICAL FAULTS

In general, when an anomaly in the electrical service is discovered, it generally appears brighter than its immediate surroundings i.e. a “hot spot” as compared to ambient temperatures. These “hot spots” are measured for temperature (with an infrared thermometer) and current flow (conventional amp meter) to confirm compliance with electrical code performance ratings and operating temperatures. Based on this information, the anomalies are then assigned a priority rating indicative of their degree of severity

Our priority ratings are determined as follows:

Priority 1: **HIGH MAINTENANCE PRIORITY.** Components are operating at current flows and/or temperatures exceeding limits stated in the Electrical Code and there is evidence of electrical discharges at connections. These locations require immediate maintenance attention to reduce the possibility of component failure or electrical shock and/or fire hazard.

Priority 2: **MEDIUM MAINTENANCE PRIORITY.** Components are performing at elevated temperatures (>20 deg. C above ambient) but there is little evidence of discolouration in the components due to electrical discharges etc.. Maintenance attention may be required due to premature wear of the component as a result of the elevated performance temperatures. The probability of component failure is low.

Priority 3: **LOW MAINTENANCE PRIORITY.** Components are performing at elevated temperatures (up to 10 deg. C above ambient) but no evidence of any electrical malfunction at this time. May be the result of unbalanced loading of electrical phases. Keep component under observation and maintain regular maintenance schedule. Probability of component failure is minimal to none.

Priority 4: **NO MAINTENANCE REQUIRED.** Components are performing within specified temperature ranges and are in good visual and operating condition. Probability of component failure is minimal to none.

3.0 PHOTOGRAPHIC RECORD

The photographs and thermal images on the following pages depict the thermal anomalies revealed during our infrared scan.

ELECTRICAL FAULT RECORD

Page 1

BUILDING: 811 FIRST AVENUE WEST, YOUR TOWN, ONTARIO

DATE OF INSPECTION: April 22, 2002

TIME OF INSPECTION: 8:00 p.m. – 10:30 p.m.

FAULTS #: 1 & 2

MAINTENANCE PRIORITY: 2

LOCATION OF FAULT: Church (Basement by Kitchen)
No Label
FEDERAL PACIFIC 70A (assumed) 120/208V
Distribution Panel
1. Bottom Phase in feed to panel.
2. Circuit breakers 14 to 20 inclusive

TEMPERATURES (deg. Fahrenheit)

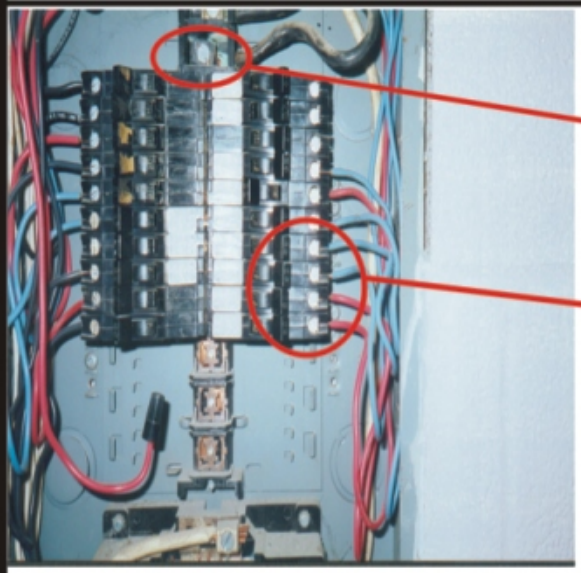
AMBIENT	MEASURED (HOT SPOT)	DIFFERENCE
24.6 C	40.7 C	16.1 C

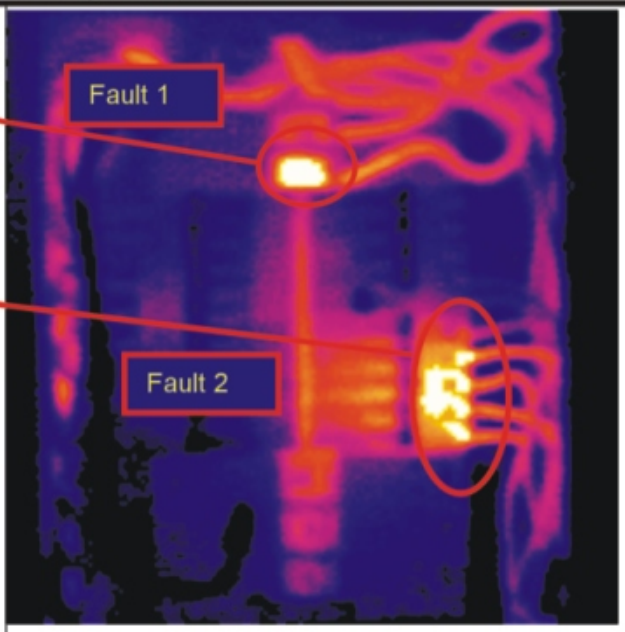
CURRENT FLOW (AMPERES):

Notes:

A Phase: 36.5 A
B Phase: 26.0 A

Circuit 14: 12.5 A on 20A 1p breaker – **overloaded**
Circuit 16: 13.25 A on 20A 1p breaker – **overloaded**
Circuit 18: 12.5 A on 20A 1p breaker – **overloaded**
Circuit 20: 12.5 A on 20A 1p breaker – **overloaded**





COMMENT : Conventional Photograph

Circled areas are fault locations.

COMMENT: Thermogram Image

Corresponds to conventional image at left.

REMEDIAL ACTION: Repair cable at Fault 1. Investigate reasons for overload on breakers then **redistribute loads at Fault 2.** Repair as soon as possible.

ELECTRICAL FAULT RECORD

Page 2

BUILDING: 811 FIRST AVENUE WEST, YOUR TOWN, ONTARIO

DATE OF INSPECTION: April 22, 2002

TIME OF INSPECTION: 8:00 p.m. – 10:30 p.m.

FAULT # : 3

MAINTENANCE PRIORITY: 1

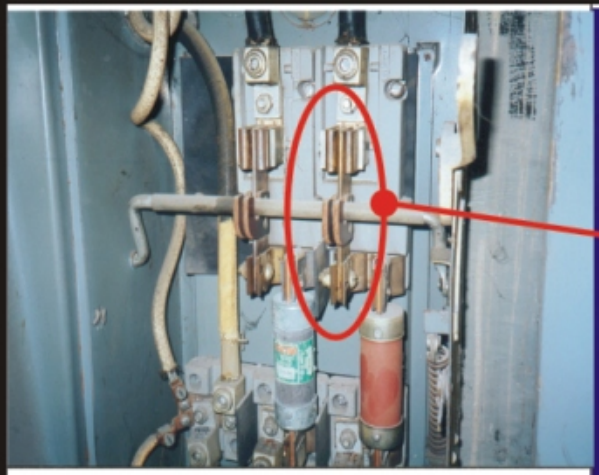
LOCATION OF FAULT: Church (Basement Electrical Room)
No Label
LANGLEY ELECTRIC 200A 125/250V
Wall Mounted Disconnect

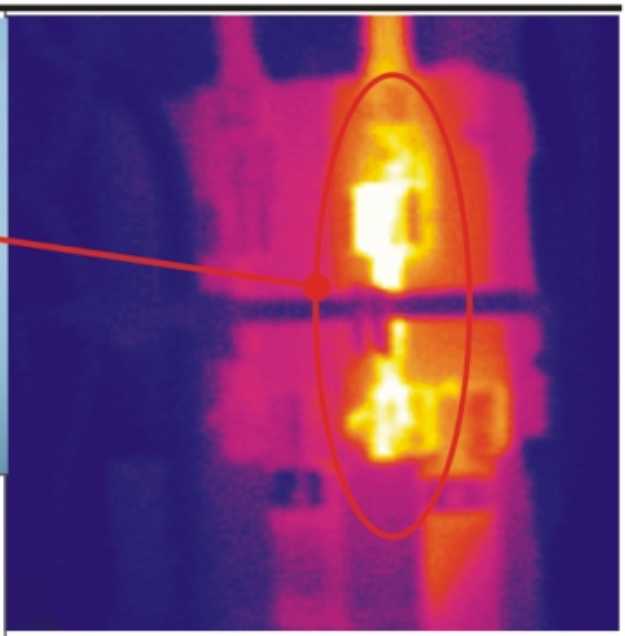
B Phase top in gear blades.

TEMPERATURES (deg. Fahrenheit)

AMBIENT	MEASURED (HOT SPOT)	DIFFERENCE
19.8 C	48 C	28.2 C

CURRENT FLOW (AMPERES):
Notes:
A Phase: 56 A
B Phase: 70 A





COMMENT : Conventional Photograph

Circled area is fault location.

COMMENT: Thermogram Image

Corresponds to conventional image at left.

REMEDIAL ACTION: Clean and tighten components. **Immediately.**

ELECTRICAL FAULT RECORD

Page 3

BUILDING: 811 FIRST AVENUE WEST, YOUR TOWN, ONTARIO

DATE OF INSPECTION: April 22, 2002

TIME OF INSPECTION: 8:00 p.m. – 10:30 p.m.

FAULT # : 4

MAINTENANCE PRIORITY: 2

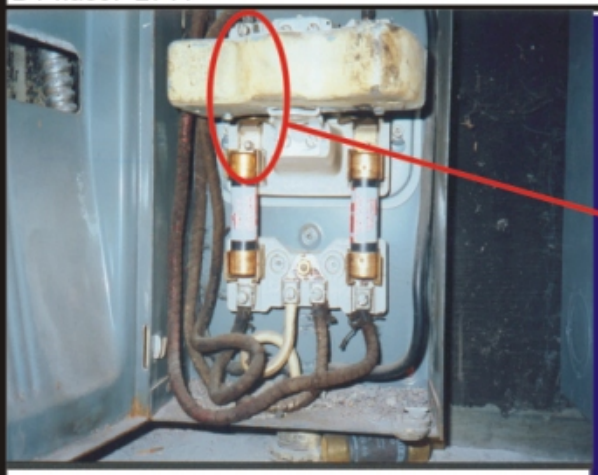
LOCATION OF FAULT: Church (Main Electrical Room Basement)
"KITCHEN FUSE BASEMENT"
No specifications or identification.

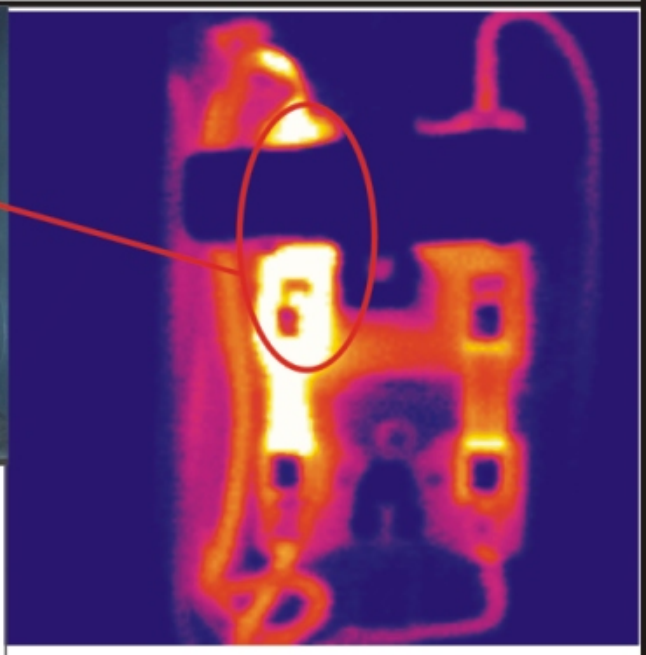
Top of A Phase in gear and fuse clip.

TEMPERATURES (deg. Fahrenheit)

AMBIENT	MEASURED (HOT SPOT)	DIFFERENCE
23.3 C	35.7 C	12.4 C

CURRENT FLOW (AMPERES):
Notes:
A Phase: 42 A
B Phase: 27 A





COMMENT : Conventional Photograph

Circled area is fault location.

COMMENT: Thermogram Image

Corresponds to conventional image at left.

REMEDIAL ACTION: Clean and tighten. As soon as possible.

APPENDIX 1

BUILDING ELECTRICAL PANEL SCHEDULE

BUILDING ELECTRICAL PANEL SCHEDULE

PROJECT NUMBER:	IRES 7777 777
NAME OF BUILDING:	YOUR CHURCH
ADDRESS OF BUILDING:	811 FIRST AVENUE. W., YOURTOWN
TYPE OF BUILDING:	CHURCH INSTITUTIONAL
NUMBER OF STOREYS:	N/A

ELECTRICAL PANELS

PANEL I.D.	LOCATION	TYPE	SPECIFIED AMPERAGE / LOAD DURING SCAN	VOLTS	CONDITION April 22, 2002
NO LABEL	Rectory (Basement)	FEDERAL PIONEER Disconnect	200 A B C	240	Priority 4 - Good
NO LABEL		GENERAL ELECTRIC Distribution Panel	200 A B 9 No access	120	Priority 4 - Good
PANEL B 120/240 VAC 1PH		FEDERAL PIONEER Distribution Panel	225 A B 10 10	120/240	Priority 4 - Good
PANEL C 120/240 VAC 1PH		FEDERAL PIONEER Distribution Panel	225 A B C 0 0	120/240	Priority 4 - Good
NO LABEL	Church (Basement by Kitchen)	FEDERAL PACIFIC Distribution Panel	70 (assumed). A B 23 42	120/208	Priority 1 – Repair cable at lug. Redistribute loading on C14,16,18,20.
NO LABEL	Church Main Electrical Room (Basement)	FEDERAL PIONEER Disconnect	200 A B C 0 0 0	240	Priority 4 - Good
NO LABEL		LANGLEY ELECTRIC Disconnect	200 A B 56 70	125/250	Priority 2 – Clean and tighten as soon as possible.
NO LABEL		Meter Base	-	-	Priority 4 - Good
KITCHEN FUSE BASEMENT		Disconnect	No Spec. A B 42 27	No Spec.	Priority 2 – Clean and tighten as soon as possible.

BUILDING ELECTRICAL PANEL SCHEDULE

PROJECT NUMBER:	IRES 7777 777
NAME OF BUILDING:	YOUR CHURCH
ADDRESS OF BUILDING:	811 FIRST AVE. W., YOURTOWN
TYPE OF BUILDING:	CHURCH INSTITUTIONAL
NUMBER OF STOREYS:	N/A

ELECTRICAL PANELS

PANEL I.D.	LOCATION	TYPE	SPECIFIED AMPERAGE / LOAD DURING SCAN	VOLTS	CONDITION April 22, 2002
NO LABEL	Church Main Electrical Room (Basement)	SQUARE D Disconnect	60 A: 9 / B: 5	120/208	Priority 4 - Good
NO LABEL		Splitter	No Spec. A / B / C	No Spec.	Priority 4 - Good
NO LABEL		COMMANDER Disconnect	100 A / B / C No access for meter	120/240	Priority 4 - Good
NO LABEL		COMMANDER Distr. Panel	125 A: 35 / B: 30	120/240	Priority 4 – Good
MAIN SUB-NEW PANEL		CEB Disconnect	60 A / B / C No access for meter	115/230	Priority 4 - Good
NO LABEL		SIEMENS Distribution Panel	100 A: 8 / B: 0	120/240	Priority 4 - Good
NO LABEL		FEDERAL PIONEER Disconnect	200 A: 0 / B: 0	240	Priority 4 - Good
NO LABEL		FEDERAL PIONEER Disconnect	200 A: 0 / B / C: 0	240	Priority 4 - Good
NO LABEL	Church Electrical Closet (basement by bar)	REX 30 KVA Transformer		600V to 120/208V	Priority 4 - Good
PANEL A 347/600 VAC 3PH		SIEMENS Distribution Panel	250 A: 8 / B: 8 / C: 0	120/208	Priority 4 - Good

BUILDING ELECTRICAL PANEL SCHEDULE — Page 3

PROJECT NUMBER:	IRES 7777 777
NAME OF BUILDING:	YOUR CHURCH
ADDRESS OF BUILDING:	811 FIRST AVENUE W., YOURTOWN
TYPE OF BUILDING:	CHURCH INSTITUTIONAL
NUMBER OF STOREYS:	N/A

ELECTRICAL PANELS

PANEL I.D.	LOCATION	TYPE	SPECIFIED AMPERAGE / LOAD DURING SCAN	VOLTS	CONDITION April 22, 2002
PANEL D 120/208 VAC 3 PH	Church Electrical Closet (basement by bar)	SIEMENS Distribution Panel	225 A B C 5 17 0	120/208	Priority 4 - Good

APPENDIX 2

GENERAL DESCRIPTIONS

DESCRIPTION OF THERMAL IMAGING SYSTEM

GENERAL DESCRIPTION OF ELECTRICAL SERVICE TO BUILDING

DESCRIPTION OF THERMAL IMAGING SYSTEM

Following is our description of the equipment used to capture the infrared images of the electrical service as well as a general description of the electrical system of the building.

DESCRIPTION OF THERMAL IMAGING SYSTEM

Thermal images were revealed by way of an infrared thermal imaging system. The infrared camera and display system was a Model Thermovision 470 manufactured by AGEMA of Dandyryd, Sweden. All images were viewed through a Model Thermovision 470, 50mm 20 deg. Infrared optical lens (Serial No. 556192902).

Where detected, all thermal anomalies were recorded on 3.25" computer floppy disc. By the Thermovision 470 system. Corresponding conventional colour photographs of the anomalies were taken with a Sony TRV 330 digital camera.

GENERAL DESCRIPTION OF ELECTRICAL SERVICE TO BUILDING

It appears that the electrical service in the building is original and was installed when the building was constructed.

The Main Electrical Service for the building enters the building at the Main Electrical Room located in the basement of the church. The Main Switch feeds various sub-panel disconnects and breaker panels for lighting and power throughout the building.