

12-14 SHEPHERD STREET



CITY OF PORTLAND, MAINE
Department of Building Inspection

Certificate of Occupancy

LOCATION 12-14 Sherman Street

Issued to Portland West Neighborhood Planning Council Date of Issue March 9, 1983

This is to certify that the building, premises, or part thereof, at the above location, built—altered—changed as to use under Building Permit No. 82-558, has had final inspection, has been found to conform substantially, to requirements of Zoning Ordinance and Building Code of the City, and is hereby approved for occupancy or use, limited or otherwise, as indicated below.

PORTION OF BUILDING OR PREMISES

APPROVED OCCUPANCY

- | | |
|---|----------------|
| <p>1st & 2nd floors</p> <p>Limiting Conditions:</p> <ol style="list-style-type: none"> 1. All plantings and finished landscaping to be completed by 6-1-83 2. 3 1/2' split-rail, cedar fence along western line to be completed by 5-1-83 3. Community space must have emergency lighting and exit signs before we will release for occupancy. | <p>5 Units</p> |
|---|----------------|

This certificate supersedes certificate issued

Approved:

7/7/83 *Wayton C. Bostwick*
(Date) Inspector

James J. Collins, Sr.
Samuel J. Allen
Inspector of Buildings

Notice: This certificate identifies lawful use of building or premises, and ought to be transferred from owner to owner when property changes hands. Copy shall be furnished to owner or lessee for one dollar.



APPLICATION FOR PERMIT
DEPARTMENT OF BUILDING INSPECTIONS SERVICES
ELECTRICAL INSTALLATIONS

Date Oct. 14, 1982
 Receipt and Permit number A79813

To the CHIEF ELECTRICAL INSPECTOR, Portland, Maine:

The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of Maine, the Portland Electrical Ordinance, the National Electrical Code and the following specifications:

LOCATION OF WORK: 14 Sherman Street
 OWNER'S NAME: Portland West Neigh. Assoc. ADDRESS: _____

	FEES
OUTLETS:	
Receptacles _____ Switches _____ Plugmold _____ ft. TOTAL <u>125</u>	11.50
FIXTURES: (number of)	
Incandescent _____ Fluorescent _____ (not strip) TOTAL <u>30</u>	5.00
Strip Fluorescent _____ ft.	
SERVICES:	
Overhead <u>x</u> Underground _____ Temporary _____ TOTAL amperes <u>A.C.</u>	6.00
METERS: (number of) <u>6</u>	3.00
MOTORS: (number of)	
Fractional _____	
1 HP or over _____	
RESIDENTIAL HEATING:	
Oil or Gas (number of units) _____	
Electric (number of rooms) _____	
COMMERCIAL OR INDUSTRIAL HEATING:	
Oil or Gas (by a main boiler) _____	
Oil or Gas (by separate units) _____	
Electric Under 20 kws _____ Over 20 kws _____	
APPLIANCES: (number of)	
Ranges _____ <u>5</u> _____ Water Heaters _____	
Cook Tops _____ Disposals _____	
Wall Ovens _____ Dishwashers _____	
Dryers _____ <u>1</u> _____ Compactors _____	
Fans _____ <u>6</u> _____ Others (denote) _____	
TOTAL	19.50
MISCELLANEOUS: (number of)	
Branch Panels <u>6</u>	6.00
Transformers _____	
Air Conditioners Central Unit _____	
Separate Units (windows) _____	
Signs 20 sq. ft. and under _____	
Over 20 sq. ft. _____	
Swimming Pools Above Ground _____	
In Ground _____	
Fire/Burglar Alarms Residential _____	
Commercial _____	
Heavy Duty Outlets, 220 Volt (such as welders) 30 amps and under _____	
over 30 amps _____	
Circus, Fairs, etc. _____	
Alterations to wires _____	
Repairs after fire _____	
Emergency Lights, battery _____	
Emergency Generators _____	
INSTALLATION FEE DUE: _____	
FOR ADDITIONAL WORK NOT ON ORIGINAL PERMIT DOUBLE FEE DUE: _____	
FOR REMOVAL OF A "STOP ORDER" (304-16.b)	
TOTAL AMOUNT DUE:	51.00

INSPECTION.

Will be ready on 10-14, 1982; or Will Call _____

CONTRACTOR'S NAME: Sennett L. Stanford

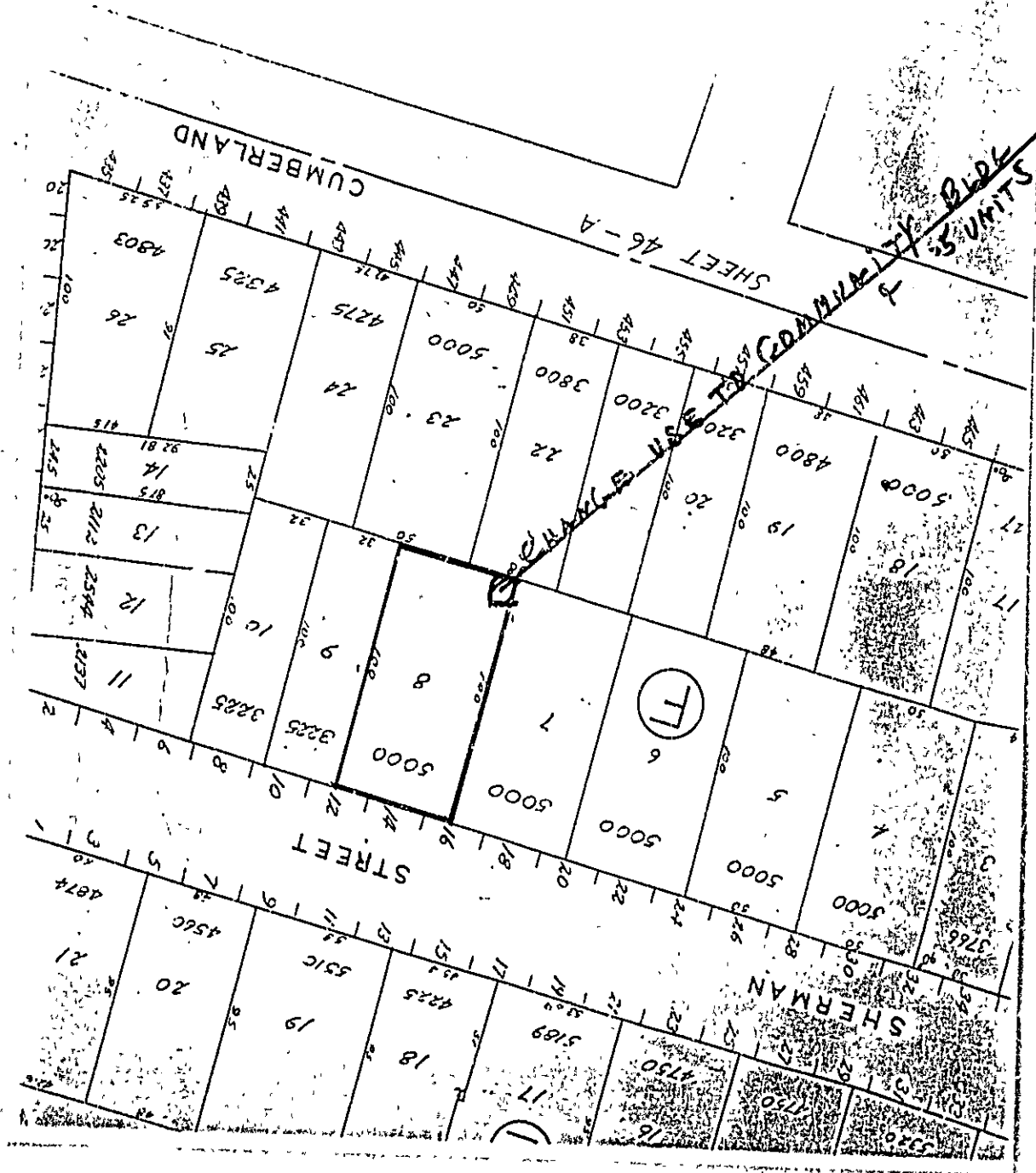
ADDRESS: P. O. Box 330 - No. Windham, Me. 04062

TEL.: 892-4059

MASTER LICENSE NO.: 2934 SIGNATURE OF CONTRACTOR: _____

LIMITED LICENSE NO.: _____

INSPECTOR'S COPY — WHITE
 OFFICE COPY — CANARY
 CONTRACTOR'S COPY — GREEN



CUMBERLAND

SHEET 46-A

SHERMAN

STREET

STIMM 55 UNITS
COMMUNITY

26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
4803	4325	4275	5000	3800	3200	3200	4800	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
4804	4805	4806	4807	4808	4809	4810	4811	4812	4813	4814	4815	4816	4817	4818	4819	4820	4821	4822	4823	4824	4825	4826	4827	4828



APPLICATION FOR PERMIT
 DEPARTMENT OF BUILDING INSPECTIONS SERVICES
 ELECTRICAL INSTALLATIONS

Date Nov. 16, 19 79
 Receipt and Permit number A 34974

To the CHIEF ELECTRICAL INSPECTOR, Portland, Maine:

The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of Maine, the Portland Electrical Ordinance, the National Electrical Code and the following specifications:

LOCATION OF WORK: 14 Sherman St.
 OWNER'S NAME: Peoples Regional Or-or ADDRESS: same
Program

OUTLETS: Receptacles _____ Switches _____ Plugmold _____ ft. TOTAL 1-30 FEES 3.00

FIXTURES: (number of) Incandescent -MM- Fluorescent XX(not strip) TOTAL 1-10 FEES 3.00
 Strip Fluorescent _____ ft. _____

SERVICES: Overhead _____ Underground _____ Temporary _____ TOTAL amperes _____

METERS: (number of) _____

MOTORS: (number of) Fractional _____
 1 HP or over _____

RESIDENTIAL HEATING: Oil or Gas (number of units) _____
 Electric (number of rooms) _____

COMMERCIAL OR INDUSTRIAL HEATING: Oil or Gas (by a main boiler) _____
 Oil or Gas (by separate units) _____
 Electric Under 20 kws _____ Over 20 kws _____

APPLIANCES: (number of) Ranges _____ Water Heaters _____
 Cook Tops _____ Disposals _____
 Wall Ovens _____ Dishwashers _____
 Dryers _____ Compactors _____
 Fans _____ Others (denote) _____

TOTAL _____

MISCELLANEOUS: (number of) Branch Panels _____
 Transformers _____
 Air Conditioners Central Unit _____
 Separate Units (windows) _____
 Signs 20 sq. ft. and under _____
 Over 20 sq. ft. _____
 Swimming Pools Above Ground _____
 In Ground _____
 Fire/Burglar Alarms Residential _____
 Commercial _____
 Heavy Duty Outlets, 220 Volt (such as welders) 30 amps and under _____
 over 30 amps _____
 Circus, Fairs, etc. _____
 Alterations to wires _____
 Repairs after fire _____
 Emergency Lights, battery _____
 Emergency Generators _____

INSTALLATION FEE DUE: _____
 FOR ADDITIONAL WORK NOT ON ORIGINAL PERMIT DOUBLE FEE DUE: _____
 FOR REMOVAL OF A "STOP ORDER" (304-16.b)
 TOTAL AMOUNT DUE: 6.00

INSPECTION: Will be ready on XX, 19 79; or Will Call _____

CONTRACTOR'S NAME: James W. Cassidy
 ADDRESS: 21 Hodgkin St.
 TEL.: 774-5478

MASTER LICENSE NO.: _____ 241 SIGNATURE OF CONTRACTOR: James W. Cassidy
 LIMITED LICENSE NO.: _____

INSPECTOR'S COPY — WHITE
 OFFICE COPY — CANARY
 CONTRACTOR'S COPY — GREEN

ELECTRICAL INSTALLATIONS-

Permit Number 34974

Location 14 Sherman St.

Owner CRDP

Date of Permit 11-16-79

Final Inspection 11-19-79

By Inspector Libby

Permit Application Register Page No. 42

INSPECTIONS: Service _____ by _____

Service called in _____

Closing-in 11-19-79 by Libby

PROGRESS INSPECTIONS: _____

CODE
COMPLIANCE
COMPLETED
DATE 11-19-79

REMARKS:

OK Exit request



APPLICATION FOR PERMIT
DEPARTMENT OF PUBLIC UTILITIES AND INSPECTIONS SERVICES
ELECTRICAL INSTALLATIONS

Date Jan. 7, 1976, 19
 Receipt and Permit number: A 11665

To the CHIEF ELECTRICAL INSPECTOR, Portland, Maine:
 The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of Maine, the Portland Electrical Ordinance, the National Electrical Code and the following specifications:

LOCATION OF WORK: 14 Sherman St.
 OWNER'S NAME: K.P. Home ADDRESS: _____

OUTLETS: (number of)
 Lights 2
 Receptacles _____ FEES
 Switches _____
 Plug, old _____ (number of feet)
 TOTAL 2 3.00

FIXTURES: (number of)
 Incandescent _____
 Fluorescent _____ (Do not include strip fluorescent)
 TOTAL _____
 Strip Fluorescent, in feet _____

SERVICES:
 Permanent, total amperes 200 3.00
 Temporary _____

METERS: (number of) 150

MOTORS: (number of)
 Fractional _____
 1 HP or over _____

RESIDENTIAL HEATING:
 Oil or Gas (number of units) _____
 Electric (number of rooms) _____

COMMERCIAL OR INDUSTRIAL HEATING:
 Oil or Gas (by a main boiler) _____
 Oil or Gas (by separate units) _____
 Electric (total number of kws) _____

APPLIANCES: (number of)
 Ranges _____ Water Heaters _____
 Cook Tops _____ Disposals _____
 Wall Ovens _____ Dishwashers _____
 Dryers _____ Compactors _____
 Fans _____ Others (denote) _____
 TOTAL _____

MISCELLANEOUS: (number of)
 Branch Panels _____
 Transformers _____
 Air Conditioners _____
 Signs _____
 Fire/Burglar Alarms _____
 Circus, Fairs, etc _____
 Alterations to wires _____
 Repairs after fire _____
 Heavy Duty, 220v outlets _____
 Emergency Lights, batt. _____
 Emergency Generators _____

INSTALLATION FEE DUE: _____

FOR ADDITIONAL WORK NOT ON ORIGINAL PERMIT .. DOUBLE FEE DUE: _____

FOR REMOVAL OF A "STOP ORDER" (304-16.b) _____

FOR PERFORMING WORK WITHOUT A PERMIT (304-9) _____

TOTAL AMOUNT DUE: 6.50

INSPECTION:
 Will be ready on _____, 19__ or Will Call XX

CONTRACTOR'S NAME: Oramandel S. Wilson

ADDRESS: 65 Elm St. Topsam

TEL: _____

MASTER LICENSE NO.: 3045

SIGNATURE OF CONTRACTOR: Oramandel S. Wilson

LIMITED LICENSE NO.: _____

INSPECTOR'S COPY

Memorandum from Department of Building Inspection, Portland, Maine

AP- 14 Sherman Street

Dec. 17, 1962

Rythien Benevolent Corp.
14 Sherman Street

cc to: Portland Gas Light Co.
5 Temple Street

Gentlemen:

Permit for installation of gas-fired cooking range at the above named location is issued herewith to the Portland Gas Light Company. Approval is given for installation of this range without a hood over it on the condition that no frying in deep fat or any other cooking that might create a quick unfriendly fire is to be done on it.

Very truly yours,

Albert J. Sears
Building Inspection Director

AJS:z

CS-27



FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT FOR HEATING, COOKING OR POWER EQUIPMENT

Portland, Maine, December 11, 1962

PERMIT ISSUED 01677 17 1962 CITY OF PORTLAND

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications.

Location 14 Sherman Street Use of Building Club and Lodge No. Stories 1
Name and address of owner of appliance Pythian Benevolent Corp., 14 Sherman St.
Installer's name and address Portland Gas Light Co., 5 Temple St. Telephone

General Description of Work

To install gas-fired #286H Garland Range ...

Permit Issued with Merit

IF HEATER, OR POWER BOILER

Location of appliance Any burnable material in floor surface or beneath?
If so, how protected? Kind of fuel?
Minimum distance to burnable material, from top of appliance or casing top of furnace
From top of smoke pipe From front of appliance From side of appliance
Size of chimney flue Other connections to same flue
If gas fired, how vented? Rated maximum demand per hour
Will sufficient fresh air be supplied to the appliance to insure proper and safe combustion?

IF OIL BURNER

Name and type of burner Labelled by underwriters' laboratories?
Will operator be always in attendance? Does oil supply line feed from top or bottom of tank?
Type of floor beneath burner Size of vent pipe
Location of oil storage Number and capacity of
Low water shut off Male No.
Will all tanks be more than five feet from any flame? How many tanks enclosed?
Total capacity of any existing storage tanks for furnace burners

IF COOKING APPLIANCE

Location of appliance basement Any burnable material in floor surface or beneath? yes
If so, how protected? tile Height of Legs, if any 4'
Skirting at bottom of appliance? no Distance to combustible material from top of appliance? 4'
From front of appliance 4' From sides and back 6" From top of smokepipe 12"
Size of chimney flue 12x16 Other connections to same flue none
Is hood to be provided? yes If so, how vented? to chimney Forced or gravity?
If gas fired, how vented? to chimney Rated maximum demand per hour

MISCELLANEOUS EQUIPMENT OR SPECIAL INFORMATION

* metal with 1" spacing with non-combustible spacers

A.G.A. P# 488 JULY 1962

Amount of fee enclosed? 2.00 (\$2.00 for one heater, etc., \$1.00 additional for each additional heater, etc., in same building at same time.)

APPROVED: 12.14.62. [Signature]

Will there be in charge of the above work a person competent to see that the State and City requirements pertaining thereto are observed? yes
Portland Gas Light Co.

Signature of Installer By: [Signature]

CS 300

INSPECTION COPY

AT

NOTES

2-6-63, Trip - 1st X in
3-6-63 Trip - 2nd X in

Multiple horizontal lines for notes, divided into two columns by a vertical line.

Permit No. 651 1677
Location 145 Pleasant St
Owner Arthur Rosewood
Date of permit 12/17/62
Approved

44-277-118-3-4



R6 RESIDENCE ZONE

PERMIT ISSUED

AUG 30 1962

01055

CITY of PORTLAND

APPLICATION FOR PERMIT

Class of Building or Type of Structure 2nd class
Portland, Maine, March 26, 1962

To the INSPECTOR OF BUILDINGS, PORTLAND, MAINE

The undersigned hereby applies for a permit to erect alter repair demolish install the following building structure equipment in accordance with the Laws of the State of Maine, the Building Code and Zoning Ordinance of the City of Portland, plans and specifications, if any, submitted herewith and the following specifications:

Location 14 Sherman Street Within Fire Limits? _____ Dist. No. _____
 Owner's name and address 311 Anagar Lutheran Church Telephone _____
 Prospective owner _____
 Lessee's name and address Knights of Pythias, c/o Frank Keenan, 268 Pleasant Ave., So. Portland Telephone _____
 Contractor's name and address Framhall Lodge #3 Telephone _____
 Architect _____ Specifications _____ Plans _____ No. of sheets _____
 Proposed use of building Fraternal Organization No. families _____
 Last use _____ No. families _____
 Material brick No. stories _____ Style of roof _____ Roofing _____
 Other buildings on same lot _____
 Estimated cost \$ 1000.00 Fee \$ 2.00 pa. 6-1-62
3.00 -pd. 2-30-62
5.00

General Description of New Work

To Change Use of building from church purposes to those of a fraternal organization.
With alterations.

This application is preliminary to get settled the question of zoning appeal.
In event the appeal is sustained the applicant will furnish complete information,
and pay legal fee

Permit Issued by _____
 Letter _____
 Beagle appeal sustained 8/6/62
 Young appeal sustained 4/12/62

It is understood that this permit does not include installation of heating apparatus which is to be taken out separately by and in the name of the heating contractor. PERMIT TO BE ISSUED TO Frank Keenan

Details of New Work

Is any plumbing involved in this work? _____ Is any electrical work involved in this work? _____
 Is connection to be made to public sewer? _____ If not, what is proposed for sewage? _____
 Has septic tank notice been sent? _____ Form notice sent? _____
 Height average grade to top of plate _____ Height average grade to highest point of roof _____
 Size, front _____ depth _____ No. stories _____ solid or filled land? _____ earth or rock? _____
 Material of foundation _____ Thickness, top _____ bottom _____ cellar _____
 Kind of roof _____ Rise per foot _____ Roof covering _____
 No. of chimneys _____ Material of chimneys _____ of lining _____ Kind of heat _____ fuel _____
 Framing Lumber—Kind _____ Dressed or full size? _____ Corner posts _____ Sills _____
 Size Girder _____ Columns under girders _____ Size _____ Max. on centers _____
 Studs (outside walls and carrying partitions) 2x4-16" O. C. Bridging in every floor and flat roof span over 8 feet.
 Joists and rafters: 1st floor _____, 2nd _____, 3rd _____, roof _____
 On centers: 1st floor _____, 2nd _____, 3rd _____, roof _____
 Maximum span: 1st floor _____, 2nd _____, 3rd _____, roof _____
 If one story building with masonry walls, thickness of walls? _____ height? _____

If a Garage

No. cars now accommodated on same lot _____, to be accommodated _____ number commercial cars to be accommodated _____
Will automobile repairing be done other than minor repairs to cars habitually stored in the proposed building? _____

APPROVED:

Miscellaneous

Will work require disturbing of any tree on a public street? _____ no _____
 Will there be in charge of the above work a person competent to see that the State and City requirements pertaining thereto are observed? _____ yes _____
FRAMHALL 31. Anagar Lutheran Church
 Frank Hall Lodge #3

CS 301

INSPECTION COPY

Signature of owner BY: Malcolm M. Johnson

PH

CITY OF PORTLAND, MAINE
MEMORANDUM

TO: Robert Hawkins, Director of Model Cities
DATE: May 22, 1968

FROM: A. Allan Soule, Acting Deputy Director of Building & Inspection Services

SUBJECT: Public Assemblage - 14 Sherman Street

This building has been approved for Public Assemblage and a Certificate of Occupancy issued on November 5, 1962 with the limited condition that not more than 150 persons at one time are permitted in this building.

An inspection made of this building on May 20, 1968 revealed the following deficiencies:

1. Boiler room ceiling is falling down. This will need to be corrected.
2. At least a Class "C" fire door with a closer is required on the door to the boiler room.

A. Allan Soule

AAS:m



CITY OF PORTLAND, MAINE
Department of Building Inspection

Certificate of Occupancy

LOCATION: 12-14 Sherman Street

Issued to Knights of Pythias

Date of Issue June 22, 1979

This is to certify that the building, premises, or part thereof, at the above location, built—altered—changed as to use under Building Permit No. 79/204, has had final inspection, has been found to conform substantially to requirements of Zoning Ordinance and Building Code of the City, and is hereby approved for occupancy or use, limited or otherwise as indicated below.

PORTION OF BUILDING OR PREMISES

APPROVED OCCUPANCY

Entire

Social & Recreational
Facility

Limiting Conditions:

This certificate supersedes
certificate issued

Approved:

6-22-79
(Date)

Mary Schmidt
Inspector

William S. Ward
Inspector of Buildings

Notice: This certificate identifies lawful use of building or premises, and ought to be transferred from owner to owner when property changes hands. Copy will be furnished to owner or lessee for one dollar.



APPLICATION FOR PERMIT

PERMIT ISSUED

APR 3 1979

B.O.C.A. USE GROUP 000204

B.O.C.A. TYPE OF CONSTRUCTION

ZONING LOCATION PORTLAND, MAINE, Feb. 2, 1979

CITY of PORTLAND

To the DIRECTOR OF BUILDING & INSPECTION SERVICES, PORTLAND, MAINE

The undersigned hereby applies for a permit to erect, alter, repair, demolish, move or install the following building, structure, equipment or change use in accordance with the Laws of the State of Maine, the Portland B.O.C.A. Building Code and Zoning Ordinance of the City of Portland with plans and specifications, if any, submitted herewith and the following specifications.

LOCATION 12-14 Sherman St. Fire District #1 [], #2 []
1. Owner's name and address Knights of Pythias same Telephone
2. Lessee's name and address Telephone
3. Prospective owner Jerry Conley 71 Roberts St. Telephone 773-8783
4. Architect Specifications Plans No. of sheets
Proposed use of building social & recreational facility No. families
Last use No. families
Material No. stories Heat Style of roof Roofing
Other buildings on same lot
Estimated contractual cost \$ Fee \$ 5.00 pd.
Appeal for \$15. pd 2-2

FIELD INSPECTOR—Mr. GENERAL DESCRIPTION

This application is for: @ 775-5451 To change use from lodge hall to non-profit
Dwelling Ext. 234 social & recreational facility
Garage
Masonry Bldg.
Metal Bldg.
Alterations Appeal sustained 3-1-79
Demolitions
Change of Use
Other
NOTE TO APPLICANT: Separate permits are required by the installers and subcontractors of heating, plumbing, electrical and mechanicals.

PERMIT IS TO BE ISSUED TO 1 [] 2 [] 3 [] 4 []

Other:

DETAILS OF NEW WORK

Is any plumbing involved in this work? Is any electrical work involved in this work?
Is connection to be made to public sewer? If not, what is proposed for sewage?
Has septic tank notice been sent? Form notice sent?
Height average grade to top of plate Height average grade to highest point of roof
Size, front depth No. stories solid or filled land? earth or rock?
Material of foundation Thickness, top bottom cellar
Kind of roof Rise per foot Roof covering
No. of chimneys Material of chimneys of lining Kind of heat fuel
Framing Lumber—Kind Dressed or full size? Corner posts Sills
Size Girder Columns under girders Size Max. on centers
Studs (outside walls and carrying partitions) 2x4-16" O. C. Bridging in every floor and flat roof span over feet.
Joists and rafters: 1st floor 2nd 3rd roof
On centers: 1st floor 2nd 3rd roof
Maximum span: 1st floor 2nd 3rd roof
If one story building with masonry walls, thickness of walls? height?

IF A GARAGE

Number of cars now accommodated on same lot to be accommodated number commercial cars to be accommodated
Will automobile repairing be done other than minor repairs to cars habitually stored in the proposed building?

APPROVALS BY: DATE MISCELLANEOUS
BUILDING INSPECTION—PLAN EXAMINER Will work require disturbing of any tree on a public street?
ZONING:
BUILDING CODE: Will there be in charge of the above work a person competent
Fire Dept. to see that the State and City requirements pertaining thereto
Health Dept.: are observed? ...yes.
Others:

Signature of Applicant Jerry Conley Phone # 773-8783
Type Name of above Jerry Conley 1 [] 2 [] 3 [] 4 []

Other and Address

FIELD INSPECTOR'S COPY

12-14 Sherman St.

March 2, 1979

Jerry Conley
71 Roberts Street
Portland, Maine

Dear Mr. Conley:

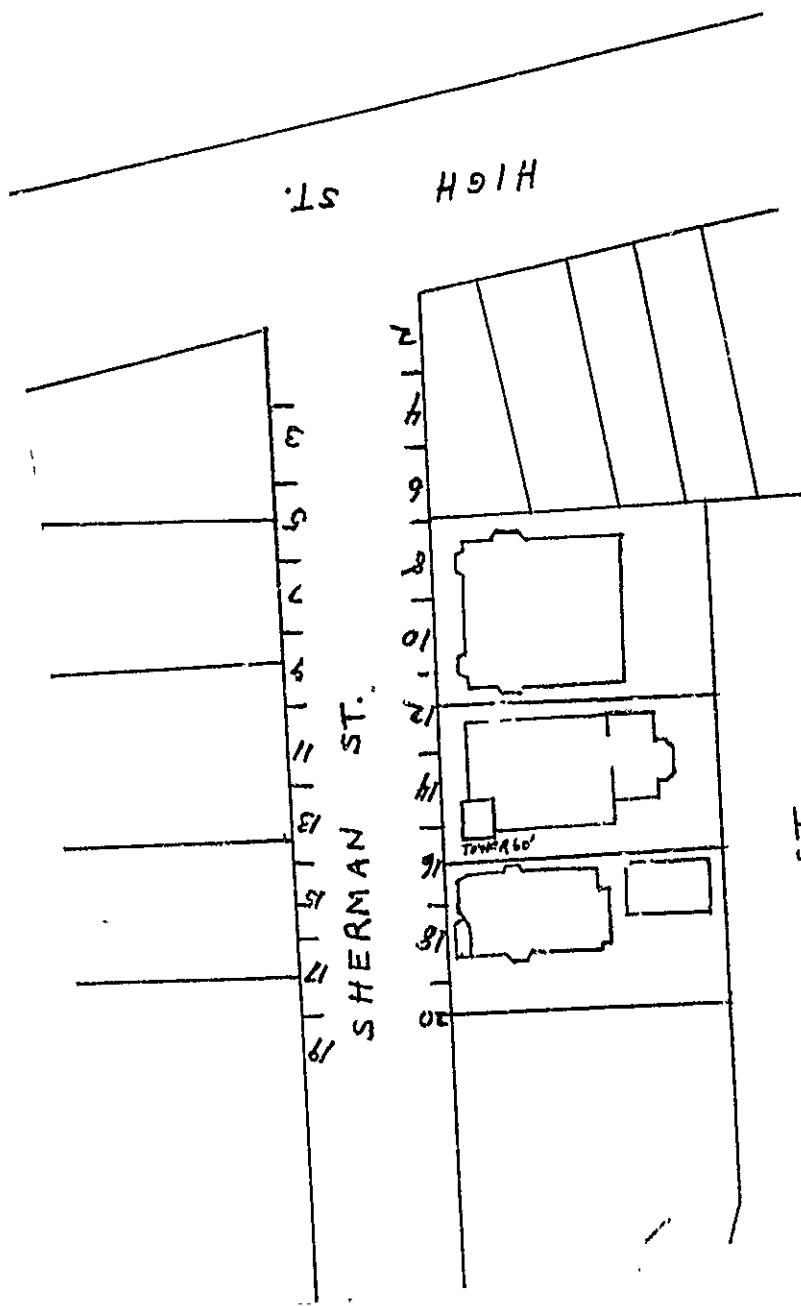
Following is the decision of the Board of Appeals regarding your petition to permit Change of Use of the above described structure to a private club or non-profit social and recreational facility. Please note that your appeal was granted.

Also, before your permit can be issued, you must pay for the permit fee itself. Please make all checks payable to City of Portland.

Very truly yours,

Malcolm G. Ward
Building Inspection Supervisor

MGSW/r



CITY OF PORTLAND, MAINE
BOARD OF APPEALS

VARIANCE APPEAL

March 27, 1962

St. Ansgar Lutheran Church, owner of property at 12-14 Sherman Street
under the provisions of Section 24 of the Zoning Ordinance of the City of Portland, hereby respectfully petitions the Board of Appeals for a variance from the provisions of said Ordinance to permit:
Changing the use of the building at this location from church purposes to those of a fraternal organization. This permit is presently not issuable for the following reasons: (1) The proposed use is not allowable in the R-6 Residential Zone in which the property is located without authorization of the Board of Appeals, as provided by Section 7-A-7e of the Ordinance. (2) The 14 off-street parking spaces required by Sec. 14-B-7 cannot be provided on the lot and are not to be provided elsewhere.

LEGAL BASIS OF APPEAL: Such variance may be granted only if the Board of Appeals finds that the strict application of the provisions of the Ordinance would result in undue hardship in the development of property which is inconsistent with the intent and purpose of the Ordinance; that there are exceptional or unique circumstances relating to the property that do not generally apply to other property in the same zone or neighborhood, which have not arisen as a result of action of the applicant subsequent to the adoption of this Ordinance whether in violation of the provisions of the Ordinance or not; that property in the same zone or neighborhood will not be adversely affected by the granting of the variance; and that the granting of the variance will not be contrary to the intent and purpose of the Ordinance.

St. Ansgar Lutheran Church

By: [Signature]
APPELLANT

DECISION

After public hearing held April 12, 1962, the Board of Appeals finds that all of the above conditions do exist with respect to this property and that a variance should be granted in this case.

It is, therefore, determined that a variance from the provisions of the Zoning Ordinance should be granted in this case.

[Signature] _____
[Signature] _____
[Signature] _____
BOARD OF APPEALS

City of Portland, Maine
Municipal Officers
BUILDING CODE

Granted 8/6/62
62/71

August 1, 1962, 19

To the Municipal Officers:

Your appellant, Knights of Pythias, who is the owner of property at 14 Sherman Street, respectfully petitions the Municipal Officers of the City of Portland to permit an exception to the provisions of the Building Code relating to this property, as provided by Section 115, Paragraph A of said Building Code.

Building permit for changing the use of the church building at the above named location to a lodge building for a fraternal order is not issuable under the Building Code for the following reasons: (1) The easterly and westerly walls of the main building, which, while of masonry construction, are less than twenty feet from the lot lines, do not have fire-resistive windows as required by Sections 206-b-3 and 207-b-1 of the Code. (2) All three walls of a rear addition of wood frame construction are closer than 20 feet to lot lines and do not have the two-hour fire resistance with fire-resistive windows and doors required by Sec. 206-b-3. (3) Existing rear exit stairs and doors are only about 32 inches wide instead of the minimum of 34 inches required by Sections 212-e-2.3 and 5.1.

The facts and conditions which make this exception legally permissible are as follows:

An exception may be granted if the Municipal Officers find that the enforcement of the Building Code would involve practical difficulty and desirable relief may be granted without substantially departing from the intent and purpose of the Code.

Knights of Pythias

By: *Madden M. Johnson*
Appellant

After public hearing held on the 6th day of August, 1962, the Municipal Officers find that an exception is necessary to avoid practical difficulty and desirable relief may be granted without substantially departing from the intent and purpose of the Code.

It is, therefore, determined that exception to the Building Code may be permitted in this specific case.

David B. Riley
James E. Clark
James P. ...
Howard ...
John ...
MUNICIPAL OFFICERS



(A) APARTMENT HOUSE ZONE Permit No. 12-14
APPLICATION FOR PERMIT TO ISSUE

Class of Building or Type of Structure Second Class MAR-27-1934

Portland, Maine, March 26, 1934

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to erect, alter, install the following building structure, equipment, in accordance with the Laws of the State of Maine, the Building Code of the City of Portland, plans and specifications, if any, submitted herewith and the following specifications:

Location 14 Sherman Street Ward 5 Within Fire Limits? Yes Dist. No. 5

Owner's or Lessee's name and address Immanuel Lutheran Church Telephone 2-7225

Contractor's name and address P. A. Highland 289 Sussex St., 60, Portland Telephone _____

Architect's name and address _____

Proposed use of building Church No. families _____

Other buildings on same lot _____

Plans filed as part of this application? Yes No. of sheets _____

Estimated cost \$ 100.00 Fee \$.50

Description of Present Building to be Altered

Material brick No. stories 1 Heat _____ Style of roof _____ Roofing _____

Last use Church No. families _____

General Description of New Work

To remove flat roof over tower and replace with hip roof after walls are lowered?

CERTIFICATE OF OCCUPANCY REQUIREMENT IS WAIVED

It is understood that this permit does not include installation of heating apparatus which is to be taken out separately by and in the name of the heating contractor.

Details of New Work

Size, front _____ depth _____ No. stories _____ Height average grade to top of plate _____

To be erected on solid or filled land? _____ earth or rock? _____

Material of foundation _____ Thickness top _____ bottom _____

Material of underpinning _____ Height _____ Thickness _____

Kind of Roof hip Rise per foot 7 1/2 Roof covering Asphalt shingles (Class C) No. 12

No. of chimneys _____ Material of chimneys _____ of lining _____

Kind of floor _____ Type of fuel _____ Is gas fitting involved? _____

Corner posts _____ Sills _____ Girt or ledger board? _____ Size _____

Material columns under girders _____ Size _____ Max. on centers _____

Studs (outside walls and carrying partitions) 2x4-16" O. C. Girders 6x6 or larger. Bridging in every floor and flat roof span over 8 feet. Sills and corner posts all one piece in cross section.

Joists and rafters: 1st floor _____ 2nd _____ 3rd _____ roof 2x8

On centers: 1st floor _____ 2nd _____ 3rd _____ roof 2x4

Maximum span: 1st floor _____ 2nd _____ 3rd _____ roof 8'

If one story building with masonry walls, thickness of walls? _____ height? _____

If a Garage

No. cars now accommodated on same lot _____ to be accommodated _____

Total number commercial cars to be accommodated _____

Will automobile repairing be done other than minor repairs to cars habitually stored in the proposed building? Yes

Miscellaneous

Will above work require removal or disturbing of any shade tree on a public street? no

Will there be in charge of the above work a person competent to see that the State and City requirements pertaining thereto are observed? Yes

Signature of owner Immanuel Lutheran Church
By Rev. Harold J. Johnson Pastor

INSPECTION COPY

Ward 5 Permit No. 34/243
 Location 14 Sherman St
 Owner Immanuel Lutheran Church
 Date of permit 3/27/34
 Notif. closing-in
 Inspn. closing-in
 Final Notif
 Final Inspn. 4/17/34
 Cert. of Occupancy issued None

NOTES

~~3/20/34 No work
 started A.G.K.
 4/7/34 Work begun
 but no one working
 A.G.K.
 4/17/34 Work begun on
 foundation A.G.K.
 1/17/34 Work nearly
 completed A.G.K.~~

APPROVED



(A) APARTMENT HOUSE ZONE

PERMIT ISSUED
Permit No. 1930

APPLICATION FOR PERMIT

OCT 1 1931

of Building or Type of Structure Second Class

Portland, Maine, October 1, 1931

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to ~~erect~~ alter ~~install~~ the following building ~~structure~~ equipment in accordance with the Laws of the State of Maine, the Building Code of the City of Portland, plans and specifications, if any, submitted herewith and the following specifications:

Location 14 Sherman Street Ward 5 Within Fire Limits? yes Dist. No. 3

Owner's or Lessee's name and address Immanuel Lutheran Church, 14 Sherman St. Telephone _____

Contractor's name and address F. A. & Sons, 533 Forest Ave. Telephone 7 4342

Architect's name and address _____

Proposed use of building Church No. families _____

Other buildings on same lot _____

Plans filed as part of this application? no No. of sheets _____

Estimated cost: \$ 200. Fee \$.75

Description of Present Building to be Altered

Material brick No. stories _____ Heat _____ Style of roof pitch Roofing plate

Last use Church No. families _____

General Description of New Work

To remove steeple, repairing ^{existing} metal/roof under same

NOTIFICATION BEFORE LATHING
OR CLOSING-IN IS WAIVED
CERTIFICATE OF OCCUPANCY
REQUIREMENT IS WAIVED

It is understood that this permit does not include installation of heating apparatus which is to be taken out separately by and in the name of the heating contractor.

Details of New Work

Height average grade to top of plate _____

Site, front _____ depth _____ No. stories _____ Height average grade to highest point of roof _____

To be erected on solid or filled land? _____ earth or rock? _____

Material of foundation _____ thickness, top _____ bottom _____

Material of underpinning _____ Height _____ Thickness _____

Kind of Roof _____ Rise per foot _____ Roof covering metal

No. of chimneys _____ Material of chimneys _____ of lining _____

Kind of heat _____ Type of fuel _____ Is gas fitting involved? _____

Corner posts _____ Sills _____ Girt or ledger board? _____ Size _____

Material columns under girders _____ Size _____ Max. on centers _____

Studs (outside walls and carrying partitions) 2x4-16" O.C. Girders 6x8 or larger. Bridging in every floor and flat roof span over 8 feet. Sills and corner posts all one piece in cross section.

Joists and rafters: 1st floor _____, 2nd _____, 3rd _____, roof _____

On centers: 1st floor _____, 2nd _____, 3rd _____, roof _____

Maximum span: 1st floor _____, 2nd _____, 3rd _____, roof _____

If one story building with masonry walls, thickness of walls? _____ height? _____

If a Garage

No. cars now accommodated on same lot _____, to be accommodated _____

Total number commercial cars to be accommodated _____

Will automobile repairing be done other than minor repairs to cars habitually stored in the proposed building? _____

Miscellaneous

Will above work require removal or disturbing of any shade tree on a public street? _____

Will there be in charge of the above work a person competent to see that the State and City requirements pertaining thereto are observed? yes

INSPECTION COPY

Signature of owner

Immanuel Lutheran Church
F. A. & Sons

By Joseph A. Cunnery

Ward 5 Permit No. 31/1930

Location 14 Sherman St.

Owner Immanuel Lutheran Church

Date of permit 10/1/31

Notif. closing-in _____

Inspn. closing-in _____

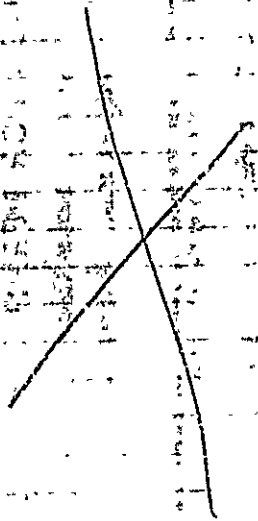
Final Notif. _____

Final I pn. 10/8/31

Cert. o' Occupancy issued None

NOTES

10/3/31 - Work begun - app.





(A) APPLICABLE ZONE

APPLICATION FOR PERMIT

PERMIT ISSUED
Permit No. **2489**
NOV 23 1929

Class of Building or Type of Structure Second Class

Portland, Maine, November 22, 1929

To, the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to erect alter or amend the following building structure equipment in accordance with the Laws of the State of Maine, the Building Code of the City of Portland, plans and specifications, if any, submitted herewith and the following specifications:

Location 14 Sherman Street Ward 5 Within Fire Limits? Yes Dist. No. 3
 Owner's or Lessee's name and address Immanuel Lutheran Church 14 Sherman St. Telephone _____
 Contractor's name and address Owner (Peter Banstedt) Telephone _____
 Architect's name and address _____
 Proposed use of building Church No. families _____
 Other buildings on same lot _____

Description of Present Building to be Altered

Material wood No. stories 1 1/2 Heat _____ Style of roof _____ Roofing _____
 Last use Church No. families _____

General Description of New Work

To close up door on side of building (front) to provide safe area of existing vestibule, existing window for ventilation.

This will leave existing front, side rear, and rear entrances to building.

Details of New Work

Size, front _____ depth _____ No. stories _____ Height average grade to highest point of roof _____
 To be erected on solid or filled land? _____ earth or rock? _____
 Material of foundation _____ Thickness, top _____ bottom _____
 Material of underpinning _____ Height _____ Thickness _____
 Kind of roof _____ Roof covering _____
 No. of chimneys _____ Material of chimneys _____ of lining _____
 Kind of heat _____ Type of fuel _____ Distance, heater to chimney _____
 If oil burner, name and model _____
 Capacity and location of oil tanks _____
 Is gas fitting involved? _____ Size of service _____
 Corner posts _____ Sills _____ Girt or ledger board? _____ Size _____
 Material columns under girders _____ Size _____ Max. on centers _____
 Studs (outside walls and carrying partitions) 2x4-16" O. C. Girders 6x9 or larger. Bridging in every floor and flat roof span over 8 feet. Sills and corner posts all one piece in cross section.
 Joists and rafters: 1st floor _____ 2nd _____ 3rd _____ roof _____
 On centers: 1st floor _____ 2nd _____ 3rd _____ roof _____
 Maximum span: 1st floor _____ 2nd _____ 3rd _____ roof _____
 If one story building with masonry walls, thickness of walls? _____ height? _____

If a Garage

No. cars now accommodated on same lot _____ to be accommodated _____
 Total number commercial cars to be accommodated _____
 Will automobile repairing be done other than minor repairs to cars habitually stored in the proposed building? _____

Miscellaneous

Will above work require removal or disturbing of any shade tree on a public street? no
 Plans filed as part of this application? no No. sheets _____
 Estimated cost \$ 20. Fee \$.25

Will there be in charge of the above work a person competent to see that the State and City requirements pertaining thereto are observed? Yes

Immanuel Lutheran Church

Signature of owner

E. L. Banstedt

INSPECTION COPY

743A

Ward 5 Permit No. 29/487

Location 14 Sherman St
Church

Owner Isaacuel Fisher

Date of permit 11/23/29

Notif. closing-in

Inspn. closing-in

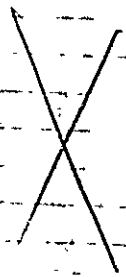
Final Notifi.

Final Inspn.

Cert. of Occupancy issued

NOTES

11/23/29 - C.K. - a.g. S



April 11, 1927.

Swedish Lutheran Church
14 Sherman Street
Portland, Maine.

Gentlemen:-

A recent inspection of the new steam heating plant that you have provided in the basement of the church shows that the doorway between the heater room and the auditorium has not been made self-closing as agreed upon in the application for the building permit.

It will be necessary for you to provide a self-closing device so that this door will be closed at all times when not actually in use. This should be taken care of promptly so that everything may be in satisfactory condition at the time of the next inspection.

Yours truly,

Inspector of Buildings.



Application for Permit for Alterations and Miscellaneous Structures

CLASS OF BUILDING OR TYPE OF STRUCTURE 2nd Class Bldg.

with the law, whether you know the Portland, Maine, May 17, 1936. 19

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to ~~alter the following described building~~ erect the following described structure according to the following specifications, the Law of the State of Maine, and the Building Ordinance of the City of Portland:

Location 14 Thomas St. Ward 5 Within Fire Limits? No.

Owner's name and address? Swedish Lutheran Church, 14 Thomas St.

Contractor's name and address? None

Architect's name and address? None

Last use of building? Church No. Families? None

Proposed use of building? Church No. Families? None

Description of Present Building

Material Brick No. of Stories 2 1/2 Style of Roof Gable Roofing Asphalt

General Description of New Work

Install new steam heating plant in separate room in basement, all doorways connecting heater room and balance of the building to be equipped with self-closing device. Build in outside collarway from heater room. Move one partition in collar to give more room in heater room.

Size of New Framing Members

Corner posts? _____ Sills? _____ Rafters or roof beams? _____ on center? _____

Material and size of columns under girders? _____ on center? _____

Ledger board used? _____ Size? _____ Studs (outside walls and carrying partitions) 2 x 4 16" O.C.

Girders 6" x 8" or larger. Bridging in every floor and flat roof span over 8 feet. Sills and corner posts will be all one piece in cross section.

Floor timbers: 1st floor _____, 2nd _____, 3rd _____, 4th _____

On centers: 1st floor _____, 2nd _____, 3rd _____, 4th _____

Span: 1st floor _____, 2nd _____, 3rd _____, 4th _____

If 1st or 2nd Class Construction

External walls } thickness { 1st story _____, 2nd story _____
Party walls } thickness { 1st story _____, 2nd story _____

Other Details New Construction

To be erected on solid or filled land? _____ earth or rock? _____

Material of foundation? _____ Thickness, top? _____ bottom? _____

Material of underpinning? _____ over 4 ft. high? _____ thickness? _____

Kind of roof (pitch, hip, etc.)? _____ Kind of roofing? _____

No. of new chimneys? None Material of chimneys? _____ of lining? _____

If a Private Garage

No. cars now accommodated on lot? _____ Total number to be accommodated? _____

Other buildings on same lot? _____

Distance from nearest present building to proposed garage? _____

All parts of garage, including eaves, will be at least 2 ft. from all lot lines.

Garage will be at least _____ feet from nearest windows of adjoining property.

Miscellaneous

Will the above construction require the removal or disturbing of any shade tree on the public street? No

Plans filed as part of this application? No No. sheets? 1

Estimated total cost \$ 1700.00 Fee? 2.00

Signature of owner or authorized representative? Swedish Lutheran Church

By _____ Agent

5

26/10/03

14 Shuman
Swedish Church

6/17/26

no way of entering ~~at 15/27~~

at 10/27

~~Mr Zethander 16/27
F 329 17/27
Bellman S.P. 10/27~~

Door leading direct from
auditorium to heater room
not covered or self-closing
Coal storage which runs
under auditorium floor for
15 or 20 feet, just not covered

letter at 5/30
self-closing at 17/27
at 11/27 X 15/27

7mi # P01

ELECTRICAL PERMIT City of Portland, Me.



To the Chief Electrical Inspector, Portland Maine:
The undersigned hereby applies for a permit to make electrical installations
in accordance with the laws of Maine, the City of Portland Electrical Ordinance,
National Electrical code and the following specification:

Date 11/4/96
Permit # 3779

LOCATION: 14 Sherman Street

OWNER Portland West Neighborhood ADDRESS _____

OUTLETS				TOTAL EACH FEE	
	Receptacles	Switches	Smoke Detector		.20
FIXTURES	(number of)				
	incandescent	fluorescent			.20
	fluorescent strip				.20
SERVICES					
	Overhead		TTL AMPS TO	800	15.00
	Underground			800	15.00
TEMPORARY SERV.					
	Overhead		AMPS OVER	800	25.00
	Underground			800	25.00
METERS	(number of)				1.00
MOTORS	(number of)				2.00
RESID/COM	Electric units				1.00
HEATING	oil/gas units				5.00
APPLIANCES	Ranges	Cook Tops	Wall Ovens		2.00
	Water heaters	Fans	Dryers		2.00
Disposals	Dishwasher	Compactors	Others (denote)		2.00
MISC. (number of)	Air Cond/win				3.00
	Air Cond/cent				10.00
	Signs				5.00
	Pools				10.00
	Alarms/res				5.00
	Alarms/com				15.00
	Heavy Duty				2.00
	Outlets				
	Circus/Carnv				25.00
	XX Alterations (repairing conduits)				5.00
	Fire Repairs				15.00
	E Lights				1.00
	E Generators				20.00
	Panels				4.00
TRANSFORMER	0-25 Kva				5.00
	25-200 Kva				8.00
	Over 200 Kva				10.00
			TOTAL AMOUNT DUE		
	MINIMUM FEE/COMMERCIAL 35.00		MINIMUM FEE	25.00	25.00

INSPECTION: Will be ready _____ or will call XX

CONTRACTORS NAME Pleasant Hill Elec., Inc /Craig Libby

ADDRESS 129 Walnut St., S.P. 04106

TELEPHONE 883-5554

MASTER LICENSE No. 3779

LIMITED LICENSE No. _____

SIGNATURE OF CONTRACTOR

Craig Libby

SECTION 15400

PLUMBING

Part 1: GENERAL

1.01 Related Documents

The General Conditions and Special Conditions of Division I of these specifications apply to the work specified in this section.

1.02 Contractor

Where the word "Contractor" appears in this Section, it shall mean the Plumbing Contractor.

1.03 Standards

The Portland Plumbing Code and such other codes of the State of Maine as apply shall be considered as minimum requirements for plumbing work.

1.04 Description

The extent of the plumbing work is as shown on the drawings, and specified herein. Furnish all materials, labor, tools, equipment, transportation and incidentals necessary or required for a complete plumbing installation, in accordance with the evident intent of the drawings and as commonly required in standard practice, including, without limitation:

1. Plumbing fixtures and fittings.
2. Traps, drains, fittings, valves, vents, trim, sanitary and roof drainage as indicated.
3. Cold water system, including water service to all fixtures and equipment.
4. Hot water system, from domestic hot water heater to fixtures.
5. Removal of own rubbish and cleaning of all fixtures.
6. Flashing of vents and stacks through the roof. Coordinate installation with roofing contractor.

1.05 Work Under Other Division

a. Excavation and backfill.

1. Excavation and backfill are specified under Division 2.

b. Cutting and Patching.

1. The Plumbing Contractor shall keep himself informed as to the location of pipes, etc., and the openings he will require for his work and shall furnish and set all sleeves, angles, frames, hangers, inserts, etc., so that they may be built in place.

2. All piping passing through basement walls or floors shall be completely sealed water-tight.
3. All pipes shall, where possible, be installed before walls and floors are constructed and built in place; otherwise, galvanized steel or cast iron sleeves shall be set for them. The pipes passing through sleeves shall be grouted in and waterproofed after installation by the Plumbing Contractor.
4. Every precaution shall be taken to place sleeves for all pipes before construction, and the cutting of the structure is to be avoided if possible. Any cutting and patching due to neglect or oversight of the Plumbing Contractor in carrying out these instructions will be done at his expense.

1.06 Workmanship and Materials in General

- a. The Contractor shall employ a competent foreman, whose qualifications are satisfactory to the Owner and Architect/Engineer, and who shall constantly supervise the work from its beginning to its completion and acceptance.
- b. The Contractor shall employ workmen who are competent and properly equipped with necessary knowledge, skill, tools and materials to do a first-class job. All work must be executed in a workmanlike manner and shall present a neat mechanical appearance when completed.
- c. The Contractor shall protect all walls, floors, ceilings, etc., while installing the work, and shall protect the fixtures, piping, etc., from damage after their installation, and until the work has been accepted.
- d. All equipment, apparatus, appliances and fixtures shall be new, and shall be installed, connected, and adjusted in strict accordance with the manufacturer's recommendation and instructions, wherever possible. Such printed instructions shall be available to the workmen and shall be left with the equipment at the completion of the work.
- e. Where no specific make of material, apparatus or fixture is mentioned, any standard product of a manufacturer regularly engaged in the production of such equipment may be furnished, provided it conforms to the applicable codes and standards. Where a specific make is mentioned, it shall be interpreted as establishing a standard of quality, and shall not be construed to limit competitive products. The Contractor may substitute any product which, in the judgment of the Engineer, is equal to the product specified, and for which approval is obtained from the Engineer.

1.07 Coordination with Other Trades

Contractor shall review plumbing drawings with other contract drawings to determine areas where coordination of work with other trades is required and before installing any work shall cooperate with other trades as required to prevent conflicts or interferences.

1.08 Permits

All required inspection forms, permits, and approvals shall be obtained and paid for by the Contractor, who shall comply with all local, State and Federal ordinances pertinent to his work.

1.09 Equipment Schedules and Shop Drawings

- a. Not later than one (1) week after execution of the contract, the Contractor shall submit to the Architect, through the General Contractor, a complete list, in quadruplicate, of those items of materials and equipment which he intends to incorporate in the work. No material and equipment shall be purchased for the work until this list is approved by the Architect, and no material shall be used in the work unless it is included in this list.
- b. In addition to the list of material and equipment, the Contractor shall submit six (6) copies of shop drawings of all fabricated equipment for approval by the Architect and for the Owner's use.

1.10 Record Drawings

The Contractor shall maintain a scale drawing, showing the progressive installation of his work, in its actual location, and showing the actual construction, and shall, at the completion of the work, submit this drawing to the Architect to make a reproducible drawing for the Owner's use.

1.11 Guarantee

- a. The Contractor shall warrant and maintain his work for one (1) year after the completion and acceptance of his work. If any defects in materials or workmanship appear within this time, unless due to faulty use of the apparatus, the Contractor shall, at his own expense, remedy such defect and pay for any damage to work resulting from such defects.
- b. The Contractor shall furnish certificates to the Owner and the Architect to the effect that he has complied with all Federal and State Laws and local ordinances which govern his work.

Part 2: MATERIALS

2.01 Soil, Waste and Vent Piping Buried

Soil, waste and vent piping and fittings buried in the ground shall be service weight iron, asphalt-coated, bell and spigot or no-hub, with no-hub couplings.

2.02 Soil, Waste and Vent Piping Above Ground

Soil, waste and vent piping and fittings above ground shall be cast iron or PVC Schedule 40 pipe.

2.03 Vent Pipes 2½" and Smaller, Above Grade

Vent pipes 2½" and smaller, above grade, shall be Schedule 40 galvanized seamless steel, conforming to ASTM A-120. Fittings shall be galvanized screwed cast iron, recessed drainage type of PVC Schedule 40 pipe.

2.04 Vent Pipe 3" and Larger, Above Grade

Vent pipe 3" and larger, above grade, shall be extra heavy cast iron, with bell and spigot fittings conforming to ASA-A40.0, or no-hub cast iron, or other material or PVC Schedule 40 pipe.

2.05 Waste Piping 2" and Smaller, Above Grade

Waste piping 2" and smaller, above grade, may be type "L" heavy seamless copper tubing with heavy cast brass drainage pattern fittings, with soldered joints.

2.06 Lead and Oakum

Lead for caulking shall not be less than 99.5% pure; Oakum for caulking shall be the best commercial grade.

2.07 Water Piping

- a. Type "L" hard with all connections of 50-50 solder.
- b. All hot and cold water piping shall be water tested to 150 psi for one hour with no pressure loss or observed leaks.
- c. All hangers shall be copper plated hangers by Carpenter and Paterson, Inc.

2.08 Valves

Valves shall be bronze, inside screw, rising spindle type. Valves smaller than 2" shall have solder ends. Valves 2" and larger shall have screwed ends. Gate valves shall be equal to Wolverine 50318. Globe valves shall be equal to Wolverine 50376. Check valves shall be equal to Wolverine 50403. Unions shall be brass 125 lbs ground joint type, equal to Dart Union. Drain-offs shall be equal to HISCO 701D.

2.09 Exposed Fixture Piping

Exposed fixture piping shall be chromium-plated iron pipe size brass pipe,

copper bearing, with screwed fittings. Fittings and escutcheons shall be chromium plated red brass. Provide stops at all fixtures.

2.10 Cleanouts in Walls

Cleanouts in walls and partitions shall be equal to Zurn Series Z-1320 with polished stainless steel round or square access cover plates, with countersunk retaining screw. Cleanouts in floors shall be equal to Zurn Series Z-1326, with flush nickel bronze floor plates.

2.11 Water Connection

The water meter to be provided by the Public Water Co. Contractor to coordinate with the Public Water Co. and provide all additional material not provided by the Public Water Co. to complete all necessary work.

2.12 Insulation

Insulation for hot and cold water pipe shall be $3\frac{1}{2}$ lb. fiberglass with universal fire retardant vapor barrier jacket, equal to Owens Corning. $\frac{1}{2}$ " thick for cold water piping and $1\frac{1}{2}$ " thick for hot water piping.

2.13 Supports

Supports for sanitary wastes, vents and water piping larger than 2" shall be equal to Crane, Grinnell or Carpenter Patterson. Supports for cast iron pipe 2" and smaller shall be flat band or split ring type. Use $\frac{3}{8}$ " rod for 2" and smaller $\frac{1}{2}$ " to $3\frac{1}{2}$ " cast iron pipe, $\frac{5}{8}$ " rod for 4" to 5", and $\frac{1}{2}$ " rod for 6" cast iron pipes. Hangers for overhead horizontal runs of pipe 2" and larger shall not be spaced over 10' apart, and for $1\frac{1}{2}$ " and smaller not over 8' apart. If lighter weight pipe is used, hangers may be reduced in size with the approval of the Engineer.

2.14 Fixtures

Fixtures shall be free of cracks, crazing or imperfections and shall be watertight. Fixtures shall be furnished with all accessories required or necessary for their installation. Fixtures supplied without traps shall be installed with separate traps and cleanouts. All fixtures shall be furnished with supplies, stops, and unions. Fixtures shall be of the type and model noted herein. The fixtures listed are recommended. However, any or all of them may be replaced by an approved equal. Fixtures and fittings shall be manufactured by American Standard, Kohler, Universal Rundle or equal approved by the Architect.

2.15 Water Closet

Vitreous china, floor mounted; close-coupled water conserving tank, siphon jet, round bowl, with solid plastic closed-front seat, chrome-plated supply pipe and stop.

Kohler - Wellworth Waterguard K-3500PB/EB
Amer. Std. - Watersaver Cadet 2122.448/2109.395
Univ. Rundle - New Castle 4055

2.16 Lavatory - Vanity

Vitreous china vanity top, complete with faucet, drain, chromeplated supply pipes, stops and 1/2" trap, vanity cabinet with louvered doors, antique brass hardware, solid wood frame, high density particle board sides and floor.

Univ. Rundle - 7637-30 w/ 4632 top and Delta 520 faucet & drain fittings.

2.17 Bathtubs and Shower

- a. Regular one piece fiberglass tub and wall surround unit, 5 foot length, slip resistant floor or floor strips, tub and shower supply fittings, pop-up drain and grab bars per architectural plans.

Kohler-Barbados-K-1405/06 with K-7150-R pop-up drain.
Amer. Std. No. 2146.264/272 with No. 1506.101 pop-up drain.
Univ. Rundle - Cabanabath II No. 6920/21T with 22181 pop-up drain.

- b. Provide tub-shower valve, shower head and tub spout. Tub-shower valve shall be temperature-limiting, pressure balancing type with tub-shower diverter and volume control integral with valve. Valve shall have lever handle and adjustable temperature limit stop.

Symmons S-76-2(LK2) or approved equal.

2.18 Kitchen Sink

Type 302, 18/20 gauge, stainless steel, self rimming, with combination faucet and cup strainer drain with Delta #100 swing spout faucet.

Regular - Elkay - CR 3322 (7" depth), double compartment.

2.19 Wall Hydrants

Non-freeze type, with 3/4" NPT inlet and 3/4" NPT outlet, brass wall casing, brass operating parts and renewable seat; length of wall casing shall be as required for each specific application. Wolverine Brass 50270. Provide Watts No. 178 vacuum breaker on outlet.

2.20 Washing Machine Supply

Single lever type, bronze body, brass ball valve with teflon seats, Watts No. 2 Duo-clos.

2.21 Domestic Hot Water Heater

Provide gas fired hot water heater of 75 gal. storage capacity, 75,000 BTUH input rating and 68 GPH recovery @ 100° ris. Unit shall be energy saving type meeting the ASHRAE 90A-1980 energy efficiency standard. Unit shall be commercial grade with glass lined heavy gauge steel tank, atmospheric type burner with factory set high limit control and 100% safety shut-off in event of pilot failure. Unit shall have A.G.A. seal of certification, a working pressure rating of 150 psi, and an ASME rated pressure-temperature relief valve. Unit shall be A.O. Smith, Stata Industries, Bradford-White or approved equal.

Part 3, INSTALLATION

3.01 Sanitary Drain Pipe

Run as indicated on the drawings, of sizes shown, and to pitches shown. Pipe below grade shall be supported firmly and uniformly so that the correct pitch is maintained, and spigots are centered in bells. Oakum shall be firmly tamped in, leaving not less than $\frac{1}{8}$ " for leading. Joints shall be made up with pipe joint compound applied to male threads only. Pipes and fittings shall be free from burrs and fins. No-hub fittings shall be installed in accordance with manufacturer's recommendations. Horizontal plastic pipe shall be supported at 4' o.c. max., and joints shall be made with pipe manufacturer's recommended cement to insure tightness.

3.02 Vents

Vents shall be run as shown on the drawings, and as required by State and local codes, and shall extend 2' above the roof, the full size of the vent.

3.03 Fixtures

Fixtures shall be set squarely against walls and floors by accurate setting of wall plates, floor flanges and rough piping. Joints between fixtures and adjacent surfaces shall be tightly sealed in a neat manner to prevent entrance of moisture and dirt. Wall-mounted fixtures shall have their wall plate hanger securely screwed to wood blocks, fastened between studs.

3.04 Hot and Cold Water Supplies

Hot and cold water supplies shall be run approximately as indicated on the drawings, and as necessary to connect all fixtures. Piping shall pitch to allow for air relief and drainage. Provide drain fittings at low points, and Wolverine 50561 ground key air bleed-off valves at high points.

3.05 Shock Absorbers

Shock absorbers and expansion joints shall be installed where shown, stainless steel or non-ferrous, factory charged, Josam or equal.

3.06 Stop Valves

Stop valves shall be installed in an accessible location at each fixture and unions shall be installed at the connection to each piece of equipment or fixture.

3.07 Insulation

Insulate all hot water piping except fixture supplies; insulate all horizontal cold water piping above ceilings.

3.08 Testing

Pipa lines shall be tested hydrostatically for thirty (30) minutes at a pressure 50% in excess of the pressure to which the pipe will normally be subjected, unless different test pressures are required by the Engineer, but in no case less than 50 lbs. per square inch (psi). Leaks or defective pipe disclosed by the test shall be repaired or replaced and the test repeated until all such piping shows tight. Water for tests shall be furnished and disposed of by the Contractor at his expense. Source and/or quality of water which the Contractor proposes to use in testing the lines shall be acceptable to the Engineer.

SECTION 15800

HEATING & VENTILATION

Part 1: GENERAL

1.01 Related Documents

- a. The general provisions of the Contract, including General and supplementary conditions and general requirements (if any) apply to the work specified in this section.

1.02 Description of Work

- a. The extent of the heating and ventilating work is indicated by the drawings, schedules, and requirements of this section. The work includes all materials, equipment and labor required to obtain a complete heating system.

1.03 Related Work Specified Elsewhere

- a. Excavation, trenching and backfill for pipe. Division 2
- b. Concrete work including openings, chases, recesses and installation of embedded items. Division 3
- c. Masonry work including openings, chases, recesses and installation of embedded items. Division 4
- d. Carpentry; scribe, cope, trim and patch where required. Division 6
- e. Range hoods. Division 11
- f. Painting, except as specified herein. Division 9
- g. Plumbing and ventilation. Division 15
- h. Electrical work; wiring and connections to equipment, except as noted herein. Division 16

1.04 Quality Assurance

All material and equipment shall be new, of quality specified herein, and free of defects. Items of same category, i.e. valves, baseboard heating elements, circulators, louvers, temperature controls, etc., shall be products of single respective manufacturer. Items shall comply with current applicable standards as specified.

1.05 Submittals

- a. Provide submittals on following items in accordance with requirements of Division 1; submittals shall consist of shop drawings, manufacturer's specifications, installation and maintenance instructions.

Gas burner unit
Piping and valves
baseboard heating units
Circulator
Expansion tank

Insulation
Temperature controls
Hydronic Specialties
Boiler Fitting, Tank Fitting
Manual Vents, Automatic Vents

1.06 Electrical Requirements

This heating contractor shall provide and mount motors for all equipment specified herein, and shall provide devices and wire equipment and controls required with heating equipment, including but not limited to gas-fired burner, heating water circulator, apartment thermostats and valves, and unit heaters and thermostats. The electrical contractor will provide a circuit and a junction box in close proximity to heating equipment requiring electrical work.

1.07 Drawings and Specifications

- a. The drawings and specifications are complementary, and what is required by any one shall be as binding as if required by both. The drawings are diagrammatic only and there is no intent to show very detail. The drawings indicate required sizes and locations of piping, fixtures, and equipment, and are intended to show proper routing to conform to structure, avoid obstructions and preserve clearances. The Contractor shall review H & V drawings with other drawings of the Contract to determine that systems can be installed essentially as indicated. Exact locations shall be the responsibility of the Contractor. Inconsistencies in drawings or specifications, if found, shall be reported before proposals are finalized. Questions relative to interpretation or extent of drawings and specifications shall be referred to Architect/Engineer.

1.08 Maintenance and Instruction Manuals

- a. This Contractor shall submit to Engineer for delivery to Owner, one 8 1/2 x 11, 3-ring loose-leaf binder with manufacturer's data including installation, maintenance instructions and parts sheets on all items furnished.

1.09 Record Drawings

- a. The Contractor shall maintain a scale drawing, showing the progressive installation of work, in its actual location, and showing the actual constructions, and shall, at the completion of the work, submit this drawing to the Architect to make a reproducible drawing for the Owner's use.

1.10 Guarantee

- a. The Contractor shall warrant and maintain his work for one (1) year after the completion and acceptance of this work. If any defects in materials or workmanship appear within this time, unless due to faulty use of the apparatus, the Contractor shall, at his own expense, remedy such defect and pay for any damage to work resulting from such defects.

Part 2: MATERIALS

2.01 Power Gas Conversion Burner

Provide unit of capacity indicated for existing H.B. Smith 2000 L boiler. The unit shall be a Midco DS-40 or approved equal. The unit shall be direct spark ignition of main flame type with instantaneous 100% safety shut-off, pre-purge, combination automatic gas valve with main pressure regulator and manual shut off. Contractor shall provide any necessary accessories required for installation of the unit. Unit shall be installed in strict compliance with manufacturer's installation instructions and applicable codes. Provide approved double swing barometric damper for flue.

2.02 Circulators

- a. Capacities indicated, centrifugal in-line type, suitable for continuous operation at 220° F., cast iron casing, bronze impeller, mechanical seals, drip-proof rubber mounted, overload protected motor, flexible steel drive coupling. Bell & Gossett, Taco, or approved equal.

2.03 Expansion Tank

- a. Size and capacity indicated, ASME construction for 40 psi working pressure and 250 maximum temperature, tank air charger and drain. Manufactured by Bell & Gossett, Thrush, or approved equal.

2.04 Piping, Fittings and Hangers

- a. Hot water supply and return piping shall be hard copper, type L, with wrought copper fittings, or schedule 40 black steel pipe with cast iron fittings.
- b. Provide clevis type hangers where piping is suspended; hangers shall be copper or copper plated.

2.05 Valves

- a. Gate valves, 2" and smaller - Jenkins Fig. 370
- b. Globe valves, 2" and smaller - Jenkins Fig. 106A
- c. Check valves, 2" and smaller - Jenkins Fig. 92A
- d. Manufactured by Jenkins, Crane, Walworth or approved equal.

2.06 Hydronic Specialties

- a. Balancing fittings: Tight shut-off type, bronze construction. Sarco, Sunb airbanks or approved equal.
- b. Air vents: Automatic air vents shall be float operated; Bell & Gossett # 7, Armstrong, Sunham V40A, or approved equal. Manual vents shall be brass, key operated.

c. Pressure gauges; Bourbon tube type, 2½" dials, operating range approximately midway on dial. No. 1000 Ashcroft, US Gauge Marshalltown or approved equal.

d. Cold water supply pressure reducing valve, ¾" No. 12, Bell & Gossett.

2.07 Baseboard Radiation

a. Provide IBR rated units of capacities indicated, complete with element hangers, enclosure, damper assembly, return pipe hangers, element saddles, ends, and corners.

b. Elements shall consist of ½" dia. copper tube with bonded aluminum fins; enclosures shall be fabricated of 20 gauge rust resistant steel primed and with baked enamel finish. Enclosures shall be supported from continuous partial backplate with dust gasketing, and elements shall be supported on slide cradle saddles or hangers. Sterling Kom-Pak, Slant-Fin, Repco, or approved equal.

2.08 Ductwork

a. All ductwork shall be fabricated from galvanized sheet metal not less than 26 gauge for rectangular sections and 29 gauge for round sections. Provide Neoprene coated fabric flexible connectors between all fans and ducts. Connectors shall be flame retardant with 25/50 rating.

2.09 Louvers

a. Extruded aluminum, 12 gauge blades and frames, stainless steel or aluminum fastenings, 45 degree blade with stormproof stop; anodized to 8 mils thickness, with insect screen in interior. Airstream Ruskin, Louvers and Dampers or approved equal.

2.10 Wall Cap

a. DuTone Model 838, 846 or 845. Aluminum or galvanized steel construction.

2.11 Insulation

a. Insulation for hot water piping shall be 1" thick, 7½ lb. fibrous glass with fire retardant kraft foil standard white jacket.

2.12 Controls

a. Provide thermostats, motor operated valves, relays and other accessories as required to obtain control as specified herein. The mounting of thermostats, relays and control accessories and wiring shall be provided under this Section. Controls shall be Honeywell, Taco, or equal.

b. Before ordering any equipment, submit shop drawings including manufacturer's data and installation instructions on all components, and a complete wiring diagram for the proposed system.

c. The submittals shall be reviewed and stamped by the heating contractor before submitting to the Engineer.

Part 3: EXECUTIVE

3.01 Equipment

- a. Locate equipment essentially as indicated and install per manufacturer's instructions. Equipment shall operate without objectionable noise or vibration. Check equipment operation thoroughly and make final adjustments for proper operation.

3.02 Piping

- a. Screwed piping shall be cut, threaded and reamed in accordance with good trade practice. Thoroughly clean all pipe before assembly and protect pipe openings as required to maintain assembled piping in clean condition.
- b. Copper piping shall be cut square without severe crimping, reamed to full inside diameter, and thoroughly cleaned before soldering. Solder with 50-50 lead tin solder and resin flux; wipe all joints clean of solder. Provide dielectric fittings where different pipe materials are joined.
- c. Install piping with proper fittings where required. Use tubing bender for bends, avoid bending or springing pipe into position. Provide guides, anchors, and supports as required to allow expansion and contraction to occur without undue strain, vibration or noise. Pitch all hot water supply and return mains slightly upward in direction of flow where possible. Provide vents and drains where required to properly vent and drain system.

3.03 Ductwork

- a. Coordinate location of ductwork with other trades to avoid interference. Duct fittings shall be fabricated to provide smooth, clean air flow. Duct joints shall be mechanically fastened and taped to make air tight. Support ducts in approved manner, free of sags, vibration and noise.

3.04 Insulation

- a. Install insulation in accordance with manufacturer's instructions. Butt and seal all joints, neatly; exposed butt ends shall be covered with jacket material. Insulate all boiler room hot water supply and return piping, including all fittings, all exposed piping risers in occupied spaces, or elsewhere as indicated.

3.05 Automatic Temperature Controls

- a. The burner shall operate to maintain operating aquastat setting. The operating aquastat on the boiler shall be outdoor reset type with 1.0 to 1.0 outdoor to indoor ratio with adjustable differential setting set for 20°.

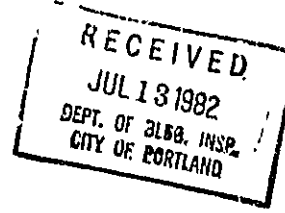
- b. Primary circulator in boiler room shall be controlled by a H-O-A switch. On automatic an outside temperature reset shall be provided for circulators when outside temperature is below 40°F.
- c. Apartment circulators and cabinet circulators shall be controlled in response to respective thermostats.

3.06 Balance and Testing

- a. Upon completion of work and when system is in full working order, balance water system as required to obtain relative heating of space.
- b. Perform an efficiency test on boiler-burner unit and forward test results to Engineer. Test results shall indicate stack temperature, CO₂ reading, smoke test results, and overall boiler-burner unit efficiency.

3.07 Valve Tags and Chart

- a. Provide numbered metal tags for all valves and framed in glass valve chart indicating number, function, and location.



SECTION 16000

ELECTRICAL

Part 1: GENERAL

1.01 General Provisions

- a. The General Conditions, and Special Conditions of Division 1 of these specifications apply to the work of this Section.

1.02 Scope of Work

- a. The work to be performed under this Section of the Specifications shall include all labor, materials, equipment, transportation, construction, facilities, and incidentals necessary for the proper execution and completion of all Electrical Work as shown and indicated on the Contract Drawings, and/or herein specified with the intent that the installation shall be complete in every respect, ready for use.
- b. Minor details not usually shown or specified, but necessary for proper installation and operation, shall be included in the Contractor's estimate, the same as if herein specified or shown.
- c. The extent of the work under this Section is indicated on the drawings and as herein specified. The work includes, but is not limited to, furnishing and installing the following:
 1. Underground feeders from Utility Company equipment to main switchgear, including necessary risers, etc.
 2. Distribution system for lighting and power including the necessary feeders, branch circuits, lighting fixtures, control switches and receptacles, motors and other power loads.
 3. A complete building ground system and special grounds as required or noted.
 4. Lighting fixtures and lamps.
 5. Empty raceway for the telephone as indicated.
 6. Smoke detection system.
 7. Television system, as indicated.

1.03 Work Specified Under Other Sections

- a. The following work is necessary for the satisfactory operation of this system, but is not included as part of this Contractor's work and will be done under separate contracts:
 1. Excavation and backfill for underground utilities.
 2. All motors, unless otherwise specified, shall be furnished and set in place by other contractors.

3. Telephone system wires, cable, equipment and instruments will be furnished by the Telephone Company.
4. Wiring of boiler-burner controls, circulator control, thermostat and valves.
5. Painting.
6. Ventilation duct installation.

1.04 Drawings and Specifications

- a. The drawings and specifications are complementary, and what is called for by one shall be as binding as if called for by both. The drawings are diagrammatic, and are intended to show the general arrangement and extent of the work to be done and do not show all the required fittings, offsets, hangers, etc., required to execute the work properly. The final location and arrangement of all parts shall be determined as the actual work progresses, so as to conform in the best possible manner with the surrounding work, and with the general intent of the drawings and specifications.

1.05 Codes, Permits and Fees

- a. This Contractor shall give all necessary notices, including electric and telephone utilities, obtain all permits, and pay all government taxes, fees, and other costs, including utility connections or extensions, in connection with this work; file all necessary plans, prepare all documents, and obtain all necessary approvals of all governmental departments having jurisdiction; obtain all required certificates of inspection for his work and deliver same to Architect before request for acceptance and final payment for the work.
- b. Work and materials shall conform to the latest rules and regulations listed below:
 1. National Electrical Code
 2. National Safety Code and OSHA Standards where applicable.
 3. Local, State and Federal laws, regulations and codes.
 4. Local Utility Company rules and regulations.
 5. Applicable NECA Standards.
 6. Applicable UL Standards.

1.06 Workmanship and Material in General

- a. All work shall be performed under supervision of a licensed master electrician and by workmen who are competent and properly equipped with necessary knowledge, skill, tools and materials to to a first-class job, and shall present a neat mechanical appearance when completed.
- b. Protect all walls, floors, ceilings, etc., while installing the work, and protect the fixtures, appliances, etc., from damage after their installation and until work has been accepted.

- c. All equipment, apparatus, appliances and fixtures shall be new and installed, connected and adjusted in strict accordance with the manufacturer's recommendations and instructions.
- d. Where no specific make of materials, apparatus or fixture is mentioned, any standard product of a manufacturer regularly engaged in the production of such equipment may be furnished, provided it conforms to the applicable codes and standards. Where a specific make is mentioned, it shall be interpreted as establishing a standard of quality and shall not be construed to limit competitive products. This Contractor may substitute any product which, in the judgment of the Architect is equal to that named.

1.07 Equipment Schedules and Shop Drawings

- a. As soon as possible after the execution of the contract, this Contractor shall submit for approval to the Architect through the General Contractor six (6) copies of shop drawings of those items of material and equipment which he intends to incorporate in the work. No material or equipment shall be purchased for the work until the list is approved by the Architect.

1.08 Cooperation With Other Trades

- a. Where the work of this Contractor is to be installed in close proximity to work of other trades, or where the work will interfere with the work of other trades, he shall assist in working out space conditions to make a satisfactory adjustment. If this Contractor installs his work before coordinating with work of other trades, he shall make necessary changes in his work to correct the condition without extra charge.

1.09 Electrical Connections

- a. Except as indicated or specified herein, this Contractor shall provide and install power wiring to all motors and electrical equipment complete and ready for operation including disconnect switches and fuses. The wiring of boiler-burner unit, circulator and temperature controls, and domestic water heater will be by Division 15.

1.10 Temporary Electrical Service

- a. This Contractor shall provide temporary wiring for use by all trades throughout the building, consisting of a 20 amp, 120 V source available to all areas through a fifty foot extension cord, and a 200 watt lamp outlet or equivalent for each 1000 square feet of construction area.

1.11 Cutting and Patching

- a. This Contractor shall advise the General Contractor of locations and sizes of all openings and chases, and furnish and locate all sleeves and inserts required for the installation of the electrical work.
- b. No structural members shall be cut without the approval of Architect. All patching shall be performed in a neat and workman-like manner acceptable to the Architect.

1.12 Waterproofing

- a. This Contractor shall provide all flashing, caulking, and sleeves required where his items pass through the outside walls or roof. The waterproofing of the openings shall be made absolutely watertight. The methods of installation shall conform to the requirements of Division 7, "Moisture Control" and/or meet the approval of the Architect.

1.13 Identification

- a. Equipment: All equipment, such as switchboards, panels, cabinets, transformers, etc., furnished by this Contractor shall be permanently labeled, in an approved manner.
- b. Wire and cable: All wire and cable shall be color coded and shall be labeled with tags or tape at each end giving use and circuit number.
- c. Control Devices: All devices controlling equipment such as switches, disconnects, starters, time switches, special light switches, volume controls, dimmers, etc., shall be clearly labeled as to what they control.
- d. Overcurrent Devices: In panels, etc. shall clearly indicate what they feed. This shall be accomplished by means of typewritten panel schedules mounted inside of the front cover doors or laminated engraved plastic nameplates.

1.14 Testing

- a. As the various parts of the work are completed, the Contractor shall make preliminary insulation resistance tests to insure that the system is free from short circuits and accidental grounds and that all connections, switches, controls and equipment are in proper operating condition. Minimum dielectric strength shall be 1 Megohm.

1.15 As-Built Drawings

- a. The Contractor shall maintain a scale drawing, showing the progressive installation of his work, in its actual location and showing the actual construction and shall, at the completion of the work, submit this drawing, together with all equipment instruction manuals and any other documents pertaining to the equipment, appliances, fixtures, etc., installed or wired under this Section, to the Architect for the Owner's use.

1.16 Guarantee

- a. The Contractor shall warrant and maintain his work for one (1) year after the completion and acceptance of this work. If any defects in material or workmanship appear within this time, unless due to faulty use of the apparatus, the Contractor shall, at his own expense, remedy such defects and pay for any damage to other work resulting from such defect.
- b. The Contractor shall furnish certificates to the Owner and Architect to the effect that he has complied with all Federal and State laws and local ordinances which govern his work.

Part 2: CONDUITS

2.01 Conduit and Fittings

- a. All wiring where required shall be in National Electrical Code approved raceways sized as shown on the Drawings, or, if not sized they shall be in accordance with the requirements of the National Electrical Code, except that no conduit smaller than 3/4 inch shall be allowed on home runs.
 - 1. All raceways shall be concealed unless otherwise indicated, raceways may be exposed in Electric Rooms.
- b. Rigid Steel Conduit shall be used in or under concrete construction and in moist or wet areas.

2.02 Wire and Cable

- a. All wire and cable shall comply with the latest requirements and specifications of the NFPA and/or the Insulated Power Cable Engineers Association (IPCEA) and shall be as manufactured by Triangle, General Cable, General Electric, Carol, American or approved equal, unless otherwise specified or indicated.
- b. All conductors used in the wiring system shall be softdrawn copper wire having conductivity of not less than 98 percent of that of pure copper, unless otherwise indicated or specified. Wire No. 10AWG and smaller shall be solid and wire No. 8AWG and larger shall be stranded.
- c. All wire and cable shall be stamped approximately every two feet to indicate voltage, type, temperature rating, UL listing, manufacturer's name, size, etc.
- d. All cable and wire shall be 000 volt; not less than No. 14AWG and have type insulation as follows:
 - General Use Areas.....THW, THWN, TRRN, XHHW
 - Hot or Moist Locations.....THWN, RHW, XHHW
 - Service Entrance.....RHW, XHHW, THWN (type USE)
 - Buried Distribution.....RR, THWN (Type UF)
- e. All wiring, internal to fixtures, shall be minimum No. 14AWG, Type AF or TF (150 degrees C) with minimum 300 volt insulation.
- f. In wood frame construction, and above ceilings, it is intended that Type NR or MC cable be used, in accordance with the requirements of the National Electrical Code, provided it is concealed, protected from damage and has a thermoplastic outer jacket.
- g. The range cable shall be No. 6AWG aluminum conductor or No. 8AWG copper complete with an insulated neutral. Type SE cable will not be allowed.

- h. Aluminum conductors, No. 2AWG and larger, will be allowed for use as service entrance conductors and panelboard feeders. Where aluminum conductors are not indicated on the drawings, the voltage drop characteristics and current carrying characteristics of the aluminum conductors shall be equivalent to the copper conductors indicated on the drawings.

2.03 Outlets and Boxes

- a. All boxes shall be one piece galvanized steel or non-metallic, of proper size and shape for conduits entering them; UL and National Electrical Code approved; installed so that device and/or cover plates shall be tight and plumb with wall finish; have unused openings closed with "knock-out" closures; be weatherproof for exterior or wet locations; and be securely fastened in position.
- b. Outlets as shown on the drawings, but not specified, shall be coordinated to the equipment for which they are provided.
- c. Outlet boxes in wet locations or exterior locations shall be threaded cast device boxes complete with vaporproof gaskets.

2.04 Switches, Receptacles, and Wiring Devices

- a. Wiring devices shall be manufactured by Arrow-Hart, Bryant, Leviton, or equal.
- b. Wall switches controlling a lighting load of 300 watts or less shall be 15 ampere, toggle-type, 277 volt rated. Wall switches controlling more than 300 watts shall be 20 ampere, toggle-type, 277 volt rated.
- c. Convenience outlet receptacles for interior use shall be duplex grounding type 15 ampere. Single duplex receptacles wired to a single circuit shall be 20 ampere rated.
- d. Plates for switches, receptacles, junction boxes, etc., shall be smooth line plastic design for flush mounting and shall be white in color.
- e. Ground fault receptacles shall be Square "D" or equal.

2.05 Disconnects

- a. Furnish and install, where required, General Duty fusible or non-fusible safety switches as manufactured by Square "D", Westinghouse, or General Electric.

2.06 Panelboards

- a. Breaker panelboards shall have mains, main circuit breakers and circuits as indicated on the drawings and be designed for one phase, three wire, 60 hertz service rated for 120/240 volts.
- b. Panelboards shall be flush mounted. Panelboards shall have full size neutral bar and separate bonding bar. Panelboards shall be installed with top up 6'-0". Each panel door shall be provided with latch and typed directory.

- c. Circuit breakers for panelboards shall be toggle-type, thermal-magnetic, quick-make, quick-break, (plug-in) type with silver-plated contacts and minimum thickness of 1" per pole. Provide common trip for multipole circuits. Panels for 120/240 volt service shall have breakers with 10,000 amperes RMS minimum interrupting rating at 240 volts.

2.07 Light Fixtures

- a. Provide all light fixtures complete as hereinafter specified and/or as shown on the Drawings.
- b. All fixtures shall be: UL approved and labeled; furnished with proper outlet boxes, hangers, etc., securely fastened to outlet boxes; furnished complete with lamps of proper size and type required or as specified; complete with supports, pendants, canopy extensions, etc., wired with type AF or TF fixture wire; furnished with plaster frames and light tight gaskets when recessed as required; and have specified finish.

2.08 Lamps, Ballasts, Accessories

- a. All lamps shall be furnished and installed by the Contractor.
- b. Ballasts for fluorescent fixtures, except as specifically indicated, shall be high power factor type, CEI certified, ETL approved for rapid start quiet operation, "A" sound rating, Class "p".

2.09 Telephone Service and Conduit System

- a. Furnish and install underground telephone service conduit risers as indicated.
- b. Furnish and install a 24" x 36" x 3/4" plywood backboard for mounting telephone equipment.
- c. Furnish and install a #6AWG copper ground wire from telephone entrance to the building ground or nearest metallic cold water pipe.

2.10 Service Main Circuit Breaker Disconnect

- a. Circuit breaker shall be manually operated, trip free and be designed so that all poles open simultaneously. Circuit breaker shall be located in the group metering enclosure. Tripping mechanism shall be thermally-magnetically operated, open instantaneously on short circuits and have time delay on overloads.
- b. Circuit breaker shall be Westinghouse, Square "D", Arrow-Hart, or General Electric rated for service characteristics as shown on the drawings and have an interruption rating of not less than 10,000 RMS symmetrical amperes at the design voltage.

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2.11 Metering

- a. Provide group metering equipment as indicated and specified herein. Meter units shall be provided with individual covers for each meter position. All compartments containing unmetered circuits shall be provided with a sealing means. Metered and unmetered circuits shall be separated by steel barriers. All components shall be UL listed for use in a multi-metering assembly, and in compliance with Utility Company requirements.
 1. Meter sockets shall be rated for 125 amperes, except as indicated otherwise.
 2. Circuit breakers for meter sockets shall be two poles. Ratings shall be as shown on drawings. Breakers shall be provided with a means to lock-off the circuit breaker.
 3. The Utility Company will provide the meter.

2.12 Door Chime System

- a. This Contractor shall furnish and install where shown on the drawings, a door chime system complete. The Chime shall be Nutone No. LB-12; pushbutton shall be Nutone No. PB-8L; transformer shall be sized to carry the load.

2.13 Smoke Detector System

- a. Each dwelling unit shall have where indicated a smoke detector, Simplex #4259-19 or equal.
- b. The detectors shall operate from a 120 volt power supply, and shall have an indicator light. The detector shall connect to the system wiring through a plug-in connector and to be of such design that dust and insects larger in size than 200 microns shall not have free access to the smoke detector. Sensitivity shall be factory set to Underwriter's Laboratory Standards.

Part 3: EXECUTION

3.01 Materials and Workmanship

- a. The existing service entrance wire and conduit shall be removed. All existing material removed and not scheduled or indicated to be re-used, shall become the property of the Electrical Contractor, and shall be removed from the site.

3.02 Raceways and Fittings

- a. Outlets shall be installed in the locations shown on the drawings. The Contractor shall study the general building plans in relation to the spaces surrounding each outlet in order that his work may fit the other work required by these specifications. When necessary, the Contractor shall relocate outlets so that, fixtures or other fittings will be symmetrically located according to room layout and will not interfere with other work or equipment. Boxes shall be installed in a rigid and satisfactory manner, either by wood screws on wood work, (wall mounted boxes in wood construction may be nailed expansion shields on masonry, or machine screws on steel work. Fire alarm and telephone outlet boxes shall be not less than 4" square fitted with appropriate covers where necessary, to set flush mount. One piece gang boxes not less than 2" deep shall be utilized where necessary.
- b. Conduits shall be kept at least 8 inches from parallel runs of flues, steam pipes or hot water pipes. Exposed runs of conduit shall be installed with runs parallel or perpendicular to walls, structural members or intersections of vertical planes and ceilings, with turns consisting of cast-metal fittings of symmetrical bends. Bends shall be made with an approved conduit-bending machine. Conduit which has been crushed or deformed in any way shall not be installed.

3.03 Conductors

- a. Conductors shall be continuous from outlet to outlet, and no splices shall be made except within outlet or junction boxes. Junction boxes may be utilized wherever required as shown on the drawings. Wire connectors, insulating material or solderless pressure connectors, properly taped, shall be utilized for all splices in wiring.

3.04 Equipment Connections

- a. Equipment connections shall be made with liquid tight flexible metal conduit. Controllers for motor, disconnect switches and all control, protective, and signal devices for motor circuits shall be connected and left in operating condition. The number and size of conductors between motors and control or protective apparatus shall be as shown on the plans or recommended by the manufacturer of the apparatus. Where equipment is furnished and installed by other trades for connection to the electrical system, this Contractor shall supervise such installation. All work shall conform to the National Electric Code requirements.

3.05 Grounding System

- a. The entire electrical installation shall be provided with a system ground connected to the water service entrance pipe and also connected to a 5/8" x 8'-0" copperweld steel ground rod. Installation shall be in accordance with N.E.C. requirements. See Tables 250-94(a) and 250-95 (N.E.C.).
- b. Provide a separate grounding wire to all outlets. Ground wire secured under conduit bushings or cable clamps will not be permitted.

3.06 Instructions to Owner

- a. At the completion of the work, this Contractor shall turn over to the Engineer, for the Owner's use, three (3) sets of operating and maintenance instructions of all equipment. The Contractor shall explain and demonstrate the operation of each system to the Owner's representative.