REGULAR MEETING

Monday, February 1, 1932.

7:30 P. M

The Common Council of the City of Indianapolis met in the Council Chamber at City Hall, Monday, February 1, 1932, at 7:30 p. m., in regular session. Vice-President Leo F. Welch in the chair.

The Clerk called the roll.

Present: Leo F. Welch, Vice-President, and five members, viz: George A. Henry, Carl A. Hildebrand, James A. Houck, Maurice E. Tennant, Clarence I. Wheatley.

Absent: Fred C. Gardner, Chas. C. Morgan, Ernest C. Ropkey.

On motion of Mr. Tennant, seconded by Mr. Henry, the reading of the Journal for the previous meeting was dispensed with.

COMMUNICATIONS FROM THE MAYOR

January 19, 1932.

To the Honorable President and Members of the Common Council of the City of Indianapolis, Indiana:

Gentlemen:

I have this day approved with my signature, and delivered to Henry O. Goett, City Clerk, the following ordinances:

GENERAL ORDINANCE NO. 5, 1932

AN ORDINANCE authorizing the purchase of one (1) 7-passenger automobile and three (3) standard 5-passenger sedans to be used by the Police Department of the City of Indianapolis, providing for the trading in of one (1) Stutz speedster and three (3) Marmon sedans to be applied on the purchase price of said automobiles, and fixing a time when the same shall take effect.

GENERAL ORDINANCE NO. 6, 1932

AN ORDINANCE transferring moneys from a certain numbered fund and reappropriating the same to another numbered fund, and fixing a time when the same shall take effect.

SPECIAL ORDINANCE NO. 9, 1931

AN ORDINANCE annexing certain territory to the City of Indianapolis and fixing a time when the same shall take effect.

Yours very truly,

R. H. SULLIVAN,
Mayor.

January 25, 1932.

To the Honorable President and Members of the Common Council of the City of Indianapolis, Indiana:

Gentlemen:

I have this day approved with my signature, and delivered to Henry O. Goett, City Clerk, the following ordinances:

GENERAL ORDINANCE NO. 97, 1931

AN ORDINANCE to amend General Ordinance No. 114, 1922, commonly known as the zoning ordinance and fixing a time when the same shall take effect.

GENERAL ORDINANCE NO. 7, 1932
(AS AMENDED).

AN ORDINANCE amending Section 17 of General Ordinance No. 28, 1931 (as amended), being an ordinance concerning taxicabs, and fixing a time when the same shall take effect.

Yours very truly,

R. H. SULLIVAN,
Mayor.

COMMUNICATIONS FROM CITY OFFICIALS

February 1, 1932.

To the Honorable President and Members of the Common Council of the City of Indianapolis, Indiana:

Gentlemen:

Attached please find copies of Appropriation Ordinance No. 2, 1932, providing for the appropriation of funds to various numbered

funds in the Department of Public Parks and in the Recreation Department.

I respectfully recommend the passage of this ordinance.

Yours very truly,

WM. L. ELDER,
City Controller.

January 30, 1932.

Mr. William L. Elder,
City Controller,
City Hall,
Indianapolis, Ind.

Dear Sir:

Acting under instructions of the Board of Park Commissioners, I am handing you herewith fifteen (15) copies of Appropriation Ordinance No....., 1932, providing for the appropriation of funds to various numbered funds in the Department of Public Parks and in the Recreation Department.

The Board of Park Commissioners respectfully requests that you present this ordinance to the Common Council with recommendation for its passage.

Yours truly,

DEPARTMENT OF PUBLIC PARKS.
MARY E. GRIFFIN,
Secretary.

February 1, 1932.

To the Honorable President and Members of the Common Council of the City of Indianapolis, Indiana:

Gentlemen:

Attached please find copies of Appropriation Ordinance No. 3, 1932, appropriating the sum of Twenty-five Hundred ($2500.00) Dollars from the estimated anticipated, unexpended and unappro-

priated balance of the General Fund for the year 1932 to various numbered funds of the Municipal Airport.

I respectfully recommend the passage of this ordinance.

Yours very truly,

WM. L. ELDER,
City Controller.

February 1, 1932.

To the Honorable President and Members of the Common Council of the City of Indianapolis, Indiana:

Gentlemen:

Attached please find copies of General Ordinance No. 12, 1932, amending Fund Sub-section 12-6 Department of Public Works—Street Commissioner and Fund Sub-section 26 Department of Finance, Office of City Controller of Section 2 of Appropriation Ordinance No. 18, 1931.

I respectfully recommend the passage of this ordinance.

Yours very truly,

WM. L. ELDER,
City Controller.

February 1, 1932.

Mr. Henry Goett,
City Clerk.

Dear Sir:

I am enclosing herewith copies of a proposed ordinance, Special Ordinance No. 1, 1932, providing for the sale and alienation of certain real estate owned by the City of Indianapolis and under the jurisdiction of the Board of Public Works, to the Belt Railway Company, which kindly present to the Common Council at the next meeting with the recommendation of the Board of Public Works that the same be passed.

Yours very truly,

ERNEST F. FRICK,
Secretary, Board of Public Works.

P. S. Will appreciate your advising when this is passed, to enable the Board to petition the Marion Circuit Court for permission to appoint appraisers and to expedite this matter.

EFF

January 30, 1932.

Honorable President and Members of the Common Council,
City of Indianapolis.

Gentlemen:

The attached are copies of ordinances amending certain sections of the Building Code and we wish to submit them to you with our recommendations that they be passed.

Respectfully submitted,

BOARD OF PUBLIC SAFETY,
WALTER O. LEWIS,
Executive Secretary.

February 1, 1932.

To the Honorable President and Members of the Common Council of the City of Indianapolis, Indiana:

Gentlemen:

Attached please find copies of General Ordinance No. 13, 1932, transferring moneys from certain numbered funds of the Department of Public Sanitation and reappropriating and reapportioning the same to other numbered funds of said department.

I respectfully recommend the passage of this ordinance.

Yours very truly,

WM. L. ELDER,
City Controller.

Mr. Henry asked for a recess. The motion was made and seconded by Mr. Wheatley and the Council recessed at 7:40 p. m.

The Council reconvened from its recess at 7:50 p. m., with the same members present as before.

COMMITTEE REPORTS

Indianapolis, Ind., February 1, 1932.

To the President and Members of the Common Council of the City of Indianapolis, Indiana:

Gentlemen:

We, your Committee on Finance, to whom was referred Appropriation Ordinance No. 1, 1932, entitled Appropriating $1500 from 1932 balance to Public Works Administration Fund No. 13, beg leave to report that we have had said ordinance under consideration, and recommend that the same be passed.

J. A. HOUCK, Chairman.
CARL A. HILDEBRAND.
LEO F. WELCH.
MAURICE E. TENNANT.

Indianapolis, Ind., February 1, 1932.

To the President and Members of the Common Council of the City of Indianapolis, Indiana:

Gentlemen:

We your Committee on Finance, to whom was referred General Ordinance No. 10, 1932, entitled Authorization to purchase—gauze, beg leave to report that we have had said ordinance under consideration, and recommend that the same be passed.

J. A. HOUCK, Chairman.
CARL A. HILDEBRAND.
LEO F. WELCH.
MAURICE E. TENNANT.

Indianapolis, Ind., February 1, 1932.

To the President and Members of the Common Council of the City of Indianapolis, Indiana:

Gentlemen:

We your Committee on Finance, to whom was referred General Ordinance No. 11, 1932, entitled Authorization to purchase—Rubber

Gloves, beg leave to report that we have had said ordinance under consideration, and recommend that the same be passed.

J. A. HOUCK, Chairman.
CARL A. HILDEBRAND.
LEO F. WELCH.
MAURICE E. TENNANT.

INTRODUCTION OF APPROPRIATION ORDINANCES

By City Controller:

APPROPRIATION ORDINANCE NO. 2, 1932

AN ORDINANCE appropriating certain moneys to certain numbered funds and fixing a time when the same shall take effect.

WHEREAS, on December 31, 1931, there was carried over into the year 1932 a balance in the unexpended appropriation of the general fund of the Department of Public Parks for said year 1931 the sum of $30,531.67 which amount had been appropriated during 1931 to various numbered funds for the construction of Pleasant Run Boulevard, and

WHEREAS, such unexpended balance will be necessary for the completion of said Pleasant Run Boulevard, and

WHEREAS, an emergency has arisen making it necessary for the appropriating of said moneys to complete said Pleasant Run Boulevard, and

WHEREAS, there was an error in General Ordinance No. 72, 1931, as finally passed by the Common Council in that under the heading Department of Public Parks Recreation Department items 33 and 36 totalling $1250.00 were omitted although the total of these two items was carried into the total amount appropriated by said ordinance, and

WHEREAS, an emergency has arisen making it necessary to appropriate for these two items from the anticipated unexpended balance of the funds collected during 1932,

NOW, THEREFORE,

BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF INDIANAPOLIS, INDIANA:

Section 1. That there be and there is hereby appropriated out of the unexpended appropriation of the general fund of the Depart-

ment of Public Parks from the year 1931 and appropriated and transferred to the various items of said Park Department funds as hereinafter set forth, to-wit:

To Fund No. 12, salaries and wages, temporary	$19,980.59
To Fund No. 41, building material	2,634.00
To Fund No. 42, sewer material	562.50
To Fund No. 43, street and alley	7,234.58
To Fund No. 72, equipment	120.00
Total	$30,531.67

Section 2. That there be and there is hereby appropriated from the anticipated unexpended balance derived during 1932 from General Ordinance No. 72, 1931, and transferred and appropriated to the various items of said Recreation Department funds as hereinafter set forth, to-wit:

To Fund No. 33, garage and motor supplies	1,000.00
To Fund No. 36, office supplies	250.00

Section 3. This ordinance shall take effect from and after its passage, approval by the Mayor and publication according to law.

Which was read the first time and referred to the Committee on Finance.

By City Controller:

APPROPRIATION ORDINANCE NO. 3, 1932

AN ORDINANCE appropriating the sum of Twenty-five Hundred Dollars ($2500.00) from the estimated anticipated, unexpended and unappropriated balance of the General Fund for the year 1932, in the amounts and to the funds of the Municipal Airport set out herein, and fixing a time when the same shall take effect.

BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF INDIANAPOLIS, INDIANA:

Section 1. That there be and there is hereby appropriated out of the estimated anticipated, unexpended and unappropriated balance of the General Fund for the year 1932, the sum of Twenty-five Hundred Dollars ($2500.00) to the funds of the Municipal Airport and in the amounts as follows, to-wit:

To Municipal Airport Fund No. 33—Garage and Motor, Five Hundred Twenty-one Dollars and Seventy-five Cents ($521.75).

To Municipal Airport Fund No. 51—Insurance and Premiums, One Thousand Nine Hundred Seventy-eight Dollars and Twenty-five Cents ($1,978.25).

Section 2. This ordinance shall be in full force and effect from and after its passage, approval by the Mayor and publication according to law.

Which was read the first time and referred to the Committee on Finance.

INTRODUCTION OF GENERAL AND SPECIAL ORDINANCES

By Board of Works:

SPECIAL ORDINANCE NO. 1, 1932

AN ORDINANCE authorizing the sale, alienation and conveyance of real estate by the Board of Public Works of the City of Indianapolis, and fixing a time when the same shall take effect.

BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF INDIANAPOLIS, INDIANA:

Section 1. The Board of Public Works of the City of Indianapolis is hereby authorized to sell, alienate and convey for cash, at public or private sale, for not less than the appraised value, which value is to be hereinafter determined by appraisers appointed by the judge of the Circuit Court of Marion County, Indiana, as required by law, of the following described real estate in the City of Indianapolis, Marion County, Indiana, to-wit:

PARCEL "A." Beginning at a point in the west line of Lot 241 of Kappes and Naltner's South Meridian Street Addition, said point being twenty-five (25) feet in a southerly direction from the northwest corner of said Lot 241 when measured along said west line; thence in a southerly direction with said west line one hundred nine and three-tenths (109.3) feet, more or less, to a point in a line parallel with and fifty (50) feet north of the center line, produced eastwardly, of the bridge of The Indianapolis Union Railway Company over White River; thence in a westerly direction eight hundred and five-tenths (800.5) feet, more or less, with said line parallel with and fifty (50) feet north of said center line of bridge produced east-

wardly, to a point, the last mentioned point being one hundred thirty-four (134) feet from "Line A" when measured in an easterly direction at right angles thereto, said "Line A" being described in Declaratory Resolution 13258 adopted by the Board of Public Works of the City of Indianapolis, February 2, 1927, and recorded January 9, 1930, in the Recorder's Office of Marion County, Indiana, in Town Lot Record 855 at page 148; thence in a northerly direction with a line parallel with and located one hundred thirty-four (134) feet east of said "Line A" ninety-five and five-tenths (95.5) feet to a point; thence in an easterly direction eight hundred twenty-four and seven-tenths (824.7) feet, more or less, to the place of beginning, containing an area of one and ninty-hundredths (1.90) acres, more or less.

PARCEL "B." Beginning at the point of intersection of the west line of Lot 241 of Kappes and Nalther's South Meridian Street Addition and a line parallel with and fifty (50) feet south of the center line, produced eastwardly, of the bridge of The Indianapolis Union Railway Company over White River; thence in a southerly direction with said line forty-five (45) feet, more or less, to a point in the original north right-of-way line of the railroad of The Belt Railroad and Stock Yards Company (The Indianapolis Union Railway Company, Lessee), as described in deed from N. McCarty to the Union Railroad, Transfer and Stock Yard Company recorded in the Recorder's Office of Marion County, Indiana, in Deed Land Record No. 3 on page 188; thence in a westerly direction with said original north right-of-way line three hundred seventy-two and five-tenths (372.5) feet, to a point; thence continuing in a westerly direction four hundred one and nine-tenths (401.9) feet, more or less, to a point, the last mentioned point being one hundred thirty-four (134) feet from "Line A" when measured in an easterly direction at right angles thereto, said "Line A" being described in Declaratory Resolution 13258 adopted by the Board of Public Works of the City of Indianapolis, February 2, 1927, and recorded January 9, 1930, in the Recorder's Office of Marion County, Indiana, in Town Lot Record 855 at page 148, said last named point also being one hundred seventy (170) feet south of the center line of the bridge over White River when measured along a line parallel with and distant one hundred thirty-four (134) feet east of said "Line A"; thence in a northerly direction with a line parallel with and located one hundred thirty-four (134) feet east of said "Line A" one hundred nineteen and eight-tenths (119.8) feet, more or less,

to a point in the line parallel with and fifty (50) feet south of said center line of bridge; thence in an easterly direction with the said line parallel with and fifty (50) feet south of said center line of bridge seven hundred eighty-one and nine-tenths (781.9) feet, more or less, to the place of beginning, containing an area of one and seventy-four hundredths (1.74) acres, more or less.

PARCEL "C." Beginning at the point of intersection of the west line of Lot 241 of Kappes and Naltner's South Meridian Street Addition and a line parallel with and fifty (50) feet north of the center line, produced eastwardly, of the bridge of The Indianapolis Union Railway Company over White River; thence in a southerly direction with the said west line one hundred and six tenths (100.6) feet, more or less, to a point in a line parallel with and fifty (50) feet south of the said center line of bridge produced eastwardly; thence in a westerly direction seven hundred eighty-one and nine tenths (781.9) feet, more or less, with the said line parallel with and fifty (50) feet south of said center line of bridge, produced eastwardly, to a point, the last mentioned point being one hundred thirty-four (134) feet from "Line A" when measured in an easterly direction at right angles thereto, said "Line A" being described in Declaratory Resolution 13258 adopted by the Board of Public Works of the City of Indianapolis, February 2, 1927, and recorded January 9, 1930, in the Recorder's Office of Marion County, Indiana, in Town Lot Record 885 at page 148; thence in a northerly direction with a line parallel with and located one hundred thirty-four (134) feet east of said "Line A" one hundred and four tenths (100.4) feet, to a point in a line parallel with and fifty (50) feet north of said center line of bridge produced eastwardly; thence in an easterly direction eight hundred and five tenths (800.5) feet, more or less, with said line parallel with and fifty (50) feet north of said center line of bridge produced eastwardly to the place of beginning, containing an area of one and eighty-two hundredths (1.82) acres, more or less.

PARCEL "D." Beginning at the point of intersection of the east shoulder line of the proposed East Drive of White River Flood Prevention Project, said point being one hundred thirty-four (134) feet from "Line A" measured at right angles thereto, said "Line A" being described in Declaratory Resolution 13258 adopted by the Board of Public Works of the City of Indianapolis, February 2, 1927, and recorded January 9, 1930, in the

Recorder's Office of Marion County, Indiana, in Town Lot Deed Record 855, at page 148, and a line parallel with and fifty (50) feet south of the center line of the bridge of The Indianapolis Union Railway Company as now constructed; thence in a northerly direction one hundred and four tenths (100.4) feet, with the said east shoulder line to a point in a line parallel with and fifty (50) feet north of said center line of bridge; thence in a northwesterly direction nine hundred thirteen (913) feet, more or less, with said line parallel with and fifty (50) feet north of said center line of bridge to a point; thence in a northerly direction thirty-three (33) feet with a line at right angles to the last described line to a point in a line parallel with and eighty-three (83) feet north of said center line of bridge; thence in a northwesterly direction thirty-six (36) feet, more or less, with said line parallel with and eighty-three (83) feet north of said center line of bridge to a point in the northeast right-of-way line of the railroad of The Indianapolis Union Railway Company, said right-of-way line being the northeast line of Parcel "B" conveyed to the Indianapolis Union Railway Company by the American Aggregates Corporation by deed recorded in the Recorder's Office of Marion County, Indiana, in Land Deed Record 86 at page 37; thence in a southerly direction one hundred fifty-one (151) feet, more or less, with said northeast right-of-way line to a point in the north right-of-way line of the railroad of The Belt Railroad and Stock Yards Company (The Indianapolis Union Railway Company, Lessee), as described in deed from N. McCarty to the Union Railroad, Transfer and Stock Yard Company recorded in the Recorder's Office of Marion County, Indiana, in Deed Land Record 3 on page 188; thence in a northwesterly direction two and five tenths (2.5) feet, more or less, with said north right-of-way line to a point in the west condemnation line of the said White River Flood Protection Project; thence in a southerly direction sixteen and five tenths (16.5) feet, more or less, with the said west condemnation line to a point in a line parallel with and eighty-three (83) feet south of the said center line of bridge; thence in a southeasterly direction twenty-three (23) feet, more or less, with the said line parallel with and eighty-three (83) feet south of said center line of bridge to a point; thence in a northerly direction thirty-three (33) feet with a line at right angles to the last described line to a point in a line parallel with and fifty (50) feet south of said center line of bridge; thence in a southeasterly direction nine hundred twenty-one (921) feet, more or less, with the said line parallel with and

fifty (50) feet south of said center line of bridge to the place of beginning, containing an area of two and twenty-two hundredths (2.22) acres, more or less.

That said real estate shall be sold at public or private sale upon such notice or notices as the Board of Public Works may determine.

Section 2. This ordinance shall be in full force and effect from and after its passage and approval by the Mayor.

Which was read the first time and referred to the Committee on Public Works.

By City Controller:

GENERAL ORDINANCE NO. 12, 1932

AN ORDINANCE amending Fund Sub-section 12-6 Department of Public Works—Street Commissioner and Fund Sub-section 26 Department of Finance, Office of City Controller of Section 2 of Appropriation Ordinance No. 18, 1931, and fixing a time when the same shall take effect.

BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF INDIANAPOLIS, INDIANA:

Section 1. That Fund Sub-section 12-6 Department of Public Works—Street Commissioner, of Appropriation Ordinance No. 18, 1931, be and the same is hereby amended to read as follows, to-wit: 12-6 Division of Sidewalks and Curbs.

Cement finishers @ 70c	$1,020.00
Trucks @ 50c to 55c	1,600.00
Laborers @ 45c and 50c	4,580.00
	$7,200.00

Section 2. That Fund Sub-section 26 Department of Finance be amended to read as follows:

26. Mayor's Contingent Fund	$25,000.00

Section 3. This ordinance shall be in full force and effect from and after its passage, publication and approval according to law.

Which was read the first time and referred to the Committee on Finance.

By City Controller:

GENERAL ORDINANCE NO. 13, 1932

AN ORDINANCE transferring moneys from certain numbered funds and reappropriating and reapportioning the same to other numbered funds, and fixing a time when the same shall take effect.

BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF INDIANAPOLIS, INDIANA:

Section 1. That the sum of Thirty-eight Thousand Four Hundred Five Dollars ($38,405.00), now in the following funds of the Department of Public Sanitation, Sewage Disposal Plant, in the amount set out hereafter, to-wit:

Fund No. 6—	12	Laborers	$13,145.00
	8	Artisans	9,560.00
	3	Firemen	1,240.00
	3	Process Men	4,320.00
	3	Filter Men	4,320.00
	3	Control Men	4,320.00
	1	Mechanic	1,500.00

be and the same is hereby transferred therefrom and reappropriated in the total sum of Thirty-eight Thousand Four Hundred Five Dollars ($38,405.00) and reapportioned to the following funds in the Sewage Disposal Plant of the Department of Public Sanitations, in the amounts set out hereafter, to-wit:

Fund No. 12—	1	Carpenter	1,380.00
	1	Truck Driver and Miss.	1,200.00
	1	Painter	1,380.00
	1	Labor Foreman	2,100.00
	1	Mechanic Helper	1,500.00
	1	Blacksmith	1,440.00
	1	Mechanic	1,620.00
	1	Ash and Coal Handler	1,620.00
	1	Ass't Power Plant Foreman	1,740.00
Fund No. 12—	1	Change Man	1,350.00
	1	Teamster and Team	2,080.00
	2	Day Watchmen	1,380.00
	1	Truck Driver	1,290.00
	1	Water Boy	650.00
	10	Laborers	8,600.00
	6	Mechanics	7,100.00
	1	Ash and Coal Handler Helper	1,475.00

Section 2. This ordinance shall be in full force and effect from and after its passage and publication according to law.

Which was read the first time and referred to the Committee on Finance.

By Board of Public Safety:

GENERAL ORDINANCE NO. 14, 1932

AN ORDINANCE to amend Division E—Part Six of Section 865 of General Ordinance No. 121, 1925, by amending Sections E-603, E-604, E-605, E-606, E-610, E-611, E-612, E-613, E-614, E-615 and E-616; repealing all ordinances in conflict therewith and fixing a time when the same shall take effect.

BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF INDIANAPOLIS, INDIANA:

Section 1. That Division E—Part Six of Section 865 of General Ordinance No. 121, 1925, be amended by amending Section E-603 entitled, "Method for Determining the Size of Warm Air Pipes, Wall Stacks and Furnaces for use in Grade C and D Buildings" to read as follows:

"SEC. E-603. METHOD FOR DETERMINING THE SIZE OF WARM AIR PIPES, WALL STACKS AND FURNACES.

The following method shall be used for calculating required sizes of warm air pipes, wall stacks and furnaces.

A.—SIZES OF BASEMENT WARM AIR PIPES.

a. Each First Floor Room.
Divide square feet of exposed glass by 12,

Divide square feet of net exposed wall, ceiling or floor by factors in Table A.

Divide cubic contents by 800, (Note 6)

Add together the above and multiply by 9.

The result is the area of the basement pipe in square inches.

Stated as an equation, this is,

$$\left\{\begin{array}{l}\text{The sum of:}\\ \text{Glass (sq. ft.) (Note 1)} \div 12\\ \text{Net Wall (sq. ft.) (Note 2)} \div \text{(Factor in Table A)}\\ \text{Cu. Contents (Note 6)} \div 800\end{array}\right\} \times 9 = \text{Area of Basement Pipe}$$

b. EACH SECOND FLOOR ROOM

Divide square feet of exposed glass by 12,

Divide square feet of net exposed wall, ceiling or floor by factors in Table A.

Divide cubic contents by 800, (Note 6)

Add together the above and multiply by 6.

The result is the area of the basement pipe in square inches. (See Sec. E-606 c)

Stated as an equation, this is,

$$\left\{\begin{array}{l}\text{The sum of:}\\ \text{Glass (sq. ft.) (Note 1)} \div 12\\ \text{Net Wall (sq. ft.) (Note 2)} \div \text{(Factor in Table A)}\\ \text{Cu. Contents (Note 6)} \div 800\end{array}\right\} \times 6 = \text{Area of Basement Pipe}$$

c. EACH THIRD FLOOR ROOM

Divide square feet of exposed glass by 12,

Divide square feet of net exposed wall, ceiling or floor by factors in Table A.

Divide cubic contents by 800, (Note 6)

Add together the above and multiply by 5.

The result is the area of the basement pipe in square inches.

Stated as an equation, this is,

$$\left\{\begin{array}{l}\text{The sum of:}\\ \text{Glass (sq. ft.) (Note 1)} \div 12\\ \text{Net Wall (sq. ft.) (Note 2)} \div \text{(Factor in Table A)}\\ \text{Cu. Contents (Note 6)} \div 800\end{array}\right\} \times 5 = \text{Area of Basement Pipe}$$

d. Basis of Working Rules for Pipes

These formulae are for 70 degrees temperature difference (outside temperature zero, inside temperature 70 degrees Fahrenheit). When temperature difference is more than 70 degrees, add 1½% per degree above 70 degrees to final figures. When temperature difference is less than 70 degrees, deduct 1½% per degree below 70 degrees from final figures.

The value as given in Table A for use in the working rules are derived as follows:

EXAMPLE:

The unit of calculation adopted for this is the equivalent of 1000 b. t. u. transmitted. Any other number than 1000 might be selected if desired and the result would be the same. Calculations are based on the commonly accepted data for heat loss through different types of walls. Thus, the factor 60, Item No.1, Table A, is obtained in the following manner: The rate of heat transmission through a wall consisting of siding, paper, sheathing, studding, lath and plaster, is 0.238 b. t. u. per square foot, per hour, per degree difference between room and outside temperatures. At 70 degrees inside and zero outside, one square foot of wall will transmit $0.238 \times 70 = 16.66$ b. t. u. per hour. 1000 b. t. u. will then be lost through $1000 \div 16.66 = 60$ square feet of wall. Since it is found from experiment that one square inch of first floor leader pipe delivers 111 b. t. u., it will require $1000 \div 111 = 9$ square inches to compensate for the loss through 60 square feet of wall. From this we derive the formula:

$$\frac{W}{60} \times 9 = \text{Area of first floor leader}$$

Substituting 167 for the second floor and 200 for the third floor in place of 111, gives the factors 6 and 5 respectively.

Other values in Table A for the different types of walls were obtained by substitution of proper coefficient of heat transmission instead of 0.238 in the above formula.

Co-efficients used in Table A taken from A. S. H. & V. E. Guide 1929.

e. Factors—Table A.

EXPOSED WALLS

No. 1—	(a)	Frame Wall constructed of siding, paper, sheathing, studding, lath and plaster.....	60
	(b)	Same (1-a) construction substituting ½" fibrous board or equivalent for the lath.....	80
	(c)	Same (1-a) construction with additional 3½" insulating fill between studding.....	140
		For stucco on frame walls, use the same values as for frame with siding as shown in 1—(a), 1—(b) and 1—(c).	
No. 2—		9" Brick wall plastered on one side.....	40
No. 3—	(a)	9" Brick wall, air space, furred and plastered..	57
	(b)	Same (3-a) construction substituting ½" fibrous board or equivalent for the lath.....	84
No. 4—		13" Brick wall, plastered on one side.....	52
No. 5—	(a)	13" Brick wall, air space, furred and plastered	69
	(b)	Same (5-a) construction substituting ½" fibrous board or equivalent for the lath.....	97
No. 6—		4" brick, 4" or 8" hollow tile plastered.....	57
No. 7—	(a)	4" brick, paper, sheathing, studding, lath and plaster, (brick veneer).....	58
	(b)	Same (7-a) construction substituting ½" fibrous board or equivalent for the lath.....	84
	(c)	Same (7-a) construction with additional 3½" insulating fill between studding.....	158
No. 8—		Stucco on 8" Hollow tile, and plaster.....	48
No. 9—	(a)	Stucco on 8" Hollow tile, furred and plastered	65
	(b)	Same (9-a) construction substituting ½" fibrous board or equivalent for the lath.....	95

CEILINGS WITH ATTIC SPACE ABOVE

No. 10—	(a)	Lath and plaster without floor above.....	50
	(b)	Same (10-a) construction substituting ½" fibrous board or equivalent for the lath.....	70

(c) Same (10-a) construction with additional ½" fibrous board or equivalent nailed on top of joists 90

(d) Same (10-a) construction with additional 3½" insulating fill between joists.....150

No. 11—(a) Lath and plaster with tight floor above..... 90

(b) Same (11-a) construction substituting ½" fibrous board or equivalent for the lath.....104

(c) Same (11-a) construction with additional 3½" insulating fill between joists.....183

No. 12—(a) Metal without floor above..... 40

(b) Same (12-a) construction with additional ½" fibrous board or equivalent between metal and joists 65

(c) Same (12-a) construction with additional ½" fibrous board fastened on top of joists..... 85

(d) Same (12-a) construction with additional 3½" insulating fill between joists.....145

No. 13—(a) Metal with tight floor above..... 75

(b) Same (13-a) construction with additional ½" fibrous board between metal and joists..... 95

(c) Same (13-a) construction with additional 3½" insulating fill 176

CEILINGS
WITHOUT ATTIC SPACE ABOVE—
PART OF THE ROOF

No. 14—(a) Lath, plaster, rafter, sheathing, any type of shingles or roofing..... 57

(b) Same (14-a) construction substituting ½" fibrous board or equivalent for the lath..... 74

(c) Same (14-a) construction with additional 3½" insulating fill.....130

FLOORS
OVER EXPOSED OR UNHEATED SPACES

No. 15—(a) Double floor, on joists..... 42

(b) Same (15-a) construction with additional ½" fibrous board fastened to bottom of joists.... 88

(c) Same (15-a) construction with sheathing fastened to bottom of joists and with additional 3½" insulating fill between joists.....140
The substitution of ½" insulating materials for sheathing should not be considered as having any additional insulating value.

EXPLANATORY NOTES

Note 1. In obtaining glass surface use full casement openings. An outside door is figured as glass.

Note 2. To obtain net outside wall multiply height by width and deduct all windows and outside doors, as obtained in Note 1. For all rooms with attic spaces immediately above, full ceiling areas shall be taken into account, using table A. Floors over unheated spaces shall be taken into account, using Table A. For walls and doors between heated and unheated spaces—use 50% of similar outside exposure.

Note 3. For rooms having unusual exposure, (ordinarily north, northeast and northwest,) add 15% to the calculated pipe area.

Note 4. Use no basement warm air pipe less than 8 inches in diameter. If a basement warm air pipe figures not to exceed 10% greater area than any standard commercial size then the nearest commercial size shall be used, provided however, that the total leader pipe area for each floor shall in no case be less than the total calculated requirements.

Note 5. It is understood in using the above values for determining basement warm air pipe areas, that these pipes should be run comparatively straight and that they should not be over 12 feet in length. Sharp turns and long pipes should have extra capacity. When warm air pipes exceed 12 ft. in length or have more than two 90 degree turns, the next larger commercial size pipe must be used.

Note 6. The value of 800 (used in cubic contents) is for an estimated air change of one room volume per hour. To provide for 1½ room volume use the figure 600. For 2 room volumes use the figure 400.

B—SIZE OF WALL STACKS

a. First Floor Rooms

All first floor fittings and connections shall maintain a free area equal to the round basement pipes leading to them.

b. Second Floor Rooms

Not less than 70% of calculated basement pipe area as determined in (b).

c. Third Floor Rooms

Not less than 70% of calculated basement pipe area as determined in (c).

d. Where two or more rooms are heated from the same basement pipe and stack, the area of such basement pipe and stack shall equal the combined areas."

Section 2. That Division E—Part Six of Section 865 of General Ordinance No. 121, 1925 be amended by amending Section E-604 entitled, "Transition, Fittings and Stacks" to read as follows:

"SEC. E-604. TRANSITION, FITTINGS AND STACKS.

a. Transition from warm air pipes to stacks or register heads shall be made with a well designed elbow or boot.

b. Rectangular warm air pipes shall in no case have the greater inside dimension more than three and one-half (3½) times the lesser inside dimension. (This does not apply to wall stacks.)

c. No stack shall be less than seventy percent (70%) of the basement warm air pipe area."

Section 3. That Division E—Part Six of Section 865 of General Ordinance No. 121, 1925 be amended by amending Section E-605 entitled "Method of Determining Size of Registers" to read as follows:

"SEC. E-605. METHOD OF DETERMINING SIZE OF REGISTERS.

All registers shall have a free area at least equal to the area of the basement pipes leading to them, and shall be of the approximate width of the stacks or fittings to which they are attached."

Section 4. That Division E—Part Six of Section 865 of General Ordinance No. 121, 1925 be amended by amending Section E-606 entitled, "Method of Determining Size of Furnace" to read as follows:

"SEC. E-606. METHOD OF DETERMINING SIZE OF FURNACE.

a. Add together the leader pipe areas (expressed in square inches) necessary for heating the building, as determined by the foregoing calculated requirements, (Sec. E-603) and install a furnace of sufficient rated capacity.

b. Every installer of warm air furnaces in the City of Indianapolis shall file with the Combustion Engineer a list of certified measurements for each size and style of furnace supplied or installed by him. Said certification shall give identification marking of each style and size, heating surface, grate area, ratio of heating surface to grate area and heating capacity. The above rating shall be figured according to the following formula:

FURNACE RATING FORMULA

$$L = 1.75\ G\ [1 + 0.02\ (R - 20)]$$

L = square inches of warm air pipe connected to the furnace as calculated.

G = grate area in square inches; the area of the fire pot at the grate level, its most restricted area.

R = ratio of heating surface area to grate area;

1.75 = a constant based upon the results obtained by Research on a furnace having 20 square feet of heating surface for each square foot of grate.

The above equation is based on the:

Efficiency of heater 0.55; combustion rate of 7.5 pounds of coal per sq. ft. of grate per hour; calorific value of fuel 12,790 B. t. u. per lb.; percentage of heat available at register 0.75; average B. t. u. delivering value of one sq. inch of leader pipe area, assuming half of the heat is sent to each floor, 136; and on an operating temperature of 175 deg. F. at the register.

The formula allows 1.75 square inches of warm air pipe area for each square inch of grate area, for the furnace having a ratio of heating surface to grate surface of 20 to 1. For furnaces having other ratios of heating surfaces to grate surface, it adds 2 per cent or deducts 2 per cent for each unit above or below a ratio of 20.

APPLICATION:

		No. 1 Positive Correction	No. 2 No Correction	No. 3 Negative Correction
Grate area, sq. inch	=	346	346	346
Heating surface area, sq. in.	=	7540	6920	5665
Ratio heating surface area to grate area	=	21.8 to 1	20.0 to 1	16.4 to 1
R—20	=	1.8	0.0	–3.6
Correction percent	=	3.6	0.0	–7.2
1.75 G	=	606	606	606
L = 1.75 G + Correction	=	628	606	562

Every warm air furnace shall be equipped with a water pan or other humidifying device.

c. SECOND FLOOR HEATING

In second floor duplex, flats or apartments where separate heating plants are used, add 50% to the total net calculated areas as determined in Sec. E-603. This represents the required furnace capacity in square inches of leader pipe area. Leaders and stacks are not to be increased.

d. GAS OR OIL-FIRED FURNACE.

In the application of any gas or oil fired furnace to any warm air heating system, any deviation from the Code shall apply only to the furnace itself. Exception: See Sec. E-614-j.

e. LIMITATIONS OF THE CODE.

The formulas for determining the size of basement warm air pipes are applicable to rooms of the proportions found in the average residence. For rooms having ratios of glass to cubic contents falling outside of these average proportions, adjustment must be made in the number of air changes to be used. The formulas are not applicable to pipes having diameters greater than 14 inches or lengths greater than 12 to 16 feet.

The rating formula is applicable to furnaces of the common type of construction having round firepots and ratios of heating surfaces to grate area between 15 and 30. The formula is not applicable to furnaces of special construction or equipped with unusual special features, to ratios outside of 15 to 30, nor to coals deviating materially from 12000 B. t. u. per pound.

f. Certified measurements of warm air furnaces issued by authority of the National Warm Air Heating Association after grate areas and heating surfaces have been accurately measured, shall be accepted as standard ratings."

Section 5. That Division E—Part Six of Section 865 of General Ordinance No. 121, 1925, be amended by amending Section E-610 entitled, "Casings" to read as follows:

"E-610. CASINGS.

(a) Warm Air furnaces shall be enclosed in metal casings or walls of brick, tile or concrete.

(b) Portable. Sheet metal casings including casing tops or bonnets shall be made of galvanized sheets, not lighter than 28 U. S. Standard Gauge. They shall fit the castings and casing rings closely, so as to be dust tight, and shall be securely fastened to the front. The casing shall be lined from the upper casing ring down to a line on a level with the grate.

(c) When side collars are used the casing top or bonnet must be of sufficient height so that the largest warm air pipe can be taken from side without ovaling. In no case shall a distance less than eight inches (8") be maintained between the top of any furnace and the bonnet.

(d) The clearance between any combustible beam or joist and above the top of any furnace or smoke pipe shall be at least one(1) foot and the furnace may be depressed in the floor of the basement in order to provide this clearance. (See Sec. A-921).

(e) Openings for side casing collars shall be cut into the casing top or bonnet, so that the tops of all openings are on the level. Casing collars shall be fitted into place with a proper flange, or bead on the outside and drawn up on the inside, making a dust tight joint. All collars shall be of the same size as the warm air pipes to which they are connected.

(f) All metal casing tops shall be insulated with magnesia, asbestos boiler covering or sand.

(g) Brick, cement or hollow tile casings shall be constructed as follows: Walls shall be not less than eight (8) inches in thickness and shall be constructed air tight. The least inside dimensions of rectangular casings shall be the same as that of the portable casing of a corresponding size of furnace. Walls of masonry set furnaces shall be carried to the same height as the walls of a portable furnace allowing not less than eight (8) inches between the top of the furnace and the bottom of the top cover. After placing the collars for the warm air pipes, the masonry shall be continued up even with the top of the collars, spacing rods of bar iron on edge or angle irons, shall be laid across the furnace top. These shall be covered with sheet

iron. The sheet iron shall be covered with masonry and the side walls shall be run four (4) inches above the masonry bed. A galvanized iron casing bonnet may be used on masonry set furnaces.

Provisions shall be made in the walls for a manhole to give ingress to the heater."

Section 6. That Division E—Part Six of Section 865 of General Ordinance No. 121, 1925, be amended by amending Section E-611 entitled, "Warm Air Pipes in the Basement or Cellar," to read as follows:

"SEC. E-611. WARM AIR PIPES IN BASEMENT.

Warm air pipes in basement or cellars shall be installed as follows:

(a) All warm air pipes shall be made of bright tin not lighter than IC, or galvanized iron. Side seams shall be locked seams. All joints shall be either double seamed or lapped not less than one and one-quarter inches (1¼"). Such joints shall be match-beaded, or beaded and soldered or riveted. All pipes and fittings shall be properly secured to ceiling or joist. No solder or riveted joint is required where round pipe slips over the casing collar or enters boot or box. Any pipe twelve inches (12") or greater in diameter shall not be made of material lighter than IX tin or No. 28 U. S. Standard Gauge galvanized iron.

(b) All warm air pipes in the basement shall have an upward pitch of not less than one inch (1") per running foot.

(c) No warm air pipe shall run within one inch (1") of any woodwork unless such woodwork is covered with asbestos paper and the paper covering with tin or iron.

(d) All warm air pipes in the basement shall be provided with dampers supported on both sides not more than two feet from the casing.

(e) Where warm air pipes pass through or into unheated spaces separated from the furnace room they shall be insulated with not less than three layers of air cell asbestos paper or the equivalent."

Section 7. That Division E—Part Six of Section 865 of General Ordinance No. 121, 1925, be amended by amending Section E-612 entitled, "Wall Stacks," to read as follows:

"SEC. E-612. WALL STACKS.

(a) Single Stacks. All single wall stacks or wall pipes, heads, boots, ells, tees, angles and other connections shall be made of tin or galvanized iron and shall be covered with not less than one thickness of 12 lbs. per one hundred (100) square feet of asbestos paper. All such stacks shall be braced in a proper manner so as not to obstruct the flow of air but to retain the full capacity throughout. All joints shall be locked and held in place by means of lugs, or straps. No joint, either horizontal or vertical, shall depend wholly upon solder to make it tight. All openings between studs, where single wall stacks are used, shall be lined with metal lath and plaster or an approved fire resisting substitute.

(b) Double Stacks. All double wall stacks or wall pipes, heads, ells, tees, angles, and other connections shall be made of bright tin not lighter than IC or galvanized iron and shall be made double from basement fitting to the top of each and every stack and register head on all floors. There shall be a continuous uniform air space of not less than five sixteenths (5/16) of an inch, which must be maintained between the outer and inner walls of all such pipes and fittings of all kinds, styles and description. Such pipes, heads, and other fitting shall be of an approved design.

(c) All pipes and fittings must be secured firmly in place by lugs or straps attached to the outer walls of stacks and fittings and no nails shall be driven through these stacks or fittings at any point.

No lugs or straps shall be formed by cutting holes in outer or inner walls of stacks and fittings.

No pipes or fittings shall be used which depend wholly on soldered joints.

The various members shall be so made that all joints are locked or soldered and the several members shall be attached to each other with slip joints which are, for the purpose intended, air tight.

(d) Where stacks, heads, boots or other fittings, go through the first floor all openings around such heads, boots stacks, or other fittings must be filled with asbestos paper, cement or other incombustible material to make the openings gas and dust tight.

(e) Wall stacks and pipes shall not be enclosed in new structures until inspected and approved and where same are installed in existing structures, inspector may require such openings or other means to insure compliance with this Code."

Section 8. That Division E—Part Six of Section 865 of General Ordinance No. 121, 1925, be amended by amending Section E-613 entitled "Registers" to read as follows:

"SEC. E-613. REGISTERS.

(a) When baseboard or wall registers are used, they shall be properly sealed to the stack head in such a manner as to prevent any leakage of air between the head and the register.

(b) Registers for warm air, warm air pipes or wall stacks shall not be located in outside walls unless properly insulated with at least one inch (1") air cell covering or its equivalent.

(c) Any furnace system having not more than two warm air openings, at least one of these openings shall be without valve or louvers and the pipe thereto shall be without damper."

Section 9. That Division E—Part Six of Section 865 of General Ordinance No. 121, 1925, be amended by amending Section E-614 entitled, "The Air Supply to the Furnace," to read as follows:

"SEC. E-614. THE AIR SUPPLY TO FURNACE.

(a) The air supply to the furnace may be taken from outside or from within the building or may be taken partially from outside and partially from within. In no case, however, shall air be supplied to any furnace from any basement or furnace room, not occupied as living quarters.

(b) The cold air intake or return where air is taken from within the building shall have a net area throughout its entire length of not less than the combined net area of all warm air pipes leading from the furnace. This may be maintained in one or more ducts. No reverse incline or air trap will be allowed in any section thereof.

(c) When the cold air supply is taken wholly from the outside of the building the supply duct at its most contracted area must equal or exceed eighty per cent (80%) of the combined area of all warm air pipes leading from the furnace.

(d) Cold air ducts, except as stated in (f), shall be constructed of metal, tile or other non-combustible material having smooth inner surface and shall maintain a constant net area

throughout their entire length. All joints shall be made dust tight. Horizontal rectangular return ducts shall have at least 10% greater area than vertical connecting pipes.

(e) Where a boot or shoe is connected to the casing at the base, the opening shall not extend higher than a line on the level of the top of the grade of the furnace. The width of the shoe shall be of proper measurement to make the area at all points at least equal to that of the round or square pipe to which it is connected. This boot or shoe shall be of streamline transition construction.

(f) Wherever the space between the joists is used to convey cold air overhead bridging and bracing shall be removed and the area sealed with a sheet metal pan. The connection of this pan to the boot or shoe shall be made of galvanized iron not lighter than 28 U. S. Standard Gauge, and shall have a transition collar, the top area of which shall be at least 10% greater than the area of the connecting pipe.

(g) When it is necessary to set the furnace over a pit and connect up cold air under the basement floor, such pit or cold air trench shall not exceed eighteen inches (18") in depth below the casing base ring and width of the trench or trenches shall be of proper measurement to make the area at least 10% greater than the pipe to which it is connected. The connection between the cold air pipe or duct and the underground pit shall be made with a transition fitting as described in "(f)" of this section.

(h) The cold air face or faces shall be made of wood, or metal. Where cold air face is placed in a seat or side wall (whether furnished by owner, general contractor or furnace contractor) the open work of face must extend to within at least one inch (1") of the floor line.

The free area of cold air faces shall be at least equal to the free area of the duct or ducts to which they are connected

(i) The effective area of a vertical cold air face lies within fourteen inches (14") of the floor line, hence, the capacity of any vertical cold air face shall be determined by multiplying the base line in inches by not to exceed fourteen inches (14") in height and deducting for the grills or cross bars.

(j) This Code applies only to gravity warm air systems. When a fan or fans are installed in the air supply duct or elsewhere in the air system, furnace sizes and pipe sizes as

calculated herein shall not be required but installer shall guarantee specific performance.

Section 10. That Division E—Part Six of Section 865 of General Ordinance No. 121, 1925, be amended by amending Section E-615 entitled, "Smoke Pipes" to read as follows:

"SEC. E-615. SMOKE PIPES AND FLUES.

(a) The smoke pipe shall be as short and direct as consistent with the location of the furnace. Furnace shall be set to eliminate as far as possible any right angle bends or short radius bends in the smoke pipe. Right angle bends and short radius bends in the smoke pipe may be permitted when chimney is of sufficient height in excess of minimum requirement to overcome draft loss created by such right angle or short radius bends. No smoke pipe shall exceed in length one third (1/3) the height of the flue as measured from the top of grate bars to the top of chimney, except that a smoke pipe up to ten (10) feet long will be permitted connected to a chimney of minimum height as set out in paragraph (f) below.

Smoke pipe shall be made of either black or galvanized iron not lighter than No. 24 U. S. Standard Gauge and shall be the full size of the collar on the furnace throughout its entire length. It must have no openings for attaching any fireplace, stove, range, water heater, gas or ventilating connection. It shall be lock seamed or riveted; all joints shall lap not less than one and one-half (1½) inches and it shall be rigidly secured. Cast iron smoke pipe may be used.

All smoke pipes shall be provided with check dampers, placed on the side of the pipe or at the end of a tee. When cast iron smoke pipe dampers are used they must be placed between the check damper and the furnace and supported on both sides of the pipe.

(b) Where the smoke pipe enters the flue, a thimble shall be cemented into the flue and the connections thereto made air tight. Should any smoke pipe come within eighteen (18) inches of any combustible material, such combustible material must be covered with asbestos paper and a metal shield so fastened that a two (2) inch air space exists between this shield and the combustible material. This shield shall be not less in size than twice the diameter of the smoke pipe and

of sufficient length to cover the wood at all points. No smoke pipe shall be nearer than eight (8) inches to any combustible material.

(c) No smoke pipe shall project through any external wall or window or any wooden or combustible partition.

(d) No furnace connection shall be made to a flue without a cast iron or steel cleanout having first been provided in the flue. Top of such cleanout shall be not more than ten (10) inches nor less than six (6) inches below the bottom of smoke pipe opening. The base of flue shall be filled up to the bottom of the cleanout; all of which must be made air tight.

(e) No warm air furnace as described in this part shall be connected to a flue of less dimensions than eleven and one quarter (11¼) inches by eleven and one quarter (11¼) inches, except that warm air furnaces having a grate area less than two hundred fifty (250) square inches may be connected to a flue no smaller than seven and one quarter (7¼) inches by eleven and one quarter (11¼) inches. Round flues of equal area to rectangular flues or round flues whose inner diameter is not less than the side measurement of a square flue, shall be considered equivalent to any rectangular or square flue respectively.

Chimneys and flues in Class D Buildings shall conform to requirements set out in Section A-822, Section A-941, and Section E-808.

(f) No chimney or flue to which a warm air furnace is connected shall be less than twenty-eight (28) feet in height above the grate bars of the furnace and such chimney or flue also shall extend to a height at least two (2) feet above the highest point of a pitched roof or four (4) feet above any flat roof. The top of no chimney or flue shall be less than six (6) feet from any other roof or woodwork.

(g) The following exceptions shall apply to this section. When a new furnace is placed in an existing structure, the combustion engineer may grant permission to use an existing chimney not entirely in conformity with the requirements herein set forth if he deems same reasonably safe and sufficient. When a warm air furnace is set to replace an old furnace of like size and without the addition of warm air openings or registers, the existing chimney may be used if satisfactory draft was obtained for the furnace so replaced."

Section 11. That Division E—Part Six of Section 865 of General Ordinance No. 121, 1925, be amended by amending Section E-616 entitled, "Single Pipe Furnaces," to read as follows:

"SEC. E-616. PIPELESS OR ONE PIPE FURNACES.

(a) When but one duplex grating is used for both warm air and cold air in a so-called pipeless furnace, the area of the cold air intake shall be at least equal to the area of the warm air outlet of the grating. Sec. E-610 relative to casings shall not govern when this type of furnace is installed, but the following specifications shall be followed:

The inner and outer casings of this type of furnace may be made of either black or galvanized iron not lighter than No. 28 U. S. Standard Gauge. A uniform air space shall be maintained at all points between the inner and outer casing. In no case shall the top of the heater be allowed closer than twelve inches (12") to any ceiling or joists above the furnace.

(b) Where joists are cut to accommodate this furnace, headers shall be put in and braced.

(c) Method of determining size of warm air pipe as given in Sec. E-603 shall not apply to pipeless furnaces.

(d) Where one warm air register face is used and separate face or faces for cold air supply are used, then Sec. E-611, E-613 and E-614 shall apply."

Section 12. All ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 13. This ordinance shall be in full force and effect from and after its passage and approval by the Mayor and due publication as by law required.

Which was read the first time and referred to the Committee on Public Safety.

By Board of Public Safety:

GENERAL ORDINANCE NO. 15, 1932

AN ORDINANCE to amend Section F-609 of Division F, Part Six of Section 865 of General Ordinance No. 121, 1925, repealing all ordinances in conflict therewith and fixing a time when same shall take effect.

BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF INDIANAPOLIS, INDIANA:

Section 1. Section F-609 of the Indianapolis Building Code, 1925, entitled "Relief Valves," shall be and is hereby amended to read as follows:

"SEC. F-609. RELIEF VALVES.

(a) To protect property owners against explosion, all Range Boilers, Hot Water Storage Tanks, and Water Heaters shall be equipped with a Pressure Relief Valve either of the Laminated Metal Diaphram type or of the Dead Weight type. In addition, there shall also be installed a Check Valve and a Water Shut-off valve; the three valves to be installed between the hot water tank and the street main in the positions and order herein set forth.

(b) Relief Valve shall be installed between the hot water tank and the street main so that there is no stop or valve of any kind between said Relief Valve and the hot water tank. The Check Valve shall be placed between the Relief Valve and a Water Shut-off Valve which shall be placed so that hot water tank may be removed without shutting off the water supply from any of the rest of the building.

(c) Relief Valve shall be not less than one-half inch nominal pipe size, either of the Laminated Metal Diaphram type or of the Dead Weight type, with corrosion resisting seat and shall be set and sealed to open at one hundred and twenty-five pounds (125 lbs.) pressure per square inch. No spring loaded pop-safety valve shall be used. The Commissioner of Buildings shall approve relief valves for this service and may approve suitable combination valves incorporating any or all of the types of valves required by this section.

(d) Waste side of Relief Valve shall not be directly connected into sewer, but shall have a visible outlet, so placed as to remove possible scalding hazard.

(e) Where stops or valves of any type are installed between the heater and the tank, an additional approved Relief Valve as above described shall be installed between the heater and the valve.

(f) These valves shall be required on all new installations and on all repairs or replacements in which a new tank is furnished.

Section 2. All ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 3. This ordinance shall be in full force and effect from and after its passage and approval by the Mayor and due publication as by law required.

Which was read the first time and referred to the Committee on Public Safety.

By Board of Public Safety:

GENERAL ORDINANCE NO. 16, 1932

AN ORDINANCE to amend Section A-223, sub-paragraph (x) of Division A—Part Two of Section 865 of General Ordinance No. 121, 1925, repealing all ordinances in conflict therewith and fixing a time when same shall take effect.

BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF INDIANAPOLIS, INDIANA:

Section 1. Sub-paragraph (x) Section A-223 of the Indianapolis Building Code, 1925, shall be amended by the addition of the following:

"A permit shall be required, the fee for which shall be one dollar ($1.00), for each replacement of hot water tank used in connection with a Range, Boiler or Hot Water Heater."

Section 2. All ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 3. This ordinance shall be in full force and effect from and after its passage and approval by the Mayor and due publication as by law required.

Which was read the first time and referred to the Committee on Public Safety.

By Board of Public Safety:

GENERAL ORDINANCE NO. 17, 1932

AN ORDINANCE to amend Division E—Part Five of Section 865 of General Ordinance No. 121, 1925, by amending Sec. E-502, repealing all ordinances in conflict therewith and fixing a time when same shall take effect.

BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF INDIANAPOLIS, INDIANA:

Section 1. That Division E—Part Five of Section 865 of General Ordinance No. 121, 1925, known as the Indianapolis Building Code of 1925 be amended by amending Sec. E-502 entitled "Guyed Sheet Metal Stacks" to read as follows:

"SEC. E-502. GUYED SHEET METAL STACKS.

(a) Guyed sheet metal stacks shall be of such gauge as will allow for corrosion, the support of its own weight and prevent buckling under the weight and tension of guy wires and the stress due to wind pressure.

The degree of permanence required shall govern largely the thickness of plate to be used. The following table shall be used as a basis for determining the plate thicknesses:

Diameter, inches	Thickness	U. S. Std. Gauge No.
18 to 22	.1094″	12
22 to 26	.1094″ to .1406″	12 to 10
26 to 30	.1406″	10
30 to 36	.1406″ to .1719″	10 to 8
36 to 42	.1406″ to .1875″	10 to 7
42 to 48	.1406″ to .2500″	10 to 3

Plates may be riveted or shop welded. When riveted, rivets shall be not less than 5/16″ diameter for Nos. 8 to 12 gauge plate, 7/16″ diameter for Nos. 4 to 7 gauge plate and ½″ diameter for No. 3 gauge plate. The circumferential pitch of rivets shall not be more than three (3) inches and the longitudinal pitch from three (3) to four (4) inches. It is considered best practice to assemble sections so that the lower end of the upper section slips into the lower section.

(b) Guys shall be stranded galvanized or other rust resisting wire rope without splices and shall have turn-buckles except by special permission, approved clamps may be used. Guys shall be figured by placing the entire overturning load on one (1) strand of each set.

(c) The anchorage shall be such as will withstand its portion of the wind load and shall be provided with eye-bolt or other suitable method to prevent cutting or other failure of the guy wires at the anchorage. No anchorage shall be made to a parapet wall unless a plate or other satisfactory method is used to distribute the load below the roof line.

(d) Sheet metal stacks up to and including twenty-five (25) feet in height shall have at least one (1) set of four

(4) guys not less than five-sixteenths (5/16) inch stranded cable as described in paragraph (b) above.

Sheet metal stacks over twenty-five (25) feet in height up to and including one hundred (100) feet in height shall have at least two (2) sets of four (4) guys not less than three-eighths (⅜) inch stranded cable as described in paragraph (b) above.

Sheet metal stacks over one hundred (100) feet in height shall have at least three (3) sets of four (4) guys not less than seven-sixteenths (7/16) inch stranded cable as described in paragraph (b) above.

When more than one set of guys are required, the upper set shall be placed not more than twelve (12) feet down from the top. When two sets of guys are required, the lower set shall be placed two-thirds (2/3) the distance from the base to the upper set. When three sets of guys are required the lower set shall be placed one half (½) the distance from the base to the upper set and the middle set approximately one half (½) way between the upper and lower set.

Lower set of guys shall be anchored at a distance from the base of the sheet metal stack equal to their height above the point of anchorage. Sets of guys above the lower set shall be anchored at a distance equal to or greater than the distance between the stack and the anchorage of the lower guys and should be as near as practical at a distance from the stack equal to their own height above their respective anchorages. When anchorages are not on the same elevation as the base of the sheet metal stack, the lower set of guys shall be at an angle of forty-five (45) degrees or more with the center line of the stack and upper sets shall approach as near as possible forty five (45) degrees. When it is impossible to use sets of four guys permission may be granted by the Combustion Engineer for the use of rigid supports or other satisfactory methods of guying.

(e) Sheet metal stacks used to top out masonry flues and not exceeding sixteen (16) inches in diameter and/or fifteen (15) feet in height above the top of masonry flue, shall not be goverened by the above regulations but shall be erected in such a manner as to insure complete safety and be approved by the Combustion Engineer.

(f) In manufacturing establishments, smoke stacks built of iron or steel shall not be used or erected in such a manner as to pass through the roofs of such buildings unless such metallic smoke pipes, flues or stacks are separated from any woodwork with a ventilating air space at least twelve (12) inches in any direction and in addition such woodwork shall be substantially covered with at least ¼" sheet asbestos or equal incombustible material.

Section 2. All ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 3. This ordinance shall be in full force and effect from and after its passage, approval by the Mayor and due publication as by law required.

Which was read the first time and referred to the Committee on Public Safety.

ORDINANCES ON SECOND READING

Mr. Houck called for General Ordinance No. 10, 1932, for second reading. It was read a second time.

On motion of Mr. Houck, seconded by Mr. Wheatley, General Ordinance No. 10, 1932, was ordered engrossed, read a third time and placed upon its passage.

General Ordinance No. 10, 1932, was read a third time by the Clerk and passed by the following roll call vote:

Ayes, 6, viz: Mr. Henry, Mr. Houck, Mr. Hildebrand, Mr. Tennant, Mr. Wheatley, Vice-President Welch.

Mr. Houck called for General Ordinance No. 11, 1932, for second reading. It was read a second time.

On motion of Mr. Houck, seconded by Mr. Wheatley, General Ordinance No. 11, 1932, was ordered engrossed, read a third time and placed upon its passage.

General Ordinance No. 11, 1932, was read a third time by the Clerk and passed by the following roll call vote:

Ayes, 6, viz: Mr. Henry, Mr. Houck, Mr. Hildebrand, Mr. Tennant, Mr. Wheatley, Vice-President Welch.

Mr. Houck called for Appropriation Ordinance No. 1, 1932, for second reading. It was read a second time.

On motion of Mr. Houck, seconded by Mr. Henry, Appropriation Ordinance No. 1, 1932, was ordered engrossed, read a third time and placed upon its passage.

Appropriation Ordinance No. 1, 1932, was read a third time by the Clerk and passed by the following roll call vote:

Ayes, 6, viz: Mr. Henry, Mr. Houck, Mr. Hildebrand, Mr. Tennant, Mr. Wheatley, Vice-President Welch.

Mr. Houck asked for suspension of the rules for further consideration and passage of General Ordinance No. 13, 1932. The motion was seconded by Mr. Henry and passed by the following roll call vote:

Ayes, 6, viz: Mr. Henry, Mr. Houck, Mr. Hildebrand, Mr. Tennant, Mr. Wheatley, Vice-President Welch.

The rules were suspended.

The Council reverted to a previous order of business.

COMMITTEE REPORT

Indianapolis, Ind., February 1, 1932.

To the President and Members of the Common Council of the City of Indianapolis, Indiana:

Gentlemen:

We your Committee on Finance, to whom was referred General Ordinance No. 13, 1932, entitled Transfer of Funds—Department of Public Sanitation, beg leave to report that we have had said ordinance under consideration, and recommend that the same be passed under suspension of the rules.

J. A. HOUCK, Chairman.
CARL A. HILDEBRAND.
LEO F. WELCH.
MAURICE E. TENNANT.

ORDINANCES ON SECOND READING

Mr. Houck called for General Ordinance No. 13, 1932, for second reading. It was read a second time.

On motion of Mr. Houck, seconded by Mr. Henry, General Ordinance No. 13, 1932, was ordered engrossed, read a third time and placed upon its passage.

General Ordinance No. 13, 1932, was read a third time by the Clerk and passed by the following roll call vote:

Ayes, 6, viz: Mr. Henry, Mr. Houck, Mr. Hildebrand, Mr. Tennant, Mr. Wheatley, Vice-President Welch.

MISCELLANEOUS BUSINESS

Mr. Houck announced that the Committee on Finance was not ready to report on General Ordinances Nos. 8 and 9, 1932, and asked for further time for consideration of said ordinances, which was granted.

On motion of Mr. Wheatley, seconded by Mr. Henry, the Common Council adjourned at 8:10 p. m.

We hereby certify that the above and foregoing is a full, true and complete record of the proceedings of the Common Council of the City of Indianapolis, held on the 1st day of February, 1932, at 7:30 p. m.

IN WITNESS WHEREOF, We have hereunto subscribed our signatures and caused the seal of the City of Indianapolis to be affixed.

Leo F. Welch

Vice-President.

Attest:

Henry O Goett

City Clerk.

(SEAL)