

COUNCIL CHAMBER, }
Ann Arbor, March 16th. 1896. }

Regular session.

Called to order by Pres. Hiscock.

Roll called. Quorum present.

Absent, Ald. Taylor and Cady.

PETITIONS AND COMMUNICATIONS.

A petition signed by A. H. Holmes and 16 others asking for a fire hydrant at the corner of Forest Ave. and Willard street was read and referred to the Fire Department and Water Committees.

A petition signed by Ross Granger and 13 others asking for an electric light at the corner of Huron and Ashley streets was read and referred to the Lighting Committee.

A communication signed by George P. Ottley asking for the payment by the city of a bill for medical attendance for his child injured in falling through an alleged defective sidewalk was read and referred to the Finance Committee.

The bids of Wm. Herz of \$28 and C. F. Staebler of \$43 for painting the Court House Clock were read and referred to the Finance Committee.

Detroit, Mich., March 9th, '95.
Glen V. Mills, City Clerk.

Ann Arbor, Mich.,

Dear Sir:—Answering yours of the 5th inst. we beg to advise that on October 3rd, 1895, we assigned to the Ann Arbor T.-H. Electric Company, Ann Arbor, Mich., our contract with the City of Ann Arbor for lighting same for a period of five years, beginning January 1st, 1896.

Trusting this gives you the information you desire, we are,

Yours truly,

Michigan Electric Company,

Jos. E. Lockwood, Pres.

To the President and Common Council of
the City of Ann Arbor.

Gentlemen:—I hereby tender my resignation as a member of the Board of Public Works of this city to take immediate effect. I take this opportunity to express my appreciation and gratitude to the President and each member of the Common Council who have ever accorded me as a member of the Board respectful, fair, and honest treatment.

Dated, Ann Arbor, Mich., March 16 '96.

A. M. Clark.

Ald. Maynard moved that the resignation of A. M. Clark as a member of the Board of Public Works be accepted.

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer, Brown, Shadford, Prettyman, Coon, Butterfield, Pres. Hiscock—12.

Nays—None.

Ald. Cady entered.

To the Honorable Common Council of
the City of Ann Arbor.

Gentlemen:—I hereby resign the office of a member of the Board of Public Works of the City of Ann Arbor.
Dated, March 16th, 1896.

Geo. W. Bullis.

Ald. Maynard moved that the resignation of Geo. W. Bullis as a member of the Board of Public Works be accepted.

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer, Brown, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock—13.

Nays—None.

To the Honorable Mayor and the Common Council of the City of Ann Arbor:

Gentlemen:—I desire to call your attention to the fact, that the salary paid the Treasurer (100.00 a year) is too small, the commissioner he receives in no way compensates him for the labor he performs. The Treasurer is required under the sewer ordinance to be in his office during business hours, he is also required to copy each roll twice to foot compare and furnish the tax payer with a copy of the roll so far as pertains to his taxes he is also obliged to furnish the Council with a statement of all unpaid sewer tax on the second Monday of May he is obliged to employ an extra clerk during the months of June, July, August, December, January and February in order to prepare receipts and sewer notices as required by the Charter. The Treasurer's whole time is occupied in keeping the books of his office in proper shape and making monthly reports as required by the Charter, the large bond required is quite a task and places your treasurer and the signers of his bond under such a responsibility that no man ought to be asked

to assume without a reasonable compensation therefore.

Section 69 of the charter provides that the salary of any officer may be increased by a vote of the people.

I would most respectfully ask that a resolution be passed at this session fixing the salary of the Treasurer at six hundred dollars a year, that the same be submitted to the voters at the spring election for their consideration.

All of which is most respectfully submitted.

C. H. Manly,
Treasurer.

Ald. Taylor entered.

By Ald Brown.

WHEREAS, it is the opinion of this Council that the salary of the City Treasurer should be raised and fixed and established at the sum of \$600 per annum, therefore be it

Resolved, 1st that a special election be and the same is hereby appointed to be held on the 6th day of April A. D. 1896 at 7 o'clock a. m. and to continue until 5 o'clock p. m. standard time of said day at the several places in the several wards of said city appointed for the charter election of said city to determine whether the salary be so fixed at \$600 per annum.

2nd. The City Clerk is hereby instructed to cause due notice of said special election to be given pursuant law.

3rd. The City Clerk is hereby instructed to cause to be provided for such special election 3000 ballots which shall consist of white paper of equal and convenient size one-half of which shall have printed thereon the words.

For establishing the salary of the City Treasurer at \$600 per annum—Yes.

For establishing the salary of the City Treasurer at \$600 per annum—No.

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer, Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock—14.

Nays—None.

Ald. Brown moved that Rule 21 of the Rules of the Common Council be suspended for this session.

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmen-

dinger, Koch, Snyder, Laubengayer, Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock—14.

Nays—None.

REPORTS OF STANDING COMMITTEES

FINANCE.

To the Common Council:

Your Committee on Finance would report that they have had the following bills under consideration and would recommend their allowance, and that warrants be ordered drawn for the same.

Respectfully submitted,

H. J. Brown,

C. H. Cady,

Emmett Coon,

Committee on Finance.

Dated this 16th day of March, 1896.

STREET FUND—STONE ACCOUNT.

Ann Arbor Savings Bank accounts assigned them:			
F L Allen, stone.....	\$	12 00	
Abram Beck		13 00	
Wm J Cochran		6 00	
Everet & Berney		11 40	
J Groff		4 20	
L D Grose		5 40	
Charles Griner		10 80	
Edward Hurst		10 20	
John Hurst		8 40	
Ed Hurst		1 80	
John Kittel		16 80	
Adam Seyfried		18 60	
Geo Schnierle		11 10	
Zenas Sweet		22 50	
C J Snyder		13 80	
David F Taylor		1 80	
John Hurst		1 60	
D F Taylor		12 60	
Chris Tessmer		5 70	
Solomon Zebbs		4 80	192 50
State Savings Bank accounts assigned them:			
Elias Saddler stone.....	\$	19 21	
Fred Rash		7 20	
Martin Negle		8 50	34 90
Cornelius Tuomey, stone.....		15 61	
Joseph Wagner		2 40	
Eugene Oesterlin		18 20	
William Osius		4 00	
W J Randall		15 60	
John Slator to Glen V Mills stone....		60	
E T Blake	stone.....	4 20	
W F Bird		5 40	
L N Bennett		1 80	
D Hiscock		1 20	
Heinzmann & Laubengayer stone...		10 20	
George Stoll	stone.....	9 00	
J E Sumner		25 80	
Zenas Sweet		5 40	
John Slator		3 00	
Leonard Gruner		2 40	
Total.....		\$	323 20

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer,

Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock—14.

Nays—None.

ORDINANCE.

The ordinance entitled "An Ordinance Relative to Porters, Runners and Drivers and to regulate Hacks and Drays" was given its third reading by sections and placed upon its passage.

Ald. Butterfield moved that section one be amended by inserting the words "Standard time after the words "of between the hours of."

Ald. Maynard moved as an amendment to the above motion that "10:30 o'clock standard time" be inserted in place of 12 o'clock.

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Snyder, Laubengayer, Brown, Shadford, Prettyman, Coon, Pres. Hiscock—10.

Nays—Ald. Koch, Taylor, Butterfield, Cady—4.

Ald. Taylor moved to amend the ordinance so that the limit of time shall be placed at 11 o'clock standard time.

Adopted as follows:

Yeas—Ald. Maynard, Allmendinger, Koch, Brown, Taylor, Prettyman, Coon, Butterfield, Cady—9.

Nays—Ald. Moore, Snyder, Laubengayer, Shadford, Pres. Hiscock—5.

Ald. Taylor moved to amend section one by inserting the words "and a fee of 10 cents may be charged after 11 o'clock p. m. for carrying a trunk.

Ald. Koch moved to amend the above motion by inserting 25 cents in place of 10 cents.

Ald. Butterfield moved as a substitute that the rate be placed at 10 cents for a trunk at all hours of the day or night.

Ald. Taylor moved to lay all the above amendments on the table.

Adopted.

Ald. Taylor moved that the ordinance be amended to direct the City

Clerk to furnish a card of tariffs to each licensed hack and the same to be posted in a conspicuous place in said hack.

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer, Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock—14.

Nays—None.

Whereupon the question was "Shall this Ordinance Pass?"

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer, Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock—14.

Nays—None.

An ordinance entitled "An Ordinance to amend an Ordinance Relative to Licenses" was given its first reading by sections.

Ald. Butterfield moved that the ordinance be placed on its second reading.

Adopted.

Whereupon the ordinance was given its second reading by sections.

Ald. Prettyman moved that Rule 16 of the Rules of the Common Council be suspended and that the ordinance be placed on its third reading.

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer, Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock—14.

Nays—None.

Whereupon the ordinance was given its third reading by section and placed upon its passage.

The question was "Shall this Ordinance Pass?"

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer, Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock—14.

Nays—None.

SIDEWALKS.

To the Common Council:

Your Committee on Sidewalks to whom was referred the petition of Wm. Herz and others, asking for the construction of a sidewalk on the north side of west Washington-st, between First and Seventh, have given the matter full consideration and consider it a necessary public improvement that such a sidewalk be ordered built, and submit the following resolution, ordering the same and recommend its adoption by the council.

Respectfully submitted,

Emmett Coon,
John Koch,
W. M. Shadford,
Jacob Laubengayer,
C. A. Maynard.

Committee on Sidewalks.

Leave being granted the following resolution was presented.

By Ald. Coon.

Resolved, That the construction of sidewalks hereinafter mentioned are deemed and declared a necessary public improvement. Therefore, it is hereby ordered that a plank sidewalk be graded built and constructed on and along the north side of Washington-st., between First and Seventh, in front of the property of The Ann Arbor Organ Co, Heinzman & Laubengayer, Louis Rohde, Eugene Oesterlin, Mrs. B. Burkhardt, E. D. Kinne, W. J. Herdman, Titus E. Hutzel, Herman Hutzel, and in front of any other property located between said streets along the line of said street.

Ald. Butterfield moved that the resolution be referred to the Board of Public Works for plans and specifications and estimated cost.

Adopted.

LIGHTING.

To the Common Council:

Your Committee on Lighting to whom was referred the petition asking for an electric light at the corner of Huron and Ashley streets would recommend that an electric light be ordered located at the place asked for.

Respectfully submitted,
D. F. Allmendinger,
C. H. Cady,
Committee on Lighting.

Adopted as follows:

Yeas—Ald. Maynard, Moore, Allmendinger, Koch, Snyder, Laubengayer, Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock—14.

Nays—None.

RESOLUTIONS.

By Ald. Prettyman.

Resolved, That G. Frank Allmendinger, Bradley, M. Thompson and Nelson J. Kyer be and they are hereby appointed and elected to be members of and to constitute the Board of Election Commissioners in and for the City of Ann Arbor for the City Election to be held in and for said city on the 6th day of April, A. D. 1896. That such persons above named shall have and hold such office for and during such time and term as shall be necessary to fully discharge all of the duties pertaining to such in the conduct of such election and the said Board of Election Commissioners are hereby charged with the duty of doing all of the things enjoined upon the City Boards of Election Commissioners under the general laws of the State of Michigan.

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer, Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady. Pres. Hiscock—14.

Nays—None.

By Ald. Butterfield.

Resolved, That the City Attorney be and is hereby directed to proceed at once to collect the claims of the City against Geo. Spathelf, Jr. and also Mrs. Stoll and to take such proceedings therefore as may be necessary.

Adopted.

By Ald. Butterfield.

Resolved, That the City Attorney be and is hereby directed to proceed at once to collect the claims of the city against the Ellis estate and to take such proceedings therefore as may be necessary.

Adopted.

By Ald. Brown.

Resolved, that the Treasurer be and is hereby directed to pay over to the Treasurer of the township of Scio the sum of Fifteen dollars due school district No. 15, as tax for the year of 1894.

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer, Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock—14.

Nays—None.

By Ald. Brown.

Resolved, That the City Attorney is hereby directed to file a bill of interpleader in the interest of the City in the matter of the sewer district Nos. 3 and 4, as soon as the said sewers shall have been accepted by the Board of Public Works.

And be it further Resolved, That the City Attorney is hereby authorized to employ any assistance he may need in the preparation of said bill.

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer, Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock—14

Nays—None.

By Ald. Taylor.

Resolved, That the Board of Public Works is hereby instructed to have built around the city pump at the junction of Broadway and Wall streets a substantial fence, using their own judgment as to material, but constructing the same in such manner that it cannot be used as a seat for loungers.

Adopted as follows:

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer, Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock—14.

Nays—None.

Ann Arbor, Mich.

March, 16th, 1896.

To the Common Council:

Gentlemen:—Pursuant to the request of your honorable body I submit, for your consideration the following suggestions concerning the building of macadam roads

The first thing to meet with consideration at your hands, should be the proper equipment of the crushing machinery for rapidly and cheaply handling the stone of which the road is to be made. This matter is of first impor-

tance because the moving of the rock to and from the crusher and its delivery upon the street will, as done last season, form a large item of the cost of the road material, and any thing that tends to diminish the cost of handling cheapens to that extent the cost of each yard of macadam laid.

You have an outfit of road making machinery which is first-class in every respect, and I don't think you will soon have cause to regret its purchase. All that remains for you to do to give Ann Arbor complete road making facilities, is to erect a suitable crushing plant. The investment of a few hundred dollars more will lessen by one-third the cost of operating. To better illustrate my ideas on this point, I have prepared plans for setting up the crusher in the new city yards, which I submit with this report. These plans include a tram-way and two dump cars for transporting the rock from the storage pile to the crusher and a system of self loading bins for the reception of the crushed rock.

A system like this will reduce the cost of getting rock to the crusher to a minimum and effect an entire saving of hand labor upon it from the time it is delivered at the crusher until it is dumped upon the street. The cost of the plant will not exceed \$400.00.

It will be more than saved in one seasons operations.

Road building is a science to which the American people have only recently turned their attention, and yet, contrary to the generally accepted belief, American engineers are now building roads and laying pavements with which the famous old world roads will bear no comparison for smoothness, durability and cheapness of maintainance.

We have not far to look for the cause of poor roads in this country. It was an incident of the settlement of a new territory on the one hand—of cheap railroad transportation on the other.

But, with increasing wealth and prosperity, our people are outgrowing the notion that a road which is passable a portion of the year is good enough, and are studying the construction of roads that will not be seas of mud in wet weather and beds of dust in dry, but will afford at all seasons a smooth and sure passage.

Without seeking to criticise the system of road making that has prevailed in Ann Arbor in the past, I wish to call your attention to the fact that during the sixty odd years that have elapsed since this city obtained a location upon the map of Michigan, some hundreds of thousands of dollars have been spent upon our streets with but very few permanent improvements to show for it, and our main thoroughfare is far from being a pleasant drive at all seasons of the year. I have no doubt but many of our principal streets have had gravel enough put upon them to make a fair wheelway, but, applied as it has been, without system or any preparation of the road bed, a load here and a load there, it has become thoroughly mixed with soil and street refuse and readily softens in wet weather and crumbles in dry. Its advantage to the streets is in no way commensurate with what it has cost. But the system and not the material is to be blamed for this condition.

And now that a new policy is to be initiated, thoroughness should be a distinguishing feature of the work. What you build, build well. One block of well built road is worth several poorly constructed. You are not building for this year nor for the next only: If you wish to build economically you will build for the next generation. A poorly constructed road or pavement of any nature is dear at any price, for the cost of maintenance must be considered in the survey of a term of years.

The better a road is built the less will it cost to maintain it, and nothing will so surely nor so speedily prejudice

the people against street improvements as a street that will not hold its shape and is a constant bill of expense.

What you undertake this season will be regarded by the people as an experiment, although there is no reason why good roads should be more of an experiment than good houses. Those who are disposed to criticise street improvements will not have far to go to find many instances where macadam roads have been deplorable failures. But there are reasons for all of these failures outside of and beyond the system itself. Like asphalt, macadam is not an economical pavement where it is subject to the wear of continuous and heavy traffic.

That mistake has frequently been made. Again, soft stone, poor foundation, lack of drainage, faulty construction, etc. have been responsible for many expensive experiments in stone road building. But I have yet to see, hear or read of a macadam road properly constructed and for a traffic to which such roads are adapted, that has failed to give satisfaction.

The essential features of a good road covering are capacity to present a smooth surface, to resist wear and to shed water; the foundation must do the rest. In most localities the first and most expensive problem with which the engineer is confronted in the construction of macadam roads is the preparation of the foundation.

Usually it must be under-drained, side ditches must be constructed and the foundation prepared at great expense before the road is ready to receive the broken stone covering. And this expense cannot be avoided for the foundation of a road is quite as essential as its covering. If that foundation is not properly drained and protected from the weather by the stone covering which should be to it as a roof, no depth of stone or other material will make a good road.

If the foundation is well drained and

the surface water prevented from reaching it by an impenetrable covering, no frost will heave it and no wet weather will cause it to cut under heavy loads.

Surface wear of course no road material can resist entirely, but if properly constructed the stone road should wear evenly and to a very thin layer before it begins to cut.

This item of foundation and drainage, nature has very efficiently cared for on most of the streets of Ann Arbor. We have readily made that which costs many communities thousands of dollars per mile to prepare. With a road surface that will turn the water that falls upon it into the gutters, the foundation of the macadam will always remain perfectly dry, for the underlying gravel will take care of the water.

All that is necessary for us to do to secure a good foundation is to excavate to grade, form the proper cross-section, and thoroughly roll and compact, filling all depressions that may appear, until we have a hard, firm and uniform road bed of the exact form and shape it is proposed to have the street when finished. For our four-lane streets I should recommend that the crown at the (street) center be not less than six nor more than ten inches above the gutter.

This cross-section will depend somewhat upon the grade of the street, and should be of the form of two inclined planes with the apex at street center rather than a gradual curve from gutter to gutter. Of whatever thickness you decide to build a road that thickness should be uniform throughout, hence the necessity of bringing the foundation to an exact grade before the covering is placed upon it. It is a waste of stone to fill up hollows with them and worse than that a waste of that material to crush it into soft, loose earth.

Most American engineers favor the Telford system of building stone roads.

The essential difference between the Telford and the ordinary macadam consists in a foundation pavement for the Telford made of carefully selected cobble stones, upon which the macadam proper is laid.

The Telford road costs a great deal more and I should consider its construction an unnecessary expense upon our natural foundation. It is a practice in some localities to put gravel upon clay as a substitute for Telford foundation and that practice has been attended with good results.

The theory of the macadam road is that under the compression of the roller, or of traffic, and with the aid of a proper proportion of binding material to fill the interstices, the angular surfaces of the broken rock become knitted together in one homogeneous mass. To this end the rock should be angular in shape. Round stones or coarse water worn gravel when clean never unite into a firm road bed, but constantly move upon each other. The quicker and more firmly the road is compacted the better. Many roads are spoiled by not being rolled enough. The rock is not firmly compacted has a chance to move upon itself and round off its angular surfaces, the coherence of the body is destroyed and the road is soon worn out. A road insufficiently rolled is subject to an internal wear from this cause, greater than that caused by the friction of wheels upon its surface.

Again, the covering should be impervious to water. It should form a perfect roof over the foundation. Contrary to popular ideas, the macadam is not intended to let the surface water sink away into the underlying soil. The proper place for the surface water is in the gutter and the stone road that fails to put it there is not worth its cost no matter how small that may have been. This water tight feature is to be obtained by thoroughly rolling and by proper binding which caulks up the

crevices. Any thing that will absorb moisture will insidiously break up the road. For that reason all earthy and clayey materials must be excluded from the broken rock. Clay not only disintegrates a road by freezing and heaving, but, when wet, acts as a lubricant between the stones facilitating motion between them. Care must also be taken to guard against the entrance of clay from the under side of the stone layer, and this is another argument in favor of thoroughly compacting the bed before the stone is laid.

Nothing but the screenings from the broken rock or the cleanest sand or fine gravel should be used for binding. With a road bound with this material properly curved and thoroughly compacted, you have a surface that will not only furnish all possible resistance to the wear of traffic that the material of which it is made is capable, but to the action of the elements as well.

Frost can heave or soft weather settle your road only when water can strain through the covering. With a road constructed in this manner no water can reach your foundation, hence climatic changes can have no effect upon it.

Perhaps for our purposes it will be as well to put the stone upon the road in two layers, the coarser layer underneath.

Yet my judgement is that if the stone is broken fine enough nothing will be lost to the durability of the road by making both layers of the same size. The saving lies in the expense of crushing and is in favor of using larger stone for the lower layer.

A well constructed macadam road does not depend upon thickness for its strength. Not only is the weight upon any given point distributed over a large area before it reaches the foundation, but, with a thoroughly compacted road, the stone form an arch which has a tendency to transmit the load over

the entire width of the road. No load which is drawn upon our streets can cut a well built macadam road four inches thick.

Bridgeport, Conn. affords a striking example of the utility of thin roads when well constructed. Their newer roads are only four inches thick and are noted among engineers for their excellence. They have been constructed at so low a price as 28 cents per square yard and compare favorably with Telford roads in the same town that cost \$1.50 per square yard.

Extra thickness is not wasted, however. After a road has been made thick enough to give it body additional thickness adds to the life of the road, extending the time when a general resurfacing must be given it. Two inches more in thickness will only cost the stone extra and I am inclined to think that when the cost of maintenance for a term of years has been added to the original cost of the road, the six inch road will prove to be cheaper than the four inch one.

Two layers of rock, which will measure four inches each when loose, and which, with the binding would make about six inches of compacted road, should make a fair average for any of the streets of Ann Arbor that it is desirable to macadamize.

Right here I wish to suggest that it is not advisable to macadamize business streets that must necessarily be frequently cleaned and are subject to continuous heavy travel. While the first cost of a brick pavement is much more than that of macadam it can be kept clean with less expense and the cost of maintenance will bear no comparison. On such streets brick at \$1.75 per square yard will be cheaper and more desirable than macadam at 50 cents.

For the purpose of safely carrying the surface water during storms, I would recommend that gutters be constructed of cobble stone or paving brick

on each side of the roadway. These gutters should vary in width from two and one half to three and one half feet, according to the grade of the street and the territory to be drained.

A three and one half foot gutter on our four rod streets would leave a 27 foot driveway to be macadamized. The cost of a cobble stone gutter would be about \$1.50 per lineal rod. The brick would cost considerable more but could be made narrower. Six inches of finished macadam 27ft wide with three and one half foot cobble stone gutters on each side will cost, at a conservative estimate, about 47 cents per square yard, \$1.40 per lineal foot, or \$46 for each four rod lot.

This estimate is apportioned as follows per surface yard.

Excavating.....	.....\$	.08
Grading.....	.....	.03
Stone.....	.....	.22
Distributing stone.....	.....	.04
Rolling.....	.....	.03
Water.....	.....	.004
Apply water.....	.....	.006
Gutter.....	.....	.06
Total.....		\$.47

The maintainance of the road will depend upon the traffic that it carries and upon its construction. It will cost more to keep a poorly built road in order than one that is properly made.

With the precautions that I have outlined a macadam street may be cheaply constructed in Ann Arbor that will at all times of the year present a smooth, hard surface for vehicles, and upon which an occasional sprinkling will effectually suppress the dust nuisance. Money expended in such construction is invested in a permanent improvement which will add many times cost to the value of abutting property.

The character of the road improvement decided upon, the next question that confronts the Council is the selection of the streets to be improved and

the adoption of some plan of assessing the cost of construction. Without presuming to instruct the Council in this particular I wish to offer a few suggestions for your consideration.

First. Streets which are leading thoroughfares into and out of the city should be first selected. The necessity for improvement is there most pressing and the greater number of people will be benefited.

Second. Such streets should be selected as have received all probable improvements in the way of gas, water and sewers. This is an important matter for once built our stone roads will not be suffered to relapse, and it would be short sighted policy to lay a road that must be torn up in a year or two to give opportunity for other improvements.

The gas and water companies should also be induced to lay all necessary service pipes to the curb line, prior to such improvement.

Of these streets leading from the country and surrounding villages into the heart of the city there are a number which could be macadamized to advantage. Among them I might mention Miller Ave., W. Huron, W. Liberty, Detroit street and Broadway, Wash-tenaw Ave., Packard Street and South State.

Third. When a street has been selected work of this character should be wholly devoted to that street until it is finished as far as it is proposed to improve it. A block here and there will be of no practical utility save to demonstrate by contrast the deplorable condition of the unimproved streets. On the other hand, a continuous macadam road from the center of the city to the outskirts, in any direction, will not only be a credit to the town, and to the administration securing its construction, but a more potent argument in favor of more improvements of that character than any other it is possible to make.

Fourth. Assessment of cost. Under the provisions of the city charter you have the right to make street improvements by general assessments or by special assessment upon a local assessment district.

There are obvious objections to either of these plans. While an improved street is, in general, a benefit to the whole city, the more immediate results accrue to the abutting property and to the people who habitually travel the street. Under the plan of general assessment we all want our streets improved and each locality offers pertinent reasons why it should receive first attention.

But, under the local assessment plan it may be hard to find a suitable street where there is anything like unanimity among the property holders in favor of improvement. At all events the policy of paying for street intersections out of the general fund, pursued in the construction of the lateral sewers is advisable.

If the case of pavements, the general public derives an obvious benefit, while the sewers at street intersections are of use only to the inhabitants of the sewer district.

The proportionate cost of these street intersections will, upon our 330 blocks, amount to about one-fifth of the whole.

As an additional inducement to make local improvements and yet a sufficient

check upon demands which cannot be granted, the plan adopted by the city of Denver might be considered.

There, one-third of the expense of paving is paid from the general fund and one-third assessed to the property on each side of the street. This one-third when added to the cost of the street intersections would amount to seven-fifteenths or nearly one-half of the improvement to be paid for out of the general fund.

Another plan would be for the city to pay for the street intersections and, in addition, grade and prepare the road bed. This would charge about two-fifths to the general sewer fund.

In all cases the cost of street improvements should be assessed upon land values only. Respectfully submitted,

Chas. W. Ward.

By Ald Prettyman.

Resolved, That the report of Street Commissioner be printed in the proceedings of this meeting and respectfully referred to his Honor the Mayor and the members of the incoming Council.

Adopted as follows

Yeas—Ald. Moore, Maynard, Allmendinger, Koch, Snyder, Laubengayer, Brown, Taylor, Shadford, Prettyman, Coon, Butterfield, Cady, Pres. Hiscock - 14.

Nays—None.

On motion the Council adjourned.

GLEN V. MILLS,

City Clerk.