

Lebanon, Oregon, January 4, 1915.

To The Mayor & Common Council,
of
Lebanon, Oregon.

Gentlemen:

I beg leave to submit the following annual report. This report is substantially the same as that prepared for the Budget Committee in November, 1914, only such changes being made as were necessary to bring it up to date.

The function of the City Engineer's office is an important one in the business of any town. There is no office in the City government, the proper conduct of which is of more vital importance to the property owners and tax payers, since on the Engineer's office depends the proper construction, and to a certain degree, the cost of every important improvement in the City. It is the City Engineer's duty to make every dollar spent count for its full value in constructive work. The records of this office should not be neglected but kept in such a manner that they will be useful to future engineers and councils. It is my wish to leave, at the end of my term of office, the records of the work of the Engineer's office in such a condition that any other person or engineer will be able to take up the work at any future time.

During the last two years, the City of Lebanon has undertaken and accomplished considerable improvement work. A fairly comprehensive system of sewers has been built and four streets have been paved and one macadamized. Some of this work has been done by contract and some of it has been done directly by the City under the direction of the City Engineer's office.

It might be well in passing, to call your attention to the difference in the amount of work and responsibility placed on the City Engineer's force when work is done by contract and when work is done directly by the City or City Engineer. In the first case, the City Engineer's duties are simple; he writes the specifications, sees to

getting bids and inspects the work. IN THE SECOND CASE, THE CITY ENGINEER BECOMES, IN A WAY, BOTH CONTRACTOR AND ENGINEER; he must attend to planning all the details of carrying out the construction; he must see to purchasing materials, hiring labor, selecting good foremen, must arrange for time keeping in the field and the necessary labor of computing and extending pay rolls, issuing checks, keeping all the records of the office, and in addition must spend a large part of his time on the job, seeing that all details are carried out:- in short he must do for the City, in addition to the work of engineering, all the work that the contractor is paid for doing.

During the year 1913, this office supervised the construction of several miles of sewer without the assistance of a contractor, AND THE SAVING TO THE CITY WAS SOMETHING OVER \$4,000.00. During 1914, the sewer on East Grant Street and a short line on South Main Street were constructed in the same way. Detailed costs on these two pieces of work, compared with the cost if done under the old contract, show a saving to the City of \$592.00. One macadam street, namely South Main Street, has been built by the City, and while the details of cost are not all in, due to the street being not quite completed, the records at the present time indicate that the street will be finished for a cost of at least \$500.00 less than the estimated cost, the estimated cost being based on the average contract price in the Willamette valley. Without doubt, then, both for 1913 and 1914, the saving to the City has been nearly twice what the engineering work of the town has cost during that time. It has been my effort to keep the cost of all this construction down to a minimum. I have been able to do all this work without any engineering assistance at all. In the field I have had the help of Mr. Green, the Street Superintendent, who has shown himself very able, faithful and efficient, especially in making surveys has his help been very valuable. In all this work, by his help, I have been able to save the cost of an assistant. In the office I have had assistance in computation, time keeping, stenographic work, extension of pay rolls

and record keeping of all kinds, without which I would have been overwhelmed. I have thus been able, by working evenings in the office, to spend the ordinary working hours in looking after details outside.

I have, at present, in use here in the office at Lebanon, \$600.00 worth of instruments specially adapted for my work. During the year 1914, I invested \$100.00 in a typewriter and \$85.00 in a drawing machine to meet the needs of the office. There is now on hand approximately two month's work. If after this is finished, no new work is ordered, it will be advisable to close the office in Lebanon and arrange to have the work of setting street grade, sidewalk grade and various other small jobs that arise from time to time, done once a month and thus concentrate the work. For this, it will be possible for me to arrange to come to Lebanon once or twice a month for as many days as necessary and transfer the equipment to the home office in Eugene. It would not be advisable to do this unless the office is closed for several months, since the office equipment is not benefited by being moved around. However, there should be no thought of transferring the Engineer's office until certain pieces of work which are now partly completed and which have been shoved aside by other work, are finished. These various jobs can best be done on the ground and may be considered under several distinct heads.

SEWER SYSTEM.

In addition to the work that I have recommended in my estimate to the Budget Committee, the records of the office should be supplied with a copy of the general map of the town showing the actual present location of all sewer lines, manholes, flush tanks, etc. A construction map of this kind was furnished the City at the beginning of the work, but so many changes in the location of the sewer line have been made and so many new lines have been added, that a complete new copy of a general map, giving all the details, should be made. Profiles should be finished and printed of all sewers built by the City during

the last two years. Since the City has been doing its own work on the sewers, it has not been necessary to prepare profiles and estimates in advance, but for the purpose of making the records complete, profiles of all these lines, which I now have in pencil only, and without blueprints of same, should be completed and printed. I have recommended that the arrangements for flushing the sewer lines be made more nearly complete. This work was neglected this year because all the sewer funds were diverted to the Grant Street sewer.

Arrangements should be made for the REGULAR FLUSHING OF ALL SEWER LINES: this is an IMPERATIVE NEED AND MUST NOT BE NEGLECTED, since if it is neglected for any considerable length of time, the sewer lines will become foul and clogged and the city may be put to considerable expense to clean them.

STREETS.

With regard to the streets, their record should be written up, in a tabular form, which will show the City's title to streets acquired by deed, dedication and condemnation. This I have undertaken to do and have already collected all the old Council records for this purpose.

Plats should be recorded showing all streets condemned and acquired by deed, WITH A SPECIAL STRESS ON STREETS CONDEMNED, since the ordinary condemnation proceedings do not provide a way by which any evidence of the transaction is allowed to reach the County records. (See opinion of Deputy District Attorney for Multnomah County, in "Oregon Journal" of Oct. 20, 1914, and also consult City Attorney).

The location of street monuments should be recorded on tabular sheets which show the elevation and relation of them to the street grade, also they should be shown on the sectional maps. This work I have undertaken and partly completed.

Many of the out-lying streets of the City have never had grade established on them. An official grade line should be prepared with a profile and blueprint showing the same and these should be established by Ordinance. In this connection, the City should establish,

by Ordinance, the location and elevation of the primary Bench Mark to which all the elevations in the City refer. As soon as I am able to prepare it, I will present an Ordinance covering this subject. Wherever possible, a system of street monuments should be further extended. Those in place and use now, which were established some years ago by Mr. Fisher, have been of great assistance to me and have probably saved many times what they cost, however, the records showing their location and character is not very clear and it is this record that I wish to extend and make more definite.

It is the custom of the City to give grade to property owners, and it is my opinion that the City would best look after the matter of giving street lines also. At the present time, the custom is to charge the property owners for giving them their street line and as a consequence not many of them ask to have it done. As a result, in many places, the attempt of the different property owners to line up their sidewalk, results in irregular and poor appearing lines. The corners of every block in town should be definitely marked on the ground and a clear record of the marks kept in the office. NEGLECT OF PROPER MONUMENTS AND CORNER STONES AT IMPORTANT POINTS MAY BE CAUSE FOR LITIGATION INVOLVING VALUABLE PROPERTY.

GENERAL.

I have been directed by the Council to prepare a general map of the City. I have done more or less work on this map from time to time during the past year as other work permitted; in fact I have been collecting information necessary for this map for the last three years, and when this is put in concrete form for use, it will be very valuable to the City. It is my intention to make this map of such accuracy and completeness that it will serve as an official plat of the City; one which the Council can adopt as the official map and record. At the beginning of the year, I placed in the office a new drafting device, specially designed to make maps of this kind quickly and accurately.

When this map is complete, a tracing of it can be made for the

purpose of indicating the house numbers as provided in Section 2 of the House Numbering Ordinance. Also another tracing can be used for the purpose of showing the present location of the sewer system, etc., as heretofore recommended in this report. Thus these three important maps will practically be made at the same time.

In addition to the general map, I have under preparation, sectional maps on a scale of 60 feet to the inch which will show details of the locality which every map covers, and will be of great assistance in future work in preparing plans for future improvements of all kinds. When these maps and plans are completed and blueprints made of the same, they should all be indexed and filed in such a way that all City officials may have access to them and get the benefit of their use. All the work referred to above is well under way and I had hoped to complete it by the end of the year. Other work, however, has intruded itself and delayed its completion into 1915.

The work of numbering the houses and marking the streets with signs is well under way, approximately two-thirds of the houses being numbered. A part of the remainder will soon be numbered. However, it will not be possible to finish the out-lying districts until the house numbering map is completed. The street signs arrived December 30, which did not give time for their erection before the first of the year. Preparations are being made to put them up, and it will be only a few days until the bulk of them will be in place.

SOUTH MAIN STREET.

The work of macadamizing South Main Street has dragged through the entire summer, due to our inability to get the crushed rock necessary. Two different times, once at the beginning of the job and again late in the fall, we tried to obtain the rock from Albany, but every time they were unable to supply it. I also investigated the possibility of getting crushed rock from more distant points, but found the cost too great. The local plant has again commenced operation in the last few days and, at the present rate, will supply enough rock for the completion of the job within a few days. While

the delay in finishing the street has been more or less annoying, the completed job will be, to a certain extent, benefited by the delay. The street has been open for public travel for several months, in fact it was never possible to keep it closed completely, consequently there has been no serious interference with public convenience.

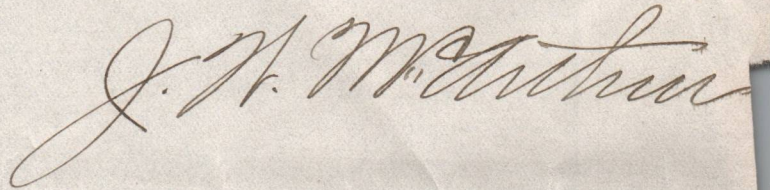
The COST RECORDS on the 1914 work should be and will be completed and summarized and be in shape for future use. These records will be very useful to future engineers and Budget Committees in making estimates for work. As the City grows, the records of both the Engineer's and the Recorder's office should grow with it.

CONCLUSION.

In concluding I suggest that the Council direct that as much of the work recommended in the foregoing report as they deem necessary, be done, especially should the maps and records pertaining to the sewer system and the streets be completed and properly filed. The matter of having the official grade established on all the streets in such a way that they will be consistent with each other, is also important.

I have had the earnest cooperation of the entire Council in all my past work in Lebanon and I value that very highly. I shall be glad to assist them in any work which they may wish to undertake in the future.

Very respectfully submitted,

A handwritten signature in cursive script, reading "J. H. McArthur".

City Engineer.