

Ordinance No. 512, Series 1911.
An Ordinance directing the manner in which the estimate of the cost of the proposed sewer system for the City of La Grande, Union County, Oregon, shall be ascertained.

The City of La Grande Does Ordain as follows:

Section 1. That in the construction of the proposed system of sewerage in said city, and for conducting the sewerage to some point outside the city for which said city contemplates the issuance of bonds the following plans and specifications be adopted for said sewers and the construction thereof, and as a basis upon which the estimate of the cost of such improvement shall be ascertained.

WORK AND MATERIALS

Excavating and Backfilling:

Earth, per cubic yard - - - - -

Gravel and Boulders, per cubic yard

Solid Rock, per cubic yard - - - - -

Furnishing and Laying Pipe:

8-inch, per linear foot - - - - -

10-inch, per linear foot - - - - -

12-inch, per linear foot - - - - -

14-inch, per linear foot - - - - -

15-inch, per linear foot - - - - -

16-inch, per linear foot - - - - -

18-inch, per linear foot - - - - -

22-inch, per linear foot - - - - -

30-inch, per linear foot - - - - -

Furnishing and Laying V's

8-inch, each - - - - -

10-inch, each - - - - -

12-inch, each - - - - -

14-inch, each - - - - -

15-inch, each - - - - -

16-inch, each - - - - -

18-inch, each - - - - -

Constructing Manholes:

10 feet or less in depth, each - - - - -

For additional depth of Manhole over

10 feet, per linear foot - - - - -

Constructing standard Flush Tank, each

Constructing special Flush Tanks, each

Furnishing and Laying 1-2 inch Galvanized

Pipe connections, exceeding 50 feet in length, per foot - - - - -

Lamp Holes, each - - - - -

Concrete Masonry, per cubic yd.

Septic Tank and Disposal Plant, complete

SPECIFICATIONS.

Excavating and Backfilling.

Section 1. All excavations shall be classified as earth, gravel and boulders and rock excavation.

2. Earth shall include the removal of all earth, clay, hardpan, sand and fine gravel.

3. Gravel and boulders shall include the removal of all coarse gravel, boulders not exceeding one-half cubic yard, and cemented gravel, loose rock, or other material readily removed by the use of pick and shovel without the use of drills, hammers or explosives.

4. Solid rock shall include the removal of all rock in its original position, cemented gravel that cannot be removed without blasting, and boulders exceeding one-half cubic yard.

5. The trench shall be excavated eighteen (18) inches wider than the inside diameter of the pipe, with a minimum width of three (3) feet where solid rock is encountered, and if in the judgment of the Sewer Committee it is impractical to reach grade with that width trench, the trenches may be widened, providing the written consent and approval of the Sewer Committee be first obtained.

6. The trenches shall be excavated to the depth indicated by the engineer's stakes. When rock is encountered it shall be excavated six (6) inches below grade and the space to grade refilled with sand, gravel or other good material in a manner which will afford a firm foundation for the pipe.

7. The excavation for the Septic Tank shall be to the exact lines as shown on the plans. Any excavation in excess of the plans will not be paid for.

8. The contractor shall use great care and diligence in the storing, handling and use of explosives. All blasting shall be done by careful, experienced, competent men under the direct supervision of the engineer.

9. The trench shall be properly timbered by the contractor whenever necessary to prevent the sides caving in.

10. No tunneling will be permitted without the written consent of the Sewer Committee.

11. After the pipe is laid it shall be backfilled to a depth of two (2) feet with the finest material available, in a manner which will not injure the pipe or cement joints or disturb the position of the pipe. After the pipe is tested the backfilling shall be completed with good material well tamped or settled with water. All ditches, ditches and other property removed or injured during the work shall be restored. The surface of the ground shall be graded and left in as near its former condition as practicable.

12. All rock removed in excavating the trench shall be disposed of by the contractor and none shall be used in backfilling the trench.

13. Excavating and backfilling shall be measured in the excavation within the limits specified herein or hereinafter authorized or approved by the Sewer Commission.

Pipe.

Sec. 2. The pipe shall be of the best quality salt glazed sewer pipe of a manufacture approved by the Engineer. The contractor shall not change the same during the progress of the work without the written consent of the Engineer.

3. The pipe shall be straight, smooth, thoroughly vitrified, salt-glazed, free from lumps, blisters and other imperfections, of true cylindrical

shape and the inner and outer surfaces shall be concentric.

3. The standard length of pipe shall be not less than two and one-half feet and shall conform to the following dimensions:

Size of Pipe Inches	Thickness Inches	Depth of Cement Socket Inches	Space Between Pipes Inches
8	3/8	2 1/2	3/4
10	3/8	2 1/2	3/4
12	3/8	3	3/4
14	3/8	3	3/4
15	3/8	3	3/4
16	3/8	3	3/4
18	3/8	3	3/4
21	3/8	4	3/4
22	3/8	4	3/4
24	3/8	4	3/4

The curves, sants, tees and "Y" junctions shall conform to all the foregoing requirements as regarding quality, form and workmanship and their thickness shall be equal to that of the pieces of the same calibre to which they may be joined.

4. If 20 per cent of any lot of pipe furnished fails to pass the specifications the whole lot will be rejected.

Cement.

Sec. 3. The cement used in any and all work done under this contract shall be high grade Portland cement and shall be sampled, stored, and stand the following tests before being used in the work:

2. It shall be so finely ground that ninety (90) per cent will pass through a number 100 sieve.

3. Briquettes one (1) inch square, made of neat cement, when seven (7) days old, shall have a tensile strength of not less than four hundred and fifty (450) pounds.

4. Briquettes one (1) inch square, made of one (1) part cement and three (3) parts sand, when seven (7) days old, shall have a tensile strength of not less than one hundred and fifty (150) pounds.

5. Pats made of neat cement and immediately placed in moist air at a temperature of 46 degrees centigrade until set and then immersed in water at the same temperature for three (3) hours shall be sound and shall not check or curl.

6. A barrel of Portland cement shall contain not less than three and two-tenths (3.2) cubic feet of packed cement, and the net weight shall not be less than three hundred and seventy-five (375) pounds.

7. The initial set as indicated by the Gilmore test on pats of normal consistency shall not take place within less than 45 minutes after the cement has been mixed with water.

8. The final set as indicated by the Gilmore test on pats of normal consistency shall not take place within less than two hours and thirty minutes after the cement has been mixed with water.

9. The volume of one (1) barrel of Portland cement (375) pounds net will be assumed to be four (4) cubic feet.

10. All cement after having been sampled shall be protected until used. Any cement that has not been protected or that has been damaged in any way shall not be used in the work.

11. Any brand of cement not having established good reputation, or with which the Engineer is unfamiliar, may be rejected without test; or will be accepted only after having satisfactorily passed the 28 day test.

Sand.

Sec. 4. The sand used in any and all work done under this contract shall be coarse, clean, sharp sand, free from earth, loam, or foreign matter of any kind.

Gravel.

Sec. 5. The gravel or broken stone used in any and all work done under this contract shall be thoroughly cleaned from dust, earth, or other objectionable matter by washing, and none of the fragments shall be less than three-eighths (3/8) inch in least, nor more than two (2) inches in greatest diameter.

Mortar.

Sec. 6. Mortar for the pipe joints and the cement plaster shall be made of one (1) part of cement and one and one-half (1 1/2) parts sand. The cement and sand shall be measured in boxes and each measure shall be struck.

2. The cement and sand shall be thoroughly mixed dry. The proper amount of water shall be added and the materials again thoroughly mixed. The mortar shall be used within thirty minutes after the cement is wet.

Pipe Laying.

Sec. 7. The sewer pipe shall be laid on a firm bed true to line and grade. The joints shall be made with oakum gaskets and cement mortar.

2. The gaskets shall be calked tightly into the bell and the inner surface of the pipe shall conform exactly to the joint.

3. The bell shall be filled flush with mortar of such consistency that it can be tamped solidly into the bell with a steel calking tool. The joints shall be immediately beveled off at an angle of about forty-five degrees with mortar.

4. After the pipe is laid, the interior surface shall be carefully cleaned and all dirt and mortar removed.

5. The joints shall be made in the best possible manner and they shall be water tight.

6. The cement joints shall be kept dry for at least twenty-four hours.

7. Before leaving the work for the night, or during a storm, the end of the sewer shall be closed with an iron cover, fastened in with clay and mortar.

8. The Contractor shall place 6-inch Y branches for house connections at all points indicated by the Engineer. The Ys shall not be covered until they are located.

9. All Y branches and dead ends shall be covered with a galvanized iron cover, cemented into the hub with about one inch of cement mortar, made of one part cement and three parts sand.

Testing for Leaks.

Sec. 8. The sewer, when completed, shall be water tight. After the trench is backfilled for depth of two feet, it shall be filled with water, which shall stand for at least two hours. All leaks that may develop by this test shall be stopped immediately by the Contractor, and all defective joints renewed.

Manholes, Flush Tanks and Septic Tanks.

Section 9. The Contractor shall construct manholes, flush tanks and septic tanks of concrete with cast-iron covers, as shown on the plans.

2. In order to have the work executed with a fine smooth surface the Contractor shall use collapsible steel forms for the inside of all manholes and flush tanks of a form approved by the engineer.

3. The interior surface of all manholes shall be grouted, or white-washed with pure cement mixed with clean water.

4. The interior surface of all flush tanks shall be grouted with a one-half inch coat of cement plaster.

5. The interior surface of the Septic Tank shall be coated with two coats of damp proofing paint. All exposed parts shall be trowel finished.

6. The surface of the concrete in the flush tank shall be cleaned and washed before the plaster is put on. The plaster shall adhere perfectly and not crack or blister.

7. The surface of the plaster shall be thoroughly troweled before the cement begins to set, and when finished it shall be smooth, true and free from trowel marks.

8. The Contractor shall furnish and set on all manholes and flush tanks, standard cast-iron manhole covers with dust pans, as shown on the plans. The covers shall be of good quality cast-iron, free from flaws, cracks or other defects, and shall be perfect casting of the form and size shown on the plans.

9. The flush tanks shall be connected as shown on the plans with a one-half inch galvanized pipe. The Contractor will be required to excavate and backfill the trench and furnish and lay the pipe from the connection to the flush tanks not to exceed 50 feet in length each. Each flush tank shall be provided with a 5-inch cast-iron automatic siphon, acceptable to the Engineer. The siphon shall be firmly bedded in the concrete, set plumb at the proper height.

Concrete Masonry.

Sec. 10. Proportions. All concrete used in the work under this contract shall be composed of Portland cement, sand and broken stone in the following proportions: Cement, one (1) part; sand, three (3) parts, broken stone five (5) parts.

2. Measurements. The sand and broken stone shall be of the class hereinbefore specified to be used under this contract, and the proportion used in each batch of mixture shall be carefully measured in boxes, or square and uniformly sized wheelbarrows, especially designed for this purpose. The use of the ordinary, round bottom wheelbarrow for the measurement of materials will not be considered satisfactory, and will not be permitted and each measure shall be struck.

3. Mixing. All concrete shall be mixed in batch mixers except for the manholes and flush tanks which may be mixed by hand and the results must be satisfactory to the Engineer, and shall be in such manner that each fragment of the gravel shall be completely covered with a coat of mortar, placed in position and rammed until

all the coarser particles are driven below and the mortar flushed to the surface.

4. Time. The concrete shall be in place and rammed within thirty minutes after the cement is wet, and any concrete material which has been wet for more than thirty (30) minutes will not under circumstances be allowed to be used in the work.

5. Men employed. The whole operation of mixing and laying each batch of concrete shall be performed as expeditiously as possible, by the employment of a sufficient number of skilled workmen.

6. Surface. The inner faces of all openings in the concrete, and all exposed surfaces of concrete masonry unless otherwise specified, shall be smoothly finished by forcing all large fragments of the concrete mixture back from the surface of the forms, with specially constructed tools for that purpose, and allowing the mortar portion of the mixture to come in direct contact with the forms.

7. Protection. The Contractor shall protect all concrete masonry from the effects of traffic for a period of not less than ten days, by means of barricades, fences or other devices, and for such a period as required by the Engineer.

8. Sprinkling. The Contractor shall keep the surface of all concrete masonry moist by sprinkling or covering with damp materials, and shall protect all concrete from the effects of sunlight and wind for a period of not less than ten days.

9. Proportions of Materials. It is the intention to make the concrete as dense and impervious as possible and to secure this end the proportions of sand and aggregate shall be changed as the Engineer may direct, the proportion of the cement to the sum of the volumes of sand and aggregate remaining the same. If directed by the Engineer the proportion of the cement to the combined proportions of sand and aggregate shall also be changed and in that case a proper allowance shall be made for the increased or decreased quantity of cement used.

10. Damaged Cement. All concrete masonry that may for any cause or reason become damaged in any way before the final acceptance of the work by the Engineer shall be immediately restored to good and perfect condition by and at the expense of the contractor.

Forms for Concrete Masonry.

Sec. 11. Wooden Forms. All wooden forms for concrete masonry shall be made of planed lumber of such size and thickness as in the opinion of the Engineer the character of the work demands.

2. Metal Forms. Metal Forms of a style acceptable to the Engineer may be used; the faces of all metal forms for concrete masonry shall be smooth as planed lumber.

3. Setting Forms. All forms for concrete masonry shall be set true to line and grade and properly secured, tied and properly braced in a rigid manner, to insure same against possible movement before the concrete masonry becomes set.

4. Coating Forms. The faces of all forms shall be coated with grease, oil, soap, or some other mixture acceptable to the Engineer, each and every time said forms are used for the moulding or shaping of work, to insure the non-adherence of the concrete mixture to the surface of the same.

5. Defective Forms. Forms that have become warped, racked, checked, bent, cracked, or in any way defective, shall not be used in the work.

Cement Plaster.

Sec. 12. Materials. Mortar for the cement plaster shall be made of one (1) part of cement and one and one-half (1 1/2) parts sand. The cement and sand shall be measured in boxes

and each measure shall be struck.

2. Mixture. One (1) barrel of cement and six (6) cubic feet of sand shall be thoroughly mixed dry. The proper amount of water shall be added and the materials again thoroughly mixed. The mortar shall be used within thirty minutes after the cement is wet.

3. Grouting. Before the surface of the concrete shall have become dry, and immediately preceding the work of putting on the plaster, a thin mixture of grout, made from equal parts of Portland cement and sand, shall be poured over and be thoroughly rubbed with a trowel into the surface of the concrete.

4. Trowelling. The surface of the plaster shall be thoroughly troweled before the cement begins to set, and when finished it shall be smooth, true and free from trowel marks. The plaster shall adhere perfectly to the concrete and shall not crack or blister.

5. Wetting. The plaster shall be kept wet for six days after being put on.

Sec. 13. 30-inch Sewer. The reinforced concrete sewer shall be constructed of concrete as herein specified and reinforced with twisted bars as shown on the plans.

2. The forms shall be carefully removed not less than forty-eight (48) hours after concrete has been deposited and in no case until the first part of the backfilling has been completed. After removing the forms on the inside of the sewer, all rough places or holes shall be carefully smoothed off or filled up with mortar made of one (1) part cement and two (2) parts sand.

Reinforcement.

Sec. 14. Materials. The material from which the metal reinforcement is constructed shall be equal to medium open-heart steel. The finished product, whether rods, bars, expanded metal, or other form of device, shall have an ultimate tensile strength of not less than 64,000 pounds per square inch. The elastic limit shall be equal to not less than one-half the ultimate tensile strength and the percentage of elongation in specimens eight (8) inches long shall be not less than twenty-two (22) per cent.

2. Tests. The tested specimen shall be capable of being bent cold one hundred and eighty (180) degrees around a diameter equal in thickness to the specimen tested without fracture on the outside of the bent portion.

Lampholes.

Sec. 15. Lampholes shall be constructed as shown on the plans. They shall be located as indicated by the Engineer. The refilling shall be carefully placed and thoroughly rammed by hand in layers not exceeding six (6) inches around and to a distance of three feet (3) each side of each lamphole. Special pains shall be taken to keep the lampholes truly vertical.

Plans.

Sec. 16. Plans. The plans will be supplemented from time to time by detail drawings intended to amplify and explain the plans on which the contract is based.

2. The specifications and all plans are intended to co-operate and agree, but in case any discrepancy exist, larger scaled plans shall take precedence over those to a smaller scale, figured dimensions shall take precedence over measurements scaled from plans, and the wording of the specifications over all, except as the same may be modified by the wording of the contract.

Measurements of Work.

Section 17. In measuring the length of sewer pipe and concrete sewer the measurements shall be taken along the center line and shall be

continuous throughout all manholes shall be measured in the excavation and the quantities paid for shall be within the limits specified herein or hereinafter authorized or approved by the Sewer Commission.

3. The Y's are to be paid for each, and the price is to be in addition to the price per linear foot to be paid for furnishing and laying pipe.

4. In measuring manholes the height shall be taken from the flow line of the sewer to the top of the cast-iron cover, and the price bid for manholes includes the foundation, manhole cover and all appurtenances finished complete.

5. The contract price for the Septic Tank and Disposal Plant is for the completed work and includes the concrete masonry, excavating, pipes, valves, reinforcement, and all other materials, labor and expense of constructing it complete as shown by the plans and specifications.

Sec. 2. Inasmuch as it is necessary and expedient that this Ordinance take effect immediately now, therefore, in order to preserve peace, order and health of the city and its inhabitants an emergency is hereby declared to exist and this ordinance shall be in force and take effect from its approval by the Mayor and its publication for one issue in the La Grande Evening Observer, on the 7th day of January, 1911.

Passed the Council on the 4th day of January, 1911, by 8 members voting therefor.

Approved this 6th day of January, 1911.

A. L. RICHARDSON, Mayor.

Attest: C. M. HUMPHREYS, Recorder of the City of La Grande, Oregon.

Ordinance No. 511, Series 1911.

An Ordinance authorizing the Mayor and Recorder to enter into a contract with J. L. Mars, for the macadamizing Second street from the south line of Harding street to the center of Lake Avenue, and from the last mentioned point to the west curb line of north Cedar street, according to the bid of Mars for said work, which bid was duly accepted by the Council.

Section 2. This Ordinance shall be published in one issue of the La Grande Evening Observer and after its approval by the Mayor shall be in force and take effect from and after the 7th day of February, 1911.

Passed the Council on the 4th day of January, 1911, by 8 members voting therefor.

Approved this 6th day of January, 1911.

A. L. RICHARDSON, Mayor.

Attest: C. M. HUMPHREYS, Recorder of the City of La Grande, Oregon.

Books Lost.

E. E. Lewis last evening lost a set of bookkeeping books including one ledger and one day book. Also a ladies purse. Finder leave at the Grande Ronde Cash company.

Every family has need of a good, reliable liniment. For sprains, bruises, soreness of the muscles and rheumatic pains there is none better than Chamberlain's. Sold by all dealers.

Why pay Rent? We loan you money to build, and you pay us as you would rent.

J. R. OLIVER.

WE'LL TRUST YOU!

W. H. BOHNENKAMP CO. - MAKER OF HAPPY HOMES

Hardware and Building Material Furniture and Carpets Bedding and Stoves

"My darling," said he, "it can not yet be, though it does break my heart to postpone it. A year or two more, perhaps three before, I can furnish the house, though I own it."

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"Why George, she replied, "this ad. should decide if you're anxious to wed why delay, dear? They'll furnish our home from cellar to dome, And give us our own time to pay, dear."