

NOTICE
The following ordinance having been presented to the Council at its regular meeting, Friday, July 31st, 1925 was referred by the Council to the Council as a Committee of the whole.

Thereupon the Council as a Committee of the whole recommended the passage of the ordinance.
A resolution directing that the ordinance be filed for public inspection for two weeks, and published as required by law, was unanimously adopted.

RECOMMENDATION OF THE BOARD OF LOCAL IMPROVEMENTS TO THE MAYOR AND COMMISSIONERS OF THE CITY OF HIGHLAND PARK, COUNTY OF LAKE AND STATE OF ILLINOIS, IN COUNCIL ASSEMBLED: Gentlemen:

We herewith submit an ordinance for the construction of a system of cast iron water mains, in:

CENTRAL AVENUE, DEERFIELD AVENUE, and DEERFIELD ROAD, beginning at and connecting with the two (2) existing discharge mains of the Water Works Plant of the City of Highland Park, along a line extended thirty (30) feet west of the west face of the west wing of the main building of said plant, thence southeasterly along said line parallel with said west face and said line extended, one hundred (100) feet, thence southeasterly along a line parallel with the south face of the main building of said water plant, and said line extended one hundred (100) feet, thence southeasterly to a point in Central Avenue on the north line of said Central Avenue, thence southeasterly in said Central Avenue to the intersection of a line forty-six (46) feet northwesterly from and parallel with the southerly line of said Central Avenue and in Deerfield Avenue, thence southeasterly in Deerfield Avenue and in Deerfield Road to the west limits of the City of Highland Park; also in:

RIDGE ROAD, from and connecting with the said proposed main in said Deerfield Road at the intersection of said Deerfield Road with Ridge Road to the south (sometimes known as Lee Road), thence southeasterly in said Ridge Road to the County Line Road (being the public road along the line between Lake County and Cook County), thence east in said County Line Road to and connecting with the existing main in Green Bay Road; also in:

CLAVEY ROAD, from and connecting with said proposed water main in said Ridge Road at its intersection with Clavey Road, thence east in said Clavey Road to and connecting with the existing main in said Green Bay Road; also in:

SKOKIE VALLEY ROAD, COMPTON AVENUE, SECTION 22, HALF DAY ROAD, and along SUMMIT AVENUE, extended south, from and connecting with said proposed main in said Deerfield Road at its intersection with Skokie Valley Road, thence northwesterly in said Skokie Valley Road to Compton Avenue, thence north in said Compton Avenue to a point in the north line of Glenwood Avenue, fifteen (15) feet east of the west line of the Northeast Quarter (N.E. 1/4) of Southwest Quarter (S.W. 1/4) of the Northwest Quarter (N.W. 1/4) of said Section 22, to the Third Principal Meridian, thence north along a line fifteen (15) feet east of and parallel with the west line of said Northeast Quarter (N.E. 1/4) of the Southwest Quarter (S.W. 1/4) and the west line of the Southeast Quarter (S.E. 1/4) of the Northwest Quarter (N.W. 1/4) of said Section 22, to the south line of the North Half (N. 1/2) of said Northwest Quarter (N.W. 1/4) of said Section 22, thence north in said Compton Avenue to its intersection with Half Day Road, thence west in said Half Day Road to a line seventeen (17) feet east of and parallel with the center line extended south of Summit Avenue of Krenn & Dato's Highland Park Addition, thence north along said center line, as extended south, with center line extended parallel with said center line, as extended south, of said Summit Avenue, to the south line of said Krenn & Dato's Highland Park Addition; also in:

HALF DAY ROAD, from and connecting with said proposed main in said Half Day Road at said Compton Avenue, thence east in said Half Day Road to the west limits of the City of Highland Park, Lake County, Illinois, being at the east line of west half (W. 1/2) of Section 15, Township 43 North, Range 12 East of the Third Principal Meridian;

Including the laying of all said cast iron water pipe mains, with connections and fittings, fire hydrants with auxiliary valves with boxes, water gate valves, valve vaults, concrete bulkheads and piers, all shoring, bracing, trenching, grubbing, calking, testing, backfilling with earth and sand, flushing, restoration of pavements, walks, and parkways where cuts are made, the removal of all surplus excavated materials, the cost of engineering services, and all other labor and expenses necessary to construct said proposed improvement in a workmanlike manner, all in the City of Highland Park, County of Lake, and State of Illinois;

Together with an estimate of the cost of said improvement, itemized to the extent that we deem necessary, duly signed by the President of this Board, and we recommend the passage of said ordinance and the making of the improvement contemplated therein.

Respectfully submitted, SAMUEL M. HASTINGS, FRANK L. CHENEY, LYLE GOURLEY, JOSEPH B. CARD,

Board of Local Improvements of the City of Highland Park, Lake County, Illinois. Dated at Highland Park this 17th day of July, A. D. 1925.

AN ORDINANCE

Providing for the construction of a system of cast iron water mains in CENTRAL AVENUE, DEERFIELD AVENUE, DEERFIELD ROAD, RIDGE ROAD, COUNTY LINE ROAD, CLAVEY ROAD, SKOKIE VALLEY ROAD, COMPTON AVENUE, SECTION 22, HALF DAY ROAD, SUMMIT AVENUE extended south including all labor and materials and all other expenses necessary to construct said proposed system of cast iron water mains, all in the City of Highland Park, Lake County, Illinois; and providing for the making of such improvement by special assessment and the issuing of special assessment bonds.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF HIGHLAND PARK, COUNTY OF LAKE, AND STATE OF ILLINOIS: SECTION 1: That a local improvement be and the same is hereby ordered made in the City of Highland Park, County of Lake and State of Illinois, the nature, character, location, and description of which improvement is as follows: That a system of cast iron water mains be constructed in:

CENTRAL AVENUE, DEERFIELD AVENUE and DEERFIELD ROAD, beginning at and connecting with the two (2) existing discharge mains of the Water Works Plant of the City of Highland Park, along a line extended thirty (30) feet west of the west face of the west wing of the main building of said plant, thence southeasterly along said line parallel with said west face and said line extended, one hundred (100) feet, thence southeasterly along a line parallel with the south face of the main building of said water plant, and said line extended one hundred (100) feet, thence southeasterly to a point in Central Avenue on the north line of said Central Avenue, thence southeasterly in said Central Avenue to the intersection of a line forty-six (46) feet northwesterly from and parallel with the southerly line of said Central Avenue and in Deerfield Avenue, thence southeasterly in Deerfield Avenue and in Deerfield Road to the west limits of the City of Highland Park; also in:

RIDGE ROAD, from and connecting with the said proposed main in said Deerfield Road at the intersection of said Deerfield Road with Ridge Road to the south (sometimes known as Lee Road), thence southeasterly in said Ridge Road to the County Line Road (being the public road along the line between Lake County and Cook County), thence east in said County Line Road to and connecting with the existing main in Green Bay Road; also in:

CLAVEY ROAD, from and connecting with said proposed water main in said Ridge Road at its intersection with Clavey Road, thence east in said Clavey Road to and connecting with the existing main in said Green Bay Road; also in:

SKOKIE VALLEY ROAD, COMPTON AVENUE, SECTION 22, HALF DAY ROAD, and along SUMMIT AVENUE extended south, from and connecting with said proposed main in said Deerfield Road at its intersection with Skokie Valley Road, thence northwesterly in said Skokie Valley Road to Compton Avenue, thence north in said Compton Avenue to a point in the north line of Glenwood Avenue, fifteen (15) feet east of the west line of the Northeast Quarter (N.E. 1/4) of Southwest Quarter (S.W. 1/4) of the Northwest Quarter (N.W. 1/4) of said Section 22, to the Third Principal Meridian, thence north along a line fifteen (15) feet east of and parallel with the west line of said Northeast Quarter (N.E. 1/4) of the Southwest Quarter (S.W. 1/4) and the west line of the Southeast Quarter (S.E. 1/4) of the Northwest Quarter (N.W. 1/4) of said Section 22, to the south line of the North Half (N. 1/2) of said Northwest Quarter (N.W. 1/4) of said Section 22, thence north in said Compton Avenue to its intersection with Half Day Road, thence west in said Half Day Road to a line seventeen (17) feet east of and parallel with the center line extended south of Summit Avenue of Krenn & Dato's Highland Park Addition, thence north along said center line, as extended south, with center line extended parallel with said center line, as extended south, of said Summit Avenue, to the south line of said Krenn & Dato's Highland Park Addition; also in:

HALF DAY ROAD, from and connecting with said proposed main in said Half Day Road at said Compton Avenue, thence east in said Half Day Road to the west limits of the City of Highland Park, Lake County, Illinois, being at the east line of west half (W. 1/2) of Section 15, Township 43 North, Range 12 East of the Third Principal Meridian;

Including the laying of all said cast iron water pipe mains, with connections and fittings, fire hydrants with auxiliary valves with boxes, water gate valves, valve vaults, concrete bulkheads and piers, all shoring, bracing, trenching, grubbing, calking, testing, backfilling with earth and sand, flushing, restoration of pavements, walks, and parkways where cuts are made, the removal of all surplus excavated materials, the cost of engineering services, and all other labor and expenses necessary to construct said proposed improvement in a workmanlike manner, all in the City of Highland Park, County of Lake, and State of Illinois;

connections and fittings, fire hydrants with auxiliary valves with boxes, water gate valves, valve vaults, concrete bulkheads and piers, all shoring, bracing, trenching, grubbing, calking, testing, backfilling with earth and sand, flushing, restoration of pavements, walks, and parkways where cuts are made, the removal of all surplus excavated materials, the cost of engineering services, and all other labor and expenses necessary to construct said proposed improvement in a workmanlike manner, all in the City of Highland Park, County of Lake, and State of Illinois;

The improvement provided for in this ordinance is further shown and described upon certain plates or drawings, showing plans, profiles, and details of construction, which are hereto attached, made a part hereof, and marked, respectively, Plate 1, File No. H. P. 8701; Plate 2, File No. H. P. 8702; Plate 3, File No. H. P. 8703; Plate 4, File No. H. P. 8704; Plate 5, File No. H. P. 8705; Plate 6, File No. H. P. 8706; Plate 7, File No. H. P. 8707; Plate 8, File No. H. P. 8708; Plate 9, File No. H. P. 8709; Plate 10, File No. H. P. 8710; Plate 11, File No. H. P. 8711; Plate 12, File No. H. P. 8712; Plate 13, File No. H. P. 8713; Plate 14, File No. H. P. 8714; Plate 15, File No. H. P. 8715; Plate 16, File No. H. P. 8716; Plate 17, File No. H. P. 8717; Plate 18, File No. H. P. 8718; Plate 19, File No. H. P. 8719; Plate 20, File No. H. P. 8720; Plate 21, File No. H. P. 8721. Said plates and each and all of the contents thereof are hereby made a part of this ordinance with the same force and effect as if the said plans, profiles, and details upon said plates or drawings, were set out in words and figures herein.

DEFINITIONS. Whenever the following words or terms are used in this ordinance, the following definitions shall obtain:

BOARD, or BOARD OF LOCAL IMPROVEMENTS: The Board of Local Improvements of the City of Highland Park, Illinois.

ENGINEER: Board of Local Improvements of the City of Highland Park, Illinois, or such person, firm or corporation as said Board shall authorize to act in its place with reference to the construction of the improvement or any portion thereof referred to herein. The said Board shall cause the Engineer to set proper stakes, make measurements, and mark grades herein provided, and make necessary surveys, plans and profiles for the construction of the improvement herein provided to be constructed.

DATUM: A horizontal plane distant in vertical line one hundred and eighty-eight and seventy-eight hundredths (188.78) feet below the top of the water table of the City Hall at the southeast corner of said City Hall in said City of Highland Park. The elevations of the finished grade as shown in the plans, profiles, and details upon said plates or drawings, are given City of Highland Park feet of a foot above the established datum of the City of Highland Park.

Wherever on said plates or drawings a single vertical dash is shown above and to the right of a figure, it is to indicate "feet," and wherever two vertical dashes or a double dash is shown above and to the right of a figure, it is to indicate "inches."

ELEVATION: The distance in a vertical line above the established datum of Highland Park as herein described.

GRADE: The finished elevation above datum of the flow line of the proposed water pipe, as established and shown on the drawings.

Diameter of the water pipe and valve vaults shall mean the internal diameter.

There shall be made five (5) connections of existing water mains as follows:

One (1) connection of the proposed twenty (20) inch main to the existing sixteen (16) inch discharge main at the Water Works Plant as shown on said Plate 10.

One (1) connection of the proposed twenty (20) inch main to the existing twelve (12) inch main at the Water Works Plant as shown on said Plate 10.

One (1) connection of the proposed twenty (20) inch main to the existing ten (10) inch main at the Stand Pipe as shown on said Plate 8.

One (1) connection of the proposed eight (8) inch main to the existing twelve (12) inch main at the intersection of Clavey Road and Green Bay Road as shown on said Plate 3.

One (1) connection of the proposed eight (8) inch main to the existing twelve (12) inch main at the intersection of County Line Road and Green Bay Road, as shown on said Plate 1.

WATER PIPE. The size of the proposed water pipe shall be as follows:

In Central Avenue, Deerpath Avenue, and Deerfield Road, from the said connections at the said Water Works Plant to Skokie Valley Road, said water pipe shall be twenty (20) inches in diameter, as shown on said Plates 4, 7, 8, 9, and 10.

In Deerfield Road from Skokie Valley Road to Ridge Road, said water pipe shall be eighteen (18) inches in diameter as shown on said Plate 4.

In Deerfield Road, from Ridge Road to the west limits of Highland Park, said water pipe shall be twelve (12) inches in diameter, as shown on said Plate 4.

In Ridge Road from Deerfield Road to the south line of Section 27, Township 43 North, Range 12 East of the Third Principal Meridian, said water pipe shall be fourteen (14) inches in diameter, as shown on said Plate 2.

In Ridge Road from said south line of said Section 27 to Clavey Road, said water pipe shall be twelve (12) inches in diameter, as shown on said Plate 2.

In Ridge Road from Clavey Road to County Line Road said water pipe shall be eight (8) inches in diameter, as shown on said Plate 2.

In County Line Road from Ridge Road to Green Bay Road said water pipe shall be eight (8) inches in diameter, as shown on said Plate 1.

In Clavey Road from Ridge Road to Green Bay Road said water pipe shall be eight (8) inches in diameter, as shown on said Plate 1.

In Skokie Valley Road, Compton Avenue, and along the west line of the Northeast Quarter (N.E. 1/4) of the Southwest Quarter (S.W. 1/4), and Quarter (N.W. 1/4) of Section 22, Township 43 North, Range 12 East of the Third Principal Meridian, from Deerfield Road to Half Day Road, said water pipe shall be fourteen (14) inches in diameter, as shown on said Plate 5.

In Half Day Road west of Compton Avenue, and along the line parallel with the center line of Summit Avenue extended south, said water pipe shall be twelve (12) inches in diameter, as shown on said Plate 5.

In Half Day Road east of Compton Avenue said water pipe shall be ten (10) inches in diameter, as shown on said Plate 6.

All of said proposed water pipe mains shall be constructed of first-class cast iron water pipe, and fittings shall be constructed of first-class steel.

The depth of the bell or socket of all of said water pipe and fittings shall be not less than four (4) inches, except that the socket for six (6) inch pipe shall be not less than three and one-half (3 1/2) inches. The weight of said water pipe shall be as follows:

600 lineal feet of said twenty (20) inch pipe shall weigh 208.3 pounds per lineal foot, or 2083 pounds per length of twelve (12) feet.

975 lineal feet of said twenty (20) inch pipe shall weigh 175 pounds per lineal foot, or 1750 pounds per length of twelve (12) feet.

All of said eighteen (18) inch pipe shall weigh 150 pounds per lineal foot, or 1800 pounds per length of twelve (12) feet.

All of said fourteen (14) inch pipe shall weigh 102.5 pounds per lineal foot, or 1230 pounds per length of twelve (12) feet.

All of said twelve (12) inch pipe shall weigh 82.1 pounds per lineal foot, or 985 pounds per length of twelve (12) feet.

All of said ten (10) inch pipe shall weigh 63.8 pounds per lineal foot, or 765 pounds per length of twelve (12) feet.

All of said eight (8) inch pipe shall weigh 47.5 pounds per lineal foot, or 570 pounds per length of twelve (12) feet.

All of said six (6) inch pipe shall weigh 33.3 pounds per lineal foot, or 400 pounds per length of twelve (12) feet.

There shall be furnished and set in place along the line of said water mains at the points as shown on said Plates 1 to 10 inclusive, eleven (11) standard twenty (20) inch gate valves weighing seventeen hundred (1700) pounds each, two (2) gear operated, twenty (20) inch gate valves, weighing seventeen hundred (1700) pounds each, not including the weight of the gears, three (3) standard ten (10) inch gate valve weighing twelve hundred ninety (1290) pounds each, one (1) gear operated sixteen (16) inch gate valve weighing nine hundred (900) pounds each, not including the weight of the gears, twelve (12) standard eight (8) inch gate valves, weighing seven hundred eighty (780) pounds each, eleven (11) standard twelve (12) inch gate valves, weighing five hundred (500) pounds each, three (3) standard ten (10) inch gate valves, weighing four hundred (400) pounds each, twenty-two (22) standard eight (8) inch gate valves, weighing two hundred fifty-five (255) pounds each.

All of the above gate valves shall be cast iron body, bronze mounted, bronze stemmed, double water gate valves, for one hundred fifty (150) HYDRANTS.

There shall be furnished, set, and connected to the herein proposed water mains as shown on said Plates 1 to 10, inclusive, fifty-five (55) fire hydrants. Said hydrants shall be cast iron body, bronze mounted fire hydrants, for a depth of five (5) feet six (6) inches, for six (6) inch connection to main, with five (5) inch valve opening, with six (6) inch cast iron body, bronze mounted water gate valve with cast iron connections, with one (1) standard Highland Park stemmer hose connection, with lugs and two (2) one (1) inch wrought iron tie bolts for strapping.

The drip of each hydrant shall have one-quarter (1/4) of a cubic yard of gravel placed under and around it. There shall be constructed over said Plates 1 to 10, inclusive, sixty-one (61) valve vaults. Said valve vaults shall be constructed of concrete (either blocks or monolithic), composed of four (4) parts gravel, mixed with sufficient water to make a quaking mass.

Constructed of concrete blocks, said blocks shall be laid with full joints of mortar neatly pointed on the inside with a trowel, composed by volume of one (1) part Portland cement, and two (2) parts sand, mixed with sufficient water to make a quaking mass.

The inside diameter of each valve vault shall be four (4) feet at the bottom thereof, and up to a horizontal plane three (3) feet below the top of the masonry, from which plane the diameter shall be uniformly decreased upwards to two (2) feet, at the top of the masonry, in such manner as to fit and support the cast iron cover herein provided. Side walls shall be eight (8) inches thick, and the bottom six (6) inches thick. The bottom shall extend to the outside edge of the side walls, and the inside bottom shall be six (6) inches below the bottom of the water pipe vault. Each valve vault shall be provided with a four (4) inch vitrified, salt-glazed, hub and spigot tile sewer pipe drain to the nearest storm sewer. Each valve vault shall be provided with a cast iron manhole cover, consisting of a frame weighing three hundred ninety (390) pounds, and lid weighing one hundred fifty (150) pounds, set on top of the masonry in such manner that the top of the cover will be flush with the finished grade of the pavement or the ground where located.

The details for the construction of said valve vaults and covers are shown on said Plate 1.

SPECIAL VALVE VAULT. There shall be constructed near the said Water Works Plant at the location as shown on said Plate 10, one (1) special valve vault. Said valve vault shall be constructed over and around one (1) twelve (12) inch, one (1) sixteen (16) inch, and two (2) twenty (20) inch valves. Said valve vault shall be constructed of concrete composed by volume of one (1) part Portland cement, two (2) parts sand, and four (4) parts gravel, mixed with sufficient water to make a quaking mass, reinforced with four thousand nine hundred fifty (4950) pounds of deformed steel reinforcing bars. Said valve vault shall have the inside dimensions of twenty (20) feet long by fifteen (15) feet wide and eight (8) feet high. The walls shall be eight (8) inches thick, the top and bottom shall each be six (6) inches thick, and the inside bottom shall be six (6) inches below the bottom of the water pipe where located. The details for the construction of said valve vault are shown on said Plate 10.

PIERS. There shall be constructed at the locations as shown on said Plate 10, fifteen (15) piers to support the said proposed twenty (20) inch water pipe on the slope of the bluff near the said Water Works Plant. Said piers shall be constructed of concrete composed by volume of one (1) part Portland cement, two (2) parts sand, and four (4) parts gravel, mixed with sufficient water to make a quaking mass. The bottom of said concrete pier shall be three (3) feet below the bottom of said water pipe where located. Said piers shall be three (3) feet, eleven (11) inches high, three (3) feet three (3) inches long, six (6) inches wide at the top, and one (1) foot six (6) inches wide at the bottom, and shall be founded out on top to conform to the outside radius of said water pipe. The details for the construction of said piers are shown on said Plate 10.

BULKHEADS. There shall be constructed four (4) bulkheads of concrete at the locations as shown on said Plate 10, to prevent said water pipe from sliding down the side of the bluff or ravine where located. Said bulkheads shall be constructed of concrete composed by volume of one (1) part Portland cement, two (2) parts sand, and four (4) parts gravel, mixed with sufficient water to make a quaking mass.

Two (2) of said bulkheads shall be constructed at the foot of the bluff at said Water Works Plant. Said bulkheads shall be constructed at right angles to and integral with each other, shall be twelve (12) feet high, five (5) feet long; the top shall be one (1) foot six (6) inches wide, and the bottom shall be three (3) feet six (6) inches wide, and said bottom shall be four (4) feet below the bottom of said water pipe where located. The details for the construction of said bulkheads are shown on said Plate 10.

SAND FILLING. All trenching under present pavements and in the parkway of Central Avenue for a distance of three hundred (300) feet east of the easterly line of the Sheridan Road extended, shall be backfilled with sand.

REPAIRING PAVEMENTS, WALKS AND PARKWAYS. All damaged pavements, walks and parkways shall be repaired and left in as good condition after the completion of the improvement as when the improvement is started.

BACKFILLING. All trenches and excavations shall be backfilled and thoroughly flushed with water, and all surplus materials from the excavation for trenches, valve vaults, piers, bulkheads, and for any excavation, shall be removed from the site of the improvement.

PIPE LAYING. All water pipe fittings, valves and hydrants shall be laid or set in open trenches, of sufficient width to permit of proper laying and calking.

JOINTS. All joints of water pipe, fittings, valves and hydrants shall be made with lead and jute; the lead shall be first quality soft pig lead, and the jute shall be best quality, long fibred packing.

WATER. All water provided to be used shall be clean and suitable for the purposes for which it is used.

SAND. All sand herein provided to be used in concrete or mortar shall be clean, sharp sand.

CEMENT. All cement herein provided to be used shall be Portland cement of a fineness permitting ninety-two per cent (92%) to pass through a sieve with one hundred (100) meshes to the lineal inch, and test piece made of one (1) part by volume of the cement and three (3) parts by volume of said sand, shall have a tensile strength of two hundred (200) pounds to the square inch after being exposed to the air one (1) day and immersed in water six (6) days.

TESTING. All of said water pipe, valves and hydrants shall comply with the following test before being accepted. Said tests to be made before any of the pipe is covered. After filling the pipe with water, the pressure shall be raised to one hundred twenty-five (125) pounds per square inch, by injecting water into said water pipe by the use of a force pump, and maintained at that pressure for a period of six (6) minutes by the injection of not more than the following quantities of water:

For a 6-inch pipe—6/10 gals. per 1000 feet of length.

For a 8-inch pipe—8/10 gals. per 1000 feet of length.

For a 10-inch pipe—1 gal. per 1000 feet of length.

For a 12-inch pipe—1 1/10 gals. per 1000 feet of length.

For a 14-inch pipe—1 4/10 gals. per 1000 feet of length.

For a 18-inch pipe—1 8/10 gals. per 1000 feet of length.

For a 20-inch pipe—2 gals. per 1000 feet of length.

CHARACTER OF IMPROVEMENT. All of the improvement herein provided to be made shall be made in the best and most substantial and workmanlike manner, and all surplus excavated material and rubbish of every description shall be removed from the site of the work. No improper material shall be used, but all materials of every kind shall fully conform to the foregoing provisions, place where, and for the purpose for which used, and said improvement shall be made under the direction and to the satisfaction of the Board of Local Improvements of the City of Highland Park, Lake County, Illinois.

SECTION II. That the recommendation of the Board of Local Improvements of the City of Highland Park, Lake County, Illinois, providing for said improvement, together with the estimate of the cost thereof, both hereto attached, be and the same is hereby approved.

SECTION III. That said improvement shall be made and the whole cost thereof, including the sum of Twenty-two Thousand Three hundred and thirty-eight Dollars and Forty-nine Cents (\$22,358.49), (being the amount included in the estimate of said Mayor as President of said Board of Local Improvements, hereto attached, as the cost of making and collecting the property benefited thereby to be levied upon by assessed therefor, in accordance with the provisions of an Act of the General Assembly of the State of Illinois, entitled "An Act Concerning the Local Improvements," approved July 14th, 1897, and all amendments thereto, and that said sum of Twenty-two Thousand Three Hundred Fifty-eight Dollars and Forty-nine Cents (\$22,358.49) shall be applied toward the cost of making and collecting said assessment.

SECTION IV. That the aggregate amount herein ordered to be assessed against the property and also the assessment on each lot and parcel which installment shall include ten per cent (10%) of assessment, to be assessed against the property, and the aggregate amount of each installment shall be equal in amount and multiple of the whole in the manner and at the time and rate of interest as provided by law. Pending installments of said assessment, bearing interest at the rate of six per cent (6%) per annum, payable annually. Said bonds shall be issued in accordance with and shall in all respects conform with the provisions of said Act of the General Assembly of the State of Illinois, as amended, and shall be signed by the Mayor and attested by the City Clerk under the corporate seal of said City.

SECTION V. That the Corporation Counsel of said City be and he is hereby directed to file a petition in the County Court of Lake County, Illinois, in the name of the City of Highland Park, praying that steps may be taken to levy a special assessment for said improvement, in accordance with the provisions of this ordinance, and in the manner prescribed by law.

SECTION VI. That all ordinances or parts of ordinances conflicting with this ordinance, be and the same are hereby repealed.

SECTION VII. That this ordinance shall be in force from and after its passage.

Filed July 31st, 1925.

bottom shall extend to the outside edge of the side walls, and the inside bottom shall be six (6) inches below the bottom of the water pipe where located. Each valve vault shall be provided with a four (4) inch vitrified, salt-glazed, hub and spigot tile sewer pipe drain to the nearest storm sewer. Each valve vault shall be provided with a cast iron manhole cover, consisting of a frame weighing three hundred ninety (390) pounds, and lid weighing one hundred fifty (150) pounds, set on top of the masonry in such manner that the top of the cover will be flush with the finished grade of the pavement or the ground where located.

The details for the construction of said valve vaults and covers are shown on said Plate 1.

SPECIAL VALVE VAULT. There shall be constructed near the said Water Works Plant at the location as shown on said Plate 10, one (1) special valve vault. Said valve vault shall be constructed over and around one (1) twelve (12) inch, one (1) sixteen (16) inch, and two (2) twenty (20) inch valves. Said valve vault shall be constructed of concrete composed by volume of one (1) part Portland cement, two (2) parts sand, and four (4) parts gravel, mixed with sufficient water to make a quaking mass, reinforced with four thousand nine hundred fifty (4950) pounds of deformed steel reinforcing bars. Said valve vault shall have the inside dimensions of twenty (20) feet long by fifteen (15) feet wide and eight (8) feet high. The walls shall be eight (8) inches thick, the top and bottom shall each be six (6) inches thick, and the inside bottom shall be six (6) inches below the bottom of the water pipe where located. The details for the construction of said valve vault are shown on said Plate 10.

PIERS. There shall be constructed at the locations as shown on said Plate 10, fifteen (15) piers to support the said proposed twenty (20) inch water pipe on the slope of the bluff near the said Water Works Plant. Said piers shall be constructed of concrete composed by volume of one (1) part Portland cement, two (2) parts sand, and four (4) parts gravel, mixed with sufficient water to make a quaking mass. The bottom of said concrete pier shall be three (3) feet below the bottom of said water pipe where located. Said piers shall be three (3) feet, eleven (11) inches high, three (3) feet three (3) inches long, six (6) inches wide at the top, and one (1) foot six (6) inches wide at the bottom, and shall be founded out on top to conform to the outside radius of said water pipe. The details for the construction of said piers are shown on said Plate 10.

BULKHEADS. There shall be constructed four (4) bulkheads of concrete at the locations as shown on said Plate 10, to prevent said water pipe from sliding down the side of the bluff or ravine where located. Said bulkheads shall be constructed of concrete composed by volume of one (1) part Portland cement, two (2) parts sand, and four (4) parts gravel, mixed with sufficient water to make a quaking mass.

Two (2) of said bulkheads shall be constructed at the foot of the bluff at said Water Works Plant. Said bulkheads shall be constructed at right angles to and integral with each other, shall be twelve (12) feet high, five (5) feet long; the top shall be one (1) foot six (6) inches wide, and the bottom shall be three (3) feet six (6) inches wide, and said bottom shall be four (4) feet below the bottom of said water pipe where located. The details for the construction of said bulkheads are shown on said Plate 10.

SAND FILLING. All trenching under present pavements and in the parkway of Central Avenue for a distance of three hundred (300) feet east of the easterly line of the Sheridan Road extended, shall be backfilled with sand.

REPAIRING PAVEMENTS, WALKS AND PARKWAYS. All damaged pavements, walks and parkways shall be repaired and left in as good condition after the completion of the improvement as when the improvement is started.

BACKFILLING. All trenches and excavations shall be backfilled and thoroughly flushed with water, and all surplus materials from the excavation for trenches, valve vaults, piers, bulkheads, and for any excavation, shall be removed from the site of the improvement.

PIPE LAYING. All water pipe fittings, valves and hydrants shall be laid or set in open trenches, of sufficient width to permit of proper laying and calking.

JOINTS. All joints of water pipe, fittings, valves and hydrants shall be made with lead and jute; the lead shall be first quality soft pig lead, and the jute shall be best quality, long fibred packing.

WATER. All water provided to be used shall be clean and suitable for the purposes for which it is used.

SAND. All sand herein provided to be used in concrete or mortar shall be clean, sharp sand.

CEMENT. All cement herein provided to be used shall be Portland cement of a fineness permitting ninety-two per cent (92%) to pass through a sieve with one hundred (100) meshes to the lineal inch, and test piece made of one (1) part by volume of the cement and three (3) parts by volume of said sand, shall have a tensile strength of two hundred (200) pounds to the square inch after being exposed to the air one (1) day and immersed in water six (6) days.

TESTING. All of said water pipe, valves and hydrants