



KEY

PROTECTED FIRE ZONE: Shuwa in Green.

NOTE.—Fire protection report in file in Engineering Department of F. I. R. O. of N. J.

Elevations range from 60 to 336 feet above mean sea level.

Water mains 8 inches and larger in diameter 

Water mains 6 inches in diameter 

Water mains 4 inches in diameter 

Fire hydrants shown thus 

Gate valves shown thus 

Fire house shown thus 

Fire apparatus designated by symbols thus:

(V) Pumping engine and hose car

(H) Hose car

(L) Ladder truck

(B) Booster car

(B) Booster tank or tanks on above

May 15, 1947.

RIDGEWOOD VILLAGE, BERGEN COUNTY, NEW JERSEY.

Population — 1940 Census — 14,948.

Local Estimate — 17,000.

IN GENERAL: Located on the main line of the Erie Railroad about 5 miles north of Paterson. It is a substantial residential community with a moderately extensive mercantile district and no manufacturing. Area about 5.7 square miles. Elevations range from 60 to 336 feet. Practically all streets are improved and in good condition. No grade crossings, but the railroad effects some segregation, with only two main underpasses to the westerly section, one of which is subject to closing during heavy rainfall. Grades are moderate to severe to the northwest. Traffic congestion and parked vehicles in the business area could effect delays in the response and operation of the fire department.

WATER SUPPLY: The Village of Ridgewood owns and operates the supply works, distribution system, and appurtenances, supplying water for domestic and fire protection purposes to Ridgewood, Midland Park, Glen Rock, and Wyckoff Township, and sells water at wholesale to the Borough of Ho-Ho-Kus. The system was installed in 1900 and has been subsequently improved and extended. **Organization:** The water department is under the control of the village commissioners. The organization includes a competent experienced superintendent, 1 general foreman, 1 assistant foreman, 2 plant operators, 3 assistant operators, 4 meter men, and about 10 regular laborers with others as needed. Employees are appointed for indefinite terms under Civil Service regulations, and long tenures have been the practice. The superintendent has been in charge since the village acquired the system in 1921 and had had 7 years' experience with the previous owner. The foremen and other employees are members of the fire department. Office in municipal building on Oak Street in the business district. Vehicles, shop and supplies are provided at yard adjacent to fire headquarters on Hudson Street. Records are very complete and well kept, and include an excellent distribution map, detailed plans, and operating data. **Supply Works:** Water is obtained from 8 well fields, 5 of which are in Ridgewood, 2 are in Wyckoff Township and 1 is in Midland Park. Wells are operated by low or high lift deep well turbines except that the Glen Avenue well is operated by direct suction. The aggregate safe yield of the well fields is estimated to be 4.90 m.g.d. not including the Ames well field in Wyckoff Township which was under development at time of inspection, and which will furnish an additional yield of 1.66 m.g.d. on completion of pump installations during the current year. The high lift pumps discharge to the distribution system with 3 low service standpipes and one high service elevated tank and standpipe acting as equalizers and providing storage. The deep well pumps at Cedar Hill and two pumps at Wortendyke discharge to high service, and the new well pumps at Cedar Hill will discharge to two high service levels. Other equipment normally supplies the low service which constitutes about 79.5% of the total delivery. Well stations are equipped with Venturi meter and current is supplied by independent aerial services from the Public Service Corporation. Well sizes and capacities are as follows:

Linwood Avenue: One 12-inch well 300 feet deep—capacity 300 g.p.m.

Ridgewood Avenue: One 12-inch well 205 feet deep—capacity 250 g.p.m.

Grove Street: One 12-inch well 300 feet deep—capacity 200 g.p.m.

Fairview Street: One 12-inch well 402 feet deep—capacity 3/5 g.p.m.

Wortendyke Station: 3 of 4 12-inch wells in use, 203-360 feet deep. The aggregate capacity of the pumped wells is 525 g.p.m.

Glen Avenue: Eight 8-inch wells 199 feet deep, with an aggregate capacity of 800 g.p.m.

Cedar Hill Station: Six 12-inch wells 315 to 500 feet deep with an aggregate capacity of 950 g.p.m.

Ames Well Field: Eight 12-inch wells 305 to 480 feet deep, 5 of which are to be equipped with pumps immediately. The aggregate capacity of the well field is 1.66 m.g.d. as presently developed.

Pumping Stations—Linwood Avenue Station: Located on the north side of Linwood Avenue at Northern Parkway. Elevation of floor 78.6. Building is 1-story, small area, stone faced, brick and concrete with wood scuttle in concrete roof, concrete floor, wired glass windows in metal frames, and wood door; no hand protection; housekeeping good; exposure negligible. **Equipment:** One 300-g.p.m. Cook high lift deep well turbine driven by a 30-h.p. U. S. motor, manually controlled from pump house or Glen Avenue Station. **Ridgewood Avenue Station:** Located on the south side of Ridgewood Avenue between Eastside Avenue and the Saddle River. Elevation of floor 68.8. Building 1-story, small area concrete, with copper covered wood scuttle in concrete roof, concrete floor, wired glass windows in metal frames, wood door with plain glass; no hand protection; housekeeping good, exposure negligible. **Equipment:** One 250-g.p.m. Cook high lift deep well turbine driven by a 30-h.p. U. S. motor automatically controlled at about 20 pounds drop in pressure. **Grove**

Street Station: Located on the north side of Grove Street between Irving Street and South Van Dien Avenue. Elevation of floor 66.5. Station control and operation identical with Ridgewood Avenue Station. **Equipment:** One Fairbanks-Morse 200-g.p.m. deep well turbine driven by a 25-h.p. Fairbanks-Morse motor. **Fairview Street Station:** Located on the east side of Fairview Street near Monroe Street. Elevation of floor 314.06 feet. Station, control and operation similar to Ridgewood Avenue Station, except that pump has a capacity of 375 g.p.m. **Wortendyke Station:** Located in Midland Park on Godwin Avenue near Paterson Avenue as shown on zone map No. 199. At each of the three operating wells there is a building with equipment of the same type as the Ridgewood Station except that one pump has a capacity of 125 g.p.m. and two have a capacity of 200 g.p.m. They are respectively driven by 10-h.p., 15-h.p., and 20-h.p. electric motors. Well pumps discharge to an aboveground concrete basin 22 feet in diameter by 20 feet high with a capacity of 56,880 gallons. Pumps are controlled by float switches or may be manually operated. Main pumping station is 1-story brick with slate roof, concrete floor, plain glass windows in wood frames, hot water heat, and electric lights. Elevation of pump floor 246.6. No exposure. Wiring installation is good and general care and cleanliness is excellent. Station is operated by one engineer on each of three 8-hour shifts. Two 2½-gallon extinguishers are provided in pump room, and hose house with 150 feet of 2½-inch hose and hydrant is located at rear. **Equipment:** Two high service American Well Works Company 300-g.p.m. at 100 pounds centrifugal pumps each driven by a 40-h.p. G. E. motor. One low service American Well Works Company 1,050-g.p.m. centrifugal pump driven by a 50-h.p. G. E. motor. One Fairbanks-Morse 700-g.p.m. centrifugal pump driven by a 20-h.p. Fairbanks-Morse motor. Station operating board carries recording pressure gauge on each service and level recorders on all storage tanks. Pumps draft from the suction basin and discharge through common header to the respective services. They are controlled by float switches and may be operated manually. **Glen Avenue Station:** Located near Glen Avenue on Stewart Street as shown on map. Building is 1-story, stuccoed brick with composition shingled roof, concrete floor, plain glass windows in steel frames, hot water heat and electric lights. Elevation of pump room floor 81.5. Exposure is negligible. Wiring installation is good and general care and cleanliness are excellent. Station is operated by one or more engineers on 8-hour shifts. Two 2½-gallon extinguishers provided. **Equipment:** One American Well Works Company 750-g.p.m. centrifugal pump driven by a 75-h.p. Westinghouse motor. One American Well Works Company 900-g.p.m. centrifugal pump driven by a 100-h.p. motor. **Cedar Hill Stations:** Located on Cedar Hill Avenue, Wyckoff Township near high service elevated tank. Elevation of floors about 330 feet. Stations are identical with Linwood Avenue Station and pumps are equipped with Venturi meters. **Equipment:** Well No. 1 is equipped with a Sterling 150-g.p.m. deep well turbine driven by a 15-h.p. U. S. motor. Wells Nos. 2 and 3 are equipped with Sterling 100-g.p.m. deep well turbines driven by 10-h.p. U. S. motors. Well No. 4 is equipped with a 300-g.p.m. Cook deep well turbine driven by a 25-h.p. U. S. motor. Well No. 5 is equipped with a 150-g.p.m. American Well Works deep well turbine driven by a 15-h.p. U. S. motor. Well No. 6 is equipped with a Sterling 150-g.p.m. deep well turbine driven by a 15-h.p. U. S. motor. **Ames Well Field Stations:** These stations will be similar to Cedar Hill and elevations range from 354 to 397 feet and pumps will be equipped with Venturi meters. **Elevated Storage—High Service:** One standpipe located on Glen Avenue east of Prospect Street, Midland Park. It is steel, 40 feet in diameter by 30 feet in height. Capacity 282,000 gallons. Elevation of base 407.9 and overflow 437.9. One elevated tank located on Cedar Hill Avenue southwest of Wyckoff Avenue, Wyckoff. It is steel on an 80-foot steel tower, 28 feet in diameter by 24.2 feet in height. Capacity 150,000 gallons. Elevation of base 332.5 and overflow 441.6. **Low Service:** Two standpipes located at north end of Aqueduct Avenue, Midland Park. They are steel, 60 feet in diameter by 30 feet in height. Capacity 634,500 gallons each. Elevation of bases 314.6 and overflows 344.6. One standpipe located on Valley View Avenue near Heights Road, Ridgewood as shown on map. It is steel, 50 feet in diameter by 30 feet in height. Capacity 440,625 gallons. Elevation of base 286.5 and overflow 316.5. **Distribution System:** Presently in two services with hydraulic gradients of 330 and 440 feet. A new high service is to be supplied from the Ames well field and having a hydraulic gradient of 520 feet. The distribution system in Ridgewood consists of fairly complete 6-inch gridiron well supported by 12-inch, 10-inch, and 8-inch arteries. See map. **Consumption:** The average and maximum daily pumpage during 1946 for the entire territory served was 1.783 and 4.59 million gallons, of which it is estimated that 65% was used in Ridgewood, and of the total pumpage 79.48% was supplied to low service. An average daily rate of 0.492 million gallons was sold to the Borough of Ho-Ho-Kus. On December 31, 1946 there were 7,885 services in the entire territory served, of which about 58.3% are in Ridgewood. Services are 100% metered. Pipe: All cast iron, tar coated, bell and spigot joint except small extensions of Transite, all laid with about 3½-foot cover. No serious trouble reported from

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Continued.

frozen mains or electrolysis. Total length in Ridgewood, 346,600 feet; 3.86% 12-inch, 2.74% 10-inch, 16.74% 8-inch, 73.40% 6-inch, and 3.26% 4-inch. Gate Valves: There are 656 in Ridgewood mainly of Eddy make set with iron boxes at grade or in manholes. Direction of operation is uniform and they are inspected annually. Hydrants: There are 467 public hydrants and 2 private hydrants in Ridgewood of Eddy make of standard type. About 25% have two 2½-inch outlets and about 18% have 4-inch branches. Outlet threads are National Standard. About 69% of the branches are gated. Hydrants are inspected semi-annually and were found to be in good condition at time of inspection. Pressures: Pressure recording gauge in department office in business center at elevation 124 showed 81 pounds at time of inspection and one in the fire headquarters at elevation 156 normally shows about 75 pounds. Other gauges located in Glen Rock center and in pumping stations show pressures to be well maintained. Readings taken at 10 well distributed hydrants showed pressures on the low service to range from 76 to 104, with an average of 86.7 pounds, and on the high service from 77 to 84, with an average of 80.7 pounds. General average is 85.9 pounds. Fire Flow Tests: Probable supply available for fire protection purposes was measured on October 5, 1937 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

Low Service

Ridgewood Ave. between Broad and Chestnut Sts., 2,320—80—55.

Oak St. and Franklin Ave., 1,570—87—68.

Ridgewood and Van Dien Aves., 1,420—97—68.

Stevens Ave. 1,200 ft. S. of Grove St., 490—104—11.

Van Emberg Ave. W. of Theyken Ave., 890—85—32.

E. Glen and Fairfield Aves., 1,185—88—60.

Lincoln Ave. and Greenway Rd., 1,130—76—27.

High Service—

Upper Blvd. S. of Glenwood Rd., 1,130—77—40.

Hillcrest Rd. W. of Stratford Rd., 1,055—81—23.

Knollwood and Greenway Rds., 470—84—9.

FIRE DEPARTMENT: A part paid and volunteer organization under the control of the village. The volunteer organization has a total membership of 35 including a chief in the employ of the Village Shade Tree Department, and assistant chief who is superintendent of fire and police alarms, 3 captains and 3 lieutenants, at least half of whom are in the employ of the municipality and of whom a minimum of 24 are available at all times. The paid force consists of 16 firemen working on two platoons with 10 men assigned to headquarters and 6 men assigned to the Glen Avenue Station. Officers are appointed by the mayor and commissioners under Civil Service regulations. The village appropriation for the support of the department during 1947 was \$60,192. A village repair shop is provided and maintenance is in charge of a full paid mechanic. **Companies—Headquarters:** Located on Hudson Street east of Broad Street. Building is a 2-story joisted brick structure with asbestos shingled wood roof, concrete apparatus floor, steam heat, electric lights and hose tower. **Equipment:** One 1928 American La France 750-g.p.m. triple combination pumping engine carrying one 100-gallon booster tank, 150 feet of booster hose, 1,050 feet of 2½-inch hose, 2 short ladders and fairly complete minor equipment. One 1936 Dodge hose car carrying 1,100 feet of 2½-inch hose, 1,100 feet of 1½-inch hose, 2 short ladders and some minor equipment. One 1925 American La France 75-foot aerial ladder truck with ladder pipe carrying 10 ground ladders ranging from 12 to 35 feet and totaling 213 feet, and complete minor equipment. One 1941 Mack booster car and emergency truck equipped with a 200-g.p.m. booster pump and carrying a 250-gallon booster tank, 300 feet of booster hose, 650 feet of 1½-inch hose, one 1,500-watt electric generator, one 250-watt and two 500-watt flood lights, 2 short ladders and fair minor equipment. One 1937 Ford coupe chiefs car carrying 2 masks, 1 inhalator and some first aid equipment. **Engine Company No. 2:** Located on West Glen Avenue west of Monroe Street as shown on map. Building is a 2-story concrete block and frame structure with composition shingled wood roof, concrete apparatus floor, oil-fired steam heat, and electric lights. No hose drying facilities, but a cabinet drier is to be installed. **Equipment:** One 1923 American La France 750-g.p.m. double combination pumping engine carrying 650 feet of 2½-inch hose, 650 feet of 1½-inch hose, 2 short ladders, and fairly complete minor equipment. **Hose:** All 2½-inch hose is C.R.L. with National Standard screw couplings. There is a total supply of 4,800 feet, of which 2,000 feet is held in reserve. Hose is tested annually at 250 pounds pressure and of the total supply about 1,800 feet is more than 5 years old and 500 feet is more than 7 years old. **Operations:** Department is governed by village ordinance. The chief has control of apparatus and equipment and of paid men and of volunteers at fires and drills. General

supervision is exercised by the governing body. The paid men drive and operate apparatus and additional volunteers are available. Motors are started weekly. **Drills and Training:** Drills are under the direction of the chief and captains and consist of ladder work, hose laying, and engine operation. Paid men are drilled twice each week and volunteers drill monthly. **Fire Methods:** Booster streams and 1½-inch lines are used on incipient fires supported by hydrant and engine streams with shut-off nozzles. Heavy stream appliances consist of a deluge set, 1 ladder pipe, and 1 cellar pipe. Gas masks and salvage covers are provided. **Response to Alarms:** The pumping engine, hose car, and ladder truck from headquarters respond to all alarms east of the railroad, and the pumping engine from the Glen Avenue Station and the hose car and ladder truck from headquarters respond to all other alarms. Substantial aid may be secured from the paid departments in Paterson and Hackensack and from the surrounding volunteer departments in Ho-Ho-Kus, Glen Rock, Paramus, Midland Park, Wyckoff, and Hawthorne. **Building Inspection:** Quarterly inspections are made of mercantile and business occupancies and public buildings by the paid men under the supervision of the chief of the department. **Records and Reports:** Log book records of alarms and attendance are fairly complete and fire prevention inspection records were being compiled at time of inspection. Hose records are incomplete. **Fire Alarm System:** The system is under the supervision of the village commissioners and in charge of the village electrician who is the assistant chief of the volunteer fire department. The system consists of an 8-circuit Gamewell automatic system installed in 1930. Headquarters equipment is located on the apparatus floor of fire headquarters in a room with ordinary communications. Battery and rectifier rooms are similarly located. Equipment consists of an 8-circuit Gamewell repeater with 6 box and 2 alarm circuits. A 12-circuit protector board and 8 fire and 4 police circuits together with a 12-circuit switchboard. Inside wiring is in cable and conduit well installed and protected. Circuits are protected by 2,000-volt 5-ampere fuses, inert gas lightning arresters and ½-ampere sneak fuses in cabinet at entrance. Current for operating system is supplied by 92 cells in 6 banks with 15 or 16 cells and low rate rectifier equipment on each of the 6 box circuits, and 19 cells on a local fire alarm circuit. Batteries are well mounted on metal racks with 3-ampere fuse protection. Circuits are 34 miles in length and are overhead except for about 4 miles in the business district. Underground wire is No. 10 in lead cable and aerial circuit is No. 14 hard drawn copper triple braided and weatherproof, carried on utility company poles below power wires. No alarm circuit extension to the Glen Avenue Fire Station. The local alarm circuit in headquarters carries only a transmitter, a punch register and bell; and a register and bell in police headquarters. One box circuit carries a register, gong, and tapper in Glen Avenue Station. The box circuits carry 101 succession type boxes, 10 of which are of 3-fold type, not more than 20 of which are located on any one circuit. Boxes are mounted on utility company poles with red and white indicating bands and no lights, except that one box in the business district and 2 outlying boxes are lighted. Boxes are tested 6 times per year by low current method with repeater in circuit. Circuits are tested daily for current, voltage and grounds, but records are incomplete. Telephone alarms are transmitted directly to headquarters over two circuits from the public exchange, neither of which is reserved exclusively for fire calls. Alarms are sounded from transmitter on diaphone equipment at fire headquarters for which dual compressors and tanks are installed.

POLICE DEPARTMENT: Consists of 24 full paid men including a chief, 2 captains, 4 lieutenants, 1 sergeant, and 16 patrolmen working in 8-hour shifts. Five radio patrol cars, an ambulance, and a rescue truck with fair emergency equipment are provided. Cooperation with the building and fire departments is good. A signaling system consisting of 31 Gamewell boxes operated through the fire alarm headquarters equipment is installed.

BUILDING LAWS: Code adopted May 15, 1935 provides for a building committee and inspector, requires the approval of plans and specifications for building operations, and embodies fair construction requirements. It establishes adequate fire limits in which combustible roofs are prohibited.

FIRE PREVENTION LAWS: The building code embodies provisions relating to garages and gasoline storage. A fire prevention ordinance adopted October 23, 1934 delegates general authority for inspection to a bureau of fire prevention under the supervision of the fire department. Regulations are not sufficiently comprehensive from a fire protection standpoint. In addition there is a satisfactory ordinance governing the installation of oil burning equipments for which certificates of approval are required. State laws adequately cover the storage and shipment of explosives and flammables and the construction of motion picture booths. They also restrict the discharge of fireworks to responsible bonded parties.

ZONING ORDINANCE: Adopted April 23, 1946.