

Superseding Map No. 109 of May 31, 1937. Please destroy old issue.

KEY

PROTECTED FIRE ZONE: Shown in Green.

NOTE.—For description of fire protection, etc., see other side.

Elevations range from 599 to 970 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:

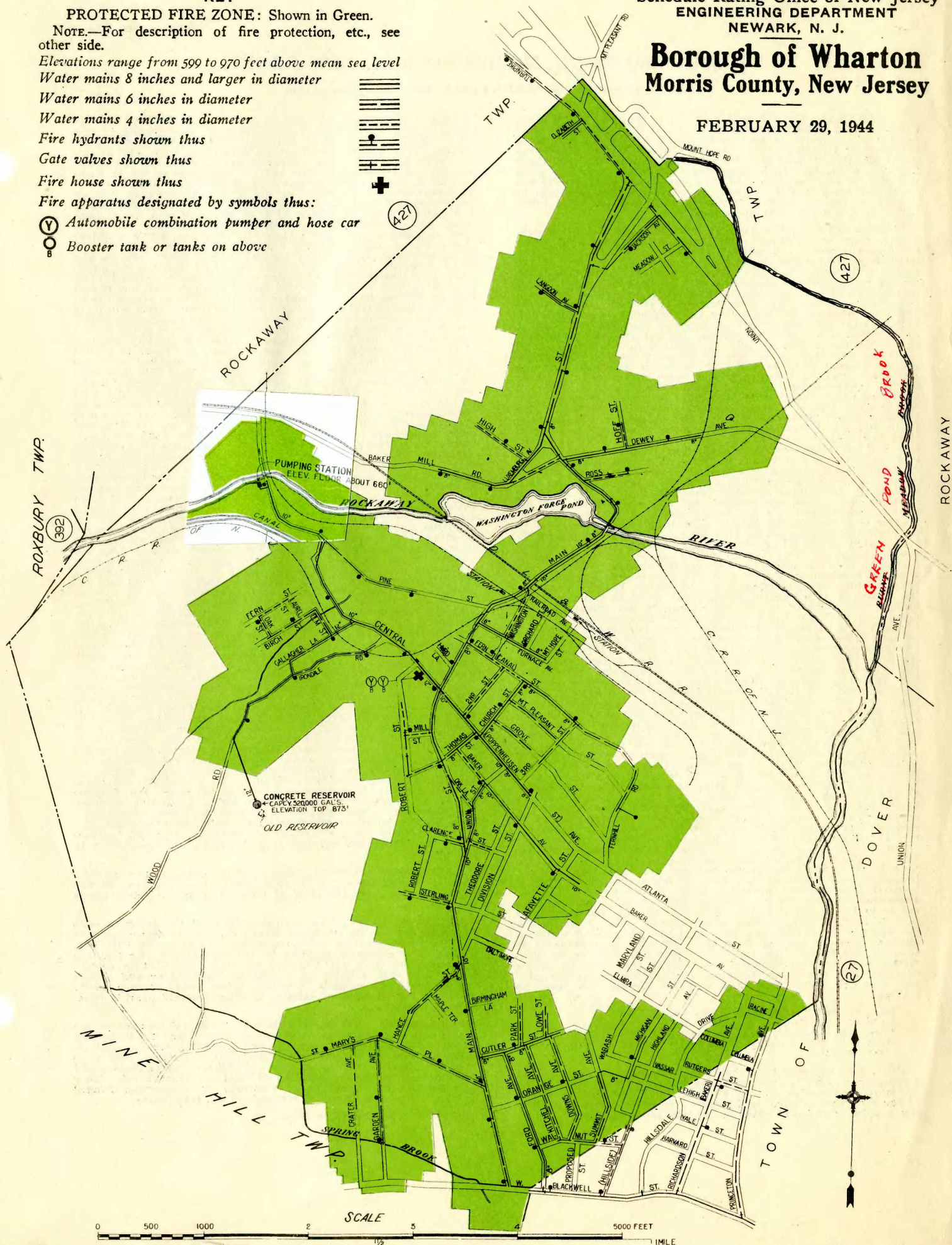
Ⓢ Automobile combination pumper and hose car

Ⓢ Booster tank or tanks on above

Schedule Rating Office of New Jersey
ENGINEERING DEPARTMENT
NEWARK, N. J.

Borough of Wharton
Morris County, New Jersey

FEBRUARY 29, 1944



WHARTON BOROUGH, MORRIS COUNTY, NEW JERSEY.

Population—Census of 1940 was 3,854. Local Estimated Population—5,200.

IN GENERAL: Located on the D., L. & W. and Central Railroads about 2 miles northwest of Dover. It is a residential community of employees of the nearby Picatinny Arsenal and other surrounding industries with one silk hosiery factory employing about 400, and one iron ore mine employing about 150. Area about 2 square miles. Elevations range from 599 to 970 feet. The main thoroughfares are macadam in good condition; other streets are mainly surfaced in fair to good condition. Railroad crossings at grade and parked vehicles in the business district could effect delays in fire department operations.

WATER SUPPLY: The borough owns and operates the supply works, distribution system and appurtenances supplying water for domestic and fire protection purposes to Wharton only. **Organization:** The water department is under the control of the mayor and council and in charge of a superintendent and one assistant who perform all duties, with laborers as needed. Major extensions and replacements are made under the supervision of a consulting engineer. The superintendent and his assistant are appointed annually by the mayor and council. Office in borough hall near the business district. A truck is provided and supplies are on hand at the pumping station. The superintendent responds to all alarms of fire. Records are limited to consumption and operating data and no suitable distribution map is maintained. **Supply Works:** Built in 1921-1922. Water is obtained from the Rockaway River at Wharton with a water shed above the intake of 28.1 square miles and a minimum stream flow of about 4.0 m.g.d. of which the Wharton diversion is limited to 0.50 m.g.d. Water flows from a concrete screened intake in the bed of the stream through 320 feet of 10-inch cast iron pipe to a coagulating basin where it is treated and then pumped through a pressure filter to the distribution system with a reservoir acting as equalizer and providing storage. **Coagulating Basin:** A covered concrete tank 50 x 32 x 10 with a capacity above the discharge pipe of about 25,000 gallons. **Pumping Station:** Located on Central Avenue at the Rockaway River as shown on map. Building is a moderately small area one-story stuccoed hollow tile structure with concrete floor, composition covered wood roof, hot air heater, and electric lights. It is exposed by a nearby garage of similar construction. No hand protection provided. Elevation of floor about 660. **Equipment:** One 350-g.p.m. Gould triplex 8 x 10-inch piston pump driven by a 30-h.p. electric motor. One 350-g.p.m. American Well Works double stage centrifugal pump driven by a 40-h.p. electric motor. Electric energy is supplied by a single overhead service to a double throw switch which prevents simultaneous operation of pumps. **Filter:** Located in pumping station. It is a Roberts pressure unit rated at 0.50 m.g.d., installed with a sealed bypass for emergency use. **Reservoir:** Located east of Wood Road about one-half mile southwest of the borough hall. It is of reinforced concrete construction, covered, in one section. 62 feet in diameter and 22 feet deep with a capacity of 520,000 gallons. Elevation of overflow 877 feet. Maximum draw down between pumping periods approximately 8 feet. **Consumption:** The average and maximum daily consumption during 1943 was approximately 0.10 million gallons and 0.15 million gallons. On December 31st, 1943 there were 896 services, practically all of which are metered. **Distribution System:** In one service consisting of 10- and 8-inch arteries and a 12-inch reservoir supply line with incomplete 4- and 6-inch gridiron and unsupported dead ends. See map. **Pipe:** All cast iron, tar coated, bell and spigot joint, Class "B," laid with about 4½-foot cover. No recent trouble reported from electrolysis or freezing of distribution mains. Total length, 52,100 feet, 20.3% 4-inch, 33.4% 6-inch, 28.4% 8-inch, 11.0% 10-inch, 6.9% 12-inch. **Gate Valves:** There are 62 on the system of Eddy and Chapman makes set with valve boxes at or near grade. Direction of operation is uniform. They are inspected only as necessitated by system maintenance. **Hydrants:** There are 68 hydrants on the system of Eddy, Corey, and Glamorgan makes of standard type with two 2½-inch outlets and 4-inch branches except that 8 residential hydrants have one additional 4½-inch outlet and 6-inch branches, and one hydrant in the business district has four 2½-inch outlets and one 4½-inch outlet and a 6-inch branch. All hydrant outlets are National Standard. Hydrants are inspected twice annually and were in fair condition at time of inspection except that operating nuts are not uniform in size. **Pressures:** No recording gauge on the system. Direct reading gauge in the pumping station at about elevation 655 showed 94 pounds at time of inspection with reservoir about 3 feet below the overflow level. Readings taken at 4 well distributed hydrants showed pressures ranging from 66 to 100 with an average of 82 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on January 26th, 1937 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

Main St. and Central Ave., 1,845—80—60.
Main St. S. of Orange St., 700—100—20.
Union Tpk. opposite Road to Picatinny, 200—66—3.
Rockaway Twp.—Union Tpk. 300 ft. N. of borough limits, 165—66—6.

FIRE DEPARTMENT: A volunteer organization composed of 3 companies under the control of the borough which owns house, apparatus, and equipment, and appropriated \$2,000 for the support of the department during 1944. Total active membership 84 including a chief, 2 assistant chiefs, a captain and a lieutenant. About

35 active members are employed in and near the borough and are immediately available and many employed at the Picatinny Arsenal are available on short notice. It is estimated that 75% of the membership would respond to fires of major proportion. The officers are elected annually by the companies and confirmed by the mayor and council. **Companies—Hook and Ladder Company No. 1:** Membership 41. **Active Hose Company No. 1:** Membership 28. **Board of Fire Wardens:** Membership 15. All located in borough hall on Central Avenue west of Main Street as shown on map. Building is a 2½-story frame structure with asbestos covered wood roof, steam heat, concrete floor, telephone on second floor, and hose rack. **Equipment:** One 1941 Hale-White 500-g.p.m. triple combination pumping engine carrying a 250-gallon booster tank, 250 feet of booster hose, 1,000 feet of 2½-inch hose, 2 short ladders, and fairly complete minor equipment. One 1927 Buffalo 500-g.p.m. triple combination pumping engine carrying one 80-gallon booster tank, 200 feet of booster hose, 750 feet of 2½-inch hose, one 12-foot roof ladder, one 30-foot extension ladder, and some minor equipment. Additional O.C.D. equipment includes three 12-foot and three 24-foot extension ladders, one 500-g.p.m. trailer pumping unit and one 500-g.p.m. skid pumping unit mounted on a Ford truck chassis together with standard equipment. **Hose:** All 2½-inch hose is C.R.L. with National Standard screw couplings. There is a total supply of 2½-inch hose, not including that supplied with the O.C.D. equipment, of 2,600 feet, of which 850 feet is held in reserve on racks in station. Hose is replaced in part at monthly drills and tested twice annually at 200 pounds. About 70% of that total supply is over 5 years old. **Operations:** Department governed by borough ordinance and company by-laws. The chief has control of apparatus and equipment at all times and of men at fires and drills. Motors are started three or four times each week and about 20 men are assigned to drive and operate the equipment. **Drills and Training:** Company drills are held at least monthly under the direction of the chief officers. They consist of pump operation, hose and ladder work, and the use of appliances. The officers have attended the County Fire School and the wardens have received special rescue training. **Fire Methods:** Booster streams and hand extinguishers are used on incipient fires supported by engine streams with shut-off nozzles. Heavy stream appliances are not available, but four salvage covers and 5 all-service type masks are provided. The wardens maintain fire lines and do salvage and rescue work. **Response to Alarms:** The entire department responds to all borough alarms and substantial aid may be secured from the surrounding volunteer departments in Rockaway, Jefferson Township, and Mine Hill and from the part-paid municipal department at Dover. **Building Inspections:** The wardens conduct semi-annual inspections of all mercantile and public buildings with the cooperation of the chief officers. A municipal ordinance providing for these inspections is not sufficiently comprehensive from a fire protection standpoint. **Records and Reports:** Records consist primarily of fire reports including nature of alarms and attendance. Monthly reports are made to the mayor and council. **Fire Alarm System:** Maintained under the fire department by a part-time qualified electrician. System consists of one 3-loop circuit about 3 miles in length consisting of No. 8 hard drawn copper weatherproof triple braided wire carried on utility company poles jointly with power lines. Equipment at fire station consists of a Stirling relay panel, siren, and a 16-wheel transmitter. Two additional sirens are installed in outskirts. Power is supplied by the New Jersey Power & Light Company at 110 volts. There are 17 Stirling interfering street boxes mounted on painted poles without identifying lights. Inside wiring is in conduit, and lightning arresters and fuses are provided at building entrances. Boxes are individually tested weekly in rotation and in addition all boxes are tested about three times each year by the electrician. Records consist of a system wiring diagram and a tabulation of tests. Telephone alarms are transmitted through the Dover central office to police headquarters where constant watch is maintained. Exchange operator has card indicating officers' phones and business locations. Alarms are sounded from a break-wheel transmitter in fire station.

POLICE DEPARTMENT: Consists of one uniformed police chief with 15 special officers, 2 of whom are assigned on each of two shifts rotating with the chief of police. One police patrol car is provided.

BUILDING LAWS: The current edition of the building code recommended by the National Board of Fire Underwriters was adopted by an enacting ordinance under date of March 11th, 1941. The enacting ordinance provides for the appointment of a building inspector, but does not establish fire limits and deletes certain restrictions with relation to smokepipe installations and garage requirements. In general, however, enforcement appears to be good and the adoption of suitable fire limits would provide satisfactory regulations.

EXPLOSIVES AND FLAMMABLES: Municipal regulations are inadequate and limited to an ordinance authorizing the inspection of all buildings at least annually and providing for the enforcement of state laws relating to hazardous conditions. The 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. In general the local regulations are inadequate.

ZONING ORDINANCE: None.