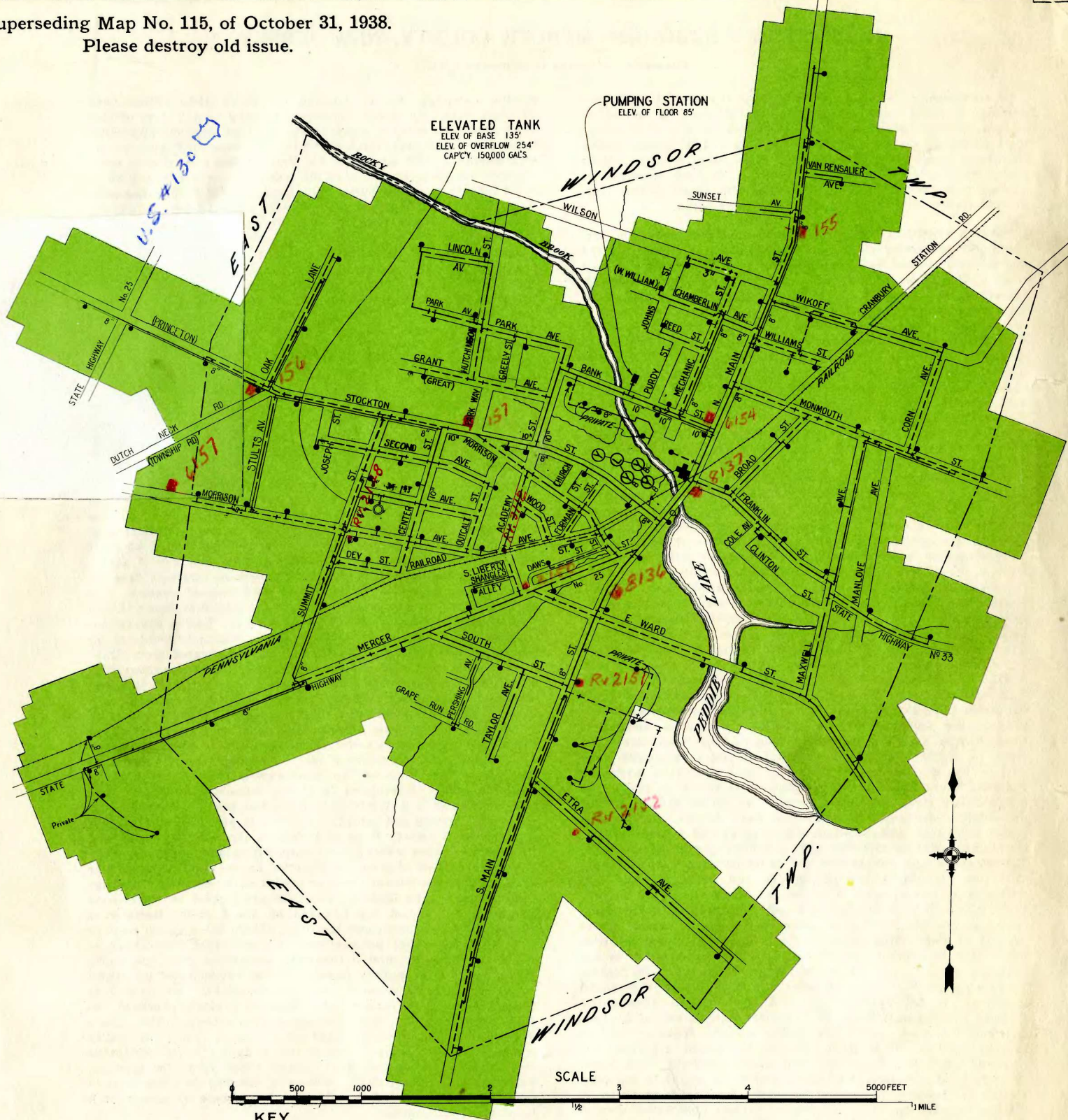


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Schedule Rating Office of New Jersey  
ENGINEERING DEPARTMENT  
NEWARK, N. J.

## Hightstown Borough Mercer County, New Jersey

APRIL 15, 1942



# HIGHTSTOWN BOROUGH, MERCER COUNTY, NEW JERSEY.

Population — Census of 1940 was 3,486.

**IN GENERAL:** Located on the Amboy Division of the Pennsylvania Railroad about 13 miles east of Trenton. A residential community with an extensive business district and 6 small industries normally employing about 600. Area 1.31 square miles. Elevations range from 83 to 131 feet. Main roads concrete, others gravel and macadam in good condition. Railroad crossings at grade, traffic, and parked cars in mercantile district might seriously interfere with the response of fire apparatus.

**WATER SUPPLY:** Water for domestic and fire protection purposes is furnished by the borough which owns supply works and distribution system and supplies water to the borough and a small section of East Windsor Township adjacent to the borough. **Organization:** The system is under the supervision of the chairman of the water committee of the council and is in charge of the superintendent of public works who also operates sewer and street departments. Organization consists of the superintendent of public works who is an engineer, 3 operators at pumping station, a maintenance man, and a laborer. Employees are appointed annually by council. Three trucks are provided. Maintenance man, who is also fire chief, responds to all alarms of fire. Records of distribution system are incomplete. **Supply Works:** Water is obtained by air lift from five 8-inch wells, 200 to 210 feet deep with capacity of 0.32 m.g.d. each. Wells discharge through an aerator into a 20 x 30 x 8 foot concrete settling basin whence water is pumped through two pressure filters to distribution system with elevated tank acting as equalizer. **Pumping Station:** Located on Bank Street as shown on map. Building is a 1-story concrete structure with a frame annex, composition on wood roof, electric lights, and steam heat. Hand protection consists of two 15-pound carbon dioxide extinguishers and a standpipe with 35 feet of 1½-inch linen hose. Exposures negligible. Wiring in conduit. Housekeeping good. Elevation of pump room floor 85 feet. **Equipment:** A 0.72-m.g.d. American Well Works 3-stage centrifugal pump driven by a 50-h.p. Western Electric Company electric motor. A 0.72-m.g.d. American Well Works 2-stage centrifugal pump driven by a 50-h.p. G. E. electric motor. A 366-c.f.m. Pennsylvania air compressor driven by a 50-h.p. G. E. electric motor. A 216-c.f.m. Gardiner-Denver air compressor driven by a 30-h.p. G. E. electric motor. Two 0.4-m.g.d. New York Continental Jewel Filtration Company pressure filters. **Distribution System:** In one service; see map. Supply to principal mercantile district is through a 10- to 8-inch main extending east on Bank Street and south on North Main Street. Arterial system is generally good with a few 4- and 6-inch dead end lines supplying hydrants. **Elevated Tank:** Located on First Avenue as shown on map; it is a 24 x 29 foot steel tank with a capacity of 150,000 gallons, erected on a 90-foot steel tower. Elevation of base 135 feet. Elevation of overflow 254 feet. **Consumption:** The average and maximum daily consumption during 1941 was 0.332 and 0.588 m.g.d. On December 31, 1941 there were 890 services, 878 of which were metered. **Pipe:** Cast iron, tar coated, bell and spigot, and Universal joint, laid with a 3- to 4-foot cover. Total length, 76,800 feet; 4.9% 10-inch, 17.2% 8-inch, 39.1% 6-inch, 38.8% 4-inch. No trouble reported from frozen mains, electrolysis, or tuberculation. **Gate Valves:** There are 175 of Eddy, Mueller, Wood, and Kennedy makes set with iron boxes or manholes to grade. Direction of operation is not uniform. Valves are said to be inspected annually. **Hydrants:** There are 97 of Eddy, Iowa, Mueller, and Wood makes of standard type with two 2½- and one 4½- or 3½-inch outlets. Hose outlet threads are National Standard. Steamer outlets are of 2 sizes, National Standard and 4-1/16 inches outside diameter with 8 threads per inch; 12 hydrant branches are gated. Hydrants are inspected annually. Those operated during resurvey were found to be in good condition. **Pressures:** Recording gauge in pumping station at elevation 85 showed pressures ranging from 66 to 75 pounds. Readings taken at 6 hydrants widely distributed showed pressures ranging from 45 to 63 pounds with an average of 53 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on March 17, 1942 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow and pressure during flow were as follows:

Stockton St. and S. Main St., 1,010—66—59.  
Mechanic St. and Chamberlain Ave., 730—63—59.  
Oak La. and Stockton St., 810—50—45.  
Monmouth St. and Corn Ave., 590—45—30.  
S. Main St., 1,500 ft. S. of Etra Ave., 510—47—23.  
Mercer St., 1,800 ft. S. W. of Summit St., 840—49—28.

**FIRE DEPARTMENT:** A volunteer organization of one company under control of borough which owns house, apparatus, and equipment and appropriated \$2,180 for the support of the department in 1942. Total active membership 35, of whom 32 are said to be available at all times. There are a chief, and a first and second assistant chief who are elected annually by the company and confirmed by the borough council. **Company — Hightstown**

**Engine Company No. 1:** Located on North Main Street near Franklin Street as shown on map. Building is a 2-story cinder block structure with an asbestos shingle roof, concrete apparatus floor, hot water heat, electric lights, telephone, and hose tower. **Equipment:** A 1920 American La France 750-g.p.m. double combination pumping engine carrying 1,000 feet of 2½-inch hose, 2 short ladders and little minor equipment. A 1925 Buffalo-Larrabee hose car with a 350-g.p.m. Barton front mounted pump carrying a 275-gallon booster tank, 300 feet of booster hose, 250 feet of 1½-inch hose, 2 gas masks, 2 short ladders, and little minor equipment. A 1928 Larrabee 500-g.p.m. triple combination pumping engine carrying a 280-gallon booster tank, 300 feet of booster hose, 200 feet of 1½-inch hose, 1,200 feet of 2½-inch hose, 2 short ladders, and good minor equipment. A 1942 Mack 500-g.p.m. triple combination pumping engine carrying a 500-gallon booster tank, 150 feet of booster hose, 200 feet of 1½-inch hose, 950 feet of 2½-inch hose, 2 short ladders, and fair minor equipment. A 1914 American La France city service ladder truck carrying 8 ladders ranging from 16 to 55 feet, totaling 235 feet, and little minor equipment. **Hose:** All 2½-inch hose is C.R.L. with National Standard screw couplings. It is tested twice a year at 150 pounds, dried in hose tower, and shifted at fires and drills. There is a total supply of 3,550 feet, of which 400 feet is held in reserve and none is over 5 years old. **Operations:** Department governed by borough ordinance and company by-laws. Chief has control of apparatus at all times and of men at fires and drills. He can suspend members pending a hearing before company. Motors are started daily. There are 7 members of the department who are assigned to drive apparatus. **Drills and Training:** Drills held twice a month in good weather under the supervision of chief officers consist of hose laying, ladder raising, and use of equipment. **Fire Methods:** Booster streams used on incipient fires reinforced by engine and hydrant lines with shut-off nozzles. Two gas masks are provided, but no salvage equipment or heavy stream appliances are carried. **Response to Alarms:** Entire department responds to all alarms in borough. Mack engine responds to all alarms outside borough. Outside aid may be secured from Cranbury, Jamesburg, and Englishtown. **Building Inspection:** The chief makes an inspection twice a year of all stores and factories. **Records and Reports:** Complete records of all fires are kept in a regular fire department log. Chief submits an annual report to mayor and council. **Fire Alarms:** Fire alarm system is part of the fire department and is under the supervision of and maintained by the borough maintenance man. Headquarters equipment is located on first floor of fire headquarters in room in rear of apparatus floor. Equipment is of the Gamewell automatic type and consists of a 2-circuit slate operating board with the usual devices for testing and operation. Circuit is protected at fire headquarters by 7-ampere fuses and vacuum lightning arresters and by 7-ampere fuses where circuit enters telephone exchange. Current for operation of system is supplied by one Oxide film rectifier serviced from the 110-volt lighting circuit with one bank of storage batteries of 5 cells floating. Batteries are located in closet near operating board and are mounted on wood shelf. Rectifier is protected by 1-ampere cartridge fuses. There are a punch register and air horn at fire headquarters, a breakwheel transmitter at telephone exchange, and 9 Gamewell succession type fire alarm boxes with the grounding feature. Boxes are mounted on utility company poles at or near street intersections. All boxes are grounded to driven copper rods. There is a single overhead circuit 15,000 feet long of No. 10 hard drawn copper wire, triple braided, weatherproof, mounted below power wires on utility company poles. Wiring in fire station is in BX cable. Test taps are sent over the system daily. Circuits are tested for grounds, amperage and voltage daily. Alarms of fire may be telephoned to telephone exchange and are sounded from there by means of a breakwheel transmitter.

**POLICE DEPARTMENT:** Consists of a chief and 2 patrolmen working in 10-hour shifts. There are 7 fire police and 2 special officers. One car is provided. Patrolmen respond to all alarms of fire.

**BUILDING LAWS:** Code adopted July 6, 1915 and amended to April 3, 1917 requires that plans be submitted to fire chief and permits secured before building operations may begin. Code has little value from a fire protection standpoint. Fire limits are established and flammable roof coverings are allowed outside the fire limits.

**EXPLOSIVES AND FLAMMABLES:** An ordinance adopted July 6, 1915 prohibits the accumulation and storage of combustible materials. 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.