



THE FIRE INSURANCE RATING  
ORGANIZATION OF N. J.  
ENGINEERING DEPARTMENT  
NEWARK 2, N. J.

## North Plainfield Borough Somerset County, New Jersey

OCTOBER 31, 1949

### KEY

PROTECTED FIRE ZONE: Shown in Green.  
NOTE.—For description of fire protection, etc., see other side.  
Elevations range from 46 to 421 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:

- Ⓢ Pumping engine and hose car
- Ⓛ Ladder truck
- Ⓢ Booster tank or tanks on above

# NORTH PLAINFIELD BOROUGH, SOMERSET COUNTY, NEW JERSEY.

Population — 1940 Census — 10,584.

**IN GENERAL:** Located north of and adjacent to the City of Plainfield. Mainly a residential community with nine small industries employing about 200. Area 3.0 square miles. Elevations range from 46 to 421 feet. Main roads improved, others gravel and macadam in good condition. There are no features which should interfere with the response of fire apparatus.

**WATER SUPPLY:** Water for domestic and fire protection purposes is furnished by the Plainfield-Union Water Company which also serves all or part of 13 other municipalities. See report with Map No. 124. **Consumption:** The average and maximum daily consumption in the entire territory served (35,140 consumers) during 1948 was 11.66 and 13.20 m.g. There were 2,941 metered services in North Plainfield on December 31, 1948. **Distribution System:** In one service; see map. North Plainfield is supplied by 12-inch feeders from Watchung standpipe and the Plainfield distribution system with 6- and 8-inch secondary feeders poorly grid-ironed with 6-inch mains. **Pipe:** Cast iron, tar coated, bell and spigot joint, laid with a 3-foot cover. Total length 156,828 feet; 1.5% 4-inch, 82.3% 6-inch, 6.8% 8-inch, and 9.4% 12-inch. No trouble from frozen mains or electrolysis. **Gate Valves:** There are 249 of Wood, Rensselaer, and Smith makes, set with iron boxes to grade. All open to the left. No regular valve inspection. **Hydrants:** There are 190 of Ludlow, Corey, Smith, and Wood makes. About 85 have two 2½- and one 4½-inch outlets, 5- or 6-inch gated branches and 5-inch barrels; the remainder have two 2½-inch outlets, 4-inch barrels and 4-inch gated branches. Two-and-a-half-inch outlets are 3-inch O.D. and 8 threads to the inch and 4½-inch outlets have National Standard threads. Hydrants are inspected annually. Those operated during inspection were found to be in good condition. **Pressures:** Readings taken at six hydrants widely distributed showed pressures ranging from 49 to 80, with an average of 62 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on August 30, 1949 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

Chatham Ave. and Somerset St., 2,760—64—45.  
Meadowbrook Drive 600 ft. N. of Mali Dr., 520—49—12.  
Westervelt Ave. 700 ft. S. of Route 29, 680—66—36.  
Grove St. and Ridge Ave., 520—47—15.  
Harrison Ave. and Walnut St., 700—66—30.  
Greenbrook Rd. and Ridge Ave., 1,030—80—37.

**FIRE DEPARTMENT:** A part-paid organization under control of borough which owns house, apparatus, and equipment and appropriated \$34,869 for the support of the department in 1949. There are 9 paid men, including a chief, an acting captain, and 1 lieutenant and 19 call men including a captain. Call men are appointed annually by the mayor and council. Paid men are divided into two platoons on duty 10 and 14 hours, alternating every fourth day. No meal periods are allowed. Paid men receive from 14 to 24 days annual vacation and are allowed to leave the city at all times. They are appointed by the mayor and council after physical and mental examinations and protected by tenure of office acts. An average of 4 call men are reported to be available at all times. **Companies:** All companies are located in headquarters on Lincoln Place, between Vine Street and Somerset Street. Building is a two-story brick structure with a tile roof, concrete floor, hose tower, steam heat, electric lights, and 2 telephones. **Equipment—Engine Company No. 1:** A 1948 Mack 750-g.p.m. triple combination pumping engine carrying a 300-gallon booster tank, 200 feet of booster hose, 200 feet of 1½-inch hose, 1,700 feet of 2½-inch hose, 1 gas mask, 1 mechanical foam nozzle, 2 short ladders, and fair minor equipment. **Engine Company No. 2:** A 1937 Mack 750-g.p.m. triple combination pumping engine carrying a 150-gallon booster tank, 200 feet of booster hose, 1,000 feet of 2½-inch hose, 1 gas mask, 1 mechanical foam nozzle, 2 short ladders, and fair minor equipment. **Ladder Company No. 1:** A 1926 Mack city service ladder truck carrying 10 ladders ranging from 10 to 45 feet and totaling 230 feet, one 1,250-watt generator, 2 floodlights, 3 all-service masks, 2 fresh air masks, 1 inhalator, and good minor equipment. **Hose:** All 2½-inch hose is C.R.L. with 3-inch O.D. and 8 threads per inch screw couplings. It is shifted and tested at 200 pounds once a year and dried in hose tower. There is a total supply of 4,450 feet of 2½-inch hose, of which 1,750 feet is held in reserve and 3,700 feet is over five years old. **Operations:** Department is governed by a Board of Fire Commissioners under municipal regula-

tions. Chief has control of apparatus at all times and of men at fires and drills. He can suspend members pending a hearing before fire commissioners. Motors are started weekly. **Drills and Training:** Drills are held about five times a year under supervision of paid officers and consist of hose laying, ladder raising, and use of equipment. **Fire Methods:** Booster streams are used on incipient fires reinforced by direct hydrant streams with shut-off nozzles. Engine is seldom hooked up. No heavy stream appliances nor salvage equipment are carried. **Response to Alarms:** One engine company and the ladder company respond to all box and telephone alarms unless person calling clearly states that fire is grass, automobile, or similar fire; then engine responds. Outside aid may be secured from Plainfield and Watchung. **Building Inspection:** The department makes an annual inspection of all schools and mercantile buildings. **Records and Reports:** Records are fairly complete consisting of log book tabulations of alarms and attendance records. Monthly reports are made to the fire commissioners. **Fire Alarms:** The fire alarm system is part of the fire department and is maintained by a part-time electrician who makes all extensions. Headquarters is located in a small closet on second floor of fire headquarters, a brick structure of ordinary construction. There is no standard operating board. Circuits are protected by 5-ampere fuses and vacuum lightning arresters and by 30-ampere fuses on the battery rack. Current for operating the system is supplied by a Mohawk high-low rectifier serviced from the 110-volt lighting circuit with a battery of one bank of 18 cells, floating. Batteries are mounted on glass rails on porcelain knobs on a wood rack in the room with the operating board. There are a punch register, two gongs, a tapper in the fire chief's house and one in the house of the captain of the call men. A manually operated air whistle is located on the roof of fire headquarters. There are 23 Gamewell boxes including one private box, of which 5 are succession and 18 are non-interfering. Boxes are mounted on utility company poles at or near street intersections and have red indicating bands but no lights. Cases are not grounded. There is a single circuit divided into four loops, three loops carrying boxes and the fourth, local alarm instruments. The circuit is all overhead, mounted on utility company poles below the power wire, and consists of No. 10 hard-drawn copper triple-braided weatherproof wire. All inside wiring is in conduit. Circuits are tested daily and boxes are shunted out and operated once a year. On receipt of telephone alarms at fire headquarters the signal is sounded manually on air whistle.

**POLICE DEPARTMENT:** Consists of a chief, 1 captain, 2 lieutenants, 1 sergeant, and 9 patrolmen working in 8-hour shifts. There are two cars with two-way radios. Police respond to alarms of fire and report unauthorized building to the building inspector.

**BUILDING LAWS:** Code adopted April 4, 1924 and subsequently amended provides for a building inspector and establishes fire limits within which no frame structures except dwellings are permitted and no combustible roofs are allowed. Code has good regulations in regard to wall thicknesses, chimneys, heights, and fire stops, but is not as comprehensive as the recommended National Building Code. State laws provide some good regulations for construction of factories, tenement houses, and public schools, and fire protection and safety features for hotels.

**FIRE PREVENTION LAWS:** Separate borough ordinances cover oil burner equipment, storage and handling of flammable liquids, bonfires, hot ashes, explosives, chemicals, flammable material, and exits. Fire limits are established, and combustible roofs are prohibited within the fire limits. State laws adequately cover the manufacture, storage, and handling of explosives, and provide for regulations governing their intrastate transportation. They also restrict the discharge of fireworks to responsible bonded parties and embody good requirements for motion picture booths and the hazard incident to the display of motion pictures except that flammable film and portable booths are permitted for temporary exhibitions and enclosures for projection equipment are not required in schools. The State Tenement House Act restricts keeping and handling of certain combustible materials in tenements.

**ZONING ORDINANCE:** Adopted December 29, 1948.