Superseding Map No. 420 of June 15, 1939. Please destroy old issue.

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

TOWN
OF

Boonton

Morris County, New Jersey

MAY 15, 1945

KEY

PROTECTED FIRE ZONE: Shown in Green.

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

Elevations range from 310 to 800 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:

(Y) *Pumping engine and hose car*

(E) *Steam fire engine*

(A) *Ambulance, Squad or Auxiliary car*

Tractorized

Booster tank or tanks on above

May 15, 1945.

TOWN OF BOONTON, MORRIS COUNTY, NEW JERSEY.

Population: Census of 1940 — 6,739.

IN GENERAL: Located on the Boonton Branch of the D., L. & W. R. R. about 29 miles northwest of New York. It is a residential community with an extensive business area and numerous industrial establishments employing about 2,000, of which the principal industries are two hosiery mills, scientific instrument works, moulding works, a large margarine plant and numerous smaller establishments. Area about 2.70 square miles. Elevations range from 310 to 800 feet with a comparatively level residential district to the south and with a business area and adjoining residential section on the hillside with very severe grades. The business district is congested consisting of ordinary and frame buildings 2 and 3 stories in height along the main street with rear sections equivalent to 4 to 6 stories along the southwesterly side of Main Street. Main thoroughfares are brick or macadam in fair to good condition and streets in residential areas are generally improved and in fair to good condition. Steep grades, narrow streets, and parked vehicles in the business area could adversely affect the operations of the fire department.

WATER SUPPLY: The Town of Boonton owns and operates the supply works, distribution system and appurtenances, supplying water for domestic and fire protection purposes to territory within and adjoining the municipal limits. System was originally installed in 1895 by the United Water Supply Company and was purchased by the municipality in 1918 and subsequently improved and extended. **Organization:** System is under the supervision of the Board of Aldermen and in charge of a town clerk who serves as manager and clerk of the water department with a Supervisor of Maintenance in charge of distribution, 1 foreman, 2 laborers, 1 chemist, 1 pumping station operator and caretaker and a consulting engineer hired annually on a free basis. All regular employees are under Civil Service, and long tenure of office has been the practice. Office located with town offices in the business area. Records are fairly complete including operating data and detailed sectional sheets, but no general distribution map is provided. No definite arrangements for the regular response of employees to alarms of fire, but employees and emergency equipment respond on call. **Supply Works:** The supply is obtained from the impounding reservoir located in Boonton Township on Stony Creek about 4 miles north of the town center, and from two driven wells in Boonton Township about 2½ miles west. **Reservoir Supply:** The reservoir is formed by a concrete core wall and earth fill with adequate spillway capacity at about elevation 637. Total capacity about 80 million gallons supplied from the water shed area of about 1.7 square miles, yielding about 1.0 million gallons per day. From the impounding reservoir water flows by gravity to the low service distribution system through a conduit 3.3 miles long consisting of 4,000 feet of 14-inch cast iron pipe and 1,500 feet of 12-inch cast iron pipe connecting with 2,200 feet of rock tunnel with a cross section 4 x 6 feet from which 450 feet of 12-inch and 11,550 feet of 10-inch cast iron main extends to the low service distribution system near the business area. About 400 feet below the outlet of the tunnel there is a 10-inch connection to the high service booster station located below the hydraulic gradient from which a 10-inch cast iron main about 7,500 feet in length extends to the high service distribution system at the town line on Boonton Avenue. The supply main capacity between reservoir and tunnel under normal head is about 1.70 m.g.d. which capacity can be increased to about 2.50 m.g.d. by a booster pump used during peak demands. The booster pump is set at the base of the dam in a small area frame building and consists of a 1,500-g.p.m. Moore Trench Company centrifugal pump driven by a 30-h.p. electric motor. **Well Supply:** This supply is delivered through 12,106 feet of 12-inch and 2,500 feet of 10-inch cast iron main connecting with the low service distribution at Plane and Main Streets in the business area. **Well No. 1 and Well No. 2:** Located in Boonton Township as shown on Map No. 421. Well pump equipment is housed in small area brick structures with wood scuttles, wired glass windows, steel doors, and electric lights. No heat or hand protection. Wiring is well installed in conduit and exposures are negligible. Each well is 24 inches in diameter, 45 feet deep and Well No. 1 delivers 225 g.p.m. and No. 2 delivers 325 g.p.m. against normal low service head. Wells were reconditioned in 1944 to these capacities. Wells are equipped with deep well turbines driven by 30-h.p. G. E. electric motors. One well is generally in continuous operation with both wells being operated during peak loads. **High Service Pumping Station:** Built in 1921. Located in the Taylortown Section of Montville Township at about elevation 620, approximately 3 miles northeast of the town center. It is a brick structure with asbestos shingled wood roof, concrete floor, electric lights, and stove. Housekeeping good. Protection is limited to one ¾-inch hose line. Wiring is well installed in conduit. Exposure from the woods is mild. Station is operated daily with attendant living nearby. **Equipment:** One 600-g.p.m. Fairbanks-Morse centrifugal pump driven by a 50-h.p. Fairbanks-Morse motor. One 300-g.p.m. Chicago centrifugal pump driven by a 40-h.p. Lincoln electric motor. Pumps discharge to the high service distribution system with a reservoir acting as equalizer and affording storage. **High Service Reservoir:** Located just outside the town limits between Green Street and Boonton Avenue as shown on map. It is a steel unit set on a sand cushion, 79 feet in diameter and 30 feet high with a capacity of one million gallons with base at elevation 750 and overflow at 770. **Distribution System:** In two services with a low service on the gravity supply from the reservoir supplemented by pumpage from the wells, and a high service supplied in conjunction with the booster pumping station and reservoir. The distribution system consists principally of an 8-inch artery in the lower section of the town which connects with a 10-inch low service supply main and extends to supply incomplete 4-inch and 6-inch gridiron and 4-inch and 6-inch dead ends. The high service is supplied by an 8-inch artery from the 12-inch supply main from the storage reservoir which connects with incomplete 4-inch and 6-inch gridiron and 6-inch dead ends in the hill section and supplies a single 6-inch connection to 4-inch and 6-inch mains in the westerly section of the town. Systems are segregated by normally closed valves with an interconnection by pressure regulator set with by-pass at Church and Main Streets in the business district. Valve is set to operate at 50 pounds on the low service side. **Consumption:** The present average and maximum daily consumption based on readings of recently installed Venturi meters is 1.30 and 2.8 million gallons. At time of inspection there were approximately 1,600 services, 40 of the larger of which are metered. **Pipe:** All cast iron, tar coated, bell and spigot joint, laid with a minimum cover of 4 feet. Total length, 127,725 feet; 4.7% 12-inch, 8.2% 10-inch, 10.1% 8-inch, 16.8% 6-inch, and 60.2% 4-inch. No serious trouble reported from frozen mains or electrolysis. **Gate Valves:** There are 211 on the system of Ludlow and other makes, set with valve boxes at or near grade. Direction of operation is not uniform, but complete records with regard to direction of operation and location are provided. Inspection is limited to that necessitated by routine system operation. **Hydrants:** There are 155 public hydrants on the system and 4 private hydrants within the municipal limits of Wood make of standard type, about 75% of which have two 2½-inch outlets and 4-inch ungated branches. The balance have an additional 4½-inch outlet and in some instances 2 additional 2½-inch outlets and 6-inch gated branches. Hydrant outlet threads are National Standard. Hydrants are inspected twice each year and were found to be in good condition at time of inspection. **Pressures:** No recording gauge on the system. Direct reading gauges in the low service well stations and high service pumping stations show pumps to operate against pressures of 70 and 92 pounds respectively. Readings taken at 30 distributed locations showed pressures on the low service to range from 53 to 122 pounds with an average of 102 pounds; on the high service from 42 to 151 pounds with an average of 101 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on May 10th, 1939 and corrected to March 28th, 1945, by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow and pressure during flow were as follows:

Taylortown Reservoir

TOWN OF BOONTON, MORRIS COUNTY, NEW JERSEY.
Continued.

High Service—
Main and School Sts., 1,140—121—94.
Plane St. S. of Main St., 420—135—10.
Liberty St. N. of North St., 205—42—*.
Liberty and Cedar Sts., 440—67—10.
Oak and Wootton Sts., 860—72—42.
Hill St. N. of Addison St., 345—96—12.
Lake Ave. and River Rd., 215—121—13.
Fanny Rd. N. W. of Morris Ave., 620—140—20.

Low Service—
Main and Mechanic Sts., 1,000—70—43.
**Main and Church Sts., 920—61—24.
***Main and Church Sts., 920—120—42.
Monroe and Washington Sts., 580—89—14.
Forbush St. and Dawson Ave., 170—92—*.
Old Boonton Rd. and Reservoir Dr., 290—103—4.
Reservoir Dr. and Sherman St., 390—115—*.
Lathrop Ave. E. of Old Boonton Rd., 1,180—100—22.
Lathrop Ave. and Vreeland Ave., 325—110—10.
Myrtle Ave. S. of Fulton St., 1,755—105—32.
Myrtle Ave. S. of Roessler St., 410—97—30.

*No reading taken.
**Normal pressure.
***Pressure with regulator open.

FIRE DEPARTMENT: A volunteer organization of 8 companies with 6 pieces of apparatus in 3 fire stations. The department is under the control of the town which owns quarters, apparatus, and equipment and appropriated $4,605 for the support of the department during 1945. Officers include a chief, a deputy chief, and a battalion chief, and in each of the 8 companies a foreman and 2 assistant foremen. Officers are elected annually by the company subject to confirmation by the Board of Aldermen. New members are subject to usual admission requirements. Total active membership 160 ranging from 10 to 28 members in each company, of whom a minimum of about 72 are available at all times. **Companies — Maxfield Engine Company No. 1:** 10 members. **Maxfield Hose Company No. 1:** 23 members. **Maxfield Hook and Ladder Company No. 1:** 23 members. Located in the town hall on Main Street between Church Street and Boonton Avenue as shown on map. Building is a 2-story joisted brick structure with concrete apparatus floor, slate covered wood roof, steam heat, electric lights, siren, compressed air whistles, telephone, and police headquarters with constant desk watch. **Equipment:** One 1938 Ahrens-Fox 500-g.p.m. triple combination pumping engine carrying one 150-gallon booster tank, 200 feet of booster hose, 1.000 feet of 2½-inch hose, one 3-inlet deck gun, 2 short ladders, and fair minor equipment. In reserve, and assigned to the engine company, is a 1915 American La France 500-g.p.m. Metropolitan steam fire engine towed by a piece of apparatus or a town truck. This engine is in operating condition, but has not been fired for a period of about 2 years. One 1926 American La France 50-foot city service ladder truck carrying a life net and ladders ranging from 12 to 50 feet, totaling 240 feet, and fair minor equipment. **Harmony Engine Company No. 2:** 23 members. **Harmony Hose Company No. 2:** 21 members. Located on Boonton Avenue between Cedar and Spruce Streets on hillside as shown on map. Building is a 2-story frame structure with composition covered wood roof, concrete apparatus floor, steam heat, electric lights, siren on tower, and telephone from police headquarters. **Equipment:** One 1942 Buffalo 500-g.p.m. triple combination pumping engine carrying one 150-gallon booster tank, 150 feet of booster hose, 1,000 feet of 2½-inch hose, 2 short ladders, and fair minor equipment. **South Boonton Hose Company No. 3:** 19 members. **South Boonton Hook and Ladder Company No. 3:** 23 members. **Board of Fire Wardens:** 28 members. Located on Madison Street between Monroe Street and Lathrop Avenue as shown on map. Building is a 2-story joisted brick structure with concrete apparatus floor, slate covered wood roof, steam heat. electric lights, siren, and telephone extension from police headquarters. **Equipment:** One 1938 Ahrens-Fox 500-g.p.m. triple combination pumping engine carrying one 150-gallon booster tank, 250 feet of booster hose, 1,000 feet of 2½-inch hose, 2 short ladders, and fair minor equipment. One 1940 Federal Knight squad and salvage car carrying 10 salvage covers, one 1,250-watt flood light generator, 3 flood lights, 4 gas masks, and good minor and emergency equipment. **Hose:** All 2½-inch hose is C.R.L. with National Standard screw couplings. The total supply is 4,650 feet, of which 1,650 feet is held in reserve at Harmony and South Boonton Fire Stations. Hose is tested in part at drills at 175 pounds pressure and all hose is tested at least annually. About 50% of the total supply is more than 5 years old and 40% is more than 7 years old. No adequate drying facilities provided. **Operations:** Department is governed by town ordinance and company by-laws under the supervision of the Board of Aldermen. The chief has full control of men and apparatus at fires and drills with disciplinary action subject to the board. Motors are started daily and six part-time paid operators maintain and drive the equipment. **Drills and Training:** Company drills are held 8 to 12 times each year under the direction of company foreman and in general charge of one of the chief officers. Drills consist of hose laying, engine operation, ladder work, and general instruction. **Fire Methods:** Booster streams are used on incipient fires supported by hydrant and engine streams with shut-off nozzles. Heavy stream appliances are limited to one deck gun; 10 salvage covers are provided, and each company is equipped with gas masks. **Response to Alarms:** One engine company responds to brush fires and still alarms of definitely known extent. All companies respond to other alarms in the business area and residential districts. Fire protection is provided under informal agreement to Boonton Township adjoining on the north. **Building Inspection:** The chief officers and Board of Fire Wardens make semi-annual inspections in the business area, industrial establishments, and public buildings, and report to the Board of Aldermen. **Records and Reports:** Records, consisting of company reports of all fires and drills including attendance, nature of alarms, and equipment used are fairly complete. Chief officer reports monthly to the Board of Aldermen. **Fire Alarms:** Alarms are telephoned through the local exchange located on the second floor of a joisted brick building in the business district to police headquarters nearby in town hall with the Maxfield Companies where constant desk watch is maintained. Alarms are sounded on Horni air horn equipment mounted on roof of building and on sirens on each fire station.

POLICE DEPARTMENT: Consists of a chief, 2 sergeants, and 3 patrolmen, two or three of whom are on duty at all times. One radio equipped patrol car is provided and the fire wardens qualify as special officers.

BUILDING LAWS: No complete building code in effect, but ordinance adopted March 4th, 1912, establishes fire limits including all properties fronting on the streets in and near the business area. Building operations within these limits require a permit issued by the building inspector, subject to the approval of the fire department and Board of Aldermen. Wood shingle roofs are prohibited within the fire limits. Regulations are entirely inadequate from a fire protection standpoint.

EXPLOSIVES AND FLAMMABLES: Local regulations are limited to an ordinance adopted December 16th, 1935 embodying some restrictions on flammable liquid storage limiting maximum above-ground capacity to 30,000 gallons. An ordinance adopted December 27th, 1944 authorizes the inspection of premises by the Board of Fire Wardens and contains some restrictions on the use and storage of flammable materials. In general the local regulations are not sufficiently comprehensive from a fire protection standpoint. 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.