



KEY

PROTECTED FIRE ZONE: Shown in Green.

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

Elevations range from 30 to 50 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

(O) Booster tank or tanks on above

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

Helmetta Borough
Middlesex County, New Jersey

SEPTEMBER 30, 1943

HELMETTA BOROUGH, MIDDLESEX COUNTY, NEW JERSEY.

Population — Census of 1940 was 667.

IN GENERAL: Located on the Amboy Division of the Pennsylvania Railroad about 12 miles southwest of South Amboy. The borough is a development of the George W. Helme Snuff Company. The snuff factory, which is the only industry in the borough, employs 379. Area 0.625 miles. Elevations range from 30 to 50 feet. Main roads macadam, others gravel in fair condition. Railroad crossings at grade are said never to interfere with the response of fire apparatus.

WATER SUPPLY: Water for domestic and fire protection purposes is supplied by George W. Helme & Company which owns and operates supply works and distribution system. A small separate system supplies water for domestic purposes. Original system was installed in 1903 as a private water system to automatic sprinklers, standpipe, and yard hydrant system for private fire protection. **Organization:** The system is under the control and supervision of the Chief Engineer of the George W. Helme Company. Office is at plant. Supply of pipe and fittings is at company shop. Repairs, extensions, maintenance, and inspection of hydrants and gate valves is handled by mechanics of same company. No records except maps of distribution system. **Supply Works:** Supply is obtained from two sources as follows; first, head race from Helmetta Pond; no data available regarding its reliability during dry seasons, but it is reported to be unfailing. Second, suction well at pumping station fed by springs and intake pipes from Manalapan Creek; the latter fed by Lake Marguerite. No data available regarding the reliability of this supply, but it is stated that the supply from the springs to suction well is adequate. Supply is pumped from either of these sources to the distribution system with a small standpipe acting as an equalizer. **Pumping Station:** Located as shown on map. Elevation of floor about 34. Building is a 1-story brick structure with a concrete floor, slate roof, and electric lights. **Equipment:** Two upright boilers rated at 20-30 h.p., 2 Worthington duplex pumps rated at 625 g.p.m. each, 1 Knowles Underwriters pump rated at 1,000 g.p.m. Each pump equipped with a Fisher governor. Two small pumps take suction from suction well and from 8-inch main to Manalapan Creek. Larger pump takes suction through a 12-inch cast iron line 395 feet long laid in the bed of the tail race from Manalapan Creek. Normally pumps receive their steam supply through a 6-inch well constructed overhead line about 160 feet long from the main boiler plant which has six 250-h.p. boilers. At least two of these are in service at all times except for a period of one week each year when the main boiler house is shut down and pumping station is dependent upon two upright boilers capable of operating only one 625-g.p.m. pump. One pump is operated continuously. Mechanics visit pumping station hourly. **Distribution System:** In one service; see map. That portion of the system made up of 8-inch pipe is primarily the private fire protection system of the manufacturing plant, but also serves as part of the public system. **Standpipe:** Located as shown on map. Base about elevation 43, size 10' x 135', capacity 80,000 gallons; protected against freezing by steam syphon. **Consumption:** The average and maximum daily consumption is 50,000 and 75,000 gallons respectively. There are 34 services on the system, none of which is metered. **Pipe:** Total length, 7,680 feet; 61% 5-inch wrought iron, 39% 8-inch cast iron, tar coated, bell and spigot joint, all laid with 4-foot cover. No trouble from frozen mains. **Gate Valves:** In addition to the gate valves in the pump and standpipe connections there are three valves of the post indicator type and four of the stem and yoke type on the distribution system, all of which open in the same direction. There are a number of post indicator gate valves on the connections to sprinklers, standpipe, and house services in the factory buildings. Valves are inspected weekly. Fire department notified when valves affecting hydrant supply are operated. **Hydrants:** There are 27 public

and 2 private hydrants on the system of Ludlow make of standard type with 4- and 6-inch ungated branches with two 2½-inch outlets with National Standard threads. Hydrants are flushed monthly except during the winter season. At the time of inspection hydrants operated were in fair condition. **Pressures:** Pressure gauge at pumping station at about elevation 40 shows 60 pounds pressure. Readings taken at 3 hydrants showed an average pressure of 60 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on April 14th, 1937 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

Brookside Place and Main St., 380—61—58.

Main St., about 700 ft. W. of Lake Ave., 380—62—15.

John St. and Railroad Ave., 580—62—35.

FIRE DEPARTMENT: A volunteer organization of one company under full control of the borough which appropriated \$3,000 for maintenance during 1943. Total active membership about 28. Officers including a chief, assistant chief, a foreman, and 2 assistant foremen are elected annually by the company and appointed by the mayor and council. A minimum of 28 members are available during the day and the same number at night. Apparatus owned by borough. Helme & Company owns house and hose. **Company:** Located on Main Street opposite snuff plant. Building is a one-story frame structure with a slate roof, wood apparatus floor, electric lights, steam heat, and a hose rack in a wooden addition in rear. No telephone is installed. **Apparatus:** One 1932 Sanford 300-g.p.m. engine with a 150-gallon booster tank, 250 feet of ¾-inch booster hose, 1,000 feet of 2½-inch hose, 2 short ladders, and good minor equipment. **Hose:** All 2½-inch hose is C.R.L. with National Standard screw couplings. Hose tested yearly at 100 pounds pressure. There is an additional 1,650 feet of 2½-inch hose distributed in hose houses around the plant. **Operations:** Department governed by rules published under order of the borough council. Chief has full control of the apparatus at all times and of men at fires and drills. He has no power to suspend members, but may prefer charges to fire committee; 8 men are appointed drivers. Motors are started weekly. **Drills and Training:** Held monthly. Attendance averages 25 members. Consist of laying hose, making and breaking connections, minor ladder work, and first-aid. **Fire Methods:** Hand extinguishers and booster streams used on incipient fires reinforced by engine and hydrant streams with shut-off nozzles. **Response to Alarms:** Engine responds to all alarms. Outside aid may be secured from Jamesburg and Spotswood at distances of two to three miles. **Building Inspection:** None by fire department. **Records and Reports:** A complete fire department log is kept. **Fire Alarms:** Alarms are telephoned over a restricted wire or transmitted by runner to boiler house where they are sounded on a steam whistle.

POLICE DEPARTMENT: Consists of 1 uniformed officer, 3 marshals, 25 auxiliary policemen subject to call. No municipally owned vehicles provided.

BUILDING LAWS: Borough has adopted the regulations with regard to chimneys, heating appliances, flues, and fire stops as found in National Board Code for Small Municipalities. No fire limits are established and combustible roof coverings are not prohibited.

EXPLOSIVES AND FLAMMABLES: No municipal regulations. 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.