

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

Ewing Township Fire Districts Nos. 1, 2 and 3 Mercer County, New Jersey

Note. — Fire protection report on file in Engineering Department of F. I. R. O. of N. J. Elevations range from 10 to 240 feet above mean sea level. Water mains 8 inches and larger in diameter canductional patienters -----------------Fire apparatus designated by symbols thus:

## EWING TOWNSHIP, MERCER COUNTY, NEW JERSEY. Fire Districts Nos. 1, 2, and 3—Including West Trenton.

Population — Census of 1940 was 10,146.

**IN GENERAL**—Located north of and adjoining the City of Trenton on the Delaware River, main line of the Philadelphia and Reading Railroad, and the Belvidere Division of the Pennsylvania Railroad. Mainly a residential and farming community with several large industries employing about 3,200. Area 16.8 square miles. Elevations range from 10 to 240 feet. Main roads concrete, others gravel and macadam in fair to good condition. Railroad crossings at grade are said never to have interfered with the response of fire apparatus.

WATER SUPPLY: Water for domestic and fire protection purposes is furnished by the City of Trenton. For details as to supply works, distribution system, and appurtenances see National Board report on the City of Trenton, April, 1932. Consumption: The average and maximum daily consumption in the entire territory served by the Trenton Water Department during 1941 (36,458 services) was 19.026 and 26.638 m.g.d. On December 31, 1941 there were 1,048 services in Ewing Township, all of which were metered. Distribution System: In three services; see map. Major portion of the township is supplied by the Pennington Road Booster Station No. 1. The section of the township west of the Reading Railroad tracks in West Trenton is supplied from Booster Station No. 3 and a small portion of the township adjoining Trenton is supplied from the gravity system. System is fairly well gridironed with a few dead end 6-inch lines supplying hydrants. Booster Station No. 3: Located on Asylum Road west of the Reading Railroad. Building is a 1-story small area brick structure with a composition roof, concrete floor, hot water heat, electric lights, and telephone. Electric wiring for light and power in conduit. Housekeeping good. Exposures negligible. Elevation of pump room floor 110 feet. No hand protection. Operation is continuous and attendant is on duty at all times. Equipment: One 2.16-m.g.d. De Laval centrifugal pump driven by a 50-h.p. Westinghouse electric motor. Two 0.36-m.g.d. De Laval centrifugal pumps driven by two Westinghouse 10-h.p. electric motors. Fire alarms from West Trenton section are received by telephone and large pump is started manually. Suction supply under 70 pounds presure is maintained from 10-inch main from the Pennington Road Booster Station. Each pump is equipped with

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a gate valve on suction side and a gate valve and check valve on discharge side. Pumps discharge under a pressure of 100 pounds. Pipe: Cast iron, tar coated, bell and spigot joint, laid with a 4-foot cover. Total length, 132,000 feet; 18.2% 4-inch, 56.6% 6-inch, 7.6% 8-inch, 7.9% 10-inch, 0.9% 12-inch and 8.8% 16-inch. No trouble from frozen mains, electrolysis, or tuberculation. Gate Valves: There are 299 of various makes set with iron boxes to grade. They are inspected continuously. Direction of operation is uniform. Hydrants: There are 102 of Wood and Corey makes of standard type. Majority have either one or two  $2\frac{1}{2}$ -inch and one 41-inch outlets with 4- or 6-inch gated branches. Hydrants are inspected continuously. Hose and steamer outlet threads are National Standard. Hydrants operated during inspection were found to be in good condition. Pressures: Readings taken at four hydrants in the territory supplied by Pennington Road Booster Station No. 1 showed pressures ranging from 64 to 86 pounds with an average of 71 pounds. Reading taken at one hydrant in the section supplied by the West Trenton Booster Station No. 3 showed a pressure of 70 pounds. Fire Flow Tests: Probable supply available for fire protection purposes was measured on July 28, 1938 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

Booster Station No. 1-

Spruce St., between 7th and 8th Sts., 410-86-13.

Woodland Ave. and Georgia Ave., 310-65-4. Fernwood Rd. and Scotch Rd., 1,440-64-28. Parkway and Pennington Ave., 1,900-68-50.

Booster Station No. 3-

Grove Rd. and Grand Ave., 960-70-9.

FIRE DEPARTMENT: Volunteer organization of two independent companies not under the control of the township. Township appropriated \$1,000 for the support of each company in 1941. Companies own houses, apparatus, and equipment. Township is divided into three fire districts and departments are under some supervision of their respective boards of fire commissioners. Total active membership 90, of whom about 14 are available during the day and 50 during the night. There are

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a chief, 4 assistant chiefs, a foreman, and a mechanic in each company who are elected annually by the company. Companies-Prospect Heights Volunteer Fire Company No. 1: Membership 60. Located on Ninth Street between Columbia and Madison Avenues. Building is a 2-story brick structure with a slate roof, concrete apparatus floor, electric lights, telephone, steam heat, and siren. Equipment: A 1928 Hale 500-g.p.m. triple combination pumping engine carrying a 60-gallon booster tank, 150 feet of booster hose, 1,000 feet of 23-inch hose, 1 gas mask, 2 short ladders, and good minor equipment. A 1941 Hale 500-g.p.m. triple combination pumping engine carrying a 150-gallon booster tank, 200 feet of booster hose, 1,000 feet of 21/2-inch hose, 150 feet of 1<sup>1</sup>/<sub>2</sub>-inch hose, 1 salvage cover, 1 30-foot extension ladder, 1 short ladder, and fair minor equipment. Pennington Road Volunteer Fire Company: Membership 30. Located on Pennington Road between Somerset and Atlantic Streets. Building is a 2-story joisted brick structure with composition roof, concrete apparatus floor, electric lights, steam heat, telephone, and siren. Equipment: A 1935 Hahn 500-g.p.m. triple combination pumping engine carrying a 125-gallon booster tank, 250 feet of booster hose, 1,200 feet of 21/2-inch hose, 400 feet of 11/2-inch hose, 2 short ladders, and fair minor equipment. A 1930 Hahn 350g.p.m. triple combination pumping engine carrying a 150-gallon booster tank, 250 feet of booster hose, 1,500 feet of  $2\frac{1}{2}$ -inch hose, 2 short ladders, and fair minor equipment. A 1924 Brockway-La France hose car carrying 500 feet of 21/2-inch hose, 6 salvage covers, 2 gas masks, 2 short ladders, and good minor equipment. Hose: All 21/2-inch hose is C.R.L. with National Standard screw couplings. Hose is said to be tested annually at 400 pounds in the Prospect Heights Company and monthly at 180 to 200 pounds in the Pennington Road Company. It is dried on hose rack in the Prospect Heights Company and on the apparatus floor in Pennington Road Company. It is shifted at fires and drills at both companies. There is a total supply of 6,100 feet of 21/2-inch hose, of which 900 feet is held in reserve in the Prospect Heights Company and none is over five years old. Operations: Companies are governed by their own by-laws. Chiefs have control of apparatus at all times and of men at fires and drills. They may suspend members

pending a hearing before companies. Motors are started daily in the Prospect Heights Company and twice a week in the Pennington Road Company. There are 12 members of the Prospect Heights Company and 5 members of the Pennington Road Company who are assigned to drive apparatus. Drills and Training: Drills, held twice monthly in Prospect Heights Company and weekly during the summer in the Pennington Road Company under the supervision of chief officers consist of pump operation, 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 where water is available. Gas masks and salvage covers are carried, but no heavy stream appliances are provided. Response to Alarms: All companies respond to all alarms in township. Outside aid may be secured from Trenton or Lawrence Township. Building Inspection: Chief makes an annual inspection of all schools. Records and Reports: Each company keeps a record of all fires which includes location, description, cause, and the amount of equipment used. Fire Alarms: Alarms of fire are telephoned through the Trenton Exchange to township police station and are sounded from there on sirens located at fire stations.

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**POLICE DEPARTMENT:** Consists of a chief, a captain, and 4 patrolmen working in 8-hour shifts. A desk clerk is always on duty. One car equipped with two-way radio is provided. Patrolmen respond to all alarms of fire and report unauthorized building construction to building inspector.

BUILDING LAWS: Code adopted May 5, 1923 provides for the annual appointment of a building inspector. Code has relatively little value from a fire protection standpoint. No fire limits are established and flammable roof coverings are allowed throughout the township.

**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.