

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

# **Town of Harrison** **Hudson County, New Jersey**

JUNE 30, 1948

## **KEY**

PROTECTED FIRE ZONE: Shown in Green.  
NOTE.—For description of fire protection, etc., see other side.

Elevations range from 0 to 80 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

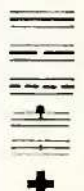
Gate valves shown thus

Fire house shown thus

Fire apparatus designated by symbols thus:

(Y) Pumping engine and hose car

(B) Booster tank or tanks on above (L) Ladder truck



## TOWN OF HARRISON, HUDSON COUNTY, NEW JERSEY.

Population—1940 Census—14,171.

**IN GENERAL:** Located on the east bank of the Passaic River directly opposite Newark and on the D. L. & W., Pennsylvania, and Erie Railroads. It is essentially a manufacturing town with 60 industries employing about 13,200. Area 1.22 square miles. Elevations range from 0 to 80 feet. Roads mainly concrete or asphalt in good condition. Traffic on main thoroughfares and railroad crossings at grade might seriously interfere with the response of fire apparatus.

**WATER SUPPLY:** Water for domestic and fire protection purposes is furnished by the Town of Harrison which owns distribution system and purchases water from the Passaic Valley Water Commission. For a description of this supply see Clifton report with Map No. 19 and Kearny report with Map No. 6. **Organization:** The municipal organization is under the supervision of a chief clerk with 2 clerks and a superintendent with 5 maintenance men. All are under State Civil Service Rules and Regulations. Detailed records of hydrant and valve locations are incomplete. Employee of department responds to alarms of fire only when requested to by the fire department. Two well equipped trucks are provided. Office in town hall and the shop is at the town garage. **Distribution System:** In one service; see map. Supply to Harrison is through a 30-inch main which extends south on Kearny Avenue, Kearny with several closed connections to the Kearny distribution system and thence through 16-inch and 14-inch mains to district and distribution system. **Consumption:** The average daily consumption for 1947 was 4.56 million gallons. On January 1, 1948 there were 2,540 services of which 1,814 were metered. **Pipe:** Cast iron, tar coated, bell and spigot joint, laid with a 4½-foot cover. Some trouble from frozen mains; none from electrolysis. Total length, 82,570 feet, 5.9% 16-inch, 0.6% 14-inch, 1.1% 12-inch, 7.6% 10-inch, 6.1% 8-inch, 78.5% 6-inch, and 0.2% 4-inch. **Gate Valves:** There are 205 on the system of A. P. Smith make set with iron boxes at grade. All turn right to open. Valves are inspected annually by the water department. **Hydrants:** There are 152 on the system of Corey, Ludlow, and Smith makes; 143 have two 2½-inch outlets, one 4½-inch outlet, 4-inch or 6-inch barrels and 4-inch or 6-inch gated branches, remainder have two 2½-inch outlets, 4-inch barrels and 4-inch ungated branches. Small outlets are New York type thread and large outlets are 4½-inch outside diameter with 8 threads per inch. Hydrants are inspected twice a year. Those operated during resurvey were found to be in good condition. **Pressures:** Readings taken at 9 hydrants widely distributed showed pressures ranging from 74 to 83 pounds with an average of 78 pounds. Recording gauge in water purveyor's office on second floor of town hall showed pressures ranging from 65 to 70 pounds with an average of 68 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on May 20, 1937 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

Hiram Ave. and Harrison Ave., 780—75—58.  
Harrison Ave. and 4th St., 1,950—74—60.  
Railroad Ave. and 2nd St., 930—82—57.  
Sussex St. and Worthington Ave., 1,080—76—25.  
Essex St. and 4th St., 820—83—76.  
Cross St. near Davis Ave., 640—77—57.  
Bergen St. near 6th St., 630—75—53.  
Dey St. near Jersey St., 640—81—54.  
William St. near 2nd St., 540—75—45.

**FIRE DEPARTMENT:** A full paid organization of 3 engine companies and 1 ladder company under the control of the chairman of the fire committee of the common council. There are 44 members including a chief, a deputy chief, and 11 captains. Members are under Civil Service Rules and Regulations. They are divided into two platoons on duty alternately 10 and 14 hours every third day. Time is allowed for meal periods. Firemen receive 21 days annual vacation during which period each company is shy one man on each platoon. Off-shift men are required to respond to second or greater alarms and are notified by tower bell at headquarters. A pension fund for paid men is established by state law, supported by assessments from salaries of men and by the city. Members may retire on half salary in case of total disability or after 20 years of service if 50 years of age. City owns all apparatus and equipment and appropriated \$156,000 for the support of the department in 1948. **Companies—Headquarters:** Located on Cleveland Avenue between Third and Fourth Streets. Building is a 2-story brick structure with a slag roof, steam heat, electric lights, concrete apparatus floor, 2 telephones, and hose tower. **Truck Company No. 1:** Membership 11 including 3 captains. **Equipment:** A 1931 Ahrens-Fox 85-foot aerial truck carrying 12 ground ladders ranging from 6 to 50 feet and totaling 320 feet, a ladder pipe, a Baker cellar pipe, 3 salvage covers, a foam generator, 1 life net, 4 gas masks, 2 oxygen masks and 1 inhalator, one 600-watt electric generator, 2 flood lights, 1 cutting torch, and fair minor equipment. **Engine Company No. 2:** Membership 10 including 3 captains. **Equipment:** A 1944 Ahrens-Fox 1,000-g.p.m. triple combination pumping engine carrying a 60-gallon booster tank, 250 feet of booster hose, 1,400 feet of 2½-inch hose, 2 short ladders, 2 gas masks, 1 Bresnan distributor, and fair minor equipment. **Engine Company No. 1:** Membership 10 including 2 captains. Located on John Street at Cleveland Avenue. Building is a 2-story brick structure with slag roof, concrete apparatus floor, steam heat, electric lights, and telephone. **Equipment:** A 1918 Ahrens-Fox 1,000-g.p.m. triple combination pumping engine carrying a 60-gallon booster tank, 250 feet of booster hose, 1,100 feet of 2½-inch hose, 2 short ladders, 2 gas masks, 1 Bresnan distributor, and fair minor equipment. **Engine Company No. 3:** Membership 10 including 3 captains. Located at Sussex and Fifth Streets. Building is a 2-story brick structure with slate roof, wood apparatus floor, steam heat, electric lights, and telephone. **Equipment:** A 1945 Ahrens-Fox 1,000-g.p.m. triple combination pumping engine carry-

ing a 60-gallon booster tank, 250 feet of booster hose, 1,400 feet of 2½-inch hose, 2 short ladders, 2 gas masks, and fair minor equipment. **Reserve Equipment:** Located with Engine No. 1. A 1917 Ahrens-Fox 1,000-g.p.m. triple combination pumping engine carrying 100 feet of 1½-inch hose, 400 feet of 2½-inch hose, 2 short ladders, 1 Bresnan distributor, 5 deluge sets, 1 mechanical foam nozzle, 1 foam generator, one 3,000-watt electric generator, 3 flood lights, and fair minor equipment. A 1943 American La France 85-foot aerial ladder carrying 8 ground ladders ranging from 12 to 40 feet and totaling 156 feet, 1 ladder pipe, 1 deluge set, 3 Bresnan distributors, 1 foam generator, 1 life net, 1 salvage cover, and fair minor equipment. A 1942 Buick 4-passenger coupe, radio equipped, carrying 2 gas masks is provided for the chief, and a 1937 Chevrolet coupe is provided for the assistant chief. **Hose:** All 2½-inch hose is CRL with New York type screw couplings. Hose is tested annually at 200 pounds, shifted every three months, and dried in hose tower. There is 5,650 feet of 2½-inch hose in reserve. About 70% of the hose is over five years old. **Operations:** Department governed by town ordinances. Chief has control of apparatus and men at all times. He may suspend members for cause and prefer charges. **Motors** are started twice a week. All paid men drive. **Drills and Training:** Drills held monthly under supervision of chief and deputy chief consist of hose laying, pump operation, ladder raising, and the majority of fire department evolutions. **Fire Methods:** Booster streams used on incipient fires reinforced by engine and hydrant streams with shut-off nozzles. Gas masks, salvage equipment, and heavy stream appliances are provided. **Response to Alarms:** Entire department responds to all box alarms. Engine and truck company respond to all telephone alarms and additional companies are summoned by pulling nearest fire alarm box. Powerful outside aid may be secured from Newark and Kearny. **Building Inspection:** Buildings and factories are inspected at least twice a year by members of the department and a record of inspections is filed. **Records and Reports:** A complete record is made of each fire and a monthly and yearly report is made by chief to mayor and council. **Fire Alarm System:** Fire alarm system is under the supervision of the fire alarm superintendent who is a member of the police department and has been detailed to the maintenance of the police and fire alarm signaling systems. He has one assistant. **Headquarters** is located in a fire-proof room in rear of fire headquarters mildly exposed by town hall. **Headquarters apparatus** is of Horni make and consists of a 6-circuit operating board with provisions for 4 box circuits, 1 alarm circuit, and 1 power circuit. Operating board is provided with the necessary switches, meters, and signaling and repeating facilities for operation. All inside wiring is in conduit. Circuits are protected on operating board by 3-ampere fuses and at the entrance to fire stations and fire alarm headquarters by 3-ampere fuses and vacuum lightning arresters. Current for operation of system is supplied by 5 high-low oxide film rectifiers serviced from the 110-volt lighting circuit with five banks of storage batteries of 15 cells each floating. Batteries are protected by 3-ampere fuses and rectifiers by 1-ampere and 5-ampere fuses. They are located in a well ventilated room under fire alarm headquarters. Batteries are well mounted on a standard rack. There are a gong and tape register at each fire house, a transmitter and tower bell at fire headquarters, a gong at police headquarters, 1 street gong, and gongs in homes of chief and deputy chief. There are 26 public boxes and 1 private box on the system. All are three-fold succession type boxes of Gamewell make. Boxes are mounted on utility company poles with red indicating bands at or near street intersections. All boxes are grounded by No. 8 wire to driven copper grounds. There are no indicating lights. There is approximately 30 miles of No. 10 hard drawn triple braided weatherproof wire mounted below power wires on utility company poles. There are 14 A.D.T. fire alarm stations in various plants throughout the town and an A.D.T. register and gong at watch desk in fire headquarters. Alarms may be telephoned to switchboard in fire headquarters over one of two trunks, one of which is reserved exclusively for fire calls, and are sounded from there by means of transmitter. Telephone switchboard located in fire headquarters has extensions to all fire stations and police headquarters. One member of the engine company remains at the watch desk, when apparatus responds, to handle telephone alarms. Circuits are tested daily for grounds, line voltage, line current, trickle charge, and battery voltage. Instruments are tested twice a day by time signal and fire alarm boxes are inspected monthly by pulling through to a master register. Excellent records are kept of all tests.

**POLICE DEPARTMENT:** Consists of a chief, deputy chief, 5 captains, 5 lieutenants, 3 detectives, 1 sergeant, and 47 patrolmen working in 8-hour shifts. There are 20 street signaling boxes over which patrolmen report every half hour. Two ambulances, 1 emergency truck, 1 pick-up truck and 4 radio cars are provided. Patrolmen on beat respond to alarms of fire and attempt to form fire lines. Patrolmen issue summonses for unauthorized construction.

**BUILDING LAWS:** Code adopted April 3, 1906 and subsequently amended December, 1927 and May 5, 1941 provides for the appointment of a building inspector, requires a permit to be issued and inspections made before building operations may begin. No fire limits are established. No regulations in regard to wood shingle roofs. Code has some poor regulations in regard to height, protection of vertical openings, wall thicknesses, chimneys, flues and heating appliances, but in general does not conform to the code recommended by the National Board of Fire Underwriters.

**FIRE PREVENTION LAWS:** No municipal regulations. State laws adequately cover the storage and shipment of explosives, the transportation of flammables, and the construction of motion picture booths. They also restrict the discharge of fireworks to responsible bonded parties.

**ZONING ORDINANCE:** Code adopted November 13, 1934.