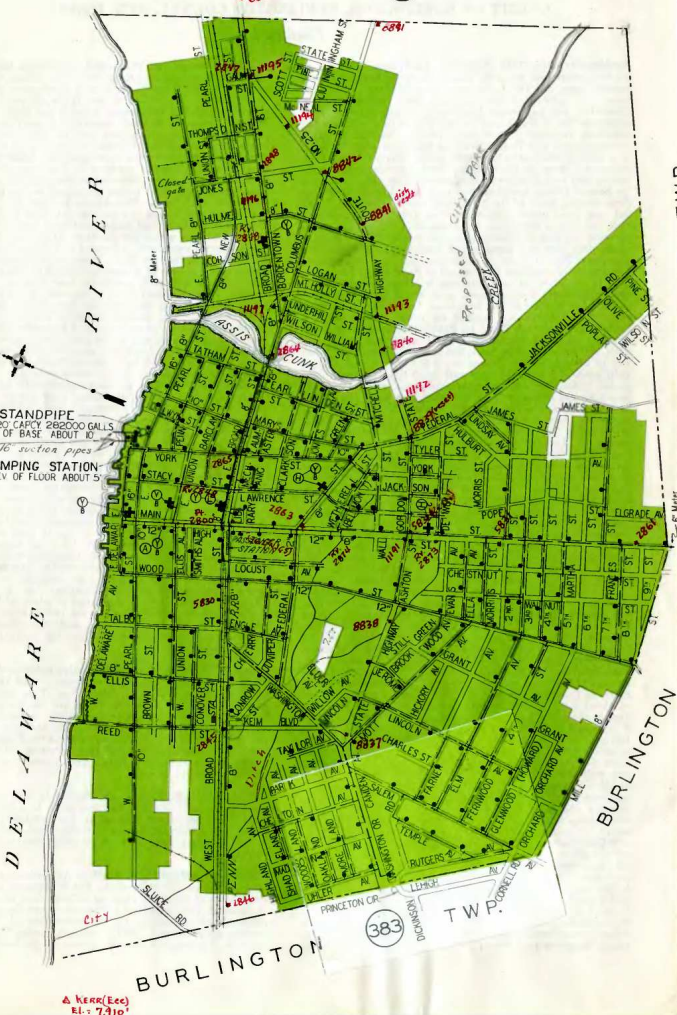


BURLINGTON 383 TWP.

Superseding Map No. 274 of August 31, 1939. Please destroy old issue.



THE FIRE INSURANCE RATING
ORGANIZATION OF N. J.
ENGINEERING DEPARTMENT
NEWARK 2, N. J.
CITY
OF
Burlington
Burlington County, New Jersey
DECEMBER 31, 1948

KEY
PROTECTED FIRE ZONE: Shown in Green.
Note.—For description of fire protection, etc., see other side.
Elevations range from 0 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:
(V) Pumping engine and hose car
(H) Hose car
(L) Ladder truck
(A) Ambulance, Squad or Auxiliary car
(B) Booster tank or tanks on above
(C) Chemical tank or tanks on above

Y-2(USE 445) Elev. = 14965' Burlington P.O.
on window sill west of loading platform rear of Bldg.
13.42(1145) Elev. = 13,871' First Mechanics Bank Bldg.
Chiseled Cross on foundation corner left of main entrance
under group of tables bearing name of bank.

December 31, 1948.

CITY OF BURLINGTON, BURLINGTON COUNTY, NEW JERSEY.

Population—1940 Census—10,905. 1948 Local Estimate—14,000.

IN GENERAL: Located on the Delaware River and the Camden and Amboy Branch of the Pennsylvania Railroad about 12 miles southwest of Trenton. It is an old residential and manufacturing community with an extensive business area and 21 industrial plants employing about 4,500. Area about 2.25 square miles. Elevations range from 0 to 50 feet. Main thoroughfare is concrete, other streets are macadam and gravel in fair to poor condition. The railroad at grade, and vehicle congestion in the business district, and narrow streets in the contiguous residential district could interfere with the response and operations of the fire department.

WATER SUPPLY: Water for domestic and fire protection purposes is furnished by the City of Burlington which owns and operates the supply works, distribution system, and appurtenances, supplying water to Burlington and nearby sections of Burlington Township. **Organization:** System is under the control of the board of water commissioners of 5 men, one of whom is appointed each year by the mayor and council. System is in charge of a competent annually appointed superintendent who has had long experience in his position. Other employees include three pumping station operators working on 8-hour shifts, one utility man, two laborers, and a clerk. A well-equipped truck is provided and alarms of fire are received over the fire alarm system at the pumping station and an employee responds to render assistance. Records consist of a general distribution map, detailed drawings, and fairly complete operating records. Office and shop at pumping station. **Supply Works:** Acquired by the city in 1877. Water is pumped from the Delaware River and from one artesian well which is normally held in reserve for peak loads. The river supply is pumped through two 16-inch suction lines into two interconnected concrete settling basins of 250,000 and 300,000 gallons capacity, whence it flows by gravity through four sand filters each of 0.75 m.g.d. capacity to a clear water basin of 223,000 gallons, whence it is pumped to the distribution system with a standpipe at pumping station acting as an equalizer and providing storage. **Pumping Station:** Located on the Delaware River near Pearl and York Streets as shown on map. Building is a 1-story and 2-story brick and fire-resistive structure with slate covered wood roof, unprotected communications, electric lights, steam heat, and telephone. No hand protection, but hydrants are available on and near the property. Exposures are mild from frame buildings. Wiring is well installed in conduit, and a standard modern operating board is provided. Housekeeping is good. Elevation of pump room floor about 5 feet. **Equipment—Low Lift Pumps:** One 30-m.g.d. Earl Gear Works centrifugal pump (rebuilt in August, 1947) driven by a 50-hp vertical steam engine. One 30-m.g.d. De Laval centrifugal pump driven by a 25-hp Westinghouse electric motor. Piping is such that these units can not be used simultaneously. **High Lift Pumps:** One 30-m.g.d. Holly steam pump (rebuilt in August, 1947). One 20-m.g.d. De Laval centrifugal pump capable of delivering 26 m.g.d. against normal operating head, driven by a 75-hp Westinghouse electric motor. One 12-m.g.d. and one 16-m.g.d. similar units driven respectively by 30-hp. and 50-hp. G. E. motors. High lift suction capacity is limited to about 4,000 g.p.m. **Boilers:** Two 125-hp. Soddan Brothers return tube boilers, one of which is under a minimum head of steam at all times. Service record of the plant has been good except that loss of suction was experienced during a short period in 1941 due to an abnormal wind and tide condition and ice accumulation in the river. Emergency suction provisions should prevent a recurrence of this condition. **Distribution System:** In one service consisting of a 16-inch main artery with 10-inch and 8-inch secondary arteries and fairly complete 4-inch and 6-inch gridiron with some 6-inch dead ends in the outlying areas. See map. **Standpipe:** Located at pumping station as shown on map. It is a wrought iron unit 20 feet in diameter by 120 feet high with a capacity of 282,000 gallons. Elevation of base 10 feet. Elevation of overflow 130 feet. **Consumption:** The average daily pumpage during the 12-month period prior to October, 1948, which period was typical of the present operating conditions, was about 1.66 m.g.d. The maximum daily pumpage during this period was

2.37 million gallons. At time of inspection there were about 3,500 services in the entire territory served, of which about 3,150 were in Burlington and the balance were in Burlington Township. About 80 services are metered. **Pipe:** All pipe is cast iron, tar coated, bell and spigot joint, laid with about a 4-foot cover. Total length, 135,300 feet; 7.9% 4-inch, 66.2% 6-inch, 13.3% 8-inch, 4.6% 10-inch, 6.2% 12-inch, and 1.8% 16-inch. No trouble reported from frozen mains or electrolysis. **Gate Valves:** There are 286 on the system, exclusive of hydrant branch valves, of Eddy and Wood makes set with iron boxes at grade. Direction of operation is uniform. Valves are inspected occasionally as necessitated by operating conditions. **Hydrants:** There are 236 on the system of R. D. Wood make of standard type, part with two 2½-inch and one 4½-inch outlets and part with a single 4½-inch outlet. Hose outlet threads are of female type, 2⅞ inches outside diameter with 7 threads per inch. Large outlets are National Standard. Branches are 4-inch and 6-inch, about 70% of which, including all of those in the business district, are gated. Hydrants are inspected twice each year and those operated during this inspection were found to be in fair to good condition. **Pressures:** Readings taken at 8 well distributed hydrants showed pressures ranging from 37 to 52 pounds with an average of 48.4 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured by means of Pitot tube on June 23, 1939 and corrected to May 8, 1947. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

Main St. and Union St., 2,640—50—35.
Ellis St. and Conover St., 780—50—28.
Uhler Ave. and Woodland Ave., 390—52—15.
Glenwood Ave. and Lincoln Ave., 450—49—22.
Jones Ave. and Linden St., 560—50—30.
Highway No. 25 and Columbus St., 250—49—2.
Hulbert Ave. and 2nd St., 330—51—46.
Jacksonville Rd. next to last hydrant east, 480—35—4.

FIRE DEPARTMENT: A volunteer organization of 6 independent companies under the general control of the city which owns the major pieces of apparatus, except the small pumper at Company No. 1, and quarters, and appropriated \$15,050 for the support of the department during 1948, inclusive of a \$5,000 appropriation for fire alarm equipment. Total department membership is approximately 1,130 with 75 to 150 active members in each of the companies. It is estimated that a minimum of 150 members are available at all times. Officers include a chief, 6 assistant chiefs, 6 foremen and 7 assistant foremen who are elected annually by the companies and confirmed by the mayor and council. Each company has an assistant chief, one of whom, in rotation, advances to the position of chief each year. All companies except the Niagara Company have 5 call men, who serve as operators and drivers and receive annual remuneration. **Companies—Endeavor Fire Company No. 1:** Total membership 250; active members about 125; minimum response 40 members. Located on East Union Street between High Street and Stacy Street as shown on map. Building is a 2-story brick structure with metal covered wood roof, wood apparatus floor, electric lights, hot water heat, hose tower, telephone, and punch register. **Equipment:** One 1947 Ward La France 750-g.p.m. triple combination pumping engine carrying one 150-gallon booster tank, 300 feet of booster hose, 500 feet of 1½-inch hose, 1,000 feet of 2½-inch hose, 2 short ladders, and fair minor equipment. One 1949 Ford emergency crash truck carrying extinguishers and flood light and emergency equipment. One 1948 Mack 500-g.p.m. triple combination pumping engine carrying one 1,500-watt flood light generator, two 500-watt and two 250-watt flood lights, 850 feet of 2½-inch hose, 400 feet of 1½-inch hose, one 150-gallon booster tank, 150 feet of booster hose, two short ladders, and some minor equipment. Two company owned ambulances. **Hope Steam Fire Company No. 2:** Total membership about 225; active members about 75; minimum response 25 members. Located on High Street near Pearl Street as shown on map. Building is a 3-story brick structure with metal covered wood roof, wood apparatus floor, steam heat, electric lights, telephone, and punch register.

CITY OF BURLINGTON, BURLINGTON COUNTY, NEW JERSEY.

Continued.

Equipment: One 1946 American La France 1,000-g.p.m. triple combination pumping engine carrying one 150-gallon booster tank, 250 feet of booster hose, 300 feet of $1\frac{1}{2}$ -inch hose, 1,000 feet of $2\frac{1}{2}$ -inch hose, 2 short ladders, 1 foam generator, and fair minor equipment **Young America Fire Company No. 3:** Total membership 130; active members 50; minimum response 15 members. Located on Broad Street between Stacy and High Streets as shown on map. Building is a 2-story brick structure with metal covered wood roof, concrete apparatus floor, steam heat, electric lights, telephone, and punch register **Equipment:** One 1931 American La France 75-foot aerial ladder truck carrying 10 other ladders ranging from 12 to 45 feet and totaling 306 feet, 1 life net, and good minor equipment One 1939 Dodge auxiliary hose car with a 500-g.p.m. front mounted centrifugal pump carrying 500 feet of $1\frac{1}{2}$ -inch hose, 800 feet of $2\frac{1}{2}$ -inch hose, a small deck gun and some minor equipment **Mitchell Fire Company No. 4:** Total membership 250; active members 150; minimum response 40. Located at Federal and Lawrence Streets as shown on map Building is a 2-story brick structure with metal covered wood roof, wood apparatus floor, steam heat, electric lights, telephone, hose drier, and punch register. Air horns are located on tower outside station. **Equipment:** One 1945 Ward La France 750-g.p.m. triple combination pumping engine carrying one 250-gallon booster tank, 300 feet of booster hose, 300 feet of $1\frac{1}{2}$ -inch hose, 1,000 feet of $2\frac{1}{2}$ -inch hose, a deluge set, a 500-watt portable flood light generator with two 250-watt flood lights, 1 foam generator, 2 short ladders, and good minor equipment One 1931 Reo hose car carrying 1,000 feet of $2\frac{1}{2}$ -inch hose, 300 feet of $1\frac{1}{2}$ -inch hose, a two-inlet deck gun, 2 short ladders, and some minor equipment. **Neptune Engine Company No. 5:** Total membership 125; active members about 75; minimum response 15. Located on Bordentown Road between Hulme and Corson Streets. Building is a 2-story cement block and frame structure with wood shingle roof, concrete apparatus floor, hot water heat, electric lights, telephone, and punch register. **Equipment:** One 1947 Ward La France 750-g.p.m. triple combination pumping engine carrying one 250-gallon booster tank, 150 feet of booster hose, 300 feet of $1\frac{1}{2}$ -inch hose, 1,000 feet of $2\frac{1}{2}$ -inch hose, 2 short ladders, and some minor equipment. One 1936 Buick chief's car carrying some light emergency equipment. **Niagara Fire Company No. 6:** Total membership 150; active members about 75; minimum response 15 Located on High Street near Dewey Street as shown on map. Building is a 2-story brick veneer, cement block structure with a composition covered wood roof, concrete apparatus floor, steam heat, electric lights, telephone, and punch register. **Equipment:** One 1930 American La France hose and chemical car carrying two 40-gallon chemical tanks, 250 feet of chemical hose, 1,100 feet of $2\frac{1}{2}$ -inch hose, 1 deck gun, 2 short ladders, and fair minor equipment **Hose:** All $2\frac{1}{2}$ -inch hose is C.R.L. with Jones Snap couplings. It is tested annually at pressures up to 400 pounds and shifted at fires and drills and dried in electric driers at Companies Nos 1, 4, and 6 There is a total supply of about 9,400 feet of $2\frac{1}{2}$ -inch hose, 2,300 feet of which is kept in reserve Of the total supply, about 50% is more than 5 years old and 25% is more than 7 years old. About 2,200 feet of $1\frac{1}{2}$ -inch hose is carried on the apparatus, in addition to which there is about 1,350 feet in reserve distributed in three fire stations **Operations:** Department is governed by city ordinance. The chief has nominal control of apparatus at all times and of men at fires and drills, but company assistant chiefs exercise complete authority over their respective companies. Motors are started daily. There are 3 call drivers in all companies except the Niagara Company, which company has 10 designated volunteer drivers. **Drills and Training:** Company drills are held under the company officers about 8 times each year; a department drill, utilizing all equipment, is held under the chief officer at least once each year All drills consist of hose laying pump operation, ladder work, and use of apparatus. **Fire Methods:** Booster and $1\frac{1}{2}$ -inch lines are used on incipient fires supported by hydrant streams with shut-off nozzles. Ten salvage covers, 16 gas masks, 3 cellar distributors, 3 deck guns, 2 deluge sets, 2 foam generators, oxygen masks, and fog nozzles are provided. **Response to Alarms:** The entire department responds

to all box alarms and chief officer dispatches two pieces of apparatus to telephone alarms of known extent Outside aid may be secured from the surrounding volunteer departments in Burlington Township, Mount Holly, Beverly, and Bordentown. **Building Inspection:** Schools and mercantile buildings are inspected at least annually by the chief officer in company with other company officers Other buildings are inspected on complaint. Records are incomplete and no comprehensive ordinance has been adopted **Records and Reports:** Detailed records are kept by company officers of all fires including location, attendance, loss, damage, and equipment used. Each chief makes an annual summary report to the mayor and council. **Fire Alarm System:** Fire alarm system is not part of the fire department. It is in charge of a competent engineer and maintained by a part-time superintendent, both of whom are members of the fire department Headquarters equipment is located in a modern fire-resistive unexposed building on Main Street near Wetherel Street. Equipment consists of a modern Gamewell three-fold automatic control unit with panels for four box and two alarm circuits. There are four box circuits carrying 5 to 15 street boxes each and two alarm circuits entering all fire stations, police headquarters, and the pumping station. Circuits are protected by Neon gas arresters and 3-ampere and $\frac{1}{2}$ -ampere fuses and at the entrance to fire alarm headquarters and fire houses by 5-ampere fuses and arresters Batteries are protected on battery rack by 3-ampere fuses and rectifiers by 2-ampere fuses Current for operation of system is supplied by oxide film rectifiers on each circuit with an additional high rate master rectifier all serviced from the 110-volt lighting circuit with 6 banks of storage batteries of 24 cells each floating Batteries located in adjoining room and are mounted on metal stand. There are a register and a gong in each fire house, gongs in homes of chief and assistant chief, a gong in pumping station, a gong in fire headquarters, and 41 Gamewell fire alarm boxes, of which 2 are interfering, 30 are non-interfering, and the remainder succession type boxes. Boxes are mounted on utility company poles and on the front of all the fire houses They are all grounded to driven copper rods with No 10 hard drawn triple braided copper wire Circuits, carried on utility company poles below power wires, consist of about 32 miles of No. 10 hard drawn triple braided weatherproof copper wire They are tested daily for voltage, amperage, and grounds Apparatus tested daily by time signal and boxes are tested monthly Standard records are kept of these tests. Alarms are sounded on coded air horns on tower at Mitchell Company No. 4 Telephone alarms are transmitted to the home or place of business of the chief officer who dispatches the two nearest companies to small fires of known extent and transmits a general alarm for additional assistance from the nearest fire alarm box, if needed.

POLICE DEPARTMENT: Active uniformed force consists of a captain, sergeant, desk sergeant and 14 patrolmen with the mayor serving as chief officer. Two radio cars and one motorcycle are provided. There are two police signaling boxes from which patrolmen can report to headquarters in addition to radio communication Twenty-four hour desk watch is maintained. Patrolmen respond to all alarms of fire and report unauthorized building construction Each fire company has three fire police and there is a uniformed auxiliary force of 25 men.

BUILDING LAWS: Code adopted in 1892 provides for the appointment of a building inspector It is of little value from a fire protection standpoint No fire limits are established and combustible roof coverings are not prohibited A new building code was under consideration at time of inspection.

FIRE PREVENTION LAWS: An ordinance adopted in 1928 authorizes the chief of the fire department to make inspections and order the removal of hazardous accumulations of material The 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.