PROTECTED FIRE ZONE: Shown in green.

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

Elevations range from 0 to 23 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

KEY

Fire hydrants shown thus:
Gate valves shown thus:
Fire house shown thus:
Fire apparatus designated by symbols thus:
- Automobile combination pump and hose wagon;
- Hose wagon;
- Ladder truck;
- Hand-drawn apparatus;
- Chemical tank or tanks on above.
GLoucester City, Gloucester County, N. J.

Population about 14,000

In General.—Located on Delaware River and Atlantic City and W. J. and S. S. R. R., adjoining Camden on the South. A commuter's and manufacturing town, especially shipbuilding; the main importance of plants is electric. 270 miles inland from the mean sea level. Streets are mainly improved and in fair to good condition. Good street car and auto bus service to Camden.

Reported that railroad crossings at grade have not interfered with response of fire apparatus.

Water Supply.—Works built in 1886; city owns and operates supply works and distribution system and supplies water to Noreg Village as well as to Gloucester. Water Department under control of Water Works Committee of Common Council; organization and supervision poor. Records poor. Repairs and extensions by local plumber. No employee of Water Department responds to alarms of fire. Supply at fire hydrants is 2700 gpm of water at 270 pounds per square inch. There are two aerators each located over a small intake well; from intake wells water is pumped by low lift pumps to two settling tanks from which it flows by gravity to four rapid sand filters and thence to the suction reservoir; from suction reservoir supply is pumped by high lift pump and thence to fire hydrants. The connection from the suction of the low and high lift pumps to creek is provided; chlorination apparatus installed for treating the creek water when used. Plant is not operated under normal conditions because of inadequate capacity and poor condition of aerators, settling tanks and filters; about one-half of supply from wells is filtered and remainder pumped directly from river to reservoir.

Pumping Station.—Located in City as shown on map, floor at elevation about 5 feet above mean sea level. 8 hands work in 3 classes on duty 24 hours a day. 650,000 gallons per day and frame buildings, all adjoining and communicating through unprotected openings with a total area of 6,700 square feet. Hazards properly guarded and inside protection provided; pool of water covered with lubricating oil under floor of each pump room.

Telephone.—2,100 long and 8-inch gauge copper fire alarm wire; 60 long distance phones, 100 short distance phones; 2 fire alarm systems; one Wandler crank and fly-wheel high lift duplex pump rated at 2.3 million gallons, installed in 1885; one Wetherill crank and fly-wheel high lift duplex pump rated at 2.5 million gallons installed in 1886; one Wheeler compound duplex low lift pump rated at 1.25 million gallons installed in 1886; one Union Steam Pump Company duplex compound low lift pump rated at 2.5 million gallons installed in 1894; (both low lift pumps may be used as high lift pumps); one 100,000 gallon centrifugal pump and 30-h. p. steam engine (used for washing filters); one each Nagle and Ingersoll-Hand air pump; capacity of a pump and engine 1.25 million gallons per day; 2 boilers, each rated at 150 horse power, installed in 1906 and 1904; four Pittsburgh rapid sand filters, each rated at one half million gallons but on account of poor condition capacity reduced to about one-quarter million gallons; two wooden settling tanks, size 30 X 134. Capacity 85,000 gallons; one wooden pumping station, elliptical in shape; excavation embankment, lined with brick and cement (in poor condition). Capacity said to be 1.25 million gallons.

Standpipe.—Located on map, Steel 17 X 76 feet high, capacity 120,000 gallons; brick base, 12 feet high; bottom of base at about elevation 27. Consumption—1000 per day output. Follow the following plan: One Wandler crank and fly-wheel high lift duplex pump rated at 2.3 million gallons, installed in 1885; one Wetherill crank and fly-wheel high lift duplex pump rated at 2.5 million gallons installed in 1886; one Wheeler compound duplex low lift pump rated at 1.25 million gallons installed in 1886; one Union Steam Pump Company duplex compound low lift pump rated at 2.5 million gallons installed in 1894; (both low lift pumps may be used as high lift pumps); one 100,000 gallon centrifugal pump and 30-h. p. steam engine (used for washing filters); one each Nagle and Ingersoll-Hand air pump; capacity of a pump and engine 1.25 million gallons per day; 2 boilers, each rated at 150 horse power, installed in 1906 and 1904; four Pittsburgh rapid sand filters, each rated at one half million gallons but on account of poor condition capacity reduced to about one-quarter million gallons; two wooden settling tanks, size 30 X 134. Capacity 85,000 gallons; one wooden pumping station, elliptical in shape; excavation embankment, lined with brick and cement (in poor condition). Capacity said to be 1.25 million gallons.

Distribution System.—See map. In one service. Pipe.—All cast iron, tar coated, bell and spigot Joint. All laid with 2½ to 3-foot cover. No trouble from frozen mains or electrolysis. Total length, 99,600 feet; 4-inch 61.6 per cent; 6-inch 33.8 per cent; 8-inch 4.4 per cent; 12-inch 0.4 per cent; 16-inch 2.4 per cent. Gate Valves.—No records. Said to be ten or twelve different makes of gate valves, some of which open to right and some to left. Generally located along property lines. No inspection. Hydrants—147 hydrants in service. Of the R. D. Wood, Ludlow, Gloucester Iron Works, and Chapmann makes, generally with 2½ to 3-foot outlets. Practically all hydrants have female butts; branches are 4-inch, some of which are gated. Some open to right and some to the left. No regular hydrant inspection. Hydrants generally in poor condition. Pressures.—Records and direct percent of hydrants used 60 per cent. Fire alarm stations during seasons of maximum draft and from 27 to 40 pounds during remainder of the year. Recording gauge records show that at times pressures at station are not maintained above 19 to 25 pounds for several days at a time. Readings taken at 27 hydrants well distributed over pressure range from 19 to 36. After an average V.P. 27.5 last three fire alarms an automatic supply over capacity available for fire protection purposes was measured by means of Pitt tubes at the following locations with the results as given: Location of test, discharge in gallons per minute, pressure with hydrants closed and pressure with hydrants open are as given consecutively: Essex and Brown, 325, 325, 11; Warren and Broadway, 728, 37, 15.5; Ellis and Morris, 206, 37, 15.5; McPherson and Burlington, 425, 25, 15.5; Ellis and Moomouth, 706, 19.5; Burlington and Ridgeway, 235, 29.5, 21.5; Water and Third, 386, 29.5, 19; Jersey and Spruce, 475, 29.5, on duty 24 hours a day; Charles all, 24.2, 9. Hunter and Sovereign, 1st and 2nd, Hunter. Data Seven, consists of Broadway of one-street, 126, 24.5, 15.5; Broadway and Jersey, 235, 24.5, 10.5; Thompson and Burdals, 186, 20.5, 4; Lane and Powell, 130, 20.5, 9; Boulevard and Francis, 270, 29.5, 7; Washington and Cumberland, 141, 19.5, 10; Broadway and Chambers, 797, 37, 32.5.

Fire Department.—Volunteer organization under control of Council Committee on fire apparatus. All members appointed by Council. Committee on fire apparatus; are organized in one company. Total membership 23, including two paid drivers, all organized in one company. Department is organized under control of map, Two story, jointed brick with steam heating and gas and electric lighting; no dormitories provided. 50-foot brick hose tower. Apparatus: Hook and ladder truck, 1000 gallons, 150 horse power, mounted on M-664 truck, carrying one 50-gallon chemical tank, 200 feet of chemical hose, 1200 feet 2½-inch hose, two short ladders and fair minor equipment. One hand drawn hose wagon (wheels in poor condition) carrying 700 feet of 2½-inch hose and small amount of minor equipment. One hand drawn ladder truck (purchased second-hand in 1915) in poor condition: carrying 4 ladders, totaling 56 feet length, 6 unlabeled hand extinguishers and small amount of minor equipment. Hose.—All 2½-inch hose is C. R. L. with Jones snap couplings. In addition to that on the apparatus there is a supply of 600 feet in the hose tower. After use at fires hose is hung in tower. In warm weather said to be shifted every six weeks. No reliable hose tests. Operations.—Department governed by Council Committee and fire department ordinance. Chief has control of apparatus and full paid men at all times and volunteer members at he. He has power to suspend but it is stated Council Committee frequently reinstates such members. Full paid men act as drivers and operate in two shifts of twelve hours each. In addition three volunteer members are trained as drivers. Motors turned over twice daily. Drills and Training.—None. Fire Methods.—For small fires, unsuppressed chemical streams are used and for larger fires high pressure streams. When structural fire are used, hooked ladders are used. In fighting automobiles pumping engine is used, frequently with driver only and at other times generally with 2 to 4 additional men. If additional apparatus is needed the ladder truck and hose wagon are summoned. Outside aid may be summoned from Camden and Woodbury. Reports and Records.—Incident Fire Alarm System operated by fire department independently. Fire Alarm System in part of fire department, 36 men, reports to Chief, and in part of Council Committee and in charge of electrician employed in local plant, who is said to devote about one hour a day to maintenance of the system. System installed in 1892; consists of one circuit of part Nos. 8, 10, 12 and 14 copper wire with weatherproof or rubber covered insulation, mounted on poles with high and low tension wires, to which are attached bells, one tow in bell, three 8-inch gongs, and one 3-figure indicator. Energy supplied by gravity cells located in fire house. Boxes are of the Gamewell non-interfering type and are pulled by hand with a key from the inside. Some of the boxes are in poor condition. Public telephone at fire house with extension bells to the second floor. Telephone alarms received at police station sounded by key in fire alarm box in police station. Headed circuits reported in poor condition.

Police.—Composition of chief, night and day sergeant and six uniformed officers. Sixteen telephone call boxes distributed throughout town; maintained by telephone company. No patrol wagon or ambulance. Police responds to alarms of fire.

Building Laws.—None.

Explosives and Inflammables.—No regulations.

May 5, 1920.