

Field Test of Roadway Lighting¹

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●THE NEW JERSEY Turnpike Authority has followed with great interest the research performed on fog lighting at Pennsylvania State University and the University of Michigan, the results of which have been described by other speakers. Following the demonstration of the practical results of this research at Boalsburg, Pennsylvania, last summer, the Authority initiated the installation of a half-mile test section of this type of lighting on the Turnpike in one of the most serious fog areas. After numerous delays a contract was awarded and the work is now nearing completion.

The principal installation on the Turnpike consists of about two thousand feet of overhead mounted spot lights aimed so as to project the beam nearly vertically and at right angles to the driver's line of sight. The lamps used are 300 watt PAR 56 aimed so as to cover the inner lane of the roadway next to the median. On the northbound lane the beam pattern is 20 deg transverse to the roadway and 15 deg along the roadway; the southbound lane beam pattern is 20 deg transverse to the roadway and 35 deg along it. The lamps are suspended at 15 ft intervals along a catenary system attached to wooden poles and mounted 26 ft above the pavement surface.

The second part of the installation consists of about 500 ft of low mounted fluorescent units. VHO type lamps are used with a parabolic reflector mounted so that light is projected horizontally and below the level of the driver's eyes. The units are aimed alternately at the northbound and southbound lanes at intervals of about 20 ft. The entire installation is protected by guardrail.

When the installation of these units is completed, tests will be conducted in conjunction with the Civil Aeronautics Administration to determine if there is possible adverse affects on the approach lighting system for the Newark Airport, which lies immediately adjacent. If these tests are successful, additional tests will be conducted under low visibility conditions. The entire project is being coordinated with the Illuminating Engineering Society and the representatives of the colleges who performed the basic research. Power supply and switching arrangements are made as flexible as possible to test different light patterns and to allow the installation of other types of lighting fixtures which may seem worthy of investigation.

¹ Summary of Remarks before Night Visibility Committee, Highway Research Board.