

As approved by the AASHTO Board of
Directors on November 13, 1994

ADMINISTRATIVE RESOLUTION AR-3-94

TITLE: ESTABLISHMENT OF WINTER MAINTENANCE PROGRAM

WHEREAS, state, county and city transportation agencies across most of the nation are commonly faced each winter with the need to control snow and ice on their highways and roads, and conditions such as occurred in the winter of 1993-94 can raise severe safety hazards for those who are travelling; and

WHEREAS, while public sector transportation agencies and private sector companies in the United States have developed and applied an array of practices and techniques for snow and ice control to alleviate winter hazards and make our highways, roads and streets safer for travel, the officials of these agencies are continually seeking better ways to handle snow and ice problems; and

WHEREAS, in an effort to seek such better ways of snow and ice control, under the sponsorship of AASHTO's National Cooperative Highway Research Program (NCHRP Project SP20-36) and the Federal Highway Administration's International Outreach Program, a group of state and local government winter maintenance experts, together with representation from the Federal Highway Administration, was constituted as a Scanning Team and conducted an International Winter Maintenance Technology Scanning Tour in early 1994, visiting winter maintenance road officials in Japan and Europe; and

WHEREAS, technology and winter maintenance systems were observed by the Scanning Team during the Scanning Tour that are not now used in the United States, and which the team members believe might be of significant benefit to Americans; and

WHEREAS, the Scanning Team developed a proposal for a Winter Maintenance Program, one purpose of which would be to conduct rigorous operational acceptance testing and evaluation of international winter maintenance technologies to determine their value for use in the United States, and to support introduction of those technologies that show promise of success in our nation; and

WHEREAS, the Scanning Team has presented its findings and its proposed Winter Maintenance Program to the Highway Subcommittee on Maintenance, which has endorsed the proposed Program; and

WHEREAS, on November 12, 1994, the Standing Committee on Highways considered the recommendation of its Subcommittee on Maintenance, and based thereon adopted this Proposed Administrative Resolution and agreed to forward it to the AASHTO Board of Directors with a favorable recommendation:

NOW, THEREFORE, the Board of Directors of the American Association of State Highway and Transportation Officials, having considered the report of the Scanning Team and the recommendations of the Standing Committee on Highways, does hereby adopt this Administrative Resolution, approving the following Winter Maintenance Program:

WINTER MAINTENANCE PROGRAM

1. AASHTO subscribes to the concept that Member Departments, and appropriate agencies in the nation's counties and cities, should consider developing and adopting for their respective jurisdictions a system concept for snow and ice control on their highways, roads and streets, addressing the vehicle, the driver, and the equipment and practices for managing roadway and bridge snow and ice, and designed to assure that the best technologies in the world are properly and effectively used in the United States.

The goals for such a system concept should be to:

- sustain or improve levels of winter maintenance service with significant cost/benefit improvements;
- provide an enhanced level of environmental protection; and
- increase the safety of driving under winter conditions.

2. The AASHTO Board of Directors supports establishment of a project under the National Cooperative Highway Research Program (NCHRP) to develop a comprehensive guide for establishing a systems approach to snow and ice control that addresses the vehicle, the driver, and equipment and practices for managing roadway and bridge snow and ice, for use by Member Departments and local governments to provide them guidance suitable for their geographic and weather conditions.

The AASHTO Board of Directors recommends that the first phase of this effort begin as soon as possible, by utilizing funding under NCHRP Project 20-7 to establish a broadly based NCHRP snow and ice panel and conduct a national workshop leading to development of a work program to produce the guide.

3. In order to experiment with snow and ice technology and systems not now in use in this nation, to determine their suitability to the United States and to help introduce the use of those with the most promise, the AASHTO Board of Directors endorses the concept of establishing a voluntary AASHTO Snow and Ice Pooled Fund Cooperative Program, under which testing by AASHTO Member Departments volunteering to sponsor and conduct tests can be supported financially with public sector funds voluntarily

contributed by AASHTO Member Departments, Federal agencies, toll authorities, counties and cities.

To assure fairness and credibility in carrying out such experiments with new snow and ice technology, the AASHTO Board of Directors believes that the Transportation Research Board should establish a Snow and Ice Technical Working Group to help develop protocols for such tests, evaluate their conduct and approve test reports for national distribution under the AASHTO Snow and Ice Pooled Fund Cooperative Program. The Working Group might be formed under an NCHRP project, either that described above or a separate one.

4. The AASHTO President, with the advice of the Chairman of the Standing Committee on Highways and the AASHTO Executive Director, is requested by the AASHTO Board of Directors to establish a standing Winter Maintenance Policy Coordinating Committee to monitor and advise on the development and implementation of the Winter Maintenance Program and the Snow and Ice Pooled Fund Cooperative Program, with membership drawn from AASHTO, the National Association of County Engineers and the American Public Works Association.
5. The AASHTO Executive Director is authorized by the AASHTO Board of Directors to take such actions as are necessary to implement this Administrative Resolution, under the oversight and with the approval of the Standing Committee on Highways, including the authority to establish and manage the AASHTO Snow and Ice Pooled Fund Cooperative Program as a self-supporting AASHTO technical service program.

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RESOLUTION OF THE HIGHWAY SUBCOMMITTEE ON MAINTENANCE

Title: Implementation of SICOP

WHEREAS, the AASHTO Board of Directors has adopted Administrative Resolution AR-3-94, "Establishment of Winter Maintenance Program," which among its provisions called for the establishment of a standing joint Winter Maintenance Policy Coordinating Committee (WMPCC) to monitor and advise on the development and implementation of a Snow and Ice Pooled Fund Cooperative Program (SICOP), among other responsibilities; and

WHEREAS, the WMPCC has been established with voting membership from AASHTO, the American Public Works Association (APWA) and the National Association of County Engineers (NACE); and

WHEREAS, under the provisions of AR-3-94 and with the approval of the Standing Committee on Highways (SCOH), NCHRP Project 20-7(71), "Winter Maintenance Program," was established, under which a Final Report was released in June, 1996 containing plans for a "Snow and Ice Control Guide" and development of a "Snow and Ice Pooled Fund Cooperative Program" (SICOP); and

WHEREAS, the AASHTO Highway Subcommittee on Maintenance considered the recommendations of the NCHRP report on SICOP at its July, 1996 meeting in Sun Valley, Idaho, is in general agreement therewith, and believes that AASHTO should now take the lead in establishing SICOP as an operational program; and

WHEREAS, under AR-3-94, the AASHTO Executive Director is authorized by the Board of Directors "to take such actions as are necessary to implement this Administrative Resolution under the oversight and with the approval of the Standing Committee on Highways, including the authority to establish and manage the AASHTO Snow and Ice Pooled Fund Cooperative Program as a self-supporting AASHTO technical service program;" and

WHEREAS, the Subcommittee has developed an initial program under SICOP, and believes that the AASHTO Executive Director, with the approval of the Standing Committee on Highways, should commence implementation of the SICOP and the initial SICOP program activities:

NOW, THEREFORE, the Highway Subcommittee on Maintenance hereby requests that the Standing Committee on Highways approve having the Executive Director and the WMPCC proceed with the following activities to implement the SICOP:

1. To provide initial funding for start-up of this new self-supporting technical services program, the Executive Director be authorized to solicit all member departments for their interest in participating in SICOP, and requesting them to provide \$4,000 per member department in 1996, to support engagement of a consultant, convening of the WMPCC and related administrative activities.
2. The WMPCC should organize a national forum involving AASHTO, APWA and NACE, the Federal Highway Administration (FHWA), and such other public and private sector organizations as the WMPCC may approve, to undertake preparation of an overall comprehensive program to develop and implement equipment, materials and techniques to improve snow and ice control on highways, roads and streets.
3. That under guidance of the WMPCC, the Executive Director undertake a survey of the AASHTO Member Departments, and APWA and NACE members, to determine their interest in supporting with funding and other resources the following specific activities, as proposed by the Subcommittee at its July, 1996 meeting, and such other equipment and technologies as may be added by the WMPCC, APWA or NACE:

Investigate and determine, in general accord with the SICOP guidelines contained in the NCHRP report, the deployment value and process for equipment and technologies, including but not limited to the following:

- a. Equipment to determine and record surface friction of roadways during snow and ice events.
- b. Equipment to determine and record roadway temperatures and to develop mapping of those temperatures.
- c. Develop technology required to implement GPS/GIS instrumentation of maintenance equipment and to integrate roadway features into a database for use by such maintenance equipment.
- d. Development of specifications, test methods and deployment guidelines for anti-icing/deicing chemicals.
- e. Develop technology required to provide computerized control of equipment functions on maintenance equipment.
- f. Develop technology required to provide maintenance equipment operators with easily observed onboard interactive displays of equipment functions.

- g. Develop proposed standardized equipment for snowplow mounts and connections that would provide universal interchangeability of plows and various equipment.
- h. Develop technology required to provide a snow removal process and equipment that would provide for rear dumping/loading of snow removed from freeways and urban streets.
- i. Develop technology which can be used to manufacture "foils" which will improve operator visibility, truck conspicuity and reduce "snow clouds" during snow plowing operations.
- j. Develop technology for the detection and mitigation of snow avalanches, and traffic management strategies for highway routes in avalanche incidents.
- k. Develop a system to utilize RWIS, pavement condition, environmental, temperature, precipitation and other data to identify optimum strategies to improve operations, safety and increase efficiency of winter maintenance operations. This system shall continue to add data and develop response scenarios based on experience and performance.

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