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MEMORANDUM OF UNDERSTANDING  
BETWEEN THE DEPARTMENT OF TRANSPORTATION OF THE UNITED STATES OF AMERICA  
AND THE MINISTRY OF TRANSPORT OF CANADA CONCERNING RESEARCH AND DEVELOPMENT  
COOPERATION IN TRANSPORTATION

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ADDENDUM NUMBER 1: URBAN TRANSPORTATION SYSTEMS  
AND  
TECHNOLOGY RESEARCH

- I. This document is an Addendum to the Memorandum of Understanding of June 18, 1970, between the Department of Transportation of the United States of America (referred to below as DOT) and the Ministry of Transport of Canada (referred to below as Transport Canada) concerning research and development cooperation in transportation, and is entered into pursuant to Section IV of that Memorandum of Understanding.
- II. The purpose of this Addendum is to promote mutually beneficial cooperation in the field of urban transportation systems and technology research.
- III. The cooperative activity described in this Addendum will be carried out for DOT by the Urban Mass Transportation Administration (UMTA) and for Transport Canada by the Transport Canada Research and Development Centre (TDC).
- IV. In order to realize the purpose set forth in Section II above, it is agreed that:
  - a. UMTA and TDC will exchange information and experience, and will conduct joint cooperative activity, in the particular areas identified in Section V below and in such additional areas as may subsequently be agreed.
  - b. Exchanges of information and experience in the identified areas will proceed on the basis of this Addendum. However, at the request of either UMTA or TDC, and in any case where

cooperative activity may involve cost-sharing or task-sharing, written project arrangements will be agreed. These arrangements will prescribe the respective commitments of UMTA and TDC with regard to the information and experience to be exchanged, the particulars and schedules of work to be accomplished, and the details of any cost-sharing.

- c. DOT and Transport Canada will each designate a Program Coordinator for the purpose of this Addendum. The Program Coordinators are authorized, subject to their respective national laws and regulations, to:
  - 1. Conclude project arrangements;
  - 2. Designate project officers responsible for each of the areas of mutual interest identified in Section V below or subsequently agreed; and
  - 3. Arrange for regular reviews of the status of the program established by this Addendum.
- d. UMTA and TDC, separately, will each bear the direct costs of its participation in cooperative activity pursuant to this Addendum. Transfer of funds between DOT and Transport Canada is not envisaged except as may be provided in supplemental project arrangements.
- e. In connection with exchanges of technical data between UMTA and TDC, any conditions or limitations placed upon further dissemination of the data by the agency providing it will be respected by the recipient.

- f. The nature and timing of any reports arising from task-sharing and cost-sharing projects will be provided for in the relevant project arrangements. Any industrial organizations which may participate in such projects will have opportunity to review and comment upon the draft reports prior to publication. Dissenting views of industrial organizations will be included in final reports.
  - g. UMTA and TDC will seek to assure the accuracy of all data and information exchanged pursuant to this Addendum, but the accuracy of such data and information is not guaranteed, and neither agency will hold the other responsible with respect thereto.
- V. The following are identified as initial areas of mutual interest for the purposes of this Addendum:
- a. Operational software for demand responsive systems;
  - b. Intermediate capacity transit systems/automated guideway transit systems; and
  - c. Flywheel/alternative propulsion drive systems.
- VI. This Addendum will enter into force upon signature and will remain in force subject to six months' written notice of termination by either signatory to the other, provided that such task-sharing or cost-sharing projects ongoing at the time of termination as may be the subject of separate project arrangements will be completed in accordance with their agreed terms and schedules.

VII. Proposals for the amendment of this Addendum by mutual agreement may be made by either DOT or Transport Canada at any time.

For the United States  
Department of Transportation

For Transport Canada



Voyce J. Mack, Deputy Director  
Office of International  
Transportation Programs



Peter H. Aykroyd  
Assistant Deputy Minister  
Research and Development  
Transport Canada

Date 28 February 1978

Date FF-3 28/78

**MEMORANDUM OF UNDERSTANDING**

**BETWEEN**

**THE DEPARTMENT OF TRANSPORTATION OF THE UNITED STATES OF AMERICA**

**AND**

**THE MINISTRY OF TRANSPORT OF CANADA**

**CONCERNING RESEARCH AND DEVELOPMENT COOPERATION IN TRANSPORTATION**

**ADDENDUM NUMBER 2:**

**MAINLINE RAIL TRANSPORTATION SYSTEMS AND TECHNOLOGY RESEARCH**

- I. This document is an Addendum to the Memorandum of Understanding of June 18, 1970, between the Department of Transportation of the United States of America (referred to below as DOT) and the Ministry of Transport of Canada (referred to below as Transport Canada) concerning research and development cooperation in transportation, and is entered into pursuant to that Memorandum of Understanding.
- II. The purpose of this Addendum is to promote mutually beneficial cooperation in the field of mainline rail transportation systems and technology research.
- III. The cooperative activity described in this Addendum will be carried out for DOT by the Federal Railroad Administration (FRA) and for Transport Canada by the Transport Canada Research and Development Centre (TDC).
- IV. In order to realize the purpose set forth in Section II above, it is agreed that:
  - a) FRA and TDC will exchange information and will conduct joint cooperative activities, in the particular areas identified in Section V below and in such additional areas as may subsequently be agreed.
  - b) Exchanges of information in the identified areas will proceed on the basis of this Addendum. However, at the request of either FRA or TDC, and in any case where cooperative activity may involve cost-sharing or task-sharing, written project arrange-

ments will be concluded. These arrangements will prescribe the respective commitments of FRA and TDC with regard to the information to be exchanged, the particulars and schedules of work to be accomplished, and the details of any cost-sharing.

- c) DOT and Transport Canada will each designate a Program Coordinator for the purpose of this Addendum. The Program Coordinators are authorized, subject to their respective national laws and regulations, to:
  - 1. Conclude project arrangements;
  - 2. Designate project officers responsible for each of the areas of mutual interest identified in Section V below or subsequently agreed; and
  - 3. Arrange for regular reviews of the status of the program established by this Addendum.
  
- d) FRA and TDC, separately, will each bear the direct costs of its participation in cooperative activity pursuant to this Addendum. It is understood that cooperative activities are subject to the availability of funds. Transfer of funds between DOT and Transport Canada is not envisaged except as may be provided in supplemental project arrangements.
  
- e) In connection with exchanges of technical data between FRA and TDC, any conditions or limitations placed upon further dissemination of the data by the agency providing it will be respected by the recipient.

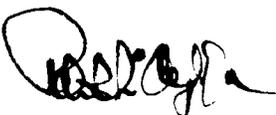
- f) The nature and timing of any reports arising from task-sharing and cost-sharing projects will be provided for in the relevant project arrangements. Any project participant will have an opportunity to review and comment upon the draft reports prior to their publication. Dissenting views of project participants will be included in final reports.
  - g) FRA and TDC will seek to assure the accuracy of all data and information exchanged pursuant to this Addendum, but the accuracy of such data and information is not guaranteed, and neither agency will hold the other responsible with respect thereto.
- V. The following are identified as initial areas of mutual interest for the purposes of this Addendum:
- a) Flywheel energy storage systems;
  - b) Environmental/noise abatement research; and
  - c) Track/train dynamics research.
- VI. This Addendum comes into effect upon signature and will remain in effect subject to six months' written notice of termination by either signatory to the other, provided that such task-sharing or cost-sharing projects ongoing at the time of termination as may be the subject of separate project arrangements will be completed in accordance with their agreed terms and schedules.

VII. Proposals for the amendment of this Addendum may be amended by mutual consent of DOT and Transport Canada at any time.

For the United States  
Department of Transportation

For Transport Canada

  
\_\_\_\_\_  
Joyce J. Mack  
Acting Director  
Office of International  
Transportation Programs

  
\_\_\_\_\_  
Peter H. Aykroyd  
Assistant Deputy Minister  
Research and Development  
Transport Canada

Date: May 8, 1979

Date: May 15, 1979

**MEMORANDUM OF UNDERSTANDING**

**BETWEEN**

**THE DEPARTMENT OF TRANSPORTATION OF THE UNITED STATES OF AMERICA**

**AND**

**THE MINISTRY OF TRANSPORT OF CANADA**

**CONCERNING RESEARCH AND DEVELOPMENT COOPERATION IN TRANSPORTATION**

**ADDENDUM NUMBER 3:**

**MARINE TRANSPORTATION SYSTEMS AND TECHNOLOGY RESEARCH**

- I. This document is an Addendum to the Memorandum of Understanding of June 18, 1970, between the Department of Transportation of the United States of America (referred to below as DOT) and the Ministry of Transport of Canada (referred to below as Transport Canada) concerning research and development cooperation in transportation, and is entered into pursuant to that Memorandum of Understanding.
- II. The purpose of this Addendum is to promote mutually beneficial cooperation in the field of marine transportation systems and technology research.
- III. The cooperative activity described in this Addendum will be carried out for DOT by the US Coast Guard (USCG) and for Transport Canada by the Transport Canada Research and Development Centre (TDC) or the Canadian Coast Guard (CCG).
- IV. In order to realize the purpose set forth in Section II above, it is agreed that:
  - (a) DOT and Transport Canada will exchange information and experience, will conduct joint cooperative activities, in the particular areas identified in Paragraph V below and in such additional areas as may subsequently be agreed in writing.
  - (b) Exchanges of information in the identified areas will proceed on the basis of this Addendum. However, at the request of either DOT or Transport Canada, and in any case where cooperative activity may involve cost-sharing or task-sharing, written project arrangements will be concluded. These arrangements will prescribe the respective commitments of DOT and Transport Canada with regard to the information to be exchanged, the particulars and schedules of work to be accomplished, and the details of any cost-sharing.

- (c) DOT and Transport Canada will each designate a Program Coordinator for the purpose of this Addendum. The Program Coordinators are authorized, subject to their respective national laws and regulations, to:
- (i) Conclude project arrangements;
  - (ii) Designate project officers responsible for each of the areas of mutual interest identified in Para V below or subsequently agreed; and
  - (iii) Arrange for regular reviews of the status of the program established by this Addendum.
- (d) Except as may be provided in supplemental project arrangements, DOT and Transport Canada, separately, will each bear the direct costs of its participation in cooperative activity pursuant to this Addendum. It is understood that all activities conducted pursuant to this memorandum are subject to the availability of appropriate funds.
- (e) In connection with exchanges of technical data between FRA and TDC, any conditions or limitations placed upon further dissemination of the data by the agency providing it will be respected by the recipient.
- (f) The nature and timing of any reports arising from task-sharing and cost-sharing projects will be provided for in the relevant project arrangements. Any project participant will have an opportunity to review and comment upon the draft reports prior to their publication. Dissenting views of project participants will be included in final reports.

(g) DOT and Transport Canada will seek to assure the accuracy of all data and information exchanged pursuant to this Addendum, but the accuracy of such data and information is not guaranteed, and neither agency will hold the other responsible with respect thereto.

V. The following are identified as initial areas of mutual interest for the purposes of this Addendum:

- (a) Marine Vehicle Research
- (b) Marine Oil and Other Hazardous Substances Pollution Cleanup Research
- (c) Advanced Marine Navigation Concepts
- (d) Marine Safety Technology
- (e) Aids to Navigation
- (f) Ice Technology

The initial projects within these interest areas will be:

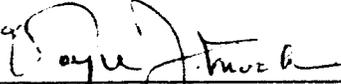
- (a) Propeller Protection Techniques for Ships Navigating in Ice
- (b) Marine Fire Hazard Research

VI. This Addendum will come into effect upon signature and will remain in effect subject to six months' written notice of termination by either signatory to the other, provided that such task-sharing or cost-sharing projects ongoing at the time of termination as may be the subject of separate project arrangements will be completed in accordance with their agreed terms and schedules.

VII. This Addendum may be amended or extended by mutual agreement in writing.

For the United States  
Department of Transportation

For Transport Canada

  
\_\_\_\_\_  
Voyce J. Mack  
Acting Director  
Office of International  
Transportation Programs

  
\_\_\_\_\_  
N. G. Mulder  
Assistant Deputy Minister  
Strategic Planning  
Transport Canada

Date: 21 December 1979

Date: 21 January 1980

MEMORANDUM OF UNDERSTANDING  
BETWEEN  
THE MINISTRY OF TRANSPORT OF CANADA  
AND  
THE DEPARTMENT OF TRANSPORTATION OF THE UNITED STATES OF AMERICA  
CONCERNING  
RESEARCH AND DEVELOPMENT COOPERATION IN TRANSPORTATION

ADDENDUM NUMBER 4  
AERONAUTICS

- I. This document is an Addendum to the Memorandum of Understanding of June 18, 1970, between the Ministry of Transport of Canada (referred to below as Transport Canada) and the Department of Transportation of the United States of America (referred to below as DOT) concerning research and development cooperation in transportation, and is entered into pursuant to that Memorandum of Understanding.
- II. The purpose of this Addendum is to promote the objectives of the Memorandum of Understanding in the field of aeronautics with special emphasis on air transportation systems.
- III. The cooperative activity described in this Addendum will be carried out for Transport Canada by the Canadian Air Transportation Administration (CATA) and for DOT by the Federal Aviation Administration (FAA).
- IV. To realize the purpose set forth in Section II above, it is agreed that:
  - (a) CATA and FAA will exchange information and experience, will conduct joint cooperative activities, in particular areas suggested in Paragraph V. below or other areas as may subsequently be agreed in writing.
  - (b) Exchanges of information in the identified areas will proceed on the basis of this Addendum. However, at the request of either CATA or FAA and in any case where cooperative activity may involve cost-sharing or task-sharing, written project arrangements will be concluded. These arrangements will prescribe the respective commitments of CATA and FAA with regard to the information to be exchanged, the particulars and schedules of work to be accomplished, and the details of any cost-sharing.

- (c) CATA and FAA will each designate a Program Coordinator for the purpose of this Addendum. The Program Coordinators are authorized, subject to their respective national laws and regulations, to:
- (i) Conclude project arrangements;
  - (ii) Designate project officers responsible for each of the areas of mutual interest suggested in Paragraph V below or other areas subsequently agreed; and
  - (iii) Arrange for regular reviews of the status of the program established by this Addendum.
- (d) Except as may be provided in supplemental project arrangements, CATA and FAA, separately, will each bear the direct costs of its participation in cooperative activity pursuant to this Addendum. It is understood that all activities conducted pursuant to this Memorandum are subject to the availability of appropriated funds and personnel.
- (e) In connection with exchanges of technical data between CATA and FAA, any conditions or limitations placed upon further dissemination of the data by the agency providing it will be respected by the recipient in accordance with applicable provisions of its domestic laws.
- (f) The nature and timing of any reports arising from task-sharing and cost-sharing projects will be provided for in the relevant project arrangements. Either project participant will have an opportunity to review and comment upon the draft reports prior to their publication. Dissenting views will be included in final reports.

(g) CATA and FAA will seek to assure the accuracy of all data and information exchanged pursuant to this Addendum, but the accuracy of such data and information is not guaranteed, and neither agency will hold the other responsible with respect thereto. Should intellectual property rights arise out of cooperative activities under this Memorandum, each party shall determine the allocation of those rights within its own country and the parties shall agree on the allocation of rights in third countries, unless the particular project agreements provided otherwise.

V. The following are identified as suggested areas of mutual interest for the purposes of this Addendum:

- (1) System Safety Analysis;
- (2) Automation of Air Traffic Services;
- (3) Mitigating Adverse Consequences of Weather;
- (4) Crash Worthiness Behavior of Aircraft Systems;
- (5) Human Factors in Flight Safety;
- (6) Airport Facilities and Security; and
- (7) R&D Planning Methodology.

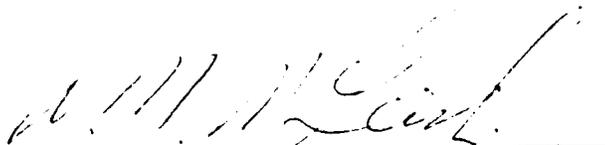
Specific projects in these and other areas will be described by separate project arrangements pursuant to this Addendum.

VI. This Addendum shall enter into force upon signature and shall remain in force unless terminated by either party upon six months' written notice to the other party. Such termination shall not affect projects ongoing at the time of termination which shall be completed in accordance with their agreed terms and schedules.

VII. This Addendum may be amended by mutual written agreement.

Done in the French and English languages.

For Transport Canada



W. M. McLeish  
Administrator  
Canadian Air Transportation  
Administration

Date: NOV 20 1981

For the United States  
Department of Transportation



J. Lynn Helms  
Administrator  
Federal Aviation Administration

Date: NOV 20 1981

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE DEPARTMENT OF TRANSPORTATION OF THE  
UNITED STATES OF AMERICA

AND

THE DEPARTMENT OF TRANSPORT OF CANADA

CONCERNING RESEARCH AND DEVELOPMENT COOPERATION IN TRANSPORTATION

ADDENDUM NUMBER 6:

MARINE TRANSPORTATION TECHNOLOGY

- I. This document is an Addendum to the Memorandum of Understanding of June 18, 1970, between the Department of Transportation of the United States of America (referred to below as DOT) and the Department of Transport of Canada (referred to below as Transport Canada) concerning research and development cooperation in transportation, and is entered into pursuant to that Memorandum of Understanding.
  
- II. The purpose of this Addendum is to promote mutually beneficial cooperation in the field of marine transportation technology, and to include continuation of the cooperative activities entered into by the U.S. Department of Commerce and Transport Canada under the terms of the Memorandum of Understanding of June 18, 1981, which is hereby superseded.
  
- III. The cooperative activity described in this Addendum will be carried out for DOT by the Maritime Administration (MARAD) and for Transport Canada by the Canadian Marine Transportation Administration (CMTA), the Transport Development Centre (TDC), or others.
  
- IV. In order to realize the purpose set forth in Section II above, it is agreed that:
  - (a) DOT and Transport Canada will exchange information and experience, will conduct joint cooperative activities, in the particular areas identified in Paragraph V below and in such additional areas as may subsequently be agreed in writing.

(b) Exchanges of information in the identified areas will proceed on the basis of this Addendum. However, at the request of either DOT or Transport Canada, and in any case where cooperative activity may involve cost-sharing or task-sharing, written project agreements will be concluded. These arrangements will prescribe the respective commitment of DOT and Transport Canada with regard to the information to be exchanged, the particulars and schedules of work to be accomplished, and the details of any cost-sharing.

(c) DOT and Transport Canada designate Program Coordinators for the purpose of this Addendum as follows:

for DOT: Director, Office of Advanced Ship Development  
and Technology, Maritime Administration

for Transport Canada: Director, Marine Planning,  
Programming and Finance

The Program Coordinators are authorized, subject to their respective national laws and regulations, to:

- (i) Conclude joint research project arrangements;
- (ii) Identify project officers responsible for each of the areas of mutual interest identified in Paragraph V below or subsequently agreed; and
- (iii) Arrange for regular review of the status of the program established by this Addendum.

- (d) Except as may be provided in supplemental joint research project arrangements, DOT and Transport Canada, separately, will each bear the direct costs of its participation in cooperative activity pursuant to this Addendum. It is understood that all activities conducted pursuant to this memorandum are subject to the availability of appropriated funds.
  
- (e) In connection with exchanges of technical data between DOT and Transport Canada, any conditions or limitations placed upon further dissemination of the data by the agency providing it will be respected by the recipient.
  
- (f) The nature and timing of any reports arising from task-sharing and cost-sharing projects will be provided for in the relevant project agreements. Any project participant will have an opportunity to review and comment upon the draft reports prior to their publication. Dissenting views of project participants will be included in final reports.
  
- (g) DOT and Transport Canada will seek to assure the accuracy of all data and information exchanged pursuant to this Addendum, but the accuracy of such data and information is not guaranteed, and neither agency will hold the other responsible with respect thereto.

V. The following are identified as current areas of mutual interest for the purposes of this Addendum:

- (a) Scientific research and technological development in the field of marine transportation that will address but not be limited to all inland and coastal waters;
- (b) Development of port facilities, waterways and ship systems to serve marine markets for the mutual benefit of U.S. and Canadian citizens;
- (c) Finding answers to other common marine transportation problems.

The specific projects under consideration include:

- Projects related to the development of Arctic ship design and regulatory criteria and construction standards;
- Development of ice navigation procedures;
- Improvement of safety of Arctic ship operation;
- Simulation of vessel operation in ice using the Computer Aided Operations Research Facility (CAORF);
- Improvement of communications and navigation facilities in the Great Lakes and Saint Lawrence Seaway;
- Exploration of shipping season extension on the Saint Lawrence Seaway.

The following Joint Research Project Agreement (JRPA's) under the aforementioned Memorandum of Understanding of June 18, 1981, are specifically incorporated hereunder:

JRPA No. 1

"Reduction and Analysis of Technical Data from At-Sea Testing and Operation of SS MANHATTAN"

JRPA No. 2

"Reduction and Analysis of Technical Data from the M.V. ARCTIC Scientific Evaluation Program"

JRPA No. 3

"Operational Assessment of Commercial Arctic Icebreaking Ships Based on Trafficability Tests of the USCG Icebreaker POLAR SEA, 1981"

JRPA No. 4

"Operational Assessment of Commercial Arctic Icebreaking Ships Based on Trafficability Tests of the USCG Icebreaker POLAR STAR - Arctic Trials, 1982"

JRPA No. 5

"Operational Assessment of Commercial Arctic Icebreaking Ships Based on Trafficability Tests of the USCG Icebreaker POLAR SEA - Arctic Trials, 1983"

JRPA No. 6

"Antarctic Uniform Level Ice Tests USCGC POLAR SEA 1983/84  
McMurdo Sound"

JRPA No. 7

"Operational Assessment of Commercial Arctic Icebreaking  
Ships Based on 1984 Trafficability Tests of the United  
States Coast Guard Icebreaker POLAR SEA, Arctic Summer  
Deployment"

JRPA No. 8

"Antarctic Uniform Level Ice Tests USCGC POLAR STAR 1984/85  
McMurdo Sound"

JRPA No. 9

"Operational Assessment of Commercial Arctic Icebreaking  
Ships Based on Trafficability Tests of the United States  
Coast Guard Icebreakers POLAR SEA and POLAR STAR"

- VI. This Addendum will come into effect upon signature and will remain in effect subject to six months written notice of termination by either signatory to the other, provided that such task-sharing or cost-sharing projects ongoing at the time of termination as may be the subject of separate project arrangements will be completed in accordance with their agreed terms and schedules.

VII. This Addendum may be amended by mutual agreement in writing.

For the United States  
Department of Transportation

For Canada  
Department of Transport

  
\_\_\_\_\_  
Captain Warren G. Leback  
Deputy Maritime Administrator  
Maritime Administration

  
\_\_\_\_\_  
Martin Brennan  
Deputy Administrator Corporate  
Affairs, Canadian Marine  
Transportation Administration

Date: 25 April 1985

Date: 25 April '85

**MEMORANDUM OF UNDERSTANDING**

**BETWEEN**

**THE DEPARTMENT OF TRANSPORTATION OF THE  
UNITED STATES OF AMERICA**

**AND**

**THE DEPARTMENT OF TRANSPORT OF CANADA**

**CONCERNING RESEARCH AND DEVELOPMENT  
COOPERATION IN TRANSPORTATION**

**ADDENDUM NUMBER: 7**

**HIGHWAY TRANSPORTATION RESEARCH**

- I. The purpose of this Addendum to the Memorandum of Understanding of June 18, 1970, between the Department of Transportation of the United States of America (referred to below as DOT) and the Department of Transport of Canada (referred to below as Transport Canada) is to promote mutually beneficial cooperation in the field of highway transportation research, including the exchange of data and statistics.
  
- II. The cooperative activity described in this Addendum will be carried out for DOT by the Federal Highway Administration (FHWA) and for Transport Canada by the Director General, Research and Development, Policy and Coordination Group.
  
- III. In order to realize the purpose set forth in Section I above, it is agreed that:
  - A. DOT and Transport Canada will exchange information and experience and will conduct joint cooperative activities in the particular areas identified in Paragraph IV below and in such additional areas as may subsequently be agreed in writing.
  
  - B. Exchanges of information in the identified areas will proceed on the basis of this Addendum. However, upon agreement by both DOT and Transport Canada, and in any case where cooperative activity involves cost-sharing or task-sharing,

written project agreements will be concluded. These agreements will describe the respective commitment of DOT and Transport Canada with regard to the information to be exchanged, the particulars and approximate schedules of work to be accomplished, and the details of any cost-sharing or task-sharing.

- C. DOT and Transport Canada designate Program Coordinators for the purpose of this Addendum as follows:

**FOR DOT:** Associate Administrator for Research,  
Development, and Technology, Federal Highway  
Administration

**FOR TRANSPORT CANADA:** Director General, Research and  
Development Policy and Coordination  
Group

The Program Coordinators are authorized, in accordance with respective national laws and regulations, to:

1. Conclude project agreements;
2. Identify project officers responsible for each of the areas of mutual interest identified in Paragraph IV below or subsequently agreed; and
3. Arrange for regular review of the status of the program established by this Addendum.

- D. Except as may be provided in supplemental project arrangements, DOT and Transport Canada will each bear the direct costs of its participation in cooperative activity pursuant to this Addendum. It is understood that all activities conducted pursuant to this memorandum are subject to the availability of appropriated funds and personnel resources.
- E. In connection with exchanges of technical data between DOT and Transport Canada, any conditions or limitations placed upon further dissemination of the data by the side providing it will be respected by the recipient.
- F. The nature and timing of any reports arising from cost-sharing and task-sharing projects will be provided for in the relevant project agreements. Each country will have an opportunity to review and comment upon the draft reports prior to publication. Dissenting views of either country will be included in final reports.
- G. DOT and Transport Canada will seek to assure the accuracy of all data and information exchanged pursuant to this Addendum, but the accuracy of such data and information is not guaranteed, and neither agency will hold the other responsible with respect thereto.

IV. The following are identified as initial areas of mutual interest for the purpose of this Addendum:

- A. **Highway Safety Research**: includes research related to the interaction of the driver, the vehicle, and the highway system with regard to overall safety performance. Illustrative are projects designed to: (1) assess the impacts of variable speed limits on accident incidence and traffic performance, and (2) improve knowledge and data base with regard to motor vehicle accidents, including use of varied statistical approaches.
- B. **Truck Weights and Dimensions Research**: includes research aimed at better quantifying the impacts of, and tradeoffs associated with, changed policies on truck weights and dimensions. Illustrative are projects designed to: (1) assess the impacts of different axle weights, tire pressures, suspension systems, and axle and tire configurations on pavement damage; (2) assess the impacts of alternative truck sizes and weights and configurations on bridge overstress and fatigue; (3) assess the impacts of alternative policies on modal diversion and truck freight flows; (4) assess the impacts of alternative policies on vehicle stability and handling and highway geometrics, and (5) assess the impacts of alternative policies on the economics and productivity of the trucking industry.

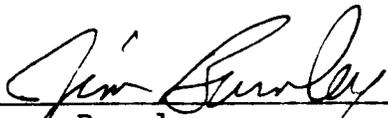
C. Strategic Highway Research Program (SHRP): includes research aimed at increasing the knowledge base with regard to asphalt characteristics, long-term pavement performance, maintenance cost effectiveness, concrete bridge component protection, cement and concrete, and snow and ice control. Illustrative are projects designed to: (1) allow Canada to participate in the U.S. SHRP program, and (2) allow the United States to participate in a Canadian counterpart to the SHRP program.

V. This Addendum will come into force upon signature and will remain in force, until terminated by either signatory upon six months' written notice to the other. Task-sharing or cost-sharing projects ongoing at the time of termination will be completed in accordance with the agreed terms and schedules contained in project agreements.

VI. This Addendum may be amended by mutual agreement in writing.

For the Department of  
Transportation of the United  
States of America

For the Department of Transport  
of Canada

  
\_\_\_\_\_  
James Burnley  
Deputy Secretary

  
\_\_\_\_\_  
Ramsey Withers  
Deputy Minister

Date: 4/7/87

Date: 4 June 1987

**MEMORANDUM OF UNDERSTANDING**

**BETWEEN**

**THE DEPARTMENT OF TRANSPORTATION OF THE  
UNITED STATES OF AMERICA**

**AND**

**THE MINISTRY OF TRANSPORT OF CANADA  
(TRANSPORT CANADA)**

**ADDENDUM NUMBER: 8**

**TRANSPORTATION DISABLED MOBILITY RESEARCH**

1. The purpose of this Addendum to the Memorandum of Understanding of June 18, 1970, between the Department of Transportation of the United States of America (hereinafter referred to as DOT) and the Ministry of Transport of Canada (hereinafter referred to as Transport Canada) is to promote mutually beneficial cooperation in transportation disabled mobility research.
2. The overall objective of this Addendum is to increase the effectiveness of programs to improve transportation services for elderly and handicapped persons in the United States and Canada (hereinafter referred to as the Parties) through information exchange, program coordination, personnel exchange, visits to experimental facilities, and joint assessments.
3. This Addendum is directed specifically towards achieving the maximum practicable cooperation and exchange of data on mobility requirements for persons with transportation disabilities. It will be concerned with:
  - loading devices for the disabled for use in small and large aircraft;
  - commuter rail accessibility;
  - mass transit accessibility;
  - air travel access;
  - architectural and transportation barriers removal;
  - taxi accessibility;

- accessible vehicles including urban and intercity buses;  
and
- international workshops and conferences.

4. The following methods of cooperation will be utilized under this Addendum:

- 4.1 The Parties will exchange reports embodying significant research results from their activities subject to restrictions on distribution of proprietary or other sensitive data.
- 4.2 Within existing fund limitations, researchers from both countries will participate in workshops and conferences organized by the Department of Transportation or Transport Canada to address specific research issues or to exchange information relating to mobility for persons with transportation disabilities.
- 4.3 The Parties will exchange operational and assessment data.
- 4.4 The Parties will cooperate in studies to evaluate the benefits and cost of potential applications for improving mobility of the transportation disabled and related research technologies.
- 4.5 As appropriate, researchers from both countries will be invited to inspect experimental test facilities and witness tests related to research concerning mobility for the transportation disabled.

4.6 Subject to the foregoing provisions, the Parties will exchange any developed software packages for studying the performance and operation of devices or methods to improve transportation mobility.

5. DOT and Transport Canada designate Program Coordinators for the purpose of this Addendum as follows:

**FOR DOT:**

Dr. Ira Laster, Jr.  
Senior Program Coordinator  
Office of Transportation Regulatory  
Affairs  
Office of the Secretary  
(Tel: 202-366-4859)

**FOR TRANSPORT CANADA:**

Mr. Marc Brenkmann  
Director, Research Program Development  
(Tel: 613-998-1817)

The Program Coordinators will be (1) responsible for the achievement of the tasks and objectives set out in this Addendum; (2) the principal points of contact between the Parties; (3) responsible for the development of such implementing arrangements as may be necessary, the designation of project officers as necessary, and the review of the status of activities through periodic meetings.

6.1 Subject to availability of funds, each Party will bear the direct costs (e.g., salary, travel, subsistence) associated with its own personnel participating in the project, as well as the cost of language services that it requires.

- 5.2 The host country will provide such office space and other support services for the resident specialists of the other Party as may be agreed by the Project Officers and approved by the Program Coordinators.
- 6.3 This Addendum does not envisage the transfer of funds from one Party to the other, unless dealt with in supplemental specific arrangements.
7. The Parties will make clear to all manufacturers involved in any cooperative activity that all information provided at the review meetings will become publicly available, except to the extent that either Party requests that the information not be made available to the public and that withholding such information is consistent with domestic law.
8. The Parties will make best efforts to ensure the accuracy of all data, but the accuracy of such data is not guaranteed. Each Party will use the other's data at its own risk and may not hold the other Party responsible in the event of claims arising out of the use of said data.
9. This Addendum will come into effect upon signature, and will remain in effect for four (4) years. It may be extended by mutual agreement in writing.

10. This Addendum may be amended at any time by mutual agreement in writing.

FOR THE DEPARTMENT OF  
TRANSPORTATION OF THE UNITED  
STATES OF AMERICA

Jim Burnley  
James Burnley  
Deputy Secretary

Date: 4/7/87

Place: \_\_\_\_\_

FOR THE DEPARTMENT OF TRANSPORT  
OF CANADA

Ramsey Withers  
Ramsey Withers  
Deputy Minister

Date: 4 June 1987

**MEMORANDUM OF UNDERSTANDING**

**BETWEEN**

**THE DEPARTMENT OF TRANSPORTATION OF THE  
UNITED STATES OF AMERICA**

**AND**

**THE DEPARTMENT OF TRANSPORT OF CANADA**

**CONCERNING COOPERATION IN TRANSPORTATION  
RESEARCH AND DEVELOPMENT**

**ADDENDUM NUMBER: 9**

**Addendum**  
**to the**  
**Memorandum of Understanding**  
**between the**  
**Department of Transportation of the United States of America**  
**and the**  
**Ministry of Transport of Canada**

I. This Addendum to the Memorandum of Understanding between the Department of Transportation of the United States of America (hereinafter referred to as "DOT") and the Ministry of Transport of Canada (hereinafter referred to as "Transport Canada"), entered into on June 18, 1970, sets forth terms under which DOT and Transport Canada will conduct cooperative activities in transportation research and development.

II. The purpose of this Addendum is to promote mutually beneficial cooperation in the field of transportation research and development including the exchange of data and statistics.

III. Cooperative activities authorized by the Memorandum of Understanding and this Addendum will be carried out for DOT by the Transportation Systems Center (TSC) and for Transport Canada by the Transportation Development Centre (TDC).

IV. In order to realize the benefits of cooperation pursuant to this Addendum, it is agreed that:

- A. DOT and Transport Canada will exchange information and experience and will conduct joint cooperative activities in the particular areas identified in paragraph V below and in such additional areas as may subsequently be agreed in writing.
  
- B. Cooperative activities may include exchanges of information and data, joint seminars and workshops, collaborative research, sharing of research data and research results, or other activities as the Coordinators determine.
  
- C. Exchanges of information in the identified areas will proceed on the basis of this Addendum. However, upon agreement by both DOT and Transport Canada, and in any case where cooperative activity involves cost-sharing or task-sharing, written project agreements will be concluded. These agreements will describe the respective commitment of DOT and Transport Canada with regard to the information to be exchanged, the particulars and approximate schedules of work to be accomplished, and the details of any cost-sharing or task-sharing. The nature and timing of any reports arising from cost-sharing and task-sharing projects will be provided for in the relevant project agreements.

- D. DOT and Transport Canada designate Program Coordinators for the purpose of this Addendum as follows:  
FOR DOT: Director, Transportation Systems Center  
FOR TRANSPORT CANADA: Executive Director  
Transportation Development Centre

The Coordinators shall arrange to review the status of the program established by this Addendum at least once each year and to agree upon an agenda of cooperative activities for the upcoming year. A joint memorandum shall be prepared at the conclusion of each meeting which describes the cooperative activities to be undertaken, the responsibilities of each Center and the schedule for presentation of results.

The location of review meetings shall alternate between the Transportation Systems Center, Cambridge, Massachusetts, U.S.A., and the Transportation Development Centre, Ottawa, Ontario, Canada.

- E. Except as may be provided in supplemental project arrangements, DOT and Transport Canada will each bear the direct costs of its participation in cooperative

activity pursuant to this Addendum. It is understood that all activities conducted pursuant to this memorandum are subject to the laws and regulations of the Parties and to the availability of appropriated funds and personnel resources.

- F. In connection with exchanges of technical data between DOT and Transport Canada, any conditions or limitations placed upon further dissemination of the data by the side providing it will be respected by the recipient.
- G. Both Parties will have the opportunity to review and comment on reports of results of cooperative activities prior to their publication. Dissenting views of either Party will be included in final reports, and final reports may not be published without the concurrence of both Parties.
- H. DOT and Transport Canada will seek to assure the accuracy of all data and information exchanged pursuant to this Addendum; but the accuracy of such data and information is not guaranteed, and neither agency will hold the other responsible with respect thereto.

V. Cooperative activities may address the following areas of mutual interest for the purpose of this Addendum: air, ground, marine, and pipeline transportation systems and technologies; and may include consideration of issues such as safety, security of persons, property and information, communications, management of transportation data, and other matters as may subsequently be agreed.

VI. This Addendum will come into effect upon the date of signature set forth below and will remain in effect, until terminated by either Party upon six months' written notice to the other. Task-sharing or cost-sharing projects ongoing at the time of termination will be completed in accordance with the agreed terms and schedules contained in project agreements.

VII. This Addendum may be amended by mutual agreement in writing.

For the Department of  
Transportation of the United  
States of America

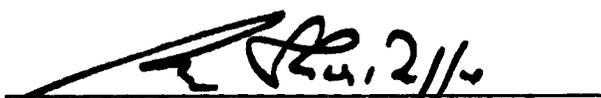


Date: June 23, 1988

PLACE: Quebec City, Quebec, Canada

Mimi Weyforth Dawson  
Deputy Secretary

For the Ministry of Transport  
of Canada



Date: June 23, 1988

Glen Scott Shortliffe  
Deputy Minister