## APPENDIX G

# PROJECT DEVELOPMENT FORMS
# (NOVEMBER 2002)

ITS PROJECT DEVELOPMENT FORM

| Project Title: | Pre-Emption of Traffic Signals by Emergency Response Vehicles, McPhillips Street; Regent Avenue (Panet-East); Portgage Avenue |
|---|---|

**Project Description:**

Traffic signal update.

| Criteria | Comments |
|---|---|
| Meets perceived need | • Allows for more rapid responses.<br>• Reduces potential for accidents. |
| Consensus support | • Yes – agreed that timely response saves lives. |
| Technological barriers | • Low -Proven technology (eg. COMPASS in Ontario). |
| Institutional barriers | • Significant - Requires high degree of cooperation. |
| Business case | • Yes – life saving and cost – proper response effort. |
| Attracts champions | • Yes – common objectives to have a safe and efficient road network. |
| Contributes to ITS profile | • Yes – Builds upon other success (COMPASS) |
| Vital to mainline strategy | • Fulfills public expectations. |
| **Overall Probability of Success as "Early Winner"** | • Medium |

ITS PROJECT DEVELOPMENT FORM

| Project Title: | Transit Automatic Vehicle Location System Providing Real Time Passenger Information and Transit Signal Priority |
|---|---|

**Project Description:**

A GPS-based AVL system would be installed on transit fleet in conjunction with a planned upgrade to the bus radio communication system.  Real time schedule information measured by the system would be distributed to the public via internet, cell phones, PDA's, displays at major stops, and IVR technology (Telebus).  On board the buses, next stop displays and announcements would be provided to passengers.  In addition, the on-board schedule adherence capability would be used to provide traffic signal priority as required.

| Criteria | Comments |
|---|---|
| Meets perceived need | |
| Consensus support | • Yes, an affordable way to improve the quality of transit service. |
| Technological barriers | • Schedule adherence algorithms need to be done locally on board the buss, rather than at the control centre. |
| Institutional barriers | • None.  Can be implemented by Winnipeg Transit and City's Public Works Department. |
| Business case | • Improved service reliability and customer information will reduce operating costs and attract new ridership/revenue. |
| Potential champions | • City Council; ITS Canada; Transit Industry; Transit User Groups. |
| Contributes to ITS profile | • Yes.  Public transit is highly visible and used by a significant portion of the population. |
| Vital to mainline strategy | • Yes.  Improves service quality, increases transit use, improves air quality. |
| **Overall Probability of Success as "Early Winner"** | • Medium – High (can be implemented in two years) |

ITS PROJECT DEVELOPMENT FORM

| Project Title:   Electronic Fare Collection for Transit | |
|---|---|

**Project Description:**

Given that both Winnipeg and Brandon are now using antiquated manual fare boxes that will have to be replaced, develop a joint specification and tender for electronic fare boxes which will allow a variety of fare mediums including tickets, smart cards, proximity cards as well as cash.  Include capability for passenger information.

| Criteria | Comments |
|---|---|
| Meets perceived need | • Makes transit more attractive to a wide variety of existing and potential users, while reducing fare evasion and providing management information. |
| Consensus support | • General support for public transit and in making it more cost effective and attractive. |
| Technological barriers | • Low – technology exists in a number of jurisdictions. |
| Institutional barriers | • Low – single agencies required for implementation. |
| Business case | • Cost of purchasing and implementing fare boxes compared to savings from reduced fare evasion.<br>• Reduced fare disputes.<br>• Reduces loading time. |
| Potential champions | • Winnipeg Transit<br>• Brandon Transit |
| Contributes to ITS profile | • Moderate visibility for transit although increased if smart cards are applied to parking and other services. |
| Vital to mainline strategy | • Moderate – leads to increased transit viability and reduced emissions. |
| **Overall Probability of Success as "Early Winner"** | • High – Brandon Transit could implement within a year. |

# ITS PROJECT DEVELOPMENT FORM

| **Project Title:   Corridor Signal Co-ordination** |
|---|

**Project Description:**

Co-ordinate traffic signals to improve progression.

| Criteria | Comments |
|---|---|
| Meets perceived need | • Meets need – improves progression, decreases congestion. |
| Consensus support | • Yes. |
| Technological barriers | • None – proven technology. |
| Institutional barriers | • Funding priorities. |
| Business case | • Yes – environmental, time.<br>• Public would perceive value. |
| Potential champions | • Public Works |
| Contributes to ITS profile | • Yes – good public profile. |
| Vital to mainline strategy | • Yes – fulfills public expectations. |
| **Overall Probability of Success as "Early Winner"** | • High. |

**Project Title:** Traveller Information Systems; #75, Winnipeg to Fargo; #1, Winnipeg to Saskatoon.

**Project Description:**

Provide information (real time) on road/weather conditions and incident delays.

| Criteria | Comments |
|---|---|
| Meets perceived need | • Manitoba Transportation and CAA receives timely information. |
| Consensus support | • Providing information for informed decisions by travellers → saving lives and reducing delays. |
| Technological barriers | • Proven technologies.<br>• Minor integration issues. |
| Institutional barriers | • Not significant. Good relations with RCMP and City Police and other jurisdictions. |
| Business case | • Significant benefit to trucking industry and traveling public to provide timely information. Will result in reduced collisions, better route decisions.<br>• Some existing technologies that could be upgraded and/or enhanced with nominal costs. Installation of RWIS sites have access to 50% funding Significant B/C ratios anticipated. |
| Potential champions | • CAA; MPIC; MB Transportation & Tourism; MTA; City of Winnipeg; North Dakota; Saskatchewan and AMM. |
| Contributes to ITS profile | • High visibility to public and trucking industry. |
| Vital to mainline strategy | • Important to maintain effectiveness of trucking industry and to maintain safe movement of people and goods.<br>• Reduced health care costs. |
| **Overall Probability of Success as "Early Winner"** | • High. |

ITS PROJECT DEVELOPMENT FORM

| **Project Title:   Active Advance Warning** |
|---|

**Project Description:**

Provide active warning to isolated situations in rural areas.  Active Stop Ahead, Active Hidden Intersection, Speed Activated Curve Ahead, blind hill warning of approaching vehicle.

| Criteria | Comments |
|---|---|
| Meets perceived need | • Yes – Collision reduction. |
| Consensus support | • Yes. |
| Technological barriers | • None.  Proven technology. |
| Institutional barriers | • None.  Current examples. |
| Business case | • Cost benefit – saves lives, reduces collision risk. |
| Potential champions | • MTGS<br>• MPI |
| Contributes to ITS profile | • Yes.  Builds on other success, i.e. Shoal Lake. |
| Vital to mainline strategy | • Yes.  Fulfills public expectations. |
| **Overall Probability of Success as "Early Winner"** | • High. |

ITS PROJECT DEVELOPMENT FORM

| Project Title: Weather Camera Linkage to Weigh Stations |
|---|

| Project Description: |
|---|
| Monitoring of high traffic areas through the "weather stations" to identify commercial vehicles with unsafe loads, i.e. load securement. |

| Criteria | Comments |
|---|---|
| Meets perceived need | • Applies to improved safety. |
| Consensus support | |
| Technological barriers | |
| Institutional barriers | |
| Business case | |
| Potential champions | |
| Contributes to ITS profile | |
| Vital to mainline strategy | |
| **Overall Probability of Success as "Early Winner"** | |

| **Project Title:   Use of WIM and AVC devices for enforcement** |
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**Project Description:**

The existing network of WIMs and AVCs will be utilized for improved enforcement of weight and safety regulations.  Telephone lines or wireless communication technology will be used to link these data collection sites with a central enforcement office (or weigh station).  Deployment of enforcement resources will take place based on the screening of the information.

| Criteria | Comments |
| --- | --- |
| Meets perceived need | • Improved inspection and clearance for commercial vehicles.. |
| Consensus support | |
| Technological barriers | • None, network already exists and can be enhanced. |
| Institutional barriers | • Limited funding and must prove that benefits outweigh costs. |
| Business case | • Better use of limited inspection resources. |
| Potential champions | • MTGS |
| Contributes to ITS profile | • Yes |
| Vital to mainline strategy | • Yes.  Improves safety through more effective enforcement. |
| **Overall Probability of Success as "Early Winner"** | Medium.  There may be other priorities in place right now. |

ITS PROJECT DEVELOPMENT FORM

| Project Title:   Online Credentials and Reporting |
|---|
| **Project Description:**<br><br>All operating requirements and authorities available through internet and telephone.  One stop shopping for all transport related documents and financial transactions. |

| Criteria | Comments |
|---|---|
| Meets perceived need | • Definitely. |
| Consensus support | • Yes, reduces administrative burdens and improves productivity. |
| Technological barriers | • None. |
| Institutional barriers | • Significant – legislation and organizational change. |
| Business case | • Savings of cost, time, environment, resources. |
| Potential champions | • DT&GS<br>• MTA |
| Contributes to ITS profile | • Yes. |
| Vital to mainline strategy | • Yes. |
| **Overall Probability of Success as "Early Winner"** | • High, but implementation may need to be staged. |

ITS PROJECT DEVELOPMENT FORM

| Project Title:   Work Zone Traffic Management ||
| --- | --- |
| **Project Description:**<br><br>Advise driers of work zones and the requirement to reduce speed and alter driving habits accordingly.  This could include website advisories and on-site warning systems. ||
| **Criteria** | **Comments** |
| Meets perceived need | • Yes.  Reduces collisions in work zones, thereby increasing safety. |
| Consensus support | • Yes – related to safety.  Reduced accidents, etc. |
| Technological barriers | • Lack of skill set. |
| Institutional barriers | • Funding issues, protocols, requirement for cooperation among many stakeholders. |
| Business case | • Saves lives, reduce economic impact of accidents. |
| Potential champions | • Industry, City, Province. |
| Contributes to ITS profile | • Yes – work zones are very visible. |
| Vital to mainline strategy | • Yes – safety improvement. |
| **Overall Probability of Success as "Early Winner"** | • Medium. |

ITS PROJECT DEVELOPMENT FORM

| Project Title: Expansion of Automated Enforcement | |
|---|---|

**Project Description:**

Expand the red light camera project to additional high speed routes and signalized intersections to reduce the number of collisions and improve safety.

| Criteria | Comments |
|---|---|
| Meets perceived need | • Yes – need to reduce specific types of incidents (right angle and left with opposing through). |
| Consensus support | • Yes – reduced incidents, saves lives and decreases economic results of accidents. |
| Technological barriers | • Cannot be implemented on electro-mechanical signal equipment. |
| Institutional barriers | • Legislation issues.<br>• Cooperation between provincial and municipal authorities. |
| Business case | • Life saving, success of other jurisdictions. |
| Potential champions | • Police Services.<br>• Public Works.<br>• Province. |
| Contributes to ITS profile | • Builds upon success in other jurisdictions.<br>• Yes – public is very aware of red light programs. |
| Vital to mainline strategy | • Yes. |
| **Overall Probability of Success as "Early Winner"** | • High. |