TERRA Transportation Engineering and Road Research Alliance

Partnering for Roadway Innovation

Transportation Engineering and Road Research Alliance

FY2008

July 1, 2007 – June 30, 2008

BUSINESS PLAN

July 27, 2007

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TERRA FY2008 BUSINESS PLAN

I. PURPOSE OF TERRA

TERRA, The Transportation Engineering and Road Research Alliance is a road research governance structure that will facilitate a comprehensive research program, with strategic focus to take advantage of the MnROAD test facility and associated resources. TERRA reflects the full capacity of the partners to conduct significant research, building on previous accomplishments.

While the primary focus will be to expand pavement-related research opportunities, other compatible research such as vehicle technologies and driver communications will be pursued in order to diversify funding.

TERRA exists to:

- Guide future pavement research investments and activities;
- Exchange information, share ideas, and learn research results;
- Develop relationships, and provide a network for expanded collaboration and development of proposals;
- Attract key public, industry, academic and other program partners to contribute resources; and,
- Expand entrepreneurial use of the capacity and capabilities of the MnROAD facility by pursuing opportunities to serve a broader research community.

The following Business Plan describes the direction of TERRA, defines the Board structure, and serves as a critical step towards implementing the vision for TERRA.

II. BACKGROUND

Mn/DOT asked the Center for Transportation Studies (CTS) at the University of Minnesota to involve key stakeholders in the evaluation of new partnership and governance structures. The Task Force was charged by then Mn/DOT Deputy Commissioner Douglas Differt to investigate options and make recommendations for the future governance of MnROAD. In March 2004, the Task Force published a report entitled “Pavement Research Governance”, describing its recommendations to Mn/DOT. The report was accepted by Mn/DOT. These recommendations included the creation of a new pavement research governance structure and identity (TERRA) to take greater advantage of the MnROAD facility.

In December 2004 the TERRA Board held a strategic planning session. Invited guests joined Board members for the morning session of this meeting to help determine the needs of the transportation engineering and road research industry. Board members then spent the afternoon synthesizing the information provided and determined a course of action for the TERRA organization. A complete report from the session is available upon request.

Upon completion of the strategic planning session, a Strategic Plan for the organization was created, centered around three strategic directions. The five-year Strategic Plan, which guides this Business Plan, is available upon request.

III. TERRA STRATEGY

Mission

To develop, sustain, and communicate a comprehensive program of research on pavement, materials, and related transportation engineering challenges, including issues related to cold climates.

Vision

A dynamic partnership of government, industry, and academia that continuously advances innovations in road engineering and construction.

Strategic Directions

- Expand Productive Research Partnerships
- Provide Effective Transportation Engineering and Road Research
- Communicate Transportation Engineering and Road Research Activities, Benefits, and Results

Five-year outcomes for these directions can be found in the Strategic Plan.

IV. TERRA BUSINESS DIRECTIONS

Investment Guidelines

To provide specific direction to setting priorities, TERRA members and partners will utilize some guidelines in directing their resources. This will outline how these resources are structured to facilitate achieving its strategic directions.

1) There will be operating budgets for TERRA committee activities, marketing, and technology transfer.
2) Key investments will be based on TERRA performance targets and measures.
3) Priority will be given to addressing gaps between targets and performance.
4) Through entrepreneurial efforts, acquire additional resources.
5) Customer input will be evaluated in all decisions.
6) Research will be performed by qualified, timely, and cost-effective researchers.

Measures & Targets

Along with investment guidelines, measures and targets were developed to serve as a key point of guidance for development of this plan.

- A ***measure*** is a set of values that tracks progress toward a desired end result for a customer.
- A ***target*** is tied to a measure and is the level of service to be delivered to customers for a specific period of time.

Performance targets enable TERRA members and partners to direct their resources and strategies to deliver specific levels of services and products to its customers. Long-term targets define the gap between system and customer needs and current levels of service, generally with unconstrained resources. Setting achievable targets is a challenging art, especially in areas of influences beyond TERRA. As more performance and cost data are accumulated, and as forecasting tools are improved, TERRA will be able to better calibrate targets.

Performance measures for FY2008, as defined for each Strategic Direction, are shown below.

STRATEGIC DIRECTION 1: *Expand Productive Research Partnerships*

1. Number of member organizations
2. Number of partner organizations
3. Number of Research Project Ideas Submitted
4. Number of Submitted Ideas Resulting in TERRA-Initiated Research Projects

STRATEGIC DIRECTION 2: *Provide Effective Transportation Engineering and Road Research*

1. Number of research projects initiated by MnROAD's Phase II reconstruction
2. Funding level from new partners

STRATEGIC DIRECTION 3: *Communicate Transportation Engineering and Road Research Activities, Benefits, and Results*

1. Number of recipients of TERRA e-newsletters
2. Number of visitors to TERRA Web site
3. Number of participants at TERRA events/demos
4. Number of magazine and journal articles published

TERRA Product Lines

There are product lines that relate to customer benefit. Product lines are defined as a group of closely related products and services.

Product Line	***Description***
Mn/ROAD Research Facility	This 150 acre facility in a cold climate environment includes 6 miles of research capable roadways. These roadways include fifty-one different pavement structures featuring extensive automated measurement and data collection capabilities. Options for loading test sections range from live freeway traffic to controlled and limited loadings.
Pavement Expertise	TERRA represents a unique and broad collection of pavement stakeholders embodying a wealth of expertise. TERRA provides a forum for the sharing and leveraging of that expertise amongst members. TERRA will also foster research and technology transfer programs that develop new information and increase the knowledge of the transportation community.
Influence over Future Research Investment and Activities	TERRA Board members will participate in the identification and prioritization of potential research projects.
Communication Tools	Through TERRA activities (i.e. committees) and communication products (i.e. web pages and summaries of research results) members will have immediate and first hand access to research results.
Collaboration Opportunities	TERRA creates a networking environment with unlimited opportunities to collaborate in solving shared problems and to pool/leverage resources resulting in more efficient research efforts.

V. TERRA SCREEING PROCESSES

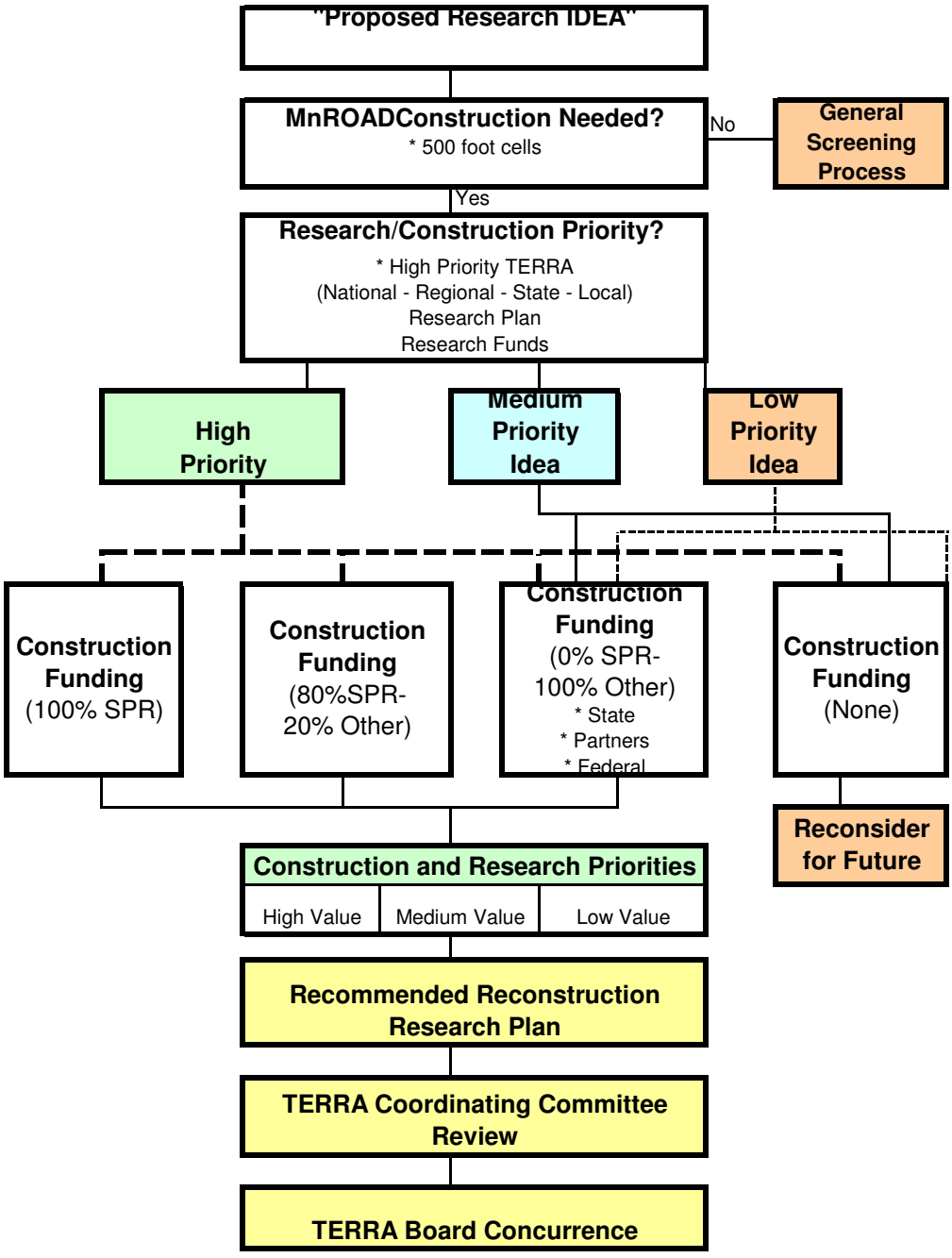
The TERRA organization has developed two screening processes to utilize when research project ideas are presented to the Board: the MnROAD Reconstruction Selection Process and the General TERRA Project Selection Process.

The MnROAD Reconstruction Selection Process and supplement documentation, as show on pages 8 and 9, will only be utilized during the reconstruction of the MnROAD facility. This process will not be used in the screening of general research project ideas presented to the Board.

For all other ideas presented to TERRA, the TERRA General Project Selection Process will be utilized. This process allows the input of research ideas in two manners: ideas may be submitted by members at any quarterly Board meeting, or ideas may be submitted by partners and friends through an annual solicitation process. The General TERRA Screening Process can be seen on page 10.

2008 MnROAD "Reconstruction" Selection Process

Proposed Timeline	Responsible Group
January 2005	Anyone
	TERRA Research Committee
January 2006	TERRA Research Committee
	TERRA Research Committee
January 2007	FHWA Mn/DOT
	TERRA Research Committee
March 2007	TERRA Research Committee
March 2007	TERRA Coordinating Committee
April 2007	TERRA Board



2008 MnROAD "Reconstruction" Selection Process Description

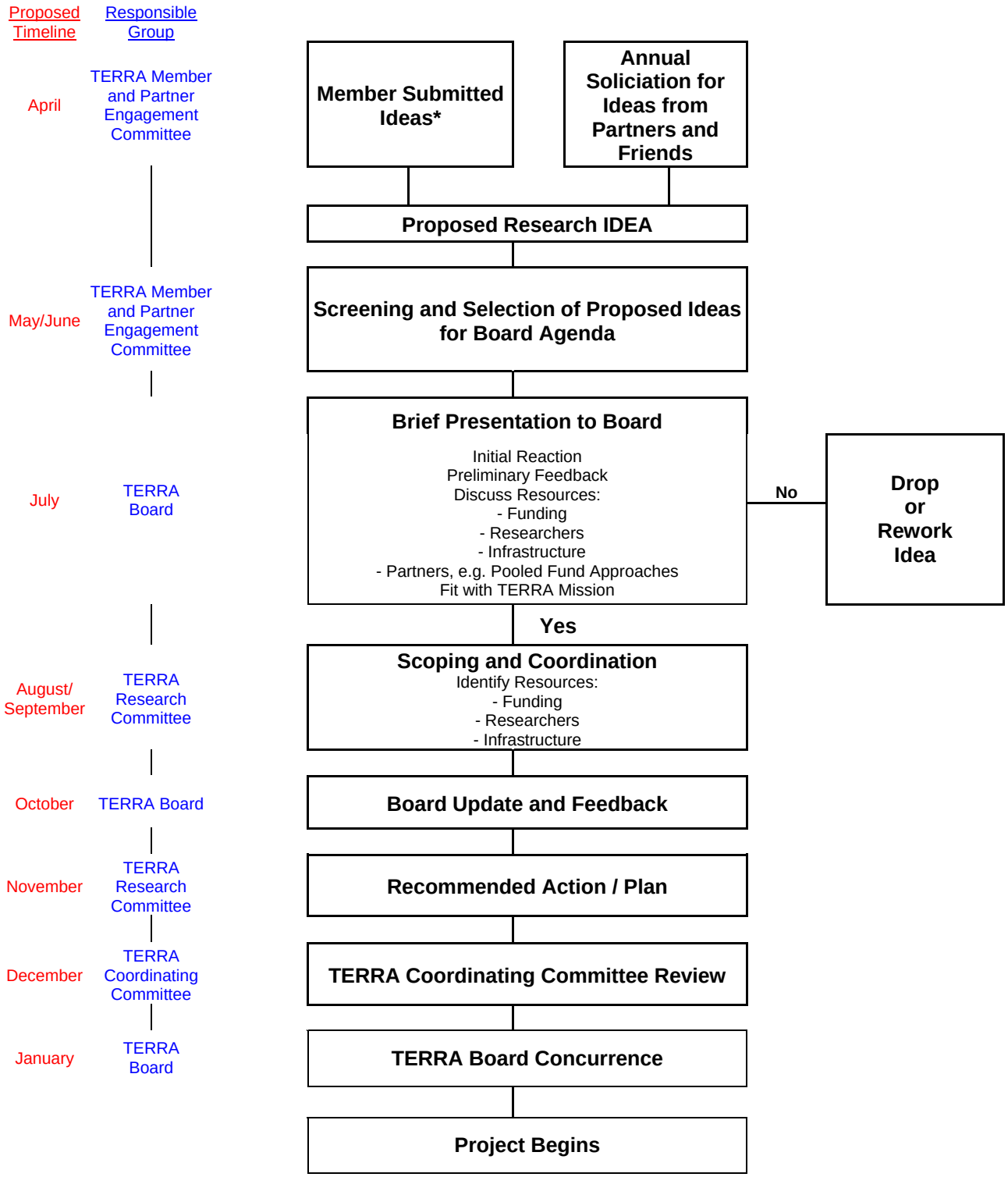
TERRA originally sought dedicated federal funding for the reconstruction of MnROAD and research priorities. This funding approach was not successful in 2005 or 2006. In the early fall of 2006, Mn/DOT identified unspent Federal State Planning and Research (SPR) funds as an alternate source of funding for MnROAD reconstruction and other research initiatives. Because of the Mn/DOT and FHWA requirements to qualify for SPR funds, a unique process was developed for TERRA to evaluate the priorities for MnROAD reconstruction. The “2008 MnROAD Reconstruction Selection Process “ is a one-time process and not the general TERRA process for selecting research priorities.

The 2008 MnROAD Reconstruction Selection Process built upon the original research ideas developed and prioritized by the TERRA Research Committee. The Research committee had created a list of 120 total research ideas, of which 44 were rated as both MnROAD compatible and a high priority. This list was used to solicit twelve pooled fund projects for some of the research to accompany reconstruction. In addition to pooled fund projects, partnerships were developed on specific topics of interest (some outside of the original list), along with projects initiated by MnDOT.

Since the SPR funding is specific federal funds allocated to MnDOT, the Office of Research Services and the local FHWA Office are determining the decisions concerning eligibility of individual projects for these funds.

A final review of the total MnROAD Phase II reconstruction plan will be made by the TERRA Research Committee once the eligibility is determined. If there is a shortage of available cells the research committee will prioritize the research and cell construction combinations and look for optional infrastructure for those that cannot be constructed at MnROAD. The recommended plan will be presented to the Coordinating Committee and the Board for concurrence.

General TERRA Project Selection Process
May 2007



***Members can submit ideas at any quarterly Board meeting; ideas do not necessarily need to follow this timeline.**

VI. TERRA ACTION PLAN

The following tables show FY2007 accomplishments and FY2008 action plans.

Strategic Direction 1: Expand Productive Research Partnerships

FY2007 Accomplishments:

What:	When:
1. Identified and recruited new members, including the Michigan DOT	June 2007
2. Refined criteria for defining partners and friends and updated the list of partners and friends	January 2007
3. Developed mechanisms for engaging partners, including the General TERRA Project Selection Process and the MnROAD Reconstruction Selection Process	March 2007
4. Defined member, partner, and friend benefits	January 2007
5. Provided input to the Coordinating Committee on FY2008 membership renewal options	May 2007
6. Submitted federal appropriations requests to four MN Congressional delegates	March 2007
7. Collected data and reported on performance measures for Strategic Direction 1	June 2007

FY2008 Action Plans:

Action	Target Start Date	Target Completion Date	Lead
1. Identify and recruit new members and partners with a goal of one additional State DOT; investigate potential use of SP&R funds	Ongoing	Ongoing	MPE Committee
2. Implement mechanisms for engaging partners, such as a welcome packet, a 'value-added' publication, and access to Board meeting minutes	July 2007	December 2007	MPE Committee
3. Provide input to Coordinating Committee on FY2009 membership renewal options	April 2008	May 2008	MPE Committee
4. Develop a strategy for a coalition approach to pursuing federal appropriations	August 2007	March 2008	MPE Committee
5. Implement General Screening Process annual solicitation for ideas from partners and friends	April 2007	January 2008	MPE Committee
6. Collect data and report on performance measures for Strategic Direction 1	March 2008	June 2008	CTS

Strategic Direction 2: Provide Effective Transportation Engineering and Road Research

FY2007 Accomplishments:

What:	When:
1. Develop construction plans for MnROAD rehabilitation and reconstruction of cells with stakeholder buy-in	March 2007
2. Develop a research plan for TERRA including:	April 2007
2a. Develop, carry out and report on Partner Projects that help implement long-term plans or that meet Partner needs	April 2007
2b. Prepare and report on annual status of Partner Projects to TERRA Board	April 2007
3. Pursue projects that meet the goals of SHRP II	On-going
4. Collect Data and report on performance measures for Strategic Direction 2	April 2007

FY2008 Action Plans:

Action	Target Start Date	Target Completion Date	Lead
1. Develop construction plans for MnROAD rehabilitation and reconstruction of cells with stakeholder buy-in	January 2007	November 2007	Research Committee
2. Report and discuss MnROAD Construction Progress	January 2008	June 2008	Research Committee
3. Update the research plan for TERRA, including:	January 2008	April 2008	Research Committee
3.a Develop, carry out, and report on Partner Projects that help implement long-term plans or that meet partner needs	January 2008	April 2008	Research Committee
3b. Prepare and report on annual status of Partner Projects to TERRA Board	January 2008	April 2008	Research Committee
4. Review research proposals as directed by the TERRA Board	Ongoing	Ongoing	Research Committee
5. Collect data and report on performance measures for Strategic Direction 2	March 2008	June 2008	Research Committee
6. Pursue projects that meet the goals of SHRP II	July 2007	June 2008	Research Committee

Strategic Direction 3: Communicate Transportation Engineering and Road Research Activities, Benefits, and Results

FY2007 Accomplishments:

What:	When:
1. Enhanced TERRA Web site	Ongoing
2. Developed and distributed TERRA electronic newsletter	January 2007
3. Cosponsored an Intelligent Compaction open house/demo at MnROAD	July 2006
4. Cosponsored MN Pavement Conference	February 2007
5. Established inventory of possible magazines and journals for submission of TERRA articles	November 2006
6. Attended and exhibited at 2006 ASAHTO Research Advisory Committee meeting	July 2006
7. Developed PowerPoint presentation and met with FHWA leadership during TRB	January 2007
8. Developed plan and assembled content for TERRA Annual Report	June 2007
9. Developed general TERRA PowerPoint for member use	May 2007
10. Developed and implemented TERRA Innovation Series	June 2007
11. Initiated development of two research fact sheets	June 2007
12. Collected data and reported on performance measures for Strategic Direction 3	June 2007

FY2008 Action Plans:

Action	Target Start Date	Target Completion Date	Lead
1. Enhance and maintain TERRA Web site	Ongoing	Ongoing	CTS
2. Distribute quarterly TERRA electronic newsletter	Ongoing	Ongoing	CTS
3. Continue TERRA Innovation Series, including press releases and one event hosted by a member organization outside of Minnesota that also engages the leadership of that organization	Ongoing	Ongoing	MC and MPE Committees; CTS
4. Develop 2 Research Fact Sheets	January 2008	June 2008	CTS
5. Cosponsor the Minnesota Pavement Conference and one additional engineering/road-related conference	August 2007	February 2008	MC & Research Committees
6. Update publication list and develop strategies for submitting articles	July 2007	December 2007	MC Committee
7. Present, and exhibit if applicable, at one engineering/road-related research conference (AASHTO RAC, City or County Engineers Annual Meeting, etc.), tailor presentation to audience	July 2007	June 2008	MC Committee

8. Communicate with FHWA Leadership, (including a special meeting with Turner Fairbanks staff), U.S. Congressional staff, etc.	Ongoing	Ongoing	MC Committee
9. Develop FY08 TERRA Annual Report	January 2008	August 2008	CTS
10. Collect data and report on performance measures for Strategic Direction 3	March 2008	June 2008	CTS
11. Develop customized materials and meet with three potential members	October 2007	June 2008	MPE & MC Committee
12. Update Marketing Plan	Nov. 2007	June 2008	MC Committee
13. Host TERRA celebration event in conjunction with an Innovation Series event	May 2008	July 2008	CTS
14. Develop up to 3 tailored synopses highlighting the TERRA organization: political, non profit, and public audiences	January 2008	June 2008	CTS

APPENDIX A: TERRA BOARD MEMBERS AS OF JULY 1, 2007
TERRA BOARD MEMBERS

Fred Corrigan,
Co-Chair, Executive Director, Aggregate and Ready Mix Association of Minnesota

Julie Skallman,
Co-Chair, Division Director, State Aid Division, Minnesota Department of Transportation

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Tom Cackler,
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Andre' Clover,
Administrative Engineer of Research and National Best Practices, Bureau of Highway Operations, Michigan Department of Transportation

Julie Garbini,
Executive Director, RMC Research and Education Foundation

Robert Johns,
Director, Center for Transportation Studies, University of Minnesota

Mark Maloney,
Director of Public Works, City of Shoreview, Minnesota

Abby McKenzie,
Director, Office of Investment Management, Minnesota Department of Transportation

Karl Melby,
Director and Professor, Norwegian Public Roads Administration

Shashi Nambisan,
Director, Center for Transportation Research and Education, Iowa State University

Dean Potts,
Engineering Manager, Caterpillar Global Paving

Calvin Roberts,
Engineer of Research and National Best Practices, Bureau of Highway Operations, Michigan Department of Transportation

Keith Shannon,
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Mike Sheehan,
County Highway Engineer, Olmsted County, Minnesota

Tom Sorel,
Minnesota Division Administrator, Federal Highway Administration

Gerald Voigt,
President and CEO, American Concrete Pavement Association

Dan Wegman,
Technical Marketing, SemMaterials

Rich Wolters,
Executive Director, Minnesota Asphalt Pavement Association

Tim Worke,
Director, Transportation and Highway Division, Associated General Contractors of Minnesota

Matt Zeller,
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