

# Transportation Engineering and Road Research Alliance

**FY2009**

July 1, 2008 – June 30, 2009

# BUSINESS PLAN

July 31, 2008

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# TERRA FY2009 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 an initial 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.

The TERRA Board held a second strategic planning session in October 2007 to assess the status of the organization and provide direction for the next five years. A complete report from this session is available upon request.

Upon completion of the 2007 strategic planning session, an updated Strategic Plan for the organization was created, centered around five 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**

- Defining and launching a bold and synergistic research program
- Implementing research results “on the ground”
- Setting up activities that enhance TERRA’s role as a dynamic forum for research interchange
- Expanding TERRA’s membership proactively
- Developing governance and operating structures that assure a thriving, changing, and sustainable organization

Priority actions 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 FY2009, as defined for by each of the TERRA committees, are shown below.

### Member and Partner Engagement Committee

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*Related Strategic Direction: Expanding TERRA's membership proactively*

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

## Research and Implementation Committee

*Related Strategic Directions: Defining and launching a bold and synergistic research program; Implementing research 'on the ground'; Setting up activities that enhance TERRA's role as a dynamic forum for research interchange*

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

## Marketing and Communications Committee

*Related Strategic Directions: Implementing research 'on the ground'; Setting up activities that enhance TERRA's role as a dynamic forum for research interchange*

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.

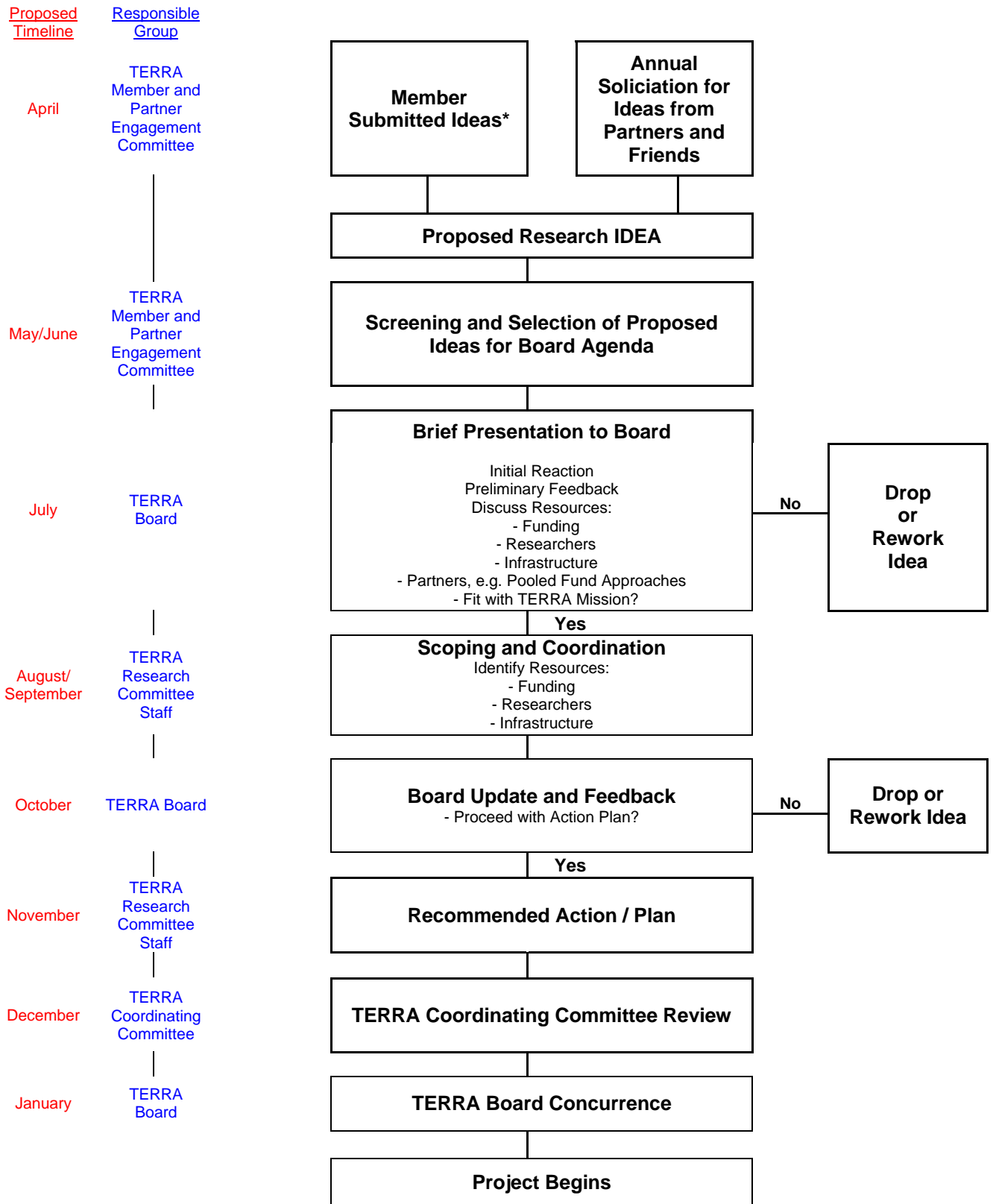
<b>Product Line</b>	<b>Description</b>
Mn/ROAD Research Facility	This 150 acre facility in a cold climate environment includes 6 miles of research capable roadways. These roadways include fifty-one different pavement structures featuring extensive automated measurement and data collection capabilities. 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. GENERAL TERRA PROJECT SELECTION PROCESS**

The TERRA organization has developed the General TERRA Project Selection Process to utilize when research project ideas are presented to the Board. 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 7.

# General TERRA Project Selection Process

December 2007



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

## VI. TERRA ACTION PLAN

### Member and Partner Engagement Committee

*Related Strategic Direction: Expanding TERRA's membership proactively*

#### **FY2008 Accomplishments:**

<b>Action</b>	<b>When</b>
1. Identified and recruited one new member; investigated potential use of SP&R funds	January 2008
2. Implemented mechanisms for engaging partners, such as a welcome packet, a 'value-added' publication, and access to Board meeting minutes	November 2007
3. Provided input to Coordinating Committee on FY2009 membership renewal options	April 2008
4. Develop an initial strategy for a coalition approach to pursuing federal appropriations	March 2008
5. Implemented General Screening Process annual solicitation for ideas from partners and friends	April 2007
6. Collected data and report on performance measures for Strategic Direction 1	June 2008

#### **FY2009 Action Plans:**

<b>Action</b>	<b>Target Start Date</b>	<b>Target Completion Date</b>	<b>Lead</b>
1. Identify and recruit new members and partners to fill gaps in membership, with a goal of one additional State DOT and one additional private sector member; provide data to the Coordinating Committee on the number of new members for budget implications; coordination with R&I Committee directions	July 2008	June 2009	MPE Committee
2. Determine procedures and mechanisms for state DOTs to use SP&R funds for joining TERRA and prepare educational information and examples	July 2008	December 2008	Jean Wallace, MPE Committee
3. Explore additional association and Canadian memberships, including national associations such as ARRA, MAAPT, and NAPA	July 2008	June 2009	Industry Members, MPE Committee
4. Engage partners, confirm contact names, define regular communications that give value, and follow up with personal contact by Board liaisons	July 2008	June 2009	MPE Committee, CTS
5. Develop a strategy for a coalition approach to pursuing federal reauthorization opportunities for TERRA, including a MnROAD tour for Congressman Oberstar and other officials	July 2008	June 2009	MPE Committee
6. Continue the General Screening Process annual solicitation for ideas from partners and friends	January 2009	May 2009	MPE Committee
7. Collect data and report on performance measures for the MPE Committee	March 2009	June 2009	CTS

## **Research and Implementation Committee**

*Related Strategic Directions: Defining and launching a bold and synergistic research program; Implementing research 'on the ground'; Setting up activities that enhance TERRA's role as a dynamic forum for research interchange*

### **FY2008 Accomplishments:**

<b>Action</b>	<b>When</b>
1. Developed construction plans for MnROAD rehabilitation and reconstruction of cells with stakeholder buy-in	November 2007
2. Reported and discussed MnROAD Construction Progress	ongoing
3. Updated the research plan for TERRA	April 2008
4. Reviewed research proposals as directed by the TERRA Board	ongoing
5. Pursued projects that meet the goals of SHRP II	ongoing
6. Collected data and report on performance measures for Strategic Direction 2	June 2008

### **FY2009 Action Plans:**

<b>Action</b>	<b>Target Start Date</b>	<b>Target Completion Date</b>	<b>Lead</b>
1. Pursue opportunities for new projects at MnROAD as cells are available.	July 2008	June 2009	R&I Committee
2. Report and discuss MnROAD Phase II progress, including findings and data analysis.	July 2008	June 2009	Maureen Jensen
3. Review research proposals as directed by the TERRA Board.	July 2008	June 2009	R&I Committee
4. Update the TERRA Research Plan, ensuring a broad focus beyond the MnROAD facility.	November 2008	April 2009	R&I Committee
5. Review the 'test section tracking' Web site and determine the best way for ensuring the long-term viability of the site. Add a link from the TERRA Web site to the 'test section tracking' Web site.	August 2008	December 2008	R&I Committee
6. Identify intellectual property challenges and potential next steps.	January 2009	March 2009	R&I Committee
7. Implement at least one project that puts TERRA research results into practice. Develop a project summary for this project, as well as a template for research implementation.	September 2008	May 2009	R&I Committee; CTS
8. Determine an existing project that can be used for branding TERRA as a source for quality research and work with the Marketing and Communications Committee to communicate project results.	January 2009	May 2009	R&I Committee; M&C Committee
9. Collect data and report on performance measures for the Research and Implementation Committee.	March 2009	June 2009	CTS

**Marketing and Communications Committee**

*Related Strategic Directions: Implementing research 'on the ground'; Setting up activities that enhance TERRA's role as a dynamic forum for research interchange*

**FY2008 Accomplishments:**

<b>Action</b>	<b>When</b>
1. Enhanced TERRA Web site	Ongoing
2. Distributed four issues of the TERRA electronic newsletter	July 2007, October 2007, January 2008, April 2008
3. Presented at three engineering/road-research conferences: Mid-Continent Transportation Research Symposium, ARM Convention, and TRB Annual Meeting	August 2007, December 2007, January 2008
4. Published the inaugural issue of the TERRA Annual Report	August 2007
5. Hosted the first Innovation Series event	November 2007
6. Developed PowerPoint presentation and met with FHWA leadership during TRB	January 2008
7. Published three research fact sheets	January 2008, March 2008, June 2008
8. Cosponsored the Minnesota Pavement Conference	February 2008
9. Created customized TERRA PowerPoints for each customer segment	February 2008
10. Collected data and reported on performance measures for Strategic Direction 3	June 2008
11. Updated the TERRA Marketing Plan	June 2008
12. Developed and published a tailored synopsis for a political audience	June 2008

## FY2009 Action Plans:

Action	Target Start Date	Target Completion Date	Lead
1. Plan the first TERRA Annual Event, including a board meeting, celebration BBQ, and Innovation Series event. Evaluate the results and determine if future annual events should be held.	March 2008	August 2008	MC & RI Committee
2. Hold 1 TERRA Innovation Series events, including press releases. Michigan should be key location. Engage the leadership of the host organization.	July 2008	June 2009	MC Committee; CTS
3. Maintain TERRA Web site.	July 2008	June 2009	CTS
4. Distribute quarterly TERRA electronic newsletter.	July 2008	June 2009	CTS
5. Co-exhibit with MN LRRB at national meetings.	July 2008	June 2009	MC Committee
6. Communicate with FHWA Leadership, (including a special meeting with Turner Fairbanks staff), U.S. Congressional staff, etc.	July 2008	June 2009	MC Committee
7. Develop customized materials as requested by Board members. Tailor PPT presentation to audience.	July 2008	June 2009	MPE & MC Committee
8. If available, post trainings/videos to the TERRA Web site.	July 2008	June 2009	MC & RI Committees
9. Coordinate communications with the Research and Implementation Committee.	July 2008	June 2009	MC & RI Committees
10. Cosponsor the Minnesota Pavement Conference and one additional engineering/road-related conference.	August 2008	February 2009	MC & Research Committees
11. Develop a plan for creating a dynamic forum for research interchange.	September 2008	January 2009	MC & RI Committees
12. Develop a communications plan, internal to TERRA members and staff, that identifies strategies, audiences, cost and timing. Coordinate with the TERRA Marketing Plan.	September 2008	October 2008	MC Committee
13. Develop two Research Fact Sheets.	November 2008	March 2009	CTS
14. Develop TERRA Annual Report.	August 2008	January 2009	CTS
15. Create a general article featuring TERRA that members can print in their publications. In addition, submit the article to the FHWA Reporter for publication.	February 2009	March 2009	CTS
16. Collect data and report on performance measures for the Marketing and Communications Committee.	March 2009	June 2009	CTS

## APPENDIX A: TERRA BOARD MEMBERS AS OF JULY 1, 2008

### TERRA BOARD MEMBERS

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**Julie Skallman (Co-chair),**

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

**Tim Worke (Co-chair),**

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

**Bernie Arseneau,**

Director, Policy, Safety and Strategic Initiatives, Minnesota Department of Transportation

**Leif Baklokk,**

Senior Principal Engineer, Norwegian Public Roads Administration

**Roberto Ballarini,**

Professor and Department Head, Department of Civil Engineering, University of Minnesota

**John Bukowski,**

Senior Pavement Engineer, Federal Highway Administration

**Tom Cackler,**

Associate Director for Construction Research and Advanced Technology, Center for Transportation Research and Education, Iowa State University

**Andrè Clover,**

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

**Fred Corrigan,**

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

**Julie Garbini,**

Executive Director, RMC Research and Education Foundation

**Jacob Hiller,**

Assistant Professor, Michigan Tech University

**Robert Johns,**

Director, Center for Transportation Studies, University of Minnesota

**Kevin Kosobud,**

Account Manager, SemMaterials

**Mark Maloney,**

Director of Public Works, City of Shoreview, Minnesota

**Abby McKenzie,**

Director, Office of Investment Management, Minnesota Department of Transportation

**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

**Robin Schroeder,**

Acting Minnesota Division Administrator, Federal Highway Department

**Keith Shannon,**

Director, Office of Materials, Minnesota Department of Transportation

**Mike Sheehan,**

County Highway Engineer, Olmsted County, Minnesota

## **TERRA BOARD MEMBERS, CON'T.**

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**Tom Sorel,**

Commissioner, Minnesota Department of Transportation

**Larry Sutter,**

Professor, Construction Materials; Director, Michigan Tech Transportation Institute; and  
Director, University Transportation Center for Materials in Sustainable Transportation  
Infrastructure, Michigan Tech University

**Gerald Voigt,**

President and CEO, American Concrete Pavement Association

**Dan Wegman,**

Technical Marketing, SemMaterials

**Rich Wolters,**

Executive Director, Minnesota Asphalt Pavement Association

**Matt Zeller,**

Executive Director, Concrete Paving Association of Minnesota

## **TERRA BOARD RESOURCE STAFF**

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**Mike Darter,**

Director, Pavement Research Institute, University of Minnesota

**Maureen Jensen,**

Manager, Road Research Section, Office of Materials, Minnesota Department of  
Transportation

**Stephanie Malinoff,**

Outreach and Education Coordinator, Center for Transportation Studies, University of  
Minnesota

**Laurie McGinnis,**

Associate Director, Center for Transportation Studies, University of Minnesota