



Intelligent Compaction

ICPF Meeting ND DOT Soils IC Demo

1:00 p.m. to 2:00 p.m. MDT

July 7, 2010

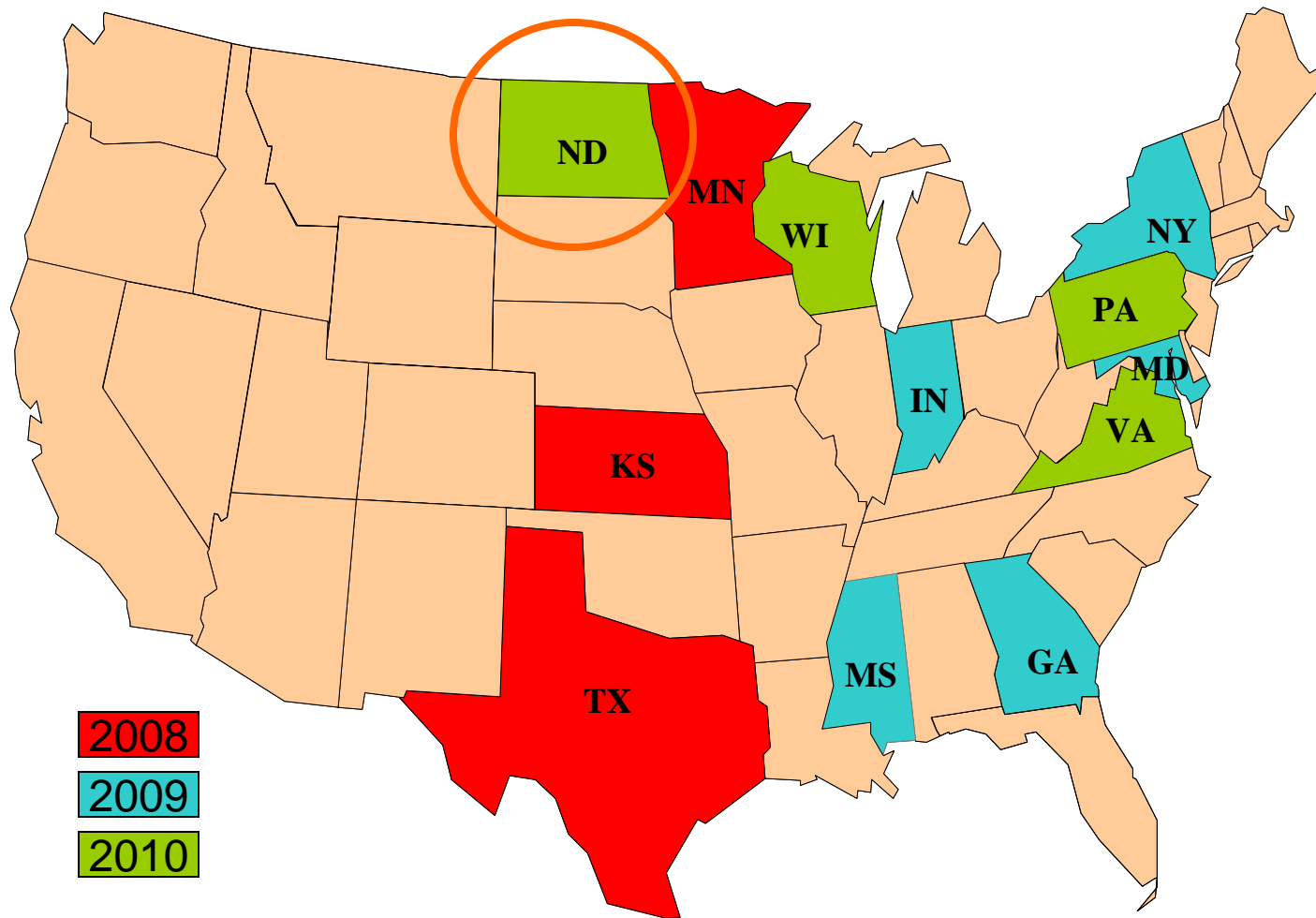
Purpose

- Review Schedule/Activities
- Coordinate Work/Responsibilities
- Review Experimental Plan



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FHWA/TPF Demo Projects



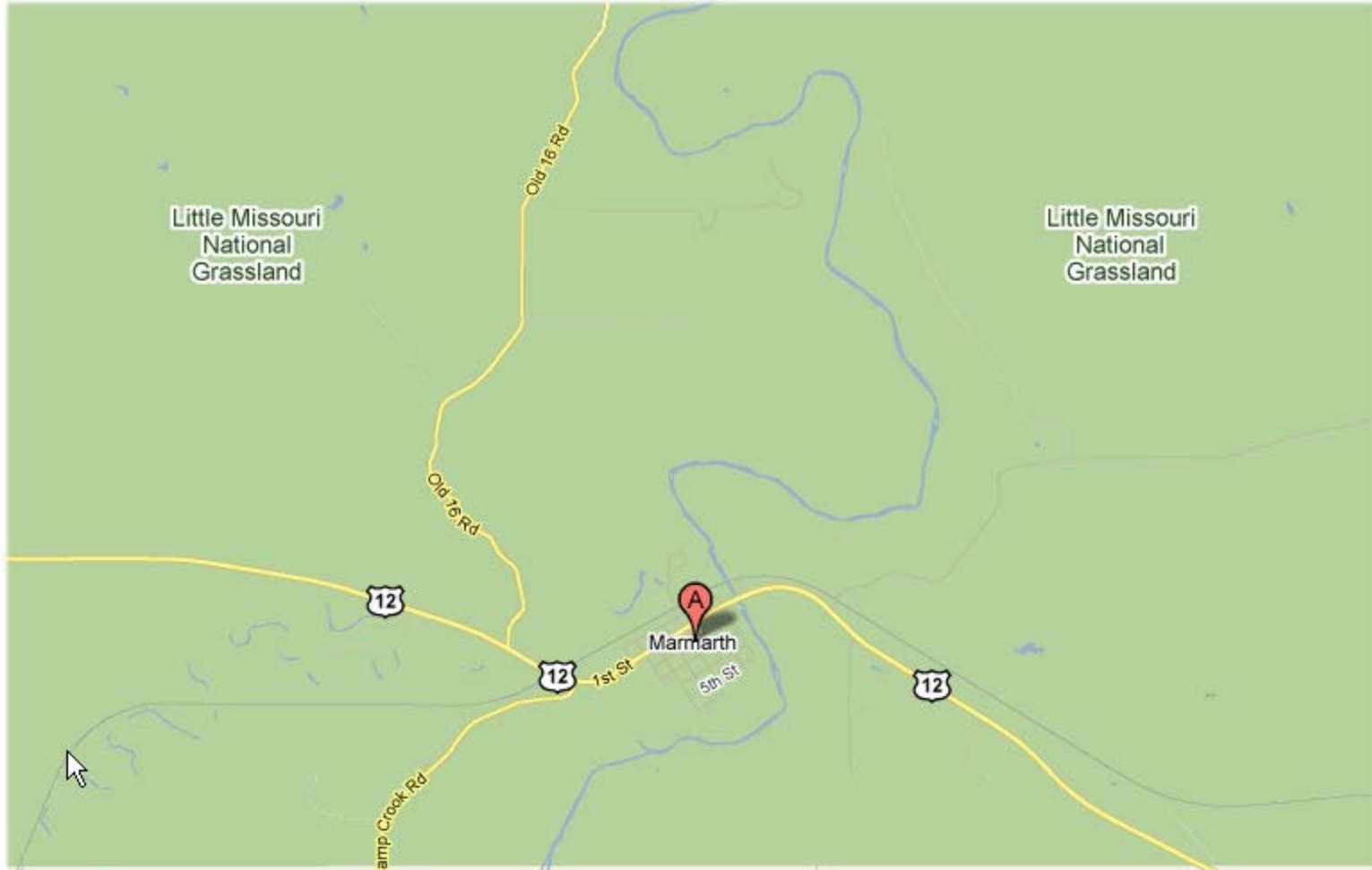
2008
2009
2010



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Test Site – Highway 12

Aug 9 – 12, 2010



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Update from Contractor/ND DOT

- Test Site
 - Locations of sections
 - Roller delivery/contact/storage (~Aug. 6)
 - ISU mobile lab stationing
- Provide
 - Site plan or design file
 - Soils information
 - 1 or 2 roller operators
 - Mobilization of IC rollers if necessary
 - Fuel for IC rollers



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Update from ND DOT

- DOT Personnel Support
 - ?
- Open House (?)
 - Thursday, Aug. 12, 2010: 9AM to Noon
 - Location
 - 2-hr indoor presentation & 1-hr field demonstration
 - Invitation to DOTs, Cities, Counties, Universities, AGC, and others



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Logistics

- Rollers and Tech Support
 - Shipment of IC Rollers
 - Storage and mobilization onsite
 - On-site Tech support personnels (including GPS)
- Research Team Travel Details



Caterpillar Single-Drum IC Roller

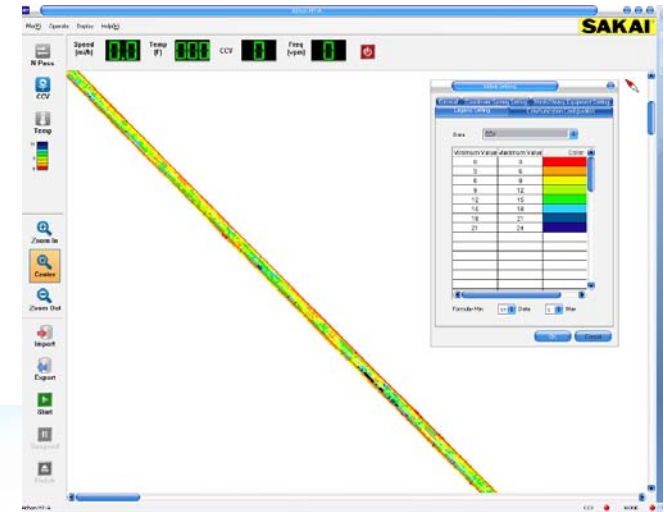


CAT CS56
with a padfoot shell



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Sakai Single-Drum IC Roller



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Sakai SV610TF
with a smooth drum kit

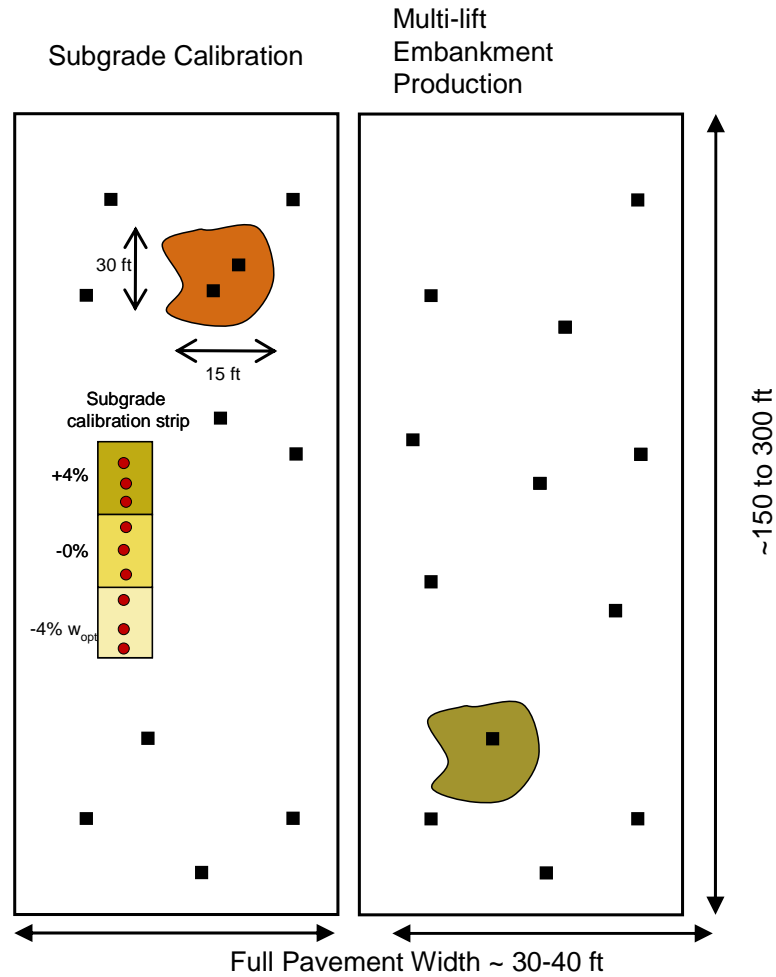
Experiment Plan

- GPS Base Station and Roller Setup
- IC Test Strip/In-Situ Tests
- IC Production Rolling/In-Situ Tests



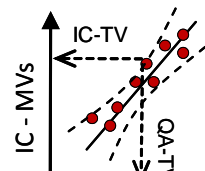
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Typical Test Plan



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- Calibration tests
- Production testing (QA)



Typical Test Settings

Date	TB	Strip	Machine	Amp (mm)	Spot Tests	Notes/Comments
08/17	Meet at US 69 field lab 6:30pm. ISU mobile lab move to project site.					
08/18	1	Calibration/ Mapping	Sakai (pad)	0.85, 1.9	DCP, LWD, NG, ST, PLT	30' X 150' test strip (see Note A and B).12 passes. Mapping with changes in machine operations.
08/19	2	Calibration/ Mapping	Cat (pad)	Static, 0.85, 1.85	DCP, LWD, NG, ST, PLT	30' X 150' test strip (see Note A and B).12 passes. Mapping with changes in machine operations.
08/20 – 08/22	3/4	Production/ Mapping	Sakai (pad)	0.85, 1.9	DCP, LWD, NG, ST, PLT	30 ft x up to 300 ft with multi-lift compaction (~ 3 to 6 lifts). ~ 8 passes per lift. Acceptance according to KDOT criteria. Mapping at different roller operations.
			Cat (pad)	Static, 0.85, 1.85	DCP, LWD, NG, ST, PLT	30 ft x up to 300 ft with multi-lift compaction (~ 3 to 6 lifts). ~ 8 passes per lift. Acceptance according to KDOT criteria. Mapping at different roller operations.
8/21	Open House (10:30AM – 2:30PM)					
8/22	AM: Wrap up, PM: ISU mobile lab departs.					



Notes:

- A. Moisture condition calibration test strip with 50' sections of -4%, 0%, and +4% of optimum moisture content. Moisture condition the production area per project QC requirements. Need water truck and mixer/reclaimer for moisture conditioning and soil mixing.
- B. Perform roller repeatability passes.

In-Situ Tests for Soils/SB



ISU Geotech Mobile Lab



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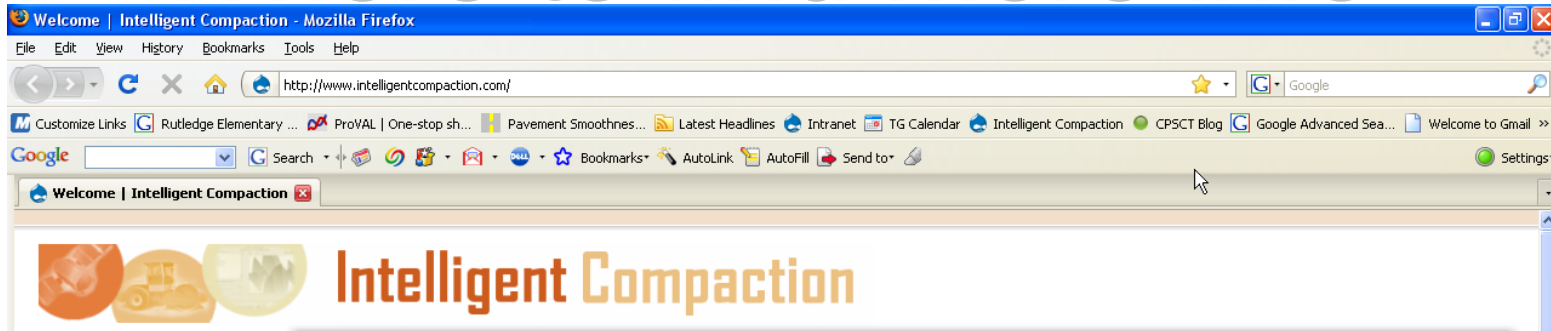
Wrap up

- Follow up action items
- Date/Time for the next meeting



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Where to find more info



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Field Demonstration

- **Mn/DOT Demo** - The first IC field demo was conducted in Willmar, Minnesota from June 2 to June 23, 2008. This demo included several HMA test sections - thanks to big help and additional funding from Mn/DOT. Missed the actions of the field demo? Now you can see them in YouTube!

You Find out more and view all video clips ...
Tube

- **TxDOT Demo** - The second IC field demo was conducted in Fort Worth, Texas from July 20 to 25, 2008. It covered cohesive soil, lime stabilized base, and granular/flex base. [Find out more and see all video clips here...](#)
- **KSDOT Demo** - The third IC field demo was conducted on US 69, Kansas from August 17 to 24, 2008. It covered cohesive soil. [Find out more...](#)

Extra! Extra! The Mn/DOT HMA IC demo was on the **front page** of the West Central Tribune! Read the online article "The future is this Moment" - [pdf'ed web version](#) or the [scanned print version](#).



Download an IC Flyer

[Download a flyer](#) to catch an overview on the IC demonstration projects now!

Done

Now: Cloudy, 69° F Tue: 75° F Wed: 76° F