CP Road Map Committee Agenda
January 11, 2011

Attending:
National CP Tech Center
Marty Fallon   Tom Cackler
Gary Frederick   Peter Taylor
Julie Garbini   Dale Harrington
Ron Guntert   Sabrina Shields-Cook
Steve Kosmatka   Sharon Prochnow
Sandra Larson    Rob Rasmussen (Transtec)
Rick Snieadowski   Sabrina Garber (Transtec)
John Staton
Jerry Voigt

FHWA Technical Monitor
Ahmad Ardani

I. **How the CP Road Map is Making a Difference (PowerPoint slides attached)**
The Road Map is not a mandate to funding agencies to direct their research but a philosophy of working
together to solve concrete pavement problems using pooled resources. The Road Map can achieve:

Prioritization:
- Strategic planning: providing funding agencies with a global view, identifying commonalities across the country.
- Programmatic thinking: The big issues that can’t be solved with just one project.
- Leverage funding: People/agencies working together to solve issues, not only a local problem

Implementation:
- Identifying who has expertise and pulling them together to do the work

Publicity
- What’s new, and what works. Value of successes dependent on publication of results, training.

II. **Examples of CP Road Map Impacts (PowerPoint attached)**
The Road Map started with 12 tracks, with Sustainability being added as Track 13. See PowerPoint slides for specific projects that have had an impact on the priority tracks. All research projects fit within the Road Map, i.e. 2.3.3 Concrete Overlays (track 2, subtrack 3 problem 3).

Comments:
Ahmad: At a recent ACPT meeting, training on COMPASS was identified as a need.
Sandra: Possible NHI course? SPR funds can be used for NHI courses making them easier for DOTs to fund. Involving TTCC pooled fund states would be a good way to implement software.
Ahmad: FHWA has a XRF and will soon have a XRD available for use on projects.
Jerry: Proportioning guide (element of track 1) that ACPA and PCA have been working on together will be finished shortly. ACPA has web applications including a gradation analyzer tool that will be available as a web application for contractor training.
Track 6: Innovative Concrete Pavement Joint Design, Materials and Construction
Joints project: Pooled fund project to investigate why joints have been deteriorating faster than desirable is ongoing. Project is looking at 3 issues: mechanical damage (wrong blade? operator error? time of sawing? Early traffic?) that shows up later in joints, also air void and water issue - poor air void system plus saturation reducing ability to resist freeze thaw cycles.

Track 13: Sustainability.
Everyone is talking about sustainability and the Center is working on how to dovetail all the projects. The Center is developing a manual on best practices that will be the core of a tech transfer initiative.

Track 7: High-speed Concrete Pavement Rehabilitation and Construction.
In addition to projects listed on the slide, NCHRP 10-79: Guidelines for Quality-Related Pay Adjustment Factors is an ongoing project within this track.

Surface Characteristics project has produced a number of products with the final report being written. There are guidelines for contractors on how to make concrete pavements quieter. This project has had input and cooperation from contractors, industry, DOTs, FHWA, and should result in specs and a guide for selecting the right texture for the right situation.

Comments
Rick: The information on quiet concrete needs to be tied to pavement selection. Misconceptions and old information need to be addressed and industry needs to promote the current information.
Tom: This research is resulting in specs and guidance documents that will have the current, up-to-date, correct information and procedures.

Turner Fairbanks Concrete Pavement Research Program (PowerPoint attached, Ahmad Ardani)
FHWA’s Pavement Program has Six Focus Areas. All research fits into one of these areas)
• Pavement Design and Analysis
• Materials and Construction Technology
• Pavement Management & Preservation
• Pavement Surface Characteristics
• Construction and Materials Quality Assurance
• Environmental Stewardship

FHWA has 3 Pavement Research Teams and the Exploratory Advanced Research program
• Pavement Design & Construction focusing on:
  ▪ Pavement Design, Management, Performance Modeling, MEPDG Implementation, QA/QC, PBS, NDT, Wireless, Forensic
• LTPP focusing on:
  ▪ 2500 Test Section Covers; GPS, Monitors performance of In-service Pavements; SPS, Examines Effectiveness of Preventive Maintenance, Rehabilitation techniques and Construction Practices; LTPP Database provides support for MEPDG Cal/Valid by State DOTS
• Pavement Materials focusing on:
  ▪ Innovative Solutions to Problems of national significance through In-house & Contract Research; State-of-the-art Equipment ; Forensic Investigations; Laboratories include: Concrete, Asphalt, Chemistry, and Aggregate
• Exploratory Advance Research (EAR) focusing on:
  ▪ Advance High-Risk/Payoff Research, Ultimate Goal: Fill the Gap between Basic & Applied Research; Accelerate Adoption of Innovative Technologies, Methods & Materials

Concrete Pavement Materials Research Strategic Plan
• Sustainable Concrete Pavement (In-line with track 13 of the CP Road Map)
  ▪ Longer-Lasting
  ▪ Achieving Balance between the Economic/Environment/Social Impact
III Task Order 3 Accomplishments (see PowerPoint)
There have been many accomplishments of the Road Map, however the Center has not been able to develop a comprehensive database; it is simply too massive, too expensive, too unwieldy. Instead a database has been developed from information collected on the priority tracks as each state’s research director is contacted. In addition, agencies such as ACPA, etc. are also contacted and their research is included tabulated. This collaborative effort is resulting in a database on JUST concrete pavements.

Comments:
Sandra: The CP Road Map continues to be a model for collaboration and the benchmark for how things should be done. The Map Briefs continue to be well done and valuable for disseminating information and training. The Road Map makes FHWA look smart for developing this program.

Recommendations by the group for E-News and the database:
- Need to make the distinction between research and technology development advancements.
- Add a column to the summary table of state’s research to show tech transfer products table.
- Add a tab to the table for industry work.
- It is a good idea to include Tollway projects when appropriate
- Add the graphs and make them website ready.
- Talk about the database in the E-News.

IV Task Order 4 (PowerPoint attached)
Task order 4 has just begun and will continue with the tasks from previous task orders. In addition, the Road Map will be reviewed/refreshed for alignment with priorities related to:
- Pavement preservation/rehabilitation
- Pavement foundations
- Research and tech transfer needs

Input from TRB, AASHTO and NCC (National Concrete Consortium) will be used in this update.

Comments:
Instead of just adding additional tracks, reevaluating and realigning will keep the tracks focused and succinct adding to the value of the Road Map by assuring it remains current. Members of the committee expressed concern whether there was sufficient funding and of time to get this task completed.

V. Future Directions
1. Looking forward from a state’s perspective, how can the CP Road Map further facilitate information exchange, efficiency, and effectiveness in addressing needed concrete pavement research and technology transfer?

John: The quantity and quality of what has been accomplished with the priority tracks and tech transfer is impressive. Build off of it – continue and take it to next level with electronic newsletters and briefs and manuals. Take it to the street – develop manuals and training based on them. Continue to seek out “mega” issues, national issues of which everyone should become aware. Many of the pooled fund projects are coming to an end. Budget constraints have made projects tougher to sell, increased scrutiny on value to state for funding, including pooled fund projects. A document is needed on the impact of the Road Map and other pooled fund projects that aren’t specific to one research issue.

Sandra: Showcase all the research involved in the C P Road Map in one of the next E-News.
Ahmad: Implementation on the research that has been presented is needed. COMPASS implementation is a need.

Jerry: ACPA has COMPASS training in this next year’s program.

Rick: The Road Map was meant to be a 10 year program; it has been active for 7-8 years now and it has been successful in that no one has walked away from it.

Gary: Training is critical and can’t be overdone. Webinars, NHI courses, whatever works. Doesn’t have to be a half day – some information could be disseminated through quick training involving a slide show with time for questions (i.e. dowel bar insertion).

Sandra: Map Briefs, E-news, database information are all even more helpful than anticipated. States need tangible products like these to promote their involvement. Road Map momentum is building; we should be able to attract more members.

John: Need to try and develop more interaction between NCC and CP Road Map. Road Map generates enthusiasm and could be used to keep NCC from getting stale.

Sandra: E-news, MAP Briefs can be used to show what states are getting when justification is needed. Multiple pooled fund projects gives states the leeway to follow their interests and needs.

Ron: In my opinion, the intent should be to move towards some standard specifications for the end product. For example, for gradation of the aggregates, Iowa has incentivized contractor to find “sweet spot” of gradation and get rewarded rather than follow a specific %. Surface Characteristics project shows that if you control the process, control the variability, you can get quietness from any of the textures. Variability is the key. Incentivize the contractor and ensure uniformity and success. Statistical spec with end product clearly defined will keep good contractors highly incentivized and give a new contractor a map of where to go.

2. Where should the CP Road Map’s pooled fund activities be focused to bring the greatest value to the states?

Sandra: Providing a total picture is key, both the research and the tech transfer. The case studies that show the ramifications of different decisions. There is value in pooled funds like this and the NC2 that are not one specific narrow area of study.

Jerry: Dale said we’ve been trying for a few years to shoehorn state’s needs into the Road Map instead of the other way around which is asking states what they need and looking for synergies. That is being done now through personal contact with the research directors at the DOTs and is valuable.

Rick: Keep the national perspective; states and agencies can get buried in seeing only their immediate issues and there is a need to have the bigger picture identified.

Julie: The trend analysis pie chart presented was helpful. When you see another state’s research focus changing, it spurs questions and interest for other states.

Gary: The CP Tech Center through the Road Map identifies the national issue and all the gaps involved in solving the problem. Each state’s specific issues are part of the big picture and each state has the opportunity to work together on the process to solve the issue. A synthesis program to look at complete problem areas is needed.

Sandra: This group could identify research that is needed and look to do the synthesis that is needed to get the project going.
Ahmad: There are so many problem statements in the Road Map; 4-6 high priority problem statements could be identified on a yearly basis and sent submitted to TRB concrete committees for their review and support and eventually submitted to NCHRP.

Sandra: AASHTO SCOR has asked all the AASHTO committees and subcommittees to identify top priorities and rank them.

Gary: The sheer number of problem statements from RAC makes for difficult evaluation, endorsements from the Road Map group might carry weight in the process. The executive committee could endorse several projects needing significant research funding and look for the best mechanism for funding, either NCHRP funding and/or pooled fund.

3. Do you support continuing the TPF beyond June 2011?

Gary: Yes it should continue, but a summary document showing the success, and in particular the advantages to states, is needed. When listing ongoing projects, it’s not clear which projects have originated or are being facilitated due to the Road Map’s involvement in identifying the need and in finding partners to fund the research. This involvement should be noted. Managing the CP Road Map is a pooled fund and that it is a pooled fund should receive more visibility. If more states were involved less money per state would be needed and that would be an easier “sell”.

Julie: Perhaps following the lead from TERRA, projects could show a CP Road Map-initiated and/or CP Road Map-facilitated project designation. The E-News header should credit the pooled fund states.

John: A short document (2 pager) summarizing all of the successes is needed.

Sandra: FHWA has done a good job leading the pooled fund, but we had hoped more states would participate. There is a lot of synergy between this project and the TTCC/NCC pooled fund; approaching the TTCC states would be a good place to start for increased participation. Iowa leads 15-18 pooled funds, including the TTCC, and would be willing to lead this one. Transferring the leadership can be done, and might make the connection for NCC states easier. States are finalizing commitments in March so timing is critical.

Tom: Sandra and Ahmad will meet with Cheryl Richter during TRB. Before we develop supportive documents we have to identify the lead agency and then work to get broader interest from the states.

John: Involvement in the pooled fund should be a discussion item at April’s NCC meeting. If material could be sent out in March, then in April it could be discussed with states that have flexibility; hopefully capture 4-5 more states.

Sandra: If we can meet a March 1 date for determining where the pooled fund wants to go, that would probably help participating states and future participating states to determine if they want to put money in beyond current fiscal year.

Tom: We need to do something at the beginning of February so that we have something out before states completely finalize their plans.

Tom: The present task order ends in June; however, there is some funding remaining that we may be able to budget for June through September 10, 2011.

Jerry: I think an extension and perhaps some of the additional funding should be considered for Task Order 4. Realigning the Road Map is a huge task and needs the time and funding to do it well.
4. **What are your ideas on how the OSG (Operating Support Group – the CP Tech Center) can be most effective within the funding provided: i.e., what activities, efforts, products, etc., do you think will bring the most value?**

Jerry: Although the database has changed somewhat in how it is being developed, it remains a valuable part of the Road Map.

Julie: The outreach and tech transfer communications.

Sandra: At national meetings, the Road Map is often used as a national model for agencies and organizations.

Gary: RAC managers want to hear not only about the actual Road Map, but also about methodologies that work. Road Map is the poster child for what is working. The OSG should be on agenda as often as possible to leverage interest in methodology and also in the Road Map. Get on RAC meeting for summer to showcase what has all been done.

John: One area of emphasis that is often overshadowed – how do you accept and pay for a pavement that is in the acceptance parameters to assure you are paying for quality. What are the pay factors, acceptance parameters, performance parameters. Process control parameters as opposed to acceptance standards for payment. We need emphasis on good solid acceptance processes.

5. **How can this pooled fund work with other existing efforts, i.e., other concrete pavement pooled funds and other related research?**

Ahmad: Suggested that TO5 (obligated, remaining funds) or extension of TO4 could be used for implementation activities.

Gary: States need a mechanism for training. Maybe this pooled fund and FHWA could work together for core funding for implementation. Even though money is tight, when experienced people leave, training for new people is not optional.

Tom: The whole issue of national training has been on the CP Tech Center’s radar. We are in the process of working with the NCC states to develop training for the participating states through the TTCC pooled fund. This idea is also on the RMC Foundation agenda for their March board meeting. Organizing industry, states and FHWA funding for a comprehensive training program would really be helpful.

Gary: A national repository of training for concrete pavement would be valuable. There may be states that would get involved in the pooled fund just to facilitate training. It’s often easier to get involved in a pooled fund project and have it pay for specific training and travel. The pooled fund contract needs to be flexible enough to allow for additional money to be added by a state for additional training.

Tom: Task Order contracts allow for the scope to change as needs develop. With the Road Map, Task Order 5 could be written to focus on implementation and training.

Ahmad: If committee wants it, the next scope of work could focus on that direction.

Gary: The database shows successful research but you need funds to facilitate that tech transfer. Build in the flexibility to have states add money for tech transfer, for webinars or hard copies of publications.
Closing remarks:
Marty Fallon: The group has made tremendous progress and it is exciting to see all the successes. Are the newsletters getting to a wide enough audience?

Julie: Excellent meeting, excellent progress. There is good momentum, let’s keep the funding up and continue this task.

Ahmad: The meeting gave a very good overview of all the successes of the program. Extension to Task Order 4 is possible (need to discuss with contract office) and adding a focus for implementation & training may be the way to go.

Unanimous agreement from the members to add implementation and training.

Meeting adjourned.