

RD&T Technology Facilitation Action Plan

The following provides a framework for items to be included in technology facilitation action plan. The items should be developed in coordination with appropriate CBU contact. This framework can then be used to finalize the action plan for delivery of research products.

PRODUCT *Describe product and its use*

Description of Product : Guidance for developing HMA and PCC paving construction performance-related specifications (PRS), including software (HMASpec 1.0 for HMA and PaveSpec 3.0 for PCC) to assist highway agencies during development and during use of the PRS.

For PCC paving, model PRS have been developed. The model PRS require construction acceptance testing for one or more of the following quality characteristics: concrete strength, slab thickness, concrete air content, surface smoothness, and consolidation of concrete under dowels. The test results can be used as inputs in PaveSpec 3.0 program to determine a performance-related pay adjustment (pay increase or decrease) to be applied to contractor’s unit bid price. The test results and PaveSpec 3.0 can also be used in a Pavement Management System to predict the future performance of the constructed pavement (i.e., when and how much faulting, cracking, and spalling will occur).

For HMA, model PRS have not been completed. However, the model HMA PRS when completed will be based on similar concepts as the model PCC paving PRS and probably will employ acceptance quality characteristics that include asphalt content, air voids, and surface smoothness. HMASpec 1.0 is currently available and undergoing beta testing. Any revised version of HMASpec will serve a function very much like that served by PaveSpec.

.....
Intended User: Primarily Federal, State and local highway agencies that currently have specifications and paving contractors interested in what it takes (in terms of materials and construction quality) to achieve performance.

.....
Distribution methods: Reports and CD-ROM’s will be distributed appropriately. The technology (theory, concepts, application, etc) will be presented in training courses and seminars.

.....
Alternative Formats:

.....
Delivery Date: Some reports have already been delivered. Other reports to be delivered upon printing. Some copies of CD’s have already been delivered. CD’s to be delivered to Federal, State and local highway agencies by August 31, 2000.

PROGRAM/PRODUCT SUPPORT *List contact information for subject matter experts or resource team*

CBU Contact(s): Ken Jacoby (HIAM-20), John D’Angelo (HIPT-10), Don Tuggle (HOA-3), Gary Crawford (HIPT-20), Suneel Vanikar (HIPT-20), Roger Larson (HIPT-20), Ben Tang (HIBT-10), Jim Sorenson (HIAM-20)

.....
Resource Center
Contact(s): Mike Smith (Southern)

.....
Division Office

Contact(s): Lee Gallivan (IN), Gregg Schiess (FL), Bob Callan (Reg 3), Kathy Petros (Reg 9)

.....
Other Contact(s): Sam Miller (MDDOT), Bernie McCarthy (AI), Dave Newcombe (NAPA), Bob Betsold (IPRF), Haleem Tahir (AASHTO Mat), Ken Kobetsky (AASHTO), Ed Harrigan (NCHRP), Freddie Simmons (FDOT), Larry Cole (ACPA), Charlie Prior (NSA), Farood Zandi (INDOT), Bob Templeton (NQT)

OUTREACH *Describe opportunities or planned external outreach*

Conference Presentations

(1) Presentation of national coordinated 5-year strategic plan for implementing PRS to AASHTO, FHWA, and industry groups, (2) TRB session on PRS, (3) Presentations at Regional Quality Assurance Conferences, (4) Presentations at NQT conferences, (5) Presentations at ACPA, NAA, AI, NAPA, AGC, etc. conferences and seminars.

.....
Publications (ITE, Public Roads, Transporter, etc.) (1) Several Transporter articles, (2) A Public Roads article that describes PRS, offers convincing logic for adopting PRS, and presents the national coordinated strategic plan for implementation, (3) a brochure that does the same, (4) FHWA R&D Report from staff study on PRS, and (5) articles in various publications.

.....
Other Outreach Activities: (1) PRS displays as part of PCC Pavements TRB booth, (2) Effort to make AASHTO QA specs performance-related, (3) Write new AASHTO recommended practice for developing, evaluating, and monitoring QA/PRS specifications, (4) Establish Technical assistance help desk, (5) Establish newsletter.

TRAINING *Describe formal training, briefings or workshop developed or needed*

Materials Needed: (1) Training Manual containing PRS history, definitions, concepts, sample specs, steps for developing PRS, guidelines for using PRS, information systems, and case studies; (2) Updated PaveSpec and HMA Spec software; (3) Audio/visuals aids.

.....
Instructor Requirements: Instructors with expertise covering HMA and PCC paving construction, pavement design, statistics, life-cycle cost analysis, and computer technology. Currently, there are few available potential instructors having sufficient knowledge of PRS. Train the trainers-type course is appropriate.

.....
Schedule of Training/

Workshop/Briefing: (1) Training on PRS can initially be incorporated into current NHI Quality Assurance course and into Materials Engineers course; (2) Later, a course for PRS only will need to be developed; (3) Highway agencies will need individual training and assistance in order to develop PRS.

.....
Intended Audience: (1) Administrators who need to understand benefits/drawbacks of PRS and why use PRS, (2) specification writers who will develop PRS, (3) construction engineers, inspectors, and technicians who will use PRS (both highway agency and contractor), (4) suppliers and producers who will be impacted by PRS, (5) highway agency personnel who will be using data generated by PRS.

.....
Alternative Formats:

PROGRAM INTEGRATION *Should include discussion of transfer of program activities to appropriate CBU*

CBU Contact: (1) FHWA technical advisory needed to provide guidance for highway agency use of PRS, (2) PRS needs to be incorporated in SEP 14, (3) Need to maintain list of resources available to help achieve implementation, (4) Develop list of FAQ's on PRS, along with answers, (5) Maintain feedback from states, (6) Concrete and asphalt trailer will provide shadow and pilot project support, (7) Establish and maintain technical assistance help desk, (8) Establish and maintain PRS web site.

.....
Research Contact – RC contact will (1) determine current practice of specifications, (2) identify key people at the agency and industry level, (3) promote use of PRS, identify agencies interested in adopting PRS, and work closely with those agencies to assure proper PRS development and application.

.....
Follow-up Activities – some products may create additional program more operational & specific design material.
integration activities.