

# PMPC In-Place Concrete Pavement STG Meeting Minutes

Date: September 6, 2018 (Thursday)

Time: 9:30 AM – 11:30 AM

Location: Translab New Geotech Building, 5900 Folsom Blvd, Sacramento, CA 95833

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**Caltrans Chair:** Dulce Rufino Feldman

**Industry Lead:** Bruce Carter

**Attendees:** Dulce Rufino Feldman, Bruce Carter, Deborah Yost, Deepak Maskey, Josh Moore for Brett Soldano, Charles Stuart, Clay Slocum, Nick Schaefer **Guests:** Marcella Wiebke, Larry Scofield, and Jim Mack

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## 1. Welcome and Introductions

- I. Self-introductions were made.

## 2. Implementation of New PMPC Charter and SOPs:

- I. Marcella went through the highlights of the Standard Operating Procedure (SOP), including the role of the subtask group, meeting schedule, development of scoping documents and working group membership.

## 3. Past Meeting Minutes:

- I. The minutes from the last meeting on June 12, 2018 were discussed. All items were part of the current agenda except the correlation between flexural strength obtained using CT 523 and ASTM C78. NCE wrote a report to Caltrans about this correlation. Bruce was disappointed that Industry did not have input on this study because the former Cast-In Place STG under Rock Products deferred to Caltrans to make a decision on threshold strengths when moving from CT 523 to ASTM C78 and Caltrans decided this was an internal design issue. Marcella will get the implementation plan with David Lim and share the final NCE report.

## 4. Update on Past Projects

The group discussed these past projects:

### I. **Evaluation of Concrete Pavement Represented by Low Flexural Strength Test**

- a. Deepak was the lead on this project.
- b. Specific language was developed for Section 40 Standard Specification and will be included in the new Revised Standard Specification once the 2018 Standard Specifications are published.
- c. Bruce had a comment on the need to include a provision for the use of the FAA-EB 34 when no data is available from a test strip, or when the specifications do not require a test strip.
- d. Deepak clarified that the FAA method will only be used for running projects or project which do not have test specimen, and FAA procedure will be available internally for use by the Districts but it will not be part of the specification. The proposed draft specification will be modified for use of alternative strength determination for in-placed concrete when the test strip is not required or waived.

### II. **Volumetric Mixers for Proportioning Rapid Strength Concrete (RSC)**

- a. Leo Mahserelli was the lead on this project.
- b. A Non-Standard Special Provision (NSSP) was developed for Jointed Plain Concrete Pavement (JPCP) when Rapid Strength Concrete (RSC) is placed with volumetric mixers.
- c. According to Marcella, a new scoping document needs to be developed to evaluate pilot projects when this new NSSP is used.
- d. A summary report was developed by the group. Dulce will distribute the report and NSSP to the CIP Members for review and comment.

### III. **LCB specification issue with the requirement for SCM's and Lithium Nitrate**

- a. Deepak was the lead on this issue and shared a draft specification that eliminated the requirement for LCB to comply with 90-1.02B(3).
- b. This change is targeted to begin showing up through RSS in January 2019.

#### IV. **Testing of RSC cement with admixtures used in concrete mix design**

- a. Deepak was the lead on this issue.
- b. Industry is preparing a document to propose testing on RSC cement without any admixtures. Caltrans currently requires these cements to be tested with admixtures used in the project concrete mix design.
- c. Deepak indicated that Caltrans discussed this matter internally and has decided not to change the specification.

#### 5. Scoping Document and Working Group Development for Approved Priority List

- I. Marcella emphasized that according to the SOP, there are only 4 members from Caltrans and 4 members from Industry in the working groups, which may include individuals outside the Sub-Task Group. She also said that the Executive Committee expects we develop 3 scoping documents for the 3 priorities that were approved. Dulce and Charles stated that we should work on one at a time because we have limited resources and want to be successful but Bruce believes that to expedite decisions, we need to work on multiple scoping documents. Ideally the scoping document will be small enough to allow fast completion with limited resources. Marcella said the Executive Committee will decide which scoping documents will get approved and they will be considering the resource need which is outlined in the scoping document.

The Work Product Groups shall be made up of a maximum of 4 CT staff members and 4 representatives from Industry. While the work product group membership is fixed as outline in the scoping document, the work product groups may bring in experts in the area being discussed (CT/Industry/Academia) who can provide input on a limited basis to assist the group with the issue at hand.

#### 6. Presentations on Best Practices for Concrete Pavement Smoothness and Long-Life Projects

- I. Dulce invited Larry Scofield and Jim Mack as they are national experts on pavement smoothness and long-life pavements, respectively.
  - a. **Developing Concrete Pavement Smoothness Specifications**
    - i. Presented by Larry Scofield.
    - ii. Larry started with the history of pavement smoothness. He said that Caltrans was the first to develop a smoothness specification in the late 50s when a profile index of 7 in/mi with the two-tenth blanking band was specified.
    - iii. Larry mentioned an on-going research by Steve Karamihas about consumer perception for the Federal Highway Administration (FHWA).
    - iv. He believes that the impact of smoothness on long-term performance is not understood because no research has linked what happens once the pavement is constructed (life zero) to long-term pavement performance.
    - v. Larry promoted the use of cumulative distribution to study smoothness.
    - vi. He presented the rate of roughness (IRI change over time) for different base types (lean concrete, aggregate and asphalt) indicating that IRI in concrete pavement with asphalt base deteriorates at a slower rate than in concrete pavement with lean concrete base.
  - b. **Long-Life Concrete Pavements**
    - i. Presented by Jim Mack.
    - ii. Jim believes that design catalogs are over-conservative.
    - iii. Atlanta had a major concrete pavement construction project where they built 1500 ft/night and opened after every night of construction.
    - iv. Agencies need to change the mind set to allow short-term traffic disruption for long-term pavement solutions.

#### 7. Open Discussion

- I. No new items were brought up other than the ones already discussed. Marcella noted that she meets with the PMPC Executive Committee on the first Thursday of every month.

## 8. New Action Items

- I. Marcella will get the implementation plan with David Lim and share the final NCE report on the correlation between CT 523 and ASTM C78.
- II. Dulce will distribute the documents from the past two projects on low flexural strength and volumetric for final approval and comments.
- III. Debra will send a draft scoping document on concrete pavement smoothness for review.
- IV. Charles/Dulce will develop draft scoping documents on long-life concrete pavement projects and early concrete pavement opening to traffic by September 28.
- V. Dulce/Bruce will give the names for the working groups by September 24.
- VI. Marcella to check with Tom Pyle if we will have separate smoothness scoping documents for concrete and asphalt.
- VII. Dulce will distribute the presentation files from Jim Mack and Larry Scofield to the group.

9. Next Meeting - December 6th, 10AM to noon.

10. Adjourn - The meeting adjourned at 1:00 PM.