

PMPC Materials and QA STG Meeting Minutes

Date: Tuesday – March 3, 2020

Time : 10:15 AM – 12:00 PM

Location: Conference Room 112

Phone Bridge: (866) 676-8836 – Code: 6275887

Co-Chair, Caltrans: Jacquelyn Wong

Co-Chair, Industry: Nathan Forrest

Attendees: Jacquelyn Wong (CT), Nathan Forrest (Ind), Samir Ead (CT), David Lim (CT), Robert Hightower (Ind), Bob Foley (Ind), Pete Conlin (Ind), Patrick Lo (CT), Deepak Maskey (CT), Brett Soldano (CT), Lance Li (CT-Notes Keeper)

Work Product Group	Caltrans Members (4, max)	Industry Members (4, max)
Use of 4x8 Cylinders for Compressive Strength Testing	1.*Patrick Lo (METS) 2.Tom Collins (OSC) 3.Larry McCrum (METS) 4.Samir Ead (HQ Const)	1.Tom Van Dam (NCE) 2. Greg Halsted (PCA) 3. Marc Robert (G3 Testing) 4. Katha Redmon (Granterock)
Unique Concrete Mix Design Naming System	1.*Brett Soldano (METS) 2. David Lim (Pavement) 3. Tom Collins (OSC) 4. Jeff Goronea (SP&I, as needed)	1. Nathan Forrest (CNCA) 2. Ken Sears (Boral) 3. Subhada Gadkar (National) 4. Michael Taylor (Private, formerly Graniterock)
Recycled Crushed Concrete Aggregate for use in Cast In-Place Concrete Pavement	1. Ron Jones (Pavement) 2. Samir Ead (HQ Const) 3. Lance Li (METS) 4. *Deepak Maskey (Pavement)	1. Don Vivant (Sully-Miller) 2. Mart Hansberger (Holliday Rock) 3. Katha Redmon (Graniterock) 4. Pete Conlin (Teichert)
Revise CT 523	1. *Jacquelyn Wong (METS) 2. Samir Ead (HQ Const) 3. David Lim (Pavement) 4. Larry McCrum (METS)	1. Nathan Forrest (CNCA) 2. Bruce Carter (SWCPA) 3. Marc Robert (G3 Testing) 4. Subhada Gadkar (National)

*Chair

Meeting Notes:

1. Introductions
2. Project Updates/Briefing by WG Chairs
 - a. Use of 4x8 Cylinders for Compressive Strength Testing (Patrick)**
 - The final report was submitted to subtask group by January 30th.
 - The WG has got the comments back for the one/two-page flyer regarding the nominal maximum aggregate sizes versus maximum aggregate sizes and will document the comments and send it out. The final report is the last deliverable item for this group.
 - On Caltrans side, we still doing the implementation efforts. Like get all the labs on board and get all the needed materials/equipment ready, etc.
 - All labs should use consistent cylinder size and should not switch the cylinder sizes during trial batch and QC/QA tests.
 - For any specification changes, targeting to post RSS around October of 2020.

b. Concrete Mix Design Naming System (Brett)

- SSRD sent out specification for comments and the first round of routing will be complete next week.
- There are about a dozen different kinds of software that ready mixing companies are using, but “Command QC” is the most widely used one.
- The WG is targeting to post the specification by June 30th and draft the implementation plan by October 30th, 2020.

c. Recycled Crushed Concrete Aggregate for use in Cast In-Place Concrete Pavement (Deepak)

- The WG had a meeting with Concrete Pavement Team last week to discuss any concerns they have regarding the use of RCA for concrete pavement. All comments have been documented and the WG will response to them with solutions.
- The potential specification will have two parts. One is the use of RCA for bottom lift of two-lift-pavement, and the other one is use of RCA for full depth of pavement.
- The specification will be drafted before March 31th, 2020. Additionally, the WG is working on drafting the Design Guidance for use of RCA in pavement, which is the next deliverable due by June 30th, 2020.

d. CT 523 Flexural Beam Test Method (Jackie)

- Stakeholders agreed that specification change was needed to address initial curing environment and was incorporated into April 2020 RSS.
- Issue of providing curing environment temperature range was resolved by WG (since compressive strength now required, that should dictate initial curing per ASTM C31).
- This CT will be posted and available on the website in May 2020 (target).

3. Other Project Updates

a. Review Bin Lists: STG-2019? and CTG-Feb 2020

- The next project that our subtask group is going to initiate is the support tasks associated with ongoing Type IL research.
- One/two work groups are going to finish their projects soon and the groups may have the resources to work on new projects.
- The previous bin list needs to be reranked and Nathan will send out a survey to everyone to reprioritize all the work products on the list and call for any potential new projects.

b. Scoping Document for Type IL to CTG

- It is ranked as No.1 on the approved Bin list and will officially start in this summer.

- The main objective of this project is to draft the specifications and implementation plan for adopting of type IL cement based on the OSU's ongoing research.
- Lance/Kirk is assembling the team and working on the full scoping document.

4. Open Discussion (Hot Topics)

a. Latest fly ash shortage notice and response (Jackie)

- Industry: The fly ash shortage may last until June and the market did not prepare for the shortage.
- The guidance of fly ash shortage for construction is already there and Caltrans will not make any exception for the SCM requirements in section 90.
- The team also discussed several potential alternative SCMs to fly ash, such as limestone filler, natural pozzolan, and other types of fly ash, etc. that are currently being looked at

b. April 2020 RSS – Pertinent Sec 40/51/90 changes

- 10 day opening-age requirement in specification was removed, and manufacturers anticipate hearing from contractors that they want the requirement on the days sooner, such as 7 days/5 days.
- Industry mentioned that the main change for some of the mixtures may be increasing of cementitious materials content, and the team discussed how it effects shrinkage, concrete temperature issues, ASR resistance and how far they can go regarding the cementitious content before they have noticeable issues meeting other criteria. Many mixes are at the low end of range 505lb/yd3 and may likely see increases as much as up to 675lb/yd3 which is the maximum allowed/
- Thermal cracking and mass concrete issues (DEF mitigation) might be the main issues associated with the increased cementitious content.

5. Action Items

Item YR-MO-#	Task	Owner	Update/Due Date
20-3-1	Nathan will send out a survey to everyone to reprioritize all the work products on the list and call for any potential new work products.	Nathan	Next week