

# Clipper® Executive Board

September 20, 2021

Agenda Item 4b

## Clipper® Implementation Update

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**Subject:** Update on key developments related to the implementation of the Current and Next-Generation Clipper system.

**Background:** **Current Implementation and Enhancement Projects**

MTC continues to coordinate with transit operators on Clipper equipment installation for several implementations, including:

- Caltrain ticket vending machines (TVM) Integration – Caltrain is working with VenTek to upgrade an additional 21 TVMs. Upgrades are planned to occur between August and October 2021. Clipper equipment continues to meet contractual performance requirements.

**Next-Generation Implementation and Enhancement Projects**

Included as Attachment A to this memorandum is a summary of recently completed activities related to delivering the Next-Generation Clipper program; upcoming activities and deliverables for MTC, Cubic Transportation Services, and the transit operators; and noteworthy items that the project team is managing.

Highlights include:

- Nearing approval of On-Site System Installation and Pilot Test plans,
- Nearing finalization of mobile app system integration and pilot test results,
- Factory acceptance testing of new devices,
- Wrap-up of account-based design workshops,
- Ongoing Final Design Review of the account-based system,
- Ongoing discussions and review of account-based business rules,
- Planned installation of new devices, scheduled to begin later this year.

Cubic submitted an updated Schedule Narrative and project registers on August 10, 2021; however, they did not submit an updated Project Schedule or associated detailed schedule reporting. MTC was willing to receive the August 2021 Schedule Submittal without the contractually required Project Schedule, with the understanding that future submittals will be complete as required by the Contract. The Project Schedule dated November 11, 2020, will continue to be the Approved Project Schedule, and MTC will expect Cubic to continue to meet the Guaranteed Completion Dates specified in the Contract.

Despite strategies to mitigate, we have experienced delays caused by COVID-driven engineering resource shortages and supply chain issues with chips and plastics leading to a 4-month delay in equipment installation. The current schedule for installation will start towards the end of this year with fleetwide installation complete by Fall 2022.

To help mitigate this delay, Cubic outlined a proposed approach in which C2 Account-based system components and functions would be tested and implemented in two stages: the first prior to achieving Revenue Ready and the second prior to starting customer transition. Cubic's proposed approach would help them achieve Revenue Ready by the October 2022 Guaranteed Completion Date while allowing additional time for testing and implementation of account-based features that cannot be launched until the planned start of customer transition. Cubic also provided Clipper staff with more information about this approach in meetings on August 13, 2021 and August 27, 2021. Clipper staff is open to the proposed approach, subject to reaching agreement with Cubic on the following topics:

- Detailed schedule for the testing approach and implementation stage
- System components and functions to be tested/implemented in each stage
- Detailed schedule for finalizing each stage's design decisions
- Contract Changes required to implement this approach, including adjustments to payment milestones


Clipper staff will continue to work with Cubic to refine the proposed approach. We have requested that this approach be documented in the testing and implementation plans to be submitted in Contract Submittal Packages 8 (System Development Plans) and 9 (Testing Plans).

Attachment A to this memo is the current C2 Program Project Schedule Summary.

**Issues:** None identified.

**Recommendation:** Information.

**Attachments:** Attachment A: Next Generation Clipper Program Executive Summary Status Report

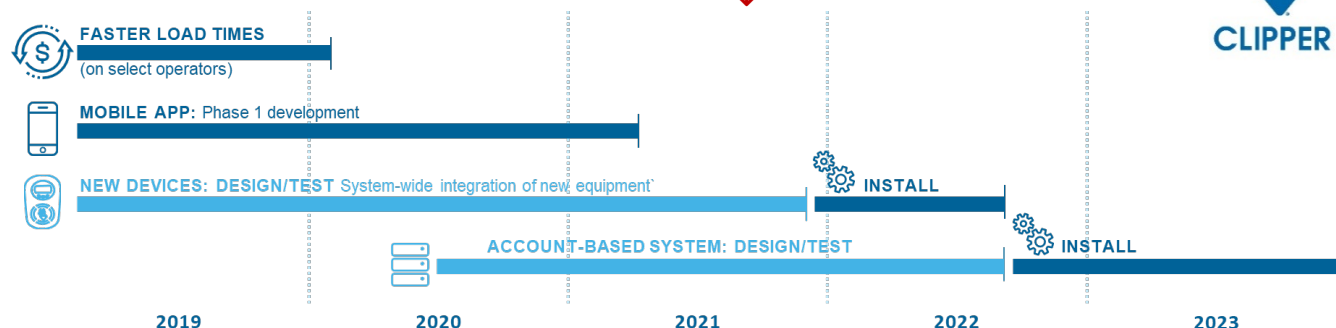


Carol Kuester



# Next-Generation Clipper Program

## Executive Summary Status Report – September 20, 2021



### Summary

- Mobile App System Integration Testing (SIT) and Pilot Test results nearing approval.
- New Devices Factory Acceptance Testing (FAT) complete; SIT starting soon; On-Site System Installation (OSIT) and Pilot Test plans nearing approval. Initial Pilot installations starting soon.
- Preliminary Design Review (PDR) complete; Final Design Review (FDR) ongoing.
- Technical and planning discussions continue with operators on various topics, including CAD/AVL integration, paratransit integration, BART and Muni equipment, and new device installation.

### Recently Completed Activities

	MTC/IBI	Cubic	Operators	Date
• Mobile App:				
o SIT/Pilot test results resubmittal		•		Sep 1
o SIT/Pilot Test results comments to Cubic	•			Sep 13
• New Devices:				
o OSIT/Pilot Test plan comments to Cubic	•		•	Aug 23
o Manuals/Training Materials submitted		•		Aug 23
o Manuals/Training Materials review sessions	•	•	•	Aug 31
o FAT execution/witnessing (Onboard Validator)	•	•	•	Sep 8
o OSIT/Pilot Test plans resubmittal		•		Sep 8
• Account-Based System Business Rules:				
o FDR submittal by Cubic		•		Aug 27
o PDR comment response resubmittal by Cubic		•		Sep 2
o PDR comment approval by MTC/Operators	•		•	Sep 8
• Account-Based System design documentation (excluding Business Rules):				
o FDR document review sessions with Cubic	•	•	•	Aug 18, 20
o FDR comments from MTC/operators	•		•	Week of Sep 13 (planned)

## Upcoming Activities/Deliverables

	MTC/IBI	Cubic	Operators	Date
• Mobile App:				
○ SIT/Pilot test results approval	●			Sep
• New Devices:				
○ OSIT/Pilot Test plans approval	●		●	Sep
○ SIT execution/witnessing	●	●	●	Oct–Dec
○ Installation at Pilot Test locations	●	●	●	Oct–Jan
○ Pilot Testing	●	●	●	Oct–Mar
• Account-Based System Business Rules:				
○ FDR document review sessions	●	●	●	Sep
○ FDR comments from MTC/operators	●		●	Oct
○ FDR resubmittal by Cubic		●		Nov
• Account-Based System design documentation (excluding Business Rules):				
○ FDR comment review sessions	●	●	●	Sep
○ FDR resubmittal by Cubic		●		Oct
○ FDR document review sessions	●	●	●	Oct
○ FDR comments from MTC/operators	●		●	Oct
○ FDR approval	●		●	Oct
• Clipper Executive Board Meeting	●		●	Oct 18