



## Agenda Item 3a

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TO: Clipper® Executive Board

DATE: September 7, 2018

FR: Clipper® Executive Director

RE: Clipper® Contract: Next Generation Clipper® (C2) Regional Fare Payment System Integrator:  
Cubic Transportation Systems, Inc. (\$461,000,000)

This memorandum asks the Board to recommend approval by MTC to enter into a contract with Cubic Transportation Systems, Inc. (Cubic) to act as System Integrator (C2 SI) for the Next Generation Clipper (C2) regional fare payment system (the Contract). The Contract includes the design, development and testing, installation and transition, and operations and maintenance (O&M) of the C2 system. The maximum payment under the Contract is \$165,000,000 for capital and \$222,000,000 for the ten-year O&M term, for a total of \$387,000,000. A 15% contingency and estimated sales tax are also requested, for a total requested authorization of \$461,000,000. The Request for Proposal (RFP) also provides for two 5-year options to extend O&M and an Open Payment Deployment Option, evaluated but not included in the total contract price.

### Background

The original 1999 Clipper contract (C1) was assigned to Cubic in 2009, when Cubic purchased the Clipper-related assets of ERG, Ltd. The C1 system successfully processes over 825,000 transactions daily and is available to all transit customers in the Bay Area. However, the 20-year old C1 system has reached the end of its serviceable life and is not able to easily accommodate advances in technology that would significantly enhance the user experience for customers and Clipper agencies. With the expiration of the C1 contract approaching in 2019, MTC and the Clipper agencies began working in 2015 to develop a next generation electronic fare collection system concept and procurement. As Clipper contracting agency pursuant to the Clipper Memorandum of Understanding (MOU) entered into in February 2016, MTC assembled a C2 SI procurement team, including MTC staff, legal counsel, and management, staff from Clipper agencies, outside legal counsel (Thompson Coburn LLP), and technical and financial advisors (IBI Group, KPMG, and Invoke Technologies). This Board directed MTC staff to move as quickly as possible, while making every effort to promote full and open competition.

### Description of Project

The C2 system will be based on a proven, high-volume, multi-operator fare collection system. It will support all existing fare policies; will accommodate innovative pricing strategies; and will provide an accurate, reliable, consistent and fast customer experience when purchasing fare products, paying fares, managing accounts, and receiving customer service. In addition to replacing obsolescent systems and equipment, C2 will introduce new features to the Clipper Program that address the most common customer and user issues with C1, such as:

- A Clipper mobile app to be implemented on an accelerated schedule that will allow customers to use smart phones to reload their account and function as a Clipper card;
- An account-based system that will allow customers to reload their Clipper accounts online, at vending machines, at retailers, and through mobile devices and use the value immediately, eliminating the current 1-2 day delay and the primary source of current customer frustration;
- A customer transition approach that is designed to ensure customer convenience and minimize disruption;
- The ability to integrate with other transportation providers such as bikeshare and paratransit providers, addressing Bay Area needs for better mobility solutions;

- Improved tools and systems to manage employer and other institutional programs and offer new types of promotions; and
- Better flexibility for the region's Clipper agencies to implement and adopt fare policies to meet the changing needs of transit riders.

The C2 SI contract represents the largest and most significant investment in the overall C2 program. However, staffing costs as well as other smaller contracts providing customer service, a payment gateway, and fare media are also necessary to fully deliver C2 for transit riders in the Bay Area. Staff will return to the Board for approval of the project budgets for these expenditures, as needed.

### **Request for Expressions of Interest, Industry Review Draft RFP and Final RFP**

The recommendation before this Board is the result of two years of outreach and interaction with the smart card industry. On April 4, 2016, MTC released a Request for Expressions of Interest (RFEI) for the C2 SI procurement to solicit feedback on the technical, commercial, and financial aspects of C2 and notify vendors of the coming procurement. Attachment A provides details on the RFEI. An industry review draft C2 SI RFP was issued on January 27, 2017 for industry and public comment. Attachment B provides detailed information on the industry review draft C2 SI RFP. After a thorough review of the feedback, the procurement team developed and released the final C2 SI RFP on September 13, 2017. The procurement team made every effort in preparing the final RFP to address the most common customer concerns and to expand competition in response to the industry feedback.

In response to the RFP, MTC received one proposal from Cubic by the proposal due date of March 5, 2018. A detailed description of the evaluation process is included in Attachment C. Following receipt of a Best and Final Offer (BAFO) on August 6, 2018, the evaluation panel determined that a second BAFO would provide important clarifications to the vendor response, and issued a Second Request for BAFO on August 24, 2018. On August 29, 2018, the evaluation panel assigned final scores to the second BAFO, as detailed in Attachment C. Based on its evaluation, the panel recommended Cubic as C2 SI based on the evaluation criteria stated in the RFP.

Cubic has proven experience with electronic fare collection and accounting and account management systems, here and in Chicago, London, Sydney, and Vancouver. Cubic offers a strong technical proposal, a capable and experienced project management team, and a price proposal found by the evaluators to be fair and reasonable. New development work being performed by Cubic for New York and Boston will directly benefit C2.

Prior to receiving proposals, the C2 system integrator technical advisor, IBI Group, prepared an independent engineer's estimate for both capital and operating costs. The methodology for the engineer's estimate included researching price data from recent similarly scoped system integrator procurements, analyzing information from IBI Group's cost library, and utilizing their professional judgement. IBI Group's engineer's estimate for capital costs was \$193,000,000, which is 17% higher than Cubic's price of \$165,000,000. The engineer's estimate for annual operating costs was \$20,300,000 compared to Cubic's average annual operating price of \$22,000,000 (9% higher than IBI Group's engineer's estimate). Furthermore, the base capital price from Cubic plus the estimated capital cost for other C2 procurements is approximately \$168,000,000 which compares favorably with the total cost of C1 capital investments to date of approximately \$180,000,000.

Cubic is neither a small business nor a disadvantaged business enterprise. Attachment D includes a summary of Cubic's small business and disadvantaged business enterprise participation. This project qualifies as a Categorical Exclusion under CEQA and a Categorical Exclusion under NEPA, with no foreseeable potential to cause either a direct or indirect physical change in the environment. A "single proposer" justification, as required by the Federal Transit Administration (FTA), documenting efforts to promote fair and open competition and a fair and reasonable price, has been prepared and reviewed for sufficiency by outside legal counsel (see Attachment E).

### Contract Funding

The estimated funding needed to award the C2 SI contract is \$194 million for capital expenses, including \$165,000,000 in the contract, approximately \$5,500,000 for estimated sales tax and a 15% contingency of approximately \$23,500,000. The summary table below outlines the funding sources committed or projected to be available for the \$194,000,000 capital cost of the C2 SI contract. (Operating costs are subject to annual appropriations, and are not included in this funding plan.)

### C2 Funding (\$millions)

<b>Contract Value</b>	<b>194</b>	
<b>Committed Funds</b>	<b>Amount</b>	<b>Notes</b>
Prior Year Funds	25	Various sources awarded/allocated prior to FY18 budget year
OBAG2	34	STP/CMAQ, Resolution No. 4202, Revised
FTA Funds	20	TCP Programming, Resolution Nos. 4212, Revised (FY16) and 4272, Revised (FY20)
RM2	13	Resolution No. 3801, Revised; Project 18
Toll Funds	10	SB1-Local Partnership Program Exchange - MTC approval expected in Fall 2018
Prop 1B/LCTOP	4	State Funds, Resolution Nos. 3880 and 4130
OBAG1	1	STP/CMAQ, Resolution No. 4035, Revised
<i>Subtotal</i>	<i>106</i>	
<b>Projected Funds</b>	<b>Amount</b>	<b>Notes</b>
FTA/FHWA	88	Projected TCP Programming for Clipper included in LONP request to FTA; available in annual \$15.4M installments FY21-FY26
<b>Grand Total</b>	<b>194</b>	

In summary, \$106 million is available from sources already programmed to the project. An additional \$88 million can be available from future FTA/FHWA funds through 2026, subject to federal appropriation and future Commission action. In proposing to award the contract this month, staff also will request that the Commission commit these future federal funds to the C2 SI contract, in advance of developing the Transit Capital Priorities program for the years after 2020. Regional Measure 3 (RM3) or SB1 funds will be used if available for the C2 SI contract, but are not presently included among the funds being proposed to certify the contract. RM3 includes a specific commitment for \$50 million in capital funds for C2. Additional details about these funding sources appear in Attachment 1 to the Request for Board Approval.

The contract budget is currently funded through both existing and expected fund sources, but due to the size of the contract, MTC may require a financing plan to address cash flow challenges in the future. Staff would return to the Board if this is necessary.

### Recommendation

Staff recommends the Executive Board approve and recommend approval by MTC of award of a Contract to Cubic Transportation Systems, Inc. (Cubic) to act as System Integrator (C2 SI) for the Next Generation Clipper (C2) regional fare payment system, with maximum capital and operating budgets of \$165,000,000 and \$222,000,000, respectively, plus a 15% contingency and estimated sales tax, for a total authorization of \$461,000,000, subject to MTC approval of the funding plan for the capital portion of the Contract, as described above and in Attachment 1 to the Request for Board Action.

Carol Kuester

## Attachment A

### Request for Expressions of Interest

On April 4, 2016, MTC released a Request for Expression of Interest (RFEI) for the Next Generation Clipper® (C2) Regional Transit Fare Payment System Integrator (SI), Customer Service Center, and other potential program areas. The RFEI was intended to solicit feedback from the industry on the technical, commercial, financial, and procurement aspects of C2 and to notify vendors of the coming procurement. The purpose of the RFEI was to identify firms interested in participating in a future C2 procurement, to refine MTC's delivery strategy through consultation with the industry, and to discover ways to maximize competition among prospective system integrator vendors. Participating in the RFEI was not required for participation in any future procurements.

MTC received Expressions of Interest from 18 firms. Nine firms indicated interest as a C2 System Integrator, two firms indicated interest as a C2 Customer Service Center provider, and the remaining firms offered key professional services within the transit fare payment industry. MTC, technical advisors, and transit agency staff met with all eighteen firms to gather additional feedback and comment to help inform the procurement process. Key themes identified through the RFEI process relating to the C2 SI RFP included:

- **C1 Operations and C2 Transition:** The current Clipper contract includes provisions to hand the C1 system over to a new contractor at the end of the C1 contract. Prospective SI proposers expressed concern over this approach (technical and competitive), and were in agreement about the difficulty for any vendor other than the current C1 contractor to maintain the C1 system, software, operations and maintenance during the transition. In response, MTC began negotiations with the C1 contractor to continue C1 operations beyond the termination of the current contract that would address this concern.
- **C2 Implementation Schedule:** The RFEI noted that the current C1 contract would terminate in November, 2019 and sought to have C2 operational by then. Based on industry comment that, based on their understanding of the project and experience elsewhere, this period was too short, the C2 implementation schedule was extended in the final RFP. Additionally, an anticipated Request for Qualifications step that would have pre-qualified vendors, which several vendors pointed out might inadvertently restrict competition, was eliminated from the procurement process.
- **Device Selection:** The RFEI initially proposed that the region would establish a pool of third party validator devices from multiple vendors that the C2 SI would have to work with. Industry responses expressed concern over technical risk associated with the approach and potential additional costs that would be incurred to integrate those devices. Multiple responses proposed as an alternative that the C2 SI maintain responsibility for providing all devices, but be required to be able to source components from multiple suppliers. The RFP requirements were subsequently developed to reflect this approach.
- **Account Based Communication:** The RFEI requested industry responses in potential telecommunications upgrades that could enhance or improve current system operations. Industry response indicated that an upgrade to an account-based system would have near-real-time communications, which was subsequently included in RFP requirements.

- **Fare Policy and Business Rules:** The desirability of simplifying fare policies and Business Rules was stressed by non-incumbent vendors. No specific changes were made in response to these comments as establishment of regional fare policy is beyond the scope of this procurement, but from a competitive perspective the current C1 system is not capable of processing account-based transactions, so the current C1 contractor would likely have to code all business rules like any other vendor to work with the new account-based system or capabilities proposed.

**Table 1: C2 RFEI Respondents and Areas of Interest**

<b>Firm</b>	<b>System Integrator</b>	<b>Customer Service Center</b>	<b>Other</b>
Accenture	X		
Cardtek	X	X	
Cubic Transportation Systems	X	X	
FAMOCO			X
Faneuil		X	
FEIG Electronics			X
First Data Government Solutions			X
Genfare			X
Infineon Technologies			X
INIT Innovations in Transportation	X		
Moovel			X
NEC Corporation	X	X	
Scheidt & Bachmann	X	X	
Thales Transport and Security	X		
Vertiba			X
Vix Technology	X	X	
WSP   Parsons Brinckerhoff		X	
Xerox Transportation Solutions	X	X	

## Attachment B

### Industry Review Draft

After careful consideration of the RFEI feedback, the procurement team determined that the process that would most support development of a request for proposal that multiple vendors could respond to was to prepare and issue a draft version of the C2 SI RFP for industry review and comment, followed by a formal RFP, rather than a two-step RFQ/RFP process. MTC released a draft Next Generation Clipper® (C2) System Integrator (SI) RFP for Industry Review on January 27, 2017. MTC also invited to members of the public to comment, from February 27 to April 3, 2017. MTC prepared a summary of main characteristics of the draft RFP for Industry Review in English, Spanish, Chinese and Vietnamese and conducted an online survey to provide input on the draft RFP. MTC and Clipper agency staff created a website for interested vendors and other parties to provide feedback on the components of the draft RFP for Industry Review. While interested parties were asked to provide feedback on all areas of the draft RFP for Industry Review, vendors were asked to focus on the following, in particular:

- Changes that MTC might consider to reduce project cost, time, or risk while still providing a highly functional, best-in-class system that meets or exceeds the program goals described in the document;
- The proposed design process, which would involve MTC and the transit agencies finalizing the system design collaboratively with the C2 SI; and
- The draft requirement that the C2 SI assume the operations and maintenance (O&M) of the current Clipper (C1) system.

MTC staff also sought guidance from the Clipper Executive Board in the following areas:

- Minimum Qualifications and Evaluation Criteria (Board instruction was to make the MQs as open as possible, to generate the maximum feasible competition and to scrutinize evaluation criteria for bias towards the incumbent);
- Pricing Structures (a proposed firm fixed incentive price structure intended to share risk with the vendor in work components with multiple variables);
- Hardware Purchase, Ownership, and Maintenance (Clipper agencies wished to be able to purchase C2 equipment directly from the selected vendor); and
- O&M Payment Incentives and Disincentives (service level agreements resulting in payment adjustments).

Interest in the Industry Review Draft RFP Information Webinar, held on March 1, 2017, was high, with 53 individuals representing 24 firms registering for the webinar. Registered firms included traditional system integrators, technology companies, payment industry firms, web and mobile application developers, fare collection equipment and card manufacturers, technology and management consulting firms, and information security firms. Attendance at the webinar also included staff from MTC, San Francisco Municipal Transportation Agency, and Golden Gate Transit, as well as various consultants.

The following 18 firms submitted responses to the Industry Review Draft RFP:

1. Accenture;
2. Acumen Building Enterprise, Inc.;
3. Conduent Transport Solutions, Inc.;

4. Cubic Transportation Systems, Inc.;
5. Faneuil, Inc.;
6. Genfare, a division of SPX Corporation;
7. Google;
8. InComm;
9. Infineon Technologies;
10. Informatix, Inc.;
11. INIT Innovations in Transportation, Inc.;
12. Mastercard;
13. NEC Corporation;
14. NTT Data;
15. Passport Parking, Inc.;
16. Scheidt & Bachmann;
17. Thales; and
18. TransSight, LLC.

The amount of information received from industry was extensive and ranged from extremely comprehensive feedback to focused areas of concentration, and general questions or concerns on the draft RFP, Scope of Work, and Contract. Overall, industry feedback focused on the following key themes:

- Inclusion of the required assumption of C1 O&M by the C2 SI may limit proposals;
- Allocation of risk in the financial and performance security requirements in the RFP was imbalanced in favor of MTC, which could drive up price;
- Further clarification of the proposed variable pricing strategy, payment provisions, and price adjustments for attainment or nonattainment of service level agreements was requested; and
- Extension of the proposed project schedule was recommended to allow for refinement of design, implementation, installation, and transition of the C2 system.

Other industry feedback focused on the scope of work and its relationship to pricing, the evaluation process, intellectual property rights, timing of open payment acceptance, equipment purchase, ownership, and maintenance, and retail options.

Based on the feedback, MTC and Clipper agency staff updated plans for multiple aspects of the C2 SI RFP in the final RFP, including:

- Removing the requirement for the C2 SI to assume C1 O&M;
- Limiting vendors' risks by modification of risk of loss provisions and financial guaranties;
- Clarifying the overall RFP pricing and payment approach; and
- Extending the proposed C2 SI procurement schedule.

In addition to industry feedback, more than 100 members of the public submitted comments. The most commented-on topics addressed fare policy or program features such as real-time add-value transactions, integration with other programs (such as tolls or bike share), and other fare payment options (like using mobile phones). Many comments were already reflected in new program features in the draft RFP for Industry Review either through specific requirements or requirements for flexible development to accommodate changing needs.

## Attachment C

### C2 System Integration RFP and Procurement

The final C2 SI RFP was posted on the [MTC website](#) on September 13, 2017, and notifications of issuance were sent to vendors in the MTC contractor database. The final RFP made key changes to the industry review draft in order to expand potential competition. The draft requirement that the C2 SI take over C1 operations after contract award was abandoned, SLAs were refined or eliminated, and contract terms were clarified or revised.

To assist potential proposers with understanding the current Clipper® system, site visits took place at selected operator sites throughout the region on October 18, 19 and 20, 2017, including BART's Test Lab, Caltrain San Francisco Station, VTA Mountain View light rail station, BART/Muni Embarcadero Station, the San Francisco Ferry Building, and bus yards at SFMTA, AC Transit, and VTA. A proposers' conference was held at the Bay Area Metro Center on October 20, 2017. The proposers' conference was attended by approximately 23 vendors, as well as the members of the procurement team. Attendees were provided time to network at the conclusion of the proposers' conference.

Approximately 200 requests for clarification or modification of RFP provisions were received from vendors. In order for the procurement team to respond thoughtfully to the requests, the due date for proposals was extended to March 5, 2018, and the RFP was revised by five addenda prior to proposal submission, clarifying RFP provisions, revising system requirements and performance metrics to address concerns raised by vendors, and modifying the risk allocation and financial guaranty provisions in a manner intended to reduce vendor risk that would have been passed along in the price proposals.

One proposal from the Cubic Transportation Systems, Inc. (Cubic) was received by the March 5 deadline.

The proposal was evaluated by a panel of seven members made up of staff from AC Transit, BART, MTC, SFMTA, and VTA, supported by technical, financial and legal advisors consisting of Clipper agency staff and outside consultants and the Thompson Coburn law firm.

The proposal was evaluated according to the following detailed criteria:

#### **Proposer Qualifications and Experience– Part 1 of the Proposal (20%)**

- i. Depth and relevance of experience of Proposer and Key Personnel;
- ii. Demonstrated capability of proposed team/firm;
- iii. Past performance of team/firm based on references;
- iv. Proposed team structure and allocation of personnel resources, based on Project organization and staffing plan, specifically for Key Personnel;
- v. Thoroughness and adequacy of mitigation plan for potential conflicts of interest, if applicable; and
- vi. Site visits.



## **Technical Proposal – Part 2 of the Proposal (50%)**

- i. Summary of Proposal submitted per Section VII, 2.1, Form of Proposal, Technical Proposal of the RFP
  - a) Proposer's overall understanding of the requirements for C2;
  - b) Relevance of the proposed technical solution to the needs of the San Francisco Bay Area; and
  - c) Description of how Proposer's existing solution will be adapted to meet the requirements of the C2 System.
- ii. Technical Solution submitted per Section VII 2.2, Form of Proposal, Technical Proposal of the RFP
  - a) Clarity, logic, and appropriateness of the Proposer's technical solution and approach;
  - b) Level of modifications required to proposer's current system to provide C2 functionality.
  - c) Features, capabilities and flexibility to accommodate existing fare policies and future changes per Section 2.2(2);
  - d) Features, functions, design and suitability of Equipment for use in a transit environment per Section 2.2(3);
  - e) Features, functions, capabilities, architecture, design and suitability of the C2 Back Office per Section 2.2(4);
  - f) System Interfaces, adoption of Application Programming Interfaces, and website development approach per Section 2.2(5);
  - g) Approach and capabilities to support Special Programs per Section 2.2(6);
  - h) Approach to managing fare media and coordinating with fare media supplier per Section 2.2(7);
  - i) Features, functions, quality and suitability of customer service systems per Section 2.2(8);
  - j) Approach to providing a comprehensive retail network per Section 2.2(9);
  - k) Understanding, quality and suitability of proposed communications networks per Section 2.2(10);
  - l) Approach to providing Transit Operator integration per Section 2.2(11); and
  - m) Approach to providing Third Party System integration per Section 2.2(12);
- iii. Proposed Approach to the *Appendix A, Scope of Work*
  - a) Clarity, logic, and appropriateness of the Proposer's approach to carry out the tasks described in *Appendix A, Scope of Work*, including all work components (*Appendix A-2 through A-6*);
  - b) Approach to coordinating with the C1 Contractor;
  - c) Effectiveness of proposed Program Management per Section 2.2(13) and Section 2.3.a;
  - d) Approach to coordinating with the C1 Contractor per Section 2.3.b;
  - e) Approach to C2 System Design per Section 2.3.c including approach to working interactively with MTC and the Transit Operators;

- f) Approach to C2 System Development and Testing per Section 2.3.d including approach to working interactively with MTC and the Transit Operators, developing customer-facing applications, and conducting logical and thorough testing;
  - g) Approach to C2 System Installation and Transition including clarity, suitability and logic of proposed installation and transition activities and sequences per Section 2.3.e;
  - h) Approach to the Operations and Maintenance of C2 per Section 2.3.f;
  - i) Services and support to be provided for End of Term Transition per Section 2.3.g; and
  - j) Approach to meeting and reporting on service levels per Section 2.3h.
- iv. Project Schedule
- a) Logic, risk and appropriateness of proposed schedule; and
  - b) Thoroughness and reasonableness of defined activities, events, and durations;
- v. Cost realism and cost effectiveness of proposed approach to carrying out the tasks in Appendix A, Scope of Work.
- a) Realism of proposed prices relative to the C2 System Scope of Work and proposed solutions; and
  - b) Ability to deliver C2 System Scope of Work and proposed solutions relative to proposed price.

Reference checks were used to supplement Proposers' written proposals in the evaluation of the factors listed above.

#### **Cost/Price Proposal – Part 4 of the Proposal (30%)**

The RFP called for Cost/Price Proposals to be assigned points based on the relative difference between the lowest overall price and each other Cost/Price Proposal, with the lowest total Proposal price receiving 100% of the available points, or 30 points. Since there was only one Proposal, the Cubic Cost/Price Proposal received 30 points.

#### **Initial Evaluation**

The panel members preliminarily scored the proposal individually and then met as a panel to discuss the proposal and receive input from the technical and financial advisors. Following the panel's discussion, members revised their scores as they deemed appropriate. The initial evaluation score is noted Table 1 below.

**Table 1: C2 SI RFP Initial Scores**

<b>Proposer</b>	<b>Proposer Qualifications and Experience</b>	<b>Technical Proposal</b>	<b>Cost/Price</b>	<b>Total Score (100 possible)</b>
<b>Cubic Transportation Systems, Inc.</b>	<b>15</b>	<b>39</b>	<b>30</b>	<b>84</b>

After the initial evaluation, discussions were conducted by participants from Golden Gate Bridge, Highway and Transportation District, Clipper staff, MTC's Contract Administration staff

and Office of General Counsel, as well as outside legal counsel and technical advisors. The purpose of discussions with the proposer was to identify to that proposer specific deficiencies and weaknesses in its proposal, address costs and risk factors, technical approaches to implementation and operation, and contractual terms and conditions. Specialists in evaluating cost proposals were included in the cost/price discussions. The discussions generated a shared understanding on the parts of the proposer, MTC and the transit agencies of the final contract terms to be included in the Request for Best and Final Offer (BAFO). During this same time period, references were checked, and changes to RFP technical requirements and scope of work to be included in the BAFO to obtain the most favorable and acceptable terms for the C2 SI contract were determined. Discussions took place through face-to-face meetings in May and June 2018 and through follow-up written correspondence.

### **Request for BAFO and Contract Finalization**

Following discussions, MTC issued a Request for Best and Final Offer (Addendum #6, revised by Addendum #7) to the proposer. The Request for BAFO included all changes to the RFP and contract that MTC and Clipper agency staff deemed acceptable or beneficial during the discussions, as well as a requirement that the proposer return a signed contract indicating acceptance of the final contractual terms and conditions with its BAFO. The BAFO also gave the proposer the opportunity to revise its technical proposal to address the weaknesses or deficiencies identified during discussions or to make other changes.

The Request for BAFO also made several substantive changes to the system requirements and contract in order to increase functionality, bring forward desirable customer-facing features earlier, reduce contractor uncertainty, and bring costs down:

- Offered the opportunity to the proposer to propose accelerating the deployment of the C2 system to bring earlier benefits to Clipper customers and transit operators and reduce transition risk;
- Invited the proposer to identify potential C2 features that could be implemented early, providing benefits to customers and transit operators, and reducing transition risk;
- Made the activation of an open payment capability (the ability to accept contactless credit/debit cards for fare payment) a contract option to be exercised after the C2 system was complete;
- Removed the requirement that fare gates and bus validators display remaining account balances, which the Proposer conveyed would be expensive to achieve and inaccurate in real-time in an account-based system; and
- Reduced the number of critical milestones with liquidated damages for late completion from seven to two.

Following receipt of a BAFO on August 6, 2018, the evaluation panel assigned scores to the BAFO:

**Table 2: C2 SI Scores after First BAFO**

<b>Proposer</b>	<b>Proposer Qualifications and Experience</b>	<b>Technical Proposal</b>	<b>Cost/Price</b>	<b>Total Score (100 possible)</b>
<b>Cubic Transportation Systems, Inc.</b>	<b>16</b>	<b>42</b>	<b>30</b>	<b>88</b>

Following the BAFO response evaluation, the procurement team determined that the final contract would benefit from obtaining clarifications and corrections in the technical and cost/price proposals. Also, having received a proposal for accelerated C2 system deployment, the technical advisers recommended applying a scaling factor to the O&M payments as implementation ramps up, so the Contract was revised to provide for partial O&M payments following the pilot tests and before full deployment. A Request for Second BAFO was issued on August 24, 2018.

Following receipt of a Second BAFO on August 28, 2018, the evaluation panel assigned final scores to the Second BAFO:

**Table 3: C2 SI Scores after Second BAFO**

<b>Proposer</b>	<b>Proposer Qualifications and Experience</b>	<b>Technical Proposal</b>	<b>Cost/Price</b>	<b>Total Score (100 possible)</b>
<b>Cubic Transportation Systems, Inc.</b>	<b>16</b>	<b>43</b>	<b>30</b>	<b>89</b>

Based on the final scores, the panel unanimously recommended award to Cubic, and the discussion participants met with the proposer to negotiate the maximum ceiling price for the development and testing and installation and transition work components and the accelerated C2 deployment deliverables, as provided by the Request for Second BAFO. The negotiation did not change the proposed ceiling prices for Development and Testing and Installation and Transition, which the evaluators and discussion participants believed to be a conservative proposal. The total amount of all payments for accelerated C2 deployment deliverables did not change, although costs were reallocated among work activities.

The final recommended maximum contract price was \$387,000,000, including \$165,000,000 for capital (design, development and testing, installation and transition and end of term transition), including the negotiated ceiling prices for development and testing and installation and transition, and \$222,000,000 for ten years of O&M.

The total requested authorization is \$461,000,000, including a 15% contingency in the amount of \$61,000,000 and estimated sales tax in the amount of \$13,000,000. The Request for Proposal (RFP) and Contract also provide for two five (5)-year options to extend O&M and an Open Payment Deployment Option, for which prices were received and evaluated, but which are not included in the contract price at this time.

Attachment D

DBE Small Business

		DBE* Firm			SBE** Firm		
Firm Name	Role on Project	Yes	DBE #	No	Yes	SBE #	No
Prime Contractor							
Cubic Transportation Systems, Inc.				X			X
Subcontractors							
Reflexions Data, LLC	Website development and user experience.			X			X
DBA Name: ESP Services Firm Name: ESP Enterprises, Inc.	Installation of equipment.	X	34472				X
DBA Name: Lumenor Consulting Group Firm Name: FIVE23 Group, Inc.	Assistance with project management (coordination with operators); and gap analysis.	X	40309				X
TransSight, LLC	Liaison with operators regarding the reporting and business information tool; and assist with designing the operator launch support and operator training.	X	42484				X
Parkeon, Inc.	Supply and support of bus driver consoles.			X			X

\*Denotes certification by the California Unified Certification Program (CUCP).

\*\*Denotes certification by the State of California.



METROPOLITAN  
TRANSPORTATION  
COMMISSION

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## *Memorandum*

TO: Steve Heminger, Executive Director

DATE: September 4, 2018

FR: Denise Rodrigues, Contracts Administrator

RE: Justification for Other Than Full and Open Competition: Single Proposal Award of Contract to Cubic Transportation Systems, Inc., for Next-Generation Clipper® (C2) System Integrator (SI) Regional Fare Payment System Project

The Metropolitan Transportation Commission (MTC) is the contracting agency for the Clipper regional fare payment system (FPS) for the San Francisco Bay Area, pursuant to a memorandum of understanding (MOU) dated February 19, 2016 among MTC and 22 San Francisco Bay Area transit operators (Clipper agencies). In September 2017, MTC issued a Request for Proposal (RFP) for a System Integrator (SI) for the Next Generation Clipper (C2) FPS. In response, MTC received a single proposal from Cubic Transportation Systems, Inc. (Cubic). This memorandum documents MTC's efforts to ensure full and open competition, and describes the basis for MTC's finding that the contract price is fair and reasonable.

**Description of Contract Action:** The contract includes the design, development and testing, installation and transition of the C2 system, a ten year operations and maintenance (O&M) period, and options for an orderly transition at the end of the contract. The capital portion of the contract is \$165,000,000; the ten-year operating period cost is \$222,000,000 for a total maximum payment under the Contract of \$387,000,000, not including sales tax and contingency. The RFP also provided two five (5) year options to extend O&M and an Open Payment Deployment Option, priced and evaluated, but not included in the total contract price.

The C2 system will be based on a proven, high-volume, multi-operator fare collection system. It will support all existing fare policies; will accommodate innovative pricing strategies; and will provide an accurate, reliable, consistent and fast customer experience when purchasing fare products, paying fares, managing accounts, and receiving customer service. In addition to replacing obsolescent systems and equipment, C2 will introduce new features to the Clipper Program that address the most common customer and user issues with C1, such as:

- A Clipper mobile app to be implemented on an accelerated schedule that will allow customers to use smart phones to reload their account and function as a Clipper card;

- An account-based system that will allow customers to reload their Clipper accounts online, at vending machines, at retailers, and through mobile devices and use the value immediately, eliminating the current 1-2 day delay and the primary source of current customer frustration;
- A customer transition approach that is designed to ensure customer convenience and minimize disruption;
- The ability to integrate with other transportation providers such as bikeshare and paratransit providers, addressing Bay Area needs for better mobility solutions;
- Improved tools and systems to manage employer and other institutional programs and offer new types of promotions; and
- Better flexibility for the region's Clipper agencies to implement and adopt fare policies to meet the changing needs of transit riders.

### **Background**

The original Clipper contract (C1), entered into in 1999, was assigned by the original contractor (Motorola) to Cubic in 2009, when Cubic purchased the Clipper-related assets of ERG, Ltd., the subcontractor that designed and began implementation of the C1 system. The C1 system successfully processes over 825,000 transactions daily and is available to all transit customers in the Bay Area. However, the 20-year old C1 system has reached the end of its serviceable life and is not able to easily and cost efficiently accommodate advances in technology that would significantly enhance the user experience for both the transit customer and the agencies managing the system. With the expiration of the C1 contract approaching in 2019, MTC and the Clipper agencies began working in 2015 to develop an electronic fare collection system procurement that would bring Clipper into the next generation.

As the Clipper contracting agency pursuant to the Clipper Memorandum of Understanding (MOU) entered into in February 2016, MTC assembled a C2 SI procurement team, including MTC staff, legal counsel, and management, staff from Clipper agencies, outside legal counsel (Thompson Coburn LLP), and technical and financial advisors (IBI Group, KPMG, and Invoke Technologies). The Clipper governing board directed the C2 procurement team to make every effort to promote open competition and “level the playing field” with respect to the incumbent C1 contractor (Cubic) and other potential C2 SI vendors.

### **Authority for Single Proposal Awards:**

The Office of Management and Budget (OMB) regulation, “Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards”, 2 CFR Part 200 (Super Circular)) is applicable to the proposed contract as a result of federal funding from the Federal Transit Administration and Federal Highway Administration. The Super Circular permits award of contract in single proposal situations if the recipient determines from an examination of solicitation, the competition was adequate (2 CFR 200.319(f)(4)). This memorandum documents the efforts on the part of MTC to foster full and open competition in the development of its C2 SI RFP.

### **Efforts to Obtain Competition:**

On April 4, 2016, MTC released a Request for Expressions of Interest (RFEI) for Next Generation Clipper (C2) Regional Transit Fare Payment System Integrator and Customer Service Center. The purpose of the RFEI was to identify firms interested in participating in a future C2 procurement, to refine MTC's procurement and delivery strategies through

consultation with the industry, and to discover ways to maximize competition among prospective system integrator vendors. MTC received Expressions of Interest and comments from 18 firms. MTC, technical advisors, and transit agency representatives subsequently met with all 18 firms to gather additional feedback to help inform the procurement process.

Key themes identified through the RFEI process relating to the System Integrator RFP included:

- **C1 Operations and C2 Transition:** The current Clipper contract includes provisions to hand the C1 system over to a new contractor at the end of the C1 contract. Prospective SI proposers expressed concern over this approach (technical and competitive), and were in agreement about the difficulty for any vendor other than the current C1 contractor to maintain the C1 system, software, operations and maintenance during the transition. In response, MTC began negotiations with the C1 contractor to continue C1 operations beyond the termination of the current contract that would address this concern.
- **C2 Implementation Schedule:** The RFEI noted that the current C1 contract would terminate in November 2019 and sought to have C2 operational by then. Based on industry comment that, based on their understanding of the project and experience elsewhere, this period was too short, the C2 implementation schedule was extended in the final RFP. Additionally, an anticipated Request for Qualifications step that would have pre-qualified vendors, which several vendors pointed out might inadvertently restrict competition, was eliminated from the procurement process.
- **Device Selection:** The RFEI initially proposed that the region would establish a pool of third party validator devices from multiple vendors that the C2 SI would have to work with. Industry responses expressed concern over technical risk associated with the approach and potential additional costs that would be incurred to integrate those devices. Multiple responses proposed as an alternative that the C2 SI maintain responsibility for providing all devices, but be required to be able to source components from multiple suppliers. The RFP requirements were subsequently developed to reflect this approach.
- **Account Based Communication:** The RFEI requested industry responses in potential telecommunications upgrades that could enhance or improve current system operations. Industry response indicated that an upgrade to an account-based system would have near-real-time communications, which was subsequently included in RFP requirements.
- **Fare Policy and Business Rules:** The desirability of simplifying fare policies and Business Rules was stressed by non-incumbent vendors. No specific changes were made in response to these comments as establishment of regional fare policy is beyond the scope of this procurement, but from a competitive perspective, the current C1 system is not capable of processing account-based transactions, so the current C1 contractor would likely have to code all business rules like any other vendor to work with the new account-based system or capabilities proposed.

After careful consideration of the RFEI feedback, the procurement team also determined that the process that would most support development of a request for proposal that multiple vendors could respond to was to prepare and issue a draft version of the SI RFP (Industry Review Draft) for further comment, followed by a formal RFP, rather than a two-step RFQ/RFP process.



MTC released a draft Next Generation Clipper (C2) System Integrator (SI) RFP for Industry Review on January 27, 2017. The industry review draft included design specifications, a statement of work, a draft contract, cost sheets, evaluation criteria, and service level agreements (SLAs) linked to variable payments. While interested parties were asked to provide feedback on all areas of the draft RFP for Industry Review, vendors were asked to focus on the following, in particular:

- Changes that MTC might consider to reduce project cost, time, or risk while still providing a highly functional, best-in-class system that meets or exceeds the program goals described in the document;
- The proposed design process, which would involve MTC and the transit agencies finalizing the system design collaboratively with the C2 SI; and
- The draft requirement that the C2 SI assume the operations and maintenance of the C1 system.

MTC also conducted an Industry Review Draft RFP Information Webinar. Interest in the webinar was high, with 53 individuals representing 24 firms registering for the webinar. Registered firms included traditional system integrators, technology companies, payment industry firms, web and mobile application developers, fare collection equipment and card manufacturers, technology and management consulting firms, and information security firms. The following 18 firms submitted responses to the Industry Review Draft RFP:

19. Accenture;
20. Acumen Building Enterprise, Inc.;
21. Conduent Transport Solutions, Inc.;
22. Cubic Transportation Systems, Inc.;
23. Faneuil, Inc.;
24. Genfare, a division of SPX Corporation;
25. Google;
26. InComm;
27. Infineon Technologies;
28. Informatix, Inc.;
29. INIT Innovations in Transportation, Inc.;
30. Mastercard;
31. NEC Corporation;
32. NTT Data;
33. Passport Parking, Inc.;
34. Scheidt & Bachmann;
35. Thales; and
36. TransSight, LLC.

The amount of information received by the procurement team was extensive and ranged from extremely comprehensive feedback to focused areas of concentration, and general questions or concerns on the draft RFP, Scope of Work, and Contract. Overall, industry feedback focused on the following key themes:

- Inclusion of the required assumption of C1 O&M by the C2 SI may limit proposals;
- Allocation of risk in the financial and performance security requirements in the RFP was imbalanced in favor of MTC, which could drive up price;

- Further clarification of the proposed variable pricing strategy, payment provisions, and price adjustments for attainment or nonattainment of service level agreements was requested; and
- Extension of the proposed project schedule was recommended to allow for refinement of design, implementation, installation, and transition of the C2 system.

After a thorough review of the feedback, the procurement team developed and released the final C2 SI RFP on September 13, 2017. The final RFP made key changes to the industry review draft in order to expand potential competition. Based on the feedback, MTC and Clipper agency staff updated plans for multiple aspects of the C2 SI RFP in the final RFP, including:

- Removing the requirement for the C2 SI to assume C1 O&M (while negotiating an extension of the C1 contract through the transition to C2);
- Limiting vendors' risks by modification of risk of loss provisions and financial guaranties;
- Clarifying the overall RFP pricing and payment approach; and
- Extending the proposed C2 SI procurement schedule.

The only major concern raised by a number of vendors that was not addressed was the complexity of the fare policies and Clipper business rules. This is an ongoing challenge for the Bay Area; MTC and the Clipper agencies will continue to look at ways to simplify fares among the 22 Bay Area operators.

In addition to the response to industry feedback, the minimum qualification (MQ) requirements were changed, at the direction of the Clipper Executive Board, to one MQ that multiple vendors could meet: the proposer must have reached revenue service and substantial completion on at least one project that involved system design, implementation, operation and maintenance of a multi-agency or multi-issuer and acquirer electronic fare payment system. The requirement that a proposer have a U.S. project was deleted in order to further competition.

The final C2 SI RFP was posted on the [MTC website](#), and notifications of issuance were sent to vendors in the MTC contractor database, including all firms that participated in the webinar and/or submitted responses to the Industry Review Draft RFP. To assist potential proposers with understanding the current Clipper system, MTC arranged for site visits to take place at selected operator sites throughout the region on October 18, 19 and 20, 2017, including BART's Test Lab, Caltrain San Francisco Station, VTA Mountain View light rail station, BART/Muni Embarcadero Station, the San Francisco Ferry Building, and bus yards at SFMTA, AC Transit, and VTA. A proposers' conference was held at the Bay Area Metro Center on October 20, 2017. The proposers' conference was attended by roughly 40 individuals as well as the members of the procurement team. Attendees were provided time to network at the conclusion of the proposers' conference.

The RFP was revised by five addenda, which for the most part clarified RFP provisions unclear to prospective proposers. As a result of approximately 200 questions received from vendors, one of the addenda extended the original proposal due date to March 5, 2018, to allow the procurement team time to respond thoughtfully to the questions and make changes in the RFP.

By the proposal due date of March 5, 2018, MTC received one proposal from Cubic Transportation Systems, Inc., the incumbent. One other firm submitted a response on the due date declining to submit a proposal. Another vendor notified MTC informally several weeks prior to the due date that it did not believe it could submit a competitive proposal, based on the complexity of the fare policies in the San Francisco Bay Area. Following an initial evaluation, proposal discussions, and evaluation of a best and final offer, the evaluators recommended award of the C2 SI contract to the single proposer, Cubic Transportation Systems, Inc.

**Fair and Reasonable Price:**

Overall price: MTC's technical advisor for the C2 procurement, IBI Group, prepared an engineering estimate prior to the proposal due date, which estimated the capital cost of the C2 SI project at \$196,440,656 and the annual operations and maintenance cost of the C2 SI project at \$20,841,530 in 2018 dollars. That estimate was not specific to any particular vendor (it was intended to support evaluation of multiple vendors), and was based on general assumptions by the consultant of what costs would be incurred during the system design, development and testing, implementation and transition, and operations and maintenance stages of the project, as well as an estimate on equipment costs. Actual prices and allocations were expected to vary by vendor based on their existing systems and solutions. Cubic's initial capital cost-price proposal was approximately \$185,000,000 and \$235,000,000 for ten years of operations and maintenance.

MTC's financial advisor, KPMG, prepared a summarized total of IBI's independent engineering estimate and determined that Cubic's initial price proposal was within 4% of the independent engineer's estimate. KPMG identified several areas in which the submitted costs and prices warranted additional discussion, and questions and clarifications were submitted to the proposer. The First Request for BAFO made several substantive changes to the system requirements and contract in order to increase functionality, bring forward desirable customer-facing features earlier, reduce contractor uncertainty, and bring costs down. It:

- Offered the opportunity to the proposer to propose accelerating the deployment of the C2 system to bring earlier benefits to Clipper customers and transit operators and reduce transition risk;
- Invited the proposer to identify potential C2 features that could be implemented early, providing benefits to customers and transit operators, and reducing transition risk;
- Made the activation of an open payment capability (the ability to accept contactless credit/debit cards for fare payment) a contract option to be exercised after the C2 system was complete;
- Removed the requirement that fare gates and bus validators display remaining account balances, which the Proposer conveyed would be expensive to achieve and inaccurate in real-time in an account-based system; and
- Reduced the number of critical milestones with liquidated damages for late completion from seven to two.

IBI revised its engineering estimate based on the updated RFP and contract, which lowered IBI's estimated capital cost of the C2 SI project to \$192,795,656 and the annual operations and maintenance cost of the C2 SI project to \$20,272,320 in 2018 dollars. KPMG again prepared a summarized total of the IBI estimate. Cubic's First BAFO prices were approximately

\$165,000,000 for capital and \$222,000,000 for ten years of O&M, bringing Cubic's overall price to within 1% of KPMG's summarized total independent engineers' estimate.

Cost Realism and Cost Effectiveness: KPMG also advised the evaluators on the cost realism and effectiveness of the proposal price. The primary purpose of this analysis was to provide insight as to whether the work proposed could reasonably be completed for the prices identified. Taking into consideration KPMG's analysis, the evaluators submitted an overall score in which Cost Realism and Effectiveness were included as part of the technical proposal (50 points out of 100). The Evaluation Committee scored the initial proposal, inclusive of price, at 84 out of a possible 100 points. Following the receipt of the First BAFO, and with guidance from KPMG's revised cost realism and effectiveness analysis, the evaluators scored the BAFO at 88 out of a possible 100 points, which, in any scenario, would likely have put this vendor well within the competitive range.

Due to a lack of clarity on several scope and price points in the First BAFO, MTC requested a Second BAFO, which did not change the scope of work. The price of the Second BAFO remained essentially the same; however, the added clarity in Cubic's proposal raised the technical score by one point to 42 out of 50, for a total of 89 out of a possible 100 points.

Other procurements: Other recent procurements, while not exactly comparable, indicate that the proposed C2 SI contract price is fair and reasonable. The approximate costs for The Massachusetts Bay Transportation Authority (MBTA) and New York Metropolitan Transportation Authority (NYMTA) are as follows: MBTA's AFC 2.0 project was awarded to the Cubic / John Laing consortium for \$723 million with a capital cost of \$357 million and a 10-year O&M cost of \$366 million. The NYMTA awarded the New Fare Payment System contract to Cubic for \$572 million with a capital cost of \$480 million and \$92 million for base O&M over seven years. NYMTA will largely be conducting the operations and maintenance of the New Fare Payment System in-house which is why their O&M costs appear relatively low.

Considering all of these factors, MTC believes the price provided by Cubic to be fair and reasonable.

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Denise Rodrigues

Concur:

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Carol Kuester, Clipper Executive Director

Concur:

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Andrew B. Fremier, Deputy Executive Director, Operations

Approved:

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Steve Heminger, Executive Director

## REQUEST FOR BOARD APPROVAL

### Summary of Proposed Contract

Contractor:	Cubic Transportation Systems, Inc. San Diego, CA
Project Title:	Next Generation Clipper® (C2) Regional Fare Payment System Integrator (SI) Contract
Purpose of Contract:	Provide an accurate, reliable, consistent and fast customer experience through implementation of a proven, high-volume regional fare payment system
Brief Scope of Work:	Design, development and testing, installation and transition, and operations and maintenance of the C2 system
Project Cost Not to Exceed:	Capital, not including sales tax: \$165,000,000 O&M (10 years) not including sales tax: \$222,000,000 Total contract amount: \$387,000,000 Estimated Sales Tax: \$13M (\$5.5M- capital; \$7.5M) 15% contingency: \$61M (\$23.5M – capital; \$37.5M) Total requested authorization \$461,000,000
Funding Source:	TCP (FTA/FHWA), STP/CMAQ (OBAG1 and OBAG2), STA, Regional Measure 2 Capital, STA, Regional Measure 2 Operating, Regional Measure 2 Marketing, Prop. 1B/LCTOP, Toll Funds, Inactive Card Funds, Transit Agencies
Fiscal Impact:	Funds are included in the FY 2018-19 Clipper budget for FY 2018-19 expenditures; future capital funding dependent on approval of annual Clipper capital budget, as described in Attachment 1 to this Summary of Committee Approval, and annual Clipper operating budgets.
Motion by Board:	That the Next Generation Clipper (C2) System Integrator Contract with Cubic Transportation Systems, Inc., for the purposes and in the amounts described herein and in the Clipper Executive Director's September 6, 2018 memorandum, is approved and recommended for approval by the MTC Operations Committee and Commission, subject to the Commission's approval of the funding plan for capital expenditures included as Attachment 1.
Executive Board:	<hr/> Denis Mulligan, Chair
Approved:	Date: September 10, 2018

## Attachment 1 to Request for Committee Approval

### Funding Plan for C2 SI Capital Expenditures

The estimated amount needed to award the C2 SI contract is \$194 million for capital expenses, including \$165,000,000 in the contract, and \$29,000,000 for sales tax and a 15% contingency. (Operating costs are subject to annual appropriations, and are not included in this funding plan). The summary table below outlines the funding sources committed or projected to be available for the \$194,000,000 capital cost of the C2 SI contract.

#### **C2 SI Contract Capital Funding**

(\$millions)

<b>Contract Value (Capital)</b>	<b>194</b>
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<b>Committed Funds</b>	<b>Amount</b>	<b>Notes</b>
Prior Year Funds	25	Various sources awarded/allocated prior to FY18 budget year
OBAG2	34	STP/CMAQ, Resolution No. 4202, Revised
FTA Funds	20	TCP Programming, Resolution Nos. 4212, Revised (FY16) and 4272, Revised (FY20)
RM2	13	Resolution No. 3801, Revised; Project 18
Toll Funds	10	SB1-Local Partnership Program Exchange - MTC approval expected in Fall 2018
Prop 1B/LCTOP	4	State Funds, Resolution Nos. 3880 and 4130
OBAG1	1	STP/CMAQ, Resolution No. 4035, Revised
<i>Subtotal</i>	<i>106</i>	

<b>Projected Funds</b>	<b>Amount</b>	<b>Notes</b>
FTA/FHWA	88	Projected TCP Programming for Clipper® included in LONP request to FTA; available in annual \$15.4M installments FY21-FY26

<b>Grand Total</b>	<b>194</b>
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Additional detail about the above funding sources follows:

- **Federal Funds:** Through the Transit Capital Priorities program (including OBAG), MTC has approved approximately \$67 million for the deployment of C2. These funds are in a program already approved by the Commission and within the federal FAST Act authorization period. For the period from FY2020-21 through FY2034-35, MTC staff projects an additional \$15 million annually for the deployment of C2. This projection, subject to future federal authorization and appropriations and MTC programming approval, was developed in coordination with transit operators in the region and was submitted to the Federal Transit Administration (FTA) as part of a Letter of No Prejudice request related to future FTA formula funding for other (non-Clipper) projects.
- **Bridge Tolls:** The Commission previously approved \$13 million of Regional Measure 2 funds for the Clipper project. Additionally, \$10 million of BATA Rehab funds can be provided to the project as part of an exchange for state Local Partnership Program (LPP) funds; \$10 million in LPP funds are being requested for BATA bridge painting projects, thereby freeing up the BATA funds for Clipper.
- **Prop 1B/LCTOP:** These state funds were previously assigned to C2.

Other potential sources: Regional Measure 3 includes \$50 million for C2. Additionally, in February 2018, the Commission committed to providing SB1 Transit State of Good Repair (SGR) population-based funds to the Clipper program, expected to be about \$10 million per year (MTC Resolution No. 4321). Either or both of these sources could replace the future federal funds if available in the right time frame. Note that the SGR funds were intended to be used on C2 if RM3 was not approved by the voters; otherwise the SGR funds could be used to supplement funding for zero emission transit bus procurements in the region. However, it is possible that both the RM3 and SGR funds could be used for the C2 SI contract if available and needed.

In summary, \$106 million is available from sources already programmed to the project. An additional \$88 million can be available from future FTA/FHWA funds through 2026, subject to federal appropriation and future Commission action. In awarding the contract this month, staff is also requesting that the Commission commit these future federal funds to the Clipper 2 contract, in advance of developing the Transit Capital Priorities program for the years after 2020. RM3 or SB1 funds will be used if available for the C2 SI contract, but are not presently included among the funds being proposed to certify the contract.



# Next-Generation Clipper (C2) Regional Fare Payment System Integrator Recommendation for Award

September 10, 2018



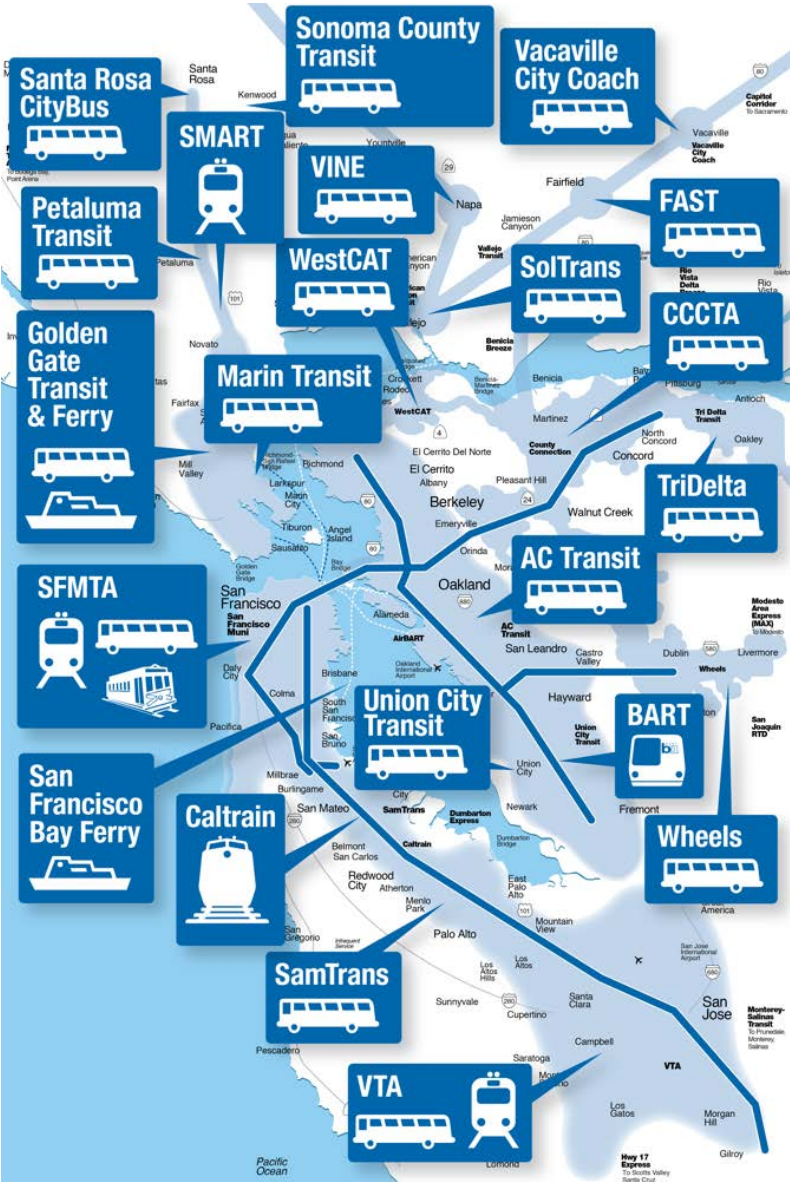
# Clipper Continues to Grow

22  
Transit Operators

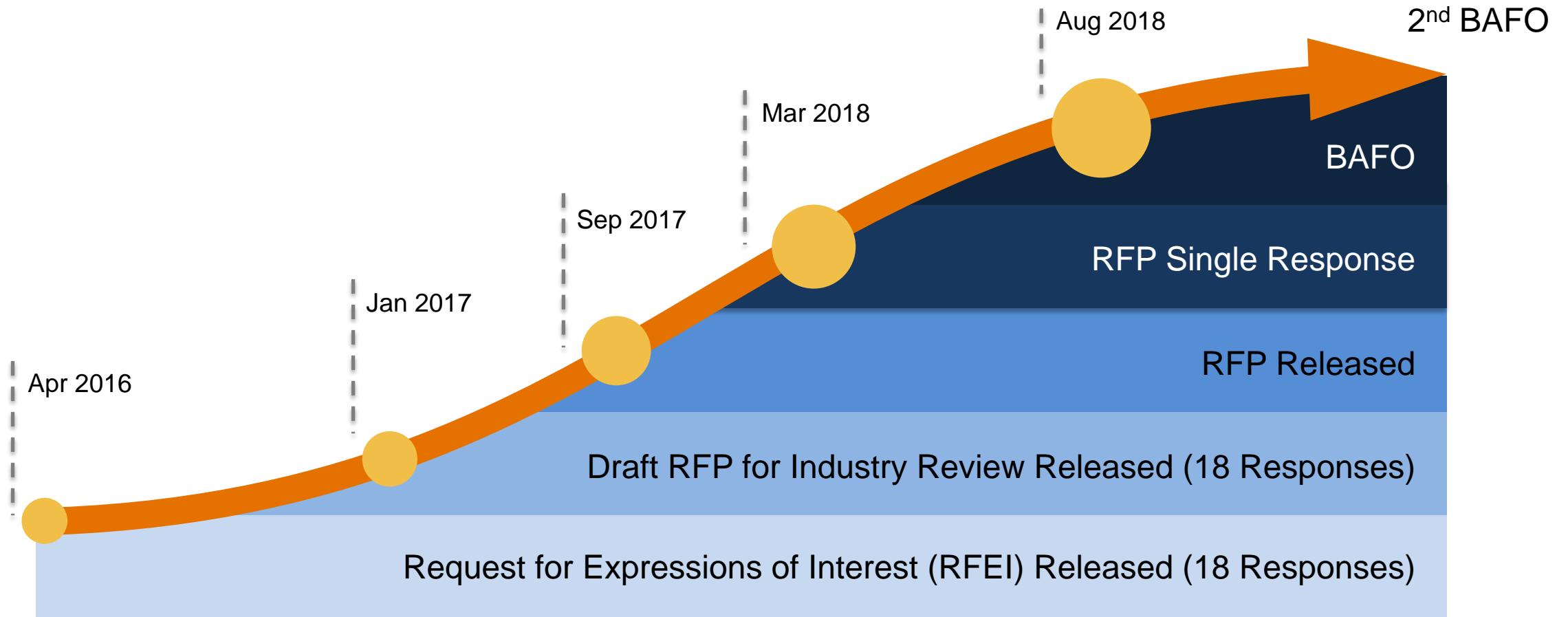
15,000  
Devices Deployed

825,000  
Daily Transactions

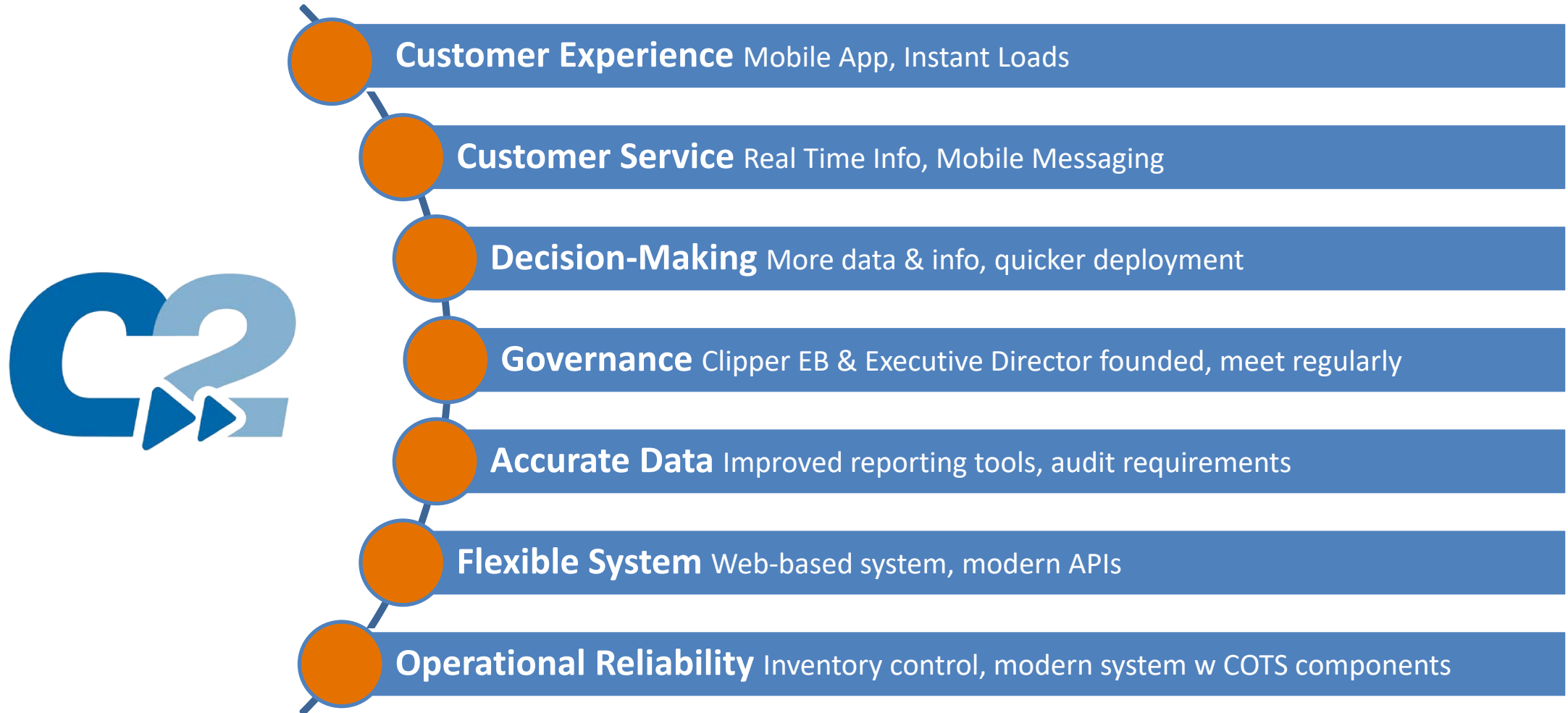
\$55M  
Monthly Transit Operator Revenue



# Procurement Summary



# Recommended Award Fulfills the MOU Goals



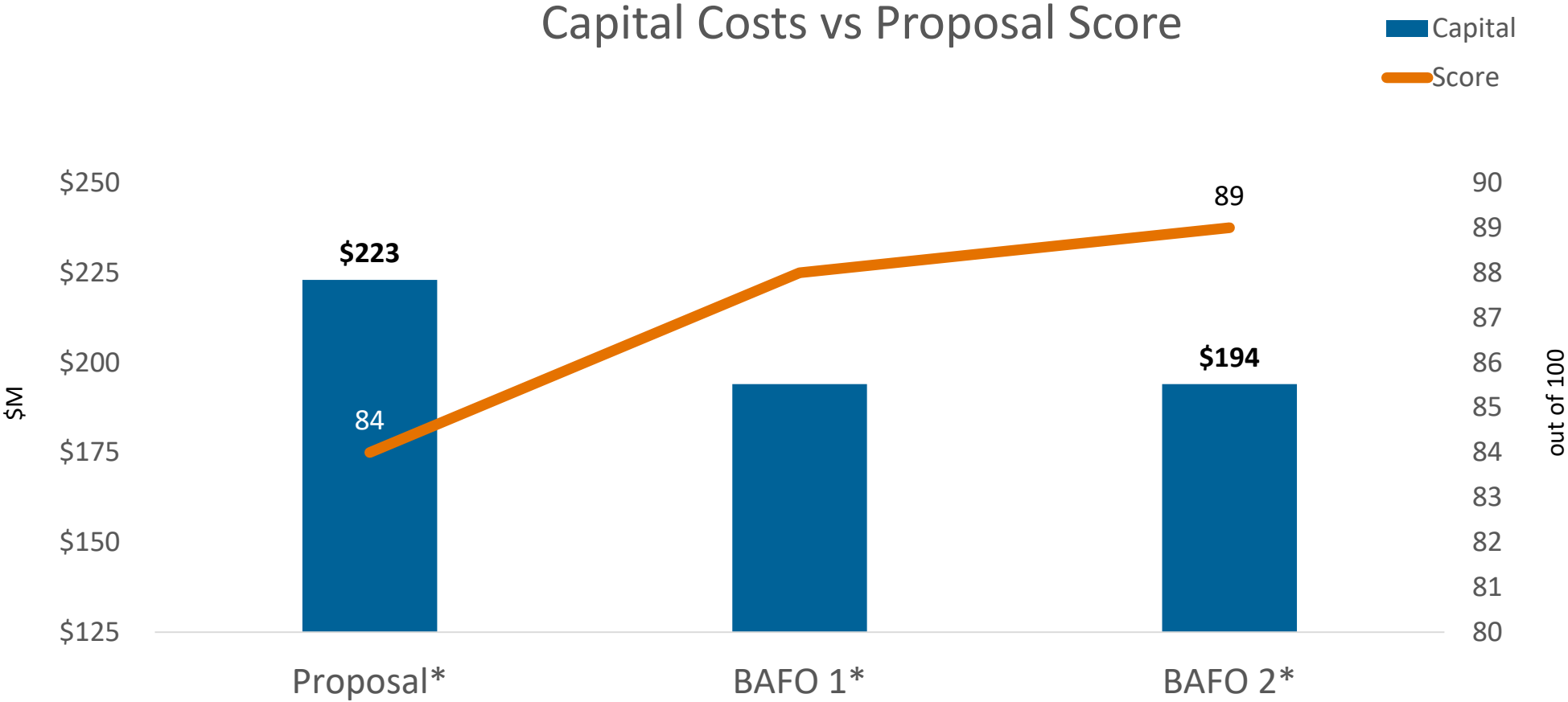
# Clipper Executive Board Direction

Item	CEB Direction
C2 Design Process	Provide technical requirements and work with vendor for best design solution
Minimum Qualifications (MQs) and Evaluation Criteria	Make MQs as open as possible to generate maximum feasible competition and minimize bias towards incumbent
Control Costs	Control costs by conducting several procurements and maximizing opportunities for competition
Hardware Purchase	Enable transit agencies to purchase equipment directly from vendor
Assumption of C1 Operations	Remove requirement for C2 vendor to assume C1 operations which favors incumbent

# Clipper Executive Board Direction

Item	CEB Direction
Payment Incentives / Disincentives	Make vendor responsible for failures that cause loss of operator revenue
Allocation of Risk	Provide financial protections for the region but not at the expense of eliminating potential vendors from submitting a proposal
Pricing Structures	Incentivize pricing to improve vendor performance
Scope of Work Detail	Minimize escalating costs through an existing solution
Project Schedule	Adopt schedule that seeks to have C2 operational as soon as feasible

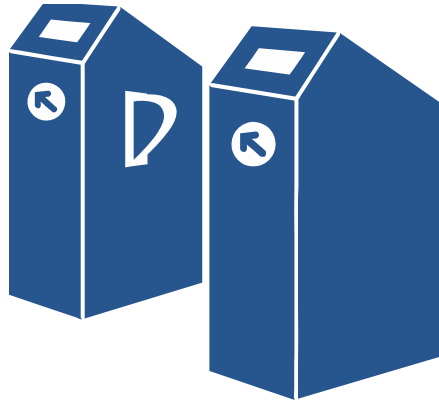
# C2 System Integrator Procurement Summary



\* Includes estimated tax + contingency

# Accelerated Deployment under C2

2019



## Near Real Time Rail & Ferry

Add value on the go and use within an hour at rail stations and ferry terminals

2020



## Mobile App

Virtual Clipper card with ability to add value

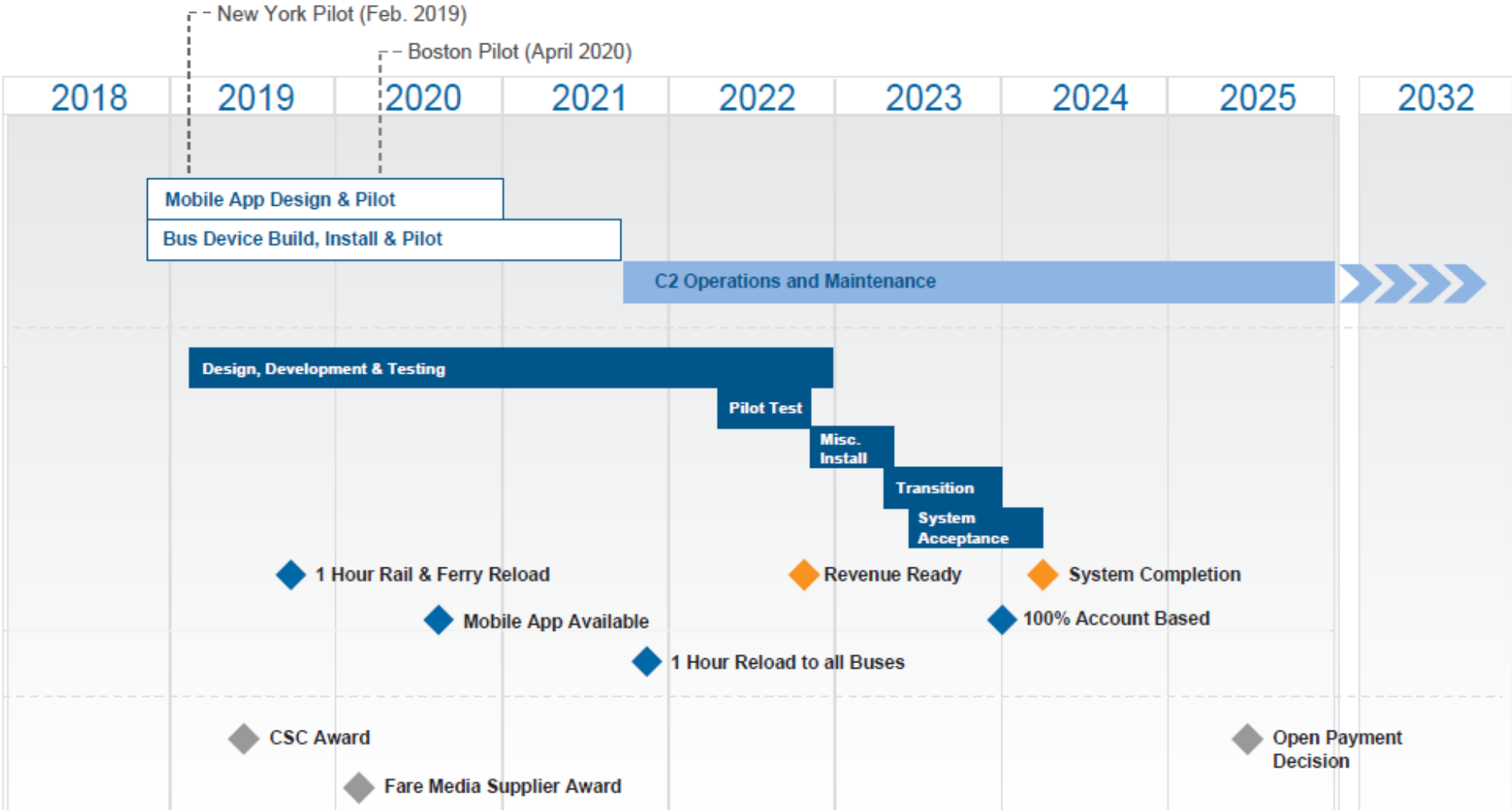
2021



## Near Real Time Everywhere

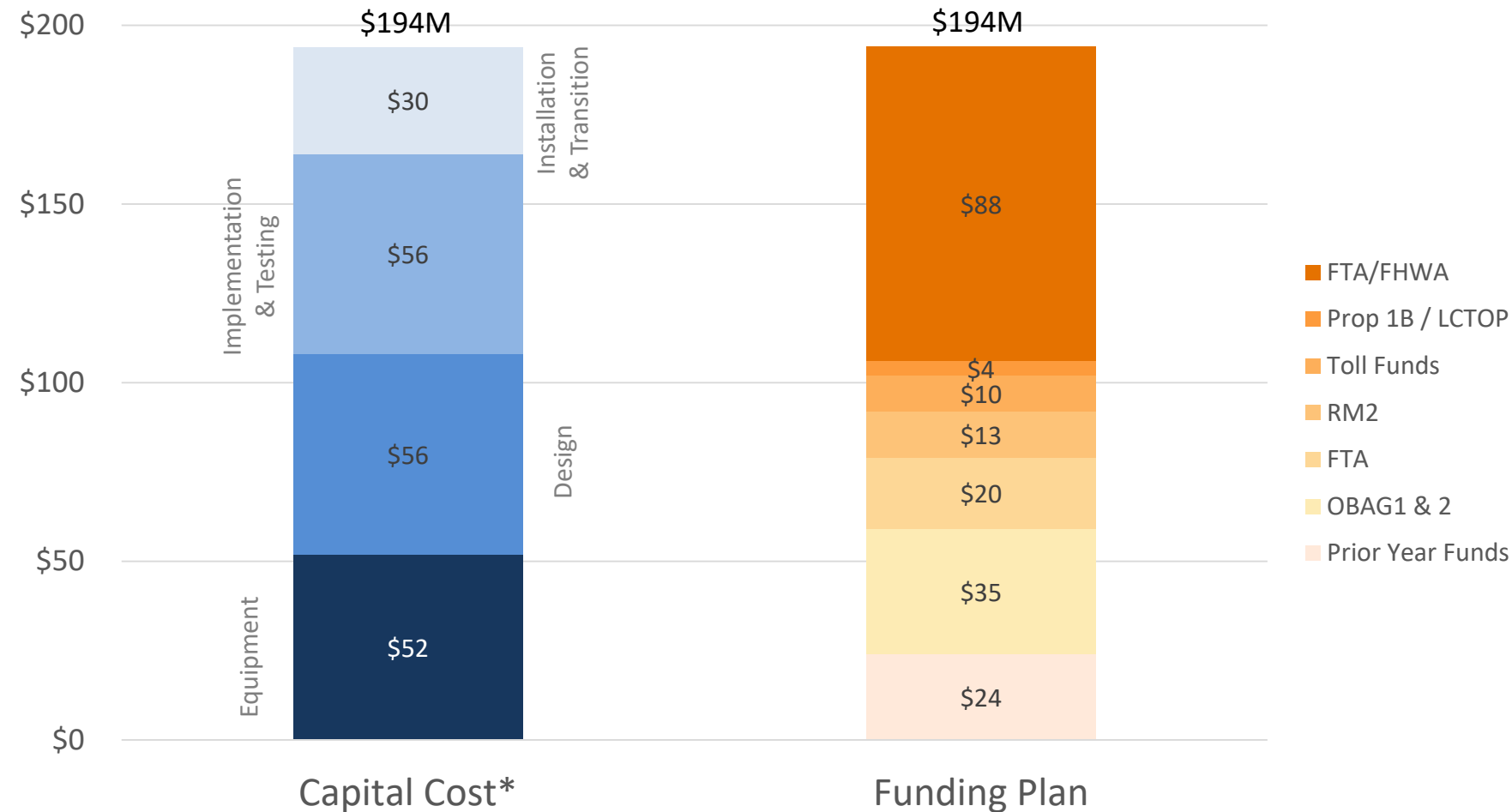
Add value on the go and use within an hour everywhere

# Proposed C2 System Integrator Schedule



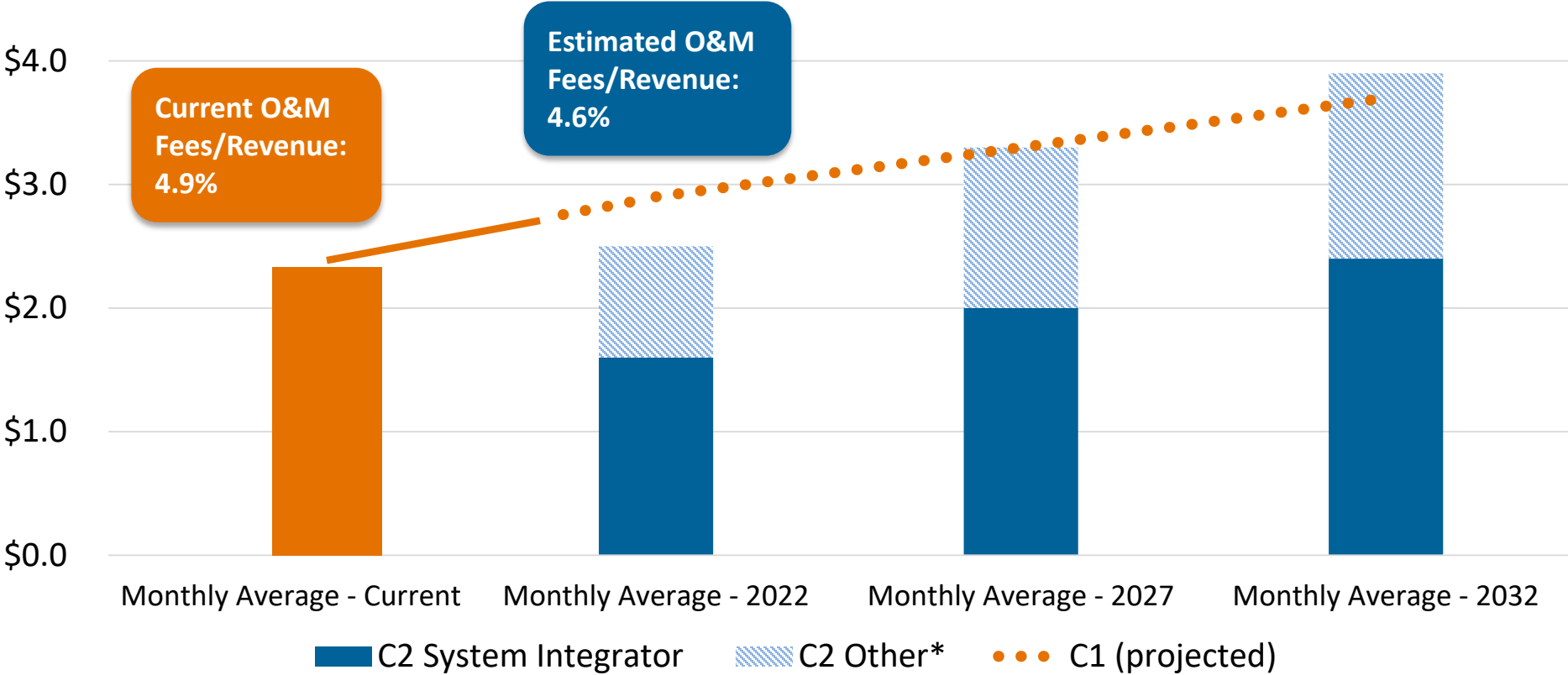


# C2 System Integrator Capital Costs and Funding Plan



\* Includes estimated tax + contingency

# C2 Operating Costs - Projected



- Estimated O&M for CSC, Pass Through Fees (incl. Mobile Fees & Third Party Commissions), Payment Gateway Fees, etc.

# Comparison to other agency contracts

MBTA CONTRACT SIMILAR TO OTHER AGENCY CONTRACTS; INCLUDES A GREATER SCOPE THAN THE RECENTLY AWARDED MTA CONTRACT

- Included in award amount
- Partial, future, optional, or costs not included in award amount

	Boston 	New York 	Chicago 	Philadelphia 	Vancouver, BC 	
Year awarded	2017 (planned)	2017	2011	2011	2011	2018 (planned)
Published value, with known amendments	\$723m (proposed)	\$573m	\$519m	\$141m	\$220m	\$461M
Service area population	3.1m	8.5m	3.3m	3.8m	2.5m	7.4M
Base ops & maintenance term	10 years	7 years	10 years	1 year	10 years	10 years
Implementation financing with ongoing performance payments	●		●			
Cash collection and servicing	●		○	○	○	
Bank card processing & fees	●	○	●		○	●
Field equipment maintenance	●		○	○	●	●
Retail network & commissions	●	○	○	○	○	●
New account-based back office	●	●	●	●	●	●
Back-office maintenance	●	●	●	○	●	●
New station vending machines	●	○	●	●	●	Integrate w/exist
New gates/turnstiles	●			●	●	Integrate w/exist
All-door boarding validators	●	○			●	●
Streetscape vending machines	●	○				○



Massachusetts Bay  
Transportation Authority

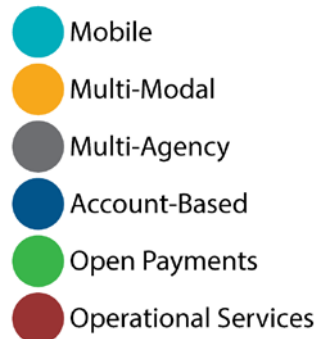
AFC 2.0: AUTOMATED FARE COLLECTION

32

# Award Recommendation: Cubic Transportation Systems



- 400 projects
- 40 major metro areas
- 2,300 transportation employees
- 50M daily transactions processed
- \$50M daily revenue collected
- 6 integrated mobile projects underway
- 15 years of Bay Area experience



# Next Steps

- Request award
  - MTC Operations Committee - 9/14
  - Commission - 9/26
- Execute contract and issue NTP - 10/1
  - Accelerated Deployment and System Design Begins – 10/2
- Approval of Schedule - Early 2019





Time for celebrating...



...then getting down to business!