File No. 130940 Committee Item No. 12
Board Item No. 12

COMMITTEE/BOARD OF SUPERVISORS

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Completed by: Victor Young **Date** October 4, 2013
Completed by: Victor Young **Date** 10/16/13

FILE NO. 130940 RESOLUTION NO.

[Contract Agreement - Award of Single-Space Parking Meter Procurement and Support Services - Not to Exceed $54,000,000]

Resolution authorizing the Municipal Transportation Agency to enter into an agreement with IPS Group, Inc., for the procurement of single-space parking meters and support services, for an amount not to exceed $54,000,000 and for a term of five years, to commence following Board approval, with the option to extend the contract for up to two additional years.

WHEREAS, In 2002, the Board of Supervisors adopted Resolution No. 305-02, which approved an agreement to replace old mechanical parking meters with electronic single-space meters and multi-space paystations; and

WHEREAS, Under the 2002 agreement, the SFMTA procured than 24,830 single-space and 490 multi-space parking meters, which are currently maintained by the SFMTA's Meter Shop; and

WHEREAS, The existing meter technology is outdated, as any modifications to the meters currently must be made at each individual meter, systemwide updates and maintenance alerts cannot be supported remotely; user interface and screens are not optimal; spare parts are no longer available; battery life is limited; and there is no credit card payment option available; and

WHEREAS, The existing meter technology (except for those meters procured in 2010 for the SF*park* Pilot program) is outdated, spare parts are no longer available, there is no credit card payment option available, and systemwide updates cannot be supported; and

WHEREAS, Under the proposed agreement, the SFMTA will procure 25,000 single-space parking meters, with an option to purchase an additional 10,000 single-space meters over the term of the contract; and

WHEREAS, The contract also includes support services, including access to the Meter Management System (various software applications); credit card processing; communications between the meter and the credit card processing gateway, the vendor management system, and SFMTA databases; product support; and warranty; and

WHEREAS, New parking meters and paystations will allow customers more variety of ways to pay for parking meters; larger screens and tactile operating buttons for a more user-friendly interface; visual indication of Pay-by-Phone payment acceptance on the meters; remote programming capability and notification of maintenance needs; longer-lasting meter batteries and sufficient meter replacement parts; and

WHEREAS, As part of the citywide meter replacement program, the SFMTA Board of Directors has awarded to a different vendor a separate agreement for multi-space paystations for $8,000,000; and

WHEREAS, New parking meters and paystations will integrate emerging technology evaluated in the SF*park* Pilot Program that allows customers a variety of ways to pay for parking meter spaces, including coin, smart card, credit card and phone; and

WHEREAS, New parking meters and paystations will also enable the SFMTA to implement demand responsive pricing citywide, if approved, based on occupancy levels determined by payment data transmitted from the smart meters; and

WHEREAS, On September 17, 2013, the SFMTA Board of Directors adopted Resolution No. 13-216, authorizing the Director of Transportation to execute an agreement with IPS Group, Inc. for the Procurement of Single-Space Parking Meters and Support Services, for an amount not to exceed $53,618,332 and for a term of five years with an option

to extend the contract for up to two additional years, and urging approval of the agreement by the Board of Supervisors; and

WHEREAS, A copy of the proposed agreement is on file with the Clerk of the Board of Supervisors in File No. 130940, which is hereby declared to be a part of this motion as if set forth fully herein; now, therefore, be it

RESOLVED, That the Board of Supervisors authorizes the San Francisco Municipal Transportation Agency to enter into an agreement with IPS Group, Inc., for the Procurement of Single-Space Parking Meters and Support Services, for an amount not to exceed $54 million, and for a term of five years, with the option to extend the contract for up to two additional years; and, be it

FURTHER RESOLVED, That the Board of Supervisors authorizes the Director of Transportation of the SFMTA to enter into any amendments or modifications to the Agreement (including without limitation, the exhibits) that the Director of Transportation determines, in consultation with the City Attorney, are in the best interest of the City, do not increase the obligations or liabilities of the City, are necessary or advisable to effectuate the purposes of the Agreement or this Resolution, and are in compliance with all applicable laws, including the City's Charter; and, be it

FURTHER RESOLVED, That within thirty (30) days of the agreement being fully executed by all parties, the Director of Transportation of the SFMTA shall provide the final agreement to the Clerk of the Board for inclusion into the official file.

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Item 12 File 13-0940	Department: San Francisco Municipal Transportation Agency (SFMTA)

EXECUTIVE SUMMARY

Legislative Objective

The proposed resolution would authorize SFMTA to execute a new five-year agreement with IPS Group, Inc. (IPS Group) for the (1) procurement of single-space parking meters and (2) related support services, for not-to-exceed $54,000,000. The anticipated term of the agreement is from December 1, 2013 through November 30, 2018, with an option to extend the agreement for up to two years, or through November 30, 2020 for a total of seven years.

Key Points

- In 2002, the Board of Supervisors approved an agreement between SFMTA and Serco Inc. (Serco) to replace old mechanical parking meters with electronic single-space meters and multi-space (pay stations) meters (Resolution No. 305-02). Under the 2002 agreement, the SFMTA procured 24,830 single-space and 490 multi-space parking meters.
- On October 17, 2012, the SFMTA issued a Request for Proposals (RFP) for procurement of both single-space and multi-space parking meters to replace outdated devices. IPS Group was selected as the highest-ranked proposer for the single-space parking meter procurement. Although not part of the proposed resolution, a separate agreement with MacKay Meters, Inc. was approved by the SFMTA Board of Directors on September 17, 2013 to procure 300 multi-space parking meters, for a not-to-exceed $8,000,000.
- Under the proposed agreement, SFMTA (a) will procure 25,000 single-space parking meters, including spare single-space meter parts and related services, to replace all of the City's existing single-space parking meters; and (b) have the option to purchase an additional 10,000 single-space parking meters; and IPS Group will provide (a) Meter Management System (MMS) software applications; (b) credit card processing; (c) communications between the meter and the credit card processing management system and SFMTA databases; (d) product support; and (e) a three-year standard warranty with two one-year extension options at SFMTA's discretion.

Fiscal Impacts

- The proposed agreement between SFMTA and IPS Group is for not-to-exceed $54,000,000, which includes one-time procurement of the meters and annual operating and maintenance expenditures. The one-time procurement costs total $19,695,421 will be paid by SFMTA reserve funds set aside for the purpose of parking meter replacement.
- The annual operating and maintenance costs total $23,098,218 for the initial five-year term and ~~$34,304,580 for the total seven-year term, including the two-year option to extend.~~ These costs include credit card processing and wireless communication fees, contractor's meter management system, replacement meter parts, extended warranty, and a contingency. Funding for these annual operating and maintenance costs will be included in the SFMTA's FY 2014-15 and FY 2015-16 budgets, subject to Board of Supervisors appropriation.

Recommendation

- Approve the resolution.

MANDATE STATEMENT/ BACKGROUND

Mandate Statement

In accordance with Charter Section 9.118(b), City agreements with anticipated expenditures of $10,000,000 or more, or amendments to such City agreements with anticipated expenditures of more than $500,000 are subject to approval by the Board of Supervisors.

Background

According to Ms. Lorraine Fuqua, San Francisco Municipal Transportation Agency (SFMTA) Manager of On-Street Parking Services Contracts, SFMTA currently has approximately 25,000 single-space parking meters and approximately 490 multi-space parking meters that are maintained by the SFMTA's Meter Shop.[1]

Prior Agreements between SFMTA and Serco, Inc. for Parking Meter Installation and Collections

In 2002, the Board of Supervisors approved an agreement between SFMTA and Serco Inc. (Serco) to replace old mechanical parking meters with electronic single-space meters and multi-space (pay stations) meters (Resolution No. 305-02). Under the 2002 agreement, the SFMTA procured 24,830 single-space and 490 multi-space parking meters.

In July 2012, the Board of Supervisors approved a new five-year agreement with Serco from August 1, 2012 through July 31, 2017 with an option to extend the term for up to an additional four years through July 31, 2021, for parking meter coin collection, counting and related support services for a not-to-exceed $46,410,974 (Resolution No. 272-12).

According to Mr. Steven Lee, SFMTA Manager of Financial Services, given that the existing Serco agreement is specifically for parking meter coin collection services, SFMTA pays for the agreement's costs based on actual coin collection volume, which allows the SFMTA to adjust services as needed in the event that coin usage declines and other payment options (i.e. debit and credit card transactions) increase and/or are implemented[2].

Under the existing agreement, Serco collects, counts and provides related support services for all parking meter collections, which were $53,371,640 in FY 2012-13, as shown in Table 1 below.

[1] According to Ms. Fuqua, the exact inventory of single and multi-space parking meters is variable, as minor adjustments to meter inventory are made on a daily basis. As of September 26, 2013 SFMTA has 24,896 single-space meters and 488 multi-space meters.

[2] In FY 2012-13 Serco invoiced SFMTA for $4,336,873 in services, which included management fees, collection of coins for single-space and multi-space meters, and coin room services. According to Ms. Fuqua, the annual Serco invoice will decrease due to decreased coin collection for single-space and multi-space meters and coin room services.

Table 1: SFMTA Parking Meter Revenue *(Includes single-space and multi-space parking meters)*	
Fiscal Year	**Amount**
2003-04	$24,107,482
2004-05	24,148,426
2005-06	29,687,616
2006-07	30,916,410
2007-08	31,625,512
2008-09	32,524,232
2009-10*	38,297,900
2010-11	40,429,963
2011-12	47,010,379
2012-13	53,371,640
2013-14 *(budgeted amount)*	*$45,760,000*

**Parking meter rate increase.*

Request for Proposal Process for New Single-Space Parking Meters

According to Ms. Fuqua, the existing single-space and multi-space parking meters (except for the meters purchased for the SF*park* Pilot discussed below) are more than ten years old which results in the following problems:

(a) Outdated technology that requires any modifications to the meters to be made manually on-site and prevents remote support to system-wide updates;

(b) Outdated meter spare parts that are hard to procure or no longer available; and

(c) Lack of credit card payment options.

On October 17, 2012, the SFMTA issued a Request for Proposals (RFP) for procurement of either or both single-space and multi-space parking meters.[3] On January 18, 2013, two proposals were submitted for the single-space parking meter procurement: (1) IPS Group Inc. (IPS Group) and (2) MacKay Meters, Inc.[4]

On April 16, 2013, IPS Group was selected as the highest-ranked proposer for the procurement of 25,000 single-space parking meters.[5] SFMTA successfully negotiated the proposed agreement with

[3] On October 5, 2012, prior to the RFP issuance, the SFMTA obtained a Local Business Enterprise (LBE) subcontracting waiver from the SFMTA Contract Compliance Office because the parking meter equipment to be procured includes proprietary programming and hardware that requires all services to be performed only by personnel of the successful vendor, which is standard practice within the parking meter industry.

[4] In February and March of 2013, an evaluation panel consisting of five experts from the SFMTA, the San Francisco International Airport and the Port of San Francisco reviewed and scored the two proposals, which included oral demonstrations from both vendors, for the meter procurement.

[5] On April 23, 2013, MacKay Meters Inc. protested the SFMTA's selection of IPS Group Inc. for negotiation of the parking meter agreement. The SFMTA determined that the protest was without merit. MacKay Meters Inc. did not contest this determination.

IPS Group from June 18, 2013 to August 1, 2013 and on September 17, 2013 the SFMTA Commission approved the proposed agreement. According to Ms. Fuqua, the new single-space parking meters will provide the following:

- Multiple ways to pay for parking meter spaces, including coin, smart card, credit card and by phone;
- A more user-friendly interface provided by a larger screen and tactile operating buttons;
- Visual indication of Pay-By-Phone payment on the meter;
- Remote notification of maintenance needs and meter programming; and
- Longer lasting meter batteries.

The proposed agreement also provides for parking meter replacement parts and a three-year warranty on the new meters.

A separate agreement with MacKay Meters Inc. was approved by the SFMTA Board of Directors on September 17, 2013 for the procurement of 300 multi-space parking meters, or pay stations, with the option to purchase an additional 200 devices, that includes the similar integration of technology for a not-to-exceed $8,000,000 for a period of five years, with a two-year option to extend. This MacKay Meters Inc. agreement is not subject to Board of Supervisors approval as it does not meet the Charter threshold of expenditures greater than $10,000,000 or a term of more than 10-years.

SF*park* Pilot Program

SFMTA implemented a SF*park* pilot program in 2008 to use new technologies and policies to improve parking in San Francisco.[6] The SF*park* pilot program uses "smart meters" and ground sensors to measure parking occupancy and adjust parking meter prices accordingly in an attempt to reduce traffic by helping drivers find parking, and to make streets less congested and safer. The SF*park* pilot program included the installation of meters that accept credit and debit cards. The total cost of the SF*park* pilot program is approximately $44,000,000 and included the replacement of 6,200 single-space and 202 multi-space parking meters.[7]

SFMTA is currently evaluating the SF*park* pilot program to determine the effectiveness of the program in measuring parking occupancy and reducing congestion with an expected completion date in 2014.

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[6] Of the total $44 million cost, SF*park* received 80 percent ($19.2 million) of the initial program funding of $24 million from the U.S. Department of Transportation Urban Partnership Program and $20 million from the Metropolitan Transportation Commission (MTC) to implement this demonstration of a parking-based approach to congestion management.

[7] In 2008, SFMTA entered into an agreement with Serco for SF*park* support services (Resolution 289-08). As part of the service requirements, Serco conducted a competitive procurement to secure single-space parking meters and multi-space pay stations for use in the SF*park* pilot program, and selected IPS Group as the single-space meter provider and Duncan Solutions as the multi-space paystation provider. Serco currently provides coin counting and collections services and support for all meters, including both the single-space parking meters and multi-space paystations in the SF*park* pilot program and the existing non-credit card capable MacKay meters. Fees for credit card processing and wireless communication services are charged to Serco by third-party vendors, and Serco passes through these costs to the SFMTA for reimbursement.

DETAILS OF PROPOSED LEGISLATION

The proposed resolution would authorize SFMTA to execute a new five-year agreement with IPS Group for the procurement of single-space parking meters and related support services, for not-to-exceed $54,000,000. The anticipated term of the proposed agreement is December 1, 2013 through November 30, 2018, with an option to extend the agreement for up to two years, or through November 30, 2020, for a total term of seven years.

Under the proposed agreement between SFMTA and IPS Group, SFMTA will procure 25,000 single-space parking meters, including spare single-space meter parts and related services, to replace the City's existing 18,500 single-space parking meters, and replacement mechanisms for 6,500 meters installed as part of the SF*park* pilot program. Under the proposed agreement, SFMTA retains the option to purchase an additional 10,000 parking meters over the term of the proposed agreement.[8]

The related support services include: (a) access to the IPS Groups Meter Management System (MMS) software applications; (b) credit card processing; (c) communications between the meter and the credit card processing management system, and SFMTA databases; (d) product support; and (e) a three-year standard warranty with two one-year extension options at SFMTA's discretion.

According to Ms. Fuqua, the up to two-year option to extend the agreement would provide for continued support services while the SFMTA determines whether to procure new meters incorporating new technology. The life expectancy of the new single-space parking meters under the proposed agreement is seven to ten years.

FISCAL IMPACT

The proposed agreement between SFMTA and IPS Group is not-to-exceed $54,000,000, which includes the one-time procurement of the parking meters (see Table 2 below) and annual operating and maintenance expenditures (see Table 3 below).

As Table 2 below shows, the one-time expenditures for the single-space parking meter procurement and related services, including optional meters, total $19,695,421. The average cost for each of the 18,500 new parking meters is $515 and the average cost for the 6,500 replacement meters is $415. Ms. Fuqua reports that the one-time expenditures shown in Table 2 will be paid for by SFMTA reserve funds set aside from previous SFMTA operating funds for the purpose of parking meter replacement.

[8] The optional 10,000 single-space meters includes meters at new locations, such as Mission Bay, replacement of 1,200 Port meters, and other changes in inventory.

Table 2: One-Time Expenditures	
Expenditure Category	**Total**
25,000 Single-Space Parking Meters	$13,294,688
Project Management	180,000
First Year Spare Parts	270,108
Support Services / Development	350,000
Subtotal	**$14,094,796**
Optional 10,000 Single-Space Parking Meters	5,600,625
Total Capital Expenditures	**$19,695,421**

According to Ms. Fuqua, SFMTA anticipates delivery of the single-space parking meters to begin in February 2014. Ms. Fuqua states that the meters will be accepted by SFMTA in batches, and the SFMTA Meter Shop will install the new meters at a rate of approximately 625 per week, with all 25,000 single-space parking meters anticipated to be installed and activated by approximately December 2014. Mr. Lee advises that SFMTA will not incur any additional costs to install the meters as existing SFMTA parking meter repair staff will be redeployed to complete the installations.

Mr. Lee reports that as each batch of single-space parking meters is installed, IPS Group will begin to charge support service fees, as shown in Table 3 below. According to Mr. Lee, SFMTA has sufficient funds in the FY 2013-14 operating budget to pay the operating and maintenance costs in FY 2013-14 under the proposed agreement.

As Table 3 below shows, IPS Group's annual operating and maintenance costs total $23,098,218 for the initial five-year term of the agreement, and include credit card processing fees, wireless communication fees, access to contractor's meter management system, replacement meter parts, extended warranty, and a 0.7 percent contingency. According to Ms. Fuqua, funding for these annual operating and maintenance costs will be included in the SFMTA's FY 2014-15 and FY 2015-16 budgets, subject to Board of Supervisors appropriation.

As also shown in Table 3 below, including the two-year option to extend period, the total seven-year operating and maintenance expenditures would be $34,304,580. Together with the one-time procurement costs of $19,695,421, the proposed IPS Group not-to-exceed contract totals $54,000,000.

Table 3: IPS Group Operating and Maintenance Expenditures

	Year 1*	Year 2	Year 3	Year 4	Year 5	Total Initial Lease Term	Option Year 6	Option Year 7	Total
Annual Operating Expenditures									
Credit Card Transaction Fees	$360,000	$799,920	$881,366	$964,362	$1,048,929	**$4,054,577**	$1,059,418	$1,070,012	**$6,184,007**
Wireless Communications Fees	442,500	973,500	1,062,000	1,150,500	1,239,000	**4,867,500**	1,239,000	1,239,000	**7,345,500**
Meter Management System Licensing Fees	682,500	1,501,500	1,638,000	1,774,500	1,911,000	**7,507,500**	1,911,000	1,911,000	**11,329,500**
Subtotal – Annual Operating Expenditures	***$1,485,000***	***$3,274,920***	***$3,581,366***	***$3,889,362***	***$4,198,929***	***$16,429,577***	***$4,209,418***	***$4,220,012***	***$24,859,007***
Other Annual Expenditures									
Spare Parts		694,233	1,388,466	1,388,466	1,388,466	**4,859,630**	1,388,466	1,388,466	**7,636,561**
Optional Two One-Year Warranty Extension				475,781	951,563	**1,427,344**			**1,427,344**
Subtotal - Other Annual Expenditures		***$694,233***	***$1,388,466***	***$1,864,247***	***$2,340,028***	***$6,286,973***	***$1,388,466***	***$1,388,466***	***$9,063,905***
Total Annual Expenditures	**$1,485,000**	**$3,969,153**	**$4,969,832**	**$5,753,609**	**$6,538,957**	**$22,716,550**	**$5,597,884**	**$5,608,478**	**$33,922,912**
Contingency (0.7 percent)						**381,668**			**381,668**
Total Operating and Maintenance Expenditures						**$23,098,218**			**$34,304,580**

*Operating expenditures will be less in the first year of the agreement as support service fees will begin to accrue as the single-space parking meters are installed and activated through December 2014.

As noted above, SFMTA's expenditures under the existing Serco agreement to collect parking meter revenues are expected to decrease due to reduced coin collections in lieu of credit card and other electronic payments with the new parking meters. According to Mr. Lee, when the new parking meter transition is complete, the Serco agreement will only be used for coin collections and counting.

In addition, Mr. Lee states that the agreement with Serco includes meter management system costs, credit card processing and wireless communication fees for the existing SF*park* pilot meters. These services for the SF*park* meters will transfer to the new IPS Group agreement, and will no longer be included in the Serco contract. Ms. Fuqua estimates that annual savings of $480,000 under the existing Serco agreement will partially offset the operating expenditures of $3,274,920 in year two under the proposed IPS Group agreement, for net increased operating expenditures of approximately $2,794,920.

RECOMMENDATION

Approve the proposed resolution.

SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
BOARD OF DIRECTORS

RESOLUTION No. 13-216

WHEREAS, In 2002, the Board of Supervisors adopted Resolution No. 305-02, which approved an agreement to replace old mechanical parking meters with electronic single-space meters and multi-space paystations; and,

WHEREAS, Under the 2002 agreement, the San Francisco Municipal Transportation Agency (SFMTA) replaced 23,000 broken-down mechanical meters citywide; and,

WHEREAS, There are currently 28,063 metered parking spaces in the City that are covered by single-space meters; and,

WHEREAS, The SFMTA now wishes to conduct another meter procurement because existing meter technology is outdated, spare parts are no longer available, there is no credit card payment option available for non-SF*park* meters, and systemwide updates cannot be supported; and;

WHEREAS, The SFMTA released an RFP in October 2012 for single-space meters and received two proposals, from MacKay Meters Inc. and IPS Group, Inc.; and

WHEREAS, An evaluation panel, consisting of five subject-matter experts from the SFMTA, the SF Airport and the Port of San Francisco, reviewed the proposals and selected IPS Group, Inc. as the highest-ranked proposer; and,

WHEREAS, On April 23, 2013, MacKay submitted a protest; the SFMTA determined that the protest was without merit; and,

WHEREAS, The SFMTA successfully negotiated an agreement with IPS Group, Inc. for procurement of up to 35,000 single-space meters, parts and support services; and,

WHEREAS, The SFMTA obtained a waiver of the LBE subcontracting requirement because the equipment to be procured includes proprietary programming and hardware that requires all services related this procurement to be performed only by personnel of the successful vendor; and

WHEREAS, Procurement of parking meters is categorically exempt under the California Environmental Quality Act; therefore, be it

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RESOLVED, That the SFMTA Board of Directors authorizes the Director of Transportation to execute an agreement with IPS Group, Inc. for the Procurement of Single-Space Parking Meters and Support Services, for an amount not to exceed $54 million, and for a term of five years with an option to extend the contract for up to two additional years; and be it further

RESOLVED, That the SFMTA Board urges the Board of Supervisors to approve the Agreement.

I certify that the foregoing resolution was adopted by the San Francisco Municipal Transportation Agency Board of Directors at its meeting of September 17, 2013.

R. Boomer

Secretary to the Board of Directors
San Francisco Municipal Transportation Agency

September 23, 2013

The Honorable Members of the Board of Supervisors
City and County of San Francisco
1 Dr. Carlton B. Goodlett Place, Room 244
San Francisco, CA 94102

Subject: Agreement with IPS Group, Inc.
Single-Space Parking Meter Procurement and Support Services

Honorable Members of the Board of Supervisors:

The purpose of this briefing is to provide information to support the San Francisco Municipal Transportation Agency's (SFMTA) request that the Board of Supervisors authorize the SFMTA to enter into an agreement with IPS Group, Inc., for an amount not to exceed $54 million, and for a term of five years, with the option to extend the term up to two additional years.

Background
In 2002, the Board of Supervisors adopted Resolution No. 305-02, which approved an agreement to replace old mechanical parking meters with electronic single-space meters and multi-space paystations. Under the 2002 agreement, the SFMTA procured than 24,830 single-space and 490 multi-space parking meters, which are maintained by the SFMTA's Meter Shop. The SFMTA currently has 28,063 metered spaces (24,830 are covered by single-space meters and 3,236 are covered by multi-space paystations).

Reasons for Meter Replacement
The existing meters and paystations (except for the meters purchased for the SF*park* Pilot) are more than ten years old:

- Technology is outdated – any modifications to the meters have to happen manually by going from meter to meter, and systemwide updates cannot be supported remotely.
- Meter spare parts are outdated and are hard to procure or no longer available.
- There is no credit card payment option.

New parking meters and paystations would integrate current technology:

- Allows customers a variety of ways to pay for parking meter spaces, including coin, smart card, credit card and by phone.
- Larger screen and tactile operating buttons provide a more user-friendly interface.
- Visual indication of Pay-By-Phone payment will be available on the meter.
- Notification of maintenance needs and meter programming can be done remotely
- Meter batteries are longer lasting and meter replacement parts are easy to come by.

Selection and Evaluation Process

After receiving SFMTA Board approval, the SFMTA released a Request for Proposals (RFP) on October 17, 2012 for procurement of both meters and paystations. On January 18, 2013, two proposals were submitted for the meter procurement -- by IPS Group Inc. (IPS) and MacKay Meters, Inc. (MacKay).

In February and March of 2013, an evaluation panel consisting of five experts from the SFMTA, the San Francisco International Airport and the Port of San Francisco reviewed and scored the two proposals for the meter procurement. After the evaluations, which included oral demonstrations from both vendors, IPS emerged as the highest-ranked proposer.

On April 23, 2013, MacKay protested the SFMTA's selection of IPS for negotiation of the meter contract. The SFMTA determined that the protest was without merit. MacKay did not contest this determination.

Proposed Agreement

The proposed Agreement will consist of the following:

- Procurement of 25,000 parking meters with an option to purchase an additional 10,000 devices over the term of the agreement. Devices will also be used to replace existing Port of San Francisco meters.
- Procurement of support services: Access to the Meter Management System (software applications); credit card processing; communications between the meter and the credit card processing gateway, vendor management system, and SFMTA databases; product support; and warranty.
- Procurement of meter spare parts and related services.
- The term of the agreement is five years, with the option to extend for up to two additional years. The option years would provide for continued support services while the SFMTA considers whether advancing technologies would necessitate a new meter procurement.

The SFMTA obtained an LBE subcontracting waiver because the equipment to be procured includes proprietary programming and hardware that requires all services related this procurement to be performed only by personnel of the successful vendor. This is standard practice within the parking meter industry and is a result of 1) increasing demands for specialization; 2) the emergence of smart meters that can process multiple payment methods (coin, credit/ debit card, smart card, etc.); and 3) more sophisticated programming to accommodate variable metered parking rates, including those used for special event pricing. No work associated with the procurement and software support would be conducted by personnel outside of the firm contracted to supply the equipment.

Procurement of parking meters is categorically exempt under the California Environmental Quality Act. A copy of the exemption letter is on file in the SFMTA Board Secretary's office.

Funding Impact

Funding for the procurement comes from local funds. The contract amount is broken down as follows: $19.1 million for Capital Expense (includes optional meters); $7.9 million for spare parts; $27 million for support and Operational Costs, including option years.

The following table summarizes costs for the meter procurement and support services, including the option years:

Line #	Category	Annual Cost	Years of Service	Sub-Total	Sales Tax (8.75%)	Total
1	Capital Expense	$12,225,000	1	$12,225,000	$1,069,688	$13,294,688
2	Project Management	$180,000	1	$180,000	$0	$180,000
3	Spare Parts - First Year	$248,375	1	$248,375	$21,733	$270,108
4	Spare Parts - Subsequent Years	$1,276,750	5.5	$7,022,125	$614,436	$7,636,561
5	Support Services / Development – First Year	$175,000	1	$175,000	$0	$175,000
6	Support Services / Development – Subsequent Years	$175,000	1	$175,000	$0	$175,000
7	Optional Single Space Parking Meter Mechanism	$5,150,000	1	$5,150,000	$450,625	$5,600,625
8	Extended Warranty	$875,000	1.5	$1,312,500	$114,844	$1,427,344
9	Annual Operating Expenditure* Year 1	$2,970,000	0.5	$1,485,000	$0	$1,485,000
10	Annual Operating Expenditure* Year 2	$3,274,920	1	$3,274,920	$0	$3,274,920
11	Annual Operating Expenditure* Year 3	$3,581,366	1	$3,581,366	$0	$3,581,366
12	Annual Operating Expenditure* Year 4	$3,889,362	1	$3,889,362	$0	$3,889,362
13	Annual Operating Expenditure* Year 5	$4,198,929	1	$4,198,929	$0	$4,198,929
14	Annual Operating Expenditure* Year 6 (Option Year)	$4,209,418	1	$4,209,418	$0	$4,209,418
15	Annual Operating Expenditure* Year 7 (Option Year)	$4,220,012	1	$4,220,012	$0	$4,220,012
16	Contingency			$381,668		$381,668
17	**Total Not to Exceed**			**$51,728,675**	**$2,271,325**	**$54,000,000**

**Meter Management System licensing, credit card processing and wireless communication fees.*

Recommendation

Approval of the agreement will provide a more user-friendly interface, allow for multiple payment options for parking; enable the SFMTA Meter Shop to maintain meter functionality, make programming changes remotely and easily replace parts as needed; and implement current technology. Therefore, the SFMTA recommends that the Board of Supervisors authorize the Agency to enter into an agreement with IPS Group, Inc. for the Procurement of Single-Space Parking Meters and Support Services for an amount not to exceed $54 million, and for a term of five years with the option to extend the contract for up to two additional years.

Thank you for your consideration of the proposed agreement. Should you have any questions or require more information, please do not hesitate to contact me any time.

Sincerely,

Edward D. Reiskin
Director of Transportation

AGREEMENT

FOR THE PROCUREMENT OF

PARKING METERS

Contract # SFMTA-2013-09

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CITY AND COUNTY OF SAN FRANCISCO
SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY
ONE SOUTH VAN NESS AVE. 7TH FLOOR
SAN FRANCISCO, CALIFORNIA 94103

AGREEMENT FOR THE PROCUREMENT OF PARKING METERS

Contract # SFMTA-2013-09

This Agreement is made this _____ day of _____, 2013, in the City and County of San Francisco, State of California, by and between IPS Group Inc.("Contractor"), and the City and County of San Francisco, a municipal corporation ("City"), acting by and through its Municipal Transportation Agency ("Agency" or "SFMTA").

RECITALS

A. Agency issued a Request for Proposals for the procurement of Parking Meters and Parking Paystations, with associated spare parts, training, and manuals.

B. The City selected Contractor's proposal as the highest-rated proposal, and City and Contractor agreed on the terms and conditions set forth below.

NOW, THEREFORE, it is agreed by the parties as follows:

1 **DEFINITIONS.** Where any word or phrase defined below, or a pronoun used in place thereof, is used in any part of the Contract Documents, it shall have the meaning set forth herein or in the Technical Specifications.

1.1 Acceptance: The formal written acceptance by the City that all work, or a specific portion thereof, under the Contract has been satisfactorily completed, in accordance with the Acceptance criteria set out in Section 6.4.

1.2 Agency or SFMTA: The Municipal Transportation Agency of the City

1.3 Award: Notification from the City to Contractor of acceptance of Contractor's Bid, subject to the execution and approval of a satisfactory Contract and bond to secure the performance thereof, and to such other conditions as may be specified or otherwise required by law.

1.4 Batch: A delivery of a set number of Meter Mechanisms/Parking Meters, ~~including all associated components that would allow a Meter Mechanism~~ to operate in a street environment (e.g., all the necessary software, firmware, hardware, installation kits, domes, decals).

1.5 Board of Supervisors: Board of Supervisors of City.

1.6 Certification: Certification by the Controller of City that funds necessary to make payments as required under the contract are available in accordance with Section 6.302 of the City Charter.

1.7 **Change Notice:** A written interpretation, revision, or addition to the RFP issued before proposal opening.

1.8 **City:** The City and County of San Francisco.

1.9 **Conformed Contract Documents:** The contract documents revised to incorporate all changes made during the proposal period by Change Notice and to incorporate information included in the Proposal accepted by the City.

1.10 **Contract or Agreement:** The written Contract executed by the City and Contractor, covering the performance of the Work and furnishing of labor, materials, equipment, tools, and services, including Work incidental to the procurement, to include all Conformed Contract Documents, the Technical Specifications, Contractor's bid submissions, the Contract bonds or other security, and all Contract Modifications.

1.11 **Contract Modification:** A written order, issued by the City to Contractor, covering changes in the Contract documents within the general scope of the Contract and establishing the basis of payment and time adjustments for the work affected by the changes.

1.12 **Contractor:** IPS Group Inc.

1.13 **Controller:** Controller of the City.

1.14 **Days:** Unless otherwise designated, the word "Days" refers to calendar days of the City.

1.15 **Deliverables:** The equipment, components, materials and Services to be furnished under this Agreement.

1.16 **Delivery:** Point in time in the procurement process when the meters have been delivered to the mutually agreed upon staging location within three miles from the Meter Shop at 1508 Bancroft Avenue, San Francisco, CA 94124.

1.17 **Director:** The Director of Transportation of Agency, or his or her designee.

1.18 **Effective Date:** The date that the City's Controller certifies the availability of funds for this Agreement as provided in Section 2.

1.19 **Meter:** Equipment to be procured under this Agreement consisting of a Meter Mechanism, as defined in the Statement of Work, and a dome, which allows a customer to pay for use of a single parking space.

1.20 **Notice to Proceed:** A written notice to the Contractor of the date on which it shall begin the Work.

1.21 **Party; Parties:** The City and Contractor, either collectively or individually.

1.22 **Performance Bond:** Security issued by a corporate surety, acceptable to the City and on a form furnished by the City, to guarantee the performance of obligations under the contract.

1.23 **Proposal:** The technical and management information and prices submitted in the prescribed format and on the prescribed forms in response to the Request for Proposals.

1.24 **Proposer:** Any firm, partnership, corporation, or combination thereof submitting a Proposal for the contemplated procurement.

1.25 **Request for Proposals (RFP):** The Request for Proposals issued by the City on October 17, 2012.

1.26 **Services.** The portion of the Work other than the provision of equipment, including, but not limited to, access to the Meter Management System; credit card processing; communications between the meter and the credit card processing gateway, vendor management system, and SFMTA databases; product support; and warranty.

1.27 **SFMTA Contract Administrator:** The SFMTA designated liaison assigned to the Contract for the Agency, or designated agent.

1.28 **Subcontractor:** Any individual, partnership, firm, or corporation that undertakes integrally on the Project the partial or total design, manufacture, or performance of one or more items of work under the terms of the contract. As used herein, the terms subcontractor and sub-supplier are synonymous.

1.29 **Surety:** The corporate body, licensed to issue bonds in the State of California, bound with and for the Contractor for the full and complete performance of the contract and for the payment of all debtors pertaining to the work. When applied to the Proposal Bond (bid bond), it refers to the corporate body acting as guarantor that the Proposer will enter into a contract with the City and County of San Francisco.

1.30 **Technical Specifications:** The specifications, provisions, and requirements that detail the work and the materials, products (including the methods of manufacture, construction, assembly, and testing), and other requirements relative to the Work.

1.31 **Work:** The furnishing of all services, products, materials, equipment, tools, supplies and the performance of all requirements called for by the Contract and necessary to the completion of the Contract.

2 TERM OF AGREEMENT.

The base term of this Agreement shall commence on the Effective Date, as evidenced by SFMTA's issuance of the Notice to Proceed, and expire five years thereafter unless the Agreement is earlier terminated as otherwise provided herein. At the sole discretion of the SFMTA, this Agreement may be extended for up to two additional years.

3 SCOPE OF WORK

The Agreement covers the procurement of 25,000 single-space Parking Meters, and associated services and support, as set forth in Appendix A (Technical Specifications), attached to this Agreement and incorporated by reference as though fully set forth. The Agreement also includes an option to purchase approximately 10,000 additional single-space Parking Meters, and associated services and support.

4 FINANCIAL MATTERS

4.1 Compensation

4.1.1 **Amount.** Compensation shall be made in monthly payments on or before the 30th day of each month for work, as set forth in Section 3 of this Agreement, that the SFMTA's Director of Transportation, in his or her sole discretion, concludes has been performed as of the last day of the immediately preceding month. Subject to any

subsequent deductions for Liquidated Damages as listed in Section IV. of Appendix B, the City agrees to pay an amount not to exceed Fifty-Three Million, Six Hundred Eighteen Thousand, Three Hundred Thirty-Two Dollars ($53,618,332) (the total Contract amount) in accordance with the terms and conditions of this Agreement. The breakdown of costs associated with this Agreement appears in the Price Schedule (Appendix C), incorporated by reference as though fully set forth herein. In no event shall City be liable for interest or late charges for any late payments.

4.1.2 Payment Limited to Satisfactory Deliverables. Contractor is not entitled to any payments from City for the Meters until they have been Accepted by the City. Payments to Contractor by City shall not excuse Contractor from its obligation to replace unsatisfactory Deliverables even if the unsatisfactory character of such Deliverables may not have been apparent or detected at the time such payment was made. City may reject Deliverables that do not conform to the requirements of this Agreement and Contractor must cure any non-conformity without delay and at no cost to the City

4.1.3 Payment Schedule.

(a) Meters. Subject to Section 4.1.1, the City will make payment for each Meter after it is Accepted by City and properly invoiced.

(b) Monthly Operational Expenses. The City will make monthly progress payments for operational expenses.

(c) Spare Parts. The City will make payment for each order of spare parts after its Delivery to the Meter Shop and receipt of a proper invoice.

4.1.4 Withholding of Payments. If Contractor fails to provide Deliverables in accordance with Contractor's obligations under this Agreement, the City may withhold any and all payments due to Contractor for such deliverables until such failure to perform is cured, and Contractor shall not stop work as a result of City's withholding of payments as provided herein.

4.1.5 Invoice Format. Contractor may invoice SFMTA for all items Accepted under this Agreement. Invoices furnished by Contractor under this Agreement must be in a form acceptable to the SFMTA and the Controller, and must include a unique invoice number. Payment shall be made by City to Contractor at the address specified in Section 19.6 entitled "Notices to the Parties," or in such alternate manner (including electronic payment) as the Parties have mutually agreed upon in writing.

Each invoice shall also include:

- Relevant milestones
- Contract order number;
- Quantity of items;
- Description of items;
- Unit price;

- Amount of sales taxes requested to be paid
- Total invoice amount.

Contractor's invoices shall be supported by evidence (such as original delivery notes, Acceptance paperwork, or MMS billing reports) satisfactory to SFMTA that the Work invoiced has been accomplished and that the materials, listed, if any, are stored and ready for use.

4.1.6 Currency. All payments by the City to Contractor pursuant to this Section 4 shall be in United States Dollars and made by bank-to-bank electronic transfer. Contractor shall provide to SFMTA all routing information required to effect such transfers.

4.1.7 Exchange Rate Risk. The City will not make price adjustments on this Contract to protect the Contractor from fluctuations in the value of the applicable foreign currency in relation to the United States dollar.

4.1.8 Inflation Risk. City will not make price adjustments during the base term of this Contract to protect Contractor from economic inflation. A one-time price adjustment may be considered during extension years.

4.2 Certification of Funds; Budget and Fiscal Provisions; Termination in the Event of Non-Appropriation. This Agreement is subject to the budget and fiscal provisions of the City's Charter. Charges will accrue only after prior written authorization certified by the City's Controller and any amount of the City's obligation hereunder shall not at any time exceed the amount certified for the purpose and period stated in such advance authorization. This Agreement will terminate without penalty, liability, or expense of any kind to City at the end of any fiscal year in the event funds are not appropriated for the next succeeding fiscal year. If funds are appropriated for a portion of the fiscal year, this Agreement will terminate, without penalty, liability, or expense of any kind at the end of the term for which funds are appropriated. City has no obligation to make appropriations for the Agreement in lieu of appropriations for new or other agreements. City budget decisions are subject to the discretion of the Mayor and the Board of Supervisors. Contractor's assumption of risk of possible non-appropriation is part of the consideration for this Agreement.

THIS SECTION CONTROLS AGAINST ANY AND ALL OTHER PROVISIONS OF THE AGREEMENT.

4.3 Guaranteed Maximum Costs. The City's payment obligation to Contractor cannot at any time exceed the amount certified by City's Controller for the purpose and period stated in such certification. No City representative is authorized to offer or promise, nor is the City required to honor, any offered or promised payments to Contractor under this Agreement in excess of the certified maximum amount without the Controller having first certified the additional promised amount and the Parties having modified this Agreement as required in Section 19.24.

4.4 Submitting False Claims. Pursuant to San Francisco Administrative Code §21.35, any contractor, subcontractor or consultant who submits a false claim shall be liable to the City for three times the amount of

damages which the City sustains because of the false claim. A contractor, subcontractor or consultant who submits a false claim shall also be liable to the City for the costs, including attorneys' fees, of a civil action brought to recover any of those penalties or damages, and may be liable to the City for a civil penalty of up to $10,000 for each false claim. A contractor, subcontractor or consultant will be deemed to have submitted a false claim to the City if the contractor, subcontractor or consultant: (a) knowingly presents or causes to be presented to an officer or employee of the City a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by the City; (c) conspires to defraud the City by getting a false claim allowed or paid by the City; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to pay or transmit money or property to the City; or (e) is a beneficiary of an inadvertent submission of a false claim to the City, subsequently discovers the falsity of the claim, and fails to disclose the false claim to the City within a reasonable time after discovery of the false claim.

4.5 **Payment Does Not Imply Acceptance of Work.** The granting of any payment or payments by the City, or the receipt thereof by the Contractor, shall in no way lessen the liability of the Contractor to replace unsatisfactory work or material although the unsatisfactory character of such work or material may not have been apparent or detected at the time such payment was made. Materials, components, or workmanship that do not conform to the Technical Specifications will be rejected and shall be replaced by the Contractor without delay.

4.6 **Audit and Inspection of Records.** Contractor agrees to maintain and make available to the City, during regular business hours, accurate books and accounting records relating to its Services. Contractor will permit City to audit, examine and make excerpts and transcripts from such books and records, and to make audits of all invoices, materials, payrolls, records or personnel and other data related to all other matters covered by this Agreement, whether funded in whole or in part under this Agreement. Contractor shall maintain such data and records in an accessible location and condition for a period of not less than three years after final payment under this Agreement or until after final audit has been resolved, whichever is later. Contractor shall include the same audit and inspection rights and record retention requirements in all subcontracts. City will make every effort to accommodate Contractor during an audit to protect any information that Contractor deems to be a trade secret as defined under California law.

5 TECHNICAL SPECIFICATIONS

5.1 **Fabrication.** The Meters procured under this Contract shall be fabricated and guaranteed in accordance with the Statement of Work and the Contractor's warranty provisions, contained in attached to Attachment 13 to Appendix A of the Conformed Contract Document of this Agreement.

5.2 **Omission.** Notwithstanding technical specifications, or other data provided by the SFMTA Project Manager / Representative, the Contractor shall have the responsibility of supplying all parts and details required to make the Parking Meters complete and ready for service even though such details may not be specifically mentioned in the specifications. Items

that are installed by SFMTA shall not be the responsibility of the Contractor unless they are included in this contract or should have been installed by the Contractor.

5.3 **Priority,** In the event of any deviation between the description of the Parking Meters in the Technical Specifications and in any other provision of the Contract or the Contractor's Proposal, the Technical Specifications shall govern.

5.4 **Responsibility for Materials/Accessories.** The Contractor shall be responsible for all materials and workmanship in the construction of the Parking Meters and all accessories used, whether the same are manufactured by the Contractor or purchased from a subcontractor. This provision excludes equipment leased or supplied by SFMTA, except insofar as such equipment is damaged by the failure of a part or component for which the Contractor is responsible, or except insofar as the damage to such equipment is caused by the Contractor during the manufacture of the Meters.

6 SINGLE-SPACE METER MECHANISMS (PARKING METERS)

6.1 **Deliverables.** Contractor shall provide Parking Meters and related components and services according to the Specifications set forth in Appendix A.

6.2 **Delivery Schedule.** The Parking Meters and other Deliverables shall be provided according to the Delivery Schedule attached as Appendix D, to the extent Contractor requires information from SFMTA in order to produce a Deliverable, Contractor shall provide SFMTA with a list of requested information and the dates such information is required in order for Contractor to comply with the Delivery Schedule. Contractor shall provide SFMTA with the list at least six weeks in advance of the date such information is required.

6.3 **Assumption of Risk of Loss.** Except for losses directly and solely attributable to actions or inactions of SFMTA, or as a result of vandalism, prior to Delivery of Meters to SFMTA, the Contractor shall bear risk of loss of the Meters, including any damage sustained during transportation to the Delivery site. Transfer of title to Meters, and risk of loss, shall pass to City upon Delivery.

6.4 **Acceptance**

6.4.1 **General Acceptance Criteria,** The Contractor shall meet the following acceptance criteria for the Meters and related Services. Meters installed and operational fully functional for 30 days shall be deemed to be Accepted and SFMTA will send written verification of which Meters are Accepted and which are not Accepted in each Batch. A delivered Batch will be considered "Not Accepted" if five percent of the Meters fail any of the conditions listed below. If SFMTA determines a Batch to be "Not Accepted," the Contractor shall return the Batch at its expense and provide a compliant Batch. Notwithstanding the above, unless notified otherwise by the SFMTA, a Meter Batch will be deemed Accepted 45 Days from its Delivery.

(a) The delivered meter technology meets the requirements set forth in subsection A of Sections I, II and III of the Technical Specifications.

(b) The delivered MMS meets the requirements set forth in subsection A of Sections I, II and III of the Technical Specifications.

(c) The transaction feed to the SFMTA Data Warehouse from Vendor's MMS meets the requirements of Attachment 1-13 to the Technical Specifications.

(d) The nightly batch file feed to SFMTA's SFPM meets the requirements of Attachment 1-13 to the Technical Specifications.

(e) The audit vs. actual coin revenue is accurate to 99% (i.e. the MMS "Coin Revenue Audit Report" matches actual revenue collected from Parking Meter to 99% accuracy).

6.4.2 **Commissioning Checklist.** SFMTA will use the checklist attached as Appendix E to test the meters and MMS prior to and during installation. SFMTA may test for any functional meter mechanism and MMS requirement at any time.

7 INTELLECTUAL PROPERTY RIGHTS

7.1 Works for Hire; Ownership of Results. If, in connection with services performed under this Agreement, Contractor or its subcontractors create artwork, copy, posters, billboards, photographs, videotapes, training materials, audio tapes, systems designs, software, reports, diagrams, surveys, source code, computerized database information, or any other original works of authorship specifically and exclusively for City, such works of authorship shall be works for hire as defined under Title 17 of the United States Code, and all copyrights in such works are the property of the City upon full payment by the City to the Contractor for any such works. If it is ever determined that any works created by Contractor or its subcontractors under this Agreement are not works for hire under U.S. law, Contractor hereby assigns all copyrights to such works to the City, and agrees to provide any material and execute any documents necessary to effectuate such assignment. With the approval of the City, Contractor may retain and use copies of such works for reference and as documentation of its experience and capabilities.

7.2 Licenses Granted

7.2.1 Computerized software and systems. To the extent that software, firmware, systems designs, computerized manuals, training modules, or other such deliverables are not designed specifically for City's purposes in connection with the Agreement, Contractor grants City a perpetual, non-transferable, license at all locations owned or controlled by City to use all such deliverables, or portions thereof based on the pricing schedule contained in this Agreement. City shall also be authorized to modify or prepare derivative works of the deliverables and make copies of such deliverables for internal use only. Any such modifications shall become the property of the City unless such modifications are not used exclusively for internal purposes. City agrees not to remove

or destroy any proprietary markings or proprietary legends placed upon or contained within the deliverable(s) or any related materials or documentation. Contractor hereby warrants that it has title to and/or the authority to grant a license of such deliverables to the City.

7.2.2 Escrow Agreement. Contractor agrees, at its expense, to place the applicable source codes for all Software that is proprietary to Contractor, including periodic updates of said source codes, and other proprietary materials, into an escrow. The source codes placed in escrow shall be on digital media and shall be accompanied by detailed software documentation, including a list of applicable software development tools. To effect such arrangement, after issuing the Notice to Proceed, City and Contractor shall negotiate and enter into an escrow agreement to be in place within 60 Days following NTP. The Director shall execute said escrow agreement on behalf of City. The escrow account shall be maintained by a third party escrow agent on behalf of the City.

7.2.3 The Director shall execute said escrow agreement on behalf of City. Except as authorized under this Section, Contractor does not grant City a license to view or access the source codes for the Software.

7.2.4 Other Deliverables. Contractor grants City a perpetual, non-exclusive, non-transferable license to use, retain, and reproduce at all locations controlled by SFMTA, for internal use only, all copies (whether in hard copy or electronic format) of drawings, plans, specifications, schematics, studies, reports, memoranda, computation sheets and all other documents that are (i) prepared by Contractor or its subcontractors or suppliers (but not exclusively for City); and (ii) required to be provided to City in connection with this Agreement. Contractor hereby warrants that it has title to and/or the authority to grant a license of such deliverables to the City.

7.2.5 Proprietary Materials.

(a) The City agrees that it will not knowingly sell any equipment or allow any third party to gain access to equipment, software, or documentation provided by Contractor for the purposes of reverse engineering without the written consent of the Contractor. This prohibition shall not apply (1) to the sale or other transfer of equipment after the end of its useful life, or (2) to consultants hired by the City to assist with the SFMTA's off-street parking program.

(b) To the extent that the Contractor considers any document or deliverable to be a trade secret or otherwise proprietary, Contractor shall so mark them. SFMTA shall require individuals using such proprietary documents to maintain the confidentiality of the documents, and if necessary, sign a confidentiality agreement regarding use of highly sensitive documents. Alternatively, at SFMTA's request, documents shall be placed in escrow, along with source codes, as described in subsection 2.a above. Contractor shall hold the

City harmless from and defend the City against all claims, suits or other proceedings instituted against the City for copyright infringement, misuse or misappropriation of a trade secret, or for access to the documents or deliverables under the City's Sunshine Ordinance or the California Public Records Act as it pertains specifically to this contract with regards to products or services provided by the Contractor. Contractor shall be notified in writing prior to disclosure under the City's Sunshine Ordinance or the California Public Records Act in order to file an injunction to protect any such Contractor information believed to be confidential or proprietary. Contractor will pay the costs and damages awarded in any such action or proceeding, or the cost of settling such action or proceeding, provided that Contractor shall have sole control of the defense of any such action and all negotiations or its settlement or compromise. If notified promptly in writing of any informal claim (other than a judicial action) brought against City based on an allegation that City's use of the equipment or other deliverables constitutes infringement, Contractor will pay the costs associated with resolving such claim and will pay the settlement amount (if any), provided that Contractor shall have sole control of the resolution of any such claim and all negotiations for its settlement. The Contractor shall not be held liable nor be required to provide indemnification to the City in the case of negligence on the part of the City or for any action unrelated to the products and services provided by Contractor or related to this Agreement.

7.2.6 Standard of Care. Notwithstanding Subsection 7.2.4 and Subsection 19.15, the Parties understand and agree that the California Uniform Trade Secrets Act, Cal. Civ. Code § 3426 et seq., prohibits disclosure of any trade secrets of either in the possession of the other. Furthermore, the Party receiving confidential information from the other Party agrees not to disclose or produce such information for any purpose, including in response to a subpoena or other court or governmental order or law, without giving the disclosing Party ten days' written notice and an opportunity to object to the disclosure or production of any information of a possible trade secret, or of proprietary or confidential nature.

8 NONDISCLOSURE OF PRIVATE, PROPRIETARY OR CONFIDENTIAL INFORMATION

8.1 If this Agreement requires City to disclose "Private Information" to Contractor within the meaning of San Francisco Administrative Code Chapter 12M, Contractor shall use such information only in accordance with the restrictions stated in this Agreement and as necessary in performing the Work. The provisions of Chapter 12M, including but not limited to the penalties for noncompliance provided in such Chapter, are incorporated by this reference and made part of this Agreement as though fully set forth herein.

8.2 In the performance of this Agreement, Contractor may have access to City's proprietary or confidential information, the disclosure of which to

third parties may damage City. If City discloses proprietary or confidential information to Contractor, such information must be held by Contractor in confidence and used only in performing the Agreement. Contractor shall exercise the same standard of care to protect such information as a reasonably prudent contractor would use to protect its own proprietary or confidential information.

9 LIABILITY OF THE PARTIES

9.1 Liability of City. CITY'S PAYMENT OBLIGATIONS UNDER THIS CONTRACT SHALL BE LIMITED TO THE PAYMENT OF THE COMPENSATION PROVIDED FOR IN SECTION 4.1.1 OF THIS AGREEMENT, AS AMENDED BY CONTRACT MODIFICATIONS. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, IN NO EVENT SHALL CITY BE LIABLE, REGARDLESS OF WHETHER ANY CLAIM IS BASED ON CONTRACT OR TORT, FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR THE SERVICES PERFORMED IN CONNECTION WITH THIS AGREEMENT.

9.2 Liability for Use of Equipment. City shall not be liable for any damage to persons or property as a result of the use, misuse or failure of any equipment used by Contractor, or any of its subcontractors, or by any of their employees, even though such equipment is furnished, rented or loaned by City.

9.3 Liability for Incidental and Consequential Damages. Contractor shall be responsible for incidental and consequential damages resulting in whole or in part from Contractor's acts or omissions.

10 LIQUIDATED DAMAGES; CREDIT ASSESSMENTS; DELAY

10.1 LD Schedule. The Schedule of Liquidated Damages (LDs) can be found in Appendix B. LDs will not be assessed in situations where actual damages are known and for which Credit Assessments may be imposed (see Section 10.2 below); moreover, City may seek damages for matters for which liquidated damages are not provided for and any other damages that may be recoverable by the City and specified elsewhere in the Contract documents. With respect to any breaches or items for which the City has a right to obtain liquidated damages, the City will not seek actual damages or any damages in excess of the liquidated damages to which it may be entitled.

10.2 Credit Assessments. The Schedule of Credit Assessments can be found in Appendix B.

10.3 Unavoidable Delay. An Unavoidable Delay is an interruption of the Work beyond the control of the Contractor, which the Contractor could not have avoided by the exercise of care, prudence, foresight, and diligence. Such delays include and are limited to acts of God; floods; windstorms; tornadoes; earthquakes or other natural disasters; acts of terrorism; wars; riots; insurrections; epidemics; quarantine restrictions; strikes and lockouts; freight embargoes; acts of a governmental agency; priorities or privileges established for the manufacture, assembly, or allotment of materials by order, decree, or otherwise of the United States or by any department, bureau, commission, committee, agent, or administrator of any legally constituted public authority; vandalism, theft and accidental

damage not caused in any way by the Contractor after Delivery of Meters; changes in the Work ordered by the City insofar as they necessarily require additional time in which to complete the entire Work; the prevention by the City of the Contractor's commencing or prosecuting the Work, or interruption or failure of electrical power, the internet or cellular telecommunications caused by any of the events or causes described herein. The duration of said Unavoidable Delays shall be limited to the extent that the commencement, prosecution, and completion of the Work are delayed thereby, as determined by the City acting reasonably.

10.4 Notification of Delay. The Contractor shall notify SFMTA as soon as the Contractor has, or should have, knowledge that an event has occurred that will result in an Unavoidable Delay of deliveries. Within five calendar days, the Contractor shall confirm such notice in writing, furnishing as much detail as is available.

10.5 Request for Extension of Time. The Contractor agrees to supply, as soon as such data are available, any reasonable proof that is required by SFMTA to make a decision on any request for an extension of time. SFMTA shall examine the request and any documents supplied by the Contractor and shall determine if the Contractor is entitled to an extension of time and the duration of such extension. SFMTA shall notify the Contractor of its decision in writing. The granting of an extension of time because of Unavoidable Delays shall in no way operate as a waiver on the part of the City of the right to collect liquidated damages for other delays or of any other rights to which the City is entitled.

11 PAYMENT OF TAXES AND OTHER GOVERNMENTAL CHARGES

The City will reimburse the Contractor for any levied sales tax on articles purchased by the City under this Agreement. However, if the Contractor cannot be authorized to collect and pay the sales taxes to the State of California, then the City will pay the sales tax directly to the State. Contractor shall be solely responsible for any penalties, interest or fees assessed as a result of late or erroneous payment of such taxes on the part of the Contractor. The City warrants that it is a public entity exempt from certain federal excise taxes and in connection therewith that it has obtained a federal excise tax exemption certificate. Contractor will pay all other taxes, licenses, imposts, duties, and all other governmental charges of any type whatsoever.

12 BONDS

12.1 The Contractor shall maintain at its own expense, and furnish to City, within 20 days following the receipt of the Notice to Proceed of the Contract, corporate surety bonds, as follows:

12.1.1 A Performance Bond in the amount of $1,000,000 to guarantee Contractor's faithful performance of all obligations regarding the supply, Delivery and Acceptance of Meters to be furnished under the Contract,

12.1.2 A Performance Bond in the amount of $3,000,000 to guarantee Contractor's faithful performance of all obligations regarding the Services to be furnished under the Contract, including warranty obligations.

12.2 The corporate surety on these bonds must be legally authorized to engage in the business of furnishing surety bonds in the State of California. All

sureties, bond coverage forms, and requests for changes to the bonding requirements must be approved by the City's Risk Manager. During the period covered by the Contract, if the surety on these bonds shall, in the opinion of the City's Risk Manager, become insolvent or unable to pay promptly the amount of such bonds to the extent to which surety might be liable, the Contractor, within 30 days after notice given by the City to the Contractor, shall by supplemental bonds or otherwise substitute another and sufficient surety approved by the Risk Manager in place of the surety becoming insolvent or unable to pay. If the Contractor fails within such 30-day period to substitute another and sufficient surety, the Contractor shall, if the City so elects, be deemed to be in default in the performance of its obligations hereunder, and the City, in addition to any and all other remedies, may terminate the Contract or bring any proper suit or proceeding against the Contractor and the surety, or may deduct from any monies then due or which thereafter may become due to Contractor under the Contract the amount for which the surety, insolvent or unable to pay as aforesaid, is obligated on the bonds, and the monies so deducted shall be held by the City as collateral security for the performance of the conditions of the bonds.

13 LETTER OF CREDIT

13.1 As an alternative to furnishing the performance bond(s) under Section 12, Contractor may submit within 15 Days following the receipt of a Notice of Award, one or more letters of credit in the amounts described in subsections 12.1.1 and 12.1.2 that comply with the requirements set forth below.

13.2 Any and all letters of credit issued pursuant to this Agreement shall be obtained from a national or California bank with at least a Moody's A rating and having at least one branch office within the City and County of San Francisco. The letter of credit shall be a confirmed, clean irrevocable letter of credit in favor of the City and County of San Francisco, a municipal corporation. The letter of credit shall have an original term of one year, with automatic extensions of the principal amount throughout the term of the contract, or until released by the City. The letter of credit shall provide that payment of the entire face amount of the letter of credit, or any portion thereof, shall be made to the City and County of San Francisco, upon presentation of a written demand to the bank signed by the General Manager on behalf of the City and County of San Francisco. The letter of credit shall constitute a security deposit guaranteeing all progress payments for which the letter of credit is issued.

13.3 If Contractor defaults with respect to any provision of this Agreement, City may, but shall not be required to, make its demand under the letter of credit for all or any portion thereof to compensate City for any loss that City may have incurred by reason of Contractor's default. City shall present its written demand to the bank for payment under the letter of credit only after City shall have made its demand for payment directly to Contractor, and five full business days have elapsed without Contractor having made payment to City or otherwise cured the default. City need not terminate this Agreement in order to receive compensation for its damages. If any portion of a letter of credit is so used or applied, Contractor, within 10 business days after written demand therefore, shall reinstate the letter of credit to its original amount; Contractor's failure to do so shall be a material breach of this Agreement.

13.4 Any letter of credit issued hereunder shall provide for 60 days notice by the bank to City in the event of non-extension of the letter of credit; in that event, Contractor shall replace the letter of credit at least 10 business days prior to its expiration. If Contractor fails to do so, City shall be entitled to present its written demand for payment of the entire face amount of the letter of credit. Any amounts so received by City shall be returned to Contractor upon replacement of the letter of credit.

13.5 If City receives any payments from the aforementioned bank under the letter of credit by reason of having made a wrongful or excessive demand for payment, City shall return to Contractor the amount by which City's total receipts from Contractor and from the bank under the letter of credit exceeds the amount to which City rightfully is entitled, together with interest thereon at the legal rate of interest, but City shall not otherwise be liable to Contractor for any damages or penalties.

14 INSURANCE

14.1 **Insurance.** Without in any way limiting Contractor's liability pursuant to the "Indemnification" section of this Agreement, Contractor must maintain in force, during the full term of the Agreement, insurance in the following amounts and coverages:

14.1.1 Workers' Compensation, in statutory amounts, with Employers' Liability Limits not less than $1,000,000 each accident, injury, or illness; and

14.1.2 Commercial General Liability Insurance with limits not less than $1,000,000 each occurrence and $2,000,000 general aggregate for Bodily Injury and Property Damage, including Contractual Liability, Personal Injury, Products and Completed Operations; and

14.1.3 Commercial Automobile Liability Insurance with limits not less than $5,000,000 each occurrence Combined Single Limit for Bodily Injury and Property Damage, including Owned, Non-Owned and Hired auto coverage, as applicable.

14.1.4 Technology Errors and Omissions Liability Insurance with limits of not less than $1,000,000 each claim in connection with the services to be provided under this Agreement.

14.1.5 A blanket fidelity bond or Crime Policy covering theft, dishonesty, forgery or alteration and computer fraud in an amount of not less than $1,000,000, including the City as additional obligee or loss payee as its interest may appear

14.2 Commercial General Liability and Commercial Automobile Liability Insurance policies must be endorsed to:

14.2.1 Name as an Additional Insured the City and County of San Francisco, its Officers, Agents, and Employees.

14.2.2 Provide that such policies are primary insurance to any other insurance available to the Additional Insureds, with respect to any claims arising out of this Agreement, and that insurance applies separately to each insured against whom claim is made or suit is brought.

14.3 All policies shall be endorsed to provide 30 days' advance written notice to the City of cancellation for any reason, intended non-renewal, or reduction

in coverages. Notices shall be sent to the City address set forth in Section 19.6 entitled "Notices to the Parties."

14.4 Should any of the required insurance be provided under a claims-made form, Contractor shall maintain such coverage continuously throughout the term of this Agreement and, without lapse, for a period of three years beyond the expiration of this Agreement, to the effect that, should occurrences during the contract term give rise to claims made after expiration of the Agreement, such claims shall be covered by such claims-made policies.

14.5 Should any required insurance lapse during the term of this Agreement, requests for payments originating after such lapse shall not be processed until the City receives satisfactory evidence of reinstated coverage as required by this Agreement, effective as of the lapse date. If insurance is not reinstated, the City may, at its sole option, terminate this Agreement effective on the date of such lapse of insurance.

14.6 Before commencing any Services, Contractor shall furnish to City certificates of insurance and additional insured policy endorsements with insurers with ratings comparable to A-, VIII or higher, that are authorized to do business in the State of California, and that are satisfactory to City, in form evidencing all coverages set forth above. Approval of the insurance by City shall not relieve or decrease Contractor's liability hereunder.

14.7 The Workers' Compensation policy(ies) shall be endorsed with a waiver of subrogation in favor of the City for all work performed by the Contractor, its employees, agents and subcontractors.

14.8 If Contractor will use any subcontractor(s) to provide Services, Contractor shall require the subcontractor(s) to provide all necessary insurance and to name the City and County of San Francisco, its officers, agents and employees and the Contractor as additional insureds.

15 INDEMNIFICATION.

15.1 General. Contractor shall indemnify and hold harmless City and its officers, agents and employees from, and, if requested, shall defend them from and against any and all claims, demands, losses, damages, costs, expenses, and liability (legal, contractual, or otherwise) arising from or in any way connected with any: (i) injury to or death of a person, including employees of City or Contractor; (ii) loss of or damage to property; (iii) violation of local, state, or federal common law, statute or regulation, including but not limited to disability and labor laws or regulations; (iv) strict liability imposed by any law or regulation. or (v) losses arising from Contractor's execution of subcontracts not in accordance with the requirements of this Agreement applicable to subcontractors; so long as such injury, violation, loss, or strict liability (as set forth in subsections (i) – (v) above) arises directly or indirectly from Contractor's performance of this Agreement, including, but not limited to, Contractor's use of facilities or equipment provided by City or others, regardless of the negligence of, and regardless of whether liability without fault is imposed or sought to be imposed on City, except to the extent that such indemnity is void or otherwise unenforceable under applicable law, and except where such loss, damage, injury, liability or claim is the result of the active negligence or willful misconduct of City and is not contributed to by any act of, or by

any omission to perform some duty imposed by law or agreement on Contractor, its subcontractors or either's agent or employee. The foregoing indemnity shall include, without limitation, reasonable fees of attorneys, consultants and experts and related costs and City's costs of investigating any claims against the City.

15.2 Duty to Defend. In addition to Contractor's obligation to indemnify City, Contractor specifically acknowledges and agrees that it has an immediate and independent obligation to defend City from any claim which actually or potentially falls within this indemnification provision, even if the allegations are or may be groundless, false or fraudulent, which obligation arises at the time such claim is tendered to Contractor by City and continues at all times thereafter.

15.3 Intellectual Property. Contractor shall indemnify and hold City harmless from all loss and liability, including attorneys' fees, court costs and all other litigation expenses for any infringement of the patent rights, copyright, trade secret or any other proprietary right or trademark, and all other intellectual property claims of any person or persons arising directly or indirectly from the receipt by City, or any of its officers or agents, of Contractor's Services.

16 TERMINATION AND DEFAULT

16.1 Termination for Convenience

16.1.1 City shall have the option, in its sole discretion, to terminate this Agreement, at any time during the term hereof, for convenience and without cause. City shall exercise this option by giving Contractor a written 30-Day notice of termination. The notice shall specify the date on which termination shall become effective. Notwithstanding the above, the Parties agree that if Meter fabrication is in progress when the SFMTA issues a notice of termination, the Agreement will not terminate until Acceptance of such Meters.

16.1.2 Upon receipt of the notice of termination, Contractor shall commence and perform, with diligence, all actions necessary on the part of Contractor to effect the termination of this Agreement on the date specified by City and to minimize the liability of Contractor and City to third parties as a result of termination. All such actions shall be subject to the prior approval of City. Such actions shall include, without limitation:

(a) Halting the performance of all Work under this Agreement on the date(s) and in the manner specified by City.

(b) Terminating all existing orders and subcontracts to the extent possible, and not placing any further orders or subcontracts for materials, Services, equipment or other items.

(c) At City's direction, assigning to City any or all of Contractor's right, title, and interest under the orders and subcontracts terminated. Upon such assignment, City shall have the right, in its sole discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts.

(d) Subject to City's approval, settling all outstanding liabilities and all claims arising out of the termination of orders and subcontracts.

(e) Completing performance of any Work that City designates to be completed prior to the date of termination specified by City.

(f) Transferring title to City and delivering in the manner, at the times, and to the extent, if any, directed by the City the fabricated or un-fabricated parts, work in process, completed work, supplies, and other material produced as part of, or acquired in connection with the performance of the work terminated, and the completed or partially completed plans, drawings, information and other property which, if the contract had been completed, would have been required to be furnished to City

(g) Using its best efforts to sell, in the manner, at the times, to the extent, and at the price(s) directed or authorized by the City, any property of the types referred to above; provided, however, that the Contractor shall not be required to extend credit to any purchaser, and may acquire any such property under the conditions prescribed by and at a price(s) approved by the City; and provided further that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by City to the Contractor under this Contract or shall otherwise be credited to the price or cost of the work covered by this contract or paid in such other manner as the City may direct;

(h) Taking such action as may be necessary, or as the City may direct, for the protection and preservation of any property related to this Agreement which is in the possession of Contractor and in which City has or may acquire an interest.

16.1.3 Within 30 Days after the specified termination date, Contractor shall submit to City an invoice, which shall set forth each of the following as a separate line item:

(a) The cost to Contractor for all Deliverables completed and accepted prior to the specified termination date, for which Deliverables City has not already tendered payment. Contractor may also recover the reasonable cost of preparing the invoice.

(b) The reasonable cost to Contractor of handling material or equipment returned to the vendor, delivered to the City or otherwise disposed of as directed by the City.

(c) A deduction for the cost of materials to be retained by Contractor, amounts realized from the sale of materials and not otherwise recovered by or credited to City, and any other appropriate credits to City against the cost of the Deliverables.

16.1.4 In no event shall City be liable for costs incurred by Contractor or any of its subcontractors after the termination date specified by

City, except for those costs specifically enumerated and described in Section 16.1.3. Such non-recoverable costs include, but are not limited to, anticipated profits on the Work under this Agreement, post-termination employee salaries, post-termination administrative expenses, post-termination overhead or unabsorbed overhead, attorneys' fees or other costs relating to the prosecution of a claim or lawsuit, prejudgment interest, or any other expense which is not reasonable or authorized under Section 16.1.3.

16.1.5 In arriving at the amount due to Contractor under this Section, City may deduct: (1) all payments previously made by City for Deliverables covered by Contractor's final invoice; (2) any claim which City may have against Contractor in connection with this Agreement; (3) any invoiced costs or expenses excluded pursuant to the immediately preceding subsection 16.1.3; and (4) in instances in which, in the opinion of the City, the cost of any Work performed under this Agreement is excessively high due to costs incurred to remedy or replace defective or rejected Services, the difference between the invoiced amount and City's estimate of the reasonable cost of performing the invoiced Services in compliance with the requirements of this Agreement.

16.1.6 City's payment obligation under this Section shall survive termination of this Agreement.

16.2 Default; Remedies

16.2.1 Each of the following shall constitute an immediate event of default ("Event of Default") under this Agreement:

(a) Contractor fails or refuses to perform or observe any term, covenant or condition contained in any of the following Sections of this Agreement:

Submitting False Claims.	Payment of Taxes
Assignment	Nondisclosure of Private, Proprietary or Confidential Information
Insurance and Indemnity	

(b) Contractor fails or refuses to perform or observe any other term, covenant or condition contained in this Agreement, including any obligation imposed by ordinance or statute and incorporated by reference herein, and such default continues for a period of ten Days, as may be extended by City, after written notice thereof from City to Contractor.

(c) Contractor (i) is generally not paying its debts as they become due; (ii) files, or consents by answer or otherwise to the filing against it of a petition for relief or reorganization or arrangement or any other petition in bankruptcy or for liquidation or to take advantage of any bankruptcy, insolvency or other debtors' relief law of any jurisdiction; (iii) makes an assignment for the benefit of its creditors; (iv)

consents to the appointment of a custodian, receiver, trustee or other officer with similar powers of Contractor or of any substantial part of Contractor's property; or (v) takes action for the purpose of any of the foregoing.

(d) A court or government authority enters an order (a) appointing a custodian, receiver, trustee or other officer with similar powers with respect to Contractor or with respect to any substantial part of Contractor's property, (b) constituting an order for relief or approving a petition for relief or reorganization or arrangement or any other petition in bankruptcy or for liquidation or to take advantage of any bankruptcy, insolvency or other debtors' relief law of any jurisdiction or (c) ordering the dissolution, winding-up or liquidation of Contractor.

16.2.2 On and after any Event of Default, City shall have the right to exercise its legal and equitable remedies, including, without limitation, the right to terminate this Agreement or to seek specific performance of all or any part of this Agreement. In addition, where applicable, City shall have the right (but no obligation) to cure (or cause to be cured) on behalf of Contractor any Event of Default; Contractor shall pay to City on demand all costs and expenses incurred by City in effecting such cure, with interest thereon from the date of incurrence at the maximum rate then permitted by law. City shall have the right to offset from any amounts due to Contractor under this Agreement or any other agreement between City and Contractor: (i) all damages, losses, costs or expenses incurred by City as a result of an Event of Default; and (ii) any liquidated damages levied upon Contractor pursuant to the terms of this Agreement; and (iii), any damages imposed by any ordinance or statute that is incorporated into this Agreement by reference, or into any other agreement with the City.

16.2.3 All remedies provided for in this Agreement may be exercised individually or in combination with any other remedy available hereunder or under applicable laws, rules and regulations. The exercise of any remedy shall not preclude or in any way be deemed to waive any other remedy. Nothing in this Agreement shall constitute a waiver or limitation of any rights that City may have under applicable law.

16.2.4 Any notice of default must be sent by registered mail to the address set forth in Section 19.6.

16.3 Rights and Duties upon Termination or Expiration

16.3.1 This Section and the following Sections of this Agreement listed below, shall survive termination or expiration of this Agreement:

Payment Limited to Satisfactory Deliverables	Warranty (nothing in this Section 16.3.1 shall be construed to extend the three-year warranty period set forth in Section I.A.3 of Appendix A)
Disallowance	Works for Hire / Ownership of Results

Submitting False Claims Audit and Inspection of Records	Nondisclosure of Private Proprietary or Confidential Information
Insurance and Indemnity	Contracts Made in California; Venue
Incidental and Consequential Damages	Section Headings
Liability of City	Entire Agreement
Payment of Taxes and other Governmental Changes	Severability

16.3.2 Subject to the survival of the Sections identified in Section 16.3.1, if this Agreement is terminated prior to expiration of the term specified in Section 2, this Agreement shall be of no further force or effect. Contractor shall transfer title to City, and deliver in the manner, at the times, and to the extent, if any, directed by City, any work in progress, completed work, supplies, equipment, and other materials produced as a part of, or acquired in connection with the performance of this Agreement, and any completed or partially completed work which, if this Agreement had been completed, would have been required to be furnished to City.

17 OPTION PARKING METERS

17.1 Exercise of Options. The City reserves an option to procure up to 10,000 additional Parking Meters. The City may exercise this option at any time prior to one year before Contract termination.

17.2 Delivery. Delivery of the option Parking Meters shall be as provided in Appendix D.

18 AUTHORITY OF CONTRACT ADMINISTRATOR; CLAIMS; DISPUTES

18.1 Authority of SFMTA Contract Administrator. The SFMTA Contract Administrator shall decide all questions which may arise as to the quality or acceptability of materials furnished and work performed and as to the manner of performance and rate of progress of the Work; all questions which may arise as to the acceptable fulfillment of the Contract on the part of the Contractor; and all questions as to compensation. In discharging the responsibilities outlined above, the SFMTA Contract Administrator shall at all times act fairly and reasonably. Any appeal of the SFMTA Contract Administrator's decisions shall be in accordance with the provisions of Section 18.4 of this Agreement. As with any claim, change, extra or additional work, Contractor shall be paid in accordance with the payment provisions set out in Section 4 of this Contract when the dispute is finally resolved.

Should any questions arise as to the meaning and intent of the Contract, the matter shall be referred to the SFMTA Contract Administrator, who, in consultation with other City representatives, as applicable, and with input from the Contractor, shall decide the true meaning and intent of the Contract. The SFMTA Contract Administrator's decision in this regard shall be administratively final and conclusive.

18.2 Claims for Additional Compensation.

18.2.1 Contractor shall not be entitled to the payment of any additional compensation for any action, or failure to act, by the SFMTA, including failure or refusal to issue a Contract Modification or for the

happening of any event, thing, occurrence, or other cause, unless Contractor shall have given the Project Manager due written notice of potential claim.

18.2.2 The written notice of potential claim shall set forth the reasons for which Contractor believes additional compensation will or may be due, the nature of the costs involved, and insofar as possible, the amount of the potential claim. The said notice as above required must have been given to the SFMTA Contract Administrator prior to the time that Contractor shall have performed the work giving rise to the potential claim for additional compensation, or in all other cases, within 15 Days after the happening of the event, thing, occurrence, or other cause giving rise to the potential claim.

18.2.3 It is the intention of this Section 18.2 that differences between the Parties arising under and by virtue of the Contract be brought to the attention of the SFMTA at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly be taken. Contractor agrees that it shall have no right to additional compensation for any claim that may be based on any such act, failure to act, event, thing, or occurrence for which no written notice of potential claim as herein required was filed.

18.3 Other Claims. For any dispute involving a question of fact that does not involve a claim for additional compensation, the aggrieved party shall furnish the other party with a notice of dispute within 15 Days of the determination of the dispute. The party receiving a notice of dispute shall submit a written reply with 15 Days of delivery of the notice. The notice and response shall contain the following: (a) a statement of the party's position and a summary of the arguments supporting that position, and (b) any evidence supporting the party's position.

18.4 Resolution of Disputes. Disputes arising in the performance of this Agreement that are not resolved by negotiation between the SFMTA Contract Administrator and Contractor may be appealed to the SFMTA Director, who will decide the matter after affording the Contractor an opportunity to be heard and to offer evidence in support of its position. The decision of the Director shall be administratively final and conclusive.

18.5 No Cessation of Work. Pending final resolution of a dispute hereunder, the Contractor shall proceed diligently with the performance of its obligations under this Agreement in accordance with the written directions of the SFMTA Contract Administrator.

18.6 Alternative Dispute Resolution. If agreed to by both parties, disputes may be resolved by a mutually agreed to alternative dispute resolution process.

19 GENERAL REQUIREMENTS

19.1 Contract Made in California; Venue. The formation, interpretation and performance of this Agreement shall be governed by the laws of the State of California. Venue for all litigation relative to the formation, interpretation and performance of this Agreement shall be in San Francisco.

19.2 Non-Waiver of Rights. The omission by either party at any time to enforce any default or right reserved to it, or to require performance of any of the terms, covenants, or provisions hereof by the other party at the time

designated, shall not be a waiver of any such default or right to which the party is entitled, nor shall it in any way affect the right of the party to enforce such provisions thereafter.

19.3 Nondiscrimination; Penalties

19.3.1 Contractor Shall Not Discriminate. In the performance of this Agreement, Contractor agrees not to discriminate on the basis of the fact or perception of a person's race, color, creed, religion, national origin, ancestry, age, sex, sexual orientation, gender identity, domestic partner status, marital status, disability or Acquired Immune Deficiency Syndrome or HIV status (AIDS/HIV status) against any employee of, any City employee working with, or applicant for employment with Contractor, in any of Contractor's operations within the United States, or against any person seeking accommodations, advantages, facilities, privileges, services, or membership in all business, social, or other establishments or organizations operated by Contractor.

19.3.2 Subcontracts. Contractor shall incorporate by reference in all subcontracts the provisions of Sections 12B.2(a), 12B.2(c)-(k) (see Appendix D for 12B Provisions), of the San Francisco Administration Code and section 12C.3 (see Appendix E, section 4 for 12 C Provisions), and shall require all subcontractors to comply with such provisions. Contractor's failure to comply with the obligations in this subsection shall constitute a material breach of this Agreement.

19.3.3 Non-Discrimination in Benefits. Contractor does not as of the date of this Agreement and will not during the terms of this Agreement, in any of its operations in San Francisco or where the work is being performed for the City or elsewhere within the United States, discriminate in the provision of bereavement leave, family medical leave, health benefits, membership or membership discounts, moving expenses, pension and retirement benefits or travel benefits, as well as any benefits other than the benefits specified above, between employees with domestic partners and employees with spouses and/or between the domestic partners and spouses of such employees, where the domestic partnership has been registered with a governmental entity pursuant to state or local law authorizing such registration, subject to the conditions set forth in section 1, 4-B. of Appendix D for 12B Provisions, 12B.2(b) of the San Francisco Administrative Code.

19.3.4 Condition to Contract. As a condition to this Agreement, Contractor shall execute the "Chapter 12B Declaration: Nondiscrimination in Contracts and Benefits" form (Form HRC - 12B - 101, see Appendix A) with supporting documentation (see www.SFHRC.org) and secure the approval of the form by the San Francisco Human Rights Commission after submitting SFMTA with the Price Proposal.

19.3.5 Incorporation of Administrative Code Provisions by Reference. The provisions of Chapters 12B of the San Francisco Administrative Code are incorporated in this Section by reference and made a part of this Agreement as through fully set forth herein. Contractor shall comply fully with and be bound by all of the

provisions that apply to this Agreement under such Chapters of the Administrative Code, including but not limited to the remedies provided in such Chapters. Without limiting the foregoing, Contractor understands that pursuant to Section 12B.2(h) (see Appendix D) of the San Francisco Administrative Code, a penalty of $50 for each person for each calendar day during which such person was discriminated against in violation of the provisions of this Agreement may be assessed against Contractor and/or deducted from any payments due Contractor.

19.4 Assignment/Subcontractors. This Contract may not be assigned without the express written consent of the City. The City's consent shall be by resolution of the Board of Directors of Agency, and shall not be unreasonably withheld; however, no assignment shall be approved unless it appears to the Agency that the proposed assignee is in every way equally reliable and responsible and fully able to perform the portion of the work covered by the proposed assignment, and to complete said work in accordance with the specifications. No transfer or assignment of this Contract, or any interest hereunder, shall release Contractor from its obligations hereunder.

All persons engaged as subcontractors or suppliers will be considered by the City as if they were employees of the Contractor, and thus the Contractor will be held responsible for the subcontractors' or suppliers' work, which shall be subject to the provisions of this Contract.

19.5 Qualified Personnel. Work under this Agreement shall be performed only by competent personnel under the supervision of and in the employment of Contractor. Contractor will comply with City's reasonable requests regarding assignment of personnel, but all personnel, including those assigned at City's request, must be supervised by Contractor. Contractor shall commit adequate resources to complete the project within the project schedule specified in this Agreement.

19.6 Notices to Parties. Unless otherwise indicated elsewhere in this Agreement, all written communications sent by the parties may be by U.S. mail, e-mail or by fax, and shall be addressed as follows:

To City: San Francisco Municipal Transportation Agency
1 South Van Ness Avenue, 8th Floor
San Francisco, CA 94103
Attn: Lorraine R. Fuqua, Contract Administrator
415.701.4678
lorraine.fuqua@sfmta.com

To Contractor: IPS Group Inc.
5601 Oberlin Drive Suite 100
San Diego, CA 92121
Attn: Chad P. Randall, Chief Operating Officer
chad.randall@ipsgroupinc.com

Any notice of default must be sent by registered mail.

19.7 Non-Collusion. By submitting a proposal, the Proposer represents and warrants that such proposal is genuine and not sham or collusive or made

in the interest or on behalf of any person not therein named, and that the Proposer has not, directly or indirectly, induced or solicited any other Proposer to submit a sham proposal, or any other person, firm, or corporation to refrain from proposing, and that the Proposer has not in any manner sought by collusion to secure to the Proposer an advantage over any other Proposer. If at any time it shall be found that the person, firm, or corporation to whom a contract has been awarded has, in presenting any proposal or proposals, colluded with any other party or parties, then the contract so awarded shall be null and void and the Contractor and its surety shall be liable to the City for all loss or damage which the City may suffer thereby; and the City may advertise for a new contract for said equipment.

19.8 **Conflict of Interest.** Through its execution of this Agreement, Contractor acknowledges that it is familiar with the provision of Section 15.103 of the City's Charter, Article III, Chapter 2 of City's Campaign and Governmental Conduct Code, and Section 87100 et seq. and Section 1090 et seq. of the Government Code of the State of California, and certifies that it does not know of any facts which constitutes a violation of said provisions and agrees that it will immediately notify the City if it becomes aware of any such fact during the term of this Agreement.

19.9 **Drug-Free Workplace Policy.** Contractor acknowledges that pursuant to the Federal Drug-Free Workplace Act of 1989, the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited on City premises. Contractor agrees that any violation of this prohibition by Contractor or its employees, agents or assigns shall be deemed a material breach of contract.

19.10 **Compliance with Americans with Disabilities Act.** Contractor acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or through a contractor, must be accessible to the disabled public. Contractor shall provide the services specified in this Agreement in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. Contractor agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agrees that any violation of this prohibition on the part of Contractor, its employees, agents or assigns will constitute a material breach of this Agreement

19.11 **First Source Hiring Program.** Contractor shall comply with all of the provisions of the First Source Hiring Program, Chapter 83 of the San Francisco Administrative Code, that apply to this Agreement, including but not limited to the remedies for noncompliance provided therein, The provisions of Chapter 83 are incorporated herein by this reference, and made part of this Agreement as though fully set forth herein.

19.12 **Responsibility for Equipment.** City shall not be responsible for any damage to persons or property as a result of the use, misuse, or failure of any equipment used by the Contractor, or by any of its employees, even though such equipment be furnished, rented, or loaned to Contractor by City. The acceptance or use of such equipment by Contractor or any of its employees shall be construed to mean that Contractor accepts full responsibility for and agrees to exonerate, indemnify, defend, and save

harmless City from and against any and all claims for any damage or injury of any type arising from the use, misuse, or failure of such equipment, whether such damage be to the contractor, its employees, City employees, or third parties, or to property belonging to any of the above.

19.13 Independent Contractor; Payment of Employment Taxes and Other Expenses

19.13.1 Independent Contractor. For the purposes of this Subsection 19.13.1, "Contractor" shall be deemed to include not only Contractor, but also any agent or employee of Contractor. Contractor acknowledges and agrees that at all times, it is an independent contractor and is wholly responsible for the manner in which it performs the Services. Contractor shall not have employee status with City, nor be entitled to participate in any plans, arrangements, or distributions by City pertaining to or in connection with any retirement, health or other benefits that City may offer its employees. Contractor is liable for the acts and omissions of itself, its employees and its agents and is responsible for all obligations and payments, whether imposed by federal, state or local law, including, but not limited to, FICA, income tax withholdings, unemployment compensation, insurance, and other similar responsibilities related to Contractor's Services. Nothing in this Agreement shall be construed as creating an employment or agency relationship between City and Contractor. Any terms in this Agreement referring to direction from City shall be construed as providing for direction as to policy and the result of Contractor's work only, and not as to the means by which such a result is obtained. City does not retain the right to control the means or the method by which Contractor performs the Services.

19.13.2 Payment of Employment Taxes and Other Expenses. Should City, in its discretion, or a relevant taxing authority such as the Internal Revenue Service or the State Employment Development Division, or both, determine that Contractor is an employee for purposes of collection of any employment taxes, the amounts payable under this Agreement shall be reduced by amounts equal to both the employee and employer portions of the tax due (and offsetting any credits for amounts already paid by Contractor which can be applied against this liability). City shall then forward those amounts to the relevant taxing authority. Should a relevant taxing authority determine a liability for past Services, upon notification of such fact by City, Contractor shall promptly remit such amount due or arrange with City to have the amount due withheld from future payments to Contractor under this Agreement. A determination of employment status pursuant to the preceding paragraphs shall be solely for the purposes of the particular tax in question, and for all other purposes of this Agreement, Contractor shall not be considered an employee of City. Notwithstanding the foregoing, should any court, arbitrator, or administrative authority determine that Contractor

is an employee for any other purpose, then Contractor agrees to a reduction in City's payment obligation so that City's total expenses under this Agreement are not greater than they would have been had the court, arbitrator, or administrative authority determined that Contractor was not an employee. In the event the Agreement has expired, Contractor agrees to pay the City the amounts assessed so that the City's financial obligations are no greater than the total not-to-exceed amount stated in this Agreement. City may offset the amount from any payment due or to become due to Contractor under this or any other Agreement with the City.

19.14 Sunshine Ordinance. Contractor acknowledges that this Agreement and all records related to its formation, Contractor's performance of Services, and City's payment are subject to the California Public Records Act, (California Government Code §6250 et. seq.), and the San Francisco Sunshine Ordinance (San Francisco Administrative Code Chapter 67). Such records are subject to public inspection and copying unless exempt from disclosure under federal, state or local law.

19.15 Compliance with Laws. Contractor shall keep itself fully informed of the City's Charter, codes, ordinances and regulations of the City and of all state, and federal laws in any manner affecting the performance of this Agreement, and must at all times comply with such local codes, ordinances, and regulations and all applicable state and federal laws, as they may be amended from time to time.

19.16 Time. Time is of the essence in this Agreement.

19.17 Resource Conservation. Chapter 5 of the San Francisco Environment Code ("Resource Conservation") is incorporated herein by reference. Failure by Contractor to comply with any of the applicable requirements of Chapter 5 will be deemed a material breach of contract.

19.18 Articles Not to be Prison Made. No Parking Meter or other equipment furnished under this Contract shall have been made in a prison or by convict labor.

19.19 Limitations on Contributions. By executing this Agreement, Contractor acknowledges that it is familiar with section 1.126 of the City's Campaign and Governmental Conduct Code, which prohibits any person who contracts with the City for the rendition of personal services, for the furnishing of any material, supplies or equipment, for the sale or lease of any land or building, or for a grant, loan or loan guarantee, from making any campaign contribution to (1) an individual holding a City elective office if the contract must be approved by the individual, a board on which that individual serves, or the board of a state agency on which an appointee of that individual serves, (2) a candidate for the office held by such individual, or (3) a committee controlled by such individual, at any time from the commencement of negotiations for the contract until the later of either the termination of negotiations for such contract or six months after the date the contract is approved. The prohibition on contributions applies to each prospective party to the contract; each member of Contractor's board of directors; Contractor's chairperson, chief executive officer, chief financial officer and chief operating officer; any person with an ownership interest of more than 20 percent in Contractor; any subcontractor listed in the bid or

contract; and any committee that is sponsored or controlled by Contractor. Contractor must inform each such person of the limitation on contributions imposed by Section 1.126 and provide the names of the persons required to be informed to City

19.20 Prohibition on Use of Public Funds for Political Activity. In performing the Work, Contractor shall comply with San Francisco Administrative Code Chapter 12.G, which prohibits funds appropriated by the City for this Agreement from being expended to participate in, support, or attempt to influence any political campaign for a candidate or for a ballot measure. The provisions of Chapter 12.G , including but not limited to the penalties for noncompliance provided therein, are incorporated by reference and made a part of this Agreement as though fully set forth herein.

19.21 Section Headings. The section headings contained herein are for convenience in reference and are not intended to define or limit the scope of any provision of this contract.

19.22 Severability. Should the application of any provision of this Agreement to any particular facts or circumstances be found by a court of competent jurisdiction to be invalid or unenforceable, then (a) the validity of other provisions of this Agreement shall not be affected or impaired thereby, and (b) such provision shall be enforced to the maximum extent possible so as to effect the intent of the parties and shall be reformed without further action by the parties to the extent necessary to make such provision valid and enforceable.

19.23 Modification of this Agreement. This Agreement may not be modified, nor may compliance with any of its terms be waived, except by written instrument executed and approved as required under law.

19.24 Entire Agreement. This Contract sets forth the entire agreement between the parties, and supersedes all other oral or written provisions. No change or waiver of any provision hereof shall be valid unless made in writing and executed as required under City law.

19.25 MacBride Principles – Northern Ireland . By signing below, Contractor acknowledges that the City urges companies doing business in Northern Ireland to move towards resolving employment inequities, and encourages such companies to abide by the MacBride Principles. The City urges San Francisco companies to do business with corporations that abide by the MacBride Principles.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first mentioned above.

CITY	CONTRACTOR
MUNICIPAL TRANSPORTATION AGENCY Edward D. Reiskin Director of Transportation	IPS GROUP INC. Chad P. Randall Chief Operating Officer
MUNICIPAL TRANSPORTATION AGENCY BOARD OF DIRECTORS RESOLUTION NO. 13-216 Dated: 9/17/2013 ATTEST: R Boomer Roberta Boomer, Secretary	5601 Oberlin Dr. Suite 100 San Diego, CA 92121 (877) 630-6638 84372 Vendor I.D. Number
Approved as to form: Dennis J. Herrera, City Attorney by: Robin M. Reitzes, Deputy City Attorney	
BOARD OF SUPERVISORS RESOLUTION NO. Dated: ATTEST: Angela Cavillo, Clerk of the Board	

Appendix A

Statement of Work
Single-Space Parking Meters and Management System

Table of Contents

Attachments 1-13: Data Transmission Requirements
Attachment 14: Miscellaneous Documents

TERMS AND ABBREVIATIONS

The following definitions apply to the Specifications:

Term or Acronym	Definition
Active	Refers to the state when a payment is in progress.
ADA	Americans with Disabilities Act, as amended.
Backend Settings	Set of variables that affect Meter Behavior and exist in the Contractor's system but are not included in the Operating Schedule or the Price Schedule and are not stored in SFMTA's Data Warehouse. They control Meter Behavior, such as minimum credit card charge, grace period, backlight and LED settings.
Behavior	Variables that govern Meter performance; e.g., start/end times, time limits, rates.
City	The City and County of San Francisco.
Configuration	Set of Behaviors that make up the Meter Behavior for a standard week period.
Contractor	The Contractor who is awarded the contract.
Customer	Person who uses a Meter on the street for the purpose of paying for parking.
Data Warehouse	One of two database and reporting systems hosted and managed by SFMTA.
Descriptive Variables	Variables that describe attributes of metered spaces and do not affect Meter Behavior; e.g., area, street, latitude, longitude.
Effective Date	The date of certification of the contract, as evidenced by a notice to proceed issued from SFMTA to Contractor.
General Metered Parking or GMP	Refers to locations where parking meters are in effect for parking for all types of vehicles.
Hotlist	A listing of credit card and/or smart card numbers that are not valid forms of payment as a result of fraud, theft or other misuse.
Idle	Refers to the state when no payment is in progress. Screen displays static information messages until a payment is started, at which time the Meter switches to Active.
Industry Standards	
Meter Mechanism	The 'brains' of the Meter device.
Meter Operation, Operating Hours, Enforcement Hours	Days and times when payment is required for use of parking spaces..
Metered Space	A parking space managed by a single-space parking Meter or multi-space Meter.
Meter Shop	SFMTA's parking Meter maintenance and administration facility.
Mixed Payment Transaction	A transaction where a Customer uses more than one payment type (e.g., coin and credit card) to pay for a single parking session.
MMS	Meter Management System: A package of software applications consisting of a relational database, user interface, reporting applications , and Meter programming module.

Term or Acronym	Definition
Near Field Communication or NFC	The ability to pay for use of the parking Meter with a smartphone or certain smart cards by bringing them into close proximity with each other.
Operating Schedule	Set of rules that govern the overall hours that the Meter is in effect and may include TOW, prepayment settings, and time limits.
Parking Space ID	Unique permanent identifier assigned to a metered space when it is added to the Parking Space Inventory.
Payment Window	Window of time during which a Customer is conducting a payment at the Meter before the Meter considers the payment completed and transmits the transaction to the MMS.
PBP	Pay-by-Phone
PCO	Parking Control Officer employed by the City and County of San Francisco to enforce parking regulations.
PDT	Personal Data Terminal (handheld device)
PMR	Parking Meter Repairer
Post ID	Unique number that identifies the location of a metered space by street, block number and side of the street.
Prepay Time; Prepayment Time	Time of day before the beginning of Operating Hours when Customer is allowed to pay for time that commences at the beginning of Operating Hours.
Price Schedule	Set of rules that govern Meter rates
Parking Space Inventory or PSI	The complete listing of parking spaces that are or have been metered spaces in SFMTA's Data Warehouse. The Parking Space Inventory table stores all attributes of the metered spaces except for variables that govern Meter Behavior; the latter are in the Operating Schedule and Price Schedule tables.
Regulatory Requirements	Federal rules and regulations governing design and operation of the Meters.
RMA	Return Merchandise Authorization. The process by which defective parts are returned and replaced.
Screen	Display on the Meter that shows dynamic messages programmed remotely.
Serco	Serco Inc., the SFMTA's contractor for Parking Meter Collection and Counting Services.
SFMTA	San Francisco Municipal Transportation Agency, an agency of City.
SFMTA Parking Card	Prepaid cards sold by SFMTA that can be used at parking meters only.
SFPM	San Francisco Parking Management, a database and information system that provides maintenance and revenue information for all parking meters under the purview of the SFMTA. It is one of two databases managed by the SFMTA.
SFTP Site	Secure file transfer protocol site
Special Event	A public event for which SFMTA charges a premium parking rate.
Standard Variables	Meter programming and reporting variables typically included in the MMS, such as physical locators: area, street, latitude, longitude and Behavior.

Term or Acronym	Definition
Time Limit, Max Time	Maximum amount of time a Customer is allowed to park during Operating Hours.
Time Slot	A period within a day (12 AM to 11:59:59 PM) defined by a START time and an END time and assigned a set of rules that govern the Meter Behavior within those hours.
Tow	Refers to a period that a vehicle may be towed for violation of parking regulations.
User	Person who uses the MMS (e.g., SFMTA Meter Shop staff).
User-Defined Variables	Variables defined and supplied by SFMTA and not typically included in the MMS, primarily used to filter and sort metered spaces in ways that are useful to SFMTA only and do not affect Meter Behavior.

SECTION I: ADMINISTRATIVE

A. Administrative: General Specification Requirements

The Meter hardware and software specifications in the Contractor's submittal shall match the equipment capabilities and supporting software that the Contractor delivers upon execution of the contract.

1. Training

The Contractor shall provide the following training

a. A local project manager and field service technician who shall provide ongoing training at any time required by SFMTA.

b. Provide all training in San Francisco, California at a location to be determined by SFMTA. The Contractor shall cover all travel and other costs associated with training.

c. Provide training in the MMS in all areas necessary to deploy, maintain, operate, and enforce parking meters to be supplied under the contract.

d. Provide four eight-hour days of detailed training covering maintenance, finance/accounting/audit, enforcement, and MMS usage, as scheduled by SFMTA. If, at SFMTA's sole discretion, more training is required, the Contractor shall provide up to three additional, eight-hour days of detailed training covering maintenance, finance/accounting/audit, enforcement, and MMS usage, as scheduled by SFMTA. Ensure that Initial training for system managers, Meter Shop field personnel, and collection staff is completed prior to turning on the new Meter according to a schedule to be approved by the SFMTA.

e. Conduct follow-up training for all other affected personnel throughout the period of installation, to be completed prior to turning on the new meters, and provided on an as-needed basis for a fixed period following system turn-on.

f. Supply and keep current hard and digital copies of all operating, training and repair manuals.

g. Grant the SFMTA rights to reproduce all training and operation manuals needed for staff.

h. Train and certify SFMTA and/or its designee as Level II Support Technician to support the proposed Meter warranty (minimum five persons shall be certified).

The details of the Training Plan components are located in *Attachment 14 – Contractor Deliverables.*

2. **Customer Support**
   a. The Contractor shall provide the customer support in the following areas:
      1. Help Desk:
         a. Contractor shall provide telephone based help desk services during standard business hours from 8am – 5pm PST. Contractor shall offer both in-state phone support and a toll-free telephone option.
         b. Contractor shall provide after-hours service in the case of emergency, weekends, after hours and holidays.
         c. Contractor will also provide contact information to all Contractor senior staff should such an emergency arise.
      2. Online Help:
         a. Contractor shall provide online help tools, such as access to all product manuals, frequently asked questions, as well as the ability to submit help tickets, and track the status of such tickets.
         b. Contractor shall provide the online ability to monitor and track RMA status.
         c. ***Within 120 days of the Notice to Proceed***, Contractor shall provide a video based training and help video library that can be accessed anytime, 24/7.
      3. On-Site Support:
         a. Contractor shall provide both on-site Project Management as well as on-site Field Technical Support for the entire term of the contract.
         b. Contractor's Project Management and on-site Field Technical Support resources shall be fully dedicated to SFMTA during the installation periods, and continue to be available locally for the entire Contract term.
      4. Customer support staff shall return a call from the SFMTA within 15 minutes during operating hours. Calls requiring a response from a senior member of the Contractor's staff shall be returned within 15 minutes during the above hours. City reserves the rights to change the business hours to reflect changes in the Meter hours and days of operation.
      5. Any subcontractor(s), e.g., gateway companies, shall be subject to the same availability standards (i.e., between 8 am and 5 pm PST/PDT) and shall return calls within 15 minutes.

3. **Warranty**
   a. The warranty period on each phased deployment of meters shall commence when the entire phase is Accepted in writing by SFMTA. SFMTA and

Contractor shall establish a deployment schedule during contract negotiations.

b. The Meters shall be warranted to operate in full functionality for a period of at least three years from the date of Acceptance.

c. Contractor warrants that it shall convey good title to the Meters purchased by City and that at the time of any such sale the Meters shall be free and clear from all liens and encumbrances.

d. The Contractor shall pay for warranty shipments from the Meter Shop to the Contractor's warranty handling facility and back to the Meter Shop.

e. The Contractor shall be responsible for providing all new software and firmware releases (as they become available and approved by the SFMTA) at no cost to the SFMTA so long as the Meters are in use by the SFMTA.

f. The Contractor shall supply and maintain an adequate inventory of replacement components (e.g., card readers, coin validators, CPU boards) locally and/or at the Meter Shop.

g. Meters shall be warranted to operate as proposed within a temperature range of 0 to 140 degrees Fahrenheit and under environmental conditions found in San Francisco, including but not limited to wind-blown grime, rain, fog, salt air, sun (including direct sunlight), and vibrations.

h. Warranty coverage shall include repair and/or replacement, at Contractor's discretion, of any part or modular component determined to be defective in material or workmanship under normal use and service in a timely manner and at no additional cost to the City.

i. Repair or replacement under warranty of any defective product (including any Meter or subcomponent) will not extend the warranty period for that product or subcomponent.

j. Returns for credit will only apply once Contractor has received the defective product (including any Meter or subcomponent) and confirmed that the defects arose within the warranty period and are covered under the terms and conditions of the warranty provided.

k. This warranty does not cover damages, defects or Failures solely caused by or due to accident, improper handling or operation, natural disaster (including earthquake), acts of terrorism, wars, riots, vandalism, neglect of routine maintenance as instructed by Contractor, or use of parts not authorized by Contractor.

l. City acknowledges that any modification (not to include required maintenance and repairs) not reasonably in accordance with Contractor's directions or performed by others in such manner to affect the work materially and adversely may void this warranty. Prior to any modification to the work, SFMTA shall notify Contractor in writing Contractor shall respond in writing within five business days describing how any such modification will affect the warranty.

4. MMS Support and Licensing

a. Maintenance and license requirements:

Contractor shall provide a hosted MMS, and maintain all required licensing for the MMS, for as long as the Meters are in use by the City. Licensing costs for the MMS are listed in *Appendix C – Pricing.*

b. Service Level Agreements (SLAs): Contractor MMS service level shall exceed 99% uptime.

c. Hardware requirements: Contractor shall provide a hosted MMS.

d. Contractor's MMS shall only require an internet browser to access the system. Contractor shall be responsible to upgrade or otherwise modify the MMS to accommodate future internet browser upgrades at no cost to the City.

5. Spare Parts:

A complete listing of Spare Parts is located in Appendix C-1 – Spare Parts and Services List.

6. Installation

a. Each mechanism shall be delivered complete, including all parts and materials needed for immediate deployment.

b. Meters shall be properly configured, tested, able to connect to the network and fully operational at the time the SFMTA takes possession of the meters.

c. As installation progresses, the Contractor shall create electronic inventory records for the installed meters, including but not limited to delivery dates, install dates, and post installation location code.

d. SFMTA Installation Deliverables

The SFMTA will provide the following deliverables prior to Meter shipment.

i. Meter locations and associated configuration parameters (rates, hours, display screens, etc.) as provided by Meter location and configuration worksheets as used during the SF*park* project.

ii. Merchant account information

iii. Logistics information (dates, quantities, and locations for delivery, etc.)

iv. Installation logistics requirements (number of people required to be provided by IPS)

v. Administrative information (Purchase orders, etc.)

vi. Access rights to MMS (users and associated access rights)

vii. Training (all functional groups identified)

viii. Customizations / Integration Information (contactless requirements, SAM requirements, licensed content or source code, etc.)

ix. Meter decals.

7. Certification and Compliance

Contractor shall have obtained prior to award of the Contract, renew as appropriate, and maintain throughout the Contract term, the certifications listed below with respect to the Meters and related applications and functionality provided under this Agreement. The Contractor shall provide a copy of all renewed compliance certificates or other documentation of the renewals ***no later than 30 days prior*** to the expiration of the current compliance certificate. At any time during the term of the Agreement, the Contractor shall provide documents regarding certification ***within two business days*** of a request from the SFMTA.

a. All required FCC Certifications

b. PCI-DSS Certification. The Contractor's credit card gateway shall maintain appropriate Payment Card Industry Data Security Standards (PCI DSS) certification as a Level 1 Service Provider. The Contractor shall comply with

Visa Cardholder Information Security Program (CISP) and MasterCard Site Data Protection (SDP) programs.

c. PA-DSS Certification

i. The Meter system payment application shall be Payment Application Data Security Standard (PA-DSS) validated by a Payment Application Qualified Security Assessor (PA-QSA) and be verified on PCI SSC's list of PA-DSS validated payment applications.

ii. Contractor's payment software submitted for PA-DSS validation shall incorporate:

- "Hold and Send" protocol
- Contactless Payment
- Remote connections capability such as Short Messaging Service (SMS)

d. New Regulatory Requirements and Industry Standards

i **EMV Certification.** Should EMV certification become a Regulatory Requirement or Industry Standard for acceptance of credit cards, the Contractor shall, at its own expense, obtain such certification and provide proof to the SFMTA that this certification has been established.

ii **Other New Requirements.** The Contractor shall, at its own expense, update certifications for Regulatory Requirements and Industry Standards that impact the Agreement as new requirements are established, and shall notify the SFMTA in writing of these new requirements when they are in effect. Should the SFMTA learn about new requirements, the SFMTA will inform the Contractor and request that the Contractor verify compliance with such requirements. The Contractor shall be responsible at its own expense to establish proper certification at the first available opportunity, and shall inform the SFMTA in writing of the timeline for compliance and any potential impact to services pending compliance.

B. Additional Administrative Requirements

1. Pay-By-Phone Integration

The Meter and the MMS shall be capable of integrating with SFMTA's designated Pay-By-Phone (PBP) service provider. The integrated solution must include communicating PBP payments so that the payment is clearly indicated on the Meter for customer verification and enforcement and maintenance inquiries.

2. Parking Meter Disposal

The Contractor shall dispose of all old Meters in compliance with applicable state environmental equipment disposal regulations. Any proceeds from recycling shall be remitted to the SFMTA as a credit to the support services invoices

issued beginning in the first month after the disposal process is complete. Contractor may also submit invoices for any recycling fees and actual labor and transportation costs incurred as part of the disposal process.

3. **Revenue Processing**

   a. The SFMTA reserves the right to change the existing gateway provider to a City-preferred gateway at any time during the term of the contract. The SFMTA and the Contractor shall negotiate costs and charges associated with the change.

   b. Credit card processing shall be performed by the acquiring bank under contract with the City.

   c. Deposits must be made to a City-owned account.

4. **Consultant Services Rate-Additional Services**

   The SFMTA may, at its sole discretion, exercise the option to request parking-related consulting services not required by other provisions of the Contract. Such services may include, but are not limited to: Analytical support for developing pricing strategies based on the best practices employed worldwide, Meter planning, inventory control, payment card development options and Meter maintenance and repair operations. Rates for these services are listed in Appendix C-1 – Spare Parts List and Services.

5. **Non-Warranty Meter Repair Services**

   In the case of non-warranty repairs, IPS shall provide the City a quotation for any such services on an as-needed basis after inspection of the products to be repaired. IPS shall perform non-warranty repair services upon receipt of a purchase order in the amount of the approved price of the work. IPS shall return non-warranty repaired Meters to the City within four to six weeks of receipt of an approved purchase order.

C. Administrative Optional Specifications

Contractor shall, upon request of the SFMTA, provide a timeline for developing one of two options of a user-facing website that would allow a credit card user to print a receipt of his or her transaction at home. The proposed website shall use "open architecture" to allow for integration with additional data sources.

1. Option 1: creating a site whereby a Customer would enter only the three following pieces of information:

   - Date and approximate time of day (plus or minus 60 minutes) the transaction began;
   - The Meter number
   - Last four digits of credit card number.

2. Option 2: creating a site whereby Customers would register their email addresses and credit card numbers. Whenever a registered credit card number

was used at any Meter, the user would receive a receipt in a PDF format at the registered email address.

SECTION II: METER MECHANISM

A. Meter Mechanism General Specification Requirements

1. General

a. All materials and components of the Meter shall be new and unused.

b. Meters and associated systems shall comply with all applicable ADA regulations.

c. Meters shall have a modular design such that Meter components shall be able to be exchanged or replaced in the field in less than 10 minutes.

d. All electronic components, connections, CPU and wiring shall be fully weatherproofed for their useful life.

e. The proposed mechanism shall be equipped with two Secure Access Memory (SAMs) sockets capable of accepting card schemes.

f. Meters shall have built-in diagnostics software that date- and time- stamps all events for retrieval and analysis in field or remotely; all data shall be integrated with the MMS supplied under this contract.

g. Meters shall feature an out-of-order function that date- and time-stamps the out-of-order event for eventual comparison to parking citation information. This information shall be automatically sent wirelessly to the MMS (assuming that power and communications are available), and shall also be available for manual collection by maintenance personnel (via mobile MMS and/or handheld) or other manual interface at the meter.

h. The Meter shall allow for adding time to an existing parking session.

i. Meters shall accept all available types of payment for adding time.

j. Meters shall periodically download and store the Hotlist from the MMS so that they prevent cards on the Hotlist from being used even when communication is not available.

k. Meters shall be equipped with GPS technology that allows the MMS to enable the end user to enter the Meter terminal number in the search field and generate a report with the exact location of the Meter on the map.)

2. Coin Chute

a. Coins passing through the Meter shall be deposited directly into a sealed container in a separate vault area of the meter.

b. Meters shall provide a count of all invalid coins.

c. If the coin slot is inoperable, meters shall have the option to accept card payments (e.g., credit card and smart card), and third party payments (e.g., PBP payments).

d. The coin chute or track shall be a free-fall type.

e. The chute shall include an anti-backup provision to prevent the retrieval of deposited coins (e.g., attached to strings, paddles, wires).

f. The entrance to the chute shall be replaceable stainless steel to accommodate or screen out coins of various sizes.

g. The jam alarm shall only stay Active as long as the cause of the jam is present in the coin chute.

h. When the coin chute detects a jam, the jams shall be recorded in the maintenance log. At a minimum, the Meter shall be able to detect the following objects:

i. bent paper clip

ii. bent soda can tab

iii. cotton

iv. toothpick

v. paper matchbook cover

vi. folded plastic straw

vii. coffee stirrer

viii. coin-wrapped in tape

3. **Coin Validation**

a. Meters shall provide a count of all coins or other metallic objects passing through the coin chute that match the programmed characteristics of valid coins to a level of accuracy of 99 %, so 990 coins out of 1000 shall be recorded.

b. The coin validation mechanism shall be programmable to accept a minimum of 16 different coins and/or tokens including U.S. nickels, dimes, quarters and dollar coins.

c. The coin validation system shall accept all user-defined coins and tokens through software parameter changes only. Software changes shall be able to be sent to the Meter wirelessly and via a mobile MMS and/or a handheld device. SFMTA shall also have the option to manually train the Meter for this purpose.

d. Should the U.S. Mint change the existing currency in any way the Contractor shall, at its own expense mutually agreed-upon time, update the software to accept the new coins issued as well as the old coins as soon as new coins are available to the general population.

e. The Contractor shall be able to alter the coin table to add new coins or to improve screening of invalid coins upon the Agency's request. Any changes to the validation process shall be made within ten business days of written request by SFMTA. The SFMTA will provide at least 100 samples of items that it wants to be screened out as invalid coins.

f. The coin validator and coin chute operations shall incorporate no contact points that could be affected by grime or moisture, or a combination of the two.

g. The coin validation system shall register both metallic and non-metallic jams.

4. **Screen**

a. Screens shall have a configurable backlight feature.

b. Date and time shall be displayed on the screen at all times when the Meter is "on."

c. Meter Post ID shall be visible on one of the information screens.

d. Screens shall be able to electronically display:

i. Rates

ii. Days and hours of operation

iii. Tow information

iv. Instructions to the user

e. The screen shall be legible and visible under all daytime and nighttime lighting conditions, including fog and direct sunlight and at various angles, (e.g., a taller person will view the screen at a different angle than a shorter person.)

f. The screen shall be vandalism resistant.

g. During Operating Hours, the screen shall display the current time period and corresponding rate or regulation, and whether the Meter is in Idle or Active.

h. The screen shall be fully programmable to display, at a minimum, messages corresponding to the following conditions:

i. Condition 1: Meter is "on" and Idle before operating hours. Information: Days/hours of operation, time slots, rates, regulations; configurable "Free" message (e.g., "Free until XX:XX).

ii. Condition 2: Meter is "on," Idle, and unpaid during operating hours. Information: Days/hours of operation, time slots, rates, regulations; configurable "Expired" message.

iii. Condition 3: Meter is "on," Idle, and paid during operating hours. Information: Days/hours of operation, time slots, rates, regulations; countdown of time left before Meter expires.

iv. Condition 4: Customer inserts a card incorrectly during operating hours. Information: Error message specific to condition (e.g., "card inserted incorrectly").

v. Condition 5: Customer inserts credit card and it is declined. Information: Error message specific to condition (e.g. "Invalid card; use another card")

vi. Condition 6: Customer inserts parking card causing the Meter to become Active, adds/subtracts time and money using Meter inputs (e.g., +/- buttons), and confirms transaction (e.g., presses "OK" button). Information: configurable "please wait" message followed by configurable "transaction completed" message.

vii. Condition 7: Customer inserts parking card causing the Meter to become Active, but pulls card out before transaction is completed. Information: Configurable "transaction cancelled" message.

viii. Condition 8: Card slot is inoperable. Information: Days/hours of operation, time slots, rates, regulations; configurable error message specific to condition (e.g. "no cards; use coin").

ix. Condition 9: Coin slot is inoperable. Information: Days/hours of operation, time slots, rates, regulations; configurable error message specific to condition (e.g., "no coins; use card").

x. Condition 10: Both coin and card slots are inoperable. Information: Configurable message specific to condition (e.g., "out of order").

xi. Condition 11: Customer presses "cancel" button. Information: Configurable "transaction cancelled" message.

xii. Condition 12: Meter is Active (payment is in progress). Information: current time slot and rate, time and corresponding payment stepping up or down as Customer adds coins or presses the +/- buttons to add/subtract time.

xiii. Condition 13: Meter is Active, current e has a rate assigned, next time period has a Tow regulation in the next time period; Customer adds money/time up to the beginning of Tow regulation. Information: Configurable "limit reached" message (e.g., "Limit Reached; Tow after XX:XX").

xiv. Condition 14: Meter is Active, current time slot has a rate assigned, Customer adds money/time up to the time limit programmed in the meter. Information: Configurable "limit reached" message (e.g., "4-hr limit reached").

xv. Condition 15: Meter is Idle, current time slot has Tow regulation. Information: Configurable "tow" message (e.g., Tow until XX:XX; DO NOT PARK").

xvi. Condition 16: Meter is "on" and Idle after operating hours. Information: Configurable "Free" message (e.g., "No payment accepted").

xvii. Condition 17: Meter has special programming in effect. Information: Days/hours of operation, time slots, rates, regulations; configurable "special" message specific to the special programming.

i. The screen shall support dynamic messaging functionality to reflect changes in pricing, regulations, display messages, format, or Configurations made in the MMS and communicated wirelessly to the Meter at least once per day.

5. **Meter Interface**

   a. The Meter shall have a mechanism for inputting information (e.g., buttons, keypad).

   b. The Meter shall have a mechanism that provides prompting and confirmation to the Customer as he/she conducts a payment at the meter.

6. **Clock**

   a. Meters shall automatically adjust internal clocks for daylight savings time periodic changes.

   b. Meter clocks shall be accurate to within plus or minus two seconds per day.

   c. Meter clocks shall be synced each time they communicate with the MMS.

   d. Meter clocks shall track each day of the week.

7. **Power**

   a. Based on the operational parameters identified in Section II. A.7) j. i. of the Request for Proposals, new and fully charged Meter Non-Rechargeable Battery Pack (part # 795-600-H3) shall function and be warranted for one year from installation date.

   b. Meters shall include a means to augment power through solar technology.

   c. SFMTA shall be able to purchase both rechargeable and non-rechargeable battery components individually.

   d. Batteries shall be standard "off-the-shelf" battery products available for consumers or shall be provided as an application specific battery pack by the Contractor.

   e. Non-rechargeable batteries shall not include any electronic boards or components besides wire connection to the mechanism.

   f. The voltage check system for rechargeable and non-rechargeable batteries shall be integrated into the mechanism reset sequence.

   g. SFMTA maintenance personnel shall be able to replace non-rechargeable batteries without the use of tools (i.e., nothing should be screwed in or otherwise constrained from removal).

   h. A low battery remote alarm indicator shall be included to facilitate timely replacement of batteries.

   i. If a Meter loses power (solar and/or battery), or the battery becomes depleted or disconnected, the Meter shall be able to retain all stored programming, operational, and financial audit data for a minimum period of one year.

8. Visual Enforcement

Meters shall have a means for a PCO to determine payment status through visual inspection of the Meter itself.

9. Card Reader Payment and Processing

a. Meters shall accept the following: NFC payment, and, at a minimum, Visa and MasterCard. The NFC functionality shall only work with the card or device intended by the Customer to be used for parking payment.

b. Meters shall have the ability to be programmed for additional payment systems upon request of the SFMTA.

c. The maximum number of credit card transactions accepted before automatically disabling credit card payment method shall be configurable via MMS.

d. The credit card payment gateway provider shall be compatible with and certified for use by credit card processor at the acquiring bank of the SFMTA's choice (currently Bank of America Merchant Services "BAMS"); BAMS requires that the payment gateway provider be "certified" by its credit card processor (TSYS, formerly Vital, and FirstData).

e. The meter's card reader shall be non-locking and shall always permit users to remove cards without damage to the card, especially during a fault situation or power failure.

f. If a credit card is inserted improperly, the card shall be easily removed by the Customer without the use of any tools.

g. If the card slot or reader is inoperable, the Meter shall have the option to accept coin and contactless methods of payment.

h. The card connector shall be rated at more than 250,000 cycles under ideal conditions.

i. The Meter shall use a switch for the card connector.

j. The card reader module shall have no electronic intelligence of its own. All of the driver and decision-making circuitry that establishes communication with inserted cards shall be located on the main board.

k. Meters shall be able to accept a GemClub Memo Card, the smart card the SFMTA currently uses in its parking meters, or future-developed payment card.

l. At SFMTA's request, the Contractor shall develop alternative card payment option(s). The SFMTA and the Contractor shall mutually agree to a timeline for delivery and negotiate development costs.

m. A payment by SFMTA parking card shall consist, generally, of the following steps:

i. Customer inserts SFMTA parking card in card slot.

ii. Meter reads and displays balance in the parking card.

iii. Customer adds/subtracts time and money using Meter input mechanism.

iv. Customer confirms payment using Meter input mechanism.

v. Meter writes new balance back to the SFMTA parking card while displaying configurable "please wait" message.

vi. Meter displays configurable "transaction completed" message and starts counting down time.

10. Revenue Audit Capabilities

a. Electronic information (coin count and revenue totals) shall be 99% accurate when compared to the following:

i. Coins: between MMS collection report and physical coin count.

ii. Credit Card: between gateway report and bank deposit.

iii. Coin, credit card and smart card revenue: between MMS, financial reports and real-time transmission.

b. Proposed meters shall record/store the number and value of all valid coins, including a count of each individual type of valid coin and the date and time each coin was inserted.

c. Meters shall record/store a count of each invalid coin.

d. Meters shall record/store the number and value of valid pre-paid and credit card transactions, and a summary of electronic cash amounts.

e. Each type of payment information (valid coins, invalid coins, electronic payments) shall be stored separately in the mechanism's memory.

f. Audit information shall be available for retrieval through MMS (both standard and mobile versions and/or handheld device).

g. Financial audit data shall not be affected by the reading or retrieval of maintenance data, by resetting the meter, or by other maintenance events.

h. Meter shall be capable of storing 300 individual transactions or 60 Days of transactions, whichever is higher, without a communication event.

i. Memory for all Meter events and transactions shall be capable of being stored for the lifetime of the meter; however the Meter shall clear memory of transaction that were successfully transmitted to the MMS.

j. Meter audit record attributes shall include but are not limited to the following:

- Post ID and device serial number
- Date and time stamp
- Method of payment

- Value of payment
- Time purchased
- Time transmitted to MMS

k. Contractor shall ensure that any record transmitted can be retrieved through the standard MMS, on a mobile device, or through the MMS Meter maintenance application. Any event or record that has not been transmitted due to a communication failure shall be retrieved and transmitted to the MMS by re-establishing the wireless connection or via manufacturer's in-house terminal software.

11. Collection Event Recording and Revenue Counter Reset

a. On the Effective Date of the Agreement, the Contractor shall provide an ability to reset Meter coin counters at the time of the physical coin collection through the use of coin collection cards that record time of collection and who collected the coins, and resets the coin counters.

b. SFMTA reserves the right to request that the Contractor develop at its own expense either or both of the two following options:

i. Develop a wired/wireless vault door solution with input from SFMTA, so that when the vault door is opened, the Meter revenue counters are automatically reset.

ii. Integrate the electronic lock MMS collection audits into the MMS so that the data is available for reporting and revenue reconciliation.

c. Using any of the methodologies listed above, the Meter shall be able to record the time and date of the door opening, and detailed coin audits since the last collection within the MMS.

d. Meter shall be able to support opening of the vault door for maintenance purposes without resetting mechanism coin counters.

e. All data regarding vault opening events or physical coin collection events shall be entered into the MMS and be available as report filters.

f. The SFMTA shall have the option to reset the coin counters of Meters remotely from the MMS (both stand alone and mobile). This feature shall support both individual mechanism reset and group resets that depend on set MMS groupings. Implementation shall be contingent upon specifications to be developed by the Parties.

12. Communications

a. Meters shall ensure that at least 95% of transmit payment data and maintenance alert data shall be sent to the MMS wirelessly within 120 seconds after determining the transaction to be completed.

b. Meters shall support secure on-line authorizations of credit cards and smart cards at the time of the transaction.

c. Meters shall support a "hold and send" feature for credit card payments that can be activated when the communication network is down or not available and credit card payments cannot be authorized in on-line mode.

d. Meters shall initiate communication with the MMS periodically, on a schedule mutually agreed upon by SFMTA and the Contractor, regardless of the occurrence of transactions or faults.

e. Contractor shall provide the SFMTA with the option to determine what type of modem they wish to install in the Meters, including GPRS (T-Mobile) or CDMA (Verizon). SFMTA reserves the right to vary the type of modem used, depending on communications viability in both modem types in a particular install area.

f. When Meters are stored as part of the SFMTA's spare Meter inventory, the Meters' SIM or Electronic ID shall remain active or in stand-by mode, as determined by the SFMTA, so that the Meter can be powered up and made to communicate within 24 hours, for the term of the Agreement.

13. Communication Dead Zones

Contractor, at its own expense, shall conduct pre-installation surveys using both Meter equipment and handheld multi-carrier single-strength testers (Squid testers) to highlight any potential problem areas and address with carriers in advance of the deployment. Such surveys shall be conducted at each specific Meter location and at both ends and the middle of each block in order to provide representative data. If any trouble spots are found, Contractor will bring the carrier in for additional survey and remediation in advance.

14. Auditing and Reconciliation Procedures

Contractor shall ensure the following:

a. A card transaction is authorized on a Meter and assigned a unique transaction ID.

b. The transaction is securely transferred according to PCI-DSS Level 1 to the MMS and removed from the Meter memory.

c. Once the transaction has been settled in a batch, the batch ID shall be recorded for further record keeping and funds are transferred from the cardholder bank to the SFMTA merchant account every day.

d. A record of all transactions and credit card settlement statements are available within the IPS MMS. This can be reconciled on a daily basis (in a daily summary) or as each individual transaction on a given day.

15. Maintenance

a. Meters shall be easily maintained and serviced, and shall be designed so that metallic and non-metallic foreign objects can be cleared from the coin chute or track and/or card reader slot within a three-minute timeframe, under any weather conditions. No special tools shall be required.

b. Meters shall return to full functionality within one minute of replacing a coin chute or track and/or and card reader. The replacement process shall take no longer than three minutes. No special tools shall be required for replacement of these items.

c. Meters shall feature on-board diagnostics that include a full on-screen menu or display that shows electronic error codes that enable technicians to analyze problems on-site.

d. Meters shall allow for SFMTA's maintenance and Meter shop staff to add time without making payment and/or having the payment register as revenue in the audit information (e.g., if a Customer's payment has to be deleted during maintenance). This usage shall be logged as a distinct payment type (e.g., instead of the payment being labeled "cash" or "credit", it might be labeled "maintenance"). The value of the payment shall be logged as $0.00.

e. The proposed mechanism shall have the ability to temporarily disable the recording of cash and card (credit and smart card) totals to allow audit data test purchases by coin or card without being recorded in the payment audit data. After this feature is invoked, the recording of any coins/cards shall be immediately disabled to allow for testing. The test coins/cards shall not register until there has been no activity for a set period of time provided by the SFMTA (this shall be configurable via MMS), after which time the registering of payments is enabled automatically. Once the Meter testing is completed, the Meter shall automatically revert back to normal operation without further operator intervention or commands.

f. The proposed mechanism shall have a feature that allows maintenance staff to add a full day's time (up to 24 hours) to the mechanism without adding coin or card payments. (e.g., when a new Meter is installed in a previously unmetered area).

g. Contractor shall provide a smart phone maintenance application.

SECTION III: MMS, Meter Programming and Data Integration

A. MMS, Meter Programming & Data Integration General Specification Requirements

1. MMS – General

a. Login to the MMS shall take less than 60 seconds.

b. MMS shall contain, at a minimum, the following general modules:

i. System Administration

ii. Asset and Inventory Management

iii. Faults and Maintenance Reports

iv. Revenue Reports

v. Management of User Permissions and Alarms

vi. Hotlist

vii. Meter Behavior Programming

viii. Management of the maintenance work orders

c. MMS shall be server-based and accessed via the web. MMS shall not require any custom software to be installed on the end user's machine, other than the SFMTA standard web browser.

d. The Contractor shall be responsible to deliver any and all updates to its MMS to ensure full compatibility with the latest versions of the internet browsers for the useful life of the meters.

e. MMS shall offer a uniform user interface, in which the same colors, fonts, nomenclature, icons and logos are used for all MMS modules.

2. MMS Documentation

a. All standard reports in the MMS shall be fully documented and explained in the MMS manual, including allowable values.

b. All standard Meter Behavior programming variables shall be fully documented and explained, in the MMS manual, including allowable values.

c. All standard Meter Backend Settings shall be fully documented and explained, in the MMS manual, including allowable values.

3. MMS Users and Permissions

a. MMS shall support a minimum of 10 different user groups, each with its own set of permissions for viewing reports and/or conducting changes to Meter programming.

b. MMS shall allow SFMTA to manage users and permissions directly, without having to go through the Contractor in order to add users or create or modify user permissions.

4. Asset and Inventory Management

MMS shall, at a minimum, have the ability to record and display the following information:

a. Date- and time-stamp of all maintenance, inventory, and audit data.

b. Mechanism serial numbers, maintenance routes and descriptions, and parking space Post ID numbers.

c. Audit, maintenance, inventory and programming transactions for a given space parking space Post ID number.

5. Faults and Maintenance

a. The MMS shall contain reports on Meter health status.

b. The MMS shall record Meter maintenance performed by repair staff.

c. The MMS shall record all meters' general status and performance, including fault and maintenance events, parking sessions, financial transactions, and payment status time.

d. The MMS shall contain, at a minimum, the following reports:

i. Maintenance activity by mechanism serial number, parking space Post ID, parking Meter repairer, or operational status.

i) Exception report for meters not repaired.

ii) Exception report for meters that have not communicated with the MMS within 24 hours or more, including the number of hours since last communication.

iii) Operational status by: mechanism serial number, parking space Post ID, date and time. The latter shall include automatic health events created by Meter and manually entered by PMR's maintenance activity (e.g., cleared cotton jam, cleaned Meter dome, remove graffiti).

6. MMS Alarms

a. The MMS shall log all alarms and retain information, including time of alarm, time resolved, who resolved the problem, and the action taken.

b. The MMS shall include, at a minimum, initial warning alarms and subsequent shutdown/failure alarms for the following events:

i. Coin collection – when physical collection occurs.

ii. Coin collection – when the coin canister is full.

iii. Initial low battery setting has been reached.

iv. Battery is experiencing a fault.

v. Wireless communications interruption.

vi. Coin payment and card payment operation failure.

vii. Operating system fault.

viii. Operational functions.

ix. Door open detection (vault and maintenance doors, if applicable).

x. Status/record of all file transfer activities.

xi. Live alarm to detect communication status.

xii. Service agent number/technician and IT trail.

xiii. Notice of various initialization and machine setting routines.

xiv. Communication failure alarm in back office software.

xv. No transaction within defined timeframe.

xvi. No coin transaction within defined timeframe.

xvii. No card or credit card transaction within defined timeframe.

xviii. MMS is "frozen" or down.

xix. Server that accepts Meter data, and supports the MMS, is down.

c. The MMS shall alert SFMTA every day that the number of meters in the non-reporting meters list reaches 2% of the number of accepted meters.

7. Revenue Reports

a. The MMS shall contain summary revenue reports.

b. The MMS shall contain detail revenue reports, to the Meter level.

c. The MMS shall report revenue broken down by payment type (i.e., coin, SFMTA parking card, credit card, other).

d. The MMS shall include a Transaction Detail Report that lists the Transaction ID and Transaction Date, Transaction Start Time, Transaction End Time, the Amount Paid, the Payment Type, the Time Purchased. In the case where payment is made during prepayment hours, the Time Purchased shall include only time starting at the beginning of operating hours for which payment is required.

e. The MMS shall, at a minimum, have the ability to generate the following (or similar) reports by date/date range:

i. Revenue by parking space Post ID, collection zone, maintenance route, or other geographically defined areas, e.g., Parking Management Area or Parking Management Zone.

ii. Payment for parking session by parking space Post ID, collection zone, maintenance route, or other geographically defined area.

iii. Current location of mechanism by mechanism serial number.

iv. Daily Meter collection report with Meter numbers, route numbers and amount collected by metered space.

v. Exception report for meters not collected.

vi. Revenue over a specified time period.

vii. Collection revenue over a specified time.

viii. Average number of meters and % of inventory out of order over a specified time period.

ix. Average repair time over a specified time period.

x. Rejected and Declined cards (e.g. credit cards, smart cards, NFC cards etc.) over specified period of time and area (e.g. collection route, maintenance route, enforcement route etc.). The report shall also be able to identify overall share of rejected/declined transactions based on card transaction counts and revenue.

f. The MMS shall have flexibility in reporting functions, including user-generated customized reporting. To the extent reports cannot be modified by the user, the Contractor shall develop any additional non-standard reports at no extra cost. Timing of development will be dependent on the complexity of the report requested. The Parties shall negotiate the schedule for development prior to commencement of this Work.

g. The MMS shall provide time and date range reporting capabilities of various payment statuses (e.g. coin revenue, credit card revenue, smart card revenue etc.), revenue collection, alarm status, operational status, current and historic Meter faults.

h. The MMS shall include a standard report showing the usage of the maintenance cards, maintenance feature that disable revenue totaling, and maintenance payments.

i. The MMS shall include a standard report showing the number of rejected smart cards and credit cards per machine broken out by reason for rejection including at least the following three reasons:

i. Bank declined the charge

ii. Communications failure prevented an authorization from being approved, and

iii. The card was unreadable

j. The MMS shall include a standard report showing revenue from each collection day to the following collection day.

k. The SFMTA shall be able to introduce new payment types and have them reflected in the Revenue Reports.

8. Management of User Permissions and Alarms

The MMS shall be configurable to send alarms to designated personnel if a Meter is not functioning.

9. Meter Location Assignment in MMS

a. The MMS shall accommodate at least twelve symbol alpha numeric format of the Meter identification numbering sequences, including but not limited to Meter number (i.e. Post ID), parking space number, collection zone number, enforcement zone number etc., (The current format is nine characters: eight numeric & one symbol, e.g., 111-11111).

b. The MMS shall allow for assignment of Meter locations in batches via CSV file.

c. Meter Location Assignment

The Contractor shall enable Meters to communicate their location and download the correct Meter Behavior parameters from the MMS.

10. Meter Backend Settings

a. The following Meter settings shall be programmable:

i. Standby mode and times

ii. Card payment settings

iii. Coin payment settings

iv. Screen parameters

v. Backlight settings

vi. LED settings

vii. Pay-by-Phone payment display settings

viii. Other Meter settings as applicable

b. The Meter card payment system shall be programmed with a customizable time delay for the user to cancel a transaction.

c. The Meter shall have the ability to be programmed for a configurable grace period, so that an amount of time, as specified by the SFMTA, may be added to any completed time purchase prior to expiration of the Meter.

B. MMS, Meter Programming, & Data Integration Additional Requirements

1. MMS – General

a. Date format shall be consistent throughout the entire MMS and shall be customizable by SFMTA.

b. MMS shall include a search module that allows the user enter in a parking space identifier (i.e. Post ID) and date or date range to get a list of the then currently applied rates (including any Special Event rates) and hours of operation.

c. The Contractor shall provide and maintain for the term of the contract (at no cost to SFMTA) SFTP site for the purpose of exchanging all XML and CSV files with SFMTA, except for incoming transaction data XML.

d. ***Within 60 Days of the Notice to Proceed***, the Contractor shall provide a file structure in the SFTP site as specified by SFMTA.

e. MMS shall be able to transmit Pay-By-Phone payment status to the meter.

f. The MMS shall allow SFMTA to create ad-hoc reports combining user-defined and standard variables. The Contractor shall develop any additional non-standard reports at no extra cost. The Parties shall negotiate the schedule for development prior to commencement of this Work.

g. The Contractor shall be able to develop (at no additional cost) up to 25 custom reports for the term of the contract.

2. Meter Behavior Programming

a. The MMS shall accept Meter programming in at least two different ways:

i. Manually, via web user interface in the MMS or mobile MMS.

ii. Automatically, via XML or CSV file deposited in Contractor's SFTP site, per the specifications in Attachments 1-13.

b. The MMS shall allow SFMTA to determine which variables related to a metered space may be edited via XML, CSV or web user interface.

c. The Meters shall accept programming for subsets of the rules required in section III.B.2.c and as described in Example III.B.2.c.

Example III.B.2.c

Rule Type	Overall Behavior	Rule	Specific Behavior
FREE	Meter has no rate assigned, does not accept card payment, and does not display time purchased if a coin is dropped. Time limit is 0.	FREE1, FREE2, FREE3	Meter displays one of three possible pre-defined FREE messages
PREPAY	Meter accepts payment before the beginning of operating hours, for the first hour of operating hours.	PREPAY1, PREPAY2	Meter displays one of two possible pre-defined PREPAY messages
RATE	Meter accepts payment and credits time based on programmed rate for specified hours of the day.	RATE00.00, RATE00.05,... RATE18.00	Meter charges specified rate during specified hours
TOW (no parking)	Meter has no rate assigned, does not accept card payment, and does not give time if a coin is dropped	TOW1, TOW2, TOW3	Meter displays one of three possible pre-defined TOW messages
TIME LIMIT	Meter has time limit assigned so that the amount of time a Customer can purchase is restricted for specified hours of the day.	TL0010, TL0015, ... TL1440	Meter restricts purchase to specified time limit during specified hours.

d. The MMS shall accept programming for a set of Behaviors listed in requirement III.B.2 as defined by SFMTA during the development and testing phase, as listed below:

- Time periods programmed with behaviors FREE, PREPAY, RATE, and TOW have to be mutually exclusive; i.e. no period of day may not have two of these rules assigned at the same time
- Time periods programmed with behaviors PREPAY may only precede time slots programmed with rule type RATE.
- Time periods programmed for FREE or TOW may not have time limits assigned to them
- Time limits apply only to time slots programmed with RATES.

e. SFMTA shall be able to program RULE TYPE "RATE" with a rate = $0.00 (different than RULE TYPE "FREE"). When RULE TYPE "RATE" = $0.00,

Meter behaves the same as RULE TYPE "FREE", but displays the information differently.

f. Meters shall accept programming of time limits independent of rates.

g. ***Within 90 days of the Notice to Proceed***, the user shall be able to program and re-program meters in batches, whether or not the original programming within the selected batch was the same, and without affecting other parameters of the original Meter Behavior.

h. The SFMTA shall have the option to determine the Configuration name rules for the Meters. Using these rules, the MMS shall automatically assign the proper Configuration name to the Meters when adding or updating the inventory.

i. The Meter shall never allow a Customer to purchase time in excess of the following, whichever is smallest, as illustrated in Example III.B.2.i:

i. The total number of operating hours for the day (i.e. if Meter operates from 9am to 6pm, the maximum number of hours a Customer can purchase is 11, and only if the time limit is "no limit").

ii. The total number of hours left in the operating hours at the time the Customer conducts the transaction.

iii. The maximum number of continuous operating hours from the time of payment excluding TOW periods.

iv. The time limit programmed in the meter

j. Meters shall accept programming for a minimum of 15 unique time slots within a 24-hr period between 0:00:00 and 24:00:00 hours, each with its rule, as illustrated in Example III.B.2.j. Meters shall also be capable of displaying all time slots on the screen at any time of the day.

k. Meter shall accept programming for time slots as small as ¼ of an hour.

l. Meter shall accept programming for up to four different types of days within a week, where each day type contains a unique set of time slot + rule combination..

m. SFMTA shall be able to program rates in $0.05 increments.

n. If a Meter is programmed with two different rates in adjacent time slots and a Customer pays for time starting in one time slot and ending in the next, the Meter shall prorate the amount charged for the time purchased.

o. When programming meters via the web user interface, the user shall be able to set the effective time and date when he/she wants the new Meter Behavior take effect.

p. At any given time, meters shall behave in accordance with programmed Meter Behavior parameters until such time as a new set of parameters becomes effective.

3. Initial Meter Behavior Programming

a. The MMS shall support automatic initial programming of any new set of metered spaces at any time via XML files and CSV tables deposited in the Contractor's SFTP site. The programming of any new set of metered spaces will generally consist of up to four files submitted to the Contractor simultaneously or successively at short intervals as listed below:

i. Parking Space Inventory XML file, as specified in Attachment 1

ii. Operating Schedule XML file, as specified in Attachment 2

iii. Price Schedule XML file, as specified in Attachment 3

iv. Special event pricing and regulation XML file, as specified in Attachment 4

b. SFMTA will require initial programming of meters via XML file as follows:

i. After Notice to Proceed, following the programming development and testing phase: existing metered spaces, phased in batches of minimum of 100s, specific schedule to be agreed upon between SFMTA and the Contractor during contract negotiations

ii. Whenever newly-metered spaces are legislated in future, in batches of minimum of 100s.

iii. Whenever individual meters are added to already-metered blocks, as needed.

c. Any number of metered spaces submitted for programming by 11:59:59 PM any day shall be programmed into the system by 6:00 AM three business days later, i.e. metered spaces submitted by 11:59:59 PM Monday shall be programmed into the system by 6:00 AM Thursday and so on, barring holidays.

d. Following Meter programming, at SFMTA's discretion Contractor shall:

i. Provide a reconciliation XML file for verification in accordance with the specification in Attachment 7

ii. Set the programmed metered spaces to "Active" so that they are ready to go live on the street.

4. Meter Programming Reconciliation

a. Following initial programming or re-programming of any batch of meters, at SFMTA's request, the Contractor shall issue an XML file in accordance with Attachment 7 "Reconciliation XML specification" and deposit it in the Contractor's SFTP site for pickup by SFMTA.

b. ***Within 90 Days of the Notice to Proceed***, the MMS shall allow SFMTA to select any subset of meters using any combination of standard and user-defined filters and an effective date, and generate an XML file as specified in Attachment 7 "Reconciliation XML specification" and deposit it in the Contractor's SFTP site for pickup by SFMTA..

c. The MMS shall issue a reconciliation XML file containing the entire Parking Meter Space inventory and associated Descriptive Variables (both user-defined and standard) per the specification in Attachment 7 to the SFTP site for pickup by SFMTA. SFMTA will use the reconciliation XML to routinely compare the attributes of metered spaces in the SFMTA and the Contractor databases for the purpose of verifying programming and correcting any discrepancies that may arise.

5. **Faults and Maintenance**

a. The MMS shall contain reports on Meter health status.

b. The MMS shall record Meter maintenance performed by repair staff.

c. The MMS shall record all meters' general status and performance, including fault and maintenance events, parking sessions, financial transactions, and payment status time.

d. The MMS shall contain, at a minimum, the following reports:

ii. Maintenance activity by mechanism serial number, parking space Post ID, parking Meter repairer, or operational status.

iii. Exception report for meters not repaired.

iv. Exception report for meters that have not communicated with the MMS within 24 hours or more, including the number of hours since last communication.

v. Operational status by: mechanism serial number, parking space Post ID, date and time. The latter shall include automatic health events created by Meter and manually entered by PMR's maintenance activity (e.g., cleared cotton jam, cleaned Meter dome, remove graffiti)

6. **MMS Alarms**

a. The MMS shall log all alarms and retain information, including time of alarm, time resolved, who resolved the problem, and the action taken.

b. The MMS shall include, at a minimum, initial warning alarms and subsequent shutdown/failure alarms for the following events:

i. Coin collection – when physical collection occurs.

ii. Coin collection – when the coin canister is full.

iii. Initial low battery setting has been reached.

iv. Battery is experiencing a fault.

v. Wireless communications interruption.

vi. Coin payment and card payment operation failure.

vii. Operating system fault.

viii. Operational functions.

ix. Door open detection (vault and maintenance doors).

x. Status/record of all file transfer activities.

xi. Live alarm to detect communication status.

xii. Service agent number/technician and IT trail.

xiii. Notice of various initialization and machine setting routines.

xiv. Communication failure alarm in back office software.

xv. No transaction within defined timeframe.

xvi. No coin transaction within defined timeframe.

xvii. No card or credit card transaction within defined timeframe.

xviii. MMS is "frozen" or down.

xix. Server that accepts Meter data, and supports the MMS, is down.

c. The MMS shall alert SFMTA every day that the number of meters in the non-reporting meters list reaches 2% of the number of accepted meters.

7. **Revenue Reports**

a. The MMS shall contain summary revenue reports.

b. The MMS shall contain detail revenue reports, to the Meter level.

c. The MMS shall report revenue broken down by payment type (i.e., coin, SFMTA parking card, credit card, other).

d. The MMS shall include a Transaction Detail Report that lists the Transaction ID and Transaction Date, Transaction Start Time, Transaction End Time, the Amount Paid, the Payment Type, the Time Purchased. In the case where payment is made during prepayment hours, the Time Purchased shall include only time starting at the beginning of operating hours for which payment is required.

e. The MMS shall, at a minimum, have the ability to generate the following (or similar) reports by date/date range:

i. Revenue by parking space Post ID, collection zone, maintenance route, or other geographically defined areas, e.g., Parking Management Area or Parking Management Zone.

ii. ~~Payment for parking session by parking space Post ID, collection zone,~~ maintenance route, or other geographically defined area.

iii. Current location of mechanism by mechanism serial number.

iv. Daily Meter collection report with Meter numbers, route numbers and amount collected by metered space.

v. Exception report for meters not collected.

vi. Revenue over a specified time period.

vii. Collection revenue over a specified time.

viii. Average number of meters and % of inventory out of order over a specified time period.

ix. Average repair time over a specified time period.

x. Rejected and Declined cards over specified period of time and area. The report shall also be able to identify overall share of rejected/declined transactions based on card transaction counts and revenue.

f. The MMS shall have flexibility of reporting functions, including user-generated customized reporting. To the extent reports cannot be modified by the user, describe how requests for non-standard reports will be supported in terms of any additional costs and turnaround times.

g. The MMS shall provide time and date range reporting capabilities of various payment statuses (e.g. coin revenue, credit card revenue, smart card revenue etc.), revenue collection, alarm status, operational status, current and historic Meter faults.

h. The MMS shall include a standard report showing the usage of the maintenance cards, maintenance feature that disable revenue totaling, and maintenance payments.

i. The MMS shall include a standard report showing the number of rejected smart cards and credit cards per machine broken out by reason for rejection including at least the following three reasons,

i. Bank declined the charge

ii. Communications failure prevented an authorization from being approved, and

iii. The card was unreadable

j. The MMS shall include a standard report showing revenue from each collection day to the following collection day.

k. The SFMTA shall be able to introduce new payment types (i.e. Tap and Go cards) and have them reflected in the Revenue Reports.

8. Management of User Permissions and Alarms

The MMS shall be configurable to send alarms to designated personnel if a Meter is not functioning.

9. Meter Location Assignment in MMS

a. The MMS shall accommodate at least twelve symbol alpha numeric format of the Meter identification numbering sequences, including but not limited to Meter number (i.e. Post ID), parking space number, collection zone number, enforcement zone number etc., (The current format is nine characters: eight numeric & one symbol, e.g., 111-11111).

b. The MMS shall allow for assignment of Meter locations in batches via CSV file.

d. Meter Location Assignment

The Contractor shall enable Meters to communicate their location and download the correct Meter Behavior parameters from the MMS.

10. Meter Backend Settings

a. The following Meter settings shall be programmable:

i. Standby mode and times
ii. Card payment settings
iii. Coin payment settings
iv. Screen parameters
v. Backlight settings
vi. LED settings
vii. Pay-by-Phone payment display settings
viii. Sensor settings
ix. Other Meter settings as applicable

b. The Meter card payment system shall be programmed with a customizable time delay for the user to cancel a transaction.

c. Meter shall allow programming for a configurable grace period where specified amount of time is added to any completed transaction time purchase.

d. Meter Backend Settings

Contractor shall provide the following Meter Backend Settings

i. Standby mode and times
ii. Card payment settings
iii. Coin payment settings
iv. Screen parameters
v. Backlight settings
vi. LED settings
vii. Pay-by-Phone payment display settings
viii. Sensor settings
ix. Other Meter settings as applicable

B. MMS, Meter Programming, & Data Integration Additional Requirements

1. MMS – General

a. Date format shall be consistent throughout the entire MMS and shall be customizable by SFMTA.

b. MMS shall include a search module that allows the user enter in a parking space identifier (i.e. Post ID) and date or date range to get a list of the then currently applied rates (including any Special Event rates) and hours of operation.

c. The Contractor shall provide and maintain for the term of the contract (at no cost to SFMTA) SFTP site for the purpose of exchanging all XML and CSV files with SFMTA, except for incoming transaction data XML.

d. ***Within 60 Days of the Notice to Proceed***, the Contractor shall provide a file structure in the SFTP site as specified by SFMTA.

e. MMS shall be able to transmit Pay-By-Phone payment status to the meter.

f. The MMS shall allow SFMTA to create ad-hoc reports combining user-defined and standard variables.

g. The Contractor shall be able to develop (at no additional cost) up to 25 custom reports for the term of the contract.

2. **Meter Behavior Programming**

a. The MMS shall accept Meter programming in at least two different ways:

i. Manually, via web user interface in the MMS or mobile MMS.

ii. Automatically, via XML or CSV file deposited in Contractor's SFTP site, per the specifications in Attachments 1-13.

b. The MMS shall allow SFMTA to determine which variables related to a metered space may be edited via XML, CSV or web user interface.

c. The Meters shall accept programming for subsets of the rules required in section III.B.2.c and as described in Example III.B.2.c.

Example III.B.2.c

Rule Type	Overall Behavior	Rule	Specific Behavior
FREE	Meter has no rate assigned, does not accept card payment, and does not display time purchased if a coin is dropped. Time limit is 0.	FREE1, FREE2, FREE3	Meter displays one of three possible pre-defined FREE messages
PREPAY	Meter accepts payment before the beginning of operating hours, for the first hour of operating hours.	PREPAY1, PREPAY2	Meter displays one of two possible pre-defined PREPAY messages
RATE	Meter accepts payment and credits time based on programmed rate for specified hours of the day.	RATE00.00, RATE00.05,... RATE18.00	Meter charges specified rate during specified hours
TOW (no parking)	Meter has no rate assigned, does not accept card payment, and does not give time if a coin is dropped	TOW1, TOW2, TOW3	Meter displays one of three possible pre-defined TOW messages
TIME LIMIT	Meter has time limit assigned so that the amount of time a Customer can purchase is restricted for specified hours of the day.	TL0010, TL0015, ... TL1440	Meter restricts purchase to specified time limit during specified hours.

d. The MMS shall accept programming for a set of general business rules that govern the specific rules listed in requirement III.B.2 as defined by SFMTA during the development and testing phase,.

- Time periods programmed with behaviors FREE, PREPAY, RATE, and TOW have to be mutually exclusive; i.e. no period of day may not have two of these rules assigned at the same time
- Time periods programmed with behaviors PREPAY may only precede time slots programmed with rule type RATE.
- Time periods programmed for FREE or TOW may not have time limits assigned to them
- Time limits apply only to time slots programmed with RATES.

e. SFMTA shall be able to program RULE TYPE "RATE" with a rate = $0.00 (different than RULE TYPE "FREE"). When RULE TYPE "RATE" = $0.00,

Meter behaves the same as RULE TYPE "FREE", but displays the information differently.

f. Meters shall accept programming of time limits independent of rates.

i. ***Within 90 days of the Notice to Proceed,*** the user shall be able to program and re-program meters in batches, whether or not the original programming within the selected batch was the same, and without affecting other parameters of the original Meter Behavior.

j. The SFMTA shall determine the Configuration name rules for the Meters. Using these rules, the MMS shall automatically assign the proper Configuration name to the Meters when adding or updating the inventory.

m. The Meter shall never allow a Customer to purchase time in excess of the following, whichever is smallest.

v. The total number of operating hours for the day (i.e. if Meter operates from 9am to 6pm, the maximum number of hours a Customer can purchase is 11, and only if the time limit is "no limit").

vi. The total number of hours left in the operating hours at the time the Customer conducts the transaction.

vii. The maximum number of continuous operating hours from the time of payment excluding TOW periods.

viii. The time limit programmed in the meter.

n. Meters shall accept programming for a minimum of 15 unique time slots within a 24-hr period between 0:00:00 and 24:00:00 hours, each with its rule. Meters shall also be capable of displaying all time slots on the screen at any time of the day.

o. Meter shall accept programming for time slots as small as ¼ of an hour.

p. Meter shall accept programming for up to four different types of days within a week, where each day type contains a unique set of time slot + rule combination.

o. SFMTA shall be able to program rates in $0.05 to $0.01 increments.

p. If a Meter is programmed with two different rates in adjacent time slots and a Customer pays for time starting in one time slot and ending in the next, the Meter shall prorate the amount charged for the time purchased.

q. When programming meters via the web user interface, the user shall be able to set the effective time and date when he/she wants the new Meter Behavior take effect.

r. At any given time, meters shall behave in accordance with programmed Meter Behavior parameters until such time as a new set of parameters becomes effective.

3. **Initial Meter Behavior Programming**

   a. The MMS shall support automatic initial programming of any new set of metered spaces at any time via XML files and CSV tables deposited in the Contractor's SFTP site. The programming of any new set of metered spaces will generally consist of up to four files submitted to the Contractor simultaneously or successively at short intervals as listed below:

      i. Parking Space Inventory XML file, as specified in Attachment 1

      v. Operating Schedule XML file, as specified in Attachment 2

      vi. Price Schedule XML file, as specified in Attachment 3

      vii. Special event pricing and regulation XML file, as specified in Attachment 4

   b. SFMTA will require initial programming of meters via XML file as follows:

      i. After Notice to Proceed, following the programming development and testing phase: existing metered spaces, phased in batches of minimum of 100s, specific schedule to be agreed upon between SFMTA and the Contractor during contract negotiations

      ii. Whenever newly-metered spaces are legislated in future, in batches of minimum of 100s.

      iii. Whenever individual meters are added to already-metered blocks, as needed.

   c. Any number of metered spaces submitted for programming by 11:59:59 PM any day shall be programmed into the system by 6:00 AM three business days later, i.e. metered spaces submitted by 11:59:59 PM Monday shall be programmed into the system by 6:00 AM Thursday and so on, barring holidays.

   d. Following Meter programming, at SFMTA's discretion Contractor shall:

      i. Provide a reconciliation XML file for verification in accordance with the specification in Attachment 7.

      ii. Set the programmed metered spaces to "Active" so that they are ready to go live on the street.

4. **Meter Programming Reconciliation**

   a. Following initial programming or re-programming of any batch of meters, at SFMTA's request, the Contractor shall issue an XML file in accordance with Attachment 7 "Reconciliation XML specification" and deposit it in the Contractor's SFTP site for pickup by SFMTA.

   b. ***Within 90 Days of the Notice to Proceed***, the MMS shall allow SFMTA to select any subset of meters using any combination of standard and user-defined filters and an effective date, and generate an XML file as specified in

Attachment 7 "Reconciliation XML specification" and deposit it in the Contractor's SFTP site for pickup by SFMTA.

c. The MMS shall issue a reconciliation XML file containing the entire Parking Meter Space inventory and associated Descriptive Variables (both user-defined and standard) per the specification in Attachment 7 to the SFTP site for pickup by SFMTA. SFMTA will use the reconciliation XML to routinely compare the attributes of metered spaces in the SFMTA and the Contractor databases for the purpose of verifying programming and correcting any discrepancies that may arise.

5. Screen Programming

a. Screens shall be able to communicate rates and regulations for every time slot programmed in the meter, each time slot in one line, so that a Customer arriving at any time of the day when the Meter is on can see all the time slots and related rates and regulations for that day.

b. If Meter requires more than one screen to display all time slots and rates for one day, then user shall be able to program lines that repeat across all screens and lines that change from screen to screen.

c. All time slots, rates and screens programmed shall be visible in the MMS.

d. ***Within 90 Days of the Notice to Proceed,*** all messages on Meter screens, including messages related to special programming, shall be based on pre-defined variables, as illustrated in Example III.B.5.d.

e. User shall be able to program Descriptive Variables, whether standard or user-defined, into Meter screens, as illustrated in Example III.B.5.e.

f. ***Within 120 Days of the Notice to Proceed***, the screen editor shall be independent of rate or tariff editor, so that messages are uniform across all Meter programming, as illustrated in Example III.B.5.f.

Example III.B.5.d/III.B.5.e/III.B.5.f [refers to all three requirements above]

User shall be able to introduce user-defined variables (such as Post ID in example below) into the screens.

User shall be able to pre-define all variables used on screens; so that changing a global message on all screens of all meters requires only changing a single variable.

[Post ID] [EXP1] – [TL_TXT] [TL1]
[ENF_TXT] [DAYF]-[DAYL]
[TS1_ST] – [TS1_END]: [RATE_1.50]
[TS2_ST] – [TS2_END]: [RATE_2.00]
[TS3_ST] – [TS3_END]: [RATE_3.00]
[DAY], [TIME]
[SCRL_TXT]

Results in:

470-01250 EXPIRED – MAX 30 min
ENFORCED MON-SUN
7:00am – 12:00pm: $1.50/hr
12:00pm – 3:00pm: $2.00/hr
3:00pm – 6:00pm: $3.00/hr
6 July 2012, 5:22 pm
MORE ↓

Where:

VAR NAME	VAR VALUE	SOURCE
Post ID	Post ID	User-defined variable stored in MMS
EXP_TXT	"EXPIRED"	User-defined variable with text content; tied to Meter status (Meter not paid)
TL_TXT	"MAX"	User-defined variable with text content
ENF_TXT	"ENFORCED"	User-defined variable with text content
DAYF	First day of week Meter is enforced	Meter behavior programming
DAYL	Last day of week Meter is enforced	Meter behavior programming
TSX_ST	Time slot X start time	Meter behavior programming
TSX_END	Time slot X end time	Meter behavior programming
RATE_1.50	RATE = $1.50/hr	Meter behavior programming
...		
DAY	CURRENT DAY	MMS/Meter clock
TIME	CURRENT TIME	MMS/Meter clock
SCRL_TXT	"MORE ↓"	User-defined variable with text content

If user wishes to change "ENFORCED" to "IN EFFECT" in all Meter screens, all he/she needs to do is change the value of variable ENF_TXT from "ENFORCED" to "IN EFFECT", and that will update every screen where variable ENF_TXT is called.

g. User shall be able to set default formats for displaying rates, times, time limits and other information on the screens

6. **MMS Customization**

a. The MMS shall allow for SFMTA or its designee a mechanism to prevent any number of credit cards or smart cards from being accepted, also known as a Hotlist. If used, any card (e.g. credit card, smart card, debit card etc.) account number the SFMTA adds to the Hotlist shall be denied at the meter.

b. ***Within 90 Days of the Notice to Proceed***, the MMS shall allow SFMTA to choose custom descriptors for standard variables routinely supported by the MMS in a master file or master page. Once saved, custom descriptors shall propagate throughout the MMS where the standard descriptors once appeared.

Example III.B.6.b

Master list of descriptors:

STANDARD DESCRIPTOR	DESCRIPTION	CUSTOM DESCRIPTOR (chosen by SFMTA)
Pole	Parking space identifier	PostID
Area Name	Name of street where pole is located	Street
...	...	...

Then:

ORIGINAL PAGE NAME	NEW PAGE NAME
Find Pole	Find PostID
Inactive Poles	Inactive Post IDs
Manage Poles	Manage Post IDs
Pole Transaction Detail	PostID Transaction Detail
Manage Areas	Manage Streets

And a report with the following original column headings:

Zone	Area	Pole

Shall have custom column headings:

Zone	Street	PostID

And so on.

c. ***Within 90 Days of the Notice to Proceed,*** in addition to vendor defined variables typically supported by the MMS, the MMS shall be capable of

storing SFMTA-defined variables as described in Table III.B.6.c and in Attachment 6.

Table III.B.6.c

Variable Name	Type/Size	Sample	Description
PARKING_SPACE_ID	number	100281	This is a surrogate ID automatically generated by SFMTA when a parking space is added to the database
JURISDICTION	varchar2(5)	SFMTA	Entity with jurisdiction over metered space (SFMTA or PORT)
OLD_RATE_AREA	varchar2(10)	Area 1	Corresponds to regulations that applied to metered spaces prior to SFpark, and still govern metered hours and rates in areas outside SFpark.
AREA_TYPE	varchar2(10)	Pilot	SFpark pilot area, SFpark control area, or "-" if neither.
STREET_BLOCK	varchar2(35)	BAY ST 100	Street name + street type + block number where metered space is located.
STR_NUM_PARITY	varchar2(4)	Even	Odd or even side of the street, based on street addresses.
ON_OFFSTREET_TYPE	varchar2(3)	ON	Describes whether the metered space is on street or off street.
CAP_COLOR	varchar2(10)	Grey	Colors correspond to how the metered space is regulated as described below. In the case of Grey, Green, Yellow, and Red, they also correspond to the actual cap (dome) color on the street.
DOME_COLOR	varchar2(10)	Grey	The actual color of the dome on single space meters.
SPACE_TYPE	varchar2(20)	GMP	Describes the type of metered space (GMP, GMP-ST, ML (Meter loading), MTL (Meter truck loading), MC (motorcycle), TOUR BUS, BOAT TRAILER); related to CAP_COLOR above
ACTIVE_METER_FLAG	char(1)	M	Describes Meter status (metered, temporarily removed, legislated but not yet installed, etc).
PMR_ROUTE	varchar2(10)	J-2	Parking Meter Repairer (maintenance) route.
COLLECTION_ROUTE	varchar2(10)	411	Describes coin collection route.
COLLECTION_SUBROUTE	varchar2(10)	411.52	Describes coin collection subroute.
PCO_BEAT	varchar2(7)	109A	Describes enforcement beats for SFMTA's Parking Control Officers (PCOs).
TOW_FLAG	char(1)	Y	Y/N indicates metered space has a TOW schedule.
PAX_FLAG	char(1)	Y	Y/N indicates metered space has a Passenger Loading hours.
COMMERCIAL_FLAG	char(1)	Y	Y/N indicates metered space has commercial loading hours.

d. ***Within 90 Days of the Notice to Proceed***, the MMS shall provide the ability to store **ten** additional user-defined variables (empty1, empty2, etc.). The SFMTA shall be able to designate these variables on as needed basis.

e. The MMS shall store the equivalent of the parameters contained in SFMTA's operating schedule type "OP" as defined in Attachment 2 – OUTGOING Operating Schedule XML specification and as listed below:

   i. Days of week

   ii. Prepayment time

   iii. Start time

   iv. End time

   v. Time limit

f. The MMS shall allow SFMTA to pre-load allowable values for San Francisco street names and types (i.e. street, avenue, boulevard, etc) so that only existing names and types can be entered in the street data field.

g. ***Within 90 Days of the Notice to Proceed***, the MMS shall accept content provided by SFMTA via XML file to populate user-defined variables as well as standard variables as described in Attachment 1 – OUTGOING Parking Space Inventory XML specification.

h. ***Within 90 Days of the Notice to Proceed,*** the MMS shall accept content provided by SFMTA in CSV format to be uploaded to the MMS to populate user-defined variables as well as standard variables.

i. The MMS shall be able to export content into XML files as specified in Appendices 6 – INCOMING Parking Space Inventory XML specification and Attachment 7 – INCOMING Reconciliation XML specification on demand, for any Meter or set of meters selected by the user.

j. ***Within 60 Days of the Notice to Proceed,*** the MMS shall support expansion of the number of characters in both standard and user-defined variables.

k. ***Within 90 Days of the Notice to Proceed,*** user-defined variables shall consist of attributes of metered spaces only and shall not affect Meter Behavior; however, MMS shall allow SFMTA to filter by user-defined variables for grouping meters for the purpose of batch editing Meter Behavior, as illustrated in Example III.B.6.k.

Example III.B.6.k

Scenario: SFMTA currently has GMP meters that have 1-hr and 2-hr time limits, but may have different operating hours or regulations (e.g. some may have a TOW restriction in the morning whereas others do not). SFMTA wishes to change the time limit in all 1-hr GMP meters to 2 hrs. The user shall be able to select all meters where SPACE_TYPE = GMP and MAX_TIME = 1 hr and assign a 2-hr time limit to all of them at once

l. ***Within 120 Days of the Notice to Proceed,*** the MMS shall support the addition of any subset of the user-defined variables as columns to standard

reports to create ad-hoc reports that combine user-defined and standard variables, as illustrated in Example III.B.6.l.

Example III.B.6.l

Scenario: User wishes to insert additional information into the standard Meter Faults report for the purpose of assigning PMRs to maintenance shifts in the Marina neighborhood, and to optimize maintenance routes by having PMRs walk one side of the street first, then the other.

Sample standard Meter Faults report columns:

Area	Street	Post ID	Fault	Date

Standard Meter Faults report with user-defined columns, filters, and sorts added:

Area [Filter 1: Marina]	**PMR Route [Sort 1: ascending]**	Street	**Street and Block [Sort 3: ascending]**	**Side [Sort 2: ascending]**	Post ID	Fault	Date

m. The MMS shall support filtering and sorting based on user-defined variables as well as standard variables for programming, reporting, or other purposes.

n. The MMS shall support exporting daily Meter revenue CSV file as defined in Attachment 9.

o. The MMS shall support exporting daily Meter maintenance CSV file as defined in Attachment 10 and 11.

7. Inventory and Asset Management Reports

Within 90 Days of the Notice to Proceed:

a. The MMS shall support a Parking Space Inventory Report that describes Meter Behavior for every time slot of each day, as illustrated in Example III.B.7.a.

Example III.B.7.a – Parking Space Inventory Report

	Street and Block	Post ID	Cap Color	Days	From	To	Free	Prepay	Tow	Rate	Time Limit
1	05TH ST 600	205-06621	Green	Mo,Tu,We,Th,Fr	12:00	8:00	X				
2					8:00	9:00		X			
3					9:00	3:00				$2.25	15 min
4					3:00	6:00				$2.00	15 min
5					6:00	12:00	X				
6				Sa	12:00	8:00	X				
7					8:00	9:00		X			
8					9:00	12:00				$1.50	15 min
9					12:00	3:00				$2.00	15 min
10					3:00	6:00				$1.75	15 min
11					6:00	12:00	X				
12				Su	12:00	12:00	X				
13	TOWNSEND ST 300	684-03121	Yellow	Mo,Tu,We,Th,Fr	12:00	6:00	X				
14					6:00	7:00		X			
15					7:00	6:00				$3.00	30 min
16					6:00	12:00	X				
17				Sa	12:00	6:00	X				
18					6:00	7:00		X			
19					7:00	6:00				$3.00	30 min
20					6:00	12:00	X				
21				Su	12:00	12:00	X				
22	03RD ST 300	203-03090	Grey	Mo,Tu,We,Th,Fr	12:00	7:00	X				
23					7:00	9:00			X		
24					9:00	12:00				$1.00	no limit
25					12:00	3:00				$2.00	no limit
26					3:00	4:00				$2.50	no limit
27					4:00	7:00			X		
28					7:00	12:00	X				
29				Sa	12:00	6:00	X				
30					6:00	7:00		X			
31					7:00	12:00				$0.50	no limit
32					12:00	3:00				$2.00	no limit
33					3:00	6:00				$2.25	no limit
34					6:00	12:00	X				
35				Su	12:00	12:00	X				

b. The Parking Space Inventory Report in the MMS shall allow customization by removal and addition of columns containing both standard and user-defined variables, as illustrated in Example III.B.7.b.

Example III.B.7.b – Customized Parking Space Inventory Report

The report below has the following differences as compared with the original report:

- Columns "Free" and "Prepay" have been removed, along with the associated time slots (rows).
- Column "Cap Color" has been removed.
- Columns "Space Type" and "Meter Type" have been added.

	Street and Block	Meter Type	PostID	Space Type	Days	From	To	Tow	Rate	Time Limit
1	05TH ST 600	SS	205-06621	GMP-ST	Mo,Tu,We,Th,Fr	9:00 AM	3:00 PM		$2.25	15 min
2						3:00 PM	6:00 PM		$2.00	15 min
3					Sa	9:00 AM	12:00		$1.50	15 min
4						12:00 PM	3:00 PM		$2.00	15 min
5						3:00 PM	6:00 PM		$1.75	15 min
6	TOWNSEND ST 300	SS	684-03121	ML	Mo,Tu,We,Th,Fr	7:00 AM	6:00 PM		$3.00	30 min
7					Sa	7:00 AM	6:00 PM		$3.00	30 min
8	03RD ST 300	SS	203-03090	GMP	Mo,Tu,We,Th,Fr	7:00 AM	9:00 AM	X		
9						9:00 AM	12:00		$1.00	no limit
10						12:00 PM	3:00 PM		$2.00	no limit
11						3:00 PM	4:00 PM		$2.50	no limit
12						4:00 PM	7:00 PM	X		
13					Sa	7:00 AM	12:00		$0.50	no limit
14						12:00 PM	3:00 PM		$2.00	no limit
15						3:00 PM	6:00 PM		$2.25	no limit

c. The MMS shall include reports that track Meter Behavior changes, and historic parameters shall be archived in a manner that they are searchable, as illustrated in Example III.B.7.c.

Example III.B.7.c

Scenario: The user wishes to find out how the Meter with Post ID 464-03100 was programmed on 6/12/12. He/she shall be able to enter these two parameters and search an archive, and see a report similar to the one below:

Date: 6/12/12

	Street and Block	PostID	Cap Color	Days	From	To	Free	Prepay	Tow	Rate	Time Limit
1	HAYES ST	464-03100	Grey	Mo,Tu,We, Th,Fr	12:00	8:00	X				
2	300				8:00	9:00		X			
3					9:00	3:00				$2.25	4 hr
4					3:00	6:00				$2.00	4 hr
5					6:00	12:00	X				
6				Sa	12:00	8:00	X				
7					8:00	9:00		X			
8					9:00	12:00				$1.50	4 hr
9					12:00	3:00				$2.00	4 hr
10					3:00	6:00				$1.75	4 hr
11					6:00	12:00	X				
12				Su	12:00	12:00	X				

8. **Faults and Maintenance**

   a. The MMS shall include a maintenance management module that records Meter and repair activity using automatically generated and manually entered faults and maintenance events.

   b. The module shall support reporting of parking Meter repair activity (PMR) including by not limited to employee name, date range, fault characteristic, area etc.

   c. ***Within 120 Days of the Notice to Proceed,*** The MMS shall allow for import of data in batch files. For example, when reconfiguring the hours of operation on 100 meters, the end user should be able to upload that data in batches. Including but limited the following data sources: XML, Excel, CSV etc.

9. **Revenue Reports**

   Within 90 Days of the Notice to Proceed:

   a. The MMS shall allow SFMTA to add user-defined variables to revenue reports, and to filter or sort reports based on user-defined variables as well as standard variables.

b. The MMS shall allow SFMTA to perform non-standard calculations in revenue reports. The SFMTA will define and approve the definition of the data in terms of its format, validation and semantics. In the case of calculated fields, the City shall define and approve the definition of the mechanism by which the data is derived, the sources of data employed in the calculation and the circumstances of data selection.

10. PBP Reports (used for visual indication of PBP transactions)

The MMS shall include a report searchable by date range that lists the following information:

a. Post ID.

b. Date/time of receipt of Pay-By-Phone transaction by the MMS.

c. Transaction amount.

d. Time purchased.

e. Date/time of receipt of Pay-By-Phone transaction by the Meter.

f. Transmission status (successful, pending, failed).

11. Data Integration

a. MMS shall be able to submit all the payment (coin, credit card, smart card etc.) and maintenance alerts data via XML format described in the Attachments 5 and 8 within 10 seconds after receiving the data from the meters.

b. The MMS shall support the ability to deliver usage and status data to SFMTA in batched manner (at the end of the operating day or as designated by the SFMTA).

c. The Contractor shall enter the programming development and testing phase where Contractor shall work closely with SFMTA to develop and test its ability to accept XML and CSV files as specified in Attachments 1-13, and conduct the necessary programming specified therein within the required timelines.

d. The frequencies of transmission for each file described in the Anticipated Frequency of Transmissions (Attachment 14) and shall be mutually independent; i.e. if an Operating Schedule XML file is submitted today for re-programming of a batch of 1000 meters, this does not prevent the submission of a Price Schedule XML file for the re-programming of the same 1000 meters two weeks from today.

e. In cases where the Contractor's system has a standard variable equivalent to a variable in SFMTA's system but named differently, the Contractor shall be responsible for translating the variable in all its communications with SFMTA.

f. The Contractor shall be required to translate system variables from default names to SFMTA-specific names.

g. In the cases where the Contractor's system cannot store a variable in the exact same format as submitted by SFMTA, the Contractor shall develop the

ability to translate SFMTA's data to fit within the equivalent in its system, as illustrated in Example III.B.11.g. Furthermore, the Contractor shall translate content both when its system receives OUTGOING XML files from SFMTA and when its system issues INCOMING XML files to SFMTA.

12. Meter Backend Settings

a. SFMTA shall be able to establish a default set of Backend Settings to be applied to every new Meter added to the inventory.

b. ***Within 120 Days of the Notice to Proceed*** SFMTA shall be able to upload a CSV file to the MMS containing Backend Settings on a per-Meter basis.

c. The format of the CSV file shall be agreed upon between SFMTA and the Contractor during the programming development and testing phase.

d. ***Within 90 Days of the Notice to Proceed*** user shall be able to select the unit that serves as basis for each default payment setting for coins and cards (money or time, mutually exclusive for each parameter).

e. User shall be able to select what conditions will cause the Meter screen backlight to turn on.

f. If Meter uses LED lights for visual enforcement, then user shall be able to configure LED lights..

13. Re-Programming of Existing Metered Spaces

a. Following the programming development and testing phase and initial programming of metered spaces, the MMS shall support automatic re-programming of any subset of metered spaces at any time via XML files and CSV tables deposited in the Contractor's SFTP site. The re-programming of subsets of metered spaces shall generally consist of any combination of the following:

i. Operating Schedule XML file, as specified in Attachment 1

ii. Price Schedule XML file, as specified in Attachment 2

iii. Special event pricing and regulation XML file, as specified in Attachment 3

b. The steps and timing for re-programming of existing metered spaces shall be coordinated so that the deadline for completing each step is described based on the completion of a previous step and "(B) days" represents business days.

c. ***Within 60 Days of the Notice to Proceed,*** in the event that a newly-metered space is created directly in the MMS, the MMS shall automatically notify SFMTA's system by sending it an XML file containing the Post ID identifier and any associated standard and user-defined data as described in Attachment 6 – INCOMING Parking Space Inventory XML specification.

d. ***Within 60 Days of the Notice to Proceed*** if a record with the Post ID identifier exists in SFMTA's Data Warehouse and the XML contains the Post ID identifier only (i.e. it does not contain associated standard and user-

defined content such as geographic locators and space attributes), then the MMS shall accept an XML file to populate both standard and user-defined variables.

14. Special Event Programming (Hours, Rates, Time Limits, and Restrictions)

a. The MMS shall allow programming of special exceptions to standard programming that can be assigned and/or removed by specific start and end dates on a calendar, consisting of time slot start/end times and one or more of the following rule types:

i. Rates

ii. Tow

iii. Free

iv. Time Limits

b. ***Within 90 Days of the Notice to Proceed*** the MMS shall allow programming of a minimum of 20 special exceptions that can be assigned to a minimum of 100 combinations of start and end dates, as described in Example III.B.14.b. The resulting Meter Behavior for each day is a combination of the standard programming for that day and the special exceptions programming. If the standard programming is different for different days of the week, then the resulting programming depends on the day of the week the override programming is scheduled for.

Example III.B.14.b

If the standard programmed Meter behavior is as follows:

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon-Fri	FREE					PREPAY					RATE_3.50			RATE_3.75			RATE_4.00			RATE_0.25				FREE	
											TL = 120 min									TL = 240 min					
Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Sat	FREE					PREPAY					RATE_0.25													FREE	
											TL = 120 min									TL = 240 min					
Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Sun	FREE					PREPAY							RATE_0.25											FREE	
													TL = 240 min												

Then the user shall be able to program a minimum of 20 distinct special overrides as illustrated below:

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
SP_01																			**RATE_7.00**						
																			TL = 240 min						
Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

SP_02	FREE																							
...																								
Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
SP_30											TOW														

That can then be scheduled for a minimum of 100 combinations of start and end dates as illustrated below:

DATE_START	DATE_END	OVERRIDE
09/14/12	09/15/12	SP_30
09/21/12	09/22/12	SP_01
DATE_START	**DATE_END**	**OVERRIDE**
11/22/12	11/22/12	SP_02
12/25/12	12/25/12	SP_02

Resulting in:

Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
09/14/12	FREE											TOW				RATE_4.00			RATE_0.25				FREE		
(Fri)																TL=120 min			TL = 240 min						
Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
09/15/12	FREE											TOW				RATE_0.25							FREE		
(Sat)																TL=120 min			TL = 240 min						
Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
09/21/12	FREE					PREPAY				RATE_3.50			RATE_3.75			RATE_4.00			RATE_7.00				FREE		
(Fri)										TL = 120 min									TL = 240 min						
Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
09/22/12	FREE					PREPAY				RATE_0.25									RATE_7.00				FREE		
(Sat)										TL = 120 min									TL = 240 min						
Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
11/22/12	FREE																								
(Thu)																									
Hour:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
12/25/12	FREE																								
(Tue)																									

Where:

	represents the override programming scheduled for a particular day
	represents standard programming parameters affected by the override on that day

c. ***Within 60 Days of the Notice to Proceed***, the MMS shall accept programming for special overrides or exceptions in accordance with Attachment 4 - Special event pricing and regulation XML specifications.

d. In the event that SFMTA submits an operating schedule or price schedule change after submitting programming for special overrides, the MMS shall update the override programming accordingly.

15. Transaction Data Feed

a. The Contractor shall transmit all parking Meter transaction data from the MMS to SFMTA's Data Warehouse in accordance with Attachment 5 – INCOMING Transaction Data XML specifications.

b. The Contractor's system shall differentiate between two possible transaction event types: new session and add-time session, where an add-time session is defined as one where a Customer adds time to a parking session already in progress (i.e. the Meter is already paid when the Customer conducts his/her transaction).

c. The Contractor's system shall differentiate between payment time and parking session start time.

d. Mixed payment transaction: When a Customer uses more than one payment type (i.e. coins and credit card) within a payment window to pay for a single parking session, the Contractor's system shall transmit separate transactions for the different payment types.

16. Monitoring Software

a. The Contractor shall implement a monitoring and alerting system (aka "watchdog software") to monitor all data transmissions to and from SFMTA, including but not limited to:

i. Receipt of OUTGOING XML files described in Anticipated Frequency of Transmissions (Attachment 14) in its SFTP site.

ii. Interruptions in the transmission of INCOMING Transaction Data XML feed (Attachment 5) including complete failure to transmit, partial transmission results from equipment problems and failure to transmit certain transaction types

iii. Failures in scheduled periodic transmissions of INCOMING XML and CSV files.

iv. Any other data transmissions not currently anticipated in accordance with the schedule agreed to by the Parties.

b. The Contractor shall, at SFMTA's request, send alerts directly to SFMTA staff via email, text message, or other agreed-upon communication method.

17. Mobile Maintenance Application / PDTs

a. The MMS shall have two versions: desktop and mobile.

b. Field communications shall be conducted via mobile MMS and/or via handheld device. All proposed Meter systems shall recognize and verify commands from an authorized device only, ignoring all other signals or devices.

c. Both desktop and mobile versions of the MMS shall be able to record Meter maintenance activity (both automatically generated by the Meter itself and

manually recorded by PMR via means of entering designated Meter repair code).

d. The mobile version of the MMS shall be able to run on any mobile platform (Apple, Windows, Android, Blackberry, etc.).

e. PMRs shall be able to perform the following activities using either mobile version of the MMS and/or a designated handheld.

i. Reprograming of Meter Behavior parameters including times, rates, time limits, etc.

ii. Reprogramming of the Backend Settings.

f. Retrieval of revenue audit information and electronic cash transactions (including mechanism serial number).

g. Retrieval of fault and maintenance information (including mechanism serial number and battery voltage).

h. Each communication session updates the mechanism's clock, calendar, and day of week information.

i. Changes made to Meter programming via mobile MMS and/or PDT shall be reflected in the desktop MMS.

18. Programming without Contractor Assistance

Within 180 Days of the Notice to Proceed, the MMS shall be configured so that the SFMTA can conduct global rate changes, various attributes reconciliation, Special Event pricing and other global programing features within MMS without assistance of the Contractor.

ATTACHMENTS TO APPENDIX A – STATEMENT OF WORK

Table of Contents

Attachment 1: OUTGOING Parking Space Inventory XML specification

Date : 29 June 2012
Author : SFMTA
Ref:
Description: The following XML is the format in which SFMTA will deliver periodic parking space inventory additions and changes for the purpose of populating or updating user-defined data fields as well as some standard fields in the Proposer's Meter Management System.

XSD along with XML namespace for this XML will be provided at a later time.

Revision History		
Date	Version	Description
29 June 2012	1.0	First DRAFT for review (SFMTA)

<PARKING_SPACE_INVENTORY>

*<CITY_ID>**ID number assigned by SFMTA**</ CITY_ID>*

*<EFFECTIVE_DATE> **The effective date in standard Oracle format** </ EFFECTIVE_DATE>*

*<TRANSMISSION_DATETIME>**Date and time of transmission from city in standard Oracle format to the second** </TRANSMISSION_DATETIME>*

<METERED_SPACE>

*<METER_TYPE>**MS or SS**</METER_TYPE>*

*<PARKING_SPACE_ID>**Internal numeric Id for meter space assigned by SFMTA**</PARKING_SPACE_ID>*

*<POST_ID>**applies to SS only**</POST_ID>*

*<MS_ID>**applies to MS only**</MS_ID>*

*<SPACE_NUM> **MS only**</SPACE_NUM>*

*<JURISDICTION>**SFMTA or PORT**</JURISDICTION>*

*<OLD_RATE_AREA>**SFMTA legacy rate area**</ OLD_RATE_AREA>*

*<PM_DISTRICT_NAME>**PM district name**</PM_DISTRICT_NAME>*

*<AREA_TYPE>**Pilot, Control or '-'**</ AREA_TYPE>*

*<STREET_NAME>**Street name in all CAPS using SFMTA street name convention**</STREET_NAME>*

*<STREET_BLOCK> **Street name + street type + block number in all CAPS using SFMTA street name convention** </STREET_BLOCK>*

*<STR_NUM_PARITY>**Odd or Even**</ STR_NUM_PARITY>*

*<LATITUDE>**Derived from geometry with standard 10 decimal**</LATITUDE>*

*<LONGITUDE>**Derived from geometry with standard 10 decimal**</LONGITUDE>*

*<ON_OFFSTREET_TYPE> **On or Off street parking** </ON_OFFSTREET_TYPE>*

*<CAP_COLOR>**one of allowed cap color values**</CAP_COLOR>*

*<SPACE_TYPE>**GMP, SHORT TERM GMP, ML, MTL, MC, TOUR BUS, BOAT TRAILER**</SPACE_TYPE >*

*<ACTIVE_METER_FLAG>**one of allowed meter flag values**</ACTIVE_METER_FLAG>*

*<PMR_ROUTE> **PMR route number from SFPM** </PMR_ROUTE>*

*<COLLECTION_ROUTE> **collection route number from SFPM** </COLLECTION_ROUTE>*

*<COLLECTION_SUBROUTE>**Sub route number from SFPM**</COLLECTION_SUBROUTE>*

*<PCO_BEAT>**PCO Beat number**</PCO_BEAT>*

*<TOW_FLAG>**Y/N flag indicating metered space has a TOW Schedule**</TOW_FLAG>*

*<PAX_FLAG> **Y/N flag indicating metered space has passenger loading hours**</PAX_FLAG>*

*<COMMERCIAL_FLAG> **Y/N flag indicating metered space has commercial loading hours** </ COMMERCIAL_FLAG>*

</METERED_SPACE>

</PARKING_SPACE_INVENTORY>

XML Code:	*Shall Be:*
CITY_ID	*Assigned by SFMTA*
EFFECTIVE_DATE	*Date and time that this addition or update to the inventory will be effective; set by SFMTA*
TRANSMISSION_DATETIME	*Given by SFMTA*
METERED_SPACE	*One or more*
METER_TYPE	*MS: multi-space pay station* *SS: single space meter*
PARKING_SPACE_ID	*This is a surrogate ID automatically generated by SFMTA when a parking space is added to the database*
POST_ID	*Unique identifier assigned by SFMTA; used primarily to identify single space metered spaces on the street*
MS_ID	*Unique identifier assigned by SFMTA; applies to multi-space pay stations only*

SPACE_NUM	*Identifier of specific parking space managed by MS pay station, assigned by SFMTA. The combination MS_ID + SPACE_NUM is always unique*
JURISDICTION	*Entity with jurisdiction over metered space (SFMTA or PORT)*
OLD_RATE_AREA	*Corresponds to regulations that applied to metered spaces prior to SFpark, and still govern days/hours of operations and rates of metered spaces in areas outside SFpark.*
PM_DISTRICT_NAME	*Parking Management District - a geographic unit for grouping metered spaces.*
AREA_TYPE	*SFpark pilot area, SFpark control area, or "-" if neither.*
STREET_NAME	*Street name and street type (ST, BLVD, etc)*
STREET_BLOCK	*Street name + street type + block number where metered space is located.*
STR_NUM_PARITY	*Odd or Even (side of the street)*
LATITUDE	*Together with LATITUDE, describes geographic location of metered space.*
LONGITUDE	*Together with LONGITUDE, describes geographic location of metered space.*
ON_OFFSTREET_TYPE	*Describes whether the metered space is on street or off street.*
CAP_COLOR	*Colors correspond to how the metered space is regulated as described below. In the case of Grey, Green, Yellow, and Red, they also correspond to the actual cap (dome) color on the street.*
SPACE_TYPE	*Derived from cap color to reflect "operations language", as follows:* *Grey = GMP* *Green = SHORT TERM GMP* *Yellow = ML* *Red = MTL* *Black = MC* *Brown = TOUR BUS* *Purple = BOAT TRAILER*
ACTIVE_METER_FLAG	*Describes meter status (metered, temporarily removed, legislated but not yet installed, etc).*
PMR_ROUTE	*Parking Meter Repairer (maintenance) route.*

COLLECTION_ROUTE	*Describes coin collection route.*
COLLECTION_SUBROUTE	*Describes coin collection subroute.*
PCO_BEAT	*Describes enforcement beats for SFMTA's Parking Control Officers (PCOs).*
TOW_FLAG	*Y/N indicates metered space has a TOW schedule.*
PAX_FLAG	*Y/N indicates metered space has a passenger loading hours.*
COMMERCIAL_FLAG	*Y/N indicates metered space has commercial loading hours.*

Examples:

<PARKING_SPACE_INVENTORY>
<CITY_ID>**1001**</CITY_ID>
<EFFECTIVE_DATE>**2012-07-10 00:00:00**</EFFECTIVE_DATE>
<TRANSMISSION_DATETIME>**2012-07-01 17:30:45**</TRANSMISSION_DATETIME>
<METERED_SPACE>
<METER_TYPE>**SS**</METER_TYPE>
<PARKING_SPACE_ID>**123456**</PARKING_SPACE_ID>
<POST_ID>**111-11111**</POST_ID>
<JURISDICTION>**SFMTA**</JURISDICTION>
<OLD_RATE_AREA>**Area 1**</OLD_RATE_AREA>
<PM_DISTRICT_NAME>**Downtown**</PM_DISTRICT_NAME>
<AREA_TYPE>**Pilot**</AREA_TYPE>
<STREET_NAME>**BATTERY ST**</STREET_NAME>
<STREET_BLOCK>**BATTERY ST 1100**</STREET_BLOCK>
<STR_NUM_PARITY>**Even**</STR_NUM_PARITY>
<LATITUDE>**37.7768342**</LATITUDE>
<LONGITUDE>**-122.423847**</LONGITUDE>
<ON_OFFSTREET_TYPE>**ON**</ON_OFFSTREET_TYPE>
<CAP_COLOR>**Grey**</CAP_COLOR>
<SPACE_TYPE>**GMP**</SPACE_TYPE>
<ACTIVE_METER_FLAG>**M**</ACTIVE_METER_FLAG>
<PMR_ROUTE>**J-2**</PMR_ROUTE>

<COLLECTION_ROUTE>**411**</COLLECTION_ROUTE>
<COLLECTION_SUBROUTE>**411.52**</COLLECTION_SUBROUTE>
<PCO_BEAT>**109A**</PCO_BEAT>
<TOW_FLAG>**Y**</TOW_FLAG>
<PAX_FLAG>**Y**</PAX_FLAG>
<COMMERCIAL_FLAG>**Y**</COMMERCIAL_FLAG>
</METERED_SPACE>

<METERED_SPACE>
<METER_TYPE>**SS**</METER_TYPE>
<PARKING_SPACE_ID>**56789**</PARKING_SPACE_ID>
<POST_ID>**324-11041**</POST_ID>
<JURISDICTION>**SFMTA**</JURISDICTION>
<OLD_RATE_AREA>**Area 1**</OLD_RATE_AREA>
<PM_DISTRICT_NAME>**Downtown**</PM_DISTRICT_NAME>
<AREA_TYPE>**Pilot**</AREA_TYPE>
<STREET_NAME>**SUTTER ST**</STREET_NAME>
<STREET_BLOCK>**SUTTER ST 1100**</STREET_BLOCK>
<STR_NUM_PARITY>**Odd**</STR_NUM_PARITY>
<LATITUDE>**37.1234567**</LATITUDE>
<LONGITUDE>**-122.123456**</LONGITUDE>
<ON_OFFSTREET_TYPE>**ON**</ON_OFFSTREET_TYPE>
<CAP_COLOR>**Green**</CAP_COLOR>
<SPACE_TYPE>**SHORT TERM GMP**</SPACE_TYPE>
<ACTIVE_METER_FLAG>**M**</ACTIVE_METER_FLAG>
<PMR_ROUTE>**J-3**</PMR_ROUTE>
<COLLECTION_ROUTE>**432**</COLLECTION_ROUTE>
<COLLECTION_SUBROUTE>**432.12**</COLLECTION_SUBROUTE>
<PCO_BEAT>**123**</PCO_BEAT>
<TOW_FLAG>**Y**</TOW_FLAG>
<PAX_FLAG>**N**</PAX_FLAG>
<COMMERCIAL_FLAG>**N**</COMMERCIAL_FLAG>
</METERED_SPACE>

<METERED_SPACE>
<METER_TYPE>**MS**</METER_TYPE>
<PARKING_SPACE_ID>**114957**</PARKING_SPACE_ID>
<MS_ID>**216-30002**</MS_ID>
<SPACE_NUM>**2**</SPACE_NUM>
<JURISDICTION>**SFMTA**</JURISDICTION>
<OLD_RATE_AREA>**Area 3**</OLD_RATE_AREA>
<PM_DISTRICT_NAME>**Mission**</PM_DISTRICT_NAME>
<AREA_TYPE>**Pilot**</AREA_TYPE>
<STREET_NAME>**16TH ST**</STREET_NAME>
<STREET_BLOCK>**16TH ST** 3000</STREET_BLOCK>
<STR_NUM_PARITY>**Even**</STR_NUM_PARITY>
<LATITUDE>**37.1234567**</LATITUDE>
<LONGITUDE>**-122.123456**</LONGITUDE>
<ON_OFFSTREET_TYPE>**ON**</ON_OFFSTREET_TYPE>
<CAP_COLOR>**Green**</CAP_COLOR>
<SPACE_TYPE>**SHORT TERM GMP**</SPACE_TYPE>
<ACTIVE_METER_FLAG>**M**</ACTIVE_METER_FLAG>
<PMR_ROUTE>**J-5**</PMR_ROUTE>
<COLLECTION_ROUTE>**567**</COLLECTION_ROUTE>
<COLLECTION_SUBROUTE>**567.11**</COLLECTION_SUBROUTE>
<PCO_BEAT>**231**</PCO_BEAT>
<TOW_FLAG>**N**</TOW_FLAG>
<PAX_FLAG>**N**</PAX_FLAG>
<COMMERCIAL_FLAG>**N**</COMMERCIAL_FLAG>
</METERED_SPACE>

<METERED_SPACE>
<METER_TYPE>**MS**</METER_TYPE>
<PARKING_SPACE_ID>**127890**</PARKING_SPACE_ID>
<MS_ID>**205-06220**</MS_ID>
<SPACE_NUM>**3**</SPACE_NUM>
<CAP_COLOR>**Grey**</EVENT_TYPE>
<ON_OFFSTREET_TYPE>**ON**</ON_OFFSTREET_TYPE>

<STREET_NAME>**BAY ST**</STREET_NAME>

<PCO_BEAT>**231**</PCO_BEAT>

<LATITUDE>**37.3214567**</LATITUDE>

<LONGITUDE>**-122.321456**</LONGITUDE>

<OLD_RATE_AREA>**Area 2**</OLD_RATE_AREA>

<ACTIVE_METER_FLAG>**M**</ACTIVE_METER_FLAG>

<COLLECTION_SUBROUTE>**411.23**</COLLECTION_SUBROUTE>

<PM_DISTRICT_NAME>**Fisherman's Wharf**</PM_DISTRICT_NAME>

<COLLECTION_ROUTE>**567**</COLLECTION_ROUTE>

<PMR_ROUTE>**J-5**</PMR_ROUTE>

<STREET_BLOCK>**BAY ST 1500**</STREET_BLOCK>

<STR_NUM_PARITY>**Even**</STR_NUM_PARITY>

<AREA_TYPE>**Pilot**</AREA_TYPE>

<TOW_FLAG>**Y**</TOW_FLAG>

<PAX_FLAG>**N**</PAX_FLAG>

<COMMERCIAL_FLAG>**N**</COMMERCIAL_FLAG>

</METERED_SPACE>

..... *Followed by all other spaces as this sample only lists few metered spaces to highlight the various elements and formats. MS space is shown in same sample xml for demo purposes only as typically MS and SS will be in distinct vendor xml files.* .....

</PARKING_SPACE_INVENTORY>

Attachment 2: OUTGOING Operating Schedule XML specification

Date : 20 June 2012
Author : SFMTA
Ref:
Description: The following XML is the format in which SFMTA will deliver periodic operating schedule changes for the purpose of re-programming meters or pay stations with new schedules (e.g. new time limits; longer operating hours).

Revision History		
Date	Version	Description
20 June 2012	1.0	First DRAFT for review (Mariana R. Parreiras)
29 June 2012	2.0	Revised per discussion with Randy (Mariana R. Parreiras)
17 July 2013	3.0	Revised per discussion with Alexiy and Ed

<OPERATING_SCHEDULE>

*<CITY_ID>**ID number assigned by Proposer to SFMTA**</ CITY_ID >*

*<EFFECTIVE_DATE> **Date and time the effective date in standard Oracle format to the second** </ EFFECTIVE_DATE >*

*<TRANSMISSION_DATETIME>**Date and time of transmission from City in standard Oracle format to the second** </TRANSMISSION_DATETIME>*

<METERED_SPACE>

*<METER_TYPE>**MS or SS**</METER_TYPE>*

<PARKING_SPACE_ID>Internal numeric ID assigned to meter space by SFMTA</PARKING_SPACE_ID>

*<POST_ID> **applies to SS only**</POST_ID>*

*<MS_ID>**applies to MS only**</MS_ID>*

*<SPACE_NUM> **MS only**</SPACE_NUM>*

< OP_SCHEDULE>

*<COLOR_RULE >**Type of Parking Allowed – see allowed values below**</COLOR_RULE>*

*<DAYS_OF_WEEK>**Day of the Week mask** </DAYS_OF_WEEK>*

*< START_TIME>**Start time for price in standard Oracle format to the second** </ START_TIME>*

*< END_TIME>**End time for price in standard Oracle format to the second** </ END_TIME>*

*<TIME_LIMIT>**Meter time limit in minutes**</TIME_LIMIT>*

*<PREPAYMENT_TIME>**Actual time of day before operating hours (in standard Oracle format to the minute) when prepayments may be accepted**</PREPAYMENT_TIME>*

</OP_SCHEDULE>

<TOW_SCHEDULE>

<DAYS_OF_WEEK>**Day of the Week mask** </DAYS_OF_WEEK>

<START_TIME>**Start time for price in standard Oracle format to the second** </START_TIME>

<END_TIME>**End time for price in standard Oracle format to the second** </END_TIME>

</TOW_SCHEDULE>

<ALT_SCHEDULE>

<COLOR_RULE >**Type of Parking Allowed – see allowed values below**</COLOR_RULE>

<DAYS_OF_WEEK>**Day of the Week mask** </DAYS_OF_WEEK>

<START_TIME>**Start time for price in standard Oracle format to the second** </START_TIME>

<END_TIME>**End time for price in standard Oracle format to the second** </END_TIME>

<TIME_LIMIT>**Meter time limit in minutes**</TIME_LIMIT>

</ALT_SCHEDULE>

</METERED_SPACE>

</OPERATING_SCHEDULE>

General Notes

OP_SCHEDULE define the overall hours of meter operation. There may be multiple schedules although typically only one weekday and one Saturday (or Saturday and Sunday) (where different). OP_SCHEDULE always has the PARKING_ALLOWED_FLAG tag = Yes.

TOW_SCHEDULE define periods when parking is not allowed due lane usage during rush hour traffic. These should always fall within overall OP_SCHEDULES and override accordingly. There may be multiple schedules although typically only one (AM or PM) or two (where AM and PM closures both apply). TOW_SCHEDULE always has the PARKING_ALLOWED_FLAG tag = No.

ALT_SCHEDULE define other exceptions base operating schedules. There may be multiple exception schedules most of which indicate no parking periods. However some indicate allowed parking periods where the time limit has changed or the allowed type of parking has changed (e.g. from commercial to general parking). COLOR_RULE sets this as follows: Grey/Green/Yellow/Red = parking allowed, White/Orange/Blue = no parking allowed.

ALT_SCHEDULE's & TOW_SCHEDULE's that are based on calendar schedules ("School Days","Performance" or Giants Day/Night") or variable "As posted" events, are not included in the feed. Non-metered space operating schedules are also not included in the feed.

Technically to avoid overlap, START_TIME's are >= values and END_TIMEs are < values.

When a change is detected for a particular meter, the entire schedule is delivered and should replace all schedule elements.

XML Code:	Shall Be:
CITY_ID	Assigned by Vendor to SFMTA
EFFECTIVE_DATE	PRELIMINARY date and time that this price schedule will be effective; set by SFMTA; and subject to change during operating schedule change process
TRANSMISSION_DATETIME	Given by SFMTA
METERED_SPACE	
METER_TYPE	MS: multi-space meter SS: single space meter
PARKING_SPACE_ID	Unique identifier for the metered parking space assigned by SFMTA; applies to either SS or MS metered space
POST_ID	Unique identifier assigned by SFMTA; used primarily to identify single space metered spaces on the street
MS_ID	Unique identifier assigned by SFMTA; applies to multi-space pay stations only
SPACE_NUM	Identifier of specific parking space managed by MS pay station, assigned by SFMTA. The combination MS_ID + SPACE_NUM is always unique
OP_SCHEDULE	
COLOR_RULE	Indicates type of allowed parking. Allowed values under OP_SCHEDULE are: Grey – general parking Green – short term general parking (30 min or less Yellow – commercial parking Red – multi-axle commercial parking Brown – tour bus Purple – Boat trailer parking Black - motorcycle

DAYS_OF_WEEK	*Given by SFMTA, mask in format 'Su,Mo,Tu,We,Th,Fr,Sa' or similar, it represents all the days of the week this schedule applies to*
START_TIME	*Given by SFMTA, it represents the beginning of the time period for this schedule*
END_TIME	*Given by SFMTA, it represents the end of the time period for this schedule*
TIME_LIMIT	*Maximum allowed time in minutes*
PREPAYMENT_TIME	*Actual time of day before operating hours when prepayments may be accepted. Format is hh:mm AM/PM.*
TOW_SCHEDULE	
DAYS_OF_WEEK	*Given by SFMTA, mask in format 'Su,Mo,Tu,We,Th,Fr,Sa' or similar, it represents all the days of the week this schedule applies to*
START_TIME	*Given by SFMTA, it represents the beginning of the time period for this schedule*
END_TIME	*Given by SFMTA, it represents the end of the time period for this schedule*
ALT_SCHEDULE	
COLOR_RULE	*Indicates type of allowed parking. Allowed values under ALT_SCHEDULE are:* *Grey – general parking* *Green – short term general parking (30 min or less)* *Yellow – commercial parking* *White – no parking passenger loading zone* *Orange – no parking shuttle bus, vanpool, or carpool loading zone*
DAYS_OF_WEEK	*Given by SFMTA, mask in format 'Su,Mo,Tu,We,Th,Fr,Sa' or similar, it represents all the days of the week this schedule applies to*

START_TIME	*Given by SFMTA, it represents the beginning of the time period for this schedule*
END_TIME	*Given by SFMTA, it represents the end of the time period for this schedule*
TIME_LIMIT	*Maximum allowed time in minutes*

Example shows both MS and SS as examples. If MS vendor is distinct from SS vendor, then these would be in distinct XML extracts:

<OPERATING_SCHEDULE>
<CITY_ID>**1001**</CITY_ID>
<EFFECTIVE_DATE>**2010-05-04 00:00:00**</EFFECTIVE_DATE>
<TRANSMISSION_DATETIME>**2010-04-15 17:30:45**</TRANSMISSION_DATETIME>
<METERED_SPACE>
<METER_TYPE>**SS**</METER_TYPE>
<PARKING_SPACE_ID>123456</PARKING_SPACE_ID>
<POST_ID>**111-11111**</POST_ID>
<OP_SCHEDULE>
<COLOR_RULE>Grey</COLOR_RULE>
<DAYS_OF_WEEK>**Mo,Tu,We,Th,Fr**</DAYS_OF_WEEK>
< START_TIME>**07:00 AM**</ START_TIME>
< END_TIME>**06:00 PM**</ END_TIME>
<TIME_LIMIT>**60**</TIME_LIMIT>
<PREPAYMENT_TIME>**6:00 AM**</PREPAYMENT_TIME>
</OP_SCHEDULE>
<OP_SCHEDULE>
<COLOR_RULE>Grey</COLOR_RULE>
<DAYS_OF_WEEK>**Sa**</DAYS_OF_WEEK>
< START_TIME>**09:00 AM**</ START_TIME>
< END_TIME>**05:00 PM**</ END_TIME>
<TIME_LIMIT>**60**</TIME_LIMIT>
<PREPAYMENT_TIME>**8:00 AM**</PREPAYMENT_TIME>
</OP_SCHEDULE>
</METERED_SPACE>
<METERED_SPACE>

<METER_TYPE>**MS**</METER_TYPE>
<PARKING_SPACE_ID>123456</PARKING_SPACE_ID>
<MS_ID>**111-11112**</MS_ID>
<SPACE_NUM>**1**</SPACE_NUM>
<OP_SCHEDULE>
<COLOR_RULE>Grey</COLOR_RULE>
<PARKING_ALLOWED_FLAG>**Yes**</ PARKING_ALLOWED_FLAG >
<DAYS_OF_WEEK>**Mo,Tu,We,Th,Fr,Sa**</DAYS_OF_WEEK>
< START_TIME>**07:00 AM**</START_TIME>
< END_TIME>**07:00 PM**</END_TIME>
<TIME_LIMIT>**60**</TIME_LIMIT>
<PREPAYMENT_TIME>**8:45 AM**</PREPAYMENT_TIME>
</OP_SCHEDULE>
<TOW_SCHEDULE>
<DAYS_OF_WEEK>**Mo,Tu,We,Th,Fr**</DAYS_OF_WEEK>
< START_TIME>**07:00 AM**</START_TIME>
< END_TIME>**09:00 AM**</END_TIME>
</TOW_SCHEDULE>
<TOW_SCHEDULE>
<DAYS_OF_WEEK>**Mo,Tu,We,Th,Fr**</DAYS_OF_WEEK>
< START_TIME>**04:00 PM**</START_TIME>
< END_TIME>**06:00 PM**</END_TIME>
</TOW_SCHEDULE>
</METERED_SPACE>
<METERED_SPACE>
<METER_TYPE>**MS**</METER_TYPE>
<PARKING_SPACE_ID>123456</PARKING_SPACE_ID>
<MS_ID>**111-11112**</MS_ID>
<SPACE_NUM>**2**</SPACE_NUM>
<OP_SCHEDULE>
<COLOR_RULE>Yellow</COLOR_RULE>
<DAYS_OF_WEEK>**Mo,Tu,We,Th,Fr,Sa**</DAYS_OF_WEEK>
< START_TIME>**07:00 AM**</START_TIME>
< END_TIME>**07:00 PM**</END_TIME>
<TIME_LIMIT>**60**</TIME_LIMIT>

```
            <PREPAYMENT_TIME>6:00 AM</PREPAYMENT_TIME>
        </OP_SCHEDULE>
        <ALT_SCHEDULE>
            <COLOR_RULE>Orange</COLOR_RULE>
            <DAYS_OF_WEEK>Mo,Tu,We,Th,Fr</DAYS_OF_WEEK>
            < START_TIME>02:00 PM</START_TIME>
            < END_TIME>03:30 PM</END_TIME>
            <TIME_LIMIT>0</TIME_LIMIT>
        </ALT_SCHEDULE>
        <ALT_SCHEDULE>
            <COLOR_RULE>Grey</COLOR_RULE>
            <DAYS_OF_WEEK>Sa</DAYS_OF_WEEK>
            < START_TIME>07:00 AM</START_TIME>
            < END_TIME>07:00 PM</END_TIME>
            <TIME_LIMIT>120</TIME_LIMIT>
        </ALT_SCHEDULE>
    </METERED_SPACE>
</OPERATING_SCHEDULE>
```

Attachment 3: OUTGOING Price Schedule XML specification

Date : 20 June 2012
Author : SFMTA
Ref:
Description: The following XML is the format in which SFMTA will deliver periodic price schedule changes for the purpose of re-programming meters or pay stations with new prices.

Revision History		
Date	Version	Description
20 June 2012	1.0	First DRAFT for review (Mariana R. Parreiras)
29 June 2012	2.0	Revised per discussion with Randy (Mariana R. Parreiras)

<PRICE_SCHEDULE>

*<CITY_ID>**ID number assigned by Proposer to SFMTA**</ CITY_ID >*

*<EFFECTIVE_DATE> **The effective date in standard Oracle format** </ EFFECTIVE_DATE >*

*<TRANSMISSION_DATETIME>**Date and time of transmission from City in standard Oracle format to the second** </TRANSMISSION_DATETIME>*

<METERED_SPACE>

*<METER_TYPE>**MS or SS**</METER_TYPE>*

<PARKING_SPACE_ID>Internal numeric Id for meter space assigned by SFMTA</PARKING_SPACE_ID>

*<POST_ID> **applies to SS only**</POST_ID>*

*<MS_ID>**applies to Duncan MS only**</MS_ID>*

*<SPACE_NUM> **MS only**</SPACE_NUM>*

*<EVENT_TYPE>**MPS (meter_price_schedule) or SE (special_event)**</EVENT_TYPE>*

*<BASE_PRICE> **Decimal value of the price in dollars and cents** </BASE_PRICE>*

<METER_PRICE_SCHEDULE>

*<DAYS_OF_WEEK>**Day of the Week mask** </DAYS_OF_WEEK>**

*<PRICE_START_TIME>**Start time for price in standard Oracle format to the second** </PRICE_START_TIME>*

*<PRICE_END_TIME>**End time for price in standard Oracle format to the second** </PRICE_END_TIME>*

<LENGTH_OF_STAY_SCHEDULE>

<LEVEL>

*<HOUR>**Hour in whole numbers**</HOUR>*

<PRICE_PREMIUM_PCT>**Price premium percentage**</PRICE_PREMIUM_PCT>

</LEVEL>

....

</LENGTH_OF_STAY_SCHEDULE>

<PRICE>**Decimal value of the price in dollars and cents**</PRICE>

</METER_PRICE_SCHEDULE>

</METERED_SPACE>

</PRICE_SCHEDULE>

XML Code:	Shall Be:
CITY_ID	Assigned by Vendor to SFMTA
EFFECTIVE_DATE	PRELIMINARY date and time that this price schedule will be effective; set by SFMTA; and subject to change during price schedule change process
TRANSMISSION_DATETIME	Given by SFMTA
METERED_SPACE	One or more
METER_TYPE	MS: multi-space pay station SS: single space meter
PARKING_SPACE_ID	Unique identifier for the metered parking space assigned by SFMTA; applies to either SS or MS metered space
POST_ID	Unique identifier assigned by SFMTA; used primarily to identify single space metered spaces on the street
MS_ID	Unique identifier assigned by SFMTA; applies to multi-space pay stations only
SPACE_NUM	Identifier of specific parking space managed by MS pay station, assigned by SFMTA. The combination MS_ID + SPACE_NUM is always unique
EVENT_TYPE	MPS (Meter Price Schedule) or SE (Special Event)

BASE_PRICE	*This is the regular price per hour in dollars and cents, applicable to all operating hours not covered by a METER_PRICE_SCHEDULE. Required & applicable only when EVENT_TYPE = MPS*
METER_PRICE_SCHEDULE	*Optional (0, 1 or more) only when EVENT_TYPE = MPS*
DAYS_OF_WEEK	*Given by SFMTA, mask in format 'Su,Mo,Tu,We,Th,Fr,Sa' or similar, it represents the all days of the week this price schedule is valid*
PRICE_START_TIME	*Given by SFMTA, it represents the beginning of the time period for this price*
PRICE_END_TIME	*Given by SFMTA, it represents the end of the time period for this price*
LENGTH_OF_STAY_SCHEDULE	
LEVEL	
HOUR	*1 is the hour after the first full hour a driver is parked. 2 is the second hour after the first full hour a driver is parked.*
PRICE_PREMIUM_PERCENTAGE	*Percentage premium over the regular price*
PRICE	*Hourly rate in dollars and cents e.g. 3.50.*

Examples:

```
<PRICE_SCHEDULE>
    <CITY_ID>1001</CITY_ID>
    <EFFECTIVE_DATE>2010-05-04 00:00:00</EFFECTIVE_DATE>
    <TRANSMISSION_DATETIME>2010-04-15 17:30:45</TRANSMISSION_DATETIME>
    <METERED_SPACE>
        <METER_TYPE>SS</METER_TYPE>
        <PARKING_SPACE_ID>123456</PARKING_SPACE_ID>
        <POST_ID>111-11111</POST_ID>
```

<EVENT_TYPE>**MPS**</EVENT_TYPE>
<BASE_PRICE>**3.00**</BASE_PRICE>
<METER_PRICE_SCHEDULE>
<DAYS_OF_WEEK>**Mo,Tu,We,Th,Fr**</DAYS_OF_WEEK>
<PRICE_START_TIME>**09:00 AM**</PRICE_START_TIME>
<PRICE_END_TIME>**05:00 PM**</PRICE_END_TIME>
<LENGTH_OF_STAY_SCHEDULE>
<LEVEL>
<HOUR>**2**</HOUR>
<PRICE_PREMIUM_PCT>**50**</PRICE_PREMIUM_PCT>
</LEVEL>
<LEVEL>
<HOUR>**4**</HOUR>
<PRICE_PREMIUM_PCT>**100**</PRICE_PREMIUM_PCT>
</LEVEL>
<LEVEL>
<HOUR>**6**</HOUR>
<PRICE_PREMIUM_PCT>**150**</PRICE_PREMIUM_PCT>
</LEVEL>
</LENGTH_OF_STAY_SCHEDULE>
<PRICE>**3.25**</PRICE>
</METER_PRICE_SCHEDULE>
<METER_PRICE_SCHEDULE>
<DAYS_OF_WEEK>**Mo,Tu,We,Th,Fr**</DAYS_OF_WEEK>
<PRICE_START_TIME>**05:00 AM**</PRICE_START_TIME>
<PRICE_END_TIME>**09:00 AM**</PRICE_END_TIME>
<PRICE>**2.00**</PRICE>
</METER_PRICE_SCHEDULE>
</METERED_SPACE>
<METERED_SPACE>
<METER_TYPE>**MS**</METER_TYPE>
<PARKING_SPACE_ID>**123458**</PARKING_SPACE_ID>
<MS_ID>**111-11112**</MS_ID>
<SPACE_NUM>**1**</SPACE_NUM>

```
            <EVENT_TYPE>MPS</EVENT_TYPE>
            <BASE_PRICE>2.00</BASE_PRICE>
        </METERED_SPACE>
        <METERED_SPACE>
            <METER_TYPE>MS</METER_TYPE>
            <PARKING_SPACE_ID>123459</PARKING_SPACE_ID>
            <MS_ID>111-11112</MS_ID>
            <SPACE_NUM>2</SPACE_NUM>
            <EVENT_TYPE>MPS</EVENT_TYPE>
            <BASE_PRICE>2.00</BASE_PRICE>
            <METER_PRICE_SCHEDULE>
                <DAYS_OF_WEEK>Mo,Tu,We,Th,Fr</DAYS_OF_WEEK>
                <PRICE_START_TIME>06:00 PM</PRICE_START_TIME>
                <PRICE_END_TIME>10:00 PM</PRICE_END_TIME>
                <PRICE>1.50</PRICE>
            </METER_PRICE_SCHEDULE>
        </METERED_SPACE>
</PRICE_SCHEDULE>
```

Attachment 4: OUTGOING Special Event Schedule XML specification

Date : 28 June 2012
Author : SFMTA
Ref:
Description: The following XML is the format in which SFMTA will deliver periodic price, closure, or time limit changes for the purpose of overriding the standard meter programming on specific days for special event conditions.

Revision History		
Date	Version	Description
28 June 2012	1.0	First DRAFT for review (SFMTA)
11 April 2012	2.0	Added <EVENT> parent tag, explanatory comments on use of <POST_ID> and <TOW_OVERRIDE_SCHEDULE>/<CLOSURE_SCHEDULE> tags.

<SPECIAL_EVENT_SCHEDULE>

*<CITY_ID>**ID number assigned by Proposer to SFMTA**</ CITY_ID >*

*<TRANSMISSION_DATETIME>**Date and time of transmission from City in standard Oracle format to the second** </TRANSMISSION_DATETIME>*

<EVENT>

*<EVENT_DESCRIPTION>**Text description of event**</EVENT_DESCRIPTION>*

<METERED_SPACE>

*<METER_TYPE>**MS or SS**</METER_TYPE>*

*<PARKING_SPACE_ID>**Internal numeric ID for meter space assigned by SFMTA**</PARKING_SPACE_ID>*

*<POST_ID> **applies to all meter types**</POST_ID>*

*<MS_ID>**applies to meter type MS only**</MS_ID>*

*<SPACE_NUM> **applies to meter type MS only**</SPACE_NUM>*

<PRICE_OVERRIDE_SCHEDULE>

*<START_TIME>**Start time for price in standard Oracle format to the minute** </START_TIME>*

*<END_TIME>**End time for price in standard Oracle format to the minute**</END_TIME>*

*<PRICE> **Decimal value of the price in dollars and cents** </PRICE>*

<FREE>Set to 1 to indicate free parking during specified start and end time</FREE>

<EVENT_CALENDAR>

<EVENT_DATE> each date as separate tag that this schedule applies to in YYYY-MM-DD format</EVENT_DATE>

</EVENT_CALENDAR>

</PRICE_OVERRIDE_SCHEDULE>

<TOW_OVERRIDE_SCHEDULE>

<TOW_OVERRIDE>Set to 1 to indicate all pre-established tow schedules for the scheduled days should be ignored</TOW_OVERRIDE>

<EVENT_CALENDAR>

<EVENT_DATE> each date as separate tag that this schedule applies to in YYYY-MM-DD format</EVENT_DATE>

</EVENT_CALENDAR>

</TOW_OVERRIDE_SCHEDULE>

<CLOSURE_SCHEDULE>

<START_TIME>Start time for closure in standard Oracle format to the minute </START_TIME>

<END_TIME>End time for closure in standard Oracle format to the minute</END_TIME>

<EVENT_CALENDAR>

<EVENT_DATE> each date as separate tag that this schedule applies to in YYYY-MM-DD format</EVENT_DATE>

</EVENT_CALENDAR>

</CLOSURE_SCHEDULE>

<TL_OVERRIDE_SCHEDULE>

<START_TIME>Start time for time limit in standard Oracle format to the minute </START_TIME>

< END_TIME>End time for time limit in standard Oracle format to the minute</END_TIME>

<TIME_LIMIT>Override time limit in minutes</TIME_LIMIT>

<EVENT_CALENDAR>

*<EVENT_DATE> **each date as separate tag that this schedule applies to in YYYY-MM-DD format**</EVENT_DATE>*

</EVENT_CALENDAR>

</TL_OVERRIDE_SCHEDULE>

</METERED_SPACE>

</EVENT>

</SPECIAL_EVENT_SCHEDULE>

Note: A TOW_OVERRIDE_SCHEDULE may be provided for the same meter/day as a CLOSURE_SCHEDULE. In such cases the CLOSURE_SCHEDULE is applied in lieu of TOW_SCHEDULE for that day. Otherwise a CLOSURE_SCHEDULE on the same day as existing Tow schedule is applied in addition to that tow schedule.

XML Code:	Shall Be:
CITY_ID	Assigned by Vendor to SFMTA
TRANSMISSION_DATETIME	Given by SFMTA
EVENT	One or more
EVENT_DESCRIPTION	Given by SFMTA to identify the event
METERED_SPACE	One or more
METER_TYPE	MS: multi-space pay station SS: single space meter
PARKING_SPACE_ID	Unique identifier for the metered parking space assigned by SFMTA; applies to either SS or MS metered space
POST_ID	Unique identifier assigned by SFMTA; used primarily to identify single space metered spaces on the street but will be provided even on multi-space meters.
MS_ID	Unique identifier assigned by SFMTA; applies to multi-space pay stations only
SPACE_NUM	Identifier of specific parking space managed by MS pay station, assigned by SFMTA. The combination MS_ID + SPACE_NUM is always unique
PRICE_OVERRIDE_SCHEDULE or TOW_OVERRIDE_SCHEDULE or CLOSURE_SCHEDULE or TL_OVERRIDE_SCHEDULE	Parent tag indicating the type of special event override schedule. Repeat in any combination together with applicable child tags
START_TIME	Given by SFMTA, it represents the beginning of the time period for this price, closure or time limit. Not applicable to TOW_OVERRIDE_SCHEDULE.
END_TIME	Given by SFMTA, it represents the end of the time period for this price, closure or time limit. Not applicable to TOW_OVERRIDE_SCHEDULE.
PRICE	Override hourly rate in dollars and cents e.g. 3.50. Applies only to PRICE_OVERRIDE_SCHEDULE when <FREE> is not used.

FREE	*Optional: Set to 1 to indicate free parking during specified start and end time (i.e. no price assigned). Applies only to PRICE_OVERRIDE_SCHEDULE.in lieu of <PRICE> tag.*
TOW_OVERRIDE	*Applies only to TOW_OVERRIDE_SCHEDULE and is mandatory set to 1 for that tag.*
TIME_LIMIT	*Override time limit in minutes, e.g. 60. Applies only to TL_OVERRIDE_SCHEDULE*
EVENT_CALENDAR	*Parent tag to individual EVENT_DATE tags*
EVENT_DATE	*One tag for each date to which this schedule applies*

Examples:

```
<SPECIAL_EVENT_SCHEDULE>
    <CITY_ID>101</ CITY_ID >
    <TRANSMISSION_DATETIME>2012-06-20 15:00:00</TRANSMISSION_DATETIME>
      <EVENT>
        <EVENT_DESCRIPTION>Giants June 2012 night games</EVENT_DESCRIPTION>
        <METERED_SPACE>
            <METER_TYPE> SS</METER_TYPE>
            <PARKING_SPACE_ID>123456</PARKING_SPACE_ID>
            <POST_ID> 700-12350</POST_ID>
            <PRICE_OVERRIDE_SCHEDULE>
                <START_TIME>6:00 PM</START_TIME>
                <END_TIME>11:00PM</END_TIME>
                <PRICE> 5 </PRICE>
                <EVENT_CALENDAR>
                    <EVENT_DATE> 2012-06-25</EVENT_DATE>
                    <EVENT_DATE> 2012-06-26</EVENT_DATE>
                    <EVENT_DATE> 2012-06-30</EVENT_DATE>
                </EVENT_CALENDAR>
            </PRICE_OVERRIDE_SCHEDULE>
        </METERED_SPACE>
```

<METERED_SPACE>
<METER_TYPE> **SS**</METER_TYPE>
<PARKING_SPACE_ID>**123457**</PARKING_SPACE_ID>
<POST_ID> **700-12351**</POST_ID>
<CLOSURE_SCHEDULE>
<START_TIME>**6:00 PM** </START_TIME>
<END_TIME>**11:00PM**</END_TIME>
<EVENT_CALENDAR>
<EVENT_DATE> **2012-06-25**</EVENT_DATE>
<EVENT_DATE> **2012-06-26**</EVENT_DATE>
<EVENT_DATE> **2012-06-30**</EVENT_DATE>
</EVENT_CALENDAR>
</CLOSURE_SCHEDULE>
</METERED_SPACE>
<METERED_SPACE>
<METER_TYPE> **MS**</METER_TYPE>
<PARKING_SPACE_ID>**123458**</PARKING_SPACE_ID>
<POST_ID>**700-12310**</POST_ID>
<MS_ID> **700-12301**</MS_ID>
<SPACE_NUM>**1**</SPACE_NUM>
<TL_OVERRIDE_SCHEDULE>
<START_TIME>**6:00 PM** </START_TIME>
<END_TIME>**11:00PM**</END_TIME>
<TIME_LIMIT>**30**</TIME_LIMIT>
<EVENT_CALENDAR>
<EVENT_DATE> **2012-06-25**</EVENT_DATE>
<EVENT_DATE> **2012-06-26**</EVENT_DATE>
<EVENT_DATE> **2012-06-30**</EVENT_DATE>
</EVENT_CALENDAR>
</TL_OVERRIDE_SCHEDULE>
</METERED_SPACE>
</EVENT>
<EVENT>
<EVENT_DESCRIPTION>**Giants June 2012 day games**</EVENT_DESCRIPTION>

<METERED_SPACE>
<METER_TYPE> **SS**</METER_TYPE>
<PARKING_SPACE_ID>**123456**</PARKING_SPACE_ID>
<POST_ID> **700-12350**</POST_ID>
<PRICE_OVERRIDE_SCHEDULE>
<START_TIME>**12:00 PM**</START_TIME>
<END_TIME>**6:00PM**</END_TIME>
<PRICE> **5** </PRICE>
<EVENT_CALENDAR>
<EVENT_DATE> **2012-07-01**</EVENT_DATE>
<EVENT_DATE> **2012-07-02**</EVENT_DATE>
</EVENT_CALENDAR>
</PRICE_OVERRIDE_SCHEDULE>
</METERED_SPACE>
<METERED_SPACE>
<METER_TYPE> **SS**</METER_TYPE>
<PARKING_SPACE_ID>**123457**</PARKING_SPACE_ID>
<POST_ID> **700-12351**</POST_ID>
<CLOSURE_SCHEDULE>
<START_TIME>**12:00 PM** </START_TIME>
<END_TIME>**6:00PM**</END_TIME>
<EVENT_CALENDAR>
<EVENT_DATE> **2012-07-01**</EVENT_DATE>
<EVENT_DATE> **2012-07-02**</EVENT_DATE>
</EVENT_CALENDAR>
</CLOSURE_SCHEDULE>
</METERED_SPACE>

<METERED_SPACE>
<METER_TYPE> **MS**</METER_TYPE>
<PARKING_SPACE_ID>**123458**</PARKING_SPACE_ID>
<POST_ID>**700-12310**</POST_ID>
<MS_ID> **700-12301**</MS_ID>
<SPACE_NUM>**1**</SPACE_NUM>
<TL_OVERRIDE_SCHEDULE>

```
                    <START_TIME>12:00 PM </START_TIME>
                    <END_TIME>6:00PM</END_TIME>
                    <TIME_LIMIT>30</TIME_LIMIT>
                    <EVENT_CALENDAR>
                        <EVENT_DATE> 2012-07-01</EVENT_DATE>
                        <EVENT_DATE> 2012-07-02</EVENT_DATE>
                    </EVENT_CALENDAR>
                </TL_OVERRIDE_SCHEDULE>
            </METERED_SPACE>
        </EVENT>
</SPECIAL_EVENT_SCHEDULE>
```

Attachment 5: INCOMING Transaction Data XML specification

Date : 20 June 2012
Author : SFMTA
Ref:
Description: The following XML is the format in which the Proposer will deliver real-time parking transaction data.

Revision History		
Date	Version	Description
20 June 2012	1.0	First DRAFT for review (Mariana R. Parreiras)
28 June 2012	2.0	Revised per discussion with Randy (Mariana R. Parreiras)
29 May 2013	3.0	Revised per discussion with Randy (Alexiy S)
03 Sep 2013	4.0	Removed PAYMENT_TYPE tag

<PAYMENT>

*<VENDOR_ID>**ID number assigned to each Proposer by SFMTA**</VENDOR_ID>*

*<TRANSMISSION_ID>**Transaction number generated by Proposer for this message**</TRANSMISSION_ID>*

*<TRANSMISSION_DATETIME>**Date and time of transmission from Proposer in UTC**</TRANSMISSION_DATETIME>*

*<METER_TYPE>**MS,SS**</METER_TYPE>*

<PARKING_SPACE_ID>Internal numeric ID assigned to meter space by SFMTA </PARKING_SPACE_ID>

*<POST_ID>**999-99999 (SS only)**</POST_ID>*

*<MS_ID>**999-99999 (MS only)**</MS_ID>*

*<SPACE_NUM>**99 (MS only)**</SPACE_NUM>*

*<EVENT_TYPE>**NS,AT** </EVENT_TYPE>*

<NEW_SESSION>

*<SESSION_ID>**unique_ID_number**</SESSION_ID>*

*<AMOUNT_PAID_BY_DRIVER>**price in dollars and cents**</AMOUNT_PAID_BY_DRIVER>*

*<AMOUNT_RECEIVED_BY_SFMTA>**price in dollars and cents**</AMOUNT_RECEIVED_BY_SFMTA >*

*<PAYMENT_TYPE>**CREDIT CARD, CASH, SMART CARD, TOKEN, PAY BY CELL, TECH CREDIT**</PAYMENT_TYPE>*

</NEW_SESSION>

<ADD_TIME>

*<SESSION_ID>**unique_ID_number**</SESSION_ID>*

*<AMOUNT_PAID_BY_DRIVER>**price in dollars and cents**</AMOUNT_PAID_BY_DRIVER>*

*<AMOUNT_RECEIVED_BY_SFMTA>**price in dollars and cents**</AMOUNT_RECEIVED_BY_SFMTA >*

*<PAYMENT_TYPE>**CREDIT CARD, CASH, SMART CARD, TOKEN, PAY BY CELL, TECH CREDIT**</PAYMENT_TYPE>*

</ADD_TIME>

*<START_TIME>**time in standard Oracle format to the second in UTC**</START_TIME>*

*<END_TIME>**time in standard Oracle format to the second in UTC**</END_TIME>*

</PAYMENT>

Descriptions:

XML Code:	*Shall Be:*
VENDOR_ID	*Assigned by SFMTA to each pay by cell company, parking meter company, etc.*
TRANSMISSION_ID	*Unique and generated by Proposer*
TRANSMISSION_DATETIME	*Given by Proposer, in standard Oracle format to the second in UTC time zone*
METER_TYPE	*MS: multi-space meter* *SS: single space meter*
PARKING_SPACE_ID	*Unique identifier for the metered parking space assigned by SFMTA; applies to either SS or MS metered space*
POST_ID	*Unique identifier assigned by SFMTA; used primarily to identify single space metered spaces on the street*

MS_ID	*Unique identifier assigned by SFMTA; applies to multi-space pay stations only*
SPACE_NUM	*Identifier of specific parking space managed by MS pay station, assigned by SFMTA. The combination MS_ID + SPACE_NUM is always unique*
EVENT_TYPE	*Given by Proposer* *NS: New Session - A customer initiates a new session* *AT: Add Time - A customer adds time to an existing session*
NEW_SESSION	
SESSION_ID	*Generated by Proposer. A new session_ID shall be generated for each new NEW_SESSION event. If a customer adds time to a session the existing session_ID will be sent along with any ADD_TIME event(s).*
AMOUNT_PAID_BY_DRIVER	*The total amount paid by the customer including any fees.*
AMOUNT_RECEIVED_BY_SFMTA	*The total amount owed the SFMTA.*
PAYMENT_TYPE	*CREDIT CARD* *CASH* *SMART CARD* *TOKEN* *PAY BY CELL (used only by pay-by-cell service provider)* *TECH CREDIT*
ADD_TIME	
SESSION_ID	*Generated by Proposer. A new session_ID shall be generated for each*
	new NEW_SESSION event. If a customer adds time to a session the existing session_ID will be sent along with any ADD_TIME event(s).
AMOUNT_PAID_BY_DRIVER	*The total amount paid by the customer including any fees.*
AMOUNT_RECEIVED_BY_SFMTA	*The total amount owed the SFMTA.*

PAYMENT_TYPE	*CREDIT CARD* *CASH* *SMART CARD* *TOKEN* *PAY BY CELL (used only by pay-by-cell service provider)* *TECH CREDIT*
START_TIME	*Given by Proposer in UTC time zone. For the NEW_SESSION event, the initial start time for the parking session.*
END_TIME	*Given by Proposer in UTC time zone. For a NEW_SESSION event, the initial end time for the parking session. For the ADD_TIME event, the new end time for the parking session.*

Sample XML:

```
<PAYMENT>
    <VENDOR_ID>999</VENDOR_ID>
    <TRANSMISSION_ID>12345678</TRANSMISSION_ID>
    <TRANSMISSION_DATETIME>2010-07-10
      15:30:02</TRANSMISSION_DATETIME>
    <METER_TYPE>SS</METER_TYPE>
    <PARKING_SPACE_ID>123456</PARKING_SPACE_ID>
    <POST_ID>111-12340</POST_ID>
    <EVENT_TYPE>NS</EVENT_TYPE>
        <NEW_SESSION>
            <SESSION_ID>123456</SESSION_ID>
            <AMOUNT_PAID_BY_DRIVER>7.00</AMOUNT_PAID_BY_DRIVER
              >
            <AMOUNT_RECEIVED_BY_SFMTA>7.00</AMOUNT_RECEIVED_B
              Y_SFMTA>
            <PAYMENT_TYPE>CASH</PAYMENT_TYPE>
        </NEW_SESSION>
```

```
        <PAYMENT_TIME>2010-07-10
        15:29:30</PAYMENT_TIME><START_TIME>2010-07-10
        15:29:30</START_TIME>
        <END_TIME>2010-07-10 17:29:30</END_TIME>
</PAYMENT>

<PAYMENT>
        <VENDOR_ID>999</VENDOR_ID>
        <TRANSMISSION_ID>12345679</TRANSMISSION_ID>
        <TRANSMISSION_DATETIME>2010-07-10
          17:20:45</TRANSMISSION_DATETIME>
        <METER_TYPE>SS</METER_TYPE>
        <PARKING_SPACE_ID>123456</PARKING_SPACE_ID>
        <POST_ID>111-12340</POST_ID>
        <EVENT_TYPE>AT</EVENT_TYPE>
                <ADD_TIME>
                        <SESSION_ID>123456</SESSION_ID>
                        <AMOUNT_PAID_BY_DRIVER>3.50</AMOUNT_PAID_BY_DRIVER
                          >
                        <AMOUNT_RECEIVED_BY_SFMTA>3.50</AMOUNT_RECEIVED_B
                          Y_SFMTA>
                        <PAYMENT_TYPE>CREDIT CARD</PAYMENT_TYPE>
                </ADD_TIME>
        <PAYMENT_TIME>2010-07-10 15:29:30</PAYMENT_TIME>
        <START_TIME>2010-07-10 17:20:45</START_TIME>
        <END_TIME>2010-07-10 18:20:45</END_TIME>
</PAYMENT>
```

Attachment 6: INCOMING Parking Space Inventory XML specification

Date : 31 July 2012
Author : SFMTA
Ref:
Description: The following XML is the format in which Proposer's Meter Management System will deliver periodic parking space inventory attribute changes originated in MMS for the purpose of comparing the data entered directly in the Proposer's system with the data contained in SFMTA's Data Warehouse so that corrections and updates can be conducted as appropriate.

XSD along with XML namespace for this XML will be provided during the development and testing phase.

Revision History		
Date	Version	Description
31 July 2012	1.0	First DRAFT for review (SFMTA)
1 August 2012	2.0	Revised DRAFT

<PARKING_SPACE_INVENTORY>

*<CITY_ID>**ID number assigned by SFMTA**</ CITY_ID>*

*<EFFECTIVE_DATE> **The effective date in standard Oracle format** </ EFFECTIVE_DATE>*

*<TRANSMISSION_DATETIME>**Date and time of transmission from city in standard Oracle format to the second** </TRANSMISSION_DATETIME>*

<METERED_SPACE>

*<METER_TYPE>**MS or SS**</METER_TYPE>*

*<PARKING_SPACE_ID>**Internal numeric Id for meter space assigned by SFMTA**</PARKING_SPACE_ID>*

*<POST_ID>**applies to SS only**</POST_ID>*

*<MS_ID>**applies to MS only**</MS_ID>*

*<SPACE_NUM> **MS only**</SPACE_NUM>*

*<JURISDICTION>**SFMTA or PORT**</JURISDICTION>*

*<OLD_RATE_AREA>**SFMTA legacy rate area**</ OLD_RATE_AREA>*

*<PM_DISTRICT_NAME>**PM district name**</PM_DISTRICT_NAME>*

*<AREA_TYPE>**Pilot, Control or '-'**</ AREA_TYPE>*

*<STREET_NAME>**Street name in all CAPS using SFMTA street name convention**</STREET_NAME>*

*<STREET_BLOCK> **Street name + street type + block number in all CAPS using SFMTA street name convention** </STREET_BLOCK>*

<STR_NUM_PARITY>**Odd or Even**</ STR_NUM_PARITY>

<LATITUDE>**Derived from geometry with standard 10 decimal**</LATITUDE>

<LONGITUDE>**Derived from geometry with standard 10 decimal**</LONGITUDE>

<ON_OFFSTREET_TYPE> **On or Off street parking** </ON_OFFSTREET_TYPE>

<CAP_COLOR>**one of allowed cap color values**</CAP_COLOR>

<SPACE_TYPE>**GMP, SHORT TERM GMP, ML, MTL, MC, TOUR BUS, BOAT TRAILER**</SPACE_TYPE >

<ACTIVE_METER_FLAG>**one of allowed meter flag values**</ACTIVE_METER_FLAG>

<PMR_ROUTE> **PMR route number from SFPM** </PMR_ROUTE>

<COLLECTION_ROUTE> **collection route number from SFPM** </COLLECTION_ROUTE>

<COLLECTION_SUBROUTE>**Sub route number from SFPM**</COLLECTION_SUBROUTE>

<PCO_BEAT>**PCO Beat number**</PCO_BEAT>

<TOW_FLAG>**Y/N flag indicating metered space has a TOW Schedule**</TOW_FLAG>

<PAX_FLAG> **Y/N flag indicating metered space has passenger loading hours**</PAX_FLAG>

<COMMERCIAL_FLAG> **Y/N flag indicating metered space has commercial loading hours** </ COMMERCIAL_FLAG>

</METERED_SPACE>

</PARKING_SPACE_INVENTORY>

XML Code:	Shall Be:
CITY_ID	Assigned by SFMTA
EFFECTIVE_DATE	Date and time that this addition or update to the inventory will be effective; set by SFMTA
TRANSMISSION_DATETIME	Given by SFMTA
METERED_SPACE	One or more
METER_TYPE	MS: multi-space pay station SS: single space meter
PARKING_SPACE_ID	This is a surrogate ID automatically generated by SFMTA when a parking space is added to the database
POST_ID	Unique identifier assigned by SFMTA; used primarily to identify single space metered spaces on the street

MS_ID	*Unique identifier assigned by SFMTA; applies to multi-space pay stations only*
SPACE_NUM	*Identifier of specific parking space managed by MS pay station, assigned by SFMTA. The combination MS_ID + SPACE_NUM is always unique*
JURISDICTION	*Entity with jurisdiction over metered space (SFMTA or PORT)*
OLD_RATE_AREA	*Corresponds to regulations that applied to metered spaces prior to SFpark, and still govern days/hours of operations and rates of metered spaces in areas outside SFpark.*
PM_DISTRICT_NAME	*Parking Management District - a geographic unit for grouping metered spaces.*
AREA_TYPE	*SFpark pilot area, SFpark control area, or "-" if neither.*
STREET_NAME	*Street name and street type (ST, BLVD, etc)*
STREET_BLOCK	*Street name + street type + block number where metered space is located.*
STR_NUM_PARITY	*Odd or Even (side of the street)*
LATITUDE	*Together with LATITUDE, describes geographic location of metered space.*
LONGITUDE	*Together with LONGITUDE, describes geographic location of metered space.*
ON_OFFSTREET_TYPE	*Describes whether the metered space is on street or off street.*
CAP_COLOR	*Colors correspond to how the metered space is regulated as described below. In the case of Grey, Green, Yellow, and Red, they also correspond to the actual cap (dome) color on the street.*
SPACE_TYPE	*Derived from cap color to reflect "operations language", as follows:* *Grey = GMP* *Green = SHORT TERM GMP* *Yellow = ML* *Red = MTL* *Black = MC* *Brown = TOUR BUS* *Purple = BOAT TRAILER*

ACTIVE_METER_FLAG	*Describes meter status (metered, temporarily removed, legislated but not yet installed, etc).*
PMR_ROUTE	*Parking Meter Repairer (maintenance) route.*
COLLECTION_ROUTE	*Describes coin collection route.*
COLLECTION_SUBROUTE	*Describes coin collection subroute.*
PCO_BEAT	*Describes enforcement beats for SFMTA's Parking Control Officers (PCOs).*
TOW_FLAG	*Y/N indicates metered space has a TOW schedule.*
PAX_FLAG	*Y/N indicates metered space has a passenger loading hours.*
COMMERCIAL_FLAG	*Y/N indicates metered space has commercial loading hours.*

Examples:

```
<PARKING_SPACE_INVENTORY>
    <CITY_ID>1001</CITY_ID>
    <EFFECTIVE_DATE>2012-07-10 00:00:00</EFFECTIVE_DATE>
    <TRANSMISSION_DATETIME>2012-07-01 17:30:45</TRANSMISSION_DATETIME>
    <METERED_SPACE>
        <METER_TYPE>SS</METER_TYPE>
        <PARKING_SPACE_ID>123456</PARKING_SPACE_ID>
        <POST_ID>111-11111</POST_ID>
        <JURISDICTION>SFMTA</JURISDICTION>
        <OLD_RATE_AREA>Area 1</OLD_RATE_AREA>
        <PM_DISTRICT_NAME>Downtown</PM_DISTRICT_NAME>
        <AREA_TYPE>Pilot</AREA_TYPE>
        <STREET_NAME>BATTERY ST</STREET_NAME>
        <STREET_BLOCK>BATTERY ST 1100</STREET_BLOCK>
        <STR_NUM_PARITY>Even</STR_NUM_PARITY>
        <LATITUDE>37.7768342</LATITUDE>
        <LONGITUDE>-122.423847</LONGITUDE>
        <ON_OFFSTREET_TYPE>ON</ON_OFFSTREET_TYPE>
        <CAP_COLOR>Grey</CAP_COLOR>
        <SPACE_TYPE>GMP</SPACE_TYPE>
```

<ACTIVE_METER_FLAG>**M**</ACTIVE_METER_FLAG>
<PMR_ROUTE>**J-2**</PMR_ROUTE>
<COLLECTION_ROUTE>**411**</COLLECTION_ROUTE>
<COLLECTION_SUBROUTE>**411.52**</COLLECTION_SUBROUTE>
<PCO_BEAT>**109A**</PCO_BEAT>
<TOW_FLAG>**Y**</TOW_FLAG>
<PAX_FLAG>**Y**</PAX_FLAG>
<COMMERCIAL_FLAG>**Y**</COMMERCIAL_FLAG>
</METERED_SPACE>

<METERED_SPACE>
<METER_TYPE>**SS**</METER_TYPE>
<PARKING_SPACE_ID>**56789**</PARKING_SPACE_ID>
<POST_ID>**324-11041**</POST_ID>
<JURISDICTION>**SFMTA**</JURISDICTION>
<OLD_RATE_AREA>**Area 1**</OLD_RATE_AREA>
<PM_DISTRICT_NAME>**Downtown**</PM_DISTRICT_NAME>
<AREA_TYPE>**Pilot**</AREA_TYPE>
<STREET_NAME>**SUTTER ST**</STREET_NAME>
<STREET_BLOCK>**SUTTER ST 1100**</STREET_BLOCK>
<STR_NUM_PARITY>**Odd**</STR_NUM_PARITY>
<LATITUDE>**37.1234567**</LATITUDE>
<LONGITUDE>**-122.123456**</LONGITUDE>
<ON_OFFSTREET_TYPE>**ON**</ON_OFFSTREET_TYPE>
<CAP_COLOR>**Green**</CAP_COLOR>
<SPACE_TYPE>**SHORT TERM GMP**</SPACE_TYPE>
<ACTIVE_METER_FLAG>**M**</ACTIVE_METER_FLAG>
<PMR_ROUTE>**J-3**</PMR_ROUTE>
<COLLECTION_ROUTE>**432**</COLLECTION_ROUTE>
<COLLECTION_SUBROUTE>**432.12**</COLLECTION_SUBROUTE>
<PCO_BEAT>**123**</PCO_BEAT>
<TOW_FLAG>**Y**</TOW_FLAG>
<PAX_FLAG>**N**</PAX_FLAG>
<COMMERCIAL_FLAG>**N**</COMMERCIAL_FLAG>

```
</METERED_SPACE>

<METERED_SPACE>
        <METER_TYPE>MS</METER_TYPE>
        <PARKING_SPACE_ID>114957</PARKING_SPACE_ID>
        <MS_ID>216-30002</MS_ID>
        <SPACE_NUM>2</SPACE_NUM>
        <JURISDICTION>SFMTA</JURISDICTION>
        <OLD_RATE_AREA>Area 3</OLD_RATE_AREA>
        <PM_DISTRICT_NAME>Mission</PM_DISTRICT_NAME>
        <AREA_TYPE>Pilot</AREA_TYPE>
        <STREET_NAME>16TH ST</STREET_NAME>
        <STREET_BLOCK>16TH ST 3000</STREET_BLOCK>
        <STR_NUM_PARITY>Even</STR_NUM_PARITY>
        <LATITUDE>37.1234567</LATITUDE>
        <LONGITUDE>-122.123456</LONGITUDE>
        <ON_OFFSTREET_TYPE>ON</ON_OFFSTREET_TYPE>
        <CAP_COLOR>Green</CAP_COLOR>
        <SPACE_TYPE>SHORT TERM GMP</SPACE_TYPE>
        <ACTIVE_METER_FLAG>M</ACTIVE_METER_FLAG>
        <PMR_ROUTE>J-5</PMR_ROUTE>
        <COLLECTION_ROUTE>567</COLLECTION_ROUTE>
        <COLLECTION_SUBROUTE>567.11</COLLECTION_SUBROUTE>
        <PCO_BEAT>231</PCO_BEAT>
        <TOW_FLAG>N</TOW_FLAG>
        <PAX_FLAG>N</PAX_FLAG>
        <COMMERCIAL_FLAG>N</COMMERCIAL_FLAG>
</METERED_SPACE>

<METERED_SPACE>
        <METER_TYPE>MS</METER_TYPE>
        <PARKING_SPACE_ID>127890</PARKING_SPACE_ID>
        <MS_ID>205-06220</MS_ID>
        <SPACE_NUM>3</SPACE_NUM>
```

<CAP_COLOR>**Grey**</EVENT_TYPE>

<ON_OFFSTREET_TYPE>**ON**</ON_OFFSTREET_TYPE>

<STREET_NAME>**BAY ST**</STREET_NAME>

<PCO_BEAT>**231**</PCO_BEAT>

<LATITUDE>**37.3214567**</LATITUDE>

<LONGITUDE>**-122.321456**</LONGITUDE>

<OLD_RATE_AREA>**Area 2**</OLD_RATE_AREA>

<ACTIVE_METER_FLAG>**M**</ACTIVE_METER_FLAG>

<COLLECTION_SUBROUTE>**411.23**</COLLECTION_SUBROUTE>

<PM_DISTRICT_NAME>**Fisherman's Wharf**</PM_DISTRICT_NAME>

<COLLECTION_ROUTE>**567**</COLLECTION_ROUTE>

<PMR_ROUTE>**J-5**</PMR_ROUTE>

<STREET_BLOCK>**BAY ST 1500**</STREET_BLOCK>

<STR_NUM_PARITY>**Even**</STR_NUM_PARITY>

<AREA_TYPE>**Pilot**</AREA_TYPE>

<TOW_FLAG>**Y**</TOW_FLAG>

<PAX_FLAG>**N**</PAX_FLAG>

<COMMERCIAL_FLAG>**N**</COMMERCIAL_FLAG>

</METERED_SPACE>

..... *Followed by all other spaces as this sample only lists few metered spaces to highlight the various elements and formats. MS space is shown in same sample xml for demo purposes only as typically MS and SS will be in distinct vendor xml files.* .....

</PARKING_SPACE_INVENTORY>

Attachment 7: INCOMING Reconciliation XML specification

Date : 20 June 2012
Author : SFMTA
Ref:
Description: The following XML is the format in which the Proposer will deliver price schedule information on their system to SFMTA for the purpose of comparison to the price schedule stored in SFMTA's database.

Revision History		
Date	Version	Description
20 June 2012	1.0	First DRAFT for review (Mariana R. Parreiras)

<PRICE_SCHEDULE>
<METERED_SPACE>
<PARKING_SPACE_ID>Internal numeric ID assigned to metered spaces by SFMTA</PARKING_SPACE_ID>
*<POST_ID>**999-99999 (SS only)**</POST_ID>*
*<MS_ID>**999-99999 (MS only)**</MS_ID>*
*<SPACE_NUM>**99 (MS only)**</SPACE_NUM>*
*<DAYS_OF_WEEK>**Abbreviated Day of week, e.g. Mo. Note each day schedule needs to be listed separately even if same**</DAYS_OF_WEEK>*
*<EVENT_DATE> **Date in standard Oracle format**</EVENT_DATE>*
<METER_PRICE_SCHEDULE>. -- repeat for more schedules on that day
*<PRICE_START_TIME>24**HH:MM, e.g. 07:00**</PRICE_START_TIME>*
*<PRICE_END_TIME>24**HH:MM, e.g. 12:00**</PRICE_END_TIME>*
<PRICE>Hourly rate E.g. 3.50</PRICE>
<MAX_TIME>Max park time in minutes, e.g. 240</MAX_TIME>
<FREE_PREPAY>Set to 1 to indicate free prepay allowed during specified start and end time</FREE_PREPAY>
<TOW_AWAY>Set to 1 to indicate free tow away zone during specified start and end time </TOW_AWAY>

<FREE>Set to 1 to indicate free parking during specified start and end time</FREE>

</METER_PRICE_SCHEDULE>

</METERED_SPACE>

</PRICE_SCHEDULE>

Descriptions:

XML Code:	*Shall Be:*
PARKING_SPACE_ID	*Unique identifier for the metered parking space assigned by SFMTA; applies to either SS or MS metered space*
POST_ID	*Unique identifier assigned by SFMTA; used primarily to identify single space metered spaces on the street*
MS_ID	*Unique identifier assigned by SFMTA; applies to multi-space pay stations only*
SPACE_NUM	*Identifier of specific parking space managed by MS pay station, assigned by SFMTA. The combination MS_ID + SPACE_NUM is always unique*
DAYS_OF_WEEK	*2 letter Abbreviated Day of week,* *Su, Mo, Tu, We, Th, Fr, or Sa.* *Note: List each day schedule separately even if same. Multiple days not allowed. This tag should always be one day value only. If this tag is used the EVENT_DATE is not.*
EVENT_DATE	*Actual date of this schedule. This is for special event reconciliations and is in lieu of using the DAYS_OF_WEEK tag.*
PRICE_START_TIME	*The start time for this meter parking schedule in 24HH:MM form, e.g, 07:00.* *Note: 00:00 signifies midnight and the first start time of the day*

PRICE_END_TIME	*The end time for this meter parking schedule in 24HH:MM form, e.g, 15:00.* *Note: 24:00 or 00:00 can be used to signify the last end time of the day.* *End times should be equal to subsequent start times and not ended as :29 or :59. It is evaluated as" less than", not as" less than or equal to".*
PRICE	*Hourly rate in dollars and cents e.g. 3.50. Tag in not used when one of the optional flags is used.*
MAX_TIME	*Optional: Max park time in minutes, e.g. 240. Should only be used when <PRICE> is provided.*
FREE_PREPAY	*Optional: Set to 1 to indicate free prepay allowed during specified start and end time*
TOW_AWAY	*Optional: Set to 1 to indicate tow away zone during specified start and end time (no payment allowed)*
FREE	*Optional: Set to 1 to indicate free parking during specified start and end time (i.e. no price assigned)*
NO_PARK	*Optional: Set to 1 to indicate no parking during specified start and end time (i.e. no price assigned)*

Sample XML:

Note: The XML file will include the metered spaces in the vendor system and setup for each day along with the various price schedules listed for the metered space/day combination.

```
<PRICE_SCHEDULE xmlns="http://www.sfmta.com/xsd/mpsrec">
 <METERED_SPACE>
  <POST_ID>201-02010</POST_ID>
  <DAYS_OF_WEEK>Tu</DAYS_OF_WEEK>
  <METER_PRICE_SCHEDULE>
   <PRICE_START_TIME>00:00</PRICE_START_TIME>
   <PRICE_END_TIME>07:00</PRICE_END_TIME>
```

```
    <FREE>1</FREE>
   </METER_PRICE_SCHEDULE>
   <METER_PRICE_SCHEDULE>
    <PRICE_START_TIME>07:00</PRICE_START_TIME>
    <PRICE_END_TIME>12:00</PRICE_END_TIME>
    <PRICE>2.75</PRICE>
    <MAX_TIME>60</MAX_TIME>
   </METER_PRICE_SCHEDULE>
   <METER_PRICE_SCHEDULE>
    <PRICE_START_TIME>12:00</PRICE_START_TIME>
    <PRICE_END_TIME>15:00</PRICE_END_TIME>
    <PRICE>3</PRICE>
    <MAX_TIME>60</MAX_TIME>
   </METER_PRICE_SCHEDULE>
   <METER_PRICE_SCHEDULE>
    <PRICE_START_TIME>15:00</PRICE_START_TIME>
    <PRICE_END_TIME>18:00</PRICE_END_TIME>
    <PRICE>3</PRICE>
    <MAX_TIME>60</MAX_TIME>
   </METER_PRICE_SCHEDULE>
   <METER_PRICE_SCHEDULE>
   <METER_PRICE_SCHEDULE>
    <PRICE_START_TIME>18:00</PRICE_START_TIME>
    <PRICE_END_TIME>00:00</PRICE_END_TIME>
       <FREE>1</FREE>
  </METER_PRICE_SCHEDULE> </METERED_SPACE>
...*
 <METERED_SPACE>
  <POST_ID>201-02070</POST_ID>
  <DAYS_OF_WEEK>Fr</DAYS_OF_WEEK>
  <METER_PRICE_SCHEDULE>
   <PRICE_START_TIME>06:00</PRICE_START_TIME>
   <PRICE_END_TIME>07:00</PRICE_END_TIME>
   <MAX_TIME>240</MAX_TIME>
   <FREE_PREPAY>1</FREE_PREPAY>
  </METER_PRICE_SCHEDULE>
 </METERED_SPACE>
 <METERED_SPACE>
  <POST_ID>201-02070</POST_ID>
  <DAYS_OF_WEEK>Sa</DAYS_OF_WEEK>
  <METER_PRICE_SCHEDULE>
   <PRICE_START_TIME>06:00</PRICE_START_TIME>
   <PRICE_END_TIME>07:00</PRICE_END_TIME>
   <MAX_TIME>240</MAX_TIME>
```

```
    <FREE_PREPAY>1</FREE_PREPAY>
   </METER_PRICE_SCHEDULE>
  </METERED_SPACE>
  <METERED_SPACE>
   <POST_ID>201-02100</POST_ID>
   <DAYS_OF_WEEK>We</DAYS_OF_WEEK>
   <METER_PRICE_SCHEDULE>
    <PRICE_START_TIME>15:00</PRICE_START_TIME>
    <PRICE_END_TIME>19:00</PRICE_END_TIME>
    <MAX_TIME>240</MAX_TIME>
    <TOW_AWAY>1</TOW_AWAY>
   </METER_PRICE_SCHEDULE>
  </METERED_SPACE>
</PRICE_SCHEDULE>
```

*Followed by all other metered spaces and/or schedules for each meter/day of week. Below this point his sample only lists few metered space/price schedules to highlight the various elements and formats.....

. Sample for Special Event reconciliation xml files:.

```
<PRICE_SCHEDULE xmlns="http://www.sfmta.com/xsd/mpsrec">
 <METERED_SPACE>
  <POST_ID>201-02010</POST_ID>
  <EVENT_DATE>2011-06-28</EVENT_DATE>
  <METER_PRICE_SCHEDULE>
   <PRICE_START_TIME>07:00</PRICE_START_TIME>
   <PRICE_END_TIME>12:00</PRICE_END_TIME>
   <PRICE>2.7500</PRICE>
   <MAX_TIME>60</MAX_TIME>
  </METER_PRICE_SCHEDULE>
  <METER_PRICE_SCHEDULE>
   <PRICE_START_TIME>07:00</PRICE_START_TIME>
   <PRICE_END_TIME>12:00</PRICE_END_TIME>
   <PRICE>2.75</PRICE>
   <MAX_TIME>60</MAX_TIME>
  </METER_PRICE_SCHEDULE>
  <METER_PRICE_SCHEDULE>
   <PRICE_START_TIME>12:00</PRICE_START_TIME>
   <PRICE_END_TIME>15:00</PRICE_END_TIME>
   <PRICE>5</PRICE>
   <MAX_TIME>60</MAX_TIME>
  </METER_PRICE_SCHEDULE>
  <METER_PRICE_SCHEDULE>
```

```
    <PRICE_START_TIME>15:00</PRICE_START_TIME>
    <PRICE_END_TIME>18:00</PRICE_END_TIME>
    <PRICE>3</PRICE>
    <MAX_TIME>60</MAX_TIME>
   </METER_PRICE_SCHEDULE>
   <METER_PRICE_SCHEDULE>
    <PRICE_START_TIME>18:00</PRICE_START_TIME>
    <PRICE_END_TIME>00:00</PRICE_END_TIME>
        <FREE>1</FREE>
   </METER_PRICE_SCHEDULE>
  </METERED_SPACE>
...see above*
</PRICE_SCHEDULE>
```

Attachment 8: INCOMING Meter Faults and Maintenance Codes XML specification

Date : 28 June 2012
Author : SFMTA
Ref:
Description: The following XML is the format in which the successful Proposer will deliver meter fault and maintenance codes information on an agreed upon interval, e.g. nightly.

XML namespace (final namespace subject to change):
http//www.sfmta.com/xsd/meterfaults

Revision History		
Date	Version	Description
28 June 2012	1.0	First DRAFT for review (SFMTA)
29 June 2012	2.0	Revised to include PsID, PostID, MsID, SpaceNum to match other specs and additional tags

<METER_FAULTS>

*<VENDOR_ID>**ID number assigned to each Proposer by SFMTA**</VENDOR_ID>*

*<TRANSMISSION_DATETIME>**Date and time of transmission from Proposer in UTC**</TRANSMISSION_DATETIME>*

<METERED_SPACE> *– one set per space*

*<METER_TYPE>**MS,SS**</METER_TYPE>*

*<LOCATION_ID>**999-99999**</LOCATION_ID>*

*<SERIAL_NUM>**12345**</SERIAL_NUM>*

*<FIRMWARE_VER>**123**</FIRMWARE_VER>*

*<FIRMWARE_REV>**4.05**</FIRMWARE_REV>*

*<EVENT_TIME>**time in standard SFpark format to the second in UTC**</EVENT_TIME>*

*<EVENT_TYPE>**F,M,S**</EVENT_TYPE>*

*<FAULT>**LB**</FAULT>**

*<METER_STATUS>**0 or 1**</METER_STATUS>**

*<MAINT_CODE>**CJ**</MAINT_CODE>**

</METERED_SPACE>

</METER_FAULTS>

***Only one of these respective element required based on event type**

SFMTA Date format: should be (Hrs as 24hr) YYYY-MM-DD 24HR:MM:SS and represented in UTC unless otherwise noted

Descriptions:

XML Code:	***Shall Be:***
VENDOR_ID	*Assigned by SFMTA to each parking meter company, etc.*
TRANSMISSION_ID	*Unique and generated by Proposer*
TRANSMISSION_DATETIME	*Given by Proposer, in standard SFpark date format to the second in UTC time zone*
METER_TYPE	*MS: multi-space meter* *SS: single space meter*
PARKING_SPACE_ID	*Unique identifier for the metered parking space assigned by SFMTA; applies to either SS or MS metered space*
POST_ID	*Unique identifier assigned by SFMTA; used primarily to identify single space metered spaces on the street*
MS_ID	*Unique identifier assigned by SFMTA; applies to multi-space pay stations only*
SPACE_NUM	*Identifier of specific parking space managed by MS pay station, assigned by SFMTA. The combination MS_ID + SPACE_NUM is always unique*
SERIAL_NUM	*Unique meter serial number assigned by SFMTA*
FIRMWARE_VER	*The firmware version of the meter.*
FIRMWARE_REV	*The firmware revision of the meter.*
MODEM_FIRMWARE_VER	*The firmware version of the modem in the meter or pay station.*

BIN_NO	*Applies to MS meter only. The bin number for the software loaded in the pay station.*
EVENT_TIME	*The time the event took place (i.e. time fault occurred or cleared, time maintenance code was entered, time meter went into service or out of service). In standard SFpark date format to the second in UTC time zone*
EVENT_TYPE	*Type of event* *F: Fault* *M: Maintenance* *S: Meter Status*
*FAULT**	*If Event Type is 'F'* *Character string up to 12 characters describing the fault; e.g. "OBL" (Low Battery) or "OCRB" (Card Reader Blocked). Up to 100 possible strings – table to be provided by SFMTA.*
*METER_STATUS**	*If Event Type is 'S'* *"0" each time the meter goes out of service; "1" each time the meter goes back into service. Correspondence between faults/maintenance events and "out of service" status to be provided by SFMTA.*
*MAINT_CODE**	*If Event Type is 'M'* *Character string up to 12 characters describing the maintenance event; e.g. "RTS" (Remove Meter From Service) or "RCJ" (Cotton Jam). Up to 100 possible strings – table to be provided by SFMTA.*

Sample table of values for fault/maint codes. Final list to be provided separately by SFMTA:

ALPHA CODE	DESCRIPTION	TYPE (M/F)	SS	MS
RRI	ROUTINE INSPECTION OK	M	X	X
RCC	CLEAN CASE	M	X	X
RCOM	COMMUNICATION ERROR	M	X	X
RRB	REPLACE BATTERY	M	X	X
RSR	SERVICE REQUEST	M	X	X
RSDL	SERVICE DOOR/LOCKS	M	X	X
RVAN	VANDALISM	M	X	X
RRV	REPLACE VALIDATOR	M	X	X
RJ	JAM	M	X	X
RJC	COTTON JAM	M	X	X
OTDO	Top Door Closed	F		X
OTDC	Top Door Opened	F		X
OXF	Cashbox Full	F		X
OXFU	Cashbox Full	F		X
OCOM	Communications problem	F	X	X
ONRM	Non-reporting meter	F	X	X
ONVF	Coin Validator Fault	F	X	
ONVO	Coin Validator Oscillator	F	X	
OCRE	Card Read Error	F	X	

Full table of codes to be provided by SFMTA.

Sample XML:

```
<METER_FAULTS>
    <VENDOR_ID>999</VENDOR_ID>
    <TRANSMISSION_DATETIME>2012-06-27
      15:30:02</TRANSMISSION_DATETIME>
    <METERED_SPACE>
        <METER_TYPE>SS</METER_TYPE>
        <LOCATION_ID>201-03340</LOCATION_ID>
        <SERIAL_NUM>61290</SERIAL_NUM>
```

<FIRMWARE_VER>**32**</FIRMWARE_VER>

<FIRMWARE_REV>**51.2**</FIRMWARE_REV>

<EVENT_TIME>**2012-06-27 13:30:02**</EVENT_TIME>

<EVENT_TYPE>**F**</EVENT_TYPE>

<FAULT>**OBL**</FAULT>

</METERED_SPACE>

<METERED_SPACE>

<METER_TYPE>**SS**</METER_TYPE>

<LOCATION_ID>**202-04390**</LOCATION_ID>

<SERIAL_NUM>**61880**</SERIAL_NUM>

<FIRMWARE_VER>**32**</FIRMWARE_VER>

<FIRMWARE_REV>**51.2**</FIRMWARE_REV>

<EVENT_TIME>**2012-06-27 13:34:02**</EVENT_TIME>

<EVENT_TYPE>**F**</EVENT_TYPE>

<FAULT>**OCRB**</FAULT>

</METERED_SPACE>

<METERED_SPACE>

<METER_TYPE>**SS**</METER_TYPE>

<LOCATION_ID>**606-23070**</LOCATION_ID>

<SERIAL_NUM>**62406**</SERIAL_NUM>

<FIRMWARE_VER>**32**</FIRMWARE_VER>

<FIRMWARE_REV>**51.2**</FIRMWARE_REV>

<EVENT_TIME>**2012-06-27 17:18:07**</EVENT_TIME>

<EVENT_TYPE>**M**</EVENT_TYPE>

<MAINT_CODE>**RRB**</MAINT_CODE>

</METERED_SPACE>

<METERED_SPACE>

<METER_TYPE>**SS**</METER_TYPE>

<LOCATION_ID>**700-10390**</LOCATION_ID>

<SERIAL_NUM>**50213**</SERIAL_NUM>

<FIRMWARE_VER>**32**</FIRMWARE_VER>

*<FIRMWARE_REV>**51.2**</FIRMWARE_REV>*

*<EVENT_TIME>**2012-06-27 23:28:07**</EVENT_TIME>*

*<EVENT_TYPE>**S**</EVENT_TYPE>*

*<METER_STATUS>**1**</METER_STATUS>*

</METERED_SPACE>

..... Followed by all other spaces as this sample only lists few metered space/price schedules to highlight the various elements and formats

.....

</METER_FAULTS>

Attachment 9: INCOMING Meter Revenue CSV

Column	Optional	Data type & format	description
Vendor	No	Char	The vendor identifier supplying the csv currently 'DUNCAN' or 'IPS'
Meter Type	No	Char	The type of meter at the location. This can be used to identify various meter properties , such as whether it is single or multi bay, how to interpret the meter status etc.
Collection Route	No	Char	Collection Route identifier that the meter is on
Collection subroute	No	Char	Collection sub Route identifier that the meter is on
Location Id	No	Char	Post identifier
Street Name	No	Char	Street where the post exists
Bay Number	No	Number	The bay number controlled by the meter. Starts at 1. Single bay meters are always set to 1
Payment Type	No	Char	Either 'CASH', CREDIT CARD' or 'SMART CARD'
Collection Time	No	DATE TIME (YYYY-MM-DD HH24:MI:SS')	The time the meter data was collected
Transaction Time	Yes	DATE TIME (YYYY-MM-DD HH24:MI:SS')	The time the transaction meter transaction took place. If this field is empty then the data is cumulative value since the last collection. If valid then the data is an individual transaction
Tokens	Yes	Integer	Number of Tokens collected per transaction or collection
Dollar2 Coins	Yes	Integer	Number of 2 dollar coins collected per transaction or collection
Dollar1 Coins	Yes	Integer	Number of 1 dollar coins collected per transaction or collection
Cents50 Coins	Yes	Integer	Number of 50 cent coins collected per transaction or collection
Cents25 Coins	Yes	Integer	Number of 25 cent coins collected per transaction or collection
Cents10 Coins	Yes	Integer	Number of 10 cent coins collected per transaction or collection
Cents5 Coins	Yes	Integer	Number of 5 cent coins collected per transaction or collection
Cents1 Coins	Yes	Integer	Number of 1 cent coins collected per transaction or collection
Total Value	No	Number(7,2)	Value of collection in dollars and cents collected per transaction or collection.
Card No	Yes	Char	Any card id. This column will only be filled in for transaction level "SMART CARD" or "CREDIT CARD" and may be an encrypted value where the data is deemed sensitive. This column can be used for any future payment type which relies on an identifier.

Meter Status	Yes	integer	This may be a bit mask or numeric value representing the status. Its interpretation is dependant on the meter type
Serial No	Yes	Char	The meters serial number.
Firmware Ver	Yes	Char	The firmware version of the meter.
Firmware Rev	Yes	Char	The firmware revision of the meter.

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Notes:

- Identification of the meter type allows properties of meters to be defined in other lookup tables and processing performed according to these properties, for example interpretation of meter status.
- Payment types can be added in future if required.
- Use of transaction time allows differentiation between cumulated totals per collection or individual transactions.
- Token allows for if meters can be paid for by token. No total Value will exist for tokens
- Card No is an identifier of the device used to make a transactional payment. It doesn't have to be from a card. It could be from a finger print recognition, electronic key fob etc. Data may be encrypted to prevent fraud.
- Each column may optionally be placed in double quotes i.e. "1.34"
- Each row must be terminated by <CR><LF> , hex 0D0A

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Attachment 10: INCOMING Meter Maintenance CSV

Date : 14 mar 2011

Author : Mariana R. Parreiras

Ref:

Revision History

Date	Version	Description
9 Feb 2011	1.0	First DRAFT for discussion
18 Feb 2011	2.0	Second DRAFT for quote
14 March	3.0	SIT Finalised Doc. (Gsmith)

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Column	Optional	Data type & format	description
Vendor	No	char	The vendor identifier supplying the csv currently 'DUNCAN' or 'IPS'
Meter Type	No	char	The type of meter at the location. This can be used to identify various meter properties , such as whether it is single or multi bay, how to interpret the meter status etc.
Location Id	No	char	Post identifier.
Serial No	No	char	The meters serial number.
Firmware Ver	No	char	The firmware version of the meter.
Firmware Rev	No	char	The firmware revision of the meter.
Event Time	No	DATE TIME (YYYY-MM-DD HH24:MI:SS')	The time the event took place (i.e. time fault occurred or cleared, time maintenance code was entered, time meter went into service or out of service).
Event Type	No	char	Type of event: F for fault, M for Maintenance, S for Status.
Fault	Yes	char	If Event Type is 'F' Character string up to 12 characters describing the fault; e.g. "LB" (Low Battery) or "CRB" (Card Reader Blocked). Up to 100 possible strings – table to be provided by SFMTA. Otherwise blank
Meter Status	Yes	integer	If Event Type is 'S' "0" each time the meter goes out of service; "1" each time the meter goes back into service. Correspondence between faults/maintenance events and "out of service" status to be provided by SFMTA. Otherwise blank
Maintenance Code	Yes	char	If Event Type is 'M' Character string up to 12 characters describing the maintenance event; e.g. "RMFS" (Remove Meter From Service) or "CJ" (Cotton Jam). Up to 100 possible strings – table to be provided by SFMTA.

			Otherwise blank

Notes:

- Identification of the meter type allows properties of meters to be defined in other lookup tables and processing performed according to these properties, for example interpretation of meter status.
- Each column may optionally be placed in double quotes i.e. "1.34"
- Each row must be terminated by <CR><LF> , hex 0D0A

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Attachment 11: List of Faults and Maintenance Codes

ALPHA CODE	DESCRIPTION	TYPE (M/F)	SS	MS
RRI	ROUTINE INSPECTION OK	M	X	X
RCC	CLEAN CASE	M	X	X
RCOM	COMMUNICATION ERROR	M	X	X
RRB	REPLACE BATTERY	M	X	X
RSR	SERVICE REQUEST	M	X	X
RSDL	SERVICE DOOR/LOCKS	M	X	X
RVAN	VANDALISM	M	X	X
RRV	REPLACE VALIDATOR	M	X	X
RJ	JAM	M	X	X
RJC	COTTON JAM	M	X	X
RSC	STUCK COINS	M	X	X
RRPM	REPLACE PARTS TO METER	M	X	X
RCFG	CONFIG ERROR	M	X	X
RRT	RESET TIME	M	X	X
ROOO	OUT OF ORDER	M	X	X
RRS	REPLACE SIGN	M		X
RRMS	REPLACE METER INTO SERVICE	M	X	X
RTS	REMOVE METER FROM SERVICE	M	X	X
REM	EXCHANGE MECHANISM	M	X	
REH	EXCHANGE HEAD	M	X	
RBP	BROKEN POST	M	X	
RVF	Validator Fault	M	X	
RCR	Card Reader Blockage	M	X	
RDI	Display	M	X	
RK	Keypad	M	X	
RLED	Expiry LED's	M	X	
OAC	Alarms cleared	F		X
OBLD	Low Battery Alert - Dry Cell	F		X
OBLR	Low Battery Alert - Rechargeable	F		X
OXR	Cashbox Removed Alert	F		X
ONJM	Max Jam - Validator Alarm	F		X
ONJI	Input Chute Coin Jam Alert	F		X
ONJO	Reject Chute Coin Jam Alert	F		X
ONJU	Vault Chute Coin Jam Alert	F		X
OXI	New Cashbox Inserted	F		X
OMR	Meter Restarted	F		X
OTK	Technician Key Used	F		X
OEL	Maintenance Event Logged	F		X

ALPHA CODE	DESCRIPTION	TYPE (M/F)	SS	MS
OXAR	Cashbox Audit Retrieval	F		X
OXSI	Same Cashbox Inserted	F		X
OUDO	Vault Door Opened	F		X
OUDC	Vault Door Closed	F		X
OTDO	Top Door Closed	F		X
OTDC	Top Door Opened	F		X
OXF	Cashbox Full	F		X
OXFU	Cashbox Full	F		X
OCOM	Communications problem	F	X	X
ONRM	Non-reporting meter	F	X	X
ONVF	Coin Validator Fault	F	X	
ONVO	Coin Validator Oscillator	F	X	
OCRE	Card Read Error	F	X	
OCD	Card Detection Switch Fault	F	X	
OCFG	Configuration Fault	F	X	
OCRB	Card Reader Blocked	F	X	
OME	Memory Error	F	X	
OBL	Battery Low	F	X	
OBC	Battery Critical	F	X	
OX75	Cashbox 75%	F	X	
OOK	OK	F	X	
ONVB	Coin Validator Blocked	F	X	

ATTACHMENT 12: ANTICIPATED FREQUENCY OF TRANSMISSION—CSV AND XML

The table below is a summary of the Attachments describing XML and CSV specifications used for automatic programming referenced throughout the RFP, their purpose, and the anticipated frequency of transmission. While the SFMTA does not anticipate major deviations to the listed specifications, the SFMTA reserves the right to make changes and corrections in consultation with the Contractor during the programming development and testing phase. Likewise, the SFMTA will review and consider any changes to the specifications requested by the Contractor. OUTGOING means files are going from the SFMTA to the Contractor; INCOMING means files are going from the CONTRACTOR to the SFMTA.

Attachment	Description	Purpose	Anticipated Frequency	Delivery Date (60, 90, 120, or 120+ days) from the Effective Date
Attachment 1 – OUTGOING PSI XML	Contains both standard and user-defined variables describing attributes of the metered spaces not related to meter behavior.	Populate attributes of newly-metered spaces in MMS.	as-needed	*Insert projected timeline here as indicated above*
		Routine changes/edits to individual metered spaces in MMS.	nightly	
Attachment 2 – OUTGOING Operating schedule XML	Contains variables that govern the overall hours meters are in effect; may include TOW, prepayment settings, time limits, and other restrictions.	Program meter behavior and screens of newly-metered spaces with hours, prepayment, TOW, and time limits.	as-needed	
		Routine changes/edits to individual metered spaces.	nightly	
		Re-program meter behavior and screens of existing metered spaces with new hours, prepayment, TOW, or time limits.	1x/month avg.	
Attachment 3 – OUTGOING Price schedule XML	Contains variables that govern meter hourly rates for specific time slots.	Program meter behavior and screens of newly-metered spaces with time slots and hourly rates.	as-needed	
		Routine changes/edits to individual metered spaces.	nightly	
		Re-program meter behavior and screens of existing metered spaces with new time slots and rates.	1x/month avg.	

Attachment	Descriptions	Purpose	Anticipated Frequency	Delivery Date: (60, 90, 120, or 120+ days) from the Effective Date
Attachment 4 – OUTGOING Special event pricing and regulation XML	Contains variables that govern the overall hours meters are in effect; may include TOW, prepayment settings, time limits, other restrictions, or rates for specific time slots that override standard operating and price schedules only on specific dates listed in the XML file.	Program meter behavior and screens of newly-metered spaces with special hours, prepayment, TOW, time limits, time slots, hourly rates, or other regulations to override standard operating and price schedules on specific dates.	as-needed	*Insert projected delivery date here as indicated above*
		Re-program meter behavior and screens of existing metered spaces with special hours, prepayment, TOW, time limits, rates, or other regulations to override standard operating and price schedules on specific dates.	Periodic, TBD	
Attachment 5 – INCOMING Transaction Data XML	Contains data related to every transaction conducted at the meter including start/end times of parking sessions, payment times, amounts, and payment type.	Deliver parking transaction data to SFMTA.	real-time	
Attachment 6 – INCOMING PSI changes XML specification	Contains standard and user-defined variables stored in the MMS.	Deliver standard and user-defined variables describing attributes of the metered spaces not related to meter behavior to SFMTA for comparison to SFMTA's records.	weekly	

Attachment	Descriptions	Purpose	Anticipated Frequency	Delivery Date: (60, 90, 120, 120+ days) from the Effective Date
Attachment 7 – INCOMING Reconciliation XML	Contains variables that govern meter behavior stored in the MMS.	Deliver metered space programming information including hours, prepayment, TOW, time limits, rates, or special event programming to SFMTA for comparison to SFMTA's records	on-demand	*Insert projected delivery date here as indicated above*
Attachment 8 – INCOMING Faults & maintenance codes XML	Contains faults and maintenance codes transmitted by the meters to the MMS.	Deliver meter faults reported by meters and maintenance codes entered by SFMTA staff at the meters to SFMTA .	nightly	
Attachment 9 – INCOMING Meter Revenue CSV	Contains meter revenue by Post ID.	To populate SFPM with meter revenue data.	nightly	
Attachment 10 – INCOMING Meter Maintenance CSV	Contains meter maintenance data by Post ID.	To populate SFPM with meter maintenance events.	nightly	
Attachment 11 – List of Faults and Maintenance Codes	Contains list of faults and maintenance codes.	Used in conjunction with Attachment 10.	nightly	N/A
Attachment 12 - Meter Programming Behavior	Meter Programming Behavior	To program three working meter samples to be submitted with the proposal	At the time of the proposal submittal	N/A

Attachment 13: Meter revenue reconciliation XML specification

Date: 25 July 2013
Author: SFMTA
Ref:
Description: The following XML is the format in which Proposer's Meter Management System will deliver weekly meter revenue reconciliation per payment type for the purpose of comparing the data entered directly in the Proposer's system with the data contained in SFMTA's Data Warehouse so that corrections and updates can be conducted as appropriate.

XSD along with XML namespace for this XML will be provided during the development and testing phase.

Revision History		
Date	Version	Description
25 July 2013	1.0	First DRAFT for review (SFMTA)

<REVENUE_RECONCILIATION>

*<TRANSMISSION_DATETIME>**Date and time of transmission from city in standard Oracle format to the second** </TRANSMISSION_DATETIME>*

*<VENDOR_ID> **Vendor ID** </ VENDOR_ID>*

*<START_DATE>**Period start date**</START_DATE>*

*<END_DATE>**Period end date**</END_DATE>*

<REVENUE>

*<PAYMENT_TYPE>**Payment Type**</PAYMENT_TYPE>*

*<TOTAL_AMONT>**Total revenue per payment type**</TOTAL_AMONT>*

</REVENUE>

</REVENUE_RECONCILIATION>

XML Code:	*Shall Be:*
TRANSMISSION_DATETIME	*Given by SFMTA*
VENDOR_ID	*Numeric presentation of Vendor ID*
START_DATE	*Report period start date in local time zone*
END_DATE	*Report period end date in local time zone*
PAYMENT_TYPE	*Payment type: CASH, CREDIT CARD, etc.*
TOTAL_AMONT	*Total amount per payment type*

Examples:

```
<?xml version="1.0" encoding="UTF-8"?>
<REVENUE_RECONCILIATION xmlns="http://www.example.org/recon_revenue"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.sfmta.com/xsd/revenue_recon revenue_recon.xsd ">
 <TRANSMISSION_DATETIME>2013-01-02 23:12:13</TRANSMISSION_DATETIME>
 <VENDOR_ID>1</VENDOR_ID>
 <START_DATE>2013-01-02 00:00:00</START_DATE>
 <END_DATE>2013-01-02 00:00:00</END_DATE>
 <REVENUE>
  <PAYMENT_TYPE>CASH</PAYMENT_TYPE>
  <TOTAL_AMONT>10.0</TOTAL_AMONT>
 </REVENUE>
 <REVENUE>
  <PAYMENT_TYPE>CREDIT CARD</PAYMENT_TYPE>
  <TOTAL_AMONT>20.0</TOTAL_AMONT>
 </REVENUE>
</REVENUE_RECONCILIATION>
```

Attachment 14: Miscellaneous Documents

A. Training Plan

Training Subject: Meter Maintenance	
Element	**Description**
Subject Matter	To introduce maintenance and operational staff with basic Meter use and operating features, including primary construction & disassembly, Meter installation & removal, coin and card transactions, primary diagnostics tools, standard operating parameters, first line troubleshooting, and basic repair. Session also includes FAQs and Q&A session.
Primary Audience	All maintenance and operations staff
Training Sessions Offered	5-8 days or as requested by SFMTA
Training Hours per Student	1-2 hours per session, 8-12 total training hours
Students Eligible to Train	5-10 per session, no limit to number of total students
Proposed Schedule	30 days prior to installation, and then 30 days post installation
Location of Training	SFMTA Meter shop or location TBD
Training Provided By	IPS Group Project Manager and Local Field Service Technician

Training Subject: Finance / Accounting / Audit	
Element	**Description**
Subject Matter	To provide overview of IPS Meter management system reporting capabilities covering all financial reports, credit card settlement, coin reconciliation and transaction details.
Primary Audience	Operations Supervisors/Managers, Administration, Data Analysts, Finance & Accounting Managers
Training Sessions Offered	5-8 days or as requested by SFMTA
Training Hours per Student	1-2 hours per session, 8-10 total training hours
Students Eligible to Train	8-10 per session, no limit to number of total students
Proposed Schedule	30 days prior to installation, and then 30 days post installation
Location of Training	Administration offices or location TBD
Training Provided By	IPS Group Project Manager and Local Field Service Technician

Training Subject: Enforcement	
Element	Description
Subject Matter	Demonstrate how IPS Meters are operated by a user as well as how to perform visual enforcement. Training will also demonstrate Meter flexibility and configuration options that can be used to make enforcement as easy as possible.
Primary Audience	Enforcement Staff / Supervisors, Adjudication Staff
Training Sessions Offered	5-8 days or as requested by SFMTA
Training Hours per Student	1-2 hours per session, 1-2 total training hours
Students Eligible to Train	8-10 per session, no limit to number of total students
Proposed Schedule	30 days prior to installation, and then 30 days post installation
Location of Training	Enforcement staff offices or location TBD
Training Provided By	IPS Group Project Manager and Local Field Service Technician

Training Subject: Meter Management System Usage	
Element	Description
Subject Matter	Provide thorough review of all financial, technical, administrative reporting capabilities, specific to each functional user group, in addition to more advanced training for system administrators who will use multiple reporting areas, as well as Meter configurations.
Primary Audience	Operations Supervisors/Managers, Adjudication Staff, Project Mangers, System Administrators
Training Sessions Offered	5-8 days or as requested by SFMTA
Training Hours per Student	1-2 hours per session, 8-10 total training hours
Students Eligible to Train	5-10 per session, no limit to number of total students
Proposed Schedule	30 days prior to installation, and then 30 days post installation
Location of Training	Administration offices or location TBD for each user group
Training Provided By	IPS Group Project Manager and Local Field Service Technician

B. Return Merchandise Authorization (RMA)

1. SFMTA will notify the Contractor's project manager or help desk of an RMA request via phone or email.
2. IPS project manager/field technician shall come to SFMTA's Meter Shop to inspect and document all RMA Meters, issue an RMA number using the MMS, and schedule pickup for Meter repair. Any SFMTA documentation will be completed at the time of pickup.

3. Contractor shall repair locally or return to Contractor's return center for repairs.
4. Contractor shall return repaired Meters to the Meter shop upon completion. The Contractor shall then close the RMA ticket.

C. Battery/Power Options

The battery pack consists of two parts – a rechargeable part and a non-rechargeable part. The rechargeable part serves as temporary buffer (a few days or weeks, depending on features enabled on the meter) to store surplus solar energy, whereas the non-rechargeable pack covers the meter's energy requirements when the solar charging system is not able to satisfy part or all of the meter's energy requirement for some extended time and the rechargeable battery becomes depleted.

The non-rechargeable part is only used when solar AND the rechargeable part is depleted – so Meters that do not receive enough direct sunlight for a while (under an overpass, below a leafy tree) will tap into the non-rechargeable part.

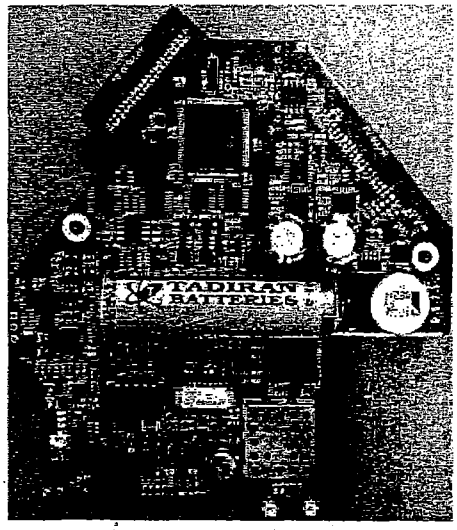


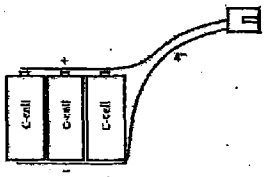
Figure 1 - M5 Main Board with On-Board Battery

The rechargeable battery comes directly attached to the main board

1. Rechargeable Battery – attached to board

Useful life expectancy: 7-10 years. This does not mean that it will retain the full charge for 7-10 years, but means that the rechargeable battery will continue to efficiently charge, store and supply energy for 7-10 years. This battery is not intended to provide sustained power supply, but buffer the energy supply given a surplus of solar energy.

2. Extended M5 Non-Rechargeable Pack – part # 795-600-H3



Life Expectancy Table – Non-Rechargeable Battery[1]

DAYS ON BACKUP BATTERY						
PBP ON/SOLAR HRs IN	0	1	2	3	4	5
0	301	758	∞	∞	∞	∞
1	281	641	∞	∞	∞	∞
2	263	556	∞	∞	∞	∞
3	248	490	25000	∞	∞	∞
4	234	439	3571	∞	∞	∞
5	221	397	1923	∞	∞	∞
6	210	362	1316	∞	∞	∞
7	200	333	1000	∞	∞	∞
8	191	309	806	∞	∞	∞
9	182	287	676	∞	∞	∞
10	175	269	581	∞	∞	∞
11	168	253	510	∞	∞	∞
12	161	238	455	5000	∞	∞
13	155	225	410	2273	∞	∞
14	150	214	373	1471	∞	∞
15	145	203	342	1087	∞	∞
16	140	194	316	862	∞	∞
17	135	185	294	714	∞	∞
18	131	177	275	610	∞	∞
19	127	170	258	532	∞	∞
20	123	163	243	472	8333	∞
21	120	157	229	424	2778	∞
22	116	152	217	385	1667	∞
23	113	146	207	352	1190	∞
24	110	141	197	325	926	∞

[1] The way to read the table above is that with no sunlight and no Pay-By-Phone (PBP) visual indication the battery will last 301 days before needing to be replaced. Please note that PBP visual indication puts a huge demand on the power system unless sufficient solar energy is available.

APPENDIX B
LIQUIDATED DAMAGES AND CREDIT ASSESSMENTS
SINGLE-SPACE METERS

I. DEFINITIONS:

In addition to the definitions in the Agreement and the Statement of Work, the following definitions shall pertain to the terms used within this document:

A. "Consumables" shall mean items that are not subject to credit assessments and/or loss compensation, such as ticket roll paper and attached graphic panels and signs.

B. "Failure" or "Fail" shall refer to functionality described under the column heading "Description of Failure" in the tables herein that is below the threshold set out in the column titled "Threshold for LD Assessment" of said tables for a particular hardware or software requirement.

C. "Vandalism" shall mean any willful damage caused to the Meter which affects the appearance or operation of the Meter or interferes with the normal use of the Meter.

II. GENERAL EXCLUSIONS:

Liquidated damages and credit assessments shall not be imposed for the following Failures or to the extent the following are solely responsible for noncompliance with the Performance Standards:

1. Unavoidable Delays.
2. Failures that are self-corrected by the Meters within agreed performance specifications (e.g., clock re-syncs).
3. Infant mortality, i.e., parts Failure during the first 60 Days after installation of the Meters, provided that such parts are replaced within seven Days of the Failure.
4. Failures in Meters that are being field tested on new software or hardware during the mutually agreed upon field test period.
5. Failure of Consumables.
6. Failure as a result of use of replacement parts for the Meters other than those authorized by the Contractor.
7. Failures that are solely caused by the negligent actions or inactions of SFMTA or its contractors or subcontractors.
8. Failure of third-party providers of electrical power, internet access or cellular communications.

III. LIQUIDATED DAMAGES:

The Contractor acknowledges that its failure to perform certain obligations under this Agreement during the respective time limits imposed will cause the SFMTA to incur cost and inconvenience not contemplated under this Agreement, which cost and inconvenience will constitute damage to the SFMTA, the City and the public, and that the exact amount of such damage will be extremely difficult or impractical to fix. The SFMTA and Contractor agree that the amounts described as liquidated damages in this Agreement are not penalties, but represent a fair and reasonable estimate of the damages that the SFMTA will incur by reason of Contractor's failure to perform, and are fair compensation to City for its losses. Failure by the SFMTA to impose credit assessments for specified violations will not be a waiver of the right to enforce this Section, nor will it constitute a waiver of any other right of the SFMTA under this Agreement.

The SFMTA may deduct a sum representing the liquidated damages assessed from any money due to Contractor under this Agreement. Should an assessment take place, the SFMTA will send written notification to the Contractor for its information. Assessments within a given month shall not exceed 35 percent of the Monthly Operational Expenses paid to Contractor. Excess liquidated damages (over a monthly cap) will be carried over to the following month.

If two or more Failures are determined for a particular event, Contractor will be charged for the Failure with the highest assessment.

Where, under the provisions below, SFMTA is required to issue a written warning to Contractor prior to assessment of liquidated damages, Contractor's obligation to repair, replace, correct, adjust, or modify a Failure shall not commence until the date SFMTA issues such written warning, which written warning shall include a reasonable description of the nature of the Failure as known to SFMTA at the time. Any extensions to the cure period must be authorized by the SFMTA in writing.

Where, under the provisions below, SFMTA is not required to issue a written warning to Contractor prior to assessment of liquidated damages, SFMTA, as soon as practicable after the failure, will send a written notice of assessment to Contractor, setting forth a reasonable description of the nature of the failure, as known to SFMTA at the time, and the amount of the assessment.

SFMTA will make full assessments of liquidated damages with a monthly assessment (items 1, 36a, 37, 38, 39, 40, 41, 42, 43, 44, 45, and 46) regardless of whether a Failure is cured prior to the end of the month.

	Description of Failure:	Threshold for LD Assessment:	Potential Assessment:
1a	A Failure of the Meters that results in either no payment transaction being Accepted by the Meters (e.g., Meters allow free parking during enforcement hours) or application of the wrong rates.	During Operating Hours, a single Failure that exceeds 20% of the total Meters installed and accepted, or multiple Failures in one Day that together exceed 20%. Multiple Failures that cumulatively exceed 30% over a one-week period. A single Failure of the same Meters that continues for more than one Day shall be considered to be a Multiple Failure for each Day.	No warning will be issued prior to assessment of liquidated damages for this Failure. The Contractor may be assessed liquidated damages based on ADR* Loss multiplied by the total number of affected Meters.
1b	A Failure (during a Special Event) of the Meters in Special Event areas that results in either no payment transaction being Accepted by the Meters (e.g., Meters allow free parking during enforcement hours) or application of the wrong rates (e.g., although properly configured, Meter does not charge Special Event rates)	During Operating Hours, a single Failure that exceeds 20% of the total Meters installed and accepted in Special Event areas or multiple Failures in one Day in Special Event areas that together exceed 20%. Multiple Failures in Special Event areas that cumulatively exceed 30% over a one-week period. A single Failure of the same Meters that continues for more than one Day shall be considered to be a Multiple Failure for each Day.	No warning will be issued prior to assessment of liquidated damages for this Failure. The Contractor may be assessed liquidated damages based on ASEDR** multiplied by the total number of affected Meters.

*Average Daily Revenue (ADR) for Failed Meters is equal to the actual revenue collected for the Failed Meters for the 90-Day period prior to the date of Failure (excluding Meters in Special Event areas during a Special Event) divided by 90, divided by the number of Failed Meters.

**Average Special Event Daily Revenue (ASEDR) for Failed Meters is equal to the actual revenue collected for the Failed Meters for the last 10 Special Events in the 12-month period prior to the date of Failure divided by 10 divided by the number of Failed Meters.

Actual Meter revenue will be based on data in the MMS.

Examples:

ADR:

- *Inventory of Accepted Meters: 25,000*
- *Systemwide Failure affected 30% of the inventory, or 7,500 Meters for 10 Days.*
- *Calculations:*
  - *Revenue collected in prior 90 days for 7,500 Meters = $3,375,000*
  - *ADR will be $3,375,000* ***divided by*** *90 Days and* ***divided by*** *7,500 Meters* ***equals*** *$5 per Meter/ per Day.*
  - *For 10 Days of Failure MMS reported total revenue for 7,500 affected Meters as $150,000 dollars.*
  - *LD for such Failure would be calculated as 7,500 multiplied by $5 AMDR* ***multiplied by*** *10 Days* ***minus*** *$150,000* ***equals*** *$225,000 dollars.*

ASEDR:

- *City total SS Meters inventory: 25,000*
- *System-wide Failure occurred and affected 22% of the inventory or 5,500 Meters for 2 Days.*
- *Contract Administrator or Designee will perform the following calculations.*
  - *For the last 10 special events from the date of failure MMS reported total revenue for 5,500 affected Meters as $385,000 dollars*
  - *ASEDR will be $385,000* ***divided by*** *10 events and* ***divided by*** *5,500 Meters* ***equals*** *$7 per Meter/ per Day.*
  - *For 2 Days of Failure MMS reported total revenue for 5,500 affected Meters as $55,000 dollars.*
  - *LD for such Failure would be calculated as 5,500 multiplied by $7 ASEDR* ***multiplied by*** *2 Days* ***minus*** *$55,000* ***equals*** *$22,000 dollars.*

	Description of Failure:	Threshold for LD Assessment:	Potential Assessment:
2	The Contractor Fails to maintain Payment Card Industry Data Security Standard Certification.	Any lapse in requirements as described in Section I.A.7.a of the Statement of Work.	No warning will be issued prior to assessment of liquidated damages for this Failure. The Contractor may be assessed liquidated damages of $30,000 the first month of non-compliance and $40,000 for each additional month until the Failure is cured. For all future such Failures, the Contractor will be assessed liquidated damages in the amount of $45,000 per month until the Failure is cured.
3	The Contractor Fails to comply with the Batches Delivery Schedule	See Contractor Delivery Schedule – Appendix D.	No warning will be issued prior to assessment of liquidated damages for this Failure. The Contractor may be assessed liquidated damages of $3,000 per Day per Deliverable until the Failure is cured.

	Description of Failure:	Threshold for LD Assessment:	Potential Assessment:
4	Meter Fails to provide a customer the proper time purchased.	**(Applies to items 4-11)** More than two percent of Accepted Meters Fail at any one time.	**(Applies to items 4-11)** The SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure the Failure within seven Days thereafter. If the Failure is not cured within allotted time frame, the Contractor may be assessed liquidated damages of $10 per Failing metered space per Day, from the date of the initial Failure until the Failure is cured. For all future such Failures the Contractor may be assessed liquidated damages of $15 per metered space per Day until the Failure is cured.
5	Meter Fails to wirelessly communicate all payment statuses to its respective MMS (coins, smart cards, credit card etc.) even though the wireless network is available.		
6	The Contractor Fails to transmit evidence of a transaction paid via pay-by-phone vendor to the Meter within 60 seconds after pay-by-phone transactions are received from PBP vendor.		
7	Meter gives a customer time when the space is programmed as "No Parking."		
8	Meter Fails to provide accurate visual enforcement indication as programmed on the front and the back of the Meter.		
9	Meter Fails to display, retain, or deliver a time-stamped "out of order" message to MMS.		
10	Meter Fails to transmit a requested alarm when malfunctioning (e.g., coin jam, card reader jam, low battery, out of order).		
11	Subject to Section II.A.3 of Appendix A (SOW), Failure of a new coin discrimination parameter change to be sent to a Meter wirelessly.		

	Description of Failure:	Threshold LD Assessment:	Potential Assessment:
12	The Contractor Fails to deliver accurate rate changes to its Meters, in accordance with the schedule agreed to by the Parties.	**(Applies to items 12-16)** More than two percent of Accepted Meters Fail at any one time.	(Applies to items 12-16) The SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure the Failure within 72 hours thereafter. If the Failure is not cured within the allotted time frame, the Contractor may be assessed liquidated damages of $10 per Failing metered space per Day, from the date of the initial Failure until the Failure is cured. For all future such Failures, the Contractor may be assessed liquidated damages in the amount of $15 per Failing metered space per Day until the Failure is cured.
13	The Contractor Fails to deliver accurate time limit changes to its Meters in accordance with the schedule agreed to by the Parties.		
14	The Contractor Fails to deliver accurate operational hours changes to its Meters in accordance with the schedule agreed to by the Parties.		
15	The Contractor Fails to deliver accurate display configuration changes to its Meters in accordance with the schedule agreed to by the Parties.		
16	The Contractor Fails to modify its modem settings (e.g. time the modem is required to listen for PBP transaction data) accurately and in accordance with the schedule agreed to by the Parties.		

	Description of Failure:	Threshold LD Assessment:	Potential Assessment:
17a	Meters' internal clocks drift more than two seconds per Day.	More than two percent of the Accepted Meters, over a period of three consecutive Days.	The SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure within seven Days thereafter,. If the Failure is not cured within the allotted time frame, the Contractor may be assessed liquidated damages of $10 per Failing metered space per Day, from the date of the initial Failure until the Failure is cured. For all future such Failures, the Contractor may be assessed liquidated damages in the amount of $15 per Failing metered space per Day until the Failure is cured.
17b	Meter Fails to synch its internal clock with the MMS on all call-in events.	More than two percent of the Accepted Meters, over a period of three consecutive Days.	The SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure within seven Days thereafter. If the Failure is not cured within the allotted time frame, the Contractor may be assessed liquidated damages of $10 per Failing metered space per Day, from the date of the initial Failure until the Failure is cured. For all future such Failures, the Contractor may be assessed liquidated damages in the amount of $15 per Failing metered space per Day until the Failure is cured.

	Description of Failure:	Threshold LD Assessment:	Potential Assessment:
18	Subject to Subsections c and e of Section II.A.3, Failure of a Meter to properly recognize and credit time for new coins issued by the U.S. Mint.	None	The SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure within three Days thereafter. If the Failure is not cured within the allotted time frame the Contractor may be assessed liquidated damages of $10 per Failing metered space per Day, from the date of the initial Failure until the Failure is cured. For all future Failures the Contractor may be assessed liquidated damages in the amount of $15 per Failing metered space per calendar Day until the Failure is cured.

	Description of Failure:	Threshold LD Assessment:	Potential Assessment:
19	Failure to deliver any custom report by the mutually agreed-upon date.	Not applicable	The SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure within 14 Days thereafter. If the Failure is not cured within the allotted time frame, the Contractor may be assessed liquidated damages of $50 per missed report per Day until the Failure is cured. For all future such Failures, the Contractor may be assessed liquidated damages in the amount of $75 per Day for each missed report until the Failure is cured.
20	Failure to make a custom report available to run in the MMS during the contract period.		
21	Failure of more than two percent of the Accepted Meters to download the Hotlist within 24 hours.	Not applicable	The SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure within three Days thereafter, unless an extension is authorized by the SFMTA in writing. If the Failure is not cured within allotted time frame, the Contractor may be assessed liquidated damages of $100 per Day until the Failure is cured. For all future such Failures, the Contractor may be assessed liquidated damages in the amount of $150 per Day until the Failure is cured.
22	Failure of the MMS to update Hotlist within 24 hours.		
23	Failure of the Meter to reject a card that is on the Hotlist.		
24	Failure of the Contractor to return a call from SFMTA within 15 minutes. (Tech. Spec. Sec. I.A.2.a.ii.)	none	The SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. If the Failure occurs a second time, the Contractor may be assessed liquidated damages of $100 per incident. For all future such Failures, the Contractor may be assessed liquidated damages in the amount of $150 per incident.

	Description of Failure:	Threshold for LD Assessment:	Potential Assessment:
25a	Failure of the Meter to maintain 99% accuracy in its audit of daily revenue that passes through the Meter payment systems. **(Coins:** Comparison will be made between MMS collection report and physical coin count.) **(Credit Card:** Comparison will be made between the Gateway report and the bank deposit.)	Discrepancy of more than 1% in audit of daily revenue	At the end of each month, and prior to assessment of liquidated damages, the SFMTA will issue a written warning to Contractor if the Failure threshold has been reached on any day of the month. The Contractor shall cure each Failure within seven Days after receipt of the warning. If any Failure is not cured within the allotted time frame, the Contractor may be assessed liquidated damages of $100 per Day per Failure until the Failure is cured.
25b	Failure of the Meter to maintain 99% accuracy in its audit of total monthly revenue that passes through the Meter Payment systems. **(Coin, credit card and smart card revenue:** Comparison will be made between MMS, financial reports and the SFMTA databases.)	Discrepancy of more than 1% in audit of monthly revenue	At the end of each month, and prior to assessment of liquidated damages, the SFMTA will issue a written warning to Contractor if the Failure threshold has been reached for the month. The Contractor shall cure a monthly Failure within seven Days after receipt of the warning. If the Failure is not cured within the allotted time frame, the Contractor may be assessed liquidated damages of $100 per Day until the Failure is cured.
26	Contractor Fails to deliver historical data older than 24 months (e.g., revenue, revenue collections, maintenance events,	none	The SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure within seven Days thereafter. If the
	alarms, payment) in CSV format within the time frame requested by SFMTA.		Failure is not cured within the allotted time frame, the Contractor may be assessed liquidated damages of $100 per Day until the Failure is cured. For all future such Failures, the Contractor may be assessed liquidated damages in the amount of $150 per Day until the Failure is cured.

	Description of Failure:	Threshold for LD Assessment:	Potential Assessment:
27	Failure to deliver 99 percent of all data (e.g., CSV files) to the SFMTA daily as defined in Attachments 1-11.	none	The SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure within three Days thereafter. If the Failure is not cured within the allotted time frame, the Contractor may be assessed liquidated damages of $500 per Day until the Failure is cured. For any future such Failures, the Contractor may be assessed liquidated damages in the amount of $750 per Day until the Failure is cured.
28	Failure to deliver 99 percent of all XML data feed to the SFMTA within 60 seconds of transmission.		
29	Failure of the Contractor's MMS to process any XML file (e.g., price schedule, special event spreadsheet) as defined in Attachments 1-11.		
30	A User with operable computers and broadband internet connection is unable to log in to the MMS (mobile and stand-alone), within 60 seconds. (Sec. III.A.1.a.)	none	The SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure within seven Days thereafter. If the Failure is not cured within the allotted time frame, the Contractor may be assessed liquidated damages of $500 per Day until the Failure is cured. For any future such Failures, the Contractor may be assessed liquidated damages in the amount of $750 per Day until the Failure is cured.
31	A User with operable computers and broadband internet connection receives an error code from the MMS.		
32	With the exception of mutually agreed-upon downtime, the MMS or any component of the MMS Fails to be available for use (e.g., the server is down, the internet connection at the data center is not functioning, a hard drive Failure on one of the storage servers) more frequently than once per 30-Day period.		

	Description of Failure:	Threshold for LD Assessment:	Potential Assessment:
33	Failure of the Contractor to make available custom fields within its MMS by a mutually agreed- upon timeframe.	not applicable	The SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure within 14 Days thereafter. If the Failure is not cured within the allotted time frame the Contractor may be assessed liquidated damages of $500 per Day until the Failure is cured. For any future such Failures, the Contractor may be assessed liquidated damages in the amount of $750 per Day until the Failure is cured.
34	Meter Fails to transmit data to the MMS within 120 seconds of transmission.	Five percent of average daily transactions. Percentage shall be calculated once a month on the anniversary Day of the Notice to Proceed.	SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure within 14 Days thereafter. If the Failure is not cured within the allotted time frame, the Contractor may be assessed liquidated damages of $500 per Day until the Failure is cured. For all future such Failures, the Contractor may be assessed liquidated damages without benefit of warning in the amount of $750 per Day until the Failure is cured.
35	MMS Fails to transmit transactional data to the SFMTA within 10 seconds of transmission.		

	Description of Failure:	Threshold for LD Assessment:	Potential Assessment:
36a	Contractor Fails to provide an SFTP site with a file structure within 60 Days of the Notice to Proceed, as described in Sections III.B.1.c and III.B.1.d of the Statement of Work.	No compliance by Day 61.	No warning will be issued prior to assessment of liquidated damages for this Failure. The Contractor may be assessed liquidated damages at the rate of $1,000 per month until the Failure is cured.
36b	Contractor Fails to maintain a functional SFTP site for the term of the Agreement, as described in Section III.B.1.c of the Statement of Work.	No functionality of the FTP site for a continuous two-week period.	SFMTA will issue a written warning to Contractor prior to assessment of liquidated damages. The Contractor shall cure within seven Days thereafter. If the Failure is not cured within the allotted time frame, the Contractor may be assessed liquidated damages of $500 per week until the Failure is cured. For all future such Failures, the Contractor may be assessed liquidated damages without benefit of warning in the amount of $750 per week until the Failure is cured.
37	User is not, within 90 days of the Notice to Proceed, able to program and re-program Meters in batches, whether or not the original programming within the selected batch was the same, and without affecting other parameters of the original Meter Behavior.	No compliance on Day 91.	No warning will be issued prior to assessment of liquidated damages for this Failure. Beginning on the 91st Day after the Notice to Proceed, the Contractor may be assessed liquidated damages at the rate of $1,000 per month until the Failure is cured.

	Description of Failure:	Threshold for LD Assessment:	Potential Assessment:
38	MMS Fails to allow the SFMTA, within 90 Days of the Notice to Proceed, to select any subset of meters using any combination of standard and user-defined filters and an effective date, and generate an XML file as specified in Attachment 7 "Reconciliation XML specification" and deposit it in the Contractor's SFTP site for pickup by SFMTA.	No compliance on Day 91.	No warning will be issued prior to assessment of liquidated damages for this Failure. Beginning on the 91st Day after the Notice to Proceed, the Contractor may be assessed liquidated damages at the rate of $500 per month until the Failure is cured.
39	MMS Customization has not been provided within 60 days of the Notice to Proceed, as described in Sections III.B.6 j of the Statement of Work.	No compliance on Day 61.	No warning will be issued prior to assessment of liquidated damages for this Failure. Beginning on the 61st Day after the Notice to Proceed, the Contractor may be assessed liquidated damages at the rate of $500 per month until the Failure is cured.
40	MMS Customization has not been provided within 90 days of the Notice to Proceed of the Agreement as described in Sections III.B.6 g, h and k in the Statement of Work.	No compliance on Day 91.	No warning will be issued prior to assessment of liquidated damages for this Failure. Beginning on the 91st Day after the Notice to Proceed, the Contractor may be assessed liquidated damages at the rate of $500 per functional requirement per month until the Failure is cured.
41	MMS Customization has not been provided within 120 days of the Notice to Proceed, as described in Sections III.B.6 l in the Statement of Work.	No compliance on Day 121.	No warning will be issued prior to assessment of liquidated damages for this Failure. Beginning on the 121st Day after the Notice to Proceed, the Contractor may be assessed liquidated damages at the rate of $500 per month until the Failure is cured.

	Description of Failure:	Threshold for LD Assessment:	Potential Assessment:
42	MMS Fails to allow for import of data in batch files within 120 Days of the Notice to Proceed.	No compliance on Day 121.	No warning will be issued prior to assessment of liquidated damages for this Failure. Beginning on the 121st Day after the Notice to Proceed, the Contractor may be assessed liquidated damages at the rate of $500 per month until the Failure is cured.
43	The SFMTA is unable to upload a CSV file to the MMS containing Backend Setting on a per-Meter basis within 120 Days of the Notice to Proceed.	No compliance on Day 121.	No warning will be issued prior to assessment of liquidated damages for this Failure. Beginning on the 121st Day after the Notice to Proceed, the Contractor may be assessed liquidated damages at the rate of $500 per month until the Failure is cured.
44	User is unable to select the unit that serves as a basis for each default payment setting for coins and cards within 90 Days of the Notice to Proceed.	No compliance on Day 91.	No warning will be issued prior to assessment of liquidated damages for this Failure. Beginning on the 91st Day after the Notice to Proceed, the Contractor may be assessed liquidated damages at the rate of $500 per month until the Failure is cured.
45	MMS Fails to accept programming for special overrides or exceptions in accordance with Attachment 4 – Special Event pricing and regulation XML specifications within 60 Days of the Notice to Proceed.	No compliance on Day 61.	No warning will be issued prior to assessment of liquidated damages for this Failure. Beginning on the 61st Day after the Notice to Proceed, the Contractor may be assessed liquidated damages at the rate of $500 per month until the Failure is cured.

	Description of Failure:	Threshold for LD Assessment:	Potential Assessment:
46	Contractor Fails to provide Special Event Programming functionality within 90 Days of the Notice to Proceed as described in Section III.B.14 b of the Statement of Work.	No compliance on Day 91.	No warning will be issued prior to assessment of liquidated damages for this Failure. Beginning on the 91st Day after the Notice to Proceed, the Contractor may be assessed liquidated damages at the rate of $3,000 per month until the Failure is cured.

CREDIT ASSESSMENTS:

Contractor agrees that in certain instances of Failure of performance of the Meters, the City will suffer loss of revenue and other damages in an amount that can reasonably be calculated. The Contractor agrees that such loss of revenue ("credit assessments") as set forth below may be deducted by the City from payments to Contractor under the Agreement as they accrue. Should an assessment take place, the SFMTA will send written notification to the Contractor for its information. Assessments within a given month shall not exceed 35 percent of the Monthly Operational Expenses paid to Contractor. Excess liquidated damages (over a monthly cap) will be carried over to the following month.

1. The SFMTA will monitor the Performance Standards listed for compliance with the requirements of the Agreement and share information monthly with the Contractor to provide early indication of potential issues. These standards are meant to be systematic performance issues.
2. If there is a Failure in the performance of the Meters as provided below, the SFMTA will notify the Contractor in writing, with supporting performance data.
3. Contractor shall review the potential performance deviation data and respond within five Days with acknowledgement of a potential Performance Standard Failure (or lack thereof) and potential causes. Failure to respond to the notice in a timely manner may result in liquidated damages to the SFMTA of $1,000 per Day.
4. Contractor shall cure the Failure within seven Days of the Failure unless SFMTA agrees to extend the time to cure. If the Failure is not repaired within seven Days of acknowledgement (unless additional cure time has been granted), SFMTA will cure the Failure and the Contractor agrees that the SFMTA shall be entitled to Credit Assessments as set forth below:
   a. All labor costs incurred by SFMTA associated with repairing or replacing parts required to cure the Failure (e.g., labor costs, including overhead, for the following classifications: Class 7444 (Parking Meter Repairer) and Class 7243 (Parking Meter Repair Supervisor)). Administrative costs shall also be included.
   b. The cost of any materials or parts required to cure the Failure.
   c. Any costs of disposal of Meters associated with the Failure if SFMTA is required to repair the Failure.
   d. Revenue losses directly associated with this Failure, retroactive to seven Days after the date of the Failure, per Meter, until the Failure is cured. Revenue loss shall be calculated based on ADR for the Meter in question.
   e. A list of Failures of Performances Standards in this category follows below:

	Description of Failure:	Threshold
1	CPU/Motherboard Failure.	More than 0.5% of Accepted Meters.
2	A battery Fails to last for 12 months.	More than two percent of Accepted Meters.
3	The jam detection mechanism Fails to detect metallic or non-metallic jams.	
4	Meter Modem Failure	
5	Meter Antenna Failure	
6	Keypad or button Failure.	
7	Failure of the single-space Meter Mechanism and Meter dome (if required) to securely fit in the MacKay MKH4500 Meter case.	
8	Any keypad or button proves to be non-weather-proof or becomes corroded.	

Appendix C
Pricing Schedule

Line Item #	Category	Annual Cost	Contract Years	SubTotal	Sales Tax (8.75%)	Total
1	Capital Expense	$ 12,225,000	1	$ 12,225,000	$ 1,069,688	$ 13,294,688
2	Project Management	$ 180,000	1	$ 180,000	$ -	$ 180,000
3	Spare Parts - First Year	$ 248,375	1	$ 248,375	$ 21,733	$ 270,108
4	Spare Parts - Subsequent Years	$ 1,276,750	5.5	$ 7,022,125	$ 614,436	$ 7,636,561
5	Support Services / Development - First Year	$ 175,000	1	$ 175,000	$ -	$ 175,000
6	Support Services / Development - Subsequent Years	$ 175,000	1	$ 175,000	$ -	$ 175,000
7	Optional Single Space Parking Meter Mechanism	$ 5,150,000	1	$ 5,150,000	$ 450,625	$ 5,600,625
8	Extended Warranty	$ 875,000	1.5	$ 1,312,500	$ 114,844	$ 1,427,344
9	Annual Operating Expenditure Year 1	$ 2,970,000	0.5	$ 1,485,000	$ -	$ 1,485,000
10	Annual Operating Expenditure Year 2	$ 3,274,920	1	$ 3,274,920	$ -	$ 3,274,920
11	Annual Operating Expenditure Year 3	$ 3,581,366	1	$ 3,581,366	$ -	$ 3,581,366
12	Annual Operating Expenditure Year 4	$ 3,889,362	1	$ 3,889,362	$ -	$ 3,889,362
13	Annual Operating Expenditure Year 5	$ 4,198,929	1	$ 4,198,929	$ -	$ 4,198,929
14	Annual Operating Expenditure Year 6 (Option Year)	$ 4,209,418	1	$ 4,209,418	$ -	$ 4,209,418
15	Annual Operating Expenditure Year 7 (Option Year)	$ 4,220,012	1	$ 4,220,012	$ -	$ 4,220,012
16	Contingency					$ 381,668
Total Not to Exceed:				**$ 51,347,007**	**$ 2,271,325**	**$ 54,000,000**

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Line Item #	Category	Unit Cost	Qty	SubTotal
1	Single Space Parking Meter Mechanisms for MacKay areas	$515	18,500	$9,527,500
2	Replacement Mechanisms for SFpark areas	$415	6,500	$2,697,500
3	Optional Single Space Parking Meter Mechanism	$515	10,000	$5,150,000
4	Extended Warranty	$35	25,000	$875,000
5	Project Management (during installation and Acceptance only)	$15,000	12	$180,000
6	**Total Cost**			**$18,430,000**

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Line Item #	Category	Unit Cost	Year 1 Qty	Meters Qty Year 1	Total Year 1	Year 2 Qty	Meters Qty Year 1	Total Year 2	Year 3 Qty	Meters Qty Year 3	Total Year 3	Year 4 Qty	Meters Qty Year 4	Total Year 4	Year 5 Qty	Meters Qty Year 5	Total Year 5	Year 6 Qty	Meters Qty Year 6	Total Year 6	Year 7 Qty	Meters Qty Year 6	Total Year 7	Total Contract Cost
1	Credit Card Transaction Fees	$ 0.06	480	25,000	$ 720,000	486	27,500	$ 799,920	490	30,000	$ 881,366	495	32,500	$ 964,362	499	35,000	$ 1,048,929	504	35,000	$ 1,059,418	510	35,000	$ 1,070,012	$ 6,544,007
2	Communications Fees (per each Meter Mechanism)	$ 2.05	12	25,000	$ 615,000	12	27,500	$ 973,500	12	30,000	$ 1,092,000	12	32,500	$ 1,150,500	12	35,000	$ 1,239,000	12	35,000	$ 1,239,000	12	35,000	$ 1,239,000	$ 7,788,000
3	Additional Communication Fees (per 1 Megabyte of extra usage per each Meter Mechanism)	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
4	Meter Management System Fees (per each SS Meter per month	$ 4.56	12	25,000	$ 1,365,000	12	27,500	$ 1,501,500	12	30,000	$ 1,638,000	12	32,500	$ 1,774,500	12	35,000	$ 1,911,000	12	35,000	$ 1,911,000	12	35,000	$ 1,911,000	$ 12,012,000
5	Pay by Phone Transaction Fees	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
6	On-going Support (Rate Changes, Reconciliation, etc.) per mont	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
7	Mobile Meter Management System (per each Meter Mechanism	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
8	MMS – General Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
9	Meter Behavior Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
10	Initial Meter Behavior Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
11	Meter Programming Reconciliation	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
12	Screen Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
13	MMS Customization Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
14	Inventory and Asset Management Report Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
15	Faults and Maintenance Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
16	Revenue Reports Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
17	Pay-by-Phone Transmission Reports (used to visual indication of PBP transactions) Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
18	Data Integration Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
19	Meter Backend Settings Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
20	Re-Programming of Existing Metered Spaces Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
21	Special Event Programming (Hours, Rates Time Limits, and Restrictions	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
22	Transaction Data Feed Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
23	Monitoring Software Programming	$ -	0	25,000	$ -	0	27,500	$ -	0	30,000	$ -	0	32,500	$ -	0	35,000	$ -	0	35,000	$ -	0	35,000	$ -	$ -
		Annual Costs			$ 2,870,000			$ 3,274,920			$ 3,351,366			$ 3,889,362			$ 4,189,929			$ 4,209,418			$ 4,220,012	$ 26,344,007

Assumptions

	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Monthly Average
Avg # Trans Cash / Pole	89	83	94	89	94	93	90
Avg # Trans Credit / Pole	39	37	43	40	41	41	40
Avg # Trans SmartCard / Pole	10	9	11	10	10	10	10

Contract Year	% Increase	cash	cc	sm
1	0%	90	40	10
2	1.0%	91	40	10
3	1.0%	92	41	10
4	1.0%	93	41	10
5	1.0%	93	42	10
6	1.0%	94	42	11
7	1.0%	95	42	11

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Part #	Replacement Components	Unit Price	First Year Qty	First Year Total	Subsequent Year Qty (Estimated)	Subsequent Year Total
147-050	Complete Meter Mechanism (M5 with 36 month warranty)	$515.00	0	$0	0	$0
147-302	Card Entry Die Casting	$19.00	200	$3,800	400	$7,600
795-601	Hybrid Card Reader	$49.00	500	$24,500	1000	$49,000
795-005	Coin Validator	$69.00	500	$34,500	1000	$69,000
147-002 (M3)	Complete Top Cover (with Lexan Insert)	$69.00	0	$0	0	$0
147-400	Lexan for Top Cover	$29.00	200	$5,800	400	$11,600
795-010 QT	Keypad	$25.00	500	$12,500	1000	$25,000
107-0503-003-PCBA	Validator Connector Board	$15.00	150	$2,250	300	$4,500
795-600B	Battery Pack (standard)	$29.00	0	$0	0	$0
795-603	Validator Connection Cable	$5.00	50	$250	100	$500
107-0603-006/7-PCBA	Solar Panel Only*	$25.00	200	$5,000	400	$10,000
795-710	Solar Panel / Communications Board	$165.00	200	$33,000	400	$66,000
795-501	Main Board	$165.00	200	$33,000	400	$66,000
795-530	Display Board	$49.00	0	$0	0	$0
795-600JK	Split battery pack set (with non-rechargeable & rechargeable items)	$29.00	0	$0	0	$0
795-600J	Non-rechargeable battery pack (2xCell C, LI,SOCl2)	$12.50	0	$0	0	$0
795-600K	Rechargeable battery pack (2xCell AA, lithium ion)	$22.00	0	$0	0	$0
395-001	M3 - 12 bay battery Charging Station	$1,500.00	0	$0	0	$0
147-311	Card Entry Die Casting	$19.00	0	$0	0	$0
795-055	Keypad Assy	$25.00	0	$0	0	$0
147-052	Card Entry Die Casting with Keypad Assy	$50.00	0	$0	0	$0
147-056 (M5)	Complete Top Cover (with Lexan Insert)	$69.00	200	$13,800	400	$27,600
147-404	Lexan for Top Cover	$15.00	0	$0	0	$0
555-706	Validator Connector Board	$15.00	0	$0	0	$0
795-628	Validator Connection Cable	$5.00	0	$0	0	$0
795-600-H1	Battery Pack 795-600-H1 (non-rechargeable)	$10.00	0	$0	0	$0
795-600-H2	Battery Pack 795-600-H2 (non-rechargeable)	$20.00	0	$0	0	$0
795-600-H3	Battery Pack 795-600-H3 (non-rechargeable)	$30.00	2000	$60,000	30000	$900,000
795-600-T	Battery Pack (rechargeable single-cell)	$19.00	0	$0	0	$0
555-703	Solar Panel / Comms Board (GSM)	$165.00	0	$0	0	$0
555-711	Solar Panel / Comms Board (CDMA)	$165.00	0	$0	0	$0
795-054	M5 Coin Validator	$89.00	0	$0	0	$0
555-701	Main Board	$165.00	0	$0	0	$0
555-702	Display Board with NFC	$89.00	200	$17,800	400	$35,600
555-704	Expiry Indicator (rear)	$15.00	0	$0	0	$0
395-100-M5	M5 Battery Charging Assy (11 meters per assy)	$115.00	5	$575	10	$1,150
795-102	Coin Entry Slot	$2.00	0	$0	0	$0
795-430	Battery Door Cover	$2.00	300	$600	600	$1,200
147-009	RFID Meter Housing Tag Assembly	$10.00	100	$1,000	200	$2,000
Painted Domes	Painted Dome (per dome)	$20.00	0	$0	0	$0
101-800	Meter Housing Assy, Equvalent to MKH4500 or Duncan 95 (including Nexgen vault lock)	$350.00	0	$0	0	$0
SWN-STANDBY	Communications Fees (per each Meter Mechanism per month) when in standby mode	$1.75	0	$0	0	$0
	Total:			$248,375		$1,276,750

Support Services / Development	Unit Price	First Year Qty	First Year Total	Subsequent Year Qty (Estimated)	Subsequent Year Total

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APPENDIX D - DELIVERY SCHEDULE

Line Item #	Deliverable	Time of Delivery
1	Merchant account setup	Four weeks prior to Delivery of first Batch of Parking Meters
2	Installation of the MMS and other related infrastructure	Two weeks prior to Delivery of first Batch of Parking Meters
3	Training and all appropriate manuals	Two weeks prior to Delivery of first Batch of Parking Meters
4	*First Year Spare Parts	Two weeks prior to Delivery of first Batch of Parking Meters
5	Spare Parts – Years 2-5	60 Days after order
6	Current SFMTA Smart Card functionality	No later than 120 days after NTP
7	**First Batch of 1,000 Parking Meters	No later than 120 Days from NTP
8	Second Batch of 1,250 Parking Meters	Three weeks after Delivery of first Batch
9	***Subsequent Batches of 1250 Parking Meters each	Every two weeks after Delivery of second Batch.
10	Option Parking Meters (in Batches of no more than 1250 at a time)	First Batch – 30 Days after delivery of final Batch of base order Subsequent Batches – every two weeks after delivery of first Option Batch

***For successive contract years, the Meter Shop will order spare parts on an as-need basis.**

****SFMTA will not accept the Delivery of the first Batch of Meter Mechanisms until line items 1 thru 4 and 6 are delivered and accepted.**

****SFMTA has the option to request an interruption of Batch deliveries to San Francisco for up to three times with combined length of all interruptions not to exceed 30 Days.**

APPENDIX E – Commissioning Checklist

1) Meter Mechanism shall not be damaged during shipment.
2) Battery voltage and condition shall meet the minimum voltage requirements for a new battery pack.
3) Coins (5¢, 10¢, 25¢, $1) shall be accepted and record the proper amount of time when deposited.
4) Non-authorized coins shall not register any amount of time.
5) The card reader shall recognize the insertion of a valid credit or smart card.
6) NFC card reader functionality shall work as described in the Technical Specifications.
7) The automated mechanism configuration download shall work as described in the Technical Specifications.
8) The Meter Mechanism location id and serial # shall be part of the MMS inventory.
9) The Meter Mechanism programming profile is accurate for its assigned location id.
10) The Keypad shall work properly.
11) The Meter Mechanism shall register jams.
12) The Meter Mechanism LEDs shall work properly.
13) The Meter Mechanism stickers shall be properly applied.
14) The Meter Mechanism communications channels shall work properly.
15) The Meter Mechanism shall display proper the date and time.
16) The Meter Mechanism backlight shall operate properly.
17) The Meter Mechanism shall have the ability to add time without using the coin and/or register in the audit records.

File No. 130940

FORM SFEC-126:
NOTIFICATION OF CONTRACT APPROVAL

(S.F. Campaign and Governmental Conduct Code § 1.126)

City Elective Officer Information *(Please print clearly.)*	
Name of City elective officer(s): Members, Board of Supervisors	City elective office(s) held: Members, Board of Supervisors

Contractor Information *(Please print clearly.)*	
Name of contractor: IPS GROUP, INC.	
*Please list the names of (1) members of the contractor's board of directors; (2) the contractor's chief executive officer, chief financial officer and chief operating officer; (3) any person who has an ownership of 20 percent or more in the contractor; (4) any subcontractor listed in the bid or contract; and (5) any political committee sponsored or controlled by the contractor. Use **additional pages as necessary.*** Board of Directors: David W. King, Chad P. Randall, Alex Schwarz, John Penn, Roy Sable Officers: David W. King, (CEO), Dario Paduano (CFO), Chad P. Randall (COO) Ownership of 20% or greater: David W. King Subcontractors listed (optional): Citywide Debris, Dixon Resources Unlimited, BlueWater Project Management Political committee(s): None	
Contractor address: 5601 Oberlin Drive, Suite 100, San Diego, CA 92121	
Date that contract was approved: *(By the SF Board of Supervisors)*	Amount of contracts: $54,000,000
Describe the nature of the contract that was approved: Single-Space Parking Meter Procurement and Support Services: 25,000 meters to be procured, with the option to purchase 10,000 additional meters. Support services included meter wireless communications, access to the meter management software system, credit card communications fees, and meter parts for maintenance	
Comments:	

This contract was approved by (check applicable):

☐ the City elective officer(s) identified on this form

☑ a board on which the City elective officer(s) serves: San Francisco Board of Supervisors
Print Name of Board

☐ the board of a state agency (Health Authority, Housing Authority Commission, Industrial Development Authority Board, Parking Authority, Redevelopment Agency Commission, Relocation Appeals Board, Treasure Island Development Authority) on which an appointee of the City elective officer(s) identified on this form sits

_____
Print Name of Board

Filer Information *(Please print clearly.)*	
Name of filer: Angela Calvillo, Clerk of the Board	Contact telephone number: (415) 554-5184
Address: City Hall, Room 244, 1 Dr. Carlton B. Goodlett Pl., San Francisco, CA 94102	E-mail: Board.of.Supervisors@sfgov.org

_____ _____
Signature of City Elective Officer (if submitted by City elective officer) Date Signed

_____ _____
Signature of Board Secretary or Clerk (if submitted by Board Secretary or Clerk) Date Signed