

Electronic Municipal Market Access (EMMA[®]) Functionality

This Information Facility (“IF-3”) serves to outline the basic functionality and the high-level parameters by which the Municipal Securities Rulemaking Board (MSRB) operates the Electronic Municipal Market Access (EMMA) system, which consists of the EMMA Primary Market Disclosure Service, the EMMA Continuing Disclosure Service, the EMMA Trade Price Transparency Service and the EMMA Short-Term Obligation Rate Transparency Service.

The EMMA system is designed to process electronic submissions of municipal securities disclosure documents and certain related information, to disseminate that disclosure data to the general public through the EMMA Portal (emma.msrb.org) and to disseminate it to licensed subscribers of subscription data feed services subject to the terms and conditions of their respective subscription agreements. The MSRB is not responsible for the content of the data or documents submitted to the EMMA system that is processed and displayed through the EMMA Portal or disseminated through the EMMA subscription services.

The MSRB maintains 7:00 a.m. to 7:00 p.m. Eastern Time as core operational hours on business days, which excludes weekends and business holidays identified on the MSRB System Holiday Schedule published on the MSRB website. Core operational hours represent those hours when the MSRB’s resources will be more readily available to respond to inquiries and incidents experienced by users of MSRB systems.

The process to submit documents to the EMMA system or access documents on the EMMA website is generally available at all times. MSRB may make the EMMA system, or portions of its functionality, unavailable outside of core operational hours for various purposes, including, maintenance, upgrades, or otherwise as needed to ensure the overall integrity of the EMMA system and the MSRB’s other information systems. As detailed in the MSRB’s EMMA Website Terms of Use, the MSRB also may restrict, block or terminate any user’s access to or use of the EMMA system due to actual or suspected malicious, illegal or abusive activity for periods necessary or appropriate to ensure continuous and efficient access to and the overall integrity of the EMMA system.¹

EMMA PORTAL

¹ Available at <https://emma.msrb.org/AboutEmma/UserAgreement>. As provided, the terms may be revised from time to time, without prior notice and users are bound by any changes to such terms upon the MSRB’s posting of such changes to the emma.msrb.org website.

The EMMA Portal is the functionality for displaying and otherwise making certain documents and data available to the public without charge on the EMMA website. During core operational hours, submissions made to the EMMA Primary Market Disclosure Service or the EMMA Continuing Disclosure Service are generally posted on the EMMA Portal promptly following the processing of such information.² Submissions outside of core operational hours may be posted on the EMMA Portal promptly following the processing of such information, though some submissions outside of core operational hours may not be processed until the next business day. Properly submitted documents and information are, at a minimum, available on the EMMA Portal for the life of the related securities.

The EMMA Trade Price Transparency Service makes the price transparency information received from the MSRB's Real-Time Transaction Reporting System (RTRS), as further described in the RTRS Information Facility, publicly available on the EMMA Portal promptly following receipt from RTRS and processing by the EMMA system. The EMMA Short-Term Obligation Rate Transparency Service makes the rate transparency information related to securities bearing interest at short-term rates, as well as certain documents received from the MSRB's Short-Term Obligation Rate Transparency System (SHORT), as further described in the SHORT Information Facility, publicly available on the EMMA Portal promptly following receipt from SHORT and processing by the EMMA system. Such information and documents are generally available on the EMMA Portal for the life of the related securities.

The EMMA Portal provides search functions to assist users in identifying and accessing documents and data provided to the EMMA Portal. Users can also request certain alerts, including when, for example, certain documents are provided and become available on the EMMA website or are updated or amended.

In addition, if and to the extent that one or more Nationally Recognized Statistical Rating Organization (NRSRO) has agreed to provide credit rating and/or related information regarding municipal securities to the MSRB, at no out-of-pocket charge, through an automated data feed for dissemination on the EMMA Portal, the EMMA Portal may display such credit rating and related information along with any documents and identifying information relating to the applicable municipal security otherwise displayed on the EMMA Portal. Credit rating and related information will be posted promptly following processing such information through the EMMA system. In processing the credit rating and related information received from an NRSRO, the MSRB does not confirm or verify the accuracy and completeness of the NRSRO's credit rating

² For purposes of IF-3, promptly shall mean within 15 minutes following the successful intake of the data by the EMMA system, transformation of such data for operational usability, and storage for effective retrieval for display or dissemination to users of the EMMA Portal and, as applicable, to licensed subscribers of EMMA subscription services ("processing").

and related information before dissemination on the EMMA Portal, nor does the MSRB undertake to supplement or modify such information.

EMMA PRIMARY MARKET DISCLOSURE SERVICE

The EMMA Primary Market Disclosure Service processes submissions of certain documents and information, whether submitted pursuant to MSRB rules or on a voluntary basis, for availability on the EMMA Portal and for dissemination through certain EMMA subscription services.

Submissions to the EMMA Primary Market Disclosure Service

Document Types. Documents received may include official statements, preliminary official statements and related pre-sale documents (“POS-related documents”); advance refunding documents; and any amendments of the foregoing (“primary market documents”). POS-related documents, including but not limited to notices of sale or supplemental disclosures, will be processed if accompanied or preceded by a voluntarily-submitted preliminary official statement.

Submitters. Brokers, dealers, and municipal securities dealers (collectively, “dealers”) acting in the capacity of an underwriter, placement agent or remarketing agent for offerings of municipal securities and their designated submission agents must submit primary market documents in accordance with applicable MSRB rules. Issuers and their designated submission agents may voluntarily submit primary market documents if the submission includes certain other information, as further discussed below. Submissions are made using password protected accounts registered and assigned through MSRB Gateway.³ Submitters are responsible for the accuracy and completeness of all information submitted to the EMMA system.

Submissions may be made by such persons in the following circumstances:

- Dealers submitting primary market documents and related information with respect to municipal securities for which they have served as an underwriter, placement agent, or remarketing agent;
- Issuers voluntarily submitting primary market documents and related information with respect to an issuance of municipal securities; and
- Designated agents submitting primary market documents and related information on behalf of dealers and issuers who have designated such agent to act with respect to the applicable issue of municipal securities, as provided further below.

Designated Electronic Format for Documents. Documents submitted to the EMMA Primary Market Disclosure Service must be in portable document format (PDF) and configured to permit documents to be saved, viewed, printed and retransmitted by electronic means without using a

³ MSRB Gateway is a single, secure access point for password-protected systems operated by the MSRB, including submission services, applications and the associated forms.

password. If the submitted document is a reproduction of an original document, the reproduction must maintain the graphical and textual integrity of the content of the original. Any document submitted to the EMMA Primary Market Disclosure Service must be word-searchable, without regard to diagrams, images and other non-textual elements. The person submitting a primary market document to the EMMA Primary Market Disclosure Service is responsible for ensuring that the document meets these requirements.

Method of Submission. The submission of documents and related information to the EMMA Primary Market Disclosure Service may be made either through a web-based electronic submitter interface or through a computer-to-computer data connection. When submissions are made using the web-based electronic submitter interface, documents are uploaded and information is input through an on-line form. When submissions are made using the computer-to-computer data connection, documents are uploaded to a web service and information is uploaded utilizing extensible markup language (XML) files. Documentation for on-line and computer-to-computer submissions are published on the MSRB website.

Information to be Submitted and Timing of Submissions. Dealers must provide all information required by MSRB rules, including Form G-32, and consistent with the EMMA Dataport Manual. Dealers must provide related information with respect to each primary market document submitted. Dealers are required to submit primary market documents and related information within the timeframes set forth in MSRB rules and related MSRB procedures.

Primary market documents voluntarily submitted by issuers will be processed if, at the time of submission, the documents are accompanied by information necessary to accurately identify:

- (i) the category of primary market document being submitted (such as official statement, preliminary official statement, POS-related document, advance refunding document);
- (ii) the issues or specific securities to which such document is related (including CUSIP number to the extent then available, issuer name, state, issue description/securities name, dated date, maturity date, and/or coupon rate); and
- (iii) in the case of an advance refunding document, the specific securities being refunded pursuant to the advance refunding document (including original CUSIP number and any newly assigned CUSIP number).

EMMA CONTINUING DISCLOSURE SERVICE

The EMMA continuing disclosure service processes submissions of continuing disclosure documents and related information submitted by issuers and obligated persons pursuant to their obligations under continuing disclosure undertakings entered into consistent with SEC Rule 15c2-12 promulgated under the Securities Exchange Act of 1934, as well as submissions of certain other voluntary continuing disclosure documents and related information (the “continuing disclosure documents”).

Submissions to the EMMA Continuing Disclosure Service

Document Types. The EMMA Continuing Disclosure Service processes continuing disclosure documents that fall into the following two categories:

- (i) the continuing disclosure documents described in Rule 15c2-12 required to be submitted pursuant to a continuing disclosure agreement or similar undertaking; and
- (ii) other continuing disclosure documents.

The MSRB may combine or divide any category, categories or subcategories, or may form additional categories or subcategories for purposes of indexing continuing disclosure documents.

Submitters. Issuers, obligated persons, and their designated submission agents make submissions to the EMMA Continuing Disclosure Service using password-protected accounts registered and assigned through MSRB Gateway. Submitters are responsible for the accuracy and completeness of all information submitted to the EMMA system. Submissions may be made by such persons in the following circumstances:

- Issuers submitting continuing disclosure documents and related information with respect to such issuer's municipal securities;
- Obligated persons submitting continuing disclosure documents and related information with respect to any municipal securities for which such person is obligated to support payment of all or part of an issue of municipal securities; and
- Designated agents submitting continuing disclosure documents and related information on behalf of issuers and obligated persons who have designated such agent to act with respect to the applicable issue of municipal securities, as provided further below.

Designated Electronic Format for Documents. Documents submitted to the EMMA Continuing Disclosure Service must be in portable document format (PDF) and configured to permit documents to be saved, viewed, printed and retransmitted by electronic means without using a password. If the submitted document is a reproduction of an original document, the reproduction must maintain the graphical and textual integrity of the content of the original. Any document submitted to the EMMA Continuing Disclosure Service must be word-searchable, without regard to diagrams, images and other non-textual elements. The person submitting a continuing disclosure document to the EMMA Continuing Disclosure Service is responsible for ensuring that the document meets these requirements.

Method of Submission. The submission of documents and related information to the EMMA Continuing Disclosure Service may be made either through a web-based electronic submitter interface or through a computer-to-computer data connection. When submissions are made using the web-based electronic submitter interface, documents are uploaded and the related information is input through an on-line form. When submissions are made using the computer-to-computer data connection, documents are uploaded to a web service and the related information is uploaded utilizing extensible markup language (XML) files. Additional

documentation for on-line and computer-to-computer submissions are published on the MSRB website.

Information to be Submitted. The person making the submission of a continuing disclosure document to the EMMA Continuing Disclosure Service must provide, at the time of submission:

- information necessary to accurately identify the type of submission, for example, annual financial information; financial statements; event notice type, including designation of which specific type or types of events; notice of failure to make timely filing of annual financial information; or other continuing disclosure document concerning municipal securities);
- in the case of annual financial information, financial statements and other financial information or operating data, the period covered by such documents;
- the issues or specific securities to which such document is related or otherwise material (including CUSIP number, issuer name, state, issue description/securities name, dated date, maturity date, and/or coupon rate);
- the name and date of the document; and
- the identity of and contact information for the person submitting the document.

EMMA SUBSCRIPTION SERVICES

The MSRB makes data and documents from the EMMA Primary Market Disclosure Service and the EMMA Continuing Disclosure Service available through a subscription service or a one-time purchase described in more detail below. The MSRB may, at its discretion, waive or reduce fees for a service or product for certain non-profit organizations and for organizations providing, at no out-of-pocket charge, services or products to the MSRB for internal or public use or dissemination on the EMMA Portal on terms agreeable to the MSRB.

Subscribers and historical data purchasers are permitted to re-disseminate data and documents from the EMMA computer-to-computer data services pursuant to the terms of their respective subscription or purchase agreements. Subscribers and historical data purchasers are subject to the terms of such agreement as entered into between the MSRB and each subscriber or purchaser, including proprietary rights of third parties in information provided by such third parties that may be made available through the EMMA subscription services.

EMMA Primary Market Disclosure Subscription Service

The EMMA Primary Market Disclosure Subscription Service makes available to subscribers the primary market disclosure documents, including official statements, preliminary official statements, advance refunding documents, and amendments thereto, together with information provided by submitters through the EMMA submission process. Documents and information submitted to the EMMA system may be modified subsequent to their initial submission, and any

such documents or data provided or modified will be made available to subscribers in accordance with their respective subscription agreements.

Subscription. MSRB's EMMA Primary Market Disclosure Subscription Service is made available pursuant to the terms of a subscription agreement for a commercially reasonable fee as set forth in the MSRB Subscription Services Price List available at the MSRB website (www.msrb.org).

List of Information Items to be Disseminated.

Data elements with respect to the EMMA Primary Market Disclosure subscription service to be provided through the data feed are set forth in the Specifications for EMMA Primary Market Disclosure Subscription Service posted on the MSRB website. For example, data elements disseminated, as appropriate for each submission, may include:

Submission Data:	submission ID; submission transaction date/time
Offering Data:	offering type; underwriting spread (agency fee)/disclosure indicator; document availability status; related issue identifier
Issue Data:	issue type; security type; issuer name; issuer description; state; closing date; dated dates; continuing disclosure status; obligated person; annual filing deadline for financial information; time of formal award; time of first execution
Security Data:	CUSIP number; maturity date; securities-specific dated date; maturity principal amount; interest rate; initial offering price/yield; security status; partial underwriting data; refunded security CUSIP numbers
Document Data:	document ID; document type; document description; document posting dates; document status indicators; refunding/refunded issue identifiers
File Data:	file ID; file posting dates; file status indicators
Limited Offering Contact Data:	contact name; address; telephone number; e-mail address

EMMA Primary Market Disclosure Historical Product

In addition to offering the EMMA Primary Market Disclosure Subscription Service, the MSRB also offers an EMMA Primary Market Disclosure Historical Product. The Primary Market Disclosure Historical Product consists of the same data set (including documents and related information) as provided by the EMMA Primary Market Disclosure Subscription Service with the notable variances that the historical data product is at least one month old up to the end of the most recent complete month and does not provide an ongoing data feed to disseminate updated information previously delivered. The EMMA Primary Market Disclosure Historical Product may be purchased in any twelve consecutive complete month data set (or other time period as

may be mutually agreed upon in writing) pursuant to the terms of a purchase agreement for a commercially reasonable fee as set forth in the MSRB Subscription Services Price List available at www.msrb.org or as otherwise agreed to pursuant to the terms of a purchase agreement. A one-time set-up fee will be charged to first-time purchasers of the EMMA Primary Market Disclosure Historical Product, unless the purchaser is a current subscriber to an MSRB subscription service.

EMMA Continuing Disclosure Subscription Service

A data and document feed from the EMMA Continuing Disclosure Service is made available through the EMMA subscription web service pursuant to the terms of a subscription agreement for a commercially reasonable fee as set forth in the MSRB Subscription Services Price List available at www.msrb.org.

The EMMA Continuing Disclosure Subscription Service makes available to subscribers the continuing disclosure documents, together with related information provided by submitters through the submission process of the EMMA Continuing Disclosure Service. Documents and information submitted to the EMMA system may be modified subsequent to their initial submission, and any such documents or data provided or modified will be made available to subscribers in accordance with their respective subscription agreements.

Data elements with respect to the EMMA Continuing Disclosure Service to be provided through the data feed are set forth in the Specifications for EMMA Continuing Disclosure Subscription Service posted on the MSRB website. The Specifications for EMMA Continuing Disclosure Subscription Service posted on the MSRB website provides definitions of each data element, data format information, and schemas and other technical specifications for accessing and using the subscription systems. For example, data elements disseminated, as appropriate for each submission, may include:

Submission Data:	submission ID; submission transaction date/time
Disclosure Indexing Data:	disclosure type; financial/operating disclosure category; event disclosure category (e.g., rating change, financial obligation); asset-backed securities disclosure category; event disclosure subcategory; other voluntary disclosure description; disclosure dates; CUSIP numbers
Contact Information Data:	contact organization type; organization name; contact name; address; telephone number; e-mail address
Document Data:	document ID; document posting date; document status indicator

EMMA Continuing Disclosure Historical Product

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provided by the EMMA Continuing Disclosure Subscription Service with the notable variances that the historical data product is at least one month old up to the end of the most recent complete month and does not provide an ongoing data feed to disseminate updated information previously delivered. The EMMA Continuing Disclosure Historical Product may be purchased in any twelve consecutive complete month data set (or other time period as may be mutually agreed upon in writing) pursuant to the terms of a purchase agreement for a commercially reasonable fee and as set forth in the MSRB Subscription Services Price List available at www.msrb.org or as otherwise agreed to pursuant to the terms of a purchase agreement. A one-time set-up fee will be charged to first-time purchasers of the EMMA Continuing Disclosure Historical Product, unless the purchaser is a current subscriber to an MSRB subscription service.