

Part II Item 6a

Piper Sandler & Co. (Piper) does not have any employees solely responsible for XE, the NMS Stock ATS. For purposes of XE, Piper considers Subscribers orders bound for XE (whether by algorithm or direct FIX connection), any live or resting order interest in XE, and any matched but unexecuted orders (such as in the On Close Match Book) to be confidential (Confidential ATS Information). After orders are executed in XE, Piper no longer considers the order information to be confidential because the execution information must be reported to the tape and transmitted for clearance and settlement purposes to the appropriate parties. Piper does not use any Confidential ATS Information or post-execution data from XE to inform its own trading or that of other customers or Subscribers. Piper does not share client execution information with any other clients, nor use client execution information in any Firm trading decisions. GENERAL OPERATION OF XE Certain employees in the: (i) Compliance, (ii) Risk Management, (iii) Technology, (iv) and Global Middle Office Departments of Piper that support the operation of XE (Select ATS Employees) have access to Confidential ATS Information. Subject to the Pipers policies and procedures, certain other employees may be granted access to the confidential trading information in the ATS as necessary on an ad hoc basis (e.g., an employee in the Legal Department may be given access to certain Confidential ATS Information to respond to a regulatory inquiry or investigate a disputed trade). The Equities Associate Compliance Director and Head of the Global Middle Office review and approve all initial and ad hoc employee requests for access to XE based on their need for access to XE and the employees purpose or function with respect to XE. The primary functions of Select ATS Employees in the Compliance, Risk Management, and Global Middle Office with respect to XE are related to monitoring and compliance. The Equities Associate Compliance Director, Equities Risk Officer, and one additional Compliance support personnel conduct real-time and post-trade supervision of the orders and matching in the ATS to monitor for potential issues (e.g., if a Subscriber tries to cancel its order, but the order remains in the system), trade reporting accuracy, and trade reporting timeliness. The Equities Risk Officer and other designated Select ATS Personnel in the Technology, Compliance, and Global Middle Office Departments in the Equities Risk Officers absence have the ability to intercede if there is a system malfunction and can manually cancel live orders in the event that the system is not able to execute orders. Select ATS Employees in the Technology Department have access to the confidential trading information in the ATS to provide technical support, infrastructure support and alert response, testing and trouble-shooting, as well as updating, implementing, or restricting permissions to the ATS as needed and in coordination with Select ATS Employees in the Compliance, Risk Management, and Global Middle Office Departments. The Employee Access area of the Technology Department administers the approval process for access to various Broker-Dealer Operator systems and is responsible for maintaining records of employee access to such systems. Quarterly, the Employee Access area of the Technology Department performs an entitlement review and sends a list of all employees with access to Confidential ATS Information to the Head of the Global Middle Office where the information is reviewed and employees are reapproved or removed based on their need to have access to the information. Select ATS Employees in the Global Middle Office have access to post-execution booking and allocation information for all trades of the Broker-Dealer Operator, including those executed in XE, but these employees do not have access in real-time to any live orders in XE. OTHER FUNCTIONS OF SELECT ATS EMPLOYEES The Compliance, Risk Management, Technology and Global Middle Office Departments (including Select ATS Employees noted above) also perform other functions for the Broker Dealer Operator which generally do not require that the Piper employees have access to Confidential ATS Information to perform these functions. The Compliance Department is responsible for establishing, maintaining, and enforcing written policies and procedures that are reasonably designed to ensure that employees of Piper comply with the applicable regulatory requirements and the federal securities laws and rules thereunder, including with respect to XE. The Risk Management Department is primarily responsible for setting credit or trading limits for each new customer of Piper, including XE Subscribers. These limits are determined during the Market Access Rule (15c3-5) Risk Assessment during the account opening process. Certain of these limits can be changed intraday (either temporarily or permanently) through the Risk Management Department in accordance with Pipers written policies and procedures for all of Pipers customer, including XE Subscribers. The Global Middle Office supports Pipers equity sales and trading group, the fixed income sales and trading group, and Pipers public finance underwriting business. The Global Middle Office works with Pipers partners and clients to ensure trades are billed and reported in a timely manner, that customer and contra party concerns are resolved, that inventories are balanced daily, and that underwritings are processed properly. As a result of these functions, the Global Middle Office works with the various front-end trading systems as well as the middleware used to allocate and/or process transactions as well as for Pipers back office. Pipers front-end systems are monitored for order and trade rejects, and the Global Middle Office can access these front-end system in order to facilitate trade error corrections, including for front-end systems that can access XE. The Technology Department is responsible for all aspects of Pipers technology including maintenance, upgrades, development, and testing of systems, including XE. ALGORITHMIC TRADING STRATEGIES ACCESSING XE As described in greater detail in Part III, Item 5, one means of access to XE is through algorithmic trading strategies offered by Piper, which can be accessed directly via the No-Touch (Electronic) Trading Desk or through the Cash Trading Desk. The algorithm engine rests on separate servers from XE and is connected to XE via a direct FIX connection. In light of their roles within the Broker Dealer Operator, Select Employees in the Compliance, Risk Management, Technology, and Global Middle Office Departments have access to trading information regarding orders submitted to XE via a trading algorithm. These employees are able to see where all orders are routed through Pipers trading algorithms to ensure the algorithms are operating appropriately and to address any issues that might arise. In addition, certain permissioned traders at the Cash Trading Desk (comprised of the Program Trading Desk and Market Making Desk) are able to see certain orders routed to XE on behalf of Subscribers via an algorithmic trading strategy in order to ensure that the algorithm is functioning as intended. Specifically, traders on the Program Trading Desk are able to see order and execution information regarding orders that they submitted to XE via a trading algorithm, but cannot see orders submitted by the Market Making Desk via a trading algorithm. Similarly, traders on the Market Making Desk are able

to see order and execution information regarding orders that they submitted to XE via a trading algorithm, but cannot see orders submitted by the Program Trading Desk. Pipers Head of Trading and/or his/her designee(s) is able to see Subscriber orders submitted via trading algorithm from both the Market Making and Program Trading Desks as part of their supervisory function. FIX CONNECTION In addition, Select ATS Employees in the Technology Department are responsible for establishing, maintaining, and troubleshooting issues relating to FIX connectivity for Piper and other Subscribers. These Select ATS Employees have access to Confidential ATS Information submitted through a direct FIX connection and may also be able to see orders routed to XE via an algorithmic trading strategy depending on their specific functions in the Technology Department. In addition, traders on the Cash Trading Desk are able to see orders that they submitted via FIX connection to XE. Similar to the structure with respect to orders routed to XE via algorithms as described above, traders on the Program Trading Desk can see orders that they submitted to XE via FIX connection, but cannot see orders submitted by the Market Making desk to XE via FIX connection and vice-versa. Similarly, employees on the No-Touch Trading Desk responsible for monitoring and assisting No-Touch clients are able to see where all of the child orders routed to execution venues for the no touch client orders are sent. The XE ATS may be one of the execution venues that the child orders were routed to for execution. Therefore, these employees of our No-Touch Trading Desk can see the child orders routed from their No-Touch clients that were sent to the XE ATS via the No-Touch Trading Desk. Pipers Head of Trading and/or his/her designee(s) can see orders routed via FIX connection by both the Program Trading and Market Making desks.

Part III Item 5a

Subscribers can access XE directly via a FIX connection or through the use of an algorithmic trading strategy offered by Piper that is configured to submit orders to XE as a possible routing destination. Orders submitted using a trading algorithm are also sent to XE via a FIX connection. All orders submitted to XE will pass through the Firms order entry gateway where orders are timestamped to the millisecond and risk controls (e.g., credit limit checks) are applied. Response orders to Limit Order Broadcasts (as described in Part III, Item 7(a)) are also sent via FIX connection and cannot be sent through a trading algorithm. Subscribers entering orders directly via FIX connection must be configured at the hosting site at a specific IP address and port of access. Connectivity must be established through a private, professional network provider. All orders and other messages submitted via direct-FIX connection must compatible with FIX specifications 4.2.

Part III Item 5c

There are four ways that orders can be sent to XE by Subscribers: (i) via FIX connection (as described in Part III, Item 5(a)); (ii) via an algorithm configured to submit orders to XE as a possible routing destination through a FIX connection; (iii) by placing an order with the Cash Trading Desk that submits an order to XE via FIX connection; or (iv) placing an order with the Cash Trading Desk that uses an algorithm configured to submit orders to XE as a possible routing destination through a FIX connection. Submitting orders through options (i) and (ii) occur through the No-Touch (Electronic) Trading Desk. All orders submitted to XE through any of four means pass through the same order entry gateway of Piper where orders are timestamped to the millisecond and risk controls are applied. The Cash Trading Desks access to XE is the same as it is for all other Subscribers - e.g., the Cash Trading Desk uses FIX specifications 4.2 for all means of access and all orders from the Cash Trading Desk runs through the same technology that other Subscribers orders pass through. Subscribers, all of which are customers of Piper, can choose whether to use the services of the Cash Trading Desk or not. Subscribers that do not elect to use the services of the Cash Trading Desk can gain access to the Cash Trading Desk services by contacting Piper and can otherwise access the ATS through the No-Touch (Electronic) Trading Desk (i.e., via options (i) and (ii) noted above). Responses to Limit Order Broadcasts in the Limit Order book (as detailed in Part III, Item 7(a)) can only occur through the Cash Trading Desk, so a Subscriber must have arranged for the services of the Cash Trading Desk in order to respond to Limit Order Broadcasts. In other words, a Subscriber cannot respond to Limit Order Broadcasts through the No-Touch (Electronic) Trading Desk.

Part III Item 7a

The XE ATS operates two books: the On-Close Match book and the Limit Order book. All order types, modifiers, and displayed information (in the case of the Limit Order book) for both order books are available on the same terms to all Subscribers, including traders on Pipers Cash Trading Desk with the limited exception that responses to Limit Order Broadcasts can only come through the Cash Trading Desk. Response orders to a Limit Order Broadcast are not visible to other Subscribers, including the sales and trading personnel responsible for that Subscribers account. However, sales and trading personnel responsible for the Subscribers account that submitted the Limit Order Broadcast response order (but not other Subscribers) are able to see any excess order interest resulting from a Limit Order Broadcast response order, as explained further below. This includes supervisory personnel on the trading desk handling the order and Select ATS support personnel. Orders submitted to XE that do not reflect a permissible order type or modifier (e.g., failing to specify a quantity) are rejected. Regarding time priority for the ATS, no two orders can ever be accepted simultaneously. Orders will be accepted as they arrive into the ATS and will be sequenced according to when they were accepted. Time priority will always go to the first order accepted by the ATS after all order validity

checks are completed. Therefore, if two orders have the same timestamp, the order that was accepted first by the ATS will have priority when determining time priority.

ON-CLOSE MATCH BOOK The On-Close Match book only accepts market orders with a time in force of either DAY or Immediate or Cancel (IOC), as selected by Subscribers. Limit orders are not accepted to the On-Close Match book. All orders submitted to the On-Close Match will be executed, if at all, at the closing price disseminated by the primary listing exchange for each NMS stock. Execution occurs upon the dissemination of the closing price, unless there is a trading halt in the stock at that time in which case no executions occur in the halted stock and all orders, including matched orders, are canceled back to Subscribers. Orders marked IOC will be canceled if they do not match with another order immediately upon submission. Orders marked DAY will rest in the On-Close Match book until they are matched or will be canceled if unmatched at the 3:55 p.m. ET cut-off time described in Part III, Item 4(a). Orders marked DAY that are submitted during the final five minutes of the trading day (i.e., 3:55 p.m. ET on normal trading days) will rest on the book until they are matched or will be canceled if unmatched at the time of the print of the closing price. If there is a partial match of an IOC order, only the unmatched portion will be canceled back. If there is a partial match of a DAY order, the unmatched portion will rest in the book until it is matched or canceled if unmatched at the time of the closing print in the stock (or canceled by the Subscriber). Execution priority in the On-Close Match book is determined based on the time they are received by XE with earlier arriving orders executed first in time. Subscribers can elect to apply a minimum quantity (MinQty) designation applicable to the initial fill of all of their orders sent to the On-Close Match book. Subscribers can specify or modify a MinQty designation by contacting Piper, and the MinQty function is available to Subscribers through both the Cash Trading Desk and the No-Touch (Electronic) Trading Desk. The specified MinQty will apply to all orders and cannot be selected on an order by order basis. A MinQty designation applies only to the initial match of an order sent to the On-Close Match book. Any remaining order interest, in the case of a partial fill, is not subject to the MinQty designation. There are no minimum order size requirements for the On-Close Match book, and the MinQty can be set for any amount of shares, including odd-lot and mixed lot quantities. Orders with a MinQty designation are filled first by orders that meet the MinQty designation. As a result, resting orders that satisfy an incoming contra-side orders MinQty designation gain priority over orders that do not satisfy the MinQty designation. For example, assume there are three resting DAY orders to sell XYZ all at the same price and arriving in the following time sequence: Order A for 100 shares, Order B for 100 shares, and Order C for 300 shares. A Subscriber submits a buy order marketable against these resting orders for 500 shares with a MinQty of 200 shares. The buy order would match first against Order C for its full quantity, and would then match with Order A and Order B to fill the remaining shares. If Order C were for 500 shares, the buy order would match entirely against Order C, and Orders A and B would not match notwithstanding their time priority over Order C. Orders submitted to the On-Close Match book can be modified or canceled at any time up until the closing print of the security. However, once an order is matched with a contra-side order, the order cannot be canceled or modified, other than in the case of a partial fill, in which case any remaining, unexecuted order interest can still be canceled or modified. Orders and modifications to orders in the On-Close Match book are timestamped upon entry. A modification to the size of an order will result in a new timestamp for the order and therefore a reset of the orders execution priority. Orders submitted to the On-Close Match book are not displayed or otherwise made known to other Subscribers or any non-Subscribers. However, when a Subscriber receives a match in the On-Close Match book, the ATS notifies the Subscriber that its order has been matched or partially matched as appropriate. The notification sent to Subscribers with respect to matched orders (or the matched portion of an order in the case of a partial fill) provide an indicative fill for the order at the NBBO midpoint at the time of the match. This indicative fill is not an execution confirmation; the actual fill will occur at the closing price on the primary listing market at which time an execution report is sent to the Subscriber and the indicative fill is canceled.

LIMIT ORDER BOOK The Limit Order book accepts conditional and firm limit orders. Market orders are not accepted in the Limit Order book. Upon the receipt of a limit order to the Limit Order book, the order will first seek to match against any resting order interest in the book. If there is no match immediately upon entry, and the order is for 500 shares or more, the order is eligible to be broadcast to other Subscribers to solicit matching order interest (a Limit Order Broadcast). Subscribers must opt-in to having their orders disseminated through a Limit Order Broadcast and must be configured for such service by requesting it through Piper. All Subscribers are eligible to subscribe to Limit Order Broadcasts and configuration is performed with employees in the Technology Department. However, Subscribers must use the services of the Cash Trading Desk to be able to send orders in response to Limit Order Broadcasts. Once a Subscriber is configured to have its orders trigger Limit Order Broadcasts, all eligible orders will trigger a Limit Order Broadcast; selection of whether an order triggers a Limit Order Broadcast is not done on an order-by-order basis. If a Subscriber has opted into having its orders trigger Limit Order Broadcasts, each order must be for 500 shares or more, or will be rejected by the System. Subscribers that are not configured to have their orders trigger Limit Order Broadcasts can submit orders of any size. Subscribers can change their Limit Order Broadcast preference by contacting Piper. Subscribers must also opt-in to receive Limit Order Broadcasts resulting from other Subscribers orders. Orders submitted in responses to Limit Order Broadcasts can be for any size. There is no minimum quantity functionality with respect to the Limit Order book. XE will disseminate a Limit Order Broadcast to all Subscribers that have elected to receive Limit Order Broadcasts that details the price (either the initiating orders limit price or pegged price as described below), size, side (buy/sell), and symbol of eligible orders through Subscribers respective execution management systems. Subscribers that have opted into having their orders disseminated through a Limit Order Broadcast must populate an additional field when entering orders to indicate whether the Limit Order Broadcast should be pegged to the primary quote (i.e., the national best bid (NBB) for buy orders or national best offer (NBO) for sell orders) or the midpoint of the national best bid and offer (NBBO) for purposes of the displayed price of their order in the Limit Order Broadcast. If a Subscriber does not designate a peg preference, the Limit Order Broadcast will provide a default peg to the NBBO midpoint. Limit Order Broadcast displayed peg preferences are set on an order by order basis. The displayed price of a Limit Order Broadcast will be the initiating orders limit price unless or until the limit price is more aggressive than the primary quotation and/or midpoint of the NBBO, in which case the displayed price will be the pegged price, as selected by the Subscriber (i.e., either the primary quote or the NBBO midpoint). Limit Order Broadcasts

pegged to the NBBO midpoint for display purposes are rounded down to the nearest whole penny increment for buy orders and up to the nearest whole penny increment for sell orders. Limit Order Broadcasts will not display order interest in sub-penny increments, including where the price of the security is less than \$1.00. XE does not otherwise rank, display, or accept orders in sub-penny increments for NMS stocks trading above \$1.00 per share. For example, assume the NBBO for stock XYZ is \$10.00 x \$10.05, and a Subscriber that has opted into having eligible orders disseminated through a Limit Order Broadcast submits an order to buy 500 shares of XYZ at a price of \$10.02 pegged to the primary quote for Limit Order Broadcast display purposes. The Limit Order Broadcast would display the price at \$10.00. If the NBBO moved to \$10.03 x \$10.05, the Limit Order Broadcast would reprice the buy order to display the order's limit price of \$10.02. Assume instead that the buy order was priced at \$10.03 and the Subscriber selected that the Limit Order Broadcast be pegged to the NBBO midpoint for display purposes while the NBBO is \$10.00 x \$10.05. The Limit Order Broadcast would display the price at \$10.02, which is the NBBO midpoint rounded down (in the case of a buy order) to the nearest whole penny increment. If the NBBO were to move to \$10.04 x \$10.08, the Limit Order Broadcast would display a price of \$10.03 (the order's limit price). If the NBBO were to move down to \$9.95 x \$10.00, the Limit Order Broadcast would display a price of \$9.97, the NBBO midpoint rounded down to the nearest whole penny increment. The Limit Order Broadcast will remain visible to Subscribers that have elected to receive Limit Order Broadcasts until the order is executed or canceled. Orders submitted to the Limit Order book can have a time-in-force of either DAY or IOC. IOC orders do not cause XE to disseminate a Limit Order Broadcast detailing the terms of the order, and such orders will instead seek an immediate execution against any resting orders or cancel back to the Subscriber if there is no immediate match. DAY orders for 500 shares or more will cause XE to disseminate a Limit Order Broadcast (provided the Subscriber has opted into Limit Order Broadcasts with respect to its orders) and the order will remain in the Limit Order book until the order is executed, canceled by the Subscriber, or, if unexecuted at the end of the trading day, will be canceled by XE. If a DAY order that triggered a Limit Order Broadcast is partially filled such that its quantity falls below 500 shares, both the order and the Limit Order Broadcast will be canceled. Subscribers that have not been configured to have their orders trigger a Limit Order Broadcast can submit orders of any size (including for less than 500 shares) and such orders (with a time-in-force of DAY) will rest non-displayed until executed, canceled by the Subscriber, or until the end of the trading day. Execution priority for orders in the Limit Order book is based on price and then time. Price is determined by the limit price the Subscriber selects and time is based on the timestamp assigned to an order upon arriving at the ATS. Priority among equally priced orders is based on the time of order entry. Orders and modifications to orders are timestamped upon entry. Modifications to a resting order's price will affect its priority. Modifications to a resting order's size will result in a new timestamp for purposes of execution priority. In the case of a partial fill, any remaining order interest will preserve the time priority of the original order for execution priority purposes. Orders cannot be routed out of the Limit Order book. However, the ATS will route intermarket sweep orders (ISOs) as necessary in compliance with Rule 611 of regulation NMS, provided the Subscriber has opted into having XE route ISOs to facilitate executions on XE, as described in greater detail in Part III, Item 16. Matches within the Limit Order Book are automatically executed without human intervention or negotiation and are reported with the MPID PJCX. Please see Part III, Item 11(c) for further detail regarding the prices at which matched orders in the Limit Order book will execute. All orders submitted to the Limit Order book can interact with multiple matching contra-side orders. Any DAY order, or excess order interest of a DAY order in the case of a partial fill immediately upon arrival, can trigger a new Limit Order Broadcast if eligible (i.e., it is for a quantity greater than 500 shares and the Subscriber has opted into Limit Order Broadcasts). However, responses to a Limit Order Broadcast cannot trigger a Limit Order Broadcast. All responses to a Limit Order Broadcast come through the Cash Trading Desk and are treated as a not-held order. Because orders sent in response to Limit Order Broadcasts (Limit Order Broadcast Responses) do not result in dissemination of a Limit Order Broadcast, Subscribers do not need to set a pegged order display preference. Any excess order interest a Limit Order Broadcast Response can rest in the ATS (provided the Limit Order Broadcast Response has a time in force of DAY) as a not-held order and is visible to the sales and trading personnel of the Cash Trading Desk responsible for that Subscriber's account. For example, assume Order 1 is submitted to buy 500 shares of XYZ at \$10.00 with a time-in-force of DAY, and Order 2 is submitted a moment later to also buy 500 shares of XYZ at \$10.00 with a time-in-force of DAY when the NBBO for XYZ is \$10.00 x \$10.05 and where there is no resting sell interest in the Limit Order book for XYZ. Assuming the Subscribers submitting Order 1 and 2 have opted into Limit Order Broadcasts, XE would disseminate a Limit Order Broadcast with respect to both Order 1 and Order 2. Assume further that a Subscriber submits in response to the Limit Order Broadcast for Order 1 a DAY sell order for 1500 shares of XYZ priced at \$10.00 (Order 3). XE would execute Order 3 against Order 1 for 500 shares and then execute against Order 2 for 500 shares with both executions occurring at \$10.00. The remaining 500 shares of sell order interest from Order 3 would not cause the ATS to broadcast a new Limit Order Broadcast to Subscribers to sell 500 shares of XYZ. However, the 500 shares of excess sell order interest from Order 3 would rest in XE and be treated as a not-held order of the Cash Trading Desk. This excess order interest would be eligible to execute against any subsequent buy orders in XYZ submitted to XE for as long as the order rests there. If Order 3 had been marked IOC rather than DAY, the 500 shares of unexecuted sell order interest would be canceled back. In the event there is resting order interest with priority over an order that initiated a Limit Order Broadcast, such interest will execute first. For instance, in the example above, if there were a resting buy order for 200 shares of XYZ at \$10.00 in the Limit Order book with time priority over Orders 1 and 2, Order 3 would execute first against this resting order before executing against Orders 1 and 2. In other words, an order sent in response to a Limit Order Broadcast will still consider any marketable resting order interest when executing. Conditional orders can only be sent by a Subscriber that: (i) has been configured to be able to submit conditional orders by contacting Piper; and (ii) uses a trading algorithm as the means of access, either through the No-Touch (Electronic) Trading Desk or through the Cash Trading Desk. Conditional orders are generally treated the same as non-conditional orders in the ATS except that any potential execution will be suspended pending satisfaction of the terms of the conditional order. For example, assume a Subscriber is looking to buy 500 shares of XYZ at a given price in the market and the Subscriber uses a trading algorithm that sends a 500 share order in XYZ to multiple trading venues being unsure where it will receive an

execution. Provided the trading algorithm has been configured to route to XE as a possible routing destination, the algorithm can submit a conditional order to XE, which would only execute against a matching order pending the cancellation of the orders sent to the other venues. If the Subscribers conditional order matches on XE, the execution would be suspended while XE sends a message to Pipers algorithmic trading engine to inform the algorithm of a match on XE. The algorithm would then seek to cancel the orders in XYZ placed on other trading centers. If the algorithm successfully cancels the orders on other trading centers, the algorithm will send a firm order to effect the transaction on XE that replaces the conditional order. If the trading algorithm is not able to successfully cancel the orders in XYZ on the other venues (e.g., because an execution occurs on one of the other venues), the algorithm will submit as a firm order the decremented quantity (in the case of a partial fill on an awayvenue) to replace the conditional order or cancel (in the case of a complete fill on an away venue) the matched order on XE as appropriate. There is no human intervention involved in this process of cancelling the orders on other venues and replacing the conditional order with a firm order to facilitate the execution on XE. If the trading algorithm is unable to confirm the terms of the conditional order (e.g., cancellation of the orders on other venues) within one second after there is a match on XE, the match of the conditional order on XE will be broken resulting in a cancellation of the conditional order in XE and the Limit Order Message. If the terms of the conditional order are satisfied (e.g., the trading algorithm successfully cancels the orders on other markets), the conditional order will trade on XE based on the market conditions at the time of execution rather than at the time of the initial match. Conditional orders have the same execution priority as non-conditional orders and are discussed in greater detail in Part III, Items 9(a) and (b).

Part III Item 11c

Regarding time priority for the ATS, no two orders can ever be accepted simultaneously. Orders will be accepted as they arrive into the ATS and will be sequenced according to when they were accepted. Time priority will always go to the first order accepted by the ATS after all order validity checks are completed. Therefore, if two orders have the same timestamp, the order that was accepted first by the ATS will have priority when determining time priority. ON-CLOSE MATCH BOOK XE crosses orders that match in the On-Close Match based on time priority. All orders submitted to the On-Close Match will be executed, if at all, at the closing price disseminated by the primary listing exchange for each NMS stock. Once an order submitted to the On-Close Match book is matched with another order, the order cannot be canceled or modified (other than any remaining order interest in the case of a partial fill). Modifications to the size of an order will reset the time priority of the order in the On-Close Match book. Therefore, an order will lose its time priority if the order is modified. No executions occur in the On-Close Match book during the trading day until the market close. The one exception to time priority in the On-Close Match book arises where a Subscriber has designated a minimum quantity (MinQty) with respect to an order, as described in Part III, Item 7(a). An incoming order with a MinQty will match first with marketable contra-side orders that meet the incoming orders MinQty designation first. As a result, resting contra-side orders marketable against an incoming MinQty order that do not meet the MinQty condition lose time priority to another resting order that does satisfy the MinQty condition. LIMIT ORDER BOOK XE crosses orders that match in the Limit Order book based on price/time priority. The Limit Order book matches limit orders only throughout the trading for immediate execution during regular trading hours. Upon the receipt of a limit order with a time-in-force of DAY to the Limit Order book that is for 500 shares or more, the order is broadcast to Subscribers through a Limit Order Broadcast to solicit matching orders or better priced orders in response. There is no time limit to respond and the order shall remain visible in the Limit Order Broadcast until it is executed, partially executed such that its quantity falls below 500 shares, canceled by the Subscriber, or remains unexecuted at the end of the trading day. As described in Part III, Item 7(a), the displayed price of an order in a Limit Order Broadcast depends on the orders limit price, the then current national best bid or offer (NBBO), and the Limit Order Broadcast pegged display preference. As there are changes to the NBBO, the pegged/displayed price of the Limit Order Broadcast will adjust accordingly, subject to the orders limit price. The Limit Order Broadcast for non-marketable limit orders occurs at the orders limit price and may adjust depending on the designated Limit Order Broadcast display pegged preference. All executions occur at or within the NBBO at the time of execution. In the event that a match would occur at a price that would trade through a protected quotation, the ATS will send required intermarket sweep orders (ISOs) to sweep the full displayed size of any better priced liquidity, and reduce the matched shares accordingly provided that the Subscriber has elected to have XE route ISOs. If a Subscriber has not been configured to have XE route ISOs to facilitate potential executions, a match will not occur and the order will either rest in the order book or be canceled back to the Subscriber depending on the terms of the order (e.g., DAY v. IOC). Subscribers can opt into or out of XE routing ISOs by contacting Piper. The execution price of matched orders in the Limit Order book is determined by the limit orders price, the pegged price, and the incoming contra-side orders limit price. If a disseminated Limit Order Broadcast has a limit price more aggressive than the primary quote (i.e., the NBB for buy orders or NBO for sell orders), and the incoming contra-side order has a limit price at the contra side primary quote (i.e., at the NBB for sell orders and at the NBO for buy orders), the execution will occur at the pegged price. If the incoming contra-side order is priced more aggressive than the contra side primary quote (i.e., more aggressive than the NBB for sell orders and more aggressive than NBO for buy orders), the execution will occur at the primary quote. If the incoming contra-side order is priced more aggressive than the resting limit orders price or at the resting limit orders price, but is less aggressive than the contra-side primary quote, the execution will occur at the contra-side orders limit price. The following examples illustrate how this operates. Assume the NBBO for stock XYZ is \$10.00 x \$10.05 and there is no resting order interest in XYZ in the Limit Order book. Assume further that a Subscriber has opted-in to Limit Order Broadcasts and selected a pegged order preference for Order 1 at the primary quote. Order 1 is submitted to buy 500 shares of XYZ at \$10.05 (the NBO) and XE disseminates a Limit Order Broadcast to Subscribers that opted into receiving Limit Order Broadcasts displaying the price of Order 1 Limit Order Broadcast at \$10.00. SCENARIO A: Order 2 is submitted in response to the Order 1 Limit Order Broadcast

to sell 500 shares at \$10.00 (the NBB), the execution will occur at \$10.00. SCENARIO B: Order 2 is submitted in response to the Order 1 Limit Order Broadcast to sell 500 shares at \$9.99 (more aggressive than the NBB), the execution will occur at \$10.00. SCENARIO C: Order 2 is submitted in response to the Order 1 Limit Order Broadcast to sell 500 shares at \$10.03, the execution will occur at \$10.03, which is the limit price of Order 2. SCENARIO D: assume that Order 1 was priced at \$9.99 (below the NBB) and Order 2 is submitted in response to the Order 1 Limit Order Broadcast at \$9.99; XE would route ISOs to execute against the full displayed price of any protected quotation at \$10.00 (provided the Subscriber submitting Order 2 has opted into XE routing ISOs), and, if any interest remains after execution of the ISOs, execute the remainder against Order 1. SCENARIO E (Midpoint Peg Limit Order Broadcasts): Assume that Order 1 (with a limit price of \$10.05) was pegged to the NBBO midpoint. The Limit Order Broadcast would display the price at \$10.02 (the NBBO midpoint slid down for buy orders to the nearest whole penny increment). If Order 2 is priced at \$10.02, the execution would occur at the NBBO midpoint. If Order 2 is priced at \$10.01, the execution would also occur at the NBBO midpoint. If Order 2 were priced at \$10.04, Order 2 would still be marketable against the Order 1 Limit Order Broadcast because it is within Order 1's limit price of \$10.05, and would execute at \$10.04. Executions occur at the midpoint of the NBBO when the contra-side matching order is priced more aggressive than the NBBO midpoint. In the Limit Order book, a modification to an order's size or price will result in a new timestamp and affect the order's priority. Orders in both the On-Close Match and Limit Order book are time stamped upon arrival, modification, rejection, execution, and cancellation to the millisecond. Short sales orders are not permitted in either order book and are automatically rejected by the ATS. Piper handles execution errors occurring on XE in accordance with Piper's error handling procedures. These procedures apply to bona fide errors (e.g., wrong security or wrong side (buy/sell)). An Error Trade Report detailing the potentially erroneous transaction(s) and the parties involved are brought to the immediate attention of a designated Supervisor and designated Compliance personnel who must review and approve the error. Among other things, the Error Trade Report is reviewed to determine if the error correction transaction qualified for an exemption under Rule 611 as a bona fide error. After reviewing the activity to confirm it is a bona fide error, a correcting transaction may be made using Piper's error account(s) as necessary. Bona fide errors can be raised by Subscribers by contacting Piper or by Piper as soon as the error is detected, and there is no time limit for submitting claims of alleged errors. All errors are subject to resolution, discussion, and negotiation in the normal course of institutional order handling.