

April 10, 2020

To: All Bidders

From: Kate Bailey
Director of Procurement

Re: **ADDENDUM NO. 6**
20-028.1 – Construction of PhilaPort Distribution Center New Dry Warehouse

This Addendum No. 6 is issued to:

1. Extend the Bid Submission Deadline from **Wednesday, April 15, 2020 at 2:00 P.M. until Friday, April 17, 2020 at 2:00 P.M.**
2. Provide a revised Bid Form (attached).
3. Provide a Rider to Subcontract Agreement (attached).
4. Provide Door Hardware Specifications (attached).
5. Clarify that we will be utilizing an e-Sourcing platform called Bonfire. Bidders must register with Bonfire to submit an electronic bid with PhilaPort. Instructions and video tutorial can be found at:
 - <https://support.gobonfire.com/hc/en-us/articles/360011135513-Vendor-Registration>.
 - and
 - <https://support.gobonfire.com/hc/en-us/articles/203903356-Vendor-Registration-and-Submission->
6. Bids must be submitted through the online Bonfire Portal at:
<https://PHILAPORT.bonfirehub.com>
Be sure to register well in advance of the bid closing date and time.
Submissions by other methods will not be accepted.
Bidders must use Internet Explorer 11, Microsoft Edge, Google Chrome, or Mozilla Firefox.
JavaScript must be enabled. Browser cookies must be enabled. Ensure pop-up blockers are turned off to avoid any issues.

Respondents should contact Bonfire at Support@GoBonfire.com for technical questions related to submissions or visit Bonfire's help forum at <https://bonfirehub.zendesk.com/hc>.

Submission materials should be prepared in the file formats listed under Requested Information for this opportunity in the Bonfire Portal. The maximum upload file size is 1000 MB. Documents should not be embedded within uploaded files, as the embedded files will not be accessible or evaluated.

7. Clarify that the entire bid submission should be uploaded into Bonfire. This includes:
 - Bid Document, Part 2 - Bid Form
 - Bid Bonds
 - Acknowledged Addenda
 - Diversity – Exhibit 1a-1e
8. Clarify that PhilaPort will not accept late bids. Please allow yourself ample time for submission of bids.
9. Clarify that a public bid opening will be held via a Zoom conference meeting. For information on using Zoom, please visit (<https://support.zoom.us/hc/en-us/articles/206618765-Zoom-Video-Tutorials>). An invite to the public opening will be posted thirty (30) minutes prior to the bid opening.
10. Clarify that by submitting a bid with PhilaPort, bidder is acknowledging receipt and review of all instructional information provided with this addendum.
11. Revise the following sections of Bid Document, Part 1-Instructions to Bidders. Section 9.-A, Section 11, and Section 13 of the Instructions to Bidders shall now read as follows:

Section 9 Bid Guaranty:

A. All bids shall be accompanied by a bid bond from a surety company authorized to business in the Commonwealth in favor of the “Philadelphia Regional Port Authority” or “PhilaPort” in an amount equal to ten percent (10%) of the gross amount of the Base Bid, excluding Alternates and including Unit Price Work for which estimated quantities have been provided unless a different specific amount has been established by PhilaPort and set forth in the Bidding Documents.

Section 11 Delivery of Bid in Clearly Marked Envelope:

This section has been deleted.

Section 13 Bid Opening Procedure:

BID OPENING PROCEDURE. This project is being electronically bid and hard copy bids will not be accepted. Bids will be opened in Bonfire by two (2) representatives of PhilaPort who enter their username and password into the program to confirm their presence at the date and time designated in the Notice, or as close after this time as reasonably possible. PhilaPort will not, under any circumstances, open a bid before the Bid Opening Date and time. The Bid Opening is viewable to the public via web conference. Information regarding the web conference can be found at www.philaport.com/procurement under the project information. PhilaPort will also publish the web conference link on its publicly accessible website. The amount of each bid, together with the name of each Bidder will be recorded in Bonfire. The Bid Tabulation shall be considered unofficial and shall be open to public inspection during the web conference.

The bid tabulation, listing the Bidders and their bid amount, will formally be made available to interested parties within ten (10) days of the opening.

12. Provide responses to the following questions received:

Q1: Does the successful Contractor have to perform 20% of the contract? Does this refer to labor – actual trade work? Does it include Project Management and/or purchase of materials? Does it include profit and overhead?

A1: See Bid Form, Section II-Bidder Responsiveness Section, B. (revised per Addendum 4)

Q2: As the Project is materially the same as Project 19-131.1, which was cancelled after bids were opened, is it the intent of PhilaPort to re-issue the 19-131.1 Questions and Answers as an addendum to 20-028.1, or do the bidders need to ask each question again under the 20-028.1 solicitation, and PhilaPort will answer each question again?

A2: See Addendum 2 attachments which include the responses from 19-131.1, revised drawings, and the specifications for lighting poles.

Q3: No bid form was provided in the solicitation. Is it the intent of PhilaPort to issue the bid form as part of the first addendum?

A3: See Addendum 4 for revised bid form.

Q4: With the work restrictions – many subcontractors will be not available for 14 days – will the bid still be held on the 6th of April?

A4: See Addendum 6, #1.

Q5: In light of the Mandatory Pre-Bid Meeting for 3/16/20 being cancelled, what is PhilaPort's position moving forward? Will the Mandatory Pre-Bid meeting be rescheduled, or will meeting be waived in its entirety? Will the bid date of 4/6/20 at 2 pm change?

A5: See Addendum 2, Q4. See response, A4.

Q6: When and how will the list of attendees at the mandatory pre-bid meeting be issued?

A6: Because there will be no pre-bid meeting, there will be no pre-bid sign-in sheet.

Q7: Please either post new bid date or put on hold.

A7: See Response, A4.

Q8: Provided the current circumstances surrounding the COVID-19 Virus and related government mandated shut downs, do you intend on extending the bid date for this project beyond the April 7, 2020 date?

A8: See Response, A4.

Q9: PGW has approved the use of MEGA PRESS fittings up to 4" In size. Would these fittings be permitted on the Dry Warehouse Project? If there is not a response to this pre-bid question, AP will presume PGW specifications for gas lines will be followed.

A9: Specifications are open to all manufacturers and products that meet the performance requirements outlines within the specifications.

Q10: With the city and state ordering shelter in place and closing all non-essential offices will this postpone this bid date

A10: See Response, A4.

Q11: Section 260923 references web based user interface and demonstration of a lighting control system but there are no lighting control drawings. Can a drawing be issued if this is the design intent?

A11: Lighting Control Design Intent:

Have a LC controller for all the fixtures in the open shipping/pallet storage area, and an OC occupancy sensor for all the fixtures in the racking aisles as specified in drawings.

The intention is that for the shipping area, client should be able to control the fixtures, either on/off all or single, or in groups, or dim. You can also do power monitoring.

For the Aisles, there should be option of only turning on when someone is in the aisle, and can control how many fixtures you want to turn on, and for how long, from a single motion detection.

Lighting control design should also include some gateways (required, with a max capacity of 200 devices per gateway), and touch screens. The touch screens should provide one more level of access control. Some manufactures also provide a phone app to control lights.

With regards to specific scene requirements, these are to be determined in conjunction with the client, and our Web based Commissioning team at the time of commissioning, and client should be able to modify any time during the life of the system.

Q12: For the card access system, the roll up doors are shown to be monitored, what is the integration? The drawings show a DC at the bottom of the door, is that to prevent someone from entering through that opening or to override the start stop station?

A12: This is intended for monitoring only. The doors will be manually locked and opened.

Q13: Who furnishes the audible horns for the doors?

A13: The Contractor is responsible for furnishing and installing all aspects of the Access Control System.

Q14: The door hardware specification has electrified components as well as the card access section. Who provides which components?

A14: The Contractor is responsible for furnishing and installing all aspects of the Access Control System.

Q15: There is fiber shown out to the gate controllers, is that part of the telecommunications system or card access?

A15: The fiber is intended to be used for a host of data related systems, the card access system being one of them.

Q16: The gates in the employee parking lot are controlled by which system?

A16: Access control for the gate will be installed under a future project

Q17: Is there an elevation within the building to show where the ductwork, cable tray and light fixtures are to be installed?

A17: Contractor is to provide coordination between all trades based on requirements of fire sprinkler head distances and clearances

Q18: What is the height of the racking system?

A18: The racking system is not in contract.

Q19: How will a C/O be obtained when the FA devices are shown to be installed on the future racks?

A19: Refer to drawing sheet FA802 / 3, for an illustrated view providing a fabricated Unistrut frame, securely mounted to the floor. Refer to the **TYPICAL INSTALLATION METHOD FOR "STAND-ALONE" NON-STORAGE RACK SUPPORTED**. Device wiring and conduit shall be fed and supported from the ceiling as if the racks were in place, until such time when racks are installed, the device wiring and conduit shall be transferred to the racks. and the fabricated Unistrut shall be fastened to the racks as illustrated in the **TYPICAL INSTALLATION METHOD FOR STORAGE RACK SUPPORTED** detail. Further coordination shall be required at that time to not interfere with the rack openings to prevent materials from being stored as required.

Q20: Since the future cold storage building will be on the southern end of the site, shouldn't the 15kV switch and switchboard be installed on the southern end of the warehouse?

A20: Contractor to bid documents as designed.

Q21: Will the Owner be paying for all Utility costs?

A21: Contractor will be responsible for any and all utility costs during construction.

Q22: Can you please provide a plan holder's list for the above mentioned project?

A22: See Response, A6.

Q23: When and how will the list of attendees at the mandatory pre-bid meeting be issued?

A23: See Response, A6.

Q24: Is the bid date going to be delayed further then 4/7/2020?

A24: See Response, A4.

Q25: Will PhilaPort post list of Prime Contractors bidding so to allow subs to reachout and submit pricing?

A25: See Response, A6.

Q26: Can Recycled Concrete meeting PennDOT 2A spec be used in lieu of stone?

A26: The materials specified on the plan are to be used for bid.

Q27: If foundations are expected to be encountered in new building foundation excavation and pipe trenches. Please provide a basis for bidding purposes such as size and depth of foundation wall and size and thickness of footings. Bidders should not have to make assumptions on unknown factors.

A27: All available information is on the plans.

Q28: Since it is also unknown what the layout of existing pile are please provide a quantity for bidding purposes.

A28: All available information is on the plans.

Q29: In the previous bid Addendum 2 it mentions the parking area to the north is not in the scope of this project. Please advise if the drainage structures, pipe and bio retention basis is in this contract.

A29: The parking area to the north is in the scope of this project. The associated drainage is also in the scope of this project.

Q30: In Drainage spec there seems to be an issue - City of Philadelphia only permits RUBBER and concrete joints (Profile Gasket or O-ring,) on round concrete pipe why is ASTM C990 material listed?

A30: City of Philadelphia Standards are to be followed for this project.

Q31: Also per the Drainage Spec the city does not permit CL1 or 2 RCP also there is confusion on B or C wall thickness. Please advise what class should be used as well as wall thickness.

A31: City of Philadelphia Standards are to be followed for this project: Minimum class 3 wall B RCP.

Q32: Lastly for Drainage - What pipe joint should be used for this project? The spec contradicts itself 3X in one sentence.

**Gravity flow which assumes no pressure or head
Nonpressure**

Pressure rating: 10' of head...that is not nonpressure (see second line above)

...joints to be silt tight...silt tight joints are not designed to hold any pressure

1.4 PERFORMANCE REQUIREMENTS

A Gravity-flow, nonpressure, drainage-piping pressure rating: 10-foot head of water. Pipe joints shall be at least silt tight, unless otherwise noted.

A32: The highest rated pipe joint following the requirements listed in the spec is to be used.

Q33: Are we expected to hand deliver the bids and will there be a bid opening at that time.

A33: See Addendum 6 for instructions.

Q34: Please confirm roof TPO system you would like on project (plans and specs differ, 45 mil vs 60 mil, fully adhered vs hot asphalt applied, etc.).

A34: Roof membrane is to be fully adhered. Include 60 mil membrane in pricing

Q35: For the 045 TPO or the 060 TPO standard membrane, the warranty would not carry any accidental puncture resistance or hail damage which is noted in the warranty section, 1.09. Certain membranes and systems can provide for this type of warranty coverage, is this necessary? Should we include the necessary components to achieve the puncture and hail resistance?

A35: Provide 60 Mil TPO roof membrane with warranties as specified. Refer to question #43 response.

Q36: Cover board is specified, is this required, not shown on the detail?

A36: Cover board is required

Q37: Spec 104400 – Fire Protection specialties – please confirm you want 2.01B – Cartridge Operated – Spun shell fire extinguishers. This adds a significant price to each fire extinguisher and is an unusual spec.

A37: Section 10 44 00, Part 2.01, B.1. Cartridge Operated – Spun shell is hereby removed

Q38: Are there any narratives in terms of changes to the plans? Seems like mostly life safety and egress additions with minor revisions elsewhere.

A38: No. The contractor is required to review the plans in their entirety.

Q39: Duct Insulation specification 230713, 3.12 G&I call for exposed supply ductwork to be externally insulated. Metal Ducts specification 233113, 3.11 F calls for ductwork to be acoustically lined. In addition 233113, 2.5 C9 calls for lined duct to be perforated double wall.

A39: All SA duct with cold air or heated air needs thermal (exterior) insulation. The 1st 10 feet from a fan either inlet or outlet shall be acoustically lined.

Q40: Can we get a clarification on what ductwork is to be acoustically lined (with or without perforated liner), and which duct is to be externally wrapped? Also, is there any lining/insulation required on ductwork in the warehouse area?

A40: The 1st 10 feet from a fan either inlet or outlet shall be acoustically lined.

Q41: Electrical – Addendum 5 answer 27 and 72 appear to be in conflict of each other regarding security. Please confirm security/access scope requirements by Contractor.

A41: Wiring and door access is by Contractor. All other cameras, radio, WiFi, WAP, by tenant.

Q42: Electrical - Drawing T501 North MDF Network cabinet shows a 24 strand fiber to a cold storage cabinet. Is this part of our scope or future expansion? If ours, need location.

A42: Rack space is reserved for future work. 24 fiber strand cabling will be installed in future phase. Provide termination panel under this contract to support future fiber.

Q43: Roofing - As per Section 075423 TPO Membrane of the Specifications dated 12/16/19. In Part 2 Products/2.01 Paragraph A TPO Membrane Roofing: One Ply Application, asphalt adhered, over insulation. SubSection 202 Paragraph C. Membrane Sub paragraph 1. Material-Thermoplastic Polyolefin(TPO) complying with ASTM D6878/D6878M Sub Paragraph 2-Reinforcing-Internal Fabric, Sub paragraph 3.Thickness-45mils(0.045in.)Minimum Sub Paragraph 5 -Color: White. Please advise if we are putting down on the roof. Carlisle .045 standard TPO in bonding adhesive or Carlisle 115(.045) Fleezeback Hot Down TPO AFX that was specified in Section 075423 in the specifications.

A43: Provide 60 Mil Fleece-Back membrane. Carlisle is not required. Other manufacturers of equal performance (as determined by the Owner) will be considered during the submittal process

Q44: Is the dock pit topping slab an 8” unreinforced slab poured back on top of the 12” reinforced slab throughout?

A44: Correct, see Section 4/S300.

Yes, for the length and width of the pit area.

Q45: Is there an elevation or detail showing the stanchions with dock control equipment? Something similar to A601 but with the layout of control boxes?

A45: Layout of controls shall be as recommended by equipment manufacturer. Final coordination will occur during shop drawing phase.

Q46: Are there any required maintenance packages to be included in dock equipment? Cleaning vehicle restraints system, leveler maintenance, etc.

A46: All required maintenance shall be included in the bid price for 1 year from Substantial completion.

Q47: Confirm Detail 4/S302 applies to only the knockout/future pass through door locations to the cooler area.

A47: Correct, see Plan Detail 2/S101.

Q48: The only detail for the fence is 6'h, but one area states 8'h. Is that the only 8'h fence & the remaining is 6'h per detail 4/C605?

A48: The 8' high fence is to be used for the existing perimeter fencing (to be replaced) and the proposed parking lot fencing. The 6' high fence is for the mechanical yard within the site.

Q49: Question 42 states that the CMC's are not being used for ground improvement – the Geo tech states that they are

A49: The design intent is covered in both the geotechnical report and the structural documents. This is a delegated design.

Q50: Question 78 is supposed to be answered by the geotech engineer. Please provide the response from PhilaPorts Geotechnical Engineer.

A50: Question is unclear.

Q51: Due to COVID-19, will the bid be extended ?

A51: See Response, A4.

Q52: Drawing C603 – Please provide a specification for the Pre-fabricated shelter (Approved by Owner) noting type of material , Basis of design (Manufacturer , Model Type) etc..

A52: Guardian Booth 6'x6' prefabricated booth or Owner approved equal.

Q53: Paragraph I refers to unit prices. There are no unit prices. The bid form seems to be made up of lump sums. It also states that the failure to make an entry shall not cause the bid to be nonresponsive. The remedy seems to be computing the unit prices which is not evident on the bid form. Does this mean that all blanks can be left blank and the bid total will be used to compute the successful respondent? (by blank I am implying the language in the paragraph ie: None, Zero N/A etc.)

A53: See Revised Bid Form provided with Addendum 4.

Q54: Paragraph J says that the unit price work will be performed at no cost to the PhilaPort if a bid form is left blank. Since the bid form does not seem to indicate unit pricing is the bid total the only evaluation for low bid? If all spaces are left blank or indicated as no cost – can a bid total still be submitted?

A54: See Revised Bid Form provided with Addendum 4.

Q55: Paragraph K refers to differing unit pricing to extensions. In this case, with no presumed unit pricing, how will discrepancies in the bid be calculated?

A55: See Revised Bid Form provided with Addendum 4.

Q56: If PhilaPort is looking for lumpsums for portions of the work; could you provide a bid form that gives quantity and description of bid item as lump sum?

A56: See Revised Bid Form provided with Addendum 4.

Q57: Please verify that only numbers are required to be filled out to be considered a responsive bidder (no words)?

A57: See Bid Document, Part 1-Instructions to Bidders, Section 6 – Bid Requirements, E.

Q58: Please consider extending the bid date to coordinate with the Commonwealth of Pennsylvania’s mandate that all non life-essential businesses close (until April 6, 2020). It will make it difficult to obtain material and subcontractor pricing.

A58: See Response, A4.

Q59: Given the current situation with the coronavirus, are bids still expected to be sealed/hand delivered to the office of the Philadelphia Regional Port Authority Procurement Department on 4/6 by 2pm, or will they now be accepted electronically? We appreciate the feedback and look forward to your response.

A59: See Response, A4. See Addendum 6 for instructions.

Q60: Please provide invert elevations for the Sanitary Sewer tie-ins.

A60: Sanitary invert tie-ins are approximately 0.5'-1.0' on the provided plan datum.

Q61: Please advise the thickness of walls, slab and floor of new Electric Manholes.

A61: Manholes shall be PECO standard.

Q62: Please provide trench detail for 2-2" Conduit runs shown on E102 as they are not called out to be Ductbanks.

A62: Refer to detail 9/C-602

Q63: Please advise on how bids with original signatures, bid bonds, etc. will be submitted/received, and how the public opening will take place given the current Covid-19 impacts and shelter in-place orders from the Governor/State.

A63: See Addendum 6 for instructions

Q64: Due to COVID-19, will the bid be extended ?

A64: See Response, A4.

Q65: Drawing C603 – Please provide a specification for the Pre-fabricated shelter (Approved by Owner) noting type of material , Basis of design (Manufacturer , Model Type) etc..

A65: Guardian Booth 6'x6' prefabricated booth or Owner approved equal.

Q66: Will every worker on site be required to have a TWIC?

A66: See Addendum 2, #6

Q67: Is the Vendor Data Management Unit Number the same as the Vendor ID through the PA Supplier Portal?

A67: More information on the Vendor Data Management Unit Number can be found at:

<https://www.vendorregistration.state.pa.us/CVMU/paper/default.aspx>

Q68: Are bids to be mailed in or hand delivered?

A68: See Addendum 6 for instructions

Q69: In the Bid Document, there is mention of a Notice to Bidders, however I do not see a Notice to Bidders posted. Please provide the Notice to Bidders.

A69: The Notice to Bidders is the first page of the bid document.

Q70: WT-1 wall material doesn't have any information regarding the finish. Please provide.

A70: See question response # 72

Q71: Spec Section 08 71 00 Door Hardware is not included in specification. Please provide.

A71: The missing door hardware specification section is included in this response.

Q72: Please clarify selections for the ceramic tile in the office space. No description of WT-1 is given and FT-1 is outdated

A72: **Wall Tile (WT-1)**
Manuf.: Crossville
Style: Cross Colors Solids
Color: Empress White Polished
Size: 12x24
Grout: Mapie White #00
Joint: 3/16"

Floor Tile (FT-1)
Manuf.: Crossville
Style: Cross Colors Mingles
Color: Graphite Unpolished
Size: 12x12
Grout: Mapie Charcoal #47
Joint: 3/16"

Note that the wall base in restrooms should match WT-1

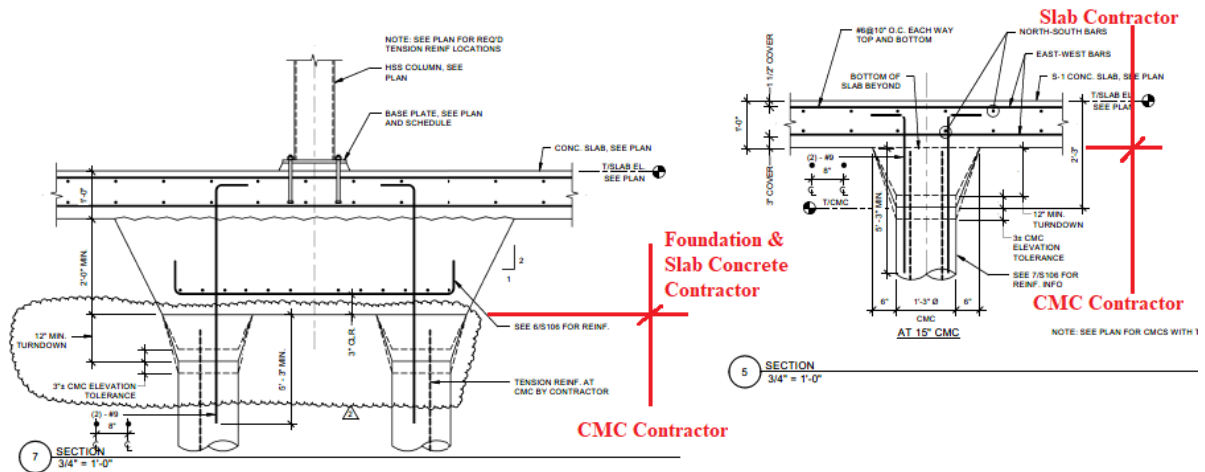
Q73: Verify ALL structural columns and girts in the warehouse space are to be painted.

A73: **Yes, and structural steel beams, joists, joist girders and vertical bracing.**
The columns are to be painted: bottom 12' caution yellow, remaining top half white. Paint to be Sherwin Williams – Dry Fall

Q74: CMCs are a proprietary system of Menard. Menard's website indicates that CMCs are ground improvement that permit shallow foundations and that they are not deep foundations. However, Q42/A42 in Addendum 5 says that the CMCs are being used as deep foundations like auger cast piles. Furthermore, structural connection (concrete/steel) between the

CMCs and slab/foundations and lack of a Load Transfer Platform confirms that the elements are in fact piles. Piles are governed by the International Building Code including requirements on factors of safety, reinforcement, and load testing. If the designer does not intend to require CMCs to comply with the requirements of IBC, please confirm that the thickened/turn down detail at slabs and caps will be part of the delegated CMC design. Otherwise, please confirm that CMC/pile design must comply with the current IBC
Is there an Asphalt index (price) established for the project at time of bid.

A74: See division of responsibility between CMC installer and foundation/slab sub-contractor below:



Q75: Item iv under Bidder Responsibility again states that workers will have to have TWIC cards. This is in conflict to previous answers regarding this qualification. Please confirm.

A75: See Addendum 2, #6

Q76: Under section 4 "Interpretation of Contract Documents" Paragraph A. - it states that requests for interpretation related to proposed work will happen no later than 10 calendar days prior to the bid opening date. Will you be extending the date or do you intend to answer all submitted questions since some of these will be falling in PhilaPorts timeline of sole discretion to give clarifications.

A76: See Addendum 4, #1 for questions deadline date.

Q77: Under section 4 "Interpretation of Contract Documents" Paragraph E – please confirm that responsive bidders are not required to enter bids in words so long as the pricing can be established in numerical figures.

A77: See Bid Document, Part 1-Instructions to Bidders, Section 6 – Bid Requirements, E.

Q78: What process will PhilaPort develop to safely submit bids during the Covid19 Emergency guidelines. I understand that the PhilaPort physical offices are currently

closed

A78: See Addendum 6 for instructions.

Q79: Does any additional Federal Contracting language have to be included in subcontract documents other than PhilaPort's typical attachments?

A79: All federal requirements for this project shall flow-down to all subcontracts. See attached subcontract rider which must be executed with all subcontracts and purchase orders (regardless of tier) on this project.

Q80: Would PhilaPort consider using a "Steel Escalation Option" similar to Penn DOT to allow for cost sharing (adjustments) to the final cost of construction.

A80: No.

All other terms and conditions remain unchanged.

Bidders shall acknowledge receipt of this addendum by immediately faxing a copy of the completed acknowledgment to Kate Bailey at 215-426-6800 AND email procurement@philaport.com

**ACKNOWLEDGMENT OF RECEIPT OF ADDENDUM NO. 6
Construction of PhilaPort Distribution Center New Dry Warehouse
Project 20-028.1**

Date _____

By _____

Company _____

Telephone _____

Fax _____

Email _____



Philadelphia Regional Port Authority
3460 North Delaware Ave. 2nd Floor
Philadelphia, PA 19134

REVISED BID FORM

Project 20-028.1
Construction of PhilaPort Distribution Center New Dry Warehouse
REVISED PER ADDENDUM 6

I. Monetary Section:

The undersigned, _____ (“Bidder”), having familiarized himself with the local conditions affecting the cost of the Work and with the Bidding and Contract Documents, including (A) this Bid Form, which includes (i) the Monetary Section, (ii) the Bidder Responsiveness Section, (iii) the Bidder Responsibility Section, (iv) the Project Point of Contact Section, (v) the Acknowledgment of Disclaimers Section and (vi) the Representation and Authorization Section, (B) the Instructions to Bidders, (C) the Diversity Inclusion Plan Forms, (D) General Conditions, and (E) the Plans and Specifications, hereby proposes to perform the Work, and to provide and furnish all labor, material, necessary tools, equipment, and all utility and transportation services necessary to perform and complete in a workmanlike manner all of the Work required to be performed within **four-hundred and ninety (490) days consecutive calendar days**, counting from the date of notice to proceed, for the following prices:

BID FORM PROVIDED ON FOLLOWING PAGES:

**20-028.1 - CONSTRUCTION OF PHILAPORT DISTRIBUTION CENTER NEW DRY WAREHOUSE
 BID FORM - REVISED PER ADDENDUM 6**

Item No.	Description of Items	Unit	Total Amount in Numbers	Total Amount in Words
I. Line Item Costs				
1 Substructure				
A. Foundations				
a.	Grade Beams, Walls, Piers	Lump Sum		
b.	CMCs	Lump Sum		
c.	Slab on Grade	Lump Sum		
2 Shell				
A. Superstructure				
a.	2nd Floor Construction	Lump Sum		
b.	Roof Construction	Lump Sum		
B. Exterior Enclosure				
a.	Exterior Walls	Lump Sum		
b.	Exterior Windows	Lump Sum		
c.	Exterior Doors	Lump Sum		
C. Roofing				
a.	Roof Covering and Misc.	Lump Sum		
b.	Roof Openings	Lump Sum		
3 Interiors				

20-028.1 - CONSTRUCTION OF PHILAPORT DISTRIBUTION CENTER NEW DRY WAREHOUSE
BID FORM - REVISED PER ADDENDUM 6

Item No.	Description of Items	Unit	Total Amount in Numbers	Total Amount in Words
A. Interior Construction				
a.	Partitions	Lump Sum		
b.	Interior Doors	Lump Sum		
c.	Fittings	Lump Sum		
B. Stairs and Ladders				
a.	Stair and Ladder Construction	Lump Sum		
b.	Stair Finishes	Lump Sum		
C. Interior Finishes				
a.	Wall and Column Finishes	Lump Sum		
b.	Floor Finishes	Lump Sum		
c.	Ceiling Finishes	Lump Sum		
4 Building Systems				
A. Plumbing				
a.	Plumbing Fixtures	Lump Sum		
b.	Domestic Water Distribution	Lump Sum		
c.	Sanitary Waste	Lump Sum		

20-028.1 - CONSTRUCTION OF PHILAPORT DISTRIBUTION CENTER NEW DRY WAREHOUSE
BID FORM - REVISIED PER ADDENDUM 6

Item No.	Description of Items		Total Amount in Numbers	Total Amount in Words
d.	Rain Water Drainage	Lump Sum		
e.	Other Plumbing Systems	Lump Sum		
B. HVAC				
a.	Energy Supply	Lump Sum		
b.	Heat Generating Systems	Lump Sum		
c.	Distribution Systems	Lump Sum		
d.	Controls and Instrumentation	Lump Sum		
e.	System Testing and Balancing	Lump Sum		
C. Fire Protection				
a.	Sprinklers	Lump Sum		
b.	Fire Protection Specialites	Lump Sum		
D. Electrical				
a.	Electrical Service and Distribution	Lump Sum		
b.	Lighting and Branch Wiring	Lump Sum		
c.	Communications and Security	Lump Sum		
d.	Other Electrical Systems	Lump Sum		
5	Sitework			

**20-028.1 - CONSTRUCTION OF PHILAPORT DISTRIBUTION CENTER NEW DRY WAREHOUSE
 BID FORM - *REVISED PER ADDENDUM 6***

Item No.	Description of Items		Total Amount in Numbers	Total Amount in Words
A. Site Preparation				
a.	Site Clearing	Lump Sum		
b.	Site Demolition	Lump Sum		
c.	Site Earthwork	Lump Sum		
B. Site Improvements				
a.	Parking Lots	Lump Sum		
b.	Site Concrete	Lump Sum		
c.	Site Development	Lump Sum		
d.	Landscaping	Lump Sum		
C. Site Mechanical Utilities				
a.	Water supply	Lump Sum		
b.	Sanitary Sewer	Lump Sum		
c.	Storm Sewer	Lump Sum		
d.	Gas Service	Lump Sum		
D. Site Electrical Systems				
a.	Electrical Distribution	Lump Sum		
b.	Single Head	Lump Sum		

**20-028.1 - CONSTRUCTION OF PHILAPORT DISTRIBUTION CENTER NEW DRY WAREHOUSE
 BID FORM - *REVISED PER ADDENDUM 6***

Item No.	Description of Items		Total Amount in Numbers	Total Amount in Words
c.	Site Communications and Security	Lump Sum		
6 General Conditions				
A.	Mobilization/Demobilization	Lump Sum		
B.	Closeout Documentation	Lump Sum		
II.	Total Project Cost			
	Total Bid Amount			

Project 20-028.1
Construction of PhilaPort Distribution Center New Dry Warehouse
REVISED PER ADDENDUM 6

II. Bidder Responsiveness Section:

- A. The Bidder certifies to the best of his knowledge, information and belief that:
- i. That for the Bidder and his Subcontractors required to be disclosed or approved by PhilaPort, and as of the date of its execution of this Bid, neither the Bidder, nor any such Subcontractors, are under suspension or debarment by the Commonwealth or any governmental entity, instrumentality, or authority and, if the Bidder cannot so certify, then it agrees to submit, along with its Bid, a written explanation of why such certification cannot be made and why the Contract should nonetheless be awarded to Bidder.
 - ii. That as of the date of its execution of this Bid, the Bidder has no tax liabilities or other Commonwealth obligations, or has filed a timely administrative or judicial appeal if such liabilities or obligations exist, or is subject to a duly approved deferred payment plan if such liabilities exist.
 - iii. That the Bidder possesses all required business, contracting and trade licenses required to perform the Work.
 - iv. That the Bidder possesses all the technical qualifications and resources, including equipment, personnel and financial resources, to perform the Work.
 - v. (1) That the Bidder (and the labor force) participates at the time of the award in an approved Apprenticeship Program as defined in the General Conditions for each craft or trade of the labor force contemplated to perform the work, (2) that such Program is currently registered with the Pennsylvania Apprenticeship and Training Council and (3) that such Program has apprentices and trainees currently participating.
 - vi. That the information provided in connection with PhilaPort's Diversity Inclusion Plan Forms is accurate and the mandatory information on form is filled out completely.
- B. The bidder acknowledges by submission of this bid, that the Bidder shall perform on the site and with his own organization at least twenty percent (20%) of the total amount of Work to be performed under this contract, exclusive of profit, overhead and the costs of procuring insurance and bonds. The bidder shall submit with his bid a complete description of the work that will be performed (e.g., earthwork, paving, brickwork, roofing, etc.), the percentage of the total work this represents, and the estimated dollar value thereof, as set forth below:

The Bidder shall perform the following Work:

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Construction of PhilaPort Distribution Center New Dry Warehouse
REVISED PER ADDENDUM 6

Percentage of Work to be performed by my organization _____%

Estimate cost of Work to be performed by my organization

\$ _____

III. Bidder Responsibility Section:

A. The Bidder certifies that:

- i. He has a satisfactory record of past contract performance and past law compliance that demonstrates a solid history of both technical competency and business integrity sufficient to justify receiving a Port PhilaPort contract; and
- ii. He currently possesses all qualifications, skills, resources, equipment personnel, financial resources and other required performance capabilities needed to successfully complete the prospective contract it is seeking to perform; and
- iii. He will comply with all relevant security requirements;
- iv. He will have sufficient workforce that possess Transportation Worker Identification Credentials to gain access and properly perform the Work by the date of Notice to Proceed with the Work.
- v. He will utilize labor enrolled in approved Apprenticeship Programs as defined in the General Conditions for the full duration of the contract Work.

B. The Bidder certifies the following responses to the questions posed to assist PhilaPort in its determination of Bidder Responsibility:

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REVISED PER ADDENDUM 6

1. Has the Bidder been suspended and/or debarred or voluntarily agreed not to bid as a result of an action by any federal, state or local government agency or authority in the past three years?

Yes No

2. Has any officer, director, owner or managerial employee of the Bidder been convicted of a felony relating to construction, maintenance, service or repair contracting industries?

Yes No

3. Has the Bidder defaulted on any project in the past three years?

Yes No

4. Has the Bidder had any type of business, contracting or trade license revoked or suspended by any government agency or authority in the past three (3) years?

Yes No

5. Has the Bidder been found in violation of any other law relating to its contracting business, including, but not limited to antitrust laws, licensing laws, tax laws, wage or hour laws, environmental or safety* laws, by a final decision of a court or government agency authority in the past three (3) years?

Yes No

*For purposes of this question, violations of safety laws may be limited to serious or willful safety violations.

6. Has the Bidder been the subject of voluntary or involuntary bankruptcy proceedings at any time in the past three years?

Yes No

C. Bidder's Vendor Data Management Unit Number is: _____

IV. Bidder's Point of Contact Section:

Contact Information for the Bidder on this project (for purposes of affirming bid price, issuing notice to proceed, insurance information, diversity information, etc.):

Name: _____

Title: _____

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Phone: _____

Email: _____

V. Acknowledgment and Disclaimers Section:

It is understood that the right is reserved by PhilaPort to reject any or all bids and to waive any informalities in the Bid, as may be provided in the Instructions to Bidders.

Submission of false or misleading information or statements in connection with this Certification shall render the Bidder ineligible to perform work for PhilaPort and/or shall be considered a material breach of any contract entered and entitle PhilaPort to all applicable remedies available at law or in equity.

Further, in the event Contractor fails to gain entry or cannot perform Work due to noncompliance, the Authority reserves the right to provide escorts to be billed to the Contractor with no increase in cost under the contract or terminate the contract for failure to perform.

VI. Representation and Authorization Section:

By making this Bid, Bidder understands, represents, acknowledges and certifies:

- a) That the foregoing representations regarding the past performance and present qualifications of the undersigned Bidder are true and correct;
- b) The Bidder has read and understands the terms and conditions of the Invitation for Bids and this Bid is made in accordance with those terms and conditions;
- c) The item(s) offered in the Bid will be in conformance with the specifications referenced in the Instructions for Bids without exceptions;
- d) The price(s) and amount of the Bid have been arrived at independently and without consultation, communication, or agreement with any other contractor, bidder or potential bidder;
- e) Neither the price(s) nor the amount of the Bid, and neither the approximate price(s) nor the approximate amount of the bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed prior to the bid opening;
- f) No attempt has been made or will be made to induce any firm or person to refrain from bidding on the contract, or to submit a bid higher than the bid, or to submit an intentionally high or noncompetitive bid or other form of complementary bid;

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- g) The Bid is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive bid;
- h) This bid has been completed by an authorized representative of the Bidder that the sufficient knowledge and information to address all matter addressed herein;
- i) If an award is made to the Bidder, the Bidder agrees that it intends to be legally bound to the contract that is formed between PhilaPort and the Bidder; and
- j) If an award is made to the Bidder, the Bidder will enter into and execute a contract based upon this bid, without delay, upon notice of award of contract, and will not withdraw this bid in accordance with the Instructions to Bidders and Applicable Law.

*[Signature pages to follow; select the page that is appropriate
to your form of business organization.]*

[SIGNATURE PAGE FOR INDIVIDUAL BIDDER]

Name of Bidder (Printed)

Signature of Individual

Trading and doing business as:

Business Address:

Tax Identification Number:

**If fictitious or trade name is employed in conduct of business, complete, by deletion as appropriate, the following statement:*

[Foregoing fictitious or trade name (has) (has not) been registered by the individual proprietorship under Pennsylvania Law.]

[SIGNATURE PAGE FOR PARTNERSHIP BIDDER]

Name of Partnership

Name of General Partner (Printed)

By: _____
(Signature of General Partner)

Witness: _____

Business Address:

Tax Identification Number:

The partners constituting the partnership herein named are:

Partner: _____

Address: _____

Partner: _____

Address: _____

Add additional lines for the names and addresses of additional Partners, if there are more than four Partners in the Partnership, by attaching an additional page or pages to this Bid.

*If fictitious or trade name is employed by the partnership in conduct of its business, insert name here:

Next, complete, by deletion as appropriate, the following statement:

[Foregoing fictitious or trade name (has) (has not) been registered by the partnership under Pennsylvania Law.]

[SIGNATURE PAGE FOR CORPORATE BIDDER]

Name of Corporation

Attest:

Signature of Secretary, Assistant Secretary
Treasurer, Assistant Treasurer or
other authorized representative**

By:

Signature of President, Vice President or
other authorized representative*

(Print Name of Representative)

(Print Name of Representative)

** If a representative other than the President or a Vice President of the Corporation signs this Bid on its behalf, then attach a valid corporate resolution or other appropriate proof, dated prior to or as of the date of the Bid, evidencing authority to execute this Bid on behalf of the Corporation.*

*** If a representative other than the Secretary, an Assistant Secretary, the Treasurer or an Assistant Treasurer attests to the signature of the corporate representative, then attach a valid corporate resolution or other appropriate proof, dated prior to or as of the date of the Bid, evidencing authority to attest to the execution of this Bid on behalf of the Corporation.*

Business Address:

Tax Identification Number:

(1) Complete the following statement: The Corporation has been organized and is existing under laws of the State/Commonwealth of: _____.

(2) If Corporation has been organized under laws of a State other than those of the Commonwealth of Pennsylvania, complete, by deletion as appropriate, the following statement:

[The Corporation (has) (has not) been granted a certificate of authority to do business in the Commonwealth of Pennsylvania under applicable laws.]

(3) If Corporation has been organized under laws other than those of the Commonwealth of Pennsylvania and has NOT been granted a certificate of authority, complete, by deletion as appropriate, the following statement:

[SIGNATURE PAGE FOR CORPORATE BIDDER]

[The Corporation (has) (has not) applied for a certificate of authority to do business in the Commonwealth of Pennsylvania and (has) (has not) attached a copy of the pending application to this Bid.]

[SIGNATURE PAGE FOR A LIMITED LIABILITY COMPANY (LLC) BIDDER]

Name of Limited Liability Company

Attest:

By:

Signature of an Authorized Representative*

Signature of Authorized Representative**

(Print Name of Representative)

(Print Name of Representative)

** The individual attesting verifies and represents that the person whose signature is affixed to this Bid on behalf of the Limited Liability Company (LLC) is duly authorized in accordance with the representations hereafter set forth.*

*** Check the box which applies to this Bid:*

_____ *The Certificate of Organization provides that LLC is to be managed by managers, and this Bid has been executed by a Manager fully authorized by the Certificate, by the Operating Agreement and by Resolutions of the LLC. Copies of the relevant documents are provided with the Bid or can be provided upon request within three (3) working days.*

_____ *The Certificate of Organization does not provide that LLC is to be managed by managers, and this Bid has been executed by a Member fully authorized by the Certificate, by the Operating Agreement and by Resolutions of the LLC. Copies of the relevant documents are provided with the Bid or can be provided upon request within three (3) working days.*

_____ *This Bid has been executed by a representative of the LLC who is not a Manager or a Member of the LLC, and instead who holds the office of _____ (insert title), and the execution of this Bid is fully authorized by the Certificate, by the Operating Agreement and by Resolutions of the LLC. Copies of the relevant documents are provided with the Bid or can be provided upon request within three (3) working days. The Bidder and the individuals signing and attesting to the execution of this document further represent that (1) execution of the Bid is carrying on business in the usual way; (2) the LLC authorizes the execution of this Bid even if execution and submission of this Bid is not carrying on business in the usual way for the LLC; and (3) to the best of the individuals' information and belief, the Owner has no knowledge of the Member's or the Manager's lack of actual authority, or of any applicable and relevant restriction on his or her authority.*

Business Address:

Tax Identification Number:

[SIGNATURE PAGE FOR A LIMITED LIABILITY COMPANY (LLC) BIDDER]

(1) Complete the following statement: The LLC has been organized and is existing under laws of the State/Commonwealth of _____.

(2) If the LLC has been organized under laws of a State other than those of the Commonwealth of Pennsylvania, complete, by deletion as appropriate, the following statement:

[The LLC (has) (has not) been granted a certificate of authority to do business in the Commonwealth of Pennsylvania under applicable laws.]

(3) If the LLC has been organized under laws other than those of the Commonwealth of Pennsylvania and has NOT been granted a certificate of authority, complete, by deletion as appropriate, the following statement:

[The LLC (has) (has not) applied for a certificate of authority to do business in the Commonwealth of Pennsylvania and (has) (has not) attached a copy of the pending application to this Bid.]



Philadelphia Regional Port Authority
3460 North Delaware Ave. 2nd Floor
Philadelphia, PA 19134

RIDER TO SUBCONTRACT AGREEMENT

RIDER TO SUBCONTRACT AGREEMENT

PRPA Project No:

Project Description:

Parties:

Contractor:

Subcontractor:

(Name & Address)

(Name & Address)

Background:

The Contractor and the Philadelphia Regional Port Authority ("Authority") are parties to an agreement for the above-referenced project ("Master Agreement").

Subcontract acknowledges that it has received a copy of the Master Agreement.

Contractor desires to subcontract a portion of the work to be performed under the Master Agreement and Subcontractor desires to perform the portion of work under the Master Agreement.

Contractor and Subcontractor have entered into an agreement detailing the work to be performed ("Subcontract Agreement").

Terms:

The Contractor and Subcontractor, intending to be legally bound and for good consideration, enter into the following Rider to Subcontract Agreement.

Subcontractor agrees that all Subcontractor work and services shall be furnished and performed by Subcontractor under the Subcontract Agreement will be done in strict accordance and consistent with the Master Agreement and requirements therein and also the terms and conditions of the Subcontract Agreement.

Subcontractor agrees to timely submit to Contractor applications for payment in a reasonable time to enable Contractor to apply for payment in accordance with Section XIV of the Master Agreement.

Subcontractor agrees that all claims for additional costs, extensions of time or otherwise with respect to subcontracted portions of the Work, as defined in the Master Agreement, shall be

submitted to the Contractor (via any Subcontractor or sub-subcontractor where appropriate) in the time and manner provided in the Master Agreement for like claims by the Contractor upon the Authority.

Subcontractor agrees to fully warrant and guarantee for the benefit of the Authority the effectiveness, fitness for the purpose intended, quality and merchantability of any item provided and/or installed by such Subcontractor.

Subcontractor agrees that the Subcontractor is without privity of contract to the Authority and that the Subcontractor agrees by signing this rider to its Subcontract Agreement that the Subcontractor neither acquires nor intends to acquire any rights against the Authority pursuant to a third party beneficiary theory or any other theory.

Subcontractor agrees to cause any of its sub contractors to execute a rider agreeing to all of the provisions of Section II (E) of the Master Agreement.

The specific terms of this Rider take precedence over the Subcontract Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Rider to be duly executed as of the day and year first above written.

[SUBCONTRACTOR]

[CONTRACTOR]

By: _____
Name
Title:
Date:

By: _____
Name
Title:
Date:



Philadelphia Regional Port Authority
3460 North Delaware Ave. 2nd Floor
Philadelphia, PA 19134

DOOR HARDWARE SPECIFICATIONS

Note to Bidders: This section added

SECTION 087100 – DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes commercial door hardware for the following:

- 1. Swinging doors.
- 2. Other doors to the extent indicated.

- B. Door hardware includes, but is not necessarily limited to, the following:

- 1. Mechanical door hardware.
- 2. Electromechanical door hardware.
- 3. Cylinders specified for doors in other sections.

- C. Related Sections:

- 1. Division 08 Section "Hollow Metal Doors and Frames".
- 2. Division 08 Section "Flush Wood Doors".
- 3. Division 28 Section "Access Control".

- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

- 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
- 2. ICC/IBC - International Building Code.
- 3. NFPA 70 - National Electrical Code.
- 4. NFPA 80 - Fire Doors and Windows.
- 5. NFPA 101 - Life Safety Code.
- 6. NFPA 105 - Installation of Smoke Door Assemblies.
- 7. State Building Codes, Local Amendments.

- E. Standards: All hardware specified herein shall comply with the following industry standards:

- 1. ANSI/BHMA Certified Product Standards - A156 Series
- 2. UL10C – Positive Pressure Fire Tests of Door Assemblies

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Warranty information for each product.
 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Shop Drawings: Details of electrified access control hardware indicating the following:
1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
 - a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
 - b. Complete (risers, point-to-point) access control system block wiring diagrams.
 - c. Wiring instructions for each electronic component scheduled herein.

2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.
- D. Proof of Certification: Provide copy of manufacturer(s) official certification or accreditation document indicating proof of status as a qualified and authorized provider of the primary Integrated Wiegand Access Control Products.
- E. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- F. Informational Submittals:
 1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- G. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- D. Integrated Wiegand, Wireless, and IP-Enabled Access Control Products Supplier Qualifications: Integrated access control products and accessories are required to be supplied and installed through current members of the ASSA ABLOY "Authorized Channel Partner" (ACP) and "Certified Integrator" (CI) programs. Suppliers are to be factory trained, certified prior to project bid, and a direct purchaser of the specified product. Installers are to be factory trained, certified prior to project bid, and are responsible for commissioning, servicing, and warranting the installed equipment specified for the project.
- E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.

1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
 2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.
- F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
1. Function of building, purpose of each area and degree of security required.
 2. Plans for existing and future key system expansion.
 3. Requirements for key control storage and software.
 4. Installation of permanent keys, cylinder cores and software.
 5. Address and requirements for delivery of keys.
- H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
 3. Review sequence of operation narratives for each unique access controlled opening.
 4. Review and finalize construction schedule and verify availability of materials.
 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.
- 1.5 DELIVERY, STORAGE, AND HANDLING
- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
 - B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
 - C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.
- C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of the hardware.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 4. Electrical component defects and failures within the systems operation.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
 - 1. Ten years for mortise locks and latches.
 - 2. Five years for exit hardware.
 - 3. Twenty five years for manual surface door closer bodies.
 - 4. Two years for electromechanical door hardware.

1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
 - 1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
 - 1. Quantity: Provide the following hinge quantity:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.
 - c. Four Hinges: For doors with heights 91 to 120 inches.
 - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
 - 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
 - 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
 - b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
 - 4. Hinge Options: Comply with the following:

- a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
5. Manufacturers:
- a. Hager Companies (HA) - CB Series.
 - b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - TA Series.
 - c. Stanley Hardware (ST) - CB Series.
- B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge. with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.
1. Manufacturers:
- a. Bommer Industries (BO).
 - b. Hager Companies (HA).
 - c. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).

2.3 POWER TRANSFER DEVICES

- A. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.
1. Manufacturers:
- a. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE) – EL-CEPT Series.
 - b. Securitron (SU) - EL-CEPT Series.
 - c. Von Duprin (VD) - EPT-10 Series.
- B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.
1. Provide one each of the following tools as part of the base bid contract:
- a. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - Electrical Connecting Kit: QC-R001.

- b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - Connector Hand Tool: QC-R003.

2. Manufacturers:

- a. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) – QC-C Series.

2.4 DOOR OPERATING TRIM

A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.

1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
2. Furnish dust proof strikes for bottom bolts.
3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.

5. Manufacturers:

- a. Door Controls International (DC).
- b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
- c. Trimco (TC).

B. Coordinators: ANSI/BHMA A156.3 certified door coordinators consisting of active-leaf, hold-open lever and inactive-leaf release trigger. Model as indicated in hardware sets.

1. Manufacturers:

- a. Door Controls International (DC).
- b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
- c. Trimco (TC).

C. Door Push Plates and Pulls: ANSI/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.

1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.

5. Manufacturers:

- a. Hiawatha, Inc. (HI).

- b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
- c. Trimco (TC).

2.5 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
- C. Cylinders: Original manufacturer cylinders complying with the following:
 - 1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
 - 2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 - 3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
 - 4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 - 5. Keyway: Manufacturer's Standard.
- D. Patented Cylinders: ANSI/BHMA A156.5, Grade 1, certified cylinders employing a utility patented and restricted keyway requiring the use of patented controlled keys. Provide bump resistant, fixed core cylinders as standard with solid recessed cylinder collars. Cylinders are to be factory keyed where permanent keying records will be established and maintained.
 - 1. Provide a 6 pin multi-level master key system comprised of patented controlled keys and security and high security cylinders operated by one (1) key of the highest level. Geographical exclusivity to be provided for all security and high security cylinders and UL437 certification where specified.
 - a. Level 1 Cylinders: Provide utility patented controlled keyway cylinders that are furnished with patented keys available only from authorized distribution.
 - b. Level 2 Cylinders: Provide utility patented controlled keyway and side bar locking incorporating unique angled bottom pins for geographical exclusivity. Cylinders constructed to provide protection against bumping and picking.
 - c. Level 3 Cylinders: Provide utility patented controlled keyway and side bar locking incorporating unique angled bottom pins for geographical exclusivity. Cylinders to be UL437 certified and constructed to provide protection against bumping, picking, and drilling.
 - d. Refer to hardware sets for specified levels.
 - 2. Manufacturers:
 - a. Sargent Manufacturing (SA) - Degree Series.
 - b. Corbin Russwin (RU) – Access 3 Series.
- E. Keying System: Each type of lock and cylinders to be factory keyed.
 - 1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
 - 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.

3. New System: Key locks to a new key system as directed by the Owner.
- F. Key Quantity: Provide the following minimum number of keys:
1. Change Keys per Cylinder: Two (2)
 2. Master Keys (per Master Key Level/Group): Five (5).
 3. Construction Keys (where required): Ten (10).
- G. Construction Keying: Provide construction master keyed cylinders.
- H. Key Registration List (Bitting List):
1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
 2. Provide transcript list in writing or electronic file as directed by the Owner.
- I. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.
1. Manufacturers:
 - a. Lund Equipment (LU).
 - b. MMF Industries (MM).
 - c. Telkee (TK).
- J. Key Control Software: Provide one network version of "Key Wizard" branded key management software package that includes one year of technical support and upgrades to software at no charge. Provide factory key system formatted for importing into "Key Wizard" software.

2.6 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
1. Mortise locks to be certified Security Grade 1.
 2. Extended cycle test: Locks to have been cycle tested in ordinance with ANSI/BHMA 156.13 requirements to 10 million cycles.
 3. Manufacturers:
 - a. Corbin Russwin Hardware (RU) – ML2000 Series.
 - b. Sargent Manufacturing (SA) – 8200 Series.

2.7 INTEGRATED WIEGAND OUTPUT LOCKING DEVICES – MULTI-CLASS READER

- A. Integrated Wiegand Output Multi-Class Mortise Locks: Wiegand output ANSI A156.13, Grade 1, mortise lockset with integrated card reader, request-to-exit signaling, door position status switch, and latchbolt monitoring in one complete unit. Hard wired, solenoid driven locking/unlocking control of the lever handle trim, 3/4" deadlocking anti-friction latch, and 1" case-hardened steel deadbolt. Lock is U.L listed and labeled for use on up to 3 hour fire rated openings. Available with or without keyed high security cylinder override.
1. Open architecture, hard wired platform supports centralized control of locking units with new or existing Wiegand compatible access control systems. Latchbolt monitoring and door position switch act in conjunction to report door-in-frame (DPS) and door latched (door closed and latched) conditions.
 2. Integrated reader supports the following credentials:
 - a. 125kHz proximity credentials: HID, AWID, Indala, and EM4102.
 - b. 13.56 MHz proximity credentials: HID iClass, HID iClass SE, SE for MIFARE Classic, DESFire EV1.
 3. 12VDC external power supply required for reader and lock, with optional 24VDC lock solenoid. Fail safe or fail secure options.
 4. Energy Efficient Design: Provide lock bodies which have a holding current draw of 15mA maximum, and can operate on either 12 or 24 volts. Locks are to be field configurable for fail safe or fail secure operation.
 5. Support end-of-line resistors contained within the lock case.
 6. Installation requires only one cable run from the lock to the access control panel without requirements for additional proprietary lock panel interface boards or modules.
 7. Installation to include manufacturer's access control panel interface board or module where required for Wiegand output protocol.
 8. Manufacturers:
 - a. Corbin Russwin (RU) – ML2000 SE-LP10 Series.
 - b. Sargent Manufacturing (SA) – M1 8200 Series.

2.8 AUXILIARY LOCKS

- A. Mortise Deadlocks, Large Case: ANSI/BHMA A156.13, Series 1000, Grade 1, certified large case mortise type deadlocks constructed of heavy gauge wrought corrosion resistant steel. One piece stainless steel bolts with a 1" throw. Deadlocks to be products of the same source manufacturer and keyway as other locksets.
1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - ML2000 Series.
 - b. Sargent Manufacturing (SA) - 8200 Series.
 - c. Yale Locks and Hardware (YA) - 8800 Series.
- B. Narrow Case Deadlocks and Deadlatches: ANSI/BHMA 156.13 Series 1000 Grade 1 certified narrow case deadlocks and deadlatches for swinging or sliding door applications. All functions shall be manufactured in a single sized case formed from 12 gauge minimum, corrosion resistant steel (option for fully stainless steel case and components). Provide minimum 2 7/8" throw laminated stainless steel bolt. Bottom rail deadlocks to have 3/8" diameter bolts.
1. Manufacturers:

- a. Adams Rite Manufacturing (AD) - MS1850S / MS1950 Series.

2.9 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
 4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
- B. Standards: Comply with the following:
 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
 2. Strikes for Bored Locks and Latches: BHMA A156.2.
 3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
 4. Dustproof Strikes: BHMA A156.16.

2.10 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
 1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
 2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
 3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
 4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
 5. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
 - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.

- b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
 6. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
 7. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
 8. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
 9. Rail Sizing: Provide exit device rails factory sized for proper door width application.
 10. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.
 - b. Sargent Manufacturing (SA) - 80 Series.

2.11 INTEGRATED WIEGAND OUTPUT EXIT DEVICES – MULTI-CLASS READER

- A. Integrated Wiegand Output Multi-Class Exit Hardware: Wiegand output ANSI 156.3 Grade 1 rim, mortise, and vertical rod exit device hardware with integrated proximity card reader, latchbolt and touchbar monitoring, and request-to-exit signaling, in one complete unit. Hard wired, solenoid driven locking/unlocking control of the lever handle exit trim with 3/4" throw latch bolt. U.L listed and labeled for either panic or "fire exit hardware" for use on up to 3 hour fire rated openings. Available with or without keyed high security cylinder override.
1. Open architecture, hard wired platform supports centralized control of locking units with new or existing Wiegand compatible access control systems. Inside push bar (request-to-exit) signaling and door position (open/closed status) monitoring (via separately connected DPS).
 2. Integrated reader supports the following credentials:
 - a. 125kHz proximity credentials: HID, AWID, Indala, and EM4102.
 - b. 13.56 MHz proximity credentials: HID iClass, HID iClass SE, SE for MIFARE Classic, DESFire EV1.
 3. 12VDC external power supply required for reader. 24VDC required for solenoid operated exit trim. Fail safe or fail secure options.
 4. Installation requires only one cable run from the exit hardware to the access control panel without requirements for additional proprietary lock panel interface boards or modules.
 5. Competitor Alternates Allowed Option>Installation to include manufacturer's access control panel interface board or module where required for Wiegand output protocol.
 6. Manufacturers:
 - a. Corbin Russwin (RU) – ED5000 SE-LP10 Series.

- b. Sargent Manufacturing (SA) – M1 80 Series.

2.12 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:

1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.
4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.
5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.

1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - DC8000 Series.
 - b. Sargent Manufacturing (SA) - 351 Series.
 - c. Norton Door Controls (NO) - 7500 Series.

2.13 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.

2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
 - a. Stainless Steel: 300 grade, 050-inch thick.
5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
6. Manufacturers:
 - a. Hiawatha, Inc. (HI).
 - b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
 - c. Trimco (TC).

2.14 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
 1. Manufacturers:
 - a. Hiawatha, Inc. (HI).
 - b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
 - c. Trimco (TC).

2.15 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.

1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- F. Manufacturers:
 1. National Guard Products (NG).
 2. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
 3. Reese Enterprises, Inc. (RE).

2.16 ELECTRONIC ACCESSORIES

- A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.
 1. Manufacturers:
 - a. Sargent Manufacturing (SA) – 3280 Series.
 - b. Securitron (SU) - DPS Series.
- B. Wiegand Test Unit: Test unit verifies proper Wiegand output integrated card reader lock installation in the field by testing for proper wiring, card reader data integrity, and lock functionality including lock/unlock, door position, and request-to-exit status. 12 or 24VDC voltage adjustable operating as Fail Safe or Fail Secure.
 1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) – WT2 Wiegand Test Unit.
 - b. Sargent Manufacturing (SA) – WT2 Wiegand Test Unit.
 - c. Yale Locks and Hardware (YA) – WT2 Wiegand Test Unit.
- C. Switching Power Supplies: Provide switching power supplies that are dual voltage, UL listed, supervised units. Units shall be field selectable with a dedicated battery charging circuit that provide 4 Amp at 12VDC or 24VDC continuous, with up to 16 independently controlled power limited outputs. Units shall tolerate brownout or overvoltage input $\pm 15\%$ of nominal voltage and have thermal shutdown protection with auto restart. Circuit breaker shall protect against overcurrent and reverse battery faults and units shall be available with a single relay fire trigger

or individually triggered relayed outputs. Provide the least number of units, at the appropriate amperage level, sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.

1. Manufacturers:
 - a. Securitron (SU) - AQ Series.

2.17 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.18 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
 - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

- A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
- B. The supplier is responsible for handing and sizing all products and providing the correct option for the appropriate door type and material where more than one is presented in the hardware sets. Quantities listed are for each pair of doors, or for each single door.

Hardware Sets

Set: 1.0

Doors: 112A

2 Continuous Hinge	CFM__HD1 X LAR		PE
2 Flush Bolt (manual)	555 (metal) / 557 (wood)	US26D	RO
1 Dust Proof Strike	570	US26D	RO
1 Mortise Deadlock	MS1850S	628	AD
1 Cylinder	4066	130	AD
1 Cylinder	DG2 63 42	US32D	SA
2 Pull	RM201 Mtg-Type 12XHD	US32D-316	RO
2 Push Bar	RM350 Mtg-Type 12XHD	US32D-	RO

		316	
2 Surface Closer	CPS7500 (brackets and drop plate as required)	689	NO
1 Threshold	273x3AFG MSES10SS		PE
1 Gasketing	By Door Manufacturer		00
2 Sweep	307APK		PE

Set: 2.0

Doors: 113C

1 Continuous Hinge	CFM__HD1 X LAR		PE
1 Exit Device (nightlatch)	DG263 16 8804	US32D	SA
1 Pull	RM201 Mtg-Type 12XHD	US32D-316	RO
1 Surface Closer	CPS7500 (brackets and drop plate as required)	689	NO
1 Threshold	271A MSES10SS		PE
1 Gasketing	By Door Manufacturer		00
1 Sweep	307APK		PE

Set: 3.0

Doors: 120A, 120B, 120C, 120D, 120E, 301

1 Continuous Hinge	CFM__HD1 X LAR		PE
1 Exit Device (nightlatch)	DG263 16 8804	US32D	SA
1 Pull	RM201 Mtg-Type 12XHD	US32D-316	RO
1 Surface Closer	CLP7500 (brackets and drop plate as required)	689	NO
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO
1 Threshold	271A MSES10SS		PE
1 Gasketing	S88BL (Head & Jamb)		PE
1 Sweep	307APK		PE

Set: 4.0

Doors: 124, 124F, 124JJ, 124PP, 124Q, 124Z

1 Continuous Hinge	CFM__HD1 PT X LAR		PE
1 Access Control Rim Exit	DG263 M1-8876-24V-IPS ETNJ	US32D	SA ↵
1 Surface Closer	CLP7500 (brackets and drop plate as required)	689	NO
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO
1 Threshold	271A MSES10SS		PE
1 Gasketing	S88BL (Head & Jamb)		PE

1 Sweep	307APK		PE
1 ElectroLynx Harness (frame)	QC-C1500P		MK ↘
1 ElectroLynx Harness (door)	QC-C*** (Length / Type as Required)		MK ↘
1 Wiring Diagram	WD-SYSPK (Elevations and Point to Point)		SA
1 Electric Power Transfer	EL-CEPT		SU ↘
1 Power Supply	AQD4-8C8R2		SU

Set: 5.0

Doors: 125

2 Continuous Hinge	CFM__HD1 X LAR		PE
1 Flush Bolt (set, automatic)	2842/2942	US26D	RO
1 Dust Proof Strike	570	US26D	RO
1 Storeroom Lock	DG263 8204 LNNJ	US26D	SA
1 Coordinator	2672 Wear Plates	Black	RO
2 Surface Closer	CLP7500 (brackets and drop plate as required)	689	NO
2 Kick Plate	K1050 10" high BEV CSK	US32D	RO
1 Threshold	1715A		PE
1 Gasketing	S88BL (Head & Jambs)		PE
2 Sweep	307APK		PE
1 Astragal	S771C		PE

Set: 6.0

Doors: 101A, 102A

1 Continuous Hinge	CFM__HD1 X LAR		PE
1 Storeroom Lock	DG263 8204 LNNJ	US26D	SA
1 Surface Closer	CLP7500 (brackets and drop plate as required)	689	NO
1 Threshold	271A MSES10SS		PE
1 Gasketing	S88BL (Head & Jambs)		PE
1 Rain Guard	346C		PE
1 Sweep	307APK		PE

Set: 7.0

Doors: 113A

3 Hinge	TA2714 FT	US26D	MK
1 Exit Device (passage)	12 8815 ETNJ	US32D	SA
1 Surface Closer	7500 (brackets and drop plate as required)	689	NO

1 Wall/ Floor Stop	RM861 / RM850	US32D	RO
1 Gasketing	S88BL (Head & Jambs)		PE

Set: 8.0

Doors: 113B

3 Hinge (heavy weight)	T4A3786 FT	US26D	MK
1 Exit Device (passage)	12 8815 ETNJ	US32D	SA
1 Surface Closer	CLP7500 (brackets and drop plate as required)	689	NO
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO
1 Gasketing	S88BL (Head & Jambs)		PE

Set: 9.0

Doors: 107

3 Hinge	TA2714 FT	US26D	MK
1 Storeroom Lock	DG263 8204 LNNJ	US26D	SA
2 Wall/ Floor Stop	RM861 / RM850	US32D	RO
3 Silencer	608		RO

Set: 10.0

Doors: 118

3 Hinge	TA2714 x NRP FT	US26D	MK
1 Storeroom Lock	DG263 8204 LNNJ	US26D	SA
1 Wall/ Floor Stop	RM861 / RM850	US32D	RO
3 Silencer	608		RO

Set: 11.0

Doors:

3 Hinge	TA2714 FT	US26D	MK
1 Storeroom Lock	DG263 8204 LNNJ	US26D	SA
1 Surface Closer	(PR) 7500 (Reg or PA) (brackets and drop plate as required)	689	NO
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO
1 Wall/ Floor Stop	RM861 / RM850	US32D	RO
3 Silencer	608		RO

Set: 12.0

Doors: 103, 123

3 Hinge	TA2714 FT	US26D	MK
1 Storeroom Lock	DG263 8204 LNNJ	US26D	SA
1 Surface Closer	7500 (brackets and drop plate as required)	689	NO
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO
1 Wall/ Floor Stop	RM861 / RM850	US32D	RO
3 Silencer	608		RO

Set: 13.0

Doors: 102B

3 Hinge	TA2714 FT	US26D	MK
1 Storeroom Lock	DG263 8204 LNNJ	US26D	SA
1 Surface Closer	(PR) 7500 (Reg or PA) (brackets and drop plate as required)	689	NO
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO
1 Wall/ Floor Stop	RM861 / RM850	US32D	RO
1 Gasketing	S88BL (Head & Jambs)		PE

Set: 14.0

Doors: 101B

3 Hinge	TA2714 FT	US26D	MK
1 Storeroom Lock	DG263 8204 LNNJ	US26D	SA
1 Surface Closer	CLP7500 (brackets and drop plate as required)	689	NO
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO
1 Gasketing	S88BL (Head & Jambs)		PE

Set: 15.0

Doors: 104, 105, 108, 201, 204, 205

3 Hinge	TA2714 FT	US26D	MK
1 Office Lock	DG263 8205 LNNJ	US26D	SA
1 Wall/ Floor Stop	RM861 / RM850	US32D	RO
3 Silencer	608		RO

Set: 16.0

Doors: 109, 114A

3 Hinge	TA2714 FT	US26D	MK
1 Passage Latch	8215 LNNJ	US26D	SA
1 Surface Closer	7500 (brackets and drop plate as required)	689	NO

1 Kick Plate	K1050 10" high BEV CSK	US32D	RO
1 Wall/ Floor Stop	RM861 / RM850	US32D	RO
3 Silencer	608		RO

Set: 17.0

Doors: 203, 206

3 Hinge	TA2714 FT	US26D	MK
1 Classroom Lock	DG263 8237 LNNJ	US26D	SA
1 Wall/ Floor Stop	RM861 / RM850	US32D	RO
3 Silencer	608		RO

Set: 18.0

Doors:

3 Hinge	TA2714 FT	US26D	MK
1 Classroom Lock	DG263 8237 LNNJ	US26D	SA
1 Surface Closer	(PR) 7500 (Reg or PA) (brackets and drop plate as required)	689	NO
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO
1 Wall/ Floor Stop	RM861 / RM850	US32D	RO
3 Silencer	608		RO

Set: 19.0

Doors: 121

3 Hinge	TA2714 FT	US26D	MK
1 Classroom Lock	DG263 8237 LNNJ	US26D	SA
1 Surface Closer	CLP7500 (brackets and drop plate as required)	689	NO
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO
3 Silencer	608		RO

Set: 20.0

Doors: 110, 111, 122, 209

3 Hinge	TA2714 FT	US26D	MK
1 Privacy Lock	49 8265 LNNJ	US26D	SA
1 Wall/ Floor Stop	RM861 / RM850	US32D	RO
3 Silencer	608		RO

Set: 21.0

Doors: 106, 112B, 119, 202

3 Hinge (heavy weight)	T4A3786 x NRP FT	US26D	MK
1 Access Control Mort Lock	DG263 M1-82271-24V-IPS LNNJ	US26D	SA ↘
1 Surface Closer	CLP7500 (brackets and drop plate as required)	689	NO
1 Threshold	151A MSES10		PE
1 Gasketing	S88BL (Head & Jambs)		PE
1 Door Bottom	411ANBL		PE
1 ElectroLynx Harness (frame)	QC-C1500P		MK ↘
1 ElectroLynx Harness (door)	QC-C*** (Length / Type as Required)		MK ↘
1 Wiring Diagram	WD-SYSPK (Elevations and Point to Point)		SA
1 Electric Power Transfer	EL-CEPT		SU ↘
1 Position Switch	DPS-M-BK		SU ↘
1 Power Supply	AQD4-8C8R2		SU

Notes: PRESENTING AUTHORIZED CREDENTIAL TO INTERGAL LOCK CARD READER UNLOCKS EXTERIOR TRIM ALLOWING ACCESS. INSIDE LEVER ALLOWS EGRESS AT ALL TIMES. INSIDE LEVER HAS RX SWITCH. LATCHBOLT MONITORED.

Set: 22.0

Doors: 114B, 115

3 Hinge (heavy weight)	T4A3786 FT	US26D	MK
1 Push Plate	70C	US32D	RO
1 Pull Plate	BF 110x70C	US32D	RO
1 Surface Closer	(PR) 7500 (Reg or PA) (brackets and drop plate as required)	689	NO
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO
1 Wall/ Floor Stop	RM861 / RM850	US32D	RO
3 Silencer	608		RO

Set: 23.0

Doors: 116, 117

3 Hinge (heavy weight)	T4A3786 FT	US26D	MK
1 Push Plate	70C	US32D	RO
1 Pull Plate	BF 110x70C	US32D	RO
1 Surface Closer	CLP7500 (brackets and drop plate as required)	689	NO
1 Kick Plate	K1050 10" high BEV CSK	US32D	RO
3 Silencer	608		RO

Set: 24.0

Doors: 101C, 123X, 124A, 124AA, 124B, 124BB, 124C, 124CC, 124D, 124DD, 124E, 124EE, 124FF, 124G, 124GG, 124H, 124HH, 124J, 124K, 124KK, 124L, 124LL, 124M, 124MM, 124N, 124NN, 124P, 124R, 124S, 124T, 124U, 124V, 124W, 124Y

1 Hardware	By Door Manufacturer	00
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Set: 25.0

Doors: MISC

1 Repair Kit	QC-R001	MK ↗
1 Crimp Tool	QC-R003	MK ↗
1 Wiring Diagram	WD-SYSPK (Elevations and Point to Point)	SA
1 Test Unit	WT1	SA ↗
1 Key Cabinet	1205	LU

END OF SECTION 087100