

CONSTRUCTION MANAGER'S MANUAL

Project: Washinton County COVID Mitigation

Issue Date: 10/24/2024

TABLE OF CONTENTS

Table of Contents	2
1.00 Invitation to Bid	4
.01 Project Information	4
.02 Bidding Procedure	4
.03 Prebid Meeting	5
.04 Project Team Information	5
.05 Site Specific Safety Considerations	5
2.00 Bidding Instructions and Supplemental Information	6
.01 Instructions to Bidders	6
3.00 Bid Forms	12
.01 General Scope Requirements	12
.02 Bid Form (Washington County COVID Mitigation)	14
5.00 Bid Packages	17
01.0 Final Cleaning	17
02. Demolition (Selective Building)	18
03.0 Concrete	20
04.0 Masonry	23
05.0 Structural and Miscellaneous Steel (Supply)	25
05.1 Structural and Pre-Engineered Metal Building (Install	ation)27
06.2 Millwork and Carpentry	29
07.0 Waterproofing, Dampproofing, Joint Sealants	31
07.4 Roofing, Flashing, Sheet Metal	
08.1 Coiling Doors and Service Doors	
09.0 Light Gauge Framing, Drywall, Acoustical & Firestopp	ing36
09.1 Tile and Commercial Flooring	
09.3 Epoxy Flooring and Walls	40
09.4 Painting, Wallcovering, and Sealed Concrete	41
10.0 Division 8 & 10: Doors, Frames, & Specialties (Supply)43
10.1 Division 8 & 10: Doors, Hardware, & Specialties (Insta	allation)46

	10.2 Aluminum Canopies	48
	11.1 Laundry Equipment	50
	11.2 Walk-in Freezer & Cooler	51
	11.3 Detention Equipment and Security Electronics	53
	13.1 Pre-Engineered Metal Building (Supply)	55
	13.2 Pre-Engineered Metal Building (Installation)	57
	21.1 Fire Suppression.	59
	22.1 Plumbing	61
	23.1 Heating, Ventilation, Air Conditioning	64
	26.1 Electrical, Communication and Electronic Safety	67
	31.1 Earthwork, Storm Drainage and Site Utilities	70
	32.1 Asphalt Paving	74
	32.4 Pavement Marking	75
	32.5 Security and Non-Security Fencing	76
	32.7 Landscaping and Irrigation	77
4	.00 Schedule	79
5	.00 Other Forms	81
	.01 Insurance Requirements	81
	.02 Example Contracts, Forms, and Other Documents	88
	.03 Virtual Design Construction Protocol	89
	.04 Project-Specific Plan for Lean Practices	93

1.00 INVITATION TO BID

Nabholz Construction Corporation (herein after referred to as "Nabholz" or "Construction Manager") is accepting specialty contractor and supplier proposals for the below referenced project. All proposals or bids received shall be submitted in accordance with the requirements of the Construction Manager's Manual (the "CM Manual"). Plans and bidding documents will be available via internet link, or at various reprographic locations. Bidders should contact Nabholz for access to bidding documents.

Bid Packages will be due at the time and date listed below. Additional instructions and details pertaining to bid submission are listed herein.

.01 Project Information

Project Name:	Washinton County Covid Mitigation
Nabholz Job Number:	TBD
Jobsite Address:	1155 West Clydesdale Drive, Fayetteville, AR 72701
Job Description:	Building Additions, Renovations, & Site
	Upgrades/Improvements
LEED Certification:	No
Approximate Construction Start:	December 2024
Approximate Construction Finish:	June 2026
Are BIM/VDC Practices Required?	No
Is this a "Nothing Hits the Floor" Project?	Yes
Is this a CCIP Project? (Contractor	No
Controlled Insurance Program)	
Is this an OCIP Project? (Owner	No
Controlled Insurance Program)	
Is this job prevailing wage?	No
Is this job taxable?	Yes

.02 Bidding Procedure

Bid Date:	11/13/2024
Bid Time:	2:00pm
Bid Submission Procedure:	Bids should be emailed to <u>dalton.schoonover@nabholz.com</u> or
	submitted via the building connected website. Hand deliveries will be
	accepted from 12:00pm – 2:00pm on 11/13/2024 at the Washington
	County Courthouse (280 N. College Ave., Fayetteville, AR 72701).
Private or Public Opening:	Public Opening: Bids will be opened and read aloud at the
	Washington County Courthouse (280 N. College Ave., Fayetteville, AR
	72701). Bids submitted after 2:00pm on 11/13/2024 will not be
	accepted or read aloud.
Bid Bond Required:	No
Bid Opening Location:	280 N. College Ave., Fayetteville, AR 72701
RFI/Bid Question Deadline:	12:00 PM on 11/4/2024
RFI/Bid Question Process:	Bidders shall submit questions in writing (email is preferred) by the
	established deadline. Questions should reference specific details, plan
	sheets, specifications, or bid manual sections.

.03 Prebid Meeting

Prebid Meeting Date:	10/30/2024	
Prebid Meeting Time:	08:00 AM	
Prebid Meeting Location:	: 1155 West Clydesdale Drive, Fayetteville, AR 72701 (Meet in Parking Lot at East Annex Front Door)	
Is the Prebid Mandatory?	? Attendance is not mandatory but is strongly encouraged and will be	
	considered in final evaluation of all proposals submitted.	

.04 Project Team Information

Nabholz Office:	3301 N. Second Street, Rogers, AR 72756	
Nabholz Project Manager:	Chad Robinson, 385-482-4530, chad.robinson@nabholz.com	
Nabholz Superintendent:	Steve Mies	
Nabholz Estimator(s):	Dalton Schoonover	
Architect:	Architect: Hight Jackson & Associates	
Architect Contact: Phillip Mevert: 479-464-4965 or pmevert@hjarch.com		
Architect Address:	5201 West Village Parkway, Suite 300, Rogers AR 72758	

.05 Site Specific Safety Considerations

Project Safety Considerations	1.	The existing facility is an active jail. Follow any directives given by the Sherrif's Department and/or County Officials.
	2.	
	3.	
	4.	
	5.	
	6.	
	7.	

Construction Manager will use the standard Master Contract, Project Contract, and any amendments thereto, collectively, (the "Subcontract"), for all Subcontractors. Construction Manager will use standard Purchase Order ("PO") for all Suppliers. Copies of these documents are available in electronic or hard copy upon request. We may also require performance and payment bonds for Subcontractors using Consensus 706 and 707 by an acceptable surety company or require other forms of surety.

Job Conditions and Job Safety in accordance with all safety regulations, including, federal (OSHA), state, and local, Construction Manager policy, and Subcontract or Purchase Order shall be required of all personnel on the Project including Subcontractors, Suppliers, and second tier Subcontractors and Suppliers. Reference Site-Specific Safety Considerations (Section 1.05 of this Manual) and Nabholz Safety Standards (Section 5.02 of this Manual). In addition, Construction Manager will enforce a NO SUBSTANCE ABUSE policy, and will not permit the use of tobacco on the Project site.

Construction Manager is an AA/EOE. All Women Owned Businesses (WBE), Minority Owned Businesses (MBE), and Disadvantaged Business Enterprises (DBE), including women, minority, disabled or veteran-owned business, are encouraged to submit a proposal or bid.

2.00 BIDDING INSTRUCTIONS AND SUPPLEMENTAL INFORMATION

.01 Instructions to Bidders

The following instructions apply to all proposals.

- 1. All bids shall be submitted on the bid form found in section 3.00 of this manual, inclusive of the scope of work specified in the applicable bid package.
- 2. Bid bonds are not required for subcontractor proposals over \$100,000, unless stated otherwise in section 1.02.
- 3. Bidders must fulfill prequalification requirements in accordance with CM's trade contractor procurement policy prior to the award of any Bid Package contract. Prequalification Questionnaires and applicable supporting documents are required annually and are available by contacting Chad Robinson, 385-482-4530, chad.robinson@nabholz.com
- 4. Modification to Bid Packages may be cause for rejection of proposal.
- 5. Bidders warrant they have visited the Project site prior to submission of proposals or have attended the pre-bid meeting(s) for the purpose of understanding and accepting all conditions in and around the Project site.
- 6. Bidders warrant that proposals are submitted in accordance with the requirements of CM Manual and Contract Documents. Bidders also warrant that proposals are submitted in accordance with the specification sections and drawings relating to the scope of the Bid Package.
- 7. Bidders must submit questions in writing to the CM no later than seven (7) days prior to the Bid Date or by the established RFI deadline. Responses to Bidders' RFI(s) will be distributed in the form of an Addendum or Clarification to all Bidders. Addenda may be issued during the bidding period. Bidders must acknowledge all addenda on the Form of Proposal. Addenda become part of the Contract Documents.
- 8. Bidders must, immediately notify CM in writing of errors, omissions, discrepancies, or noncompliance with applicable codes and regulations within the Contract Documents or any work which will not fit or properly function if installed as indicated in the drawings and specifications. This requirement does not relieve the Architect of design or professional service responsibilities.
- 9. Bidders must comply with all federal, state, local laws, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Subcontract or Purchase Order ("PO") throughout. Statutes will be deemed to be included in the Subcontract or PO, the same as though herein written out in full.

- 10. Subcontracts and PO will be awarded based on the lowest responsible qualified proposal, provided it is in the best interest of the Owner and/or CM. The Owner and/or CM reserves the right to reject any and all proposals and to waive any informality in the proposals.
- 11. To determine the lowest responsible qualified proposal, the CM will evaluate proposals based on the following considerations:
 - a. Total amount of Bidders' proposal, including Base Bid and Alternate Bids;
 - b. Acknowledgement of issued Addenda;
 - c. Bidders' bonding rate and capacity;
 - d. Sufficiency of Bidders' financial resources;
 - e. Evaluation of Bidder's labor rates;
 - f. Bidders' ability to perform in accordance with the Contract Documents;
 - g. Bidders' ability to perform without delay or interference to other trades or scopes of work;
 - h. Bidders' history of performance on previous projects with CM or Owner;
 - i. Responsibility and reputation of Bidders;
 - j. Evaluation of Bidders' safety record;
 - k. Bidder's history of compliance with applicable laws, codes, and regulations;
 - I. Quality and availability of Bidders' personnel and resources; and
 - m. Amount and nature of Bidders' current or pending litigation.
- 12. Bidders bonding capacity and rate will be evaluated by CM and Owner. The cost of providing Bidders Performance and Payment Bonds may be added to Base Bid to assist in evaluating the lowest responsible qualified proposal. Bidders will be required to use the ConsensusDocs 706 and 707 for bonds, as provided at https://www.nabholz.com/bidding-and-contract-documents/
- 13. CM may perform an investigation of Bidders' financial condition. Bidders agree to assist in any such investigation, which may include a request for Bidders most recent audited or reviewed financial statements, a review of Bidders "Business Information Report" as prepared by Dun & Bradstreet, Inc., or discussions with Bidders' surety and banking agents.
- 14. Bidders are required to provide a price for each specified Alternate Bid, Unit Price, or Price Breakout that affects Bidders' Bid Package.
- 15. Bidders are required to provide unit prices for all labor classifications that apply to Bidder's Bid Package. Labor unit prices will be used to calculate labor for all change order requests.
- 16. The Contract Documents will include all documents identified as Contract Documents in the Agreement between the Construction Manager and Owner, and the Agreement between the Owner and Subcontractor.
 - a. Exhibit B Bid Package Description
- 17. All attachments and exhibits to the Contract between Construction Manager and Owner shall be recognized by Subcontract or PO between Bidders and Owner.
- 18. Bidders' proposal shall include, but not limited to, the following costs:
 - a. All applicable Sales Tax and Freight on Board to Project site unless stated otherwise in the trade specific Bid Package.

- b. Employee orientation, safety training, infection control training, and photo ID badging, as required.
- c. Attendance at preconstruction and project coordination meetings, as required by specifications and Construction Manager's Quality Management System ("QMS"). Subcontractor is required to send foreman, project manager or owner to all weekly Project site coordination meetings pertaining to the Scope of Work and/or as required by Construction Manager's Project Superintendent. Employees attending meetings must have the authority to make commitments on Subcontractor's resources (manpower, equipment, tools, etc.) to maintain Project Schedule or meet milestone dates.
- d. Delivery of submittals, including but not limited to shop drawings, product data, samples, mockups, operating service and maintenance manuals, Material Safety Data Sheets (MSDS), and other documents and submittal materials required by the specifications.
- e. All product testing documentation required by specifications, including test certificates
- f. Coordination for field testing and inspections required by specifications and Construction Manager's QMS. Laboratory testing by others; any re-testing required due to initial failed testing under Scope of Work is the responsibility of Subcontractor. This requirement does not apply to air test & balance tests
- g. Hook-up and consumption charges for temporary utility and telephone services for Bidders' trailers and sheds, including maintenance of temporary services and removal of services when no longer needed.
- h. Task lighting and special electrical service requirements, including but not limited to:
 - i. Electrical Subcontractor will provide temporary power to accommodate the use of power tools, lighting, and masonry saws.
 - ii. Temporary electrical outlets will be spaced so that the entire area of construction can be reached by power tools on a single 100-foot extension cord; and
 - iii. General temporary illumination will be maintained at a level of 5 foot-candles.
- i. Telephones, computers, and internet access.
- j. Drinking water and ice.
- k. Storage sheds, office trailers, and labor sheds.
- I. Portable, gas-driven welders.
- m. All parking for employees shall be coordinated with Construction Manager's Project Superintendent at Bidders' expense.
- All material handling equipment, including but not limited to hoisting with certified operators, bracing, shoring, engineering of shoring/bracing, scaffolding as necessary to move materials and complete Scope of Work.
- o. Daily clean up and removal of all identifiable debris, including but not limited to:
 - Site Cleanup. Subcontractor shall keep the Project site and work areas clean at all times and must sweep each work area and remove all debris prior to discontinuing work in each area. If the Subcontractor fails to immediately

commence compliance with cleanup duties within forty-eight (48) hours after written notification from the Construction Manager of noncompliance, the Construction Manager may implement appropriate cleanup measures without further notice and deduct the cost thereof from any amounts due or to become due the Subcontractor under their Contract. Unless otherwise specified or required by law or regulation, all debris will be sorted as required and deposited on the Project site at a location designated by the project superintendent. Subcontractor shall comply with Construction Manager's on-site recycling and refuse programs. Subcontractors shall follow sustainability plans and programs regardless of whether the job is certified by the U.S. Green Building Council, Green Globes, or any other building certification entity. Temporary protection of work and stored materials. Protect adjacent materials and finishes. Damage caused by performing work will be the responsibility of the trade contractor that caused the damage.

- p. Weather protection as required to protect and perform the Work unless specifically excluded in Bid Package.
- q. All applicable trade permits, licenses, and inspection fees, including bonds required for the Scope of Work.
- r. Engineering layout, professional surveys, grade control and field dimensions associated with the Scope of Work.
- s. Touch-up painting of any prefinished items as required.
- t. Dewatering of all excavations associated with the Scope of Work, as required, preserving structural integrity and workability.
- u. Provide enclosures, temporary heat, blankets, additives, etc. as needed to protect Work and materials from cold weather conditions.
- v. Removal of existing materials in existing facilities, if considered part of the Scope of Work and legally dispose of offsite.
- w. Provide and install firestopping at penetrations in fire walls resulting from Work in accordance with specifications and code requirements. Allow 5-10% destructive testing. Obtain approved submittal before installing firestopping.
- 19. Bidders shall strictly comply with Construction Manager's safety policies and OSHA safety regulations. Construction Manager's complete Safety Standards can be reviewed at Construction Manager's offices or https://www.nabholz.com/bidding-and-contract-documents/ Hard hats and safety glasses, and high-visibility clothing are mandatory for all Project site employees during all phases of the project and must be worn at all times. Prior to working on a Construction Manager's Project, the viewing of Construction Manager's Safety Video by the construction personnel of all Bidders is a mandatory requirement. Hardhat stickers will be given to those construction workers who are confirmed to have viewed the safety video. All workers must have the current calendar year hard hat sticker on their hard hats in order to perform work on Construction Manager's Project.

- 20. Compliance with and weekly updating of Construction Manager's Site Specific Combustibles Storage Plan.
- 21. Compliance with all requirements of Construction Manager's substance abuse and security policies.
- 22. Compliance with Construction Manager's insurance requirements. Reference Section 5.01 of the CM
- 23. Bidders' work shall strictly comply with all adopted Building Codes. Any code-related conflict in drawings and specifications shall be clarified and approved by the local Code Authority prior to installation.
- 24. Bidders shall be held responsible for submission of all submittals within three weeks of Notice of Intent to Award, including but not limited to shop drawings, product data, samples, mock-ups, operating, service and maintenance manuals, material safety data sheet information, and other submittals required by the specifications and Construction Manager's QMS. Submittals to be checked and signed off on by Bidders' representative indicating a review has been completed. Shop Drawings should be started upon Notice of Intent to Award and completed expeditiously to not delay construction. Coordinate with existing conditions and other Subcontractors as needed for locations, sizes and penetrations required. Color samples to be treated as part of the submittal process.
- 25. Bidders shall provide closeout documents per Contract Documents and Contract including, but not limited to, attic stock, as built drawings, testing, warranties and equipment operation manuals before Substantial Completion as a prerequisite to Final Payment. Provide equipment operation instructions to Owner representative, as required.
- 26. Bidders shall provide warranty from date of Substantial Completion of Subcontractor's Work and for the duration per specification. All Warranty and call-back Work resulting from the Scope of Work shall be at no cost to the Owner or Construction Manager. Temporary use of equipment during construction will not affect the Warranty or call-back periods required by the specifications.
- 27. Bidders may not remove or replace its Superintendent or Foreman without prior written consent from Construction Manager.
- 28. Bidders shall coordinate delivery of required materials associated with the Bid Package. Bidders shall provide equipment and personnel necessary to unload, stack, protect, and store materials on Project site. Bidders shall inventory all delivered items and inspect for damage or missing items. Note damaged or missing items on the bill of lading. Construction Manager is not responsible for damaged or misplaced materials or equipment. Bidders shall file all damage claims with insurance carrier(s). Placement of staged items shall be coordinated with Construction Manager's Project Superintendent.
- 29. Stored materials are to be protected from heat and humidity as required by the manufacturer. All materials must be tagged with Project and Construction Manager's name. The items above are subject to the specifications and Owner requirements. Coordinate location of Project site storage containers with Project Superintendent.
- 30. Bidders shall coordinate Work with the Construction Manager and other trades affecting their Scope of Work.

- 31. Bidders shall contact the Project Superintendent if the substrate is unacceptable before installation of the Scope of Work. Installation of materials over substrate implies acceptance of substrate.
- 32. Time is of the essence. Provide a detailed schedule in bar chart format for the Scope of Work within 10 days of receiving Notice of Intent to Award. Comply with the Project Schedule furnishing necessary resources, including overtime, to maintaining project schedule. Should Bidders fall behind schedule due to conditions within Bidders' control, Bidder shall implement whatever means are necessary to accelerate the Bidders' Scope of Work until it is in compliance with the schedule. The cost of accelerating the Work shall be borne by the Bidders. Certain areas may be completed earlier than originally indicated on schedule. Subcontractor must be prepared for any minor adjustments to the schedule as Work progresses.
- 33. Time lost due to weather conditions must be made up by Bidders.
- 34. Bidders shall comply with the established work hours or Owner-specified durations necessary to minimize impact on Owner operations.
- 35. Construction Manager maintains ownership of all schedule free float.
- 36. Bidders shall sequence Work as directed by Construction Manager.
- 37. Bidders must be and have been regularly engaged in Work to be performed for the past 5 years using at least partially their own workforce skilled in that type of work. Project site foreman must be employed directly by Subcontractor and professionally qualified for Work to be performed with at least 10 years' experience.
- 38. Bidders must participate and comply with the Construction Manager's QMS as relevant to the Scope of Work.
- 39. Punch lists issued by Construction Manager, Architect, or Owner will be completed within fourteen (14) calendar days from the date of issue. If Bidders fails to comply with this requirement, Construction Manager reserves the right to perform the Work for the Bidders and back-charge the Bidders for the cost of the Work.
- 40. Prior to commencing work, bidders must provide company specific safety plan and silica exposure plan to superintendent, in either digital or physical copy.

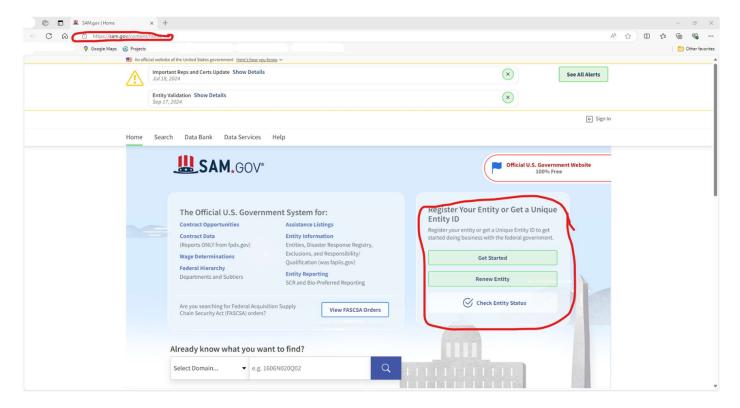
3.00 BID FORMS

.01 General Scope Requirements

All trade specific bid packages shall be inclusive of the General Scope Requirements listed below.

- 1. Refer to Instructions for Bidders, for general requirements.
- 2. Subcontractor agrees to follow all safety procedures and safety regulations of Nabholz, including those that are more stringent than Subcontractor's own safety policy or OSHA standards.
- 3. Nabholz project teams, including on-site trade partners and vendors, shall maintain orderly job sites and clean work areas to promote safety, efficiency, first-time quality, and a professional work environment. Clean work areas reduce trip hazards and improve productivity. Organized and properly staged materials are less likely to be damaged before installation. For a full document on Jobsite Cleanup Standards click the link https://rb.gy/teadb.
- 4. All employees must wear hard hats, eye protection, and high visibility vests at all times on site.
- 5. Subcontractor is responsible for the protection of the SWPPP devices in place. If Subcontractor is required to move a SWPPP device in order to complete work, Subcontractor must replace that device as installed. Coordinate removal and replacement of SWPPP device with Project Superintendent.
- 6. Construction Manager will provide layout to building corners. Subcontractor is responsible for layout beyond these points.
- 7. Coordinate on-site employee parking with Project Superintendent.
- 8. Coordinate location of on-site storage containers with Project Superintendent
- 9. Employees shall avoid harassment of students, faculty, or staff. Employees who violate this requirement may be removed from the jobsite by Project Superintendent.
- 10. Subcontractor will actively participate in the Nabholz Quality Management System.
- 11. Subcontractor agrees to follow the Project Schedule and meet the milestone dates. Certain areas may be made earlier than originally indicated on Schedule. Subcontractor must be prepared for any minor adjustments to the Schedule as work progresses.
- 12. Subcontractor must attend weekly coordination meetings. Employees attending meetings must have the authority to make commitments on manpower to maintain Project Schedule or meet milestone dates.
- 13. All Subcontractors and Suppliers will be required to write a site-specific safety plan to address Nabholz 12 Commitments To Live By (C2LB).
- 14. The Project will be staged on an existing, occupied, operating jail. Avoid interaction with owner's employees, and/or staff. Any harassment of personnel listed above will not be tolerated. All questions or comments from such should be referred to Project Superintendent. Violation of this requirement will not be tolerated and may be grounds for immediate dismissal from Project and/or legal action.

- 15. Construction activities that generate high decibel noise levels must be scheduled and coordinated with Construction Manager's Project Superintendent.
- 16. Each trade shall provide and install firestopping at all penetrations for their work that crosses through fire-resistance-rated floor and roof construction including both empty / blank openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.
- 17. All subcontractors must have a SAMs number before any contract is awarded. A SAM's number is a unique federal identification number that is required of every entity wishing to do business with Washington County. To obtain a SAM's number, please visit http://SAM.GOV and select "get started" on the right hand side of the screen. See screenshot below:



.02 Bid Form (Washington County COVID Mitigation)

Date of Bid
Submitting Company ("Bidder")
Company Name Comfort Systems USA, (Arkansas) Inc.
Legal Name_ Comfort Systems USA, (Arkansas) Inc.
Project State License Number 0004460425
Federal SAM.GOV Number 742885035 (required)
Company Representative
Name_ Josh Zuber
Email Addressjzuber@comfortar.com
Cell Phone 501-539-1757
Scope of Work
Bid Package Number
Bid Package Description
Addenda Bidder acknowledges receipt of the following addenda:
Addendum # Dated
Base Bid
By submitting this proposal form, bidder acknowledges receipt of and compliance with Nabholz minimum
insurance requirements, Master Contract Agreement, Project Contract Agreement, Performance and
Payment Bond requirements, Purchase Order, CCIP Program Addendum, and Safety Standards.
Bidder agrees to complete the Scope of Work listed above for a lump sum of:
\$

Lea	ad Times	
1.	Structural Steel Supply	Weeks/Months
2.	Pre-Engineered Metal Building Supply	Weeks/Months
3.	HVAC Equipment	Weeks/Months
4.	Freezer & Cooler Equipment	Weeks/Months
5.	Electrical Gear	Weeks/Months
Alt	ernates	
1.	Replace Scheduled Security Ceilings in Area E with AC-1	Add/Deduct \$
2.	Area E (E107 & E108) Reduced Finish-out	Add/Deduct \$
Vo	luntary Alternates	
1.		Add/Deduct \$
2.		Add/Deduct \$
lis co de	idders may be required as part of the overall evaluation to so sts the ten (10) largest projects currently being constructed. Inditional on review of WIP Report, and Bidder's experience ocument is not required at the time of bid submission.	Final evaluation of Bidder's proposal shall be
A pı	ompletion Time II Work shall be completed within the schedules prepared by rovide adequate manpower and submit documentation for a meframe scheduled. Estimated time for construction is Janu	approval necessary to work within the
	onding ond Rate Cost in Percent	
"F	idder can provide a Performance and Payment Bond and car Project Contact".	n meet the requirements set forth in the
(C	ircle one) Yes/No	
N	ame of Surety Agent	
	urety Agent Phone umber	

Acceptance of Contract Forms

Bidder acknowledges that they have reviewed and accept the Contract Performance and Administration, Sample Master Contract, Sample Project Contract, Payment and Performance Bonds, Sample Purchase Order, Contractor-Controlled Insurance Program Addendum to Master Contract and the Nabholz Safety Standards forms linked in Section 5.02. Proposed modifications must be submitted with bid.

Signature

Bidder agrees that this proposal remains valid for a period of 60 days. Bidder understands that Nabholz and the Owner reserve the right to reject any or all bids. Bidder acknowledges Nabholz minimum insurance requirements and understands that the Master Contract shall be the basis of any contract offered by Nabholz Construction to Bidder. Proposed modifications of Master Contract language must be submitted with bid. Attach additional sheets if necessary. Upon receipt of notice of acceptance of bid, Bidder agrees to execute and return the contract and required insurance certificates within two weeks of notification.

Ву	
Title	_
Printed name of individual signing this proposal	·
Contact phone number	
Date	

END OF PROPOSAL FORM

5.00 BID PACKAGES

01.0 Final Cleaning

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade-Specific Requirements

- 1. Provide final construction cleaning service.
- 2. Time is of the essence. Furnish adequate manpower to clean areas of the building so as not to adversely impact move in by the owner.
- 3. Cleaning compounds must be compatible with surfaces.

Section B: Project Specific Requirements:

- 1. Wipe down all surfaces.
- 2. Clean all interior glass and mirrors.
- 3. Clean all exterior window glass.
- 4. Vacuum sweep carpet.
- 5. Wet mop epoxy coated floors.
- 6. Wet mop sealed concrete floors.
- 7. Dust clean all countertops and millwork drawers and cabinets.
- 8. Clean light fixtures, sinks and tub plumbing fixtures and trim.

Section C: Project-Specific Exclusions:

1. Project specific exclusion 1.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

02. Demolition (Selective Building)

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 02 26 23 Asbestos Precautions and Procedures
- 02 41 17 Building Demolition

All General Scope Requirements as outlined in Section 3.01.

- 1. Subcontractor must comply with all environmental laws during demolition.
- 2. Subcontractor must provide containers and transportation for all demo debris removal for all demolition.
- 3. Include all road clean-up required by demolition activities.
- 4. All asbestos materials will be abated and removed by the Owner outside of the scope of this contract.
- 5. All materials removed under this scope of work will be disposed of on a daily basis. Any materials to be salvaged shall be turned over to the Owner and delivered to a location on site as designated by the Owner. Reasonable care shall be exercised in removing any and all items to be retained.
- 6. Ensure utilities are disconnected prior to the commencement of demolition activities.
- 7. Coordinate demolition sequence with the project superintendent.
- 8. Include all necessary temporary waterproofing for exterior walls and roof to prevent entry of water into the existing building. Temporary shelters and partitions must be maintained under this bid package until new construction allows for removal, or as dictated by the Construction Manager.
- Include all means and measure to protect existing finishes, materials, structures and equipment from damage and dust due to demolition activities. Damage of such will be repaired at the expense of the demolition contractor.
- 10. Include all temporary shoring and bracing of any structures or devices which are affected by demolition activities. When necessary, engineering of shoring/bracing plan to be included in this package.
- 11. Demolition must be performed in strict coordination with Mechanical and Electrical trades and in strict accordance with the Owner to minimize disturbances or interruptions to operations. Note that demolition of electrical, plumbing, mechanical and fire sprinkler services is not included in this bid package and is included with those trades in their respective bid packages.
- 12. Leave job site "shovel clean" in areas of building demolition.
- 13. Leave jobsite "broom clean" in areas of interior demolition.

- 1. Include wall scanning to locate reinforcement prior to cutting concrete walls.
- 2. Multiple mobilizations will be necessary due to security requirements for an operating jail.

Section C: Project-Specific Exclusions:

1. None

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1

03.0 Concrete

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- Section 3300 Concrete
- 03 11 00 Concrete Formwork
- 03 15 16.1 Expansion, Construction, and Contraction Joints (Civil)
- 03 20 00.1 Concrete Reinforcing
- 03 21 00 Concrete Reinforcement
- 03 30 00 Cast in Place Concrete
- 03 30 00.1 Cast-in-Place Concrete
- 03 35 00.1 Concrete Finishing
- 03 39 00.1 Concrete Curing
- 03 62 00 Non-Shrink Grouting
- 31 31 16 Termite Control

All General Scope Requirements as outlined in Section 3.01.

- 1. Prepare and construct all building concrete assemblies, including but not limited to drilled piers, wall and column foundations, pile caps, footings and mats, grade beams, slabs on grade, ramps, trenches, pits, equipment pads, below-grade walls, structural slabs, columns, beams, and slabs on deck as indicated in the construction documents.
- 2. Furnish and install all expansion and construction joints including keyways, dowels and saw cutting as required.
- 3. Include all associated excavation, backfill, and compaction (both interior and exterior perimeters). Move spoils off-site or to area designated by Contraction Manager.
- 4. Backfill compaction must meet requirements of specifications.
- 5. Include formwork, bedding and leveling materials, reinforcing steel and mesh, tie wire, bolsters and supports, void forms, board insulation, concrete ready-mix, methods of conveyance (i.e. pumps, buggies), admixtures, curing and hardening compounds, concrete accessories, joints and weeps, sleeves, drain boxes and covers, filter fabrics and moisture membranes, finishing, and rubbing.
- 6. Install all embedded items (including bollards, sleeves, bolts) furnished by others.
- 7. Provide integrally colored concrete if required by construction documents.

- 8. Provide termite treatment in accordance with specifications.
- 9. Grout all base plates as required.
- 10. Provide all cold weather and/or hot weather protection as required to maintain Project Schedule in accordance with ACI standards.
- 11. Provide generator power if electric is not readily available.
- 12. Unless more stringent requirements are specified, maintain maximum flatness tolerance of 1/8 inch in 10 feet for all floor slabs.
- 13. Final surfaces shall be as specified and free from cracks, voids, and spalls. Positive drainage of water shall be provided on traffic surfaces, without ponds or water stands. Should final surfaces contain any of the above mentioned, items shall be repaired at no additional cost to the Owner.
- 14. Replace grades to original condition in affected areas adjacent to work performed.
- 15. Concrete curing shall be in accordance with the construction documents and ACI.
- 16. Include temporary shoring and engineering of shoring of metal deck as required to support concrete materials.
- 17. Include foundation layout with base line established by professional surveyor. Check and maintain survey control points and layout anchor bolts.
- 18. Coordinate with plumbing and electrical trades regarding work that is under or in concrete.
- 19. Coordinate city inspections.
- 20. Provide ACI certified personnel to take concrete cylinders as required.

Termite Control

- 21. Post signs to indicate/give warning of area treated with termiticide.
- 22. Provide and install soil treatment for termite control for all slab-on-grade, crawl spaces (if any), both sides of foundation surfaces, and soils within 10 feet of the building perimeter.
- 23. Apply extra treatment to surfaces penetrated by piping, ducts, rods, or posts.
- 24. Coordinate work with Project Superintendent according to Construction Manager's construction schedule.
- 25. Comply with Nabholz Construction Quality Assurance Program.
- 26. Multiple mobilizations may be required.
- 27. Provide written warranty documenting specified coverage.

Site Concrete

- 28. Prepare and construct all site concrete assemblies, including but not limited to concrete paving, drainage swales, curbs and gutters, curb inlet caps, pedestrian paving, steps, ramps, stoops, mow strips, equipment and transformer pads, light pole bases, light bollard bases, flag bases, site foundations and slabs as indicated in the construction documents.
- 29. Provide all layout and field measurements, including layout and installation of embedded items.
- 30. Coordinate equipment mobilization and productivity with overall Project Schedule. Provide concrete conveyance as necessary.
- 31. Provide barricades, traffic control, and flagmen as necessary for this work.
- 32. Provide generator power if electric is not readily available.
- 33. Repair, fine grade, and proof-roll subgrade to accept base course.
- 34. Provide compaction as required by the specifications.
- 35. Pay for any retesting in the event of failed compaction test.

- 36. Perform all associated excavation, backfill, and compaction required for site concrete assemblies. Haul excavation spoils to designated area on site for backfill. Remove excess spoils from site.
- 37. Furnish and install complete site concrete assemblies as noted below.
- 38. Provide all formwork and formwork accessories, bedding and leveling materials, reinforcing steel and reinforcing accessories, concrete ready-mix, admixtures, curing and hardening compounds, concrete accessories, joints and weeps, sleeves, finishing and rubbing, and installation of any and all embedded items furnished by others (including bollards, sleeves, bolts, etc.).
- 39. Provide sidewalks with gravel base.
- 40. Provide concrete paving with gravel base.
- 41. Provide concrete curb and gutter.
- 42. Provide cast-in-place curb inlets. Storm drain boxes provided under separate bid package.
- 43. Provide handicap ramps at sidewalk transitions with embedded detectable warning devices.
- 44. Provide foundations for all site walls.
- 45. Provide cast-in-place site walls.
- 46. Provide light pole bases. Include drilling for bases and setting anchor bolts. Bolts provided by others.
- 47. Provide all mechanical housekeeping pads and transformer pads
- 48. Clean up and remove concrete spillage.
- 49. Provide all cold weather and/or hot weather protection required to maintain Project Schedule.
- 50. Replace grades to original condition in affected areas adjacent to work performed.
- 51. Final surfaces shall be as specified and free from cracks, voids, and spalls. Positive drainage of water shall be provided on traffic surfaces, without ponds or water stands. Should final surfaces contain any of the above mentioned, items shall be repaired or removed and replaced at no additional cost to the Owner.
- 52. Provide all road cleanup required by activities of this work.

- 1. Include all retaining walls.
- 2. Include setting (1) nut at each column for base plate elevation.
- 3. Include slab on deck in hardened corridors of building in Area E.
- 4. Include Fiber Reinforcement and WWF where required in SOG.
- 5. Provide and utilize concrete washout dumpster that is designed to contain washout liquids.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1

04.0 Masonry

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 03 30 00- Cast-In-Place Concrete: grout
- 04 05 13 Mortar
- 04 22 00 Concrete Unit Masonry
- 05 50 00 Metal Fabrications: Loose steel lintels
- 07 27 26 Fluid-Applied Weather Barrier System
- 07 19 00 Water Repellent Coating
- 07 21 00 Insulation
- 07 62 00 Sheet Metal Flashing & Trim
- 07 92 00 Joint Sealers: Rod and sealant at control joints.
- 09 91 00- Painting and Finishing.
- 09 97 26 Special Coatings

All General Scope Requirements as outlined in Section 3.01.

- 1. Provide and construct all masonry assemblies as indicated and specified in the construction documents.
- 2. Perform all work from approved shop drawings and/or product data. Confirm that you have the latest approved "field use" drawings prior to start of work.
- 3. Provide a sample mock-up panel as soon as possible, in a location as directed by the Project Superintendent. The panel will clearly show all CMU, grout, reinforcing, anchoring, seismic (if required) ties, flashing, brick and mortar (per required color selection(s), and other materials as required for a complete review and approval of the quality of finished product.
- 4. Coordinate all lay down and staging areas with Project Superintendent at least 48 hours in advance of all material deliveries.
- 5. Provide all layout and field measurements for this work including layout and installation of embedded items.

- 6. Prepare and clean footings (as required) prior to starting masonry work.
- 7. Layout, drill, and epoxy reinforcing at masonry walls when shown on the contract documents.
- 8. Provide shoring and engineering of shoring/bracing of walls, masonry lintels, and bond beams to facilitate this work.
- 9. Coordinate with other trades as required for block outs, cutouts, and the installation of access doors and plumbing fixture chairs.
- 10. Coordinate location and placement of steel embeds with structural steel erection subcontractor.
- 11. Provide standard and special shaped masonry units, mortar, grout, knock-out panels, reinforcing steel, precast, masonry joint reinforcing, anchors, ties, embedded flashing, and other masonry accessories as may be required to complete the masonry assemblies as detailed and specified.
- 12. Include all rigid insulation behind masonry as required.
- 13. Install weather barrier flashing provided by others at each masonry tie or penetration.
- 14. Furnish and install cavity wall insulation when shown in contract documents.
- 15. Provide all anchor and attachment to structural members as required per the contract documents.
- 16. Set hollow metal frames furnished by others. Including grouting of frames as required.
- 17. Install steel lintels and embed plates furnished by others.
- 18. Include protection of masonry cells and cavity between masonry walls from infiltration of moisture at the end of each work day. Protect space between masonry and sheathing.
- 19. Cover and protect all slab areas that will receive special finishes as directed by Construction Manager.
- 20. Repair divots bigger than 1/2" in diameter and patch block as directed by Construction Manager.
- 21. Include rubbing of exposed unit masonry and final cleaning.
- 22. Provide all cold-weather and hot-weather protection per construction documents necessary to maintain Project Schedule.
- 23. Include flue liners, ash dumps and fireplace units if required.

- 1. Provide and install cementitious waterproofing special coating on CMU as required.
- 2. Provide and install masonry fill insulation in exterior CMU walls as required.
- 3. CMU Walls in Area E have specific requirements. Reference General Note 4 on Sheet A2.8D.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Provide voluntary alternate price on the bid form for cold weather provisions, including temporary heat, enclosures, blankets, tenting, and other means necessary to maintain schedule in cold weather.

Section E: Unit Pricing:

1. Unit Price 1.

05.0 Structural and Miscellaneous Steel (Supply)

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 03 30 00 Cast-in-Place Concrete
- 05 12 23 Structural Steel
- 05 21 00 Open Web Steel Joists
- 05 31 23 Metal Decking Roof
- 05 36 00 Metal Decking Floor
- 05 40 00 Cold Formed Metal Framing
- 05 50 00 Metal Fabrications
- 05 51 30 Aluminum Access Ladders
- 05 52 00 Hand Rails
- 05 59 60 Security Bars
- 09 91 00 Painting and Finishing

All General Scope Requirements as outlined in Section 3.01.

- 1. All steel work shall be fabricated from approved shop drawings. Confirm that you have the latest approved "field use" drawings prior to start of work.
- 2. Fabricate and deliver all structural steel columns, beams, tube framing, brace frames, gusset plates, bridging, joists, decking, edge and other angles, bent plates, connectors, studs, and fasteners as indicated in the construction documents.
- 3. Fabricate and supply anchor bolts, loose lintels, wheel guards, railings, and pipe bollards as indicated in the construction documents.
- 4. Fabricate and deliver all rough hardware, bearing and leveling plates, miscellaneous steel trim, shelf and relief angle, tread plate and supports, railings and handrails and metal pan stairs.
- 5. Furnish, fabricate and deliver laundry trench grate.
- 6. Furnish miscellaneous framing/support for mechanical, plumbing, and electrical equipment.
- 7. Fabricate and deliver metal deck closures.
- 8. Provide all sleeve anchors and any anchors that connect steel to other materials.
- 9. All steel exposed to view shall be oil free, have welds ground smooth, and be of sufficient quality for an exposed and finished surface.

- 10. Include prime painting (galvanized where required by the bid documents) and touch-up (where required) as indicated in the construction documents. This scope includes the furnishing of paint for touch-up by the field erection contractor.
- 11. Include all freight to jobsite. Coordinate all lay down and staging areas with Project Superintendent at least 48 hours in advance of all material deliveries. Coordinate delivery schedule with steel erection subcontractor for offloading.
- 12. Provide copies of current welder's certifications prior to the start of any work. Keep those records on file at the job trailer and keep them current at all times.

- 1. Furnish all access ladders as required in the documents.
- 2. Furnish guardrails at exterior locations.
- 3. Furnish security bars as required in the documents.
- 4. Include Sales Tax

Section C: Project-Specific Exclusions:

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

05.1 Structural and Pre-Engineered Metal Building (Installation)

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 03 30 00 Cast-in-Place Concrete
- 05 12 23 Structural Steel
- 05 21 00 Open Web Steel Joists
- 05 31 23 Metal Decking Roof
- 05 36 00 Metal Decking Floor
- 05 40 00 Cold Formed Metal Framing
- 05 50 00 Metal Fabrications
- 05 51 30 Aluminum Access Ladders
- 05 52 00 Hand Rails
- 05 59 60 Security Bars
- 07 46 21 Preformed Metal Wall and Soffit Panel System
- 07 62 00 Flashing and Sheet Metal
- 07 62 10 Gutters and Downspouts
- 07 72 53 Roof Snow Guard & Flue / Vent Pipe Guards
- 07 92 00 Joint Sealants
- 08 11 13 Hollow Metal Doors & Frames
- 08 62 23 Tubular Daylighting Devices
- 09 91 00 Painting and Finishing 05 41 00 Cold Formed Framing
- 09 22 16 Non-Load Bearing Metal Stud Wall Framing
- 13 34 19 Pre-Engineered Metal Building System

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade- Specific Requirements

Structural Steel Installation

- 1. All steel work shall be erected from approved shop drawings furnished by the steel fabricator. Confirm that you are working from the latest approved "field use" drawings prior to start of work.
- 2. Erect all structural and miscellaneous steel furnished in Bid Package 05.0 Structural and Miscellaneous Steel (Supply).
- 3. Include off-loading of materials. Coordinate all lay down and staging areas with Project Superintendent at least 48 hours in advance of all material deliveries.
- 4. Protect surfaces from welding equipment and activities.
- 5. Include all materials and equipment for stud welding if required including power source.
- 6. Concrete subcontractor to set (1) nut at each column for base plate elevation.
- 7. All steel exposed to view shall be oil free, have welds ground smooth, and be of sufficient quality for an exposed and finished surface. Clean and touch-up paint steel after erection.

Pre-Engineered Metal Building Installation

- 8. Include off-loading of materials. Coordinate all lay down and staging areas with Project Superintendent at least 48 hours in advance of all material deliveries.
- 9. All steel work shall be erected and installed from approved shop drawings furnished by the PEMB fabricator. Confirm that you are working from the latest approved "field use" drawings prior to start of your work.
- 10. Erect all PEMB steel furnished in Bid Package 13.1 Pre-Engineered Metal Building (Supply).
- 11. Provide copies of current welder's certifications prior to the start of any work. Keep those records on file at the job trailer and keep them current at all times.
- 12. The anticipated phasing of the two PEMB's is to get the storage building in Area A delivered and installed as early as possible in the project.

Section B: Project Specific Requirements:

- 1. Install all access ladders as shown in the documents.
- 2. Install guardrails at exterior locations.
- 3. Install tubular skylights per plan.
- 4. Install snow retention bars.
- 5. Install all sealants on the PEMB for a complete weather tight building envelope.
- 6. Provide temporary bracing and shoring well as engineering of shoring/bracing as needed to perform this scope of work.
- 7. All items specified to be installed in inmate living and gathering areas shall be installed with detention-rated fasteners (Torx or equal).

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

06.2 Millwork and Carpentry

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 06 10 00 Rough Carpentry
- 06 20 23 Finish Carpentry
- 06 40 23 Interior Architectural Woodwork
- 06 41 16 Cabinet Work and Shelving
- 06 61 16 Solid Surfacing
- 08 14 16 Wood Doors
- 08 71 00 Finish Hardware
- 08 81 00 Glass and Glazing
- 09 65 00 Resilient Floor
- 09 91 00 Finishes
- 10 56 26 Mobile Storage Shelving: Relocate

All General Scope Requirements as outlined in Section 3.01.

- 1. Provide samples of any exposed wood grain product and all millwork hardware with shop drawings submittal. Specifically request approval of color and finish selections of all laminate and hardware on shop drawings.
- 2. Visit project site and take field measurements before fabrication. Coordinate and schedule site visit with Project Superintendent.
- 3. Coordinate all material deliveries and sequence of installation with Project Superintendent no later than 30 days prior to start of work.
- 4. Furnish and install all cabinet units, shelving units, vanity units, countertops, splashes, running trim, display cases and window sills as indicated in the construction documents.
- 5. Provide a sufficient amount of scribes and/or fillers as necessary for a complete installation of millwork.
- 6. Include all associated brackets and supports.
- 7. Furnish and install finish hardware for millwork and cabinetry including key locks per construction documents.
- 8. Furnish and install solid surface tops, sills and treads per contract documents.

- 9. Provide all necessary cut outs for plumbing and electrical fixtures as required, and all cut outs as required for appliances. Provide grommets at cut-outs for power or data cords.
- 10. Furnish and install approved and matching colored caulking for each color of plastic laminate or solid surface material supplied.
- 11. Set and adjust all door and drawer margins after installation at the project site.
- 12. Remove glues and resins, clean out wood and plastic laminate shavings from inside drawers and compartments, and wipe all dust from all millwork immediately after installation.
- 18. Provide protection of countertops after installation, to be removed at the direction of the Construction Manager.
- **19.** Each trade shall provide and install firestopping at all penetrations for their work that crosses through fire-resistance-rated floor and roof construction including both empty / blank openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.

- 1. Provide and install: lower & upper cabinets, countertops, kiosk station (booking area), cubby system (booking area), and judge's stand
- 2. Level 7, 11/16" Thick Bullet Resistant Panel required on judges stand. (G6/A6.1)
- 3. Project specific requirement 3.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

07.0 Waterproofing, Dampproofing, Joint Sealants

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 03 30 00 Cast-In-Place Concrete
- 04 22 00 Concrete Unit Masonry
- 05 40 00 Cold Formed Metal Framing
- 06 10 00 Plywood Sheathing
- 07 10 00 Waterproofing and Dampproofing
- 07 19 00 Water Repellent Coating
- 07 27 26 Fluid Applied Weather Barrier System
- 07 46 21 Preformed Metal Wall and Soffit Panel System
- 07 62 00 Flashing and Sheet Metal
- 07 92 00 Joint Sealants
- 08 11 13 Hollow Metal Doors & Frames
- 09 29 00 Drywall-Sheathing
- 10 73 16 -Aluminum Canopies

All General Scope Requirements as outlined in Section 3.01.

- 1. Provide weather-tight storage and heat to protect materials from freezing.
- 2. Provide all necessary surface preparation.
- 3. Provide waterproofing system(s) for below-grade surfaces, including membrane, flashing, protection board, rigid insulation, and drainage mat as required by the construction documents.
- 4. Provide dampproofing for below-grade and above-grade surfaces where unexposed to view per construction documents.
- 5. Furnish and install underslab vapor barrier if not polyfilm.
- 6. Provide all joint sealants required or indicated at exterior and interior masonry constructed walls and partitions.
- 7. Provide water-repellent and elastomeric coatings for exposed concrete and masonry surfaces. Clean surfaces prior to commencement of work per construction documents.

- 8. Provide joint sealants and incidentals as necessary and per the bid documents at building exterior to secure a water-tight building envelope.
- 9. Include joint sealants in and surrounding site paving.
- 10. Confirm that materials furnished for this Bid Package are compatible with other materials furnished for other Bid Packages.
- 11. Supply and install fluid applied weather barrier on exterior walls.

1. Provide and install sealant at reglets for aluminum canopies shown on the Enlarged Roof Plan drawing sheets and details F3 and F10 on Sheet A5.7.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

07.4 Roofing, Flashing, Sheet Metal

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 06 10 00 Rough Carpentry
- 07 54 24 Thermoplastic Polyolefin (TPO) Membrane
- 07 62 00 Sheet Metal Flashing and Trim
- 07 62 10 Gutters and Downspouts
- 07 72 53 Roof Snow Guard & Flue / Vent Pipe Guards
- 07 92 00 Sealants
- 08 62 23 Tubular Daylighting Devices
- 10 73 16 Aluminum Canopies
- 13 34 19 Pre-Engineered Metal Building System

All General Scope Requirements as outlined in Section 3.01.

- 1. Confirm that materials furnished for this Bid Package are compatible with other materials furnished for other Bid Packages.
- 2. Should the roofing product manufacturer require standard details that conflict with the contract documents, drawings, details, or notes, Subcontractor must immediately notify Construction Manager in writing with a proposed method of resolution.
- 3. Review, approve, and accept all subsurfaces prior to installation.
- 4. All work shall, as a minimum, comply with industry accepted "best practices" and with the SMACNA "Architectural Sheet Metal Manual" criteria.
- 5. Comply with all wind uplift requirements of Owner and Owner agents.
- 6. Coordinate all deliveries of material with Project Superintendent. Secure, store, and protect all materials from weather.
- 7. Provide hoisting for materials provided in this Bid Package.
- 8. Provide a complete watertight roof system with related tapered insulation, flashing and counter flashing, coping, scuppers, expansion joints, ballast, gutters and downspouts, and caulking.
- 9. Provide manpower or safety barriers below all roof penetrations for protection of others during kettle discharge operation. Provide daily reports showing kettle discharge temperatures.

- 10. Provide a complete insulation system to provide positive drainage to roof drain, and to prevent ponding of water on roof surface. Provide tapered crickets at rooftop units, equipment, and roof perimeter.
- 11. Provide roof system that meets minimum insulation value as specified. Clearly confirm the minimum "R" value rating on shop drawings.
- 12. Cover all insulation installed each day. Do not shake out or leave unprotected any insulation which may become wet with dew or rainfall.
- 13. Coordinate all metal flashing and trim so that metal products match in color to the metal roof copings, flashing and trim.
- 14. Provide pitch pockets and flashing for miscellaneous penetrations of the roof.
- 15. Provide roof expansion joints and covers.
- 16. Provide walk-pads at the HVAC equipment as required to properly access all rooftop equipment.
- 17. Provide all miscellaneous roof accessories.
- 18. Install roof drains provided by plumbing subcontractor and set clamping rings. Coordinate with plumbing subcontractor for the proper installation of this work.
- 19. Coordinate with the HVAC and plumbing subcontractors to ensure that proposed locations of plumbing vents and rooftop equipment do not conflict with roofing manufacturer warranty requirements.
- 20. Immediately clean all areas or surfaces soiled by roofing operations.
- 21. Prior to demobilization, Subcontractor agrees to coordinate with Project Superintendent for the purpose of conducting a waterproof test.
- 22. All warranties must be signed by the roofing manufacturer's representative.

- 2. Provide roof hatch and smoke units where shown.
- 3. Provide all metal work, flashing, coping, scuppers, gutters, downspouts and trim shall be pre-finished as noted in the specifications.
- 4. Provide all soffits and fascia, including all trim.
- 5. Supply only of tubular skylights for Area E.
- 6. Provide reglets for aluminum canopies shown on the Enlarged Roof Plan drawing sheets and details F3 and F10 on Sheet A5.7.

Section C: Project-Specific Exclusions:

- 1. Gutters and downspouts on Pre-engineered Metal Buildings.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

08.1 Coiling Doors and Service Doors

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 05 50 00 Metal Fabrications: Support framing and framed opening.
- 08 33 23 Overhead Coiling Doors
- 09 91 00 Painting: Field applied finish.
- 11 13 00 Loading Dock Equipment
- Division 26 Electrical

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade-Specific Requirements

- 1. Furnish and install all overhead doors, frames, controls, and accessories for a fully functional, completely operating system.
- 2. Include all necessary materials to connect doors to structure.
- 3. Provide all necessary blocking or supports that may be required for this work that is not shown on drawings.
- 4. Furnish and install all loading dock equipment, controls, dock leveler, dock bumpers, vehicle restraints for a complete system

Section B: Project Specific Requirements:

- 1. Provide card reader control capabilities.
- 2. Project specific requirement 2.
- 3. Project specific requirement 3.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

09.0 Light Gauge Framing, Drywall, Acoustical & Firestopping

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 05 40 00 Cold-Formed Metal Framing
- 07 84 00 FIRESTOPPING
- 07 92 00 Joint Sealants-Sill Sealer below bottom track at exterior walls
- 09 22 16 Non-Structural Metal Framing
- 09 24 00 Gypsum Plaster: Interior plaster applications
- 09 29 00 Drywall: Gypsum interior sheathing
- 09 51 00 Acoustical Tile Ceiling
- 09 57 53 Security Ceilings
- 09 91 00 Painting
- Division 23 Air Distribution Systems
- Division 26 Lighting

All General Scope Requirements as outlined in Section 3.01.

- 1. Except where found to be in conflict with contract documents, adhere to requirements of the latest edition of the U.S. Gypsum Handbook for installation of gypsum board materials. Advise Construction Manager of all such discrepancies or conflicts in writing immediately.
- Coordinate with pre-engineered metal building contractor all miscellaneous steel installations that are integral with light gauge framing systems. Coordinate with other trades for installations encapsulated by drywall or drop ceilings. Coordinate any and all framing inspections with local jurisdictions.
- 3. Include layout for metal stud walls and ceilings.
- 4. Furnish and install all load-bearing and light-gauge steel studs and joists, steel runner, lintels, clip angles, hold-downs, furring channels, brackets, Z-furring, reinforcement, fasteners, and other accessories as required by the construction documents and as required for a complete metal framing system.
- 5. Install all framed openings and block-outs in drywall partitions, ceilings, fur-downs, and enclosures as required for the work of other trades.
- 6. Provide sheathing and gypsum board, moisture-resistant board, drywall control joints, acoustical caulking, high impact gypsum, shaftwall, weather resistant barriers and tile backerboard.

- 7. Provide UL listed fire rated assemblies as shown.
- 8. Furnish and install all firestopping, sealant or caulking except for MEPF penetrations in fire rated walls, fire rated enclosures above light fixtures, fire safe insulation if required and fire stop between floors.
- 9. Furnish and install weather barrier system on exterior sheathing. Including window flashing per manufacturer's recommendations.
- 10. Inspect all penetrations through the weather barriers system for proper sealing and bring all non-conforming penetrations to the attention of the superintendent.
- 11. Provide expansion joints in walls and ceiling joint systems as shown.
- 12. Furnish and install FRP and accessories where required.
- 13. Furnish and install all batt, blanket, and acoustical insulation per construction documents.
- 14. Insulate steel beams where shown on construction documents.
- 15. Furnish and install board insulation (except where installed by concrete and masonry bid packages).
- 16. Provide complete suspended ceiling framing systems, including all furring channels, hanger rods, flat hangers, wire, grid system, axiom trim, grid wires for light fixtures and other accessories.
- 17. Maintain true and level ceilings at heights indicated in the construction documents.
- 18. Coordinate installation of sprinkler heads, light fixtures, speakers, HVAC devices, access doors, and other appurtenances in ceilings.
- 19. Provide all blocking (plywood, lumber, or metal strap) for millwork, doors, windows, frames, louvers, toilet accessories, marker boards, toilet partitions, fire extinguishers, roof blocking, panel boards for telephone system, or Owner-furnished items.
- 20. Set and install door frames (provided by others) in metal framing systems.

Fire Stopping

- 21. Provide firestopping at all fire-resistance-rated and smoke-rated walls and partitions.
- 22. Provide all shop drawings, firestop system details, product data, and/or any additional UL documentation for each type of assembly.
- 23. Provide firestop systems compatible with one another and with substrates under conditions of application and service.
- 24. Each trade shall provide and install firestopping at all penetrations for their work that crosses through fire-resistance-rated floor and roof construction including both empty / blank openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.

Section B: Project Specific Requirements:

- 1. Provide allowance for 285 LF of 15'-0" temp walls (Metal Studs 3-5/8" with Gypsum Board on Each Side 5/8"). Locations to be determined by Superintendent.
- 2. Provide and install framing and subfloor for raised platforms in booking and court areas.
- 3. Multiple mobilizations will be required for this scope of work.
- 4. Coordination with all trades penetrating fire barriers is required.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

09.1 Tile and Commercial Flooring

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 03 30 00 Cast In Place Concrete: Floor Substrate Surface & Concrete Slab Moisture Mitigation
- 06 41 16 Cabinet Work & Shelving
- 09 65 00 Resilient Flooring
- 09 68 00 Carpeting

All General Scope Requirements as outlined in Section 3.01.

- 1. Furnish to Construction Manager a seaming layout plan for approval by Architect.
- 2. Inspect substrates prior to installation. The start of installation of floor covering will be construed as the applicator's acceptance of the finish floor surface conditions.
- 3. Perform moisture test and give results to construction manager prior to commencement of work.
- 4. Provide all surface preparation, leveling, bonding agents and adhesive, carpet tack strips, patterns, transition strips, and other accessories required.
- 5. Surface preparation, provide and install up to 1 lb. of floorstone per 30SF of flooring. Floorstone not used in one area may be added to another area. Prime surfaces per mfg.'s directions if required.
- 6. Furnish and install all carpet and padding.
- 7. Furnish and install all resilient flooring and resilient base including treads and risers, transition strips, and stair nosings.
- 8. Furnish and install porcelain, ceramic, quarry, stone and marble tile.
- 9. Furnish and install all expansion and construction joints including keyways, dowels and saw cutting as required.
- 10. Provide and install pre-molded cove base outside corners.
- 11. Unless shown otherwise provide 4" rubber base at all millwork toe spaces.
- 12. Furnish and install thin brick pavers.
- 13. Provide and install all floor-to-floor expansion joint covers as required.
- 14. Include waterproofing at showers or shower pans.
- 15. Provide initial cleaning of resilient materials, carpet, and tile upon completion of installation in strict accordance with the manufacturer's recommendations.
- 16. Remove visible adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet manufacturer. Remove protruding yarns from carpet surface.

- 17. Protect flooring against mars, marks, indentations, and other damage from construction. Use protection methods indicated or recommended by tile manufacturer.
- 18. Provide "extra stock" materials as identified in the construction documents.

Section B: Project Specific Requirements:

- 1. For cove base, outside wall corners must be Pre-Molded. Pre-Formed will not be accepted.
- 2. Project specific requirement 3.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

09.3 Epoxy Flooring and Walls

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 03 30 00 Cast In Place Concrete Concrete Slab Moisture Mitigation
- 09 67 26 Epoxy Resinous Flooring

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade- Specific Requirements

- 1. Include and perform all moisture testing, surface preparation, leveling, bonding agents, and other accessories as required.
- 2. Furnish and install all epoxy flooring, divider strips, control joint strips, base cap, base divider strips and sealer.
- 3. Furnish and install all expansion and construction joints including keyways, dowels and saw cutting as required.
- 4. Installed epoxy flooring within tolerances as outlined in the construction documents.
- 5. Provide fresh air to avoid health hazards to all workers.
- 6. Provide necessary heat (if required) for completion of this scope.
- 7. Provide and install floor protection following the completion of installation.
- 8. Provide integral 4" or 6" high (as scheduled on drawings) 1 inch cove base with epoxy material as indicated on drawings.

Section B: Project Specific Requirements:

- 1. Project specific requirement 1.
- 2. Project specific requirement 2.
- 3. Project specific requirement 3.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

09.4 Painting, Wallcovering, and Sealed Concrete

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 09 29 00 Drywall: Surface Texturing
- 09 91 00 Painting and Finishing
- 09 97 26 Special Coatings
- 13 34 19 Pre-Engineered Metal Building: Painted Components

All General Scope Requirements as outlined in Section 3.01.

- 1. Include surface preparation.
- 2. Preparation before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of various coatings, remove oil and grease before cleaning. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces are thoroughly dry. Remove efflorescence before painting cementations and masonry materials. Prepare and paint all miscellaneous metals include handrails, stairs, ladders and metal flashing which are not pre-finished.
- 3. Include taping and finishing of drywall surfaces.
- 4. Protect all adjacent surfaces against painting.
- 5. Provide all interior and exterior painting and staining of all surfaces shown to be field finished. Scope includes, but is not limited to, gypsum board, doors, frames, millwork, wood surfaces, metals, exposed concrete, and CMU.
- 6. Include painting of open structure ceilings as noted on finish schedule.
- 7. Paint mechanical and electrical equipment, ductwork, conduit and piping as required.
- 8. Include glaze coatings as needed.
- 9. Includes touch up of walls, ceilings, and all other painted surfaces as required by industry standards.
- 10. Include interior caulking at hollow metal frames, window frames, storefront frames, sills and other beauty caulking as needed.
- 11. Furnish and install wall fabrics and cork wall coverings.
- 12. Include stenciling of fire and smoke walls as required.
- 13. Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of the same material are applied. Tint undercoats to match the color of the finish coat but provide sufficient difference in the shade of undercoats to distinguish each separate coat.
- 14. Include painting all hollow metal doors and frames. (Interior & Exterior)

15. All pre-engineered metal framing components exposed to exterior are to be painted per Specification Section 09 91 00. This shall include, but not limited all door jambs and heads, extended exposed frame ends and any metal building frame component on an open-air structure.

Sealed Concrete

- 1. Include all surface preparation and other accessories as required.
- 2. Furnish and install all concrete sealer.
- 3. Provide fresh air to avoid health hazards to all workers.
- 4. Provide necessary heat (if required) for completion of this scope.

Section B: Project Specific Requirements:

- 1. Apply sealed concrete finish to all areas specified in the construction documents.
- 2. Include painting all exposed steel pipe rail, steel stair components, parking bollards, etc.
- 3. Project specific requirement 3.
- 4. Provide allowance for 285 LF of 15'-0" temporary walls (Mud and Tape).

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Provide alternate price on Lump Sum Proposal form for field finishing wood doors in lieu of prefinished wood doors.

Section E: Unit Pricing:

1. Unit Price 1.

10.0 Division 8 & 10: Doors, Frames, & Specialties (Supply)

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 08 11 13 Hollow Metal Doors & Frames
- 08 14 16 Wood Doors
- 08 71 00 Finish Hardware
- 10 00 00 Misc Specialties
- 10 28 13 Toilet and Bath Accessories
- 10 44 00 Fire Extinguishers & Cabinets
- 10 56 26 Mobile Storage Shelving

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade-Specific Requirements

- 1. This is an all-inclusive bid package. Supplier agrees to furnish ALL items covered by the Sections referenced above and described herein.
- 2. Coordinate with superintended for multiple shipments of materials throughout the duration of the project and as required by the project.

Doors, Frames and Hardware

- 3. Include cost of freight to jobsite. Coordinate all lay down and staging areas with Project Superintendent at least 48 hours in advance of all material deliveries.
- 4. Any discrepancy between the hollow metal, hardware and wood door schedules shall be immediately brought to the attention of Project Superintendent.
- 5. Furnish and deliver all hollow metal frames and mullions, including all anchors and accessories.
- 6. Furnish and deliver all hollow metal doors, wood doors and accessories.
- 7. Furnish and deliver FRP and laminate doors to jobsite.
- 8. All materials must be individually wrapped and protected, and clearly labeled and tagged.
- 9. All frames and doors must be rated as required and carry the appropriate underwriters label.
- 10. All doors must be pre-machined for finish hardware, undercut (as required), and pre-finished (if required by construction documents).
- 11. Include door cutouts, view lite kits, grilles, and stops.
- 12. Include all transoms and side panels as required.
- 13. Furnish and deliver all finish hardware, including cylinders for aluminum or glass doors.
- 14. Furnish and deliver temporary construction cores.

- 15. Include provisions for final keying. Include cost for coordination meeting with Owner Representative(s).
- 16. Provide low voltage transformers and wiring required for mag locks, hold opens, etc.

Visual Display Devices

- 17. Supply markerboards, tackboards, tackwalls, and accessories from specified manufacturer.
- 18. Supply all material and associated hardware to provide a complete installation for all sections of this package.
- 19. Furnish and deliver factory-built visual display boards, including factory-applied trim where indicated, completely assembled in one piece without joints. Store visual display units vertically with packing materials between each unit.
- 20. Ensure that the supplied product is the correct mounting type for the scheduled wall.

Signage

- 21. Furnish and deliver signage that complies with the ADA-ABA Accessibility Guidelines.
- 22. Provide dimensional characters from specified manufacturer.
- 23. All material will be handled, inventoried, and protected by Construction Manager. Construction Manager will provide a secure lockup for storage.

Wall Protection

24. Supply all material, equipment, and associated hardware to provide a complete installation of wall protection, end wall guards, and corner guards.

Fire Extinguishers

- 25. Supply all portable fire extinguishers and fire extinguisher cabinets as indicated and specified.
- 26. Provide maintenance data of fire protection cabinets and fire extinguishers to be included in maintenance manuals.
- 27. Coordinate type and capacity of fire extinguishers with fire protection cabinets to ensure fit and function.

Lockers

28. Supply and deliver lockers as indicated and specified in the construction documents.

Toilet and Bath Accessories

- 29. Furnish all toilet and bath accessories and hardware as indicated and specified
- 30. The owner will furnish soap dispensers, type TD-1 tissue dispensers and paper towel dispensers. These items are to be installed by the contractor.
- 31. All accessories shall meet the performance specifications in the construction documents.
- 32. All material will be handled, inventoried and protected by Construction Manager. Construction Manager will provide a secure lockup for storage.
- 33. Supply all material, equipment, and associated specialties hardware to provide a complete installation.
- 34. Furnish and deliver all mounting devices, accessories and fasteners required for complete installation.
- 35. Coordinate wall blocking requirements with the construction manager.
- 36. Contractor to verify blocking locations in drywall partitions to ensure proper anchorage. Blocking provided and installed by others.
- 37. For all products use specified manufacturer unless otherwise noted.
- 38. All warranties shall commence on the date of Substantial Completion of the Project.

Section B: Project Specific Requirements:

- 1. Project specific requirement 1.
- 2. Project specific requirement 2.

3. Project specific requirement 3.

Section C: Project-Specific Exclusions:

- 1. All Detention Grade Specialties
- 2. Soap dispensers, type TD-1 tissue dispensers and paper towel dispensers
- 3. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

10.1 Division 8 & 10: Doors, Hardware, & Specialties (Installation)

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 06 10 00 Rough Carpentry: Blocking for Wall Anchors
- Non-Structural Metal Framing: Placement of Supports in Stud Walls
- 08 11 13 Hollow Metal Doors & Frames
- 08 14 16 Wood Doors
- 08 71 00 Finish Hardware
- 10 00 00 Misc Specialties
- 10 28 13 Toilet and Bath Accessories
- 10 44 00 Fire Extinguishers & Cabinets
- 10 56 26 Mobile Storage Shelving

All General Scope Requirements as outlined in Section 3.01.

- 1. Install grab bars, sanitary-napkin vendor, sanitary-napkin disposal unit, mirror unit, towel pin, and mop and broom holders.
- 2. Install fire extinguishers and cabinets. Coordinate type and capacity of fire extinguishers with fire protection cabinets to ensure fit and function.
- 3. Coordinate layout and installation of projection screens with adjacent construction, including ceiling suspension systems, light fixtures, HVAC equipment, fire-suppression system, and partitions.
- 4. Coordinate wall blocking requirements with the construction manager.
- 5. Contractor to verify blocking locations in drywall partitions to ensure proper anchorage. Blocking provided and installed by others.
- 6. Install all non-detention grade doors and door hardware
- 7. Install temporary construction cores
- 8. Install all wall protection listed in section 10 00 00 as shown in the drawings.

Section B: Project Specific Requirements:

- 1. Molly-type anchors are not acceptable for securing accessories to walls or partitions. Secure to gypsum board partitions with screws anchored in wood blocking. Anchor accessories to masonry walls with screws set in epoxy.
- 2. Where security accessory items are surface mounted, provide security screws as specified in Section 08 71 65.
- 3. Disassemble, relocate, and reassemble mobile storage shelving. Move shelving system from existing location in Records File Room 76 (Reference drawing sheet A2.0A), to newly constructed Room C117 "Property Room" in Area C. Reference (Drawing sheet A2.1C). Storage of the shelving system at an intermediate location may be required until construction of the new "Property Room" is completed.

Section C: Project-Specific Exclusions:

- 1. Detention Grade Doors, Hardware, & Specialties
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

10.2 Aluminum Canopies

SCOPE OF WORK

As noted below, Subcontractor shall be responsible for the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Furnish all labor and supervision required to complete the work of this package. Unless noted otherwise, furnish all equipment, materials, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 00 Procurement and Contracting Requirements
- Division 01 General Requirements
- 05 50 00 Metal Fabrications
- 07 92 00 Sealants
- 10 73 16 Aluminum Canopies

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade- Specific Requirements

- 1. Provide a complete canopy system where noted on the drawings.
- 2. Verify all dimensions to confirm compatibility with building construction.
- 3. Provide all connections, sealants, grouting, finishes and support per the specifications and drawings.

Section B: Project Specific Requirements:

- **1.** Coordinate with trade contractors of the surfaces and structure where the canopy will be installed to ensure correct dimensions and support.
- 2. Include new canopies on every location as shown on the roof plan drawing sheets and in accordance with details F3 and F10 on drawing Sheet A5.7.
- **3.** Provide anchors necessary for canopy attachments and coordinate with Pre-Engineered Metal Building Manufacturer and masonry contractor for anchor locations and blocking.
- **4.** Provide and install sealant at anchors per canopy details.
- **5.** Provide engineer approved design for canopy if needed.

Section C: Project-Specific Exclusions:

1. N/A

Section D: Project Alternates:

1. N/A

Section E: Unit Pricing:

1. N/A

11.1 Laundry Equipment

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise the subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 Procurement and Contracting Requirements
- Division 1 General Requirements
- Section 11 23 26 Laundry Equipment
- Section 11 40 00 Food Service Equipment

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade- Specific Requirements

- 1. Provide all material, equipment, and associated hardware to provide complete installation for all sections of this package.
- 2. Ensure that equipment of standard manufacture is of latest model or succeeding model at time of delivery and includes all standard accessories as designated in the latest catalog or the project manual.
- Ensure that replacement parts for all components furnished will remain available for no less than 10 years after acceptance.
- 4. Coordinate with other trades for installation of adjacent finishes, hoods, fire suppression systems, plumbing, and electrical connections.
- 5. Provide uncrating, setting-in-place, leveling, anchoring, and cleaning of new equipment, to be ready for fittings, controls, and utility connections by other trades.
- 6. Provide individual training modules for each piece of equipment furnished and installed under this package.

Section B: Project Specific Requirements:

1. Provide and install all laundry equipment as shown on the plans.

Section C: Project-Specific Exclusions:

1. All kitchen and detention equipment.

11.2 Walk-in Freezer & Cooler

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise the subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 Procurement and Contracting Requirements
- Division 1 General Requirements
- Section 11 40 00 Food Service Equipment
- Division 22 Plumbing
- Division 23 Heating, Ventilating, and Air-Conditioning (HVAC)
- Division 26 Electrical

- 1. Refrigeration contractor to provide equipment and ductwork shop drawings for coordination with other trades. Shop drawings are to include the locations and sizes of all duct work, piping, equipment and equipment maintenance access.
- 2. Provide layout locations as needed for piping, equipment, vents etc. during layout of kitchen addition.
- 3. Supply and install a complete Refrigerant System.
- 4. Scope includes, but is not limited to equipment, roof curbs, supports, anchors, curbs, flashings, piping, duct work, insulation, controls, stenciling and labeling, dampers, diffusers, detectors, interconnection of instrumentation I/O control wiring systems, fuels, refrigerants and lubricants, supports for equipment, and other materials and devices as required for a complete Refrigerant System as per plans and specifications.
- 5. Include any and all fittings, offset, valves, etc., for a complete system.
- 6. Supply and install any access doors (24" x 24" min.) needed for access to Refrigeration equipment.
- 7. Provide all sleeves, blocking, coring, and other associated caulking required for this scope of work.
- 8. Include concrete cutting, coring and patching as required for the mechanical scope of work.
- 9. Include Automatic Temperature Controls and interlock wiring including control components and complete control wiring system in strict accordance with construction documents.
- 10. Supply and install motor controllers and starters for equipment as specified.
- 11. Furnish and install louvers, access doors, grilles, and vents as required for this scope of work.
- 12. Include fire-stopping, fire sealing and caulking for penetrations created by this scope of work.

13. Coordinate with the electrical contractor for the location, size and installation of disconnects. The electrical contractor is to furnish and install disconnects. The locations are to be provided by the

refrigerant contractor.

14. Include testing and adjusting as required per contract documents.

15. Include Commissioning per construction documents as required.

16. Include documented instructional training to the owner's representative regarding the operation and

maintenance of the plumbing systems.

17. All warranties for equipment and system components begin at date of Substantial Completion of Project.

Section B: Project Specific Requirements:

1. Refrigeration contractor is responsible for all final refrigeration electrical terminations to refrigeration

equipment.

2. Condensing units shall be located inside Mechanical Room 068.

3. Coordinate concrete slab requirements and elevations under the freezer and cooler with concrete

subcontractor.

Section C: Project-Specific Exclusions:

1. Not Applicable

Section D: Project Alternates:

1. Not Applicable

Section E: Unit Pricing:

1. Not Applicable

11.3 Detention Equipment, Glazing, and Security Electronics

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise the subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 Conditions of the Contract
- Division 1 General Requirements
- Section 05 59 60 Security Bars
- Section 08 34 63 Detention Security Hollow Metal Doors & Frames
- Section 08 71 65 Security Screws
- Section 08 88 53 Security Glazing
- Section 09 57 53 Security Ceilings
- Section 10 22 13 Security Barrier
- Section 10 26 41 Bullet Resistant Fiber Glass Composite
- Section 11 15 00 General Detention Equipment Requirements
- Section 11 19 00 Detention Hardware
- Section 12 55 00 Detention Furnishings
- Section 28 05 10 Common Work Results for Electronic Safety
- Section 28 46 19 Electronic Security Control System
- Section 28 46 23 Touch Screen Control and Management System
- Section 28 50 45 Uninterruptible Power System
- Section 28 51 23 Intercom and Paging System

All General Scope Requirements as outlined in Section 3.01.

- 1. Furnish only detention grade hollow metal door frames and window frames. Installation by masonry contractor.
- 2. An onsite preinstallation coordination meeting with the construction manager, mason, security controls contractor, electrician, and detention contractor is required before masonry construction begins.
- 3. Supply and install individual inmate standing kiosk stations.
- 4. Supply and install security joint sealants.
- 5. Supply and install all detention grade hollow metal doors and hardware.
- 6. Supply and install security glazing in doors and window frames.
- 7. Supply and install all detention grade furnishings and toilet accessories.
- 8. Supply and install gun lockers.

- 9. Supply and install speakers and access ports.
- 10. Supply and install security ceilings, and welded wire mesh (WWM) ceilings.
- 11. Supply and install security cameras, and access controls (security & non-security) including cables.
- 12. Supply and install access controls for 3 security gates.
- 13. Provide all material, equipment, and associated hardware to provide complete installation for all sections of this package.
- 14. Ensure that equipment of standard manufacture is of latest model or succeeding model at time of delivery and includes all standard accessories as designated in the latest catalog or the project manual.
- 15. Coordinate with other trades for installation of adjacent finishes, steel work, fire suppression, HVAC, plumbing, and electrical connections.
- 16. Provide individual training modules for each piece of equipment furnished and installed under this package.
- 17. Include delivery, off-loading, and on-site inventory of all detention door & window frames.
- 18. Coordinate all lay down and staging areas with Project Superintendent at least 48 hours in advance of all material deliveries.

Section B: Project Specific Requirements:

- 1. An onsite preinstallation coordination meeting with the construction manager, mason, security controls contractor, electrician, and detention contractor is required before masonry construction begins.
- 2. Detention grade toilets shall be provided by Plumbing Contractor and installed by Plumbing Contractor.
- 3. All glazing in the security doors and non-security doors shall be security glazing. Provide and install under this bid package.

Section C: Project-Specific Exclusions:

- 1. Conduit, raceways, and backboxes.
- 2. New 8 KVA UPS and bypass switch.
- 3. Toilets of any type.

13.1 Pre-Engineered Metal Building (Supply)

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 05 41 00 Cold Formed Framing
- 07 46 21 Preformed Metal Wall and Soffit Panel System
- 07 62 00 Flashing and Sheet Metal
- 07 62 10 Gutters and Downspouts
- 07 72 53 Roof Snow Guard & Flue / Vent Pipe Guards
- 07 92 00 Joint Sealants
- 08 11 13 Hollow Metal Doors & Frames
- 09 22 16 Non-Load Bearing Metal Stud Wall Framing
- 13 34 19 Pre-Engineered Metal Building System

All General Scope Requirements as outlined in Section 3.01.

- All steel work shall be fabricated from approved shop drawings and design engineering calculations. It
 is incumbent upon this Supplier to confirm that he has the latest approved "field use" drawings prior to
 start of his work.
- 2. Engineering to include, but is not limited to loads for misc. steel items, catwalks, stairs, flag poles, sprinklers, and any other items attached to the building.
- 3. Fabricate and deliver all pre-engineered primary steel framing members, secondary framing members, bracing, bridging, joists, decking, edge and other angles, bent plates, connectors, studs, and fasteners as indicated in the construction documents and as required for a complete, sound structural system.
- 4. Furnish miscellaneous framing/support for mechanical, plumbing, and electrical equipment.
- 5. Fabricate and deliver all rough hardware, bearing and leveling plates, miscellaneous steel trim, shelf and relief angle, tread plate and supports, railings and handrails.
- 6. Fabricate and supply anchor bolts, loose lintels, as indicated in the construction documents.
- 7. Grout anchor bolts and bearing conditions with "Non-Shrink Grout".
- 8. Provide all sleeve anchors and any anchors that connect steel to other materials.
- 9. Roof panels are 24 gauge standing seam. Wall panels are 24 gauge panel rib, 3'-0" wide with ribs at 12" centers.

- 10. Panel end closures are metal. No foam closures are to be used. Seal completely around perimeter of each closure for a weather tight fit.
- 11. Furnish wall and roof insulation as noted in the Construction Documents.
- 12. Include 1" thermal blocks on roof and walls as required.
- 13. Provide roof curbs for HVAC equipment.
- 14. Furnish metal wall, roof, and soffit panels as noted in the Construction Documents. Include all flashing, trims and gutters and downspouts necessary for a complete, fit, finished product.
- 15. Furnish flashing and boots at all roof penetrations. Include prefinished metal flashing around wood blocking at louvers if required.
- 16. All items installed in roof and wall panels provided by other trades are to be properly flashed and sealed. It will be the responsibility of the metal building supplier and erector to make these penetrations weathertight. Provide flashing details with shop drawing submittal.
- 17. Anchor bolt layout and bolts will require early approval and delivery to accommodate concrete phase of work.
- 18. Furnish snow guards as required by contract documents.
- 19. All steel exposed to view shall be oil free, have welds ground smooth, and be of sufficient quality for an exposed and finished surface.
- 20. Include prime painting (galvanized where required by the bid documents) and touch-up (where required) as indicated in the construction documents.
- 21. Provide copies of current welder's certifications prior to the start of any work. Keep those records on file at the job trailer and keep them current at all times.
- 22. Include all freight to jobsite. Coordinate all lay down and staging areas with Project Superintendent at least 48 hours in advance of all material deliveries. Coordinate delivery schedule with steel erection subcontractor for offloading.
- 23. A 20 year no-dollar-limit warranty is required. Written proof of final roof inspection shall be provided after Manufacturer performs final roof inspection with Architect.
- 24. Include the roof warranty per construction documents when it exceeds the manufacturer's standard warranty.

Section B: Project Specific Requirements:

- 1. Furnish steel supports for metal canopies (Detail #).
- 2. Supply and install snow retention bars.
- 3. Supply and install rain gutter leaf screens.
- 4. Include Sales Tax

Section C: Project-Specific Exclusions:

1. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

13.2 Pre-Engineered Metal Building (Installation)

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 05 41 00 Cold Formed Framing
- 07 46 21 Preformed Metal Wall and Soffit Panel System
- 07 62 00 Flashing and Sheet Metal
- 07 62 10 Gutters and Downspouts
- 07 72 53 Roof Snow Guard & Flue / Vent Pipe Guards
- 07 92 00 Joint Sealants
- 08 11 13 Hollow Metal Doors & Frames
- 08 62 23 Tubular Daylighting Devices
- 09 22 16 Non-Load Bearing Metal Stud Wall Framing
- 13 34 19 Pre-Engineered Metal Building System

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade- Specific Requirements

- All steel work shall be erected and installed from approved shop drawings furnished by the PEMB fabricator. Confirm that you are working from the latest approved "field use" drawings prior to start of your work.
- 2. Provide copies of current welder's certifications prior to the start of any work. Keep those records on file at the job trailer and keep them current at all times.
- 3. Include off-loading of materials. Coordinate all lay down and staging areas with Project Superintendent at least 48 hours in advance of all material deliveries.
- 4. Erect and install all materials furnished in Bid Package 13.01.
- 5. All steel exposed to view shall be oil free, have welds ground smooth, and be of sufficient quality for an exposed and finished surface.

Section B: Project Specific Requirements:

- 1. Install tubular skylights per plan.
- 2. Install snow retention bars.

3. Install all sealants for a complete weather tight building envelope.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

21.1 Fire Suppression

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 21 01 00 General Fire Suppression Provisions
- 21 05 01 Common Work Results for Fire Suppression
- 21 05 48 Vibration and Seismic Control for Fire Suppression
- 21 05 53 Identification for Fire Suppression Piping and Equipment
- 21 13 01 Fire suppression Sprinkler Systems

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade- Specific Requirements

- 1. Provide all hydraulic calculations and piping drawings.
- 2. **Design, furnish, and install** a complete Fire Suppression System that shall conform to the construction documents, NFPA, local ordinances and zoning restrictions, and all local authorities having jurisdiction.
- 3. In the case of difference between specification, codes, local and state laws, ordinances or contract documents, the most stringent governs.
- 4. Provide all fire protection service lines from any tap location to the building.
- 5. Include fire protection risers as needed (includes PIV, BFP, fire hydrants, FDC points and/or check/ball valves).
- 6. Provide systems as required for concealed spaces such as attics, stage floors, canopies, etc.
- 7. Provide erection of metal supports and anchorages for fire protection scope of work.
- 8. Coordinate with electrical, HVAC, and plumbing trades to avoid all layout conflicts.
- 9. Furnish to other trades any access doors needed for access to fire protection installation.
- 10. Provide hose valves, backflow devices, cabinets, and hoses per plans and specifications.
- 11. Provide all connections and attachments to existing fire suppression sprinkler system as required.
- 12. Provide fire-stopping assemblies where necessary for penetrations created by this scope of work.
- 13. Provide all compliance reports and certificates as required by specifications.
- 14. Include training of Owner's staff.
- 15. Each trade shall provide and install firestopping at all penetrations for their work that crosses through fire-resistance-rated floor and roof construction including both empty / blank openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.

Section B: Project Specific Requirements:

1. Coordinate revisions of existing system with all affected building users.

- 2. Include cost for re-work of sprinkler heads in existing spaces where renovations will be performed.
- 3. Project specific requirement 3.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

22.1 Plumbing

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- Firestopping
- 22 01 00 General Plumbing Provisions
- 22 05 48 Vibration and Seismic Controls for Plumbing Piping and Equipment
- 22 05 53 Identification for Plumbing Piping and Equipment
- 22 07 19 Piping Insulation
- 22 10 05 Plumbing Piping
- 22 10 06 Plumbing Specialties
- 22 10 08 Plumbing Solder
- 22 30 00 Plumbing Equipment
- 22 40 00 Plumbing Fixtures

All General Scope Requirements as outlined in Section 3.01.

- 1. In the case of discrepancy between drawings, specifications, codes, local and state laws, ordinances, or contract documents, the most stringent governs.
- 2. Because of the drawing scales it is not possible to indicate all fittings and accessories that may be required. Include any and all fittings, offset, valves, etc., for a complete system.
- 3. Include temporary water supply.
- 4. Include water and sewer connections to the job trailer as required.
- 5. Plumbing contractor is to lay out all lines and elevations associated with this scope of work.
- 6. It is the responsibility of the plumbing contractor to verify the locations of all existing utilities and services as indicated on the drawings that are to be tied into prior to submitting a bid proposal. Failure to do so will result in the plumbing contractor assuming responsibility for any deviations of existing utilities from the construction documents.
- 7. Furnish all pipe bedding, cushion materials per construction documents.
- 8. Provide gradation plan if required. Check all sewer line gradations with existing utilities prior to installation to ensure the required flow is achieved.
- 9. Upon completion of plumbing contactor's underground work, plumbing contractor is responsible to regrade area, back fill and compaction to restore slopes and elevations to prevent standing water.

 Remove all spoils off site. Restore areas to the same state or better before work was commenced.

- 10. Prior to placement of the concrete slab, all stub ups are to be capped to prevent any concrete debris from falling into sanitary waste and vent lines. After installation of all concrete slabs on grade provide camera inspections of all sanitary sewer and vent lines to verify that lines are free and clear of debris.
- 11. Furnish and install complete plumbing system per construction documents.
- 12. Include complete sanitary sewer system.
- 13. Include natural gas piping required for this scope of work.
- 14. Furnish and install all domestic water piping required to complete this scope of work.
- 15. Include any utility company fees, impact costs, metering or vault costs. Include penetration sleeves, saw cutting, and coring required for this scope of work.
- 16. Furnish on site storage as required by the construction manager for the storage of fixtures and equipment.
- 17. Include a plumbing representative to be on site during slab pours to ensure plumbing lines remain in place.
- 18. Include all hoisting and scaffolding as required.
- 19. Furnish and install all plumbing fixtures including but not limited to urinals, urinal carriers, toilets, sinks and drinking fountains.
- 20. Include shower and bath units including shower pans as required.
- 21. Include backflow preventers and tests.
- 22. Tie new sanitary sewer lines in the existing sanitary sewer system per construction documents.
- 23. Include selective demolition required to install work in existing building. Remove plumbing items per plumbing plans shown to be removed and legally dispose of off-site. Cap existing lines.
- 24. Include all associated blocking, anchors, stenciling and tagging for this scope of work.
- 25. Include pipe supports associated with this scope of work. All miscellaneous steel, uni-strut, all thread rod and accessories required for pipe support, wall or floor penetrations and blocking as required.
- 26. Coordinate with other trades to locate sleeves and to ensure plumbing does not interfere with any other items.
- 27. Include all plumbing identification including color coding, stencil, labels tags, etc. per construction documents.
- 28. Include cutting, coring and patching required for plumbing installations.
- 29. Supply any access doors (24" x 24" min.) needed for access to plumbing equipment.
- 30. Install flashing or sealant at each exterior weather barrier penetration per weather barrier manufacturer's recommendation.
- 31. Include all final connections to Owner-furnished equipment.
- 32. Include final plumbing connections to food service equipment and casework. Coordinate with those trades for tie-in of plumbing items relating to those trade.
- 33. Furnish and install all appliance related plumbing as required.
- 34. Supply roof drains to be installed by roofing contractor. Include roof drain piping and connection to roof drains.
- 35. Furnish and install solid and/or grease intercepts per construction documents.
- 36. Include fire-stopping for penetrations created by this scope of work.
- 37. Include sealants (color selected by Architect) around all plumbing fixtures, sinks and lavatories.
- 38. Include cleaning, purging and flushing of all lines when complete as related to this scope of work.
- 39. Ensure all equipment has adequate maintenance access when in place.
- 40. Clean up waste and debris generated by this scope of work and dispose on a daily basis and as directed by the construction manager.
- 41. Include documented instructional training to the owner's representative regarding the operation and maintenance of the plumbing systems.
- 42. All warranties for fixtures, devices, and equipment begin at date of Substantial Completion of Project.

43. Each trade shall provide and install firestopping at all penetrations for their work that crosses through fire-resistance-rated floor and roof construction including both empty / blank openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.

Section B: Project Specific Requirements:

- 1. Supply and Install all toilets including detention grade stainless steel toilets.
- 2. Include concrete cutting, coring and patching for new drains and drain repairs inside the existing building.

Section C: Project-Specific Exclusions:

- 1. Underground utilities beyond 5' outside of building.
- 2. Some night work will be required to perform work in the kitchen area.

Section D: Project Alternates:

1. Alternate 1.

23.1 Heating, Ventilation, Air Conditioning

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 07 84 00 Firestopping
- 23 01 00 General HVAC Provisions
- 23 05 13 Common Motor Requirements for HVAC Equipment
- 23 05 48 Vibration and Seismic Controls for HVAC Piping and Equipment
- 23 05 53 Identification for HVAC Piping and Equipment
- 23 05 93 Testing, Adjusting, And Balancing
- 23 07 13 Duct Insulation
- 23 07 19 HVAC Piping Insulation
- 23 09 23 DDC Controls Systems
- 23 23 00 Refrigerant Piping and Specialties
- 23 31 00 Ducts
- 23 33 00 Duct Accessories
- 23 34 23 Power Ventilators
- 23 37 00 Air Outlets and Inlets
- 23 40 00 Air Cleaning Devices
- 23 55 34 Electric Heaters
- 23 74 13 Packaged Rooftop Air Conditioning Units
- 23 81 26 Small-Capacity Split-System Air Conditioners

All General Scope Requirements as outlined in Section 3.01.

- 1. HVAC contractor to provide equipment and ductwork shop drawings for coordination with other trades. Shop drawings are to include the locations and sizes of all duct work, equipment and equipment maintenance access.
- 2. Provide layout locations as needed for roof curb, exhaust fans, vents etc. during steel erection phase.
- 3. In the case of discrepancy between drawings, specifications, codes, local and state laws, ordinances, or contract documents, the most stringent governs.

- 4. Include all selective demolition required to install work in the existing building. Remove all HVAC items per HVAC or demolition plans and legally dispose of off-site.
- 5. Furnish and install a complete HVAC system.
- 6. Scope includes, but is not limited to equipment, supports, anchors, curbs, flashings, piping, duct work, insulation, controls, stenciling and labeling, VFD's, equipment disconnect switches, air venting devices, air exhausting devices, flow switches, condensation lines, dampers, diffusers, detectors, interconnection of instrumentation I/O control wiring systems, fuels, refrigerants and lubricants, supports for mechanical equipment, and other materials and devices as required for a complete HVAC system as per plans and specifications.
- 7. Because of the drawing scales it is not possible to indicate all fittings and accessories that may be required. Include any and all fittings, offset, valves, etc., for a complete system.
- 8. Provide conditioned air at the earliest possible date, as directed by Construction Manager, including all **temporary, final and attic stock air filters** as required.
- 9. Supply any access doors (24" x 24" min.) needed for access to HVAC equipment.
- 10. Provide all sleeves, blocking, coring, and other associated caulking required for this scope of work.
- 11. Provide the necessary temporary air filters materials over permanent return air grills at all entrances to return air ducts weekly or more often if needed.
- 12. Include concrete cutting, coring and patching as required for the mechanical scope of work.
- 13. Include Automatic Temperature Controls and interlock wiring including control components and complete control wiring system in strict accordance with construction documents.
- 14. Furnish and install motor controllers and starters for mechanical equipment as specified.
- 15. Include roof curbs and penetration enclosures as required and per the roofing manufacturer's requirements to preserve the roof warranty.
- 16. Furnish and install louvers, access doors, grilles, and vents as required for this scope of work.
- 17. Include condensate piping.
- 18. Include all natural gas piping required for this scope of work.
- 19. Provide air filters including spare air filters for HVAC equipment. Furnish, install and maintain temporary filters during construction operations.
- 20. Furnish, install and maintain all roof penetrations, openings and curbs associated with this scope of work until all equipment has been installed and flashed in permanently. Remove and dispose of covers at the completion of work.
- 21. Include fire-stopping, fire sealing and caulking for penetrations created by this scope of work.
- 22. Duct detectors are to be furnished by the electrical contractor, installed by this scope of work, and terminated by the electrical contractor. Coordinate with the electrical contractor for wiring and terminations.
- 23. Coordinate with the electrical contractor for the location, size and installation of disconnects. The electrical contractor is to furnish and install disconnects. The locations are to be provided by the HVAC contractor.
- 24. Coordinate with food service for tie-in locations of mechanical items relating to their equipment.
- 25. Furnish and install supports for return air boots as necessary.
- 26. Include all final connections to Owner-furnished equipment.
- 27. Include testing, adjusting and balancing per contract documents.
- 28. Include Commissioning per construction documents as required.
- 29. Include documented instructional training to the owner's representative regarding the operation and maintenance of the plumbing systems.
- 30. All warranties for fixtures, devices, and equipment begin at date of Substantial Completion of Project.
- 31. Include warranty per construction documents on all equipment regardless if used temporarily during construction for climatization.

32. Each trade shall provide and install firestopping at all penetrations for their work that crosses through fire-resistance-rated floor and roof construction including both empty / blank openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.

Section B: Project Specific Requirements:

- 1. Include DDC Controls from Alerton Technologies by Northwest Controls.
- 2. Coordinate roof penetrations in pre-engineered metal buildings with erector.
- 3. Project specific requirement 3.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

26.1 Electrical, Communication and Electronic Safety

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- Firestopping
- 11 15 00 General Detention Work Requirements
- 11 19 00 Detention Hardware
- 12 55 00 Detention Furnishings
- Division 26, 27, and 28
- 26 00 10 General Electrical Provisions
- 26 00 15 Seismic/Vibration Isolation for Electrical & Conduit
- 26 05 19 Wires and Cables
- 26 05 26 Grounding
- 26 05 29 Supporting Devices
- 26 05 34 Conduit
- 26 05 37 Outlet and Pull Boxes
- 26 05 53 Identification
- 26 05 73 Overcurrent Protective Devices
- 26 05 76 Short-Circuit/Coordination Study/Arc Flash Hazard Analysis
- 26 21 02 Underground Distribution
- 26 22 00 Transformers
- 26 24 16 Panelboards
- 26 27 26 Wall Switches, Receptacles, and Plate Covers
- 26 28 18 Motor and Circuit Disconnects
- 26 32 15 Generator and Automatic Transfer Switch
- 26 36 33 Dual Purpose Docking Station with Rotary Manual Transfer Switch Isolation
- 26 51 00 Interior Building Lighting
- 26 56 00 Exterior Lighting
- 27 10 05 Conduit for Telephone/data and TV Raceway System

- 28 05 10 Common Work Results for Electronic Security
- 28 05 55 Cabinets and Enclosures
- 28 31 04 Fire Detection and Voice Evacuation System
- 28 46 19 Electronic Security Control System
- 28 46 23 Touch Screen Control and Management System
- 28 50 45 Uninterruptible Power System
- 28 51 23 Intercom and Paging System

All General Scope Requirements as outlined in Section 3.01.

- 1. This package includes all electrical, communication, fire alarm and electronic safety and security scopes.
- 2. Provide all temporary lighting and power distribution in buildings as required for construction activities.
- 3. Provide all site power and/or lighting electrical work.
- 4. Provide all site trenching and duct banks needed for electrical and communication underground raceways and/or cables.
- 5. Upon completion of Electrical contactor's underground work, Electrical contractor is responsible to regrade area, back fill and compaction to restore slopes and elevations to prevent standing water.

 Remove all spoils off site. Restore areas to the same state or better before work was commenced.
- 6. Provide any electrical meter fees or impact cost required by the local electrical service provider.
- 7. Provide any conduit, pull strings, j-boxes etc. for any Division 26, 27, or 28 empty raceway systems as required per plans and specifications.
- 8. Provide any building primary/secondary electrical switchgear, panels, emergency power and/or generator systems as per plans and specifications.
- 9. Provide all raceway, wiring and terminations of VFD and/or starters that are furnished and installed by HVAC Subcontractor.
- 10. Provide any grounding systems, lightning protection systems, and certifications as required per plans and specifications.
- 11. Provide fire stopping for all penetrations created by this scope.
- 12. Provide all final connections and terminations for Owner Furnished Equipment.
- 13. Provide all final electrical connections and terminations as required to equipment furnished and installed by other bid packages.
- 14. Provide equipment and device testing, checkout and/or load studies as required per plans and specifications.
- 15. Provide control wiring for automatic doors.
- 16. Provide rough in for owner door access (card readers)
- 17. Provide training of Owner's staff on electrical equipment.
- 18. Provide all raceway, wire, termination, poles, light fixtures, and grounding for site lighting. Concrete pole bases will be provided by others.
- 19. In the case of difference between drawings, specification, codes local & state laws, ordinances or contract documents, the most stringent governs.
- 20. All warranties for fixtures, devices, equipment and gear begin at the date of the Project's Substantial Completion.
- 21. The electrical contractor is to furnish and install equipment disconnects.

COMMUNICATIONS

- 22. In the case of difference between drawings, specification, codes local & state laws, ordinances or contract documents, the most stringent governs.
- 23. Include field measurements as required.
- 24. Provide any conduit, pull strings, j-boxes etc. for any Division 27 empty raceway systems as required per plans and specifications.
- 25. Provide all final connections and terminations for Owner Furnished Equipment.
- 26. Provide all final electrical connections and terminations as required to equipment furnished and installed by other bid packages.
- 27. Provide equipment and device testing, checkout and/or load studies as required per plans and specifications.
- 28. Provide training of Owner's staff on communication system or equipment.
- 29. All warranties for fixtures, devices, equipment and gear begin at the date of the Project's Substantial Completion.

Section B: Project Specific Requirements:

- 1. Provide all Division 27 Communication systems.
- 2. Provide all Division 28 Electronic Safety and Security Systems except for Detention Security Equipment controls.
- 3. Provide conduit, raceways and back boxes for the Detention Security system. Coordinate with the detention controls subcontractor.
- 4. Provide and Install new 8KVA UPS and bypass switch.
- 5. Each trade shall provide and install firestopping at all penetrations for their work that crosses through fire-resistance-rated floor and roof construction including both empty / blank openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.

Section C: Project-Specific Exclusions:

- 1. Concrete light pole bases.
- 2. Wire, equipment and termination of security detention equipment and controls.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

31.1 Earthwork, Storm Drainage and Site Utilities

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 02 41 00 Demolition (Civil)
- 31 00 00 Earthwork
- 31 11 00 Clearing and Grubbing
- 31 22 13 Rough Grading
- 31 23 13 Subgrade Preparation
- 31 23 16 Excavation
- 31 23 16.13 Trenching
- 31 23 23.13 Fill & Backfill
- 31 23 23.16 Trench Backfill
- 31 23 33 Trenching and Backfilling
- 31 25 00 Erosion and Sedimentation Control
- 31 31 16 Termite Control
- 31 32 00 Soil Erosion Stabilization
- 31 37 00 Riprap33 05 05.31 Hydrostatic Testing
- 33 05 05.36 Vacuum Testing
- 33 05 05.41 Air Testing
- 33 05 05.43 Mandrel Testing
- 33 05 07.13 Utility Horizontal Directional Drilling
- 33 05 07.23 Utility Boring and Jacking
- 33 05 07.24 Steel Encasement Pipe for Utilities
- 33 05 24 Steel Water Pipe
- 33 05 39 Reinforced Concrete Pipe and Fittings
- 33 05 61 Concrete Manholes
- 33 05 97 Identification and Signage for Utilities
- 33 14 13 Water Pipe and Fittings
- 33 14 17 Water Service Pipe and Accessories

- 33 14 19 Valves and Hydrants
- 33 14 19.02 Fire Hydrants
- 33 31 11 Sanitary Sewerage Gravity Piping
- 33 42 00 Storm Utility Drainage Piping
- 33 46 16 Sub-drainage System-Downspouts

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade- Specific Requirements

Site Demolition

- 1. Subcontractor must comply with all environmental laws during demolition.
- 2. Subcontractor must provide containers and transportation for all demo debris removal for all demolition.
- 3. Include all road clean-up required by demolition activities.
- 4. Provide all barricades, traffic control and flagmen required by demolition activities.
- 5. All materials removed under this scope of work will be disposed of on a daily basis. Any materials to be salvaged shall be turned over to the Owner and delivered to a location on site as designated by the Owner. Reasonable care shall be exercised in removing any and all items to be retained.
- 6. Ensure utilities are disconnected prior to the commencement of demolition activities.
- 7. Coordinate demolition sequence with the project superintendent.
- 8. Include all means and measures to protect existing finishes, materials, structures and equipment from damage and dust due to demolition activities. Damage of such will be repaired at the expense of the demolition contractor.
- 9. Include all temporary shoring and bracing of any structures or devices which are affected by demolition activities. When necessary, engineering of shoring/bracing plan to be included in this package.
- 10. Demolition must be performed in strict coordination with Mechanical and Electrical trades and in strict accordance with the Owner to minimize disturbances or interruptions to operations. Note that demolition of electrical, plumbing, mechanical and fire sprinkler services is not included in this bid package and is included with those trades in their respective bid packages.
- 11. Leave job site "shovel clean" in areas of building demolition.
- 12. Leave jobsite "broom clean" in areas of interior demolition.

Earthwork and Storm Drainage

- 13. Coordinate the procurement of all paperwork, permits, fees, and bonds necessary for the work covered under this agreement, bearing all cost associated.
- 14. Professional surveyor to establish benchmarks, set lines and levels to layout building(s) and parking under this scope of work. Provide all site layout and engineering required including maintenance of such.
- 15. Install and maintain storm water prevention plan in accordance with requirements of the local jurisdiction(s).
- 16. Provide erosion control, maintenance of positive site drainage, and dewatering as it relates to the work. Maintain positive site drainage.
- 17. Provide all barricades, excavation protection, traffic control, and flagmen as necessary for the work.
- 18. Include all applicable taxes for this scope of work.

- 19. Locate existing utilities and structures prior to commencement of work. Damage to existing utilities and structures as a result of this work will be paid for by the sitework contractor.
- 20. Do not interrupt existing utility serving occupied or operating facilities, except when authorized in writing by Owner and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to governing authorities.
- 21. Provide all site demolition (including saw cutting) and removal from site. Demolition includes, but is not limited to asphalt paving, base, concrete paving, curbs, walks, poles bases, stairs, ramps, retaining walls, and foundations. Provide demolition of all abandoned or terminated underground utility lines and structures.
- 22. Provide, maintain, and remove protection around all trees to be saved using orange safety netting.
- 23. Provide all site clearing, grubbing, tree and stump removal, hauling, and dumping.
- 24. Strip, store, and protect topsoil. Replace and grade to within (±) .10 feet. Remove excess topsoil from site or stockpile in a location as directed by Construction Manager.
- 25. Provide watering/water trucks as required to provide compaction and to control dust.
- 26. All grading, cut, fill, disking and or processing, compaction to 95% standard optimum density (or as otherwise specified). Grades to be provided to (+/-) .10 feet of specified subgrade. Provide import of necessary fill or hauling of excess cut if necessary. Excessive slopes shall be laid back at a 2:1 slope as required.
- 27. Final grading and topsoil replacement to be done after all trades are finished. Fill all ruts, back of curbs, sidewalk edges, paving edges and against buildings. Provide suitable topsoils to specified topsoil depth. Topsoil shall be equivalent to clean sandy loam if site topsoil is insufficient or unsuitable. Seed as required by construction documents. All areas disturbed by construction activities shall be re-graded and backfilled.
- 28. Coordinate soils testing with Project Superintendent and testing agency.
- 29. Pay for any retesting in the event of failed compaction test.
- 30. Provide test certificates for offsite fill if used.
- 31. Provide and install all storm sewer including related concrete structures.
- 32. Provide a complete storm drainage piping system. Curb inlet tops will be provided by others.
- 33. Grated inlets to be completed as part of this package.
 - 34. At future storm drain inlet locations, temporary enclosures may be necessary to maintain water flow and to avoid debris in piping.
 - 35. Provide weekly as-built site drawings. Final as-builts shall be documented by professional surveyor.

Site Utilities

- 36. All permits, fees, and right of way bonds required to form this work.
- 37. Field engineering and site layout required to perform this scope of work.
- 38. Verify locations of existing utilities and services prior to commencement of work.
- 39. Include necessary traffic and dust control including signage and barricades required.
- 40. Provide complete underground system from utility service main to location at building or as noted.
- 41. Provide all excavation and backfill required for underground utilities.
- 42. Clean up site and adjoining streets while working onsite. Power wash all paving, drives and walks at the end of project. Remove and legally dispose off site of all debris associated with this trade package. Do not use dumpsters.
- 43. Sewer line complete Furnish and install all materials including structures and sleeves required, tie in to building sewer.
- 44. Water main complete Furnish and install all materials including connection to city service, hydrants, thrust blocks. etc.
- 45. Gas main and meter complete furnish and install including connection to utility service.
- 46. Furnish and Install concrete structures as required.

- 47. Furnish and Install backflow preventers and testing.
- 48. Repair paving and sidewalks including re-striping where needed.
- 49. All cutting, patching, excavation, backfill and boring as required to construct utility lines.
- 50. Dewatering of the excavations associated with this scope of work as required. Preserve structural integrity and workability.
- 51. Clean and flush all lines when complete.
- 52. Properly dispose of all spoils offsite.

Section B: Project Specific Requirements:

- 1. Include jack & bore design, equipment, and labor to install new sanitary sewer lines, including pipe encasements.
- 2. Sanitary sewer lines to be re-routed are active lines and are to remain active during construction. Limit disruption to the facility when the existing lines are transferred to the new lines.
- 3. Work is to be performed inside a secure area which shall be maintained at all times. Coordination of import/export of materials will be required.
- 4. Connect underground utilities to lines stubbed out 5 feet from the building.

Section C: Project-Specific Exclusions:

1. Concrete wash out maintenance

32.1 Asphalt Paving

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 32 11 16 Subgrade Preparation and Base Course Construction
- 32 12 16 Asphalt Paving-AR
- 32 16 23 Curbs and Sidewalks
- 32 17 23 Pavement Markings

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade- Specific Requirements

- 1. Provide barricades, excavation protection, traffic control, and flagmen as necessary for this work.
- 2. Repair and fine grade sub-grade ready to accept base course.
- 3. Asphalt and gravel base quantities are to be all inclusive in this package. Quantities will not be qualified and increased at a later date. Factor all necessary material to totally complete this scope.
- 4. Provide and install aggregate base and asphalt pavement as indicated and specified in the construction documents.
- 5. Provide all road clean-up required by activities of this work.

Section B: Project Specific Requirements:

1. Walk site with earthwork contractor prior to mobilizing to identify areas that need additional grading.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

32.4 Pavement Marking

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 32 17 23 Pavement Markings

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade- Specific Requirements

- 1. Provide all layout and field measurements.
- 2. Provide barricades, traffic control, and flagmen as necessary for this work.
- 3. Provide all striping and pavement markings as shown on drawings.
- 4. Provide painting of fire lanes and pipe bollards.
- 5. Provide all traffic signage, handicap signage, restricted access signage, etc. Include concrete footings necessary to support signs.
- 6. Multiple mobilizations may be necessary.
- 7. Provide parking bumpers as shown on drawings.

Section B: Project Specific Requirements:

- 1. Project specific requirement 1.
- 2. Project specific requirement 2.
- 3. Project specific requirement 3.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

32.5 Security and Non-Security Fencing

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 32 31 02 Structural Cantilever Slide Gate System
- 32 31 13 Fence and Gates

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade- Specific Requirements

- 1. Provide barricades, excavation protection, traffic control, and flagmen as necessary for this work.
- 2. Provide all layout and field measurements.
- 3. Furnish and install all materials necessary for a complete fencing system as shown in the construction documents.
- 4. Provide any concrete necessary to complete this work.
- 5. Furnish all hardware necessary to complete this work.
- 6. Provide and install 3-strands of barbed wire, razor wire, wire support post caps, tension wire, truss rods, horizontal fence rails, flat bar embedded in concrete grade beam, and post caps

7.

Section B: Project Specific Requirements:

- 1. Provide and install vehicle sliding gate and operator
- 2. Provide and install personnel gate with detention lock.
- 3. Provide and install concrete grade beam along fence line and at gate openings.
- 4. Plan for a minimum of 3 mobilizations.

Section C: Project-Specific Exclusions:

- 1. Access controls.
- 2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

32.7 Landscaping and Irrigation

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 General Requirements
- 32 92 13 Site Restoration
- 32 92 19 Seeding
- 32 19 20 Temporary Seeding and Mulching
- 32 92 23 Sodding

•

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade- Specific Requirements

- 1. Coordinate the procurement of all paperwork, permits and bonds necessary for the work covered under this agreement, bearing all cost associated with the same, including impact fees.
- 2. Provide barricades, excavation protection, traffic control, and flagmen as necessary for this work.
- 3. Provide all material and perform all work to provide a complete landscaping system in strict accordance with construction documents.
- 4. Furnish and install topsoil to slope grades up to match new sidewalks. Slope extends 3'-0" from edge of sidewalks.
- 5. Provide final machine/hand grading of topsoil as required to ensure proper drainage away from buildings and walks. Remove deleterious materials and rocks from topsoil.
- 6. Furnish and install sleeves.
- 7. Provide initial maintenance as required by construction documents.
- 8. Kill existing vegetation prior to the installation of sod.
- 9. Roll sod as required to provided uniformity and proper contact with soil.
- 10. Provide all plantings and ground treatments (grass seed and/or sod) as outlined in the documents.
- 11. Provide watering/water trucks as required to provide compaction and to control dust.
- 12. Provide all road clean-up required by activities of this work.

Section B: Project Specific Requirements:

- 1. Include 11,000 SY of Bermuda sod to be installed around the new buildings and sidewalks.
- 2. Include overseeding 5,500 SY of turf areas after construction work is completed to repair damaged areas from movement of equipment and staging
- 3. Provide an irrigation system repair allowance of \$2,000.00
- 4. Project specific requirement 3.

Section C: Project-Specific Exclusions:

- 1. Project specific exclusion 1.
- 2. Project specific exclusion 2.

Section E: Unit Pricing:

1. Irrigation repair Hourly Rate _____

4.00 SCHEDULE

- All activities related to Bidder's Scope of Work shall be completed within the schedules prepared by and agreed to by Construction Manager. All Subcontractors and Suppliers shall procure materials and provide the manpower necessary to meet the Project Construction Schedule. Estimated time periods for construction are:
 - a. Earthwork & Site Utilities:

a)	Phase 1 (Site)	January 2025 – February 2025
b)	Phase 1A (Site)	January 2025 – January 2026

b. Exterior Shell & Skin:

```
    a) Phase 1 (Building) February 2025 – May 2025
    b) Phase 1A (Building) May 2025 – August 2025
```

c) Phase 2 (Building) September 2025 – December 2025

d) Phase 4 (Building) January 2026 – April 2026

c. Interior Finishes:

```
a)
        Phase 1 (Building)
                              May 2025 - July 2025
b)
        Phase 1A (Building)
                              July 2025 – September 2025
c)
        Phase 2 (Building)
                              October 2025 - November 2025
d)
        Phase 3 (Building)
                              December 2025 – January 2026
e)
        Phase 3A (Building)
                              January 2026 – February 2026
f)
        Phase 4A (Building)
                              February 2026 - May 2026
```

d. Site Improvements:

```
    a) Phase 1 (Site) February 2026 – March 2026
    b) Phase 1B (Site) March 2026 – May 2026
    c) Phase 1C (Site) May 2026 – June 2026
```

e. Project Completion:

```
    a) Phase 1 – Phase 1C (Site) January 2025 – June 2026
    b) Phase 1 – Phase 4A (Building) February 2025 – May 2026
```

2. A Preliminary Construction Schedule will be provided to all Subcontractors and Suppliers with Project Contracts. Meetings will then be held with all Subcontractors and Suppliers for the purpose of receiving and coordinating input relating to duration and scheduling of project activities, which will be used to produce the actual Project Construction Schedule.

3. All Subcontractors and Suppliers shall be ready to commence work as required by the Project Construction Schedule and immediately upon receiving Notice to Proceed; and receipt from Subcontractor of executed Master and Project Contract Documents, Insurance that complies with Nabholz requirements, and Performance and Payment bonds (if required). In addition, all Subcontractors and Suppliers shall be prepared to provide shop drawings and/or submittals immediately upon award of contract and in no case no later than 30 days after award of contract.

5.00 OTHER FORMS

.01 Insurance Requirements

CONSTRUCTION MANAGER WILL NOT AUTHORIZE PAYMENTS TO SUBCONTRACTOR UNLESS SUBCONTRACTOR'S CURRENT CERTIFICATE OF INSURANCE AND CERTIFICATE OF SAFETY AND HEALTH IS ON FILE AND APPROVED.

FOLLOWING ARE MINIMAL INSURANCE REQUIREMENTS FOR SUBCONTRACTORS. WHERE THESE GENERAL REQUIREMENTS ARE LESS THAN THE REQUIREMENTS SET BY THE CONTRACT DOCUMENTS, THE CONTRACT DOCUMENTS WILL PREVAIL.

1. Commercial General Liability, no less than:

Each occurrence: \$2,000,000

General aggregate (project specific): \$2,000,000

Products/completed operations aggregate: \$2,000,000

Policy shall contain no less than the following:

- a. Policy form ISO CG 00 01, or equivalent.
- b. Coverage shall be primary and non-contributory.
- c. ISO standard severability of interest's clause and separation of insureds clause.
- d. Claims-made policies are not acceptable
- e. Policy shall contain no EIFS exclusion.
- f. Policy shall contain no subsidence or earth movement exclusions.
- g. Policy shall contain no prior work exclusions.
- h. Policy shall contain no cross-liability exclusion, except for Named Insureds.
- i. Policy shall contain no breach of contract exclusions.
- j. Policy shall contain no action-over or similar employee-injury exclusion.
- k. Policy shall contain no exclusion for work from heights.
- I. Policy shall contain no exclusions for occurrences causing continuous or progressively deteriorating injury or damage.
- m. Policy shall contain no exclusion for damage to work performed by subcontractors on your behalf.
- n. Any professional liability exclusion must contain an exception for construction means and methods.
- o. ISO CG 24 04, or equivalent endorsement form waiving subrogation.

- p. ISO CG 20 10 10 01 and CG 20 37 10 01, or equivalent blanket additional insured endorsement(s) for ongoing and completed operations. Additional insured status shall not be limited to comparative negligence or vicarious liability of the Construction Manager, or respondeat superior liability for the acts or omissions of Subcontractor. In the event this requirement is not permitted by state law, the provision shall be interpreted and applied to the extent permitted by applicable law. Regardless of the form of endorsement used, it shall require the maximum scope of coverage allowed under law.
- q. Additional insured endorsements shall accompany Certificate of Insurance.

2. Commercial Automobile Liability Insurance, no less than:

Combined single limit: \$2,000,000

Policy shall contain no less than the following:

- a. Coverage for "any auto," including owned, non-owned, and hired motor vehicles.
- b. Additional insured endorsement or omnibus clause.
- c. Waiver of subrogation endorsement.
- d. ISO CA 20 70, if Subcontractor's work will be performed within 50 feet of a railroad.
- e. ISO CA 99 48 10 01 and MCS-90, if Subcontractor's work involves the transport of pollutants.

3. Workers' Compensation and Employer's Liability Insurance, no less than:

workers' Compensation:	Per Statute
EL Each Accident	\$1,000,000
EL Disease – EA Employee	\$1,000,000
EL Disease – Policy Limit	\$1,000,000

Policy shall contain no less than the following:

- a. Other States coverage shall be included.
- b. Jones Act coverage shall be included, if applicable.
- c. USL&H coverage shall be included, if applicable.
- d. Policy shall contain a Voluntary Compensation Endorsement (or equivalent) providing coverage for executive officers, partners, and sole proprietors if coverage is not otherwise scheduled on the workers' compensation policy.
- e. Waiver of subrogation endorsement, if permitted by law.
- f. Alternate Employer Endorsement of NCCI Form WC 00 03 01 A, if Subcontractor uses an employee leasing firm or will supply equipment with an operator.
- g. Maritime Coverage Endorsement, if applicable.

4. Umbrella Liability or Excess Liability Insurance, no less than:

Each Occurrence \$1,000,000
General Aggregate \$1,000,000

If Subcontractor uses Umbrella or Excess Liability Insurance to arrive at the limits required herein for Commercial General Liability, Automobile Liability, or Employer's Liability insurance, such insurance shall follow-form with any primary policies and must retain a minimum limit of \$1,000,000 after accounting for partial application of its limits to underlying policies.

5. Pollution Liability Insurance

Pollution Liability Insurance is required if Subcontractor will be performing mechanical, electrical, plumbing, drilling/subsurface activities, demolition, drywall/insulation, building envelope system, moisture barrier protection application, environmental remediation, or if Subcontractor will be handling, disposing, or installing hazardous materials or pollutants. If applicable, limits shall be no less than:

Each Occurrence \$2,000,000
General Aggregate \$2,000,000

Policy shall contain no less than the following:

- a. Coverage may be provided on a Pollution Liability policy or endorsement to Commercial General Liability policy that provide coverage for bodily injury and property damage arising from a sudden or gradual pollution event in connection with Subcontractor's activities and those activities of its subcontractors.
- b. Coverage shall protect against the actual or alleged liability and costs arising from the sudden, gradual, and accidental release or discharge or pollutants.
- c. Contractual liability coverage shall apply.
- d. Policy shall have no exclusions for silica, mold, or fungi.
- e. Policy shall contain no cross-suits exclusions, except for Named Insureds.
- f. Coverage shall be primary and non-contributory.
- g. Additional insured endorsement, including competed operations.
- h. Waiver of subrogation endorsement.

6. Professional Liability Insurance

Professional Liability Insurance is required if Subcontractor's Scope of Work includes any professional, design, or engineering service responsibility, including delegated design-assist or design review responsibilities. If applicable, limits shall be no less than:

Each Claim \$1,000,000 Annual Aggregate \$2,000,000 Policy shall contain no less than the following:

- a. Coverage for claims that arise from the actual or alleged negligent acts, errors, or omissions of Subcontractor or any entity for which the Subcontractor is legally responsible, in the provision of professional services. Insurance shall be obtained by the party performing the professional, design, engineering, or delegated design-assist service.
- b. Policy shall not exclude coverage related to the scope of services being provided, third-party bodily injury and property damage, pollution conditions arising out of professional services, delays in project completion and cost overruns, mold or microbial matter, or design-build or contractor-driven projects.
- c. Waiver of subrogation endorsement.

7. Asbestos or Lead Abatement Liability Insurance

Asbestos or Lead Abatement Liability is required if Subcontractor's Scope of Work includes asbestos or lead abatement. If applicable, limits shall be no less than:

Each Occurrence \$5,000,000

8. Protection and Indemnity Insurance

Protection and Indemnity Insurance is required if Subcontractor's Scope of Work involves the use of watercraft. Coverage shall apply to all crew members as well passengers. If applicable, limits shall be no less than \$5,000,000, or the value of the watercraft, whichever is greater.

9. Contractors Equipment Floater Insurance

Policy shall contain no less than the following:

- a. Coverage shall apply to all equipment utilized by the Subcontractor in the performance of the Subcontract and all equipment rented or leased to the Construction Manager by the Subcontractor as part of the Subcontract.
- b. Limits of liability shall be not less than the replacement value of Subcontractor's owned, rented, leased, or borrowed equipment, except such items which are included in and remain part of the permanent construction.
- c. Waiver of subrogation endorsement

10. Riggers Liability Insurance

Riggers Liability Insurance is required if Subcontractor's Scope of Work involves conveying the property of others by hoist, crane, or mobile equipment to facilitate its installation. If applicable, limits shall be no less than:

Each Occurrence \$1,000,000
General Aggregate \$1,000,000

Policy shall contain no less than the following:

- a. Coverage may be provided through a Riggers Liability Insurance policy, endorsement to Commercial General Liability policy, or through an Installation Floater policy.
- b. If coverage is provided by an endorsement to an existing Commercial General Liability policy, the endorsement must delete the exclusion of personal property in the insured's care, custody or control and delete the exclusion of "that particular part of real property" on which the Named Insured is performing operations.
- c. If coverage is provided by an Installation Floater insurance policy, an endorsement to cover loss of property of others must be included.
- d. Increased limits may be required depending on the value of property or equipment being lifted or moved for Owner or others.
- e. Waiver of subrogation endorsement

11. Cyber Liability Insurance

Cyber Liability Insurance is required if Subcontractor will have access to any person's or organization's confidential or personal information. If applicable, limits shall be no less than:

Each Claim \$1,000,000
Aggregate \$2,000,000

Policy shall contain no less than the following:

- a. Coverage shall apply to claims involving privacy violations (including alleged violations of any federal, state, local or foreign privacy protection laws and regulations), information theft, damage to or destruction of electronic information, infringement of intellectual property, intentional and/or unintentional release of confidential or private information, alteration of electronic information, extortion, and network security arising from Subcontractor's work.
- b. Coverage shall include expenses of notifying affected individuals/entities and providing credit monitoring or similar services for those affected.

12. Electronic Data Liability Insurance

Electronic Data Liability Insurance is required if Subcontractor's work is in or adjacent to a server room or data center. If applicable, limits shall be no less than:

Each Claim \$1,000,000

Policy shall contain no less than the following:

- a. Coverage shall be provided on an Electronic Data Liability ISO CG 00 65 12 07 or on a Commercial General Liability policy endorsed with ISO CG 07 37 04 13.
- b. Coverage shall be primary and non-contributory.

c. Additional insured endorsement shall be provided.

13. Drone Liability Insurance

Drone Liability Insurance is required if drones will be used by Subcontractor or on Subcontractor's behalf. Coverage shall apply to any owned, leased, borrowed, rented, or hired unmanned aircraft. If applicable, limits shall be no less than:

Each Occurrence/ Combined Single Limit -

Bodily Injury and Property Damage \$1,000,000
Personal Injury \$1,000,000

14. Boiler and Machinery Insurance.

Boiler and Machinery Insurance is required if Subcontractor's work involves installation, maintenance, or any work involving boilers, machinery, or refrigeration units. If applicable, limits shall not be less than:

Each Occurrence \$1,000,000

15. Motor Trucker Cargo and/or Warehouseman's Legal Liability Insurance

Motor Trucker Cargo and/or Warehouseman's Legal Liability Insurance is required if Subcontractor's Scope of Work involves moving, transportation, and/or storage of Owner's property.

If applicable, policy shall contain no less than the following:

- a. Limits shall not be less than the replacement value of the property, artifacts, equipment and/or material.
- b. White such property is in the care, custody, and control of Subcontractor, coverage shall include loading, unloading, transportation, and return of said artifacts, equipment, and/or material up to the acceptance by Owner.
- c. Policy shall have no exclusion or contain an endorsement limiting coverage with respect to fine arts, historic documents, antiques, or breakage.

16. Railroad Protective Liability Insurance

Railroad Protective Liability Insurance is required if Subcontractor's Scope of Work is within 50 feet of a railroad, including without limitation WMATA, VRE, etc. Limits and terms of coverage shall be set forth by the railway operator.

17. Builders Risk Insurance

Builders Risk Insurance may be provided by Owner or Construction Manager; however, Subcontractor has the option to purchase and maintain, at its own cost and expense, any supplementary property insurance that Subcontractor deems necessary to protect Subcontractor's interest in the Work, including without limitation of offsite stored materials and materials in transit.

18. Other Insurance

Other Insurance coverages may be required based on Subcontractor's Scope of Work.

19. Additional Insured Entities.

Each insurance policy (except for workers' compensation and employer's liability insurance) shall include the following entities as additional insured parties:

- a. Nabholz Construction Corporation, its parent, subsidiary, related and affiliated companies
- b. Project Owner
- c. Project Architect and Engineers
- d. Each of their respective employees, agents, members, officers, managers, and principals
- e. Others as required by the Contract Documents
- **20.** Subcontractor must maintain insurance throughout the duration of the Project and such time Subcontractor may be held legally liable for its Work, including the warranty period, or for such longer period as may be required under the terms of the Contract Documents.
- 21. If permitted by law, the certificate of insurance must include a 30-day written cancellation notice.
- 22. See sample certificate of insurance at https://www.nabholz.com/bidding-and-contract-documents/

.02 Example Contracts, Forms, and Other Documents

Effective March 1, 2022, Nabholz began using an updated form of the Master Contract. If you previously had a Master Contract with Nabholz that is dated prior to March 1, 2022, you will need to execute a new Master Contract for subcontracts issued after March 1, 2022. Any subcontract issued prior to March 1, 2022, will be governed by the previous Master Contract form. Executing this new Master Contract will not affect projects already completed or currently under subcontract with Nabholz.

The following documents are available at https://www.nabholz.com/bidding-and-contract-documents/ and should be reviewed prior to bid submission:

- 1. Contract Performance and Administration
- 2. Sample Master Contract
- 3. Sample Project Contract
- 4. Sample Performance and Payment Bonds
- 5. Sample Purchase Order
- 6. Sample Certificate of Insurance
- 7. Contractor-Controlled Insurance Program Addendum to Master Contract
- 8. Safety Standards

.03 Virtual Design Construction Protocol

Subcontractor's Virtual Design Construction ("VDC") Scope of Work and Spatial Coordination Requirements, as follows:

- Alternate Section 1 language if Nabholz is providing the BIM services firm for the Project. Subcontractor shall agree to participate in the Project BIM coordination process by attending the BIM coordination and review meetings and provide guidance to the project BIM service firm as necessary to achieve the requirements below.
- 2. Subcontractor shall agree to provide Construction Manager an electronic three-dimensional (3D) model (such models are functionally referred to herein as "BIM" or "Building Information Models"). The models provided will be used to facilitate coordination, sequencing, and/or production of as-built depictions of the Project. The Subcontractor's costs of such participation shall be included in the lump sum Proposal unless explicitly outlined herein.
- 3. The BIM provided by Subcontractor shall be of sufficient detail (refer to Appendix A for details) to enable complete clash detection and shall be submitted to Construction Manager at a point in time that is reasonably in advance of Subcontractor's shop drawing submittals and the subsequent Project site construction of Subcontractor's Work. Each trade is required to submit six (6) copies of its respective, coordinated systems in two-dimension (2D) format as required by Subcontract, for approval through the regular approval process.
- 4. Construction Manager will make available its Project BIM website that will allow all parties to upload and download its respective "in progress shop models," manage electronic drawing files or models, and other documents used in the BIM coordination process.
- 5. Subcontractor shall attend Project kick-off meeting and participate in review and finalization of the Project BIM execution plan which will be signed by all participating parties.
- 6. Subcontractor shall participate in BIM coordination and review meetings as Construction Manager may require (usually once a week or 48 hours after the submissions of the BIM). As a result of such meetings, both the 2D (traditional method) and 3D (BIM) may be required to be changed by Subcontractor to achieve coordination with other elements of the Project that are provided by other parties.
- 7. Subcontractor agrees to promptly update and post changes to the BIM originating from RFIs, submittals, and bulletins throughout the course of the Project so that the BIM at the conclusion of the Project accurately depicts the Work as actually performed and installed. Such changes shall be accomplished at no increase in the price or time of completion.
- 8. All Subcontractors participating in the BIM must use the following file naming convention for their BIM/CAD files to track the version and date by each trade.

NCS Job #_Trade/Subcontractor Phase/Location

- 9. Subcontractors are responsible for providing a true 3D solid or surface model (not line and wireframe model) that represents the actual dimensions of the trade system elements and the equipment that will be installed. Individual pieces of equipment shall be modeled as a single complete element rather than connected lines and surfaces.
- 10. Subcontractor's drawing and model files shall be based on an origin point provided by Construction Manager. The cost of any changes required by Subcontractor to its drawings or models due to the use of an unauthorized origin shall be borne by Subcontractor.
- 11. All files supplied by Construction Manager will be as Autodesk .dwg, .nwc, .nwd or .rvt file format or other file format as necessary and agreed to by Construction Manager.
- 12. See the following spatial coordination requirements for BIM.

Spatial Coordination Requirements for BIM

1. Major Components.

a. HVAC Duct and Piping.

The HVAC and Piping Subcontractor will generate and provide in a timely manner BIMs of the HVAC systems including, but not limited to, duct work, piping, and all equipment installed in the HVAC scope of Work (fans, air handling units, built-up air handling units, pumps, tanks, valves, controls, heat exchangers, smoke and fire dampers, valves (including valve stems and handles), gauges and control valves, insulation on piping and ductwork, hangers and seismic bracing (if applicable), diffusers, registers, louvers, grilles, high and low point drains, starters, etc.). The HVAC and Piping Subcontractor shall also include in the BIMs all Owner or Construction Manager provided equipment that is installed under this Contract, concrete equipment pads, and inertia pads, and accessibility requirements for above listed items for code and maintenance purposes. The HVAC and Piping Subcontractor shall label the BIMs elements for all equipment under this contract as indicated in the Contract Documents.

b. Plumbing.

The **Plumbing Subcontractor** will generate and provide in a timely manner BIMs of the plumbing systems including, but not limited to, all piping systems and equipment installed in the Plumbing Subcontractor's scope of Work (domestic water, chilled water, steam, storm and roof leaders, pumps, tanks, water heaters, in-wall carriers, in-wall plumbing equipment, valves, gauges and control valves, insulation on piping, hangers and seismic bracing (if applicable), clean-outs, etc.). The Plumbing Subcontractor shall also include in the BIMs all Owner or Construction Manager provided equipment that is installed under this contract, concrete equipment pads, inertia pads, and accessibility requirements for above listed items for code and maintenance purposes. The Plumbing Subcontractor shall label the BIMs elements for all equipment under this contract as indicated in the Contract Documents.

c. Fire Protection System.

The **Fire Suppression System Subcontractor** will generate in a timely manner BIMs of the Fire Suppression Systems including, but not limited to, all risers, main and branch piping, heads, pumps, controllers, ATS, and equipment installed in the Fire Suppression System scope of Work (pre-action system, dry system, and main fire suppression systems, hangers and seismic bracing (if applicable), valve assemblies, drain valves, Fire Department valves, etc.) The Fire Suppression System Subcontractor shall also include in the BIMs concrete equipment pads, inertia pads, and access doors. The Fire Suppression System Subcontractor shall identify, under separate model element or drawing layer, access doors, and accessibility requirements for above listed items for code and maintenance purposes. The Fire Suppression Subcontractor shall label the BIMs elements for all equipment under this contract as indicated in the Contract Documents.

d. Electrical.

The Electrical Subcontractors, including, Low Voltage Subcontractor, Audio-Video Subcontractor, and Scoreboard-Ribbon Board Subcontractor, will generate in a timely manner BIMs of its respective electrical systems and/or devices including, but not limited to, all conduit systems, and equipment installation in its respective scopes of Work (individual conduits over 2", racks carrying more than 4 conduits 1" and smaller, panels, transformers, switch/paralleling gear, ATS', generators, cable tray, data racks, starters, VFD's, cast-in-place floor boxes, hangers and seismic bracing (if applicable), etc. for normal, emergency and isolated power systems or applicable specialty systems). Subcontractor shall also include in the BIMs equipment pads, inertia pads, light fixtures, exit signs, fire alarm components and devices, speakers, A/V equipment and devices, scoreboards, ribbon boards (and related devices), recessed electrical devices and access doors. Subcontractor shall identify under model element, or separate drawing layer access doors and accessibility requirements for above listed items for code and maintenance purposes. Electrical Subcontractor shall label the BIMs elements for all equipment under this contract as indicated in the Contract Documents.

e. Structural.

The **Structural Steel Supplier** will generate and provide in a timely manner BIMs of its scope of Work in addition to the contractually required 2D documentation. The BIMs will represent an "as fabricated" fully detailed level of information. The fabrication-level detailed model shall include, but is not limited to, major structural members such as trusses, beams, columns, etc., as well as secondary and miscellaneous steel connections including gusset plates, bracing, angles, knife plates, etc. necessary for the successful coordination of other building trades. These models shall be updated and maintained to reflect changes in

the Work as a result of coordination or design changes and shall be delivered at the end of the Project as an "as built" record model of the structural steel system in its entirety.

2. Minimum Hardware Requirements.

- a. TBD
- 3. Minimum Software Requirements.
 - a. TBD

4. Structural / Architectural Features Required for Coordination

a. Spatially accurate and dimensionally scalable building elements including but not limited to soffits, fixture locations, ceiling/floor tile locations, ADA clearances, interior wall framing, moment-frame side plates, cross bracing, gusset plates, beam stiffeners, miscellaneous steel framing, and other similar entities within the modeling space requiring coordination with the MEP trades.

5. Fully Annotated Installation Drawings.

a. Fully annotated installation drawings shall include all text, dimensions, and annotations required for physical location of all elements shown on the drawings in the physical space at the time of their installation.

.04 Project-Specific Plan for Lean Practices

Subcontractor will actively participate in the lean construction practices employed by Nabholz. *Lean* construction is a management philosophy to improve flow and efficiency by reducing waste, adding value, and continuously improving.

DEFINITIONS

- 1. Goals of lean construction practices
 - a. Reduce waste to add value
 - b. Create reliable workflow
 - c. Continuously improve
- 2. Waste any effort that does not add value
 - a. Defects work not installed correctly, causing rework
 - b. Overproduction building too much or out of sequence, making downstream work difficult
 - c. Waiting unable to work due to missing information, materials, or prerequisite work
 - d. Non-Utilized (or under-utilized) Talent failure to take full advantage of the best knowledge, experience, and ideas from all members of the team
 - e. Transportation excess movement of materials or equipment before final installation
 - f. Inventory excess materials delivered before needed, causing congestion in the workplace
 - g. Motion excess movement by workers to complete tasks
 - h. Extra Processing unnecessary steps to complete work, often the result of other wastes
- 3. 5S a methodology to optimize productivity, organization, and efficiency
 - a. Sort eliminate what's not needed
 - b. Straighten organize what remains and prioritize for maximum efficiency
 - c. Shine improve cleanliness and ensure good working order
 - d. Standardize develop system to replicate and maintain improvements
 - e. Sustain maintain improvements and seek to do better

PROJECT-SPECIFIC PLAN

The following lean practices will be utilized on the project if checked in the matrix.

X	Nothing Hits the Floor	Materials, tools, and equipment on wheels or palettes
X	Phase Planning (pull planning)	Collaborative planning to establish workflow to intermediate milestones
X	6-Week Look-Ahead Planning	Detailed plan of activities for upcoming work
X	Percent Planned Complete	Measurement of activities completed according to plan
X	Daily Huddle	Short daily review of activities and constraints
X	Right Time Material Delivery	Minimize duration of material storage on site
X	Prefabrication	Assemble building elements away from the work area

LEAN PRACTICES

Subcontractor agrees to actively participate in the following lean practices, which include but are not limited to the activities described.

1. Nothing Hits the Floor

a. Definition – Keep materials, tools, and equipment on wheels or palettes to the greatest extent possible.

b. Goals

- i. Improve housekeeping by eliminating accumulated debris piles
- ii. Reduce trip hazards
- iii. Improve efficiency of work areas by eliminating obstacles

c. Execution

- i. All materials shall be loaded onto wheeled carts, dollies, or palettes to allow easy movement and facilitate organization within the work areas.
- ii. Plan work activities to minimize or eliminate off-cuts, debris, and excess materials from piling up on the floor. Debris containers shall be wheeled to facilitate efficient placement and ease of debris transport.
- iii. All work areas shall be kept clean, organized, and broom swept, with no materials left on the floor at the end of the workday.
- iv. All materials and small tools are to be neatly stored and organized and work areas kept free of debris, surplus equipment, and surplus materials.
- v. Whenever feasible, assembly of components and preparation of materials shall be accomplished at tabletop height to encourage healthy posture for workers.
- vi. Wherever feasible, Subcontractors shall unpackage materials and dispose of packaging waste at their own shops rather than the job site.
- vii. Wherever feasible, Subcontractors shall endeavor to utilize cordless tools to eliminate the trip hazards associated with electrical extension cords.

2. Phase Planning (pull planning)

a. Definition – Collaborative work session in which activities are pulled forward from identified intermediate milestones to establish workflow and sequence.

b. Goals

- i. Develop reliable workflow
- ii. Commit as a team and as individuals to the dates and work sequence agreed upon
- iii. Identify potential constraints early in order to manage and mitigate them

c. Execution

Nabholz will identify intermediate project milestones within the Master Project Schedule.
 Milestones shall not typically extend past 4 months.

- ii. When invited, Subcontractor shall actively participate in planning meeting, represented by a foreman or superintendent with knowledge of the work and authority to commit to dates and crew sizes.
- iii. If requested by Nabholz, Subcontractor shall prepare for meeting ahead of time and submit activities and durations to be sequenced in planning session.
- iv. Following the meeting, Nabholz shall import the activities, durations, and sequence into the Master Project Schedule.
- v. Nabholz shall maintain visual communication tools such as constraint boards to manage and mitigate potential issues that arise in pull planning work sessions.

3. 6-Week Look-Ahead Planning

a. Definition – Detailed plan of activities scheduled to occur in the next six weeks.

b. Goals

- i. Identify and prepare for specific upcoming tasks
- ii. Ensure that all materials, tools, equipment, or information are secured for upcoming tasks
- iii. Identify and mitigate constraints that may prohibit tasks from being completed
- iv. Consistently make work ready in order to maintain project flow

c. Execution

- Nabholz will develop the 6-week look-ahead plan based on the Phase Plan (pull plan) and Master Project Schedule.
- ii. When invited, Subcontractor shall actively participate in weekly planning meeting with Nabholz superintendent, represented by a foreman, superintendent, or project manager with knowledge of the work and authority to commit to dates and crew sizes.
- iii. Nabholz shall distribute completed 6-week look-ahead plan to all subcontractors.
- iv. Nabholz shall maintain visual communication tools such as constraint boards to manage and mitigate potential issues that arise in look-ahead planning meetings.

4. Percent Planned Complete

a. Definition – Measurement of completion of the tasks to which the team committed, and analysis of the root causes for missed dates.

b. Goals

- i. Analyze root causes of missed dates to eliminate constraints and improve performance
- ii. Keep the team accountable to their commitments

c. Execution

- i. At the 6-week look-ahead planning meeting, Nabholz will lead a review of the previous week's plan and record whether or not each task was completed on time.
- ii. If a task was not completed as planned, the team will briefly discuss why and select a root cause to categorize the missed commitment.
- iii. Nabholz will maintain records of weekly performance and overall project to date.

5. Daily Huddle

a. Definition – A short coordination meeting to review daily planned activities and constraints.

b. Goals

- i. Collaborate among crew leaders
- ii. Ensure reliable workflow

c. Execution

- If Subcontractor is working on site that day, Subcontractor's foreman shall join the Nabholz superintendent for a 20-minute coordination meeting to review planned activities and to discuss constraints.
- ii. Nabholz superintendent will determine time and location of huddle.
- iii. Discussion typically reviews planned tasks, crew sizes, material deliveries, and constraints.
- iv. Nabholz shall maintain visual communication tools such as constraint boards to manage and mitigate potential issues that arise in daily huddles.

6. Right Time Material Delivery

a. Definition – Deliver to the job site only the quantity of materials that may be consumed within a defined timeframe, typically two weeks.

b. Goals

- i. Eliminate long-duration stored materials in the work area
- ii. Decrease congestion in the work area, improving efficiency and productivity
- iii. Reduce the chances for material damage while materials await installation

c. Execution

- i. Materials stored on site shall be labeled with Subcontractor's name, phone number for Subcontractor's foreman or superintendent, and the date of material delivery.
- ii. Materials delivered shall be incorporated into the work within 10 working days of delivery.
- iii. Exceptions may be approved by Nabholz.

7. Prefabrication

a. Definition – Assemble elements of construction away from the work area, typically off-site in a warehouse or shop, and deliver complete assemblies to jobsite ready for installation.

b. Goals

- i. Reduce man-hours on the job site
- ii. Reduce the overall on-site duration
- iii. Improve the quality of constructed elements
- iv. Improve worker safety away from jobsite hazards

c. Execution

- i. Wherever feasible, and with prior Nabholz approval, Subcontractor shall plan to prefabricate components off-site in a shop or other controlled environment.
- ii. Prefabricated assemblies should be carefully coordinated with the adjacent work of other trades, preferably within a virtual model.
- 1. When testing is required of a completed system, such as air testing in a plumbing assembly, testing may be completed off-site as part of the prefabrication process. Requirements for testing documentation do not change.