



# CONSTRUCTION MANAGER'S MANUAL

Project: **University of Missouri Healthcare  
Women's and Children's Hospital  
CP180131 - Exterior Envelope Replacement  
Package #1**

Issue Date: 7/9/2019

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# 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:	University of Missouri Healthcare Women’s and Children’s Hospital CP180131 - Exterior Envelope Replacement Package #1
Nabholz Job Number:	08-19-3071
Jobsite Address:	404 North Keene Street, Columbia, MO, 65201
Job Description:	The University of Missouri Women’s and Children’s Hospital is a 5-story hospital facility with mechanical penthouse consisting of a total of 225,000 gross sqft of floor area. The Exterior Envelope Replacement project, CP180131, will replace and reconstruct the full exterior building envelope, consisting of the metal wall panels, window systems, vapor/air barriers, integral flashings, roof membranes and tuckpointing repairs to brick masonry stair towers and replacing interior finishes with strict adherence to infectious control and interim life safety measures.  **Package #1 includes only the Wall Panels, Roofing and Glazing scopes of work. The remainder of the project will be bid at a later date**
LEED Certification:	None
Approximate Construction Start:	January, 2020
Approximate Construction Finish:	(a more detailed schedule to be issued)
Are BIM/VDC Practices Required?	No
Is this a “Nothing Hits the Floor” Project?	No
Is this a CCIP Project? (Contractor Controlled Insurance Program)	No
Is this an OCIP Project? (Owner Controlled Insurance Program)	No
Is this job prevailing wage?	Yes
Is this job taxable?	No

## .02 Bidding Procedure

Bid Date:	7/31/2019
Bid Time:	1:30 PM
Bid Submission Procedure:	<b>Bids should be sealed and delivered to:</b> University of Missouri – General Services Building 900 E Stadium Blvd Columbia, MO 65211 Room L100 (Front Reception Desk) ATTN: Nabholz Construction
Bid Bond Required:	Bid Bond required for proposals greater than \$100,000 – 5% Bid Bond. Oblige is Nabholz Construction Corporation.
RFI/Bid Question Deadline:	2:00 PM on 7/24/2019
RFI/Bid Question Process:	ALL COMMUNICATIONS TO GO THROUGH NABHOLZ Bidders shall submit questions in writing to: <a href="mailto:daniel.dercher@nabholz.com">daniel.dercher@nabholz.com</a> by the established deadline. Questions should reference specific details, plan sheets, specifications, or bid manual sections.

## .03 Prebid Meeting

Prebid Meeting Date:	7/18/2019
Prebid Meeting Time:	9:00 AM
Prebid Meeting Location:	Women’s and Children’s Hospital 404 North Keene Street, Columbia, MO, 65201 Rooms 4, 5 and 6
Is the Prebid Mandatory?	Attendance is not mandatory but is strongly encouraged and will be considered in final evaluation of proposals.

## .04 Project Team Information

Nabholz Office:	17300 W 116 <sup>th</sup> St. Lenexa, KS 66219
Nabholz Senior Project Manager:	Jeremy Branson, 913.393.6552, <a href="mailto:jeremy.branson@nabholz.com">jeremy.branson@nabholz.com</a>
Nabholz Project Manager:	Mitchell Fuemmeler, 816.985.7463, <a href="mailto:mitchell.fuemmeler@nabholz.com">mitchell.fuemmeler@nabholz.com</a>
Nabholz General Superintendent:	Mickey Starkey, 913.490.9269, <a href="mailto:mickey.starkey@nabholz.com">mickey.starkey@nabholz.com</a>
Nabholz Estimator:	Daniel Dercher, 913.393.6544, <a href="mailto:daniel.dercher@nabholz.com">daniel.dercher@nabholz.com</a>
Architect:	International Architects Atelier
Architect Contact:	Majid Amirahmadi

## .05 Site Specific Safety Considerations

Project Safety Considerations (in addition to Nabholz Safety Standards)	1.
	2.
	3.
	4.
	5.
	6.

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 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 at <https://www.nabholz.com/trade-contractors/> or by contacting the Construction Manager's ("CM's") office.
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;
  - l. Quality and availability of Bidders' personnel and resources; and
  - m. Amount and nature of Bidders' current or pending litigation.
  - n. Ability to meet diversity goals.
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, The Master Contract & Project Contract between Construction Manager and Subcontractor, as well as the following attachments and any Addenda and Supplementary Conditions.
- a. Exhibit A – 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 Construction Manager.
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. Prevailing wage rates and documentation if required by Contract Documents.
  - c. Employee orientation, safety training, infection control training, and photo ID badging, as required.

- d. 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.
- e. Delivery of submittals, including but not limited to shop drawings, product data, samples, mock-ups, operating service and maintenance manuals, Material Safety Data Sheets (MSDS), and other documents and submittal materials required by the specifications.
- f. All product testing documentation required by specifications, including test certificates
- g. 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
- h. 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.
- i. 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.
- j. Telephones, computers, and internet access.
- k. Drinking water and ice.
- l. Storage sheds, office trailers, and labor sheds.
- m. Portable, gas-driven welders.
- n. All parking for employees shall be coordinated with Construction Manager's Project Superintendent at Bidders' expense.
- o. All material handling equipment, including but not limited to hoisting with certified operators, bracing, shoring, scaffolding as necessary to move materials and complete Scope of Work.
- p. Daily clean up and removal of all identifiable debris, including but not limited to:
  - i. 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



Contractor of noncompliance, the Contractor may implement appropriate cleanup measures without further notice and deduct the cost thereof from any amounts due or to become due the Subcontractor under this 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 Contractor's on-site recycling and refuse programs. Subcontractors shall follow any Nabholz 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 this work will be the responsibility of this trade contractor.

- q. Weather protection as required to protect and perform the Work unless specifically excluded in Bid Package.
  - r. All applicable trade permits, licenses, and inspection fees, including bonds required for the Scope of Work.
  - s. Engineering layout, professional surveys, grade control and field dimensions associated with the Scope of Work.
  - t. Touch-up painting of any prefinished items as required.
  - u. Dewatering of all excavations associated with the Scope of Work, as required, preserving structural integrity and workability.
  - v. Provide enclosures, temporary heat, blankets, additives, etc. as needed to protect Work and materials from cold weather conditions.
  - w. Removal of existing materials in existing facilities, if considered part of the Scope of Work and legally dispose of offsite.
  - x. 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 all requirements of Construction Manager's substance abuse and security policies.

21. Compliance with Construction Manager's insurance requirements. Reference Section 5.01 of the CM Manual.
22. 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.
23. 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.
24. Bidders shall provide closeout documents per Contract Documents and Master 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.
25. 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.
26. Bidders may not remove or replace its Superintendent or Foreman without prior written consent from Construction Manager.
27. 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.
28. 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.
29. Bidders shall coordinate Work with the Construction Manager and other trades affecting their Scope of Work.
30. 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.

31. 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.
32. Time lost due to weather conditions must be made up by Bidders.
33. Bidders shall comply with the established work hours or Owner-specified durations necessary to minimize impact on Owner operations.
34. Construction Manager maintains ownership of all schedule free float.
35. Bidders shall sequence Work as directed by Construction Manager.
36. 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.
37. Bidders must participate and comply with the Construction Manager's QMS as relevant to the Scope of Work.
38. 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.
39. Prior to commencing work, bidders must provide company specific safety plan and silica exposure plan to superintendent, in either digital or physical copy.

.03 Bid Affidavits

(INSERT ADDITIONAL AFFIDAVITS, ETC. HERE)

## .04 Wage Requirements

### Annual Wage Order No. 25 Boone County

effective 8/28/2018

*These are the wage rates applicable to this project in accordance with 13.6.1 of the general conditions. Overtime provisions are specified under 13.6.13*

OCCUPATIONAL TITLE	BASIC HOURLY RATES
Asbestos Worker (H&F) Insulator	\$55.87
Boilermaker	\$67.29
Bricklayer	\$48.19
Carpenter, Pile Driver, Millwright, Lather, Linoleum Layer	\$43.25
Cement Mason, Plasterer	\$41.45
Communication Technician	\$50.23
Electrician (Inside Wireman)	\$50.23
Electrician (Outside-Line Construction/Lineman)	\$66.35
Elevator Constructor	\$80.35
Glazier	\$40.30
Ironworker	\$55.45
Laborer, 1st Semi Skilled Laborer, 2nd Semi Skilled Laborer	\$37.55
Mason, Marble Mason, Marble Finisher, Terrazzo Worker, Terrazzo Finisher, Tile Setter, Tile Finisher	\$35.29
Operating Engineer	\$56.33
Painter	\$36.67
Plumber, Pipefitter	\$59.60
Roofer/Waterproofer	\$45.59
Sheet Metal Worker	\$49.43
Sprinkler Fitter - Fire Protection	\$57.26
Truck Driver	\$36.00

## .04 MU Healthcare Construction Guideline

### 1.E.1

## Healthcare Construction Guideline

SEPT 2017 Edition

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## **Section 1 Training Requirements**

The purpose of the training requirements for contractors is to ensure that construction project work in and around the healthcare environment is managed in such a way to minimize health and safety risks associated with construction activities and that contractors know and understand their responsibilities.

### **Required Training**

1. Contractor project managers, superintendents and subcontractor foremen will be required to attend the following training:
  - Minimum of One (1) hour training related to *“Infection Control & Dust Barriers”* and *“Healthcare Construction Training for Contractors”*.
2. Contractor project managers, superintendents and subcontractor foremen have the responsibility for ensuring that contractor employees are knowledgeable of the training requirements and direct their employees and project work accordingly.
3. Contractors will be required to utilize the MU Hospital online **eMeditrack** system for initiating work requests of various types, examples may include infection control barriers, utility outage, various permits required.
4. Contractors are required to report in and sign in and out at the designated location per building location each work day upon arrival and exit of the work location.

### **Training Agenda**

At a minimum the topics to be covered in the training include the following:

1. Construction Risk Assessment, Infection Control, ventilation, barrier plans and Interim Life Safety.
2. Contractor Training Requirements.

### **Documentation**

1. All employees who receive training will be required to sign their name on a training acknowledgement form stating that they have been oriented to the training requirements.
2. Healthcare Safety and Infection Control Requirements will be in the project contract documents for further review as required.
3. **COMPLIANCE VIOLATIONS:** Contractors/Vendors who violate the requirements of this Guideline are subject to disciplinary action and removal from the project.

## **Section 2 Emergency Phone Numbers & Contact Information**

Telephone contacts should be used by the contractor for emergency situations which may arise during the construction project. Contact Plan will be identified and coordinated at the project Pre-Construction Meeting by the owner’s representative.

## **Section 3 Contractor Identification Badge**

Contractors working in and around the MUHC facilities will be required to display and wear the *“Contractor Identification Badge”* and in accordance with the information displayed below. It is the responsibility of the contractor to provide the computer and color printer for reproduction of badges required. Consult the Owner’s Representative for the electronic file.

### **Contractor ID Badge**

1. Contractor is to issue badges to employees as required. (Contractor to validate employee with proof of ID).
2. Contractor to edit the information, print in color, cut out the badges, fold in the center and insert. Contractor will provide badge holders.
3. Contractor shall keep a roster/log of badged employees by trade/subcontractor at the project jobsite for reference by the Owners Representative.
4. All badges to be collected and returned to PD&C at the end of the project.
5. Any orientation required will be discussed at the pre-construction meeting with the Owner’s Representative.

6. Contractor employees are to wear the badge on the upper chest facing forward unless approved otherwise for safety reasons.
7. All contractor superintendent and foreman shall attend "Healthcare Construction Training" and affix issued "T" sticker in the circle area on badge as shown. This will show evidence that the employee has completed training
8. The Badge document will be provided to the Contractor to make copies and distribute as required. See Page HCG 12.

#### **Section 4 General Safety Requirements for Health Care Projects**

The General Contractor and its Subcontractors are responsible for understanding, planning and implementing the following requirements in the management of the project.

1. Make sure shoes/boots and clothing are free of excessive dirt/debris before entering and leaving the construction area.
2. If you leave any dust/dirt or tracks in the occupied area of the healthcare facility, you must stop and clean them up immediately by using a HEPA filtered vacuum and/or a clean dampened floor mop with a UMTH hospital approved furnished cleaning solution.
3. Assure that all construction material, supplies and tools are cleaned and covered with a clean covering material while transporting through the healthcare facility.
4. Ensure that the carts and wheels on tool and supply carts as well as trash/demolition waste carts are properly wiped clean before leaving the construction area. Cleaning/wiping solutions are provided by the hospital and must be approved per direction of the Owner's Representative.
5. Staff and patients **ALWAYS** have priority and the "**Right of Way**" in the elevators and corridors.
6. Never use aerosol sprays or cleaning solvents that could dispense fumes, odors or cause potentially allergenic reactions or medical problems to susceptible patients, staff or visitors.

#### **Section 5 Construction-Renovation-Maintenance Risk Assessment (CRMRA)**

The "**Construction-Renovation-Maintenance Risk Assessment**" (**CRMRA**) planning process establishes criteria to be used and measures to be taken for the protection of patients, healthcare workers, visitors and contractors, from construction/renovation activities which could lead to infections or compromise existing life safety systems in the healthcare facility.

Once the Contractor is selected, they will be required, and the Subcontractors as applicable to participate in the "**CRMRA**" planning process for orientation of project requirements and help in identifying any additional project needs or risks prior to any contract construction work commencing.

The owner's representative will work with the contractor to coordinate and facilitate these **CRMRA** planning activities with MUHC engineering services, infection control department and others as required during the duration of the project.

#### **Section 6 Construction – Renovation – Maintenance Infection Control Risk Mitigation Criteria**

The "**Construction–Renovation-Maintenance Infection Control Risk Mitigation Criteria**" (**CRMICRMC**) is a process to evaluate construction projects for required interventions during construction in order to minimize Hospital Acquired Infections (HAI's), and controlling dispersal of air and/or water-borne infectious agents concealed within the building components.

All construction activities shall be defined and managed in such a way that occupant's exposure to dust, moisture and their accompanying hazards is limited.

1. **Construction–Renovation-Maintenance Infection Control Risk Mitigation Criteria and the Construction–Renovation-Maintenance Infection Control Risk Mitigation Permit** which will be used for all MUHC construction and renovation projects.
2. **Any work required outside the main project limits will require a NEW Infection Control Risk Assessment.**



3. The owner's representatives and Contractor will work together to coordinate the assessment and determine the requirements and permit.
4. The owner's representative will ensure that all required infection control interventions and needed life safety measures required for the project are in place by the contractor prior to starting work. (i.e. barrier walls, tacky mats, required exits, etc.)
5. The contractor shall follow all requirements to support the **"Construction – Renovation- Maintenance Infection Control Risk Mitigation Criteria"**.
6. The contract documents and CRM IC Permit will provide requirements specific to the project.
7. Work outside of construction limits. Prior to contractor performing any work outside of construction limits, the owner's representative must be notified.
8. Contractors that violate the requirements of the **"Construction – Renovation- Maintenance Infection Control Risk Mitigation Criteria/Permit"** will be removed from the project.

## **Section 7 Construction of Dust Barrier Walls**

Infection control is the number one health concern in a construction project. Infection can occur when workers are not cautious about keeping dust, bacteria, mold, etc. from becoming airborne during the construction process. For these reasons, barrier walls are built to isolate dust and fumes in the construction site to separate the patient care and public areas of the healthcare facility.

### **Dust Barriers Walls and Contamination Reduction**

1. A signed copy of the **"CRM Infection Control Construction Permit"** shall be kept at the job site at all times. Large AND small projects may have several "CRM Infection Control Construction Permits" issued as project phases, needs and assessments evolve.
2. Barriers are required to contain the ceiling envelope, chases, interstitial spaces, etc.
3. When access and exiting to the construction site can only be accomplished through a public area, the interior space of the construction site must be cleaned once every 8 – hour shift to control excessive dust and ventilation filtering issues. Debris shall be removed daily.
4. A temporary fire resistant 6 mil., polyethylene dust barrier is required to control dust while the rigid barrier is being constructed as well as at the end of the job during removal of the rigid barrier.
5. Contractors are responsible to ensure that barrier systems and walls are properly constructed, penetrations sealed and maintained for effectiveness for the duration of the project. Anytime polyethylene is used in a control barrier, it must be fire resistant, 6 mil. See **"Approved Equipment and Product Information"**.
6. Once barrier walls are built they are required to be cleaned or wiped down prior to the start of work.
7. Barrier doors and exits from the construction site must be installed with a closer and kept in good working order with positive latching.
8. Keep doors closed except when in use in order to minimize migration of dust and to maintain negative air pressure relationships.
9. Doors must have a seal/door sweep installed at the undercut and weather stripping around the metal frame to control the migration of dust from the construction site.
10. Doors in barrier walls which are not in use by the contractor to the public spaces must be sealed off and taped around the door, frame and threshold undercut, in order to minimize migration of dust and to maintain negative air pressure requirements.
11. If an elevator, dumb waiter, pneumatic tube system, stairway, linen chute, or any other chased or open type building system is located within the construction site, a barrier wall system will be required to be built around the open building system from deck to deck and properly sealed at top, bottom and sidewalls.
12. Upon completion of barriers and prior to beginning work, the contractor shall notify the owner's representative and healthcare construction compliance manager to coordinate an inspection and verify that the barrier wall meets requirements and that acceptable negative air pressure is being achieved.

**Special Notes:** 1. See **"Barrier Wall Design Details"** for additional requirements.

2. See section in this manual on "**Ventilation and Negative Air Pressure Requirements**" for additional requirements *when* building dust barrier systems and walls.
3. See section in this manual on "**Approved Equipment and Product Information**" .

## **Section 8 Ventilation and Negative Air Pressure Requirements**

The first step is building of dust barrier walls to isolate the construction site from patient care and public areas of the healthcare facility to protect patients and the public from construction related dust, fumes and other activities. The effectiveness of barrier walls is minimal unless the construction site is also under negative air pressure. (i.e. air must flow from clean or public spaces into the dirty or construction site).

The following are the "**Ventilation and Negative Air Pressure Requirements**" which contractors shall strictly follow in the management and construction of their projects.

### **Negative Air Pressure Requirements**

1. The contractor shall provide all necessary "**Negative Air HEPA Filtered Ventilation Units**" required for the negative air requirements of the construction area.
2. See section in this manual on "**Approved Equipment and Product Information**" for more information.
3. The contractor will work with the owner's representative to determine best methods and equipment set up requirements for the project.
4. The contractor shall run the "**Negative Air HEPA Filtered Ventilation Unit**" in the work zone location prior to starting any barrier wall construction or work.
5. "**Negative Air HEPA Filtered Ventilation Units**", may be connected to normal or emergency power and shall run continuously, 24/7. Critical areas of the healthcare facility may require the HEPA filtered ventilation units to be connected to emergency power only.
6. A secondary method to maintain negative air pressure is by using the hospitals exhaust system attached to the "**Negative Air HEPA Filtered Ventilation Units**". This process and installation must be approved by the owner's representative.
7. **Pre-Filters shall be changed at least twice weekly during demolition and drywall sanding and a minimum of once a week during other times.** This frequency requirement may be relaxed for lower risk projects and on prior approval from the owner's representative.
8. The contractor shall furnish and install the negative air-monitoring device to monitor daily negative air pressure - **.01 inches of water column.** See section in this manual on "**Approved Equipment and product Information**".
9. The contractor shall record daily on the "**Negative Air Pressure and Filter Change Log**" the air pressure reading in the construction area to insure that appropriate negative air pressure is being maintained.
10. See "**Negative Air Pressure and Filter Change Log**" form at the end of this section.

### **Barrier Walls and Negative Air Ventilation**

#### **Special Infection Control Requirements and Interventions for Contractors When Working In (Surgical OR's, Sterile Processing, Bone Marrow Transplant)**

Construction activities can lead to increased Aspergillus counts in the air and increased risk for Aspergillus infections in high risk patients. In an effort to minimize and contain dust, and lessen the possibility of microbial contamination during renovation work in high risk special care units, Interventions are typically initiated and maintained until the completion of the project. The owner's representative, MUHC infection control and engineering services departments will be involved in contractor orientation for project work procedures in high risk special care units.

**Special work scheduling in these special care units may be a requirement of the project and contractor.**

### Negative Air Pressure and Filter Change Log

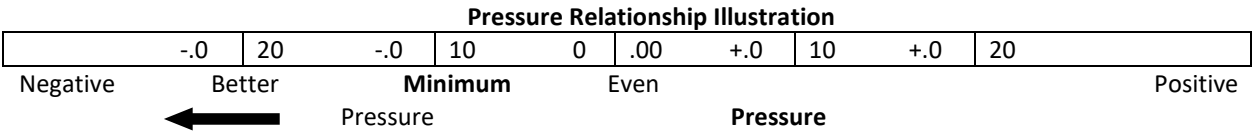
Project Name: \_\_\_\_\_

Location: \_\_\_\_\_

Date:	Time	Negative Air			Unit No.	Inspected By:	Actions Taken (Filter Change, Pre Filter, HEPA, Other)
		Yes	No	Pressure Reading			

Project Number: \_\_\_\_\_

Contractor to complete the **Negative Air Pressure and Filter Change Log** daily at the start of each work shift and maintain completed forms in the project safety file for future review. Post this log inside construction site entrance for use and review.



## **Section 9 Interim Life Safety Measures Assessment (ILSM)**

Interim Life Safety Measures (ILSM) are a series of administrative actions that must be taken to compensate temporarily for the hazards posed by existing NFPA Life Safety Code 101, 2014 edition deficiencies, other building code issues or construction activities. Examples of when construction activities require ILSM's to be implemented are as follows:

1. Fire alarm system, detection, and/or sprinkler system are impaired or disabled.
2. Normal exits or exit routes and/or exit lighting have been compromised.
3. Re-routing of traffic due to construction activities.
4. Temporary narrowing of the corridor.
5. Deficiencies in fire and/or smoke separations and systems caused by construction activities. (Changes to wall, door, dampers, penetrations, etc.)
6. Emergency lighting not compliant.
7. Major and minor construction/renovation in an occupied health care occupancy.
8. Hot work.

Whenever an *"Interim Life Safety Measure"* is identified for implementation during the construction project, there will typically be measures or actions required by both the MUHC engineering services department as well as the contractor.

The contractor has the responsibility prior to the beginning of work and throughout the project to become familiar with the ILSM in order to plan and identify what construction related activities will require an evaluation of ILSM's as noted in the ILSM. The *"Interim Life Safety Measures Evaluation"* is a required team effort.

## **Section 10 Noise and Vibration Control Management**

Construction related noise and vibration control and mitigation measures are to be implemented when the contractor is working in and around healthcare facilities. The contractor shall work with the owner's representative to develop means and methods for controlling excessive noise and vibration during construction.

## **Section 11 Above Ceiling Work Permit**

All contractors who need access above ceilings in the public areas of the healthcare facility and outside the approved construction site shall be required to obtain an *"Above Ceiling Work Permit"* from the owner's representative prior to disrupting or lifting out ceiling tiles. The contractor shall notify the owner's representative fourteen (14) days prior to the need for ceiling access in order to process and evaluate any special requirements of the permit.

### **General Requirements for Working above Ceilings ("Above Ceiling Permit Required")**

1. The Construction-Renovation-Maintenance Infection Control Risk Mitigation Permit issued for the work activity will note specifics required for Barrier Types.
2. Any cable and wiring pulls through the healthcare facility which will require a ceiling disturbance must be approved in advance by obtaining an *"Above Ceiling Work Permit"*.
3. Ceiling tiles must not be left displaced by the contractor if he walks away from the area unless the area has been contained by an approved *"Dust Barrier"*.
4. If a ceiling tile is damaged by the contractor he should notify the owner's representative to acquire a new tile for replacement.
5. All debris shall be cleaned up by the contractor daily when working in cabling and electrical closets.
6. Pulling of communication cables in a patient care or other critical care areas will require special scheduling. Consult with the owner's representative for coordination.
7. When cables must be pulled in an active patient care unit, a dust partition must be used at the site of entry and exit of the cable.

8. The dust partition may be attached to the false ceiling because taking it to deck may interfere with the work.
9. The site of entry and exit of the cable or other above ceiling work must be HEPA vacuumed (ceiling tiles and pipes) before the work begins.

## **Section 12 Lock Out/Tag out Permit**

**The contractor shall give a minimum fourteen (14) working days) notice** to the owner’s representative for shutdown work on electrical systems or other critical utility systems which could significantly impact the healthcare facilities operations, **the contractor will be required to plan these “Lock Out/Tag Out” activities ten (14) days in advance.** Major utility shutdowns may require weeks of notice and planning. The contractor shall work with the owner’s representative to identify these time planning requirements.

## **Section 13 Utility Systems Shutdown & Service Permit**

The ***“Utility Systems Shutdown & Service Permit”*** is to be used when work on an existing utility system **may cause** a disruption within the MUHC facility.

“Utility Systems” shall be defined as any system that would hinder the delivery of patient care and hospital operations should the system be interrupted for any reason. Planning for this work usually requires a contingency plan by the healthcare facility management department to address any failure of the utility system.

### **Utility Shutdown**

Any and all utility or system connections, shut-off, or interruptions must be scheduled with the owner’s representative prior to commencement of the work. This work shall be defined as a ***“Utility Shutdown”*** and notice shall be made to the owner’s representative to coordinate the request and facilitation.

### **Utility Service - (System must be worked live or energized)**

In addition to utility system connection, shut-off, or interruption, the contractor must also schedule any work on existing utility systems that either **do not require interruption or cannot be interrupted** to accomplish the work. This type of work shall be defined as ***“Utility Service”*** and notice shall be made to the owner’s representative.

**The contractor shall give up to 14 working days’ notice** to the owner’s representative in order to properly plan and coordinate required activities.

All permits are to be posted at the job site location for the duration of the permit. When complete the contractor shall file the permits in the contractor job safety file for future review as may be required.

## **Section 14 Hot Work & Permit**

Hot work shall be defined as welding, brazing, cutting soldering, grinding, or other activities which produce sparks or use flame which are capable of initiating fires or explosions.

All contractors performing construction, renovation and installation work for MUHC facilities are required to follow the requirements and provisions of **NFPA 51B** and the owner’s representative procedures related to “Hot Work” and obtaining a ***“Hot Work Permit”***.

The following are the requirements for a contractor to obtain a ***“Hot Work Permit”***.

1. Contractors shall contact the owner’s representative two (2) days, forty eight (48) hours in advance to request a hot work permit. A request for complex projects which requires extensive planning on behalf of the owner’s representative may require a longer notice period.
2. All hot work sites are inspected by the owner’s representative using the requirements printed on the ***“Hot Work Permit”***.

3. The owner's representative will issue a **"Hot Work Permit"** tag to be attached in the vicinity of the actual hot work being performed. Upon completion, the hot work tag shall be returned to the owner's representative.
4. **"Hot Work Permits"** will be issued for only one shift unless other arrangements have been made with owner's representative. All permits expire 30 minutes prior to the end of the shift.
5. If hot work cannot be completed within one work shift, the contractor is responsible for obtaining approval for a revised permit extension from the owner's representative. The contractor is responsible for meeting all the safety requirements required by the permit for any and all extensions granted.
6. The contractor shall be responsible for supplying a trained worker for the requirement of a fire watch during the actual hot work. The fire watch's only responsibility will be as a fire watch.
7. A fire watch shall be provided for 30 minutes following the completion of work, including during lunch and breaks by the contractor.
8. The contractor shall provide at a minimum a ten pound (10) ABC fire extinguisher that has a current, valid inspection tag.
9. A copy of the **"Hot Work Permit"** shall be kept in the general contractors project file for future review as may be required.
10. The contractor shall upload completed Hot Work Permits to the owner's electronic construction document program (Projex 4) in the Hot Work Permit folder for the project not less than on a weekly basis or as instructed by the owner's representative.

## **Section 15 Exterior Construction Site Helicopter Landings**

Any contractor doing construction work or activities on the hospital grounds, property or on the roof of the buildings is required to follow the guidelines regarding construction activities during helicopter landings on the helipad. The contractor shall coordinate with the owner's representative roof access, roof protection, keying, roof and safety precautions to be taken when working close to the roof edge regarding helicopter landings and contractor responsibilities during this time. In addition, the placement of vertical installations such as tall lighting poles and the use of project cranes or hoisting on the hospital property might affect the **"Final Approach and Take Off"** of medical center ambulance helicopters. It is essential that the contractor plans these types of activities with the owner's representative prior to the beginning of work.

## Section 16 Required Forms, Permits, Postings and Documentation

**Note:** Refer to the sections in the “Healthcare Construction Requirements” manual for detailed information on each form and permit approval procedure.

Category	Required Notice	Form	Permit Approval	Job Site Posting	Contractor Safety File
CRM Infection Control Construction Permit	Before Starting	√	√	√	√
Above Ceiling Permit	14 Days	√	√	√	√
Utility Systems Shutdown & Service Permit	14 Days	√	√	√	√
Fire Protection System Impairment Permit	14 Days	√	√	√	√
Hot Work Permit	2 Days	√	√	√	√
Lock Out/Tag Out Permit	14 Days	√	√	√	√
<hr/>					
CRM Interim Life Safety Measures Assessment		√			
Negative Air Pressure Log		√		√	√
CRM Risk Assessment		√			
Construction Safety Deficiency Notice		√			√
Violations and “Notice To Contractor”		√			√
Hazardous Material Abatement Signage				√	
Required Construction Jobsite Signage				√	
Interim Life Safety Signage				√	
Contractor & Employee Training Acknowledgment		√			√
Contractor Safety Meeting Minutes					√

The contractor will be required to furnish and install a “Project Safety Information” bulletin board on their project site for posting of required safety information. Small, short duration projects may have this requirement waived by the owner’s representative.

**LEGEND** CRM = Construction-Renovation-Maintenance

## Section 17 Project Cleaning and Barrier Removal Process

The following is the typical sequence prior to the removal of barrier walls.

With the barrier in place and with the “**Negative Air HEPA Filtered Ventilation Unit**” running, the contractor will HEPA vacuum all horizontal and vertical surfaces.

1. Clean the covers that are isolating the HVAC ducts.
2. Clean the outside of the negative air HEPA machine and its exhaust duct.
3. The contractor shall notify the owner’s representative to schedule a walk-through of the clean space for inspection and approval prior to removal of the barrier wall.
4. Following all job site cleaning and flushing of plumbing, the contractor can begin the barrier cleaning process.

5. During construction or removal of barrier walls, fire resistant polyethylene barriers must be put into place to help control any construction or demolition dust of the barrier wall system.
6. MUHC must approve removal of any Infection Control or other barriers. Prior to removal of the temporary fire resistant polyethylene barrier, it shall be vacuumed with a HEPA vacuum to eliminate any dust attached to the plastic. The polyethylene barrier is then wiped down with the use of damp cleaning cloths and using a hospital furnished approved infection control cleaning solution. The contractor shall roll or fold the polyethylene in on itself creating as little dust as possible prior to transporting out of the building in a covered cart.
7. Remove the covers or caps from any and all HVAC system supply, return and exhaust ducts and restore the HVAC system.
8. The **“Negative Air HEPA Filtered Ventilation Unit”** is removed from the project site once the HVAC system is verified is operating properly.

#### **If Air Sampling Is Required**

When construction/renovation is done and completed in or near a high risk assessment critical care unit (i.e. Burn Unit, Operating Rooms, Intensive Care, etc.) there may be a requirement to do air sampling after the negative air system has been removed and the building HVAC system has been restored. This will be a requirement only if the infection control department determines the need at the end of the project and prior to occupancy.

## **Section 18 Approved Equipment and Product Information**

**“NEGATIVE AIR HEPA FILTERED VENTILATION UNIT”**, HEPA filter equipped negative air machines that provide rough in filters, primary filters and a HEPA final filter. Rating of 300 to 2000 cubic feet per minute, (CFM). HEPA filters **must** be a minimum 99.97% efficient @ 0.3 microns. Differential pressure alarm required if not installed in another fashion to monitor construction site negative air of – 0.01 water column. Or approved equal.

- MICRO Trap Corporation, Models MT 1000 or Model MT 2000. 1300 W. Steel Road, No. 2 Morrisville, PA 19067 (215) 295-8208 or (877) 646-8208.
- ABATEMENT Technologies, Inc. Model HEPA-AIRE PAS2400HC Portable Air Scrubber or Model PAS1200HC 605 Satellite Blvd. Suite 300 Suwanee, GA 30024 (800) 634-9091

**“HEPA VACUUM”**, A shop style vacuum with a HEPA filter cartridge at 99.97% filtration @ 0.3 microns. Or approved equal.

- ABATEMENT Technologies Inc. Model V8000WD Canister Style Wet/Dry HEPA Vacuum. 605 Satellite Blvd. Suite 300 Suwanee, GA 30024 (800) 634-9091.
- ABATEMENT Technologies Inc. Model V1300H Hip Mounted HEPA Vacuum, designed for use on scaffolding and mobile conditions such as ceiling tile type cleaning. Lightweight at 6.4 lbs. 605 Satellite Blvd. Suite 300 Suwanee, GA 30024 (800) 634-9091.

**“ADHESIVE WALK OFF MATS”**, 24” x 36” Tacky Mat. Peel up dirty layer and dispose to reveal a new, fresh clean tacky mat.

- Tacky walk off mat No. 5838 24” x 36”, 60 tacky mats to a unit. Four units per case. 3M Company, St. Paul, MN 55144 (888) 364-3577. Or approved equal.

**“NEGATIVE AIR PRESSURE INDICATOR”**, Manometer.



- Model “Mark II Model No. 25 inclined-vertical Manometer. Dwyer Instruments Inc. PO Box 373, Michigan City, IN 46361 (219) 879-2000.
- MICRO Trap Corporation, Model Tri/Mon, digital recording manometer for tracking differential pressure. 1300 W. Steel Road, No. 2 Morrisville, PA 19067 (215) 295-8208 or (877) 646-8208.

**“PORTABLE WORK ENCLOSURE”**, For temporary fire resistant polyethylene dust barrier. System components supplier of zip poles, door opening access zippers, dust sealing system parts, etc.

- Zip Wall, LLC. 37 Broadway, Arlington, MA 02474 (800) 718-2255. Or approved equal.

**“FIRE RESISTANT POLYETHYLENE”**, For temporary dust barriers and use with Zip Wall Barrier System. Fire resistant polyethylene 6 mil. Underwriters Laboratories listed. Americover, Inc. 6 mil. Fire Retardant Polyethylene No. ASFR6. Use with Zip Pole System also sold by Americover. 2067 Wineridge Place. Suite F Escondido, CA 92029. 800-747-6095 Dept. 48. Or approved equal.

Example of Badge for Contractor use -

	
Enter Name	
Enter Company Name	
Project#: Enter Project #	
Project Name:	
Enter Project Name	
Expires: Enter Expiration	

	
Enter Name	
Enter Company Name	
Project#: Enter Project #	
Project Name:	
Enter Project Name	
Expires: Enter Expiration	

	
Enter name	
Enter Company Name	
Project#: Enter Project #	
Project Name:	
Enter Project Name	
Expires: Enter Expiration	

Protocol for Hospital Contractor Badges:

Contractor to issue badges to employees as necessary. (Need to show proof of ID)

Contractor to edit the information, print in color, cut out the badges, fold in the center and insert in badge holders.

Contractor shall keep a log of badged employees on site for reference by MU as necessary.

All permits to be collected and returned to MU at the end of the project.

Any orientation required will be discussed at the preconstruction meeting with the Owner's Representative.

## **SECTION 19 Health Care Construction Cleaning Definitions**

### **Construction Clean**

1. Remove tools & equipment from the work area.
2. Remove all bulk trash from the work area.
3. Thoroughly sweep all floor surfaces in the work area utilizing a dust compound (floor sweep) material.
4. Dry wipe all horizontal & vertical surfaces in the work area. Surfaces to include but not limited to walls, window sills, doors & door frames, base trim, casework (inside & out), fixtures, and wall-mounted equipment.
5. Sweep all floor surfaces utilizing a dust mop.
6. Wet mop all floor surfaces.

### **Thorough Clean**

1. To be implemented only after Construction Clean procedures have been completed.
2. Wet wipe all horizontal and vertical surfaces utilizing a MUHC – Infection Control Department approved germicidal disinfectant. Surfaces to include but not limited to walls, window sills, doors & door frames, base trim, casework (inside & out), all fixtures, and wall-mounted equipment.
3. Wet mop all floor surfaces utilizing a MUHC Infection Control Department approved germicidal disinfectant.

### **Terminal Clean**

1. To be implemented only after Through Clean procedures have been completed.
2. Cleaning procedures shall be conducted by MUHC trained Environmental Services, Sterile Processing or Surgical Services staff only.
3. Thoroughly clean and disinfect surfaces on the ceiling such as diffusers, light fixtures, and ceiling mounted devices & equipment.
4. Thoroughly clean and disinfect all equipment in the work area.
5. Thoroughly clean and disinfect all flooring including moving equipment & furnishings to allow access to all floor surfaces.
6. Move all portable equipment and furnishings away from the walls. Wet wipe and disinfect all wall surfaces and wall mounted equipment.

## 3.00 BID PACKAGES AND 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. All employees must wear hard hats, eye protection, and high visibility vests at all times on site.
4. 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.
5. Construction Manager will provide layout to building corners. Subcontractor is responsible for layout beyond these points.
6. Coordinate on-site employee parking with Project Superintendent.
7. Coordinate location of on-site storage containers with Project Superintendent
8. Employees shall avoid harassment of students, faculty, or staff. Employees who violate this requirement may be removed from the jobsite by Project Superintendent.
9. Subcontractor will actively participate in the Nabholz Quality Management System.
10. 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.
11. 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.
12. All Subcontractors and Suppliers will be required to write a site-specific safety plan to address Nabholz 12 Commitments To Live By (C2LB).
13. All workers are required to have the OSHA 10. Nabholz can provide arrangements for training if needed
14. A company logo and phone number of any Contractor of any tier must be displayed on vehicles when parked on or near the project.
15. The Project will be staged on an existing, occupied, operating Healthcare campus. Avoid interaction with patients and owner's 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.
16. Deliveries of building materials will give right of way to hospital traffic.

17. Construction activities that generate high decibel noise levels must be scheduled and coordinated with Construction Manager's Project Superintendent.
18. Smoking, the use of tobacco, or the use of products containing tobacco in any form is prohibited on any property owned or leased by MU Women's and Children's Hospital.

# .02 Bid Form

**Date of Bid** \_\_\_\_\_

**Submitting Company (“Bidder”)**

Company Name \_\_\_\_\_

Project State License Number \_\_\_\_\_

**Company Representative**

Name \_\_\_\_\_

Email Address \_\_\_\_\_

Cell Phone \_\_\_\_\_

**Scope of Work**

Bid Package Number \_\_\_\_\_

Bid Package Description \_\_\_\_\_

**Addenda**

Bidder acknowledges receipt of the following addenda:

Addendum # \_\_\_\_\_ Dated \_\_\_\_\_

Addendum # \_\_\_\_\_ Dated \_\_\_\_\_

Addendum # \_\_\_\_\_ Dated \_\_\_\_\_

Addendum # \_\_\_\_\_ Dated \_\_\_\_\_

Addendum # \_\_\_\_\_ Dated \_\_\_\_\_

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 below for a lump sum of:

\$ \_\_\_\_\_

**Alternates**

- 1. \_\_\_\_\_ Add/Deduct \$ \_\_\_\_\_
- 2. \_\_\_\_\_ Add/Deduct \$ \_\_\_\_\_
- 3. \_\_\_\_\_ Add/Deduct \$ \_\_\_\_\_
- 4. \_\_\_\_\_ Add/Deduct \$ \_\_\_\_\_

**Voluntary Alternates**

- 1. \_\_\_\_\_ Add/Deduct \$ \_\_\_\_\_
- 2. \_\_\_\_\_ Add/Deduct \$ \_\_\_\_\_

**Unit Pricing**

- 1. \_\_\_\_\_ \$ \_\_\_\_\_
- 2. \_\_\_\_\_ \$ \_\_\_\_\_
- 3. \_\_\_\_\_ \$ \_\_\_\_\_
- 4. \_\_\_\_\_ \$ \_\_\_\_\_

***Work in Progress & Project Specific Qualifications***

Bidder shall submit with their proposal a Work in Progress (WIP) Report that lists the ten (10) largest projects currently being constructed. Moreover, final evaluation of Bidder’s proposal shall be conditional on review of WIP Report, and Bidder’s experience with similar scope and projects.

**Completion Time**

All Work shall be completed within the schedules prepared by and agreed to by Nabholz. Bidder shall provide adequate manpower and submit documentation for approval necessary to work within the timeframe scheduled.

**Bonding**

Bidder can provide a Performance and Payment Bond and can meet the requirements set forth in the “Project Contact”. (circle one)

**Yes/No**

Performance and Payment Bond Rate Cost in Percent \_\_\_\_\_

Name of Surety Agent \_\_\_\_\_

Surety Agent Phone Number \_\_\_\_\_

**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.

By \_\_\_\_\_

Title \_\_\_\_\_

Printed name of individual signing this proposal \_\_\_\_\_

Contact phone number \_\_\_\_\_

Date \_\_\_\_\_

**SUPPLIER DIVERSITY COMPLIANCE EVALUATION FORM**

This form shall be completed by all Subcontractors, Suppliers and Venders, regardless of any tier, and submitted with the Bidder's Statement of Qualifications.

The undersigned submits the following data with respect to this firm's assurance to meet the goal for Supplier Diversity participation.

I. Project: \_\_\_\_\_

II. Name of Contractor: \_\_\_\_\_

III. Name of Diverse Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Phone No.: \_\_\_\_\_ E-mail.: \_\_\_\_\_

Status (check one) MBE \_\_\_\_\_ WBE \_\_\_\_\_ Veteran \_\_\_\_\_ Service Disabled Veteran \_\_\_\_\_ DBE \_\_\_\_\_

IV. Describe the subcontract work to be performed. (List Base Bid work and any Alternate work separately):

Base Bid: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

V. Dollar amount of contract to be subcontracted to the Diverse firm:

Base Bid: \_\_\_\_\_

Alternate(s), (Identify separately): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

VI. Is the proposed subcontractor listed in the Directory of M/W/DBE Vendors and/or the Directory of Veterans maintained by the State of Missouri?

Yes \_\_\_\_\_

No \_\_\_\_\_



VII. Is the proposed subcontractor certified as a diverse supplier by any of the following: federal government agencies, state agencies, State of Missouri city or county government agencies, Minority and/or WBE certifying agencies?

Yes \_\_\_\_\_

No \_\_\_\_\_

If yes, please provide details and attach a copy of the certification.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

VIII. Does the proposed subcontractor have a signed document from their attorney certifying the Supplier as a Diverse and meeting the 51% owned and committed requirement?

Yes \_\_\_\_\_

No \_\_\_\_\_

If yes, please attach letter.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

END OF PROPOSAL FORM

## 07.2 Wall Panels

### **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 1 – General Requirements
- Section – 074213.19 Insulated Metal Wall Panels
- Section – 076200 Sheet Metal, Flashing and trim (as applies)
- Section – 079200 Joint Sealants

***All General Scope Requirements as outlined in Section 3.01.***

### ***Section A: Trade- Specific Requirements***

1. Fabricate as specified by manufacturer’s standard procedure and processes to fulfill indicated performance requirements by laboratory testing.
2. Comply with indicated profiles and with dimensional and structural requirements.
3. Provide metal wall panel assemblies in strict compliance with specifications without failure due to defective manufacture, fabrication, installation or other defects in construction.
4. Provide metal panel soffits as shown in the construction documents.
5. Provide all necessary panel fasteners and anchorage systems.
6. Provide complete flashing and trim systems.
7. Provide all panel accessories per specifications and manufacturer’s recommendations.
8. Provide panel sealants and joint sealants.

### ***Section B: Project Specific Requirements:***

1. Include complete metal wall panel system, integral window frames and louvers, perforated panels, and sunshades.
2. All flashing and sheet metal that is integral to, adjacent to, or needs to match the metal wall panels system is by this package.
3. Protect existing roofs, including roofs noted as NIC
4. Include all temporary flashing/sealing necessary to meet phasing requirements
5. A complete shop drawing for metal panels, integral window frames, louvers and sunshades will be required.
6. All metal panels shall be ordered/manufactured at the same time to ensure color consistency.
7. Include storage of metal panels in a bonded warehouse until installation.
8. Include the complete, turn-key, mockup as noted. Including the required testing.

9. Include all shimming and/or furring required for installation over existing substrate that may be out of plumb.
10. Include aluminum tube structure behind perforated panels.

***Section C: Project-Specific Exclusions:***

1. Demolition is by others
2. Scaffold is by others

***Section D: Project Alternates:***

1. Provide an alternate to include suspended (swing stage) scaffold.

***Section E: Unit Pricing:***

1. Provide Labor rates.

**END OF BID PACKAGE**

## 07.3 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 1 – General Requirements
- Section 075216 – Styrene-Butadiene-Styrene Modified Bituminous Membrane Roofing
- Section 076200 – Sheet Metal Flashing and Trim
- Section 077200 – Roof Accessories
- Section 079200 – Joint Sealants

***All General Scope Requirements as outlined in Section 3.01.***

### ***Section A: Trade- Specific Requirements***

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 sub surfaces 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.

***Section B: Project Specific Requirements:***

1. Include all metal work, flashing, coping, scuppers, gutters, downspouts and trim that is integral to the roof system and roof warranty.
2. Include all roof blocking
3. Low VOC product information must be submitted with bid. Closely coordinate with Hospital for air quality requirements.
4. Protect existing roofs, including roofs noted as NIC
5. Include all temporary flashing/sealing necessary to meet phasing requirements
6. Include roof demolition and temporary weatherproofing.
7. Include demolition of roof curbs
8. Include cutting and flashing for scuppers
9. Install all roof curbs provided by others
10. Include replacement and infill of existing roof deck similar to note 7 on A117 and A118, B32 on S502
11. Include 30-year roof warranty as noted

***Section C: Project-Specific Exclusions:***

1. Supply and install of roof drains is by others
2. Fall protection anchor system is by others
3. MEP packages will remove roof top MEP equipment

***Section D: Project Alternates:***

1. Provide deductive alternate for a 20-year roof warranty

***Section E: Unit Pricing:***

1. Provide unit price to repair damaged gyp fill roof deck.
2. Provide Labor rates.

**END OF BID PACKAGE**

## 08.2 Glazing

### **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 1 – General Requirements
- Section – 084423 Glazed Aluminum Curtain Walls
- Section – 088000 Glazing

***All General Scope Requirements as outlined in Section 3.01.***

### ***Section A: Trade- Specific Requirements***

1. Verify actual field measurements from installed rough openings.
2. Clearly identify all tolerance requirements on dimensioned shop drawings. Initiate on-site coordination meetings with the Project Superintendent to ensure the proper fit and scheduling of this work with the work of others.
3. Clearly dimension stile heights and widths on shop drawings.
4. Provide hoisting and material handling.
5. Provide any blocking required for the installations associated with this package that may not be shown on the drawings.
6. Provide all aluminum and glass storefront systems, curtainwall systems, and entrances.
7. Provide all sills, trims, transoms, cladding, etching, associated exterior caulking, sealants, and adhesives, weather stripping, brake metal, etc.
8. Provide all miscellaneous flashings integral with storefront, curtainwall, or entrance systems.
9. Include steel reinforcement within aluminum framing if required.
10. Include fire safing insulation at floors if required for work covered by this trade scope.
11. Provide all related hardware not specifically provided by others.
12. Furnish and install aluminum metal, wood, plastic or clad windows including weather stripping, hardware, misc. related aluminum, trim, thresholds, anchors, bracket attachments, sealants and other accessories necessary for a complete installation.
13. Provide all glass products according to glass type schedules in the documents and as required by Code.
14. Furnish and install glass at all exterior windows and doors. Include all sealants and gaskets.
15. Include final adjusting per contract documents.
16. Remove all labels and stickers from all components after installation.
17. Include final cleaning and install security tape across windows immediately after installation.
18. Prior to final Application for Payment, schedule and perform for Construction Manager a water (hose) infiltration test on all exterior work deemed complete and ready for Owner acceptance.

***Section B: Project Specific Requirements:***

1. Include glazing for window frames provided by others.
2. Include entire curtain wall systems

***Section C: Project-Specific Exclusions:***

1. Exclude window frames integral with metal panel system.
2. Structural and Misc. steel is by others

***Section D: Project Alternates:***

***Section E: Unit Pricing:***

1. Provide Labor rates.

**END OF BID PACKAGE**



## 4.00 SCHEDULE

(To be issued via addendum)

## 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**, with limits, 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. ISO CG 24 04 10 93, or equivalent endorsement form waiving subrogation.
- f. ISO CG 20 10 and CG 20 37, or equivalent endorsement(s) for ongoing and completed operations. Unless prohibited by law, additional insured status shall not be limited to comparative negligence or vicarious liability of the Construction Manager.
- g. Additional insured endorsements shall accompany Certificate of Insurance.

**2. Automobile Liability Insurance**, no less than:

Combined single limit:	\$2,000,000
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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.

**3. Workers' Compensation and Employer's Liability Insurance**, with limits 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

- 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. Workers' compensation policy shall contain a waiver of subrogation endorsement, if permitted by law.

**4. Umbrella Liability or Excess Liability Insurance** OPTIONAL

Limits may be used to obtain the required limits for commercial general liability, automobile liability, and employer's liability insurance. Such insurance shall follow-form with any primary policies.

**5. Other Insurance**

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

**6. 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 and affiliated companies;
- b. Project Owner;
- c. Project Architect and Engineers;
- d. Each of their respective employees, agents, and principals; and,
- e. Others as required by the Contract Documents

**7.** 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.

**8.** If permitted by law, the certificate of insurance must include a 30-day written cancellation notice.

**9.** See sample certificate of insurance at <https://www.nabholz.com/bidding-and-contract-documents/>

## .02 Example Contracts, Forms, and Other Documents

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