

NC State Fairgrounds Midway Event Center

4285 Trinity Road

Raleigh, NC 27607

Release 2 Bid Manual

June 13, 2025

Bid Packages:

0210 – Final Cleaning
0400 – Masonry
0620 – Millwork
0710 – Waterproofing/Sealants
0742 – Wall Panels
0750 – Roofing
0810 – Doors/Frames/Hardware
0840 – Aluminum/Glass
0920 – Drywall
0930 – Hard Tile
0950 – Acoustical Tile
0965 – Resilient/Carpet
0966 – Terrazzo
0990 – Painting
1000 – Specialties
1030 – Operable Partitions
1400 – Elevators
2100 – Fire Protection
2200 – Plumbing
2300 – HVAC
2600 – Electrical
3290 – Landscaping
3300 – Site Utilities



NC Department of Agriculture & Consumer Services
2 West Edenton Street
Raleigh, NC 27601



IN ASSOCIATION

Clancy & Theys Construction Company
In Association with SGS Contracting
421 N. Harrington, Suite 200
Raleigh, North Carolina 27603

North Carolina Department of Agriculture & Consumer Services
NCSF Midway Event Center
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**NC Department of Agriculture & Consumer Services
NC State Fairgrounds – Midway Event Center
Raleigh, NC 27607**

NOTICE TO BIDDERS - Release 2

Sealed proposals for NC State Fairgrounds – Midway Event Center will be received from PRE-QUALIFIED BIDDERS ONLY and must be hand delivered to the **Martin Building-NC State Fairgrounds – 4285 Trinity Road, Raleigh, NC 27607**, as described in *Instructions to Bidders* no later than the date(s) and time(s) detailed below. Bids submitted after this time will not be accepted.

All prospective bidders are strongly encouraged to attend the pre-bid meeting on Wednesday, June 25, 2025 at 2:00 pm at the **Martin Building-NC State Fairgrounds – 4285 Trinity Road, Raleigh, NC 27607**. The pre-bid meeting is not mandatory but is strongly encouraged. Attendance will earn bidder ten points toward a good faith effort requirement for minority participation. Project information, bidding instructions and MWBE requirements will be explained during the pre-bid meeting.

The apparent low bidders will be **required** to attend a scope review meeting at Clancy & Theys Office at the dates and times indicated below.

The following is a listing of the bid packages, the bid due date and the scope review meeting (scheduled for the apparent low bidder):

<u>Bid Package</u>	<u>Bid Date/Time</u>	<u>Mandatory Scope Review Meeting – Apparent Low Bidder:</u>
0210 – Final Cleaning	July 24, 2025, 2:00pm	August 6, 2025, 9:30am
0400 – Masonry	July 24, 2025, 2:00pm	July 28, 2025, 3:00pm
0620 – Millwork	July 24, 2025, 2:00pm	July 31, 2025, 9:00am
0710 – Waterproofing/Sealants	July 24, 2025, 2:00pm	July 31, 2025, 10:30am
0742 – Wall Panels	July 24, 2025, 2:00pm	July 30, 2025, 9:00am
0750 – Roofing	July 24, 2025, 2:00pm	July 30, 2025, 10:30am
0810 – Doors/Frames/Hardware	July 24, 2025, 2:00pm	July 31, 2025, 1:00pm
0840 – Aluminum/Glass	July 24, 2025, 2:00pm	July 30, 2025, 2:30pm
0920 – Drywall	July 24, 2025, 2:00pm	July 30, 2025, 1:00pm
0930 – Hard Tile	July 24, 2025, 2:00pm	August 1, 2025, 9:00am
0950 – Acoustical Tile	July 24, 2025, 2:00pm	August 1, 2025, 10:30pm
0965 – Resilient/Carpet	July 24, 2025, 2:00pm	August 1, 2025, 1:00pm
0966 – Terrazzo	July 24, 2025, 2:00pm	July 31, 2025, 2:30pm
0990 – Painting	July 24, 2025, 2:00pm	August 4, 2025, 9:00am
1000 – Specialties	July 24, 2025, 2:00pm	August 4, 2025, 10:30am
1030 – Operable Partitions	July 24, 2025, 2:00pm	August 4, 2025, 1:00pm
1400 – Elevators	July 24, 2025, 2:00pm	August 4, 2025, 2:30pm
2100 – Fire Protection	July 24, 2025, 2:00pm	July 28, 2025, 9:00am
2200 – Plumbing	July 24, 2025, 2:00pm	July 25, 2025, 1:00pm
2300 – HVAC	July 24, 2025, 2:00pm	July 28, 2025, 10:30am
2600 – Electrical	July 24, 2025, 2:00pm	July 28, 2025, 1:30pm
3290 – Landscaping	July 24, 2025, 2:00pm	August 6, 2025, 10:30am
3300 – Site Utilities	July 24, 2025, 2:00pm	August 6, 2025, 1:30pm

All pre-qualified bidders will be provided the link to bid documents via Building Connected. Bidders may provide second-tier subcontractors and suppliers with a link via Building Connected.

Clancy & Theys has an affirmative action policy of fostering, promoting, and conducting business with women and minority owned enterprises. Women and minority contractors are encouraged to participate in the bid process.

Inquiries should be made to the Construction Manager, Clancy & Theys Construction Company, to the attention of **Jessica Bates**, Jessicabates@clancytheys.com.

**NC State Fairgrounds
Midway Event Center
Raleigh, North Carolina**

INSTRUCTIONS TO BIDDERS - Release 2

General Information: The Midway Event Center in the heart of the NC State Fairgrounds in Raleigh NC will serve as an exciting destination for the community and visitors year around. New ground up building will include a 2-story brace frame steel structure with a multipurpose assembly room and a multi-vendor food hall with indoor and outdoor dining options

Owner: NC Dept of Agriculture and Consumer Services (NC DACS). 2 West Edenton Street Raleigh, NC 27601

Architect: HH Architecture

Construction Manager at Risk: Clancy & Theys Construction Company – 421 N. Harrington Street, Suite 200 Raleigh, NC 27603. (Also referred to as Construction Manager or CM.)

Bid Due Date, Time & Location: Bid dates, times and location for all Release 2 Bid Packages are detailed in the *Notice to Bidders*.

Type of Opening: Bid will be received and opened publicly by the Construction Manager. Late bids will not be accepted.

Bid Submission: All bids **must** be submitted on the Form of Proposal provided in the Bid Manual or issued by Clarification. Bids must be submitted in a sealed envelope. The Bidder must complete the one-page document labeled “Bid Information Form” provided with the Form of Proposal and attach it securely to the outside of the sealed envelope containing the completed bid form. Subcontractors providing bids on multiple Bid Packages must submit a separate bid form, bid bond (if applicable), and HUB forms in separate sealed envelopes with a bid information sheet attached to each bid envelope. Bids must be submitted by the date and time indicated in the enclosed *Notice to Bidders* unless date and time are modified by Addendum or Clarification. No faxed bids, email bids, or bids submitted through Building Connected will be considered. Only marks and responses placed in the appropriate spaces on the bid form will be considered.

Please note if Bidder chooses to overnight its bid, Clancy & Theys and DC DACS **do not** accept any responsibility for the timely delivery or correct location delivery by an overnight carrier. Do not place the bid form directly into the overnight envelope. The bid form must be sealed in a separate envelope and placed into the overnight envelope. **Overnight deliveries** (only) must be sent to Clancy & Theys Construction Company, attention Jessica Bates, 421 N. Harrington St., Suite 200, Raleigh NC 27603 clearly marked for Clancy & Theys and stated as a bid for NCSF Midway Event Center with bid package number/bid package name with a sealed envelope within the overnight packaging. Overnight deliveries must be received in Clancy & Theys office at least four hours prior to bid time. **DO NOT SEND OVERNIGHT DELIVERY BIDS TO NCSF.**

Bidder Qualifications: Only the bids of pre-approved, invited Bidders will be accepted.

Please note that, if it is the intent of pre-approved Bidders to subcontract out any portion of the work, the Bidder must list sub-Subcontractors on the proposal form where indicated. The Construction Manager reserves the right to reject for any reason any proposed sub-Subcontractor not deemed acceptable to perform the work for which they are designated. Should any sub-Subcontractors be so rejected, the Bidder's proposal must remain binding. The Bidder will have the option to self-perform the designated work or propose alternative sub-Subcontractors for review and approval.

Bidding Documents: A link to download all bid documents has been provided to approved Bidders via Building Connected. Bidders may share this link with suppliers and sub-subcontractors. Bidders will receive notification of addenda or clarifications to the bid documents. The same link can be used to download addenda or clarifications. It is, however, the Bidder's responsibility to periodically make contact with the Construction Manager during the bidding period to verify that he/she is in receipt of all addenda and clarifications issued. The Bidder must acknowledge all addendum and clarification letters in the appropriate spaces on the Form of Proposal. It is the Bidder's responsibility to verify that the appropriate drawings and specifications are used in the development of the bid. A complete list of drawings and specifications with the proper dates is provided in this Bid Manual.

Subcontractor Default Insurance (SDI) / Performance and Payment Bonds: The Construction Manager is enrolling the Subcontractor in the Construction Manager's Subcontractor Default Insurance ("SDI") Program to insure the Construction Manager against the Subcontractor's default under the Subcontract Agreement and in lieu of, requiring the Subcontractor to furnish performance and payment bonds. However, at the Construction Manager's sole discretion, in lieu of enrolling the Subcontractor into the Construction Manager's Subcontract Default Insurance Program, the Construction Manager may require the Subcontractor to provide a Payment and Performance Bond(s) and the costs of said bonds shall be borne by the Construction Manager.

Bid Bonds: A bid bond in the amount of five percent (5%) of total bid amount must be submitted with Bid Proposal Form for lump sum bids totaling \$500,000 or greater. The bid bond form included in the bid manual MUST BE USED. No other forms are acceptable. All bonding companies must have a Best Rating of "A" or better to be considered acceptable. In lieu of a bid bond, a certified check in the amount of 5% of the total bid amount may be submitted with bid. The certified check will be held by Clancy & Theys Construction Company until a low, responsive, responsible bidder has been clearly determined and approved by Owner.

Liquidated Damages: Liquidated Damages are identified in the General Scope of Work - ALL BID PACKAGES in Section 09 of the Bid Manual.

Minority Business Participation: Clancy & Theys Construction Company is firmly committed to the goals of encouraging and promoting participation for this project by businesses that the State of North Carolina has identified as Historically Underutilized Businesses (HUB's). All Bidders, including certified HUB Firms, will be required to make a good faith effort toward HUB participation and provide documentation that they have met the verifiable goal for HUB

participation or that they have made good faith efforts as specified in NC GS 143-128.1 The NC DOA HUB Participation goal is 10%.

Subcontractors may contact Debra Connolly, with questions or assistance with HUB participation requirements. Also, see below for HUB documents that **MUST** be submitted with your Bid Proposal for you to be considered a low responsive and responsible Bidder.

Companies must be certified by NC DOA HUB office to be considered a HUB vendor. Please use the website below to search for HUB certified companies or check the HUB status of a company. <https://evp.nc.gov/vendors/vendorsearchadvanceform/?id=6303fa3a-a351-ee11-be6e-001dd804e775>

Bid Proposal Form: Each bid must be submitted on the Bid Proposal Form enclosed with all blank spaces filled in and executed. Lump sum bids and alternates shall remain valid for 90 days from bid opening. All approved Bidders are aware of the market conditions and have factored that within their bid proposal pricing. There will not be an opportunity for any Bidder to change their bid price after submission of their pricing due to market conditions.

Signatures must be by an authorized Officer of the company, which is someone in the firm with authority to enter into a contract, which could be the owner of a company or another delegated staff person with *authority to bind the company legally*.

The bid amount must be completed with both the numerical and written amount of bid. Written amount governs in case of discrepancy.

Bid Proposal Form HUB Requirements:

- Affidavits to be submitted with bid are found in Section 06 of this Bid Manual.
- If you are bidding more than one Bid Package, HUB requirements stated below must be submitted WITH EACH BID PACKAGE.
- If you are subcontracting out any portion of your scope of work or buying any materials/supplies/services you are required to make a good faith effort for HUB Participation for that portion of work. This requirement applies to ALL Bidders regardless of if they are certified HUB or not. (Please read your scope of work in Section 09 of the Bid Manual early in the bid period.)
 - Affidavit A AND the Identification of HUB Certified/Minority Business Participation form (ID form) MUST be completed and submitted WITH YOUR BID.
 - Affidavit A must be signed and notarized with At least 50 points checked.
 - If you are a certified HUB firm, you are NOT allowed to list yourself on the ID form.
 - Complete the ID form even if the HUB participation amount is \$0.
 - See Follow Up HUB Affidavits below.
- If you are self-performing ALL of your scope of work, including providing ALL material/supplies/services you are required to submit Affidavit B and the HUB Certified/Minority Business Participation form (HUB ID Form) WITH YOUR BID. **If you are purchasing any materials/supplies/services, you are REQUIRED to make a Good Faith Effort and should NOT be submitting Affidavit B, see Affidavit A requirements above.** (Please read your scope of work in Section 09 of the Bid Manual early in the bid period.)

- Affidavit B AND the Identification of HUB Certified/Minority Business Participation form (ID form) MUST be completed and submitted WITH YOUR BID.
- If you are a certified HUB firm, you are NOT allowed to list yourself on the ID form.
- Complete the HUB ID Form even if the HUB participation amount is \$0.
- Affidavit B must be signed and notarized.
- See Follow Up HUB Affidavits below.

Follow up HUB Affidavit Requirements from low responsive, responsible Bidder:

- Requirements for follow up HUB Affidavits and any good faith effort (GFE) documentation will be discussed at the low Bidder's scope review meeting.
- Follow up HUB Affidavits and GFE documentation MUST be submitted within 72 hrs of scope review meeting to Debra Connolly (debraconnolly@clancytheys.com)
- Follow up HUB Affidavits and Good Faith Effort Guidelines are located in Section 07 of the Bid Manual.
- The percentage of HUB participation is based on your BASE BID and will not include any alternate costs.
- HUB Affidavits and Good Faith Effort Documentation must be found to be compliant by CM before Bidder is declared the low, responsive, responsible Bidder. Bidder may be deemed disqualified if not compliant and bid rejected.
- If you submitted Affidavit A and ID form with your bid and you meet or exceed NC DOA 10% HUB participation goal, you will be required to submit a signed and notarized Affidavit C - Portion of the Work to be Performed by HUB Firms. Requirements to ensure Affidavit C is compliant will be discussed at the scope review meeting.
- If you submitted Affidavit A and ID form with your bid and you did not meet NC DOA 10% HUB participation goal, you will be required to submit Affidavit D AND all good faith effort documentation. GFE documentation will depend on the point items checked on your Affidavit A. See Good Faith Effort Guidelines in Section 07 of the Bid Manual and contact Debra Connolly if you have any questions. Requirements to ensure Affidavit D and GFE documents are compliant will be discussed at scope review meeting.
- If you submitted Affidavit B you do not have any additional follow up submittals. Verification of self-performing and HUB participation will be discussed at scope review meeting.

Scopes of Work: Bidders must include all items of work associated with their trade and associated **Bid Package – Scope of Work** included in the Section 09 of the Bid Manual. Exclusions or exceptions to this scope are NOT acceptable and are grounds for rejecting the bid proposal. Subcontractor will make arrangements to sub-subcontract work listed in their scope that they do not typically provide themselves.

Taxes: Each Bidder is to INCLUDE in his bid proposal all sales, consumer, use and other similar taxes including tax on purchase or rental of tools and equipment. Each successful Subcontractor will be required to submit State Sales and Use Tax forms as included in Bid Manual with each monthly pay application.

Insurances: The successful Bidder must provide insurances as indicated in the Supplemental Conditions and Requirements regardless of Certificate of Insurances indicated with his prequalification forms. All pre-qualifications and pre-approvals granted by the Construction Manager and the Owner are contingent upon the Bidder's ability to provide insurance requirements indicated in this document.

Examine Contract Documents: Before submitting a Bid Proposal all Bidders shall:

- Carefully examine the complete set of Contract Documents
- Fully inform themselves as to all existing conditions and limitations, including those of labor; progress of work to date, if any, and include in the Bid Proposal a sum sufficient to cover the cost of the items contemplated by the Contract Documents and this request for Proposal Document. No consideration will be granted for any alleged misunderstanding of the material, article or piece of equipment to be furnished or work to be done, it being understood that the terms of a Bid Proposal carries with it the agreement to all items and conditions referred to herein or indicated in the Contract Documents.

Substitutions: Substitution requests shall be made from **Bidders only** and must be submitted on the substitution request forms in the Specifications. Bidders shall submit their request directly to the CM (not the design team) at least 10 days prior to bid. No substitution requests shall come directly from manufacturers to the CM. Approval of products will be identified by addendum from the architect. Approval of substitution request and/or prequalification does not relieve Bidder from the obligation to meet all the requirements of the Plans and Specifications.

Addenda/Clarification Letters: All Addenda/Clarification Letters issued during the time of bidding will become a part of the Contract Documents and receipt thereof must be acknowledged in the Bid Proposal.

Withdrawal or Revision of Bid Proposals: After bid opening, bid amounts may not be revised. Bidder may withdraw his bid in writing and provide documentation as allowed under the specific guidelines indicated in NC GS 143-129.1 within 72 hours of bid opening. Failure to withdraw within 72 hours of bid opening may result in forfeiture of bid bond.

Acceptance and Rejection of Proposals: The Construction Manager reserves the right to reject any bid that includes qualifications, exclusions, or exceptions to the scope of work described for the particular Bid Package. The Construction Manager may reject any bid wherein the appropriate bid forms are not used or are altered in any way. The Construction Manager reserves the right to reject any or all bids proposals and to waive any informality or irregularity. Subject to the rights of the Construction Manager and/or Owner to reject any or all bids, the Construction Manager will award the Subcontract to the Bidder deemed by the Construction Manager and Owner in their discretion to be the lowest responsive and responsible Bidder. Pre-qualification of

a Bidder is a condition precedent to the Bidder being deemed responsive, but pre-qualification is not to be construed as a determination that the Bidder is responsible or, in fact, responsive. The determination as to whether a Bidder is responsible shall be made after the bids have been opened. In making the determination as to the responsibility of a Bidder, the Owner and Construction Manager reserve their rights to consider factors beyond those set forth in the pre-qualification criteria including, but not exclusively, those factors that are more qualitative and less subject to quantification than those set forth in the pre-qualification criteria. The pre-qualification of a particular Bidder shall not be deemed a property right of the Bidder or create any other right, legal or equitable, or any cause of action in favor of the Bidder even if the Bidder submits the lowest monetary bid. And, in determining which Bidder is the lowest responsive and responsible Bidder, the Construction Manager and Owner, in their discretion, may take into consideration not only the amount of the bid, but also other criteria as they deem appropriate, including the quality, performance, the time specified in the bids for performance of the contract, the cost of construction oversight, current project backlog, availability of resources, failures to perform notices, time for completion, and may give such weight thereto as they deem appropriate.

Bidders will be disqualified for the following reasons:

- Affidavit A OR Affidavit B is not attached to bid.
- Identification of HUB Certified/Minority Business Participation is not attached with Affidavit A or B.
- Affidavit A does not have at least 50 points checked.
- Affidavits are not signed and notarized.
- Bid form is not signed.
- Bid Bond is not attached for bid amounts of \$500,000 or higher.

Selection Procedure: The following outlines the procedures that will be employed to select or reject the Subcontractors and Vendors with whom to proceed:

- A. Prepare your proposal to be all encompassing so that all items of work necessary to a complete and functioning result for your trade are/will be included.
- B. Please recognize that we will initially analyze the bid of the apparent low Bidder to determine that the entire scope indicated by plans and specifications, bid manual and construction schedule have been addressed in the proposal. Selection procedures will follow applicable state guidelines for Construction Manager at Risk.
- C. In composing your proposal, bear in mind that it is to be presented as a Lump Sum, including labor, materials, engineering, permits, fees, taxes, insurance, scaffolding, hoisting, tools, equipment machinery, equipment rentals, transportation, supervision, clean-up, and safety measures for the entire Scope of Work indicated in the Contract Documents and this Request for Proposal.
- D. Additional considerations that will be taken into account when evaluating a “responsible” subcontractor is current workload/backlog, appropriate manpower/skilled labor forces, years in business, experience with scope of work, review of financial statements, etc.
- E. In view of the above, to assure that proposals received are evaluated properly, we will employ the following procedure:

- i. Receive proposals
- ii. Analyze bids
- iii. Interview apparent low Bidder
- iv. Notify Bidders of Subcontract
- v. Notice to Proceed

To help assure that we properly evaluate your proposal, please make the effort to clearly provide all information requested in a legible manner to allow a correct interpretation of your proposal.

Bid Day Helpful Hints: A “Bid Day Helpful Hints” checklist is included in the Bid Manual to assist you with completing bid proposal and eliminating common mistakes that may be grounds for disqualification of bid.

Contract Form: The successful Bidder will be required to execute the ConsensusDocs 750 (modified) with all attachments and will be bound by all terms of the agreement and attachments. A sample is included in the Bid Manual.

Contract Attachment Forms: Awarded Subcontractors will be required to complete the following listed forms at a time designated by the Construction Manager.

- Subcontractor’s Sales Tax Report
- Application for Payment
- Conditional Release of Claims
- Final Release of Claims
- Appendix E – HUB Documentation for Contract Payment
- Change Order Forms
- E589CI Affidavit of Capital Improvement
- Subcontractor Safety Performance Evaluation (SSPE)

Schedule of Values: Subcontractors will be required to complete a Schedule of Values, breaking down their work into categories, as may be required by the scope of the work. Each Subcontractor must have a separate line item for submittals and close-out documents. These items will not be payable until all items are completed and approved by the Architect. This document must be completed within three (3) days of scope review meeting. Processing of pay requests will not occur until the Schedule of Values is completed and accepted by the Construction Manager.

Project Schedule Requirements: This project has an aggressive schedule that may necessitate Bidders to include premium time and acceleration costs within their proposal. **Note that the construction schedule is based on a six-day work week.** The Construction Schedule is included in this Bid Manual. Bidders are to carefully review and account for the requirements of this schedule. All premium time costs and acceleration expenses required to achieve the schedule are to be included in your bid without exception.

Project Safety Requirements: Subcontractors are required to comply with the regulations and guidelines set forth by all entities and authorities governing workplace safety. Subcontractors are required to name a competent safety person in accordance with Federal and State Safety

guidelines, complete a project safety plan and ensure that all personnel are 100% protected from falls. Supplemental Safety requirements of this Bid Package are found in the following documents of the Bid Manual:

- C&T Safety Policy Cover Letter
- Subcontractor Safety Manual
- Subcontractor Safety Performance Evaluation

Building Information Modeling: Clancy & Theys will implement Building Information Modeling (BIM) on this project for construction coordination, work phasing, and logistics. Certain trades will participate in BIM and requirements are included in the Bid Manual. Trades required to participate in BIM are identified in their Scopes of Work. The use of the model shall be governed by ConsensusDoc 301 and is included in the Bid Manual.

Questions: Questions should be made to the Construction Manager, Clancy & Theys Construction Company, to the attention of Jessica Bates jessicabates@clancytheys.com. **Last day to submit written RFIs is 7/9/2025.**

Bid Day Helpful Hints
NC State Fairgrounds – Midway Event Center

Checklist for Bid Form - DO NOT SUBMIT THIS CHECKLIST WITH BID FORM!!

- *Bid Form from Bid Manual is used (unless revised by Clarification.)
- Correct number of Addenda and Clarifications are acknowledged (check CM provided link to bid documents for all addenda and clarifications for this project.)
- Base bid is completed with both numerical and written amount. (Written amount governs in case of discrepancy). Make sure the bid amounts are legible.
- Bid breakdown is completed and total amount agrees with base bid amount. Bid breakdown is for accounting purposes only.
- Alternates completed with "\$0", "No Charge," "N/A", or the dollar amount. Do not leave blank. "Add" OR "Deduct" is circled. The word "Add" is assumed if neither is circled.
- All applicable unit prices are completed for any unit prices assigned to your bid package. All other unit prices may be left blank.
- Scope of Work acknowledgement is initialed on bid form.
- Construction Schedule acknowledgement is initialed on bid form.
- Site Logistics acknowledgement is initialed on bid form.
- Contract terms and conditions acceptance is initialed on bid form.
- List sub-subcontractors who you plan to use for this project. This section may be left blank if unknown at time of bid.
- *Proposal form is signed with original signature
- *MWBE Affidavit A OR Affidavit B is attached, signed, and notarized.
- *Identification of Certified HUB/Minority Participation form (ID Form) is attached with Affidavit A and Affidavit B.
- *Bid bond is signed and attached for all bids at or over \$500,000.
- *Bid form, affidavits, ID form is enclosed in a sealed opaque envelope.
- Bid Information Form is securely attached to outside of sealed envelope.

*Failure to submit these items properly will result in disqualification of bidder.

Other Information

- Read Instructions to Bidders.
- Bidders submitting bids for multiple bid packages must submit each bid sealed in separate envelopes with all documents applicable to that bid package (affidavits, ID forms, bid bonds)
- No exclusions or qualifications attached to bid or written on bid form. No product data, scope of work, MBE certification, emails, addenda, clarifications, etc. attached to bid.
- No faxed or emailed bids will be accepted. No bids submitted through Building Connected will be accepted.
- No late bids will be accepted.
- Bids opened and publicly read out loud.
- **Apparent low bidder must attend scope review meeting.** Time and date for scope review meeting is indicated in Notice to Bidders. Note: Bidder is not allowed to adjust bid if scope items have been excluded or is in error.

CONTACT Jessica Bates (jessicabates@clancytheys.com) for questions.

BID INFORMATION FORM
NC State Fairgrounds – Midway Event Center Release 2

This form is to be attached to the outside of the sealed envelope containing the bid. Refer to “Instructions to Bidders”

Bid Due Date: _____

Subcontractor: _____

Contact Person: _____
 (Person to be contacted for notice of low bid and scope review meeting)

Contact Email: _____

Bid Enclosed if for Bid Package checked below. (Each bid package bid must be in separate sealed envelopes.)

<input type="checkbox"/>	0210 – Final Cleaning
<input type="checkbox"/>	0400 – Masonry
<input type="checkbox"/>	0620 – Millwork
<input type="checkbox"/>	0710 – Waterproofing/Sealants
<input type="checkbox"/>	0742 – Wall Panels
<input type="checkbox"/>	0750 – Roofing
<input type="checkbox"/>	0810 – Doors/Frames/Hardware
<input type="checkbox"/>	0840 – Aluminum/Glass
<input type="checkbox"/>	0920 – Drywall
<input type="checkbox"/>	0930 – Hard Tile
<input type="checkbox"/>	0950 – Acoustical Tile
<input type="checkbox"/>	0965 – Resilient/Carpet
<input type="checkbox"/>	0966 – Terrazzo
<input type="checkbox"/>	0990 – Painting
<input type="checkbox"/>	1000 – Specialties
<input type="checkbox"/>	1030 – Operable Partitions
<input type="checkbox"/>	1400 – Elevators
<input type="checkbox"/>	2100 – Fire Protection
<input type="checkbox"/>	2200 – Plumbing
<input type="checkbox"/>	2300 – HVAC
<input type="checkbox"/>	2600 – Electrical
<input type="checkbox"/>	3290 – Landscaping
<input type="checkbox"/>	3300 – Site Utilities

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we,

(Bidder's Name)

_____, of _____
(Street Address) (City, State, Zip)

hereinafter called the Principal, and

_____,
(Surety's Name)

a corporation organized and existing under the Laws of the State of _____,

and authorized to transact business in the State of North Carolina, as Surety, hereinafter called Surety, are held and firmly bound unto Clancy & Theys Construction Company, as Construction Manager, hereinafter called Obligee, in the penal sum of five percent (5%) of the amount bid, good and lawful money of the United States of America, for the payment of which the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents. This bid bond is submitted in lieu of submitting cash, a cashier's check, or a certified check pursuant to G.S.143-129.

The Condition of this Obligation is such, that, WHEREAS the Principal has submitted a proposal to the Obligee on a contract for the construction

of _____
.
(Contract Name and Number)

NOW THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the Bidding or Contract Documents with good and sufficient surety for the faithful performance of such construction for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void; otherwise to remain in full force and effect.

State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts

County of _____

(Name of Bidder)

Affidavit of _____

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- 1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- 2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- 3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- 4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- 6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- 7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

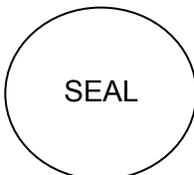
The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina --AFFIDAVIT B-- Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of _____

(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____

_____ contract.

(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

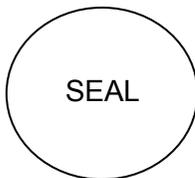
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina - AFFIDAVIT C - Portion of the Work to be Performed by HUB Certified/Minority Businesses

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.
 This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the _____
 (Name of Bidder)

_____ (Project Name)
 Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

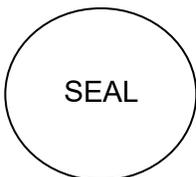
*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____



Signature: _____

Title: _____

State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina AFFIDAVIT D – Good Faith Efforts

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify that on the _____
(Name of Bidder)

_____ (Project Name)
Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*Minority Category	Work description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster.
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.
- I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

Good Faith Effort Guidelines

1. MINORITY BUSINESS ENTERPRISE (MBE) SUBCONTRACTORS:

All bidders, including MBEs shall complete this Affidavit, unless the bidder is self-performing as defined in N.C. Gen. Stat. § 143-128.2(c). If a bidder is self-performing, the bidder shall submit an affidavit stating that it will perform all of the work under a contract with its own workforce in lieu of this affidavit. (OWNER HAS A COPY THAT CAN BE PROVIDED UPON REQUEST OR USE SIMILAR VERSION OF AFFIDAVIT FOR SELF-PERFORM)

State of _____

AFFIDAVIT

A Listing of the Good Faith Effort

County of _____

The below-signed company has made a good faith effort to recruit minority businesses in accordance with N.C. Gen. Stat. § 143-128.2 and represents that it has performed the following (check all that apply; note that a minimum of fifty (50) points must be achieved):

A WELL-CRAFTED EMAIL SOLICITATION TO INDIVIDUAL MBE'S MAY PROVIDE DOCUMENTATION OF 6 (CRITERIA 1,2,3,6,8,10) OF THE ITEMS BELOW. EXAMPLES ARE GIVEN BENEATH EACH CRITERIA OF WAYS TO SATISFY REQUIREMENTS.

Solicitations must be made separately to MBE firms only and by each trade.

- 1. (10 points) Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least **10 days** before the bid date and notified them of the nature and scope of the work to be performed.

**NEWSPAPER/TRADE ADS DON'T COUNT FOR NOTIFICATION
PRODUCE LIST OF POTENTIAL BIDDERS CONTACTED BY CONTRACTOR
SUBTRACT 10 DAYS FROM BID DATE THEN ADD 1 DAY TO DETERMINE LATEST TIME TO NOTIFY**

- 2. (10 points) Made the construction plans, specifications and requirements available for review by prospective minority businesses, or provided these documents to them at least **10 days** before the bids are due.

**NEWSPAPER/TRADE ADS DON'T COUNT FOR NOTIFICATION
NOTICE SHALL STATE AVAILABLE IN OWN OFFICE OR PROVIDE MBE'S THE DOCUMENTS
SUBTRACT 10 DAYS FROM BID DATE THEN ADD 1 DAY TO DETERMINE LATEST TIME TO NOTIFY**

- 3. (15 points) Broke down or combined elements of work into economically feasible units to facilitate minority participation.

SHOW THAT WORK IS BROKEN DOWN INTO SMALL COMPONENTS (EG: FOR MECHANICAL CONTRACTOR - BREAK DOWN TO INSULATION, CONTROLS, AND AIR BALANCE)

INDICATE IN SOLICITATION THAT MBE'S CAN BID WORK FOR THIS PROJECT IN ANY AREAS THAT THEY ARE QUALIFIED

- 4. (10 points) Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.

OBTAIN LETTER OR OTHER DOCUMENTATION FROM ONE OF THESE ORGANIZATIONS INDICATING THAT YOU ARE WORKING WITH THEM IN THE RECRUITMENT OF MINORITY BUSINESSES

- ❑ 5. (10 points) Attended prebid meetings scheduled by the public owner.

OWNER/ARCHITECT IS KEEPING LIST OF ATTENDEES (MAKE SURE YOU SIGN-IN)

- ❑ 6. (20 points) Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.

DOCUMENT, OR INDICATE IN SOLICITATION TO NOTIFIED SUBS, THAT BONDS AREN'T REQUIRED, OR THAT BONDS AREN'T REQUIRED IN CERTAIN DIVISIONS, OR THAT BONDS AREN'T REQUIRED BELOW CERTAIN CONTRACT AMOUNTS, OR THAT WILL ASSIST IN PROCURING BONDS OR INSURANCE

- ❑ 7. (15 points) Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.

DOCUMENT THAT NO MBE'S WERE LOW

DOCUMENT THAT YOU ACCEPTED ALL LOW MBE'S

DOCUMENT WRITTEN REASONS FOR REJECTION OF ANY LOW MBE'S

- ❑ 8. (25 points) Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.

DOCUMENT RECENT HISTORY OF DOING JOINT PAY AGREEMENTS SUCH AS "IN THE RECENT PAST, WE HAVE DONE JOINT PAY AGREEMENTS (LINES OF CREDIT, WAIVING OF CREDIT, ETC.) WITH THE FOLLOWING MBE'S (X COMPANY, Y COMPANY, Z COMPANY) AND INTEND TO OFFER THE SAME ON THIS PROJECT FOR QUALIFIED MBE'S"

PRODUCE LETTER FROM VENDOR/SUPPLIER INDICATING THAT THEY WILL GIVE THE SAME PRICING TO MBE'S QUOTING TO YOU AS VENDOR/SUPPLIER GIVES DIRECTLY TO YOU

INDICATE IN SOLICITATION THAT JOINT PAY AGREEMENTS, ETC. ARE AVAILABLE FOR QUALIFIED MBE'S.

- ❑ 9. (20 points) Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.

SELF EXPLANATORY

- ❑ 10. (20 points) Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash flow demands.

DOCUMENT RECENT HISTORY OF DOING QUICK PAY AGREEMENTS SUCH AS "IN THE RECENT PAST, WE HAVE DONE QUICK PAY AGREEMENTS WITH THE FOLLOWING MBE'S (X COMPANY, Y COMPANY, Z COMPANY) AND INTEND TO OFFER THE SAME ON THIS PROJECT FOR QUALIFIED MBE'S"

INDICATE IN SOLICITATION THAT QUICK PAY AGREEMENTS ARE AVAILABLE FOR QUALIFIED MBE'S

IDENTIFICATION OF MINORITY BUSINESS PARTICIPATION SCHEDULE

Name	Description of Work to be performed	Subcontract Amount	Percentage of Bid
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
13. _____	_____	_____	_____
14. _____	_____	_____	_____
15. _____	_____	_____	_____

In accordance with G.S. 143-128.2, the undersigned will enter into a formal agreement with the firms listed in the above Identification of Minority Business Participation Schedule conditioned upon execution of a contract with the Owner. The failure to abide by this statutory provision shall constitute a breach of the construction contract.

The undersigned hereby certifies that he or she has read this affidavit and the information contained herein is true and accurate. The undersigned further certifies that he or she is authorized to bind the bidder to the commitment herein set forth.

Company: _____

Date: _____ Signature: _____

Name/Title Authorized Officer: _____

NOTARY
SEAL

State of _____, County of _____

Subscribed and sworn to before me this ____ day of _____, _____.

Notary Public _____

My commission expires: _____

COMMON MISTAKES

- *ONLY CHECKING OFF 4 BOXES**
- *FORGETTING TO CHECK ANY BOXES**
- *INCLUDING AN AFFIDAVIT WITH THE FORM OF PROPOSAL OTHER THAN THIS ONE OR THE SELF PERFORMING AFFIDAVIT**
- *NOT INCLUDING ALL OF THE PAGES IN THE FORM OF PROPOSAL WHEN IT IS PUT TOGETHER**
- *WRITING 100% ON IDENTIFICATION OF MBE PARTICIPATION SCHEDULE INSTEAD OF LISTING WHICH MBE'S ARE BEING USED OR NOT FILLING OUT ALL OF THE COLUMNS LISTING MBE PARTICIPATION**
- *NOT PRODUCING DOCUMENTATION (OR AFFIDAVIT SHOWING THAT 10% GOAL WAS ACHIEVED) WITHIN 3 BUSINESS DAYS AFTER BEING NOTIFIED TO PROVIDE THE MBE BACKUP OR NOT BEING ABLE TO DOCUMENT THAT THE BOXES CHECKED WERE ACCOMPLISHED**

Overall Table of Contents

- Table of Contents
- Introductory Letter/ Important Information
- Consensus Doc
- Exhibits
 - Exhibit A: The Subcontract Work
 - Exhibit B: Addendum & Clarifications
 - Exhibit C: Alternates & Units Prices
 - Exhibit D: Drawings & Specifications List
 - Exhibit E: Information Reference Number (IRN) List
 - Exhibit F: Insurance Provisions
 - Exhibit G: General Conditions
 - Payment Applications
 - Electronic Signature Policy
 - Submittals & Shop Drawings
 - Operational Requirements
 - Coordination & Coordination Drawings
 - Field Management Software: Autodesk Construction Cloud
 - Miscellaneous Provisions

 - Exhibit H: Appendix E - Minority Reporting Form
 - Exhibit I: Sales Tax Report
 - Exhibit J: Affidavit of Capital Improvements
 - Exhibit K: Building Information Modeling (BIM) Addendum
 - Exhibit L: (NOT USED)
 - Exhibit M: Subcontractor Safety Manual
 - Exhibit N: Project Schedule

Date: 01/02/2025

Subcontractor:
Subcontractor Address:

Re: 7284- NCSF Midway

Dear

Your firm has been selected to perform the referenced subcontract work for us. We welcome you to our team and look forward to a good working relationship. As a member of our team, you should be aware that we pride ourselves on our fair and professional dealings with our customers; on our ability to deliver to our customer a facility on or before the scheduled completion date; and on the quality of our finished product. In addition, C&T has established a minimum 10.00% participation goal for Minority, Women, Disadvantaged, Small and Veteran owned businesses through subcontractors, suppliers and tiered subs on all C&T projects. We expect you, as a member of our team, to endeavor to contribute to these goals.

Before your work starts, the following items must be received by Clancy & Theys' office within 14 calendar days after receipt of subcontract:

- 1) The signed Subcontract Agreement.
- 2) Your insurance certificate indicating liability, automobile, workman's comp and excess liability insurance coverage in the amounts required by the contract, and noting the project name. No payments can be processed until we have received this certificate.
- 3) Material Data Safety Sheets (MSDS) for the hazardous materials you intend to bring on-site, with the project name clearly marked. If this does not apply to the work to be performed, provide a letter stating so which includes the project name.
- 4) Submit copies of Subcontractor Site Specific Safety Plan.
- 5) Subcontractor Contact Information Sheet and license .
- 6) Tiered Subcontractors Contact Information Sheet and license numbers .

C&T Project Contact Information

Project Manager:

(o)

(m)

(e)

Superintendent:

(m)

(e)

Project Assistant

(e)

Accounts Payable:

(e)

Safety Representative:

(e)

Please do not hesitate to contact me or any of the above noted Clancy & Theys' representatives should you have any questions regarding this letter and the enclosed information.

Sincerely,

Clancy & Theys Construction Company

SUBCONTRACTOR CONTACT INFORMATION SHEET

Please submit to Clancy & Theys within 14 Days (dawnsmith@clancytheys.com)

Subcontractor Company Name:

S/MWDBE Classification:

Mailing Address:

Contractor's License #:

Project Manager (In Office):

Contact Name:

Office Phone:

Cell Phone:

Email:

Field Superintendent (on site):

Contact Name:

Office Phone:

Cell Phone:

24 Hour Emergency Contact#:

Email:

Safety Officer:

Contact Name:

Office Phone:

Cell Phone:

24 Hours Emergency Contact#:

Email:

Accounts Receivable Contact:

Contact Name:

Office Phone:

TIERED VENDOR CONTACT INFORMATION SHEET

Please submit to Clancy & Theys immediately upon signing your contract
(dawnsmith@clancytheys.com, leetillett@clancytheys.com)

An updated version of this form must also be provided upon submission of a billing greater than 25% complete or payment may be held.

Submission Date: _____

Vendor/Supplier Name: _____

Address: _____ City: _____ State: _____ Zip _____

Diversity Classification (check all that apply)

- Female Small Business African American American Indian Asian
 Hispanic Disabled Veteran owned Disadvantaged

Scope Description: _____

Estimated Contract/PO Value \$ _____

- Material Only Labor Only Both Material and Labor

AR Contact Name: _____

AR Contact Email: _____

AR Contact Phone: _____

Vendor/Supplier Name: _____

Address: _____ City: _____ State: _____ Zip _____

Diversity Classification (check all that apply)

- Female Small Business African American American Indian Asian
 Hispanic Disabled Veteran owned Disadvantaged

Scope Description: _____

Estimated Contract/PO Value \$ _____

- Material Only Labor Only Both Material and Labor

AR Contact Name: _____

AR Contact Email: _____

AR Contact Phone: _____

Vendor/Supplier Name: _____

Address: _____ City: _____ State: _____ Zip _____

Diversity Classification (check all that apply)

- Female Small Business African American American Indian Asian
- Hispanic Disabled Veteran owned Disadvantaged

Scope Description: _____

Estimated Contract/PO Value \$ _____

- Material Only Labor Only Both Material and Labor

AR Contact Name: _____

AR Contact Email: _____

AR Contact Phone: _____

Vendor/Supplier Name: _____

Address: _____ City: _____ State: _____ Zip _____

Diversity Classification (check all that apply)

- Female Small Business African American American Indian Asian
- Hispanic Disabled Veteran owned Disadvantaged

Scope Description: _____

Estimated Contract/PO Value \$ _____

- Material Only Labor Only Both Material and Labor

AR Contact Name: _____

AR Contact Email: _____

AR Contact Phone: _____

Vendor/Supplier Name: _____

Address: _____ City: _____ State: _____ Zip _____

Diversity Classification (check all that apply)

- Female Small Business African American American Indian Asian
- Hispanic Disabled Veteran owned Disadvantaged

Scope Description: _____

Estimated Contract/PO Value \$ _____

- Material Only Labor Only Both Material and Labor

AR Contact Name: _____

AR Contact Email: _____

AR Contact Phone: _____

STANDARD AGREEMENT BETWEEN CONSTRUCTOR AND SUBCONTRACTOR**TABLE OF ARTICLES**

1. AGREEMENT
2. SCOPE OF WORK
3. SUBCONTRACTOR'S RESPONSIBILITIES
4. CONSTRUCTOR'S RESPONSIBILITIES
5. PROGRESS SCHEDULE
6. SUBCONTRACT AMOUNT
7. CHANGES
8. PAYMENT
9. INDEMNITY, INSURANCE, AND BONDS
10. SUSPENSION, NOTICE TO CURE, AND TERMINATION
11. DISPUTE MITIGATION AND RESOLUTION
12. MISCELLANEOUS
13. SUBCONTRACT DOCUMENTS

ARTICLE 1 AGREEMENT

Job Number: **7284-** Subcontract Number: **7284-001**

This Agreement is made effective as of **DATE** by and between the

CONSTRUCTOR,
Clancy & Theys Construction Company
P O Box 27608
Raleigh, NC 27611

and the SUBCONTRACTOR,

for services in connection with the **SUBCONTRACT WORK**

for the following PROJECT

7284- NCSF Midway
1025 Blue Ridge Rd
Raleigh, NC 27607

Notice to the Parties shall be given at the above addresses.



Standard Agreement Between Constructor and Subcontractor

The OWNER is
NC Department of Agriculture
1001 Mail Service Center
Raleigh, NC 27699

The DESIGN PROFESSIONAL for the Project is
HH Architecture
1100 Dresser Ct
Raleigh, NC 27609

ARTICLE 2 SCOPE OF WORK

2.1 PARTIES' RELATIONSHIP The Parties each agree to proceed with the Subcontract Work on the basis of mutual trust, good faith, and fair dealing.

2.2 SUBCONTRACT WORK The Constructor contracts with the Subcontractor as an independent contractor to provide all labor, materials, equipment, and services necessary or incidental to complete the Subcontract Work in accordance with, and reasonably inferable from, the Subcontract Documents, and consistent with the Progress Schedule, as may change from time to time. The Subcontractor shall perform the Subcontract Work under the general direction of the Constructor and in accordance with the Subcontract Documents. As to Subcontractor's Work, Subcontractor is bound to Constructor and assumes all the obligations and responsibilities that Constructor, by the Prime Contract, assumes to the Owner. Subcontractor's Work is to be completed in strict accordance with this Subcontract, the Prime Contract and the Subcontract Documents. The Subcontractor warrants to perform, to schedule and to coordinate its Subcontract Work in accordance with all terms of the Contract Documents. The Subcontract Work includes all work described in the Subcontract Documents, including all such labor, materials, equipment, or services incident thereto as is customarily performed or furnished by the trade covered by this Agreement. In the event that the Subcontract Work is not sufficiently explained or described in the Subcontract Documents, then the Subcontractor agrees to conform to such clarification or explanation by the Constructor as part of this Agreement without extra compensation. Each party to this Subcontract is an independent contractor and nothing contained in this Subcontract shall be construed to be inconsistent with this relationship or status.

2.3 CONSTRUCTOR'S WORK The Constructor's Work is the construction and services required of the Constructor to fulfill its obligations pursuant to its agreement with the Owner (the "Work"). The "Subcontract Work" is a portion of the Constructor's Work.

2.3.1 ETHICS The Parties shall perform their obligations with integrity, ensuring at a minimum that each: (a) avoids conflicts of interest and discloses promptly any to the other Party; and (b) warrants that it has not and shall not pay nor receive any contingent fees or gratuities to or from the other Party, including its agents, officers and employees, subcontractors or others for whom they may be liable, to secure preferential treatment.

2.4 SUBCONTRACT DOCUMENTS The Subcontract Documents include this Agreement, the prime agreement, special conditions, general conditions, specifications, drawings, addenda issued prior to execution of this Agreement, amendments, laboratory testing to determine the nature of encountered hazardous materials, other documents listed in this Agreement, and modifications issued in accordance with this Agreement. The Constructor shall make available to the Subcontractor, prior to the execution of this Agreement, copies of the existing Subcontract Documents to which the Subcontractor will be bound (but, at Constructor's option, with the amount of Constructor's fees omitted). The Subcontractor shall provide copies of applicable portions of the Subcontract Documents to its proposed subcontractors and suppliers. Nothing shall prohibit the Subcontractor from obtaining copies of the Subcontract Documents from the Constructor at any time after the Subcontract Agreement is executed. The Subcontractor acknowledges and represents that all Subcontract Documents have been made available for review and examination by the Subcontractor, that the Subcontractor is familiar with the Subcontract Documents and the requirements set forth therein, and that the Subcontractor has investigated the nature, locality, and site of the Subcontract Work and the conditions under which the Subcontract Work is to be performed. In the event that the Subcontract Work is not sufficiently explained or described in the Subcontract Documents, Subcontractor agrees to promptly request clarification or explanation from Constructor as needed and further agrees to conform to such clarification or explanation by Constructor as part of this Subcontract Agreement.

2.4.1 DOCUMENTS IN ELECTRONIC FORM If the Owner requires that the Owner, Design Professional, Constructor and Subcontractors exchange documents and data in electronic or digital form, prior to any such exchange, the Owner, Design Professional, and Constructor shall agree in ConsensusDocs 200.2, AIA Document E203, or other written protocol governing all exchanges, which, at a minimum, shall specify: (a) the definition of documents and data to be accepted in electronic or digital form or to be transmitted electronically or digitally; (b) management and coordination responsibilities; (c) necessary equipment, software, and services; (d) acceptable formats, transmission methods, and verification procedures; (e) methods for maintaining version control; (f) privacy and security requirements; and (g) storage and retrieval requirements; and (h) the cost of such documents to the Subcontractor. The Subcontractor shall provide whatever input is needed to assist the Constructor in developing the protocol and shall be bound by the requirements of the written protocol. Except as otherwise agreed to by the Parties in writing, the Parties shall each bear their own costs as identified in the protocol. In the absence of a written protocol, use of documents and data in electronic or digital form shall be at the sole risk of the recipient.

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2.5 CONFLICTS In the event of a conflict between this Agreement and the other Subcontract Documents, this Agreement shall govern.

2.6 DEFINITIONS

2.6.1 "Agreement" means this ConsensusDocs 750 Standard Agreement between Constructor and Subcontractor, as modified herein, the cover page to this Agreement, and exhibits and attachments made part of this Agreement upon its execution. Subcontractor acknowledges that this Agreement contains modifications to the standard ConsensusDocs 750.

2.6.1.1 The following exhibits are attached hereto and made part of this Agreement:

- Exhibit A: The Subcontract Work (Scope)
- Exhibit B: Addendum & Clarifications
- Exhibit C: Alternates & Units Prices
- Exhibit D: Drawings & Specifications List
- Exhibit E: Information Reference Number (IRN) List
- Exhibit F: Insurance Provisions
- Exhibit G: General Conditions
- Exhibit H: Appendix E Minority Reporting Form
- Exhibit I: Sales Tax Report
- Exhibit J: Affidavit of Capital Improvements
- Exhibit K: Building Information Modeling (BIM) Addendum
- Exhibit L: (NOT USED)
- Exhibit M: Subcontractor Safety Manual
- Exhibit N: Project Schedule

2.6.2 "Business Day" means all Days, except weekends and official federal or state holidays where the Project is located.

2.6.3 The term "Day" shall mean calendar day.

2.6.4 "Laws" mean federal, state, and local laws, ordinances, codes, rules, and regulations applicable to the Subcontract Work with which the Constructor and Subcontractor must comply that are enacted as of the Agreement date.

2.6.5 The "Parties" are collectively the Constructor and the Subcontractor.

2.6.6 A "Subcontract Change Order" is a written order signed by the Constructor and the Subcontractor after execution of this Agreement, indicating changes in the scope of the Subcontract Work, the Subcontract Amount or Subcontract Time, including substitutions proposed by the Subcontractor and accepted by the Constructor.

2.6.7 "Subcontract Time" means the time period on the Progress Schedule between commencing and completing the Subcontract Work.

2.6.8 "Substantial Completion" occurs on the later of: 1) satisfaction of all requirements in the Prime Contract for Substantial Completion or 2) when construction is sufficiently complete in accordance with the Subcontract Documents so that the Owner can occupy or utilize the Project, or a designated portion, for the use for which it is intended, without unscheduled disruption. The Design Professional and/or Owner must certify the date for Substantial Completion before the Subcontract Work will be considered Substantially Complete. The warranty period applicable to the Subcontract Work shall commence upon the achievement of Substantial Completion of the Project and acceptance by the Owner under the terms of the prime agreement.

2.6.9 "Sub-subcontractor" means any third-party who supplies labor, equipment, materials, tools, staffing, supervision, administration, design, or any other resources to Subcontractor for completion of the Subcontract Work.

2.6.10 "Worksite" means the geographical area of the Project location as identified in ARTICLE 1 where the Work is to be performed.

2.6.11 The terms "Contractor," and "General Contractor," when and if used in this Agreement, shall both refer to and have the same meaning as, the "Constructor."



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2.6.12 The term "prime agreement" or "prime contract" as used herein means the agreement between the Owner and Constructor for the construction of the Project, including all documents enumerated and/or incorporated therein, and shall include changes or modifications thereto, whether issued before or after the date of this Agreement.

2.6.13 The term "Subcontract Work" means the work to be performed by Subcontractor pursuant to this Agreement as described on the cover page of this Agreement and in Exhibit A.

2.6.14 The terms "Trade Partner" and "Trade Contractor," when and if used in this Agreement, shall both refer to and have the same meaning as, the "Subcontractor."

ARTICLE 3 SUBCONTRACTOR'S RESPONSIBILITIES

3.1 OBLIGATIONS The Constructor and the Subcontractor are hereby mutually bound by the terms of this Agreement. Subcontractor assumes toward Constructor all the obligations, which Constructor assumes toward Owner or others under the Prime Contract. Constructor shall have all the rights and remedies against Subcontractor, which Owner or others have against Constructor under the Prime Contract. Except as specifically set forth in the Subcontract, Subcontractor shall not have any rights against Constructor that Constructor does not have against Owner under the Prime Contract. In the event of an inconsistency among the documents, the specific terms of this Agreement shall govern.

3.2 RESPONSIBILITIES The Subcontractor shall furnish its best skill and judgment to perform the Subcontract Work in an expeditious manner and to cooperate with the Constructor so that the Constructor may fulfill its obligations to the Owner. The Subcontractor shall furnish and pay for all of the labor, materials, equipment, and services, including but not limited to competent supervision, shop drawings, samples, tools, and scaffolding as are necessary for the proper performance of the Subcontract Work, all of which shall be provided in full accord with and reasonably inferable from the Subcontract Documents. The Subcontractor shall provide the Constructor a list of its proposed subcontractors and suppliers, and be responsible for taking field dimensions, providing tests, obtaining required permits related to the Subcontract Work and affidavits, ordering of materials, and all other actions as required to meet the Progress Schedule.

3.2.1 Constructor, being the Project Expediter for this project, shall set the working hours for this Project. It shall be the responsibility of Subcontractor to abide by this schedule on a daily basis. Any deviation from this schedule shall first be approved by the Constructor's Project Superintendent. All trades are required to be on site the full work week while their scope of work is being performed. Shortened work weeks with extended hours will not be acceptable.

3.2.2 If Subcontractor's Work to be performed under the Subcontract Documents involves the employment or use of Sub-Subcontractors by the Subcontractor, then the Subcontractor will provide a full time onsite representative to supervise the work of the Sub-Subcontractors and to coordinate all work of the Sub-Subcontractors with that of the Constructor, other Subcontractors, and/or Prime Constructors. Before any Sub-Subcontractor of Subcontractor of any tier may start any portion of the Subcontract Work, Constructor must receive reasonable evidence that such Sub-SubContractor has both obtained the insurance coverages and complied with all other obligations required in Exhibit F hereto.

3.2.3 Before starting any Subcontract Work, the Subcontractor shall inspect all surfaces to be finished. Subcontractor shall notify Constructor in writing of any unsuitability of surfaces for finishing. The commencing of Subcontract Work, or the absence of the notification in writing, shall be construed as acceptance of the surfaces by the Subcontractor. It shall be the responsibility of the Subcontractor to correct any defects appearing in the finished work thereafter.

3.2.4 Subcontractor shall submit a complete listing of the Subcontractor's Sub-Subcontractors of all tiers, including all material and/or labor suppliers (together, "Subordinate Parties"). The list shall include the firm's name, contact person, phone numbers, Subcontract or material purchase date along with the anticipated delivery dates and material shipping points. If Subcontractor proposes to subcontract portions of the Subcontract Work, prior written approval of Constructor shall be required. For all work Subcontractor intends to subcontract, Subcontractor shall enter into written agreements with Sub-Subcontractors performing portions of Subcontractor's Work by which Subcontractor and the Sub-Subcontractor are mutually bound. Subcontractor shall be fully responsible to Constructor for all actions, omissions, or other conduct of Subordinate Parties arising from or in connection with the Subcontract Work or the Project. Obligations imposed upon Subcontractor shall be binding on its Subordinate Parties. By appropriate agreement, written where legally required for validity, Subcontractor shall require its Subordinate Parties, to the extent of Subcontract Work to be provided by the Subordinate Party, to be bound to Subcontractor by the terms of the Subcontract, and to assume towards Subcontractor, all obligations and responsibilities that Subcontractor by this Agreement assumes towards Constructor. Subcontractor shall maintain good control and discipline over its Subordinate Parties, including full-time supervision by Subcontractor at the Project Site while Subcontract Work is being performed and shall take all reasonable measures to maintain labor harmony. Subcontractor shall remove from the Project any Subordinate Party deemed objectionable by Constructor or Owner. Subcontractor shall also pay its Subordinate Parties promptly. If approval is granted to allow portions of the Subcontract Work to be subcontracted, Subcontractor's Sub-Subcontractors shall adhere to all rules and requirements as if such Sub-Subcontractors were under contract directly with Constructor. Further, upon Constructor's request, Subcontractor shall promptly deliver to Constructor copies of all written subcontract and sub-subcontract agreements and/or purchase orders (as applicable) (i.e., those between Subcontractor and its Sub-Subcontractors and suppliers, and those between Sub-Subcontractors and their lower tiered Sub-Subcontractors and suppliers).

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3.3 INCONSISTENCIES AND OMISSIONS The Subcontractor shall make a careful analysis and comparison of the drawings, specifications, other Subcontract Documents, and information furnished by the Owner relative to the Subcontract Work. Subcontractor agrees to review the Subcontract Documents for and promptly seek clarification from Constructor of vague, ambiguous, contradictory, or insufficiently detailed drawings and specifications bearing on the Subcontract Work. Should the Subcontractor discover any errors, inconsistencies, or omissions in the Subcontract Documents, the Subcontractor shall promptly report such discoveries to the Constructor in writing within three (3) days. Following receipt of written notice, the Constructor shall instruct the Subcontractor as to the measures to be taken, and the Subcontractor shall comply with the Constructor's instructions. If the Subcontractor performs work knowing it to be contrary to Laws without notice to the Constructor and advance approval by appropriate authorities, including the Constructor, the Subcontractor shall assume responsibility for such work and bear all associated costs, charges, fines, penalties, fees, and expenses necessarily incurred to remedy the violation. Nothing in this section shall relieve the Subcontractor of responsibility for its own errors, inconsistencies, and omissions.

3.4 WORKSITE VISITATION Before commencing and during performance of the Subcontract Work, the Subcontractor shall examine and compare the Subcontract Documents, relevant field measurements made by Subcontractor or shared by Constructor, and any visible conditions at the Worksite affecting the Subcontractor Work. Subcontractor shall examine and monitor the nature, locality, and site of the Subcontract Work and the conditions under which the Subcontract Work is to be performed. Subcontractor shall promptly send written notification to Constructor of any deficiencies that might impact the Subcontract Work. If Subcontractor discovers any errors, omissions, or inconsistencies in the Subcontract Documents or between its Worksite observations and the Subcontract Documents, such discrepancies shall be promptly reported to Constructor. In the event Subcontractor knows or should know of such deficiencies and proceeds with the Subcontract Work without promptly giving written notice to Constructor, then the Project site will be deemed accepted by Subcontractor for purposes of the Subcontract Work. In addition, Subcontractor warrants and represents that it has inspected the Project site, taken actions to determine the location of any and all underground utilities and services through the use of a locator service if necessary, and contacted known service and utility owners, whether public, private or owned or controlled by the Owner, to determine the nature, extent, and location of existing, adjusted, or new utility or service facilities, including all private utilities and services. Any additional cost resulting from the nature, extent, location or interference of existing, adjusted or new utility facilities has been included in the Subcontract Amount. Constructor will not be responsible for any claims for additional compensation from the Subcontractor resulting from delays, inconvenience, or damage sustained by Subcontractor attributable to interference by utility appurtenances or the operation of moving the same, other than a consideration of an extension of time; however, Subcontractor shall not be entitled to an extension of time for any utility interference unless such extension is first approved in writing by the Owner. Subcontractor shall notify all utility services and utility owners in accordance with local and state utility laws prior to performing any work which may conflict with existing utility services. Subcontractor shall be fully responsible and shall indemnify and hold harmless Constructor and Owner for any liability, claims, actions, losses, damages, costs and expenses to existing, adjusted or new utility facilities as a result of Subcontractor's Work.

3.5 INCREASED COSTS OR TIME No changes to the Subcontract Work, the Subcontract Amount, the Subcontract Time, the Progress Schedule, or other terms of this Agreement are authorized unless approved in a Subcontract Change Order or Notice to Proceed signed by an authorized representative of Constructor. No course of dealing or course of performance between the parties shall be the basis for an increase in the Subcontract Amount or extension of the Progress Schedule. The Subcontractor may seek a Subcontract Change Order as provided in Article 7 if the Constructor's clarifications or instructions in responses to requests for information are believed to require additional time or cost. If the Subcontractor fails to perform the reviews and comparisons required in sections 3.3 and 3.4, to the extent the Constructor is held liable to the Owner because of the Subcontractor's failure, the Subcontractor shall pay the costs and damages to the Constructor that would have been avoided if the Subcontractor had performed those obligations. Subcontractor shall perform the Subcontract Work promptly and efficiently without delaying other work or other subcontractors, and, if necessary as Constructor may indicate, certain parts of the Subcontract Work shall be prosecuted in preference to others in order to secure the execution of the Subcontract Work in a prompt and orderly fashion. Constructor shall not be liable for delays or interruptions due to events or other unforeseeable causes beyond its reasonable control. Subcontractor remains responsible to perform Subcontractor's Work as expeditiously as possible, and Constructor shall not be responsible for any additional costs that could have been avoided by Subcontractor. Should overtime be required in order that Subcontractor stay on schedule or get back on schedule, even if delays are attributable in whole or in part to the delays by Constructor or other subcontractors, then Subcontractor agrees to add additional labor forces and to perform overtime as expeditiously as is necessary to stay on schedule or get back on schedule and at no additional cost.

3.6 COMMUNICATIONS Unless otherwise provided in the Subcontract Documents and except for emergencies, the Subcontractor shall direct all communications related to the Project to the Constructor.



Standard Agreement Between Constructor and Subcontractor**3.7 SUBMITTALS**

3.7.1 The Subcontractor promptly shall submit for approval to the Constructor all shop drawings, samples, product data, manufacturers' literature, inspections, surveys, quality and testing records, and similar submittals required by the Subcontract Documents. Submittals shall be submitted in electronic form if required. The Subcontractor shall be responsible to the Constructor for the accuracy and conformity of its submittals to the Subcontract Documents. The Subcontractor shall prepare and deliver its submittals to the Constructor in a manner consistent with the Progress Schedule and in such time and sequence so as not to delay the Constructor or others in the performance of the Work. Subcontractors will be held accountable for all costs incurred if the Project Schedule is impacted as a result of their submittals being late. These costs include, but are not limited to, liquidated and actual damages, and general conditions costs. The Subcontractor's submittals shall identify in writing for each submittal all changes, deviations, or substitutions from the requirements of the Subcontract Documents. The approval of any Subcontractor submittal shall not be deemed to authorize changes, deviations, or substitutions in the requirements of the Subcontract Documents unless express written approval is obtained from the Constructor and Owner authorizing such change, deviation, or substitution. Such approval shall be promptly memorialized in a Subcontract Change Order within seven (7) Days following approval by the Constructor and, if applicable, provide for an adjustment in the Subcontract Amount or Subcontract Time. If the Subcontract Documents do not contain submittal requirements pertaining to the Subcontract Work, the Subcontractor agrees upon request to submit in a timely fashion to the Constructor for approval any shop drawings, samples, product data, manufacturers' literature, or similar submittals as may reasonably be required by the Constructor, Owner, or Design Professional.

3.7.2 The Constructor, Owner, and Design Professional are entitled to rely on the adequacy, accuracy, and completeness of any professional certifications required by the Subcontract Documents concerning the performance criteria of systems, equipment, or materials, including all relevant calculations and any governing performance requirements.

3.7.3 CLOSE OUT DATA If the final payment due to the Constructor from the Owner is being withheld due to Subcontractor's failure to submit the required close out data, then Subcontractor shall be charged interest (at the prevailing legal rate) on the amount being withheld from Constructor, and this amount shall be deducted from Subcontractor's retainage.

3.8 DESIGN DELEGATION

3.8.1 If the Subcontract Documents (a) specifically require the Subcontractor to procure design services, and (b) specify all design and performance criteria, the Subcontractor shall provide those design services necessary to satisfactorily complete the Subcontract Work. As permitted by the laws, rules, and regulations in the jurisdiction where the Project is located, the Subcontractor shall procure such services and any necessary certifications from licensed design professionals. Subcontractor's design professional must be a professional engineer licensed in the state where the Project is located, with errors and omissions insurance in the amount in accordance with the requirements of Article 9.2 and Exhibit F. The signature and seal of Subcontractor's design professional shall appear on all drawings, calculations, specifications, certifications, shop drawings, and other submittals related to the Subcontract Work designed or certified by the Subcontractor's design professional. The Constructor shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications, or approvals performed by the Subcontractor's design professional.

3.8.2 If the Subcontractor's design professional is an independent professional, the design services shall be procured pursuant to a separate agreement between the Subcontractor and the design professional. The agreement between the Subcontractor and the Subcontractor's design professional shall not include any limitation of liability, except to the extent that consequential damages are waived pursuant to subsection 5.4.1, or exclusion from participation in the multiparty proceedings requirement of section 11.6. The Subcontractor shall be responsible for conformance of its design with the information given and the design concept expressed in the Subcontract Documents. The Subcontractor shall not be responsible for the adequacy of the performance or design criteria required by the Subcontract Documents.

3.9 TEMPORARY SERVICES The Subcontractor's and Constructor's respective responsibilities for temporary services are set forth in Exhibit G.

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3.10 COORDINATION The Subcontractor shall:

3.10.1 Cooperate with the Constructor and all others whose work may interface with the Subcontract Work:

3.10.1.1 Constructor intends to hold a weekly meeting during progress of the Work. The Subcontractor is required to have its Project Manager and Superintendent present at these meetings. This shall include attendance by all of Subcontractor's major sub-subcontractors while the Subcontract Work is being performed. Information which must be provided at these meetings include:

- .1 Material Deliveries
- .2 Job Progress
- .3 Review of total job schedule
- .4 Short term look-ahead
- .5 Safety Review
- .6 Quality Program

3.10.1.2 The Subcontractor shall have full representation of its company at all job site progress meetings when working on site or when otherwise advised.

3.10.2 specifically note and immediately advise the Constructor of any such interface with the Subcontract Work, and:

3.10.3 Participate in the preparation of coordination drawings and work schedules in areas of congestion.

3.11 SUBCONTRACTOR'S REPRESENTATIVE The Subcontractor shall designate a person, subject to the Constructor's approval, who shall be the Subcontractor's authorized representative. This representative shall be the only person to whom the Constructor shall issue instructions, orders, or directions, except in an emergency. The Subcontractor's representative is set forth in the cover page to this Agreement, who is agreed to by the Constructor. If the Subcontractor changes its representative, the Subcontractor shall immediately notify the Constructor in writing. It shall be the responsibility of this representative to distribute all instructions, orders and directions as required to ensure proper performance and compliance. Adequate and competent supervision will be provided on site at all times when the Subcontractor and/or its sub-subcontractors are performing work.

3.12 TESTS AND INSPECTIONS The Subcontractor shall schedule all required tests, approvals and inspections of the Subcontract Work at appropriate times so as not to delay the progress of the work. The Subcontractor shall give proper written notice to all required Parties of such tests, approvals, and inspections. Except as otherwise provided in the Subcontract Documents, the Subcontractor shall bear all expenses associated with tests, inspections, and approvals required of the Subcontractor by the Subcontract Documents which, unless otherwise agreed to, shall be conducted by an independent testing laboratory or entity approved by the Constructor and Owner. Required certificates of testing, approval, or inspection shall, unless otherwise required by the Subcontract Documents, be secured by the Subcontractor and promptly delivered to the Constructor.

3.13 WARRANTIES The Subcontractor warrants that all materials and equipment shall be new unless otherwise specified, of good quality, in conformance with the Subcontract Documents, and free from defective workmanship and materials. Upon request by the Constructor, the Subcontractor shall furnish satisfactory evidence of the quality and type of materials and equipment furnished. The Subcontractor further warrants that the Subcontract Work shall be free from all deficiencies and defects in materials and workmanship. The Subcontractor warranties shall commence on the date of Substantial Completion of the Work or a designated portion and shall continue at least for the duration of the Constructor's warranty obligations to Owner. This warranty survives the termination of this Agreement and the completion of the Subcontract Work specified in this Agreement, shall only be extinguished by limitation periods imposed by applicable law and shall not be limited by any other provisions contained in the Agreement. Nothing in this section establishes a period of limitation or otherwise restricts obligations, which Subcontractor may have under other provisions of this Agreement or applicable law. The Subcontractor will correct such deficiencies and defects, without cost to Owner or Constructor, immediately upon receipt of written notice from Constructor. The Subcontractor shall obtain from its subcontractors and suppliers any special or extended warranties. To the extent such warranties have not been previously transferred to the Owner or Constructor as required by the Subcontract Documents, the Subcontractor shall assign all warranties to the Constructor and provide reasonable assistance to the Constructor in enforcing the obligations of subcontractors and suppliers after the one-year correction period referenced in Paragraph 3.22.

Standard Agreement Between Constructor and Subcontractor**3.14 CLEANUP**

3.14.1 The Subcontractor shall at all times during its performance of the Subcontract Work keep the Worksite clean and free from debris resulting from the Subcontract Work. Prior to discontinuing the Subcontract Work in an area, the Subcontractor shall clean the area and remove all its rubbish and its construction equipment, tools, machinery, waste, and surplus materials. The Subcontractor shall make provisions to minimize and confine dust and debris resulting from its construction activities. The Subcontractor shall not be held responsible for unclean conditions caused by others. Each Subcontractor is expected to perform strictly according to the Subcontract Documents with regard to construction cleanup.

Subcontractor's cleanup duties include:

- .1 Clean up all waste materials, rubbish, and debris resulting from Subcontractor's operations and place in a dumpster provided by the Constructor on a daily basis (excluding wet trades and hazardous materials which shall be disposed of by the Subcontractor in accordance with applicable law).
- .2 Remove grease, dirt, stains, scribe lines, prints, and other foreign materials from the interior and exterior surfaces of material fixtures, hardware, and equipment furnished as a part of this Agreement.
- .3 Repair, patch and touch-up marred surfaces to match adjacent finishes damaged by Subcontractor's own operations.
- .4 Provide forces, on a daily basis, as required by the Constructor to leave the work "broom clean."

3.14.2 If the Subcontractor fails to commence compliance with cleanup duties within twenty-four (24) hours after notification from the Constructor of non-compliance, the Constructor may implement appropriate cleanup measures without further notice and shall deduct the costs from any amounts due or to become due the Subcontractor in the next payment period.

3.15 SAFETY

3.15.1 The Subcontractor is required to perform the Subcontract Work in a safe and reasonable manner. The Subcontractor shall prevent against injury, loss, or damage to persons or property by taking reasonable steps to protect:

3.15.1.1 employees and other persons at the Worksite;

3.15.1.2 materials and equipment stored on or off the Worksite for use in performance of the Subcontract Work; and

3.15.1.3 all property and structures located at the Worksite and adjacent to work areas, whether or not said property or structures are part of the Project or involved in the Subcontract Work.

3.15.2 The Subcontractor shall give all required notices and comply with all applicable rules, regulations, orders, and other lawful requirements established to prevent injury, loss, or damage to persons or property.

3.15.3 The Subcontractor shall implement appropriate safety measures pertaining to the Subcontract Work and the Project, including establishing safety rules, posting appropriate warnings and notices, erecting safety barriers, and establishing proper notice procedures to protect persons and property at the Worksite and adjacent to the Worksite from injury, loss, or damage.

3.15.4 The Subcontractor shall exercise extreme care in carrying out any of the Subcontract Work which involves explosive or other dangerous methods of construction or hazardous procedures, materials, or equipment. The Subcontractor shall use properly qualified individuals or entities to carry out the Subcontract Work in a safe and reasonable manner so as to reduce the risk of bodily injury or property damage.

3.15.5 Damage or loss not insured under property insurance and to the extent caused by the negligent acts or omissions of the Subcontractor, or anyone for whose acts the Subcontractor may be liable, shall be promptly remedied by the Subcontractor.

3.15.6 The Subcontractor is required to designate an individual at the Worksite in the employ of the Subcontractor who shall act as the Subcontractor's designated safety representative with a duty to prevent accidents. Unless otherwise identified by the Subcontractor in writing to the Constructor, the designated safety representative shall be the Subcontractor's project superintendent. Such safety representative shall attend Worksite safety meetings as requested by the Constructor.

3.15.7 The Subcontractor has an affirmative duty not to overload the structures or conditions at the Worksite and shall take reasonable steps not to load any part of the structures or Worksite so as to give rise to an unsafe condition or create an unreasonable risk of bodily injury or property damage. The Subcontractor shall have the right to request, in writing, from the Constructor loading information concerning the structures at the Worksite.



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3.15.8 Subcontractor shall give prompt written notice within 24 hours to the Constructor of any accident related to work of this Subcontract. Failure to comply with this reporting requirement may result in the immediate suspension of Subcontractor's Work at Constructor's sole discretion. Subcontractor shall notify Constructor immediately upon its discovery of any condition that could result in injury or accident.

3.15.9 Subcontractor is fully responsible for, and shall ensure, the safety of persons and property in connection with the Subcontract Work. Subcontractor shall provide a safe workplace and shall otherwise take all precautions for the safety of Subordinate Parties and persons and property in or near the premises where Subcontract Work is being performed. Subcontractor shall not create or allow, and shall promptly report to Constructor and be fully responsible for, any unsafe conditions relating to the Subcontract Work. Establishment of a safety program by the Constructor shall not relieve the Subcontractor or other Parties of their safety responsibilities. The Subcontractor shall establish its own safety program implementing safety measures, policies, and standards conforming to those required or recommended by governmental and quasi-governmental authorities having jurisdiction and by the Constructor and the Owner, including, but not limited to, requirements imposed by the Subcontract Documents. Subcontractor will cooperate with Constructor and comply with any overall safety program for the Project. The Subcontractor shall comply with the reasonable recommendations of insurance companies having an interest in the Project, and shall stop any part of the Subcontract Work which the Constructor deems unsafe until corrective measures satisfactory to the Constructor shall have been taken. The Constructor's failure to stop the Subcontractor's unsafe practices shall not relieve the Subcontractor of the responsibility therefor. The Subcontractor shall notify the Constructor immediately following a reportable incident under applicable rules, regulations, orders, and other lawful requirements, and promptly confirm the notice in writing. A detailed written report shall be furnished if requested by the Constructor. To the fullest extent permitted by law, each Party to this Agreement shall indemnify the other Party from and against fines or penalties imposed as a result of safety violations, but only to the extent that such fines or penalties are caused by its failure to comply with applicable safety requirements. This indemnification obligation does not extend to additional or increased fines that result from repeated or willful violations not caused by the Subcontractor's failure to comply with applicable rules, regulations, orders, and other lawful requirements.

3.15.10 This Worksite is a "hard hat area." Hard hats and other appropriate safety apparel are to be worn by all personnel at all times while on the Worksite.

3.15.11 In addition to the requirements set forth in this Section 3.15, Subcontractor shall comply with all provisions and requirements set forth in the Subcontractor Safety Policy Manual attached to this Agreement as Exhibit M and incorporated herein by reference. To the extent there is any conflict between the provisions of this Section 3.15 and the provisions of the Subcontractor Safety Policy Manual, the Subcontractor Safety Policy Manual shall control.

3.16 PROTECTION OF THE WORK The Subcontractor shall take necessary precautions to properly protect the Subcontract Work and the work of others from damage caused by the Subcontractor's operations. Should the Subcontractor cause damage to the Subcontract Work or property of the Owner, the Constructor, or others, the Subcontractor shall promptly remedy such damage to the satisfaction of the Constructor, or the Constructor may, after forty-eight (48) hours written notice to the Subcontractor, remedy the damage and deduct its cost from any amounts due or to become due the Subcontractor, unless such costs are recovered under applicable property insurance.

3.16.1 Protection and security of materials included in this Agreement are the responsibility of the Subcontractor until the Subcontract Work is completed. Materials included in this Agreement either stored or in place that are stolen or damaged by any cause whatsoever will be replaced in like new condition by Subcontractor at its expense until the Subcontract Work is completed. Costs to replace stolen materials or costs of damages that can be determined to have been caused by others will be borne by the responsible party.

3.16.2 Should there be any costs attributable to unclaimed damages, said costs shall be assessed on a pro-rata basis among subcontractors.

3.17 EMERGENCIES In an emergency affecting the safety of persons or property, the Subcontractor shall act to prevent threatened damage, injury, or loss. Any change in the Subcontract Amount or the Progress Schedule from actions of the Subcontractor in an emergency situation shall be determined in ARTICLE 7.

3.18 PERMITS, FEES, LICENSES, AND TAXES The Subcontractor shall give timely notices to authorities pertaining to the Subcontract Work, and shall be responsible for all permits, fees, licenses, assessments, inspections, testing, and taxes necessary to complete the Subcontract Work in accordance with the Subcontract Documents, the furnishing of which is required of Constructor by the Prime Contract. The Subcontract Amount includes the cost of all permits, fees, licenses, assessments, inspections, and tests and all taxes applicable to the Subcontract Work or to any labor, materials, equipment, or services furnished by Subcontractor, including any sales or use taxes applicable to any tangible personal property furnished or used by Subcontractor in performing the Subcontract Work. Subcontractor is responsible for paying all such taxes timely.

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3.18.1 Subcontractor represents that it is fully qualified and licensed to perform this Agreement, and acknowledges that, prior to the execution of this Agreement, (a) it has by its own independent investigation ascertained (i) the work required by this Agreement, (ii) the conditions involved in performing the work, including but not limited to the conditions of the Project site, and (iii) the obligations of this Agreement; (b) it has reviewed this Agreement, including all documents incorporated by reference herein, and the Schedule of Work; and (c) it has independently verified all the information contained in this Agreement and satisfied itself as to the correctness and accuracy of that information. Any failure by Subcontractor to independently investigate and become fully informed will not relieve Subcontractor from its responsibilities hereunder nor serve as a basis of a claim for an adjustment to the time for performance or price of this Agreement.

3.19 HAZARDOUS MATERIALS To the extent that the Constructor has obligations under the Prime Agreement or by Law regarding hazardous materials as defined by the Subcontract Documents within the scope of the Subcontract Work, the Subcontractor shall have the same obligations. Subcontractor is fully responsible for any Hazardous Materials it brings to, creates or releases at the Project Site. Subcontractor shall immediately report to Constructor any Hazardous Materials that Subcontractor discovers or that are released at the Project. Subcontractor shall comply with all requirements of any state or federal workplace right to know laws, including.

3.19.1 If hazardous substances of a type of which an employer is required by law to notify its employees are being used on the site by Subcontractor or anyone directly or indirectly employed by them, Subcontractor shall, prior to harmful exposure to such substance of Constructor's employees, give written notice of the chemical composition thereof to Constructor in sufficient detail and time to permit Constructor's compliance with such laws.

3.19.2 Subcontractor shall provide applicable Material Safety Data Sheets ("MSDS") information to Constructor's office and job site prior to beginning work. MSDS information for materials supplied by others is available at these same locations.

3.19.3 Subcontractor represents that a Hazard Communication Program is in effect for all of its employees working on the Project

3.19.4 Subcontractor shall properly label all containers of Hazardous Materials that are brought on the Project Site or used in the performance of Work under this Subcontract.

3.19.5 Subcontractor shall provide all required training of its employees pursuant to law.

3.20 MATERIAL SAFETY DATA (MSD) SHEETS The Subcontractor shall submit to the Constructor all Material Safety Data Sheets required by law for materials or substances necessary for the performance of the Subcontract Work and shall have a copy of same available for its employees. MSD sheets obtained by the Constructor from other subcontractors or sources shall be made available to the Subcontractor by the Constructor.

3.21 LAYOUT RESPONSIBILITY AND LEVELS The Constructor shall establish principal axis lines of the building and Worksite, and benchmarks. The Subcontractor shall lay out and be strictly responsible for the accuracy of the Subcontract Work and for any loss or damage to the Constructor or others by reason of the Subcontractor's failure to lay out or perform Subcontract Work correctly. The Subcontractor shall exercise prudence so that the actual final conditions and details shall result in alignment of finish surfaces.

3.22 UNCOVERING/CORRECTION OF SUBCONTRACT WORK

3.22.1 UNCOVERING OF SUBCONTRACT WORK

3.22.1.1 If required in writing by the Constructor, the Subcontractor must uncover any portion of the Subcontract Work which has been covered by the Subcontractor in violation of the Subcontract Documents or contrary to a directive issued to the Subcontractor by the Constructor. Upon receipt of a written directive from the Constructor, the Subcontractor shall uncover such work for the Constructor's or Owner's inspection and restore the uncovered Subcontract Work to its original condition at the Subcontractor's time and expense.

3.22.1.2 The Constructor may direct the Subcontractor to uncover portions of the Subcontract Work for inspection by the Owner or Constructor at any time. The Subcontractor is required to uncover such work whether or not the Constructor or Owner had requested to inspect the Subcontract Work prior to it being covered. Except as provided by the subsection immediately above, this Agreement may be adjusted by Subcontract Change Order for the cost and time of uncovering and restoring any work which is uncovered for inspection and proves to be installed in accordance with the Subcontract Documents, provided the Constructor had not previously instructed the Subcontractor to leave the work uncovered and provided that the Owner approves the Subcontract Change Order. If the Subcontractor uncovers work pursuant to a directive issued by the Constructor, and such work upon inspection does not comply with the Subcontract Documents, the Subcontractor shall be responsible for all costs and time of uncovering, correcting and restoring the work so as to make it conform to the Subcontract Documents. If the Constructor or some other entity for which the Subcontractor is not responsible caused the nonconforming condition, the Constructor may adjust this Agreement by Subcontract Change Order for all such costs and time provided that the Owner approves the Subcontract Change Order.

Standard Agreement Between Constructor and Subcontractor**3.22.2 CORRECTION OF WORK**

3.22.2.1 All work shall meet the approval of the Owner, Design Professional, Constructor and governmental authorities having jurisdiction and industry standards. Subcontractor agrees that Constructor and the Design Professional or Engineer each have the authority to reject Subcontractor's Work that does not conform to the Agreement. Any disputes arising between Constructor and Subcontractor as to the correctness or quality of workmanship, and/or quality or quantity of materials, including any dispute over the amount of any progress payment requested by Subcontractor based upon work completed and material suitably stored on site, shall be determined by the Design Professional or the Owner's authorized agent and such determination shall be binding on Subcontractor. Subcontractor shall, within twenty-four (24) hours of receipt of written notice from the Owner, Design Professional or Constructor proceed to take down all portions of the Subcontract Work and remove from the Project site all material, whether worked or un-worked, which is determined to be improper or fails to conform to the plans and specifications or Subcontract Documents.

3.22.2.2 If the Design Professional or Constructor rejects the Subcontract Work or the Subcontract Work is not in conformance with the Subcontract Documents, the Subcontractor shall promptly correct the Subcontract Work whether it had been fabricated, installed, or completed. The Subcontractor shall be responsible for the costs of correcting such Subcontract Work, any additional testing, inspections, and compensation for services and expenses of the Design Professional and Constructor made necessary by the defective Subcontract Work.

3.22.2.3 In addition to, and not in lieu of, the Subcontractor's obligations under Section 3.13 above and this Section 3.22, the Subcontractor agrees to promptly correct, after receipt of a written notice from the Constructor, all Subcontract Work performed under this Agreement which proves to be defective in workmanship or materials within a period of one year from the date of Substantial Completion of the Subcontract Work or for a longer period of time as may be required by specific warranties in the Subcontract Documents. If the Subcontractor fails to correct defective or nonconforming Subcontract Work within a reasonable time, but no more than three (3) business days after receipt of notice from the Constructor, the Constructor may correct such Subcontract Work pursuant to subsection 10.1.1.

3.22.3 The Subcontractor's correction of Subcontract Work pursuant to this section shall not extend the one-year period for the correction of Subcontract Work, but if Subcontract Work is first performed after Substantial Completion, the one-year period for corrections shall be extended by the time period after Substantial Completion and the performance of that portion of Subcontract Work. The Subcontractor's obligation to correct Subcontract Work within one year does not limit the enforcement of the Subcontractor's other obligations with regard to the Agreement and the Subcontract Documents.

3.22.4 If the Subcontractor's correction or removal of Subcontract Work destroys or damages completed or partially completed work of the Owner, the Constructor, or any separate contractors or subcontractors, the Subcontractor shall be responsible for the reasonable cost of correcting such destroyed or damaged property.

3.22.5 If portions of Subcontract Work which do not conform with the requirements of the Subcontract Documents are neither corrected by the Subcontractor nor accepted by the Constructor, the Subcontractor shall remove such Subcontract Work from the Project Worksite if so directed by the Constructor.

3.23 MATERIALS OR EQUIPMENT FURNISHED BY OTHERS If the scope of the Subcontract Work includes installation of materials or equipment furnished by others, the Subcontractor is responsible for exercising proper care in receiving, handling, storing, and installing such items, unless otherwise provided in the Subcontract Documents. The Subcontractor shall examine the items provided and report to the Constructor in writing any items it may discover that do not conform to requirements of the Subcontract Documents. The Subcontractor shall not proceed to install nonconforming items without further instructions from the Constructor. Loss or damage due to acts or omissions of the Subcontractor shall, upon two (2) Business Days' written notice to the Subcontractor, be deducted from any amounts due or to become due the Subcontractor.

3.24 SUBSTITUTIONS No substitutions shall be made in the Subcontract Work unless permitted in the Subcontract Documents, and only upon the Subcontractor first receiving all approvals required under the Subcontract Documents for substitutions. The use of substitutions by the Subcontractor shall not result in any additional costs being incurred by the Constructor or any other Subcontractors/Sub-Subcontractors.

3.25 USE OF CONSTRUCTOR'S EQUIPMENT The Subcontractor, its agents, employees, subcontractors or suppliers shall use the Constructor's equipment only with the express written permission of the Constructor's designated representative and in accordance with the Constructor's terms and conditions for such use. If the Subcontractor or any of its agents, employees, subcontractors or suppliers utilize any of the Constructor's equipment, including machinery, tools, scaffolding, hoists, lifts, or similar items owned, leased or under the control of the Constructor, the Subcontractor shall defend, indemnify and be liable to the Constructor as provided in ARTICLE 9 for any loss or damage (including bodily injury or death) which may arise from such use, except to the extent that such loss or damage is caused by the negligence of the Constructor's employees operating the Constructor's equipment.

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3.25.1 Equipment operators shall be trained and certified to operate equipment per the manufacturer's operator's manual and the OSHA guidelines. If there is not a trained operator in the Subcontractor's employment, Constructor will supply a trained operator (if available) at the Subcontractor's expense.

3.26 WORK FOR OTHERS Until final completion of the Subcontract Work, the Subcontractor agrees not to perform any work directly for the Owner or any tenants, or deal directly with the Owner's representatives in connection with the Subcontract Work, unless otherwise approved in writing by the Constructor.

3.27 SYSTEMS AND EQUIPMENT STARTUP With the assistance of the Owner's maintenance personnel and the Constructor, the Subcontractor shall direct the check-out and operation of systems and equipment for readiness, and assist in their initial startup and the testing of the Subcontract Work.

3.28 COMPLIANCE WITH LAWS The Subcontractor agrees to comply with all Laws at its own costs. The Subcontractor shall be liable to the Constructor and the Owner for all loss, cost, and expense attributable to any acts of commission or omissions by the Subcontractor, its employees, and agents resulting from the failure to comply with Laws, including, any fines, penalties, or corrective measures, except as provided in subsection 3.15.9.

3.28.1 Subcontractor expressly agrees that it shall be solely responsible for complying with any and all Occupational Safety and Health Act of 1970 ("OSHA") regulations applicable to persons practicing its trade and that Subcontractor shall be solely and personally liable for any fines, penalties or restrictions resulting from violations of such OSHA regulations, whether such violations result from acts or omissions of Subcontractor or persons or entities hired, directly or indirectly, by Subcontractor. Subcontractor expressly agrees that as part of the obligation herein, Subcontractor shall indemnify and hold harmless Owner and Constructor against any and all liability, fines, claims, actions, losses, damages, costs and expenses, including attorney's fees and costs, incurred by Owner or Constructor in defense of any alleged violation of any OSHA regulations or any other alleged violations of local, state or federal law applicable to persons performing Subcontractor's Work.

3.29 CONFIDENTIALITY To the extent the prime agreement provides for the confidentiality of any of the Owner's proprietary or otherwise confidential information disclosed in connection with the performance of this Agreement, the Subcontractor is equally bound by the Owner's confidentiality requirements.

3.30 ROYALTIES, PATENTS, AND COPYRIGHTS The Subcontractor shall pay all royalties and license fees which may be due on the inclusion of any patented or copyrighted materials, methods, or systems selected by the Subcontractor and incorporated in the Subcontract Work. The Subcontractor shall defend, indemnify, and hold the Constructor and Owner harmless from all suits or claims for infringement of any patent rights or copyrights arising out of such selection. The Subcontractor shall be liable for all loss, including all costs, expenses, and attorneys' fees, but shall not be responsible for such defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Subcontract Documents. However, if the Subcontractor has reason to believe that a particular design, process, or product required by the Subcontract Documents is an infringement of a patent, the Subcontractor shall promptly furnish such information to the Constructor or be responsible to the Constructor and Owner for any loss sustained as a result.

ARTICLE 4 CONSTRUCTOR'S RESPONSIBILITIES

4.1 CONSTRUCTOR'S REPRESENTATIVE The Constructor shall designate one or more persons who shall be the Constructor's authorized representatives. The Constructor's representatives shall be the only persons the Subcontractor shall look to for instructions, orders or directions, except in an emergency. The Constructor's Representatives shall be the Constructor's Project Manager and Superintendent identified in the cover page to this Agreement. If the Constructor changes its representative, the Constructor shall promptly notify the Subcontractor in writing.

4.2 OWNER'S ABILITY TO PAY

4.2.1 Unless expressly prohibited by the prime agreement, following Subcontractor's written request, the Constructor shall promptly provide to the Subcontractor the following information received from the Owner: (a) information regarding the Owner's financial ability to pay for the Work, and (b) notice of any material variation in the Owner's financial ability to pay. The Constructor, however, does not warrant the accuracy or completeness of the information provided.

4.2.2 If the Subcontractor does not receive the information referenced in the subsection immediately above with regard to the Owner's ability to pay for the Work as required by the Contract Documents, the Subcontractor may request the information from the Owner or Owner's lender.

4.3 LEFT BLANK INTENTIONALLY

Standard Agreement Between Constructor and Subcontractor

4.4 INFORMATION OR SERVICES The Subcontractor is entitled to request through the Constructor any information or services required for the Subcontractor's performance of the Subcontract Work which is under the Owner's control. To the extent the Constructor receives such information or services, the Constructor shall provide them to the Subcontractor in a timely manner. The Constructor, however, does not warrant the accuracy or completeness of the information provided by the Owner.

4.5 STORAGE AREAS The Constructor shall allocate adequate storage areas, if available, for the Subcontractor's materials and equipment during the course of the Subcontract Work.

4.5.1 Storage of materials on site and in the building shall be subject to and restricted to Constructor's approval. Material deliveries must be coordinated with the Constructor's Project Superintendent. A minimum formal notice of forty-eight (48) hours shall be given for all material deliveries. In order not to impede the progress of the Work, the Subcontractor may be required to move stored materials to another location at no cost to the Constructor or the Owner. The Subcontractor may also be required to store material off site at Subcontractor's expense so as not to impede the progress of the Work.

4.6 TIMELY COMMUNICATIONS The Constructor shall transmit to the Subcontractor, with reasonable promptness, all submittals, transmittals, and written approvals relative to the Subcontract Work. Unless otherwise specified in the Subcontract Documents, if communications are not through the Subcontractor, the Constructor shall inform the Subcontractor of the communications the Constructor has with the Subcontractor's subcontractors, and suppliers.

4.7 USE OF SUBCONTRACTOR'S EQUIPMENT The Constructor, its agents, employees or suppliers shall use the Subcontractor's equipment only with the express written permission of the Subcontractor's designated representative and in accordance with the Subcontractor's terms and conditions for such use. If the Constructor or any of its agents, employees, or suppliers utilize any of the Subcontractor's equipment, including machinery, tools, scaffolding, hoists, lifts, or similar items owned, leased, or under the control of the Subcontractor, the Constructor shall indemnify and be liable to the Subcontractor as provided in ARTICLE 9 for any loss or damage (including bodily injury or death) which may arise from such use, except to the extent that such loss or damage is caused by the negligence of the Subcontractor's employees operating the Subcontractor's equipment.

ARTICLE 5 PROGRESS SCHEDULE

5.1 TIME IS OF THE ESSENCE Time is of the essence with regard to the Subcontractor's obligations under the Subcontract Documents. Subcontractor shall start the Subcontract Work upon receiving a notice to proceed from Constructor and shall execute the Subcontract Work with promptness and diligence to maintain and to meet Project milestones established by Constructor. Subcontractor shall perform and complete the Subcontract Work in accordance with the Progress Schedule, when and in such sequence as directed by Constructor, so as not to conflict or interfere with the activities or work of others, including Constructor and the Owner.

5.2 SCHEDULE OBLIGATIONS The Subcontractor shall provide the Constructor with any scheduling information proposed by the Subcontractor for the Subcontract Work. In consultation with the Subcontractor, the Constructor shall prepare the schedule for performance of the Work ("Progress Schedule") and shall revise and update such schedule, as necessary, as the Work progresses. Subcontractor shall be bound by the Progress Schedule. The Progress Schedule and all subsequent changes and additional details shall be submitted to the Subcontractor promptly and reasonably in advance of the required performance. The Constructor shall have the right to determine and, if necessary, make changes to the time, order, and priority in which the various portions of the Work shall be performed and all other matters relative to the Subcontract Work.

5.2.1 In executing this Agreement, the Subcontractor assures the Constructor that all materials can be made available at the required time to maintain the Project Schedule

5.2.2 If it is found that any item of material cannot be delivered timely, thereby causing delay in the Work, the Subcontractor shall notify the Constructor in writing, within twenty-four (24) hours.

5.2.3 Subcontractor shall indemnify and hold harmless Constructor from and against any increased costs and expenses, including any penalty, liquidated damages, or liability of Constructor to Owner or others, arising or resulting from Subcontractor's failure to comply with the Progress Schedule. Changes to the Progress Schedule resulting from Subcontractor's failure to perform to an earlier version of the Schedule shall not excuse Subcontractor from this indemnification obligation.

5.3 DELAYS AND EXTENSIONS OF TIME

5.3.1 OWNER CAUSED DELAY Subject to the subsection immediately below, if the commencement or progress of the Subcontract Work is delayed, suspended, disrupted, hindered, interfered with, made less efficient or less productive, or accelerated by the acts or omissions of Owner and without the fault or responsibility of the Subcontractor, the Subcontract Time shall be extended by Subcontract Change Order and the Subcontract Amount equitably adjusted but only to the extent, if any, that Constructor obtains an extension or adjustment from Owner on Subcontractor's behalf, and the Progress Schedule shall be revised accordingly.

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5.3.2 CLAIMS RELATING TO OWNER The Subcontractor agrees to initiate all claims for which the Owner is or may be liable in the manner and within the time limits provided in the Subcontract Documents for like claims by the Constructor upon the Owner and in sufficient time for the Constructor to initiate such claims against the Owner in accordance with the Subcontract Documents.

5.3.3 CONSTRUCTOR CAUSED DELAY Subcontractor's sole and exclusive remedy for any delays caused by Constructor or any other subcontractor shall be any time extension granted by Owner. Constructor shall not be liable to Subcontractor for any costs, losses, or damages for delay or other schedule-related damages, including damages for acceleration, disruption, suspension of work, or lost productivity, except to the extent Constructor recovers such costs, losses, or damages on Subcontractor's behalf from Owner or from another subcontractor. Constructor also shall not be liable to Subcontractor for any home-office overhead, lost profits, or consequential damages should the work be delayed, suspended, accelerated, or disrupted for any reason unless and except to the extent Constructor recovers such costs, losses, or damages on Subcontractor's behalf from Owner or another subcontractor.

5.3.4 CLAIMS RELATING TO CONSTRUCTOR The Subcontractor shall give the Constructor written notice of all claims not included in subsection 5.3.2 within seven (7) Days of the occurrence of the event for which claim is made or such shorter time as may be required by the Prime Contract. Thereafter, the Subcontractor shall submit written documentation of its claim, including appropriate supporting documentation, within fourteen (14) Days after giving notice, unless the Parties agree upon a longer period of time. The Constructor shall respond in writing denying or approving, in whole or in part, the Subcontractor's claim no later than fourteen (14) Days after receipt of the Subcontractor's documentation of claim. The Constructor's failure to respond shall be deemed a denial of the Subcontractor's claim. It is the intent of the parties to provide timely, prompt written notice of all such claims in order to afford the parties the full and fair opportunity to resolve the claim at the time of its occurrence and to allow the Constructor full opportunity to present the Subcontractor's Claim to the Owner or the Owner's representative. Therefore, failure of the Subcontractor to give timely written notice in accordance with this Article shall be deemed a conclusive waiver of the claim. The timely written notice is a condition precedent to the existence of a claim under this Agreement. An oral notice or statement will not be sufficient, nor will any notice given more than seven (7) Days after the event for which claim is made or such shorter time as may be required by the Prime Contract. Pending final resolution of a claim, the Subcontractor agrees to continue diligently with the progress of the Subcontract Work so as not to cause any delay. All unresolved claims, disputes, and other matters in question between the Constructor and the Subcontractor not relating to claims included in subsection 5.3.2 shall be resolved as provided for in ARTICLE 11.

5.4 LIMITED MUTUAL WAIVER OF CONSEQUENTIAL DAMAGES

5.4.1 Except for any (a) liquidated, consequential, or other damages that the Owner is entitled to recover against the Constructor under the prime agreement, and (b) losses covered by insurance required by the Subcontract Documents, the Constructor and the Subcontractor mutually waive all claims against each other for consequential damages, including damages for loss of business, loss of financing related to the Project, loss of profits not related to this Project, loss of bonding capacity, loss of reputation, or insolvency. Similarly, the Subcontractor shall obtain in another agreement from its Sub-subcontractors mutual waivers of consequential damages that correspond to the Subcontractor's waiver of consequential damages herein. The provisions of this subsection shall also apply to and survive termination of this Agreement.

5.5 LIQUIDATED DAMAGES

5.5.1 If the Subcontract Documents provide for liquidated damages or other damages for delay beyond the completion date set forth in the Subcontract Documents that are not specifically addressed as a liquidated damage item in this Agreement, and such damages are assessed, the Constructor may assess a share of the damages against the Subcontractor in proportion to the Subcontractor's share of the responsibility for the damages. However, the amount of such assessment shall not exceed the amount assessed against the Constructor. This section shall not limit the Subcontractor's liability to the Constructor for the Constructor's actual damages caused by the Subcontractor, including, without limitation, reasonable attorney's fees.

5.5.2 To the extent the prime agreement provides for a mutual waiver of consequential damages by the Owner and the Constructor, damages for which the Constructor is liable to the Owner, including those related to section 9.1, are not consequential damages for the purpose of this waiver. Similarly, to the extent the agreement between the Subcontractor and Sub-subcontractor provides for a mutual waiver of consequential damages by the Owner and the Constructor, damages for which the Subcontractor is liable to lower-tiered parties due to the fault of the Owner or Constructor are not consequential damages for the purpose of this waiver.

ARTICLE 6 SUBCONTRACT AMOUNT

As full compensation for performance of this Agreement, the Constructor agrees to pay the Subcontractor in current funds for the satisfactory performance of the Subcontract Work subject to all applicable provisions of this Agreement:

- a. the fixed-price of **ZERO AND XX / 100 DOLLARS (\$0.00)** subject to additions and deductions as provided for in the Subcontract Documents; or
- b. alternates and unit prices in accordance with the attached schedule of alternates and unit prices and estimated quantities, which is incorporated by reference and identified as Exhibit C; or

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c. time and material rates and prices in accordance with the attached Schedule of Labor and Material Costs which is incorporated by reference and identified as Exhibit C. The fixed-price, unit prices or time and material rates and prices are referred to as the Subcontract Amount.

ARTICLE 7 CHANGES

7.1 Constructor may order changes in the Subcontract Work or the timing or sequencing of the Subcontract Work that impacts the Subcontract Amount or Subcontract Time. All such changes in the Subcontract Work that affect the Subcontract Amount or the Subcontract Time shall be formalized in a written Subcontract Change Order and processed in accordance with this article.

7.1.1 Each requested or ordered change in the Subcontract Work (whether appearing in a request for information, clarification, field adjustment, addendum or otherwise) shall be assigned a specific Information Reference Number (IRN). The assigned IRN shall be referenced on all documentation related to that change.

7.1.2 For changes in the Subcontract Work, the Constructor and the Subcontractor shall negotiate in good faith an appropriate adjustment to the Subcontract Amount or the Subcontract Time and shall conclude these negotiations as expeditiously as possible. Acceptance of the Subcontract Change Order and any adjustment in the Subcontract Amount or Subcontract Time shall not be unreasonably withheld.

7.1.3 The Subcontractor must maintain an as-built set of drawings to document any and all changes to the Subcontract Work.

7.1.4 With respect to any Subcontract Change Order, Subcontractor agrees that (a) the Subcontract Change Order does not include adjustments to the Subcontract Amount or Subcontract Time that have been authorized by Construction Change Directive until the cost and time have been agreed upon by both Owner and Constructor, in which case a Subcontract Change Order is executed to supersede the Construction Change Directive, (b) Subcontractor shall perform the work described in the Subcontract Change Order in accordance with the terms of the Subcontract Change Order and in compliance with applicable sections of the Subcontract Documents, (c) the adjustment in the Subcontract Amount, if any, and the adjustment in the Subcontract Time, if any, set out in the Subcontract Change Order shall constitute the entire compensation and/or adjustment in the Subcontract Time due Subcontractor arising out of the change in the Subcontract Work covered by the Subcontract Change Order, unless otherwise provided in the Subcontract Change Order, and (d) Subcontractor accepts the terms and conditions stated in the Subcontract Change Order as full and final settlement of any and all claims arising from the Subcontract Change Order. Subcontractor shall quote the price and time impact of proposed changes within 14 days of receipt, unless otherwise directed or agreed in writing by Constructor.

7.2 **CONSTRUCTION CHANGE DIRECTIVES** The Constructor may, in its sole discretion, issue a written Construction Change Directive directing a change in the Subcontract Work prior to reaching agreement with the Subcontractor on the adjustment, if any, in the Subcontract Amount or Subcontract Time. The Subcontractor shall promptly comply with the Construction Change Directive. No adjustment in the Subcontract Amount or the Schedule of Work will be made for any changes performed by Subcontractor that have not been ordered or approved, in writing, by the authorized representative of the Constructor. No substitutions from the drawings or specifications will be considered unless approved in writing by the Constructor through a signed Change Order or Construction Change Directive. All Construction Change Directives must be written and signed by the Constructor. At the Constructor's sole option, all Construction Change Directives shall be accompanied by a signed Work Verification Form in such form as shall be either provided by, or approved by, the Constructor.

7.3 **CONCEALED OR UNKNOWN SITE CONDITIONS** If the conditions encountered at the Worksite are (a) subsurface or other physical conditions materially different from those indicated in the Contract Documents, or (b) unusual and unknown physical conditions materially different from conditions ordinarily encountered and generally recognized as inherent in Work provided for in the Contract Documents, the Subcontractor shall stop affected Work after the condition is first observed and give prompt written notice of the condition to the Constructor. The Subcontractor shall not be required to perform any Work relating to the unknown condition without the written mutual agreement of the Parties. Any change in the Contract Price or the Contract Time as a result of the unknown condition shall be determined as provided in ARTICLE 5. The adjustment which the Subcontractor may receive shall be limited to the adjustment the Constructor receives from the Owner on behalf of the Subcontractor.

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7.4 **ADJUSTMENTS IN SUBCONTRACT AMOUNT** If a Subcontract Change Order or Construction Change Directive requires an adjustment in the Subcontract Amount, the adjustment shall be established by one of the following methods:

7.4.1 mutual acceptance of an itemized lump sum properly supported by sufficient substantiating data to permit evaluation;

7.4.2 unit prices as indicated in the Subcontract Documents or as subsequently agreed to by the Parties;

7.4.3 costs as determined in the Subcontract Documents or in a manner otherwise acceptable to the Parties, and a mutually acceptable fixed or percentage fee;

7.4.4 if the Subcontractor 7.1.1 does not respond promptly or disagrees with the method for adjustment in the Subcontract Amount, the Constructor shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Subcontract Amount, an amount for overhead and profit as set forth in the Subcontract, or if no such amount is set forth in the Subcontract, a reasonable amount. In such case, the Subcontractor shall keep and present, in such form as the Constructor may prescribe, an itemized accounting together with appropriate supporting data.

7.5 **SUBSTANTIATION OF ADJUSTMENT** If the Subcontractor does not respond promptly or disputes the method of adjustment, the method and the adjustment shall be determined by the Constructor on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in the case of an increase in the Subcontract Amount, an allowance for overhead and profit of the percentage provided in section 7.6, or if none is provided, as mutually agreed upon by the Parties. The Subcontractor may contest the reasonableness of any adjustment determined by the Constructor. The Subcontractor shall maintain for the Constructor's review and approval an appropriately itemized and substantiated accounting of the following items attributable to the Subcontract Change Order:

7.5.1 labor costs, including Social Security, health, welfare, retirement, and other fringe benefits as normally required, and state workers' compensation insurance;

7.5.2 costs of materials, supplies, and equipment, whether incorporated in the Subcontract Work or consumed, including transportation costs;

7.5.3 costs of renting machinery and equipment other than hand tools;

7.5.4 costs of bond and insurance premiums, permit fees, and taxes attributable to the change.

7.6 Adjustments shall be based on net change in the Subcontractor's reasonable cost of performing the changed Subcontract Work plus, in case of a net increase in cost, an agreed upon sum for overhead and profit not to exceed **15%** on the subcontractor self-performed work, and **15%** on work performed by sub-tier subcontractors. However, if a sum for overhead and profit is established in the Subcontract Documents or the prime agreement, then the Subcontractor shall be bound not to exceed such sum.

7.7 (INTENTIONALLY NOT USED)

7.8 **INCIDENTAL CHANGES** The Constructor may direct the Subcontractor to perform incidental changes in the Subcontract Work which do not involve adjustments in the Subcontract Amount or the Subcontract Time. Incidental changes shall be consistent with the scope and intent of the Subcontract Documents. The Constructor shall initiate an incidental change in the Subcontract Work by issuing a written order to the Subcontractor. Such written notice shall be carried out promptly and is binding on the Parties.

7.9 **TIME AND MATERIAL CHANGES** No time and material changes will be accepted without the prior written authorization of the Constructor's project superintendent or project manager.

7.10 **NO INCREASES IN PRICING.** Subcontractor shall not charge the Constructor for any increases in the costs of labor, equipment, materials or taxes after execution of this Agreement.



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ARTICLE 8 PAYMENT

8.1 SCHEDULE OF VALUES As a condition precedent to payment, the Subcontractor shall provide a schedule of values satisfactory to the Constructor not more than fifteen (15) Days from the date of execution of this Agreement. The schedule of values shall show as nearly as possible the true value of each phase of work in relation to the Subcontract Sum. No schedule of value line item shall exceed \$100,000. The approved schedule of values will be used only for the purpose of making progress payments to Subcontractor.

8.2 PROGRESS PAYMENTS

8.2.1 APPLICATIONS The Subcontractor's applications for payment shall be itemized and supported by substantiating data as required by the Subcontract Documents. At minimum, Subcontractor shall furnish to Constructor such certificates, waivers, releases, sworn statements, and other documentation, as Constructor may request to verify the cost complete to date or as required in the Prime Contract. If the Subcontractor is obligated to provide design services pursuant to section 3.8, the Subcontractor's applications for payment shall show its design professional's fee and expenses as a separate cost item. The Subcontractor's application for payment shall be notarized if required and if allowed under the Subcontract Documents may include properly authorized Subcontract Construction Change Directives. The Subcontractor's application for payment for the Subcontract Work performed in the preceding payment period shall be submitted for approval by the Constructor in accordance with the schedule of values if required and subsections 8.2.2 through 8.2.4. The Constructor shall incorporate the approved amount of the Subcontractor's application for payment into the Constructor's application for payment to the Owner for the same period and submit it to the Owner in a timely fashion. The Constructor shall promptly notify the Subcontractor of any changes in the amount requested on behalf of the Subcontractor.

8.2.1.1 Based upon the Owner's pay schedule, normal turn-around from payment request to payment should be forty-five (45) Days from the date the Architect and/or Owner approves the payment application, but Constructor shall not be liable to Subcontractor if such payment is not made within 45 Days except as otherwise set forth in this Agreement.

8.2.1.2 An affidavit of payment of debts or claims shall be provided by the Subcontractor to the Constructor and, if required, to the Owner prior to final payment being made to the Subcontractor.

8.2.1.3 All applications for payment must be submitted on the form supplied by Constructor as detailed in Exhibit G.

8.2.1.4 If Sales Tax Certificates are required by the Subcontract Documents, certification must be provided with each payment application on the form attached hereto as Exhibit I. Payment applications will not be approved nor payment made without the properly completed certification form.

8.2.2 RETAINAGE The rate of retainage shall be **FIVE PERCENT (5.00%)**, which is equal to the percentage retained from the Constructor's payment by the Owner for the Subcontract Work. If the Subcontract Work is satisfactory and the prime agreement provides for reduction of retainage, the Subcontractor's retainage shall also be reduced when the Constructor's retainage of the Subcontract Work has been so reduced by the Owner.

8.2.3 TIME OF APPLICATION The Subcontractor shall submit progress payment applications to the Constructor no later than the 20th Day of each payment period for the Subcontract Work performed up to and including the last Day of the payment period indicating work completed and, to the extent allowed under the subsection below, materials suitably stored during the preceding payment period. Any application received after the {JobPayAppDueDate} Day will be treated as an application for the following month.

8.2.4 STORED MATERIALS Unless otherwise provided in the Subcontract Documents, and if approved in advance by the Owner, applications for payment may include materials and equipment not yet incorporated in the Subcontract Work but delivered to and suitably stored on or off the Worksite including applicable insurance, storage, and costs incurred transporting the materials to an off-site storage facility. Approval of payment applications for such stored items on or off the Worksite shall be conditioned upon submission by the Subcontractor of bills of sale and required insurance or such other procedures satisfactory to the Owner and Constructor to establish the Owner's title to such materials and equipment, or otherwise to protect the Owner's and Constructor's interest including transportation to the Worksite. Payment for materials stored off-site is contingent upon approval by the Owner.

Standard Agreement Between Constructor and Subcontractor

8.2.5 **TIME OF PAYMENT** Subject to and conditioned upon satisfaction of all conditions listed in Article 8 herein, progress payments to the Subcontractor for satisfactory performance of the Subcontract Work shall be made no later than seven (7) Days after receipt by the Constructor of payment from the Owner for the Subcontract Work. If payment from the Owner for such Subcontract Work is not received by the Constructor, through no fault of the Subcontractor, the Constructor will make payment to the Subcontractor within a reasonable time for the Subcontract Work satisfactorily performed.

8.2.6 **PAYMENT DELAY** If the Constructor has received payment from the Owner and if for any reason not the fault of the Subcontractor, the Subcontractor does not receive a progress payment from the Constructor within fourteen (14) Days after the date such payment is due, as defined in the subsection immediately above, the Subcontractor, upon giving seven (7) Days' written notice to the Constructor, and without prejudice to and in addition to any other legal remedies, may stop work until payment of the full amount owing to the Subcontractor has been received.

8.2.7 **PAYMENTS WITHHELD** The Constructor may reject a Subcontractor application for payment in whole or in part or withhold amounts from a previously approved Subcontractor application for payment, as may reasonably be necessary to protect the Constructor from loss or damage for which the Constructor may be liable and without incurring an obligation for late payment interest based upon:

8.2.7.1 the Subcontractor's failure to perform the Subcontract Work as required by this Agreement;

8.2.7.2 damages by Subcontractor to personal property;

8.2.7.3 except as accepted by the insurer providing Builders Risk or other property insurance covering the Project, loss or damage arising out of or relating to this Agreement and caused by the Subcontractor or its subcontractors to the Owner, the Constructor, or others to whom the Constructor may be liable;

8.2.7.4 the Subcontractor's failure to properly pay for labor, materials, equipment, or supplies furnished in connection with the Subcontract Work;

8.2.7.5 rejected, nonconforming, or defective Subcontract Work which has not been corrected in a timely fashion;

8.2.7.6 reasonable evidence of delay in performance of the Subcontract Work such that the Work will not be completed within the Subcontract Time, and that the unpaid balance of the Subcontract Amount is not sufficient to offset the liquidated damages or actual damages that may be sustained by the Constructor as a result of the anticipated delay caused by the Subcontractor;

8.2.7.7 reasonable evidence demonstrating that the unpaid balance of the Subcontract Amount is insufficient to cover the cost to complete the Subcontract Work;

8.2.7.8 third-party claims (including lien claims and payment bond claims) involving the Subcontractor (including from any person furnishing labor, materials, or equipment through or under the Subcontractor) or reasonable evidence demonstrating that any such third-party claims are likely to be filed or made unless and until the Subcontractor first satisfies such claims or furnishes the Constructor with adequate security in the form of a surety bond, letter of credit, or other collateral or commitment which are sufficient to discharge such claims if established;

8.2.7.9 failure to make timely and complete restorations to rights of way, adjacent property or structures, and private property;

8.2.7.10 any reason for which the Owner may withhold payment from the Constructor under the provisions of the Prime Contract. The Constructor shall give written notice to the Subcontractor, at the time of disapproving or nullifying all or part of an application for payment, stating its specific reasons for such disapproval or nullification, and the remedial actions to be taken by the Subcontractor in order to receive payment. When the above reasons for disapproving or nullifying an application for payment are removed, payment will be promptly made for the amount previously withheld.

8.2.8 Approval and payment of Subcontractor's monthly application for payment is specifically agreed not to constitute or imply acceptance by Constructor of any portion of Subcontractor's Work, nor shall it be taken as an admission by Constructor of the amount of Work done, its classification, quality, sufficiency or the sum due Subcontractor or as an acceptance or release of Subcontractor from responsibility under the Subcontract.

8.2.9 Constructor shall have the right to audit Subcontractor's books relative to Claims, Subcontract Change Orders, cost-based pricing, and performance of the Subcontract Work under this Agreement

Standard Agreement Between Constructor and Subcontractor**8.3 FINAL PAYMENT**

8.3.1 APPLICATION Upon acceptance of the Subcontract Work by the Owner and the Constructor and receipt from the Subcontractor of evidence of fulfillment of the Subcontractor's obligations in accordance with the Subcontract Documents and the subsection below, the Constructor shall incorporate the Subcontractor's application for final payment into the Constructor's next application for payment to the Owner without delay, or notify the Subcontractor if there is a delay and the reasons for the delay.

8.3.2 REQUIREMENTS Before the Constructor shall be required to incorporate the Subcontractor's application for final payment into the Constructor's next application for payment, as a condition precedent to final payment, the Subcontractor shall submit to the Constructor:

8.3.2.1 an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Subcontract Work for which the Owner or its property or the Constructor or the Constructor's surety might in any way be liable, have been paid or otherwise satisfied, in such form as provided by, or approved by, the Constructor;

8.3.2.2 consent of surety to final payment, if required;

8.3.2.3 satisfaction of required closeout procedures;

8.3.2.4 other data, if required by the Constructor or Owner, such as receipts, releases, and waivers of liens to the extent and in such form as may be required by the Prime Contract or Subcontract Documents;

8.3.2.5 written warranties, equipment manuals, startup and testing required in section 3.27;

8.3.2.6 all required operating instructions, as-built drawings, inspections and test results and similar items; ;

8.3.2.7 final close-out documents and a lien waiver; and

8.3.2.8 any other documents, actions or requirements of the Prime Contract or Contract Documents to the extent applicable to Subcontractor's Work.

8.3.3 TIME OF PAYMENT Final payment of the balance due of the Subcontract Amount shall be made to the Subcontractor within seven (7) Days after receipt by the Constructor of final payment from the Owner for such Subcontract Work. Notwithstanding anything contained herein to the contrary, the Subcontractor's application for final payment must be received by the Constructor within one hundred twenty (120) days after completion of the Subcontract Work. The Constructor reserves the right to deny payment of any application for payment not submitted within such 120-day period following completion of the Subcontract Work.

8.3.4 FINAL PAYMENT DELAY If the Owner or its designated agent does not issue a certificate for final payment or the Constructor does not receive such payment for any cause which is not the fault of the Subcontractor, the Constructor shall promptly inform the Subcontractor in writing. If final payment from the Owner for such Subcontract Work is not received by the Constructor, through no fault of the Subcontractor, the Constructor will make payment to the Subcontractor within a reasonable time.

8.3.5 WAIVER OF CLAIMS Final payment shall constitute a waiver of all claims by the Subcontractor relating to the Subcontract Work, but shall in no way relieve the Subcontractor of liability for the obligations assumed under sections 3.21 and 3.22, or for faulty or defective work or services discovered after final payment, nor relieve the Constructor for claims made in writing by the Subcontractor as required by the Subcontract Documents prior to its application for final payment as unsettled at the time of such payment.

8.4 LATE PAYMENT INTEREST Progress payments or final payment due and unpaid under this Agreement shall bear interest from the date payment is due at the lesser of (i) the late payment interest rate set forth in the prime agreement, or (ii) the prevailing statutory rate at the place of the Project. However, if the Owner fails to timely pay the Constructor as required under the prime agreement through no fault or neglect of the Constructor, and the Constructor fails to timely pay the Subcontractor as a result of such nonpayment, the Constructor's obligation to pay the Subcontractor interest on corresponding payments due and unpaid under this Agreement shall be limited to Subcontractor's proportionate share of the interest, if any, received by the Constructor from the Owner on such late payments.

8.5 CONTINUING OBLIGATIONS Subcontractor shall reimburse the Constructor for any costs and expenses for any claim, obligation, or lien asserted before or after final payment is made that arises from the performance of the Subcontract Work. The Subcontractor shall reimburse the Constructor for costs and expenses including attorneys' fees and costs and expenses incurred by the Constructor in satisfying, discharging, or defending against any such claims, obligation, or lien, including any action brought or judgment recovered. If any Law or bond requires the Subcontractor to take any action prior to the expiration of the reasonable time for payment referenced in subsection 8.2.5 in order to preserve or protect the Subcontractor's rights with respect to mechanic's lien or bond claims, then the Subcontractor may take that action prior to the expiration of the reasonable time for payment and such action will not: (a) create the reimbursement obligation recited above, (b) be in violation of this Agreement, or (c) considered premature for purposes of preserving and protecting the Subcontractor's rights.

Standard Agreement Between Constructor and Subcontractor

8.6 **PAYMENT USE RESTRICTION** Payments received by the Subcontractor shall be used to satisfy the indebtedness owed by the Subcontractor to any person furnishing labor or materials, or both, for use in performing the Subcontract Work through the most current period applicable to progress payments received from the Constructor before it is used for any other purpose. In the same manner, payments received by the Constructor from the Owner for the Subcontract Work shall be dedicated to payment to the Subcontractor, subject, however, to the right of the Constructor to withhold payment from the Subcontractor as provided in this Agreement. This provision shall bear on this Agreement only, and is not for the benefit of third parties. Moreover, it shall not be construed by the Parties to this Agreement or third parties to require that dedicated sums of money or payments be deposited in separate accounts, or that there be other restrictions on commingling of funds. Neither shall these mutual covenants be construed to create any fiduciary duty on the Subcontractor or Constructor, nor create any tort cause of action or liability for breach of trust, punitive damages, or other equitable remedy or liability for alleged breach.

8.7 **PAYMENT USE VERIFICATION** If the Constructor has reason to believe that the Subcontractor is not complying with the payment terms of this Agreement, the Constructor shall have the right to contact the Subcontractor's subcontractors and suppliers to ascertain whether they are being paid by the Subcontractor in accordance with this Agreement.

8.8 **PARTIAL LIEN WAIVERS AND AFFIDAVITS** As a prerequisite for payments, the Subcontractor shall provide, in a form satisfactory to the Owner and Constructor, partial lien or claim waivers in the amount of the application for payment and affidavits covering its subcontractors and suppliers for completed Subcontract Work. If required by Constructor, the Subcontractor shall include with each application for payment, similar partial lien or claim waivers and affidavits from its sub-subcontractors and suppliers of all tiers. Such waivers may be conditional upon payment. In no event shall the Constructor require the Subcontractor to provide an unconditional waiver of lien or claim, either partial or final, prior to receiving payment or in an amount in excess of what it has been paid.

8.9 **SUBCONTRACTOR PAYMENT FAILURE** Upon payment by the Constructor, the Subcontractor shall promptly pay its subcontractors and suppliers the amounts to which they are entitled. If the Constructor has reason to believe that labor, material, or other obligations incurred in the performance of the Subcontract Work are not being or will not be paid (by Subcontractor or by lower tier subcontractors and suppliers of Subcontractors), the Constructor may give written notice of a potential claim, garnishment or lien to the Subcontractor and may take any steps deemed necessary to assure that progress payments are utilized to pay such obligations, including but not limited to withholding payment to Subcontractor or the issuance of joint checks pursuant to and in accordance with Constructor's joint check agreement and procedures, with Subcontractor and any applicable Sub-subcontractor or supplier being required to execute Constructor's joint check agreement upon Constructor's request. If upon receipt of notice, the Subcontractor does not (a) supply evidence to the satisfaction of the Constructor that payment owed has been paid; or (b) post a bond indemnifying the Owner, the Constructor, the Constructor's surety, if any, and the premises from a claim or lien, the Constructor shall have the right to withhold from any payments due or to become due to the Subcontractor a reasonable amount to protect the Constructor from any and all loss, damage, or expense including attorneys' fees that may arise out of or relate to any such claim or lien.

8.10 Constructor shall have the right to withhold, deduct or offset funds due to Subcontractor on this Project for any amount due to the Constructor from Subcontractor, for increases in Constructor's costs resulting from Subcontractor's failure to comply with this Agreement, or for any other claims by the Constructor against the Subcontractor on this Project or on any other project in which Subcontractor is a subcontractor of Constructor. Among other methods of enforcement of the foregoing, Constructor may issue a back charge order against the Subcontractor reducing the Subcontract Amount by the amount of Constructor's claim against the Subcontractor. In the event of receipt of a back charge order, the Subcontractor shall include the amount of such decrease in the Subcontract Amount in its next application for payment in a separate line item. Subcontractor's signature on the back charge order shall not be required for the back charge order to be effective against the Subcontractor.

8.11 **SUBCONTRACTOR ASSIGNMENT OF PAYMENTS** The Subcontractor shall not assign any payment due or to become due under this Agreement, without the written consent of the Constructor, unless the assignment is intended to create a new security interest within the scope of Article 9 of the Uniform Commercial Code. Should the Subcontractor assign all or any part of any payment due or to become due under this Agreement to create a new security interest or for any other purpose, the instrument of assignment shall contain a clause to the effect that the assignee's right in and to any money due or to become due to the Subcontractor shall be subject to the claims of all persons, firms, and corporations for services rendered or materials supplied for the performance of the Subcontract Work.

8.12 **PAYMENT NOT ACCEPTANCE** Payment to the Subcontractor does not constitute or imply acceptance of any portion of the Subcontract Work.

Standard Agreement Between Constructor and Subcontractor**ARTICLE 9 INDEMNITY, INSURANCE, AND BONDS****9.1 INDEMNITY**

9.1.1 **INDEMNITY** To the fullest extent permitted by law, the Subcontractor shall, at its sole cost and expense, defend, indemnify and hold harmless the Constructor, the Design Professional (and its consultants), the Owner, the Owner's lender (if any), and their respective members, managers, partners, officers, directors, agents, employees, heirs, successors and assigns (together the "Constructor Indemnitees"), from all claims actions, damages, liabilities, judgments, costs, expenses, penalties or losses, including the costs and expenses of litigation and attorney's fees, arising out of or resulting from the performance of the Subcontract Work to the extent that such claims, actions, damages, liabilities, judgments, costs, expense, penalties or losses are caused by the alleged or actual (i) negligent or grossly negligent acts, errors or omissions, or (ii) intentional wrongful acts or omissions, of the Subcontractor, Sub-subcontractors, material suppliers, anyone directly or indirectly employed by any of them, or any entity or anyone for which the Subcontractor or its Sub-subcontractors or material suppliers may be liable. The Subcontractor further shall defend, indemnify and hold harmless the Constructor Indemnitees from all claims, actions, damages, liabilities, judgments, costs, expenses, penalties or losses, including the costs and expenses of litigation and attorney's fees, arising out of or resulting from the Subcontractor's breach of this Agreement, the performance of the Subcontract Work, or from any lien claims or bond claims made against Constructor, Constructor's surety, or the Owner by any person furnishing labor, materials or equipment by, through or under Subcontractor. The obligations set forth in this provision shall not be construed to negate, limit, abridge, or reduce other rights of obligations of indemnity which would otherwise exist as to an entity or person described in this provision. Notwithstanding anything to the contrary herein, Subcontractor shall not be required to indemnify or hold harmless any Constructor Indemnitees for a Constructor Indemnitee's own negligence or the negligence of a Constructor Indemnitee's agents or employees.

9.1.2 **NO LIMITATION ON LIABILITY** In any and all claims against the Indemnitees by any employee of the Subcontractor, anyone directly or indirectly employed by the Subcontractor or anyone for whose acts the Subcontractor may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

9.2 INSURANCE

9.2.1 **SUBCONTRACTOR'S INSURANCE** Before commencing the Subcontract Work, and as a condition precedent to payment, the Subcontractor shall procure, purchase and maintain at all times throughout the duration of this Agreement, and for such extended term as required, and require each of its Sub-subcontractors to maintain insurance of the types and minimum limits of liability, containing the endorsements, and subject to the terms and conditions, as described in Exhibit F. The coverage and limits set forth in Exhibit F are the minimum acceptable to Constructor. In specifying minimum insurance requirements, Constructor does not represent that coverage and minimum limits are adequate to protect Subcontractor from loss, damage, or liability arising from the Work and/or Project, and such coverage and limits shall not be deemed as a limitation on Subcontractor's liability under the indemnities granted in this Agreement. The required insurance set forth in Exhibit F shall be maintained under forms of policies and from companies satisfactory to the Constructor. In the event the Subcontractor fails to obtain or maintain any insurance coverage required under this Agreement, the Constructor may purchase such coverage and charge the expense to Subcontractor or terminate this Subcontract.



Standard Agreement Between Constructor and Subcontractor

9.2.2 PROPERTY INSURANCE

9.2.2.1 Upon written request of the Subcontractor, the Constructor shall provide the Subcontractor with a copy of the Builder's Risk policy of insurance or any other property or equipment insurance in force for the Project and procured by the Owner or Constructor, but only to the extent that the Constructor is able to obtain a copy thereof. The Constructor shall advise the Subcontractor if a Builder's Risk policy of insurance is not in force.

9.2.2.2 To the extent Constructor is required to pay all or any portion of the deductibles or self-insured retentions on the Builders Risk or other property or equipment insurance covering the Project because of damage or loss caused by the Subcontractor, Subcontractor shall be liable, and shall promptly reimburse Constructor, for the amount of such deductibles or self-insured retentions required to be paid by the Constructor.

9.2.2.3 If the Owner or Constructor has not purchased property insurance for the full value of the Subcontract Work, the Subcontractor may procure such insurance as will protect the interests of the Subcontractor, its Sub-subcontractors, and their subcontractors for the value of the Subcontract Work.

9.2.2.4 The Subcontractor shall procure and maintain at the Subcontractor's own expense property and equipment insurance for the value of all Subcontract Work stored off of the Worksite or in transit, when such portions of the Subcontract Work are to be included in an application for payment under ARTICLE 8, unless the Constructor issues a specific written waiver of this requirement.

9.2.2.5 Subcontractor shall procure and maintain at the Subcontractor's own cost and expense, property coverage with comprehensive perils for all owned, borrowed, leased and rented tools and equipment brought to the Worksite. In any event, Subcontractor waives all rights and claims against Constructor, Owner, Design Professional, and their respective officers, directors, members, consultants, subcontractors, agents, and employees, together with any other parties required by the Prime Contract, for any and all loss or damage to such tools and equipment and shall require similar waivers from its Sub-subcontractors.

9.2.3 ENDORSEMENT If the policies of insurance referred to in this Agreement require an endorsement to provide for continued coverage where there is a waiver of subrogation, the owners of such policies will cause them to be so endorsed.

9.2.4 WAIVER OF SUBROGATION Subcontractor waives, and shall require (by endorsement or otherwise) all its insurers to waive, all rights against Constructor, Owner, Design Professional, and their respective officers, directors, members, consultants, subcontractors, agents, and employees, together with any other parties required by the Prime Contract, for recovery of damages to the extent these damages are covered by Workers' Compensation Insurance, Employers' Liability Insurance, Business Automobile Liability, CGL, Professional Liability, property liability and any excess or umbrella liability policies obtained by Constructor. The Subcontractor shall require similar waivers from its Sub-subcontractors.

9.2.5 RISK OF LOSS Except to the extent a loss is covered by applicable insurance, risk of loss or damage to the Subcontract Work shall be upon the Subcontractor until the Date of Substantial Completion, unless otherwise agreed to by the Parties.

9.3 BONDS

9.3.1 Performance and Payment Bonds **ARE NOT** required of the Subcontractor. Such bonds shall be issued by a surety that (i) is licensed in the state in which the Project is located, (ii) is rated "A" by A.M. Best, and (iii) is acceptable to the Constructor. The bonds shall be in the form(s) provided by the Constructor. The penal sum of the Payment Bond and of the Performance Bond shall each be in the full Subcontract Amount.

9.3.2 The Subcontractor shall include all bonds as a line item on the Subcontractor's Schedule of Values and it shall be invoiced the same as all other items provided by the Subcontractor.

9.3.3 The Subcontractor shall obtain and submit the required Payment and Performance Bond (as applicable) contemporaneously with the execution of this Agreement. If the Subcontractor shall fail to promptly provide any required bonds, the Constructor may terminate this Agreement and enter into a subcontract for the balance of the Subcontract Work with another subcontractor. All Constructor costs and expenses incurred by the Constructor as a result of said termination shall be paid by the Subcontractor.

9.3.4 PAYMENT BOND REVIEW The Constructor **HAS** provided the Owner with a payment bond. A copy of the Constructor's payment bond for the Project, if any, shall be made available by the Constructor for review and copying by the Subcontractor, if requested in writing by the Subcontractor.

Standard Agreement Between Constructor and Subcontractor**9.4 SUBCONTRACTOR DEFAULT INSURANCE (SDI)**

9.4.1 The Constructor **IS** enrolling the Subcontractor and/or this Agreement in the Constructor's Subcontractor Default Insurance ("SDI") Program to insure the Constructor against the Subcontractor's default under this Agreement and in lieu of, requiring the Subcontractor to furnish performance and payment bonds. The Subcontractor agrees that the Constructor's enrollment of the Subcontractor and/or this Agreement in the Constructor's SDI program is and shall be for the exclusive benefit of the Constructor, and the existence of SDI coverage shall not in any way limit or restrict any of the Constructor's rights or remedies in the event of a Subcontractor default, nor shall it in any manner inure to the benefit of, provide any rights or remedies to, or limit the obligations or liabilities of, the Subcontractor or any of its sub-subcontractors or any of their respective employees or agents.

9.4.2 The Subcontractor shall comply with the Constructor's SDI prequalification procedures, including providing documentation and information required by the SDI insurer involving financial, technical, management, safety records, and other matters relating to the Subcontractor and its operations. Following commencement of the Subcontract Work and upon written request by the Constructor or the SDI insurer, the Subcontractor shall promptly furnish all such additional and updated information regarding Subcontractor's finances, management, safety records, and operations as may be requested.

9.4.3 At the Constructor's sole discretion, in lieu of enrolling the Subcontractor into the Constructor's Subcontract Default Insurance Program, the Constructor may require the Subcontractor to provide a Payment and Performance Bond(s) in accordance with Section 9.3 above, and the costs of said bonds shall be borne by the Subcontractor.

ARTICLE 10 SUSPENSION, NOTICE TO CURE, AND TERMINATION**10.1 FAILURE OF PERFORMANCE AND TERMINATION**

10.1.1 NOTICE TO CURE A DEFAULT If the Subcontractor refuses or fails to supply proper supervision, a competent person (as defined by OSHA), enough properly qualified and skilled workers, proper or sufficient materials, or equipment to maintain the Progress Schedule, fails to perform under this Subcontract, fails to correct contractual deficiencies, or fails to make prompt payment to its workers, sub-subcontractors, or suppliers, or disregards Laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a breach of a provision of this Agreement, the Subcontractor shall be deemed in default of this Agreement. If the Subcontractor fails within forty-eight (48) hours after written notification to commence and continue satisfactory correction of the default with diligence and promptness, then the Constructor without prejudice to any other rights or remedies, shall have the right to exercise any or all of the following remedies:

10.1.1.1 supply workers, materials, equipment, and facilities as the Constructor deems necessary for the completion of the Subcontract Work or otherwise cure any default which the Subcontractor has failed to complete, perform or cure after written notification, and charge the Subcontractor costs and expenses, including reasonable overhead, profit, and attorneys' fees that are due or to become due. The Subcontractor shall be liable for the payment of any amount by which such expense may exceed the unpaid balance of the Subcontract Amount.

10.1.1.2 contract with one or more additional contractors to perform such part of the Subcontract Work as the Constructor determines will provide the most expeditious completion of the Work, and charge the cost to the Subcontractor as provided under the subsection above;

10.1.1.3 withhold any payments due or to become due the Subcontractor pending corrective action in amounts sufficient to cover losses and compel performance to the extent required by and to the satisfaction of the Constructor. In the event of an emergency affecting the safety of persons or property, the Constructor may proceed as above without notice, but the Constructor shall give the Subcontractor notice promptly after the fact as a precondition of cost recovery; or

10.1.1.4 terminate the Agreement by written notice. All costs incurred by the Constructor in performing the Subcontract Work, including reasonable overhead, profit and attorney's fees, costs and expenses, shall be deducted from any amounts due or to become due the Subcontractor. The Subcontractor shall be liable for the payment of any amount by which such expense may exceed the unpaid balance of the Subcontract Amount.

10.1.2 USE OF SUBCONTRACTOR'S EQUIPMENT If the Constructor performs work under this article, either directly or through other subcontractors, the Constructor or its subcontractors shall have the right to take and use any materials, supplies, implements, equipment, appliances, or tools furnished by, or belonging to the Subcontractor and located at the Worksite for the purpose of completing any remaining Subcontract Work all of which Subcontractor transfers, assigns and sets over to Constructor for such purpose. Immediately upon completion of the Subcontract Work, any remaining materials, implements, equipment, appliances, or tools not consumed or incorporated in performance of the Subcontract Work, and furnished by, belonging to, or delivered to the Project by or on behalf of the Subcontractor, shall be returned to the Subcontractor in substantially the same condition as when they were taken, normal wear and tear excepted.

Standard Agreement Between Constructor and Subcontractor**10.2 BANKRUPTCY**

10.2.1 TERMINATION ABSENT CURE If the Subcontractor files a petition under the Bankruptcy Code or a petition is filed against the Subcontractor, this Agreement shall terminate if the Subcontractor or the Subcontractor's trustee rejects the Agreement or, if there has been a default, and the Subcontractor is unable to give adequate assurance that the Subcontractor will perform as required by this Agreement or otherwise is unable to comply with the requirements for assuming this Agreement under the applicable provisions of the Bankruptcy Code.

10.2.2 INTERIM REMEDIES If the Subcontractor is not performing in accordance with the Progress Schedule at the time a petition in bankruptcy is filed, or at any subsequent time, the Constructor, while awaiting the decision of the Subcontractor or its trustee to reject or to assume this Agreement and provide adequate assurance of its ability to perform, may avail itself of such remedies under this article as are reasonably necessary to maintain the Progress Schedule. The Constructor may offset against any sums due or to become due the Subcontractor all costs incurred in pursuing any of the remedies provided including, but not limited to, reasonable overhead, profit, and attorneys' fees. The Subcontractor shall be liable for the payment of any amount by which costs incurred may exceed the unpaid balance of the Subcontract Amount.

10.3 SUSPENSION BY OWNER FOR CONVENIENCE Should the Owner suspend the Work or any part which includes the Subcontract Work for the convenience of the Owner and such suspension is not due to any act or omission of the Constructor, or any other person or entity for whose acts or omissions the Constructor may be liable, the Constructor shall notify the Subcontractor in writing and, upon receiving notification, the Subcontractor shall immediately suspend the Subcontract Work. To the extent provided for under the prime agreement and to the extent the Constructor recovers such on the Subcontractor's behalf, the Subcontract Amount and the Subcontract Time shall be equitably adjusted by Subcontract Change Order for the cost and delay resulting from any such suspension.

10.4 TERMINATION BY OWNER Should the Owner terminate its contract with the Constructor or any part which includes the Subcontract Work, the Constructor shall notify the Subcontractor in writing within three (3) Business Days of the termination and, upon written notification, this Agreement shall be terminated and the Subcontractor shall immediately stop the Subcontract Work, follow all of the Constructor's instructions, and mitigate all costs. In the event of Owner termination, the Constructor's liability to the Subcontractor shall be limited to the extent of the Constructor's recovery on the Subcontractor's behalf under the Subcontract Documents, except as otherwise provided in this Agreement.

10.5 CONTINGENT ASSIGNMENT OF THIS AGREEMENT The Constructor's contingent assignment of this Agreement to the Owner, as provided in the prime agreement, is effective when the Owner has terminated the prime agreement for cause and has accepted the assignment by notifying the Subcontractor in writing. This contingent assignment is subject to the prior rights of a surety that may be obligated under the Constructor's bond, if any. The Subcontractor consents to such assignment and agrees to be bound to the assignee by the terms of this Agreement, provided that the assignee fulfills the obligations of the Constructor.

10.6 SUSPENSION BY CONSTRUCTOR The Constructor may, at will and without cause or for convenience, order the Subcontractor in writing to suspend all or any part of the Subcontract Work for such period of time as may be determined to be appropriate for the convenience of the Constructor. Phased Work or interruptions of the Subcontract Work for short periods of time shall not be considered a suspension. The Subcontractor, after receipt of the Constructor's order, shall notify the Constructor in writing in sufficient time to permit the Constructor to provide timely notice to the Owner in accordance with the prime agreement of the effect of such order upon the Subcontract Work. The Subcontract Amount or Subcontract Time may be adjusted by Subcontract Change Order for any increase in the time or cost of performance of this Agreement caused by such suspension if such increase is approved by the Owner. No claim under this section shall be allowed for any costs incurred more than fourteen (14) Days prior to the Subcontractor's notice to the Constructor. Neither the Subcontract Amount nor the Progress Schedule shall be adjusted for any suspension, to the extent that performance would have been suspended, due in whole or in part to the fault or negligence of the Subcontractor or by a cause for which the Subcontractor would have been responsible. The Subcontract Amount shall not be adjusted for any suspension to the extent that performance would have been suspended by a cause for which the Subcontractor would have been entitled only to a time extension under this Agreement.

10.7 WRONGFUL EXERCISE In the event Constructor's termination of this Agreement is determined to be wrongful or without just cause, then termination shall be deemed for Constructor's convenience, and Subcontractor's sole remedy shall be as provided in § 10.9.

10.8 TERMINATION BY SUBCONTRACTOR If the Subcontract Work has been stopped for thirty (30) Days because the Subcontractor has not received progress payments or has been abandoned or suspended for more than one hundred percent (100%) of the Subcontract Time not due to the fault or neglect of the Subcontractor, then the Subcontractor may terminate this Agreement upon giving the Constructor seven (7) Days' written notice and an opportunity to cure. Upon such termination, the Subcontractor shall be entitled to recover from the Constructor payment for all Subcontract Work satisfactorily performed but not yet paid for, together with all actual and reasonable demobilization costs. The Constructor's liability for any other damages claimed by the Subcontractor under such circumstances shall be extinguished by the Constructor pursuing said damages and claims against the Owner on the Subcontractor's behalf as provided for in sections 10.3 and 10.4.

Standard Agreement Between Constructor and Subcontractor

10.9 **TERMINATION OF SUBCONTRACTOR FOR CONVENIENCE** By written notice to the Subcontractor, the Constructor may at any time, at will and without cause or for convenience, terminate the subcontract for the convenience of the Constructor without articulating any reason and without any cause or default under the Subcontract Documents, and without the Owner having first terminated its contract with the Constructor. Promptly following the receipt of a notice of termination for convenience, the Subcontractor agrees that it will stop the Subcontractor Work, make reasonable arrangements for the protection of any Subcontract Work then in place, promptly remove its personnel, tools, and equipment from the Project Site, and terminate its sub-subcontracts or supply contracts with respect to the Subcontract Work. In the event of such a termination for convenience and provided the Subcontractor is not in default of the Agreement, the Constructor shall pay the Subcontractor as the Subcontractor's entire and sole compensation, within a reasonable period of time after the notice of termination, the Subcontractor's actual, necessary, and reasonable costs of performing the Subcontract Work through the date of termination, including overhead of five percent (5%) and profit of five percent (5%) of the principal amounts of costs incurred in performing the Subcontract Work through the date of termination and the Subcontractor's expenses and costs directly incidental to the demobilization. Subcontractor waives all claims for additional damages. The Subcontractor agrees to make available to the Constructor such records as the Constructor may reasonably require to calculate the amounts to be paid.

10.10 Constructor retains the authority to *immediately terminate* this Subcontract Agreement upon (1) any act by Subcontractor, its agents, employees, or subcontractors exposing the Constructor to liability, its employees to personal injury, or property damage related to the Project; or (2) any act by Subcontractor in violation of law, including but not limited to the hiring of unauthorized aliens to complete any portion of this Subcontract Agreement, pursuant to the Immigration Reform and Control Act of 1986 (8 U.S.C. § 1324a) (hereinafter, the "Immigration Act") and any applicable state immigration statute. In completing obligations according to this Subcontract, Subcontractor shall deny employment to unauthorized aliens, defined as those not lawfully present in the United States or not lawfully authorized to work in the United States, pursuant to 8 U.S.C. § 1324a (h)(3). Subcontractor agrees to indemnify Constructor from any violation of the Immigration Act by Subcontractor, its employees or its sub-subcontractors. Each request for payment by Subcontractor constitutes a warranty of compliance with the provisions of this Subcontract and the employee verification system of the Immigration Act.

ARTICLE 11 DISPUTE MITIGATION AND RESOLUTION

11.1 **WORK CONTINUATION AND PAYMENT** Unless otherwise agreed in writing, the Subcontractor shall continue the Subcontract Work and maintain the Progress Schedule during any dispute mitigation or resolution proceedings. If the Subcontractor continues to perform, the Constructor shall continue to make payments in accordance with this Agreement.

11.2 **DISPUTES BETWEEN CONSTRUCTOR AND SUBCONTRACTOR** If the dispute resolution provisions between the Constructor and the Owner in the Subcontract Documents do not permit consolidation or joinder with disputes of third parties, such as the Subcontractor, or if such dispute is only between the Constructor and the Subcontractor, then the Parties shall submit the dispute to the dispute resolution procedures set forth in the section below.

11.3 CONSTRUCTOR-SUBCONTRACTOR DISPUTE RESOLUTION

11.3.1 **DIRECT DISCUSSIONS** If the Parties cannot reach resolution on a matter relating to or arising out of the Agreement, the Parties shall endeavor to reach resolution through direct discussions between the Parties' representatives, who shall possess the necessary authority to resolve such matter. If the Parties' representatives are not able to resolve such matter within a reasonable time period not to exceed thirty (30) days from the date of first discussion, the Parties shall submit such matter to the dispute resolution procedures selected in ARTICLE 11.

11.3.2 **BINDING DISPUTE RESOLUTION** If the matter is unresolved after submission of the matter to a mitigation procedure, and the dispute involves the Owner or other subcontractors of Constructor then, at Constructor's sole option, the dispute may be resolved according to the dispute resolutions procedures under the Prime Contract. Otherwise, the Parties shall submit the matter to the binding dispute resolution procedure selected below:

Standard Agreement Between Constructor and Subcontractor

Arbitration using the current Construction Industry Arbitration Rules of the AAA currently in effect. The administration of the arbitration shall be as mutually agreed by the Parties. A demand for arbitration shall be filed in writing with the other party to this Agreement and with the AAA. Demand for arbitration shall be made within a reasonable time after the Claim has arisen, but in no event shall it be made after the date when institution of legal or equitable proceedings based on such Claim would be barred by the applicable statute of limitations. Constructor and Subcontractor agree that venue for arbitration shall be in the city in which the Project is located. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

Litigation in either the state or federal court having jurisdiction of the matter in the location of the Project.

11.4 **COST OF DISPUTE RESOLUTION** The prevailing party in any binding dispute resolution procedure, such as arbitration or litigation, shall be entitled to an award of its reasonable attorneys' fees, reasonable experts' and consultants' fees, costs and other expenses as determined by the adjudicator of the dispute.

11.5 Constructor and Subcontractor waive their right to trial by jury.

11.6 **MULTIPARTY PROCEEDING** All parties necessary to resolve a matter agree to be parties to the same dispute resolution proceeding. To the extent disputes between the Constructor and Subcontractor involve in whole or in part disputes between the Constructor and the Owner, disputes between the Subcontractor and the Constructor shall be decided by the same tribunal and in the same forum as disputes between the Constructor and the Owner.

11.7 **NO LIMITATION OF RIGHTS OR REMEDIES** Nothing in this article shall limit any rights or remedies not expressly waived by the Subcontractor which the Subcontractor may have under lien laws or payment bonds.

ARTICLE 12 MISCELLANEOUS

12.1 **EXTENT OF AGREEMENT** Except as specifically as provided, this Agreement is for the exclusive benefit of the Parties, and not for the benefit of any third party. This Agreement represents the entire and integrated agreement between the Parties, and supersedes all prior negotiations, representations, or agreements, either written or oral.

12.2 **ASSIGNMENT OF SUBCONTRACT WORK** Except as provided in section 8.10, the Subcontractor shall neither assign the whole nor any part of the Subcontract Work without prior written approval of the Constructor.

12.3 **GOVERNING LAW** This Agreement shall be governed by the Law in effect at the location of the Project.

12.4 **SEVERABILITY** The partial or complete invalidity or unenforceability of any one or more provisions of this Agreement shall not affect the validity or continuing force and effect of any other provision. The invalid or unenforceable portion of a provision shall be stricken without removing the enforceable portion of the provision.

12.5 **NO WAIVER OF PERFORMANCE** The failure of either Party to insist, in any one or more instances, upon the performance of any of the terms, covenants, or conditions of this Agreement, or to exercise any of its rights, shall not be construed as a waiver or relinquishment of term, covenant, condition, or right with respect to further performance.

12.6 **TITLES** The titles given to the articles and sections of this Agreement are for ease of reference only and shall not be relied upon or cited for any other purpose.

12.7 **JOINT DRAFTING** The Parties expressly agree that this Agreement was jointly drafted, and that they both had opportunity to negotiate its terms and to obtain the assistance of counsel in reviewing its terms prior to execution. Therefore, this Agreement shall be construed neither against nor in favor of either Party, but shall be construed in a neutral manner.

12.8 This Agreement may be executed in multiple counterparts, each of which shall be deemed an original but which when taken together, shall constitute one agreement, and shall become a binding agreement when one or more counterparts have been signed by each of the parties hereto. This Agreement, any amendments hereto, and any change orders may be executed by hand-signatures or by electronic signatures using DocuSign or similar technology. Such signatures may be transmitted by facsimile or email. Any such electronic signatures or electronic transmissions of signatures shall be deemed to constitute originals. In addition, either party may rely upon any electronic transmission of any document that is properly executed by the other party.

Standard Agreement Between Constructor and Subcontractor

12.9 The Constructor and Subcontractor warrant and represent that they each have the capacity to manage their affairs, which includes the ability to understand and appreciate the effect of signing this Agreement. Constructor and Subcontractor warrant and represent that they have the legal capacity to enter into this Agreement. The signatories to this Agreement represent that they are officers of their respective companies, and they have full authority to contract and bind their respective companies to the terms of this Agreement. FURTHER, IF SUBCONTRACTOR IS A WHOLLY OR PARTIALLY OWNED SUBSIDIARY OF ANOTHER ENTITY (THE "PARENT"), (I) THE PARENT HEREBY AGREES TO GUARANTEE THE FULL AND TIMELY PAYMENT AND PERFORMANCE OF SUBCONTRACTOR'S OBLIGATIONS AND LIABILITIES UNDER THIS AGREEMENT, (II) THE PARENT AGREES THAT SUCH GUARANTEE IS AN INDUCEMENT TO CONSTRUCTOR AGREEING TO ENTER INTO THIS AGREEMENT AND THAT THE PARENT WILL REAP A DIRECT BENEFIT FROM THIS AGREEMENT, (III) THE PARENT AGREES THAT SUCH GUARANTEE BY THE PARENT SHALL BE AN ABSOLUTE, CONTINUING AND UNCONDITIONAL GUARANTY OF PAYMENT AND PERFORMANCE AND NOT OF COLLECTION, AND SHALL CONTINUE IN FORCE FOR ANY AMENDMENT OF THE AGREEMENT, AND (IV) THE PARENT HEREBY WAIVES PRESENTMENT, DEMAND OF PAYMENT, PROTEST, NOTICE OF DISHONOR OR NONPAYMENT OF OR NONPERFORMANCE UNDER THE AGREEMENT. SUBCONTRACTOR'S SIGNATORY ON THIS AGREEMENT REPRESENTS AND WARRANTS THAT HE/SHE HAS THE ACTUAL AUTHORITY TO BIND THE PARENT TO THE FOREGOING GUARANTEE OF PAYMENT AND PERFORMANCE.

ARTICLE 13 SUBCONTRACT DOCUMENTS**13.1 INTERPRETATION OF SUBCONTRACT DOCUMENTS**

13.1.1 The drawings and specifications are complementary. If Work is shown only on one but not on the other, the Subcontractor shall perform the Subcontract Work as though fully described on both consistent with the Subcontract Documents and reasonably inferable from them.

13.1.2 In case of conflicts between the drawings and specifications, the specifications shall govern. In any case of omissions or errors in figures, drawings, or specifications, the Subcontractor shall immediately submit the matter to the Constructor for clarification by the Owner. The Owner's clarifications are final and binding on all Parties, subject to an equitable adjustment in Subcontract Time or Subcontract Amount pursuant to dispute mitigation and resolution.

13.1.3 Where figures are given, they shall be preferred to scaled dimensions.

13.1.4 Unless otherwise specifically defined in this Agreement, any terms that have well-known technical or trade meanings shall be interpreted in accordance with their well-known meanings.

SIGNATURES ON THE FOLLOWING PAGE



Consensus Docs 750
Standard Agreement Between Constructor and Subcontractor

CONSTRUCTOR: Clancy & Theys Construction Co.

BY: _____

PRINT NAME: PRINT TITLE:

ATTEST _____

NAME TITLE:

SUBCONTRACTOR:

BY: _____

PRINT NAME: _____ PRINT TITLE: _____

ATTEST _____

NAME: _____ TITLE: _____

END OF DOCUMENT.



1. **General.** Subcontractor shall procure, purchase and maintain insurance as set forth in this Exhibit F to the Agreement.
2. **Subcontractor's Required Insurance Coverage**
 - 2.1. The Subcontractor shall procure, purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located and with a financial rating of at least A minus (A-) as defined by A.M. Best Company.
 - 2.2. **Commercial General Liability (CGL)**
 - a. CGL with limits of Insurance of not less than \$1,000,000 each occurrence and \$2,000,000 Annual Aggregate.
 - b. General Aggregate shall apply separately to each project.
 - c. When the work includes such hazards, the policy shall not contain an exclusion or limitation on:
 - i. Roofing
 - ii. Exterior Insulation Finish Systems (EIFS) or similar exterior coatings
 - iii. Residential or Habitational projects
 - iv. Explosion, Collapse, and Underground Hazards
 - v. Property Damage claims caused by work of Subcontractors
 - d. CGL coverage shall be written on ISO form CG 0001 or a substitute form providing equivalent coverage and shall cover liability arising from premises, operations, independent contractors, products-completed operations, and personal and advertising injury.
 - e. ADDITIONAL INSURED Subcontractor shall endorse (and cause its Sub-subcontractors to endorse) its CGL policy to name as additional insureds: Owner, Constructor, Design Professional, Design Professional's consultants, and their respective agents, officers, directors, and employees, together with any other parties required by the Prime Contract to be named as additional insureds (referred to individually as "Additional Insured" and collectively as "Additional Insureds").
 - f. Subcontractor shall maintain CGL insurance applicable to liability arising out of the Subcontractor's completed operation (including continued coverage for all Additional Insureds) for the greater of (i) three (3) years, (ii) the duration of the applicable statute of repose following final completion of the Project, or (iii) the length of time required in the Prime Contract (the "Completed Operations Period").
 - g. The Additional Insureds shall be included as additional insureds on the CGL using ISO Additional Insured Endorsement CG 20 10 04 13 along with (and) form CG 20 37 04 13 or an endorsement providing equivalent coverage to the additional insureds. The additional insured coverage shall be primary and non-contributory to any other insurance or self-insurance, including any deductible maintained by, or provided to, the Additional Insureds, and shall remain in effect for the duration of the Agreement, including the Completed Operations Period.
 - h. The following entities are to be listed as additionally insured: **Clancy & Theys Construction Company & Owner.**
 - 2.3 **Automobile Liability:**
 - a. Business Auto Liability with limits of at least \$1,000,000 each accident.
 - b. Business Auto coverage must include coverage for liability arising out of all owned, leased, hired, and non-owned automobiles.
 - c. The Additional Insureds shall be included as additional insureds on the automobile liability policy.
 - 2.4 **Commercial Umbrella:**
 - a. Umbrella limits must be at least \$2,000,000. Higher Limits may be required in the Prime Contract or as noted below, whichever is greatest. Higher minimum limits are required depending on the work performed and subcontract amount.
 - i. Work Performed: The trades listed below shall be subject to a minimum limit of \$5,000,000, unless a greater value is stipulated below. Hoisting Operations, Structural Steel, Concrete Frame, Curtainwall, Roofing, Plumbing, Electrical, Mechanical, Fire Protection
 - ii. Subcontract Amount (For trades not listed in 3.a.i above):
 - i. \$0 - \$999,999 requires a limit of \$2,000,000
 - ii. \$1,000,000-\$10,000,000 requires a limit of \$5,000,000
 - iii. Subcontracts over \$10,000,000 require a limit of \$10,000,000
 - iii. Coverage shall be excess of the CGL, Auto and Employers Liability coverages.
 - iv. Umbrella coverage must include all Additional Insureds as additional insureds therein.

v. Umbrella coverage for Additional Insureds shall apply as primary and noncontributory before any other insurance or self- insurance, including any deductible maintained by, or provided to, the Additional Insureds other than the CGL, Auto Liability and Employers Liability coverages maintained by the Subcontractor. Should Subcontractor carry limits in excess of those amounts set forth above, coverage for the Additional Insureds shall also be provided through the limits available to the Subcontractor.

vi. Excess or Umbrella Liability policies shall provide coverage on a following form basis to the underlying insurance and shall include as broad a primary endorsement. Said policies shall contain wording to the effect that, in the event of the exhaustion of any underlying insurance due to the payment of claims, the Excess or Umbrella Liability policies shall “drop down” to apply as primary insurance to all required additional insureds and/or with respect to any other insurance or self-insurance programs afforded to, or maintained by, any additional insured.

2.5 Worker’s Compensation and Employer’s Liability:

- a. Workers Compensation coverage at statutory limits. Subcontractors using a PEO must also have a Workers Compensation policy with Subcontractor as names insured.
 - i. Employer’s Liability Insurance limits
 - Bodily Injury by Accident: \$1,000,000 Each Accident
 - Bodily Injury by Disease: \$1,000,000 Each Employee
 - Bodily Injury by Disease: \$1,000,000 Policy Limit
- b. Where applicable,US Longshore and Harborworkers Compensation Act Endorsement shall be attached to the policy.
- c. Where applicable, the Maritime Coverage Endorsement shall be attached to the policy.

2.6 Professional Liability

- a. If the Subcontractor's work involved design professionals, the Subcontractor shall require its design professionals to maintain Professional Liability Insurance with a company satisfactory to the Constructor, including contractual liability insurance against the liability assumed in the Agreement, and including coverage for any professional liability caused by any of its design professional’s consultants. Said insurance shall have specific minimum limits as set forth below:
 - i. Limit of \$1,000,000 per claim.
 - ii. General Aggregate of \$2,000,000 for the subcontract services rendered.
- b. The Professional Liability insurance shall contain prior acts coverage sufficient to cover all subcontract services rendered by its design professional(s). Said insurance shall be continued in effect for the Completed Operations Period.
- c. Such insurance shall have a maximum deductible amount of \$10,000 per occurrence. The deductible shall be paid by the Subcontractor or by its design professional(s).
- d. The Subcontractor shall require its design professional(s) to furnish to the Subcontractor and Constructor, before its design professional(s) commences its services, a copy of its professional liability policy evidencing the coverages required in this Paragraph. No policy shall be cancelled without thirty (30) days’ prior written notice to the Subcontractor and Constructor.

2.7. (NOT USED)

2.8. Pollution Insurance

- a. If there is abatement of asbestos, lead paint, mold, or otherwise for this Project, pollution insurance must be in force and included on the certificate. Minimum limits in force should be in the amount of \$1,000,000 per occurrence and \$2,000,000 aggregate. The Additional Insureds shall be named as additional insureds on this policy.

2.9 (NOT USED)

2.10 Building Information Modeling (BIM) | Additional Insurance Requirements for Participants

- a. These requirements apply when the Building Information Modeling (BIM) Addendum has been added to the Agreement.
- b. For the BIM Manager:
 - i. Professional liability insurance with a policy definition of covered "professional services" including either "BIM model management," "technical consulting," or similar wording covering the BIM Manager services required under this Addendum: \$1,000,000 per occurrence
 - ii. Electronic data processing insurance with limits adequate to cover the risk.
- c. For any Contributor that is a Constructor, or a Subcontractor or Supplier having a direct contractual relationship with a Constructor:
 - i. Constructor's professional liability insurance having a policy definition of covered "professional services" that includes "BIM model management," "technical consulting," or similar wording: \$1,000,000 per occurrence
- d. For any Contributor that is a Design Professional or that furnishes a Design Model for the Project:
 - i. professional liability insurance with a policy definition of covered "professional services" that includes "BIM model management," "technical consulting," or similar wording: \$1,000,000 per occurrence
- e. For all Contributors:
 - i. technology or cyber liability insurance, including liability for exposures that include electronic security breaches, mistakes, and unauthorized employee acts, virus attacks, hacking, identity theft or private information loss, and infringing or disparaging content: \$1,000,000 per occurrence
- f. For any Project Participant providing hosting services:
 - i. electronic data processing insurance, including coverage for electronic data processing (EDP), including media replacement cost coverage and EDP data coverage with limits adequate to cover the risk.

3. General Provisions.

- 3.1 Notice of Cancellation.** The above described insurance policies shall contain a provision that the insurance company or its designee must give the Constructor written notice transmitted in paper or electronic format at least 30 days before coverage is nonrenewed or canceled. If any insurance policy required under the Agreement and this Exhibit is not to be immediately replaced without lapse in coverage when it expires, exhausts its limits, or is to be canceled, the Subcontractor shall give the Constructor prompt written notice upon actual or constructive knowledge of such condition. Failure of the Subcontractor to provide prompt written notice shall be considered a material breach of this Agreement. The Subcontractor shall, prior to the effective expiration or cancellation date, furnish the Constructor with evidence of renewal or replacement of the policy. Payment may be withheld, or Work suspended, until withdrawal of cancellation or reinstatement of the canceled policy. No extension of time shall be allowed to the Subcontractor in the event of any such suspension.
- 3.2 Certificates.** The Subcontractor shall furnish certificates of insurance evidencing compliance with all insurance requirements, and attach all required policy endorsements providing additional insured coverage and permitting waiver of subrogation before commencing any Subcontract Work on the Project, at the time of final application for payment, upon renewal or replacement of such insurance until the expiration of the time period for which such insurance must be maintained, and within ten (10) days of a request by the Constructor. The required insurance shall be subject to the approval of the Contractor, but any acceptance of insurance certificates by Contractor shall in no way limit or relieve Subcontractor of the duties and responsibilities stipulated in the Subcontract Agreement.
- 3.3 Waiver Of Subrogation** As set forth in Section 9.2.4 of the Agreement, Subcontractor shall require (by endorsement or otherwise) all its insurers to waive, all rights against Constructor, Owner, Design Professional, and their respective officers, directors, members, consultants, subcontractors, agents, and employees, together with any other parties required by the Prime Contract, for recovery of damages to the extent these damages are covered by Workers' Compensation Insurance, Employers' Liability Insurance, Business Automobile Liability, CGL, Professional Liability, Pollution Liability, property insurance and any excess or umbrella liability policies. The Subcontractor shall require similar waivers from its Sub-subcontractors.

1. Payment Application Procedures

- i. Send your Payment Applications to www.GCPAY.com. Clancy & Theys Construction Co. ("Constructor") uses a payment application service called GCPay. GCPay is an all-inclusive program involving subcontractor schedule of values, change orders, applications for payment, compliance, and lien waivers. It is being implemented in order to make these processes more efficient for both Constructor and its subcontractors. There is no charge for subcontractors to use the GCPay system. Subcontractors will simply go to the GCPay website (GCPay.com) to process outstanding items. Because it is a web-based system, you will be able to access GCPay from any device available to you, including a computer, tablet or smart phone. To begin the process of using GCPay with us, please go to <http://www.gcpay.com/> to register your company in the system. Click on the Get Started link at the top right of the home page. If you have questions during the registration process or need to register by phone, please call GCPay Support toll-free at (877) 447-2584 Option 1. If you already are registered in GCPay, there is no need to register again as you are already in the system and accessible to our team. Constructor can email more detailed instructions upon request.
 - ii. Immediately after you are awarded your Subcontract Agreement and after receiving an invitation/ prompt, log in to GC Pay and submit, for approval, a detailed Schedule of Values to GC Pay for your work. No payment request will be processed until this schedule is received and approved by the project manager.
- b. Forms:
- i. All requested forms within GCPay must accompany all applications for progress payment. These forms can be found within your project at GCPay.com. Forms are all project specific and include but are not limited to a cover page, schedule of values, and lien waivers. All forms will be electronically signed, notarizing these documents is not necessary.
- c. Construction Change Order:
- i. Change orders will only be shown within GCPay once accepted. No change order can be billed against prior to approval.
- d. Retainage Payment Application Procedure:
- i. When making application to Constructor for the retainage payment, please follow this procedure
 1. Make the application for retainage payment separately from any progress payment application. Please do not include the retainage payment application in the final progress payment application. The retainage payment application may accompany the final progress payment application, but the two applications must be separate.
- e. Payment General Conditions:
- i. No Constructor executive, employee, or agent is authorized to enter into a Subcontract Agreement without processing a standard written subcontract signed by Constructor and the Subcontractor.
No oral contract shall exist between Constructor and any person or other entity who submitted a bid or proposal.

2. Constructor Electronic Document & Signature Policy

- a. Pursuant to applicable law (including the Uniform Electronic Transactions Act, the Electronic Notary Public Act, and the federal Electronic Signatures in Global and National Commerce Act) but subject to the parameters and limitations set forth below, Constructor Clancy & Theys and Subcontractor agree that (i) the electronic signature thereof by a party shall be as valid as an original signature of such party and shall be effective to bind such party to the Subcontract, (ii) both parties agree not to deny the legal effect or enforceability of the Subcontract solely because it contains an electronic signature, and (iii) both parties agree not to object to the admissibility of the Subcontract in the form of an electronic record, or a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the grounds that it is an electronic record or electronic signature or that it is not in its original form, is not an original, or does not contain an original signature.
- b. Definitions
 - i. "Electronic record" means a record created, generated, sent, communicated, received, or stored by electronic means.
 - ii. "Electronic signature" means an electronic sound, symbol, or process attached to, or logically associated with, a record and executed or adopted by a person with the intent to sign the record.
 - iii. "Information processing system" means an electronic system for creating, generating, sending, receiving, storing, displaying, or processing information.
 - iv. "Record" means information that is inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form.

c. Subcontract Documents

- i. Electronic versions of Subcontract Documents (Subcontracts, Lien Waivers, Change Orders, Payment Applications, Invoices, Sales Tax Forms, Surety Bonds, etc.) will be accepted in lieu of original (and signed) paper documents as follows:
 1. This policy will not apply if and to the extent the Owner or Owner's lender requires receipt of original paper documents;
 2. Constructor will not require signatures to be notarized on Subcontracts and Change Orders. For other subcontract documents that may require a notarized signature (i.e., Payment Applications, Lien Waivers, Surety Bonds, etc.), for an electronic record to be accepted in lieu of an original paper document: (i) for scanned documents, the notary seal or stamp must clearly appear in the scanned image, and (ii) if an electronic signature is to be used on the record, the required notary information must be attached to the electronic signature in compliance with the Uniform Electronic Transactions Act (UETA) and/or the Electronic Notary Public Act, N.C.G.S. §10B-100 et. seq. (for North Carolina projects).
 3. The Subcontract Documents must be electronically recorded and/or signed using an information processing system approved by Constructor that (i) allows for the electronic record to be printed and stored by each party, (ii) identifies the name and title of the person who made such electronic record or signature, and (iii) allows for verification or validation that an electronic signature, record, or performance is that of a specific person who intended to make such signature, record, or performance.
 4. In the case of a scanned copy of an original signed paper document, (i) the scanned document must be an exact and clear replica that contains all information included in the original paper document, such as any writing and text in margins, footnotes, multiple ink colors, watermarks, and notary seals, and (ii) the scanned document must be emailed or otherwise electronically sent to Constructor's project manager or accounting department (at the email address(es) provided by Constructor)
 5. For Projects taking place in Virginia: Constructor and Subcontractor agree to conduct this transaction by electronic means, pursuant to Virginia Code Sections 59.1-479, et seq., and to accept facsimile or scanned signatures ("electronic signatures") as valid and binding and of the same force as original signatures. The parties agree that electronic signatures shall satisfy all requirements for a signature set forth by law. The parties expressly waive all right to contest an electronic signature solely because it is in electronic form.

3. Submittals/ Shop Drawings/ Close Out

a. General

- i. Submittals must begin immediately after receipt of a Contract or Letter of Intent from the Constructor and submitted to Constructor no less than (15) working days after award. Long lead items should be identified, and fabrication and delivery times noted on the submittal. Submittals must be completed in time to allow for a minimum three (3) weeks of review and turn around to the Subcontractor and not affect the Progress Schedule for the Project. Delays in shop drawings and continuous resubmittals will constitute a tacit acceptance by a Vendor or Subcontractor to perform, at no expense to the Owner, Design Professional, or Constructor, overtime work in the shop or field to make up lost time in the Progress Schedule
- ii. Subcontractors or Vendors with detailed shop drawings requiring multiple submissions on sets of shop drawings or staggered submittals must coordinate with the General Contractor's Project Manager and submit a written schedule and sequence of drawing/submittal preparation and receive approval of same. This will serve as a check list throughout the duration of the job. Subcontractor to provide a complete submittal schedule. For coordination drawings, electronic format must be of an acceptable electronic format for all to be able to use and update information.
- iii. All items that become a part of the finished product require submittal.
- iv. With the exception of physical submittals, all submittals are to be submitted electronically. Submittals are to include all items indicated in the specifications, including, but not necessarily limited to the following: Shop Drawings, Cut Sheets, Product Data, Certifications, Guarantees, etc.

- b. Procedural
 - i. All brochures, manufacturer's literature, or other submittals must be marked to indicate specific items being submitted for approval. The particular item being submitted must be circled or highlighted and note made indicating for what the item is being submitted. Items not properly identified will be returned to the Subcontractor for correction.
 - ii. The Design Professional, Owner, and Constructor reserve the right to reject shop drawings for reasons including, but not limited to, the inability to clearly read the information or dimensions on the drawings, scale too small for proper review, incomplete information, etc. Such rejected drawings must be redrawn and reworked without delay.
 - iii. All materials to conform to specifications and applicable codes and requirements. If a conflict exists between the specifications and applicable code, the Subcontractor will give immediate notification to the Constructor
 - iv. Stamped review by the Design Professional or Constructor does not constitute approval to perform work that deviates from the plans and specifications. The Subcontractor must still provide a complete scope of work per the Subcontract Documents
 - v. Physical Samples: Submit no less than 2 (or amount as required by specification) samples for every material/color required/requested unless the contract documents request more.
 - 1. Each sample must be labeled with the following information. The label must have a blank space large enough for Constructor's and the Design Professional/Engineer's review stamps (2).
 - a. Subcontractor Agreement Number
 - b. Name of Subcontractor
 - c. Applicable Contract Drawing # and/ or Spec Section
 - d. Name of Manufacturer
 - e. Description
 - c. Transmittals
 - i. Transmittals must contain the following information:
 - 1. Project title
 - 2. Company making submittal
 - 3. Specification section of submittal
 - 4. Contact in case an item submitted required discussion
 - 5. Date required to avoid delays in fabrication and the Progress Schedule
 - 6. Reason for submittal - i.e., approval, resubmittal, field, and file information, etc.
 - 7. Documents submitted for the first time or unapproved to-date shall be noted "FOR APPROVAL" or "FOR INFORMATION ONLY," as applicable thereon.
 - d. Close Out/ Field & File/ O&M's
 - i. Subcontractors and Vendors must make all corrections indicated on the submittal and furnish, if required, corrected electronic shop drawings noted "FOR FIELD AND FILE" or "FOR CONSTRUCTION."
 - ii. All As-Built/Record Drawings are to be submitted electronically in a searchable text file.
 - iii. All Operation and Maintenance Manuals are to be submitted electronically in a searchable text file.
 - iv. O & M's to be submitted at 50% completion of the project.
 - e. Certification
 - i. All applicable systems and equipment shall receive required certifications.
4. Operational Requirements
- a. Safety
 - i. Subcontractors are required to comply with their company's Environmental, Health and Safety policies, the safety policies of Clancy & Theys Construction Co. ("Constructor") (see Exhibit M) Federal, State and Local regulations and code requirements to protect the public, client and all construction personnel against injury. If at any time there is a conflict between policies and governmental regulations, the Subcontractor is expected to follow the most stringent. Any fines incurred by Constructor due to a safety violation by a Subcontractor will be paid by the cited Subcontractor. The latest version of the Constructor Safety Policy can be downloaded at the below link. Hard copies will be provided onsite upon request. Any updates to the manual will be provided to all subcontractors with an accompanying acknowledgement form

b. Schedule

- i. Pursuant to this Subcontract and without limiting the provisions thereof, Subcontractor shall perform the work in its scope according to the distributed Project Schedule (Exhibit N). The Progress Schedule has the intent of providing an overall project flow and sequencing of all phases of work required to maintain an overall project completion in accordance with the prime contract.
- ii. Subcontractor shall provide its forces at the Worksite in such number and working such hours as is reasonably necessary to maintain the Project Schedule and coordinate the Subcontract Work with the work of other subcontractors on the Project. Saturdays and Sundays will be worked with full crews as makeup days lost due to inclement weather, holidays, or to maintain the Project Schedule.
- iii. Constructor reserves the right to revise the Project Schedule from time to time without invalidating Subcontractor's responsibility to perform the Subcontract Work at the durations indicated.
- iv. Look Ahead Schedules may be distributed and reviewed during jobsite subcontractor meetings as the project necessitates. If there are no subcontractor exceptions made during the review of the Look Ahead Schedule, the Subcontractor accepts acknowledgement of the Look Ahead Schedule and will sufficiently staff the Project to adhere to the provided schedule.
- v. Objection to the Progress Schedule shall require written notice to Constructor within three (3) Business Days of receipt of the Progress Schedule. Failure to timely respond to the distributed Progress Schedule constitutes acceptance.
- vi. Constructor does not guarantee the task start dates on this schedule however it is expected that the durations are adhered to.

c. Subcontractor Supervision & Quality Control

- i. It is always our intention to provide high quality work, and this job is no exception. Only the highest quality work will be accepted. There will be no exceptions to that commitment. If Constructor, the Design Professional, or the Owner deem the work unacceptable, it must be corrected in a timely manner
- ii. The Subcontractor shall be responsible for Subcontractor's own supervision and quality control.
- iii. The Subcontractor shall designate one of Subcontractor's personnel as Project Supervisor. Key personnel on this Project should not be changed without the written consent of Constructor.
- iv. The Project Supervisor must monitor the work of the Subcontractor's forces to assure compliance with the plans and specifications and to assure that the Subcontract Work is above industry norms relative to quality.
- v. The Subcontractor must attend weekly subcontractor meetings and weekly foreman meetings at the site. The Subcontractor is required to start attending these meetings a minimum of two weeks before the installation of any of the Subcontract Work, or as invited. Attendance at these meetings must continue until the Subcontract Work is completed. The Subcontractor's representative(s) at meetings must have the authority to speak for the Subcontractor on items related to schedule, material deliveries and movements, safety and coordination with other trades.
- vi. Monitor and maintain a status log of the Subcontractor's required submittals. The list shall be updated by the Subcontractor and status provided as needed when requested.
- vii. Monitor any tests or inspections required of the Subcontract Work. Maintain a log of tests performed and at a minimum a digital record of those tests or inspections
- viii. Maintain, in conjunction with the Subcontractor's superintendent, an accurate and current set of red line as-builts for the Subcontract Work. This shall be performed at-minimum on a monthly basis. At project completion Subcontractor shall provide a digital version of the red line-as-builts (scanning is acceptable but they must be legible once scanned).

d. Clean Up

- i. Subcontractor shall, at its own cost and expense, (a) keep the Worksite free at all times from all waste materials, packaging materials and other rubbish accumulated in connection with the execution of the Subcontract Work by collecting and depositing said materials and rubbish in locations or containers as Constructor designates from which it shall be removed by Constructor from the Worksite without charge; (b) clean and remove from the Subcontract Work and from all contiguous work of others any soiling, pipe shavings, material remnants, staining, mortar, core slurry, plaster, concrete or dirt caused by the execution of the Subcontract Work and make good all defects resulting therefrom; (c) at the completion of the Subcontract Work in each area, perform such cleaning as may be required to leave the area "broom clean"; and (d) at the entire completion of the Subcontract, remove all of its tools, equipment, scaffolds, shanties and surplus materials.
- ii. Should Subcontractor fail to perform any of the foregoing to the satisfaction of Owner, Design Professional or Constructor, and upon receipt of a formal 48 hour clean-up notice from Constructor, Constructor shall have the right to perform and complete such work itself or through others and charge the cost up to \$75 per hour, plus equipment costs via a deductive change order, to Subcontractor.
- iii. At Constructor Superintendent's discretion, a comprehensive cleanup plan may be utilized to maintain site cleanliness throughout the project. Such plan may include shared subcontractor resources to comprehensively clean areas of the Project as necessary. Subcontractor shall dedicate necessary resources to assist in the comprehensive cleanup efforts.
- iv. If recycling facilities are provided, the Subcontractor shall use them accordingly.

e. Misc. Job Site Information

- i. The Constructor will provide field office and telephone for their exclusive use. Subcontractor, at the discretion of the Constructor, may have their own field office on site. Subcontractor is responsible to provide their own field office trailer, telephone, and provide for their own utilities (if able to be supported by project space and utility constraints). Location must be approved by the Constructor.
- ii. A designated area may be assigned for staging. Vehicles must be parked in designated areas. Construction vehicles will not be allowed to park in spaces outside of construction fence. The Subcontractor shall in no way interfere with or endanger the normal pedestrian and vehicular traffic adjacent to and surrounding the project site.
- iii. Temporary toilets are supplied by Constructor and are to be used by all subcontractors.
- iv. All temporary site facilities that are required to facilitate the Subcontract Work, such as storage sheds, temporary heat, additional light, generator power, cold weather protection, ventilation, pumps, drinking water, security of stored materials and equipment shall be furnished by the Subcontractor unless otherwise noted.
- v. Subcontractor agrees that no delivery of material will be made without prior notice to the Project Superintendent. The Subcontractor shall be responsible for the safe and suitable storage and offloading of equipment and materials on site. Materials are to be stored or staged in a location acceptable to the Constructor. The Subcontractor further agrees to relocate materials stored on site to other areas within the Worksite, as required, so as not to impede the overall Project Schedule.

f. Subcontractor Responsibilities

- i. All subcontractors are required to do their own cutting and patching unless specifically agreed to in the Agreement.
- ii. All penetrations at, or installations within, walls, floors and ceilings must be properly/correctly sealed with an approved UL Design assembly by responsible party making or using the penetrations where applicable. Where Subcontractor is installing fixtures and or equipment within an assembly, it is the Subcontractor's responsibility to provide rated fixtures/equipment or properly rate their fixtures or equipment within the assembly.
- iii. Subcontractor must provide temporary fire protection system(s) within the immediate area of Subcontractor's work, as required by the local Fire Marshall and local, state, federal, and insurance underwriter requirements.
- iv. Subcontractor shall furnish all scaffolding, ladders, swing stages, or any other means or methods that may be required to gain access to Subcontractor's work. All access equipment must comply with all OSHA, Constructor Environmental Health and Safety requirements and local safety requirements. Subcontractor is responsible to take all precautions to locate and protect existing utilities. Subcontractor is responsible for damages to existing utilities resulting from Subcontractor's operations.
- v. Subcontractor is responsible for the necessary cleaning and repairing of existing streets resulting from Subcontractor's operations.
- vi. Subcontractor is responsible for the repair of tire ruts and excavations by use of Subcontractor equipment. Subcontractor is responsible for returning the grade back to condition prior to equipment traffic or trenching.
- vii. Subcontractor shall provide adequate temporary protection of adjacent finish work and removal of same following the completion of the Subcontract Work in the area affected.
- viii. Subcontractor shall provide dewatering as necessary to complete the Subcontract Work.
- ix. Unless noted otherwise, Subcontractor shall be responsible for furnishing and installing the blocking, backing, shimming, furring fasteners and grounds necessary for the installation of the Subcontract Work.
- x. Subcontractor shall make suitable preparations for the installation of the Subcontract Work, including all piping, conduit, hangers, inserts, anchors, grounds, and supports that are to be embedded in concrete, masonry walls, floors, partitions, or structural members, or that are to pass through or be attached thereto. Subcontractor must provide and install proper sleeves, boxes, receptacles, or chases for all openings or recesses to receive the Subcontract Work occurring in or passing through any such members, all of which must be located accurately and secured firmly in place before any such masonry has been erected or concrete poured. Core drilling is the responsibility of Subcontractor. It is to occur only under the supervision of the Constructor and with the approval of the Structural Engineer. If coring of a structural slab or wall is required, the Subcontractor is responsible for laser scanning prior to coring or cutting unless other approved coordination has been cleared with the Constructor.
- xi. If shown on the drawings, the ceiling or wall Subcontractor is responsible for furnishing and installing access panels. Otherwise, Subcontractor is responsible for furnishing any and all access panels for items of work installed under the Agreement that are not called for by the construction drawings. Installation of all access panels is the responsibility of the Subcontractor erecting the wall or ceiling system. If not shown, these access panels must be approved by the Design Professional prior to installation. Rated access panels are required where applicable.
- xii. Subcontractor is to verify all existing/field conditions as required prior to commencement of the Subcontract Work. Any discrepancies are to be reported to the Constructor in writing within 48 hours of discovery. Disregard to provide prior written notification, will be construed as the acceptance of such conditions.

- g. Existing Facility/ Completed Construction Areas
- i. If this is an operating facility, there should be no contact by Subcontractor's construction personnel with any resident personnel unless specific arrangements are made. ANY inappropriate behavior will be grounds for immediate dismissal. No warnings will be required for this. Instruct your people. ALL CONSTRUCTION PERSONNEL SHOULD STAY OUT of areas outside the construction fence unless duties require otherwise. Personnel should maintain distance and decorum towards members. Constructor will designate an area for "breaks".
 - ii. Where any portion of the Subcontract Work is conducted above or adjacent to existing construction, the Subcontractor must protect the existing construction, as necessary. Damages as a result of unprotected work will be the responsibility of the Subcontractor causing damage.
 - iii. Concrete floor slabs must be protected from construction damage. No heavy equipment will be permitted on the slabs until the concrete has obtained its designed strength.
 - iv. No work will be performed on concrete floors that would detrimentally affect the finish or appearance of uncovered floors or the application of finish flooring, where called for. Operations such as cutting or threading pipe, burring, welding, paint mixing, or clean-up of painting, will not be permitted in these areas.
 - v. Protection of subfloor during application of solvents and adhesives is required to eliminate future bleeding through flooring of left behind solvents or liquids. If not protected and bleeding takes place, responsible subcontractor will be responsible for finish replacement
- h. Hoisting
- i. It shall be the responsibility of Subcontractor to furnish equipment and tools for the Subcontract Work and hoisting of materials.
 - ii. It shall not be the policy of Constructor to loan equipment or tools to a subcontractor or any other party under any circumstances. However, in an extenuating circumstance where equipment or tools may be loaned out, the following shall apply:
 1. The Subcontractor site supervisor must be present and is the only person to whom the equipment or tools may be released.
 2. The Subcontractor site supervisor must sign a Constructor "EQUIPMENT AND/OR MATERIAL USE AGREEMENT" Form.
 3. The operator/safety manual must accompany the equipment or tools.
 4. If Constructor agrees to Subcontractor's request on the use of equipment owned or leased by Constructor, any and all damages shall be the responsibility of the Subcontractor. Furthermore, any injuries to any person at the Worksite shall be the responsibility of Subcontractor if Subcontractor requested use of the equipment.
 5. Provide certification of Subcontractor's Representative who is a trained "Competent Person." All hoisting and scaffolding will be the responsibility of each Subcontractor and shall comply with all OSHA requirements.
- i. Layout
- i. Constructor will layout buildings corners, and provide a reference elevation on each floor for the use of all subcontractors. Subcontractor is responsible for all layout and measurements required to complete the Subcontract Work in accordance with the Subcontract Documents.
Subcontractor is responsible for all layout engineering as required to complete the Subcontract Work. The Subcontractor shall be responsible for performing all necessary field measurements as applicable to ensure the proper installation of the Subcontract Work. The Subcontractor shall be held responsible for the accuracy of all field measurements. No requests for additional compensation will be entertained due to differences between actual measurements and the distances provided on the Subcontract Documents
- j. Daily Reports
- i. After each day's work, submit one (1) Daily Report Form to our project superintendent. These reports should be filled out in enough detail so that we can readily determine your daily manpower, work location, and work accomplished. These reports should be turned in by quitting time each day that you are on the job, or no later than 8:00 a.m. the following morning
- k. Mock-Up's
- i. An exterior mockup may be constructed that is representative of the construction methods, materials, details and finishes that will be incorporated into the final completed work of the Project. The Subcontractor may be required as detailed in the project scope to participate in the construction of the mockup as applicable, as well as perform all work that is required to complete subsequent to the start of the construction of the mockup. Constructor will coordinate the location, scheduling, reviewing and testing of the mockup. An approved mockup will be established as the minimum acceptable level of completed work. Any minor deviations from the Contract Documents that are a result of the review and approval of the mockup shall not be considered an increase in the overall scope, value or durations of the Subcontract Work. Subcontractors that are not required to participate in the construction of the exterior mockup shall be held responsible for any delays to the completion of the mockup or damages that occur to the mockup if attributable to the subcontractor's scope of work.
 - ii. Mockups for approval of finishes, performance testing, or general coordination may be requested by Constructor. It is the responsibility of the Subcontractor to participate in the construction of the mockup as applicable, and perform all work required to complete the mockup

I. System Start Up and Commissioning

- i. All equipment and systems furnished under the Agreement shall be started up, made fully functional, tested and demonstrated to the Owner by the Subcontractor. Factory start up technicians will be utilized as required by the Subcontract Documents. Should the Subcontract Documents include a commission process or should Owner elect to hire an independent commissioning agent (for purposes of LEED or otherwise) the Subcontractor shall provide all labor, material, test equipment, documentation, administrative support and management required to support the commissioning effort. Subcontractor shall schedule its work to complete this commissioning process within the time allotted by the Subcontract Documents.

m. Job Site Codes of Conduct

- i. No alcoholic beverages or illicit drugs will be permitted on site.
- ii. If the Local authority requires specific inspections of the Subcontract Work, Subcontractor is expected to coordinate them and provide suitable evidence of compliance.
- iii. If conflicts exist in plans and specifications, Subcontractor has the "higher quality" in such instances and is expected to put in the "more expensive" unless resolved otherwise prior to installation.
- iv. Smoking will not be permitted in the building and only in areas outside the building designated by Constructor.
- v. The Constructor and Owner will not tolerate any unseemly behavior from construction personnel. If such behavior results, immediate dismissal of the offending person from the job site may be demanded by the Owner and Constructor.
- vi. No unsanitary and/ or offensive actions will be tolerated.

5. Coordination & Coordination Drawings

- a. The Subcontractor is responsible for coordinating the requirements, locations and elevations of the Subcontract Work with that of other trades, to ensure the proper matching and fitting of the Subcontract Work and to avoid conflicts and interference with the work of other trades. Failure on the part of the Subcontractor to comply with this requirement shall not be considered as a basis for establishing a subcontractor change order. All extra costs to correct the work to comply with the Subcontract Documents shall be the responsibility of the Subcontractor.
- b. The Subcontractor is responsible for maintaining the fire, smoke and/or STC rating of floors, walls and ceilings where items furnished under this Agreement penetrate and/or are installed within. This shall be accomplished by the use of a UL approved design and shall provide a rating equal to or exceeding that of the floor, wall or ceiling in which it is installed. All Subcontract Work shall be in conformance to all regulatory agencies.
- c. Any and all rough openings required for the Subcontract Work are to be provided as a complete submission package within a timely manner of execution of this Agreement in order to be reviewed and coordinated with respective affected trades of which construct the rough opening.
- d. Subcontractor is responsible for coordinating any and all electrical and mechanical requirements with that of other trades and the building systems to ensure proper equipment operation. This is to include exchange and review of other trades subcontract drawings, documents and submittals.

6. Coordination Drawings

- a. Coordination drawings showing all horizontal and vertical dimensions must be prepared as follows:
 - i. Drawings showing all sleeves, openings, and inserts must be prepared by each Subcontractor whose work passes through or is recessed in the structural systems. These drawings must be prepared at such time and manner as reasonably directed by the Constructor and will be subject to the review of the Constructor and Design Professional.
 - ii. To the extent required by the Subcontract Documents or where directed by the Constructor, these drawings must be prepared electronically, utilizing the Contract Structural Drawings as background drawings. Subcontractors must incorporate all reasonable revisions arising from the coordination of sleeves, openings, and inserts at no additional cost to the Owner.
 - iii. Drawings must be prepared by all Subcontractors with items of Work located in or above ceilings or at any other location, as reasonably directed by the Constructor. These drawings must be prepared at such time and manner as reasonably directed by the Constructor and will be subject to the review of the Constructor and Design Professional. To the extent required by the Subcontract Documents or where directed by the Constructor, these drawings must be prepared electronically, utilizing architectural background drawings.
 - iv. Subcontractors must incorporate all reasonable revisions arising from the coordination of these items of Work at no additional cost to the Owner.
 - v. Any rework or relocation required due to the failure of the Subcontractor to install the Subcontract Work in accordance with the coordination drawings will be performed by the Subcontractor at no additional cost to the Constructor or Owner.
 - vi. All costs associated with the coordination drawing process including coordination meetings, electronic drafting, drawing production, engineering and software are included in the Subcontract Amount.

7. Autodesk Construction Cloud Software

- a. Clancy & Theys Construction Co. ("Constructor") will utilize the Autodesk Construction Cloud software for the purposes of this project. The Autodesk Construction Cloud platform serves as a comprehensive project management solution for construction-related activities, facilitating the management of RFIs, submittals, project documents, and the creation of programs for punch list, quality, safety, commissioning, daily reporting, and other related tasks. Additionally, the software provides tools for managing cost-related activities, including budget tracking, change order management, and cost forecasting. Furthermore, the software provides robust reporting capabilities, allowing users to generate custom reports and track project progress in real-time. The software enables the execution of these programs at the point of construction via personal computers and mobile devices, including but not limited to smartphones and tablets. The Constructor's project manager shall be responsible for providing additional information as needed.
- b. Subcontractors must participate in the workflow processes outlined in the Autodesk Construction Cloud program. This software allows subcontractors to easily access project details, schedules, and documents, and provide updates on their progress. Subcontractors can view all relevant project documents, including working drawings, specifications, meeting agendas and minutes, submittals, and RFIs, within the Autodesk Construction Cloud program. Workflows managed by Autodesk Construction Cloud, including Issue Management, RFI's, submittals and forms, may have assigned response due dates, which must be met. Subcontractors will be required to submit daily reports within Autodesk Construction Cloud.
- c. The Constructor will utilize the features and tools of the Autodesk Construction Cloud program to record, authorize, and execute alterations to the project's scope, schedule, or cost. Subcontractors must participate in the platform for all change management operations, including the creation, monitoring, and pricing of change requests.
- d. Autodesk Construction Cloud is a software that can be used on both desktop computers and mobile devices. There is no cost for subcontractors to use Autodesk Construction Cloud. However, subcontractors must provide their own hardware, such as iPads, iPhones, or tablets, to access and use the program. A free app must be installed to use the software on a mobile device. The software can be accessed on a personal computer or laptop by using a local browser.

8. Miscellaneous Provisions

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General Scope of Work (ALL BID PACKAGES):

1	For any Bid Packages requiring licensure, provide proof of current licensure prior to beginning any work whatsoever. Failure to show proof of licensure is grounds for disqualification and nullification of the contract.
2	For bids \$500,000 or greater, a Bid Bond will be required as indicated in the Instructions to Bidders. A Class "A" Surety with a North Carolina licensed agent must provide the Bid Bond. The Bid Bond form included in the Bid Manual must be used. The Bid Bond must be submitted with the bid. Failure to provide the required Bid Bond will be grounds for disqualification of bid.
3	Provide proof of insurance meeting the requirements indicated in the Supplemental Conditions and Operation Requirements. Failure to provide proof of adequate insurance will be grounds for disqualification and nullification of the contract. A sample insurance certificate must be provided within 72 hours of the scope review meeting. The insurance certificate submitted with the pre-qualification application may be used as a sample if the certificate meets or exceeds all insurance requirements.
4	This Scope of Work includes a complete system per the drawings and specifications. In addition, the Subcontractor and Construction Manager agree that the Construction Manager has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
5	Subcontractors shall include all necessary parts and components to furnish and install a complete system as required of their specific trade, at no additional cost to the project. If the drawing details provided in the Construction Documents are not constructible (missing detail or required components not shown) or contradict code requirements, it is still the Subcontractor's responsibility to furnish and install a complete system per code and manufacturer's requirements.
6	At a minimum, each Subcontractor shall bid and construct the project such that it is in accordance with all Authority Having Jurisdiction (AHJ) standards and specifications as it pertains to the Subcontractor's Scope of Work. The Contract Documents and Bid Manual shall override in cases where they exceed code minimum code requirements.
7	Disregard all notes indicating "by G.C." or "by others". The Scope of Work is defined for each Bid Package and may include work indicated on the plans to be "by G.C." or "by others".
8	Subcontractors shall include all sales, use, consumer, and other similar taxes.
9	Valid insurance certificates will be required for payments to be processed each month, even if the Subcontractor is not currently on site or complete with their work. Compliant insurance certificates will also be required from all tiered Subcontractors and prior to working on site. If insurance certificates expire while a Subcontractor is working on site and the renewal has not been forwarded to the Construction Manager, Subcontractors will not be allowed on site until the renewal is received. Any delays associated with expired insurance certificates shall be the responsibility of the Subcontractor.
10	Subcontractors shall be responsible for providing a detailed Schedule of Values (SOV) no later than 15 calendar days after Subcontract agreement issuance. No payment applications will be processed until the SOV is approved by the Construction Manager. The SOV must be separated into labor and materials for all portions of the Subcontractor's scope and no line items shall exceed \$25,000 without prior approval from the Construction Manager. The SOV should also be separated by each building and each individual floor within these buildings.

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General Scope of Work (ALL BID PACKAGES):

11	The Construction Manager is enrolling the Subcontractors in the Construction Manager's Subcontractor Default Insurance (SDI) program to insure the Construction Manager against the Subcontractor's default under the Subcontract Agreement and in lieu of requiring the Subcontractor to furnish payment and performance bonds. The Subcontractor agrees that the Construction Manager's enrollment of the Subcontractor and/or this Agreement in the Construction Manager's SDI program is and shall be for the exclusive benefit of the Construction Manager. The existence of SDI coverage shall not in any way limit or restrict any of the Construction Manager's rights or remedies in the event of a Subcontractor default, nor shall it in any manner inure to the benefit of, provide any rights or remedies to, or limit the obligations or liabilities of the Subcontractor, any of its lowered tiered Subcontractors, or any of their respective employees or agents. The Subcontractor shall comply with the Construction Manager's SDI program prequalification procedures, including providing documentation and information required by the SDI insurer involving financial, technical, management, safety records, and other matters relating to the Subcontractor and its operations. Following commencement of the Subcontract work and upon written request by the Construction Manager or the SDI insurer, the Subcontractor shall promptly furnish all such additional and updated information regarding the Subcontractor's finances, management, safety records, and operations as may be requested. At the Construction Manager sole discretion, in lieu of enrolling the Subcontractor into the Construction Manager's SDI program, the Construction Manager may require the Subcontractor to provide a payment and performance bond (s). The costs of payment and performance bonds shall be borne by the Construction Manager.
12	The Construction Manager will be utilizing GC Pay for all Subcontractor Payment Applications and required backup. Refer to Exhibit G included within the Sample Subcontractor Agreement as part of this Bid Manual.
13	Provide a site-specific safety plan within thirty (30) days of the notice of award and prior to beginning work. All Safety Data Sheets (SDS) information for materials to be used in connection with your work shall be included.
14	Subcontractors shall be responsible for their own fall protection systems as required to complete their work per OSHA regulations and the Construction Manager's safety standards.
15	This site involves tree and stream protection areas that will be strictly enforced. All Subcontractors must take extreme care to not disturb trees and streams in protection areas. Any fines resulting from a Subcontractor's damage of trees or streams will be assessed to that Subcontractor.
16	Subcontractor's field employees will be required to attend weekly safety meetings and toolbox talks. Records of the weekly toolbox meetings must be submitted to the Construction Manager. Provide signed and dated copies of the weekly safety meetings to the Construction Manager's project team no later than 10:00 am each Friday morning.
17	All foremen must be first aid and safety trained. Subcontractors shall submit records of certified training to the Construction Manager's project team. For any Subcontractor employee operating equipment, they shall submit records of certified training to the Construction Manager's project team. Each day, Subcontractors shall designate a competent person according to OSHA CFR 1926.32(f) who shall be on site continuously while work is in progress. That designated person shall sign in on a form provided by the Construction Manager each morning prior to the commencement of work.
18	Each Subcontractor and their tiered Subcontractors are responsible for protecting their workers from potential silica/respirable dust hazards, regardless of who the creating trade may be, per OSHA regulations.

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General Scope of Work (ALL BID PACKAGES):

19	Subcontractors agree to instruct their employees and tiered Subcontractors on all project rules including, but not limited to, appropriate attire, language, smoking restrictions, food and beverage restrictions, break area restrictions, parking restrictions, and limitation on access to areas outside of the immediate area of work. Subcontractor employees found breaking project rules set forth by the Owner and Construction Manager will be dismissed from project. Subcontractors shall promptly replace any dismissed employees to prevent impacts to the schedule. Employee misconduct shall not be a permissible excuse for schedule delays.
20	Subcontractors must provide drinking water and first aid kits for their own work forces on site per OSHA regulations.
21	Subcontractors will be required to complete daily activity reports indicating progress and manpower on site. These reports will be turned in by 10:00 am the following day.
22	Weekly job site meeting attendance will be required two weeks prior to mobilization and every week thereafter if the Subcontractor is on site. Second and third tier Subcontractor representatives may attend meetings, but may not substitute for the first tier Subcontractor at weekly meetings. Designated project managers for all Subcontractors are required to attend the monthly Construction Schedule update and pay application review meetings. Designated foreman for all Subcontractors are required to attend a daily coordination meeting.
23	Subcontractors agree to mobilize their field supervisor(s) full time (50 hours per week) to the project at a minimum of two (2) weeks before the scheduled start of work to understand the scope of work, issue RFI's, understand logistics, coordinate material deliveries, and understand the associated tasks required to successfully enable all trades to begin executing work in full force.
24	Subcontractors must have a field supervisor that speaks fluent English.
25	The Construction Manager will be holding preinstallation meetings for every Subcontractor on the project. The intent of these meetings is to discuss items such as safety, schedule, manpower, material delivery dates, expectations, quality, etc. In addition, there may be future meetings for coordination with other Subcontractors, as necessary.
26	Subcontractors must coordinate with other trades and the Construction Manager accordingly. Subcontractors will fully coordinate their work with the work of others.
27	Subcontractors shall be responsible for coordination of all drawing disciplines.
28	Each Subcontractor is required to have cellular/mobile phone service or approved equal for all primary onsite supervisors and foreman to allow for direct communication with the Construction Manager's project team.
29	Subcontractors must coordinate site visits with the Construction Manager. Prior to bid, if any Subcontractor wishes to dig test pits or other land disturbing investigations, they must contact the Construction Manager and provide a location of desired investigations prior to the site visit. Digging test pits or other land disturbing investigations without approval will be grounds for disqualification based on irresponsible actions. Any fines resulting from a Subcontractor's unauthorized site investigations will be assessed to that Subcontractor.
30	Debris from clearing and demolition must be hauled offsite for disposal by the respective trades. All Subcontractors must refer to the project specifications for requirements regarding which materials cannot be discarded in dumpsters/C&D containers. Any materials that cannot be placed in dumpsters onsite shall be hauled offsite and disposed of at the expense of the Subcontractor furnishing or removing said materials.

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General Scope of Work (ALL BID PACKAGES):

31	<p>Provided that the material can be placed in onsite dumpsters, Subcontractors will be responsible for distributing their own waste materials into the onsite waste containers provided by others. and will be responsible for hauling these containers offsite. Daily cleanup of all debris, trash, etc. generated by a Subcontractor in completing the work is to be brought to the appropriate dumpster by that Subcontractor. The Subcontractor shall be responsible for cleaning all debris because of onsite operations including identification and proper disposal of hazardous or toxic debris and/or materials. Failure to clean up debris on a daily basis will result in the Construction Manager performing and/or directing the cleanup and issuing the appropriate back charge.</p>
32	<p>Subcontractors to include one (2) employee for every ten (10) employees working onsite to provide general cleanup one (1) day per week. This is not for trade specific cleanup; it is for general cleanup across the site.</p>
33	<p>Cleanup of unassignable debris because of onsite operations will be the responsibility of all Subcontractors working on site at the time that the debris appeared. Each Subcontractor working onsite shall put forth an equal effort for the site/building cleanup. The Construction Manager may at their discretion designate a cleanup crew utilizing Subcontractor manpower or a global back charge. In either case, the cleanup of unassignable debris is the sole responsibility of those Subcontractors working on the site.</p>
34	<p>Each Subcontractor for each trade must provide one (1) trash carts, one (1) brooms, and one (1) shovels.</p>
35	<p>Subcontractors will be responsible for keeping roads clean from work associated with their own equipment and operations.</p>
36	<p>Subcontractors shall review the Preliminary Construction Schedule included in the Bid Manual and bid as needed to meet schedule requirements. The Preliminary Construction Schedule is based on calendar days (6 days per week, 365 days per year). Additionally, workdays of more than eight (8) hours will be required as a normal course of performing the work. Work hours must be adhered to; if hours are not met then deductive change orders will be written for the hours not worked each week (labor to be deducted at same rate as approved within additive change orders). Subcontractors will be expected, as a minimum, to work from 7:00 am until 5:30 pm on Monday through Thursday, 7:00 am until 3:30 pm on Friday, and 9:00 am until 5:30 pm on Saturday. The Saturday hours are based on the City of Raleigh Noise Ordinance. Working on Sundays or holidays requires 72 hours prior approval by the Construction Manager and Owner. It is agreed that the Subcontractors will make up any normal workday (Monday through Friday) time lost by working Saturdays, Sundays, Holidays, and/or extra shifts as necessary to maintain the schedule at no additional cost to the Construction Manager.</p>
37	<p>Subcontractors agree to anticipate and plan for inclement weather for the number of calendar days in accordance with the following months: January = 7, February = 6, March = 7, April = 6, May = 7, June = 6, July = 8, August = 6, September = 5, October = 5, November = 5, and December = 6. These monthly anticipated inclement weather days (calendar) are included in the Construction Schedule activity durations. Additional weather days are based on cumulative net value and not based on a month-by-month calculated total.</p>
38	<p>Due to sequencing requirements, multiple mobilizations will be required, which may be in addition to the project phasing as reflected within the Preliminary Construction Schedule. The Preliminary Construction Schedule requires multiple sections of the building to be built concurrently. There is no guarantee of workflow from area to area. Subcontractors shall work in areas as they become available and as directed by the Construction Manager. Changes will not be considered for out of sequence work or additional mobilizations.</p>

NC State Fairgrounds Midway Event Center

General Scope of Work (ALL BID PACKAGES):

39	If at any time it is determined by the Owner or Construction Manager that a Subcontractor is not on schedule, the Subcontractor shall increase its manpower, work overtime, or both to bring their work back on schedule. Such efforts shall be performed at no additional costs to the Owner or Construction Manager. If a Subcontractor cannot meet the schedule dates, they will be supplemented as necessary and subject to incidental liquidated damages through back charges.
40	If the Construction Manager is assessed liquidated damages for delay of the project, the Construction Manager will assess a share of those liquidated damages against the Subcontractors in proportion to the Subcontractor's share of the responsibility for the delay. The amount of the assessment shall not exceed the amount assessed against the Construction Manager. The Construction Manager's liquidated damages have been established in their contract with NC State Fair Grounds. They are \$2,500.00/per calendar day that the project fails to achieve Substantial Completion. The Substantial Completion dates are stipulated in the Preliminary Construction Schedule as part of the Bid Manual.
41	Due to schedule demands, Subcontractors must release all materials and equipment upon submittal approval. Material deliveries must be coordinated a minimum of 48 hours in advance and if not, may be turned away by the Construction Manager on site.
42	Given that all materials must be released upon submittal approval, Subcontractors are encouraged to bill for stored materials. All materials stored offsite must be stored in a bonded/insured warehouse/facility located in the county of the project. To bill for stored materials, the Subcontractor shall provide the following: a) Certificate of Insurance Evidence of Property Insurance (with Owner as additional insured – specific language will be provided by Construction Manager), b) Bill of Sale to Owner, c) Affidavit of stored materials, d) Invoices for stored materials (matching amount billed), e) Photos of the stored materials indicating tags specific to this project. If a Subcontractor intends to store materials outside of the county of the project, the Subcontractor must inform the Construction Manager within 90 calendar days of contract issuance. This will only be acceptable with approval from the Owner, obtained by the Construction Manager.
43	Subcontractors shall be responsible for providing lead times on all materials no later than 21 calendar days after Subcontract agreement issuance. These lead times shall represent the time frame for materials to arrive on site after submittal approval from the Design Team. Once these dates are submitted and approved, they shall become the contractual due dates of these materials.
44	Subcontractors shall provide all required submittals within 2 weeks from the issued Letter of Intent by the Construction Manager, unless noted otherwise within their specific Scope of Work. Subcontractors shall provide all submittal data in strict compliance with the Construction Manager's Submittal Guidelines (Subcontractor General Conditions Exhibit) and the project specifications. Any submittals not in compliance will be rejected by the Construction Manager and may be considered late. Subcontractors will be held responsible for any delays to the Construction Schedule because of their late submittals.
45	For any Subcontractor with engineering/delegated design responsibility indicated in the specifications associated with their Scope of Work, that Subcontractor must ensure that their submittals include signed and sealed shop drawings as provided by a licensed professional engineer registered in North Carolina. This engineer must provide a certificate of insurance for professional liability with limits as indicated in Article 9.2.3 of the Contract. (Modified: Consensus Docs 750).
46	Subcontractors are required to bid performance requirements indicated in the specifications regardless of whether a product is identified as the basis of design or as an approved manufacturer. Submittals and shop drawings rejected because they fail to meet the specifications will not be grounds for additional costs or delays to the project.

NC State Fairgrounds Midway Event Center

General Scope of Work (ALL BID PACKAGES):

47	When a submittal is marked as revise and resubmit, return as corrected, revise for record, or any such status requiring a resubmittal, that resubmittal will be due no later than 7 calendar days after the original submittal is returned to the Subcontractor.
48	For changes in the work, Subcontractors and tiered Subcontractors are allowed a maximum labor burden of thirty nine percent (30%) on the actual cost of labor. Additionally, the portion of any change proposal relating to labor may include reasonably anticipated gross wages of job site labor, including foreman who will be directly involved with the work for the change (for such time as they will be involved). Subcontractor markup shall be limited to the following: 15% for materials (including small tools and consumables), 15% for labor, 15% for equipment, and 15% total markup for lower tiered Subcontractor and Principal Subcontractor as stipulated on the NC State Construction General Conditions. All change proposals must include detailed backup with labor and material breakdowns.
49	All change order pricing shall be due to the Construction Manager no later than 7 calendar days after the issuing document or field condition is discovered. If pricing is not received within this time frame, it will be deemed that the Subcontractor accepts the scope of work into their contract at no additional costs or time.
50	Subcontractors may be required to proceed with potential change orders prior to formal approval to maintain the Construction Schedule with written direction from the Construction Manager. It is mutually agreed and understood that negotiations may be required on this pricing and that the team will work to approve and provide comments as soon as possible.
51	All time and material (T&M) tickets must be authorized by the Construction Manager prior to the start of the work, and they must be signed daily. Tickets not forwarded to the Construction Manager within 48 hours of the work will not be accepted nor will tickets that did not receive previous authorization from the Construction Manager.
52	Subcontractors will be responsible to carry labor rates and anticipate increases throughout the entire duration of the project regardless of where their scope of work may fall within the schedule. Change orders for labor rate increases during the project will not be entertained.
53	Back charges from Subcontractor to Subcontractor shall be dealt with between the Subcontractors. It is not the Construction Manager's responsibility to process back charges between Subcontractors. Each Subcontractor is responsible for pursuing reimbursement from the Subcontractor being back charged.
54	The proposed access to the site is through the fairgrounds. Adherence to safe driving practices, staying within the posted speed limits, and obeying traffic signage will be strictly enforced..
55	Due to the size of the site, designated site parking is limited and is on a first come availability. Daily onsite project parking for every Subcontractor and employee is not guaranteed. Subcontractors are solely responsible for offsite parking accommodations, fees, transporting, shuttling, etc. Additionally, Subcontractors are responsible for tickets/fines associated with illegal parking. Parking is prohibited in neighboring communities.
56	Subcontractors will maintain noise levels or utilize equipment in accordance with the local city and public health authority ordinances, as directed by the Construction Manager. No construction equipment alarms, motor revving, or open throttles shall be sounded prior to 7:00 am and later than 6:00 pm Monday through Friday or prior to 9:00 am and later than 6:00 pm on Saturday. Work time requirements that fall outside of the published parameters must be addressed with the Construction Manager prior to beginning the work.
57	Subcontractor's project signage for promotional benefit is prohibited. Only small, directional signage may be installed with the Construction Manager's prior authorization.

NC State Fairgrounds Midway Event Center

General Scope of Work (ALL BID PACKAGES):

58	Construction activities cannot impact the current operations for the Fairgrounds, the City of Raleigh, and the State. Therefore, the Construction Manager has established a protocol for the project whereby all Subcontractors are required to comply. This includes, but is not limited to:
	a. No commingling with the staff, and patrons of the Fairgrounds.
	b. Site access is granted for construction work hours only. Loitering before or after work hours is not permitted.
	c. Failure to comply with these protocol items may result in disciplinary action, including removal (temporary or permanent) from the site and the inability to utilize onsite construction parking.
59	Subcontractors will receive, unload, and store all materials associated with their work unless noted otherwise. Subcontractors will include all equipment, cranes, hoisting, and crews required for their scope of work and to meet the Construction Schedule. This includes the use of any lifts or lulls as required to access the work. Elevators will not be available for use at any time.
60	The Construction Manager must approve all the Subcontractors onsite storage locations and durations for the materials and equipment in advance of delivery. If the allowable storage duration is exceeded, that Subcontractor will relocate materials as directed by the Construction Manager at the Subcontractor's cost. Facilities for storage onsite will be limited and it shall be the Subcontractor's responsibility to make necessary arrangements to ensure proper material availability to maintain the Construction Schedule.
61	Subcontractors shall place and relocate their trailers, at their own expense, when and where directed by the Construction Manager. Subcontractors are responsible for the acquisition, maintenance, and removal of all utility and phone services required for their trailers. All energy services and utility consumption charges will be the Subcontractor's responsibility. In no case shall the Subcontractor's trailer share/piggyback the same service of the Construction Manager. Subcontractors shall be responsible to replace, at no additional cost to the project, any trailer deemed by the Construction Manager to be in an unacceptable condition (unsafe, improper tie-down, code infraction, etc.).
62	Subcontractors shall provide and maintain all field engineering and layout needed to accomplish the work associated with the Subcontractor's Bid Package. Subcontractors shall procure the services of a registered surveyor for the complete layout associated with their work, including any re-staking and maintenance. Subcontractors shall not rely on utilizing others staking or surveying. If Subcontractors choose to use GPS, supplemental staking will be required as directed by the Construction Manager for verification. Anchor bolt and column line layouts will be provided by BP 0300 – Turnkey Concrete.
63	The Construction Manager will employ a professional engineering firm to develop a coordinate package for the Construction Manager's use and to verify and/or check layout performed by Subcontractors. If the Construction Manager determines the need to verify/check staking/engineering work performed by any Subcontractor and it is determined that the Subcontractor's staking/engineering layout is in error, the Subcontractor will be responsible for the incurred costs of the Construction Manager during the verification/checking efforts.
64	Any Subcontractor performing underground work or potentially exposing existing underground utilities must employ a qualified utility locator service to locate all existing underground utilities including, but not limited to, electrical, telephone, gas, cable, and fiber optic within the limits of construction. Subcontractors must not use expired locates and will be required to acquire current locates as needed per NC811 regulations.
65	Subcontractors will include dewatering of excavations, slabs, and work areas as necessary to perform their scope of work. This may include, but is not limited to, pumping, hoses, mud removal, and removal of standing water. Excess water is to be disposed per the sedimentation and erosion control requirements.

NC State Fairgrounds Midway Event Center

General Scope of Work (ALL BID PACKAGES):

66	Subcontractors shall provide task lighting as needed to perform their work for quality and finish requirements. BP 2600 - Electrical shall provide temporary building lighting, but is not responsible for task lighting for any other Subcontractor.
67	All Subcontractors shall provide suspension systems, hangers, and supports as required for their respective materials and equipment.
68	All Subcontractors are responsible for verifying field dimensions prior to the fabrication of materials.
69	Subcontractors shall include all mockups/samples as indicated per the plans and specifications. These must be completed between 90 and 120 days from the issued Notice To Proceed (NTP) or Letter of Intent (LOI).
70	Subcontractors shall include the standalone mockup as indicated on the contract documents . This shall be furnished and installed in addition to mockups/samples required per the specifications.
71	Protection of work in place by others is a priority. Any work damaged through the lack of proper protection will be the sole responsibility of the installing Subcontractor. If the work of others must be altered in any way to facilitate the work of another Subcontractor, that Subcontractor is responsible for coordinating with the Construction Manager and the preceding work by others. Such work will be replaced or repaired to its pre-disturbed condition by the responsible party altering the work at that Subcontractor's sole expense.
72	Any Subcontractors working on roofs must provide proper protection for their work, materials, equipment, etc. If any roof damage occurs due to Subcontractor's work forces, the necessary repairs will be made at that Subcontractor's expense.
73	Any Subcontractor creating penetrations through walls will be required to patch or seal those penetrations upon completion of work, including fire caulking and acoustical sealants as necessary.
74	Subcontractors need to include provisions to be present for any third-party testing, inspections, or commissioning of their systems as required. They will also be required to perform preliminary testing of all their systems with any manufacturing representatives to prove that their systems are 100% functional prior to the scheduling of final tests and inspections by an AHJ. Subcontractors will be required to have all necessary personnel for the AHJ testing on site also. If systems do not pass the preliminary or final testing, Subcontractors will be required to have these same personnel on site until the point these systems do pass. If additional costs are incurred because of multiple inspections, that Subcontractor shall be responsible for the resulting back charges.
75	Subcontractors with project deficiencies are required to correct these items within 7 calendar days of notification unless otherwise approved in writing by the Construction Manager. These items focus on contractual work and cannot be deferred until punch list under any circumstances.
76	The punch list will be issued in phases from the Design Team. If Subcontractors are listed on the punch list, they have 7 calendar days of notification to correct items included within that issuance unless otherwise approved in writing by the Construction Manager. These items cannot be deferred until future punch lists under any circumstances.
77	Subcontractors with punch list items on the exterior façade of the building should figure performing the work from lifts provided by the Subcontractor.
78	Subcontractors will be responsible for investigating all issues that arise within the project during the specified warranty period. As a result, extra compensation for these investigations if the issue ends up not being related to the Subcontractor's work will not be entertained.

NC State Fairgrounds Midway Event Center

General Scope of Work (ALL BID PACKAGES):

79	Subcontractors are required to provide electronic copies of all approved submittals, as-built drawings, operation and maintenance manuals, etc. to the Construction Manager prior to Substantial Completion. Any warranties with specific reference to Substantial Completion shall follow within two (2) weeks of the Construction Manager's confirmation of the established Substantial Completion date. All copies must be received in electronic format prior to the release of final retainage/payment. Subcontractors shall also provide hard copies of closeout documents as requested by NC SCO.
80	The Subcontractors shall warranty all materials and workmanship incorporated in the Project, against any and all defects due to faulty materials, workmanship, or negligence for a period of 12 months from the date of Substantial Completion, or such longer periods as set forth in the Contract Documents. This warranty shall be binding where defects occur due to normal usage conditions and does not cover willful or malicious damage, damage caused by acts of God, or other casualty beyond the control of the Subcontractors. This warranty shall be in addition to other warranties and guarantees set forth in the Contract Documents and shall not act to constitute a waiver of additional protection of the Owner afforded, where applicable, by consumer protection and product liability provisions of law, and these stipulations shall not constitute waiver of any additional rights or remedies available to the Owner under the law. This warranty must be signed by an officer of the Subcontractor's firm and notarized accordingly.
81	All trades shall utilize appropriate equipment and exercise extreme care when working on slabs that terrazzo floor finishes so as not to damage the concrete slab prior to or after terrazzo flooring installation. See Specification of Terrazzo Flooring for requirements and restrictions on areas that receive terrazzo floor finishes (diapered powered equipment, no vehicles, no pipe cutting machine, no steel laydown, etc.).

Midway Event Center SCOPE OF WORK - BP 0210 Final Cleaning

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	This scope of work includes a complete system per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.

SCOPE OF WORK

1	Provide brooms, rakes, shovels, hoses, wax based sweeping compounds, etc. as necessary to complete final clean up.
2	Provide a pre-punch building cleaning including flooring, glass / glazing, doors, windows, handrails, baseboards, fixed furniture, etc. prior to the building substantial completion / punch list as directed by the construction manager.
3	Provide a pre-project completion building cleaning including flooring, glass / glazing, doors, windows, handrails, baseboards, fixed furniture, etc. prior to the final walk-thru inspection as directed by the construction manager.
4	Provide final cleaning of all flooring, glass / glazing, doors, windows, handrails, baseboards, fixed furniture, etc. shall be included in this scope of work at the completion of the project and final construction occupancy as directed by the construction manager.
5	<p>Cleanings include the following:</p> <ul style="list-style-type: none"> · Flooring: Clean all flooring surfaces in accordance with manufacturer's recommendations. · Walls: Dust and wipe down all wall surfaces. · Ceramic, porcelain and quarry tile: sweep, scrub, extract using wet/dry vacuum and mop. · Storefront, windows and doors: Wipe down and polish interior and exterior sides. Includes glass, bathroom mirrors, door thresholds and door hardware. · Millwork / Casework: Dust, vacuum, wipe down and polish cabinet interior and exterior sides including all drawers, upper and lower cabinets, countertops, shelves, etc. · Kitchen Equipment: Wipe down, polish all stainless steel. · Electrical devices: Wipe down and clean all electrical devices including receptacles, switches, cover plates, light fixtures, etc.
6	Subcontractor shall sweep, mop, and wax all resilient floors. Subcontractor shall be required to wax resilient floors (in accordance with the plans, specifications, and manufacturer's recommendations) one time during the final cleaning period.
7	Various trades will be responsible for the protection of their surfaces. BP 0210 – Building Cleaning shall remove and dispose of all surface protection installed by others when directed by the Construction Manager. This shall include, but is not limited to, flooring, countertops, toilet partitions, food service equipment, and accessories. Protective materials that may require removal consist of loose and static plastic, corrugated cardboard, masonite type materials, and fire-retardant surface covers. Subcontractor shall coordinate reuse and removal of protective materials with the Construction Manager.
8	The use of razor blades on finished glass or other delicate surfaces will not be permitted. Subcontractor shall inspect all glass surfaces prior to cleaning for evidence of scratches and notify the Construction Manager prior to proceeding with cleaning the area.
9	Provide all equipment with associated fuels required to complete this work including any lifts, ladders, scaffolding, etc.
10	Subcontractor shall clean all elevator interiors including exposed metals, elevator millwork and floors. All elevators are to receive rough cleaning, final cleaning and touch up cleaning.
11	Subcontractor is responsible to clean sitework areas, including but not limited to: all sidewalks, concrete paving areas, curb/gutter, equipment pads, dumpster enclosure and loading dock slab / retaining walls. These areas will require pressure wash cleaning.
12	Subcontractor shall coordinate cleaning materials with manufacturer's requirements and obtain all acceptable products. Submit a cleaning plan with type of cleaning product to be used on each specific material type.
13	All service, maintenance, deliveries, are to be included with any machinery provided under this scope

Midway Event Center SCOPE OF WORK - BP 0210 Final Cleaning

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

14	FULL TIME foreman while working onsite (the goal is to one person who is knowledgeable with this specific project and is familiar with the day-to-day operations of entire project). The supervision must be qualified in all aspects of each scope and have the authority to make decisions.
15	Strict adherence to the construction schedule including all necessary manpower, supervision, premium time, equipment, tools, materials, etc.
16	Provide daily clean up, all walkways and egress paths to be clear at all times.
17	Provide supervision for any sub tier contractor
18	Subcontractor shall include two (2) laborers and one (1) foreman for forty (40) labor hours per week to perform ongoing cleanup duties and light unloading of materials as directed by the Construction Manager for a period of eleven (11) months. The Construction Manager may ask that a laborer who demonstrates uncooperative actions be removed from the project with 24 hours of written notice issued. The Construction Manager shall give, at minimum, 24-hour notice for discretionary labor requirements. Subcontractor shall include a qualified/competent superintendent for the duration of the project.
19	Subcontractor shall include commercial grade brooms, rakes, shovels, hoses, and sweeping compounds as necessary to support cleaning operation.
20	Subcontractor shall include weekly, thorough cleaning of the Construction Manager's office trailer complex for a period of ten (10) months. This includes dusting and cleaning of all desks, tables, bathrooms, chairs, and cleaning of windows. This is in addition to the scope items listed above.
21	Subcontractor shall include a 10' x 20' conex/storage unit for secured storage of materials and cleaning supplies for a period of twenty-nine (29) months. Subcontractor shall include a pad lock for the security of the conex/storage unit and provide lock access information to the Construction Manager for "at-will" access and additional storage as needed by the Construction Manager. The Construction Manager will determine the placement of the conex/storage unit.
22	Subcontractor shall include an additional 160-man hours of labor time for the discretionary use of the Construction Manager. Additional labor time will be tracked per daily reports and any remaining unused labor time will be credited back to the Owner/Construction Manager at the appropriate hourly labor rate.

Midway Event Center SCOPE OF WORK - BP 0400 Masonry

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	042000 Unit Masonry
	072100 Thermal Insulation
	076200 Sheet Metal Flashing and Trim
	079200 Joint Sealants
	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.

SCOPE OF WORK

1	Subcontractor to furnish and install structural and architectural masonry walls and structures including all CMU, brick and CMU veneer, cast stone, sills, wall caps, and cast stone anchors, masonry bond beams, masonry lintels, grout, and reinforcement. Work shall include, but not be limited to, joint reinforcing, sand, mortar, grout, ties, anchors, control joints, anchorage, mastic/adhesive, flashing, end dams, sealant beds, stainless steel drip edge, termination bars, weeps, drainage material, rigid insulation, block cavity fill, etc. at all interior and exterior locations.
2	Subcontractor to include installation of the following items, furnished by others: - Loose lintels and shelf angles - Door frames located in masonry walls (grouting of frames included) - Steel embeds, bearing plates, and anchors set in masonry walls - Counterflashings. - Mech. vent caps in masonry walls
3	All materials to be per the project Division 04 specifications and structural requirements noted on the contract documents
4	Includes providing and installation of rigid foam insulation board behind brick.
5	All masonry brick materials to be per specifications and architectural elevation drawings and finish schedules. Material types, sizes, texture, and pigmented mortar colors as required by the contract documents.
6	Subcontractor includes all cast stone sills, anchors, rake joints and sealants, mortar nets, stone and stucco drainage mats, SS angles, rain screens, fluid applied flashings, etc. for turnkey installation at window walls with cast stone sills locations per the contract documents.
7	All embeds and plates shall be installed in CMU walls prior to grouting solid. Any missed or misplaced embeds shall be the responsibility of the subcontractor to replace and/or relocate.
8	Subcontractor shall furnish and install all thru-wall flashing at masonry opening heads and sills. This is to include all primers and mastics for all flashing in order to obtain proper adhesion. Top of all self-adhered membrane flashing is to be bedded in mastic.
9	The Subcontractor shall return brick veneer to back walls to serve as jamb, rowlock sills, etc. as required to complete finish surfaces.
10	Subcontractor shall clean-off, pump, and dewater all footings and grade beams in coordination with the start of masonry work. Cleaning off footings includes less than 18" of loose dirt.
11	The Subcontractor shall furnish and install brick ties. Brick tie installation shall be in accordance with vapor barrier manufacturer's instructions.
12	The Subcontractor shall prepare all masonry openings as required for louvers, window openings, door frames, etc. All openings shall be plumb and square. Dimensions will be provided by others. Any temporary frames or forms necessary to complete this work is the responsibility of this subcontractor.

Midway Event Center SCOPE OF WORK - BP 0400 Masonry

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

13	Subcontractor shall provide extensive coordination and work closely with the other trades (plumbing, piping, HVAC, concrete and electrical) to coordinate framed openings and installation for conduit, piping, ductwork, and other building components to be installed by these trades. Be aware these openings may require additional framing to close up the openings after the conduit, piping and ductwork have been installed.
14	Subcontractor includes multiple mobilizations.
15	Masonry shall furnish and install all reinforcing steel within masonry units. Subcontractor shall provide shop drawings and submittals for all reinforcing within masonry units.
16	Subcontractor to provide all weather protection required for this scope of work for continuous masonry operation.
17	Subcontractor to rub and point up all exposed CMU walls for architecturally acceptable finish and to receive paint or any finishes installed by others.
18	Subcontractor to coordinate masonry joint locations with C&T, project drawings, and building downspouts in order to conceal all masonry joints as best as possible.
19	Subcontractor to install, recess, step, course, and joint all brick veneer as shown on the architectural elevations, sections, and details.
20	Mortar and grout mix designs shall be in compliance with the construction drawings and specifications.
21	Subcontractor to follow all cold and hot weather procedures as detailed in ACI standards and per project specifications.
22	Subcontractor to grout all masonry and cavities below grade solid as show on the contract documents.
23	All lifts and scaffolds are to be erected, braced, and attached per manufacturer's recommendations and instructions.
24	All scaffolds and lifts over 125' shall be engineered per OSHA standards.
25	Subcontractor shall be responsible for providing all hoisting, scaffolding, lifts, and equipment needed to access all areas work for areas as detailed in the IRN 004 Information to Bidders Exhibits.
26	Furnish and install any sleeves and fire stopping required for this scope of work. Coordinate with other trades for any sleeves or wall penetrations that may be required (each trade responsible for their sleeve material and installation)
27	Subcontractor shall include the protection of the work of other trades. All cleaning of masonry materials shall be in accordance with the specifications. Subcontractor shall include protection of all adjacent surfaces as necessary during cleaning work.
28	Subcontractor is required to have a full time field manager onsite during the installation of your scope of work.
29	Subcontractor to provide samples and mock up panels for all finish materials for design team material approval prior to material release. Samples to be provided in timeframe to meet any and all material order dates based on schedule and cost.
30	Subcontractor to include furnishing and installation of brick veneer and/or CMU walls for exterior building mock up for all buildings and skin types.
31	Subcontractor to coordinate, work with, and comply with on-site 3 rd party inspections requirements.
32	Subcontractor to furnish and install compressible fill material where masonry walls meet the bottom of floor and roof decking surfaces.
33	Subcontractor includes all grouting, sealants, firestopping, firesafing, etc. at rated wall locations in order to provide full UL rated fire assembly.
34	Subcontractor to install and grout all HM door frames set in concrete and CMU walls. Frames to be furnished by others for installation by this Subcontractor.
35	Block and grout infill around all elevator doors/frames. This may require a separate mobilization.
36	Subcontractor to infill and grout around all elevator door frames. Frames to be installed by others.
37	Subcontractor includes all exterior brick at interior finish locations, wall wraps, etc. as shown on the contract documents.
38	Subcontractor includes all rigid insulation within masonry cavity as noted by contract documents. Weather resistive barrier and air barriers by others
39	Subcontractor shall include all protection when working over roofing system materials. At a minimum, protection shall include a sandwiched system consisting of plastic sheeting (over roofing material), 2 in. poly foam, plywood, and a top layer of plastic sheeting or alternate system as approved by the Construction Manager.

Midway Event Center SCOPE OF WORK - BP 0400 Masonry

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

40	Subcontractor shall protect all opening, window, storefront, etc. frames and/or glass to prevent damage. Masonry shall be responsible for any damage or necessary repairs to installed frames and glass.
41	Subcontractor includes all loose masonry insulation fill at walls per contract documents.
42	Subcontractor shall coordinate with Elevator subcontractor for additional elevator shaft fire stopping as required. Elevator subcontractor shall move the cab up and down as necessary for Mason to work from the top of the cab to complete fire stopping requirements.
43	Stone and masonry sealers and coatings as required per the contract documents
44	Waterproofing and damproofing of masonry structures including damproofing at foundations (CMU below grade to support brick veneer)
45	Caulking /Joint sealants to bottom of structure at all building CMU walls including as required to maintain full fire rating of wall assembly
46	Subcontractor shall furnish and install all tags, labeling, and identification requirements for all fire rated CMU assemblies.
47	Includes 5% of the total Brick SF for replacement due to damage. Not to be part of punch.

Midway Event Center SCOPE OF WORK - BP 0622 Millwork

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	062023 Interior Finish Carpentry
	064023 Interior Architectural Woodwork
	064400 Ornamental Woodwork
	064116 Plastic-Laminate-Clad Architectural Cabinets
	123661.19 Quartz Agglomerate Countertops
	057500 Decorative Formed Metal
	108223 Interior Grilles and Screens
	This scope of work includes a complete system per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.

SCOPE OF WORK

1	This Subcontractor shall provide all Casework and Architectural Woodwork including but not limited to all plastic laminate and wood casework; window stools; plastic laminate, metal, quartz countertops; simulated stone and solid surface countertops; backsplashes & side splashes; casework filler panels, hardware, & glazing; shelving & coat rods; built in seating with cushion; cubbies; knee wall plastic laminate & solid wood caps.
2	Subcontractor includes all applicable scope shown on Architectural, General, and ID drawings relating to the turnkey installation of the below listed finish materials as shown on the finish floor plans and/or elevations. Any VE's, substitutions, or exclusions must be specifically listed in this subcontract scope.
3	Subcontractor shall furnish and install any glass or glazing that is integral to the casework.
4	All materials listed in this scope and associated accessories shall have finishes, color, sizing, details, and locations to be per specifications and Architectural and ID drawings.
5	All materials are to exactly match the specifications and Architectural/ID drawings Description, Manufacturer, Series, Style, Color and Finish (unless noted otherwise in this scope). Any substitutions will need to be equal or greater in value, and submitted to the Architect/Owner for approval. If substitutions are not approved, Subcontractor agrees to provide specified material.
6	Upholstery Materials per the contract documents
7	Simulated Stone Countertops per the contract documents
8	Decorative Metals finishes per the contract documents
9	Plastic Laminate Materials per the contract documents
10	Subcontractor includes all wood and millwork ceiling features. All painting GWB ceiling feature by others
11	Subcontractor agrees to be proactive in procuring all materials. All materials will be procured and readily available for install before Subcontractor begins work on site, date per project schedule.
12	Subcontractor to provide three (3) physical samples of each material listed in this scope to submit for Architect and Owner approval. Samples to be provided within 2 weeks of issuance of this Subcontract.
13	Subcontractor to provide detailed, project specific, shop drawings for entire scope, showing all materials, elevations, details, etc. Shop drawings will be created and drafted by the Subcontractor. Marked up ID drawings will not be acceptable.
14	Subcontractor to provide all submittals as listed in the finish schedules and specifications.
15	All wood trim to be exact species, finish, and profile as specified on the contract documents.
16	Includes all necessary frames, supports, fasteners, caulking, edging, finishing, adhesives, etc.
17	Subcontractor to coordinate and provide any openings required by other trades located in materials outlined in this scope. Includes field cutting as required.
18	Includes casing at any cased openings and doors as scheduled, tagged, or elevated.
19	Subcontractor includes wood casings at all door and window as called out per the finish schedule.
20	Includes all necessary framing for millwork, finishes scope of work. Any metal stud framing to be by others.
21	Subcontractor to provide blocking drawings for coordination with framing subcontractor.
22	Subcontractor to perform final cleaning, touch-up and adjustment of all millwork and finishes during the punch list phase. Subcontractor will participate in the ACC Build punch list process for closing out all punch list items.
23	Subcontractor shall include the required coordination with other trades including, but not limited to... Framing, Drywall, Painter, Electrician, HVAC Sub, Plumber, Flooring Sub, FP Sub, Door Sub, Window/Storefront Sub, Misc. Metal Sub, Appliance Sub, etc.
24	Subcontractor is responsible for working around finished products, walls, paint, etc. Any cost associated with damage to the work of others is the responsibility of the Subcontractor.
25	Subcontractor agrees to fully staff the job to keep up with the progress schedule and workflow. Subcontractor agrees to supply more manpower at the request of the Contractor.
26	Subcontractor shall have a direct employee of their company on site at all times as a supervisor and decision maker. Subcontractor will have a full time field manager onsite during the duration of your scope of work.
27	Subcontractor to provide detailed procurement plan and schedule with submittal dates, lead times, etc. to the Contractor within (6) weeks of receiving this subcontract. Subcontractor agrees the maximum lead time for the materials listed in this scope is 8-10 weeks (submittal approval/release date to arrival on site). Subcontractor includes all shipping, freight, importing, tariffs, taxes for this scope of work.
28	Subcontractor to furnish and install any blocking, shims, etc. that is outside of the wall cavity, directly applied to face of wall after sheetrock is hung, etc.

Midway Event Center SCOPE OF WORK - BP 0622 Millwork

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

29	Subcontractor responsible for providing all clips, refinishing, shop finishing, staining, fasteners, hardware, trim pieces, termination/transition pieces, fry reglets, j-trims, z-clips, fasteners, screw plugs, edge banding, scribing, rails, sub frames, shims, brackets, sealing, extrusions, schluter strips, cleats, finished ends/exposed edges, auxiliary materials, corner profiles, mitering, primers, adhesives, cabling, hangers, brackets, etc. per drawings and specifications for all materials that are being furnished and installed by Subcontractor.
30	All fasteners are to be concealed unless explicitly shown and identified otherwise.
31	Subcontractor shall include multiple mobilizations to complete your scope of work.
32	If there are any discrepancies between the drawings and specifications or between plan and elevation views, the subcontractor has included/assumed the direction that involves more scope and cost. Any discrepancies to be promptly sent to the Contractor as an RFI.
33	All materials to be fire rated as required by specifications, drawings, and AHJ building codes.
34	Subcontractor includes all casework/millwork scope related items in the project general notes and details as noted in the General, Architectural, and Interior drawing packages.
35	Shop drawings to be fully coordinated with appliances, framing, doors, trim, millwork, panels, tile, flooring, countertops, electrical (lighting/outlets/switches/devices), fire alarm, mechanical grilles, and plumbing fixtures.
36	Material quantities to be the responsibility of the subcontractor.
37	Subcontractor to level all casework, millwork, countertops, trim, etc. as required in field to account for uneven surfaces and walls.
38	Subcontractor to provide samples of all finish materials for owner and design team approval. Samples to be provided in a timely fashion in order to provide time for approvers review prior to ordering deadline.
39	Subcontractor to furnish and install turnkey cabinetry and casework for all amenities, common areas, corridors. Includes all hardware per ID drawings and specifications. All cabinet sizes and profiles to be per the plans and specifications.
40	Cabinet and millwork construction to include hardware, pulls, reveals, etc. to follow Interior drawing details.
41	Subcontractor is responsible for coordinating material deliveries to meet the project schedule and all associated unloading, flagmen, traffic control, lane closures, etc. Subcontractor to provide all equipment (lulls, forklifts, etc.), operators, and labor for deliveries and unloading. No equipment will be provided by the Contractor.
42	Subcontractor includes mockups as required by specifications.
43	Delivery and staging of materials to be coordinated with the Contractor. There is no onsite storage.
44	It is the responsibility of the subcontractor to fix all scratches, defects, etc. on their materials during and after install, until substantial completion turnover.
45	Subcontractor responsible for meeting all ADA, ANSI, and FHA clearance, height, and reach requirements.
46	Subcontractor to provide labor to QC all installations quality and to ensure correct finishes are installed in the correct location. Subcontractor is responsible for all labor and material due to re-work (demo and re-installation of this scope of work and any other scopes of work affected) if incorrect material is installed in an incorrect location.
47	Subcontractor to coordinate casework with all countertop supports (including hidden/concealed supports) so that supports are fully concealed, and the cabinetry casework and panels hide the supports properly for a clean/finished detail. Includes all notching, cutting, etc. of casework/panels to coordinate with the concealed supports.
48	Subcontractor to furnish and install toe kicks to match cabinets at all lower cabinets.
49	Subcontractor to sand, fill in nail holes, and re-finish on all trim, shoe moulding, crown moulding, casework, paneling, etc. prior to being turned over as a completed finished product.
50	Subcontractor includes hidden metal support brackets as required.
51	Cabinets and fillers shall be laid out by Subcontractor during shop drawings to avoid any and all rubbing/bumping/etc. of doors while opening simultaneously. Subcontractor shall also avoid any drawers/doors hitting adjacent hardware when opened.
52	Subcontractor to furnish and install all drawer stops as required to prevent drawers in corners from hitting each other while opening at the same time or hitting adjacent appliances.
53	All lighting that attached to any material in this scope of work shall be properly concealed by the material. If additional trim is needed to conceal the device or fixture, the Subcontractor shall furnish and install this at no additional cost.
54	Subcontractor shall cut all holes in cabinets that are required by MEP trades, including but no limited to: holes for electrical whips, switches, outlets, plumbing pipes, etc. Subcontractor to coordinate all locations with Contractor prior to cutting holes. Subcontractor responsible for patching any holes that have been overcut.
55	Subcontractor is responsible for installing all cabinets within an 1/8" of level (maximum). Subcontractor responsible for all furring, shimming, etc. required to meet this tolerance.
56	Fillers and necessary panels for countertop support are included.
57	Where appliances are shown adjacent to each other, panels to be provided for the necessary countertop support.
58	Subcontractor to furnish and install countertop support blocking as coordinated with countertop installer and shop drawings.
59	Subcontractor is responsible for verifying the flatness of floors and levelness of walls during field measuring allowing the cabinets to be installed level and plumb prior to beginning work so remedial work can be performed by others. Wall cabinets to be installed using a laser to ensure levelness.
60	Subcontractor includes all additional labor and materials to adjust for field conditions during installation, including additional fillers, panels, shims, etc. to provide an acceptable finished product.
61	Subcontractor shall coordinate all cabinet sizing, spacing, fillers, layout, etc. on shop drawings and upon installation based on the approved appliance package and associated appliance sizing/required clearances.
62	Includes all countertop supports per plans and specifications.
63	Includes all caulking at all countertop edges. Sealant product and color to be submitted to owner/architect for approval. Includes countertop to countertop, countertop to wall, countertop to cabinet joints. All countertop edges/profiles to be per drawings and specifications.
64	All countertops to exactly match specified colors and previously provided samples.
65	Subcontractor is responsible for caulking countertops to the wall surface for turnkey installation.
66	Subcontractor to completely review plumbing fixture submittals to ensure all sink and faucet cutouts are coordinated. Subcontractor to provide all cutouts in countertops.
67	Subcontractor to clearly label and show any joints on countertop shop drawings. Subcontractor to strategically place joints/seams to provide a clean, finished looking product.

Midway Event Center SCOPE OF WORK - BP 0622 Millwork

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

68	Provide and install elevator finishes including paneling, handrail and decorative metal for complete interior finish
69	Subcontractor to apply stone sealer to all countertops upon completion of installation and after cleaning of all surfaces. To be applied no later than 1 week after completed installation.
70	Subcontractor to level all tops and splashes as required in field to account for uneven surfaces and walls. Subcontractor includes all countertop side/back splashes as required. Any tile backsplashes by others.
71	Subcontractor to provide all cutouts for plumbing fixtures, faucets, electrical switches, outlets etc. Cutout sizes and location to be coordinated and approved prior to fabrication. Subcontractor to field cut any missed items as required.
72	Subcontractor to field cut countertops as required based on field conditions. Includes all material, equipment, and labor. Subcontractor to design slab section in the shop drawings to provide flexibility and tolerance.
73	Subcontractor to provide grommet cutouts anywhere shown on architectural/ID unit plans. Final locations to be submitted for architect approval.
74	Subcontractor to provide cutout in material and install for any Access Panels required in their scope of work. Access Panels to be provided by others. Subcontractor to provide finished material (laminated, paneling, etc.) to install on face of access panels.
75	Includes countertop support legs and columns as shown on drawings. Size/finish to be per drawings and specifications.
76	Includes all laminate cabinetry and shelving.
77	All joints, seams and terminations should be clearly shown on shop drawings for all materials for approval. Joints, seams and terminations in the field shall not deviate from the locations as shown on the approved shop drawings without written contractor consent. Subcontractor shall locate all joints, seams and terminations appropriately per industry standards for approval (i.e. joints centered or lined up at other features). Full lengths of materials shall be used as much as possible, cut seams are not preferred.
78	Subcontractor responsible for scribing all material if required by field conditions at no additional cost.
79	Subcontractor to provide all material and labor for punch list participation per General Scope punch list items. Subcontractor to provide dedicated labor to complete all punchlists generated by Contractor, separate from production labor. Subcontractor acknowledges that punch list work will need to be completed at the same time as installation/production work without affecting schedule durations. Subcontractor to promptly address and fix all punch list items upon receipt of punchlists. Subcontractor acknowledges there will be multiple punch lists for each unit and amenity/corridor/back of house area. Subcontractor agrees to fully participate in the C&T and owner punch process. This process is extensive and requires detailed work, coordination, and communication. Punch lists will be generated weekly and distributed to Subcontractor.
80	Subcontractor to field measure and verify all framing dimensions in the field prior to fabrication and install.
81	Subcontractor responsible for patching and sanding scratches, gouges, nicks, etc. in their scope of work (trim, panels, millwork, casework, etc.).
82	Subcontractor includes countertop, casework, handrail, and paneling protection for materials once they are installed.
83	Subcontractor includes all warranties, attic stock and owner training per specifications.
84	Subcontractor responsible for all additional trim, fillers required to conceal gaps.
85	Subcontractor is responsible to provide and install all Decorative formed metal DFM-01 -03
86	Subcontractor is responsible to provide all upholstered booths, benches, and seating as shown on the contract documents. This included all privacy screens shown on A512.
87	Includes bar drink and foot rails
88	Includes brass trim and brass inlay
89	Includes all shelving
90	Includes IFC-01 Cove trim
91	Includes all column wraps (interior and exterior)
92	Includes IS-01 Sreen
93	Includes all interior grills and screens

Midway Event Center SCOPE OF WORK - BP 0710 Waterproofing & Sealants

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	071113 Bituminous Dampproofing
	072726 Fluid-Applied Membrane Air Barriers
	076200 Sheet Metal Flashing and Trim
	077616 Roof Deck Pavers
	079200 Joint Sealants

Waterproofing, Dampproofing

1	This contract is intended to include all labor, materials, supervision, equipment, taxes, and safety measures for all waterproofing and dampproofing scopes of work. All work to be done per the project drawings and specifications.
2	Includes elevator pit walls

Joint Sealants

3	This contract is intended to include all labor, materials, supervision, equipment, taxes, and safety measures for all joint sealant and expansions joints scopes of work. All work to be done per the project drawings and specifications.
4	Joint sealant locations include, but are not necessarily limited to, back of curb, column isolation, SOG isolation joints, sidewalk expansion joints, any any other sealants associated with waterproofing assemblies within this scope of work.
5	Subcontractor to provide field applied material samples for specification and color approval prior to installing.
6	All exterior caulking – brick-to-brick, masonry to steel framed doors, brick to precast
7	Subcontractor includes all required surface preparation in order to install all systems per the contract specifications and manufacturer recommendations. Includes all surface cleaning, priming, etc.
8	Includes joint sealants at all hardscapes, concrete sidewalks, back-of-curb, and exterior vertical transitions.
9	Provide add price to provide/install joint sealants at HM frames in both CMU and precast.
10	Provide add price to provide/install joint sealants between front of curb and paving in the event requested by inspectors.
11	Provide add price to provide/install joint sealants at CMU top of wall locations in the event this needs to be picked up.
12	Aluminum Storefront Joint Sealants to be by others
13	Subcontractor shall include an additional 600LF of caulking and sealant work as requested by the Construction Manager. Additional caulking and sealant work will be tracked via daily reports and any remaining, unused quantity will be credited back to the Construction Manager and Owner at the linear footage rate for this work.
14	Precast to Precast sealants by others
15	Coordination with adjacent surfaces and final finishes included for compatibility with surrounding materials.
16	Includes field test and pre-construction testing. Manufacturer representative to be present for all field testing. Subcontractor to verify adhesion of all joint sealants per specification section 079200 prior to proceeding with installation.
17	Includes all misc. materials and accessories required such as backer rods, bond breaker tapes, masking tapes, etc.
18	Includes all surface prep, cleaning, debris removal, brushing, grinding, priming, etc.
19	Joint sealant locations include, but are not necessarily limited to, building to hardscape, CIP control joints, dissimilar materials, slab isolation joints, exposed top and bottom of concrete walls and columns, unit masonry control joints, wall expansion and control joints, exterior door frames (aluminum storefront doors and windows by others), louvers and vents, hose bibbs, scuppers, brick veneer shelf/relief angles, metal canopies, exterior soffits, miscellaneous penetrations, elevator frames, exterior joints to receive paint finishes, jamb perimeter weather barrier seals, control and expansion joints in interior and exterior unit masonry, joints between frames doors, vertical joints on exposed surfaces of interior unit masonry, concrete, walls and partitions, sidewalks and back-of-curb, etc.

Liquid Air Barrier

20	Progressive clean up of own work included.
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Midway Event Center SCOPE OF WORK - BP 0710 Waterproofing & Sealants

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

21	If discrepancies arise between submittals and contract documents, Subcontractor has the more costly and/or timely item(s) covered. Any discrepancies to be brought to Contractor's attention in a timely manner prior to installation.
22	Mock-up included.
23	Multiple mobilizations included.
24	Subcontractor to have on-site supervision participate in field inspections and documentation with project waterproofing consultant.
25	All cold fluid-applied waterproofing per the contract documents.
26	All traffic coatings outside of BOH areas. Complete face coverage of balcony slabs included.
27	All fluid-applied air barrier at locations including, but not limited to, tower slab edges, slate, CMU, metal panels, cast stone, brick, loft units, parapets, etc. Wrap CMU headers as required.
28	Includes all coatings, treating of substrate joints and cracks, flashings, penetrations, and all other required termination conditions.
29	Install waterproofing around all penetrations and lap over flashings as required.
30	All waterproofing shall include any required substrate prep as required to comply with the manufacturer's application requirements including all cleaning, priming, taping, etc.
31	Subcontractor to provide field applied material samples for specification and color approval prior to installing.
32	Subcontractor includes all required surface preparation in order to install all systems per the contract specifications and manufacturer recommendations. Includes all surface cleaning, priming, etc.
33	Coordination with adjacent surfaces and final finishes included for compatibility with surrounding materials.
34	Includes field test and pre-construction testing. Manufacturer representative to be present for all field testing. Subcontractor to verify adhesion of all joint sealants per specification section 079200 prior to proceeding with turnkey installation.
35	Includes all misc materials and accessories required such as backer rods, bond breaker tapes, masking tapes, etc.
36	Sealed concrete at parking garage floors, service corridors, rooms, stairwells, mech rooms, BOH, etc.
37	Includes complete waterproofing measures of sleeves, block-outs, penetrations, etc. for (4) tower levels to dry-in below.

Midway Event Center SCOPE OF WORK - BP 0742 Metal Panel

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	074213 Formed Metal Wall Panels
	074247 Ultra High-Performance Concrete Façade Panels
	084113 Aluminum-Framed Entrances and Storefronts (as required for coordination)
	084413 Glazed Aluminum Curtain Walls (as required for coordination)
	072100 Thermal Insulation
	079200 Joint Sealants
	070543 Rain Screen Attachment System
1	This scope of work includes a complete system per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
2	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.
SCOPE OF WORK	
3	Subcontractor to furnish and install all metal and concrete wall panels. Subcontractor includes turnkey furnish and installation of all systems and associated accessories/hardware/etc. Including, but not limited to, all scope required for a complete system. Can list out all material tags.
4	Subcontractor includes turnkey metal and concrete panelling scope including insulation at all locations per the contract documents.
5	Includes all metal and concrete wall and soffit panels.
6	Includes provide and install of rigid insulation behind all metal and concrete wall panels.
7	Includes cladding on vertical shading device.
8	Includes ACM wrap on steel columns
9	Subcontractor includes full coordination with storefront subcontractor, steel subcontractor, framing/sheathing subcontractor, air barrier subcontractor, roofing subcontractor, joint sealant subcontractor, MEP-FP subcontractors, Doors/Frame subcontractor to coordinate panneling. Subcontractor responsible for cutting all holes in their scope of work for other trades required penetrations.
10	Subcontractor shall furnish and install all flashing and counter flashing assemblies integral or related to metal panel installation.
11	Subcontractor includes all insulation, rigid insulation, clips, tracks, j-channel, rails, brackets, z clips, fasteners, shims, rainscreen systems, fixed brackets, closure strips, adjustable brackets, mounting systems, trim (to match panelling), fasteners (to match panelling), mitered corners if required, panel corner profile, vent screens, subframes, composite panels, furring, mullions, coping, fascsiae, corner units, flashings, gaskets, fillers, sealants, reveals, fillers, sheet metal, dry seal systems, etc. for metal panels, phenolic panels, and translucent single panel wall cladding assemblies/polycarbonate flush panel systems scopes of work per drawings, specifications, and manufacturer's requirements.
12	Subcontractor shall expedite field measuring and procurement of typical panel sizes and profiles for installation of continuous sections. Termination sections and transitions shall field verified separately prior to fabrication and expedite shipment included on materials to maintain installation schedule.
13	Subcontractor to furnish and install turnkey joint sealant package for metal and concrete panels. Subcontractor responsible for joint sealants at all locations where metal or phenolic panelling requires joint sealant as shown in the contract documents and as required by the manufacturer. Subcontractor responsible for all joint sealants and backer rods between their scopes of work and where their scopes of work are adjacent to dissimilar materials. This includes at all seams of this subcontractors scope.
14	Includes full range of color selection for all panelling systems in this scope of work.
15	Subcontractor to provide all submittals and samples listed in the specifications sections.

Midway Event Center SCOPE OF WORK - BP 0742 Metal Panel

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

16	Subcontractor includes all engineering as required in the specifications.
17	Subcontractor to participate in all pre-install and coordination meetings for each scope of work.
18	Subcontractor to provide in place mockup per specifications for each panelling system.
19	The Subcontractor shall procure materials in a timely fashion such that all materials necessary for the Work are available for installation. Should any material procurement issue arise that will jeopardize the start date, the Subcontractor shall promptly notify the Contractor so that the issue can be managed.
20	Subcontractor responsible for installing all joints as shown on the architectural and interior drawings. Joints to align on mullions, edges, openings, etc. as shown on the drawings and as listed in the specifications. Subcontractor responsible for field verifying all joint locations to provide a clean, finish looking product.
21	The subcontractor shall employ, or subcontract, sufficient labor to specifically provide multiple crews to perform the scope of the panel work to maintain the pace of the schedule. Panel work must occur in multiple locations at the same time.
22	Subcontractor to install all panel systems per manufacturer's warrantable requirements. There shall be no "oil canning" effect on any of the panel systems installed. If any panels are found to have this effect in the field, it is the responsibility of the subcontractor to promptly replace/repair the panelling to eliminate the oil canning effect.
23	Subcontractor is responsible for coordinating with other trades for all penetrations, trim rings, flashings, etc. as shown on architectural drawings. Subcontractor is responsible for providing escutcheons / trim rings for other trades penetrations.
24	Subcontractor must protect the Roof System and all adjacent work from any damage associated with this scope of work for the duration of this Subcontractor's work. Subcontractor will be held liable for any damage to the roof and adjacent work that is caused by this Subcontractor.
25	Subcontractor shall provide all labor, material and equipment to furnish and install the metal coping above the metal panels at roof elevations.
26	Provide final cleaning of all panels. Subcontractor is responsible for protection of surrounding finish products during installation and cleaning operations. Cleaning must be completed prior to demobilizing from each area of Work. This includes but is not limited to clearing of all weep holes and drainage channels, etc., in accordance with the manufacturers recommended cleaning instructions.
27	Subcontractor shall provide all labor, material, and equipment to furnish and install caulking as required to create a water tight condition at all metal and concrete panel locations. Metal and concrete panels to be dry seal.
28	Subcontractor responsible for all field measurements and verification. Subcontractor responsible for all field cutting of panels as required, any cutting shall be per manufacturer's installation requirements.
29	Subcontractor to provide all warranties as listed in the specifications.
30	Subcontractor responsible for all blocking required.
31	Subcontractor responsible for all hoisting, equipment, labor, materials, etc. required for installation of all panel systems and locations.
32	Includes all column wraps both interior and exterior

Midway Event Center SCOPE OF WORK - BP 0750 Roofing

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	061000 Rough Carpentry
	075552 Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing
	077200 Roof Accessories
	075419 Polyvinyl-Chloride (PVC) Roofing
	077616 Roof Deck Pavers
	079200 Joint Sealants
	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.

SCOPE OF WORK

1	Subcontractor includes a complete membrane roof system per the drawings and specifications at all locations shown and implied on the drawings and specifications.
2	Subcontractor is responsible for furnishing and installing a turnkey complete roof system, including but not limited to, membrane roofing, roofing insulation, cover board, flashing, plywood, ice and water shield, fasteners/anchors, coping, etc.
3	Subcontractor is responsible for furnishing and installing all flashing, counter flashing, coping, roof expansion joints, roof expansion joint covers, scuppers, secondary/overflow scuppers, scuppers/overflow drains, conductor heads, downspouts, brackets, term bars, etc.
4	Subcontractor shall furnish and install the modified bituminous membrane roofing. The Scope of Work includes, but is not limited to, the modified bituminous membrane system, flashing systems, fascias, deck overlayment board, asphalt primer, rosin paper, sealants, walk treads, vents, substrate boards, expansion joints systems, smoke vents, fasteners, and all accessories for a complete installation.
5	Subcontractor shall provide submittals within 4 weeks from the issued Letter of Intent by the Construction Manager.
6	Subcontractor shall furnish and install the expansion joints. Subcontractor shall include the expansion joint covers, flashing, sealants, stiffeners, fasteners, and all accessories necessary for a complete installation.
7	Subcontractor is responsible for coordinating all roof penetrations with the respective subcontractors and making all roof penetrations weather tight, including three (3) additional mobilizations that may be necessary towards the conclusion of the project as directed by the Construction Manager.
8	Subcontractor shall furnish and install a hard barricade fall protection system at the beginning of their work and maintain it until Certificate of Occupancy is received. Subcontractor shall include fall protection for all personnel working at the roof level and shall cover 100% of the roof area. The hard barricade fall protection system shall maintain compliance with OSHA regulations.
9	Subcontractor is responsible for furnishing and installing all roofing specialties.
10	Include all trim, fasteners, sealants, etc. to provide a complete water tight roofing system. This includes all manufactures warranties required in the specifications.
11	Subcontractor includes all metal gutters, collector heads, downspouts, etc. as shown on the contract documents.
12	Subcontractor includes all aluminum brake metal, standing seam metal roof systems, metal copings, etc. and all similar type conditions.
13	Subcontractor to flash and all seal all roof penetrations including but not limited to plumbing stacks, sprinkler riser lines, electrical conduit, curbs, chases, trash chutes, doghouses, mechanical curbs, roof vents, roof anchors, steel columns, etc. for a complete and watertight system.
14	Parapet kickers to be fully wrapped with membrane roof membrane and protection board.
15	Roof membrane to extend up roof kickers and parapet walls at all buildings. Roof cover board and insulation shall extend to exterior wall framing at all locations to create full thermal envelope at the roof deck.
16	Subcontractor is responsible for furnishing and installing all roofing specialties, accessories, roof expansion joints per membrane manufactures standards, ice and water shield at eaves, crickets, rakes and valleys, ridge vents, curbs, boots, etc.
17	Subcontractor will be required to install all scope items (prefinished flashings, coping, etc.) for the building mock up.
18	Subcontractor is responsible for all prefinished metal and aluminum applications including all flashings, metal trim, roof coping, prefinished drip edges, roof parapet metal, metal at eaves, overflow scuppers, etc.

Midway Event Center SCOPE OF WORK - BP 0750 Roofing

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

19	Subcontractor includes all pre-finished metal flashings.
20	All copings to be shop fabricated.
21	Subcontractor includes all flexible flashings as detailed and required as part of its roofing and/or waterproofing systems.
22	All coping corners to be mitered and sealed water tight. Metal coping to be field measured prior to fabrication.
23	Subcontractor to install continuous sealant along bottom of metal coping and beneath all metal flashings at all locations per the project details.
24	Subcontractor is responsible for coordinating the sequence of all roofing details so that adjacent materials can be installed in the correct sequences as determined by the Contractor.
25	Subcontractor will be responsible for a final cleaning and broom sweeping of all roofs upon completion of work at time directed by GC. All materials shall be removed from the roof and placed in the dumpster, hauled off-site, or handed over to the GC for attic stock.
26	Include multiple mobilizations for execution of the work of this subcontract. Install roof system vapor barrier layer on initial site mobilization then return for subsequent roof system layers when directed by the CM. There is limited on site storage thus material deliveries will be phased per building.
27	Subcontractor is responsible for participation in a pre-installation meeting to ensure that the roofing system has been completely coordinated and all details on the contract documents are fully understood. Any details requiring further clarification should be clarified via the RFI process in advance of starting work on site.
28	Subcontractor to provide all roof shop drawings, product data, and samples for approval.
29	Subcontractor to be responsible for all costs for the repair and/or replacement of any finished materials damaged as a result of roof leaks.
30	Includes all roof walk ways and pads. Final layout of walkways to be confirmed in field based on installed conditions of rooftop equipment, penetrations, etc. prior to installation.
31	Membrane roofing to extend up and over parapet walls. Coverboard and insulation to extend to exterior wall framing beneath parapet kickers.
32	Subcontractor includes membrane roofing, metal cap flashings, termination bars, counterflashings, etc. at unit canopies roofs, overhangs, and framing bump outs.
33	Subcontractor to install curb flashings for rooftop mechanical units and equipment.
34	Roof edge flashings and copings shall be shop fabricated in lieu of factory fabricated.
35	Subcontractor to furnish and install roof hatches with safety railings as shown on the contract documents.
36	Complete roofing system to be installed according to all manufacturer details and per the project detail in order to meet all warranty requirements of manufacturer and as listed in the project specifications.
37	Subcontractor to furnish and install all prefinished aluminum flanges and flashings at roof scuppers and downspout connector heads.
38	Subcontractor includes warranty per the drawings and specifications.
39	Subcontractor includes building up and tapering of roof system to provide all required sloping and positive drainage to roof drains, scuppers, etc. as required.
40	Subcontractor includes all roof parapet and balcony thru-wall scuppers. All other scuppers at roof parapet walls, downspout collector heads, terrace and courtyard walls, etc. included in membrane roofing base bid.
41	Subcontractor includes flashings for all roof penetrations including for all window washing equipment per contract documents.
42	Includes Roof expansion joints, all flashings, wraps, cover plates, etc. for finished and water-tight system by Subcontractor.
43	All roof blocking including roof nailers, parapet blocking, and plywood at parapet bracing.
44	Includes waterproofing, pedestals, and pavers at outdoor terrace.

Midway Event Center SCOPE OF WORK - BP 0810 Doors / Frames / Hardware

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	081113 Hollow Metal Doors and Frames
	081216 Aluminum Frames
	081416 Flush Wood Doors
	087100 Door Hardware

SCOPE OF WORK

1	This scope of work includes a complete commercial doors, frames, and hardware package per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
2	This scope of work includes a complete building doors, frames, and hardware package per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
3	All doors and frames to be physically labeled to match openings, designations, and fire ratings noted on drawings.
4	Subcontractor shall include the required coordination with other trades including, but not limited to framing, security/access control, aluminum door supplier/installers, and glazing.
5	Subcontractor will provide doors and frame assemblies in compliance with all fire ratings as called for in the project drawings and specifications.
6	Subcontractor shall punch, dimple, install, and Bondo any hollow metal frames in precast walls and frames that cannot be installed during masonry work due to delivery damage, inventory issues, or by any other fault of this subcontractor. Those hollow metal frames installed in precast and masonry walls shall have a protective coating on the back of the frame.
7	This Subcontractor shall include the provision of any special anchors to allow for the complete installation of frame including but not limited to punch and dimple anchors for masonry frames (that are not able to arrive before Masonry installation), z-clips for drywall frames, etc.
8	All materials provided are to be in compliance with the UL specifications and details provided in the contract drawings. Doors and frames shall be labeled as required by UL and local code.
9	Subcontractor to furnish and deliver all welded hollow metal and steel frames for unloading and installation in the field by Others. Frames to be factory primed.
10	Subcontractor is responsible for required coordination with the electrical/low voltage/security contractor to ensure that hardware that is furnished is coordinated with low voltage plans and specs. Subcontractor includes electric hardware for all access controlled openings and card reader locations as called for on both the LV drawings and hardware specifications.
11	Subcontractor to prep all doors and frames for access control conduit and wiring by others per LV drawings and detail sheets.
12	Subcontractor shall provide door control wiring diagram submittals that indicates all specific electronic hardware devices and power supplies.
13	Subcontractor is responsible for required coordination with the fire protection contractors to ensure that hardware that is furnished is coordinated with fire alarm plans, specifications, and code requirements.
14	Door hardware specifications, finishes, etc. to be per the hardware schedule, headings, and designations shown on the Architectural door schedules and hardware specification.
15	Subcontractor is responsible for providing necessary construction cores and keys to maintain a secure building as coordinated with the C&T superintendent.
16	Subcontractor will provide doors and frame assemblies in compliance with all fire ratings as called for in the project drawings and specifications.

Midway Event Center SCOPE OF WORK - BP 0810 Doors / Frames / Hardware

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

17	Subcontractor includes all door protection items (kick-plates, door protectors, etc.) per the door schedule, specs. and other contract documents.
18	This package is to supply and install and remove when no longer needed, temporary doors and locks at all exterior entrances, IT, Mechanical, Electrical, and Elevator equipment rooms.
19	Subcontractor to furnish all aluminum door hardware to Alum. Storefront contractor for installation by others. Subcontractor to provide hardware templates to aluminum door and frame suppliers for coordinated prep. Receiving subcontractor shall sign ticket verifying receipt of all provided hardware and assume responsibility of all materials lost or damaged upon possession.
20	Material provider is responsible for procuring and delivering all required materials to start framing activities per the project schedule and maintain production for the duration of the metal framing, exterior windows, and skin scopes of work. Material provider will be responsible for any costs associated with down time related to the installing contractor being delayed due to material delivery delays.
21	All materials to be shipped to site on "just in time" basis. Materials to be stored off site and only delivered upon directive from C&T or framing contractor.
22	Subcontractor is responsible for a complete submittal package to be approved by the architect and/or Engineer of Record confirming material types, grades, specifications, and compliant design to be used on the project.
23	Subcontractor shall lock in all material pricing upon issuance of the Subcontract agreement. Contractor will not accept any change orders for material price increases, lower-tier Material Provider cost increases, or fuel cost escalation.
24	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included above are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.
25	Subcontractor is responsible for furnishing material to meet the project sequencing and progress schedule. This includes all necessary material deliveries, unloading, traffic control, staging to install location, etc.
26	Subcontractor is responsible for participating in pre-installation meetings associated with the scope of work. Subcontractor is also responsible for participating in an owner keying meeting if required to ensure it is properly coordinated.
27	Subcontractor is responsible for coordinating with the storefront/curtain wall contractor to ensure the appropriate hardware is being furnished and the necessary prep/adjustments are made.
28	Subcontractor is responsible for required owner training.
29	Subcontractor shall furnish permanent cores for all lockable hardware provided in this contract.
30	Subcontractor to provide all permanent cores and keying. Subcontractor to submit keying schedule for owner and GC review.
31	Includes Bondo repairs to hollow metal doorframes installed by others. Repairs shall be considered as eight (8) man-hours of repairs per floor level per building. Repairs include cost of all tools, labor, materials, etc.
32	Subcontractor shall include an additional 250 man hours and appropriate materials for hollow metal frame, hollow metal door, and wood door repair/touch ups due to damage by others as requested by the Construction Manager. This repair/touch up work will be tracked via daily reports and any remaining, unused quantity will be credited back to the Construction Manager and Owner at the hourly rate for this work.
33	Subcontractor includes all panic hardware for exterior site fence gates and openings
34	Includes repairs to all pre-finished wood doors. Repairs shall be considered as Eight (8) man-hours of repairs per floor level per building. Repairs include cost of all tools, labor, materials, etc.
35	Subcontractor shall furnish and install building knox boxes to meet AHJ Requirements.

Midway Event Center SCOPE OF WORK - BP 0840 Aluminum and Glass

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	084113 Aluminum-Framed Entrances and Storefronts
	084413 Glazed Aluminum Curtain Walls
	088000 Glazing
	089119 Fixed Louvers
	079200 Joint Sealants
	07 84 00 Firestopping
	07 84 00.01 Schedule of common firestop systems
	087100 Door Hardware
	089119 Fixed Louvers
	083513 Folding Doors
	08 51 13 Aluminum Windows

SCOPE OF WORK

1	This scope of work includes a complete system per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during
2	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.
3	Contract is intended to include all labor, materials, supervision, equipment, taxes, and safety measures for a complete aluminum window wall, storefront windows and doors, aluminum window installation.
4	Includes labor , material, and equipment for the complete install of all storefront and curtain walls systems including the doors and the hardware for those doors.
5	Includes all labor, material and equipment for all glazing required per the contract documents
6	Includes all exterior fixed louvers
7	Includes removal of all stickers and a final cleaning of all glass inside and out
8	Includes protection of doors and frames at 1st floor building entrances.
9	Include all barrowed lights in interior doors.
10	Includes all mirrors for the project
11	Includes all joint sealants from this packages scope to next surface.
12	Includes all integral flashings and counterflashings required.
13	Includes prefabricated Alumnimun vendor awning on sheet A201.
14	Includes all Sun Control devices / Sunshades per spec section 08 44 13
15	Includes operable windows and folding door on the South elevation deliniated by the notes SP 1 and SP 2, SF1 and SF2 per sheet A201
16	At the time of "dry-in" as established by the Contractor all openings must be enclosed. Temporary measures approved by the Contractor may be accepted if permanent enclosures are not in place. Temporary measures must be capable of maintaining adequate temperature and humidity conditions. Provide maintenance of temporary enclosures.
17	Protection of all work installed by this Bid Package. This includes protection of all aluminum framing members and glazing. This Bid Package responsible for providing a window protection film on all glazing systems. This Bid Package is responsible for verifying film is compatible with manufacturer's means of protection. This Bid Package responsible for final removal of aluminum and glass protection at the direction of the Contractor; assume separate mobilization to remove protective measures.

Midway Event Center SCOPE OF WORK - BP 0840 Aluminum and Glass

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

18	Includes perimeter fire stopping for a complete system as it relates to this scope at slab edge intersections of glass systems. Firestop to comply with the performance requirements of the system in which it is installed. Examine substrates; do not proceed until substrate is satisfactory. Prep and clean joints before installation. Where curtainwall passes slab edge, provide fire stopping to equal rating of the floor assembly and close the gap/ Provide clips, angles, supports, etc. as necessary for firestop installation. Include sealants and fire safing insulation as specified. Protect during and after the curing period to prevent damage.
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Midway Event Center SCOPE OF WORK - BP 0920 Drywall and Framing

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	The metal framing, insulation, drywall, exterior sheathing, and EIFS scope of work. All work to be done per the project drawings and specifications.
	This scope of work includes a complete system per the drawings and specifications. In addition, the Subcontractor and
	Division 01 General Requirements - All Sections
	054000 Cold-Formed Metal Framing
	061000 Rough Carpentry
	061600 Sheathing
	072100 Thermal Insulation
	079219 Acoustical Joint Sealants
	092116 Gypsum Board Shaft Wall Assemblies
	092216 Non-Structural Metal Framing
	092900 Gypsum Board
	095113 Acoustical Panel Ceilings
	079200 Joint Sealants
	09 27 13 Glass Fiber Reinforced Gypsum (GRG/GFRG) Fabrications

Metal Framing

1	All cold formed metal framing, both structural and non-structural. Includes all walls, ceilings, grid systems, soffits, bulkheads, deflection tracks, etc.
2	Subcontractor shall provide all labor, material, and equipment to furnish and install all metal stud framing as required. This framing package shall include, but is not limited to; metal track, acoustical sealants required for the installation of framing materials, metal studs, clips, slip connections, bridging, bracing, backing plates, furring, furring channels, resilient channels, stiffeners, fasteners, anchors, clips, gussets, hangers, plates, foam gasket isolation strips, etc
3	Subcontractor shall provide all labor, material, and equipment to furnish and install all ceiling suspension systems. These ceiling suspension systems shall include, but are not limited to; hangers, channels, anchors, fasteners, angles, grid, etc.
4	Subcontractor includes all materials in order to provide turnkey framed assembly systems in accordance with the project drawings and specifications including for all fire and STC assembly ratings specified.
5	The General Contractor shall provide horizontal and vertical control points. Subcontractor shall provide their own horizontal and vertical controls as required to perform this work and back check their controls against those provided by the General Contractor. The control that subcontractor will provide for their work includes all framing, and specifically unit framing.
6	The subcontractor shall provide all labor, material, and equipment to layout all interior walls, exterior walls, partition walls, soffits, ceilings, shafts, etc. The subcontractor shall completely frame all walls, shafts, soffits, ceilings, etc. in each unit, before leaving the unit, including all applicable pre-rock assemblies. The subcontractor acknowledges that the exterior framing of the balcony areas may occur while structural re-shoring materials and equipment are still in place (at cantilevered locations only) as required by the structural drawings
7	Subcontractor shall provide all labor and equipment to receive, unload, inspect, transport to individual floors, stage, and set all hollow metal door frames that are scheduled to be installed in framed metal walls. Upon the arrival of these materials at the site the Subcontractor shall immediately inspect each frame, note any damage, and inform the General Contractor of the damage in writing via an itemized list. Subcontractor shall take the variance of concrete poured on an elevated slab into account when setting the head elevation of door frames and uniformly set the head elevation of all doors above the elevation of the floor slabs.

Midway Event Center SCOPE OF WORK - BP 0920 Drywall and Framing

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

8	Subcontractor shall provide all connections between cold formed metal framing and structural or miscellaneous steel, including welded or mechanically fastened connections
9	Subcontractor shall provide all labor, material, and equipment to frame all openings required for MEP penetrations, dampers, and louvers through framed walls as needed. The locations, dimensions, and layout of these opens shall be provided by the MEPS subcontractors and coordinated with the General Contractor.
10	Subcontractor shall provide all labor, material, and equipment to frame all openings for access panels, fire extinguishers cabinets, recessed, and semi-recessed accessory items. All access panels, fire extinguishers cabinets, and accessories shall be provided by others. The rough opening dimensions for these panels, cabinets, and accessories shall be provided to the subcontractor prior to the installation of framing. The location of the access panels shall be provided by the subcontractors who provide the access panels. The subcontractor shall install all access panels which are provided by other trades. The subcontractor shall not install fire extinguishers cabinets, recessed, and semi-recessed accessory items
11	Subcontractor shall provide all labor, material, and equipment to furnish and install acoustical sealants and fire rated sealants as required for this SOW
12	Subcontractor shall provide all labor, material, and equipment to furnish and install dropped soffits, bulkheads, etc. throughout.
13	Subcontractor shall provide all labor, material, and equipment to furnish and install four (4) each 48" x 96" sheets of fire rated plywood in each electric room, IDF room, and equipment room. The subcontractor shall also plan to furnish and install ten (10) additional sheets of the same size and type at the direction of the General Contractor on an as needed basis
14	Subcontractor understands and acknowledges that the ceiling soffits may require steps, or changes in framing elevations, as required to eliminate gaps with cabinets, etc.; all labor, material, and equipment to perform this work is included in this subcontract. The General Contractor will provide this information prior to the commencement of framing activities, steps or drops added or changed after framing is installed shall be treated as additional cost
15	The subcontractor shall provide dedicated labor walk with the General Contractor, and the AHJ, during inspections and immediately perform corrections to expedite the inspection review process
16	Subcontractor shall provide all labor, material, and equipment to removal all excess material from each work area immediately upon the completion of work. Area to be broom sweep at end of work day or at the completion of work in that area.
17	Delegated design and engineering as required in the project specifications. Drawings and calculations to be submitted for review and approval and shall be stamped by a licensed Professional Engineer in the state of the project location. Includes engineer CA work as required for coordination and clarification of the engineered system throughout the construction duration and in coordination with other trades and building systems.
18	Subcontractor acknowledges all deflection requirements listed in the project drawings, structural notes, and specifications and includes all materials in order to be within the limits provided in the contract documents.
19	All wall layout by subcontractor. Control points to be provided at each floor by others for layout of subcontractor work.
20	All in-wall wood blocking and strapping by subcontractor - includes cabinets, closet rods and shelves, grab bars, toilet partitions, handrails, mirrors, toilet accessories, shower doors, shelving, roller shades, TVs, FECs, and at all locations noted on plans. All wood blocking to be fire rated as required by code.
21	Includes all blocking for interior and exterior window and door frames.
22	Includes all roof blocking including roof nailers, parapet blocking, and plywood at parapet bracing.
23	Includes all framing, sheathing, etc. for building mock up shown on the contract documents.
24	Includes framing, materials, and installation of access doors for other trades work.
25	Includes allowance of (50) access panels for furnish and install by this Subcontractor.
26	Includes receiving, handling, storing, and installation of all HM door frames where located in metal framed walls.

Midway Event Center SCOPE OF WORK - BP 0920 Drywall and Framing

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

27	Subcontractor shall furnish and install wood templates and spreaders for each hollow metal door frame. Subcontractor shall verify that each hollow metal frame is square and not racked prior to and after drywall hanging activities. Subcontractor shall promptly correct any deficiencies found. Subcontractor shall confirm in writing to the Construction Manager that this verification has been completed.
28	Includes removal of all elevated slab fall protection at all floors upon completion of exterior wall openings. Subcontractor includes fall protection barriers at all framed exterior openings including all windows and doors.
29	Subcontractor shall furnish, install, and maintain temporary barricades in front of each of the elevator openings, wheelchair lift openings, and stair openings at each level. The barricades shall be made in such a way that they can be easily removed and replaced by Elevator subcontractor as they perform their work.
30	All walls to be constructed per the partition schedule and as required to meet applicable fire ratings per UL details - includes all framing, bracing, furring, GWB, insulation, sealants, taping, etc.

Shaftwalls & Gypsum Board

31	This subcontract is intended to include a full drywall and shaft wall package.
32	Subcontractor shall provide all labor, material, and equipment to furnish and install all gypsum board assemblies as required. These assemblies shall include, but are not limited to: shaft wall enclosures, stair enclosures, chase enclosures, gypsum liner panels, core boards, metal framing, corners, edge trims, assembly specific control joints, fasteners, anchors, sound attenuation, sealants, etc.
33	Subcontractor shall provide all labor, material, and equipment to label all shaft walls and rated assemblies as required.
34	Subcontractor shall provide all labor, material, and equipment to furnish and install all enclosures so that they meet the criteria for sound and fire rating as applicable. This work shall include, but is not limited to: framing members, runner tracks, fire stop tracks, jamb struts, insulation, etc.
35	Subcontractor shall provide all labor, material, and equipment to reasonable clean out, and/or vacuum as needed, all enclosures prior to the installation of gypsum wall board.
36	Subcontractor shall furnish and install exterior rated gypsum products for exterior ceiling and soffit locations as applicable. Subcontractor shall also furnish and install tile backer board at all ceramic tile, locations. All tile located at rated assemblies shall be pre-rocked as required to meet the project schedule. This may require a separate mobilization which is included in the contract sum.
37	Subcontractor shall provide all labor, material, and equipment to pre-rock and finish all rated walls above ceiling to deck, HVAC closets full height, and interior of electrical rooms one side full height with moisture resistant gyp. board prior to dry-in. Includes 5-side drywall as required to keep fire rating as required by AHJ.
38	Subcontractor is responsible for furnishing and installing all rated shaft wall assemblies required. Note that the bottom of all shafts must have a rated horizontal shaft slab opening and complete the assembly. These components are often omitted from the design documents but nevertheless are required to achieve a fire rated system. This subcontract includes these horizontal assemblies, wither shown or not in the design documents.
39	Subcontractor is responsible for all fire-safing, fire blocking, head joint fire stopping, etc. as required for all metal framed gypsum wall and ceiling assemblies, CMU walls and MEP penetrations are excluded from this requirement.
40	Subcontractor is responsible for coordinating with expansion joint/control joint sizes and locations per manufacture's recommendations.
41	Subcontractor shall provide all labor, material, and equipment to furnish and install all wall board finishing. This work shall include, but is not limited to: level four (4) finish throughout the project, joint tape, joint compound, skimming, sanding, finishing, etc unless otherwise noted in drawings or specifications.
42	Subcontractor shall provide all labor, material, and equipment to furnish and install a level 5 finish behind all wall covering products including but not limited to vinyl wall coverings, custom printed graphics, etc. Includes Level 5 finish at all semi-gloss (PT-XC) and gloss (PT-XD) paint locations and other areas specifically indicated.

Midway Event Center SCOPE OF WORK - BP 0920 Drywall and Framing

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

43	Subcontractor shall include an additional 200 hours of manpower and associated materials to complete touch ups, patches, etc. as requested by the Construction Manager. This additional work will be tracked via daily reports and any remaining, unused quantity will be credited back to the Construction Manager and Owner at the hourly rate for this work.
44	Subcontractor is responsible for furnishing all sheetrock point up. Initial point-up will be performed with temporary lighting furnished by Subcontractor and will be ready for prime and first finish coat after completion. Subcontractor to provide written documentation that walls are ready for paint. Final point-up will be performed after finish trade installations (cabinets, granite, fixtures, flooring, etc.) prior to final paint. Final point-up should address areas that have been impacted by finish trade work or by illumination due to permanent lighting.
45	Subcontractor shall ensure that ceilings, walls, and floors are free of "sanding" dust prior to the application of primer and paint.
46	Prior to commencing the delivery of GWB materials, the subcontractor must submit a staging plan to the general contractor for review and approval. GWB stored on floors must be stored on blocking or dunnage to prevent contamination by water on the concrete floor.
47	Subcontractor understands and acknowledges that specific areas of every floor cannot be framed, hung, and/or finished with the balance of the mass production work because of the exteriors hoists (buck hoists), and also the need for material storage and staging areas. The work required to complete these areas must be performed after the hoists are removed, and/or after the balance of the framing, GWB, and finishing has been performed. Additional effort, mobilizations, and/or lost production required to perform this work is included in this subcontract agreement at no additional expense to the General Contractor.
48	Subcontractor shall provide all labor, material, and equipment to furnish and install FRP at all mop sink locations and other areas in commercial kitchens as required by local building code and contract documents.
49	Subcontractor includes all drywall control and expansion as required by the project documents and industry standards
50	Subcontractor includes all corner beads, j-beads, l-beads, trim, fry reglets and drywall reveals as indicated in the Architectural and ID drawings and details. This scope included but is not limited to detail 12/A652.
51	Subcontractor includes mold resistant GWB at wet wall locations, wall modifier M locations, and all exterior walls
52	Subcontractor shall pre-rock/top out with moisture resistant drywall at all framed locations. Subcontractor shall include pre-rock and moisture resistant drywall from finished floor to top-out at all Mechanical, Electrical, Telecommunication, MDF, and IDF rooms
53	Includes sealants at top/bottom of walls (acoustical, joint sealants, fire caulk, etc.) as noted on the contract documents and for STC rated assemblies.
54	Includes all associated GWB and insulation related modifications as called for on architectural wall modifications
55	Includes fire retardant plywood ILO of gyp. board at wood and wall panel finish locations as noted on both Architectural plans and at all wall panel finish locations noted on the ID drawings including but not necessarily limited to wood panels , Solid Phenolic Wall Panels, Specialty Wall Panels, and Ornamental Woodwork finishes. Plywood to be installed flush with surrounding GWB. GWB to remain where required for fire rating per UL requirements with plywood installed flush with face of stud inside wall cavity.
56	Includes all tile backer board and mold/moisture resistant drywall bathrooms and tile finish areas.
57	Includes furnish and install of all RFP
Insulation	
58	Subcontractor shall provide all labor, material, and equipment to furnish and install all thermal and acoustical insulation located inside framing. This work shall include, but is not limited to: glass fiber blanket insulation, rock wool insulation, accessories, etc. per drawings and specifications

Midway Event Center SCOPE OF WORK - BP 0920 Drywall and Framing

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

59	Includes all edge of slab furring channels and firesafing
60	Includes all batt insulation in stud cavities.
61	Continuous rigid insulation behind masonry walls is by mason
62	Includes all glass fiber blanket insulation R19 min.
63	Includes all sound attenuation blankets at wall modifier A
64	Includes all mineral wool board insulation R-49 min or equal substitute as required to meet minimum R-value requirements.
65	Includes all associated insulation related modifications as called for on architectural wall modifications
66	Includes foam around exterior openings for air tight system
67	Includes all R-30 unfaced batt insulation at above ceiling heated plenum areas.

Exterior Sheathing

68	Subcontractor shall provide all labor, material, and equipment to furnish and install all glass mat sheathing as required for walls, parapets, etc. Sheathing work shall include, but is not limited to: sheathing, fasteners, gaps as required to abut structural elements and/or dissimilar materials, etc. Sheathing installation tolerances must meet the required substrate criteria associated with the approved air barrier system.
69	Subcontractor shall ensure that the proposed sheathing system complies with the requirements of the roof system requirements, subcontractor shall furnish and install Dens Deck Prime sheathing materials at parapet wall locations, as needed, to comply with the requirements of the roofing manufacturer.
70	Subcontractor includes roof and parapet sheathing
71	Subcontractor includes all exterior glass-mat faced gyp. sheathing and FRT plywood sheathing per the contract documents.

ROUGH CARPENTRY & BLOCKING - SCOPE OF WORK - TRADE SPECIFIC

72	All in-wall wood blocking and metal strapping by subcontractor as required - includes cabinets, countertop supports, closet rods and shelves, grab bars, shower seats, microwaves, toilet partitions, windows, exterior doors, handrails, mirrors, toilet accessories, shower doors and curtain rods, shelving, roller shades, door and window frames, handrails, unit prehung doors, unit entry doors, expansion joints/cover, metal screenwall, water fountains, barn doors, guardrails, TVs, FECs, railing and handrails when located in CFS framed walls, millwork, cast stone system anchors, artwork, and all locations noted on plans. All wood blocking to be fire rated as required by code. Includes all blocking for interior and exterior window and door frames. Includes blocking for cabinet, doors, bath accessories, shower doors, grab bars, ceiling trim, crown, chair rail, windows, shower controls, t-stats, shower/tub head, etc.
73	Includes all blocking per Interior drawings and details as required for millwork, artwork, fastening, furring, etc. Includes blocking for all unit entry wall trim.
74	Includes all roof blocking including roof Nailers, parapet blocking, and plywood at parapet bracing.
75	Furnish and install fire rated wood blocking and/or strapping in metal framed unit walls for all casework, accessories, handicap accessories, shower doors, shelving, TVs, etc.
76	Furnish and install fire rated wood blocking for all interior doors and exterior framed openings.
77	Include all wood blocking and plywood sheathing as required for roof installation including on interior face of and top of parapet walls.

Other

78	Provide full-time dedicated progressive clean-up labor based on (6) laborers for (48) weeks. These workers will provide ongoing trash and debris removal for the entirety of the project square footage at the direction of C&T. NOTE that these composite clean-up forces shall be treated separately from on-going progressive clean up of all trades' own work, which will still be required.
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Midway Event Center SCOPE OF WORK - BP 0920 Drywall and Framing

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

79 Provide all trash and debris removal for your scope of work.

Construction Equipment & Lifts

80 Subcontractor acknowledges the IRN 004 Exhibit B - Building Exterior Equipment & Access Plan as issued with the original Information To Bidders. Subcontractor acknowledges and includes all required items according to the following:

81 Certified equipment operators as required to access all areas of Building identified with equipment provided by Clancy & Theys.

82 Subcontractor to provide daily inspections, documentation, reports as required by OSHA and equipment manufacturers when using any and all Contractor provider equipment.

83 Subcontractor to provide housekeeping/basic maintenance to equipment/scaffolding during use. Subcontractor to assume all damages and repair costs associated with Subcontractor misuse.

84 Subcontractor equipment operator training to be provided by Contractor

85 Subcontractor to sign and return Clancy & Theys' equipment usage agreement prior to use of Contractor provided equipment.

Midway Event Center SCOPE OF WORK - BP 0966 Terrazzo Flooring

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	096623 Resinous Matrix Terrazzo Flooring
	079200 Joint Sealants
	This scope of work includes a complete system per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.

SCOPE OF WORK

	Floor preparatory work necessary for the recommended installation of the products including variances in the slab substrate that exceed the tolerances outlined in the concrete specifications or as a result of building 1 demolition in existing buildings. Gypsum based floor patching material is not allowed.
	2 Buffing, including both initial cleaning after installation and final cleaning prior to Owner Acceptance
	3 Temporary protection for all floor finishes in this Subcontractor until Owner Acceptance.
	4 Ensure adhesives for terrazzo are compatible with curing compounds utilized on the concrete.
	5 Cleaning and acceptance of surfaces to receive terrazzo applications.
	6 Include all terrazzo applications, trim, and accessories for a complete and functioning system.
	Caulking and sealants of all fabrications and assemblies furnished under this Subcontractor and as follows: (1) To 7 one another. (2) To the work of other trades to which they adjoin that is in place prior to work of this Subcontractor.
	8 Subcontractor shall include 5% replacement cost of damaged flooring and base materials based on the total quantity of the project, to make repairs for unidentifiable damages caused by others prior to Owner Acceptance.
	This Subcontractor will verify all substrate conditions and notify C&T twenty-one (21) days prior to the start of work of any deficiencies in substrate, outside of the tolerances accepted within the scope of this Subcontractor. This subcontractor shall assume that the concrete substrate floor moisture control shall not pass the moisture test and PH testing as required by the manufacturer(s) and shall include all proper moisture and PH mitigation to meet the contract schedule. This includes but is not limited to concrete sealers or any other methods in remediating the moisture and PH levels so that flooring may be installed without issue. Provide copies of 9 moisture and PH testing performed by this subcontractor to C&T.
	10 Subcontractor shall carry provisions for eight hours of manpower and associated materials to complete floor preparation at each room scheduled to receive Terrazzo flooring
	11 Subcontractor shall coordinate final finished floor height to match adjacent floor finishes. Subcontractor shall include floor preparation and leveling as necessary to ensure a smooth transition that is acceptable to the Owner, Design Team, Construction Manager, and ADA requirements.
	12 Subcontractor shall completely seal all floor and toilet drains with inflatable balls prior to beginning work.
	13 Subcontractor shall not clean tools or dispose of mortar or grout into the building drainage or sanitary systems.
	14 Subcontractor shall verify floor drainage operations in each room prior to beginning work and again after completion of the work. This shall be witnessed by the Construction Manager to avoid any post work cost implications against Subcontractor for repairing damaged systems
	15 Subcontractor shall arrange for and schedule a Terrazzo manufacturer's representative to complete inspection of the work in accordance with the plans and specifications.

Midway Event Center SCOPE OF WORK - BP 0966 Terrazzo Flooring

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

16	Subcontractor shall comply with NTMA's written recommendations for Terrazzo and accessory installation.
17	Upon completion of a given area, Subcontractor shall furnish and install temporary protection for all BP 0966 – Terrazzo work. The temporary protection must include 6 mil (minimum) plastic and a high strength, flame retardant material such as Cover Guard. Damage resulting from lack of said protection will be the responsibility of BP 0940 – Terrazzo. Removal of the temporary protection will be by others.
18	Subcontractor shall review the Architectural and Structural drawings and specifications prior to providing submittals to ensure that slab depressions, floor substrates, wall substrates, and expansion joints meet the requirements of the submittal data and the intent of the contract documents. Any area which does not appear to drain properly shall be brought to the attention of the Construction Manager prior to the installation of flooring materials.
19	Subcontractor shall include all in place mockups and samples as required by the plans and specifications.
20	Removal of all waste / by product of the operation from site is included in this package.
21	Includes all precast terrazzo specifically at the monumental stair treads and landing.

Midway Event Center SCOPE OF WORK - BP 0990 Painting

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	099113 Exterior Painting
	099123 Interior Painting
	097200 Wall Coverings

SCOPE OF WORK

1	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.
2	Subcontractor shall provide a turn key painting, wall covering, coatings, etc
3	Subcontractor to furnish and install all wallcoverings per plans and specifications.
4	Paint sheen as required per the contract documents
5	Include samples for all paint colors/finishes.
6	Subcontractor to caulk transition from door casing and jamb to flooring at every unit prehung door and cased opening to fill in gap. Caulk to match flooring color.
7	Subcontractor includes cabinet/countertop protection when painting. Includes painting around fixtures, MEP-FP trim, etc.
8	Subcontractor to paint all bollards.
9	Subcontractor to paint architectural steel.
10	Subcontractor to tape any fire alarm conduit/boxes/devices/etc. as required.
11	Subcontractor to wrap all outlet, switch, etc. cover plates where there is wall covering with specified wall covering.
12	Subcontractor to end match all wall coverings.
13	Subcontractor to paint behind phenolic interior panels and other paneling as called out in the ID and Architectural drawings.
14	Subcontractor to paint all steel angles, lintels, tube steel, channels.
15	Subcontractor to paint all exposed steel with high performance paint.
16	Subcontractor to paint stair risers, stringers, handrails, gates, guardrails, pickets, walls.
17	Subcontractor includes exterior steel handrail painting.
18	Subcontractor to paint all CMU where called out for on ID/Arch.
19	Subcontractor to paint all HM doors and frames.
20	Subcontractor to proactively procure material to meet project schedule.
21	Subcontractor includes painting at all Type IV ceilings (gypsum board ceiling/soffit).
22	Painted surfaces shall receive one prime coat and two finish coats (minimum) or additional if required to achieve uniform coverage.
23	Subcontractor includes all prep work to walls receiving wall coverings. All walls receiving wall coverings shall be prepared properly to ensure uniform adhesion.
24	Horizontal seams in wall coverings are not acceptable, unless specified as railroad installation. At all railroad installation location vertical seams are not acceptable.
25	No outside corner conditions are acceptable for wall covering to terminate or meet a painted surface. If found, subcontractor shall immediately bring this to the attention of the Contractor.
26	Includes all caulking, putty, etc. at all painted materials. Includes caulking between painted and dissimilar materials.
27	Subcontractor to provide all material and labor for punch list participation per General Scope punch list items. Subcontractor to provide dedicated labor to complete all punchlists generated by Contractor, separate from production labor. Subcontractor acknowledges that punch list work will need to be completed at the same time as installation/production work without affecting schedule durations. Subcontractor to promptly address and fix all punch list items upon receipt of punchlists. Subcontractor acknowledges there will be multiple punch lists for each unit and amenity/corridor/back of house area. Subcontractor agrees to fully participate in the C&T and owner punch process. This process is extensive and requires detailed work, coordination, and communication. Punch lists will be generated weekly and distributed to Subcontractor.

Midway Event Center SCOPE OF WORK - BP 0990 Painting

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

28	Subcontractor includes (2) painters and (2) cleaners to join the Contractor for all punch walks.
29	Subcontractor to provide all material and labor for punch list participation per General Scope punch list items. Subcontractor has included repair work including, but not limited to, re-painting, touchup paint, replacing wall covering, cleaning, caulking, sanding, putty, etc.
30	Subcontractor agrees to fully participate in the C&T and owner punch process. This process is extensive and requires detailed work, coordination, and communication. Punch lists will be generated weekly and distributed to Subcontractor. The Subcontractor agrees to put all manpower on said punch list until it is complete.
31	Subcontractor to paint all interior and exterior exposed steel.
32	Subcontractor to paint all ceiling coves.
33	Subcontractor to paint all access panels to match wall/ceiling color.
34	Includes paint at all paint grade materials.
35	Paint all cane detection in stairwells.
36	Subcontractor includes painting and sealed concrete at all back of house rooms.
37	Includes painting of exposed sprinkler piping paint and stairwells standpipe painting.
38	Includes painting all code exposed piping, conduit, etc. that is required by code.
39	Includes painting block filler at CMU/concrete walls, wall paint, stairwells, HM doors, HM frames, balcony ceilings (where gypsum board ceilings are present), etc.
40	Subcontractor shall provide all labor to clean substrates prior to paint application.
41	Subcontractor includes all equipment, hoisting, and material for exterior painting.
42	Subcontractor to provide all labor, material and equipment to furnish and install all painting of exposed piping.
43	Subcontractor to include all prep work for painting including caulking, putty, primer, sanding, taping, masking, protection of adjacent finishes and fixtures. This is inclusive of all nail holes in frames, trims and casings prior to paint.
44	Subcontractor to provide paint touch up after drywall point ups.
45	Subcontractor to protect all sprinkler heads as necessary during paint and drywall installation.
46	Subcontractor shall practice proper means and methods to protect their work from damage or weather. Excessive rework due to damage by others will require reasonable AND TIMELY documentation indicating man hours, location, cause and trade responsible for damage in the event the subcontractor plans to submit backcharges. Subcontractor shall photo document and track all time and materials as a result of rework and damages by others. Subcontractor understands that no change orders will be provided without adequate photo and timecard back up. All extra work order labor time tickets shall be reviewed and signed by a Clancy & Theys field superintendent.
47	Subcontractor includes all painting of all unfinished exterior surfaces including, but not necessarily limited to exterior HM and wood doors and frames, trim, exposed steel and metal decking, exposed structural concrete, lintels, soffits, exposed piping and conduits, handrails, bollards, CMU walls and surfaces, steel posts.
48	Subcontractor includes all Attic Stock and maintenance materials per specifications.
49	Subcontractor includes back priming of millwork and trim.
50	Subcontractor includes painting doors on all 6 sides.
51	Subcontractor to sand, fill in nail holes on all trim, casing, base board, doors, etc. prior to painting.
52	Subcontractor shall have a direct employee of their company on site at all times as a supervisor and decision maker. Subcontractor will have a full time field manager onsite during the duration of your scope of work. Subcontractor shall have a minimum of (2) supervisors, (1) for painting/wall coverings scopes of work and (1) for the cleaning scope of work.
53	Subcontractor to provide complete shop drawings, samples and product data within 14 working days from receiving a letter of intent or subcontract. Shop drawings shall be completed in 1-2 weeks.
54	Material quantities to be the responsibility of the subcontractor.
55	Subcontractor to field verify all dimensions.
56	Subcontractor to provide samples of all finish materials for owner and design team approval. Samples to be provided in a timely fashion in order to provide time for approvers review prior to ordering deadline.
57	Subcontractor to provide all submittals as noted in the specifications.

Midway Event Center SCOPE OF WORK - BP 0990 Painting

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

58	Subcontractor is responsible for coordinating material deliveries to meet the project schedule and all associated unloading, flagmen, traffic control, lane closures, etc. Subcontractor to provide all equipment (lulls, forklifts, etc.), operators, and labor for deliveries and unloading. No equipment will be provided by the Contractor.
59	Subcontractor shall include multiple mobilizations to complete your scope of work, as this is a phased project.
60	Subcontractor is responsible for working around finished products, walls, paint, etc. Any cost associated with damage to the work of others is the responsibility of the Subcontractor.
61	Subcontractor agrees to fully staff the job to keep up with the progress schedule and workflow. Subcontractor agrees to supply more manpower at the request of the Contractor.
62	Subcontractor agrees to be flexible and work with both Contractor and other trades when scheduling, sequencing, re-scheduling (when necessary), delivering, and installing work.
63	Subcontractor includes all warranties, attic stock and owner training per specifications.
64	Subcontractor responsible for all equipment required to install material at elevated heights. Subcontractor responsible for providing all of their own safety equipment to comply with OSHA and Clancy & Theys safety rules and regulations.
65	All materials to be per specifications and plans exactly, there shall be no alternates or substitutions. Subcontractor has acknowledged that their pricing is directly per specs and plans.
66	All pricing to be locked upon receipt of this subcontract and will not be subject to change regardless of escalation in material and/or labor pricing, tariffs, or other.
67	Subcontractor shall furnish and install surface preparation and field painting of exposed interior and exterior surfaces including, but not limited to, ferrous metals, concrete masonry units, zinc coated metal, poured and precast concrete, gypsum board, smooth wood, exposed mechanical and electrical systems, and piping.
68	Subcontractor shall removal all efflorescence at exposed masonry surfaces, whether scheduled to receive paint or not.
69	Subcontractor is responsible for applying paint and coatings when conditions are suitable and are forecasted to remain suitable for proper application and curing.
70	Subcontractor shall furnish, install, and remove all wet paint and coating signage required for this work.
71	Subcontractor shall include all painted letter signage
72	Subcontractor shall furnish and install concrete floor sealer per the plans and specifications.
73	Subcontractor shall furnish and install caulking for acoustical tile grid to the wall, acoustical tile grid to the perimeter of kitchen and food service appliances and equipment, acoustical tile grid to exhaust hoods, and around the perimeter of any items attached to walls. Subcontractor shall furnish and install all caulking also requested by the Health Inspector.
74	Painting shall include one final room by room, including exterior, touch-up painting just prior to Substantial Completion. This activity does not include any punch list work required.
75	Subcontractor shall not paint over fire rating labels and/or tags. If labels and/or tags need to be replaced because of being painted, BP 0990 – Painting will be required to do so at no additional costs.
76	Subcontractor shall include an additional 200 hours of manpower and associated materials to complete touch ups, patches, etc. as requested by the Construction Manager. This additional work will be tracked via daily reports and any remaining, unused quantity will be credited back to the Construction Manager and Owner at the hourly rate for this work.
77	Subcontractor shall provide submittals within 4 weeks from the Construction Manager issuing a Letter of Intent (LOI).
78	Subcontractor shall also include all in place mockups and samples as required by the plans and specifications.
79	This Subcontractor is to coordinate with the Drywall Subcontractor for drywall point up and finish coats. Subcontractor shall be responsible to apply the first coat of paint in drywall areas prior to any final drywall touchup. Second coat(s) shall be applied after drywall touchup. In addition, this Subcontractor shall be responsible to apply the first coat of paint/primer for windows, doors, or frames, prior to glass and glazing installation. This is to include the inside of glass stops etc. Second coat(s) shall be applied after glass and glazing installation.
80	This bid package includes verification that lighting, environmental conditions, and substrate are acceptable prior to installing paint.
81	Paint any surface not specifically mentioned to be painted herein, on the drawings, or in the specifications but for which painting is typically necessary for a complete job.

Midway Event Center SCOPE OF WORK - BP 0990 Painting

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

82	Daily cleanup of painting equipment and supplies is to be performed at an area designated by C&T. Waste cannot be disposed of into sanitary or storm sewer systems.
83	Includes sealing of concrete in Back of house areas per the ID finish plans

Midway Event Center SCOPE OF WORK - BP 1000 Specialties

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	101419 Dimensional Letter Signage
	101423 Panel Signage
	102113.17 Phenolic-Core Toilet Compartments
	102600 Wall and Door Protection
	102800 Toilet, Bath, and Laundry Accessories
	104413 Fire Protection Cabinets
	104416 Fire Extinguishers
	108223 Interior Grilles and Screens
	101416 Plaques

SCOPE OF WORK

1	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.
2	This scope of work includes a complete system per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
3	Furnish and install all signage for the project per the drawings and specifications.
4	Provide a shop drawing and product data for all signage
5	Furnish and install of toilet compartments
6	Ensure that toilet compartment install adheres to ADA requirements
7	Furnish and install all wall and door protection per the drawings and specs
8	Furnish and install all toilet, bath, and laundry accessories
9	Furnish and install all fire protection cabinets per drawings and specs. They need to be fire rated if in a fire rated wall.
10	Furnish and install all fire extinguisher's for the project per drawings and specifications. Including current inspection tag.
11	Furnish and install all interior grills and screens per the drawings and specifications.
12	Have all required by spec submittal data to CM within 4 weeks of a letter of intent
13	Includes all Dimensional Letter Signage at Bar

Midway Event Center SCOPE OF WORK - BP 1400 Elevators

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	142023 Machine Room-Less Hydraulic Passenger Elevator
	078400 Fire Stopping
	079200 Joint Sealants

SCOPE OF WORK - TRADE SPECIFIC

1	This scope of work includes a complete system per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during
2	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.
3	This scope of work includes all applicable specifications including section 142023
4	Furnish and install elevator systems as shown on the contract documents.
5	Two-way voice, one-way video and text-based emergency communication system included.
6	Review the contract drawings to confirm conformance with elevator shop drawings including locations of sump pits, access ladders, pit dimensions, shaft dimensions, door opening sizes, overhead clearances, etc.
7	Furnish and install pit ladders for each elevator. Review the misc. metal submittals for conformance with hoist beam, sump pit grating and divider beam requirements for the elevator shafts.
8	(12) months of maintenance and warranty included for all elevators after owner acceptance. Includes emergency callback service during normal working hours.
9	Participation in an elevator coordination meeting prior to installation with other trade contractors to confirm all power, access control, data, HVAC, plumbing, etc. requirements are coordinated. Furnish and install traveler cable as required for camera and access controls in all elevators. (100) hours of operator time for on-site coordination included.
10	Card reader/CCTV provisions are included for all elevators. Card readers and cameras furnished and installed by others. Subcontractor provides wiring and assistance with final terminations only.
11	Provide Contractor with a written pre-DOL inspection checklist filled out for each individual elevator noting items, by others, that must be completed in order to pass the DOL inspection. Checklist to be provided to the Contractor a minimum of (1) week prior to when DOL needs to be contacted for the inspection.
12	Provide comprehensive owner training with a written agenda provided to Contractor beforehand.
13	Provide complete and timely submittal data for review and approval including specified samples.
14	Provide all required conduit rough-in for the elevators including the signal equipment, elevator shafts, etc. Note that conduit and pull string from elevators to the remote control rooms and fire command center is by others.
15	Elevator jamb depths to be coordinated with wall types as shown on the architectural plans and details.
16	Provide any firestopping associated with penetrations by Subcontractor per an approved UL detail.
17	Maintain temporary barricades, provided by others, during the elevator installation until they can be removed at each elevator opening as required by OSHA.
18	Responsible for unloading, hoisting, storage and stockpiling materials for this scope. This may involve coordination with other trades and protection of surrounding materials. Subcontractor will coordinate all stockpiling on the building floors
19	Provide all equipment necessary for erection and installation required to complete this scope.
20	Furnish and install elevator cab protection for each elevator during construction. Provide protective cab wall pads with at all elevators that will be turned over to the owner at acceptance. Provide transmittal to Contractor to confirm turnover.
21	Subcontractor to notify DOL or other AHJs in advance of required inspections so that they are aware of the project

22	This scope of work includes turning over Elevators to the Contractor for early use during the finish stages of the project for construction use. This will include the necessary testing and temporary use certificate from the State and any final adjustments, re-cleaning and re-inspections that might be required prior to the final inspection. The warranty period will begin upon the final completion of the entire project. If temporary use of the elevator requires temporary power requirements, the Subcontractor will coordinate with Contractor efforts to provide temporary power.
23	Subcontractor understands the priority for early turnover of above referenced elevators and commits to providing adequate installation manpower and to working extended, OT hours at the discretion of the General Contractor based on a rate of \$125/hr. included as contract allowance. Subcontractor shall track all hours for final cost reconciliation upon
24	Subcontractor to provide locations for intermediate rail bracket supports furnished and installed by others.
25	All front/rear opening elevators as called for the on the project plans will have (2) car operating panels
26	Subcontractor to pay for all necessary permits, licenses and inspections fees associated with this scope of work. One (2) NCDOL permit and inspection per elevator.
27	Subcontractor includes all emergency use requirements including all labeling, symbols, etc.

Midway Event Center SCOPE OF WORK - BP 2100 Fire Protection

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

Division 01 General Requirements - All Sections
079200 Joint Sealants
79219 Acoustical Joint Sealants
07 84 00 Firestopping
07 84 00.01 Schedule of common firestop systems
210210 Fire Suppression Summary of Work
210510 Fire Suppression Basic Requirements
210511 Electrical Provisions for Fire Suppression Work
210513 Electrical Motors for Fire Suppression Equipment
210517 Sleeves and Sleeve Seals for Fire Suppression Piping
210521 Fire Suppression Piping Specialties
210529 Fire Suppression Piping Hangers and Supports
210553 Fire Suppression Painting and Identification
211000 Sprinkler and Standpipe Fire Suppression Systems
213113 Centrifugal Fire Pumps

SCOPE OF WORK - TRADE SPECIFIC

1	This scope of work includes a complete system per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
2	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.
3	Subcontractor to engineer, design, furnish and install a complete fire suppression sprinkler system in accordance with NFPA 13, 14 and 20, LATEST edition, all other applicable NFPA sections and code standards, and all other AHJ requirements.
4	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included above are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.
5	Subcontractor is to participate in all BIM coordination efforts as required and provide 3D modeling of their scope of work. See additional Building Information Modeling (BIM) scope of work attachment.
6	Provide delegated design drawings and calcs for permit by AHJ and for review and approval by project design team.
7	Furnish and install turnkey fire sprinkler system coordinated with all other building systems including fire alarm, HVAC mechanical, electrical, etc.
8	Subcontractor includes turnkey wet and dry system as required by code for full building sprinkler protection.
9	Sprinkler installation to begin at 1'-0" stubbed into building from fire riser line. Underground lead-in extending into building by others.
10	Subcontractor includes furnishing and installation of building fire pump sized as required to meet the required PSI at all building levels. Subcontractor includes automatic transfer switch, all controllers, etc.
11	Subcontractor to supply and install an electric fire pump with jockey pump and controllers (sized by hydraulic calculations); reduced pressure backflow preventer and alarm check valve with FDC in pump room for all residential floors.

Midway Event Center SCOPE OF WORK - BP 2100 Fire Protection

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

12	Subcontractor includes all reduced pressure backflows as required by design and AHJ. Included as required to meet testing requirements and pass AHJ inspections, as well as operational testing/maintenance.
13	Subcontractor shall furnish and install all required drain and test connections. Subcontractor to produce a drawing for review by the Owner, Contractor and Design Team showing the proposed location of all sprinkler drains that will open into the parking deck or on grade for review and approval.
14	Subcontractor has reviewed current plumbing, mechanical, fire alarm, and electrical drawings and agrees that any and all required MEP services to support the fire sprinkler system are currently included and shown in the drawings. If the Subcontractor identifies additional scope that is required to support the fire sprinkler system that is not shown on the current drawings as of the date of issuance of this subcontract, the Subcontractor will be responsible for the cost of any added systems/scope.
15	Subcontractor to produce a detailed sleeving plan for all penetrations that will require sleeving through cast-in-place concrete structure that must be sleeved (including slabs, walls, columns, etc. - also including masonry walls). It is the responsibility of this Subcontractor to actively monitor the concrete pour schedule to ensure that all sleeving is installed correctly during concrete frame construction. Sleeves are not to protrude past finish face of concrete and shall be at 90 degrees. Subcontractor shall also provided an extremely detailed plan (including 3-D views) of the fire pump room with dimensions to all piping, equipment, pads, etc.
16	All grooved fittings to be factory-painted.
17	Subcontractor to coordinate with all necessary trades for fire tamper and flow switch locations and requirements. Coordinate location and function of all flow, air pressure, supervisory switches and other dry contacts with the fire alarm contractor.
18	Subcontractor to fully coordinate fire sprinkler and fire alarm systems as required by AHJ.
19	All stairwells to have standpipes, hose valves, and floor control valves at each floor to isolate the floors sprinkler system. Pressure regulating valves to be located per shop drawings and hydraulic calculations.
20	Access doors required for Subcontractor scope of work shall be provided by Subcontractor for installation by others. Access doors product type to be per plans/specs.
21	Freeze protection including insulation or heat trace is included if required. Subcontractor to route piping in conditioned areas to avoid heat tracing where possible.
22	Subcontractor includes all firestopping (UL rated) as required for penetrations at rated assemblies.
23	Subcontractor includes all necessary labeling and code required/AHJ signage for full CO including signage for FDC, Riser Room, etc. Any temporary required signage included.
24	Subcontractor to provide owner training.
25	Subcontractor shall furnish and install all identification tags, charts, labeling, etc. for their scope of work.
26	Subcontractor to furnish and install all fire hose valves and cabinets. Locations to be provided prior to framing.
27	Subcontractor to protect all shafts, trash chutes, chases and exterior structure as required by building codes and local AHJ.
28	Subcontractor to coordinate all sprinkler head locations with electrical fixtures, HVAC grilles and all other building elements per architectural RCPs. Note that light fixture location takes precedence. Sprinkler head locations to be organized and aligned with lights in an orderly manner. Provide additional heads beyond minimum coverage requirements if necessary to maintain ceiling device organization.
29	Subcontractor includes fire sprinkler protection of all elevator shafts, lobbies, and machine rooms as required by code and DOL including at top and bottoms of all elevator shafts.
30	Progressive clean up of own work is to be included.
31	Subcontractor includes all roof manifolds.

Midway Event Center SCOPE OF WORK - BP 2100 Fire Protection

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

32	Subcontractor shall install protective caps and/or covers at all sprinkler heads in areas receiving finish paint, by others, and shall remove protection at GC's directive. Subcontractor to walk with GC for sign-off of adequate protection and provide documentation within (2) days of walk via email. Without sign-off and documentation, replacement of any unprotected sprinkler heads due to paint or avoidable damages by others shall be the responsibility of the sprinkler subcontractor.
33	Subcontractor to provide full flow pump acceptance test for the new pump installation to verify its capability to provide adequate water supply at the time of system start up per AFM requirements provided by design team and ownership. A copy of the manufacturer's certified test curve for the pump shall be provided by the subcontractor prior to the acceptance test.
34	All soffits, Cloud ceiling systems, overhead doors, protruding structures, canopies, etc. have been accounted for and will be adequately sprinkled.
35	Labor to cut ceiling tiles for any fixtures provided by Subcontractor in ceiling grid. Material provided by others.
36	Subcontractor to submit final testing procedures to be reviewed and approved by Contractor and AHJ.
37	Speed drain to be sized per NFPA 14 7.11.1 and to extend to highest PRV located on the stairwell.
38	All commercial/standpipe piping as required by AHJ inspector and codes to be black steel sched. 10 piping.
39	Dry sprinkler piping as required by AHJ inspector and codes to be galvanized sched. 10 piping, which will not require any painting for protection (per subcontractor). Only painting would be factory painted fittings (by Subcontractor).
40	Subcontractor to provide a turnkey system that shall satisfy all requirements by AHJ plan reviewers, AHJ inspectors, and codes. Subcontractor responsible for any changes to design, work in place, etc. that are identified by AHJ inspector as required to pass inspections and meet code.
41	Subcontractor to provide a design and final product that will meet all inspections and testing requirements, timing, flowrates, etc.
42	Sub includes waterproof sleeves if specified in drawings or specs.
43	Sprinkler head locations to be coordinated w/ RCP's. Centered on fixtures, grilles, etc.
44	Subcontractor shall rough-in as much of the FP on typical floors before interior framing and any other trades. Subcontractor will mobilize back to finalize head locations and cut back head once all framing and other rough-in's are complete.
45	All equipment, fixtures, devices, components, assemblies, appliances, machines, etc. provided by subcontractor are to be UL listed. Subcontractor to review all specifications, drawings, submittals, etc. to confirm everything is UL listed prior to procuring and installing. If anything is not UL listed, regardless of what is called for on specification or drawings, it is the responsibility of the subcontractor to pay for third party certification of the product(s) and/or replace with a UL listed product.
46	Sub responsible for covering all penetrations in concrete after pours.
47	Subcontractor to a perform flow test from the two (2) hydrants nearest the site service entry is to be performed by the Contractor to confirm the flow and pressure characteristics of the existing water service.
48	Subcontract to provide drawing noting all plumbing, fire alarm, and electrical services required by others that will be needed for full fire protection system.
49	Subcontractor includes wall post indicator valve (WPIV) per the civil drawings
50	Subcontractor incudes all dry valves with air maintenance devises, air compressors, etc. for parking deck protection system
51	Includes (1) year warranty for entire scope to be provided after substantial completion.
52	The Subcontractor has included the necessary design, construction and sequencing elements into the project to support a phased occupancy if desired by ownership.
53	Subcontractor to have superintendent onsite at all times while performing work. This Superintendent is required to has authority to make decisions for the subcontractor.

Midway Event Center SCOPE OF WORK - BP 2100 Fire Protection

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

54	Reviewed all Flow Tests provided by the Owner and incorporated into the design of the system.
55	Produce a detailed framing and sleeving plan for the hose valve cabinet locations so that it can be coordinated with concrete frame construction and wall framing.
56	Furnish and install all firestopping associated with the scope of work. The Subcontractor will verify that all penetrations through expansion joint locations are designed and installed to allow for the necessary allowable structural movement/settlement. The Subcontractor will furnish and install all sealants necessary around sprinkler piping penetrations through the structure.
57	Responsible for a review and verification of the project drawings to ensure that sprinkler layout is coordinated with unit and amenity light fixtures, HVAC transfer grilles (to ensure no conflicts with sidewalls for these rooms), closet shelving, etc.
58	Delegated design is the responsibility of the subcontractor. The Subcontractor is responsible for any changes to the design of the areas if a field inspector or AHJ requires a different code interpretation.
59	Coordinate with the electrical subcontractor regarding light and fan locations, fire pump connections and fire alarm requirements.
60	Subcontractor responsible for any damages to surrounding finishes during entirety of scope of work, but especially during testing of system and inspections.
61	Install dri-post flex wrap at all pipe penetrations thru Tyvek building wrap. Flex wrap must be installed within one week of pipe installation date. Access for work provided by Subcontractor. Exterior contractor to install flex wrap if pipe penetrations installed prior to Tyvek. Exterior contractor to provide flex wrap to sprinkler sub if penetrations installed prior to Tyvek.
62	All pricing to be locked in per below "Contract Summary" upon receipt of this subcontract and will not be subject to change regardless of escalation in material and/or labor pricing, tariffs, or other.
63	All unit prices on the "Alternate & Unit Prices" section are to be honored for the duration of the project.
64	Provide all seismic restraints as required.
65	Threading machines shall be set up in sand/absorbent boxes. Sand/absorbent shall be disposed of properly in accordance with state or local requirements.
66	Unless otherwise stipulated in the specifications, factory-manufactured products provided are to have factory applied finishes, insulation, and jacketing as appropriate. Integral support framing is also to have factory applied finishes.
67	Furnish and install all necessary piping equipment supports and any equipment not shown on drawings or called for in the specifications but necessary to provide a complete and workable system. This includes any supplemental steel and engineering for sizing to support the fire protection scope of work, if required.
68	Subcontractor shall provide all necessary and required materials, management and field labor. Commissioning documentation to include but not limited to, all complete and correct pre-function test reports, all training records-audio, video, and written, coordination meetings, all assistance necessary to accomplish a complete and Final Commissioning Activity per the contract documents. Be advised that should for any reason this activity require premium time and or night/weekend/holiday scheduling this requirement shall be met without any additional cost to the project. Be advised that per-function and or final Commissioning Activities that are confirmed to be deficient and or delinquent by cause of this subcontractor will be subject to responsibility assessment and subsequent cost to be paid by this subcontractor.
69	Subcontractor shall furnish and install all system identification per the plans and specifications. Subcontractor shall include system identification measures (color of pipe, painted pipe, etc.) required by the plans and specifications.
70	Subcontractor shall furnish and install all hangers for their work on steel prior to the installation of spray fireproofing.

Midway Event Center SCOPE OF WORK - BP 2100 Fire Protection

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

71	Subcontractor shall not hang any piping from "C-Clamp or Beam Clamp" hangers on joists due to the joists design limitations. All piping support shall be threaded rod methods through chord members.
72	Subcontractor is not permitted to cut structural members without prior approval and scheduling by the Construction Manager.
73	Subcontractor shall coordinate the layout of openings and penetrations with BP 0302 – Building Concrete for slab locations and BP 0750 - Roofing for roof locations. Subcontractor is responsible for coring slabs after concrete placement for penetrations integral to their work. Subcontractor shall include all cut-outs integral for their work at structurally framed and unframed penetrations of metal deck as needed. Subcontractor must protect all opening per OSHA regulations.
74	The Construction Manager will implement Building Information Modeling (BIM) on this project for construction coordination, phasing, and logistics. BP 2100 - Fire Protection shall participate in the modeling process as set forth in the BIM Requirements of the Bid Manual. Change orders for coordination clashes on site will not be entertained.
75	Subcontractor shall generate and maintain their own Fire Protection model through the coordination process. These models are not intended to replace shop drawings, which are also required.
76	Subcontractor shall include ceiling heights and the locations of access panels within their coordination model.
77	Subcontractor shall reference and coordinate requirements as indicated on the reflected ceiling plans they must also include acoustical clouds at locations indicated on the reflected ceiling plans and coordinate the fire suppression system with these finishes and acoustical clouds.
78	Subcontractor is responsible for providing personnel for efficient and effective troubleshooting shall any balancing, start up, or commissioning problems occur.
79	Subcontractor shall ensure that the designated competent person is on-hand, including any second tier Subcontractors, for all WCPSS/Design Team overhead ceiling inspections. This should include personnel ready and able to address any items during the inspection.
80	Subcontractor shall provide all documents required to submit and obtain fire sprinkler trade permits with the AHJ.
81	Subcontractor shall provide all required submittals within 4 weeks from being issued the Letter of Intent by the Construction Manager.

Midway Event Center SCOPE OF WORK - BP 2200 Plumbing

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	078400 Firestopping
	079200 Joint Sealants
	079219 Acoustical Joint Sealants
	220210 Plumbing Summary of Work
	220510 Plumbing Basic Requirements
	220511 Electrical Provisions for Plumbing Work
	220513 Electrical Motors for Plumbing Equipment
	220517 Sleeves and Sleeve Seals for Plumbing Piping
	220529 Plumbing Hangers and Supports
	220548 Plumbing Vibration Control
	220553 Plumbing Painting and Identification
	220596 Water Heating Systems Commissioning
	220700 Plumbing Insulation
	221116 Domestic Water Distribution Piping
	221123 Domestic Water Pumps
	221125 Natural Gas Piping
	221316 Sanitary Waste and Vent Piping
	221316 Sanitary Waste and Vent Piping
	221416 Storm Water Piping
	221429 Sump Pumps
	223400 Fuel-Fired Domestic Water Heaters
	224000 Plumbing Fixtures

SCOPE OF WORK - TRADE SPECIFIC

GENERAL

1	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.
2	This scope of work includes a complete system per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
3	Responsible for BIM coordination. Dimensioned sleeving and layout drawings will be required for all rough-in required in concrete frame construction. This Subcontractor has included the required coordination with other trades including, but not limited to, electrical, fire protection, drywall, masonry, storefront, concrete, etc.
4	Includes all firestopping, sleeves, collars, pressure plates, etc. at all concrete wall and slab penetrations as called for.
5	Subcontractor shall provide field engineering and layout for this scope of work. Control points will be established in the field by others.
6	All fire stopping for all penetrations through rated walls and ceilings made by the subcontractor per UL details.
7	All signage and labeling as required for inspections by AHJ
8	All access panels as noted on the project drawings and/or required by AHJ to be furnished by Subcontractor for installation by drywall subcontractor. Includes all units above ceilings, shut off valves, mechanical dampers, etc.
9	Subcontractor to return all grades to original subgrade and compaction upon completion of all excavations.
10	Includes a complete Function and Performance walkthrough with the Contractor, Engineer and Owner upon substantial completion of the project. All balance reports, testing information, start up logs, warranties, O&M's, certifications, as-builts, etc. will be submitted to C&T prior to this time
11	Permits to be provided by others. All permits and inspections fees as required for final inspections to be by subcontractor. Includes, but is not necessarily limited to, boiler inspection fees from NCDOL.
12	All equipment, fixtures, devices, components, assemblies, appliances, machines, etc. provided by subcontractor are to be UL listed. Subcontractor to review all specifications, drawings, submittals, etc. to confirm everything is UL listed prior to procuring and installing. If anything is not UL listed, regardless of what is called for on specification or drawings, it is the responsibility of the subcontractor to pay for third party certification of the product(s) and/or replace with a UL listed product.
13	Access panels, grilles, etc. must be laid out of the floor (5) days prior to framing starting on that floor or subcontractor will be responsible for framing/sheetrock re-work.
14	Access panels must align with adjacent fixtures unless Arch. RCP's dictate otherwise.
15	All exterior penetrations must be installed while exterior framing/window wall is being installed on that floor so penetrations can be properly waterproofed/sealed.
16	Sub responsible for covering all penetrations in concrete after pours.
17	Include layout of all ceiling mounted items prior to metal stud framing. Any item not laid out prior to framing which has conflict with ceiling members will be subcontractors responsibility to relocate framing member and return to code compliant installation

Midway Event Center SCOPE OF WORK - BP 2200 Plumbing

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

18	Subcontractor is responsible to uncover all sleeves and cast in place conduits within 48 hours of concrete slab being poured
19	All rated penetrations to be at 90deg of rated wall and as required by UL Assembly listings
20	Labeling of any devices or access panels as required by AHJ is subcontractors responsibility
21	Final inspections will happen throughout the job and not all at the end. I.E. we will walk by floor instead of all at once.
22	Will participate and facilitate all required 3 rd party inspections for the stair press system prior to inspection with AHJ – Inspections will be afterhours
23	Subcontractor will participate in all BIM coordination meetings, daily huddles, site meetings, and subcontractor meetings. Personnel at meeting will be a decision maker

SCOPE OF WORK- PLUMBING

24	All labor, materials, supervision, equipment, taxes, and safety measures for a complete and turnkey building plumbing system including all domestic water, sanitary sewer waste, grease waste, storm and condensate drainage, etc. per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project
25	Subcontractor includes all plumbing equipment and fixtures including booster pumps, BFPs, water heaters, expansion tanks, shock arrestors, etc.
26	Subcontractor includes irrigation service and BFP
27	Includes all plumbing lines and connections to all water, storm drain, and sanitary sewer systems to within 5' outside of the building pad.
28	Subcontractor includes all grease waste systems and connection to grease interceptor provided by others in the location shown on the Civil Plans.
29	Foundation drainage systems to be by others.
30	Subcontractor to furnish and install all required insulation per the project drawings, specifications, and all code requirements.
31	Includes all sump pits, pumps, and drains. Locations to be coordinated with the elevator Subcontractor
32	Subcontractor to install all roof drains and drain systems. Exterior roof leaders and downspouts by others.
33	Audio-Visual alarms to signal that oil is detected in the sump pit at the elevator. Sump pumps required in all elevators.
34	Subcontractor shall provide air test of all piping before drywall. All leaks identified during testing shall be sealed or replaced in a timely manner to not delay other trades. Any leaks that occur as a result of the plumbing system installations shall the responsibility of the plumbing subcontractor to address including any water damages that result.
35	Subcontractor shall include all testing of the plumbing system, fixtures or equipment per the specifications and as required by AHJ
36	Subcontractor to provide all documentation and certifications required of plumbing systems and equipment in order to receive CO from local AHJ
37	Includes all floor and trench drains and service lines within the building footprint per both the architectural and plumbing drawings. This includes, but is not limited to, all stairwells, trash rooms, corridors, bathrooms, elevator lobbies, parking levels, etc. as shown and called for on the plumbing and mechanical drawings.
38	Subcontractor to furnish and install all plumbing fixtures (excludes unit kitchen and vanity sink bowls), equipment, and connections per the fixture schedules on all Plumbing, Arch, and Interior Design drawings. Includes, but is not limited to all water heaters, showers, tubs, sump pumps, toilets, clean outs, hub and floor drains, trap primers, urinals, sinks, oil interceptors, mop sinks, hose bibbs, roof hydrants, water fountains, etc.
39	Includes hub drains at all mechanical air handlers, coordinate with mechanical.
40	Includes all "witch hats", pipe boots, etc. at roof penetrations.
41	Subcontractor to coordinate all plumbing service and waste connection locations with site civil utility plans.
42	Subcontractor shall install all plumbing fixtures to meet all ADA, ANSI, and FHA requirements.
43	Subcontractor to install hose bibbs at all public restrooms and all other areas required by code.
44	Includes all supply water, waste lines, backflow preventers, hose bibs, plumbing fixtures, and floor drains, water features, etc. as shown on the Architectural and Land Planning drawings.
45	Subcontractor shall furnish all fixtures, equipment, and specialties per the Plumbing and the Interior Design drawings. Arch and ID drawings shall take precedence when discrepancies occur between Plumbing and ID drawings
46	All cleanouts, supply lines and waste lines shall be installed above the wood trim base height to avoid notching of trim.
47	All exposed water piping shall be heat traced, insulated, and labeled as required at unconditioned spaces. Power for heat trace system to be provided by others.
48	Includes all required gas piping for plumbing and mechanical equipment, heaters, etc. Gas meter and services to meter location to be by others. Final location of gas meter(s) to be confirmed with gas utility service provider.
49	Interior and exterior gas appliances by others. Gas supply lines and venting requirements by Subcontractor.
50	Domestic water backflow preventer to be by the Subcontractor
51	Includes temp. domestic water supply riser(s) with pumps at (1) building location to be determined at the discretion of the General Contractor. Pumps to be provided as required to maintain City standard water pressure at all levels of building.
52	Installation of temporary water and sanitary sewer services for (1) C&T field office trailer. Permits will be procured by others.
53	The Subcontractor is responsible for furnishing and installing access doors required for this scope of work to access equipment. All access doors to be turned over to framing/drywall contractor for installation.
54	Submeters to be furnished and installed by others
55	Sump pump control wiring from panel to sump pump.
56	Painting all exposed gas lines.

Midway Event Center SCOPE OF WORK - BP 2200 Plumbing

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

57	Subcontractor shall test all systems and remove all test balls and tees prior to sheetrock.
58	Include all seismic provisions as required by the contract documents and all applicable building codes.
59	Unless otherwise stipulated in the specifications, factory-manufactured products to have factory applied finishes, insulation, and jacketing as appropriate. Integral support framing is also to have factory applied finishes.
60	Starters and motors not shown on Electrical Drawings.
61	Disconnect switches integral with equipment so requiring.
62	Painting, stenciling and tagging. Includes all equipment labels, warning signs and labels, pipe labels, stencils, valve tags and warning tags. Provide color coded ceiling markers to identify locations of concealed valves and equipment above ceiling. Ceiling markers shall be color coded to match Owner standards. Includes color coded painting of pipe / insulation in areas where piping is exposed. Includes painting of ALL natural gas piping per the project specifications.
63	Inserts and pipe hangers. Includes comprehensive engineering analysis by a qualified professional engineer using performance and design criteria indicated in Specification Section 220529. Includes any supplemental steel to support the plumbing scope of work not shown on the structural drawings.
64	Provide temporary tie in and piping at roof drains to remove water from the building until final roof leaders can be installed.
65	This Subcontractor shall furnish and install in their entirety all drip pans and associated drainage piping to the closest sanitary drain, required for protection of Electrical and Telcom rooms.
66	Sump Pump and/or Sewer Ejector Discharge Systems. This bid package will provide controllers/alarm panels that have the required alarm/operation outputs that will be required to interface with the BAS system. This bid package is responsible for control and alarm wiring associated with the systems unless specifically indicated otherwise on the contract documents.
67	All storage facilities for piping, equipment, fitting, etc shall be provided under this scope. A reminder to secure all items of value at the end of the each working day (NO compensation will be granted for lost or stolen materials).
68	Subcontractor shall provide all necessary and required materials, management and field labor. Commissioning documentation to include but not limited to, all complete and correct pre-function test reports, all training records-audio, video, and written, coordination meetings, all assistance necessary to accomplish a complete and Final Commissioning Activity per the contract documents. Be advised that should for any reason this activity require premium time and or night/weekend/holiday scheduling this requirement shall be met without any additional cost to the project. Be advised that per-function and or final Commissioning Activities that are confirmed to be deficient and or delinquent by cause of this subcontractor will be subject to responsibility assessment and subsequent cost to be paid by this subcontractor.
69	Subcontractor shall furnish and install all hangers for their work on steel prior to the installation of spray fireproofing.
70	Subcontractor shall not hang any piping from "C-Clamp or Beam Clamp" hangers on joists due to the joists design limitations. All piping support shall be threaded rod methods through chord members.
71	Subcontractor shall coordinate the layout of openings and penetrations with Building Concrete for slab locations and Roofer for roof locations. Subcontractor is responsible for coring slabs after concrete placement for penetrations integral to their work. Subcontractor shall include all cut-outs integral for their work at structurally framed and unframed penetrations of metal deck as needed. Subcontractor must protect all opening per OSHA regulations.
72	Subcontractor shall furnish and install all plumbing piping, including condensate, as indicated on the plans to 5' outside of the building and make final connections.
73	Subcontractor shall furnish and install condensate drains and backwater valves leaving the building, including the tie in point on the exterior of the building.
74	Subcontractor shall furnish and install internal roof drain piping to 5' outside of the building and make final connections to the underground roof drainage system.
75	Subcontractor shall furnish, install, and maintain temporary piping from the secondary/overflow scuppers and route them to the nearest storm structure until the primary internal roof drains are functional. Subcontractor shall then remove the temporary piping as directed by the Construction Manager.
76	Subcontractor shall furnish and install all gas piping systems as indicated on the plans, including services outside of the building to the gas meter. Subcontractor shall furnish and install gas regulators necessary for the food service equipment.
77	Subcontractor shall furnish and install any insulation required for the gas piping (e.g., generator exhaust).
78	Subcontractor shall furnish and install all system identification per the plans and specifications. Subcontractor shall include system identification measures (color of pipe, painted pipe, etc.) required by the plans and specifications.
79	Subcontractor shall include all required isolation and /or expansion supports for piping.
80	Subcontractor shall furnish and deliver the roof drains to the installation locations, which will be installed by the Roofer. Plumber shall provide a transmittal with a detailed description of materials and quantities for signature while turning the roof drains over. The signed transmittal should then be given to the Construction Manager. The Construction Manager shall not be held responsible for missing materials turned over to other trades. If failing to properly transmit materials to the receiving subcontractor, then this subcontractor shall be solely responsible for replacing missing materials.
81	Subcontractor shall furnish and install all storm drainage and drain bodies for the parking garage.
82	Subcontractor shall furnish and install all equipment, housekeeping, and specialty pads for this Scope of Work required at the mechanical yard. The concrete paving at the mechanical yard will be by others.
83	Subcontractor must haul off site any concrete truck wash out associated with their work.
84	Subcontractor is responsible for excavation and backfill of their work per OSHA regulations.
85	Subcontractor shall pump, demuck, and dewater as necessary for their own work.

Midway Event Center SCOPE OF WORK - BP 2200 Plumbing

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

86	Subcontractor shall excavate for underground plumbing, compact, and backfill per the specification requirements, including repair and replacement of the slab stone sub-base. Stockpiled spoils must be away from the building perimeter at a place designated by the Construction Manager so that clear access to the building is maintained for construction of foundation walls and slabs. Subcontractor must protect their stockpiles of soils, whether generated onsite or imported, so that soils needed for fill or backfill operations are not made unsuitable and hinder the Construction Schedule. Unsuitable soils unit prices will not be used for soils that are made wet or unsuitable due to natural weather conditions.
87	Subcontractor acknowledges that the building pad and perimeter is to receive lime/cement stabilization treatment by others. Subcontractor shall include necessary provisions for excavation and backfill requirements accordingly.
88	Subcontractor is responsible for the installation of underground piping as to not delay slab placements.
89	Subcontractor shall furnish, install, and maintain protection to keep concrete, trash, and debris out of lines. It is required to cap and plug lines. Subcontractor must verify that the lines are cleaned and thoroughly flushed at Substantial Completion.
90	Subcontractor shall furnish and install pipe insulation prior to weathertight conditions to help facilitate the Construction Schedule.
91	Subcontractor shall furnish and install all piping and fixtures as indicated within casework. Subcontractor shall coordinate installation with BP 1230 – Educational Casework and BP 1240 - Laboratory Casework.
92	This package shall include hookup and final connections for all food service equipment, commercial appliances, and residential appliances.
93	Subcontractor shall furnish all motor starters, internal and external disconnect switches, and combination starters for the plumbing equipment and turn them over to Electrical for installation. This subcontractor shall provide a transmittal with a detailed description of materials and quantities for signature while turning these over to Electrical Subcontractor. The signed transmittal should then be given to the Construction Manager.
94	Subcontractor shall furnish and install all blocking as required for the installation of plumbing fixtures.
95	Subcontractor shall protect all drains and finishes until Substantial Completion.
96	Subcontractor shall generate and maintain their own Plumbing model through the coordination process. These models are not intended to replace shop drawings, which are also required.
97	Subcontractor shall include ceiling heights and the locations of access panels within their coordination model.
98	During the coordination process, valves, filters, and other items that will be accessed for maintenance need to be taken into consideration. If any piping or materials are installed in a fashion that makes access difficult, Subcontractor is responsible for moving the items at no additional cost to the project.
99	The initial model issued after contract award may indicate roof leaders and sanitary sewer lines penetrating column footings. However, the noted plumbing piping must be coordinated to avoid penetrating column footings at no additional expense to the project.
100	Subcontractor shall take an active role in the commissioning process. As a commissioning team member, Subcontractor will appoint a representative to attend meetings, coordinate work activities and assist in meeting the objectives of the commissioning team and contract documents.
101	Subcontractor is responsible for scheduling NCDOL Boiler (Water Heater) inspections and paying all required fees and associated costs.
102	Subcontractor shall ensure that the designated competent person is on-hand, including any second tier Subcontractors, for all WCPSS/Design Team overhead ceiling inspections. This should include personnel ready and able to address any items during the inspection.
103	Subcontractor is responsible for pressure testing all lines witnessed by the Authority Having Jurisdiction and Construction Manager.
104	Subcontractor is responsible for training the Owner on all systems within this Scope of Work.
105	Subcontractor shall provide all required submittals within 4 weeks from being issued the Letter of Intent by the Construction Manager.
106	Subcontractor is responsible for reviewing the plans and specifications to ensure compliance with ADA requirements. Change orders for related items will not be entertained.
107	See Bid Proposal Form for allowances and unit prices applicable to this Bid Package.
108	Subcontractor shall refer to Specification 012300 for all alternates related to this Scope of Work and complete the Bid Proposal Form accordingly.
COORDINATION	
109	Responsible for BIM coordination, including 3D modeling, coordination drawings, sleeving and layout plans, etc. per the included contract BIM Addendum. Dimensioned sleeving and layout drawings will be required for all rough-in required in concrete frame construction. This Subcontractor has included the required coordination with other trades including, but not limited to, HVAC, plumbing, fire protection, drywall, masonry, storefront, concrete, etc.
110	Subcontractor shall provide full time, on-site project superintendent dedicated solely to the project. Additionally, Subcontractor shall provide General Superintendent to serve as primary field contact overseeing all plumbing operations.
111	Includes layout and installation of all sleeves and pre-pour slab penetrations on the active deck in coordination with concrete contractor, rebar placement, etc. as required to maintain the concrete schedule.

Midway Event Center SCOPE OF WORK - BP-2300 HVAC

Subcontractor agrees to make the project complete in every respect insofar as this Subcontract is concerned in strict accordance with Bid Package BP-2300 Mechanical Scopes of work, the Contract Documents listed on Exhibit "A" and shop drawings and submittals as approved by the Architect and/or Owner. The Subcontractor shall not perform any portion of the work at any time without Contract Documents or, where required, approved Shop Drawings, Product Data, Manufacturer's Instructions or Samples for such portion of the work. The Subcontract includes but is not limited to providing of all submittals, shop drawings (and associated engineering), trade coordination, layout, hoisting, supervision, tools, equipment, scaffolding, supplies, incidentals, plant,

The organization of the specifications into divisions, sections and articles, and the arrangement of the drawings shall not control the Contractor in dividing the work among the Subcontractors or in establishing the extent of the Work to be performed by any Subcontractor.

Reference is made to the following Divisions of Work and Specification Sections which relate to the Scope of Work, but is in no way intended to limit or alter the intent of the Contract Documents:

Division 01 General Requirements - All Sections
079200 Joint Sealants
079219 Acoustical Joint Sealants
078400 Firestopping
078400.01 Schedule of common firestop systems
230210 HVAC Summary of Work
230510 HVAC Basic Requirements
230511 Electrical Provisions for HVAC Work
230513 Electric Motors for HVAC Equipment
230514 Variable Frequency Drives for HVAC Motors
230517 Sleeves and Sleeve Seals for HVAC Piping
230521 HVAC Piping Specialties
230523 HVAC General-Duty Valves for Hydronic Piping
230529 Hangers and Supports for Piping, Ductwork, and Equipment
230548 HVAC Vibration Controls
230553 HVAC Painting and Identification
230593 HVAC Testing, Adjusting, and Balancing
230596 HVAC Systems Commissioning
230713 HVAC Duct Insulation
230719 HVAC Piping Insulation
230913 Instrumentation and Control Devices for HVAC
230923 Direct Digital Control System for HVAC
230924 Original Equipment Manufacturer (OEM) Controls
230993 Sequences of Operation
232300 Refrigerant Piping
233100 HVAC Ductwork
233300 Air Duct Accessories
233416 Centrifugal HVAC Fans
233423 HVAC Power Ventilators
233433 Air Curtains
233600 Air Terminal Units
233713 Diffusers, Registers, and Grilles
233813 Commercial Kitchen Exhaust
234113 Particulate Air Filtration, Low Efficiency (MERV 6-8)
234123 Particulate Air Filtration, Medium Efficiency (MERV 9-16)
234215 Needlepoint Cold Plasma
235543 Unfired Unit Heaters
237433 Dedicated Outdoor Air Units
238116 Ductless Split System Air-Conditioning Units
238121 Packaged Air-Cooled, Heating and Cooling Units
238216 Air Coils

SCOPE OF WORK - TRADE SPECIFIC

Midway Event Center SCOPE OF WORK - BP-2300 HVAC

GENERAL

It is understood and agreed this Mechanical Work includes all scope as described in the following items regardless of whether or not they are in the above specifications or any other specification section or shown on the plans:

1	All references to "by Contractor" or "by General Contractor" in the Mechanical Drawings and Specifications shall be interpreted as "by This Subcontractor."
2	This Subcontractor is responsible for BIM coordination. Dimensioned sleeving and layout drawings will be required for all rough-in required in concrete frame construction. This Subcontractor has included the required coordination with other trades including, but not limited to, electrical, fire protection, plumbing, drywall, masonry, storefront, concrete, etc.
3	This Subcontractor agrees to provide a complete system in full compliance with all applicable codes and the Contract Documents.
4	This Subcontractor shall utilize at least one (1) iPad® to actively manage construction and quality control activities in Autodesk Construction Cloud (ACC) Build, including equipment and systems installation, pre-functional and functional checklists, commissioning IST, and punch lists.
5	This Subcontractor shall include multiple mobilizations as required to complete the Scope of Work.
6	This Subcontractor shall utilize gas- or diesel-operated welding machines, with the understanding that welding will not be performed using on-site temporary electrical power.
7	This Subcontractor shall include all required hoisting for the loading, unloading, storage, protection, and installation of materials and equipment related to this Scope of Work.
8	This Subcontractor shall include final cleaning of all installations completed under this agreement as part of the Scope of Work.
9	This Subcontractor is responsible for notifying the Construction Manager, Owner, Architect, and governing agencies of all tie ins and shutdowns of existing utility systems.
10	This Subcontractor shall ensure that all installations completed under this agreement maintain the specified and/or code-required separations and clearances.
11	This Subcontractor shall furnish and install all required supports for this Work, including but not limited to seismic bracing, anchor bolts, hangers, isolators, channels, angles, embeds, etc. All items shall have a hot-dipped galvanized finish unless otherwise noted in the Contract Documents.
12	This Subcontractor shall ensure all materials and equipment are installed in a manner that does not overload the building's structural elements. If additional supports are needed to distribute loads across multiple structural elements, they shall be provided by this Subcontractor. All items suspended from steel trusses shall be hung from truss panel points.
13	This Subcontractor shall include all concrete saw cuts, removal, and concrete replacement as required to complete the Work within this Scope. No saw cutting or core drilling shall be performed without written approval from the Construction Manager and Architect/Engineer.
14	This Subcontractor shall provide field engineering and layout for this scope of work. Control points will be established in the field by others.
15	This Subcontractor shall provide all required firestopping for penetrations through rated walls and ceilings in accordance with applicable UL details.
16	This Subcontractor shall provide all required signage and labeling for inspections by the Authority Having Jurisdiction (AHJ), including but not limited to dryer exhausts and damper locations.
17	This Subcontractor shall furnish all access panels as indicated on the project drawings and/or required by the Authority Having Jurisdiction (AHJ) for installation by the drywall subcontractor. This includes access panels for above ceilings, shut-off valves, mechanical dampers, and other related components.
18	This Subcontractor shall restore all excavated areas to their original subgrade and compaction upon completion of the work.
19	This Subcontractor shall participate in an exterior sacrificial freestanding mock-up and an interior in-place unit mock-up, including applicable rough-ins and fixture trims. This Subcontractor shall also provide fixture and device samples as requested during the submittal approval and mock-up process.
20	This Subcontractor shall protect all building finishes, surrounding substrates, and finishes while performing work under this agreement. This Subcontractor is responsible for safeguarding the ceiling grid and shall bear the cost of any repairs, including shared responsibility for unidentifiable damage caused jointly with other MEP trades.

Midway Event Center SCOPE OF WORK - BP-2300 HVAC

21	This Subcontractor shall participate in a complete Function and Performance walkthrough with the Contractor, Engineer, and Owner upon substantial completion of the project. All balance reports, testing information, start-up logs, warranties, operation and maintenance manuals (O&M's), certifications, as-built drawings, and related documentation shall be submitted to Clancy & Theys prior to this walkthrough.
22	This Subcontractor shall assume that all materials under this agreement will be prefabricated off-site due to limited on-site storage. No material storage will be permitted inside the building, and establishing a fabrication shop within the building is prohibited, as the work of other trades will need to proceed concurrently with this Scope of Work.
23	The building permit and other required permits will be provided by others; however, this Subcontractor shall be responsible for all re-inspection fees and any permits and inspection fees required for final inspections. This includes, but is not limited to, boiler inspection fees from the North Carolina Department of Labor (NCDOL).
24	All equipment, fixtures, devices, components, assemblies, appliances, machines, and related items provided by This Subcontractor shall be UL listed. This Subcontractor shall thoroughly review all specifications, drawings, submittals, and related documents to verify UL compliance before procurement and installation. If any item is found to be non-UL listed, regardless of its inclusion in the specifications or drawings, This Subcontractor shall bear full responsibility for obtaining third-party certification and/or replacing the item with a UL listed product at no additional cost to the project.
25	All access panels, grilles, and similar components must be laid out on the floor a minimum of five (5) days prior to the start of framing on that floor. Failure to meet this requirement will result in This Subcontractor being responsible for any associated framing and sheetrock rework.
26	All access panels must be aligned with adjacent fixtures unless otherwise directed by the Architectural Reflected Ceiling Plans (RCPs).
27	All exterior penetrations must be installed concurrently with the exterior framing and window wall installation on each floor to ensure proper waterproofing and sealing.
28	This Subcontractor shall include the installation of rated raceways, cabling, and wiring as required when it is not possible to route through existing rated assemblies as shown on the contract drawings.
29	This Subcontractor shall be responsible for all raceways, boxes, and related components required for systems such as CO detection, thermostats, and similar devices. This includes running all conduit within concrete slabs and walls as required to maintain the proper rating of wiring and controls, including electrical wiring and conduit provided for other subcontractors (e.g., elevators). If conduit is not installed within the concrete slab or wall, This Subcontractor shall be responsible for any additional costs associated with implementing rated construction solutions (e.g., shaft walls, fire wrap) to maintain required ratings. This Subcontractor shall review all design drawings to verify that adequate routing is available to meet rating requirements.
30	This Subcontractor shall be responsible for covering all penetrations in concrete following concrete pours.
31	All corridors, mechanical rooms, common areas, and support spaces must be roughed in and inspected concurrently with adjacent areas on the same floor.
32	This Subcontractor shall be responsible for the layout of all ceiling-mounted items prior to the installation of metal stud framing. Any item not laid out before framing that results in a conflict with ceiling members shall be the responsibility of This Subcontractor to relocate, including any necessary modifications to framing and ensuring a return to code-compliant installation.
33	This Subcontractor shall be responsible for uncovering all sleeves and cast-in-place conduits within 48 hours of the concrete slab being poured.
34	All rated penetrations shall be installed perpendicular (90 degrees) to the rated wall and in full compliance with the requirements of the applicable UL assembly listings.
35	Labeling of all devices and access panels, as required by the Authority Having Jurisdiction (AHJ), shall be the responsibility of This Subcontractor.
36	Final inspections will be conducted progressively throughout the project, on a per-floor basis, rather than all at once upon project completion. This Subcontractor shall coordinate accordingly to ensure readiness for inspections as each floor is completed.
37	This Subcontractor shall participate in and facilitate all required third-party inspections prior to the Authority Having Jurisdiction (AHJ) inspection.
38	This Subcontractor shall participate in all BIM coordination meetings, daily huddles, site meetings, and subcontractor meetings. The personnel representing This Subcontractor at these meetings shall have decision-making authority.

Midway Event Center SCOPE OF WORK - BP-2300 HVAC

39	Provide and install Kitchen exhaust hoods as specified on the contract documents are to be included under this Bid Package with fire suppression systems. Subcontractor to include any and all interfacing wiring/controls so kitchen hood functions as required by the Contract Documents AND Local Jurisdiction.
HVAC MECHANICAL	
40	This Subcontractor shall provide all labor, materials, supervision, equipment, taxes, and safety measures required for a complete, turnkey Mechanical/HVAC system in accordance with the drawings and specifications. The Contractor and This Subcontractor acknowledge that the Contractor has selected This Subcontractor based on its expertise in constructing similar projects. This Subcontractor shall perform all work necessary to deliver a fully completed and functioning system, including addressing any scope gaps, errors, inconsistencies, or coordination issues discovered in the drawings and specifications that a subcontractor with similar experience could have reasonably identified during the bidding process.
41	This Subcontractor's work includes all HVAC equipment and related components, including but not limited to pumps, rooftop equipment, DOAS units, fans, heat pumps, VRF systems, split-systems, unit heaters, ductwork, grease duct, condensate drains, refrigerant lines, supply and return piping, insulation, fire wrap, pressurization systems, dampers (including fire and smoke dampers), vents, dryer boxes, grilles, registers, diffusers, dummy and transfer grilles, fire wrap, wall caps, exhaust fans, louvers, access doors, drip pans, controls, and all other items necessary for a complete and functional HVAC system.
42	All rough-in work included in this Scope of Work shall be concealed within wall cavities unless otherwise approved by the Owner and Architect. This Subcontractor is responsible for cleaning up all core drill slurry from walls and slabs, as well as promptly removing and patching all core drill machine anchors immediately after the activity is completed.
43	This Subcontractor shall coordinate with the framing subcontractor for all floor penetrations occurring within framed walls. Any penetrations that are not centered within a framed wall shall be the responsibility of This Subcontractor to relocate.
44	This Subcontractor shall not paint or mark on exposed concrete flooring. Any markings made by This Subcontractor on exposed concrete flooring must be completely removed, and the affected area resealed to match the surrounding flooring at This Subcontractor's sole expense.
45	All ceiling grilles, registers, and diffusers in common areas shall have a factory finish that matches the color of the adjacent ceilings. This Subcontractor shall coordinate finish selections with the Contractor and design team prior to procurement and installation.
46	This Subcontractor shall perform all start-up, testing, adjusting, and balancing (TAB) activities, including the preparation of TAB reports and the provision of owner training for all applicable systems. Independent, third-party TAB testing and reporting shall be conducted for all mechanical systems serving common areas, support spaces, and critical building functions.
47	This Subcontractor shall perform all conditional start-up of units as required by the Contractor to maintain conditioned space for finishes installation. Any fees associated with conditional start-up shall be paid by This Subcontractor.
48	All materials, including but not limited to dryer boxes, dampers, and similar components, shall be rated to maintain the required fire-resistance rating of the wall or ceiling system in which they are installed.
49	This Subcontractor shall provide three (3) sets of filters per unit, to be installed, replaced, and/or turned over at the discretion of the Contractor.
50	This Subcontractor shall provide all required firestopping and dampers to ensure code compliance for all penetrations made within rated assemblies.
51	All fire dampers, duct smoke detectors, and related devices shall be tied into the fire alarm system. This Subcontractor shall coordinate with the fire alarm subcontractor to ensure proper integration. This Subcontractor shall install all duct-mounted smoke detectors provided by the electrical subcontractor, with fire alarm wiring connections to be completed by others.
52	All condensate drain piping shall be routed to hub drains and storm drainage systems. Where a hub drain is not available, condensate drains shall be pumped and/or gravity-drained to a location coordinated with the Contractor prior to installation. This Subcontractor shall furnish and install all required drip pans.
53	This Subcontractor shall start up and maintain all HVAC and mechanical equipment for temporary use during construction as directed by the Contractor. If excess dust is present in the units after mechanical start-up, the Contractor will install temporary filter fabric over the filters as needed.
54	This Subcontractor shall furnish and install all loose and integral disconnects for all HVAC equipment.

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55	This Subcontractor shall furnish and install all interior and exterior architectural, fresh air, and exhaust louvers to meet the specified free air requirements as indicated on the mechanical drawings. Submittals for louvers, including model, size, color, and finish, shall be provided for architect approval prior to procurement.
56	Exterior louvers shown on architectural drawings and Mechanical drawings whether ducted or not will be provided by this package.
57	This Subcontractor shall provide a turnkey CO monitoring system in full compliance with applicable codes, plans, and specifications.
58	This Subcontractor shall provide and install all building management control systems as specified in the plans and specifications.
59	All low voltage control wiring shall be provided and installed by This Subcontractor.
60	Line-side and load-side wiring shall be provided by others.
61	Plenum temperature sensors are included and shall be provided by This Subcontractor.
62	This Subcontractor shall coordinate and interface with the smoke control system and panel provided by the fire alarm subcontractor.
63	Fire wrap and insulation shall be provided and installed by This Subcontractor at all locations as required by code.
64	Variable Frequency Drives (VFDs) for mechanical equipment, where scheduled, are included in This Subcontractor's scope.
65	This Subcontractor shall furnish and install all hoods for line sets as required by the project specifications and drawings.
66	This Subcontractor shall furnish and install all required hangers, Unistrut's, steel, and related components for the support of mechanical equipment and ductwork.
67	This Subcontractor shall furnish and install all concrete or prefabricated pads required for floor-mounted equipment.
68	This Subcontractor shall furnish and install all manufacturer-provided landings, platforms, and related components as required by code for mechanical equipment.
69	This Subcontractor shall furnish and install all required hanging supports, framing, and related components for mounting mechanical units at all locations.
70	This Subcontractor shall furnish and install all required vent caps per project specifications and drawings.
71	This Subcontractor shall align all grilles with adjacent fixtures and center them on exterior windows when near an exterior wall, unless otherwise directed by the Architectural Reflected Ceiling Plans (RCPs).
72	This Subcontractor shall furnish and install wind restraints for ductwork at roof conditions as required by code, project plans, and specifications.
73	This Subcontractor shall provide multiple mobilizations for testing, adjusting, and balancing (T&B), including off-hours T&B as required to maintain the project schedule.
74	This Subcontractor shall ensure that all exterior vents and louvers are aligned in elevation per project requirements.
75	This scope includes, but is not limited to, the chilled water and condenser water systems, encompassing piping, insulation, pumps, valves, fittings, welding, meters, water treatment, and variable frequency drives. It also includes the heating hot water systems with all associated piping, insulation, meters, pumps, valves, and variable frequency drives, as well as building distribution units such as unit heaters and fan coil units.
76	This Subcontractor shall furnish and install all control wiring as required for the mechanical systems.
77	This Subcontractor shall provide all necessary storage facilities for piping, equipment, fittings, and related materials. All valves and materials must be secured at the end of each working day. No compensation will be granted for lost or stolen materials.
78	This Subcontractor shall, through the use of temporary equipment or the permanent HVAC system, maintain indoor air conditions between 55°F and 75°F with a maximum 60% relative humidity (RH) from the point of temporary or permanent building dry-in until project completion.
79	All shop-fabricated ductwork must be sealed immediately upon completion of fabrication using an impervious membrane at each end and shall remain sealed until ready for installation on-site.
80	This Subcontractor shall provide a temporary control system to enable the HVAC system, including all air handling units (AHUs), to maintain consistent temperature and humidity levels in enclosed areas during construction. The temporary controls shall include fan speed and supply air temperature regulation, with fully operational freeze stat and high/low static pressure safety features, as required by project specifications.

Midway Event Center SCOPE OF WORK - BP-2300 HVAC

81	Any external starters shall be furnished by This Subcontractor, installed by the electrical contractor, with line and load connections performed by the electrical contractor, while This Subcontractor shall be responsible for providing and installing all control wiring.
82	This Subcontractor shall provide all required caulking and sealants for fixtures and equipment, ensuring proper sealing to all finished surfaces.
83	All ductwork shall be clean and free of dust prior to installation and shall be maintained in this condition throughout the duration of the project. This Subcontractor shall implement all necessary protective measures to ensure compliance. No compensation will be provided for duct cleaning, and it shall be the responsibility of This Subcontractor to clean any ductwork found to be noncompliant.
84	This Subcontractor shall furnish and install all mechanical louvers as specified in the Architectural and Mechanical drawings, including factory finishing, insect and/or bird screens, insulated blank-off panels, anchors, anchorage devices, sills, and louver bars as required.
85	Unless otherwise specified, all factory-manufactured products shall be provided with factory-applied finishes, insulation, and jacketing as appropriate. Integral support framing shall also include factory-applied finishes.
86	This Subcontractor shall furnish and install heat tracing for HVAC piping where indicated in the Contract Documents. Wiring and conduit shall be provided and routed to the junction box furnished by others.
87	This Subcontractor shall coordinate with the mechanical piping, Building Energy Management System, Fire Alarm, and Electrical Subcontractors to ensure the provision of all necessary contacts and relays for proper system operation and interface.
88	This Subcontractor shall cover the top of all ductwork with 6-mil poly to protect insulation from water and dirt damage, ensuring the ductwork remains protected until the building reaches dry-in condition.
89	This Subcontractor is responsible for the final cleaning of all mechanical equipment prior to final project acceptance.
90	This Subcontractor shall furnish and install galvanized sheet metal drip/drain pans with float switches and control devices as specified in the project documents and as required wherever systems pass over electrical equipment, sensitive equipment, or furnishings.
91	This Subcontractor shall provide all necessary materials, management, and field labor. Commissioning documentation shall include, but is not limited to, complete and accurate pre-function test reports, training records (audio, video, and written), coordination meeting records, and all required assistance to achieve a complete and final commissioning activity in accordance with the contract documents.
92	This Subcontractor shall provide all painting, stenciling, and tagging, including equipment labels, warning signs, pipe labels, duct labels, stencils, valve tags, and warning tags. Color-coded ceiling markers shall be installed to identify the locations of concealed valves and equipment above the ceiling, with colors matching Owner standards.
93	This Subcontractor shall provide and install all sheaves, belts, and other miscellaneous components as required to meet balancing requirements and as reasonably requested by the Test and Balance Contractor and Commissioning Agent.
94	This Subcontractor shall furnish and install all required connections to Food Service Equipment serviced by Mechanical Systems within this scope of work.
95	This subcontractor is responsible for coordinating/verifying the mechanical / HVAC equipment and requirements as related to the elevator scope of work. This is to ensure that the design intent meets the requirements. This includes but is not limited to locations of Mech/HVAC systems, penetrations of these systems specifically related to the elevator shaft and meets the code and requirements of capacity and or clearances required by the state elevator code.
96	Subcontractor shall furnish and install all hangers for their work on steel prior to the installation of spray fireproofing.
97	Subcontractor shall not hang any piping from "C-Clamp or Beam Clamp" hangers on joists due to the joists design limitations. All piping support shall be threaded rod methods through chord members.
98	Subcontractor shall coordinate the layout of openings and penetrations with Building Concrete subcontractor for slab locations and Roofing subcontractor for roof locations. Subcontractor is responsible for coring slabs after concrete placement for penetrations integral to their work. Subcontractor shall include all cut-outs integral for their work at structurally framed and unframed penetrations of metal deck as needed. Subcontractor must protect all opening per OSHA regulations.
99	Subcontractor is not permitted to cut structural members without prior approval and scheduling by the Construction Manager.

Midway Event Center SCOPE OF WORK - BP-2300 HVAC

100	Subcontractor shall furnish and install all equipment, housekeeping, and specialty pads for this Scope of Work. The concrete mix design submittals must be submitted and approved prior to installation.
101	Subcontractor shall furnish and install all equipment, housekeeping, and specialty pads for this Scope of Work required at the mechanical yard. The concrete paving at the mechanical yard will be by others.
102	Subcontractor must haul off site any concrete truck wash out associated with their work.
103	Subcontractor is responsible for excavation and backfill of their work per OSHA regulations.
104	Subcontractor shall pump, demuck, and dewater as necessary for their own work.
105	Subcontractor shall excavate for underground HVAC piping, compact, and backfill per the specification requirements, including repair and replacement of the slab stone sub-base. Stockpiled spoils must be away from the building perimeter at a place designated by the Construction Manager so that clear access to the building is maintained for construction of foundation walls and slabs. Subcontractor must protect their stockpiles of soils, whether generated onsite or imported, so that soils needed for fill or backfill operations are not made unsuitable and hinder the Construction Schedule. Unsuitable soils unit prices will not be used for soils that are made wet or unsuitable due to natural weather conditions. This subcontractor will be responsible for hauling off their own spoils.
106	Subcontractor is responsible for the installation of their underground work as to not delay slab placements. Subcontractor will coordinate with BP 0302 – Building Concrete, BP 2200 – Plumbing, and BP 2600 – Electrical.
107	BP 2300 – HVAC shall furnish and deliver the motor starters, internal and external disconnect switches, and combination starters for the mechanical equipment to the installation locations, which will be installed by BP 2600 - Electrical. BP 2300 – HVAC shall provide a transmittal with a detailed description of materials and quantities for signature while turning these items over to BP 2600 – Electrical. The signed transmittal should then be given to the Construction Manager. The Construction Manager shall not be held responsible for missing materials turned over to other trades. If BP 2300 – HVAC fails to properly transmit materials to the receiving subcontractor, then BP 2300 – HVAC shall be solely responsible for replacing missing materials.
108	HVAC contractor shall furnish all external electrical disconnects required for mechanical equipment, regardless of whether internal disconnects are factory-provided, as required to meet project electrical plans and code requirements. The electrical subcontractor shall install all disconnects.
109	If equipment is furnished with internal disconnects, BP 2300 - HVAC shall also be responsible for providing all external disconnects if required by the Electrical plans and specifications.
110	BP 2300 – HVAC shall coordinate with the finish trades so there are no conflicts with outlets, light switches, casework, etc.
111	Subcontractor shall furnish and install all wiring within the kitchen exhaust hoods for interlocking, lighting, etc.
112	Subcontractor shall include hookup and final connections for all food service equipment, commercial appliances, and residential appliances provided by others. This includes providing, installing and hook up of the exhaust hoods. This work includes all grease duct including code required fire wrap.
113	Subcontractor shall furnish and install roof mounted support for all mechanical piping and equipment.
114	Subcontractor shall include all required isolation and/or expansion supports for piping.
115	Subcontractor is responsible for placing the heating and cooling systems into service as early as possible to coordinate with the Construction Schedule requirements.
116	Subcontractor shall furnish, install, and maintain all filters during construction. This includes, but is not limited to, installing filter media over return grills and fresh air wall louvers for temporary protection.
117	Subcontractor is responsible for the replacement of all filters at Substantial Completion.
118	Subcontractor shall furnish, install, and maintain protection to keep trash and debris out of ductwork. Subcontractor must verify that the ductwork is clean at Substantial Completion.
119	Subcontractor shall ensure that any exposed metal duct scheduled to be painted is not treated with passivator, so it is ready for prime and paint by others.
120	The Construction Manager will implement Building Information Modeling (BIM) on this project for construction coordination, work phasing, and logistics. BP 2300 – HVAC shall participate in the modeling process as set forth in the BIM Requirements of the Bid Manual. Change orders for coordination clashes on site will not be entertained.
121	Subcontractor shall generate and maintain their own HVAC model through the coordination process. These models are not intended to replace shop drawings, which are also required.
122	Subcontractor shall include ceiling heights and the locations of access panels within their coordination model.

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123	During the coordination process, valves, filters, units, equipment, and other items that will be accessed for maintenance need to be taken into consideration. If any piping, units, or materials are installed in a fashion that makes access difficult, Subcontractor is responsible for moving the items at no additional cost to the project.
124	Subcontractor shall take an active role in the commissioning process. As a commissioning team member, Subcontractor will appoint a representative to attend meetings, coordinate work activities, and assist in meeting the objectives of the commissioning team and contract documents.
125	BP 2300 - HVAC is responsible for scheduling NCDOL Boiler inspections and paying all required fees and associated costs.
126	Subcontractor is responsible for third party fire/smoke damper testing.
127	Subcontractor shall include all testing, adjusting, and balancing of HVAC systems to achieve the design objectives per the plans and specifications.
128	Subcontractor is responsible for providing personnel as necessary for efficient and effective trouble shooting shall any balancing, start up, or commissioning problems occur.
129	Subcontractor shall ensure that the designated competent person is on-hand, including any second tier Subcontractors, for all overhead ceiling inspections. This should include personnel ready and able to address any items during the inspections.
130	Subcontractor shall provide hydronic piping submittals within 2 weeks from the issued Letter of Intent (LOI) by the Construction Manager. All other HVAC submittals are required within 4 weeks of the LOI.
131	See Bid Proposal Form for allowances and unit prices applicable to this Bid Package.
132	Subcontractor shall refer to Specification 012300 for all alternates related to this Scope of Work and complete the Bid Proposal Form accordingly.

Midway Event Center SCOPE OF WORK - BP 2600 Electrical

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	079200 Joint Sealants
	079219 Acoustical Joint Sealants
	078400 Firestopping
	078400.01 Schedule of common firestop systems
	260000 Summary of Electrical Work
	260500 Basic Electrical Requirements
	260519 Secondary Voltage Wires and Cables
	260526 Grounding
	260529 Supporting Devices
	260533 Electrical Identification
	260534 Raceways
	260535 Electrical Boxes and Fittings
	260536 Cable Trays
	260543 Underground Ducts and Raceways for Electrical Systems
	260579 Temporary Power and Lighting
	260584 Concrete Equipment Pads
	260590 Painting
	260593 Electrical Connections for Equipment
	260596 Lighting Systems Commissioning
	260800 Testing and Placing in Service
	260923 Lighting Control Devices
	260924 Lighting Relay Panel
	262200 Low Voltage Transformers
	262413 Switchboards
	262416 Panelboards
	262550 Generator Docking Station
	262713 Electrical Metering Equipment
	262726 Wiring Devices
	262813 Fuses
	262816 Enclosed Switches and Circuit Breakers - Equipment Procured as Part of early Elec package
	263213 Diesel Generator Set - Equipment Procured as Part of early Elec package
	263623 Automatic and Non-Automatic Transfer Switches - Equipment Procured as Part of early Elec package
	265000 Lighting Fixtures
	270528 Telephone/Data Raceway System
	272000 Telephone/Data Systems
	275124 Emergency Telephones
	283100 Fire Alarm Systems

GENERAL

1	This scope of work includes a complete system per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
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Midway Event Center SCOPE OF WORK - BP 2600 Electrical

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

2	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.
3	Responsible for BIM coordination. Dimensioned sleeving and layout drawings will be required for all rough-in required in concrete frame construction. This Subcontractor has included the required coordination with other trades including, but not limited to, electrical, fire protection, drywall, masonry, storefront, concrete, etc.
4	Includes all firestopping, sleeves, collars, pressure plates, etc. at all concrete wall and slab penetrations as called for.
5	Subcontractor shall provide field engineering and layout for this scope of work. Control points will be established in the field by others.
6	All fire stopping for all penetrations through rated walls and ceilings made by the subcontractor per UL details.
7	All signage and labeling as required for inspections by AHJ including for dryer exhausts and damper locations
8	All access panels as noted on the project drawings and/or required by AHJ to be furnished by Subcontractor for installation by drywall subcontractor. Includes all above ceilings, shut off valves, mechanical dampers, etc.
9	Subcontractor to return all grades to original subgrade and compaction upon completion of all excavations.
10	Participate in an exterior sacrificial free standing mock up and interior in place unit mock up, including applicable rough-in and fixture trim. Note that this Subcontractor will provide applicable fixture and device samples as requested during submittal approval and mock up process.
11	Includes a complete Function and Performance walkthrough with the Contractor, Engineer and Owner upon substantial completion of the project. All balance reports, testing information, start up logs, warranties, O&M's, certifications, as-builts, etc. will be submitted to C&T prior to this time
12	permits to be provided by others. All permits and inspections fees as required for final inspections to be by subcontractor. Includes, but is not necessarily limited to, boiler inspection fees from NCDOL.
13	All equipment, fixtures, devices, components, assemblies, appliances, machines, etc. provided by subcontractor are to be UL listed. Subcontractor to review all specifications, drawings, submittals, etc. to confirm everything is UL listed prior to procuring and installing. If anything is not UL listed, regardless of what is called for on specification or drawings, it is the responsibility of the subcontractor to pay for third party certification of the product(s) and/or replace with a UL listed product.
14	Access panels, grilles, etc. must be laid out of the floor (5) days prior to framing starting on that floor or subcontractor will be responsible for framing/sheetrock re-work.
15	Access panels must align with adjacent fixtures unless Arch. RCP's dictate otherwise.
16	All exterior penetrations must be installed while exterior framing/window wall is being installed on that floor so penetrations can be properly waterproofed/sealed.
17	Includes rating raceways, cabling, wiring as required where not possible to run in already existing rated assemblies as shown on contract drawings.
18	Responsible for all raceways, boxes, etc. (CO detection, thermostats, etc.). Sub to run all conduit in concrete slab/wall as required for rating of wiring/controls (including electrical wiring and other subs for which electrician is providing conduit (ex: elevator)). If conduit is not run in the concrete slab/wall, sub is responsible for added cost to add rated construction (shaftwall, fire wrap, etc.). Sub to review drawings and confirm there is routing available based on design drawings to maintain ratings.
19	Sub responsible for covering all penetrations in concrete after pours.
20	Include layout of all ceiling mounted items prior to metal stud framing. Any item not laid out prior to framing which has conflict with ceiling members will be subcontractors responsibility to relocate framing member and return to code compliant installation

Midway Event Center SCOPE OF WORK - BP 2600 Electrical

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

21	Subcontractor is responsible to uncover all sleeves and cast in place conduits within 48 hours of concrete slab being poured
22	All rated penetrations to be at 90deg of rated wall and as required by UL Assembly listings
23	Labeling of any devices or access panels as required by AHJ is subcontractors responsibility
24	Final inspections will happen throughout the job and not all at the end. I.E. we will walk by floor instead of all at once.
25	Subcontractor will participate in all BIM coordination meetings, daily huddles, site meetings, and subcontractor meetings. Personnel at meeting will be a decision maker
26	The Construction Manager will implement Building Information Modeling (BIM) on this project for construction coordination, work phasing, and logistics. BP 2600 - Electrical shall participate in the modeling process as set forth in the BIM Requirements of the Bid Manual. Change orders for coordination clashes on site will not be entertained.
27	Subcontractor shall generate and maintain their own Electrical model through the coordination process. These models are not intended to replace shop drawings, which are also required.
28	Subcontractor shall include ceiling heights and the locations of access panels within their coordination model.
29	During the coordination process, valves, units, equipment, and other items that will be accessed for maintenance need to be taken into consideration. If any valves, equipment, and other items are installed in a fashion that makes access difficult, Subcontractor is responsible for moving the items at no additional cost to the project.

SCOPE OF WORK - Electrical

30	This scope of work includes turnkey Electrical and specified Electrical system(s) per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
31	Subcontractor to furnish and install all feeders, secondary conduit and conductors, CT cabinets, lighting, lighting controls, branch circuitry, devices, conduit, MC cable, power distribution equipment, fire and jockey pumps power and connections, booster pump connections, panels, meter centers, grounding/bonding, transformer and electrical equipment pads, contactor cabinets, elevator connections, current transformer cabinets, service conduit, transfer switches, fire protection equipment connections, HVAC equipment connections and disconnects, plumbing equipment connections, etc. for the resident units, common areas, courtyards, parking garage, amenity/common spaces, fire alarm system, control panels, wiring, grounding, etc. for a complete electrical system. Pre-purshed Gear and Generators will be turned over to this subcontractor for installation and hook up. Please review Early Electrical Scope to understand what will be provided by others. All other required scope to make fully functional will be the responsibility of this subcontractor.
32	Include installation of all transformer pads, stone, etc. required for Duke Energy transformers per Duke standard details and specifications.
33	Primary service conductors by utility service provider
34	Includes layout and installation of any hangers, sleeves and raceways for all low voltage and fire alarm.
35	Includes all light fixtures types and quantities as identified on electrical, architectural, interiors, and landscape drawings.

Midway Event Center SCOPE OF WORK - BP 2600 Electrical

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

36	Provide power for all fire protection systems including fire pump, air compressors for dry systems, etc. as required. Subcontractor includes coordination with all approved submittals prior to installation of wiring, disconnects, etc. Subcontractor shall install all electrical provisions as outlined in the product submittal docs. If changes to electrical provisions are required as dictated in the project documents Subcontractor shall verify with Contractor via email or RFI prior to installation in order to substantiate any cost changes.
37	Waterproof GFI outlets at roof and exterior conditions. Subcontractor to verify and provide power so that electrical service is available within 25 ft. of all rooftop mechanical units and as shown on drawings
38	Subcontractor shall run all conduit required for electrical, low voltage, fire alarm, and security wiring. Includes all conduit at concrete and block walls for power, lighting, security, and access control.
39	Verify electrical gear will fit in the electrical rooms before ordering and installing.
40	Furnish and install all elevator mainline and hoistway auxiliary disconnects and associated wiring as shown on E Sheets. Coordinate with elevator contractor to determine if any additional scope is required.
41	Furnish and install disconnects, junction boxes, and associated for wiring signage. Final locations and requirements to be coordinated with design team and owner.
42	Furnish and install disconnects, junction boxes, and associated wiring for roll up doors and smoke curtains.
43	Furnish and install all disconnects and wiring for mechanical HVAC, Plumbing and Fire Sprinkler equipment. Subcontractor to provide all line side wiring to factory disconnects and line & load side wiring to all loose disconnects for all equipment. Includes external disconnects where required for mechanical, plumbing and fire sprinkler equipment and as designated on the project drawings. Does not included internal disconnects however final connections to this equipment is also included.
44	Provide complete grounding system per NEC. Includes all sleeves as required.
45	Include all labeling and designation of electrical devices, panels, equipment, and meters.
46	Include all painting, tagging and identification of electrical devices per the specifications and as required by the AHJ.
47	Include all testing of the electrical system, fixtures or equipment per the specifications and as required by the AHJ.
48	Provide a pull string/wire and circuit tag label in all empty conduits.
49	This Subcontractor has included installation of a complete generator and transfer switch scope of work using equipment provided by others , including all required start-up, steps, rails, vibration isolation, testing, stairs and supports, owner training, etc. Applicable standalone permits for testing the fuel tank, fuel for testing and enough fuel to fill the tank completely (Fill Line) prior to owner turnover is included.
50	Include complete lighting fixture package as shown on the contract documents.
51	Include complete lightning protection system, testing and UL certifications as required.
52	Included a complete lighting controls system per plans and specifications. Local controls as indicated
53	Power & Fire Alarm connections to all code required Fire Smoke Dampers as required by HVAC drawings. Note that Fire Smoke Dampers are furnished by others.
54	This subcontractor is responsible for reviewing the HVAC equipment submittals to ensure that breakers are coordinated with approved equipment and identify in writing before procurement of breakers or installation of wiring any breaker or wiring changes necessary.
55	Applicable power and conduit to ADA door operators per MEP-FP-LV contract documents.
56	Include applicable power to all auto-flush urinals and water fountains per MEP-FP-LV or Architectural contract documents.
57	All conduits to be concealed, surface mounted wiring and conduits only acceptable as designated in the project specifications
58	Subcontractor shall coordinate install all concrete penetrations and floor boxes prior to pouring of concrete slabs.

Midway Event Center SCOPE OF WORK - BP 2600 Electrical

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

59	Subcontractor shall include all penetrations and sleeving required for your scope of work including fire caulking or sealant required to meet approved UL details.
60	Sleeving drawings will be required to be provided by this Subcontractor for above grade concrete construction.
61	Subcontractor to maintain all clearances required by code around sprinkler heads.
62	Responsible for furnishing and installing access doors required for this scope of work to access equipment, etc.
63	This scope of work requires extensive BIM coordination efforts requiring major involvement with this subcontractors Superintendent and Project Manager to attend all coordination meetings. Subcontractor is responsible for maintaining and updating design and/or field changes during the course of the project as required for as-built closeout documents turnover.
64	Include all provisions for electrical duct banks as required by AHJ including all anchors, spacers, bars, etc. Concrete material and placement by this subcontractor.
65	Include special switch depth device boxes where required.
66	Include electrical equipment, circuitry, and provisions associated with electric vehicle charging equipment as required.
67	Include electrical system(s) testing as outlined in design documents/specification and/or PDI testing practices whichever is more stringent. Includes but not limited to continuity testing, final hot check testing, low voltage and fire alarm inspections and testing, generator, distribution system (Torque & Meggar Reports/Grounding)
68	Include preliminary and final short circuit and protective device/power studies, protective device coordination studies, Arc flash analysis as required
69	All electrical outlets and switches to be installed per FHA and ANSI requirement.
70	Subcontractor to install all code required protected wiring through rated assemblies (concrete, shafts, etc.). Included as required for all code required building systems including elevators and associated communication systems.
71	Subcontractor includes any/all concrete bases and supports as required for ground mounted light fixtures in landscape areas
72	Subcontractor includes electrical power for all access control and hardware power supplies, electrified exit devices, auto operators, etc. Subcontractor includes all electrical and fire alarm connection to access controlled doors as required for fail-safe operations
73	Concrete for duct banks by Subcontractor as required for their work
74	Power and connections for all heat trace as shown on drawings including plumbing, mechanical, etc. Heat trace to be by others
75	Installation and wiring to all VFDs as provided by others
76	Building grounding system includes installation for exterior wall penetrations prior to building waterproofing so as all penetrations can be sealed properly. Failure to install at this time will be subcontractors responsibility to waterproof per contract documents
77	All conduits and MC cable located inside electrical rooms will be labeled at all times during construction
78	Subcontractor will use 2 hour rated cable or provide 2 hour rated wrap if any required protected cable is missed during coordination or initial rough-in
79	Sub to provide conduit drawings for in slab conduit.
80	Sub to provide drawings for all wall (shear and foundation) blockouts, sleeving and conduit running inside walls.
81	Includes power to all motorized shades as called for on arch. and interior drawings
82	Includes all FA modules for FA scope of work as well as connection to any other separate systems that require monitoring by FA system as shown and as required by AHJ for code compliant system

Midway Event Center SCOPE OF WORK - BP 2600 Electrical

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

83	Hot check must be completed immediately following power being turned on to various areas of the Building.
84	Coordinate stairwell light fixture locations with sprinkler standpipes.
85	Temporary doors locks at all electrical rooms. Doors by others
86	Printed sticker labels for all electrical panels.
87	All light pole concrete footings as required per drawings, specs, manufacturer's specs.
88	All disconnects required by Elevator contractor
89	Raceway for sump pump control wiring from sump pump to panel.
90	Power to Auto door operators as called for on door and hardware schedules. All required raceways for LV and hardware connections
91	Power supply to all electrified hardware at all card reader locations per door and hardware schedules. Raceways for all access control and door hardware requirements.
92	Subcontractor shall verify electrical requirements, voltage, amperage, etc. of all major/specialty equipment (including, but not limited to: all HVAC equipment, fire protection equipment/pumps, OH doors, appliances, plumbing equipment/pumps, door hardware, elevators, smoke curtains, motorized roller shades, etc.)
93	Provide emergency power to all BAS panels.
94	Prove emergency power to all IDF/MDF rooms.
95	Elevator pit receptacles to be on emergency power per DOL.
96	Subcontractor includes cutting and installation of all ceiling tile (provided by others) as required during installation and trim out of light fixtures located ACT ceilings
97	Subcontractor shall not hang any piping from "C-Clamp or Beam Clamp" hangers on joists due to the joists design limitations. All piping support shall be threaded rod methods through chord members.
98	Subcontractor shall coordinate the layout of openings and penetrations with BP 0302 – Building Concrete for slab locations and BP 0750 - Roofing for roof locations. Subcontractor is responsible for coring slabs after concrete placement for penetrations integral to their work. Subcontractor shall include all cut-outs integral for their work at structurally framed and unframed penetrations of metal deck as needed. Subcontractor must protect all opening per OSHA regulations.
99	The Scope of Work shall also include site lighting, pedestrian lighting, and vehicular lighting unless identified to be by Others.
100	Subcontractor shall submit electrical power system studies to the Construction Manager within the electrical gear/panelboard submittal as required per the plans and specifications.
101	Subcontractor shall furnish and install all system identification per the plans and specifications. Subcontractor shall include system identification measures (color of pipe, painted pipe, etc.) required by the plans and specifications.
102	Subcontractor shall furnish and install all sleeves and conduits as indicated on both the site electrical plans and site utility plans.
103	Subcontractor shall include three 6" sleeves under all curb and gutter and concrete paving for primary power.
104	Subcontractor shall furnish and install sleeves for this Scope of Work. Firestopping for sleeves will be the responsibility of the trade who installs the sleeves. The AHJ may use destructive testing measures during inspections and Subcontractor must repair/replace as required.
105	Subcontractor shall provide sleeves for all necessary penetrations within the foundations and slabs as coring is not desired. Subcontractor shall also furnish and install sealants, grout, and fireproofing firestopping as necessary for a complete and proper installation.
106	Subcontractor is responsible for laying out and completing any cores required where it is not possible to install sleeves.
107	Subcontractor shall furnish and install all hangers for their work prior to the installation of fireproofing.

Midway Event Center SCOPE OF WORK - BP 2600 Electrical

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

108	Subcontractor is not permitted to cut structural members without prior approval and scheduling by the Construction Manager.
109	Subcontractor shall layout and install materials needed for BP 2600 – Electrical as BP 0400 – Masonry installs masonry walls, brick, etc.
110	Subcontractor shall coordinate with the finish trades so there are no conflicts with locating outlets, light switches, etc. in areas with casework, equipment, etc.
111	Subcontractor shall furnish and install all wiring and power requirements necessary for the irrigation system (controller, pumps, etc.) as indicated in the plans and specifications.
112	Subcontractor shall install variable frequency drives furnished by BP 2310 – HVAC Controls.
113	Subcontractor shall include requirements and installation coordination of the Food Service Equipment as indicated per the Food Service plans and specifications.
114	Subcontractor shall furnish and install power connections to all equipment furnished by others which require power (e.g., Plumbing equipment, HVAC equipment, Food Service Equipment, Division 10, Division 11, etc.). This includes the complete installation of raceways and electrical components as indicated per each specification section that may not specifically be indicated on the panel schedule.
115	Subcontractor shall furnish and install all electrical connections, conduit, boxes, back boxes, wiring to power sources, and control locations for other electrically powered devices as indicated in the plans and specifications for Division 11 and Division 12 work.
116	Subcontractor shall include all wiring for the kitchen exhaust hoods, control panels, and accessories.
117	This subcontractor shall ensure that the ANSUL System manual pull stations conduit and rough in boxes are installed within walls and not surface mounted.
118	Subcontractor shall install the generator, exhaust silencer, sub-base fuel storage tank, battery and charger, weatherproof enclosure, and transfer switch provided by Others for a complete system. Subcontractor shall furnish and install the generator equipment pad for equipment provided by others.
119	Subcontractor shall furnish and install all underground electrical and communication conduits.
120	This subcontractor shall furnish and install all duct bank per the plans and specifications.
121	Subcontractor shall furnish and install all equipment, housekeeping, and specialty pads for this Scope of Work. Concrete mix design submittals must be submitted and approved prior to installation.
122	Subcontractor shall furnish and install all equipment, housekeeping, and specialty pads for this Scope of Work required at the mechanical yard. The concrete paving at the mechanical yard will be by others.
123	Subcontractor must haul off site any concrete truck wash out associated with their work.
124	Subcontractor is responsible for excavation and backfill of their work per OSHA regulations. Subcontractor shall excavate for underground electrical, compact, and backfill as indicated per the plans and specifications, including repair and replacement of slab stone sub-base. Stockpiled spoils must be away from the building perimeter at a place designated by the Construction Manager so that clear access to the building is maintained for the construction of foundation walls and slabs. Subcontractor must protect their stockpiles of soils, whether generated onsite or imported, so that soils needed for fill or backfill operations are not made unsuitable and hinder the construction schedule. Unsuitable soils unit prices will not be used for soils that are made wet or unsuitable due to natural weather conditions. BP 3110 - Grading shall remove BP 2600 - Electrical surplus spoils off site or reuse on site unless BP 2600 - Electrical has made them unsuitable due to their lack of protection. If this occurs, BP 2600 - Electrical will be responsible for hauling off their own spoils.
125	Subcontractor acknowledges that the building pad and perimeter is to receive lime/cement stabilization treatment by others. Subcontractor shall include necessary provisions for excavation and backfill requirements accordingly.
126	Subcontractor is responsible for the installation of their underground work as to not delay slab placements. Subcontractor will coordinate with BP 0302 – Building Concrete, BP 2200 – Plumbing, and BP 2300 – HVAC.
127	Subcontractor shall pump, demuck, and dewater as necessary for their own work.

Midway Event Center SCOPE OF WORK - BP 2600 Electrical

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

128	Subcontractor shall provide all submittals within (4) weeks from issuance of the Letter of Intent by the Construction Manager.
129	Subcontractor shall take an active role in the commissioning process. As a commissioning team member, Subcontractor will appoint a representative to attend meetings, coordinate work activities, and assist in meeting the objectives of the commissioning team and contract documents.
130	Subcontractor is responsible for providing personnel for efficient and effective troubleshooting shall any balancing, start up, or commissioning problems occur.
131	Subcontractor shall ensure that the designated competent person is on-hand during all other inspections. This includes, but is not limited to, the startup and inspections of all major equipment, generators, chillers, AHU's, boilers, and pumps.

TEMPORARY POWER

132	<p>Temporary Power to include 2000A service to provide (at minimum)</p> <ul style="list-style-type: none"> - OSHA required lighting - Power distribution in building - Spider boxes at all active construction decks within 150' of work area. - Temp. Elevator use of (1) elevator - (1) Clancy & Theys Field Office <p>Subcontractor shall provide plan showing electrical distribution riser for temporary power. Temporary power to be maintained throughout the duration of construction.</p>
133	Includes all service disconnects required for associated equipment.
134	Work with the Contractor and elevator contractor to facilitate the temporary use of (1) elevator to meet the project schedule. This includes, but is not limited to, temporary power and inspection measures. Power for operation of elevators for temporary use is assumed to be provided through permanent distribution. Note that it is the responsibility of the Subcontractor to ensure that temporary power can be provided through permanent distribution to support the critical path elevator installation schedule.
135	Aggressively pursue all Conditional and Permanent Power milestones in the schedule to facilitate power to the overall building and ultimately each residential unit as needed to support the progress schedule.
136	Temporary power provisions for construction of elevators.
137	Provide power for temporary heating and cooling equipment
138	Subcontractor shall furnish and install all hangers for their work on steel prior to the installation of spray fireproofing.
139	Temp lighting in each elevator lobby (10 foot candles) that will be used for temp. construction.
140	Temporary power for the Construction Manager's trailer complex including pole, meter, and final connection to the trailers. Subcontractor shall coordinate with Duke Energy for temporary power. If BP 2600 – Electrical is unable to secure temporary power to the site by the time indicated on the Construction Schedule, Subcontractor must provide temporary generator(s), fuel, and panels to produce the necessary power required for the trailer complex until temporary power work is completed.
141	Others will furnish and install heat trace at the Construction Manager's trailer complex, which shall be wired by BP 2600 – Electrical.
142	Once 3 phase electric service is provided to the site by Duke Energy, BP 2600 – Electrical shall furnish and install 480V 3 phase 400A or 208V 3 phase 800A service to the building area for temporary power.
143	Subcontractor shall furnish, install, maintain, and remove (16) added data connections at the Construction Manager's trailer complex.
144	Subcontractor shall maintain and re-lamp lights continuously until permanent power and lighting is in place.

Midway Event Center SCOPE OF WORK - BP 2600 Electrical

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

145	Subcontractor shall install and remove (1) Ox-Blue time lapse camera, including their related components and accessories. Subcontractor shall furnish and install separate temporary poles to mount each camera on, which must be at least 20 feet tall. Subcontractor shall account for providing power to these three locations that will each be within 1,500 LF of the Construction's Managers trailer complex. Subcontractor shall install and remove as directed by the Construction Manager.
146	Subcontractor shall remove the temporary services as directed by the Construction Manager.
147	Subcontractor shall furnish and install supplemental electrical power at the terrazzo flooring areas to include 220V single phase 100A breaker and 480V three phase 60A breaker with hook-ups/disconnects within 200 feet of any terrazzo flooring area.
148	A unit price must be provided in the appropriate space on the Bid Proposal Form for all unit prices applying to the corresponding allowances above (except for any lump sum allowances). Refer to Specification 012200. Unit prices will be used as a basis for the adjustment of the contract total whether work is added or deducted. See Bid Proposal Form for additional unit prices applicable to this Bid Package.
149	Subcontractor shall refer to Specification 012300 for all alternates related to this Scope of Work and complete the Bid Proposal Form accordingly.
150	Owner shall furnish Electric Vehicle Power Transfer Systems. Subcontractor shall excavate and backfill to furnish and install all conduit, wiring, raceways, handholes, etc. required for Subcontractor to install the Electric Vehicle Power Transfer Systems.
151	Connection of construction trailer to fairground power supply.

LOW VOLTAGE

152	Include the following as it relates to Division 28 low voltage/electrical systems per arch. door/hardware schedules and as indicated on the electrical drawings
154	Subcontractor to submit RFI for direction when discrepancies occur between LV and electrical prior to proceeding
155	Provide all conduit systems (with pull strings) for all low voltage where required by code; access control, security systems. Card reader, access control, and camera systems will be by others. Low voltage raceway, grounding, sleeving, pull string and boxes per low voltage drawings. Free air assumed where applicable
156	Subcontractor includes all required raceways and door framed prep at all openings called to be card reader access controlled on the arch. door/hardware schedules and electrical drawings. EC shall prep all openings to the hinge, strike, and head of frame at all CR door locations and all door locations located in concrete or CMU walls
157	Include conduits and handhole(s) from MDF to Right of Way
158	Provide power to all junction boxes for hardware power and power to power supply.
159	Includes a complete two (2) way communication system. Design build to code and within the requirements and design intent of the plans and specifications
160	The backbone cabling connection from IDF to IDF to MDF to DEMARC will be by others.
161	Pathways and sleeves for Tel/CATV risers are included.
162	Subcontractor to install all back boxes and conduit where needed (based on walls and ceiling type) for security wiring.
163	HVAC low voltage control wiring to be by others.
164	Furnish and install all emergency phones to elevators.
165	Fire retardant plywood backboards at all MDF and IDF rooms included. Minimum of 4 sheets per room is included and painting as required.
166	All site conduit and handholes. Locations to be coordinated for approval with general contractor. Subcontractor to provide all required site layout.

Midway Event Center SCOPE OF WORK - BP 2600 Electrical

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

167	Provide review of all door frame and hardware submittals for coordination and inform C&T of any discrepancies with electrified hardware.
168	Coordinate mounting height and locations of all outlets and devices with architect.
169	Seal all penetrations through exterior walls and air/weather barrier per manufacturer recommendations. This subcontractor shall make any exterior wall penetrations prior to air/weather barrier installation. This subcontractor will be responsible for any cost incurred for air/weather barrier rework by others.
170	Responsible for the required conduit and pull string from each lower level elevator lobby to the fire command center.
171	Include all firestopping at conduit and sleeve rough-in by this subcontractor.
172	Coordination with other trades associated with these scopes of work is required.
173	Coordination with the door hardware schedule and storefront details is required for any conduit rough-in associated with access control including door detail rough-in as required by access control type. Conduit to be run in door frames to hinge, strike, and head at all locations.
174	Furnish and install backboxes for access control and security devices including card readers, request to exit motion detectors, sounders, glass break detectors, cameras, etc.
175	Power in MDF and IDF rooms as required for Division 27 and 28 scopes of work.
176	Underground conduit, pull strings and handholes is included
177	Furnish and install all required IDF room infrastructure including floor sleeves, grounding/bonding, etc.
178	Furnish and install 120V power to all power supplies (By Others) necessary for access control system at electric hardware locations as called for on the door and hardware schedules
179	Furnish and install raceway and pull strings to the entrance level gate operators in the Parking Deck to support long range card reader and camera installation By Others.
180	Install all conduit, sleeves and pathways for all low voltage, access control & security system. Low voltage wiring and equipment by others. Cable to be free air where allowed by code
181	All electronic door hardware to be furnished and installed By Others.
182	Install two-way communication system/Area of Rescue complete include but not limited to all shop drawings/submittals conduits, cabling, communication base system, call boxes, graphics, labeling, programming and testing, signage, and labeling as required by AHJ. Design build to code and within the requirements and design intent of the plans and specifications
183	Subcontractor includes turnkey, design-build BDA system including all conduits, sleeving, wiring, antennas, etc. as required by code and by local AHJ.
184	Includes all raceways between elevator control rooms, FCC rooms, and elevator shafts as required.
185	Code required communication systems
186	Raceways as required for mech. CO detection at locations required per plans and specs
187	Subcontractor shall furnish and install all conduits and cable trays as required. Subcontractor shall furnish and install underground conduits and handholds for telecommunications systems as indicated on the plans.
FIRE ALARM	
188	Complete turnkey Fire Alarm system, design and permit drawings per include NFPA and AHJ requirements. Includes all pull stations, horns, strobes, control and annunciator panels, etc. to provide fully functional fire alarm system. Design build to code and within the requirements and design intent of the plans and specifications
189	Subcontractor to provide turnkey, design-build FA system and shall submit for final approval by AHJ and design team. EC acknowledges that although FA system shall be design-build, design and construction shall comply with all project specifications and requirements as noted throughout the project documents and shall comply within the overall design intent of the building and provided FA drawings. Design build to code and within the requirements and design intent of the plans and specifications

Midway Event Center SCOPE OF WORK - BP 2600 Electrical

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

190	Includes all wiring, relays, programming, etc. to coordinate with other systems including but not limited to access controls, elevators, fire protection, generator and HVAC, smoke curtains, duct mounted smoke detectors, smoke dampers, and fire shutters, etc.
191	Responsible for furnishing, installing, programming, testing, etc. the system per contract documents and specifications to meet published code and acceptance by applicable AHJ. Note that this includes all applicable functional requirements needed for the fire protection design, access control design, HVAC systems, elevator systems, etc. This includes, but is not limited to, furnishing and installing the stair and elevator pressurization control panel. All retesting as required is included.
192	Subcontractor shall provide all cabling and activation for all emergency phone systems. Conduit and pathways only. Cabling and phones by others.
193	Includes wiring and final terminations to tamper and flow. Flow switches and all required fire sprinkler integration as required by code based on the fire protection system. Coordinate all flow, tamper, and pressure switches with fire sprinkler drawings
194	Includes full build out as required by AHJ for FCC room including all panels, smoke control panels, labeling, back boards, etc.
195	Coordinate all flow and tamper switches with fire sprinkler drawings
196	Include all door hold opens and tie-into FA system as required
197	Furnish and install all duct mounted smoke detectors
198	Fire alarm speaker in elevator cars NFPA 72 907.5.2.2

COORDINATION

199	Participate in a planning meeting with the electrician and fire alarm contractor so that each trade can compare Sprinkler, Fire Alarm & Electrical drawings to confirm that all power and fire alarm connection points are coordinated.
200	Responsible for BIM coordination. Dimensioned sleeving and layout drawings will be required for all rough-in required in concrete frame construction. This Subcontractor has included the required coordination with other trades including, but not limited to, HVAC, plumbing, fire protection, drywall, masonry, storefront, concrete, etc.
201	Participate in an exterior sacrificial free standing mock up and interior in place unit mock up, including applicable rough-in and fixture trim. Note that this Subcontractor will provide applicable fixture and device samples as requested during submittal approval and mock up process.

Midway Event Center SCOPE OF WORK - BP 3290 Landscape

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	312000 Earth Moving
	329100 Planting Soil
	329300 Planting
	323300 Site Furnishings
	This scope of work includes a complete system per the drawings and specifications. In addition, the Subcontractor and Contractor agree that the Contractor has selected the Subcontractor for this project because the Subcontractor's expertise in constructing similar projects. This Subcontractor shall perform all construction necessary to result in a completed and functioning system including scope, errors, inconsistencies, lack of coordination, etc. that may be discovered in the drawings and specifications that an experienced Subcontractor could have reasonably recognized during the bidding of this project.
	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included here are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.

LANDSCAPING - SCOPE OF WORK - TRADE SPECIFIC

1	This scope of work is to be turnkey and shall include all labor, materials, supervision, equipment, engineering, shop drawings, taxes and safety measures needed to complete the landscaping scope per plans and specifications defined herein.
2	It is the intent of this scope that the work performed pursuant to this scope be complete and acceptable in every respect. The descriptions of the work included are clarifications of specific items and are not intended to limit the overall scope of work required for complete systems per the Contract Documents.
3	Subcontractor is responsible for participation in a pre-installation meeting to ensure that the scope within this contract has been completely coordinated and all details on the contract documents are fully understood. Any details requiring further clarification should be clarified via the RFI process in advance of starting work on-site.
4	If discrepancies arise between submittals and contract documents, Subcontractor has the more costly and/or timely item(s) covered. Any discrepancies to be brought to Contractor's attention in a timely manner prior to installation.
5	Subcontractor has reviewed the Project Documents and cross checked for discrepancies between plan and section views as they relate to Subcontractor's scope, and confirms no gaps in information exist.
6	Subcontractor to provide all submittals as listed in the specifications. Provide product warranties in accordance with the project specifications from the date of GC substantial completion.
7	Multiple mobilizations included.
8	Subcontractor responsible for all equipment necessary for hoisting and staging materials.
9	Subcontractor agrees to fully staff the job to keep up with the progress schedule and workflow. Subcontractor agrees to supply more manpower at the request of the Contractor.
10	Subcontractor is responsible for replacing at no additional cost any plant materials or trees that fail after installation. Subcontractor is responsible for any bracing, staking, support, etc. required for street trees.
11	Subcontractor to provide watering for all plants until building reaches substantial completion and site is turned over with operational irrigation.
12	Subcontractor is responsible for coordinating material deliveries to meet the project schedule and all associated unloading, flagmen, traffic control, lane closures, etc.
13	Subcontractor is responsible for furnishing material to meet the project sequencing and progress schedule. This includes all necessary material deliveries, unloading, traffic control, staging to install location, etc.
14	Subcontractor to furnish reasonable attic stock for all material, or as called for by drawings and specifications, whichever is greater. The owner must sign for the attic stock material and it must be witnessed by a C&T employee.

Midway Event Center SCOPE OF WORK - BP 3290 Landscape

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

15	Subcontractor is responsible for working around finished products. Any cost associated with damage to the work of others is the responsibility of the Subcontractor.
16	Subcontractor shall not be entitled to additional compensation for price increases as they relate to the base contract work for any reason. Subcontractor's price for all labor and material for the scope of work herein are locked for the duration of the Project. This also includes all handling, storage, trucking, taxes, etc. Subcontractor shall be responsible for taking any necessary actions and advanced planning to ensure all material is obtained or will be obtained in time for delivery to the Project in order to meet the project schedule.
17	Progressive clean up of own work included.
18	Subcontractor is responsible for coordinating material deliveries to meet the project schedule and all associated unloading, flagmen, traffic control, lane closures, etc. Subcontractor to provide all equipment (lulls, forklifts, etc.), operators, and labor for deliveries and unloading. No equipment will be provided by the Contractor.
19	Subcontractor includes turnkey surveying/layout for this scope of work.
20	Subcontractor includes any and all landscaping shown on the Civil and Land Planning drawings.
21	Subcontractor includes turnkey scope for all landscaping and associated landscaping details per landscaping drawings and Civil drawings.
22	Subcontractor to provide product warranties in accordance with the project specifications from the date of Owner substantial completion.
23	Delivery and staging of all materials to be coordinated with the Contractor. There are specific limited delivery and storage options for the building.
24	Includes plants, mulch, rocks, soil, etc. per LA and civil drawings. All plants, mulch and soil to be exactly per drawings/specifications. Includes drainage board, weep holes, PVC underdrain, edging at river rock/landscape borders, root barrier, filter fabric, protection composite board, aggregate, rootstop, garden drain filled with aggregate, system filter, rigid insulation at planter areas where called for on drawings and specifications.
25	Subcontractor to furnish and install landscape scopes to support progress sequencing and project schedule. Subcontractor to provide production and delivery schedule after approved submittals to meet the project schedule. Subcontractor to also provide progress photos and updated during production to ensure product is being procured/fabricated to meet the agreed upon production schedule.
26	It is the responsibility of the subcontractor to fix all scratches, defects, etc. on site furnishing, plants, planters, materials, etc. during and after install, until substantial completion turnover.
27	Subcontractor shall provide additional labor immediately if requested by the GC.
28	Subcontractor to furnish, spread and install all topsoil and planting soil.
29	Subcontractor includes warranty on all work per specifications/drawings.
30	Subcontractor responsible for locating all utilities prior to excavation.
31	Subcontractor includes all landscaping installation and maintenance scope as outlined in the project specifications.
32	All soils to be per specifications and drawings unless noted otherwise in this scope of work.
33	Subcontractor shall furnish and spread all topsoil. However, at no time can the topsoil be stockpiled on site. Subcontractor must import topsoil as needed for a complete installation, including amending the topsoil as required per the plans and specifications. Subcontractor shall furnish and install positive drainage for their work.

Midway Event Center SCOPE OF WORK - BP 3300 Site Utilities

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

	Division 01 General Requirements - All Sections
	321216 Asphalt Paving
	321313 Concrete Paving
	321700 Pavement Markings
	331415 Site Water Distribution Piping
	333115 Site Sanitary Sewerage Piping

SCOPE OF WORK

1	This contract is intended to include all labor, materials, supervision, equipment, taxes, and safety measures for the site utilities scope of work, including all domestic water, fire line, sanitary sewer, and storm drainage systems. All work to be done per the project drawings and specifications
2	This scope of work is detailed by and is shown and indicated on the contract drawings. The work is not restricted by division of drawings unless otherwise specifically noted. All work to be performed shall consist of providing all labor, materials, taxes (state & local), supervision, equipment, items of incidental nature, business license, etc. required to furnish a complete and functional system whether or not shown, detailed and/or implied on the plans and specifications
3	Subcontractor includes all traffic control, road closures, permits, etc. as required for utility installations.
4	Subcontractor includes patching of all existing surfaces required during installation of their work including all asphalt and concrete surface and subbase replacement. Full depth asphalt patching to meet or exceed the AHJ/NCDOT details.
5	Subcontractor includes pot holing/investigative work as required to locate existing utilities for all work in the ROW and public utility easements. All existing utilities to be located prior to performance of the work.
6	Subcontractor includes all demolition, abandonments, etc. for existing utility services as required and shown on the project documents and per all local AHJ requirements. Subcontractor includes capping, demo, and removal of all existing utility services as required. Existing utilities to be removed in a manner, coordinated with CM, to limit service interruption to servicing properties.
7	Subcontractor includes capping and abandonment of existing services that were feeding the existing structures on site that have been demolished.
8	Scope of work that is to be completed outside of the project fencing will be performed in a manner to minimize impact to traffic and surrounding buildings.
9	It is the responsibility of the Subcontractor to schedule municipality & 3rd party inspections to support the progress schedule. It is the responsibility of the Subcontractor to ensure that any quantification and/or reporting for additional work relating to earthwork is document by the 3rd party inspector hired by Owner.
10	Street cleaning as required due to dirt, mud or material spilled or tracked onto surrounding roads.
11	Coordination with Duke Energy if required so they can install conduits and/or vaults by others in the construction work area while the roads are shut down for the utility work.
12	Multiple mobilizations as necessary to complete the scope of work.
13	Subcontractor shall coordinate all public utility shutdowns and bypasses with CM, affected property owners, and Local Municipality
14	All quality control testing and observations required by the specifications and AHJ related to this Scope of Work shall be coordinate by the Subcontractor, including observation of field installation work.
15	The Subcontractor shall perform clean-up of application tools and equipment in designated areas only. Any damage to finished surfaces or fixtures caused by inappropriate clean up measures will be the responsibility of the Subcontractor to repair or replace.
16	Layout and field engineering for all utilities to be by the subcontractor. CM to provide control & building corners.
17	Subcontractor shall provide final adjustments of all utilities including fire hydrants, manhole covers, etc. once final finished grades and surfaces have been installed. Adjustments to be made for each item/structure (1) time.
18	All materials and installation procedures shall be per the project specifications, local AHJ requirements and details, and Project Notes.

Midway Event Center SCOPE OF WORK - BP 3300 Site Utilities

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

19	Subcontractor to coordinate all utility service connection points at building with locations shown on MEP/FP plans, CM, and associated building subcontractors.
20	Subcontractor to coordinate all excavation and utility installations with temporary shoring systems around building foundations and walls.
21	Subcontractor includes temporary seeding of all disturbed areas as required for erosion control maintenance
22	All applicable barricades, signage, road plates, temporary lighting, etc. required to separate the limits of construction from surrounding pedestrians and traffic.
23	Inlet protection erosion control as specified on the contract documents at all new storm structures installed as part of this contract. Maintenance of erosion control while on site performing scope of work.
24	Subcontractor to coordinate all excavation and utility installations with temporary shoring systems around building foundations and walls.
25	Subcontractor includes all utility demo inside ROW only. All utility demo within building pads to be by others
26	Subcontractor must visit the site to evaluate existing conditions associated with the site development. Failure to visit the site may be grounds for disqualification. Subcontractor must coordinate the site visit with the Construction Manager. Prior to bid, if the Subcontractor wishes to dig test pits or other land disturbing investigations, they must contact the Construction Manager and provide a location of desired investigations prior to the site visit. Digging test pits or other land disturbing investigations without approval will be grounds for disqualification based on irresponsible actions.
27	Subcontractor shall include any temporary valves and caps needed on existing or new water and sewer services as required to execute the work.
28	Subcontractor shall employ a qualified utility locator service to locate all underground utilities (sanitary sewer and water) to provide subsurface utility engineering. Subcontractor must locate all potential utilities, including private ones, to avoid conflict with their work.
29	Subcontractor is responsible for horizontally and vertically locating and protecting all public and private utilities that lie in or are adjacent to the site.
30	Subcontractor shall be responsible for the excavation, backfill, and bedding material necessary to complete their work.
31	Subcontractor shall furnish and install all bedding material as required by the plans and specifications.
32	Subcontractor shall furnish and install cast-in-place or precast concrete collars as required.
33	Subcontractor shall furnish and install all trench protection for their work in compliance with OSHA and the Construction Manager's Safety Manual included within the Bid Manual. Subcontractor must also obtain any necessary trenching permits and related requirements.
34	If Subcontractor stockpiles soils from their excavation to be used for backfilling their trenches, they must protect the stockpiles so that soils needed for fill or backfill operations are not made unsuitable and hinder the Construction Schedule. Unsuitable soils unit prices will not be used for soils that are made wet or unsuitable due to natural weather conditions. Others shall remove BP 3300 - Site Utilities surplus spoils off site or reuse on site unless BP 3300 - Site Utilities has made them unsuitable due to their lack of protection. If this occurs, BP 3300 - Site Utilities will be responsible for hauling off their own spoils.
35	Subcontractor shall dewater, including pumps and any devices, all excavations as needed.
36	Subcontractor must haul off site any concrete truck wash-out associated with their work.
37	Subcontractor must coordinate inspections required to complete their work.
38	All work for the telephone, gas, and electrical services will be by others. Subcontractor will be responsible for assisting with the coordination for service utilities.
39	Subcontractor shall coordinate site utilities with the Construction Manager per the Preliminary Construction Schedule, Project Logistics, and Sequencing Information.
40	Subcontractor shall furnish and install signage as indicated (Fire Department Connection, Post Indicator Valve, etc.), including the associated signage, post, and mounting accessories. Please include applicable signage and mounting for all conditions (e.g. FDC at a wall condition).

Midway Event Center SCOPE OF WORK - BP 3300 Site Utilities

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

41	Subcontractor shall provide the associated bonding as required by NCDOT Driveway and Encroachment agreements for work performed in the ROW. This is in addition to any other jurisdictional permitting requirements, etc. These agreements indicating the value of bonding may be provided after bidding. In that case, Subcontractor shall submit a change proposal for the associated bonding costs.
42	Subcontractor shall furnish and install all traffic control per MUTCD and NCDOT as required to perform their work, any work within the ROW, and any work within 5' of traffic lanes. Subcontractor shall include any ROW roadway closure and obstruction permits as required.
43	Subcontractor shall furnish and install signage per MUTCD, Town, State, and NCDOT as required for shifting pedestrian and vehicular traffic along roadways when work is being performed in that area.
44	Includes all excavation, backfill, asphalt patch and curb and gutter and curb and gutter repair
45	Includes provision for removal and replacement of 100 yards of unsuitable soil.
STORM DRAINAGE	
46	Storm Drainage not part of this package as it was included in BP 3110 Grading
SANITARY SEWER	
47	Complete installation of all water utility work including DIP Sewer Services, Manholes, castings, doghouse manholes, backwater valves, clean outs and all associated testing, inspections, and certifications
48	Subcontractor included all bypass pumping and temporary measures during installation of new sewer utilities as required and as called for on civil plans for duration of utility construction including all off-site work. Includes all engineering, pumping, testing, doghouse and suction manholes, force mains, backup pumps, 24-hour monitoring, maintenance, etc.
49	Subcontractor includes bypass plan sealed by a NC Professional Engineer and submission to local AHJ public utilities and engineering as required.
50	Demolition of existing sewer lines as required and indicated on plans
51	Sanitary sewer services to buildings
52	All grease interceptor(s) as shown on the contract documents.
53	Run all sanitary sewer lines and make final connections as necessary.
54	Run sanitary sewer to a cleanout within 5' of all buildings. Quantities, locations, and elevations of final connections to be reviewed and installed in conjunction with the project plumbing drawings for coordination.
55	Subcontractor to provide connections of all existing sanitary sewer systems per Municipality requirements.
56	Subcontractor to provide video inspection of all new sanitary sewer systems upon completion. Corrections, flushing, cleaning, and repairs of new systems to be provided as required by city AHJ.
57	Air/Vac testing of sewer mains and manholes as required by AHJ for final approval
58	Camera/CCTV of all sanitary sewer lines and manholes as required by AHJ
59	All as-built surveying and drawings as required by AHJ
60	Subcontractor shall furnish and install sanitary sewerage utilities. This includes, but is not limited to, sewerage piping outside of the building, pipe fittings, cleanouts, manholes, identification, and all accessories for a complete installation. Subcontractor shall run sanitary sewer to within 5' of building, including all cleanouts, and make final connections. This work includes all off-site sanitary areas west of the new high school as well as the on-site sanitary work. Subcontractor will be responsible for all layout and is required to submit As-Built information for all work. Subcontractor will restore the grade to the condition they received it along the offsite right of way upon completion of the utility work. The grade must be graded to drain in a smooth condition, temporarily seeded, and mulched with an approved mix.
61	Subcontractor shall include staking for site sanitary systems; pull centerline of structures with rim and invert offset, center line of roof drains, and cleanouts with rim grade.
62	Subcontractor shall include staking and offsets for piping tie-in to existing structures

Midway Event Center SCOPE OF WORK - BP 3300 Site Utilities

This Scope of Work shall include providing all material, labor, equipment, supervision and taxes required to furnish and install the subcontracted scope noted below (unless noted otherwise):

WATER DISTRIBUTION

63	Complete installation of all water utility work including 4" DIP, 6" DIP, 8" DIP, fittings, Hydrants, Yard FDC, Taps, Meters, Vaults, Valves, Insertion Valves, back flows, Blow offs, PIVs, etc. as required and all associated testing.
64	Scope of work includes providing and installing fire hydrants, valves, meters and meter boxes, steel encasements, etc. as required for a complete and operating installation.
65	Fire line & PIV stub ups to be completed in separate mobilizations from main lines.
66	Domestic water services, including RPZ, meter, structure, and hotbox to 5' outside building.
67	Irrigation water service, including RPZ, meter, and hotbox. Irrigation services beyond BFP by others.
68	RPDA backflow preventer in above ground heated enclosure.
69	Testing and chlorination of new waterline piping.
70	Fire hydrants shall be installed and active prior to arrival of building combustible materials on site
71	Testing/chlorination of water mains
72	NFPA testing of fire line lead ins
73	Wall mounted PIV and FDCs on building façade to by others
74	Subcontractor includes all testing and certification for all installed fire hydrants, BFPs, RPZs, etc.
75	Subcontractor shall run fire protection service piping to 1' AFF in building flanged for connection by BP 2100 - Fire Protection. BP 3300 – Site Utilities shall furnish and install all site FDCs, mountings, and code compliant signage. Subcontractor shall also run domestic water lines to within 5' of building and include making final connections as indicated on the drawing after plumbing lines are complete.
76	Subcontractor shall furnish and install the water distribution system. This shall include, but is not limited to, water system piping for potable water services and fire protection services, associated fittings, valves, vaults, hot boxes, protective enclosures, alarm devices, fire hydrants, meter vaults, reduced pressure assemblies, backflow preventers, yard hydrants, taps, tie-ins, anchorage, final adjustments, identification, testing, and all accessories for a complete installation. This work includes all off-site water lines as well as the on-site water lines.
77	Subcontractor shall apply for and receive the applicable permits that allow them to drill a well on site for water. Subcontractor shall drill the new well to a depth of 500 ft adjacent to the construction trailer complex. Subcontractor shall include well drilling, steel casing, grout, pumps, piping to the construction trailer complex, and hose bibbs. Subcontractor will later abandon the well, per requirements of the Authority Having Jurisdiction (AHJ), as coordinated with the Construction Manager.
78	Subcontractor shall furnish and install the irrigation water distribution system up to and including the temporary blow-off assemblies, backflow assemblies, reduced pressure assemblies, and meter vaults at the 5 irrigation tie-on points. The Scope of Work shall include, but is not limited to, PVC piping, associated fittings, valves, vaults, hot boxes, protective enclosures, taps, tie-ins, anchorage, final adjustments, identification, testing, and all accessories for a complete installation.
79	Subcontractor shall include staking of water services with locations of taps, tees, valves, horizontal finish grades on bends, etc. Subcontractor shall locate line at 50' intervals, water-meters, BFP, hydrants, PIV, FDC, and any other items as required.
80	All underground domestic water/fire service lines will have a pig run through them by this subcontractor prior to flushing.

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Specification Volume 1		MBE Contractor List and Affidavits A through D	June 12, 2025
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Specification Volume 1	011000	Summary	January 8, 2025
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Specification Volume 1	071113	Bituminous Dampproofing	June 12, 2025
Specification Volume 1	072100	Thermal Insulation	June 12, 2025
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S (Structural)	S505	TYPICAL DETAILS - MASONRY	Jun 12, 2025
S (Structural)	S506	TYPICAL DETAILS - MASONRY	Jun 12, 2025
S (Structural)	S507	TYPICAL DETAILS - MASONRY	Jun 12, 2025
S (Structural)	S508	TYPICAL DETAILS - STEEL	Jun 12, 2025
S (Structural)	S509	TYPICAL DETAILS	Jun 12, 2025
S (Structural)	S510	TYPICAL DETAILS	Jun 12, 2025
S (Structural)	S511	TYPICAL DETAILS	Jun 12, 2025
S (Structural)	S601	COLUMN SCHEDULE/ BASE PLATE DETAILS	Jun 12, 2025
V (Survey/Mapping)	V-101	EXISTING CONDITIONS PLAN	Jun 12, 2025
V (Survey/Mapping)	V-102	EXISTING CONDITIONS PLAN	Jun 12, 2025

STATE OF NORTH CAROLINA
 COUNTY SALES AND USE TAX REPORT
 SUMMARY TOTALS AND CERTIFICATION

CONTRACTOR: _____

Page 1 of

PROJECT: _____

FOR PERIOD: _____

	TOTAL FOR COUNTY OF:	TOTAL ALL COUNTIES					
CONTRACTOR							
SUBCONTRACTOR(S)*							
COUNTY TOTAL							

* Attach subcontractor(s) report(s)

** Must balance with Detail Sheet(s)

I certify that the above figures do not include any tax paid on supplies, tools and equipment which were used to perform this contract and only includes those building materials, supplies, fixtures and equipment which actually became a part of or annexed to the building or structure. I certify that, to the best of my knowledge, the information provided here is true, correct, and complete.

Sworn to and subscribed before me,

This the _____ day of _____, 20____

Signed

Notary Public

My Commission Expires: _____

Print or Type Name of Above

Seal

NOTE:
This certified statement may be subject to audit.

STATE OF NORTH CAROLINA
SALES AND USE TAX REPORT DETAIL

CONTRACTOR: _____

Page 2 of _____

SUBCONTRACTOR _____

FOR PERIOD: _____

PROJECT: _____

PURCHASE DATE	VENDOR NAME	INVOICE NUMBER	TYPE OF PROPERTY	INVOICE TOTAL	COUNTY TAX PAID	COUNTY OF SALE *
				\$	\$	
				TOTAL:	\$	

* If this is an out-of-state vendor, the County of Sale should be the county to which the merchandise was shipped.



CLANCY & THEYS
CONSTRUCTION COMPANY
Subcontractors/Material Suppliers

APPLICATION FOR PAYMENT

FIRM:	\$	PAYMENT REQUEST NUMBER:	\$
DATE OF APPLICATION:	\$	PROJECT NUMBER:	\$
PROJECT NAME:	\$	PHASE NUMBER:	
CONTRACT NUMBER:	\$	PERIOD:	\$

STATEMENT OF CONTRACT AMOUNT		AMOUNT
(1)**	Original Contract Amount	\$
(2)**	Approved Changes (Net + and -)	\$
(3)**	Adjusted Contract Amount	\$
(4)**	Work Completed to Date	\$
(5)*	Value of Stored Materials	\$
(6a)	Previous Sales Tax	\$
(6b)	Current Sales Tax	\$
(6c)	Total Sales Tax	\$
(7)	Total Including Sales Tax (4,5 & 6c)	\$
(8)	Less Amount Retained (____%)	\$
(9)	Total Less Retainage	\$
(10)	Previous Applications	\$
(11)	Total Amount of this Request	\$
(12)	Portion to be issued Single Party	\$
(13)	Portion to be issued Joint Check(s)	\$

***Stored Materials**

Unless specifically prohibited by the contract documents, payment will be allowed for materials stored off-site; however, we will request two (2) copies of material invoices from your suppliers for any of your company's invoices containing payment requests for materials stored off-site. Also, two (2) copies of an insurance certificate naming Clancy & Theys and the Owner as additionally insured should accompany the invoice. This certificate should identify the materials stored and the storage location (an approved bonded warehouse.)

****Value does not include applicable Sales TAX**

CERTIFICATION

I also certify that payments, less applicable retention, have been made through the period covered by previous payments received from the contract to (1) all my subcontractors and (2) for all materials and labor used in or in connection with the performance of the contract. I further certify that I have complied with Federal, State, and Local tax laws, including Social Security and Unemployment Compensation laws and Workmen's Compensation laws insofar as applicable to the performance of this contract. I hereby waive, release, and relinquish any and all claims, demands, right of lien for all work, labor, material, machinery, equipment, fixtures, and services performed and furnished for payment previously received.

FIRM: \$

BY

TITLE: \$

Vendor No. _____

Contract No. \$

Project Manager: \$

FIRST TIER SUBCONTRACTOR/SUPPLIER
UNCONDITIONAL INTERIM LIEN WAIVER AND RELEASE

Owner: _____
Contractor: _____
First Tier Subcontractor: _____
Project: _____
Property (Address or Description): _____

The undersigned, being duly sworn, deposes and states as set forth below.

1. The undersigned is a duly authorized representative of the above-named First Tier Subcontractor/Supplier ("**FTS**") and is authorized to sign this Unconditional Interim Lien Waiver and Release on behalf of (and to so bind) FTS.

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3. FTS acknowledges having received an interim progress payment from Contractor in the amount of \$ _____ (the "**Payment**") on _____, 20__ and agrees that in consideration of such Payment: (a) FTS voluntarily and unconditionally releases and waives all claims, liens, claims of lien (both on funds and real property), bond claims, and rights of lien against Owner, Contractor, any surety of Contractor, the Project, the Property, and any lender providing funds for the construction of the Project, relating to, on account of, or in any way connected with labor, materials and/or equipment provided for, to or on the Project or Property by FTS on or before _____, 20__ (i.e., the date covered by FTS's current payment application/invoice to Contractor) (the "**End Date**"), but only to the extent of the Payment received by FTS and all prior payments received by FTS on account of labor, materials and/or equipment provided for, to or on the Project and Property, (b) FTS acknowledges and agrees that, prior to the receipt of the Payment, FTS had formerly been paid the sum of \$ _____ for labor, materials and/or equipment provided for, to or on the Project or Property by FTS; and (c) FTS certifies that all laborers, subcontractors and suppliers employed or engaged by FTS to provide labor, materials, or equipment for, to or on the Project or the Property have been paid all sums previously due out of the Payment and all prior payments received by FTS.

This ____ day of _____, 20__.

(Signature)
(Printed Name)
(Title of Position with FTS)

STATE OF _____
COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 20__.

(OFFICIAL SEAL)

NOTARY PUBLIC

My Commission Expires: _____

FIRST TIER SUBCONTRACTOR/SUPPLIER
UNCONDITIONAL FINAL LIEN WAIVER AND RELEASE

Owner: _____
Contractor: _____
First Tier Subcontractor: _____
Project: _____
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This ____ day of _____, 20__.

(Signature)
(Printed Name)
(Title of Position with FTS)

STATE OF _____
COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 20__.

(OFFICIAL SEAL)

NOTARY PUBLIC

My Commission Expires: _____

FIRST TIER SUBCONTRACTOR/SUPPLIER
CONDITIONAL INTERIM LIEN WAIVER AND RELEASE

Owner: _____

Contractor: _____

Clancy & Theys Construction Co.

First Tier Subcontractor: _____

Project: _____

Property (Address or Description): _____

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This ____ day of _____, 20__.

(Signature)

(Printed Name)

(Title of Position with FTS)

STATE OF _____

COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 20__.

(OFFICIAL SEAL)

NOTARY PUBLIC

My Commission Expires: _____

FIRST TIER SUBCONTRACTOR/SUPPLIER
CONDITIONAL FINAL LIEN WAIVER AND RELEASE

Owner: _____
Contractor: _____
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Project: _____
Property (Address or Description): _____

Clancy & Theys Construction Co.

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This ____ day of _____, 20__.

(Signature)

(Printed Name)

(Title of Position with FTS)

STATE OF _____
COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 20__.

(OFFICIAL SEAL)

NOTARY PUBLIC

My Commission Expires: _____

SECOND TIER SUBCONTRACTOR/SUPPLIER
CONDITIONAL INTERIM LIEN WAIVER AND RELEASE

Owner: _____
Contractor: _____
First Tier Subcontractor: _____
Project: _____
Property (Address or Description): _____

Clancy & Theys Construction Co.

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This ____ day of _____, 20__.

(Signature)
(Printed Name)
(Title of Position with STS)

STATE OF _____
COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 20__.

(OFFICIAL SEAL)

NOTARY PUBLIC

My Commission Expires: _____

SECOND TIER SUBCONTRACTOR/SUPPLIER
CONDITIONAL FINAL LIEN WAIVER AND RELEASE

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First Tier Subcontractor: _____
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This ____ day of _____, 20__.

(Signature)

(Printed Name)

(Title of Position with STS)

STATE OF _____
COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 20__.

(OFFICIAL SEAL)

NOTARY PUBLIC

My Commission Expires: _____

SECOND TIER SUBCONTRACTOR/SUPPLIER
UNCONDITIONAL INTERIM LIEN WAIVER AND RELEASE

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First Tier Subcontractor: _____
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Clancy & Theys Construction Co.

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This ____ day of _____, 20__.

(Signature)

(Printed Name)

(Title of Position with STS)

STATE OF _____
COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 20__.

(OFFICIAL SEAL)

NOTARY PUBLIC

My Commission Expires: _____

SECOND TIER SUBCONTRACTOR/SUPPLIER
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This ____ day of _____, 20__.

(Signature)
(Printed Name)
(Title of Position with STS)

STATE OF _____
COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 20__.

(OFFICIAL SEAL)

NOTARY PUBLIC

My Commission Expires: _____

APPENDIX E

MBE DOCUMENTATION FOR CONTRACT PAYMENTS

Prime Contractor/Architect: _____

Address & Phone: _____

Project Name: _____

SCO Project ID: _____

Pay Application #: _____ Period: _____

The following is a list of payments made to Minority Business Enterprises on this project for the above-mentioned period.

MBE FIRM NAME	* TYPE OF MBE	AMOUNT PAID THIS MONTH (With This Pay App)	TOTAL PAYMENTS TO DATE	TOTAL AMOUNT COMMITTED

*Minority categories: Black (B), Hispanic (H), Asian American (AA), American Indian (AI), White Female (WF), Socially and Economically Disadvantaged (SED)

Approved/Certified By:

Name

Title

Date

Signature

SUBMIT WITH EACH PAY REQUEST - FINAL PAYMENT - FINAL REPORT

SUBCONTRACTOR CHANGE PROPOSAL FORM

SCO ID # _____
 Architect _____
 Project: NC State Fair Grounds - Midway Center
 CM@R _____
 Subcontractor _____

NOTE: Start with Sheet 2

Code # _____ Item # _____
 Proposal # _____
 Project # _____
 Date _____

Enter a detailed description of the Change: (Ref. drawings numbers, spec sections, revisions, RFI's ect.)

(Attach list with Qty, Item, Unit \$, Unit mh, OT mh, Total \$) Input numbers Here) (Math per formula)

Materials		SUBTOTALS	
1	Total Direct Cost of Materials (Material Summary on Sheet 2)		
2	Overhead & Profit on Item 1. (15% Maximum, includes small tools & consumables) (5% on Credits)	1+2=	_____
3	Sales Tax (Line1 x tax rate)		
4	Shipping & Transportation	=	_____
5	Material Subtotal (Material Costs + OH&P + Sales tax on material only + Shipping)	=	_____

Labor			
6	Labor OT	_____ MH @ _____ /hr.	_____
7	Working Forman OT	_____ MH @ _____ /hr.	_____
8	Labor Regular Time	_____ MH @ _____ /hr.	_____
9	Working Forman Regular Time	_____ MH @ _____ /hr.	_____
10	Labor Subtotal		10=
11	Overhead & Profit on Item 10. (15% maximum on straight labor cost, not premium portion) (NOTE: O & P includes supervisor's time) (5% on Credits)		10+11=
12	Payroll, Taxes and Insurance (Maximum 30%)		10+11+12
13	Labor Subtotal (Labor + OH&P + Burden on labor costs only)		=

Equipment Rental (Include Quotes)			
14	Equipment Rental	(Equipment Summary on Sheet 2)	_____
15	Overhead & Profit on Item 13	(15% maximum)	_____
16	Equipment Cost Subtotal	(line 14 + 15)	=

Subcontractors (Includes quotes with material & equipment backup)			
17	Subcontractors	(Subcontractor Summary Sheet 2)	_____
18	Overhead & Profit on Item 15. (15% maximum for all Tier Sub-Subcontractors and Principal Subcontractor)		_____
19	Subcontractor(s) subtotals	(line 17 +18)	=

Subtotal of Proposal _____

20 Bonds (% of subtotal of proposal) _____

TOTAL OF CHANGE PROPOSAL _____
ADD/DEDUCT

Time Extension Requests: _____ day(s) Schedule Activity # Affe _____

The Subcontractor agrees to perform the work outlined in this change proposal for the amount specified above and in accordance with the Contract Documents if the work is authorized by the Owner/CM@R.

Subcontractor Signature _____ Date _____

C&T Signature _____ Date _____



E-589CI Affidavit of Capital Improvement

Web-
Fill
7-18

Form E-589CI, Affidavit of Capital Improvement, may be used to substantiate that a contract, or a portion of work to be performed to fulfill a contract, is to be taxed for sales and use tax purposes, as a real property contract for a capital improvement to real property.

The recipient of an affidavit of capital improvement for services to real property, absent fraud or other egregious activities, establishes that the subcontractor or other person receiving the affidavit should treat the transaction as a real property contract for sales and use tax purposes

A real property contract is a contract between a real property contractor and another person to perform a capital improvement to real property

Section I. Single Use (Complete this section to issue the affidavit for a single capital improvement.)

A Owner, Tenant, or Real Property Contractor

Clancy & Theys Construction Company

Address
Post Office Box 27608

City Raleigh State NC Zip Code 27611-7608

B Real Property Contractor (General Contractor or Subcontractor) Hired to perform capital improvement

Address

City State Zip Code

Describe capital improvement to be performed:

Field Engineering

Project Name

7284- NCSF Midway

Project Address (where the work is to be performed)

1025 Blue Ridge Rd

City

Raleigh

State

NC

Zip Code

27607

I certify that, to the best of my knowledge, this affidavit is accurate and complete and that the transaction described to be performed by the Real Property Contractor (General Contractor or Subcontractor identified in box "B") shall be treated as a real property contract with respect to a capital improvement to real property for sales and use tax purposes. I understand that if it is determined that I issued this affidavit in error and the transaction is subject to sales tax as a retail sale of repair, maintenance, and installation services to real property, I will be liable for payment of any additional taxes determined to be due.

Signature of Authorized Person:

Title: Assistant Controller

Date:

Form E-589CI, Affidavit of Capital Improvement, may be issued to substantiate that a contract, or a portion of work performed to fulfill a contract, is a capital improvement to real property and subject to sales and use tax as a real property contract. Generally, services to real property are retail sales of or the gross receipts derived from repair, maintenance, and installation services, unless a person substantiates that a transaction is subject to tax as a real property contract, subject to tax as a mixed transaction contract, or the transaction is not subject to sales and use tax. A "real property contract" is a contract between a real property contractor and another person to perform a capital improvement to real property.

A mixed transaction contract is a contract that includes both a real property contract for a capital improvement and repair, maintenance, and installation services for real property that are not related to the capital improvement. For a mixed transaction contract, if the allocated sales price of the taxable repair, maintenance, and installation services included in the contract is less than or equal to twenty-five percent (25%) of the contract price, then the repair, maintenance, and installation services portion of the contract, and the tangible personal property, digital property, or service used to perform those services, are taxable as a real property contract for sales and use tax purposes.

- A person that issues Form E-589CI is liable for any additional tax due on the transaction in excess of tax paid on purchases pursuant to N.C. Gen. Stat. § 105-164.4H(a), if it is determined that the transaction is not a capital improvement, but rather the transaction is subject to tax as a retail sale.
- A person who receives Form E-589CI from another person, absent fraud or other egregious activities, is not liable for any additional tax on the gross receipts from the transaction if it is determined that the transaction is not a capital improvement.
- Form E-589CI is not an affidavit of tax paid on tangible personal property, or digital property purchased or used to fulfill a real property contract.
- Form E-589CI may not be used to purchase tangible personal property, or digital property exempt from sales and use tax.

Exceptions from the Issuance of Form E-589CI to Establish a Transaction is to be Taxed as a Real Property Contract

In lieu of issuing an affidavit of capital improvement, a person may substantiate by other records that a transaction is a real property contract or a mixed transaction contract subject to tax as a real property contract, as discussed above, for a capital improvement to real property. However, where subcontractors are involved, it may be in the best interest of all parties to use Form E-589CI to ensure proper application of the sales and use tax laws.

Section I. Single Use Instructions

A person may complete "Section I – Single Use" for a one time use to substantiate that a transaction is a real property contract for a single capital improvement to real property and subject to sales and use tax as a real property contract. When a real property contractor hires a subcontractor to perform a portion of the overall real property contract and there is not a recurring business relationship between the two parties (when a period of no more than twelve months elapse between transactions between two parties), "Section I – Single Use" may be completed and the form issued to the subcontractor as notice that the transaction is subject to sales and use tax as a real property contract.

The following scenarios are for reference to assist a person to complete and issue Form E-589CI. The scenarios presented are not intended to cover all possible uses of the form.

A property owner oversees the entire activity to real property that is a real property contract for a capital improvement to real property. The property owner hires various subcontractors to complete the real property contract or portions thereof:

- **Box A – Owner, Lessee/Tenant or Real Property Contractor:** Enter property owner's name and address.
- **Box B – Real Property Contractor (General Contractor or Subcontractor):** Enter a single subcontractor's name and address.
- Owner listed in Box A must describe the real property contract activity to be performed.
- Owner listed in Box A must enter the project address (if different than the address entered in Box A).
- Authorized Person (owner) signs, enters title (owner), enters the date, and issues to the person listed in Box B.

A property owner hires a general contractor to oversee the entire activity to real property that is a real property contract for a capital improvement to real property. The general contractor hires a subcontractor to perform the real property contract, or portion thereof:

- **Box A – Owner, Lessee/Tenant or Real Property Contractor:** Enter general contractor's name and address.
- **Box B – Real Property Contractor (General Contractor or Subcontractor):** Enter subcontractor's name and address.
- General contractor listed in Box A must describe the real property contract activity to be performed.
- General contractor listed in Box A must enter the project address.
- Authorized Person (general contractor) signs, enters title (general contractor), enters the date, and issues to the person listed in Box B.

A lessee/tenant hires a general contractor for the installation of equipment that is to be attached to real property and will be depreciated under the Internal Revenue Code:

- **Box A – Owner, Lessee/Tenant or Real Property Contractor:** Enter lessee/tenant's name and address.
- **Box B – Real Property Contractor (General Contractor or Subcontractor):** Enter subcontractor's name and address.
- Lessee or tenant listed in Box A must describe the capital improvement to be performed and indicate the equipment will be depreciated under the Internal Revenue Code.
- Authorized Person (typically lessee or tenant) signs, enters title (lessee or tenant), enters the date, and issues to the person listed in Box B.

Section II. Blanket Use Instructions

A real property contractor may complete "Section II – Blanket Use" and issue the form to another real property contractor (subcontractor) who is used exclusively to perform part, or all, of real property contracts with respect to capital improvements to real properties, where the parties have a recurring business relationship (when a period of no more than twelve months elapse between two parties). A blanket use affidavit continues in force so long as the real property contractor named in "Box C" and the real property contractor (subcontractor) named in "Box D" maintain a recurring business relationship or until the affidavit is withdrawn or otherwise notified by the issuer of the form.

The blanket use will generally apply for the following: (1) a builder who hires the same contractor(s) only for new construction; (2) a real property contractor who hires the same subcontractor(s) only for reconstruction; (3) a real property contractor who hires the same subcontractor(s) for remodeling or renovation and the activities performed by the subcontractor(s) for the other party are never repair, maintenance, and installation services for real property based on the contract or agreement between the parties; and (4) a real property contractor who exclusively hires the same subcontractor(s) to perform part, or all, of its real property contracts for capital improvement to real properties.

A general contractor or subcontractor hires a subcontractor that will replace the complete electrical wiring in all renovated homes:

- **Box C – Real Property Contractor:** Enter the hiring real property contractor's name and address.
- **Box D – Real Property Contractor (General Contractor or Subcontractor):** Enter the hired subcontractor's name and address.
- Authorized person listed in Box C signs, enters title, enters the date, and issues to the person listed in Box D.



To: Subcontractors of Clancy & Theys

From: David Maggio, Safety Director

Subject: Safety Policy

Clancy & Theys' safety policy is to ensure the well being of all construction workers on our sites. The attached questionnaire, Subcontractor Safety Performance Evaluation Form, is a vital part of this effort. It is designed as a tool to help us, as well as you, as a subcontractor, in evaluating the level of safety and health being provided to protect workers.

Attached is the "Subcontractor Safety Performance Evaluation Form." Copy of this form containing your most current information must be on file in our office for any current or future work you may contract with Clancy & Theys. Please have the person in charge of your safety program complete the Evaluation Form and return it to my attention as quickly as possible.

Once the completed form is returned, it will be reviewed for ways to assist you in your safety and health program, if necessary. So, please make sure this form is as complete and accurate as possible. If areas of concern are found during our review, you will receive a call to discuss the matter(s) further.

If you have completed and returned this form in the past, it is not necessary to complete another one unless your mod rate, training information, etc. have changed since the last time you submitted it.

Failure to return the "SSPE" form may impact future work with Clancy & Theys. Please contact me if you have any questions concerning this matter or have safety related questions of which I may be of service.

Sincerely,

David Maggio, Safety Director



Corporate Environmental, Health and Safety Manual

Built on Safety

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SAFETY MISSION & COMMITMENT STATEMENT

To All Employees:

An issue of great concern to me, members of management, and most employees is the need to maintain a safe workplace. I am personally committed to creating an incident-free work environment and I expect other members of management to demonstrate that same level of commitment. Working together, all employees are expected to:

- Work safely as a condition of employment.
- Report unsafe conditions immediately to management.
- Work with their supervisor to identify and eliminate the causes of unsafe work behaviors.
- Make suggestions and recommendations to improve the safety of each operation or task we perform.
- Actively and enthusiastically participate in all aspects of our safety program.

Our goal is to have zero incidents. Occupational injuries hurt everyone: injured employees, their families, their work team, and our organization. We will manage all Workers' Compensation claims by ensuring that the injured employee receives prompt, appropriate medical treatment. Injured employees will have transitional-duty work developed for them. They are expected to continue contributing to the work team while recovering from their injuries.

All incidents must be reported immediately so they can be properly investigated to determine where we need to improve our safety management system. When you are asked to participate in an incident analysis, please do so knowing that the purpose is to fix the system, not to place blame on individuals.

Working together on safety, we can improve the quality of our work life, products, and services, and ultimately our ability to be competitive in the marketplace.

Thank you,

CLANCY & THEYS CONSTRUCTION COMPANY

Baker Glasgow
President



GOALS AND OBJECTIVES

Safety, like quality, is the result of doing things the right way. Virtually every incident is caused by an unsafe act or condition. It is Clancy & Theys' objective to achieve a year-by-year reduction in incident frequency and severity rates until they stand at zero. No correctable potential causes of incidents will be permitted to interfere with this basic objective. Furthermore, it is the responsibility of ALL employees to work toward achievement of this basic objective.

Employee safety and incident prevention are so important at Clancy & Theys that all employees will work as a team to prevent incidents and unsafe conditions. Clancy & Theys' approach to safety is based on the principal of adherence to an organized program which incorporates the fundamentals of incident prevention and yet allows room for individual initiative.

This Safety Manual is designed to provide you, an employee, with safety policies and procedures which must become part of your everyday working habits. The rules, policies and procedures outlined in this Manual do not supersede safety standards set by any regulatory agency, nor do they eliminate the need for sound safety practices beyond those outlined in this Manual.

The Manual is intended to be dynamic and the information and procedures outlined will be revised as rules and regulations are updated and Clancy & Theys' business changes. The user is encouraged to develop and share with others any personalized checklists, form letters, and management aids that will assist the safety process.

The increased number of women entering Clancy & Theys' workforce in previously male dominated positions has made it important to avoid gender stereotypes. However, the awkwardness and inelegance of "he/she", "his or her", or alternating paragraphs or sections by gender, has led the author to either eliminate personal pronouns entirely or use neuter pronouns where appropriate. Where personal pronouns are stylistically unavoidable, the author has used the masculine form.



STATEMENT OF SAFETY POLICY

It is the policy of Clancy & Theys Construction Company to continually strive for the highest safety and health standards on our projects. This is to advise all parties concerned that we strongly adhere to the principle that incident prevention and industrial health are just as important to this organization as quality and production. To this end, every reasonable effort will be made to provide and maintain a safe and healthy workplace, safe equipment, and proper materials.

Maintaining a safe work environment is a continuous endeavor. It requires the cooperation of all employees. The management of this company is committed to providing the proper planning, communication, supervision, and training for employees to ensure that they can carry out their jobs in a safe and effective manner. Safety is no incident!

Our safety rules and regulations were developed for the protection of our employees, subcontractors, suppliers, clients, and the public. We always insist on safe methods and practices. Specifically, we will:

- Comply with all Federal, State, and Local laws, regulations, and recognized safe practices pertaining to safety and health in the Construction Industry.
- Conduct all operations with common sense and safe practices commensurate with the varied conditions, locations, and circumstances of our jobs.
- Exercise good judgment in the application of this policy.
- Protect members of the public under all conditions.

It is a condition of employment with our company that all employees adhere to the requirements of this Safety Program as well as comply with all pertinent safety rules, regulations, procedures, and practices relevant to their work.

Furthermore, all subcontracts, purchase orders, and service contracts issued will contain by reference the requirements of our safety policy, rules, and procedures. We will make every effort to ensure that other parties' activities pose no danger to our employees. However, all employees are required to immediately report to their supervisor any such hazardous activities or conditions.

All supervisory personnel have the full support of management to carry out the provisions of our safety policy and they are expected to do so. Employees and management will jointly participate in developing solutions for safety problems as they arise and will actively participate in the safety organization planned for each individual work site.



Clancy & Theys Safety Leadership Team

Executive Management

Baker Glasgow, President

Becky Carter, CFO

Fleming Herring, Vice President of Construction

Division Managers

David Michael, Wilmington, NC

Bill Goggins, Newport News, VA

Bill Zecker, Orlando, FL

Tom Planishek, Charlotte, NC

Safety Department

David Maggio, Corporate EHS Director

Jason Petrie, Division Safety Manager

Shawn Ray, Regional Safety Manager

Antonio Cooper, Safety Coordinator

Jorge Garcia, Safety Coordinator

Jarod Fornes, Safety Coordinator

Safety Responsibilities

General Superintendent

- Thoroughly understands the safety regulations related to his area of responsibility.
- Directs and coordinates safety activities of all Superintendent/Foremen.
- Provides leadership and motivation to all Superintendent/Foremen concerning compliance with the safety program.
- Requires all Superintendents/Foremen to utilize the proper individual protective equipment and job safety devices.
- Conducts periodic safety inspections of all job sites, directs corrective action for unsafe conditions noted and informs the Project Manager, Superintendent, and Safety Manager of inspection results.
- Assures that all field personnel are aware of and comply with requirements for safe practices and conditions to be maintained on job sites.
- Reviews all accidents with Project Managers, Superintendents, and the Safety Manager and assures that corrective action is taken immediately to identify and alleviate the cause.
- Provides information and recommendations (“feedback”) for improvement of the safety program to the Safety Manager.

Superintendent/Foreman

- Thoroughly understands and enforces regulations applicable to company operations within their area of responsibility.
- Directs, coordinates, and corrects safety activities within his area of responsibility, including the motivation of employees for safe work practices on all job sites under his control.
- Conducts daily safety inspections of all work areas at the job site, directs corrective action for unsafe conditions noted and informs the Project Manager, General Superintendent, and Safety Manager of inspection results.
- Assures that safety equipment is available and equipment storage locations are clearly designated.
- Requires all employees under his supervision to utilize the proper individual protective equipment and job safety devices.
- Instructs all persons within their area of responsibility in job safety and requirements and insists on compliance.
- Assures that injuries are treated promptly and reported properly.
- Investigates all accidents, obtains all pertinent data, files a complete report with the Safety Manager, and initiates immediate corrective action.
- Assures that no unsafe conditions exist in their area of responsibility and reports to the Project Manager, General Superintendent or Safety Manager on any corrective actions needed which are beyond his control.
- Requires all subcontractors and subcontract personnel to comply with applicable safety regulations.
- Conducts and documents weekly “toolbox” safety meetings on each job.



All Employees

- Strive to make all operations safe.
- Be familiar with and comply with safety and health practices.
- Use the required safety devices and proper personal protective safety equipment. Replace or repair safety precautions removed or altered before leaving the work area.
- Keep all work areas clean and free of debris.
- Maintain mental and physical health conducive to working safely.
- Notify Supervisor immediately of unsafe conditions and acts.
- Report all accidents to Supervisor immediately.



SAFETY RULES AND PROCEDURES

Introduction

In order for a safety program to be effective, it is vital that procedures be established, monitored by responsible individuals, and implemented at all levels of employment. Following are some of the general safety rules and procedures applicable to our operations that must be enforced on every project contracted by Clancy & Theys Construction Company. This is a partial listing only. The pertinent requirements of OSHA Regulation CFR 29, Part 1926 "Safety and Health Regulations for Construction" with CFR29, Part 1910 identified as "Applicable to Construction," also apply to this firm and its employees.

Since safety rules can only be effective if they are known by everyone, Clancy & Theys' safety rules will be:

- Posted in appropriate visible places
- The subject of weekly tool box safety meetings
- Reviewed with each new employee

All employees must acknowledge receipt of their copy of the "Basic Safety Rules for Construction" and "Employee Safety Handbook" by signing the appropriate form on the last page of the Handbook. Above all, employees should protect themselves and fellow workers by following the rules.

GENERAL SAFETY RULES

- These are general safety rules only and are not all inclusive. The OSHA standards shall be observed and strictly adhered to at all times.
- The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazard or other exposure to illness or injury.
- All employees shall work in a safe manner as to insure the well being of themselves and their fellow workers.
- Horseplay, pranks, or unsafe conduct will not be allowed.
- Drugs and alcohol are prohibited.
- Prescription drugs, which impair ability to work safety, are prohibited.
- Firearms are prohibited on all projects, company property(s), and vehicles.
- All employees shall wear hard hats, eye protection and proper clothing as required by OSHA Standards and the project specific safety rules...
- On projects under construction
- Truck drivers when out of the vehicle.
- In designated areas of the Shop & Warehouse.
- Making material deliveries to projects under construction.
- Earplugs shall be worn whenever there is exposure to sudden loud noise (Powder Actuated Tools) or long exposures with volume levels greater than normal conversation. (Hammer drills, Jack Hammers, etc.)
- Proper respiratory equipment shall be worn when exposed to airborne contaminants such as dusts, mists or fumes. (Refer to MSDS Sheets for proper equipment)
- Do not bring personal tools to work that are damaged.
- Smoking is permitted only in designated areas. Never smoke around fuel or other flammable objects.
- Hazardous materials or chemicals shall not be used without proper training in the use, hazards, and personal protective equipment.
- MSDS sheets shall be readily available for all employees with potential exposure to a hazardous material.
- Power and hand tools shall be inspected prior to each shift or before use. Damaged items shall be tagged out (DO NOT USE).
- Employees using powder-actuated tools shall have a user certification card showing training for that specific model in use. The certification card shall be on their person.
- Compressed gas cylinders shall be secured and in the upright position at all times. Even when empty.
- Welding and Cutting operations shall only be performed by trained, authorized personnel.
- Extension cords & power tools shall be inspected daily or before use for defects. Unsafe cords or tools shall not be used and will be tagged out of service until repaired or discarded.
- GFCIs (Ground Fault Circuit Interrupters) shall be always used regardless of work being performed.
- Lock-out / Tag-out standards apply when working on or servicing equipment or whenever there is a potential for stored energy of any type to be released and cause injury. (field, shop, warehouse, service call)

- Scaffolding shall be erected and dismantled only under supervision of a Competent Person.
- When erecting or dismantling scaffolding systems, proper fall protection systems shall be used.
- Scaffolding shall be inspected daily for defects or unsafe conditions prior to beginning work by a Competent Person.
- Employees shall not be permitted on scaffolding during severe weather conditions such as high winds, snow, ice or thunderstorms.
- Employees are not permitted to stay on scaffolding while the scaffolding is being moved.
- Care should be taken not to place scaffolding within 10 feet of overhead power lines.
- Aerial lifts are to be operated only by trained, authorized personnel.
- A personal fall arrest system is required for anyone using an articulating boom “Cherry Picker” type aerial lift.
- Fall protection is required when workers are exposed to fall hazards of 6 feet or greater. (This does not apply to scaffolding, ladders, stairways or steel erection) See the appropriate standard for these specific rules.
- Employees shall be trained in fall protection and the use of fall protection systems before they are exposed to fall hazards.
- Employees working with or around cranes, hoists, or boom trucks shall be instructed in the hazards associated with them such as rigging, overhead electrical lines, and proper signaling.
- Seat belts are to be worn at all times when seated in a motor vehicle or on equipment with a Roll- Over Protection System (ROPS).
- Only authorized personnel shall operate a motor vehicle or motorized equipment.
- Trenching or excavation operations are to be under the supervision of a Competent Person.
- A stairway or ladder shall be provided at all personnel points of access where there is a break in elevation of nineteen inches (19”) or more.
- Only persons trained in safe ladder practices shall use ladders.
- Ladders shall be inspected for defects daily before use. Defective equipment shall be taken out of service, tagged, and repaired/destroyed.
- Ladders shall only be used for purposes for which they were manufactured. Never alter or disassemble a ladder for any reason.

Safety Training and Meetings

Training will be an essential part of the Clancy & Theys Safety Program. With proper education, employees will learn how to protect themselves and others around them from hazardous situations.

Each employee of Clancy & Theys will be properly trained for the tasks that they must perform. The training an employee receives will take place as follows:

- New Hire Orientation
 - Fall Protection
 - Hazard Communications
 - Personal Protective Equipment
 - Electrical
 - Small Tools
 - Skill, Reciprocating and Gas Cutoff Saws
 - Standard Drills and Rotary Hammers
 - Electric Generators
 - Powder Actuated Tools
 - Certification Cards will be Issued

- On the Job Training

Each employee will be trained on various subjects throughout their career with Clancy & Theys. Supervisors or other qualified persons will conduct necessary training prior to the employee(s) performing the task at hand.

- Weekly Training (Field Employees)

Field Employees will receive weekly training in the form of "Toolbox Talks" as well as Formal Classroom and Hands-On Training. Training will take place at a minimum of once per week. However, the project Superintendent is not limited to the number of times training can be performed.

The Safety Director shall provide supervisors with safety topics and discussion items each month. In addition to the safety topic, supervisors may discuss other items such as recent accidents and injuries, results of safety inspections, and revisions of safety policies and procedures.

Documentation will be maintained on each employee safety meeting. It should contain the subjects discussed as well as an attendance sheet. **The original attendance sheet shall be returned to the Clancy & Theys home office for processing.** Fax copies will not be allowed unless prior arrangements are made with the Corporate Safety Director.

Weekly Safety meeting attendance sheets are part of a Supervisors Safety Bonus Program. These sheets are required to be turned into the Clancy & Theys home office no more than **30 days** from the date the training was held. Failure to submit documentation shall result in actions taken in accordance with the Supervisors Safety Incentive Program.

When meetings are held periodically, there is always the danger that they will become dull and routine. We will continuously review and improve our meeting plans to prevent this from happening. Supervisors will follow the below plan of action to ensure successful safety meetings are conducted:

A. Preparing for the Meeting

- Supervisors will conduct frequent inspections of the various areas and work practices and note any unsafe acts being performed or unsafe conditions that need to be corrected.
- Supervisors will select an unsafe act or condition to be used as a Safety Meeting topic for the benefit of all. A Safety Meeting can help identify and eliminate hazards before accidents occur.

B. Conduct the Meeting

- Supervisors will discuss only one topic per meeting.
- Allow employees to discuss why the situation occurs.
- Reach an agreement with employees on how to eliminate or control the situation.

C. Keep a Record of the Meeting

- Copies of the monthly safety meeting report forms will be sent to the Safety Director. The Supervisor should keep originals in his or her area.

▪ Monthly Training (Superintendents & Project Managers)

Project Managers and Superintendents will receive training monthly on various topics. Training will cover a variety of topics designed to keep them up to date on safety related issues. This time will also be utilized to inform them of new products, processes, or policies that can aid in making our projects safer.

Supervisors shall attend monthly safety meetings as part of an ongoing training program. These meetings will focus on:

- hazard recognition and awareness;
- changes or modifications to government safety and health regulations;
- changes or modifications to Clancy & Theys policies or procedures;
- and other information deemed necessary.

The dates and times for these meetings shall be determined by the Branch Manager and will vary accordingly.



These meetings are to be attended by all Superintendents, Project Managers and those designated to attend by a company officer.

The attendance of the Monthly Supervisor Safety Meeting is an important part of a supervisor's job requirements. Failure to attend these meetings may affect a Supervisor's performance evaluation as well as any bonus they may or may not receive.

- Annual Training

Field employees will attend the Clancy & Theys "Annual Safety Day" with the purpose of receiving a full day of intense safety related training. Topics will vary from year to year depending on the recommendations of the Safety Committee. The Safety Committee will base topics on the "Injury & Illness Log" and Project Safety Audits for the past year as well as any other material deemed necessary.

SAFETY COMMITTEE MEETINGS

Branch Safety Committees Purpose

A safety committee has been established as a management tool to recommend improvements to our workplace safety program and to identify corrective measures needed to eliminate or control recognized safety and health hazards.

Responsibilities

- Each Branch Safety Committee will be responsible for:
- Assisting management in communicating procedures for evaluating the effectiveness of control measures used to protect employees from safety and health hazards in the workplace.
- Assisting management in reviewing and updating workplace safety rules based on accident investigation findings, any inspection findings, and employee reports of unsafe conditions or work practices; and accepting and addressing anonymous complaints and suggestions from employees.
- Assisting management in updating the workplace safety program by evaluating employee injury and accident records, identifying trends and patterns, and formulating corrective measures to prevent recurrence.
- Assisting management in evaluating employee accident and illness prevention programs, and promoting safety and health awareness and co-worker participation through continuous improvements to the workplace safety program.
- Participating in safety training and for assisting management in monitoring workplace safety education and training to ensure that it is in place, that it is effective, and that it is documented.
- Management will provide written responses to recommendations of the safety committee.

Meetings

- Safety committee meetings are held bi-monthly and more often if needed.
- Meetings are documented with minutes and available to all employees upon request.
- All safety committee records will be maintained for not less than three calendar years.

ACCIDENT AND INCIDENT REPORTING PROCEDURES

Worker's Compensation/Subcontractor Incident/General Liability/Near Miss

RESPONSIBILITIES

- The Project Superintendent has overall responsibility for ensuring there has been a thorough investigation of the incident. The Superintendent must ensure that proper photos and statements have been taken, evidence saved, and the elements of this procedure adhered to. The Superintendent is also responsible to immediately contact the Safety Manager and Corporate Safety Director.
- The Project Safety Manager is responsible for initially determining the seriousness of the incident and informing the Corporate Safety Department. The Safety Manager is also responsible for conducting a thorough investigation in conjunction with the Project Superintendent and to take the lead if warranted by the Corporate Safety Director.
- It is the responsibility of all managers and supervisory personnel to enforce this procedure and of each employee to follow it.

GENERAL REQUIREMENTS

- The following circumstances require an investigation:
 1. Any Fatality.
 2. Serious Injuries (head injury, loss of consciousness, loss of limb, injury requiring an ambulance at the scene).
 3. Any injury to a Clancy & Theys or subcontractor employee who goes to a doctor for care of a job-related injury.
 4. Injury due to fall from an elevation of six feet or more.
 5. Injury to more than one party in a single incident.
 6. Collapse of a structure.
 7. Any incident involving significant property damage.
 8. Any injury or property damage involving the public.
 9. Any incident of questionable merit.
 10. In the event you're not sure whether to report something, report it.
- Subcontractors. Subcontractors shall establish the same procedures and submit any reports generated to the Clancy & Theys Superintendent and/or the Project Safety Manager who monitors their work.

IMPLIMENTATION

- Notification to Safety Department. The Clancy & Theys Safety Department shall be notified immediately in the event of a fatality, lost time, or other serious incident. The Safety Department shall be notified by calling the Safety Director and/or by calling other Safety Department staff directly. Other incidents that are minor in nature, such as a first aid or a general recordable, must be reported to the Safety Manager immediately. The safety manager will brief the Corporate Safety Director. This includes any incident that happens over the weekends or evenings.

- All Incident investigations must be submitted within 24 hours. ALL reports must be completed and submitted in 'SAFETY-REPORTS' or submitted to the safety manager/director within 24 hours with attached liability investigation reports, notes, witness statements, pictures, sketches, drawings with measurements, and other pertinent evidence. Indicate if there is any physical evidence that has been saved such as a ladder, electrical cord, etc. Identify who, what, where, when, why and by whom. Do not send out any emails regarding the incident unless given express permission to do so by the Corporate Director of Safety.
- Photos must be taken of the incident scene. Photos of the incident scene must capture details you may not notice during your observations. On the back of the photo, note the name of the individual who took the photos, as well as any other comments or description.
- Follow Up Actions. The following must be completed as indicated.
 - For an Incident involving a reported near miss:
 - Superintendent is responsible to complete notifications, fill out and submit the incident in within 24 hours as detailed above.
 - Safety Manager and Superintendent will hold a meeting with the applicable party(s) to discuss what took place within 24 hours based on the seriousness of the incident. The meeting shall be documented.
 - Safety Manager, in conjunction with the Superintendent, will hold a special toolbox talk meeting and/or "take-five" with the project staff and field personnel to discuss the incident and prevention measures for the future within 48 hours. The meeting shall be documented with a copy immediately submitted to the Safety Department.
 - For an incident involving a lost time injury and/or serious property or public damage:
 - Superintendent is responsible to complete notifications, fill out and submit the incident in 'SAFETY-REPORTS' within 24 hours as detailed above.
 - Safety Manager in conjunction with the Superintendent will hold a special toolbox talk meeting with the project staff and field personnel to discuss the incident and prevention measures for the future within 48 hours. The meeting shall be documented with a copy immediately submitted to the Safety Department.
 - For an incident involving multiple recordable or lost time injuries, a fatality, and/or major property or public damage:
 - Superintendent is responsible to complete notifications, fill out and submit the incident in 'SAFETY-REPORTS' within 24 hours as detailed above.
 - Division Manager, Company Safety Director, Safety Manager, Project Executive, Superintendent, and all other applicable parties shall hold a meeting at the jobsite to discuss the incident and preventative measures for the future. The meeting shall be documented and submitted to the Safety Department. The Corporate Safety Department shall distribute the documentation to upper management for review as appropriate. In those areas where geographical limitations involving travel exist, parties who cannot attend the meeting shall attend via conference call.
 - No comments to the media except by authorized Clancy & Theys individuals are to be made. Refer to the Company policy on handling the media.
 - Safety Manager in conjunction with the Superintendent will hold a special safety

meeting with the project staff and field personnel to discuss the incident and prevention measures for the future. The meeting shall be held and documented only after a major investigation has been completed. A preliminary meeting may be held to quell any concerns of the staff but with limited information being distributed.

- For all incidents involving injury:
 - Clancy & Theys and all subcontractors shall provide light duty work as part of our return to work policy for all injured individuals that have the appropriate medical release. The work provided shall follow the medical provider's guidelines.

ACCIDENT AND INCIDENT REPORTING PROCEDURES

Vehicle Incident

- **Call 911** or the State Highway Patrol to report the accident immediately.

If the accident occurred on personal property, the police may not respond. In such case, you will still need to completely fill out the Clancy & Theys Vehicle Accident Report which includes the other driver's information. Also provide our information in return.

- The vehicle insurance card should be in the vehicle glove compartment at all times.
- **Call** Fleet & Equipment Manager at Clancy & Theys' home office and report the accident and he will contact our insurance carrier. If you or others need medical attention, then report the accident to the home office at the earliest possible time. 919-834-3601 x220
- **Completely fill out** a Vehicle Accident Report Slip and return to the Clancy & Theys home office in Raleigh. This form should be always kept in the vehicle glove compartment.
- The **assigned driver** will be **responsible** for **obtaining estimates of repair** and arranging with the Shop Foreman a time and date for the repair work to be done. You will also need to make arrangements with the Shop Foreman for an alternate vehicle to drive while repairs are being made.
- **At no time should a Clancy & Theys employee admit fault or guilt.** Police and insurance investigators will determine who is at fault.

REPORTING THEFT

- Call 911 or the local authorities upon discovering a theft has taken place.
- Do not disturb anything or allow anyone into the area until the police arrive.
 - Make a detailed report of stolen items and include the model and serial numbers if possible.
- Contact the Fleet & Equipment Manager, Corporate Safety Director and Corporate Subcontractor Specialist to report the theft and they will contact our insurance carrier.

AERIAL LIFT SAFETY PROGRAM

Aerial Lifts are a valuable part of any construction project. They can provide a safe means of lifting personnel to great heights if they are used properly and by trained operators. Clancy & Theys is devoted to ensuring the safety of its employees at any height.

Aerial lifts include the following types of vehicle-mounted aerial devices used to elevate personnel to job- sites above ground:

- Extendable boom platforms
- Aerial ladders
- Articulating boom platforms
- Vertical towers
- A combination of any such devices

Aerial equipment may be made of metal, wood, fiberglass reinforced plastic (FRP), or other material; may be powered or manually operated; and are deemed to be aerial lifts whether or not they are capable of rotating about a substantially vertical axis.

Training

Only trained and authorized employees shall operate an aerial lift. A qualified person shall conduct training which shall consist of the following:

- Each Clancy & Theys employee who performs work while on an aerial lift shall be trained in how to recognize the hazards associated with the type of lift being used and to understand the procedures to control or minimize those hazards.
- The nature of any electrical hazards and correct procedure for dealing with electrical hazards
- Fall hazards and falling object hazards in the work area
- Fall protection systems and falling object protection systems being used
- The proper use of the lifts, and the proper handling of materials on the lift
- The maximum intended load and the load-carrying capacities of the lift being used
- Any other pertinent requirements or the manufacturer's safety operating procedures

Transportation of Aerial Lifts

If aerial lifts are transported via company owned vehicle, care should be taken in the safe loading and unloading of the lift. Only trained persons shall transport, load or unload an aerial lift.

Modification

Clancy & Theys prohibits the modification of any aerial lift.

Inspection

Aerial lifts shall be inspected daily or prior to each work shift for wear or damage that has a potential to cause mechanical failure and a checklist fill out.

Hazards in the Work Area

The work area shall be inspected for potential hazards which may include the following*:

- Holes or opening in floor
- Overhead Hazards and/or Electrical Items
- Trash, Power Cords, Hoses, etc. (Any object that may cause the lift to stop abruptly.)
- Presence of Water or Oil on floor
- Other Personnel in the work area

*If potential hazards are present, they shall first be abated. If it is not feasible to remove potential hazards, extreme caution shall be used. Employees are to be trained in the recognition of these hazards and what protective measures are to be taken prior to operation.

Use

- Lifts shall not be loaded in excess of their maximum intended loads.
- Load ratings will be located on a Load Chart Decal somewhere on the machine.
- Lifts shall be equipped with both upper and lower controls.
- When outriggers are used, brakes shall be set.
- Lifts shall be fully lowered when in motion, unless specifically designed to move while extended.
- A minimum 10 feet clearance distance from energized power lines shall be maintained.
- Debris shall not be allowed to accumulate on work platforms.
- Makeshift devices, such as, but not limited to boxes and buckets, shall not be used to increase the working level heights of employees.
- Ladders shall not be used on lift platforms to increase the working level heights of employees.
- Ignition key is to be removed when lift is unattended.

Fall Protection

- Employees shall always wear a Personal Fall Arrest System (PFAS) while on an articulating boom lift, regardless of the height.
- Employees on a scissor type lift in which the workbasket will only move in the vertical direction need not wear a PFAS. The handrail on the lift basket is all the fall protection that is required by OSHA. Employees may opt to wear a PFAS if they so choose.
- Employees shall be trained in proper wear and inspection of a PFAS.
- Employees are to use factory installed anchor points within the lift basket. Securing a PFAS to hand railing is prohibited.

Falling Object Protection

Where there is a danger of tools, materials, or equipment falling from an aerial lift and striking workers below, the following shall apply:

- Barricade or flag off the area and warn employees and others of the hazard. All persons shall be kept out of the barricaded area.
- Employees are required to wear head protection if working in the area below an aerial lift is unavoidable.



BLOOD BORNE PATHOGENS EXPOSURE CONTROL PROGRAM

Purpose

The purpose of this exposure control plan is to:

1. Eliminate or minimize employee occupational exposure to blood or certain other body fluids.
2. Show Clancy & Theys' compliance with OSHA's Bloodborne Pathogens Standard, 29 CFR 1910.1030.

Policy

It is our company policy that only trained and authorized employees are allowed to handle or clean up blood and other body fluids. These trained and authorized employees shall use the appropriate personal protective equipment (latex gloves and safety glasses at a minimum) to protect themselves when working with or around blood and other body fluids. These employees shall always wash their hands thoroughly and promptly after contact with blood or body fluids, even if gloves or other barriers were used. Wash hands with non-abrasive soap and running water then dry with disposable towels. Antiseptic towelettes may be used to cleanse hands. Anything contaminated with potentially infectious substances shall be disposed of properly.

Exposure Determination

OSHA requires employers to perform an exposure determination concerning which employees may incur occupational exposure to blood or other potentially infectious materials. The exposure determination is made without regard to the use of personal protective equipment (i.e. employees are considered to be exposed even if they wear personal protective equipment). This exposure determination is required to list all job classifications in which all employees may be expected to incur such occupational exposure, regardless of frequency. At our company, the following job classifications are in this category:

- First Aid & CRP Responders

Implementation Schedule and Methodology

Clancy & Theys requires that this plan include a schedule and method of implementation for the various requirements of the standard. The following complies with this requirement:

1. Compliance Methods

Universal precautions will be observed at this facility or jobsite in order to prevent contact with blood or other potentially infectious materials. All blood or other potentially infectious material will be considered infectious regardless of the perceived status of the source individual.

2. Contaminated Equipment

The First Aid & CRP Responder is responsible for ensuring that equipment which has become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary unless the decontamination of the equipment is not feasible.

3. Personal Protective Equipment (PPE)

The supervisor is responsible for all personal protective equipment used at the project and will ensure equipment is provided, without cost to employees. Personal protective equipment will be chosen based on the anticipated exposure to blood or other potentially infectious materials. The protective equipment will be considered appropriate only if it does not permit blood or other potentially infectious materials to pass through or reach the employees' clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time in which the protective equipment will be used.

Minimum PPE Needed & Provided: Latex Gloves & Eye Protection

4. PPE Use

The supervisor shall ensure that the First Aid & CRP Responder uses appropriate PPE unless the supervisor shows that employee temporarily and briefly declined to use PPE when under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of health care or posed an increased hazard to the safety of the worker or coworker. When the employee makes this judgment, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

5. PPE Cleaning, Laundering, and Disposal

All personal protective equipment will be cleaned, laundered, or disposed of by the employer at no cost to the employees. All repairs and replacements of PPE will be made by the employer, at no cost to employees.

Gloves shall be worn where it is reasonably anticipated that employees will have hand contact with blood, other potentially infectious materials, non-intact skin, and mucous membranes; when performing vascular access procedures, and when handling or touching contaminated items or surfaces.

Disposable gloves are used at this facility and are not to be washed or decontaminated for reuse and are to be replaced as soon as practical when they become contaminated or as soon as feasible if they are torn punctured, or when their ability to function as a barrier is compromised.

6. Housekeeping

All contaminated work areas or equipment will be decontaminated immediately or as soon as feasible, after any spill of blood or other potentially infectious materials.

Any items, which may be contaminated, will not be picked up directly with the hands. Dustpans and hand brooms or forceps / tongs are available for use. Contaminated materials shall be placed in sturdy, leak- proof containers that are properly labeled and then appropriately disposed of.

7. Hepatitis B Vaccine and Post-Exposure Evaluation and Follow Up

Clancy & Theys shall make available the Hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post exposure follow-up to employees who have had an exposure incident.

The supervisor shall ensure that all medical evaluations and procedures including the Hepatitis B vaccine and vaccination series and post exposure follow-up, including prophylaxis are:

- a) Made available at no cost to the employee

- b) Made available to the employee at a reasonable time and place
- c) Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed health care professional
- d) Provided according to the recommendations of the US Public Health Service

All laboratory tests shall be conducted by an accredited laboratory at no cost to the employee.

8. Hepatitis B Vaccination

The supervisor is in charge of the Hepatitis B vaccination program.

Hepatitis B vaccination shall be made available after the employee has received the training in occupational exposure (see information and training) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete Hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.

Participation in a prescreening program shall not be a prerequisite for receiving Hepatitis B vaccination.

If the employee initially declines Hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the vaccination shall then be made available.

All employees who decline the Hepatitis B vaccination offered shall sign the OSHA required waiver indicating their refusal. (See Declination form at end of this section)

If a routine booster dose of Hepatitis B vaccine is recommended by the US Public Health Service at a future date, such booster doses shall be made available.

9. Post Exposure Evaluation and Follow-up

All exposure incidents shall be reported, investigated, and documented. When the employee incurs an exposure incident, it shall be reported to the supervisor who has responsibility for investigation of exposure incidents.

Following a report of an exposure incident, the exposed employee shall immediately receive a confidential medical evaluation and *follow-up*, including at least the following elements:

- a) of the route of exposure, and the circumstances under which the exposure incident occurred;
- b) Identification and documentation of the source individual, unless it can be established that identification is infeasible or prohibited by state or local law.
- c) The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and/or HIV infectivity. If consent is not obtained, the Safety Director shall establish that legally required consent cannot be obtained.

When law does not require the source individual's consent, the source individual's blood, if available, shall be tested and the results documented.

- d) When the source individual is already known to be infected with HBV and/or HIV, testing for the source individual's known HBV and/or HIV status need not be repeated.
- e) Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

Collection and testing of blood for HBV and HIV serological status will comply with the following:

- a) The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained;
- b) The employee will be offered the option of having their blood collected for testing of the employees HIV/HBV serological status. The blood sample will be preserved for up to 90 days to allow the employee to decide if the blood should be tested for HIV serological status.

All employees who incur an exposure incident will be offered post-exposure evaluation and *follow-up* in accordance with the OSHA standard. All post exposure *follow-up* will be performed by the Company's Health Care Professional at that present time.

10. Information Provided to the Health Care Professional

The supervisor shall ensure that the health care professional responsible for the employee's Hepatitis B vaccination is provided with the following:

- a) A copy of 29 CFR 1910.1030; (While the standard outlines the confidentiality requirements of the health care professional, it might be helpful for the employer to remind that individual of these requirements.)
- b) A written description of the exposed employee's duties as they relate to the exposure incident;
- c) Written documentation of the route of exposure and circumstances under which exposure occurred;
- d) Results of the source individuals blood testing, if available; and
- e) All medical records relevant to the appropriate treatment of the employee including vaccination status.

11. Health Care Professional's Written Opinion

The supervisor shall obtain and provide the employee with a copy of the evaluating health care professional's written opinion within 15 days of the completion of the evaluation.

The health care professional's written opinion for HBV vaccination shall be limited to whether HBV vaccination is indicated for an employee, and if the employee has received such vaccination. The health care provider's written opinion for post exposure follow-up shall be limited to the following information:

- a) A statement that the employee has been informed of the results of the evaluation;
and
- b) A statement that the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

Note: All other findings or diagnosis shall remain confidential and shall not be included in the written report.

12. Information and Training

The employee's supervisor shall ensure that Blood borne Pathogens training is provided at the time of initial assignment to tasks where occupational exposure may occur, and that it shall be repeated within twelve months of the previous training.

Training shall be tailored to the education level and language of the employee.

13. Record keeping - Medical Records

Medical Records

Personnel Director is responsible for maintaining medical records as indicated below. These records will be kept in the Medical Record Files.

Medical records shall be maintained in accordance with OSHA Standard 29 CFR 1910.20. These records shall be kept confidential, and must be maintained for at least the duration of employment plus 30 years. The records shall include the following:

- a) The name and social security number of the employee.
- b) A copy of the employee's HBV vaccination status, including the dates of vaccination.
- c) A copy of all results of examinations, medical testing, and follow-up procedures.
- d) A copy of the information provided to the health care professional, including a description of the employee's duties as they relate to the exposure incident, and documentation of the routes of exposure and circumstances of the exposure.

Note: For OSHA 300 Record keeping purposes, an occupational Blood borne pathogens exposure incident shall be classified as an injury since it is usually the result of an instantaneous event or exposure. It shall be recorded if it meets the recordability requirements.

14. Training Records

The Safety Director is responsible for maintaining the following training records. Training records shall be maintained for three years from the date of training. The following information shall be documented:

- a) The dates of the training sessions;
- b) An outline describing the material presented;

- c) The names and qualifications of persons conducting the training;
- d) The names and job titles of all persons attending the training sessions.

15. Availability

All employee records shall be made available to the employee in accordance with 29 CFR 1910.20.

All employee records shall be made available to the Assistant Secretary of Labor for the Occupational Safety and Health Administration and the Director of the National Institute for Occupational Safety and Health upon request.

16. Transfer of Records

If this facility is closed or there is no successor employer to receive and retain the records for the prescribed period, the Director of the NIOSH shall be contacted for final disposition.

17. Evaluation and Review

The Safety Director is responsible for annually reviewing this program and its effectiveness, and for updating this program as needed.

CONCRETE AND MASONRY CONSTRUCTION

Purpose

This program is designed to help protect all construction workers from the hazards associated with concrete and masonry construction operations at construction, demolition, alteration or repair worksites.

Working with concrete can pose hazards in many different areas such as...

- Working with hazardous materials
- Working around construction equipment, including boom trucks and cranes
- Working with forming/shoring materials and systems
- Falls and impalement

Training

Employees of Clancy & Theys will be trained in a minimum of the following areas prior to working with concrete and/or masonry construction:

- Hazard Communications concerning concrete and masonry materials, including proper Personal Protective Equipment.
- Working with and around construction necessary equipment.
- Fall protection systems and impalement hazards, including, but not limited to the following:
 - OSHA Construction Standards 1926 Subpart M & L
 - Competent Person designation and training for the applicable areas

General Requirements

Construction Loads

Employers must not place construction loads on a concrete structure or portion of a concrete structure unless the employer determines, based on information received from a person who is qualified in structural design, that the structure or portion of the structure is capable of supporting the intended loads.

Reinforcing Steel

Reinforcing steel for walls, piers, columns, and similar vertical structures must be adequately supported to prevent overturning and collapse.

Installers must take measures to prevent unrolled wire mesh from recoiling. Such measures may include, but are not limited to, securing each end of the roll or turning over the roll.

Reinforcing steel shall be covered according to the OSHA standards any time there is a potential for a worker to be impaled.

Post-Tensioning Operations

Only employees essential to the post-tensioning operations are to be permitted to be behind the jack during tensioning operations.

Signs and barriers must be erected to limit employee access to the post-tensioning area during tensioning

operations.

Concrete Buckets

Employees are not to be permitted to ride concrete buckets.

Employees will not be permitted to work under concrete buckets while the buckets are being elevated or lowered into position.

To the extent practical, elevated concrete buckets must be routed so that no employee, or the fewest number of employees possible, is exposed to the hazards associated with falling concrete buckets.

Concrete Safety

Personal Protective Equipment

Employees must not be permitted to apply a cement, sand, and water mixture through a pneumatic hose unless they are wearing protective head and face equipment.

Employees must not be permitted to place or tie reinforcing steel more than 6 feet above any adjacent working surfaces unless they are protected by the use of a safety belt or equivalent fall protection.

Employees must also wear appropriate personal protective equipment as recommended by the MSDS Sheet. Employees will be trained in the use, care, inspection and maintenance of required PPE equipment.

Equipment and Tools

Employees will be trained in the proper use, care, inspection and operations of related equipment to be used. Equipment will be inspected prior to each use for defects or wear. Faulty equipment will be tagged out of service until repaired or discarded.

Cast-In-Place Concrete

General Requirements for Formwork

Formwork must be designed, fabricated, erected, supported, braced, and maintained so that it will be capable of supporting, without failure, all vertical and lateral loads that might be applied to the formwork.

Drawings or Plans

Drawings and plans, including all revisions for the jack layout, formwork (including shoring equipment), working decks and scaffolds, must be available at the jobsite.

Shoring and Re-shoring

All shoring equipment (including equipment used in re-shoring operations) must be inspected prior to erection to determine that the equipment meets the requirements specified in the formwork drawings.

Damaged shoring equipment must not be used for shoring. Erected shoring equipment must be inspected immediately prior to, during, and immediately after concrete placement. Shoring equipment found to be damaged or weakened after erection must be immediately reinforced.

If single-post shores are used, one on top of another (tiered), then additional shoring requirements must be met. The shores must be as follows:

- Designed by a qualified designer and inspected by an engineer qualified in structural design
- Vertically aligned
- Spliced to prevent misalignment
- Adequately braced in two mutually perpendicular directions at the splice level. Each tier also must be diagonally braced in the same two directions

Adjustment of single-post shores to raise formwork must not be made after the placement of concrete.

Whenever the concrete is required to support loads in excess of its capacity, re-shoring must be erected as the original forms and shores are removed.

Vertical Slip Forms

The steel rods or pipes on which jacks climb or by which the forms are lifted must be:

- Specifically designed for that purpose, and
- Adequately braced where not encased in concrete

Forms must be designed to prevent excessive distortion of the structure during the jacking operation.

Jacks and vertical supports must be positioned in such a manner that the loads do not exceed the rated capacity of the jacks.

The jacks or other lifting devices must be provided with mechanical dogs or other automatic holding devices to support the slip forms whenever failure of the power supply or lifting mechanisms occurs.

The form structure must be maintained within all design tolerances specified for plumpness during the jacking operation.

The predetermined safe rate of lift must not be exceeded.

All vertical slip forms must be provided with scaffolds or work platforms where employees are required to work or pass.

Removal of Formwork

Forms and shores (except those used for slabs on grade and slip forms) must not be removed until it is determined that the concrete has gained sufficient strength to support its weight and superimposed loads. Such determination must be based on compliance with one of the following:

- Stipulated conditions in the plans and specifications for removal of forms and shores, and such

conditions have been followed, or

- The concrete has been properly tested with an appropriate American Society for Testing and Materials (ASTM) standard test method designed to indicate the concrete compressive strength, and the test results indicate that the concrete has gained sufficient strength to support its weight and superimposed loads.

Re-shoring must not be removed until the concrete being supported has attained adequate strength to support its weight and all loads in place upon it.

Precast Concrete

Precast concrete wall units, structural framing, and tilt-up wall panels must be adequately supported to prevent overturning and to prevent collapse until permanent connections are completed.

Lifting inserts that are embedded or otherwise attached to tilt-up wall panels must be capable of supporting at least two times the maximum intended load applied or transmitted to them.

Lifting inserts for other precast members must be capable of supporting four times the load. Only essential employees are permitted under precast concrete that is being lifted or tilted into position.

Lift-Slab Operations

Lift-slab operations must be designed and planned by a registered professional engineer who has experience in lift-slab construction. Such plans and designs must be implemented by the employer and must include detailed instructions and sketches indicating the prescribed method of erection. The plans and designs must also include provisions for ensuring lateral stability of the building/structure during construction.

Jacking equipment must be capable of supporting at least two and one-half times the load being lifted during jacking operations and the equipment must not be overloaded.

For the purpose of this provision, jacking equipment includes any load bearing component that is used to carry out the lifting operation(s). Such equipment includes, but is not limited to, the following: threaded rods, lifting attachments, lifting nuts, hook-up collars, T-caps, shearheads, columns, and footings.

Only employees essential to the jacking operation are to be permitted in the building/structure while any jacking operation is taking place unless the building/structure has been reinforced sufficiently to ensure its integrity during erection. The phrase "reinforced sufficiently to ensure its integrity" used in this paragraph means that a registered professional engineer, independent of the engineer who designed and planned the lifting operation, has determined from the plans that if there is a loss of support at any jack location, that loss will be confined to that location and the structure as a whole will remain stable.

Under no circumstances must any employee who is not essential to the jacking operation be permitted immediately beneath a slab while it is being lifted.

Masonry Construction

Masons will be trained as a minimum in the same areas mentioned in the preceding section "Training".

Whenever a masonry wall is being constructed, employers must establish a limited access zone prior to the start of construction. The limited access zone must be as follows:

- Equal to the height of the wall to be constructed plus 4 feet, and shall run the entire length of the wall;
- Located on the side of the wall that will be un-scaffold
- Entry restricted to only employees actively engaged in constructing the wall
- Kept in place until the wall is adequately supported to prevent overturning and collapse unless the height of wall is more than eight feet (8') and unsupported; in which case, it must be braced. The bracing must remain in place until permanent supporting elements of the structure are in place.

CRANE OPERATIONS AND MATERIAL LIFTING

Purpose

Moving large, heavy loads is crucial to today's manufacturing and construction industries. Much technology has been developed for these operations, including careful training and extensive workplace precautions. There are significant safety issues to be considered, both for the operators of the diverse "lifting" devices, and for workers in proximity to them.

The purpose of this program is to establish consistent requirements for all Clancy & Theys' crane operations. This policy includes pre-construction lift procedures, pre-lift requirements for all loads and critical lift requirements, and all necessary required documentation.

Responsibility

It will be the responsibility of the crane operator to ensure that the crane is mechanically sound to safely perform its task at hand. The crane operator also has the responsibility of ensuring that the crane's limitations are not exceeded according to the manufacturer's recommendations. It will also be the responsibility of the crane operator to attend any pre-lift meeting(s) and possibly call the meetings if the project expeditor does not do so. The crane operator has full authority to reject lifting a load if he has substantial reason that it will endanger life or property.

It is the responsibility of the rigger to ensure the load is secured before allowing the crane operator to lift the object(s). It will also be the responsibility of the rigger to warn unnecessary persons if they are in an unsafe area of the erection operation. The rigger will also have the responsibility to inspect all slings, chokers, etc. daily or before initial use.

On most projects, cranes are a subcontract service to Clancy & Theys. When this service is under subcontract, the crane operator and/or subcontractor supervisor will be responsible for the direction of all lifts. ***Clancy & Theys will not direct lifting, rigging, signaling or any other crane related operations. It shall be the sole responsibility of the crane foremen or operator to direct operations associated with their scope of work. This responsibility will be the same for any other similar situations regardless of the person requesting.***

Training

All operators, riggers, and signalmen will be trained in accordance with the OSHA and ANSI standards. These persons will be trained by qualified persons prior to working in these positions.

All persons working around cranes and hoisting equipment will be trained in but not limited to the following:

- Overhead Hazards
- Falling objects and Struck By hazards

General Safety Requirements

- Clancy & Theys will comply with the manufacturer's specifications and limitations applicable to the operation of any and all cranes or derricks. Where the manufacturer's specifications are not available, the limitations assigned to the equipment shall be based on the determinations of a qualified engineer

competent in this field and such determinations will be appropriately documented and recorded. Attachments used with cranes shall not exceed the capacity, rating, or scope recommended by the manufacturer.

- Rated load capacities, recommended operating speeds, special hazard warnings, or instruction, shall be conspicuously posted on all equipment. Instructions or warnings shall be visible to operators while they are at their control stations.
- Hand signals to crane and derrick operators shall be those prescribed by the applicable ANSI standard for the type of crane in use. An illustration of the signals will be posted at the job site.
- All employees shall be kept clear of loads about to be lifted and of suspended loads.
- Clancy & Theys shall designate a competent person(s) who shall inspect all machinery and equipment prior to each use and during use, to make sure it is in safe operating condition. Any deficiencies shall be repaired or defective parts replaced, before continued use.
- A thorough, annual inspection of the hoisting machinery shall be made by a Competent Person or by a government or private agency recognized by the U.S. Department of Labor. Clancy & Theys shall maintain a record of the dates and results of inspections for each hoisting machine and piece of equipment.
- Belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating or other moving parts or equipment shall be guarded if such parts are exposed to contact by employees or otherwise create a hazard. Guarding shall meet the requirements of the American National Standards Institute B15.1-1958 Rev., *Safety Code for Mechanical Power Transmission Apparatus*.
- Accessible areas within the swing radius of the rear of the rotating superstructure of the crane, either permanently or temporarily mounted, shall be barricaded in such a manner as to prevent an employee from being struck or crushed by the crane.
- All exhaust pipes shall be guarded or insulated in areas where contact by employees is possible in the performance of normal duties.
- Whenever internal combustion engine powered equipment exhausts in enclosed spaces, tests shall be made and recorded to see that employees are not exposed to unsafe concentrations of toxic gases or oxygen deficient atmospheres.
- All windows in cabs shall be of safety glass or equivalent which introduces no visible distortion that will interfere with the safe operation of the machine.
- Where necessary for rigging or service requirements, a ladder or steps shall be provided to give access to a cab roof. Guardrails, handholds, and steps shall be provided on cranes for easy access to the car and cab, conforming to American National Standards Institute B30.5.
- Platforms and walkways shall have anti-skid surfaces.
- The OSHA 1926 Standard, Subpart R "Steel Erection" will apply to this program as applicable.

Wire rope

Wire rope shall be taken out of service when any of the following conditions exist:

- In running ropes, six randomly distributed broken wires in one lay or three broken wires in one strand in one lay;
- Wear of one-third the original diameter of outside individual wires. Kinking, crushing, bird caging, or any other damage resulting in distortion of the rope structure;

- Evidence of any heat damage from any cause;
- Reductions:
 - from nominal diameter of more than one-sixty-fourth inch for diameters up to and including five-sixteenths inch
 - one-thirty-second inch for diameters three-eighths inch to and including one-half inch
 - three-sixty-fourths inch for diameters nine-sixteenths inch to and including three-fourths inch
 - one-sixteenth inch for diameters seven-eighths inch to 1 inches inclusive
 - three-thirty-seconds inch for diameters 1¼ to 1½ inches inclusive
- In standing ropes, more than two broken wires in one lay in sections beyond end connections or more than one broken wire at an end connection.
- Wire rope safety factors shall be in accordance with American National Standards Institute B30.5-1968 or SAE J959-1966.

Fueling & Fire Prevention

- Fuel tank filler pipe shall be located in such a position, or protected in such manner, as to not allow spill or overflow to run onto the engine, exhaust, or electrical equipment of any machine being fueled.
- An accessible fire extinguisher of 5BC rating or higher shall be available at all operator stations or cabs of equipment. Fire extinguishers shall be inspected in accordance with NFPA 10 Standards.
- All fuels shall be transported, stored, and handled to meet the OSHA Standards of Subpart F, *Fire Protection and Prevention*. When fuel is transported by vehicles on public highways, Department of Transportation rules contained in 49 CFR Parts 177 and 393 concerning such vehicular transportation are considered applicable.

Working Near Electrical Transmission Lines

Equipment or machines shall be operated proximate to power lines only in accordance with the following:

- Except where electrical distribution and transmission lines have been de-energized and visibly grounded at the point of work, or where insulating barriers, not a part of or an attachment to the equipment or machinery, have been erected to prevent physical contact with the lines,
- For lines rated 50 kV. or below, minimum clearance between the lines and any part of the crane or load shall be 10 feet;
- For lines rated over 50 kV., minimum clearance between the lines and any part of the crane or load shall be 10 feet plus 0.4 inch for each 1 kV. over 50 kV., or twice the length of the line insulator, but never less than 10 feet; In transit with no load and boom lowered, the equipment clearance shall be a minimum of 4 feet for voltages less than 50 kV., and 10 feet for voltages over 50 kV., up to and including 345 kV., and 16 feet for voltages up to and including 750 kV.
- A person shall be designated to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means;
- Cage-type boom guards, insulating links, or proximity warning devices may be used on cranes, but the use of such devices shall not alter the requirements of any other regulation of this part even if such device is required by law or regulation;
- Any overhead wire shall be considered to be an energized line unless and until the person owning such line or the electrical utility authorities indicate that it is not an energized line and it has been

visibly grounded;

- Prior to work near transmitter towers where an electrical charge can be induced in the equipment or materials being handled, the transmitter shall be de-energized or tests shall be made to determine if electrical charge is induced on the crane. The following precautions shall be taken when necessary to dissipate induced voltages:
 - The equipment shall be provided with an electrical ground directly to the upper rotating structure supporting the boom; and
 - Ground jumper cables shall be attached to materials being handled by boom equipment when electrical charge is induced while working near energized transmitters. Crews shall be provided with nonconductive poles having large alligator clips or other similar protection to attach the ground cable to the load.
 - Combustible and flammable materials shall be removed from the immediate area prior to operations.

THE ABOVE OPERATIONS SHALL ONLY BE PERFORMED BY A QUALIFIED ELECTRICIAN.

Pre Lift-Requirements

Prior to lifting any load with any crane, the operator (Or Service Company) shall first ensure that the following criteria have been met:

- All crane inspections shall be conducted and up-to-date per OSHA regulations. The operator is responsible for conducting the daily and monthly inspections. The inspection shall also be up-to-date with any deficiencies noted.
- The OSHA 1926 Standard, Subpart R "Steel Erection" will apply to this program as applicable.
- Only qualified operators shall be allowed to operate any crane.
- The operator shall ensure that all loads are rigged properly. If there is any doubt to the way any load is rigged, the operator shall not make any lifts till he/she deems it a safe lift.
- The operator shall govern and verify the weight of all loads. This weight called; the "Net Load" is the weight of the object being lifted. It must be determined based on reliable information or engineering data or actually weighing the object in question.
- Prior to making a lift, the operator shall ensure that the signal person is knowledgeable and competent on crane signals. If the hand signals are used, they shall be those prescribed by ANSI B30.5 Whenever radios are used, try to use a dedicated channel or limit conversation not pertaining to the lift.

Crane Inspections

Daily Inspections

Prior to any lift, the operator shall conduct a daily inspection. This inspection shall be documented, and records kept either on the crane or on the project. Any notations that show deficiencies should be corrected.

Monthly Inspections

Prior to any lift, the operator shall make sure that the monthly inspection is current to within thirty (30) days. A record of the inspection shall be kept either in the crane or on the project. If the crane is rented, you should check with the rental company and obtain such information.

Annual Inspection

A thorough, annual inspection of the hoisting machinery shall be made by a Competent Person, or by a government or private agency recognized by the U.S. Department of Labor. The employer shall maintain a record of the dates and results of inspections for each hoisting machine and piece of equipment.

Crane operation condition check

Prior to any lift, the operator shall warm up the crane and run it through all its functions. This includes booming, swinging, raising, and lowering the ball or block and a test of all brakes and clutches. Extra time for warm-up may be needed in cases when moisture may have an effect on brakes and clutches (i.e. rain and dew). Whenever possible, again test all functions after just picking the load free.

Site Conditions

Weather

Never attempt a critical lift (Crane exceeds 75% maximum load) if bad or severe weather is imminent. Wind must always be considered. OSHA requires that all crane operations be suspended if the wind velocity exceeds 30 MPH. A critical lift shall be postponed if the wind velocity exceeds 20 MPH. Wind can cause a dynamic loading on the crane. Moisture from dew or rain must be dried from brakes prior to crane operations each day.

Area clear of Personnel

No personnel shall be allowed in the area during a critical lift unless they have a specific responsibility. Never allow a load to pass over personnel if at all possible.

Location of adjacent structures/objects considered

The pre-lift meeting shall include a survey of the area to ensure everything possible is being done to avoid obstructions. Never shall the crane, boom or load come any closer than 10 feet from a power line rated 50KV or less. For lines greater than 50KV, a distance of one-half inch per KV shall be added to the distance. However, try to avoid operating in the vicinity of any overhead power lines altogether. Other hazards within the vicinity of the lift must be considered and specific plans made based on their presence. Contact the Safety Department if assistance is needed in these situations.

Underground installations/utilities

Always consider what may be buried underground such as pipes, lines, vaults, etc. This includes the area where the crane is sitting and where the load will be placed.

Hoisting

Lift radius

Prior to the lift, determine the radius necessary to place the load properly. If the load is to be lowered into an excavation, the boom angle should be set for the proper radius prior to swinging the load over the excavation. Also, whenever possible use the power down function to lower the load.

Minimum allowable angle for the load

Once the required radius is determined, the boom angle shall be noted. With this information, the operator will know what angle cannot be exceeded to avoid exceeding the required radius.

Maximum allowable radius for the load

The maximum allowable radius can be obtained from the load chart. This radius is never to be exceeded with this load.

Load centered properly

The load shall be positioned directly below the boom tip before the load is lifted. This may be checked by freely hanging the hook directly above the center of gravity of the load. Remember the boom will tend to lower slightly as the load is lifted so this must be corrected for as the load is being picked free.

Choosing the radius

The exact radius at which you must work may not appear on the crane lift chart. In this case, use the next higher radius on the chart and the corresponding capacity at that radius is the maximum allowable for your lift.

Slings

This section applies to slings used in conjunction with other material handling equipment for the movement of material by hoisting. The types of slings covered are those made from alloy steel chain, wire rope, metal mesh, natural or synthetic fiber rope (conventional three strand construction), and synthetic web (nylon, polyester, and polypropylene).

Lifting & Hoisting Material

There are good practices to follow to protect your self while using slings to move materials.

1. First, learn as much as you can about the materials with which you will be working. Slings come in many different types, one of which is right for your purpose.
2. Second, analyze the load to be moved In terms of size, weight, shape, temperature, and sensitivity then choose the sling which best meets those needs.
3. Third, always inspect all the equipment before and after a move and always be sure to give equipment any "in service" maintenance it may need.
4. Fourth, use safe-lifting practices. Use the proper lifting technique for the type of sling and the type of load.

By following the above guidelines to proper sling use and maintenance, and by the avoidance of kinking, it is possible to greatly extend a wire rope sling's useful service life.

Operating Practices for Slings

When any sling is used, the following practices shall be observed:

General Practices

- Slings that are damaged or defective shall not be used.

- Slings shall not be shortened with knots or bolts or other makeshift devices.
- Sling legs shall not be kinked.
- Slings shall not be loaded in excess of their rated capacities.
- Slings used in a basket hitch shall have the loads balanced to prevent slippage.
- Slings shall be securely attached to their loads.
- Slings shall be padded or protected from the sharp edges of their loads.
- Suspended loads shall be kept clear of all obstructions.
- All employees shall be kept clear of loads about to be lifted and of already suspended loads.
- Hands or fingers shall not be placed between the sling and its load while the sling is being tightened around the load.
- Shock loading is prohibited.
- A sling shall not be pulled from under a load when the load is resting on the sling.

Inspections

- Each day before being used, the sling and all fastenings and attachments shall be inspected for damage or defects by a competent person designated by the employer. Additional inspections shall be performed during sling use where service conditions warrant.
- Damaged or defective slings shall be immediately removed from service.

Alloy Steel Chain Slings

Sling Identification

- Alloy steel chain slings shall have permanently affixed durable identification stating size, grade, rated capacity and reach.

Sling Use

- Alloy steel chain slings shall not be used with loads in excess of the rated capacities prescribed in Table N184-1 of § 1910.184. Slings not included in this table shall be used only in accordance with the manufacturer's recommendations.

Safe Operating Temperatures

- Alloy steel chain slings shall be permanently removed from service if they are heated above 1000° F. When exposed to service temperatures in excess of 600° F, maximum working load limits permitted in Table N- 184-1 of the OSHA Standards - § 1910.184 shall be reduced in accordance with the chain or sling manufacturer's recommendations.

Repairing Slings

- Worn or damaged alloy steel chain slings or attachments shall not be used until repaired.

Effect of Wear

- If the chain size at any point of any link is less than that stated in Table N- 184-2 of the OSHA Standards - § 1910.184, the sling shall be removed from service.
- Alloy steel chain slings with cracked or deformed master links, coupling links or other components shall be removed from service.

Wire Rope Slings

Sling Use

- Wire rope slings shall not be used with loads in excess of the rated capacities shown in Tables N- 184-3 through N- 184-14 of § 1910.184. Slings not included in these tables shall be used only in accordance with the manufacturer's recommendations.

Safe Operating Temperatures

- Fiber core wire rope slings of all grades shall be permanently removed from service if they are exposed to temperatures in excess of 200° F. When non-fiber core wire rope slings of any grade are used at temperatures above 400° F or below minus 60° F, recommendations of the sling manufacturer regarding use at that temperature shall be followed.

Removal from Service

Wire rope slings shall be immediately removed from service if any of the following conditions are present:

- Ten randomly distributed broken wires in one rope lay, or five broken wires in one strand in one rope lay
- Wear or scraping of one-third the original diameter of outside individual wires
- Kinking, crushing, bird caging or any other damage evidence of heat damage
- End attachments that are cracked, deformed or worn
- Hooks that have been opened more than 15 percent of the normal throat opening measured at the narrowest point or twisted more than 10 degrees from the plane of the unbent hook
- Corrosion of the rope or end attachments.

Synthetic Web Slings

Sling Identification

- Each sling shall be marked or coded to show the rated capacities for each type of hitch and type of synthetic web material.

Sling Use

- Synthetic web slings illustrated in Figure N- 18-6 shall not be used with loads in excess of the rated capacities specified in Tables N184-20 through N- 184-22 of the OSHA Standards - § 1910.184.

Slings not included in these tables shall be used only in accordance with the manufacturer's recommendations.

Environmental Conditions

When synthetic web slings are used, the following precautions shall be taken:

- Nylon web slings shall not be used where fumes, vapors, sprays, mists or liquids of acids or phenolics are present.
- Polyester and polypropylene web slings shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.

- Web slings with aluminum fittings shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.

Safe Operating Temperatures

- Synthetic web slings of polyester and nylon shall not be used at temperatures in excess of 180°F.
- Polypropylene web slings shall not be used at temperatures in excess of 200°F.
- Synthetic web slings that are repaired shall not be used unless repaired by a sling manufacturer or an equivalent entity.

Removal from Service

- Synthetic web slings shall be immediately removed from service if any of the following conditions are present:
 - Acid or caustic burns
 - Melting or charring of any part of the sling surface
 - Snags, punctures, tears, or cuts
 - Broken or worn stitches
 - Distortion of fittings

DEMOLITION OPERATIONS

Preparatory Operations

Before the start of every demolition job, the demolition contractor should take a number of steps to safeguard the health and safety of workers at the job site. These preparatory operations involve the overall planning of the demolition job, including methods to be used to bring the structure down, equipment necessary to do the job, and measures to be taken to perform the work safely. Planning for a demolition job is as important as actually doing the work. Therefore, a competent person experienced in all phases of the demolition work to be performed should perform all planning work.

"No employee shall be permitted in any area that can be adversely affected when demolition operations are being performed. Only those employees necessary for the performance of the operations shall be permitted in these areas."

Training

On a normal basis, all major building demolition is performed by a qualified subcontractor that specializes in this field of work. Clancy & Theys requires these subcontractors to provide well-trained, competent personnel.

Minor demolition operations may be performed by our in house work force. In this case, Clancy & Theys will insure that its employees receive training in the following areas, but not limited these areas:

- Demolition hazards and protection methods
- Encountering hazardous materials (such as asbestos or lead)
- Personal protective equipment
- Proper and safety operation of demolition tools and equipment

Engineering Survey

Prior to starting all demolition operations, OSHA Standard 1926.850(a) requires that a competent person conduct an engineering survey of the structure. The purpose of this survey is to determine the condition of the framing, floors, and walls so that necessary measures can be taken to prevent the premature collapse of any portion of the structure. When indicated as advisable, any adjacent structure(s) or improvements should also be similarly checked. The demolition contractor must maintain a written copy of this survey. Photographing existing damage in neighboring structures is also advisable.

The engineering survey provides the demolition contractor with the opportunity to evaluate the job in its entirety. The contractor should plan for the wrecking of the structure, the equipment to do the work, manpower requirements, and the protection of the public. The safety of all workers on the job site should be a prime consideration. During the preparation of the engineering survey, the contractor should plan for potential hazards such as fire, cave-ins, and injuries.

If the structure to be demolished has been damaged by fire, flood, explosion, or some other cause, appropriate measures, including bracing and shoring of walls and floors, shall be taken to protect workers and any adjacent structures. It shall also be determined if any type of hazardous chemicals, gases, explosives, flammable material, or similar dangerous substances have been used or stored on the site. If the nature of a substance cannot be

easily determined, samples should be taken and analyzed by a qualified person prior to demolition.

Engineering Survey – Continued

During the planning stage of the job, all safety equipment needs should be determined. The required number and type of respirators, lifelines, warning signs, safety nets, special face and eye protection, hearing protection, and other worker protection devices should be determined during the preparation of the engineering survey. A comprehensive plan is necessary for any confined space entry.

Utility Location

One of the most important elements of the pre-job planning is the location of all utility services. All electric, gas, water, steam, sewer, and other service lines should be shut off, capped, or otherwise controlled at or outside the building before demolition work is started. In each case, any utility company which is involved should be notified in advance and approval or any necessary services shall be obtained.

If it is necessary to maintain any power, water, or other utilities during demolition, such lines shall be temporarily relocated as necessary and/or protected. The location of all overhead power sources should also be determined, as they can prove especially hazardous during any machine demolition. All workers should be informed of the location of any existing or relocated utility service.

Medical Services and First Aid

Prior to starting work, provisions should be made for prompt medical attention in case of serious injury. The nearest hospital, infirmary, clinic, or physician shall be located as part of the engineering survey. The job supervisor should be provided with instructions for the most direct route to these facilities. Proper equipment for prompt transportation of an injured worker, as well as a communication system to contact any necessary ambulance service, must be available at the job site. The telephone numbers of the hospitals, physicians, or ambulances shall be conspicuously posted.

In the absence of an infirmary, clinic, hospital, or physician that is reasonably accessible in terms of time and distance to the worksite, a person who has a valid certificate in first aid training from the U.S. Bureau of Mines, the American Red Cross, or equivalent training should be available at the worksite to render first aid.

A properly stocked first aid kit, as determined by an occupational physician, must be available at the job site. The first aid kit should contain approved supplies in a weatherproof container with individual sealed packages for each type of item. It should also include rubber gloves to prevent the transfer of infectious diseases. Provisions should also be made to provide for quick drenching or flushing of the eyes should any person be working around corrosive materials. Eye flushing must be done with water containing no additives. The contents of the kit shall be checked before being sent out on each job and at least weekly to ensure the expended items are replaced.

Police and Fire Contact

The telephone numbers of the local police, ambulance, and fire departments should be available at each job site. This information can prove useful to the job supervisor in the event of any traffic problems, such as the

movement of equipment to the job, uncontrolled fires, or other police/fire matters. The police number may also be used to report any vandalism, unlawful entry to the job site, or accidents requiring police assistance.

Fire Prevention and Protection

A "fire plan" should be set up prior to beginning a demolition job. This plan should outline the assignments of key personnel in the event of a fire and provide an evacuation plan for workers on the site.

General rules in fire prevention planning:

- All potential sources of ignition should be evaluated and the necessary corrective measures taken.
- Electrical wiring and equipment for providing light, heat, or power should be installed by a competent person and inspected regularly.
- Equipment powered by an internal combustion engine should be located so that the exhausts discharge well away from combustible materials and away from workers.
- When the exhausts are piped outside the building, a clearance of at least six inches should be maintained between such piping and combustible material.
- All internal combustion equipment should be shut down prior to refueling. Fuel for this equipment should be stored in a safe location.
- Sufficient fire fighting equipment should be located near any flammable or combustible liquid storage area.
- Only approved containers and portable tanks should be used for the storage and handling of flammable and combustible liquids.
- Heating devices should be situated so they are not likely to overturn and shall be installed in accordance with their listing, including clearance to combustible material or equipment. Temporary heating equipment, when utilized, should be maintained by competent personnel.
- Smoking should be prohibited at or in the vicinity of hazardous operations or materials. Where smoking is permitted, safe receptacles shall be provided for smoking materials.
- Roadways between and around combustible storage piles should be at least 15 feet wide and maintained free from accumulation of rubbish, equipment, or other materials.
- When storing debris or combustible material inside a structure, such storage shall not obstruct or adversely affect the means of exit.
- A suitable location at the job site should be designated and provided with plans, emergency information, and equipment, as needed. Access for heavy fire fighting equipment should be provided on the immediate job site at the start of the job and maintained until the job is completed.
- Free access from the street to fire hydrants and to outside connections for standpipes, sprinklers, or other fire extinguishing equipment, whether permanent or temporary, should be provided and maintained at all times.
- Pedestrian walkways should not be so constructed as to impede access to hydrants.
- No material or construction should interfere with access to hydrants, Siamese connections, or fire extinguishing equipment.
- A temporary or permanent water supply of sufficient volume, duration, and pressure, required to properly operate the fire fighting equipment, should be made available.
- Standpipes with outlets should be provided on large multistory buildings to provide for fire protection on upper levels. If the water pressure is insufficient, a pump should also be provided.

- An ample number of fully charged portable fire extinguishers should be provided throughout the operation. All motor driven mobile equipment should be equipped with an approved fire extinguisher.
- An alarm system, e.g., telephone system, siren, two-way radio, etc., shall be established in such a way that employees on the site and the local fire department can be alerted in case of an emergency. The alarm code and reporting instructions shall be conspicuously posted and the alarm system should be serviceable at the job-site during the demolition. Fire cut offs shall be retained in the buildings undergoing alterations or demolition until operations necessitate their removal.

Special Structures Demolition

Safe Work Practices When Demolishing a Chimney, Stack, Silo, or Cooling Tower

Inspection and Planning

When preparing to demolish any chimney, stack, silo, or cooling tower, the first step must be a careful, detailed inspection of the structure by an experienced person. If possible, architectural/engineering drawings should be consulted. Particular attention should be paid to the condition of the chimney or stack. Workers should be on the lookout for any structural defects such as weak or acid-laden mortar joints, and any cracks or openings. The interior brickwork in some sections of industrial chimney shafts can be extremely weak. If the stack has been banded with steel straps, these bands shall be removed only as the work progresses from the top down. Sectioning of the chimney by water, etc. should be considered.

Safe Work Practice

- When hand demolition is required, it should be carried out from a working platform.
- Experienced personnel must install a self-supporting tubular scaffold, suspended platform, or knee-braced scaffolding around the chimney.
- Particular attention should be paid to the design, support, and tie-in (braces) of the scaffold.
- A competent person should be present at all times during the erection of the scaffold.
- It is essential that there be adequate working clearance between the chimney and the work platform.
- Access to the top of the scaffold should be provided by means of portable walkways.
- The platforms should be decked solid and the area from the work platform to wall bridged with a minimum of 2-inch thick lumber.
- A back rail 42 inches above the platform with a midrail covered with canvas or mesh should be installed around the perimeter of the platform to prevent injury to workers below. Debris netting may be installed below the work platform.
- Excess canvas or plywood attachments can form a wind sail that could cause collapse of the scaffold.
- When working on the work platform, all personnel should wear hard hats, long sleeve shirts, eye/face protection, such as goggles and face shields, respirators and safety belts, as required.
- Care should be taken that the proper number of workers are assigned to the task.
- Too many people on a small work platform can lead to accidents.
- An alternative to the erection of a self-supporting tubular steel scaffold is to "climb" the structure with a creeping bracket scaffold. Careful inspection of the masonry and a decision as to the safety of this alternative must be made by a competent person. It is essential that the masonry of the chimney be in good enough condition to support the bracket scaffold.
- The area around the chimney should be roped off or barricaded and secured with appropriate warning

signs posted. No unauthorized entry should be permitted to this area. It's also good practice to keep a worker, i.e. a supervisor, operating engineer, another worker, or a "safety person", on the ground with a form of communication to the workers above.

- Special attention should be paid to weather conditions when working on a chimney. No work should be done during inclement weather such as during lightning or high wind situations. The worksite should be wetted down, as needed, to control dust.

Debris Clearance

If debris is dropped inside the shaft, it can be removed through an opening in the chimney at grade level. The opening at grade must be kept relatively small in order not to weaken the structure. If a larger opening is desired, a professional engineer should be consulted.

When removing debris by hand, an overhead canopy of adequate strength should be provided.

If machines are used for removal of debris, proper overhead protection for the operator should be used. Excessive debris should not be allowed to accumulate inside or outside the shaft of the chimney as the excess weight of the debris can impose pressure on the wall of the structure and might cause the shaft to collapse.

The foreman should determine when debris is to be removed, halt all demolition during debris removal, and make sure the area is clear of clean-up workers before continuing demolition.

Demolition by Deliberate Collapse

Another method of demolishing a chimney or stack is by deliberate collapse. Deliberate collapse requires extensive planning and experienced personnel, and should be used only when conditions are favorable.

There must be a clear space for the fall of the structure of at least 45 degrees on each side of the intended fall line and 1½ times the total height of the chimney. Considerable vibration may be set up when the chimney falls, so there should be no sewers or underground services on the line of the fall. Lookouts must be posted on the site and warning signals must be arranged. The public and other workers at the job site must be kept well back from the fall area.

The use of explosives is one way of setting off deliberate collapse. This type of demolition should only be undertaken by qualified persons. The entire work area shall be cleared of nonessential personnel before any explosives are placed. Though the use of explosives is a convenient method of bringing down a chimney or stack, there is a considerable amount of vibration produced, and caution should be taken if there is any likelihood of damage.

Demolition of Pre-Stressed Concrete Structures

The different forms of construction used in a number of more or less conventional structures built during the last few decades will give rise to a variety of problems when the time comes for them to be demolished. Pre-stressed concrete structures fall in this general category. The most important aspect of demolishing a pre-stressed concrete structure takes place during the engineering survey. During the survey, a qualified person

should determine if the structure to be demolished contains any pre-stressed members.

It is the responsibility of the demolition contractor to inform all workers on the demolition job site of the presence of pre-stressed concrete members within the structure. They should also instruct them in the safe work practice which must be followed to safely perform the demolition. Workers should be informed of the hazards of deviating from the prescribed procedures and the importance of following their supervisor's instruction.

Categories of Pre-Stressed Construction

There are four main categories of pre-stressed members. The category, or categories, should be determined before attempting demolition, bearing in mind that any pre-stressed structure may contain elements of more than one category.

- **Category 1.** Members pre-stressed before the application of the superimposed loads and having all cables or tendons fully bonded to the concrete or grouted within ducts.
- **Category 2.** As Category 1, but having the tendons left un-grouted. This type of construction can sometimes be recognized from the access points which may have been provided for inspection of the cables and anchors. More recently, unbonded tendons have been used in the construction of beams, slabs, and another member. These tendons are protected by grease and surrounded by plastic sheathing instead of the usual metal duct.
- **Category 3.** Members that are pre-stressed progressively as the building construction proceeds and the dead load increases, using bonded tendons, as Category 1.
- **Category 4.** As category 3, but using unbonded tendons, as Category 2. Examples of construction using members of Categories 3 or 4 are relatively rare up to this time. However, they may be found, for example, in the podium of a tall building or some types of bridges. They require that particular care be taken in demolition.

Pre-tensioned Members

These usually do not have any end anchors, the wires being embedded or bonded within the length of the member. Simple pre-tensioned beams and slabs of spans up to about 7 meters (23') can be demolished in a manner like ordinary reinforced concrete. Pre-tensioned beams and slabs may be lifted and lowered to the ground as complete units after the removal of any composite concrete covering to tops and ends of the units. To facilitate breaking up, the members should be turned on their sides. Lifting from the structure should generally be done from points near the ends of the units or from lifting point positions. Reuse of lifting eyes, if in good condition, is recommended whenever possible. When units are too large to be removed, consideration should be given to temporary supporting arrangements.

Pre-Cast Units Stressed Separately from the Main Frames of the Structure, with End Anchors and Grouted and Un-grouted Ducts

Before breaking up, units of this type should be lowered to the ground, if possible. It is advisable to seek the counsel of a professional engineer before carrying out this work, especially where there are ungrouted tendons. In general, this is true because grouting is not always 100 percent efficient. After lowering, the units can be turned on their side with the ends up on blocks after any composite concrete is removed. This may suffice to break the unit and release the pre-stress. If not, a sandbag screen, timbers, or a blast mat as a screen should be erected around the ends and demolition commenced, taking care to clear the area of any personnel. It should be borne in mind that the end blocks may be heavily reinforced and difficult to break up.

Monolithic Structures

The advice of the professional engineer experienced in pre-stressed work should be sought before any attempt is made to expose the tendons or anchorages of structures in which two or more members have been stressed together. It will usually be necessary for temporary supports to be provided so the tendons and the anchorage can be cautiously exposed. In these circumstances, it is essential that indiscriminate attempts to expose and de-stress the tendons and anchorages are not made.

Progressively Pre-Stressed Structures

In the case of progressively pre-stressed structures, it is essential to obtain the advice of a professional engineer, and to demolish the structure in strict accordance with the engineer's method of demolition. The stored energy in this type of structure is large. In some cases, the inherent properties of the stressed section may delay failure for some time, but the presence of these large pre-stressing forces may cause sudden and complete collapse with little warning.

Safe Work Practices When Working in Confined Spaces

Demolition contractors often come in contact with confined spaces when demolishing structure at industrial sites. These confined spaces can be generally categorized in two major groups: those with open tops and a depth that restricts the natural movement of air, and enclosed spaces with very limited openings for entry. Examples of these spaces include storage tanks, vessels, degreasers, pits vaults, casing, and silos.

The hazards encountered when entering and working in confined spaces are capable of causing bodily injury, illness, and death. Accidents occur among workers because of failure to recognize that a confined space is a potential hazard. It should therefore be considered that the most unfavorable situation exists in every case and that the danger of explosion, poisoning, and asphyxiation will be present at the onset of entry.



ELECTRICAL SAFETY PROGRAM

Purpose of the Electrical Safety Program

The purpose of this program is to heighten awareness when it comes to ELECTRICAL SAFETY at Clancy & Theys. Electricity is used daily in our lives yet under normal use we may never see the electrical current itself. Because of the invisibility, abundance, and daily use of electricity we become relaxed when working with or around current. This is when someone gets shocked, burned and often killed. Electricity is also a common cause of fires in the workplace due to its misuse, faulty wiring, or failure to protect and isolate electricity with “Lock-out / Tag-out”

Electrical installations made in accordance with the National Electrical Code are considered to be in compliance with OSHA's electrical standards for construction

Clancy & Theys is committed to safe conditions for our employees while working with electricity throughout the company. This policy will cover the responsibilities, procedures, and training requirements for all of the employees of Clancy & Theys.

Protection of Personnel

- Electrical work shall only be performed by a qualified person. No employee of Clancy & Theys is to perform electrical work unless they are qualified in such electrical activities.
- Clancy & Theys will utilize GFCI "Ground Fault Circuit Interrupters" during all phases of construction. This will apply to all types of construction and related activities.
- Protection shall be provided against accidental shock from live electrical parts such as circuit breaker panels, and motor control equipment by suitable insulation of the floor area, physical guarding of live parts, and proper grounding according to the National Electrical Code and applicable OSHA standards including “Lock-out / Tag-out” procedures.
- All electrical equipment should be periodically inspected. Such inspections should be made by qualified workers at intervals according to the equipment used and the severity of conditions to which the equipment is subjected.
- To maintain electrical equipment in proper condition, all necessary repairs should be made by qualified workers.
- Personal Protective Equipment will be worn, as deemed necessary by the supervisor, to protect employees when working with or around electricity.

Responsibilities

The supervisor must ensure that employees follow safe work practices. Supervisors are responsible for ensuring that only qualified persons perform electrical wiring and testing.

Employees are responsible for following the safe work practices included in this policy along with OSHA regulations and the NEC “National Electric Code”.

Training

Clancy & Theys shall ensure that each worker exposed to electrical hazards is trained by a qualified person, in the following areas:

- The nature of electrical hazards in the workplace
- Use of GFCI's "Ground Fault Circuit Interrupters"
- Proper selection of electrical cords, tools and equipment
- Inspection of electrical cords, tools and equipment
- The use of barriers or other forms of guarding live parts
- Minimum distance clearances from potentially energized parts
- Lockout / Tagout procedures
- Any necessary Personal Protective Equipment

** **WARNING:** ELECTRICAL WIRING AND TESTING SHALL ONLY BE PERFORMED BY A QUALIFIED PERSON, WHO IS TRAINED IN THE SPECIFIC SKILLS REQUIRED FOR THE WIRING TASK AT HAND. Unqualified persons performing electrical wiring and testing are subject to disciplinary action including and up to termination of employment.*

In addition, retraining shall be provided for workers as deemed necessary by their supervisor. All training shall be documented as to its subject, date, instructor, and student signature.

Inspections

This procedure is intended to establish a program to assure a thorough inspection of all small portable electric hand tools, temporary lighting, electrically powered shop equipment, extension cords, and all other temporary electrical circuits. This procedure is also intended to comply with OSHA regulation 1926.400(h).

- One or more competent individuals will be designated as inspectors to test equipment on each jobsite, shop, warehouse, or other work location(s).
- Inspectors will identify existing and predictable hazards in tools, cords, and other pieces of electrical equipment. They will also have the authority to take prompt, corrective measures to eliminate problems found. Any problem equipment that cannot be repaired immediately must be removed from service and tagged "Defective -Do Not Use" until repairs are made.
- Inspectors shall conduct and document these tests and inspections on a regularly scheduled basis.
- Before each use, each employee using a piece of electrical equipment must perform a visual inspection of the cord set, attachment cap, plug, and receptacles which are fixed in place and not exposed to damage. Workers should check for deformed or missing conductor and ground pins, insulation damage, and indications of possible internal damage. Damaged equipment will be tagged and removed from service immediately.
- The subject of employee responsibility for daily inspection will be included in new employee safety orientations and mentioned at the toolbox safety meetings.
- Clancy & Theys shall neither make available nor permit any employee to use any equipment found to have the potential to cause an injury.

Testing

A Competent Person on a weekly basis will test all GFCIs which are being used by Clancy & Theys Conditioner employees. This shall be done by introducing a ground fault into the circuit using a commercially available GFCI

tester. A record of testing shall be kept identifying the date of testing, location of testing, the identification of the GFCI, and person performing the test. If any GFCI is found to be faulty it shall be be tagged out “Do Not Use”, until repaired.

General Safety Practices

Power Extension Cord Sets

Only 12-gauge 3 wire cords are to be used meeting the following requirements:

- Junior hard-service cord (type SJ, SJO, SJTO, or SJT) may be used for portable cords both indoor and outdoor. If conditions are extreme, such as rocky ground or extended exposure to moisture, use hard-service cord (type 5, SO, STO, ST).
- Never allow vehicle traffic to run over electrical wires.
- Use type SO cable or its equivalent in all electrical wiring in shafts or tunnels.
- Nonmetallic-sheathed cable (type NM) is designed for use indoors and should not be exposed to moisture.
- Two-conductor Number 12 Stranded (rubber or thermoplastic) cord is recommended for festoon lighting when sockets are attached to a flexible cable.
- Worn or frayed electrical cords or cables must not be used. Extension cords must not be fastened with staples, hung from nails, or suspended by wire.
- Flexible cords must be connected to devices and fittings so that strain relief is provided which will prevent pull from being directly transmitted to joints or terminal screws.

Illumination for Temporary Installations

- Temporary lighting systems that are installed on construction sites should provide adequate illumination for safe working conditions. Special attention should be given to illumination for stairways, ladders, access ways, basements, and other locations where warranted.
- All temporary illumination shall be a minimum of 8 feet above the working surface unless the bulbs are protected from accidental breakage.
- Combustible materials shall be kept clear from all temporary lighting systems. Special precautions shall be taken during bulb replacement to prevent burns and electrocution.
- Temporary lighting circuits should not be used for any other purpose.
- Use portable lamp holders consisting of a rubber or plastic insulated handle and lamp cage with all wiring connections and socket parts enclosed for extension lights.

Electrical Work Practices

Supervisors must not allow employee(s) to work near live parts of electrical circuits, unless they are protected by one of the following means:

- De-energizing and grounding the parts
- Guarding the part by insulation
- Any other effective means
- A utility locator service must be contacted before any type of excavation begins.
- In work areas where the exact location of underground electrical power lines is unknown, employees using jack hammers, bars, or other hand tools that may contact the lines must be protected by insulating

gloves, aprons, or other protective clothing that will provide equivalent electrical protection.

- Barriers or other means of guarding must be used to ensure that workspace for electrical equipment will not be used as a passageway during periods when energized parts of equipment are exposed.
- Equipment or circuits that are de-energized must be rendered inoperative and must have tags attached at all points where the equipment or circuits could be energized.
- “Lock-out / Tag-out” procedures will be followed when working on electrical systems.

Clearances from Above Ground Electrical Lines

All employees of Clancy & Theys shall maintain a distance of no less than 10 feet from any overhead electrical transmission line. All lines shall be considered energized unless the power is disconnected by the Utility Company and clearly grounded.

EMPLOYEE ASSISTANCE PROGRAM

Clancy & Theys recognizes that a wide range of personal problems can affect an employee’s job performance. Examples of such personal problems include alcohol and/or drug abuse, marital or family distress, or other problems that cause emotional instability. These problems may result in deterioration of job efficiency. In most instances, the employee will overcome such personal problems independently and the effect on job performance will be negligible. In some instances, normal supervisory assistance will serve either as motivation or guidance by which such problems can be resolved so the employee’s job performance will return to an acceptable level. In some cases, however, neither the efforts of the employee or supervisor have the desired effect on resolving the employee’s problems and unsatisfactory performance persists over a period of time, either consistently or intermittently.

The intent of the Employee Assistance Program is to help the employee to overcome the problem and to restore that employee to full efficiency. The program is designed to identify the problem at the earliest possible stage, motivate the employee to seek help, and to direct the employee to appropriate assistance.

Clancy & Theys believes it is in the interest of the employee, the employee’s family and the company to provide a service that deals with such persistent problems. For the Employee Assistance Program to be successful, the following must be implemented:

1. Personal problems that affect work performance and attendance are legitimate concerns of management. Management recognizes that these problems can be successfully treated provided they are identified early and referral is made to the appropriate resource.
2. Personal problems requiring assistance include alcohol abuse, drug abuse, marital or family distress, or other problems that cause emotional distress.
3. The purpose of the Employee Assistance Program is to assure employees that, if personal problems are the cause of unsatisfactory job performance, they will receive an offer of assistance to help resolve such problems in an effective and confidential manner.



4. No employee will have his or her job security or promotional opportunities jeopardized because of participation in the program.
5. Strict confidentiality is essential and will be maintained.
6. Employees are encouraged to use the Employee Assistance Program voluntarily when they need professional help or guidance.
7. If an employee has not sought help independently for a personal problem, it will be the responsibility of the supervisor and/or department manager to follow a procedure that will ensure that no employee with an identified personal problem will fail to have the benefit of assessment and referral.
8. Any expenses incurred in seeking assistance, beyond that which is covered by medical insurance, will be the responsibility of the employee.
9. It is the employee's responsibility to cooperate in the designated treatment or rehabilitation plan. After a reasonable opportunity for progress, normal disciplinary procedure, up to and including job dismissal, will apply unless there is noticeable improvement in job performance.
10. The program is also available to the immediate family members of our employees.
11. Time off for participating in the Employee Assistance Program will be granted in accordance with the existing policy on leave for doctor appointments.
12. Implementation of this policy will not require or result in any special regulations, privileges or exemptions from the standard personnel policies applicable to job performance.

EXCAVATION – TRENCHING and SHORING PROGRAM

General

Many on-the-job accidents can be eliminated by initial planning. Correcting mistakes in shoring and/or sloping after work has begun slows down the operation, adds to the cost, and increases the possibility of an excavation failure.

Due to the extreme hazard potential and strict regulations, prior to commencing excavation operations everyone involved with the project should become thoroughly familiar with OSHA's Excavation Standards, this safety program, and have a competent person available.

The following site conditions should be taken into account when planning excavations on our projects:

- Traffic, both on and off road
- Nearness of structures and their conditions
- Soil
- Surface and ground water
- The area water table
- Overhead and underground utilities
- Current and pending weather conditions

These and other conditions can be determined by jobsite studies, observations, test boring for soil type or conditions, and consultations with local officials and utility companies.

Before any excavation actually begins, Clancy & Theys, or the responsible subcontractor, will determine the estimated location of utility installations. The contractor should ask the utility companies and/or the owners to find exact location of the underground installations. The contractor should be certain to comply with any applicable legal requirements to notify a centralized agency, such as "NOCUTS" or similar program, before commencing excavation. To find the exact location of underground installations, workers should use safe and acceptable means. If underground installations are discovered, they should be removed, protected or properly supported.

Training

Competent Person

Select personnel, including the project superintendent, will be trained as "Competent Persons." Competent Persons shall receive training in the following:

- Hazards associated with trenching and excavation
- Inspection procedures
- Underground utilities and water accumulation
- Soil classification
- Cave-in prevention, protection methods and protection equipment options/selection
- Spoil and barrow soil hazards
- Employee protection, access and egress
- Hazards associated with surface encumbrances, adjacent traffic, & adjacent structures
- Confined Space recognition, entry, permits

- Potential for and recognition of hazardous atmospheres
- Emergencies and emergency rescue procedures.

General Employees

Any employee working in or around trenching, and excavation operations shall be properly trained prior to commencing work. Affected employees will be trained by a Competent Person in the following areas:

- Hazards associated with trenching and excavation
- Access and egress procedures
- Hazards associated with surface encumbrances, adjacent traffic, and adjacent structures
- Underground utilities and water accumulation
- Potential for and recognition of hazardous atmospheres
- Cave-in prevention

Soil Classification

Soil classification will be in accordance with the OSHA 1926 Standards, Subpart P. Competent persons will receive training in how to determine soil classifications and the employee protection methods associated with each type.

Excavation Inspections

A Competent Person will inspect excavations before work commences, prior to each work shift, and as required due to a change in conditions. Inspections will include but are not limited to the following:

- Potential signs of cave-ins
- Failures of protective systems and equipment
- Hazardous atmospheres
- Other hazardous conditions

Cave-ins and Protective Support Systems

Excavation workers could be exposed to many hazards, but the chief hazard is the danger of cave-ins. Workers must be protected from cave-ins by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

Designing a protective system can be complex because of the number of factors involved such as soil classification, depth of cut, water content of soil, changes due to weather and climate, and/or other operations in the vicinity. Any excavation 20' or more in depth must be designed by a Registered Professional Engineer. OSHA's Excavation Standard provides several different methods and approaches for designing protective systems that can be used to provide the required level of protection against cave-ins. See the Appendix at the end of this program for more details on protective systems.

Safety Precautions

Support systems such as shoring, bracing, or underpinning should be provided to ensure the stability of adjacent structures such as buildings, walls, sidewalks, or pavement.

Excavations below the level of the base or footing of any foundation or retaining wall are not permitted unless:

- A support system such as underpinning is provided
- The excavation is in stable rock
- A registered professional engineer determines that the structure will not pose a hazard to workers

Excavations under sidewalks and pavements should also be prohibited unless an appropriately designed support system is provided, or another effective method is used.

Installation and Removal of Protective Support Systems

The following procedures will be provided for the protection of workers when installing support systems:

- Securely connected members of support systems
- Safely installed support systems
- Never overloaded members of support systems
- Other structural members installed to carry loads imposed on the support system when temporary removal of individual members is necessary

As soon as work is completed, the excavation will be backfilled as the protective system is dismantled. After the excavation has been cleared, workers should slowly remove the protective system from the bottom up, taking care to release members slowly.

Materials and Equipment Hazards

Defective and damaged materials and equipment can result in the failure of a protective system and cause excavation hazards.

To avoid possible failure of a protective system, the employer should check to see that:

- Materials and equipment are free from damage or defects
- Manufactured materials and equipment are used and maintained in a manner consistent with the recommendations of the manufacturer and in a way that will prevent worker exposure to hazards
- While in operation, damaged materials and equipment are examined by a Competent Person to determine if they are suitable for continued use. If materials and equipment are not safe for use, they should be removed from service. These materials cannot be returned to service without the evaluation and approval of a registered professional engineer.

Additional Precautions

In addition to cave-in hazards and secondary hazards related to cave-ins, there are other hazards from which workers should be protected during excavation-related work. These hazards include exposure to falls, falling loads, and mobile equipment. The following precautions should be followed to protect workers from these hazards:

- Keep materials or equipment that might fall or roll into an excavation at least 2 feet from the edge of the excavations, or provide retaining devices, or both.
- Provide warning systems such as mobile equipment, barricades, hand or mechanical signals, or stop logs to alert operators of the edge of an excavation. If possible, keep the grade away from the excavation.
- Provide scaling to remove loose rock or soil or install protective barricades and other equivalent protection to protect workers against falling rock, soil, or materials.

- Workers should not be permitted to work on faces of sloped or benched excavations at levels above other workers unless workers at lower levels are adequately protected from the hazard of falling, rolling, or sliding material equipment.
- Workers should not be permitted to work under loads that are handled by lifting or digging equipment. To avoid being struck by any spillage or falling materials, require workers to stand away from vehicles being loaded or unloaded. If cabs of vehicles provide adequate protection from falling loads, during loading and unloading operations, the operators may remain in them.

Water Accumulation

Workers may not work in excavations where water has accumulated or is accumulating unless adequate protection has been provided. If water removal equipment is used to control or prevent water from accumulating, the equipment and operations of the equipment should be monitored by a Competent Person to ensure proper use.

Diversion ditches, dikes, or other suitable means should be constructed to prevent surface water from entering an excavation and to provide adequate drainage of the area adjacent to the excavation. Also, a Competent Person should inspect excavations subject to runoffs from heavy rains.

Hazardous Atmospheres

A competent person will test excavations greater than 4 feet in depth, as well as ones where oxygen deficiency or a hazardous atmosphere exist or could reasonably be expected to exist, before a worker enters the excavation. If hazardous conditions exist, controls such as proper respiratory protection or ventilation should be provided. Also, controls used to reduce atmospheric contaminants to acceptable levels should be tested regularly.

Where adverse atmospheric conditions may exist or develop in an excavation, emergency rescue equipment should be provided.

When a worker enters bell-bottom pier holes and similar deep and confined footing excavations, the worker should wear a harness with a lifeline. The lifeline should be securely attached to the harness and should be separate from any line used to handle materials. Also, while the worker wearing the lifeline is in the excavation, an attendant should be present to ensure that the lifeline is working properly and to maintain communication with the worker.

Access and Egress

Safe access and egress to all excavations should be provided. When workers are required to be in excavations 4 feet deep or more, adequate means of exit, such as a ladder within 25 feet of lateral travel, must be provided. If structural ramps are used as a means of access or egress, they should be designed by a qualified person. Also, structural members used for ramps or runways will be uniform in thickness and joined in a manner to prevent tripping or displacement.

Vehicular Traffic

Employees exposed to vehicular traffic must be provided with, and will wear, warning vests or other suitable garments marked with or made of reflective or high-visibility material. Warning vests worn by flagmen must be red or orange and be of reflective material if worn during night work.



Fall Protection

Barricades, walkways, lighting and posting must be provided as necessary prior to the start of excavation operations.

Guardrails, fences, or barricades must be provided on excavations adjacent to walkways, driveways, and other pedestrian or vehicle thoroughfares. Warning lights or other illumination must be maintained as necessary for the safety of the public and employees from sunset to sunrise.

Wells, holes, pits, shafts, and all similar excavations must be effectively barricaded or covered and posted as necessary to prevent unauthorized access. All temporary excavations of this type will be backfilled as soon as possible.

Walkways or bridges protected by standard guardrails must be provided where employees and the general public are permitted to cross over excavations. Where workers in the excavation may pass under these walkways or bridges, a standard guardrail and toe board must be used. Information on the requirements for guardrails and toeboards can be found in the Clancy & Theys Fall Protection Program or 1926.500 Subpart M of the OSHA Construction Standards.

Excavation – Trenching and Shoring Program

Glossary

- **Adjacent Structure Stability** refers to the stability of the foundation of adjacent structures whose location may create surcharges, changes in soil conditions, or other disruptions that have the potential to extend into the failure zone of the excavation.
- **Bell-bottom Pier Hole** means a type of shaft or footing excavation, the bottom of which is made larger than the cross section above to form a belled shape.
- **Benching or Benching System** is a method of protecting employees from cave-ins by excavating the sides of an excavation to form one or more horizontal steps, usually with vertical or near-vertical surfaces between levels.
- **Cave-in** means the movement of soil or rock into an excavation, or the loss of soil from under a trench shield or support system, in amounts large enough to trap, bury, or injure and immobilize a person.
- **Competent Person** means one who has been trained to identify hazards in the workplace, or working conditions that are unsafe for employees, and who has the authority to have these hazards eliminated or controlled.
- **Cross Braces** mean the horizontal members of a shoring system installed from side to side of the excavation. The cross braces bear against either uprights or wales.
- **Excavation** means any man-made cut, cavity, trench, or depression in an earth surface formed by earth removal.
- **Faces or Sides** mean the vertical or inclined earth surfaces formed as a result of excavation work.
- **Failure** means the movement or damage of a structural member or connection that makes it unable to support loads.
- **Hazardous Atmosphere** means an atmosphere that is explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, that may cause death, illness, or injury.
- **Access and Egress** mean "entry" and "exit" respectively and refer to the safe means for employees to enter or exit.
- **Protective System** means a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.
- **Ramp** means an inclined walking or working surface that is used to gain access to one point from another. A ramp may be constructed from earth or from structural materials such as steel or wood.
- **Registered Professional Engineer** means a person who is registered as a professional engineer in the state in which the work is taking place.
- **Sheeting** means the members of a shoring system that retain the earth in position and in turn are supported by other members of the shoring system. Picture
- **Shield or Shield System** means a structure used in an excavation to withstand cave-ins and which will protect employees working within the shield system. Shields can be permanent structures or portable units moved along as work progresses.
- **Shoring or Shoring System** means a structure that is built or put in place to support the sides of an excavation to prevent cave-ins.
- **Sloping or Sloping System** means sloping the sides of the excavation away from the excavation to protect

employees from cave-ins. The required slope will vary with soil type, weather, and surface or near surface loads that may affect the soil in the area of the trench (such as adjacent buildings, vehicles near the edge of the trench, etc.

- **Stable Rock** means natural solid mineral material that can be excavated with vertical sides that will remain intact while exposed.
- **Structural Ramp** means a ramp built of steel or wood, usually used for vehicle access. Ramps made of soil or rock are not considered structural ramps.
- **Support System** means a structure such as underpinning, bracing, or shoring, which provides support to an adjacent structure, underground installation, or the sides of an excavation.
- **Surface Encumbrances** include underground utilities, foundations, streams, water tables, transformer vaults, and geologic anomalies.
- **Surcharge** means an excessive vertical load or weight caused by spoil, overburden, vehicles, equipment, or activities that may affect stability.
- **Tabulated Data** means tables and charts approved by a registered professional engineer and used to design and construct a protective system.
- **Trench** means a narrow excavation (in relation to its length) made below the surface of the ground.
- **Trench Box See "Shield"**.
- **Unconfined Compressive Strength** is the load per unit area at which soil will fail in compression.
- **Underground Installations** include, but are not limited to, utilities, tunnels, shafts, vaults, foundations, and other underground fixtures or equipment that may be encountered during excavation work.
- **Uprights** mean the vertical members of a trench shoring system placed in contact with the earth and usually positioned so that individual members do not contact each other. Uprights placed so that individual members are closely spaced, in contact with or interconnected to each other, are often called "sheeting."
- **Wales** are horizontal members of a shoring system placed in the direction of the excavation face whose sides bear against the vertical members of the shoring system or earth (the uprights or sheeting).

Appendix A – Protection Systems Decision Tree

Use the following guideline to determine whether protection systems are needed.

- **If the excavation is less than 4 feet deep**, a protection system is needed that meets the requirements under Appendix B1 – Sloping and Benching or Appendix C – Support Systems, unless the site excavation competent person determines that there is no risk for cave-in.
- **If the excavation is between 4 and 20 feet deep**, a protection system that meets the requirements under Appendix B1 – Sloping and Benching or Appendix C – Support Systems must be installed and utilized in all occupied areas of the excavation.
- **If the excavation is greater than 20 feet**, a protection system designed by a registered engineer must be installed and utilized in all occupied areas of the excavation.

Appendix B1 – Sloping and Benching Systems

The slope and configuration of sloping and benching systems must be selected and constructed by the Competent Person in accordance with one of the following:

- **Option 1 - Allowable configurations and slopes**
 - Excavations must be sloped at an angle not steeper than one and one-half horizontal to one vertical (34 degrees measured from the horizontal), unless the Competent Person uses one of the other options listed below.
 - The slopes used must be excavated in accordance with the slopes shown for Type B soil in Appendix B2 - Sloping and Benching.

- **Option 2 - Determination of slopes and configurations**
 - Maximum allowable slopes, and allowable configurations for sloping and benching systems must meet the requirements of Appendix B2 - Sloping and Benching and Appendix B3 - Soil Classification.

- **Option 3 - Designs using other tabulated data**
 - The design of sloping or benching systems may be selected from, and must be constructed in accordance with, other tabulated data, such as tables and charts. The tabulated data used must be in written form and include all of the following:
 - ❖ Identification of the factors that affect the selection of a sloping or benching system.
 - ❖ Identification of the limits of use of the data, including the maximum height and the angle of the slopes determined to be safe.
 - ❖ Other information needed by the user to make correct selection of a protective system.
 - One copy of the tabulated data that identifies the registered professional engineer who approved the data must be maintained at the jobsite during construction of the protective system.

- **Option 4 - Design by a registered professional engineer**
 - Sloping and benching systems not utilizing Option (1), Option (2) or Option (3) above must be approved by a registered professional engineer.
 - Designs must be in written form and must include at least the following:
 - The maximum height and angle of the slopes that were determined to be safe for the particular project;
 - The identity of the registered professional engineer approving the design.
 - At least one copy of the design must be maintained at the jobsite while the slope is being constructed.

Appendix B2 – Sloping and Benching

Scope and Application

This appendix contains specifications for sloping and benching when used as methods of protecting employees working in excavations from cave-ins. The requirements of this appendix apply when the design of sloping and benching protective systems is to be performed in accordance with the requirements set forth in Appendix B1 – Sloping and Benching Systems Option 2.

Definitions

Actual slope means the slope to which an excavation face is excavated.

Distress means that the soil is in a condition where a cave-in is imminent or is likely to occur. Distress is evidenced by such phenomena as the development of fissures in the face of or adjacent to an open excavation, the subsidence of the edge of an excavation, the slumping of material from the face or the bulging or heaving of material from the bottom of an excavation, the spalling of material from the face of an excavation, and raveling, i.e., small amounts of material such as pebbles or little clumps of material suddenly separating from the face of an excavation and trickling or rolling down into the excavation.

Maximum allowable slope means the steepest incline of an excavation face that is acceptable for the most favorable site conditions as protection against cave-ins, and is expressed as the ratio of horizontal distance to vertical rise (H:V).

Short term exposure means a period of time less than or equal to 24 hours that an excavation is open.

Requirements

- **Soil classification**

Soil and rock deposits must be classified in accordance with the Appendix B3 - Soil Classification Procedures.

- **Maximum allowable slope**

The maximum allowable slope for a soil or rock deposit must be determined from Table B2-1.

Table B2-1: Maximum Allowable Slopes for Excavations Less Than 20 Feet

Soil or Rock Type	Maximum Slope (H:V)	Maximum Slope (Degrees)
Stable Rock	Vertical	90
Type A	.75:1	53
Type B	1:1	45
Type C	1.5:1	34

Footnote(1) Numbers shown in Max Slope (degrees) are angles expressed in degrees from the horizontal. Angles have been rounded off.

Footnote(2) A short-term maximum allowable slope of 1/2H:1V (63 degrees) is allowed in excavations in Type A soil that are 12 feet (3.67 m) or less in depth. Short-term maximum allowable slopes for excavations greater than 12 feet (3.67 m) in depth shall be 3/4H:1V (53 degrees).

Footnote(3) Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer.

- **Actual slope**

The actual slope must not be steeper than the maximum allowable slope.

The actual slope must be less steep than the maximum allowable slope when there are signs of distress. If that situation occurs, the slope must be cut back to an actual slope which is at least 1/2 horizontal to one vertical (1/2H:1V) less steep than the maximum allowable slope.

When surcharge loads from stored material or equipment, operating equipment, or traffic are present, a Competent Person must determine the degree to which the actual slope must be reduced below the maximum allowable slope and assure that such reduction is achieved.

Surcharge loads from adjacent structures must be evaluated in accordance with this program.

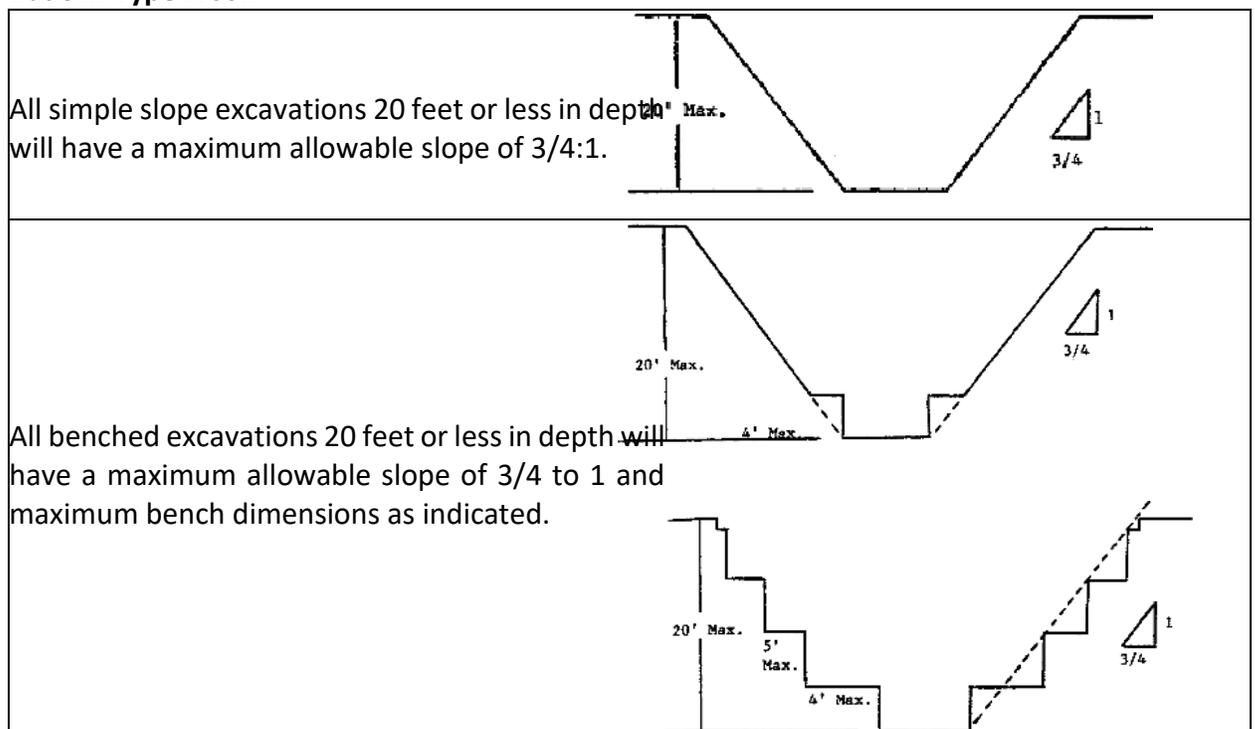
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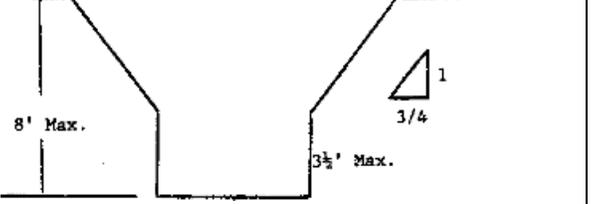
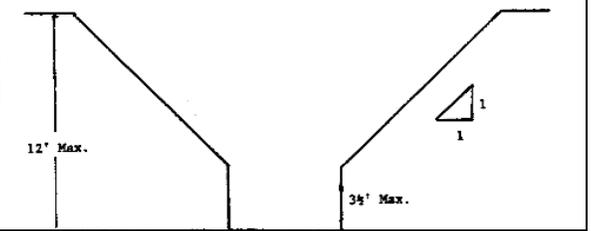
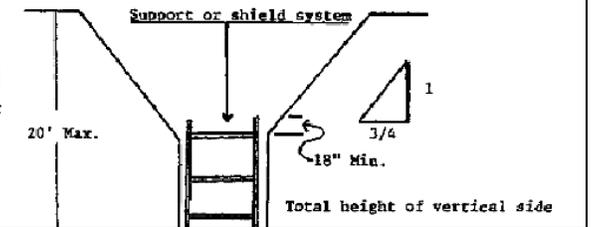
Configurations of sloping and benching systems must be in accordance with the table and figures below.

Figures: Slope Configurations

All slopes stated below are in the horizontal to vertical ratio.

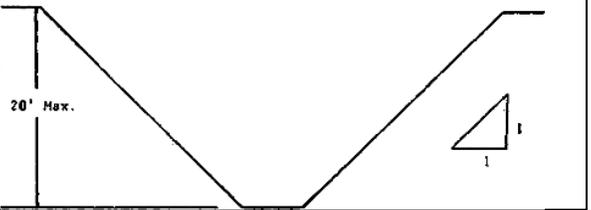
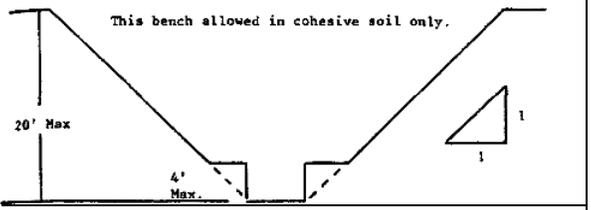
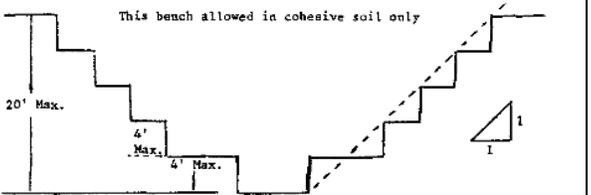
Excavations made in **Type A** soil



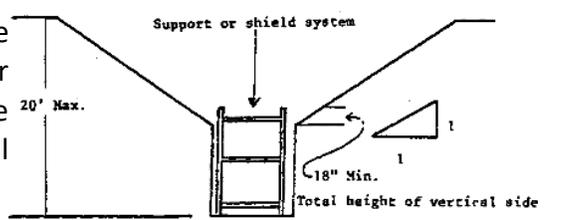
<p>All excavations 8 feet or less in depth which have unsupported vertically sided lower portions will have a maximum vertical side of 3 1/2 feet.</p>	
<p>All excavations more than 8 feet but not more than 12 feet in depth with unsupported vertically sided lower portions will have a maximum allowable slope of 1:1 and a maximum vertical side of 3 1/2 feet.</p>	
<p>All excavations 20 feet or less in depth which have vertically sided lower portions that are supported or shielded will have a maximum allowable slope of 3/4:1. The support or shield system must extend at least 18 inches above the top of the vertical side.</p>	

All other simple slope, compound slope, and vertically sided lower portion excavations will be in accordance with the other options described in Appendix B1 – Sloping and Benching Systems.

Excavations Made in **Type B** Soil

<p>All simple slope excavations 20 feet or less in depth will have a maximum allowable slope of 1:1.</p>	
<p>All benched excavations 20 feet or less in depth will have a maximum allowable slope of 1:1 and maximum bench dimensions as indicated.</p>	
	

All excavations 20 feet or less in depth which have vertically sided lower portions will be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations will have a maximum allowable slope of 1:1.



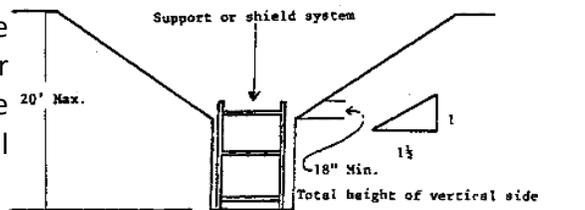
All other sloped excavations must be in accordance with the other options permitted in Appendix B1 – Sloping and Benching Systems.

Excavations Made in Type C Soil

All simple slope excavations 20 feet or less in depth will have a maximum allowable slope of 1 1/2:1.



All excavations 20 feet or less in depth which have vertically sided lower portions will be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations will have a maximum allowable slope of 1 1/2:1.

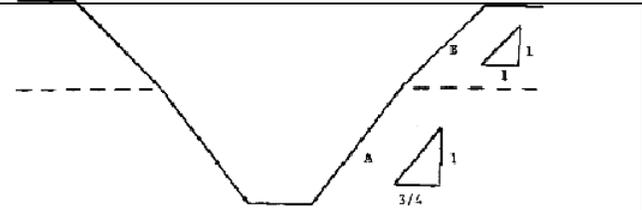


All other sloped excavations must be in accordance with the other options described in Appendix B1 – Sloping and Benching Systems.

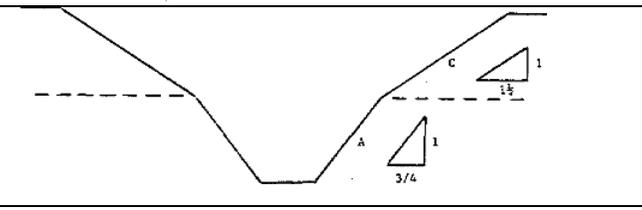
Excavations Made in Layered Soils

All excavations 20 feet or less in depth made in layered soils will have a maximum allowable slope for each layer as set forth below.

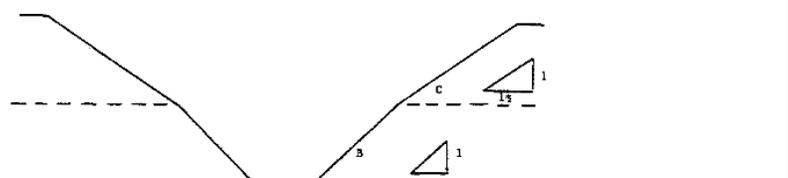
Type B over Type A

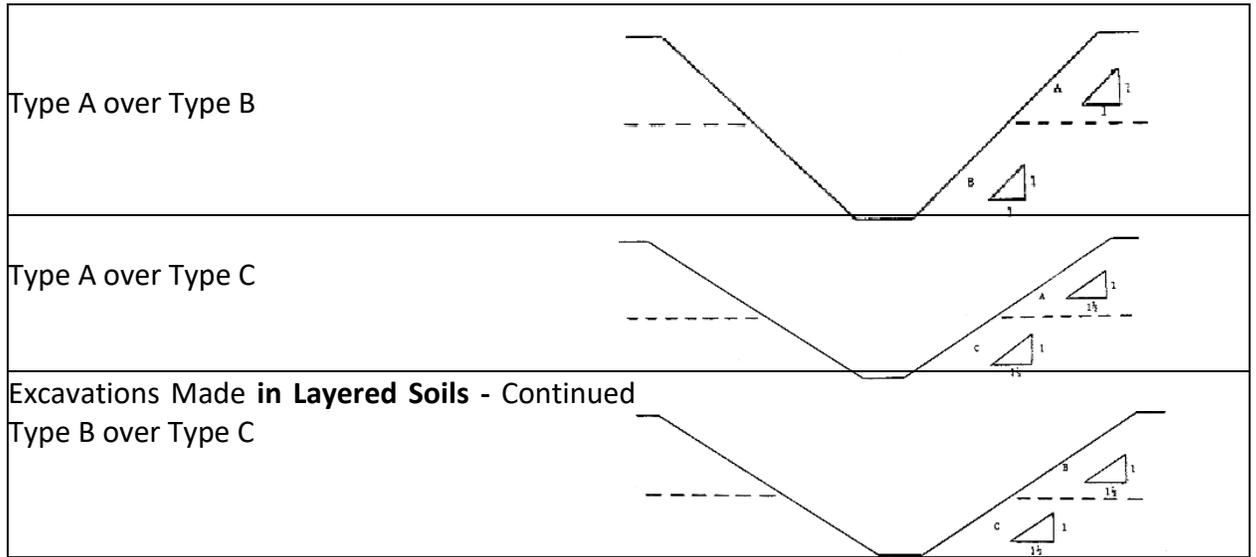


Type C over Type A



Type C over Type B





All other sloped excavations must be in accordance with the other options described in Appendix B1 – Sloping and Benching Systems.

Excavation – Trenching and Shoring Program

Appendix B3 – Soil Classification Scope and Application

Scope

This appendix describes a method of classifying soil and rock deposits based on site and environmental conditions, and on the structure and composition of the earth deposits. This appendix contains definitions, sets forth requirements, and describes acceptable visual and manual tests for use in classifying soils.

Application

This appendix applies when a sloping or benching system is designed in accordance with the requirements set forth in 1926.652(b)(2) as a method of protection for employees from cave-ins. This appendix also applies when timber shoring for excavations is designed as a method of protection from cave-ins in accordance with appendix C to subpart P of part 1926, and when aluminum hydraulic shoring is designed in accordance with appendix C. This Appendix also applies if other protective systems are designed and selected for use from data prepared in accordance with the requirements set forth in 1926.652(c), and the use of the data is predicated on the use of the soil classification system set forth in this appendix.

Definitions

The definitions and examples given below are based on, in whole or in part, the following: American Society for Testing Materials (ASTM) Standards D653-85 and D2488; The Unified Soils Classification System; The U.S. Department of Agriculture (USDA) Textural Classification Scheme; and The National Bureau of Standards Report BSS-121.

- **Cemented soil** means a soil in which the particles are held together by a chemical agent such as calcium carbonate, such that a hand-size sample cannot be crushed into powder or individual soil particles by finger pressure.
- **Cohesive soil** means clay (fine grained soil) or soil with a high clay content which has cohesive strength. Cohesive soil does not crumble, can be excavated with vertical side slopes, and is plastic when moist. Cohesive soil is hard to break up when dry and exhibits significant cohesion when submerged. Cohesive soils include clay type silt, sandy clay, silty clay, clay and organic clay.
- **Dry soil** means soil that does not exhibit visible signs of moisture content.
- **Fissured** means a soil material that has a tendency to break along definite planes of fracture with little resistance, or a material that exhibits open cracks, such as tension cracks in an exposed surface.
- **Granular soil** means gravel, sand, or silt (coarse grained soil) with little or no clay content. Granular soil has no cohesive strength. Some moist granular soils exhibit apparent cohesion. Granular soil cannot be molded when moist and crumbles easily when dry.
- **Layered system** means two or more distinctly different soil or rock types arranged in layers. Micaceous seams or weakened planes in rock or shale are considered layered.
- **Moist soil** means a condition in which a soil looks and feels damp. Moist cohesive soil can easily be shaped into a ball and rolled into small diameter threads before crumbling. Moist granular soil that contains some cohesive material will exhibit signs of cohesion between particles.
- **Plastic** means a property of a soil which allows the soil to be deformed or molded without cracking or appreciable volume change.
- **Saturated soil** means a soil in which the voids are filled with water. Saturation does not require flow.

Saturation, or near saturation, is necessary for the proper use of instruments such as a pocket penetrometer or shear vane.

- **Soil classification system** means, for the purpose of this subpart, a method of categorizing soil and rock deposits in a hierarchy of Stable Rock, Type A, Type B, and Type C, in decreasing order of stability. The categories are determined based on an analysis of the properties and performance characteristics of the deposits and the characteristics of the deposits and the environmental conditions of exposure.
- **Stable rock** means natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.
- **Submerged soil** means soil which is underwater or is free seeping.
- **Type A** means: Cohesive soils with an unconfined, compressive strength of 1.5 ton per square foot (tsf) (144 kPa) or greater. Examples of cohesive soils are: clay, silty clay, sandy clay, clay loam and, in some cases, silty clay loam and sandy clay loam. Cemented soils such as caliche and hardpan are also considered Type A. However, no soil is Type A if:
 - The soil is fissured; or
 - The soil is subject to vibration from heavy traffic, pile driving, or similar effects; or
 - The soil has been previously disturbed; or
 - The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4H:1V) or greater; or
 - The material is subject to other factors that would require it to be classified as a less stable material.
- **Type B** means:
 - Cohesive soil with an unconfined compressive strength greater than 0.5 tsf (48 kPa) but less than 1.5 tsf (144 kPa); or
 - Granular cohesionless soils including angular gravel (similar to crushed rock), silt, silt loam, sandy loam and, in some cases, silty clay loam and sandy clay loam.
 - Previously disturbed soils except those which would otherwise be classed as Type C soil.
 - Soil that meets the unconfined compressive strength or cementation requirements for Type A, but is fissured or subject to vibration; or
 - Dry rock that is not stable; or
 - Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than four horizontal to one vertical (4H:1V), but only if the material would otherwise be classified as Type B.
- **Type C** means:
 - Cohesive soil with an unconfined compressive strength of 0.5 tsf (48 kPa) or less; or
 - Granular soils including gravel, sand, and loamy sand; or
 - Submerged soil or soil from which water is freely seeping; or
 - Submerged rock that is not stable, or
 - Material in a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4H:1V) or steeper.
- **Unconfined compressive strength** means the load per unit area at which a soil will fail in compression. It can be determined by laboratory testing or estimated in the field using a pocket penetrometer, by thumb penetration tests, and other methods.

- **Wet soil** means soil that contains significantly more moisture than moist soil, but in such a range of values that cohesive material will slump or begin to flow when vibrated. Granular material that would exhibit cohesive properties when moist will lose those cohesive properties when wet.

Requirements

Classification of soil and rock deposits

Each soil and rock deposit shall be classified by a Competent Person as Stable Rock, Type A, Type B, or Type C in accordance with the definitions set forth in this appendix.

Basis of classification

The classification of the deposits shall be made based on the results of at least one visual and at least one manual analysis. Such analyses shall be conducted by a Competent Person using tests described below, or in other recognized methods of soil classification and testing such as those adopted by the American Society for Testing Materials, or the U.S. Department of Agriculture textural classification system.

- **Visual and manual analyses**

The visual and manual analyses, such as those noted as being acceptable in this appendix, shall be designed and conducted to provide sufficient quantitative and qualitative information as may be necessary to identify properly the properties, factors, and conditions affecting the classification of the deposits.

- **Layered systems**

In a layered system, the system shall be classified in accordance with its weakest layer. However, each layer may be classified individually where a more stable layer lies under a less stable layer.

- **Reclassification**

If, after classifying a deposit, the properties, factors, or conditions affecting its classification change in any way, the changes shall be evaluated by a Competent Person. The deposit shall be reclassified as necessary to reflect the changed circumstances.

- Acceptable visual and manual tests

Visual tests

- Visual analysis is conducted to determine qualitative information regarding the excavation site in general, the soil adjacent to the excavation, the soil forming the sides of the open excavation, and the soil taken as samples from excavated material.
- Observe samples of soil that are excavated and soil in the sides of the excavation. Estimate the range of particle sizes and the relative amounts of the particle sizes. Soil that is primarily composed of fine-grained material is cohesive material. Soil composed primarily of coarse-grained sand or gravel is granular material.
- Observe soil as it is excavated. Soil that remains in clumps when excavated is cohesive. Soil that breaks up easily and does not stay in clumps is granular.
- Observe the side of the opened excavation and the surface area adjacent to the excavation. Crack-like openings such as tension cracks could indicate fissured material. If chunks of soil spall off a vertical side, the soil could be fissured. Small spalls are evidence of moving ground and are indications of potentially hazardous situations.
- Observe the area adjacent to the excavation and the excavation itself for evidence of existing utility and other underground structures, and to identify previously disturbed soil.
- Observe the opened side of the excavation to identify layered systems. Examine layered systems to identify if the layers slope toward the excavation. Estimate the degree of slope of the layers.
- Observe the area adjacent to the excavation and the sides of the opened excavation for evidence of

surface water, water seeping from the sides of the excavation, or the location of the level of the water table.

- Observe the area adjacent to the excavation and the area within the excavation for sources of vibration that may affect the stability of the excavation face.

Manual tests

- Manual analysis of soil samples is conducted to determine quantitative as well as qualitative properties of soil and to provide more information in order to classify soil properly.

Plasticity. Mold a moist or wet sample of soil into a ball and attempt to roll it into threads as thin as 1/8- inch in diameter. Cohesive material can be successfully rolled into threads without crumbling. For example, if at least a two-inch (50 mm) length of 1/8-inch thread can be held on one end without tearing, the soil is cohesive.

Dry strength. If the soil is dry and crumbles on its own or with moderate pressure into individual grains or fine powder, it is granular (any combination of gravel, sand, or silt). If the soil is dry and falls into clumps which break up into smaller clumps, but the smaller clumps can only be broken up with difficulty, it may be clay in any combination with gravel, sand, or silt. If the dry soil breaks into clumps which do not break up into small clumps and which can only be broken with difficulty, and there is no visual indication the soil is fissured, the soil may be considered unfissured.

Thumb penetration. The thumb penetration test can be used to estimate the unconfined compressive strength of cohesive soils (based on the thumb penetration test described in American Society for Testing and Materials (ASTM) Standard designation D2488 - "Standard Recommended Practice for Description of Soils (Visual - Manual Procedure).") Type A soils with an unconfined compressive strength of 1.5 tsf can be readily indented by the thumb; however, they can be penetrated by the thumb only with very great effort. Type C soils with an unconfined compressive strength of 0.5 tsf can be easily penetrated several inches by the thumb and can be molded by light finger pressure. This test should be conducted on an undisturbed soil sample, such as a large clump of spoil, as soon as practicable after excavation to keep to a minimum the effects of exposure to drying influences. If the excavation is later exposed to wetting influences (rain, flooding), the classification of the soil must be changed accordingly.

Other strength tests. Estimates of unconfined compressive strength of soils can also be obtained by use of a pocket penetrometer or by using a hand-operated shearvane.

Drying test. The basic purpose of the drying test is to differentiate between cohesive material with fissures, unfissured cohesive material, and granular material. The procedure for the drying test involves drying a sample of soil that is approximately one inch thick (2.54 cm) and six inches (15.24 cm) in diameter until it is thoroughly dry:

- If the sample develops cracks as it dries, significant fissures are indicated.
- Samples that dry without cracking are to be broken by hand. If considerable force is necessary to break a sample, the soil has significant cohesive material content. The soil can be classified as an unfissured cohesive material, and the unconfined compressive strength should be determined.
- If a sample breaks easily by hand, it is either a fissured cohesive material or a granular material. To distinguish between the two, pulverize the dried clumps of the sample by hand or by stepping on them.



- If the clumps do not pulverize easily, the material is cohesive with fissures. If they pulverize easily into very small fragments, the material is granular.

Appendix C – Support Systems

The design of support systems, shield systems, and other protective systems shall be selected and constructed by the Competent Person in accordance with one of the following options.

Option 1 - Designs using OSHA Criteria

Timber shoring and aluminum hydraulic shoring must be utilized in accordance with OSHA criteria. If this option is selected, contact EHSS to coordinate design and implementation of these systems.

Option 2 - Designs using manufacturer's tabulated data

Support systems, shield systems, or other protective systems (e.g. trench boxes) drawn from manufacturer's tabulated data shall be constructed and used in accordance with all specifications, recommendations, and limitations issued or made by the manufacturer.

Deviation from the specifications, recommendations, and limitations issued or made by the manufacturer shall only be allowed after the manufacturer issues specific written approval.

Manufacturer's specifications, recommendations, limitations, and manufacturer's approval to deviate from the specifications, recommendations, and limitations shall be kept in written form at the jobsite during construction of the protective system.

Option 3 - Designs using other tabulated data

Designs of support systems, shield systems, or other protective systems shall be selected from and be constructed in accordance with tabulated data such as tables and charts.

The tabulated data shall be in written form and include all the following:

- Identification of the factors that affect the selection of a protective system drawn from such data
- Identification of the limits of use of the data
- Information needed by the user to make a correct selection of a protective system from the data

At least one copy of the tabulated data, identifying the registered professional engineer who approved the data, shall be maintained at the jobsite during construction of the system. After that time, the data may be stored off the jobsite, but a copy of the data shall be made available to EHSS upon request.

Option 4 - Design by a registered professional engineer

Support systems, shield systems, and other protective systems not using the options detailed in options 1, 2, or 3 above, shall be approved by a registered professional engineer.

Designs shall be in written form and shall include the following:

- A plan indicating the sizes, types, and configurations of the materials to be used in the protective system; and
- The identity of the registered professional engineer approving the design.
- At least one copy of the design shall be maintained at the jobsite during construction of the protective system.

Materials and Equipment

Materials and equipment used for protective systems shall be free from damage or defects that might affect their proper function.

Manufactured materials and equipment used for protective systems shall be used and maintained in accordance with the recommendations of the manufacturer, and in a manner that will prevent employee exposure to hazards.

When material or equipment used for protective systems are damaged, the Competent Person shall ensure that these systems are examined by a Competent Person to evaluate suitability for continued use. If the Competent Person cannot assure the material or equipment is able to support the intended loads or is otherwise suitable for safe use, then such material or equipment shall be removed from service. These materials or equipment shall be evaluated and approved by a registered professional engineer before being returned to service.

Installation and Removal of Support

Members of support systems shall be securely connected together to prevent sliding, falling, kickouts, or other potential hazards.

Support systems shall be installed and removed in a manner that protects employees from cave-ins, structural collapses, or from being struck by members of the support system.

Individual members of support systems shall not be subjected to loads exceeding those which those members were designed to support.

Before temporary removal of individual support members begins, additional precautions shall be taken as directed by the Competent Person to ensure the safety of employees. These precautions could include, for example, the installation other structural members to carry the loads imposed on the support system.

Removal of support systems shall begin at, and progress from, the bottom of the excavation. Members shall be released slowly. If there is any indication of possible failure of the remaining members of the structure or possible cave-in of the sides of the excavation the work shall be halted until it can be examined by the Project Manager.

Backfilling shall progress together with the removal of support systems from excavations. Additional requirements for support systems for trench excavations:

- Excavation of material to a level no greater than 2 feet below the bottom of the members of a support system is allowed, but only if the system is designed to resist the forces calculated for the full depth of the trench. There shall be no indications while the trench is open of a possible loss of soil from behind or below the bottom of the support system.
- Installation of a support system shall be closely coordinated with the excavation of trenches.

Shield systems

- Shield systems shall not be subjected to loads that are greater than those they were designed to withstand.
- Shields shall be installed in a manner that will restrict lateral or other hazardous movement of the shield that could occur during cave-in or unexpected soil movement.
- Employees shall be protected from the hazard of cave-ins when entering or exiting the areas protected by shields.
- Employees shall not be allowed in shields when shields are being installed, removed, or moved vertically.
- In trench excavations, excavation of material to a level no greater than 2 feet below the bottom of the shield system is allowed, but only if the system is designed to resist the forces calculated for the full depth of the trench. While the trench is open there shall be no indications of a possible loss of soil from



behind or below the bottom of the shield system.

FALL PROTECTION PROGRAM

Duty To Have Fall Protection

Each employee shall be protected from falling:

- On the same level as the walking and working surface (Trip Hazards)
- From heights of greater than six feet (6') above a walking and working surface
- Objects falling from above

Responsibilities

Clancy & Theys will provide equipment and means for its employees to protect themselves from recognized fall hazards.

Clancy & Theys will train its employees in the recognition of fall hazards and the associated fall protection systems.

Employees of Clancy & Theys will always abide by fall protection policies, procedures and training requirements specified in this program and the OSHA Standards.

Employees of Clancy & Theys will insure that fall protection systems are in place BEFORE work begins.

“It is the responsibility of each employee to protect their self and their fellow employees from fall hazards.”

Training Requirements

Clancy & Theys will provide fall protection training to any employee exposed to a fall hazard, prior to exposure to the hazard.

A "Competent Person" will perform all training. Training will include the following....

- The nature of fall hazards
- The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems and equipment to be used
- The use and operation of fall protection equipment and systems to be used
- The limitations of the fall protection equipment and systems

Re-Training is required but not limited to the following situations:

- Changes in workplace conditions
- Changes in fall protection systems or equipment
- The employee demonstrates inadequate knowledge or use of fall protection systems or equipment

Clancy & Theys will also provide for training of personnel designated as “Competent Person.” Only after formal training will the qualified individuals have the authority to stop work if hazardous conditions are present and to take corrective action before works continues.

Each Superintendent of Clancy & Theys will have appropriate fall protection training, after which they have the full authority of a “Competent Person” as required by the OSHA standards.

Certification of Training

Clancy & Theys must maintain written certification of training. Certification documentation shall be maintained at the home office and must include the following:

- The name of the employee trained and signature
- Date of training
- Person who conducted the training

Fall Hazards

General

- All workers shall be protected from falling 6 feet or greater from their walking/working surface by a personal fall arrest system, handrail system, or safety net.
- Floor openings and floor holes should be guarded by standard railings and toeboards or covers.
-Floor holes or openings are defined as being 2 inches in diameter or greater.
- Open-sided floors and platforms 6 feet or more from the adjacent floor or ground level should also be guarded by standard railings and toeboards.
- Hatchways and floor chute openings should be covered with hinged covers or removable guardrails. The covers and guardrails should be in place when the opening is not in use.
- Ladder way floor openings and platforms should be guarded on all open sides. The passage through the railing should have either a swinging gate or an offset to prevent anyone from walking directly into the opening. Employees should not have to climb through a handrail system to access/egress a ladder.
- Excavations - Each employee at the edge of an excavation 6 feet or more in depth shall be protected from falling by guardrail systems, fences, or barricades especially when the excavations are not readily seen because of plant growth or other visual barrier.
- Employees having to cross an excavation or trench 6 feet or more in depth shall be provided with a walkway with handrails.
- Each employee at the edge of a well, pit, shaft, and similar excavation 6 feet or more in depth shall be protected from falling by guardrail systems, fences, barricades, or covers.
- Wall openings - Each employee working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface, shall be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.
- Hoist or material loading areas shall be equipped with a removable handrail system or gate. If the removable handrail system or gate is removed during loading or unloading those employees

performing the loading or unloading shall wear a personal fall arrest system. Upon completion of the task the handrail system shall be immediately replaced.

Standard Guardrail Systems

- The top rail should consist of nominally dressed 2 x 4 wooden handrails, 1-1/2 inch nominal diameter piping railing, or the equivalent. The top rail should be 42 inches high \pm 3 inches and should have midrail halfway between the top rail and floor. The wooden midrail should be at least 1inch x 6 inch. The posts should be spaced not more than 8 feet on center.

- If wire rope is used for top rails, it shall be flagged at not more than 6-foot intervals with high-visibility material. Top rails and midrails shall be at least one-quarter inch nominal diameter to prevent cuts and lacerations.
- The posts and railings should be capable of withstanding a load of 200 pounds from any direction, at any point, with a maximum deflection of ± 3 inches.
- Lumber used in the construction of temporary or permanent handrails should be sound and should not contain large or loose knots or any other defects which could reduce the strength of the lumber.
- Materials used for railing systems shall be smooth surfaced so as not to cause injury or the snagging of clothing.
- Nails should be driven in completely. They should be of the proper size and number to provide the required strength in the joints. Double-headed nails should not be used.
- When guardrail systems are used at hoisting areas, a chain, gate, or removable guardrail section shall be placed across the access opening between guardrail sections when hoisting operations are not taking place.

Personal Fall Arrest Systems

Training

- Any employee of Clancy & Theys that must wear a personal fall arrest system shall be trained in its use, care, and limitations by a Competent Person prior to use.

Inspection of Equipment

- Employees shall inspect all components of a personal fall arrest system for wear, damage and other deterioration that may result in the failure of the system.
- Inspections shall be performed prior to use and/or each shift change.
- Any faulty or questionable equipment found shall be immediately turned over to the Competent Person for repairs or discarding.
- Horizontal lifelines shall be designed, installed, and used under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.
- Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses shall be made from synthetic fibers.
- Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached.
- A personal fall arrest system shall be rigged so that an employee can free fall no more than 6 feet and cannot contact any lower level.
- Body belts, harnesses, and components shall be used only for employee protection and not to hoist materials.
- Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a Competent Person to be undamaged and suitable for reuse.
- The job site supervisor shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves

- When a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the walking/working surface.

Protection from Falling Objects

Hardhats

- Head protection shall be worn anytime there is a potential for falling objects or possible injury could occur to the head.

Toe boards, Screens and Canopies

- When used as falling object protection, shall be erected along the edge of the overhead walking/working surface for a distance sufficient to protect employees below.
- Toe boards shall be capable of withstanding, without failure, a force of at least 50 pounds applied in any downward or outward direction at any point along the toe board.
- Toe boards shall be a minimum of 3-1/2 inches in vertical height from their top edge to the level of the walking/working surface. They shall have not more than 1/4 inch clearance above the walking/working surface. They shall be solid or have openings not over 1 inch in greatest dimension.
- Where tools, equipment, or materials are piled higher than the top edge of a toe board, paneling or screening shall be erected from the walking/working surface or toe board to the top of a guardrail system's top rail or midrail, for a distance sufficient to protect employees below.
- Guardrail systems, when used as falling object protection, shall have all openings small enough to prevent passage of potential falling objects.
- Canopies, when used as falling object protection, shall be strong enough to prevent collapse and to prevent penetration by any objects which may fall onto the canopy.

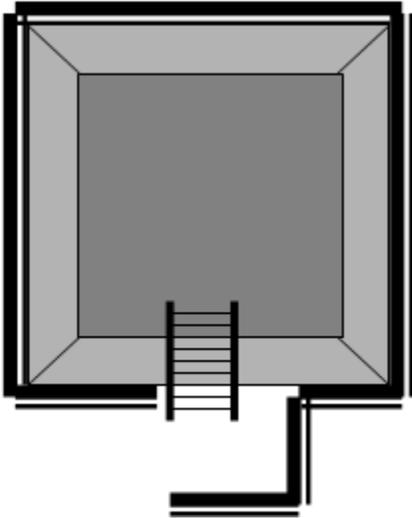
Covers

Covers for holes in floors, roofs, and other walking/working surfaces shall meet the following requirements:

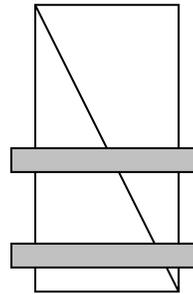
- Covers located in roadways and vehicular aisles shall be capable of supporting, without failure, at least twice the maximum axle load of the largest vehicle expected to cross over the cover.
- All other covers shall be capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time.
- All covers shall be secured when installed so as to prevent accidental displacement by the wind, equipment, or employees.
- All covers shall be color-coded, or they shall be marked with the word "HOLE" or "COVER" to provide warning of the hazard.

APPENDIX A – Fall Protection

Guarding a ladder way



If bottom of opening is less than 39" install a top rail

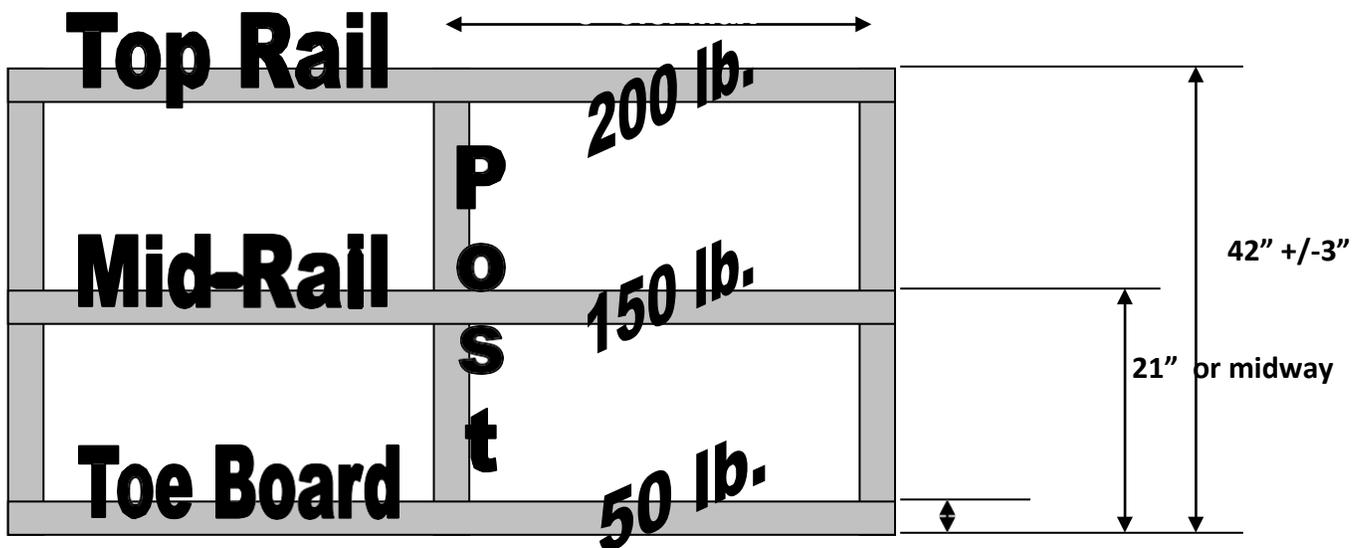


If bottom of opening is less than 21" install a midrail & top rail

Must be a system that is offset so that a person cannot walk straight into the opening or a gate that locks in the closed position



Typical Handrail Configuration



FIRE PROTECTION AND PREVENTION PROGRAM

Purpose

The purpose of this Fire Protection and Prevention Program is to prevent potential injuries or deaths and to protect company property from damage or loss due to fires. This program documents the procedures for fire protection and prevention at our company's facilities.

Policy

Clancy & Theys does not require anyone to fight a fire. It is this company's policy that only Clancy & Theys employees that have been trained to use fire extinguishers should attempt to extinguish any incipient "Small" stage fires. If an employee chooses to fight a fire, then they must follow all procedures set forth in "The procedures for fire extinguisher use" that are contained in this program. Each employee's personal safety, health, and well-being are always the company's number one priority.

Fire extinguishers shall not be relied on as the only means to provide protection against fire hazards. Fire extinguishers will be used in conjunction with employee notification, evacuation, contacting 911 emergency services, and accounting for all employees in the event of a fire. Any recognized fire hazards will be immediately reported to your supervisor to be corrected or removed to provide protection against fire hazards. Fire protection equipment will be maintained in an accessible and reliable condition at all times and inspected on a regular basis.

Fire Prevention

Our first line of defense against fire is to prevent it in the first place. It is the responsibility of all employees to prevent fires. All employees will be instructed on the potential fire hazards in their work area, and they will be trained in safe work procedures and practices. All Clancy & Theys employees are expected to follow proper procedures to prevent fires and to notify their supervisor or other management personnel if they observe any conditions that could lead to the ignition of a fire or could increase the spread of a fire.

Following are some general fire prevention practices and procedures that shall be followed:

- All ignition sources (i.e., open flames, welding, cutting torches, spark producing equipment, electric motors, heating equipment, etc.) should be controlled, and contact with combustible and flammable materials must be avoided. Keep all combustible materials at least five feet (5') from such ignition sources and all flammable liquids at least twenty feet (20') away.
- Any damaged or frayed electrical wiring, equipment cords, extension cords, etc. should be removed from service immediately, tagged "DO NOT USE", and replaced or repaired by a qualified person.
- Any use of flammable liquids must be done in a manner that prevents spills and prevents the flammable liquid or its vapor or spray from coming in contact with any ignition source. All flammable liquids must be stored in proper flammable liquid storage containers and kept in the proper storage cabinets.
- Shop housekeeping and storage practices are critical to preventing fires. Combustible materials must be stored in neat stacks with adequate aisle space provided to prevent easy spread of fire and to allow for access to extinguish any fire that may start. Boxes and other combustible materials shall be kept at least 24 inches away from the ceiling. A minimum of 36 inches of clearance shall be maintained around all electrical panels. Trash, scrap, and other unnecessary combustibles must be cleaned up immediately and placed in proper disposal containers. All trash cans shall be emptied on a regular basis.
- Smoking may not be allowed on all sites; employees are responsible to observe "NO Smoking" signs and

smoke only in designated areas.

Building Fire Exits (Shop and Warehouse Areas, New Construction, Additions and Renovations)

- All employees must be aware of fire extinguisher locations, evacuation routes, and the designated assembly areas.
- If any employee discovers a fire or smoke, they should alert everyone as quickly and as safely as possible. They are to leave the area immediately and go to the designated assembly area.
- Fire exit doors must not be blocked or locked to prevent emergency use when employees are within the building.
- Exit routes from our building must be clear and free of obstructions. All exits are marked with signs designating exits from the building. Report any burned-out exit signs to your supervisor immediately so they can be repaired.

Fire Extinguishers – Placement/Location

Fire extinguishers should be provided throughout a building during construction after the roof/floor decking and walls are started. There should be a fire extinguisher for every 3,000 square feet of building and at the top of each stairway.

The Shop and warehouse areas will have a minimum of 2 fire extinguishers rated not less than 2A:10B: C.

Fire extinguisher will be located on, with or near all forklifts, aerial lifts, welding machines, cutting torches, and field vehicles owned by Clancy & Theys.

It is against company policy to use a fire extinguisher for anything other than its intended use. Fire extinguishers are never to be removed from their assigned locations except for extinguishing fires or when removed for service. Employees found discharging a fire extinguisher for purpose other than extinguishing a fire will be disciplined up to termination of employment.

Our fire extinguishers will be inspected annually by a fire protection equipment company and tagged with the date of inspection. An assigned Clancy & Theys employee for each project and department will be designated to inspect our fire extinguishers every 30 days. This monthly fire extinguisher inspection will be documented by writing their initials and date of inspection on the back of the inspection tag.

If a fire extinguisher is used or discharged for any reason, it must be removed from service, tagged “DO NOT USE”, and replaced with another properly charged fire extinguisher of the same size and rating while it is being recharged.

Maintenance of Fire Extinguishers

It is very important that all fire extinguishers be kept free from obstructions and properly maintained by the employee. It is the responsibility of the supervisor to make sure all fire extinguishers are maintained in all assigned locations, they are easily accessible, and they are inspected every 30 days. Supervisors are responsible for ensuring compliance with this program.

All Fire Extinguishers shall be inspected on the 1st working day of each month.

Recharging and Servicing of Fire Extinguishers

The supervisor has responsibility for having all fire extinguishers recharged and serviced as needed. If a fire extinguisher is found by an employee to be in need of recharge, repair, service, or replacement, it is the responsibility of the employee to bring it to the immediate attention of his or her supervisor. When a fire

extinguisher is discharged or removed for service, it will be immediately replaced with a fire extinguisher of equal size and rating.

Employee Training

1. Training will be provided for each employee who is allowed to use fire extinguishers. Training will include:
 - The company's Fire Protection and Prevention Program
 - Building Evacuation and Notification
 - Accountability of Employees
 - Classification of Fires
 - Types of Fire Extinguishers
 - Proper Operation of Fire Extinguishers (Must be hands on training per NFPA)
 - Procedures for Fire Extinguisher Use
2. Trained employees must demonstrate, to their supervisors, an understanding of the training and the ability to use fire extinguishers properly before they are allowed to use fire extinguishers.
3. Trained employees shall not use fire extinguishers without first alerting their co-workers and 911 emergency services to protect everyone and company property from the hazards associated with fires.
4. If their supervisor has reason to believe an employee does not have the understanding or skill required, then the supervisor must retrain them. Circumstances where retraining may be required include changes in the workplace, changes in the procedures being used, or changes in the types of equipment to be used which would render previous training obsolete. Also, inadequacies in an affected employee's knowledge of what to do in case of a fire or proper use of fire extinguishers, which indicates that the employee has not retained the necessary understanding or skills, may require retraining.
5. The Supervisor will certify in writing that the employee has received and understands the fire extinguisher training. Each written certification shall contain the name of each employee trained, the date(s) of training, the instructor's name, and identify in detail, what subject the employee was certified in.
6. Fire extinguisher refresher training is required annually for all those employees who have been previously trained in fire extinguisher use here at Clancy & Theys.
7. All supervisors and managers are responsible for ensuring their employees are in compliance with this policy. Failure to comply (failure to wear such equipment) will result in disciplinary action up to and including discharge.

Procedures for Fire Extinguisher Use

If any trained employee chooses to fight a fire here at Clancy & Theys, they are required to follow this Procedure for Fire Extinguisher Use in the following order:

1. Alert all co-workers and your supervisor that there is a fire and instruct them to evacuate the building and report to the assembly area outside.
2. Establish a way out.
3. Size-up the fire.
4. Establish a trained back-up person with an appropriate fire extinguisher.
5. Attempt to extinguish the fire.
6. Evacuate the building.

7. Report to the assembly area outside.

General Fire Protection Rules & Standards Fire Extinguisher Requirements:

- One 2A:10B:C rated fire extinguisher is required:
- To be located throughout the building no further than 75 feet from any given point
- One 10B rated fire extinguisher (5 lb. ABC Dry Chemical) must be:
- Within 50 ft. of wherever more than 5 gallons of flammable or combustible liquids or 5 lb. of flammable gas are being used.
- One 20B rated fire extinguisher must be:
- From 25 to 75 feet of an outside flammable or combustible liquid storage area.
- All fire extinguishers must be inspected at least every 30 days.
- A written record of each inspection must be maintained showing the date of each inspection and the initials of the person who performed each inspection.

Temporary Heaters

- If using temporary heaters inside, make certain that adequate fresh air is available to avoid asphyxiation.
- Install circulating heaters with a minimum of 12-inch clearance on all sides.
- Radiant-type heaters must have a minimum of 36-inch clearance on all sides.
- Salamanders:
- Hot salamanders may not be refueled or relit under any circumstances.
- Gasoline or kerosene may not be used unless the heater is designed for such fuel.
- Always secure salamanders in a manner that will prevent their tipping over due to impact, collision, or wind.

Compressed Gas Cylinders

- Cylinders, when in use, shall be secured on a cart to prevent tipping over.
- Oxy / Fuel Cylinders, when not in use, shall be secured and separated by a distance of 20 feet or by a 5-foot high, 1-foot-wide fire wall with a rating of 1-hour.
- Cylinders shall be secured at all times.
- Cylinders shall be stored in areas where they will not be knocked over or damaged by passing or falling objects.
- Cylinders shall be kept far enough away from hot work operations so that sparks, hot slag, or flames cannot reach them.
- When work is finished, cylinders are empty, or cylinders are moved, the cylinder valve shall be closed and capped.

Hot Work (Welding and Cutting)

- During any hot work, a suitable fire extinguisher(s) shall be located in the immediate vicinity of the operation and on adjacent floors if necessary.



- Fire blankets or other fire-retardant materials shall be used to cover combustible items that have the potential to ignite.
- A fire watch should be maintained during and for at least 30 minutes after hot work operations in the vicinity of combustible or flammable materials takes place.

FIRST AID / CPR PROGRAM

Purpose

The purpose of this First Aid / CPR Program is to document the guidelines for trained employees to follow when providing care for a victim. Clancy & Theys is dedicated to providing trained personnel to respond to the First Aid and CPR emergencies that employees may have. All employees will have an increased level of safety and comfort in knowing that there are trained employees on site to provide immediate care for them in case they are injured or become sick. This program will serve as a guide for treating victims when injuries and illnesses do occur.

Policy

It is our company's policy that employees who are currently trained in First Aid, CPR, and Blood borne Pathogens shall administer care only to the level of their training. These trained employees shall follow the requirements, guidelines, techniques, and procedures as required by OSHA, American Red Cross, and those listed in this program. All supervisors shall ensure that their employees know who the trained persons are in their area or on their jobsite, in case of an employee injury or illness.

General Information

First aid is the immediate care given to the victim of an accident or sudden illness until emergency medical care can be administered. First aid providers must be able to determine whether life-threatening conditions exist and know how to care for such injuries until emergency medical care is available. It is not only important to know what to do but also what NOT to do. Injured persons should never be moved unless there is an immediate threat to the victim's life. For example, a victim in a burning vehicle would be moved immediately regardless of his or her condition. Otherwise moving a victim may compound the injury and may even cause death.

First Aid Equipment and Personnel

- The amount and the type of first aid equipment needed will vary with the size and location of each construction jobsite. Small jobs of relatively short duration will have different requirements than larger jobs or jobs in remote areas. Regardless of the job size and conditions, at least one properly trained person shall be assigned first aid responsibilities and supplies will be stocked at each jobsite.
- An adequate first aid kit should be supplied. For example: If there are 10 employees on site then a 10-person first aid kit is required. The contents of the kit shall be checked weekly and missing items should be replaced on a regular schedule. Most of our projects will be serviced by a First Aid supply company. Each site superintendent is to set the schedule with the supply company to service our account.
- These first aid supplies should be centrally located in the work area. Every worker shall be familiar with the first aid kit location.
- Each company owned field vehicle shall be equipped with a first aid kit and a fire extinguisher.

Treatment

In cases of severe bleeding, and/or cases where breathing has stopped, immediate action is required. In cases other than these, first aid responders can take additional time to assess the situation. The scene safety shall always be checked prior to administering care.

Bleeding (See Blood borne Pathogens Program)

- Bleeding is best controlled by applying direct pressure to the wound with a dressing or cloth. A sterile

dressing should be used if available. Otherwise, any clean cloth may be applied. A bandage may be snugly applied over the dressing or cloth to hold it in place.

- Extreme care should be taken by the first aid provider when there is a potential for coming into direct contact with blood or other bodily fluids. First aid supplies should include, at a minimum, latex gloves, safety glasses, and a pocket mask for protection against contact with blood and body fluids. (See Blood borne Pathogens Program)
- Usually, the victim should lie flat. If the victim is bleeding from an arm or leg and you do not suspect a fracture, slightly elevate the limb above the level of the heart.
- Sometimes direct pressure alone will not control bleeding. In such cases, the first aid provider can reduce the bleeding by applying pressure against the artery that supplies the bleeding area. If the arm is bleeding, pressure should be applied on the inner side of the arm between the shoulder and the elbow. This presses the brachial artery against the bone and reduces the blood flow. In cases of bleeding from the leg, pressure should be applied in the groin area by pressing the femoral artery against the pelvic bone.
- Always use direct pressure on the wound in addition to pressure on the artery.

Rescue Breathing and CPR

- Asphyxiation may result when a victim's oxygen supply is cut off or reduced. Common causes include electric shock and suffocation. Whenever breathing has stopped, IMMEDIATE ACTION IS NECESSARY. Every second counts. Have a bystander summon emergency medical care (911) immediately. A designated first aid provider should begin rescue breathing or cardiopulmonary resuscitation (CPR) immediately in accordance with his or her professional training.
- Care should be taken by the first aid provider when there is a potential for coming into direct contact with body fluids. A pocket mask should be used when rescue breathing is performed.

Shock

- Signs of shock include confused behavior, weakness, very fast breathing, very fast heart rate, very slow breathing, very slow heart rate, cool moist skin, pale or bluish skin, lips and fingernails and enlarged pupils.
- Keep the victim lying down. Except as noted below, elevate the victim's feet 8 to 12 inches. If the victim is on the floor or ground, place pillows or substitutes beneath the victim's calves. **Do not elevate:**
 1. If there is a head injury
 2. If breathing difficulty is thereby increased
 3. If the victim complains of pain, for example at a fracture site in the lower extremity or abdominal pain

Fractures

- Keep the broken ends of the fracture and the adjacent joints immobilized. Trained first aid providers should splint fractures when possible, to ensure immobilization.
- Give first aid for shock.
- If the fracture is compound, control bleeding by direct pressure. Do not push a protruding bone back into place.

Transportation

- Never move an injured person unless it is absolutely necessary to protect the person from further injury. Always bring the emergency medical personnel and/or vehicles to the injured person.
- If the victim must be pulled to safety to prevent further injury or death, pull the victim in the direction of the long axis of the victim's body, not sideways. The danger is reduced if a blanket or similar object can be placed beneath the victim, so that the victim can ride in the blanket.
- If a person must be lifted to safety to prevent further injury or death, the carriers should try to protect all parts of the victim's body from the tensions of lifting. An attempt should be made to give adequate support to each extremity, the head, and the back, keeping the entire body in a straight line and keeping it as immobile as possible.
- The importance of first aid availability on the job site cannot be overemphasized. OSHA 1926.50(c) Subpart D requires the employer to provide a person on the job site who has a valid certificate in first aid training from the American Red Cross, US Bureau of Mines, or equivalent training when medical assistance is not reasonably accessible in terms of time or distance to the site. The latest information is that OSHA is using *"fifteen minutes"* as a rule of thumb for *"reasonably accessible"*.



FLEET VEHICLE SAFETY MANUAL

Policy

The Clancy & Theys Fleet Vehicle Safety Program is designed to reduce accidents, injuries, and costs associated with operating company vehicles and to enhance awareness of driver safety. The Fleet Vehicle Safety Program is administered by the Safety Director.

Accident prevention is the primary objective because:

- Accident prevention is good business.
- Clancy & Theys' policies dictate that employees support highway safety.
- Any accident, regardless of severity, can affect the safety, health, and well-being of employees and the general public.
- Accidents are costly, time consuming, and increase operating costs as well as insurance premiums.

Operation of Company Owned Vehicles

Clancy & Theys is interested in the personal safety of both its employees and the general public. Company policy provides that company vehicles be operated only:

- When the vehicle is in good, safe mechanical condition
- When the driver is free from the influence of alcohol, mind-altering substances, or medical conditions which may impair one's ability to operate a motor vehicle safely
- In accordance with all traffic laws, signals, and markings, with additional consideration for weather and traffic conditions
- In accordance with the principles of defensive driving, the driver being always on the alert and prepared to compensate for the unpredictable actions of other drivers and pedestrians
- In a courteous manner at all times, with consideration for other drivers and pedestrians

Data Required On Drivers Of Clancy & Theys Vehicles

Pre-employment Requirements

Selection of drivers of Clancy & Theys vehicles begins prior to actual employment. The applicant must provide Clancy & Theys with the following information:

- Current driver's license valid within the state in which the employee is hired.
- Prospective employee that will drive a company vehicle may be subject to a drug screen test. *Company policy states in cases where a positive drug and alcohol test is confirmed, the employee will be immediately terminated. Upon providing satisfactory evidence of receiving professional help in the area of substance abuse the employee may reapply and will be considered for rehire.*
- Motor Vehicle Records (MVRs) will be reviewed by Management as a part of the overall background investigation.

If an MVR indicates, within the last three years, a conviction of a moving violation, conviction of driving under the influence of drugs or alcohol, or multiple accidents in a 12-month period, then the applicant may have restrictions placed on his/her privileges of operating a company vehicle.

Current Employee Requirements

Clancy & Theys will obtain annual MVRs on all drivers who operate company vehicles as part of its ongoing Fleet



Vehicle Safety Program.

Authorized Drivers and Passengers

Only authorized and licensed Clancy & Theys, Inc. employees may operate company vehicles. Personal use of assigned vehicle is restricted to commuting to and from work. Non-employees of Clancy & Theys are prohibited from driving and are discouraged from being a passenger in Clancy & Theys' vehicles. Officers and Department Managers of Clancy & Theys are exempt from the personal use policy.

Vehicle Safety Equipment

Clancy & Theys will provide each company vehicle with the following safety equipment:

- First Aid Kit
- Fire Extinguisher
- Reflective Safety Vest
- Flashlight
- Tire Pressure Gauge
- Vehicle Accident Report

These items are to be kept in the vehicle at all times, inspected monthly, and maintained in proper working condition.

Safety Rules When Operating A Company Vehicle

- Drivers and passengers must wear seat belts and shoulder harnesses when operating Clancy & Theys vehicles.
- Only authorized and licensed employees may operate Clancy & Theys vehicles.
- All accidents/incidents and injuries, regardless of severity, must be reported to your supervisor immediately.
- Any driver authorized to operate a Clancy & Theys vehicle that has had his or her state vehicle operator's license suspended, revoked, or terminated without renewal, shall immediately notify your supervisor, and must discontinue further operation of any company owned vehicle. Failure to do so will result in disciplinary action up to and including termination of employment.
- Each driver is responsible for ensuring that his or her vehicle is in safe operating condition prior to driving. Vehicle defects must be reported immediately and repaired. A Vehicle Inspection Report shall be completed once a month and turned in to the Fleet Manager for review. Forms will be given to drivers monthly.
- Drivers are responsible for ensuring the security of company vehicles and their contents. All contents of the vehicle shall be secured as not to become dislodged or as to create a hazard. Unattended vehicles must be legally parked with the engine off, parking brake applied, ignition keys removed, windows closed, and doors locked.
- Drivers must obey posted speed limits. In the event of adverse driving conditions, speed should be reduced to a safe operating speed consistent with the conditions of the road, weather, light, and traffic.
- Drivers must obey all traffic signs/signals and posted regulations. As with the speed limit, existing conditions may warrant adjustment to driving behavior.
- Drivers are required to maintain a safe following distance at all times. To measure this space

cushion, when the vehicle ahead of you in your lane passes a highway mark, start counting – one thousand one, one thousand two, one thousand three. If you arrive at the same point before you finish counting, you don't have an adequate space cushion and need to allow more room between your vehicle and the one ahead.

- When stopping in traffic, drivers are required to maintain adequate distance from the car in front of them to prevent rolling into the car or being pushed into it if struck from behind. It is required that, when stopped behind a car, a driver be able to see the road below the tires of the car in front of them.
- Drivers are required to yield the right-of-way at all traffic controls, signals, and signs requiring same as well as when the action demonstrates good defensive driving and may prevent an accident. Examples of which action is important include parking lots, driveways, and unmarked intersections.
- Drivers are required to look behind their vehicle to ensure that no hazards are present before making any backing maneuvers. When more than one person is in the vehicle, one of the occupants should exit the vehicle and be a spotter for the driver before making any backing maneuvers.
- No driver shall operate any Clancy & Theys vehicle if his or her ability to do so safely has been impaired by alcohol, drugs, medication, illness, or fatigue.
- At all times when operating a company vehicle, drivers are required to use good judgment, practice defensive driving principles and be prepared to take appropriate action to avoid an accident. Appropriate actions may include sounding the horn, braking, speeding up or slowing down, turning away, or maintaining speed or position.
- When it is necessary to park your vehicle on an incline or slope, the driver shall set the emergency brake before exiting the vehicle.
- No one under any circumstances is to ride in the rear of a pickup or open bed truck.
- Failure to observe any of these General Safety Rules could result in disciplinary actions.

Accidents

All accidents will be reviewed by management to determine the following:

- Cause
- Preventability or non-preventability
- Chargeable or non-chargeable

Failure to report any injury, accident or damage to the company vehicle, or failure to provide full disclosure of accident details, constitutes a violation of company policy which will result in disciplinary action up to and including termination. This includes drivers who turn vehicles in with unreported damage.

Accident frequency or serious moving violations will initiate a management review which may result in disciplinary action up to and including termination.

Employee driver performance will be part of their performance review.

What You Should Do In Case Of an Accident

- Stop at once and park safely.
- Call for the police, regardless of the severity of the accident. If there are injuries, ask for a doctor and ambulance.

- **COMPETELY FILL OUT A VEHICLE ACCIDENT REPORT** – Located in glove compartment at all times
- Do not admit liability.
- Exchange information with the other driver, including address, phone numbers, license plate numbers, and insurance companies. Do not rely on a police report. Police reports may be incomplete, inaccurate, or not even written if the accident does not fall within police parameters. Make every effort to have a police report filed.
- Do not assume the damage will not be costly. Don't be in a hurry to leave the accident scene without full information. If the police cannot come to the accident location, go to the nearest police station, and file a bench report.
- Don't say too much, even if you are angry. Statements made at the scene of an accident may be legally damaging.
- Look around for a witness, ask: "Did you see the accident? Can I have your name and phone number?" Request a business card or other ID, most people look up at the sound of a collision but may not have actually seen the accident.
- If there are no witnesses, make notes. Be as accurate as possible. Draw a diagram to clarify a dispute involving, for example, a traffic light or highway lane change. Take many pictures, from several angles if you have a camera.
- Report the accident as soon as possible while the details are fresh on your mind. Insurance coverage may be jeopardized if an accident report is not filled in a timely manner.
- Do not make any settlements on your own, nor sign any insurance company agreements or releases before consulting with the company's designated claims handler. You may think an insurance check covers medical care when it pays only for property damage.
- Note anything suspicious about your surroundings, the other car and its occupant(s), and the type of accident, particularly if it is a rear-end bump. If you suspect that your security or personal safety is endangered, drive to a police station or well-lighted public place or keep honking your horn to attract attention and assistance.
- If the other party refuses to cooperate or leaves the scene of the accident, advise the police, and secure the license plate number and make of the vehicle.
- Any accident or injury resulting from an accident must be reported to your supervisor immediately.

FORKLIFT - POWERED INDUSTRIAL TRUCK SAFETY PROGRAM

Purpose

The purpose of the Forklift Safety Program is to heighten the awareness of the hazards involved in operating and working around a forklift. The most important reasons for a forklift safety program is Personnel Safety, Product Safety, Equipment Damage, and Building Damage.

The worker is a company's most important commodity, therefore, Clancy & Theys will insure those competent persons are chosen then well trained to operate our forklifts. The next most important commodity is our product and property. Again, we will rely on competent well-trained personnel to operate our lifts safely and professionally.

Policy

Only trained and authorized persons will operate a forklift of any type. Clancy & Theys will provide thorough training for anyone required to operate a forklift prior to use. Any untrained / unauthorized employee found operating a lift or not following the proper operating procedures will receive disciplinary action against them up to termination of employment.

Training

Selection of Personnel

Supervisors of Clancy & Theys are responsible for selecting and providing the proper training to the operators. It is important that these individuals have the necessary training and are able and willing to perform their jobs properly.

Safe operation

Supervisors of Clancy & Theys shall ensure that each powered industrial truck operator is competent to operate a powered industrial truck safely as demonstrated by the successful completion of the training and evaluation specified in this program.

Prior to permitting an employee to operate a powered industrial truck (except for training purposes), the employer shall ensure that each operator has successfully completed the training required in this manual.

Training program implementation

Trainees may operate a powered industrial truck only:

- Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and
- Where such operation does not endanger the trainee or other employees.

Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace.

Clancy & Theys will ensure that all operator training and evaluations shall be conducted by persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.

Training Program Content

Powered industrial truck operators shall receive initial training in the following topics, with the exception of topics which are designated “not applicable” to safe operation of the truck in our workplace:

Truck-related topics:

- Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate
- Differences between the truck and the automobile
- Truck controls and instrumentation: where they are located, what they do, and how they work
- Engine or motor operation
- Steering and maneuvering
- Visibility (including restrictions due to loading)
- Fork and attachment adaptation, operation, and use limitations
- Vehicle capacity
- Vehicle stability
- Any vehicle inspection and maintenance that the operator will be required to perform
- Refueling and/or charging and recharging of batteries
- Operating limitations
- Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle the employee is being trained to operate

Workplace-related topics:

- Surface conditions where the vehicle will be operated
- Composition of loads to be carried and load stability
- Load manipulation, stacking, and un-stacking
- Pedestrian traffic in areas where the vehicle will be operated
- Narrow aisles, roads, and other restricted places where the vehicle will be operated
- Hazardous (classified) locations, if any, where the vehicle will be operated
- Ramps and other sloped surfaces that could affect the vehicle's stability
- Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust
- Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation

Refresher training and evaluation

Refresher training, including an evaluation of the effectiveness of that training, shall be conducted as required to ensure that the operator has the knowledge and skills needed to operate the powered industrial truck safely. *An evaluation of each powered industrial truck operator's performance shall be conducted at least once every three years*

Refresher training in relevant topics shall be provided to the operator when:

- The operator has been observed to operate the vehicle in an unsafe manner
- The operator has been involved in an accident or near-miss incident
- The operator has received an evaluation that reveals that the operator is not operating the truck safely
- The operator is assigned to drive a different type of truck
- A condition in the workplace changes in a manner that could affect safe operation of the truck

Avoiding duplicate training

If an operator has previously received training in a topic specified in sections "*Truck Related Topics & Workplace Related Topics*", and such training is appropriate to the truck and working conditions encountered, additional training in that topic is not required if evaluation has found the operator competent to operate the truck safely.

Certification

Clancy & Theys shall certify that each operator has been trained and evaluated as required by this program. The certification shall include the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation.

Operating Procedures

As a minimum, supervisors and forklift operators should ensure that the following safety requirements are complied with:

- No part of a load must pass over any worker.
- A lift truck left unattended must be immobilized and secured against accidental movement and forks, buckets or other attachments must be in the lowered position or firmly supported.
- No load may exceed the maximum rated load and loads must be handled in accordance with the height and weight restrictions on the vehicle's load chart.
- When a load is in the raised position, the controls must be attended by an operator at all times.
- If an operator does not have a clear view, a signaler who has been instructed in a code of signals for managing traffic in the workplace must be used.
- Loads must be carried as close to the ground or floor as the situation permits.
- Loads that may tip or fall and endanger a worker must be secured.
- Where a lift truck is required to enter or exit a vehicle to load or unload, that vehicle must be immobilized and secured against accidental movement.
- A lift truck must not be used to support, raise or lower a worker on a construction site unless a safety platform design by an engineer is utilized.
- Barriers, warning signs, designated walkways or other safeguards must be provided where pedestrians are exposed to the risk of collision.

Co-worker Safety

- Never carry hitchhikers--they can easily fall off and become injured.



- If co-workers are on a safety platform, always ensure that the platform is securely attached to the forklift and personnel are wearing proper personal protective equipment (e.g., hardhat and safety belt).
- Never travel with co-workers on the platform.
- Watch out for overhead obstructions.

Pedestrian Safety

Pedestrians working nearby should be sure to keep a safe distance from forklifts. That means staying clear of the forklift's turning radius and making sure the driver knows where you are.



FORKLIFT TRUCK OPERATORS' SAFETY SKILLS RATING

(This is a 3-part form)

Part 1

Physical examination of lift truck (touch and tell)

The objective of this rating sheet is to ensure that employee(s) understand the mechanics of the lift truck as well as all items that involve standard checking prior to driving the lift truck.

The operator (Trainee) should be familiar with the features of the lift truck. This can be evaluated by having the operator demonstrate and describe the following:

- Proper use of tilt
- Proper use of raise / lower mechanism
- Proper use of horn
- Check for oil leaks
- Check mast chains
- Check tilt and lift cylinders for wear and/or leakage
- Check brakes
- Check tires and wheels
- Check hour meter
- Check scissors reach
- Check warning light
- Check rear view mirror
- Check battery retainer
- Check discharge indicator
- Check back up alarm
- Check hose and hose reel
- Check light on overhead guard
- Know capacity of lift truck

Trainee must receive a score of 85% or higher to pass.

- Pass
- Fail

Trainee: _____ Date: __/____/____

Instructor: _____

Equipment Make: _____

Equipment Model: _____

Part 2

Knowledge of safeguards within the facility

The operator (Trainee) is asked to identify many safety items at the dock and battery recharging area, as well as overall safety.

- Dock Area
- Battery Charging Area
- Wheel chocking
- Protective equipment
- Dock plate
- Acid neutralizing
- Trailer lighting
- MSDS
- Condition of trailer floor
- No smoking
- Keep clear of dock loading area
- Plug/unplug procedures
- Be aware of warning and information signs
- Clean-up procedures
- Correct height of empty pallets
- Eyewash station
- Commercial battery rules
- Fire and Safety
- Personal Safety
- Location of extinguishers
- Use of eye protection during banding operations
- Type of extinguisher to use
- How to use extinguisher

Trainee must receive a score of 85% or higher to pass.

- Pass
- Fail

Trainee: _____ Date: __/__/__

Instructor: _____

Equipment Make: _____

Equipment Model: _____

Part 3

Operating Skills Evaluation

Determine the operating skills of the employees by making a full evaluation while operating the lift truck.

- Did the operator pull forward toward the designated section of racking without endangering anyone?
- Did the operator place the forks under the pallet properly?
- Did the operator raise or tilt the load properly?
- Did any part of the container strike any section of racking while removing the pallet?
- Did the operator lower the pallet before moving or backing out? (Don't drive and lower the pallets at the same time.)
- Did the operator drive at a safe speed?
- Did the operator slow down or stop at cross aisles?
- Did the operator sound the horn at blind intersections?
- Did the operator pull into the racking area properly to place the pallet back in the racking?
- Did the operator strike any racking on the way up or going into the rack?
- Did the operator back out and lower the forks before moving?
- Did the operator always look behind before backing up?
- Was the operator wearing protective equipment?
- Did the operator drive around the block of wood or obstacle on the floor, or get out of the truck and remove it?
- Did the operator set the load flat on the floor before getting out of the truck?
- Did the operator put on a hardhat before getting out of the truck?
- Did the operator perform any moves that were potentially dangerous?

Trainee must receive a score of 85% or higher to pass.

- Pass
- Fail

Trainee: _____ Date: __/____/____

Instructor: _____

Equipment Make: _____

Equipment Model: _____

HAND AND POWER TOOLS SAFETY PROGRAM

Purpose

This program is designed to present to our employees a summary of the basic safety procedures and safeguards associated with hand and portable power tools.

Tools are such a common part of our lives that it is difficult to remember that they may pose hazards. Tragically, a serious incident can occur before steps are taken to identify and avoid or eliminate tool- related hazards. Employees who use hand and power tools and are exposed to the hazards of falling, flying, abrasive, and splashing objects, or to harmful dusts, fumes, mists, vapors, or gases must be provided with the appropriate personal protective equipment. All electrical connections for these tools must be suitable for the type of tool and the working conditions (wet, dusty, flammable vapors). When a temporary power source is used for construction a ground-fault circuit interrupter should be used.

Employees should be trained in the proper use of all tools. Workers should be able to recognize the hazards associated with the different types of tools and the safety precautions necessary.

Basis Safety Rules

Basic safety rules can help prevent hazards associated with the use of hand and power tools:

- Keep all tools in good condition with regular maintenance.
- Use the right tool for the job.
- Examine each tool for damage before use and do not use damaged tools.
- Operate tools according to the manufacturer's instructions.
- Provide and use properly the right personal protective equipment.
- Workplace floors shall be kept as clean and dry as possible to prevent accidental slips with or around dangerous hand tools.

Training

Training is a must when it comes to the safe operation of hand and power tools. The supervisor will be responsible for ensuring the employees have been trained in the following prior to use.

- Manufacturer's recommended operating procedures
- Required personal protective equipment and accessories
- Hazards associated with the tool
- Limitations of the tool or accessories
- Proper care and maintenance

Responsibility

According to the OSHA standards, Clancy & Theys is responsible for the safe condition of tools and equipment used by our employees. Clancy & Theys shall not issue or permit the use of unsafe hand tools regardless of who owns the tool(s).

Supervisors shall periodically check tools owned by Clancy & Theys for excessive wear and damage. Tools found to be in an unsafe condition will be immediately tagged out of service until repaired or discarded. Faulty tools will not be given to anyone for home use.

Hand Tools Safety

Hand tools are tools that are powered manually. Hand tools include anything from axes to wrenches. The greatest hazards posed by hand tools result from misuse and improper maintenance.

General Safety Precautions:

- If a chisel is used as a screwdriver, the tip of the chisel may break and fly off, hitting the user or other employees.
- If a wooden handle on a tool, such as a hammer or an axe, is loose, splintered, or cracked, the head of the tool may fly off and strike the user or other employees.
- If the jaws of a wrench are sprung, the wrench might slip.
- If impact tools such as chisels, wedges, or drift pins have mushroomed heads, the heads might shatter on impact, sending sharp fragments flying toward the user or other employees.
- Employees, when using saw blades, knives, or other tools, should direct the tools away from aisle areas and away from other employees working in close proximity.
- Knives and scissors must be sharp; dull tools can cause more hazards than sharp ones.
- Cracked saw blades must be removed from service.
- Wrenches must not be used when jaws are sprung to the point that slippage occurs.
- Impact tools such as drift pins, wedges, and chisels must be kept free of mushroomed heads.
- The wooden handles of tools must not be splintered.
- Iron or steel hand tools may produce sparks that can be an ignition source around flammable substance. Where this hazard exists, spark-resistant tools made of non-ferrous materials should be used where flammable gases, highly volatile liquids, and other explosive substances are stored or used.
- Appropriate personal protective equipment such as safety goggles and gloves must be worn to protect against hazards that may be encountered while using hand tools.

Power Tool Safety

Power tools must be fitted with guards and safety switches; they are extremely hazardous when used improperly. The types of power tools are determined by their power source: electric, pneumatic, liquid fuel, hydraulic, and powder actuated.

General Safety Precautions:

To prevent hazards associated with the use of power tools, workers should observe the following general precautions:

- Never carry a tool by the cord or hose.
- Never yank the cord or the hose to disconnect it from the receptacle.
- Keep cords and hoses away from heat, oil, and sharp edges.
- Disconnect tools when not using them, before servicing and cleaning them, and when changing accessories such as blades, bits, and cutters.
- Keep all people not involved with the work at a safe distance from the work area.
- Secure work with clamps or a vise, freeing both hands to operate the tool.
- Avoid accidental starting. Do not hold fingers on the switch button while carrying a plugged-in tool.
- Maintain tools with care - keep them sharp and clean for best performance.
- Follow instructions in the user's manual for lubricating and changing accessories.

- Be sure to keep good footing and maintain good balance when operating power tools.
- Wear proper apparel for the task. Loose clothing, ties, or jewelry can become caught in moving parts.
- Remove all damaged portable electric tools from use and tag them: “Do Not Use.”

Guards

The exposed moving parts of power tools need to be safeguarded. Belts, gears, shafts, pulleys, sprockets, spindles, drums, flywheels, chains, or other reciprocating, rotating, or moving parts of equipment must be guarded.

Machine guards, as appropriate, must be provided to protect the operator and others from the following:

- Point of operation
- In-running nip points
- Rotating parts
- Flying chips and sparks

Safety guards must never be removed when a tool is being used. Portable circular saws having a blade greater than 2 inches in diameter must be equipped at all times with guards.

An upper guard must cover the entire blade of the saw. A retractable lower guard must cover the teeth of the saw, except where it makes contact with the work material. The lower guard must automatically return to the covering position when the tool is withdrawn from the work material.

Operating Controls and Switches

The following hand-held power tools must be equipped with a constant-pressure switch or control that shuts off the power when pressure is released: drills, tappers, fastener drivers, horizontal, vertical, and angle grinders with wheels more than 2 inches in diameter, disc sanders with discs greater than 2 inches, belt sanders, reciprocating saws, saber saws, scroll saws, and jigsaws with blade shanks greater than 1/4- inch wide, and other similar tools.

These tools also may be equipped with a “lock-on” control, if it allows the worker to also shut off the control in a single motion using the same finger or fingers. The following hand-held power tools must be equipped with either a positive “on-off” control switch, a constant pressure switch, or a “lock-on” control: disc sanders with discs 2 inches or less in diameter; grinders with wheels 2 inches or less in diameter, platen sanders, routers, planers, laminate trimmers, nibblers, shears, and scroll saws, and jigsaws, saber and scroll saws with blade shanks a nominal 1/4-inch or less in diameter.

It is recommended that the constant-pressure control switch be regarded as the preferred device. Other hand-held power tools such as circular saws having a blade diameter greater than 2 inches, chain saws, and percussion tools with no means of holding accessories securely, must be equipped with a constant- pressure switch.

Electric Tools

Employees using electric tools must be aware of several dangers. Among the most serious hazards are electrical burns and shocks. Electrical shocks, which can lead to injuries such as heart failure and burns, are among the major hazards associated with electric powered tools. Under certain conditions, even a small amount of electric current can result in fibrillation of the heart and death. An electric shock also can cause the user to fall off a ladder or other elevated work surface and be injured or killed due to the fall.

To protect the user from shock and burns, electric tools must have a three-wire cord with a ground and be plugged into a grounded receptacle, be double insulated, or be powered by a low voltage isolation transformer. Three-wire cords contain two current carrying conductors and a grounding conductor. Any time an adapter is

used to accommodate a two-hole receptacle, the adapter wire must be attached to a known ground. The third prong must never be removed from the plug.

Double-insulated tools are available that provide protection against electrical shock without third-wire grounding. On double insulated tools, an internal layer of protective insulation completely isolates the external housing of the tool.

The following general practices should be followed when using electric tools:

- Operate electric tools within their design limitations.
- Use gloves and appropriate safety footwear when using electric tools.
- Store electric tools in a dry place when not in use.
- Do not use electric tools in damp or wet locations unless they are approved for that purpose.
- Keep work areas well lighted when operating electric tools.
- Ensure that cords from electric tools do not present a tripping hazard.

In the construction industry, employees who use electric tools must be protected by ground-fault circuit interrupters or an assured equipment-grounding conductor program.

Portable Abrasive Wheel Tools

Portable abrasive grinding, cutting, polishing, and wire buffing wheels create special safety problems because they may throw off flying fragments. Abrasive wheel tools must be equipped with guards that:

1. cover the spindle end, nut, and flange projections.
2. maintain proper alignment with the wheel; and
3. do not exceed the strength of the fastenings.

Before an abrasive wheel is mounted, it must be inspected closely for damage and should be sound-or ring-tested to ensure that it is free from cracks or defects. To test, wheels should be tapped gently with a light, non-metallic instrument. If the wheels sound cracked or dead, they must not be used because they could fly apart in operation. A stable and undamaged wheel, when tapped, will give a clear metallic tone or “ring.”

To prevent an abrasive wheel from cracking, it must fit freely on the spindle. The spindle nut must be tightened enough to hold the wheel in place without distorting the flange. Always follow the manufacturer’s recommendations. Take care to ensure that the spindle speed of the machine will not exceed the maximum operating speed marked on the wheel.

An abrasive wheel may disintegrate or explode during start-up. Allow the tool to come up to operating speed prior to grinding or cutting. The employee should never stand in the plane of rotation of the wheel as it accelerates to full operating speed. Portable grinding tools need to be equipped with safety guards to protect workers not only from the moving wheel surface, but also from flying fragments in case of wheel breakage.

When using a powered grinder:

- Always use eye or face protection.
- Turn off the power when not in use.
- Never clamp a hand-held grinder in a vise.

Pneumatic Tools

Pneumatic tools are powered by compressed air and include chippers, drills, hammers, and sanders.

There are several dangers associated with the use of pneumatic tools. First and foremost is the danger of getting hit by one of the tool’s attachments or by some kind of fastener the worker is using with the tool.



Pneumatic tools must be checked to see that the tools are fastened securely to the air hose to prevent them from becoming disconnected. A short wire or positive locking device attaching the air hose to the tool must also be used and will serve as an added safeguard.

If an air hose is more than 1/2-inch in diameter, a safety excess flow valve must be installed at the source of the air supply to reduce pressure in case of hose failure.

In general, the same precautions should be taken with an air hose that are recommended for electric cords, because the hose is subject to the same kind of damage or accidental striking, and because it also presents tripping hazards.

When using pneumatic tools, a safety clip or retainer must be installed to prevent attachments such as chisels on a chipping hammer from being ejected during tool operation.

Pneumatic tools that shoot nails, rivets, staples, or similar fasteners and operate at pressures more than 100 pounds per square inch must be equipped with a special device to keep fasteners from being ejected, unless the muzzle is pressed against the work surface.

Airless spray guns that atomize paints and fluids at pressures of 1,000 pounds or more per square inch must be equipped with automatic or visible manual safety devices that will prevent pulling the trigger until the safety device is manually released.

Eye protection is required, and head and face protection is recommended for employees working with pneumatic tools.

Screens must also be set up to protect nearby workers from being struck by flying fragments around chippers, riveting guns, staplers, or air drills.

Compressed air guns should never be pointed toward anyone. Workers should never “dead-end” them against themselves or anyone else. A chip guard must be used when compressed air is used for cleaning.

Use of heavy jackhammers can cause fatigue and strains. Heavy rubber grips reduce these effects by providing a secure handhold. Workers operating a jackhammer must wear safety glasses and safety shoes that protect them against injury if the jackhammer slips or falls. A face shield also should be used.

Noise is another hazard associated with pneumatic tools. Working with noisy tools such as jackhammers requires proper, effective use of appropriate hearing protection.

Liquid Fuel Tools

Fuel-powered tools are usually operated with gasoline. The most serious hazard associated with the use of fuel-powered tools comes from fuel vapors that can burn or explode and give off dangerous exhaust fumes. The worker must be careful to handle, transport, and store gas or fuel only in approved flammable liquid containers, according to proper procedures for flammable liquids.

Before refilling a fuel-powered tool tank, the user must shut down the engine and allow it to cool to prevent accidental ignition of hazardous vapors. When a fuel-powered tool is used inside a closed area, effective ventilation and/or proper respirators such as atmosphere-supplying respirators must be utilized to avoid breathing carbon monoxide. Fire extinguishers must also be available in the area.

Powder-Actuated Tools

Powder-actuated tools operate like a loaded gun and must be treated with extreme caution. Powder-actuated tools must be operated only by specially trained employees. These trained employees shall be able to show proof of training, upon being asked by a supervisor, for the specific model for which they are operating.

When using powder-actuated tools, an employee must wear suitable ear, eye, and face protection. The user must select a powder level—high or low velocity—that is appropriate for the powder-actuated tool and necessary to do the work without excessive force.

The muzzle end of the tool must have a protective shield or guard centered perpendicular to and concentric with the barrel to confine any fragments or particles that are projected when the tool is fired. A tool containing a high-velocity load must be designed not to fire unless it has this kind of safety device.

To prevent the tool from firing accidentally, two separate motions are required for firing. The first motion is to bring the tool into the firing position, and the second motion is to pull the trigger. The tool must not be able to operate until it is pressed against the work surface with a force of at least 5 pounds greater than the total weight of the tool.

If a powder-actuated tool misfires, the user must hold the tool in the operating position for at least 30 seconds before trying to fire it again. If it still will not fire, the user must hold the tool in the operating position for another 30 seconds and then carefully remove the load in accordance with the manufacturer's instructions. This procedure will make the faulty cartridge less likely to explode. The bad cartridge should then be put in water immediately after removal. If the tool develops a defect during use, it should be *tagged* and must be *taken out of service immediately* until it is properly repaired.

Safety precautions that must be followed when using powder-actuated tools include the following:

- Do not use a tool in an explosive or flammable atmosphere.
- Inspect the tool before using it to determine that it is clean, that all moving parts operate freely, and that the barrel is free from obstructions and has the proper shield, guard, and attachments recommended by the manufacturer.
- Do not load the tool unless it is to be used immediately.
- Do not leave a loaded tool unattended, especially where it would be available to unauthorized persons.
- Keep hands clear of the barrel end.
- Never point the tool at anyone.

Powder-Actuated Tools – Continued

When using powder-actuated tools to apply fasteners, several additional procedures must be followed:

- Do not fire fasteners into material that would allow the fasteners to pass through to the other side.
- Do not drive fasteners into very hard or brittle material that might chip or splatter or make the fasteners ricochet.
- Always use an alignment guide when shooting fasteners into existing holes.

- When using a high-velocity tool, do not drive fasteners more than 3 inches (7.62 centimeters) from an unsupported edge or corner of material such as brick or concrete.
- When using a high velocity tool, do not place fasteners in steel any closer than 1/2-inch (1.27 centimeters) from an unsupported corner edge unless a special guard, fixture, or jig is used.

Hydraulic Power Tools

The fluid used in hydraulic power tools must be an approved fire-resistant fluid and must retain its operating characteristics at the most extreme temperatures to which it will be exposed. The exception to fire-resistant fluid involves all hydraulic fluids used for the insulated sections of derrick trucks, aerial lifts, and hydraulic tools that are used on or around energized lines. This hydraulic fluid shall be of the insulating type.

The manufacturer's recommended safe operating pressure for hoses, valves, pipes, filters, and other fittings must not be exceeded.

All jacks—including lever and ratchet jacks, screw jacks, and hydraulic jacks—must have a stop indicator, and the stop limit must not be exceeded. Also, the manufacturer's load limit must be permanently marked in a prominent place on the jack, and the load limit must not be exceeded.

A jack should never be used to support a lifted load. Once the load has been lifted, it must immediately be blocked up. Put a block under the base of the jack when the foundation is not firm, and place a block between the jack cap and load if the cap might slip.

To set up a jack, make certain of the following:

- The base of the jack rests on a firm, level surface
- The jack is correctly centered
- The jack head bears against a level surface
- The lift force is applied evenly

Proper maintenance of jacks is essential for safety. All jacks must be lubricated regularly. In addition, each jack must be inspected according to the following schedule:

1. For jacks used continuously or intermittently at one site—inspected at least once every 6 months,
2. For jacks sent out of the shop for special work—inspected when sent out and inspected when returned,
3. And for jacks subjected to abnormal loads or shock—inspected before use and immediately thereafter.



HAZARD COMMUNICATION PROGRAM

Policy

Clancy & Theys is committed to providing a safe working environment for our employees. Our Hazard Communication Program is intended to comply with North Carolina OSHA Standards. This program applies to all working situations where our employees may be exposed to hazardous chemicals.

As a part of this program, Clancy & Theys employees will be informed of the contents of the Hazard Communication standard, the hazardous properties of chemicals they work with, safe handling and storage procedures, and the appropriate personal protection devices or equipment that may be required.

List of Hazardous Chemicals & MSDS Book

Clancy & Theys home office will maintain a book containing all of the material safety data sheets for the chemicals used by our company. Each individual jobsite will also have a copy of this MSDS book. All employees will be made aware of the existence and location of the MSDS Book at each project.

The list of Hazardous Chemicals will be reviewed annually and the MSDS Book is to be revised if necessary.

If an MSDS book is not present employees may call the Raleigh Office, Monday thru Friday from 8a.m. - 5p.m., at 919-834-3601 x239 or x243 and an appropriate sheet will be faxed to you.

IF AN MSDS SHEET IS NOT ACCESSABLE THEN THE HAZARDOUS SUBSTANCE IS NOT TO BE USED. NO EXCEPTIONS!

Material Safety Data Sheets

MSDS' will contain specific information about the chemicals used on our job sites. These MSDS' will be reviewed with an affected employee(s) before the hazardous substance is used. Employees will be informed as to the information they contain, the hazards associated with the chemicals, personal protective equipment (if needed), what to do if there is a chemical spill, and emergency first aid procedures.

As any new chemical or a different brand of chemical is purchased for use at Clancy & Theys, its MSDS will be added to the MSDS Book and the list of Hazardous Chemicals. New MSDS are required to be obtained on any chemicals that are currently being used when the containers are marked "New and Improved", "New Formula", "Now Safe for Use On..." or otherwise obviously changed.

Labels and Other Forms of Warning

All Clancy & Theys employees will be instructed to read and understand the warning labels on the chemicals with which they are working. All chemicals used will be properly labeled with appropriate chemical identity, hazard warnings and the name and address of the manufacturer.

If employees transfer chemicals from a labeled container to an unlabeled container and the amount transferred is only intended for their immediate use, then no labels will be required, per the OSHA standard.

Training

All employees who work with or could be exposed to hazardous chemicals will be trained on the safe use of these chemicals and working around them. Safe handling and storage of chemicals will be a regular topic discussed at safety meetings.



Additionally, employees will be informed of the potential health hazards associated with improperly using hazardous chemicals, how to read MSDS sheets and how to obtain MSDS sheets. When new chemicals are introduced, all employees will be thoroughly trained as to the hazards associated with that chemical, proper storage, and how to safely use that chemical.

Upon employment, each employee will be trained in the following:

- An overview of the requirements of the Hazard Communication Standard, including their rights under this regulation
- Information on where hazardous substances are present in their work areas
- The location and availability of the written Hazard Communication Program. A copy of the program will be available at the Clancy & Theys home office and in the Clancy & Theys Safety Manual on each Project Site
- The controls, work practices and personal protective equipment which are available for protection against possible exposure
- How to read labels and Material Safety Data Sheets (MSDS) to obtain the appropriate hazard information
- What to do if there is a chemical spill, proper authority notification procedures, and evacuation procedures

Non-Routine Tasks

Infrequently, employees may be required to perform non-routine tasks which involve the use of hazardous substances. Prior to starting work on such projects, each involved employee will be given information by his/her supervisor about hazards to which they may be exposed during such an activity and how to protect themselves.

This information will include:

- The specific hazards and if protective/safety measures which must be utilized
- The measures the Company has taken to lessen the hazards, including special ventilation, respirators, the presence of other employees, air sample readings, and emergency procedures.

Material Safety Data Sheet Reference

OSHA compliance officers may ask randomly selected employees on your job site if they are familiar with the Hazard Communications Program and if they know how to read a Material Safety Data Sheet (MSDS). They may also ask an employee if they know how to read a chemical label. The following is a reference for training on MSDS and chemical labels.

Location of MSDS Book

The master MSDS book will be kept at the home office and on each project of Clancy & Theys. Refer to "**List of Hazardous Chemicals & MSDS Book**" section for complete information.

Chemical Hazard

Most chemicals pose either a physical or health hazard that can be immediately harmful and/or cause life-long illness due to prolonged exposure. Examples of these hazards are:

- Burn skin or eyes
- Flammable

- Long-term physical damage or illness such as Cancer.
- React with other chemicals

Two Health Affects of Hazardous Materials

- Acute: Rashes, bums, nausea, etc. immediately obvious
- Chronic: Symptoms that develop gradually due to repeated or long-term exposure

Route of Exposure for Hazardous Chemicals

- Contact with skin or eyes can cause bums, rashes, allergies even blindness
- Inhaling can cause dizziness, nausea, headaches, lung damage, asphyxiation or even death
- Swallowing due to eating or smoking without washing your hands causes a risk of poisoning
- Injection: When skin is punctured with a contaminated sharp object

Information Found On Material Safety Data Sheets

The MSDS is obtained from the hazardous substance manufacturer or supplier. Employees should become familiar with information on these sheets to avoid injury to themselves and fellow employees.

Following is a description of the principle sections of an MSDS. Not all sections are relevant to your safety, but brief descriptions will be provided.

Section I-Identification of Product

This identifies the chemical name, trade name or synonym, manufacturer's name, chemical formula, and emergency phone number for more detailed information.

Section II-Hazardous Ingredients

Hazardous ingredients are those substances which have been defined as hazardous due either to flammability characteristics or for their potential to have adverse health effects on the worker. The percentage of each hazardous ingredient in the product is provided, as well as the Threshold Limit Value.

Section III-Physical Data

This is primarily technical data used by chemists and industrial hygienists when doing calculations to determine the safe use parameters of the substance.

Section IV-Fire and Explosion Hazard Data

In this section, data is provided which describes the ability of the substance to burn or explode. The method for extinguishing a fire involving the substance is also provided. Pertinent data in this section is:

1. Flash Point-This is the lowest temperature at which the liquid gives off sufficient vapor to form an ignitable mixture with air and produce a flame when an ignition source is brought near the surface of the liquid.
2. Extinguishing Media-The type of fire extinguishing material to be used when a particular substance is burning.
3. Special Fire Fighting Procedures-These procedures describe the firefighting equipment needed if the substance is involved in a fire. Some substances can give off toxic gases when burning; therefore, a

special piece of personal protection equipment would be worn by persons fighting the fire. Talk to your supervisor regarding your actions in the event of a fire involving a hazardous substance.

4. **Unusual Fire and Explosion Hazards** - This section provides information on substance incompatibility or its ability to react with other substances to create a flammable atmosphere.

Section V-Health Hazard Data

Data included in this section is very important to you. This information will help you recognize the effects of overexposure to a particular hazardous substance, and the emergency and first-aid procedures to follow in the event of overexposure.

Terms & Definitions

1. **Threshold Limit Value**- The value printed on the MSDS expresses the airborne concentration of material to which nearly all persons can be exposed day after day without adverse health effects. Threshold Limit Values (TLV) may be expressed in the following three ways: a) Time Weighted (TWA), b) Short Term Exposure Limit (STEL), and/or c) Ceiling Exposure Limit (C). The TLV is used by engineers and industrial hygienists as a guide in the control of health hazards.
2. **Effects of Overexposure**- Describes what physical effects might be felt (dizziness, headaches, skin irritation, dermatitis, etc.).
3. **Emergency and First-Aid Procedures**- Explains the procedures to follow should it become necessary to provide first-aid treatment to a person who may be overcome by a hazardous substance. The procedures may address exposures that occur through inhalation of the substance, contact with skin, or ingestion (swallowing).

Section VI-Reactivity Data

This section presents information on reactive substances. Reactive substances are materials which, under certain environmental or induced conditions, enter into violent reaction with spontaneous generation of large quantities of heat, light, gases (flammable and nonflammable), or toxicants that can be destructive to life and property. Reactions occur often when incompatible materials are mixed together.

Some loosely categorized types of reactive chemicals are:

- **Explosives**- (example: nitroglycerin), react to friction, heat, or shock
- **Acids**-Don't mix with sensitizers
- **Oxidizers**-Don't mix with reducers
- **Water Sensitizers**-Should not be mixed with water.
- **Pyrophors**- Substances that generate sparks or heat when friction is applied.

When reviewing a particular data sheet, note the conditions to avoid, and incompatibility (materials to avoid). In general, isolate from other potentially reactive substances. Use appropriate personal protection gear that is recommended in Section VIII-Special Protection Information.

Section VII-Spill or Leak Procedures

This section gives directions to take certain actions in the event of a hazardous substance spill or leak. Do not attempt to contain a spill or leak by yourself. Get help from your supervisor.

Section VIII-Special Protection Information

This section specifies the proper personal protection devices for specific situations. Types of recommended equipment will include respirators, goggles, face shield and safety glasses, gloves, protective aprons, footwear, etc.

Ventilation equipment will not necessarily be applicable. These requirements are based on amount used, container the substance is stored in, conditions use occurs in, etc.

Section IX-Special Precautions

Describes proper storage and handling procedures. This section is important and provides many of the dos and don'ts associated with the substance. It will also alert you to situations to avoid when handling or storing the substance.

Container Labeling

No container or hazardous substances should be released for use unless the container is correctly labeled, and the label is legible.

All chemicals in bags, drums, barrels, bottles, boxes, cans, cylinders, reaction vessels, storage tanks, or similar containers should be checked by the receiving department or responsible person to ensure the manufacturer's label is intact, is legible, and the container has not been damaged in any manner during shipment. Any containers found to have damaged labels should be quarantined until a new label has been installed. When a bulk chemical is transferred to a smaller container for use, it must also be properly labeled unless all the contents in the smaller container will be immediately used.

The label must contain:

- The chemical name of the contents
- The appropriate hazard warnings, the name and address of the manufacturer, and any other details of the chemical which are in the referenced container
-

How to Read a Chemical Label: (NFPA Label)

- Labels contain the name of the manufacturer, chemical name, physical or health hazards, proper storage and any personal protective equipment required when using the chemical.

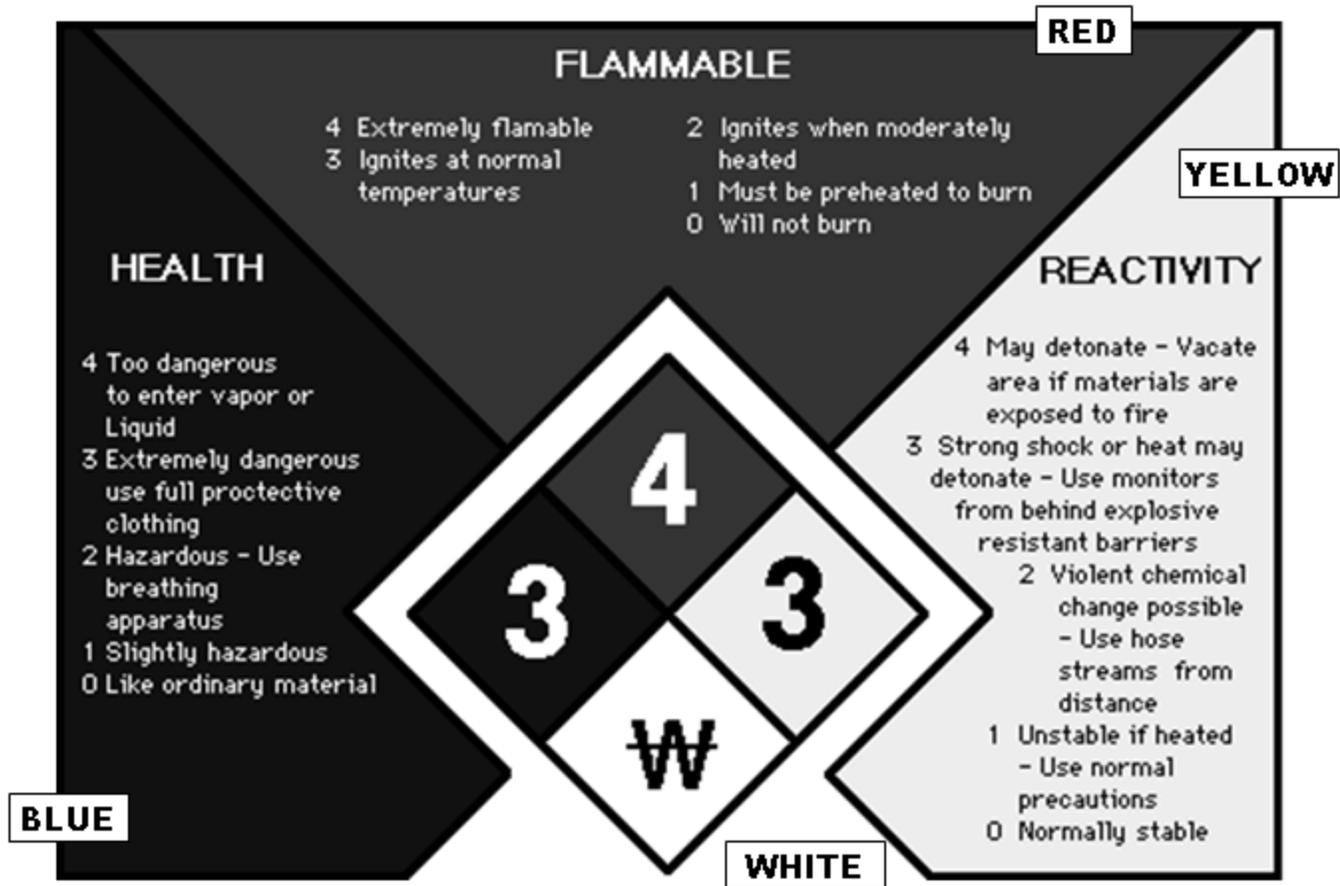
Color Coded:

Red = Fire Hazard "Flammable"
Yellow = Reactivity Hazard
Blue = Health Hazard
White = Additional Information
= Severe Hazard

Number Coded:

0 = No Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard

White area of a chemical label may contain the personal protective equipment or special instruction.





Hearing Conservation Program

Purpose

Clancy & Theys is committed to preventing hearing loss for our employees. Occupational hearing loss is one of the most pervasive problems in today's occupational environment. At the present national average exposure limits, one in four will develop a permanent hearing loss as a result of their occupational exposure to noise hazards. The gradual progression of hearing loss due to noise may be less dramatic than an injury resulting from a workplace accident, but it is a significant and permanent handicap for the affected individual. Loss of hearing denies people sensory experiences that contribute to the quality of their lives. For some, loss of hearing may impede their ability to be gainfully employed. This tragedy *is* preventable.

Training

Each employee exposed to a noise level at or above the levels specified on Table D-2 of the OSHA Standards Section 1926.52 will be trained in the following:

- Recognition of harmful noise levels
- Effects of noise on hearing
- Hearing protection devices
 - Selection
 - Fit
 - Use
 - Care

General Safety Practices

- If there is ever a question as to the noise level of a particular task, contact the Safety Director immediately so that a sound sampling can be taken and if necessary, appropriate safety measures taken. Work on this task will cease until either it is determined to be safe or corrective action has been taken.
- Hearing protection should be worn at all times when using the following items:
 - Powder actuated tools
 - Demolition hammers or any size hammer
 - Concrete and masonry saws
- As a rule, if you cannot hear a person talking from no more than three feet away during a normal conversation then you need hearing protection.
- Read the manufacturer's instructions for fit, use, and care procedures.
- Keep hearing protection clean and never share hearing protection. Unsanitary hearing protection can lead to illnesses and possible hearing damage.

HOUSEKEEPING

Purpose

OSHA addresses housekeeping within 29 CFR 1926.25 construction standards. Obviously, a clean and organized workplace will reduce hazards for all employees and fellow contractors and help make the job of housekeeping easier for our company. It has also been proven that production is improved when good housekeeping procedures are utilized.

Clancy & Theys' reputation also may be enhanced by a clean and organized work site. Good housekeeping may be the most prominent indicator of management and employee concern for safety and health that a company displays on an everyday basis. An organized workplace leads to a safe working environment by reducing exposures that may threaten safety such as tripping hazards, spills, potential fire, etc.

Good housekeeping procedures can yield the following benefits:

- Lower operating costs due to less time and efforts required to maintain clean work areas.
- Reduced fire hazards due to control of combustible materials and unblocked access to fire protection equipment.
- Improved traffic flow for people and equipment, especially for tight spaces or storage areas with materials- handling equipment present.
- More efficient space utilization at the work place due to better organization.
- Improved control over resources and data due to better maintenance and organization of those resources.
- Conservation of resources, since resources can be better maintained and most efficiently utilized.
- Fewer mishaps or accidents that cause an increase in insurance premiums and workers compensation claims due to reduced slip, trip, fall and chemical exposure hazards.
- Increased production time due to more efficient utilization of space, more efficient materials-movement.
- Higher employee morale due to improved work environment.

Storage Areas

- Securely store materials by piling or arranging in an orderly manner. This will allow for easy access and prevent material storage piles from collapsing.
- Physically or mechanically load and move materials in a safe manner in a pan, car, cart, truck, forklift or other approved conveyance(s)]. Clancy & Theys will provide training for employees on the safety and operation of mechanical material handlers.
- Clancy & Theys will provide Hazard Communication training for employees, who in the course of housekeeping duties, will be exposed to hazardous chemicals such as bleach, ammonia, or any other types of cleaning products that may pose a chemical hazard. If you work with a chemical you suspect of posing a hazard and you have not been trained in its safe use, contact your supervisor immediately.

Work Areas

- Keep all ladders, scaffolds and man lifts safely clear of aisles and passageways to allow for other workers to pass by and easily exit in case of an emergency. If it is necessary to work in an aisle or passageway, proper warning devices or barricades shall be used to protect the worker and passersby.
- All spills, regardless of the substance, shall be immediately cleaned up using appropriate measures stated on required MSD sheets.

- Do not allow materials in use or scrap materials to clutter your work area or the surrounding area. This could lead to injury of a fellow worker or contractor.
- Dispose of trash in designated containers or areas.

Tools and Movable Equipment

All tools and movable equipment shall be stored properly in a secure assigned location when not being used.

Access / Egress and Emergency

Clear access shall be maintained to all work areas, exits, fire extinguishers, electrical disconnects, and emergency aids.

Loading and Unloading Areas

- Loading and unloading areas shall be free of unnecessary materials accumulation.
- If hazardous materials are being loaded or unloaded, have emergency spill kits and other spill cleanup equipment and materials available in the loading/unloading area and clean up spills as soon as they occur.
- Wheels of delivery trucks shall be chocked at all times when the driver is not present in the cab.

Working Surfaces (Floors, Ground, Scaffold Platforms, etc.)

- Make sure working surfaces are clean, dry, and free of waste, unnecessary material, oil and grease.
- Have an adequate number of waste receptacles provided at accessible locations throughout all work areas to collect debris and trash.
- Provide designated walkways through grounds, kept clear of snow, ice, materials, or any other physical hazards.

MATERIAL HANDLING SAFETY PROGRAM

Introduction

Back injuries are responsible for 100 million lost workdays annually! These types of injuries occur nearly twice as often as any other injury. More than one out of five work-related injuries are back injuries. They represent the largest single contributor in injury cases and insurance claims in the workplace. The risk of injury is different for every employee. Contrary to popular belief, the workplace environment has a strong influence on back safety. Several factors, including type of work, noise, temperature, and design of the workplace, can have an effect on the safety of the workplace. The most effective tools for preventing back injuries are training and education on the workings of the back, injury cases, and proper material handling techniques.

This manual is to ensure that each employee at Clancy & Theys is properly trained, and that each employee adheres to safe material handling practices while on and off the job.

The Most Common Causes of Back Pain

- Posture and Poor Alignment – Any posture that compromises the natural curvature and muscular balance of the spine predisposes us to lower back pain. Poor posture places strain and tension on the supporting muscles and ligaments, weakening them. Remember to keep your ears, shoulders, and hips stacked in a straight line.
- Overexertion – We tend to ignore the subtle signs our back gives us to let up on our activity or change our position. In spite of a twinge or a little spasm, we continue to move furniture around or sit at a computer for another three hours until we strain a muscle or squeeze a disc.
- Traumatic Back Injuries - Automobile, industrial accidents, and active sports cause most traumatic injuries.
- Degenerative Wear and Tear – Although the spine undergoes a natural aging process, inappropriate alignment and use of the spine can speed up that process.
- A Bulging or Herniated Disc – This can cause severe back pain, but only a small percentage of back pain can be attributed to this condition.
- Structural Abnormalities – Occasionally, low back pain is caused by a predisposing condition such as scoliosis (curvature of the spine.)
- Emotional Stress and Muscular Tension – Stress causes muscles to contract. Chronically contracted muscles stop the circulation of blood and oxygen, resulting in pain and atrophy.

Proper Material Handling Techniques

- Test every load before you lift it, push it, or pull it. A light load can do as much damage as a heavy one if not handled correctly. Also, a small size does not always mean a light load.
- **Remember to keep your ears, shoulders, and hips stacked in a straight line. This puts your back in the strongest position. Lift with your legs and hold the load close to your body. A load held at arm length can be up to ten times heavier than one held close to your body. Always tighten your stomach muscles as you lift or lower an object.**
- If you must turn while carrying the load, use your feet. You can injure your back if you twist while carrying a load.
- Look over the route you plan to travel. Make sure there is nothing that you can trip over or slip on. Try to avoid uneven surfaces.
- You can injure your back if you arch your back when lifting a load over your head. To avoid an injury, use a ladder when you must lift something that is over your head.
- Be sure you have a tight grip on an object before you lift it.
- Use slow and smooth movements when lifting heavy objects.
- If an object is very heavy or unbalanced, use a partner to help you lift it. If you can, use a dolly or mechanical lifting device.
- If possible, push instead of pulling an object. You have twice as much power and less chance of injury.
- Split large loads into several smaller ones whenever practical.

MOVING MATERIALS WITH MECHANICAL HELP

Obviously, there are materials on the job that cannot be moved by hand. Whenever possible, material-handling tools should be used. They enable you to move heavy objects rapidly and with less effort. Levers, inclined planes, jackscrews, and block and tackle are some of the simpler devices.

But there are other devices that you use on the job every day--devices that are sometimes taken for granted.

HAND TRUCKS

- Many types of hand trucks are used throughout industry, including wheelbarrows, dolly trucks and two-wheeled hand trucks.
- Two-wheeled hand trucks are used for lifting and transporting heavy and bulky objects for short distances.
- When using these trucks, make sure the load is placed carefully. Your view should be unobstructed.
- *Two-wheeled trucks* and wheelbarrows may be equipped with knuckle guards to help prevent hand injuries. These guards can be made of canvas, leather, or rubber belts.
- *Cylinder trucks* are used for moving compressed air cylinders; the cylinders should be handled carefully and secured to the truck with bands, chains, or straps.
- A *three-wheeled handlift truck* should always be centered under the skid it carries so that good balance is maintained. This truck should be pulled; pushing is limited to maneuvering. Leave the handle in the up position to control tripping hazards.
- *Hand pallet trucks* are designed for moving pallets; they should also be pulled. The handle should be down only to jack the skid.

POWERED INDUSTRIAL TRUCKS (FORKLIFT)

Powered industrial trucks move material quickly and easily and save work and time. If you're selected as a lift truck operator you should know how to operate the trucks carefully and safely and react correctly to every situation. (No employee is permitted to operate a powered industrial truck (Forklift) without proper training and certification according to the Clancy & Theys – Powered Industrial Truck Safety manual.)

- Pay attention to maximum load limits--never overload.
- Back the truck down a ramp but keep the load in front when you're going uphill.
- Check to see that your path is clear before backing.
- Remember, pedestrians have the right of way.
- Make sure your truck is inspected thoroughly before starting it and report any malfunctions to your supervisor. Check your brakes, steering, controls, forks, hoist, warning devices and lights before and after each shift.
- Tilt the forklift masts back when you're driving the lift and keep your head, arms and legs inside.
- Keep the forks about 4 to 6 inches above the ground.
- Do not use your forklift as an elevator for co-workers.
- Drive on the right side under normal conditions; avoid quick starts, quick turns and jerky stops. Come to a complete stop before reversing direction and watch the distance between other vehicles.
- Sound your horn when approaching a blind corner or when workers may not see you.
- Reduce your speed when the driving surface is slick or rough.
- Check clearances when loading or unloading a truck bed.
- Know the weight capacity and condition of the bed.
- Besides having regard for company rules, you, as a forklift operator, should operate your machine properly, efficiently and alertly.

CRANES AND DERRICKS

- Only thoroughly trained persons are permitted to operate cranes.
- The rated load must be plainly marked on each side of the crane and the crane must never be overloaded.
- Never work or stand underneath a crane that is moving material.
- If you're the operator, do not swing loads over workers.
- Keep hoisting chains and ropes free from kinks. Do not wrap chains or ropes around loads--use a load block hook with a sling. Operators should make sure the sling clears all obstacles.
- Both the operator and the signaler should understand standard hand signals for boom cranes.
- Crane operators should never remove their hands and feet from the controls while a load is suspended.
- All cranes should be inspected thoroughly by persons familiar with all engineering aspects of the cranes.

STORING MATERIALS

Stored materials must not create a hazard for employees. Employers should make workers aware of such factors as the materials' height and weight, how accessible the stored materials are to the user, and condition of the containers where materials are being stored when stacking and piling materials.

To prevent creating hazards when storing materials, Clancy & Theys employees shall do the following:

- Keep storage areas free from accumulated materials that cause tripping, fires, explosions, or that may contribute to the harboring of rats and other pests
- Place stored materials inside buildings that are under construction and at least 6 feet from hoist ways, or inside floor openings and at least 10 feet away from exterior walls
- Separate non-compatible material
- In addition, workers should consider placing bound material on racks, and secure it by stacking, blocking, or interlocking to prevent it from sliding, falling, or collapsing

STACKING MATERIALS

Stacking materials can be dangerous if workers do not follow safety guidelines. Falling materials and collapsing loads can crush or pin workers, causing injuries or death. To help prevent injuries when stacking materials, employees of Clancy & Theys must do the following:

- Stack lumber no more than 16 feet high if handled manually, and no more than 20 feet if using a forklift.
- Remove all nails from used lumber before stacking.
- Stack and level lumber on solidly supported bracing.
- Ensure that stacks are stable and self-supporting.
- Do not store pipes and bars in racks that face main aisles to avoid creating a hazard to passersby when removing supplies.
- Stack bags and bundles in interlocking rows to keep them secure; and stack bagged material by stepping back the layers and cross keying the bags at least every ten layers. (To remove bags from the stack, start from the top row first).
- Store paper and rags inside a building no closer than 18 inches to the walls, partitions, or sprinkler heads.
- Band boxed materials or secure them with crossties or shrink plastic fiber.
- Stack drums, barrels, and kegs symmetrically.
- Block the bottom tiers of drums, barrels, and kegs to keep them from rolling if stored on their sides.
- Place planks, sheets of plywood dunnage, or pallets between each tier of drums, barrels, and kegs to make a firm, flat, stacking surface when stacking on end.
- Chock the bottom tier of drums, barrels, and kegs on each side to prevent shifting in either direction when stacking two or more tiers high. Stack and block poles as well as structural steel, bar stock, or other cylindrical materials to prevent spreading or tilting unless they are in racks.
- Paint walls or posts with stripes to indicate maximum stacking heights for quick reference.
- Observe height limitations when stacking materials; and
- Consider the need for availability of the material.

AISLES and PASSAGEWAYS

When using aisles and passageways to move materials mechanically, workers must allow sufficient clearance for aisles at loading docks, through doorways, wherever turns must be made, and in other parts of the workplace.

Providing sufficient clearance for mechanically moved materials will prevent workers from being pinned between the equipment and fixtures in the workplace, such as walls, racks, posts, or other machines. Sufficient clearance also will prevent the load from striking an obstruction and falling on an employee. Employers must



ensure that all passageways used by workers remain clear of obstructions and tripping hazards. Workers should not store materials in excess of supplies needed for immediate operations in aisles or passageways, and Clancy & Theys will insure the marking of permanent aisles and passageways.

TRAINING and EDUCATION

Clancy & Theys shall establish and maintain a formal training program to teach workers how to recognize and avoid materials handling hazards. Instructors should be well versed in safety materials handling and storing. The training shall include but is not limited to the following topics:

- Dangers of lifting without proper training.
- Avoidance of unnecessary physical stress and strain.
- Awareness of what a worker can comfortably handle without undue strain.
- Use of equipment properly.
- Recognition of potential hazards and how to prevent or correct them.
- Proper use and safety practices of mechanical handling equipment.

OSHA AND THE INSPECTION PROCESS

What OSHA does

OSHA uses three basic strategies, authorized by the *Occupational Safety and Health Act*, to help employers and employees reduce injuries, illnesses, and deaths on the job:

- Strong, fair, and effective enforcement
- Outreach, education, and compliance assistance
- Partnerships and other cooperative programs

Based on these strategies, OSHA conducts a wide range of programs and activities to promote workplace safety and health. The agency:

- Encourages employers and employees to reduce workplace hazards and to implement new safety and health management systems or improve existing programs.
- Develops mandatory job safety and health standards and enforces them through worksite inspections, employer assistance, and, sometimes, by imposing citations, penalties, or both.
- Promotes safe and healthful work environments through cooperative programs, partnerships, and alliances.
- Establishes responsibilities and rights for employers and employees to achieve better safety and health conditions.
- Supports the development of innovative ways of dealing with workplace hazards.
- Maintains a reporting and recordkeeping system to monitor job-related injuries and illnesses.
- Establishes training programs to increase the competence of occupational safety and health personnel.
- Provides technical and compliance assistance and training and education to help employers reduce worker accidents and injuries.
- Works in partnership with states that operate their own occupational safety and health programs; and
- Supports the Consultation Service.

OSHA Coverage

Who the act covers



The *OSH Act* covers employers and employees in the 50 states and all territories and jurisdictions under federal authority either directly through federal OSHA or through an OSHA approved state program.

Who is not covered

The *OSH Act* does not cover:

- The self-employed.
- Immediate members of farming families on farms that do not employ outside workers.
- Employees whose working conditions are regulated by other federal agencies under other federal statutes. These include mine workers, certain truckers and transportation workers, and atomic energy workers
- Public employees in state and local governments; some states have their own occupational safety and health plans that cover these workers.

Employer "Clancy & Theys" Responsibilities

If you are an employer, you must:

- Meet your general duty responsibility to provide a workplace free from recognized hazards
- Keep workers informed about OSHA and safety and health matters with which they are involved
- Comply, in a responsible manner, with standards, rules, and regulations issued under the *OSH Act*
- Be familiar with mandatory OSHA standards
- Make copies of standards available to employees for review upon request
- Evaluate workplace conditions
- Minimize or eliminate potential hazards
- Provide employees safe, properly maintained tools and equipment, including appropriate personal protective equipment, and ensure that they use it

Employer "Clancy & Theys' Rights

If you are an employer, you have the right to:

- Seek free advice and on-site consultation.
- Be involved in job safety and health through your industry association
- Request and receive proper identification of OSHA compliance officers
- Be advised by the compliance officer of the reason for an inspection
- Have an opening and closing conference with the compliance officer
- Accompany the compliance officer on the inspection
- File a notice of contest to dispute inspection results
- Request an informal settlement agreement process after an inspection
- Apply for a variance from a standard's requirements when technical expertise and materials are unavailable and other means have been provided to protect employees
- Take an active role in developing safety and health programs
- Be assured of the confidentiality of any trade secrets
- Submit a written request to the National Institute for Occupational Safety and Health (NIOSH) for information on whether any substance in your workplace has potentially toxic effects in the concentrations being used
- Submit information or comments to OSHA on the issuance, modification, or revocation of OSHA

standards and request a public hearing

Employee Responsibilities

Employees are expected to comply with all applicable standards, rules, regulations, and orders issued under the *OSH Act*.

If you are an employee, you should:

- Read the OSHA “It’s The Law” poster (OSHA 3165) at the jobsite
- Comply with all applicable OSHA standards
- Follow all employer safety and health rules and regulations, and wear or use prescribed protective equipment while engaged in work
- Report hazardous conditions to the supervisor
- Report any job-related injury or illness to the employer, and seek treatment promptly
- Cooperate with the OSHA compliance officer conducting an inspection
- Exercise your rights under the *OSH Act* in a responsible manner

Employee Rights

If you are an employee, you have the right to:

- Review copies of appropriate OSHA standards, rules, regulations, and requirements that the employer should have available at the workplace
- Request information from your employer on safety and health hazards, precautions, and emergency procedures
- Receive adequate training and information
- Request that OSHA investigate if you believe hazardous conditions or violations of standards exist in your workplace
- Have your name withheld from your employer if you file a complaint
- Be advised of OSHA actions regarding your complaint and have an informal review of any decision not to inspect or to issue a citation
- Have your authorized employee representative accompany the OSHA compliance officer during an inspection
- **Respond to or not respond to questions from an OSHA compliance officer**
- **Have your supervisor present during an interview with an OSHA compliance officer**
- Observe any monitoring or measuring of hazardous materials and see any related monitoring or medical records
- Review the Log and Summary of Work-Related Injuries and Illnesses (OSHA 300 and 300A) at a reasonable time and in a reasonable manner
- Request a closing discussion following an inspection
- Submit a written request to the National Institute for Occupational Safety and Health for information on whether any substance in your workplace has potentially toxic effects in the concentrations being used and have your name withheld from your employer
- Object to the abatement period set in a citation issued to your employer
- Participate in hearings conducted by the Occupational Safety and Health Review Commission
- Be notified by your employer if he or she applies for a variance, and testify at a variance hearing and appeal the final decision; and • Submit information or comments to OSHA on the issuance, modification,

or revocation of OSHA standards and request a public hearing

Compliance Officer Authority

The *OSH Act* authorizes OSHA compliance officers—at reasonable times, in a reasonable manner, and within reasonable time limits to:

- Enter any factory, plant, establishment, construction site, or other areas of the workplace or environment where work is being performed
- Inspect and investigate during regular working hours any such place of employment and all pertinent conditions, structures, machines, apparatus, devices, equipment, and materials
- Inspect and investigate at other times any such place of employment and all pertinent conditions, structures, machines, apparatus, devices, equipment, and materials
- Question privately any employer, owner, operator, agent or employee during an inspection or investigation

Advance Notice of Inspections

OSHA generally conducts inspections without advance notice. In fact, anyone who alerts an employer in advance of an OSHA inspection can receive a criminal fine of up to \$1,000 or a six-month jail term or both.

However, under special circumstances, OSHA may give the employer advance notice of an inspection but no more than 24 hours. These special circumstances include:

- Imminent danger situations, which require correction immediately
- Inspections that must take place after regular business hours or require special preparation
- Cases where OSHA must provide advance notice to assure that the employer and employee representative or other personnel will be present
- Situations in which OSHA determines that advance notice would produce a more thorough or effective inspection

Employers receiving advance notice of an inspection must inform their employees' representative or arrange for OSHA to do so.

Search warrants

An employer has the right to require the compliance officer to obtain an inspection warrant before entering the worksite. OSHA may inspect after acquiring a judicially authorized search warrant based on administrative probable cause or evidence of a violation. OSHA may take appropriate steps, including legal action, if an employer still refuses to admit a compliance officer, or if an employer attempts to interfere with an inspection. It is not policy of Clancy & Theys to require a search warrant for OSHA inspections.

Inspection priorities

- **Imminent danger**, or any condition where there is reasonable certainty that a danger exists that can be expected to cause death or serious physical harm immediately or before the danger can be eliminated through normal enforcement procedures. OSHA gives top priority to imminent danger situations.
- **Catastrophes and fatal accidents** resulting in the death of any employee or the hospitalization of three or more employees.
- **Employee complaints** involving imminent danger or an employer violation that threatens death or serious physical harm.

- **Referrals** from other individuals, agencies, organizations, or the media.
- **Planned, or programmed, inspections** in industries with a high number of hazards and associated injuries.
- **Follow-ups** to previous inspections.

The Inspection Process

On-site Inspections

What to expect A typical OSHA inspection includes four stages:

- Presentation of inspector credentials
- Opening conference
- Inspection walkaround
- Closing conference

How an inspection begins

When arriving at a worksite, the OSHA compliance officer displays official credentials and asks to meet an appropriate employer representative. Employers should always insist on seeing the compliance officer's credentials.

An OSHA compliance officer carries N.C. Department of Labor credentials bearing his or her photograph and a serial number that an employer can verify by phoning the nearest OSHA office. Posing as a compliance officer is a violation of law; suspected imposters should be promptly reported to local law enforcement agencies.

Opening conference

In the opening conference, the compliance officer:

- Explains why OSHA selected the establishment for inspection
- Obtains information about the establishment
- Explains the purpose of the visit, the scope of the inspection, walkaround procedures, employee representation, employee interviews, and the closing conference
- Determines whether an OSHA funded consultation is in progress or whether the facility has received an inspection exemption. If so, the compliance officer usually terminates the inspection

The compliance officer asks the employer to select an employer representative to accompany him or her during the inspection. OSHA welcomes, but does not require, an employee representative to accompany the inspector. Under no circumstances may the employer select the employee representative for the walkaround. OSHA does, however, encourage employers and employees to meet together.

Inspection walkaround

After the opening conference, the compliance officer and accompanying representatives proceed through the establishment, inspecting work areas for potentially hazardous working conditions. The compliance officer will discuss possible corrective actions with the employer. OSHA may consult, at times privately, with employees during the inspection walkaround.

An inspection walkaround may cover only part of an establishment, particularly if the inspection resulted from a specific complaint, fatality, or catastrophe or is part of a local or national emphasis program. Other inspections may cover the entire facility, “wall to wall.” Trade secrets observed by the compliance officers are kept confidential. Federal employees who release confidential information without authorization are subject to a \$1,000 fine, one year in jail, or both, and removal from office or employment.

Records reviews

The compliance officer checks posting and recordkeeping practices, including whether the employer has:

- Maintained records of deaths, injuries, and illnesses
- Posted OSHA’s Summary of Work-Related Injuries and Illnesses (OSHA 300A) from February 1 to April 30
- Prominently displayed the OSHA “It’s The Law” poster (OSHA 3165)

The compliance officer also examines records, where required, of employee exposure to toxic substances and harmful physical agents.

On-the-spot corrections

Some apparent violations detected by the compliance officer can be corrected immediately. The compliance officer records such corrections to help evaluate the employer’s good faith for compliance. Apparent violations that have been corrected may still serve as the basis for a citation or notice of proposed penalty or both.

After the walkaround

After the inspection walkaround, the compliance officer holds a closing conference with the employer and the employee representatives, either jointly or separately. During the closing conference, the compliance officer:

- Discusses with the employer all unsafe or unhealthful conditions observed on the inspection and indicates all apparent violations for which a citation may be recommended
- Tells the employer of his or her appeal rights, anti-discrimination rights under 11(c) of the *OSH Act*, and procedures for contesting citations within 15 working days after receiving the citation
- Informs the employer of his or her obligations regarding any citations that may be issued

The compliance officer will hold a separate closing conference with the employees or their representative, if requested, to discuss matters of direct interest to employees and to inform them of their rights after an inspection.

Information in an OSHA citation

Citations inform the employer and employees of:

- Regulations and standards the employer allegedly violated
- Any hazardous working conditions covered by the *OSH Act*’s general duty clause
- The proposed length of time set for abatement of hazards
- Any proposed penalties

Additional information provided

The compliance officer:

- Informs employers of their rights under the *Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA)*. *SBREFA* requires that all federal agencies have in place a policy to reduce or, under appropriate circumstances, waive penalties for violations of standards by small businesses.
- Informs employers that Regional Small Business Regulatory Fairness Boards created under *SBREFA* exist to hear cases if employers are not satisfied with agency resolutions of enforcement matters



- Explains that OSHA area offices offer assistance and can answer questions about programs and activities

Disclosures of penalties

Only the OSHA area director has the authority to tell the employer what penalties the agency will propose. OSHA has up to six months following an inspection to issue a final report. After reviewing the full inspection report, the OSHA area director will:

- Issue citations without penalties



PERSONAL PROTECTION

General

All levels of supervision should be responsible for ensuring that workers wear or use the proper protective equipment and that the equipment is kept in good repair.

Clancy & Theys' workers performing manual labor or operating equipment shall wear clothes that do not hang loosely. Workers are also encouraged not to wear long head or neck coverings, rings, watches, earrings, or have long hair that is unprotected.

Hard Hats

All Clancy & Theys construction workers will wear hard hats as required by OSHA standards. Head protection will be appropriate for the exposure. Bump caps will not be used in construction operations.

Clancy & Theys' workers will not be allowed to wear hats that have had the shell altered by drilling or cutting. These alterations destroy the integrity of the shell, and the hat will not provide adequate protection.

Hard hats shall not be painted or have an excess of stickers that would hinder inspection of the equipment for wear or damage.

Hard hats that have been hit by falling objects should be replaced.

Hard hats will be periodically inspected for defects by the Superintendent/Foreman.

Gloves

Where needed, Clancy & Theys' workers should wear work gloves that are in good condition and are suited for the type of work involved.

Workers that are required to operate or work around drill presses, power saws, and similar rotating machinery should not wear gloves.

Leather gloves, because of their resistance to abrasion, sparks, or molten metal, are recommended for general use and material handling jobs.

Neoprene or nitrile gloves should be worn for use with detergents or plastics. Neoprene, nitrile, or rubber gloves should be worn for protection against acids or chemicals.

Appropriate electrically insulated gloves should be used for work on or in proximity to power lines and other electrical hazards. These gloves should be inspected before each use and dielectrically tested periodically and certified by a laboratory. Destroy defective gloves.

Shoes & Foot Guards

Proper work shoes will be used by all Clancy & Theys construction workers in accordance with the OSHA standards. All safety shoes when required, shall meet nationally recognized standards.

In addition to safety shoes, canvas or leather leggings and spats should be worn by welders, metal lancers, or anyone working around molten metal.

Encourage construction workers to keep their shoes in good repair. Shoes with worn heels or thin and worn soles should not be permitted. Workers should not be allowed to wear sneakers, sandals, or worn-out shoes.

Approved foot guards will be worn by Clancy & Theys' employees while operating jackhammers, soil tamps, and similar equipment when the employee does not have "steel toe" shoes.

Eye and Face Protection

Safety glasses shall be used in all circumstances where there is a potential for eye injury. Nationally recognized standards should be observed when purchasing eye protection.

Plastic face shields shall be used to guard against spraying liquids, corrosives, flying particles, and similar hazards that will potentially come in contact with the face.

Cover-all acid goggles should be worn when washing masonry walls, fluxing metals, handling corrosives, and performing similar work.

Cover-all chipping goggles should be worn when caulking, drilling, picking, sawing, chipping, and while performing other dust-producing operations.

Gas and electric welding operations require burning goggles or a welder's hood with lenses having the proper color density for the type of welding involved. Such lenses should be of the approved safety type.

Protective Equipment for Specific Use

- *Personal Fall Arrest System (PFAS)*

A PFAS should be worn by Clancy & Theys' workers on elevated levels which are not protected by handrails, safety nets or when working from suspended scaffolds. PFAS shall be used in accordance with the Clancy & Theys "Fall Protection" program.

- *Respirators*

Use approved respiratory protective devices appropriate for the airborne contaminate (dust, fumes, smoke, vapors, mist, etc.) present. See the Clancy & Theys "Respirator Safety" program.

- *Protective Clothing*

Workers exposed to potential skin damaging hazards such as detergent, tar, grease, insulating materials, heat/fire, and similar materials, should cover their skin with suitable protective clothing.

Maintenance

All personal protective clothing and equipment should be kept clean and in good repair at all times to ensure proper personal protection. Manufacturer's guidelines for cleaning and maintenance shall be followed.

Training

The supervisor will provide training for each employee who is required to use personal protective equipment. Training will be in accordance with the OSHA standards and the manufacturer's recommendations. Training for employees will include:

- When PPE is necessary
- What PPE is necessary
- How to wear assigned PPE
- Limitations of PPE
- The proper care, maintenance, useful life, and disposal of assigned PPE

Employees must demonstrate, to their supervisors, an understanding of the training and the ability to use the PPE properly before they are allowed to perform work requiring the use of the equipment.

Employees shall not perform work without first outfitting themselves with the appropriate PPE to protect themselves from the hazards they will encounter in the course of their duties.

If their supervisor has reason to believe an employee does not have the understanding or skill required, the supervisor must retrain them. Circumstances where retraining may be required include changes in the



workplace, changes in the equipment being used, or changes in the types of PPE to be used which would render previous training obsolete. Also, inadequacies in an affected employee's knowledge or use of the assigned PPE, which indicates that the employee has not retained the necessary understanding or skills, may require retraining.

The Supervisor will certify in writing that the employee has received and understands the PPE training. Each written certification shall contain the name of each employee trained, the date(s) of training, and identify in detail what equipment the employee was certified for. All training documentation will be sent to the Home Office for recordkeeping data entry.



EH&S POLICY NOTICE (100% Eye Protection)

C&T requires 100% eye protection policy on our construction projects. This policy applies to any C&T employee or subcontractor entering a construction project regardless of the reason or length of stay.

Subcontractors will also comply with this policy on all future projects commencing after the date of this notice. The type of eye protection utilized must be chosen based on a hazard assessment of the assigned employee task. Contact the C&T EH&S Department for eye protection equipment.

Non-Prescription Eye Protection

C&T EH&S Department will furnish non-prescription eye protection to our employees at no cost. C&T will also furnish non-prescription eye protection with +1.5 and +2.0 magnification readers as well as over-the-glasses eye protection at no cost to the employee.

Eye protection will be purchased by the C&T EH&S department and distributed to the projects as required. Individual C&T projects should not purchase eye protection unless approved by the C&T EH&S Department. All C&T eye protection equipment is intended solely for C&T employees only. Subcontractors are responsible for providing personal protective equipment to their respective employees in accordance with the OSHA standards.

Prescription Eye Protection

- *Hourly Field Employees*
 - C&T hourly field employees purchasing safety prescription eye-protection meeting the ANSI Z87.1 standards for the lens and frame are eligible to be reimbursed up to \$250.00 once per year. A copy of the original receipt is required for reimbursement.
- *Salary Employees*
 - C&T salary employees purchasing safety prescription eye-protection meeting the ANSI Z87.1 standards for the lens and frame are eligible to be reimbursed up to \$100.00 once per year. A copy of the original receipt is required for reimbursement.

EH&S POLICY NOTICE (High Visibility Apparel)

C&T requires 100% high visibility apparel policy on our construction projects. This policy applies to any C&T employee or subcontractor entering a construction project regardless of the reason or length of stay.

- *Exception: Construction projects that are solely fit-up or interior finish type projects where no motorized mobile equipment (earthmoving equipment, aerial lifts, scissor lifts, forklifts, etc.) is being utilized.*

Subcontractors will also comply with this policy on all future projects commencing after the date of this notice. Selection of High Visibility Apparel:

- Tasks performed outside of the right-of-way of a road during any time of day.
 - Apparel must be a high visibility shirt, vest, or jacket. However, apparel does not need to be ANSI approved.
- Tasks performed within the right-of-way of a road.
 - Daytime
 - Minimum of ANSI Class II High-Visibility Apparel
 - Nighttime (0:30 minutes prior to sunset until 0:30 after sunrise)
 - ANSI Class III High-Visibility Apparel only



C&T will furnish high visibility apparel (Vests Only) to our employees at no cost.

High visibility apparel will be purchased by the C&T EH&S department and distributed to the projects as required. Individual C&T projects should not purchase high visibility apparel unless approved by the C&T EH&S Department. All C&T eye protection equipment is intended solely for C&T employees only. Subcontractors are responsible for providing personal protective equipment to their respective employees in accordance with the OSHA standards.

RESPIRATORY PROTECTION

General

In the Respiratory Protection program, hazard assessment and selection of proper respiratory PPE is conducted in the same manner as for other types of PPE. In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used.

Responsibilities

All Employees will...

- Follow the requirements of the Respiratory Protection Program.

Management will...

- Implement the requirements of this program
- Provide a selection of respirators as required
- Enforce all provisions of this program

Safety Director will...

- Conduct the respiratory protection program

Supervisors will...

- Review sanitation/storage procedures
- Ensure respirators are properly stored, inspected and maintained
- Monitor compliance for this program
- Provide training for affected employees
- Review compliance and ensure monthly inspection of all respirators
- Provide respirator fit testing

Designated Occupational Health Care Provider - Hartford Casualty Insurance Company

- Will conduct medical aspects of program

Voluntary Use of Respirators

OSHA requires that voluntary use of respirators, when not required by the company, must be controlled as strictly as under required circumstances. So, any employee wearing a respirator voluntarily shall fall under this respiratory protection program, be issued a copy of Appendix D or 1910.134, and fill out a medical questionnaire (Appendix C) and have it evaluated by an appropriate individual – "Hartford Casualty Insurance Company" authorized facility.

Training will be conducted on the proper storage, cleaning, and maintenance of the respirator. All steps will be taken to ensure that the respirator does not pose a health risk to the person wearing it. *Exception: Employees whose only use of respirators involves the voluntary use of filtering (non-sealing) face pieces (dust masks) do not fall under this program.*

Program Evaluation

Evaluations of the workplace are necessary to ensure that the written respiratory protection program is being properly implemented. This includes consulting with employees to ensure that they are using the respirators properly. Evaluations shall be conducted as necessary to ensure implementation and effectiveness.

Program evaluation will include discussions with employees required to use respirators to assess the employees' views on program effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed include, but are not limited to:

- Respirator fit (including the ability to use the respirator without interfering with effective workplace performance)
- Appropriate respirator selection for the hazards to which the employee is exposed
- Proper respirator use under the workplace conditions the employee encounters
- Proper respirator maintenance

Record Keeping

Clancy & Theys will retain written information regarding medical evaluations, fit testing, and the respirator program. This information will facilitate employee involvement in the respirator program, assist the Company in auditing the adequacy of the program, and provide a record for compliance determinations by OSHA.

Training and Information

Effective training for employees who are required to use respirators is essential. The training must be comprehensive, understandable, and recur annually, or as often as necessary.

Training will be provided prior to requiring the employee to use a respirator in the workplace. The training shall ensure that each employee can demonstrate knowledge of at least the following:

- Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator
- Limitations and capabilities of the respirator
- How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions
- How to inspect, put on and remove, use, and check the seals of the respirator
- What the procedures are for maintenance and storage of the respirator
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators
- The general requirements of this program

Retraining shall be conducted annually and when:

- Changes in the workplace or the type of respirator required render previous training obsolete
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill
- Other situations arise in which retraining appears necessary to ensure safe respirator use

Training will be conducted by instructors who have adequate knowledge of OSHA training requirements and is

divided into the following sections:

Classroom Instruction

- Overview of the Company Respiratory Protection Program & OSHA Standard
- Respiratory Protection Safety Procedures
- Respirator selection
- Respirator operation and use
- Why the respirator is necessary
- How improper fit, usage, or maintenance can compromise the protective effect
- Limitations and capabilities of the respirator
- How to use the respirator effectively in emergency situations, including respirator malfunctions
- How to inspect, put on and remove, use, and check the seals of the respirator
- Procedures are for maintenance and storage of the respirator
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators
- Change out schedule and procedure for air purifying respirators

Fit Testing

- For each type and model of respirator used

Hands-on respirator Training

- 🔍 Respirator inspection
- 🔍 Respirator cleaning and sanitizing
- 🔍 Recordkeeping
- 🔍 Respirator storage
- 🔍 Respirator fit check
- 🔍 Emergencies

Basic Respiratory Protection Safety Procedures

- Only authorized and trained Employees may use respirators. Any of these employees may use only the respirator they have been trained on and properly fitted to use.
- Only Physically Qualified Employees may be trained and authorized to use respirators. A pre-authorization and annual certification by a qualified physician will be required and maintained. Any changes in an employee's health or physical characteristics will be reported to the Safety Director and will be evaluated by a qualified physician.
- Only the proper prescribed respirator or SCBA may be used for the job or work environment. Air cleansing respirators may be worn in work environments when oxygen levels are between 19.5 percent to 23.5 percent and when the appropriate air cleansing canister, as determined by the Manufacturer and approved by NIOSH or MESA, for the known hazardous substance is used. SCBAs will be worn in oxygen deficient and oxygen rich environments (below 19.5 percent or above 23.5 percent oxygen).
- Employees working in environments where a sudden release of a hazardous substance is likely, will wear an appropriate respirator for that hazardous substance
- Only SCBAs will be used in oxygen deficient environments, environments with an unknown hazardous

substance, or unknown quantity of a known hazardous substance or any environment that is determined "Immediately Dangerous to Life or Health" (IDLH).

- Employees with respirators loaned on "permanent check out" will be responsible for the sanitation, proper storage, and security. Respirators damaged by normal wear will be repaired or replaced by the Company when returned.
- The last employee using a respirator and/or SCBA which is available for general use will be responsible for proper storage and sanitation. All respirators will be inspected monthly and after each use with documentation to assure its availability for use.
- All respirators will be in a clean, convenient, and sanitary location.
- In the event that Employees must enter a confined space, work in environments with hazardous substances that would be dangerous to life or health should an RPE fail (an SCBA is required in this environment), and/or conduct a HAZMAT entry, a "buddy system" detail will be used with a Safety Watchman with constant voice, visual or signal line communication. Employees will follow the established Emergency Response Program and/or Confined Space Entry Program when applicable.

Selection of Respirators

Clancy & Theys will evaluate the respiratory hazard(s) in each workplace or job site, identify relevant workplace and user factors, and will base respirator selection on these factors. Also estimates of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form will be considered. This selection will include appropriate protective respirators for use in IDLH atmospheres and will limit the selection and use of air-purifying respirators. All selected respirators will be NIOSH-certified.

Filter Classifications - These classifications are marked on the filter or filter package

- ***N-Series: Not Oil Resistant***

Approved for non-oil particulate contaminants Examples: dust, fumes, mists not containing oil

- ***R-Series: Oil Resistant***

Approved for all particulate contaminants, including those containing oil Examples: dusts, mists, fumes

Time restriction of 8 hours when oils are present

- ***P-Series: Oil Proof***

Approved for all particulate contaminants including those containing oil Examples: dust, fumes, mists

See Manufacturer's time use restrictions on packaging

Respirators for IDLH atmospheres

The following respirators will be used in IDLH atmospheres:

- A full-face piece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or
- A combination full face piece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.
- Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.

Respirators for atmospheres that are not IDLH

- The respirators selected shall be adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements, under routine and reasonably foreseeable emergency situations. The respirator selected shall be appropriate for the chemical state and physical

form of the contaminant.

Identification of Filters and Cartridges

- All filters and cartridges shall be labeled, and color coded with the NIOSH approval label and ensure that the label is intact and legible.

Respirator Filter and Canister Replacement

- An important part of the Respiratory Protection Program includes identifying the useful life of canisters and filters used on air-purifying respirators. Each filter and canister shall be equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant
- Filters shall remain in their original sealed package until needed for immediate use
- If there is no ESLI appropriate for conditions, a change schedule for canisters and cartridges that is based on objective information or data which ensures that canisters and cartridges are changed before the end of their service life is required.
- Filters shall be changed on the most limiting factor below:
 - Prior to expiration date
 - Manufacturer's recommendations for the specific use and environment
 - When requested by employee
 - When contaminate odor is detected
 - When restriction of air flow has occurred as evidenced by an increased effort by user to breathe normally
 - When discoloring of the filter media is evident

Physical and Medical Qualifications

Clancy & Theys will strictly adhere to the OSHA standards 29 CFR 1910.1020 for Medical Evaluations & Fit testing of our employees.

Respirator Fit Testing

Before an employee is required to use any respirator with a negative or positive pressure tight-fitting face piece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used. Whenever a different respirator face piece (size, style, model or make) is used, the Company shall ensure that an employee is fit tested prior to initial use of the respirator and at least annually thereafter.

Respirator Operation and Use

Respirators will only be used following the respiratory protection safety procedures established in this program.

The Operations and Use Manuals for each type of respirator will be maintained by the Project Superintendent and be available to all qualified users.

The direct supervisor shall maintain surveillance of work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, the Company shall reevaluate the continued effectiveness of the respirator.

For continued protection of respirator users, the following general use rules apply:

- Users shall not remove respirators while in a hazardous environment.

- Respirators are to be stored in sealed containers out of harmful atmospheres.
- Store respirators away from heat and moisture.
- Store respirators such that the sealing area does not become distorted or warped.
- Store respirator such that the face piece is protected.

Face piece seal protection

The Company does not permit respirators with tight-fitting face pieces to be worn by employees who have:

- Facial hair that comes between the sealing surface of the face piece and the face or that interferes with valve function; or
- Any condition that interferes with the face-to-face piece seal or valve function.
- Corrective glasses or goggles or other personal protective equipment unless such equipment is worn in a manner that does not interfere with the seal of the face piece to the face of the user. The Company shall ensure this.

Continuing Effectiveness of Respirators

The Company shall ensure that employees leave the respirator use area:

- To wash their faces and respirator face pieces as necessary to prevent eye or skin irritation associated with respirator use
- To replace the respirator or the filter, cartridge, or canister elements.
- If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the face piece. In such a case, the Company will replace or repair the respirator before allowing the employee to return to the work area.

Procedures for IDLH atmospheres

No employee of Clancy & Theys is permitted to work in an IDLH atmosphere unless proper employee training has been conducted, proper equipment is selected for use, and all applicable OSHA guidelines are met.

Cleaning and Disinfecting

Clancy & Theys shall provide each respirator user with a respirator that is clean, sanitary, and in good working order. **Cleaning and storage of respirators assigned to a specific employee is the responsibility of the employee** and shall occur:

- As often as necessary to be maintained in a sanitary condition
- Before being worn by different individuals
- After each use when maintained for emergency use
- After each use when used in fit testing and training

Respirator Inspection

- All respirators available for "General Use" and those on "Permanent Check-out", will be inspected prior to and after each use. Should any defects be noted, the respirator will be

taken to the project Superintendent for repair or discarding.

- Damaged Respirators will be either repaired or replaced.
- **The inspection of respirators loaned on "Permanent Check-out" is the responsibility of that trained employee.**

Respirators shall be inspected as follows:

- Before each use and during cleaning when used in routine situations
- At least monthly and in accordance with the manufacturer's recommendations when maintained for use in emergency situations
- Before and after each use and shall be checked for proper function

Respirator inspections include the following:

- A check of respirator function, tightness of connections, and the condition of the various parts including, but not limited to the face piece, head straps, valves, connecting tube, and cartridges, canisters or filters and check of elastomeric parts for pliability and signs of deterioration.

Respirator Storage

Respirators are to be stored as follows:

- All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed or stored to prevent deformation of the face piece and exhalation valve.
- Emergency respirators shall be:
 - Kept accessible to the work area
 - Stored in compartments or in covers that are clearly marked as containing emergency respirators
 - Stored in accordance with any applicable manufacturer's instructions

Repair of Respirators

Respirators that fail an inspection or are otherwise found to be defective will be removed from service to be discarded, repaired, or adjusted in accordance with the following procedures:

- Repairs or adjustments are to be made only by persons appropriately trained to perform such operations and shall use only the respirator manufacturer's NIOSH-approved parts designed for the respirator.
- Reducing and admission valves, regulators, and alarms shall be adjusted or repaired only by the manufacturer, or a technician trained by the manufacturer.
- Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed.

SANITATION

Potable Water

An adequate supply of potable water shall be provided in all places of employment.

"Potable water" means water which meets the quality standards prescribed in the U.S. Public Health Service Drinking Water Standards, published in 42 CFR part 72, or water which is approved for drinking purposes by the State or local authority having jurisdiction.

Portable containers used to dispense drinking water shall be capable of being tightly closed, and equipped with a tap. Water shall not be dipped from containers.

Any container used to distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purpose.

A common (shared) drinking cup is prohibited.

Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

Non-Potable Water

Outlets for non-potable water, such as water for industrial or firefighting purposes only, shall be identified by signs meeting the requirements of Subpart G of the OSHA Standards, to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes.

There shall be no cross-connection, open or potential, between a system furnishing potable water and a system furnishing non-potable water.

Toilet Facilities

Toilets shall be provided for employees according to the following:

- 20 or less workers = 1 toilet
- 20 or more workers = 1 toilet seat and 1 urinal per 40 workers.
- 200 or more workers = 1 toilet seat and 1 urinal per 50 workers.

Washing Facilities

Clancy & Theys shall provide adequate washing facilities for our employees that are engaged in the application of paints, coating, herbicides, or insecticides, or in other operations where contaminants may be harmful to the employees. Such facilities shall be in near proximity to the worksite and shall be so equipped as to enable employees to remove such substances. Washing facilities shall be maintained in a sanitary condition.

Eating & Drinking Areas

No employee shall be allowed to consume food or beverages in a toilet room nor in any area exposed to a toxic material.

Vermin Control

Every enclosed workplace shall be so constructed, equipped, and maintained, so far as reasonably practicable, as to prevent the entrance or harborage of rodents, insects, and other vermin. A continuing and effective extermination program shall be instituted where their presence is detected.



Changing Rooms

Whenever employees are required by a particular standard to wear protective clothing because of the possibility of contamination with toxic materials, change rooms equipped with storage facilities for street clothes and separate storage facilities for the protective clothing shall be provided.

STAIRWAY AND LADDER SAFETY

Introduction

Any time we use stairways and ladders we are working from an elevated position and as we all know, height is hazardous. Therefore stairways and ladders are major sources of injuries and fatalities among construction workers. Many of the injuries are serious enough to require time off the job or even worse, a fatality. OSHA rules apply to all stairways and ladders used in construction, alteration, repair, painting, decorating and demolition of worksites covered by OSHA's construction safety and health standards.

General Requirements

These rules specify when stairways or ladders are required.

- When there is a break in elevation of 19 inches or more and no ramp, runway, embankment, or personnel hoist is available, employers must provide a stairway or ladder at all worker points of access.
- When there is only one point of access between levels, employers must keep it clear of obstacles to permit free passage by workers. If free passage becomes restricted, employers must provide a second point of access and ensure that workers use it.
- When there are more than two points of access between levels, employers must ensure that at least one point of access remains clear.

Note: The standard does not apply to ladders specifically manufactured for scaffold access and egress but does apply to job-made and manufactured portable ladders intended for general purpose use. Rules for ladders used on or with scaffolds are addressed in 29 CFR 1926.451 Subpart L.

Rules for Ladders

The following rules apply to *all ladders*:

- Maintain ladders free of oil, grease, and other slipping hazards.
- Do not load ladders beyond their maximum intended load nor beyond the manufacturer's rated capacity.
- Use ladders only for their designed purpose.
- Use ladders only on stable and level surfaces unless secured to prevent accidental movement.
- Do not use ladders on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental movement. Do not use slip-resistant feet as a substitute for exercising care when placing, lashing, or holding a ladder upon slippery surfaces.
- Secure ladders placed in areas such as passageways, doorways, or driveways. Ladders shall also be secured where they can be displaced by workplace activities or traffic. Or use a barricade to keep traffic or activity away from the ladder.
- Keep areas clear around the top and bottom of ladders.
- Do not move, shift, or extend ladders while in use.
- Use ladders equipped with nonconductive side rails if the worker or the ladder could contact exposed energized electrical equipment.
- Face the ladder when moving up or down.
- Use at least one hand to grasp the ladder when climbing.
- Do not carry objects or loads that could cause loss of balance and falling.
- Do not disassemble extension ladders for the purpose of making two ladders.
- Do not lean step ladders. Spreader bar(s) must be engaged whenever a step ladder is in use.

In addition, the following general requirements apply to all ladders, including ladders built at the jobsite:

- *Double-cleated ladders* or two or more ladders must be provided when ladders are the only way to enter

or exit a work area where 25 or more employees work or when a ladder serves simultaneous two-way traffic.

- Ladder rungs, cleats and steps must be parallel, level and uniformly spaced when the ladder is in position for use.
- Rungs, cleats, and steps of *portable and fixed ladders* (except as provided below) must not be spaced less than 10 inches apart, nor more than 14 inches apart, along the ladder's side rails.
- Rungs, cleats, and steps of *step stools* must not be less than 8 inches apart, nor more than 12 inches apart, between center lines of the rungs, cleats, and steps.
- Rungs, cleats, and steps at the base section of *extension trestle ladders* must not be less than 8 inches nor more than 18 inches apart, between center lines of the rungs, cleats and steps. The rung spacing on the extension section must not be less than 6 inches nor more than 12 inches.
- Ladders must not be tied or fastened together to create longer sections unless they are specifically designed for such use.
- When splicing side rails, the resulting side rail must be equivalent in strength to a one-piece side rail made of the same material.
- Two or more separate ladders used to reach an elevated work area must be offset with a platform or landing between the ladders, except when portable ladders are used to gain access to fixed ladders.
- Ladder components must be surfaced to prevent snagging of clothing and injury from punctures or lacerations.
- *Wood ladders* must not be coated with any opaque covering except for identification or warning labels, which may be placed only on one face of a side rail.

Note: A Competent Person must inspect ladders for visible defects periodically and after any incident that could affect their safe use.

Specific Types of Ladders

- Do not use *single-rail ladders*.
- Use *non-self-supporting ladders* at an angle where the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder.
- Use *wooden ladders* built at the jobsite with spliced side rails at an angle where the horizontal distance is one-eighth of the working length of the ladder.
- The top of a non-self-supporting ladder must be placed with two rails supported equally unless it is equipped with a single support attachment.

Stepladders

- Do not use the top or top step of a stepladder as a step.
- Do not use cross bracing on the rear section of stepladders for climbing unless the ladders are designed and provided with steps for climbing on both front and rear sections.
- Metal spreader or locking devices must be provided on stepladders to hold the front and back sections in an open position when ladders are being used.

Portable Ladders

- The minimum clear distance between side rails for all portable ladders must be 11.5 inches.

- The rungs and steps of portable metal ladders must be corrugated, knurled, dimpled, coated with skid-resistant material or treated to minimize slipping.
- When portable ladders are used for access to an upper landing surface, the side rails must extend at least 3 feet above the upper landing surface. When such an extension is not possible, the ladder must be secured and a grasping device such as a grab rail must be provided to assist workers in mounting and dismounting the ladder.
- A ladder extension must not deflect under a load that would cause the ladder to slip off its supports.

Defective Ladder

Ladders needing repairs are subject to the following rules:

- Portable ladders with structural defects such as broken or missing rungs, cleats, or steps, broken or split rails, corroded components or other faulty or defective components must immediately be marked defective or tagged with "Do Not Use" or similar language and withdrawn from service until repaired.
- Fixed ladders with structural defects such as broken or missing rungs, cleats, or steps, broken or split rails or corroded components must be withdrawn from service until repaired.
- Defective fixed ladders are considered withdrawn from use when they are immediately tagged with "Do Not Use" or similar language or marked in a manner that identifies them as defective or blocked such as with a plywood attachment that spans several rungs.
- Ladder repairs must restore the ladder to a condition meeting its original design criteria before the ladder is returned to use.
- Defective ladders are not to be taken home by any employee of Clancy & Theys.

Rules for Stairways

The rules covering stairways and their components generally depend on how and when stairs are used. Specifically, there are rules for stairs used during construction and stairs used temporarily during construction, as well as rules governing stair rails and handrails.

Stairways Used During Construction

The following requirements apply to all *stairways used during construction*:

- Stairways that will not be a permanent part of the building under construction must have landings at least 30 inches deep and 22 inches wide at every 12 feet or less of vertical rise.
- Stairways must be installed at least 30 degrees and no more than 50 degrees from the horizontal.
- Variations in riser height or stair tread depth must not exceed 1/4 inch in any stairway system, including any foundation structure used as one or more treads of the stairs.
- Doors and gates opening directly onto a stairway must have a platform that extends at least 20 inches beyond the swing of the door or gate.
- Metal pan landings and metal pan treads must be secured in place before filling.
- Stairway parts must be free of dangerous projections such as protruding nails.
- Slippery conditions on stairways must be corrected.
- Workers must not use spiral stairways that will not be a permanent part of the structure.

Temporary Stairs

- The following requirements apply to *stairways used temporarily during construction*, except during construction of the stairway.
- Do not use stairways with metal pan landings and treads if the treads and/or landings have not been filled in with concrete or other materials except when the pans of the stairs and/or landings are temporarily filled in with wood or other materials. All treads and landings must be replaced when worn below the top edge of the pan.
- Do not use skeleton metal frame structures and steps (where treads and/or landings will be installed later) unless the stairs are fitted with secured temporary treads and landings.

Note: Temporary treads must be made of wood or other solid material and installed the full width and depth of the stair.

Stair Rails

The following general requirements apply to all stair rails:

- Stairways with four or more risers or rising more than 30 inches in height, whichever is less, must be installed along each unprotected side or edge. When the top edge of a stair rail system also serves as a handrail, the height of the top edge must be no more than 37 inches nor less than 36 inches from the upper surface of the stair rail to the surface of the tread.
- Stair rails must be not less than 36 inches in height.
- Top edges of stair rail systems used as handrails must not be more than 37 inches high nor less than 36 inches from the upper surface of the stair rail system to the surface of the tread.
- Stair rail systems and handrails must be surfaced to prevent injuries such as punctures or lacerations and to keep clothing from snagging.
- Ends of stair rail systems and handrails must be built to prevent dangerous projections, such as rails protruding beyond the end posts of the system.
- Unprotected sides and edges of stairway landings must have standard 42-inch guardrail systems.
- Intermediate vertical members, such as balusters used as guardrails, must not be more than 19 inches apart.
- Other intermediate structural members, when used, must be installed so that no openings are more than 19 inches wide.
- Screens or mesh, when used, must extend from the top rail to the stairway step and along the opening between top rail supports.

Handrails

Requirements for handrails are as follows:

- Handrails and top rails of the stair rail systems must be able to withstand, without failure, at least 200 pounds of weight applied within 2 inches of the top edge in any downward or outward direction, at any point along the top edge.
- Handrails must not be more than 37 inches high nor less than 30 inches from the upper surface of the handrail to the surface of the tread.

- Handrails must provide an adequate handhold for employees to grasp to prevent falls.
- Temporary handrails must have a minimum clearance of 3 inches between the handrail and walls, stair rail systems and other objects.
- Stairways with four or more risers, or that rise more than 30 inches in height, whichever is less, must have at least one handrail.
- Winding or spiral stairways must have a handrail to prevent use of areas where the tread width is less than 6 inches.

Midrails

- Midrails, screens, mesh, intermediate vertical members, or equivalent intermediate structural members must be provided between the top rail and stairway steps to the stair rail system.
- When midrails are used, they must be located midway between the top of the stair rail system and the stairway steps.

Training Requirements

Clancy & Theys shall train all employees to recognize hazards related to ladders and stairways and instruct them to minimize these hazards.

Clancy & Theys shall ensure that each employee is trained by a Competent Person in the following areas, as applicable:

- Nature of fall hazards in the work area
- Correct procedures for erecting, maintaining, and disassembling the fall protection systems to be used
- Proper construction, use, placement, and care in handling of all stairways and ladders
- Maximum intended load-carrying capacities of ladders used

Retaining

Clancy & Theys will retrain each employee as necessary to maintain their understanding and knowledge on the safe use and construction of ladders and stairs.

STEEL ERECTION SAFETY PROGRAM

Policy

It is not a practice for Clancy & Theys to self-perform steel erection. It is standard practice for this task to be subcontracted. Subcontractors shall have a written Steel Erection Program in place and will be responsible for the safety of their employees as well as not endangering the employees of Clancy & Theys or other subcontractors. Steel erection contractors are hired and will comply with all applicable OSHA, Government Agencies, Industry Standards, and this Safety Program.

It is the policy of Clancy & Theys to ensure that its employees are provided with the proper training and equipment necessary to safely perform steel erection when the need arises. No employee is permitted to work in the process of steel erection beyond their level of training. Employees are required to adhere to this manual and all OSHA standards covered in §1926.750 – Subpart R.

Pre-Erection Procedures

Written Approvals

Clancy & Theys will receive from the appropriate engineer(s) or testing service the following written approvals prior to commencement of the erection process. This information will be copied and forwarded to the steel erection contractor.

The concrete in the footings, piers and walls and the mortar in the masonry piers and walls have attained, based on an appropriate ASTM standard test method of field-cured samples, either 75 percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.

Any repairs, replacements and modifications to the anchor bolts were conducted in accordance with §1926.755(b). It will be the policy of Clancy & Theys not to begin the steel erection process until both items listed above are received in writing.

Site Preparations

The following will be provided and maintained for or by Clancy & Theys, depending on site control, before and throughout the steel erection process:

- Adequate access roads into and through the site for the safe delivery and movement of derricks, cranes, trucks, other necessary equipment, and the material to be erected; and means and methods for pedestrian and vehicular control.
- A firm, properly graded, drained area, readily accessible to the work with adequate space for the safe storage of materials and the safe operation of the erector's equipment.

Pre-Planning of Lifts

Clancy & Theys will ensure that all hoisting operations in steel erection shall be pre-planned to ensure that the requirements of § 1926.753(d) are met.

Working under loads

Routes for suspended loads shall be pre-planned to ensure that no employee is required to work directly below a suspended load except for:

- Employees engaged in the initial connection of the steel or employees necessary for the hooking or unhooking of the load.
- When working under suspended loads, the following criteria shall be met:
 - Materials being hoisted shall be rigged to prevent unintentional displacement
 - Hooks with self-closing safety latches or their equivalent shall be used to prevent components from slipping out of the hook
 - All loads shall be rigged by a qualified rigger

Crane Inspections

The following crane inspections will be in accordance with the ANSI B30.5-1968 standards:

- See "Inspection of Cranes In Steel Erection" form included in this policy.
- If any deficiency is identified, an immediate determination shall be made by the competent person as to whether the deficiency constitutes a hazard.
- If the deficiency is determined to constitute a hazard, the hoisting equipment shall be removed from service until the deficiency has been corrected.

Rigging Inspections

Rigging inspection will be performed by a Qualified Person prior to each shift and in accordance to OSHA 1926.251 – "Rigging Equipment for Handling Material" standards.

Crane Operator Responsibility

- It will be the sole responsibility of the crane operator to make decisions regarding the hoisting of materials or personnel. The operator's decisions will be based on their expertise as a competent and qualified crane operator.
- Clancy & Theys will not require or direct a hoist operation in which the crane operator deems unsafe.
- Whenever there is any doubt as to safety, the operator shall have the full authority to stop and refuse to handle loads until safety has been assured.

Hoisting of Personnel



It is Clancy & Theys' erector's policy that no employee will be hoisted by a crane unless determined by a competent person that it will be impractical to perform erection tasks using another conventional method.

If a person is to be hoisted by a crane, the following shall be in effect:

- NO RIDING The Headache Ball is permitted
- Only approved Man Baskets shall be used
- This process shall be used only as a last resort

Safety Latches and Hooks

Safety latches and hooks will not be deactivated or made inoperable unless directed and supervised by a competent person and a qualified rigger.

EXCEPTION:

When a qualified rigger has determined that the hoisting and placing of purlins, joists, and columns can be performed more safely by doing so.

Multiple Rigging

- Multiple rigging shall only be made with a Multiple Rigging Assembly suited for the task.
- Picks shall not exceed a maximum number of 5 members per lift.
- Only beams and similar structural steel shall be lifted.
- Clancy & Theys will train its employees in multiple rigging techniques and the avoidance of the hazards associated with a multiple rigging lift.
- Multiple rigging lifts shall only be performed if the rigging equipment manufacturer allows such task.
- Multiple lift rigging assembly components shall be specifically designed for the task.
- The total load shall not exceed capacity of the rigging assembly.
- Rigging shall be from the top down and members are to be rigged at least 7' apart.

Building Structural Steel Assembly

Structural stability shall be always maintained during the erection process. The following additional requirements shall apply for multi-story structures:

- The permanent floors shall be installed as the erection of structural members progresses, and there shall be not more than eight stories between the erection floor and the upper-most permanent floor, except where the structural integrity is maintained because of the design.

- At no time shall there be more than four floors or 48 feet, whichever is less, of unfinished bolting or welding above the foundation or uppermost permanently secured floor, except where the structural integrity is maintained because of the design.
- A fully planked or decked floor or nets shall be maintained within two stories or 30 feet, whichever is less, directly under any erection work being performed.

Walking/working surfaces

Shear connectors (such as headed steel studs, steel bars or steel lugs), reinforcing bars, deformed anchors or threaded studs shall not be attached to the top flanges of beams, joists or beam attachments so that they project vertically from or horizontally across the top flange of the member until after the metal decking, or other walking/working surface, has been installed.

When shear connectors are used in construction of composite floors, roofs and bridge decks, employees shall lay out and install the shear connectors after the metal decking has been installed, using the metal decking as a working platform. Shear connectors shall not be installed from within a controlled decking zone “CDZ”

Slip resistance of skeletal structural steel

Workers shall not be permitted to walk the top surface of any structural steel member installed after July 18, 2006, that has been coated with paint or similar material unless documentation or certification that 1926.750 Appendix B has been met.

Plumbing-up

When deemed necessary by the competent person, plumbing-up equipment shall be installed in conjunction with the steel erection process to ensure the stability of the structure.

When used, plumbing-up equipment shall be in place and properly installed before the structure is loaded with construction material such as loads of joists, bundles of decking or bundles of bridging.

Plumbing-up equipment shall be removed only when approved by a competent person.

Metal decking

Bundle packaging and strapping shall not be used for hoisting unless specifically designed for that purpose.

If loose items such as dunnage, flashing, or other materials are placed on the top of metal decking bundles to be hoisted, such items shall be secured to the bundles.

Bundles of metal decking on joists shall be landed in accordance with 1926.757(e)(4).

Metal decking bundles shall be landed on framing members so that enough support is provided to allow the bundles to be unbanded without dislodging the bundles from the supports.

At the end of the shift or when environmental or jobsite conditions require, metal decking shall be secured against displacement.

Roof and floor holes and openings

Metal decking at roof and floor holes and openings shall be installed as follows:

- Framed metal deck openings shall have structural members turned down to allow continuous deck installation except where not allowed by structural design constraints or constructability.
- Roof and floor holes and openings shall be decked over. Where large size, configuration or other structural design does not allow openings to be decked over (such as elevator shafts, stair wells, etc.) employees shall be protected in accordance with.
- 1926.760(a)(1) Each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge more than 15 feet (4.6 m) above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.
- Metal decking holes and openings shall not be cut until immediately prior to being permanently filled with the equipment or structure needed or intended to fulfill its specific use, or they shall be immediately covered.

Covering roof and floor openings

Covers for roof and floor openings shall be capable of supporting, without failure, twice the weight of the employees, equipment and materials that may be imposed on the cover at any one time.

All covers shall be secured when installed to prevent accidental displacement by the wind, equipment, or employees.

All covers shall be painted with high-visibility paint or shall be marked with the word "HOLE" or "COVER" to provide warning of the hazard.

Smoke dome or skylight fixtures that have been installed, are not considered covers for the purpose of this section unless they meet the proper strength requirements.

Decking gaps around columns

Wire mesh, exterior plywood, or equivalent, shall be installed around columns where planks or metal decking do not fit tightly. The materials used must be of sufficient strength to provide fall protection for personnel and prevent objects from falling through.

Installation of metal decking

Metal decking shall be laid tightly and immediately secured upon placement to prevent accidental movement or displacement.

During initial placement, metal decking panels shall be placed to ensure full support by structural members.

General requirements for erection stability

All columns shall be anchored by a minimum of 4 anchor bolts.

Each column anchor bolt assembly, including the column-to-base plate weld and the column foundation, shall be designed to resist a minimum eccentric gravity load of 300 pounds located 18 inches from the extreme outer face of the column in each direction at the top of the column shaft.

Columns shall be set on level finished floors, pre-grouted leveling plates, leveling nuts, or shim packs which are adequate to transfer the construction loads.

Columns shall be evaluated by a competent person to determine whether guying or bracing is needed; if guying or bracing is needed, it shall be installed.

Beams & Columns

During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with at least two bolts per connection and drawn up wrench tight.

A Competent Person shall determine if more than two bolts are necessary to ensure the stability of cantilevered members. If additional bolts are needed, they shall be installed.

Diagonal bracing

Solid web structural members used as diagonal bracing shall be secured by at least one bolt per connection drawn up wrench tight.

Double connections at columns and/or at beam webs over a column

When two structural members on opposite sides of a column web, or a beam web over a column, are connected sharing common connection holes, at least one bolt with its wrench-tight nut shall remain connected to the first member unless a shop-attached or field-attached seat or equivalent connection device is supplied with the member to secure the first member and prevent the column from being displaced.

If a seat or equivalent device is used, the seat (or device) shall be designed to support the load during the double connection process. It shall be adequately bolted or welded to both a supporting member and the first member before the nuts on the shared bolts are removed to make the double connection.

Perimeter columns

Perimeter columns shall not be erected unless:

- The perimeter columns extend a minimum of 48 inches above the finished floor to permit installation of perimeter safety cables prior to erection of the next tier, except where constructability does not allow.

- The perimeter columns have holes or other devices in or attached to perimeter columns at 42-45 inches above the finished floor and the midpoint between the finished floor and the top cable to permit installation of perimeter safety cables.

Open Web Steel Joist

Except as provided in the following section (*), where steel joists are used and columns are not framed in at least two directions with solid web structural steel members, a steel joist shall be field bolted at the column to provide lateral stability to the column during erection. For the installation of this joist:

- A vertical stabilizer plate shall be provided on each column for steel joists. The plate shall be a minimum of 6 inch by 6 inch and shall extend at least 3 inches below the bottom chord of the joist with a 13/16-inch hole to provide an attachment point for guying or plumbing cables.
- The bottom chords of steel joists at columns shall be stabilized to prevent rotation during erection.
- Hoisting cables shall not be released until the seat at each end of the steel joist is field-bolted, and each end of the bottom chord is restrained by the column stabilizer plate.

* Where constructability does not allow a steel joist to be installed at the column an alternate means of stabilizing joists shall be installed on both sides near the column and shall provide stability equivalent to the paragraph above, be designed by a qualified person, be shop installed; and be included in the erection drawings. Hoisting cables shall not be released until the seat at each end of the steel joist is field-bolted and the joist is stabilized.

Where steel joists at or near columns span 60 feet or less, the joist shall be designed with sufficient strength to allow one employee to release the hoisting cable without the need for erection bridging.

Where steel joists at or near columns span more than 60 feet, the joists shall be set in tandem with all bridging installed unless an alternative method of erection, which provides equivalent stability to the steel joist, is designed by a qualified person, and is included in the site-specific erection plan.

A steel joist or steel joist girder shall not be placed on any support structure unless such structure is stabilized.

When steel joist(s) are landed on a structure, they shall be secured to prevent unintentional displacement prior to installation.

No modification that affects the strength of a steel joist or steel joist girder shall be made without the approval of the project structural engineer of record.

Field-bolted joists

Except for steel joists that have been pre-assembled into panels, connections of individual steel joists to steel structures in bays of 40 feet (12.2 m) or more shall be fabricated to allow for field bolting during erection.

- These connections shall be field bolted unless constructability does not allow.

- Steel joists and steel joist girders shall not be used as anchorage points for a fall arrest system unless written approval to do so is obtained from a qualified person.
- A bridging terminus point shall be established before bridging is installed.

Attachment of steel joists and steel joist girders

Each end of "K" series steel joists shall be attached to the support structure with a minimum of two 1/8-inch fillet welds 1 inch long or with two 1/2-inch bolts, or the equivalent.

Each end of "LH" and "DLH" series steel joists and steel joist girders shall be attached to the support structure with a minimum of two 1/4-inch fillet welds 2 inches long, or with two 3/4-inch bolts, or the equivalent.

Each steel joist shall be attached to the support structure, at least at one end on both sides of the seat, immediately upon placement in the final erection position and before additional joists are placed.

Panels that have been pre-assembled from steel joists with bridging shall be attached to the structure at each corner before the hoisting cables are released.

Erection of steel joists

Before hoisting cables are released, both sides of the seat of one end of each steel joist that requires bridging shall be attached to the support structure. (Refer to Tables A and B.)

For joists over 60 feet, both ends of the joist shall be attached as specified in the section above "Attachment of steel joist and steel girders" and the provisions of the "Erection Bridging" section are met before the hoisting cables are released.

On steel joists that do not require erection bridging under Tables A and B, only one employee shall be allowed on the joist until all bridging is installed and anchored.

Employees shall not be allowed on steel joists where the span of the steel joist is equal to or greater than the span shown in Tables A and B except in accordance with the section on "Erection Bridging."

When permanent bridging terminus points cannot be used during erection, additional temporary bridging terminus points are required to provide stability.

Table A -- Erection Bridging for Short Span Joists	
Joist	Span
8L1	NM
10K1	NM
12K1	23-0
12K3	NM

12K5	NM
14K1	27-0
14K3	NM
14K4	NM
14K6	NM
16K2	29-0
16K3	30-0
16K4	32-0
16K5	32-0
16K6	NM
16K7	NM
16K9	NM
18K3	31-0
18K4	32-0
18K5	33-0
18K6	35-0
18K7	NM
18K9	NM
18K10	NM
20K3	32-0
20K4	34-0
20K5	34-0
20K6	36-0
20K7	39-0
20K9	39-0
20K10	NM

22K4	34-0
22K5	35-0
22K6	36-0
22K7	40-0
22K9	40-0
22K10	40-0
22K11	40-0
24K4	36-0
24K5	38-0

Table A -- Erection Bridging for Short Span Joists

24K6	39-0
24K7	43-0
24K8	43-0
24K9	44-0
24K10	NM
24K12	NM
26K5	38-0
26K6	39-0
26K7	43-0
26K8	44-0
26K9	45-0
26K10	49-0
26K12	NM
28K6	40-0
28K7	43-0

28K8	44-0
28K9	45-0
28K10	49-0
28K12	53-0
30K7	44-0
30K8	45-0
30K9	45-0
30K10	50-0
30K11	52-0
30K12	54-0
10KCS1	NM
10KCS2	NM
10KCS3	NM
12KCS1	NM
12KCS2	NM
12KCS3	NM
14KCS1	NM
14KCS2	NM
14KCS3	NM
16KCS2	NM
16KCS3	NM
16KCS4	NM
16KCS5	NM
18KCS2	35-0
18KCS3	NM
18KCS4	NM

18KCS5	NM
20KCS2	36-0
20KCS3	39-0
20KCS4	NM

Table A -- Erection Bridging for Short Span Joists

20KCS5	NM
22KCS2	36-0
22KCS3	40-0
22KCS4	NM
22KCS5	NM
24KCS2	39-0
24KCS3	44-0
24KCS4	NM
24KCS5	NM
26KCS2	39-0
26KCS3	44-0
26KCS4	NM
26KCS5	NM
28KCS2	40-0
28KCS3	45-0
28KCS4	53-0
28KCS5	53-0
30KCS3	45-0
30KCS4	54-0
30KCS5	54-0

NM= diagonal bolted bridging not mandatory for joists under 40 feet

Table B -- Erection Bridging for Long Span Joists

Joist	Span
18LH02	33-0
18LH03	NM
18LH04	NM
18LH05	NM
18LH06	NM
18LH07	NM
18LH08	NM
18LH09	NM
20LH02	33-0
20LH03	38-0
20LH04	NM
20LH05	NM
20LH06	NM
20LH07	NM
20LH08	NM
20LH09	NM
20LH10	NM
24LH03	35-0

Table B -- Erection Bridging for Long Span Joists	
24LH04	39-0
24LH05	40-0
24LH06	45-0
24LH07	NM
24LH08	NM
24LH09	NM
24LH10	NM
24LH11	NM
28LH05	42-0
28LH06	46-0
28LH07	NM
28LH08	NM
28LH09	NM
28LH10	NM
28LH11	NM
28LH12	NM
28LH13	NM
32LH06	47-0 through 60-0
32LH07	47-0 through 60-0
32LH08	55-0 through 60-0
32LH09	NM through 60-0
32LH10	NM through 60-0
32LH11	NM through 60-0

32LH12	NM through 60-0
32LH13	NM through 60-0
32LH14	NM through 60-0
32LH15	NM through 60-0
36LH07	47-0 through 60-0
36LH08	47-0 through 60-0
36LH09	57-0 through 60-0
36LH10	NM through 60-0
36LH11	NM through 60-0
36LH12	NM through 60-0
36LH13	NM through 60-0
36LH14	NM through 60-0
36LH15	NM through 60-0

NM = diagonal bolted bridging not mandatory for joists under 40 f

Erection bridging

Where the span of the steel joist is equal to or greater than the span shown in Tables A and B, the following shall apply:

- A row of bolted diagonal erection bridging shall be installed near the mid-span of the steel joist
- Hoisting cables shall not be released until this bolted diagonal erection bridging is installed and anchored
- No more than one employee shall be allowed on these spans until all other bridging is installed and anchored

Where the span of the steel joist is over 60 feet and up and including 100 feet, the following shall apply:

- All rows of bridging shall be bolted diagonal bridging

- Two rows of bolted diagonal erection bridging shall be installed near the third points of the steel joist
- Hoisting cables shall not be released until this bolted diagonal erection bridging is installed and anchored
- No more than two employees shall be allowed on these spans until all other bridging is installed and anchored

Where the span of the steel joist is over 100 feet and up to and including 144 feet, the following shall apply:

- All rows of bridging shall be bolted diagonal bridging
- Hoisting cables shall not be released until all bridging is installed and anchored
- No more than two employees shall be allowed on these spans until all bridging is installed and anchored

For steel members spanning over 144 feet:

- The erection methods used shall be in accordance with the “Beams & Columns” section.

Where any steel joist specified in this section is a bottom chord-bearing joist, a row of bolted diagonal bridging shall be provided near the support(s). This bridging shall be installed and anchored before the hoisting cable(s) is released.

When bolted diagonal erection bridging is required by this section, the following shall apply:

- The bridging shall be indicated on the erection drawing
- The erection drawing shall be the exclusive indicator of the proper placement of this bridging
- Shop-installed bridging clips, or functional equivalents, shall be used where the bridging bolts to the steel joists
- When two pieces of bridging are attached to the steel joist by a common bolt, the nut that secures the first piece of bridging shall not be removed from the bolt for the attachment of the second
- Bridging attachments shall not protrude above the top chord of the steel joist

Landing and placing loads

During the construction period, the employer placing a load on steel joists shall ensure that the load is distributed so as not to exceed the carrying capacity of any steel joist.

**Except for the sections below, no construction loads are allowed on the steel joists until all bridging is installed and anchored and all joist-bearing ends are attached.*

The weight of a bundle of joist bridging shall not exceed a total of 1,000 pounds. A bundle of joist bridging shall be placed on a minimum of three steel joists that are secured at one end. The edge of the bridging bundle shall be positioned within 1 foot of the secured end.

Landing and placing loads

*No bundle of decking may be placed on steel joists until all bridging has been installed and anchored and all joist bearing ends attached, unless all the following conditions are met:

- The employer has first determined from a qualified person and documented in a site-specific erection plan that the structure or portion of the structure can support the load
- The bundle of decking is placed on a minimum of three steel joists
- The joists supporting the bundle of decking are attached at both ends
- At least one row of bridging is installed and anchored
- The total weight of the bundle of decking does not exceed 4,000 pounds
- Placement of the bundle of decking shall be in accordance with this section

The edge of the construction load shall be placed within 1 foot of the bearing surface of the joist end.

Falling Object Protection

Securing loose items aloft. All materials, equipment, and tools, which are not in use while aloft, shall be secured against accidental displacement.

Protection from falling objects other than materials being hoisted. The controlling contractor shall bar other construction processes below steel erection unless overhead protection for the employees below is provided.

Fall Protection for Steel Erectors

Except as provided by the “Controlled Decking Zone” section, each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge more than 15 feet above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.

Perimeter safety cables

- On multi-story structures, perimeter safety cables shall be installed at the final interior and exterior perimeters of the floors as soon as the metal decking has been installed.

Connectors

Each connector shall:

- Be protected in accordance with Except as provided by the “Controlled Decking Zone” section, each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected

side or edge more than 15 feet above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.

- Be protected from fall hazards of more than two stories or 30 feet above a lower level, whichever is less
- Have completed connector training in accordance with the “Training” section
- Be provided, at heights over 15 and up to 30 feet above a lower level, with a personal fall arrest system, positioning device system or fall restraint system and wear the equipment necessary to be able to be tied off or be provided with other means of protection from fall hazards.

Controlled Decking Zone (CDZ)

A controlled decking zone may be established in that area of the structure over 15 feet and up to 30 feet above a lower level where metal decking is initially being installed and forms the leading edge of a work area. In each CDZ, the following shall apply:

- Each employee working at the leading edge in a CDZ shall be protected from fall hazards of more than two stories or 30 feet, whichever is less.
- Access to a CDZ shall be limited to only those employees engaged in leading edge work.
- The boundaries of a CDZ shall be designated and clearly marked.
- The CDZ shall not be more than 90 feet wide and 90 feet deep from any leading edge.
- The CDZ shall be marked using control lines or the equivalent.
- Each employee working in a CDZ shall have completed CDZ training.
- Unsecured decking in a CDZ shall not exceed 3,000 square feet.
- Safety deck attachments shall be installed in the CDZ from the leading edge back to the control line and shall have at least two attachments for each metal decking panel.
- Final deck attachments and installation of shear connectors shall not be performed in the CDZ.

Criteria for fall protection equipment

- Guardrail systems, safety net systems, personal fall arrest systems, positioning device systems and their components shall conform to the criteria in § 1926.502 in the OSHA Standards.

Custody of fall protection

Fall protection provided by the steel erector shall remain in the area where steel erection activity has been completed, to be used by other trades, only if the controlling contractor or its authorized representative:

- Has directed the steel erector to leave the fall protection in place

- Has inspected and accepted control and responsibility of the fall protection prior to authorizing persons other than steel erectors to work in the area

Training

Training required by this section shall be provided by a qualified person(s).

Fall hazard training

The employer shall provide a training program for all employees exposed to fall hazards. The program shall include training and instruction in the following areas:

- The recognition and identification of fall hazards in the work area
- The use and operation of guardrail systems (including perimeter safety cable systems), personal fall arrest systems, positioning device systems, fall restraint systems, safety net systems, and other protection to be used
- The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used
- The procedures to be followed to prevent falls to lower levels and through or into holes and openings in walking/working surfaces and walls

Special training programs

In addition to the training required in paragraphs (a) and (b) of this section, the employer shall provide special training to employees engaged in the following activities:

Multiple lift rigging procedure

The employer shall ensure that each employee who performs multiple lift rigging has been provided training in the following areas:

- The nature of the hazards associated with multiple lifts
- The proper procedures and equipment to perform multiple lifts

Connector procedures

The employer shall ensure that each connector has been provided training in the following areas:

- The nature of the hazards associated with connecting
- The establishment, access, proper connecting techniques and work practices

Controlled Decking Zone Procedures

Where CDZs are being used, the employer shall assure that each employee has been provided training in the following areas:



- The nature of the hazards associated with work within a controlled decking zone
- The establishment, access, proper installation techniques and work practices

SUBSTANCE ABUSE POLICY

As a part of Clancy & Theys Construction Company's commitment to safeguarding the health of its employees, providing a safe place for its employees to work, and supplying its customers with the highest quality construction and service possible, this policy establishes the company's position on the use or abuse of alcohol, drugs, or other controlled substances by its employees. Because substance abuse, either while at work or away from work, can seriously endanger the safety of employees and render it impossible to supply top quality construction and service, Clancy & Theys has established this program to detect users and remove abusers of alcohol, drugs, or other controlled substances. Clancy & Theys is committed to preventing the use and/or presence of these substances in the workplace. It is also the policy of Clancy & Theys to provide as an employee benefit, the Clancy & Theys Employee Assistance Program, to deal with substance abuse and other problems that company employees, and their families might encounter.

The intent of this policy is:

1. To provide clear guidelines and consistent procedures for handling incidents of employees abuse of alcohol, drugs or controlled substances that affect job performance, and to make every effort to institute and maintain a drug-free workplace.
2. To ensure that employees conform to all state and federal regulations regarding alcohol, drugs, or controlled substances.
3. To provide substance abuse prevention education for all employees and supervisory training regarding problem recognition and the implementation of this policy.
4. To help the employees and their family members in resolving problems which affect job performance.

The essential parts of this program are as follows:

1. Clancy & Theys prohibits the unlawful manufacture, distribution, dispensation, presence or use of alcohol, drugs or other controlled substances on its property or worksites. Employees violating this prohibition will be referred to Clancy & Theys' EAP, or disciplined up to and including, termination.
2. Clancy & Theys will present a Drug Free Awareness Education Program for all supervisors and employees on a periodic basis.
3. This policy applies to all employees of Clancy & Theys.

4. The Clancy & Theys Employee Assistance Program (EAP) is available to all employees and their families for the purpose of dealing with alcohol or drug problems before these problems become serious enough to affect job performance or become life threatening.

5. On projects covered by the Drug Free Workplace Act or other federal or state contracts, laws or regulations, all employees will be given a copy of this policy, be required to notify the company of any conviction of a criminal drug statute in the workplace within 5 days and acknowledge receipt of this policy by signing the Employee Acknowledgement Form.

Miscellaneous Matters

- A. This Substance Abuse Program policy primarily governs company actions around alcohol, drugs or other controlled substances. Other company policies may be applicable in this area to the extent that they do not conflict with this policy.
- B. In any of the situations described in this policy, if prescription drugs are detected and the applicant or employee can prove medical or professional authorization for the prescription, the company reserves the right to contact the individual's physician or professional for verification and review of the situation.
- C. No part of this policy, nor any of the procedures hereunder, is intended to affect the company's right to manage its workplace, to discipline its employees, or guarantee employment, continued employment or terms or conditions of employment. The Substance Abuse Program in no way creates an obligation or contract of employment. The company reserves the right to alter or amend the program at any time in its sole discretion.
- D. If any part of this policy is determined to be void or unenforceable under state or federal law, the remainder of the policy, to the extent possible, will remain in full force and effect.
- E. Employees are the company's most valuable resource, and, for that reason, their health and safety are of paramount concern. Therefore, as a condition of employment, all employees are required to read and abide by the terms of this amended policy.
- F. To ensure that such drugs and alcohol do not enter or affect the workplace and to enforce the company's policy, the company may take any or all the following steps while employees are on company property, company jobsites, or during working hours:
 - Observe actions of employees
 - Counsel employees
 - Search employees' personal items
 - Search employees' persons



- Require searches with canines
- Chemical screening (e.g., urinalysis, blood tests, etc.)

There are two exceptions. The first exception will apply to the moderate use of alcohol beverages at company-sponsored social functions; such exceptions must be authorized specifically by management.

The second exception is for prescription drugs for which the employee has a valid prescription. Prescription drugs may not be abused and must be taken only according to the doctor's instructions.

Searches of employees' personal property will take place only in the employees' presence. All searches under this policy will occur with the utmost discretion and consideration for the employee(s) involved. Employees refusing to allow a search will be discharged. Law enforcement officials will be notified whenever illegal drugs are found. On May 8, 1992, the company began random screening for all employees.

- G. Employees who test positive may be required, at the company's discretion, to enroll in and satisfactorily complete a rehabilitation program. Failure to do so may result in termination. Employees who test positive may also be terminated or removed from certain jobs if the company deems it advisable. Reinstatement to employment may be contingent on success in a rehabilitation program. In addition, employees who test positive and who enroll in a rehabilitation program are subject to further tests for up to five years at the company's discretion. A positive reading on a subsequent test may also result in a removal from work, termination, or other actions deemed advisable by the company.
- H. Any employee randomly selected to be tested and refusing to do so will be subject to disciplinary action, which could include immediate dismissal.
- I. Employees are encouraged to approach the company at any time with any questions they have about the company's drug and alcohol policy as amended herein.
- J. Post work-related accident drug screening **will** be performed.

THESE GUIDELINES ARE NOT INTENDED TO FORM AND DOES NOT FORM A CONTRACT BETWEEN THE COMPANY AND ANY EMPLOYEE. BECAUSE CIRCUMSTANCES MY CHANGE, THESE GUIDELINES DO NOT PROMISE OR GUARANTEE ANY PARTICULAR TERMS, CONDITIONS, RULES, REGULATIONS, PRACTICES OR LENGTH OF EMPLOYMENT WITH THE COMPANY.

VIOLATION AND DISCIPLINARY ACTION POLICY

Strategy

In most cases, a qualified and trained worker will make a conscience choice between a known safe practice and an unsafe alternative. Both the safe way and the unsafe way have advantages and disadvantages. The worker will choose the alternative which, as he sees it, is the most attractive at the time. The Superintendent/Foreman must actively develop good behaviors in the worker and instill the general readiness to choose the safe alternative in all situations. Specifically, the Superintendent/Foreman must:

- Emphasize and increase the advantages and satisfactions associated with working safely.
- Eliminate, where possible, any existing disadvantages or dissatisfactions associated with working safely.
- Emphasize and increase the disadvantages and dissatisfaction associated with working unsafely.
- Eliminate, where possible, any existing advantages or satisfaction associated with working unsafely.

The above four principles amount to an incentive-deterrent strategy that increases the incentives to work safely and eliminates the incentives to work unsafely. The Superintendent/Foreman can increase the general readiness of workers to choose the safe alternative by:

Increasing Incentives to Work Safely

- Compliment safe work
- Express appreciation for exceptional safe performance
- Request commendation for deserving people
- Emphasize the personal gains of working safely
- Emphasize the job gains of safe methods
- Explained the reason behind a required safety rule
- Encourage employee safety participation

Eliminating Deterrents Against Working Safely

- Identify safe practices that are repeatedly ignored
- Identify the deterrents (such as “takes too much time”)
- Convince the employee to change their behavior

Increasing Deterrents Against Working Unsafely

- Stress the long run certainty of accidents
- Stress severity potential where it is real
- Always correct observed unsafe behavior
- Get other employees to show their disapproval of unsafe practices
- When necessary, show readiness to discipline
- Always explain why an unsafe practice is unsafe

- Tell employees about recent accidents

Eliminate The Incentives to Work Unsafely

- Determine the underlying cause of the employee's behavior
- Eliminate or nullify the underlying cause

Setting the Right Example

There is nothing more devastating to the development of positive safety attitudes than having the Superintendent set the wrong example. For example, a Superintendent on a job site wearing a ball cap while requiring everyone else to wear a hard hat. Employees resent safety rules being interpreted one way for management and another way for them. Some specific dos and don'ts are:

- Always demonstrate compliance with safety rules and regulations.
- Always wear the personal protective equipment your own employees are required to wear.
- Never order workers to work unsafely.
- React to hazards as you want your employees to react.
- Show enthusiasm and ability in carrying out responsibilities in the safety program.
- Never belittle the company safety program.

Procedure for Correcting Safety Violations

All the above activities create a greater readiness in employees to do what they know they should do. They are preventive measures because when properly followed, they will prevent disciplinary problems. However, corrective measures will need to be initiated when the existence of a problem of safety performance has been recognized. Depending on the type, severity, and circumstances associated with the problem, the following methods of correction can be applied:

- Correction by reinstruction
- Correction by reminding
- Correction by persuasion
- Correction by warning
- Correction by interview
- Correction by penalty



The recommended normal sequence of corrective action should be: 1) reinstruction, 2) persuasion or warning, 3) corrective interview, and 4) penalty. Whether a deviation from the sequence is appropriate depends upon such factors as:

- The seriousness of the safe practice violation
- The reasons for the safe practice violation
- The general safe conduct history of the employee

If reinstruction, persuasion or warning, or the corrective interview do not deter the employee from persistently violating company safety rules, then disciplinary penalties are issued according to the principles that follow.

Safety Rule Enforcement

All rules must be enforced and obeyed by management and workers. The following are disciplinary actions invoked for safety rule violations:

- A non-serious violation should result in a verbal warning to the employee.
- A repetitive non-serious or serious violation will result in a written warning to the employee. This documented warning will include the date and the nature of the safety violation. This notice should also note the preventive measures taken to ensure that the action will not be repeated.

Both the employee and the Superintendent will sign the notice. A copy will be given to the employee and one copy kept in the employee's personnel file.

- A repetitive serious or willful serious violation will result in disciplinary action being taken and could result in termination of employment.

Violation of any of the following items could subject the employee to automatic suspension with the possibility of discharge:

- Willful violation of OSHA regulations or Clancy & Theys Construction Company's Safety Rules
- Intoxication (Coming to the job premises or trying to work while under the influence or in possession of intoxicating liquors or controlled substance.)
- Fighting or provoking a fight
- Horseplay in any form – scuffling, pranks, wrestling, throwing material at others, etc.
- Possession of firearms, explosives or any other items intended to cause harm or death to others.

Superintendents are charged with the responsibility of enforcing the above regulations. They have the backing, support, and assistance of the management of Clancy & Theys Construction Company.

The following principles relate to the use of disciplinary penalties:

- Make penalties a truly last resort measure unless exceptional circumstances prevail.
- Make certain the charges of wrongdoing are wholly correct before issuing a disciplinary penalty.
- Always establish the cause(s) of why the employee(s) behaved in an unsafe manner.
- Look for and consider extenuating circumstances.
- Take into consideration a person's past performance when deciding on the severity of a penalty.
- Show respect for the dignity of the individual.
- Make the severity of the penalty only what is necessary to deter further infractions.

Convince the employee there will be an opportunity for a clean start.

VISITOR / OUTSIDE VENDOR SAFETY PROCEDURES

- Signage should be posted at all site entrances and should state that *"Visitors Must Report to the Office"*. Exceptions may be made to this policy only after review of the project and scope of work.

**Wording May Vary*

- All vendors and visitors should wear a hard hat, eye protection, and work shoes prior to entering a construction area. This includes delivery drivers.

If visitors do not provide their own hardhat or eye protection, a "Yellow" visitor hard hat and/or standard eye protection may be obtained through the Clancy & Theys Site Office and should be returned after use.

- All visitors shall be escorted while on site either by a Clancy & Theys employee or a representative of the subcontractor involved.

WELDING AND CUTTING PROGRAM

Purpose

It is the purpose of Clancy & Theys in issuing this plan to further ensure a safe workplace based on following formal, written procedures for welding and cutting. This plan will be reviewed and updated as needed to comply with new OSHA regulations, new, best practices in welding technology and as business practices demand.

Policy

Only trained and authorized persons shall use an Oxy/Fuel Torch set or an Arc Welding System. Any untrained/unauthorized employee found operating one of these systems will be disciplined up to termination of employment.

Training

Clancy & Theys will train select employees on welding and cutting safety practices including, but not limited to:

- Handling and operation of Oxy/Fuel cutting systems
- Arc welding
- Use of Personal Protective Equipment (PPE)
- Fire Prevention while welding and cutting

Procedures

Compressed Gas Cylinders - Handling, Storage and Use

- Always keep valve protection cap in place when a cylinder is not in use.
- When cylinders are hoisted, secure them on a cradle, sling board or pallet.
- Use a cylinder cart to move cylinders from place to place. If a cart is not available, you may move the cylinders by tilting and rolling them on their bottom edges. Care in handling is required.
- Secure cylinders in an upright position always whether in use or not. If a fuel gas cylinder is found lying on its side, immediately stand the cylinder upright. Do Not use the cylinder for the same amount of time it was lying down. If the time is unknown assume 8 hours.
- When operating a torch setup, keep the cylinders away from welding or cutting slag and sparks as to prevent possible fire or explosion.

- Care will be taken to prevent cylinders from becoming part of an electrical circuit.
- When storing the Oxygen and Fuel cylinders, a distance of at least 20 feet or a noncombustible barrier at least five feet high must separate the fuel gas cylinders from oxygen cylinders. This applies to indoor and outdoor storage.
- The site supervisor will:
 - Designate well-ventilated storage areas for cylinders inside buildings.
 - Take care to keep storage areas out of traffic areas or other situations where they could be knocked over, damaged or be tampered with.
 - Post “NO SMOKING” signs at storage areas.
- Never use the valve protection caps for lifting cylinders.
- Never use damaged or defective cylinders. If a cylinder is found damaged or in need of repair it will immediately be tagged out of service until replaced.
- Mixing of gases is prohibited.
- Taking oxygen, fuel gas or manifolds with these gases into confined spaces is prohibited.

Gas Welding and Cutting Practices Safe practices

- Only trained authorized persons shall operate an Oxy/Fuel System.
- Open cylinder valve and attach regulator according to industry practice.
 - Oxygen – Open the valve fully
 - Fuel Gas – Open the valve ½ turn.
- Keep all hoses, regulators, cylinders, valve protection caps, couplings, apparatus and torch connections free of grease and oil, especially those involving oxygen.
- Use fuel gas hose and oxygen hose of different colors.
- Inspection of Oxy/Fuel Torch system:
 - Inspect all hose shift
 - All torches
- Only devices designed for the purpose will be used to clean torch tips.
- Use only friction lighters to ignite torches.
- Remove torches and hoses and positive shut-off of gas sources from confined spaces when leaving a confined space project for any substantial period of time.
- Always have proper ventilation and/or respiratory protection. Some metals such as ones that have been galvanized are toxic when heated or cut.
- Never interchange hoses, including use of adapters, between fuel gas and oxygen sources.
- Do not place anything on or near a manifold or cylinder top that may interfere with the prompt shut-off in case of an emergency.
- No taping more than four inches out of every 12 inches in joining fuel gas and oxygen hoses. This prohibits the inspection process of the hoses.
- Never use a defective hose or torch.
- Do not use oxygen for personal cooling, cleaning off surfaces, ventilation or blowing dust from clothing.
- Never carry a butane lighter on your person while operating a torch system.

Personal Protective Equipment for Oxy/Fuel Systems

The following is required while operating an Oxy/Fuel Torch System:

- Proper tinted “Cutting Glasses” (Sunglasses are prohibited)
- Leather shoes
- Other Leather or non-flammable clothing as applicable

Arc Welding and Cutting

Safe practices

- Only trained and authorized persons shall operate an Arc Welding system.
- Use electrode holders, cable and other apparatus specifically designed for the purpose that they were intended.
- When leaving electrode holders unattended, electrodes are to be removed and holders placed so that accidental electrical contact is not made.
- Turn off the arc welding or cutting machine when it is to be left unattended for a substantial period of time or when it is being moved.
- Immediately tag out and report any defective equipment to the site supervisor.
- Use noncombustible or flameproof screens to protect employees and passersby from arc rays wherever practicable.
- Do not use cables with repairs or splices within 10 feet of the holder that are not equivalent in insulating value to the original cable.
- Do not dip hot electrode holders into water.

Personal Protective Equipment for an Arc Welding System

The following is required while operating an Arc Welding System:

- Welding shield with proper lens in accordance with OSHA Standards.
- Fire resistance clothing
- Leather Shoes
- Other Leather or non-flammable clothing as applicable

Hollow Metal Structures or Containers

Safe practices

Cutting or welding of sealed or hollow metal containers is prohibited unless the following conditions are met:

- The vessel has been purged of any hazardous substance(s).
- Proper fire protection precautions have been taken.
- Work operations are to take place on the outside of the vessel.
- Shall only be performed by experienced persons trained in this task.

Fire Prevention

Fire prevention is an important part of any Hot Work operation. A fire extinguisher rated not less than 10#ABC will be readily available anytime Hot Work is taking place.

Each Torch Cart and Arc Welding machine shall be equipped with a fire extinguisher rated not less than a 5#ABC.

Fire extinguishers are to be checked monthly and annual inspections are to be maintained in accordance with NFPA 10.

Workers who are authorized to extinguish fires will receive training according to OS Steel Erectors – Fire Prevention Program.

A Clancy & Theys supervisor shall assure that all combustible material and flammable liquids are kept out of the area where Hot Work is taking place.

Fire Watchers

When normal fire prevention measures are not sufficient, based on the site supervisor's assessment, the Company will assign a firewatcher(s).

i.e. – welding within an exterior wall where hot slag could fall to the floor below.

- Firewatchers will provide additional safeguards against fire during and after operations.
- Clancy & Theys will provide training for firewatchers on the specific fire hazards and equipment available.

Ventilation

- The site supervisor will determine the number, location and capacity of ventilation devices if needed.
- Where ventilation is not sufficient to provide clean, respirable air, respirators will be used and specified according to the hazardous substances found. Refer to MSDS Sheets.
- Ventilation will be sufficient to protect passersby as well as the welder.
- When known or unknown toxic materials are present in a job, respirators will be provided that match the hazard for all employees. The hazards include zinc or zinc bearing base or filler metals, lead base metals, cadmium-bearing filler metals, chromium bearing, or chromium coated metals, mercury, nitrogen dioxide and beryllium. Due to beryllium's extreme danger, both ventilation and air line respirators will be used.

The use of any cut-off machine may be hazardous. Because a cut-off machine is a high-speed cutting tool, special safety precautions must be observed to reduce the risk of personal injury, death and/or fire.



It is important that every operator must read, fully understand, and observe the following safety precautions and company policies.

Cut-off saws or similar equipment are intended for use by qualified Clancy & Theys Employees only.

Owner's Manual

- The manufacturer's Owner/Operator/Safety manual shall be available to the operator and shall always remain with the cut-off machine.
- The operator(s) shall read, have read, fully understand, and observe the safety precautions and warnings stated in the manufacturer's Owner/Operator/Safety manual.

Operator

- The operator(s) must be in good physical condition and mental health and not under the influence of any substance which might impair vision, dexterity, or judgment.
- Persons shall not operate a cut-off machine if fatigued. If the operator becomes tired during use, then he/she should take a break, or an alternate operator shall take over. Tiredness may result in a loss of control of the machine.
- Prolonged use of cut-off machines (or other machines) exposing the operator to vibrations may produce whitefinger disease (Raynaud's phenomenon) or carpal tunnel syndrome. In order to reduce the risk of whitefinger disease and carpal tunnel syndrome, please note the following:
 - Use anti-vibration ("AV") systems when available from the manufacturer.
 - Maintain the "AV" system in proper working condition.
 - Wear gloves and keep hands warm.
 - Always maintain a firm grip, but do not squeeze the handles with constant, excessive pressure.
 - Take frequent breaks.
 - The cut-off machine is a one-person tool. Do not allow other persons to be near the machine. Start and operate without assistance.

Personal Protective Equipment & Clothing

- General clothing
 - Sturdy & snug fitting
 - Allow complete freedom of movement
 - Avoid loose fitting, flared, frayed clothing
 - Always wear long pants – NO SHORTS
 - Protective Leg Chaps shall be worn during operation.
- Hands
 - Gloves shall be worn during operation
- Heavy Duty
- Nonslip
- Anti-vibration (recommended)
- Feet

- Sturdy boots shall be worn during operation
- Nonslip soles
- Steel toes (recommended)
- Eyes & Face
 - Eye Protection shall be worn during operation
 - Full face shield shall be worn during operation
- Eye & face protection shall comply with the ANSI Z87.1 standard.
- Head
 - Hard hat shall be worn during operation
- Hearing
 - Hearing protection shall be worn during operation
- Shall comply with the OSHA 1926.52 standards.
- Respiratory
 - When the inhalation of dust, mists and fumes cannot be eliminated, the operator should always wear a respirator approved by NIOSH/MSHA for the material being cut to reduce the risk of serious or fatal respiratory illness.

The Cut-Off Machine

- Never modify a cut-off machine in any way.
- Use only attachments supplied by the manufacturer or an approved/authorized attachment.
- Dust may collect on the powerhead. Especially around the carburetor, and may collect gasoline resulting in danger of fire. Clean dust from the powerhead regularly.

Transporting the Cut-Off Machine

- Always stop the engine before putting a cut-off machine down or carrying it.
- When carrying a cut-off machine grip the front handle and place the muffler at the side away from the body.
- Protect the cutting wheel from hitting the ground or any other objects. Damaged wheels may shatter and cause serious or fatal injury.

When transporting by vehicle secure properly and with the cutting wheel removed.

Fueling

- Fuel in well ventilated areas, outdoors only.
- Do not smoke or bring fire, flame, or spark near the fuel.
- Always shut off engine and allow it to cool before refueling.
- Refer to the operator/safety manual for additional information on fueling.

Use

- Inspect the cut-off machine before each initial use. Never operate a cut-off machine that is damaged, improperly adjusted or not completely and securely assembled.

- Inspect for safety in operation.
- Follow proper startup procedures found in the operator/safety manual.
- Operate only under good visibility and daylight conditions only.
- Do not use a cut-off machine around flammable objects and direct sparks away from the operator, other people, or any flammable surroundings.
- **See the sections on “Reactive Forces” in the operator/safety manual for special precautions and warnings.**
- Shims, wedges, or other methods shall be used when cutting objects that have the potential to shift or pinch the wheel.

Cutting Wheels

- Before mounting the cutting wheel make sure that the maximum operating wheel speed is above or equal to the spindle speed of the cut-off machine.
- Do not use a wheel that has been dropped.
- Do not cut any material for which the abrasive wheel is not authorized.
- Do not grind on side of the abrasive wheel.
- Do not twist, knock, or drop the machine. This can cause damage to the wheel.
- When wet cutting take precautions to prevent electrocution hazards.

Abrasive Wheels

- Inspect abrasive wheels frequently and replace immediately if the wheel is cracked or warped.
- Abrasive wheels are heat sensitive. Do not expose abrasive wheels to direct sunlight or other sources of heat.
- Store abrasive wheels in a dry place.
- Never use circular saw, carbide tipped, rescue, woodcutting, or toothed blades of any nature.
- Use for dry cutting only unless specified differently by the manufacturer.

Diamond Abrasive Wheels

- Inspect a diamond abrasive wheel before using for under-cutting, flatness, core fatigue, segment damage or loss, sign of overheating and possible arbor hole damage.
- Always fit the when so that the arrow on the wheel points in the direction of the rotation of the spindle.

Loaning of Cut-Off Saws to Subcontractor’s

It shall not be the policy of Clancy & Theys to loan a cut-off saw to a subcontractor or any other party under any circumstances. However, in an extenuating circumstance where a cut-off saw may be loaned out the following shall apply.

1. The subcontractor site supervisor must be present and is the only person to whom the equipment may be released.



2. The subcontractor site supervisor must sign a Clancy & Theys “EQUIPMENT AND/OR MATERIAL USE AGREEMENT” form found at the end of this section.
3. The operator/safety manual must accompany the saw.
4. The operator of the saw must wear the following equipment. No exceptions.
 - Hard Hat
 - Face Shield
 - Safety Glasses
 - Hearing Protection sufficient to meet or exceed the OSHA regulations.
 - Leg Chaps
 - Toe Caps
 - Gloves
 - Respiratory Protection appropriate to conditions.

Subcontractor Safety Performance Evaluation (SSPE)

Date: ____ / ____ / ____

Vendor # _____ (CT office use only)

Please PRINT all information.

Company Name: _____

Company Safety Manager: _____

Address: _____

Company Owner or President: _____

City / State / Zip: _____

Phone Number: (____) ____ - ____

Fax Number (____) ____ - ____

1) Describe the type of work you will be performing with Clancy & Theys.

2) Total average number of employees: _____ Total Man Hours worked for all employees for last year _____

3) Do you have a written safety program? Yes No

4) Do you conduct job site safety inspections? Yes, if yes, at what frequency? _____ No

5) Do you carry Worker's Compensation Insurance? Yes No (explain if no) _____

6) Do you have a return to work program? Yes No

7) Do you have a drug and alcohol testing program? Yes No

8) What is your current EMR - Experience Modification Rate? _____ (Please refer to the explanation below to calculate.)

9) Do you require field supervisors to hold Safety Meetings/Tool Box Talks? Yes, if yes, at what frequency? _____ No

10) What training do you provide your employees? Check all that apply.

- Employee safety orientation
- Hazard Communications
- Scaffolding
- Eye & Face Protection
- Hearing Protection
- Working around Const. Equipment
- Fall Protection
- Electrical
- Trenching and Excavation
- Foot Protection
- Fire Prevention & Protection
- Emergency First Aid & CPR
- Fall Protection Equipment and Systems
- Lockout / Tagout
- Head Protection
- Respiratory Protection
- Welding and Cutting
- Housekeeping

11) Do you maintain records of employee training? Yes No

12) Can you provide documentation of this training for personnel assigned to Clancy & Theys' projects? Yes No

By signing this document I certify that the information I have provided is true and accurate to the best of my knowledge and that I have received, read and retained the Subcontractor Safety Policy Manual for reference.

Signature of Officer _____ Title _____

Name Printed _____ Date _____

You may return this form via email or fax to davidmaggio@clancytheys.com (919) 834-0289

Attention David Maggio,

Safety Director, Clancy & Theys Construction Company.

The EMR is a computation for establishing Worker's Compensation insurance premiums. The experience rating calculation generally consists of an experience period of three policy years of class code, payroll, and claim data. The most recent policy year of data used is the policy year that expired one year prior to the rating effective date. The standards are: 0.60 better than average; 1.00 average EMR; 1.20 worse than average; 1.50 if equal to or greater than this, OSHA requires special safety programs to be written for the specific company. OSHA and many other agencies or companies use this rate to judge the overall safety record of a company. It can be obtained from your "workers compensations" insurance provider.

ConsensusDocs® 301

BUILDING INFORMATION MODELING (BIM) ADDENDUM



GENERAL PRINCIPLES

- 1.1. This Addendum does not effectuate or require a restructuring of contractual relationships or shifting of risks between or among the Project Participants other than as specifically required per the Addendum and its Attachments.
- 1.2. This Addendum is not intended to create privity of contract among any Project Participants beyond that which otherwise exists at law or by the terms of the Governing Contract.
- 1.3. Each Party to the Governing Contract shall append or incorporate, and shall cause each Project Participant with which it is in privity to append or incorporate, this identical Addendum in all contracts for which any other Project Participants are to perform obligations to be modeled. All such contracts shall contain flow-down provisions requiring that the provisions of this Addendum be passed downstream to subconsultants and subcontractors, as applicable.
- 1.4. Nothing in this Addendum shall relieve the Design Professional from its obligation, nor diminish the role of the Design Professional, as the person responsible for and in charge of the design of the Project.
- 1.5. Nothing in this Addendum shall diminish the extent to which, under applicable law, the Owner warrants to any Party the adequacy and/or sufficiency of the design.
- 1.6. Participation of Clancy & Theys Construction Company or its subcontractors and suppliers in Contributions to a Model shall not constitute the performance of design services.



1.7. Unless otherwise agreed in the BIM Execution Plan, a Design Model is not intended to provide the level of detail needed in order to extract precise material or object quantities.

1.8. In the event of a conflict between the contents of the Architect's Construction Documents and any Model, the Construction Documents shall take precedence.

1.9. If any Project Participant becomes aware of a discrepancy between a Model and either another Model or another Contract Document, such Project Participant shall promptly notify the other Party or Parties to that Project Participant's Governing Contract and the Information Manager (IM).

1.10. Unless otherwise agreed in the BIM Execution Plan, the dimensional tolerances provided by the Contract Documents in the Governing Contract shall apply to dimensions in a Model.

1.11. In the event of an inconsistency between this Addendum and the Governing Contract, this Addendum shall take precedence.

2. DEFINITIONS

2.1. Affiliated Contract means any contract relating to the Project to which an identical Addendum is attached and in which that identical Addendum is incorporated, other than the Governing Contract.

2.2. Construction Model means a Model that (a) consists of those aspects of the Project that are to be modeled as specified in the BIM Execution Plan prepared pursuant to this Addendum; (b) utilizes data imported from a Design Model or, if none, from a designer's Construction Documents; and (c) contains the equivalent of shop drawings and other information useful for construction.

2.3. Contract Documents, as defined in the Governing Contract, is modified to include all Design Models, unless otherwise specified in the BIM Execution Plan.

2.4. Contribution means the expression, design, data or information that a Project Participant (a) creates or prepares, and (b) incorporates, distributes, transmits, communicates or otherwise shares with other Project Participant(s) for use in or in connection with a Model for the Project.

2.5. Contributor means a Project Participant who makes a Contribution.

2.6. Design Model means a Model of those aspects of the Project that (a) are to be modeled as specified in the BIM Execution Plan prepared pursuant to this Addendum and (b) have reached the stage of completion that would customarily be expressed by an Design Professional in two-dimensional Construction Documents. This shall not include Models such as analytical evaluations, preliminary designs, studies, or renderings. A Model prepared by a Design Professional that has not reached the stage of completion specified in this definition is referred to as a Model.

2.7. Drawings means (a) those two-dimensional plans, sketches or other drawings that are Contract Documents under the Governing Contract and are created separately from, and are not derived from, a Model and (b) those two-dimensional projections derived from a Model supplemented with independent graphics and annotations specified by the Parties to be Contract Documents.

2.8. Federated Model means a Model consisting of linked but distinct component Models, drawings derived from the Models, texts, and other data sources that do not lose their identity or integrity by being so linked, so that a change to one component Model in a Federated Model does not create a change in another component Model in that Federated Model.



- 2.9. Full Design Model means a Model consisting of coordinated structural, architectural, MEP and other Design Models designated in the BIM Execution Plan to be produced by the design team.
- 2.10. Governing Contract means the agreement to which this Addendum is attached and in which it is incorporated, but excludes an Affiliated Contract.
- 2.11. Information Management means measures that protect and defend information and information systems with respect to their availability, integrity, authentication, confidentiality, and nonrepudiation. These measures include providing for restoration of information systems by incorporating protection, detection, and reaction capabilities.
- 2.12. Information Manager or IM means one or more individuals responsible for the BIM's Information Management program.
- 2.13. MEP means mechanical, electrical and plumbing.
- 2.14. Model means a three-dimensional representation in electronic format of building elements representing solid objects with true-to-scale spatial relationships and dimensions. A Model may include additional information or data.
- 2.15. Project Model means a Model consisting of the federation of a Full Design Model and one or more Construction Models designated in the BIM Execution Plan to be produced by Project Participants.
- 2.16. Project Participant shall be, and Project Participants shall include, each Party to the Governing Contract and each Party to an Affiliated Contract.

3. INFORMATION MANAGEMENT

3.1. Clancy & Theys Construction Company shall appoint one or more IM(s) for the Project. Clancy & Theys Construction Company may replace the IM at its own discretion.

3.2. The role and responsibility of the IM with respect to a Federated Model for the Project, including the Project Model, shall be to perform or procure from a third party acceptable to the Owner the following functions (exclude any functions that do not apply):

- 3.2.1. Create, delete, modify and maintain user accounts;
- 3.2.2. Assign, delete and modify access rights to users;
- 3.2.3. Apply access controls to users so that only authorized users of the Model can access only the data they are authorized to access;
- 3.2.4. If appropriate, establish and maintain encryption-at-rest measures and encryption-during-transmissions measures;
- 3.2.5. Record, at a minimum, the following information about each data entry by Model users in the Federated Model (including downloading of Models to the Federated Model):
 - a) User name;



- b) User role;
- c) Contact information;
- d) Date/time entered;
- e) Any additional information required to be recorded for each data entry as set forth in the BIM Execution Plan;

3.2.6. Backup and restore data;

3.2.7. Routinely run information system scans to maintain Model security;

3.2.8. Maintain and monitor information system logs so that only authorized users are accessing the Model and to ensure that there are no functional problems associated with the Model;

3.2.9. Install patches to close documented vulnerabilities in the Model;

3.2.10. Document and report any incident relating to the Model (including but not limited to an incident originating outside the Model that results in the Model being the victim of an attack) and take action to protect the Model;

3.2.11. Provide authorized users with access instructions and system requirements;

3.2.12. Respond to requests by authorized users for assistance in maintaining access; and

3.2.13. Perform any and all other responsibilities or functions as required of it in the BIM Execution Plan.

4. BIM EXECUTION PLAN

4.1. As soon as is practicable, but in no event later than thirty (30) days after execution of the Contract with the Project Participants, all Project Participants shall meet, confer and use their best efforts to agree upon the terms of or modifications to a BIM Execution Plan. When agreed upon, the BIM Execution Plan and any modifications shall become an amendment to this Addendum. As soon as is practicable, but in no event later than thirty (30) days after the execution of a Contract with any other Project Participants, all Project Participants shall meet, confer and use their best efforts to agree upon any necessary modifications to a BIM Execution Plan.

4.2. Unless otherwise agreed, the IM shall schedule and chair all such meetings.

4.3. The BIM Execution Plan shall address the following elements, but may include additional elements:

4.3.1. Contact information for each Project Participant;

4.3.2. Identification of what Models are to be created, the purpose(s) each Model is intended to serve, and which Project Participant(s) is(are) responsible for creating each Model;

4.3.3. A definition of what Design Model or Models, if any, shall not constitute Contract Documents;

4.3.4. The spatial portions or areas of the Project to be modeled in each Model and the spatial portions or areas of the Project not to be modeled;



4.3.5. The expected content of each Model and the required level of detail at various Project milestones, which content includes:

- a. geometric and spatial data;
- b. object property data;
- c. object constitution data;
- d. provision for object parameters as place holders for cost and schedule data; or
- e. authoritative source information;

4.3.6. A schedule for initial delivery of each Model to the IM;

4.3.7. A schedule for updating of each Model and preservation of versions of each Model and its constituent Models;

4.3.8. A definition of what Model or Models shall constitute part of the record documents for the Project;

4.3.9. Procedures and protocols for submission, for approval of Models including electronic stamping, for designating a Model as a Design Model, and for notification of action on a request for approval;

4.3.10. Procedures and protocols for designating two-dimensional projections derived from a Model as Contract Documents;

4.3.11. Contributor's Dimensional Accuracy Representation Selection of one, but only one, of the following representations applicable to the dimensional accuracy of any Contribution of or to a Model. Any such representation is:

1. . limited to the other parties to the Governing Contract,
2. in accordance with the standard of care applicable to the Contributor for such Contribution, and
3. effective at the time the Model has been developed to the same stage of completion as two-dimensional Shop Drawings.

Each Contributor represents that the dimensions in its Contribution to a Model are accurate and take precedence over the dimensions called out in the Drawings or inferred from the Drawings. Details and components that are not represented in a Contribution to a Model must be retrieved from the Drawings;

Each Contributor represents that the dimensions in its Contribution to a Model are accurate to the extent that the BIM Execution Plan specifies dimensions to be accurate, and all other dimensions must be retrieved from the Drawings. Dimensions shall be accurate and utilized to the same level as provided for in Shop Drawings. The dimensions shall be reliable for the accurate coordination and placement of building elements that are not otherwise dimensioned in the contract documents.

Contributors make no representation with respect to the dimensional accuracy of the Contributor's Contribution to a Model. A Model can be used for reference only and all dimensions must be retrieved from the Drawings; or

Other: ;



- 4.3.12. Establishment of a common coordinate system;
- 4.3.13. Establishment of conventions as to units;
- 4.3.14. Conventions for defining critical dimensions and critical Model content;
- 4.3.15. File format to be used;
- 4.3.16. File-naming and object-naming conventions to be used;
- 4.3.17. File structure to be used;
- 4.3.18. Software to be utilized;
- 4.3.19. Measures needed to achieve interoperability of applications;
- 4.3.20. Two-dimensional reference Drawings;
- 4.3.21. Utilization of BIM for the RFI process, response protocol and timing, incorporation of responses into any Model;
- 4.3.22. Utilization of BIM for the Change Order process, response protocol and timing, incorporation of responses into any Model;
- 4.3.23. A schedule for BIM development, coordination and clash detection meetings among the Project Participants;
- 4.3.24. Engagement of the IM in these processes;
- 4.3.25. Utilization of a Project BIM website;
- 4.3.26. Procedures and protocols for confirmation of field changes through an as-built Project Model;
- 4.3.27. Specification of Project close-out and final deliverables;
- 4.3.28. The extent, if any, to which Project Participants or specified staff for each will be co-located; and
- 4.3.29. Any changes or additions to the Governing Contract or an Affiliated Contract relating to BIM-related compensation and costs.

4.4. Design Models (2.6) and Full Design Models (2.9), if produced, shall not constitute Contract Documents.

5. RISK ALLOCATION

5.1. Each Party shall be responsible for any Contribution that it makes to a Model or that arises from that Party's access to that Model. Such responsibility includes any Contribution or access to a Model by a Project Participant in privity with that Party and of a lower tier than that Party. Nothing in this



section shall expand the scope of any representation stated in the BIM Execution Plan pursuant to Section 4.3.11.

5.2. With respect to the issue of a waiver of consequential damages:

a. The Governing Contract shall govern the issue of any waiver of consequential damages arising from a Contribution; and

b. Each Party waives claims against the other Parties to the Governing Contract for consequential damages arising out of or relating to the use of or access to a Model, including but not limited to damages for loss of use of the Project, rental expenses, loss of income or profit, costs of financing, loss of business, principal office overhead and expenses, loss of reputation or insolvency.

5.3. It is understood that the Architect's Design will be expressed as two dimensional Construction Documents and that there will be no Design Model produced by the Architect. Project Participants may rely upon the accuracy of information in the Contract Documents; provided, however, that the selection in Paragraph 4.3.11 shall control a Project Participant's right to rely on the dimensional accuracy of a Contribution or Model.

5.4. The standard of care applicable to each Party regarding that Party's Contributions to or use of a Model shall be in accordance with that Party's Governing Contract or common law, as applicable.

5.5. Each Party shall use its best efforts to minimize the risk of claims and liability arising from the use of or access to its Model or the Project Model. Such efforts shall include promptly reporting to the relevant Project Participants any errors, inconsistencies, or omissions it discovers in its Model or the Project Model; however, nothing in this section shall relieve any Party of liability it would otherwise bear under Section 5.1.

5.6. No Party involved in creating a Model shall be responsible for costs, expenses, liabilities, or damages which may result from use of its Model beyond the uses set forth in this Addendum or fully executed amendments hereto.

5.7. A defect in the software used in the creation, modification, federation or other use of a Model, including the Project Model, shall entitle a Party to a time extension or other excuse from performance, but only to the extent that the Party could not have avoided any delay or loss by the exercise of reasonable care. In addition, a Party has the duty to mitigate any such delay or loss.

6. INTELLECTUAL PROPERTY RIGHTS IN MODELS

6.1. Each Party warrants to the other Parties to the Governing Contract that either (a) that Party is the owner of all copyrights in all of that Party's Contributions, or (b) that Party is licensed or otherwise authorized by the holders of copyrights of expression contained in the Contribution to make such Contribution under the terms of this Addendum. Subject to waiver of subrogation clauses, if any, contained in the Governing Contract, each Party agrees to indemnify and hold such other Parties harmless for claims of third parties arising out of, or relating to, claims or demands relating to infringement or alleged infringement of expression contained in that Party's Contribution. Nothing in this Addendum is intended to limit, transfer, or otherwise affect any of the intellectual property rights that a Party may have with respect to any Contribution, except for the licenses or permissions expressly granted by this Addendum or the Governing Contract.



6.2. Subject to the provisions of Section 6.1, each Party grants to the other Party or Parties to the Governing Contract (a) a limited, non-exclusive license to reproduce, distribute, display, or otherwise use that Party's Contributions for purposes of this Project only; (b) a limited, non-exclusive sublicense to reproduce, distribute, display, or otherwise use, for purposes of this Project only, the Contributions of those other Project Participants who have granted that Party an identical license or sublicense; (c) the right to grant an identical sublicense to any other Project Participants with which the licensee has an Affiliated Contract in which this Addendum is incorporated by reference; and (d) a limited, non-exclusive license to reproduce, distribute, display, or otherwise use any Model containing such Contributions, or any other Model with which the Model containing such Contributions is federated or otherwise related, in each case for the sole purpose of carrying out the Project Participants' respective duties and obligations relating to this Project. This limited license shall include any archival purposes permitted hereunder or in the Governing Contract, but does not allow the licensee to reproduce, distribute, display, or otherwise reuse all or part of any other Party's Contributions except as permitted herein or in the Governing Contract. This limited, non-exclusive license is in addition to any other licenses or usage rights that also may be granted under the Governing Contract.

6.3. If a Party to the Governing Contract is the holder of copyrights in another Project Participant's Contribution or is the grantee of an exclusive license with respect to such Contribution, then such holder or exclusive licensee hereby grants to such other Party or Parties the right to grant to other Project Participants with which the other Party has or Parties have Affiliated Contracts in which this Addendum is incorporated, a limited license in the form set forth in Section 6.2.

6.4. The Project Owner's entitlement to use the Full Design Model after completion of the Project shall be governed by the Contract between the Owner and the Design Professional.

6.5. The Project's Owner shall be entitled to use the construction model and all of the contributions of the project participants after completion of the project.

6.6. Unless otherwise limited herein or by express license-limiting terms in the Governing Contract, the non-exclusive license granted in this BIM Addendum shall remain in effect as permitted by law. In addition, after final completion of the Project, the non-exclusive license shall be limited to keeping an archival copy of Project-related Contributions.

6.7. In the absence of express language to the contrary in the Governing Contract or in this Addendum, nothing in this Addendum, and no act by a Project Participant in furtherance of this Addendum, shall be deemed or construed to deprive or dispossess a Contributor of copyrights or license rights held by that Contributor in its respective underlying Contribution to any Model. Other Parties, Project Participants, persons, or entities that provide Contributions to a Model shall not be deemed to be co-authors in the Contributions of other Project Participants. Except where otherwise stated, no Contributor shall possess rights in a Model containing a Contribution greater than those granted by the non-exclusive license provided in this Addendum, as that license may be further limited in this Part 6. Nothing in this Addendum shall grant a right to a Party to use all or part of another Party's Contribution for any purpose other than performance of the Project Participant on this Project and as is otherwise expressly stated in the Governing Contract or in this Addendum.

6.8. Terms of the Governing Contract pertaining to non-payment by the Project Owner notwithstanding, the Project Owner's non-exclusive license granted herein to reproduce, distribute, display, or otherwise reuse the Contributions and Models shall not be limited to construction or maintenance of this Project. However, if the Project Owner fails materially in its Project-related payment obligations to a Contributor, and that material failure is so adjudged against the Project Owner by the decision of a court of law or arbitration (an Adjudication), then any Project-related licenses to the Project Owner from that Contributor shall be terminated as of the time of such Adjudication. Notwithstanding the foregoing, the Parties hereto (and all Contributors by virtue of



Affiliated Contracts) waive any rights to claim contributory, direct, or vicarious copyright infringement, to assert claims of misappropriation or like claims, to revoke licenses granted herein, or to pursue equitable remedies under the Copyright Act or under applicable law against other Parties and Contributors who are not found liable in the Adjudication (for failure to pay or otherwise). This applies to their respective obligations, if any, to the Contributor unpaid by the Project Owner, and the non-liaible Parties' licenses granted herein shall survive the termination of the Owner's license due to the Adjudication.



Clancy & Theys Construction Company

BUILDING INFORMATION MODELING (BIM) ADDENDUM

1. GENERAL PRINCIPALS

1.1. This Addendum identifies rights and responsibilities of Project Participants related to the use of BIM on this Project. It is not intended to create privity of contract among any Project Participants beyond that which otherwise exists at law or by the terms of the Governing Contracts or Affiliated Contracts.

1.2. This Addendum and its Exhibits shall be appended to or incorporated by reference in the Governing Contracts and all Affiliated Contracts of Contributors, as well as any contracts of others having rights or obligations under this Addendum, as needed.

1.3. Nothing in this Addendum shall relieve the Design Professional from any design obligations under its Governing Contract, including responsibility for its Contributions to comply with applicable codes, regulations, or laws. No Contributor may require the Design Professional to provide designs inconsistent with these obligations or may modify another Contributor's Contribution without that Contributor's consent.

1.4. Nothing in this Addendum shall diminish or expand the extent to which, under applicable law, Owner confirms or warrants the adequacy, sufficiency, or both of any Model.

1.5. Except to the extent required under the Constructor's Governing Contract, Constructor's and its Subcontractors' and Suppliers' Contributions or participation in modeling activities shall not constitute the performance of design services.

1.6. If any Project Participant becomes aware of a discrepancy between a Model and another Model or Contract Document, that Project Participant shall promptly notify the other affected Model Contributors and the BIM Manager.

1.7. Except as expressly provided in this Addendum, this Addendum shall take precedence over any conflicting or inconsistent Governing Contract or Affiliated Contract terms

2. DEFINITIONS

2.1. "4D" means integrating time or schedule information, including phase planning modeling into a Model.

2.2. "Affiliated Contract" means any Project contract to which this Addendum is attached or into which it is incorporated by reference, other than the Governing Contracts.

2.3. "As-Built Construction Model" is a Construction Model modified to reflect as-built conditions of the Work as constructed during Construction Phase, including facility Geometric data, fabrication, and coordination modeling.

2.4. "Building Information Modeling" or BIM, means the collaborative development of a three-dimensional digital representation that is Intelligent and Parametric, depicting the physical and functional characteristics of a structure or site for use as a shared knowledge resource; it may also include generation of Geometric and non-graphic Information, and related processes, analysis, and deliverables for use over the lifecycle of the structure or site depicted.

2.5. "BIM Execution Plan" means a plan that enumerates the goals, implementation processes, metrics, and deliverables that will be used to develop BIM for the Project, which also may be referred to as a PXP or project execution plan. This section addresses mutuality in the flowdown of rights and responsibilities.

2.6. "BIM Manager" means the Project Participant or parties responsible for the information management program for the Project.

2.7. Information Management means implementation of measures that protect BIM project information and systems availability, integrity, authentication, confidentiality, and nonrepudiation, including providing for restoration of project information systems by incorporating protection, detection, and reaction capabilities.

2.8. "CIM" or civil information modeling, means the digital representation of the physical and functional characteristics of a site, including topography and location of structures on the site, usable as a shared knowledge resource.

2.9. "Construction Model" is a Model that utilizes data imported from a Design Model or Drawings containing the equivalent of shop drawings and other information useful for construction.

2.10. "Contract Documents" is as defined in a Governing Contract, but is hereby modified to include the Full Design Model, this Addendum, as modified and agreed to by the parties, and the BIM Execution Plan adopted by the parties pursuant to this Agreement.

2.11. "Constructor" is identified in the Governing Contract with Owner as the responsible entity to provide or coordinate construction Work for the Project, and may be referred to as the General Contractor, Contractor, Prime Contractor, Constructor, Design-Builder, or Construction Manager.

2.12. "Contribution" means the expression, design, data or information created or prepared for the Project that is incorporated, distributed, transmitted, communicated by, or shared with Project Participants through or in connection with a Model.

2.13. "Contributor" is any Project Participant who makes a Contribution.

2.14. "Coordinated Construction Model" is: (a) a discipline-specific Shop Model; (b) updated to incorporate the changes and updates approved during the digital design coordination process and before commencement of the Work; (c) that is modeled to a Level of Granularity; and (d) is delivered in the format and with the file extension specified in Attachment A to the BIM Execution Plan.

2.15. "Design Model" is a discipline-specific Model prepared by a Design Professional to illustrate the architectural, structural, mechanical electrical and plumbing (MEP), or other specialty design requirements of the Project, exclusive of analysis undertaken by other Contributors to that Model.

2.16. "Design Professional" is responsible for the development and delivery of design services for the Project, and may be referred to as the architect/engineer, architect, engineer, or Design Professional in their Governing Contract with Owner.

2.17. "Digital Fabrication" means the process by which machine technology is used to prefabricate Elements used in construction directly from Model data, including spooling into appropriate sections and inputting into fabrication equipment for production of system assemblies to be used in construction of the Project.

2.18. "Dimensional Accuracy" means the expected content of a Model and its prescribed reliability at each milestone or Model Phase established in the BIM Execution Plan.

2.19. "Drawings" are (1) two-dimensional projections derived from a Model, which may be supplemented with independent graphics and annotations and (2) two-dimensional plans, sketches, or other graphic depictions created separately and not derived from a Model.

2.20. "Element" means a self-contained, uniquely identified object in a Model representing a building component, system, or assembly within a structure or on the Project site.

2.21. "Federated Model" is a Model that links distinct component Models, Drawings, analysis, and other data sources that do not lose their identity or integrity by being so linked, such that a change to one component Model does not change another component Model in the Federated Model.

2.22. "Full Design Model" is a Model consisting of linked component Design Models that illustrate the construction-ready designs as designated in the BIM Execution Plan.

2.23. "Geometric" means rectilinear or curvilinear points, lines, and surfaces developed using BIM.

2.24. "Geospatial" means three dimensional objects developed using BIM.

- 2.25. “Governing Contract” means an agreement between the Project Owner and Design Professional or between Owner and Constructor, to which this Addendum is to be attached or incorporated by reference.
- 2.26. “Granularity” means the level of accuracy of Geometric representation of a Model Element needed to support a specific BIM use.
- 2.27. “Intelligent” means the imbedded specifications, sizes, material definitions, characteristics, manufacturer properties, identification numbers, and other data describing the attributes and configuration of an Element that are readable directly within the Model.
- 2.28. “Interoperability” means the capability of different software programs to exchange data via a common set of exchange formats, to read and write in those formats, and to use the same protocols so that Model data is not dropped, repurposed, or reformatted.
- 2.29. “Level of Detail” means the input detail, information maturity, and richness of a Model Element.
- 2.30. “Level of Development (LOD)” specifies the completeness of a Model Element or reliability of Model output at various stages in the design and construction process, and the minimum requirements for its expression.
- 2.31. The “LOD Specification,” unless otherwise defined in the Contract Documents, is as defined or incorporated into the BIM Forum’s Levels of Development Specification as published at <https://bimforum.org/lod/> on the Governing Contract’s effective date.
- 2.32. “Level of Granularity (LOG)” means the level of dimensional accuracy of Model data.
- 2.33. “Model” means an electronic, three-dimensional representation of building Elements representing solid objects with true-to-scale Geospatial relationships and dimensions, which may include additional attribute information, or data, and 4D, 5D, sustainability, or other analyses.
- 2.34. “Model Use” is the deliverable that is derived from a specific Model or an intended use of a Model.
- 2.35. “Model Phase” means any of the following phases of development or anticipated use of a Model over the lifecycle of a Project, including conceptual planning, design development, construction, commissioning, turnover, facility operation & maintenance, enterprise management, and decommissioning and recycling.
- 2.36. “Parametric” means that attributes of construction materials, equipment, and assemblies are linked and consistently coordinated and maintained in all Model views and schedules such that a change to a Model Element or other data in any view or schedule is automatically similarly modified in all views and schedules where it appears in the Model.
- 2.37. “Project Model” means a Model consisting of the federation of a Full Design Model and one or more Construction Models designated to be produced in the BIM Execution Plan.
- 2.38. “Project Participants” means all parties to a Governing Contract or Affiliated Contract for the Project.
- 2.39. “Record Model” means a separate, discipline-specific Model that accurately reflects clarifications and changes made during Project construction to the Geospatial and Geometric attributes that comprise Elements of a Design Model, but which does not modify the original Design Model or require creation of new Design Model Elements beyond the LOG established in the BIM Execution Plan.
- 2.40. “Shop Model” means a digital Model created from data derived from one or more Design Models or a Full Design Model and prepared by a Constructor, Subcontractor, or Supplier to illustrate some portion of their Work and its conformity to Project specifications and other design requirements.

3. INFORMATION MANAGEMENT

- 3.1. Clancy & Construction Company will undertake overall responsibility for the use, implementation, and creation of BIM for the Project:
- 3.2. The BIM Manager shall perform, or procure from third parties, the following functions:
- 3.2.1. Develop and oversee Contributor compliance with the BIM Execution Plan for the Project;

- 3.2.2. Schedule and manage BIM-related meetings with Contributor BIM technicians and coordinators to assist them in their development of their respective Contributions;
- 3.2.3. Create, delete, modify, and maintain individual user accounts, including confirming Contributor use of hardware, software, formatting, file exchange, maintenance, archiving, and other technology protocols specified in the BIM Execution Plan;
- 3.2.4. Assign, delete, and modify access rights to Contributors, including coordinating necessary access training, and facilitating proper export and data extraction from BIM to support the Model Uses;
- 3.2.5. Develop system access controls so that only authorized Contributors to the Model can access Model data, and so they may only access the data they are authorized to access;
- 3.2.6. Establish and maintain encryption and access security measures selected;
- 3.2.7. Maintain Model Element continuity, and coordinate Geospatial coordination, clash resolution, and Model quality control processes;
- 3.2.8. Backup and restore Model data, as appropriate, including developing protocols for versioning, storage, access rights, and availability;
- 3.2.9. Maintain and monitor information system logs documenting access to the Models and resolving functional problems associated with Model access;
- 3.2.10. Determine measures needed to achieve Interoperability of Model applications and resolve documented Model Interoperability issues;
- 3.2.11. Document and report any incident relating to the Model, including but not limited to an incident originating outside the Model that results in the Model data loss, corruption, or unauthorized access, and take action to protect the Model;
- 3.2.12. Provide authorized users with system hardware configuration and software and related version requirements, and access instructions;
- 3.2.13. Respond to requests by authorized users for assistance in maintaining access;
- 3.2.14. Review all deliverables for compliance with submittal requirements developed pursuant to § 4.2, § 4.4, and § 4.5 for the BIM Execution Plan adopted for the Project;
- 3.2.15. Confirm that changes made during the Project design and construction are updated in the Model; and
- 3.2.16. Perform any and all other responsibilities or functions as required of the BIM Manager in the BIM Execution Plan.

4. BIM EXECUTION PLAN

4.1. As soon as is practicable, but in no event later than thirty (30) days after execution of the Contract with the Project Participants, all Project Participants shall meet, confer and use their best efforts to agree upon the terms of or modifications to a BIM Execution Plan. When agreed upon, the BIM Execution Plan and any modifications shall become an amendment to this Addendum.

4.2. The BIM Manager shall schedule and manage all meetings necessary for development of the BIM Execution Plan.

4.3. MODEL USES AND DELIVERABLES The BIM Execution Plan shall address, at a minimum, the following Model Uses and deliverables:

- 4.3.1. Identify and prioritize desired goals and objectives for BIM;
- 4.3.2. Maximize structure lifecycle best value and develop a list of Model Uses; and
- 4.3.3. Determine required Geometric modeling, related deliverables, process and Model deliverable requirements, including:

- 4.3.3.1. Identify by Model Phase the Models needed to achieve each Model Use;
- 4.3.3.2. This includes all needed Design Models, Construction Models, and any Federated Models or Record Models.
- 4.3.3.3. Identify the parties responsible for each Model deliverable;
- 4.3.3.4. Create a schedule for Model deliverables, including dates for completion of Model Phases and interim coordination milestones within Model Phases, as necessary; and
- 4.3.3.5. Determine a process to preserve versions of each Federated Model and its constituent Models, and scheduling for such process.

4.4. BIM PROCESS EXECUTION: GEOMETRIC MODELING Specific Models and their development sequence shall be identified. This shall include (a) Project areas to be depicted in each Model; (b) the Geospatial portions or Project areas not to be modeled; (c) the process of collaborative information exchanges; and (d) the sequence and required development of required Models.

4.5. BIM EXECUTION: RELATED DELIVERABLES Determine related non-Model deliverables, such as Drawings, reports, records, performance data, diagrams, and analyses and activities, including schedule of information sharing and required development milestones to achieve the Model Uses, including:

4.5.1. Drawings – Two-dimensional documents, including details, sections, elevations, plans, permitting sets, and diagrammatic RFI responses:

4.5.2. 2D Drawings will be derived from:

- 3D Model data

4.5.3. Select one of the following.

4.5.4. If there is a conflict between a Model Contribution and a portion of the design generated in a 2-dimensional medium then:

- Dimensions called for in or reasonably inferred from the Drawings shall take precedence over a Model Contribution.

4.5.5. Other Related Deliverables – any other related deliverables, including spreadsheets, reports, photographic documentation, .pdf deliverables, RFI and Change Order management logs and lists.

4.6. TECHNOLOGY INFRASTRUCTURE & INFORMATION EXCHANGE After determination of the necessary Model Geometric and related deliverables as provided in § 4.4 and § 4.5, develop necessary technology infrastructure and information exchange processes and protocols to support the Model Uses, including determination of the following:

4.6.1. Software – proprietary and open source authoring and file sharing platforms and applications including version (and version upgrade process, if applicable);

4.6.2. Access – permitted users, including security protocols and training, collaboration and communication process requirements, priority of access, and data transfer interoperability and patching obligations;

4.6.3. Model sharing and networking infrastructure;

4.6.4. Meeting scheduling – including frequency, participants and locations, decision documentation for each Phase of Model development;

4.6.5. Model management and content, including:

4.6.5.1. data formatting (font, dimension, line styles, unit conventions, levels, etc.);

4.6.5.2. file- and element-naming and file size, protocols – including project identification number, discipline designation, model number, revision number, Element name and type, layer, sharing status, and related information;

4.6.5.3. measurement system;

- 4.6.5.4. Geospatial coordinate system (geo-referenced, origin point);
 - 4.6.5.5. permitted native file types;
 - 4.6.5.6. model partitioning; and
 - 4.6.5.7. submission procedures and protocols – electronic stamping, approval process for designating a Model as a Design Model or Full Design Model, version and change tracking requirements, and system for notification of action on a request for approval of a Model or portion of it.
- 4.6.6. Model precision requirements – use of Level of Development, Granularity, and Level of Detail measurement tools by Phase and milestone.
- 4.6.7. DIMENSIONAL ACCURACY A Contribution of or to a Model shall be:
- accurate to the extent the LOD specified in the BIM Execution Plan requires dimensions to be accurate, and all other dimensions must be retrieved from the Drawings
- 4.6.8. Model reliability standards and quality control measures – visual, interference, standards, model integrity for accuracy and completeness of information, eliminating undefined, incorrectly defined and duplicated Elements. Paper and other non-electronic documentation requirements, including drawing set sizes, title sheet and sheet block designation formats, and content.
- 4.6.9. Utilization of BIM for RFI and Change Order processes, response protocols and timing, incorporation of responses into Models.
- 4.6.10. Workflow and revision management – process and approval, and validation tracking mechanisms.
- 4.6.11. Archiving, and data legacy integration and reuse rights – version, Record Model, Conformed Design Model control.

4.7. BIM STAFFING

- 4.7.1. Identify contact information for each Contributor and any other authorized users of Project BIM.
- 4.7.2. Determine roles and responsibilities – by Contributor organization and individually, including contact information sharing.
- 4.7.3. Develop training requirements for all Contributors.
- 4.7.4. Decision hierarchies – develop preferred sequence of information management and Model access, including identifying required decision makers for various aspects of Model development.

5. RISK ALLOCATION

5.1. Each Model Contributor shall be responsible for the Contributions it makes to a Model or the data that is developed as a result of that Contributor's access to a Model. A Model Contributor is also responsible for any Contribution or access to a Model by a Project Participant in privity with, and of a lower tier contractually than, that Contributor.

5.2. With respect to waiver of consequential damages:

5.2.1. The applicable Governing Contract shall govern, as between the parties to that Governing contract, for any waiver of consequential damages by or in favor of Constructor or Design Professional arising from their respective Contribution; and

5.2.2. Each Affiliated Contract Contributor waives claims against the other Project Contributors for consequential damages arising out of or relating to the use of, or access to, a Model, including, but not limited to, damages for loss of use of the Project, rental expenses, loss of income or profit, costs of financing, loss of business, principal office overhead and expenses, loss of reputation, or insolvency.

5.3. The standard of care applicable to a Contributor's Contributions to, or use of, a Model shall be governed by a Contributor's Governing Contract or Affiliated Contract, or, if no such standard is stated, then pursuant to common law, as applicable.

5.4. Each Model Contributor shall use its best efforts to minimize the risk of claims and liability arising from that Contributor's use of, or access to, its Model or any other Project Models. Such efforts shall include promptly reporting to affected Contributors any errors, inconsistencies, or omissions the Contributor discovers in its Model or other Project Models; however, nothing in this section shall relieve any Contributor of liability it would otherwise bear under § 5.1.

5.5. To the extent that any Design Models are included as Contract Documents under the BIM Execution Plan adopted for the Project or otherwise in this Addendum, Project Participants may rely upon the accuracy of information in those Design Models; provided, however, the selection in § 4.6.9 shall control a Project Participant's right to rely on the Dimensional Accuracy of a Contribution, Model, or Model Elements.

5.6. No Contributor shall be responsible for costs, expenses, liabilities, or damages that may result from use of its Model by other Contributors beyond the uses set forth in this Addendum, as may be amended.

5.7. Model use beyond the permitted uses set forth in this Addendum, as may be amended, is at the sole risk of the user; provided, however, nothing in this Addendum conveys any right to use a Model or other Contribution for a purpose other than for this Project to the extent provided herein.

5.8. Unless agreed otherwise in the BIM Execution Plan, and in addition to any insurance required by a Governing Contract or Affiliated Contract, Contributors shall procure and maintain the insurance coverage as listed in Insurance Addendum ____.

6. INTELLECTUAL PROPERTY RIGHTS IN MODELS

6.1. LICENSE GRANT In addition to any other copyright or other intellectual property licenses that may be granted under a Governing Contract, each Contributor grants to Owner and the other Contributors limited, non-exclusive licenses (Copyright Licenses) to reproduce, distribute, display, make derivative works of, and otherwise use the following for purposes of this Project only:

6.1.1. That Contributor's Contributions;

6.1.2. The Contributions of those other Project Participants who have granted that Contributor an identical license; and

6.1.3. Any Model relating to the Project to which that Contributor has intellectual property rights.

6.2. LICENSE LIMITATIONS

6.2.1. Unless otherwise provided in the BIM Execution Plan, the Copyright License will: (a) remain in effect as permitted by law and as required under this Addendum; and (b) after final completion of construction of the Project, be limited to retention of an archival copy of the Contributor's Project-related Contributions, and any additional Owner licenses as provided in § 6.5.

6.3. OWNERSHIP AND LICENSING Each Contributor warrants to the Project Participants that the Contributor is the copyright owner of, possesses a valid copyright license for, or is otherwise authorized by the copyright owner to use its Contribution, including the right to grant licenses to other Project Participants to use such data or the software used to create it as needed to fulfill duties or Model Uses established in the BIM Execution Plan for the Project. Subject to waiver of subrogation in a Governing Contract or Affiliated Contract applicable to Contributions, each Contributor agrees to defend, indemnify, and hold the other Project Participants harmless, including for costs, expenses of defense, and attorneys' fees, for claims of, and causes of action by, third parties arising out of, or relating to, infringement or alleged infringement of expression by that Contributor's Contribution.

6.4. NO TRANSFER OR DEPRIVATION OF RIGHTS Except as expressly granted by this Addendum, this Addendum is not intended to limit, transfer, deprive, dispossess, or otherwise affect any intellectual property rights that a Contributor has with respect to its respective Contribution.

6.5. ADDITIONAL OWNER LICENSES Owner's entitlement, if any, to use the Models developed for this Project for purposes other than this Project is as provided in the Governing Contract between Owner and Design Professional, and the Governing Contract between Owner and Constructor.

6.5.1. This entire subsection does not take precedence over any terms in the Governing Contract pertaining to non-payment by Owner:

6.5.1.1. Except as provided in subsection 6.5.1.2 immediately below, the Copyright License granted to Owner in this Addendum to reproduce, distribute, display, or otherwise reuse the Contributions and Models for this Project shall be for the entire lifecycle of the Project.

6.5.1.2. If Owner fails to make Project-related payments to a Contributor when due under a Governing Contract, and that material failure is so adjudged against Owner by the final decision of the court of law, or alternative dispute resolution forum identified in that Governing Contract, or via such other forum mutually agreed by Owner and affected Contributor(s) (an "Adjudication"), then any Copyright Licenses granted to Owner from that Contributor shall be suspended as of the time of such Adjudication and reinstated upon satisfaction of the Adjudication.

6.5.1.3. Contributors waive any rights against other Contributors who are not found liable in an Adjudication (for failure to pay or otherwise) to:

6.5.1.3.1. claim contributory, direct, or vicarious copyright infringement;

6.5.1.3.2. to assert claims of misappropriation or like claims;

6.5.1.3.3. to revoke licenses granted in this Addendum;

6.5.1.3.4. or to pursue equitable remedies under the US Copyright Act, 17 U.S.C. §§ 101 et seq., or under applicable law, including their respective Model Use obligations, if any, to the Contributor unpaid by Owner.

6.5.1.4. The non-liable Contributor's licenses granted in this Addendum shall not be affected by the suspension of Owner's license due to an Adjudication.

7. PROJECT REQUIREMENTS

7.1. MINIMUM QUALIFICATIONS

7.1.1. Each participating company must adequately staff their coordination department with qualified trade-knowledgeable personnel before coordination begins. Individual participants (persons not companies) in the subcontractor's Spatial Coordination Team shall have verifiable experience in at least two fully coordinated 3D projects where the team spatially coordinated a 3D construction model.

7.1.2. If the subcontractor does not have a qualified in-house team, a third party modeling company may be considered if the following are met:

7.1.2.1. Pre-approval of using a third party modeling company must be requested.

7.1.2.2. The third party modeling company must provide evidence of the successful completion of five projects of similar size and complexity, where the modeling was used for coordination during the construction phase of the project, and where modeling participants were contractors.

7.1.2.3. The subcontractor must present a detailed plan illustrating how timely and accurate transfer of information between the subcontractor and the third party modeling company will be managed. Of primary concern is that the model will accurately reflect the subcontractor's actual knowledge of the construction detailing as proposed for use on this project.

7.2. BIM COORDINATION MANAGER

7.2.1. Clancy & Theys Construction Company's Virtual Design and Construction Coordinator (VDCC) will lead the BIM coordination process for spatial coordination of the major building systems. The VDCC will also serve as the BIM Manager referenced in Section 3.2 of the BIM

Addendum, unless modified by the BIM Execution Plan (BEP). The VDCC will be responsible for conducting the spatial coordination meetings, facilitating the federated model updates, maintaining the collaborative workspace, and facilitating meeting participation for local and remote participants.

7.3. BIM EXECUTION PLAN (BEP)

7.3.1. Prior to beginning the coordination work, the VDCC shall conduct a BIM Kickoff Meeting to develop, in collaboration with the BIM coordination participants, a BIM Execution Plan, which shall serve as the guiding document for the BIM requirements of this project. All coordination participants are required to attend. The BEP shall further define the standards, modeling scope, LOD, file transfer protocols, coordination schedule and BIM related deliverables for the project.

7.4. FILE TRANSFER AND PROJECT COLLABORATION WEBSITE

7.4.1. C&T shall provide a project BIM website to host the project models, referenced in Section 7.6 above. The workspace will provide a collaborative location where the current contract CAD drawings, coordination CAD files and Models, and fully coordinated submittal drawing files will reside. Each BIM coordination team member will obtain data from this location. Spatial Coordination Team members shall up-load to the project website progress models semi-weekly during the coordination process. The VDCC will combine the models as they are updated into a federated model that will be available for download from the website. The federated model shall be used by each subcontractor for coordination of the work.

7.5. MODEL REQUIREMENTS

7.5.1. General - In addition to the two-dimensional shop drawings and other deliverables required in the specifications, the subcontractor shall furnish a three dimensional model conforming to the requirements set forth below:

7.5.1.1. BIM deliverables shall be in addition to and in conjunction with all other contracted deliverables.

7.5.1.2. All models shall be provided in native file format, dwg file format, and .nwc file format and purged of elements, xrefs, and standards not required via the BIM Execution Plan. Software versions must be compatible with those defined by the BIM Execution Plan.

7.5.1.3. All elements of the project shall be created in 3 dimensions with real world sizes and snap grid coordinates.

7.5.1.4. All elements shall have identifiable Type Description and Color/ Material designations.

7.5.1.5. The Level of Development (LOD) for specific model components, referenced in Section 4.6.6 above, shall be established in the BIM Execution Plan, to be developed during the BIM Kickoff Meeting. In general, building elements to be coordinated shall be modeled to an LOD 350 as defined in the BIM Forum LOD Specification, 2017 Edition, or greater. In essence, parts necessary for coordination of the building element with nearby or attached elements shall be modeled. These parts shall include such items as supports and connections. The quantity, size, shape, location, and orientation of the element as designed shall be measured directly from the model without referring to non-modeled information such as notes or dimension call-outs

7.5.1.6. The model origin shall be specified in the BIM Execution Plan. All models shall locate point (0,0,0) at this location.

7.5.1.7. Models shall be broken down by scope and area as outlined in the BIM Execution Plan. Models may be required to be broken down by floor for multi-story buildings. Subcontractors providing more than one building trade shall provide a separate model file for each trade.

7.5.1.8. Each MEP Coordination Team member shall model all of the major components of their work to scale, at elevation, and free from interference with the structure, their own

components, and other MEP trades' work. Supports, hangers, seismic restraints, insulation, structural zones of influence, serviceability access, and maintenance clearances shall be included, unless otherwise noted in the BEP. Major Components include the following:

- 7.5.1.8.1. HVAC Duct -All ductwork, grilles, registers, diffusers, dampers, access panels, air moving equipment, external insulation, hangers, installation, maintenance and code required clearances, access doors and any item which may impact coordination with other disciplines.
- 7.5.1.8.2. HVAC Piping - All overhead piping, vertical piping in shafts, connections to equipment, valves, scheduled equipment, pumps, boilers, insulation, installation, maintenance and code required clearances, hangers, supports, access doors and any item which may impact coordination with other disciplines.
- 7.5.1.8.3. Plumbing - All overhead piping, vertical piping between floors, connections to equipment and fixtures, nominal modeling (placeholder) of fixtures, floor drains, pumps and other equipment, maintenance and code required clearances, traps, hose bibs, clean-outs, insulation, hangers, supports, and any item which may impact coordination with other disciplines.
- 7.5.1.8.4. Fire Protection - All overhead piping, piping mains, vertical risers, branch connections, air gap drains and drain ports, valves, backflow assemblies, drops and heads, FDC, access panels, pumps, tanks, maintenance and code required clearances, hangers, supports, equipment, control panels, insulation and insulated enclosures and any item which may impact coordination with other disciplines.
- 7.5.1.8.5. Electrical - All exposed conduits 1 1/2" and larger (including conduit in chases), any rack of two or more conduits regardless of size, nominal modeling (placeholder) of light fixtures, electrical pull boxes, circuit boxes, access clearances, installation clearances, and code required clearances, cable trays (including communications data), all grounding systems (i.e. lightning protection, static ground, communications grounding, etc.), hangers, supports, access doors, raceways, and any item which may impact coordination with other disciplines. Temporary electrical work will not be modeled.
- 7.5.1.8.6. Structural and Miscellaneous Steel - All structural and miscellaneous steel members that are detailed in steel fabrication and erection drawings including columns, beams, channels, tubes, angles (for slab and roof openings, deck bearing, etc.), lintels, steel bar joists, bracing, pipe railing, metal pan stairs, embeds for masonry.

7.6. COORDINATION MEETINGS

7.6.1. Each participant shall designate a model coordinator from their company who shall be required to participate in weekly on-site coordination meetings, for the purposes of reviewing the model and resolving conflicts. Web-based conference participation may be permitted on a case per case basis when weekly on-site participation is impractical.

7.6.2. Each subcontractor shall be required to provide review of the model and drawings by individual(s) meeting the following criteria. In addition, the subcontractor shall designate one of these as the primary contact for coordination of the modeling process:

7.6.2.1. **Modeler/Coordinator** - an individual that is proficient in the software utilized to create the BIM, and the software that is being utilized for coordination.

7.6.2.2. **Decision Maker** - an individual that has the authority to make reasonable changes on behalf of their respective company. These changes will potentially have cost impact, and the individual must be able to communicate cost implications where various conflicts arise.

7.6.2.3. **Field Knowledge** - an individual that has field experience and understands the constructability of the system being discussed. They should be able to provide alternate routing paths, understand sequencing of the work, and understand installation best practices for their respective systems.

7.7. TIMELINESS

7.7.1. Each participant recognizes that building systems coordination is a team effort. As such, each team member relies on other team members to post models promptly as designated in the BIM Coordination Schedule and to actively participate in coordination meetings. Missing or late models can prevent the entire team from making coordination deadlines or can cause rework of coordination models, therefore:

7.7.1.1. Participants whose models are uploaded late or missing are subject to a \$1000 penalty for delaying the coordination of the project. This same requirement applies to any subcontractor who fails to comply with the agreed upon coordination schedule. Success requires that the entire coordination team is fully committed throughout the entire process.

7.8. SPATIAL COORDINATION

7.8.1. At the mandatory regular coordination meetings, the VDCC shall provide a means to electronically reconcile interferences between all affected MEP/FP trades. The VDCC shall utilize coordination and spatial review software to provide “real time” rendered views of the structure and MEP/FP components. Spatial interferences shall be documented, resolution of the interference and party responsible for making changes noted. The VDCC shall create a report of changes to be made and distribute to all Spatial Coordination team members in the Meeting Minutes.

7.8.2. The Design team (Project Architect, Mechanical Engineer, Plumbing Engineer, Electrical Engineer, Structural Engineer, etc.) may participate in the coordination meetings, as necessary, to resolve spatial issues which may require design consideration. Design changes made during this process shall be properly documented by the Design participants and transmitted to C&T for distribution to the MEP/FP coordination team.

7.8.3. Stratification/System Priorities: Each trade shall be designated a typical elevation that should be maintained when possible. Each system shall also receive a priority based on the ease to which it can be relocated and the cost to relocate. When conflicts between trades arise, this priority shall determine which trade is to offset or move to accommodate the other trade. The coordination manager reserves the right to change these priorities on a case by case basis. The stratification and system priorities shall be outlined specifically in the BIM Execution Plan.

7.8.4. Coordination models shall be updated at least two times per week during the coordination process, or as specified in the BEP.

7.9. SHOP DRAWINGS

7.9.1. The formatting and content of 2-D shop drawing shall be as required in the project specifications. Additional formatting requirements may be specified in the BEP.

7.9.2. Shop drawings shall be extracted from the coordinated BIM.

7.10. COORDINATION DRAWINGS

7.10.1. When all spatial interferences and coordination issues have been resolved and a fully coordinated MEP/FP system is achieved, each MEP/FP coordination subcontractor shall produce fully annotated installation drawings of their respective systems complete with title blocks appropriate for installation by their field team, extracted from the coordinated BIM. These drawings shall show all vertical and horizontal dimensions of the coordinated scope. Drawing areas shall correlate with the coordination model unless additional detail is required and written permission has been received from the coordination manager.

7.10.2. One hardcopy and one PDF format data file shall be submitted to the Design Team for review and compliance with design intent. At the request of the Design Team, a Coordination Model Review Meeting may be scheduled to review Coordination Data for compliance with Design Intent. Upon approval by the Design Team, a copy of the fully-coordinated coordination submittal drawings shall be signed by each participant, and shall become the official "Coordination Sign-Off Drawings". The "Coordination Sign-Off Drawings" will be stored by the Construction Manager on the project site and will form the basis for resolution of any field installation conflicts or disagreements.

7.10.3. All plans shall be at a minimum 1/4" scale and arranged using a common sheet order and base files designated by the VDCC.

7.10.4. Annotation and Dimension Text Sizes shall follow the current National Cad Standard recommendations. These and additional Coordination Drawing Standards shall be further described in the BIM Execution Plan

7.11. SIGNOFF & EXECUTION

7.11.1. Once an area has been deemed "coordinated" by the VDCC, Coordination Signoff Drawings and Models shall be issued to document the current coordination status of the project. All parties that participated in the BIM coordination process shall be required to sign the drawing and a document indicating that they have reviewed the drawing/model and agree that it is substantially coordinated and shall meet their needs for construction in the field.

7.11.2. Work in an area shall not commence prior to signoff of that area.

7.11.3. Components not shown on, or not installed in accordance with the "Coordination Sign-Off Drawing" shall be relocated by and at the expense of the offending party.

7.11.4. Cost for rework, re-coordination, or schedule impact required to accommodate components not shown on, or not installed in accordance with the "Coordination Sign-Off Drawings" shall be paid by the party in non-compliance.

7.11.5. The CONSTRUCTION MANAGER shall determine the method to be used to resolve interference problems not identified prior to execution of the work. The cost of rework and relocation's directed by the CM shall be the responsibility of the Subcontractor having installed affected items. In the event of a dispute, CONSTRUCTION MANAGER's decision shall be final.

7.11.6. Post-Signoff Coordination: If a significant design change is issued or if unforeseen issues arise in the field, it may be necessary to revisit coordination for specific areas. Additional Coordination shall be determined at the discretion of the VDCC, and all affected parties shall be required to participate. At that point, the signoff process shall proceed in the standard fashion.

7.12. AS-BUILT DOCUMENTATION

7.12.1. The subcontractor shall continuously update and maintain the Construction BIM throughout construction to reflect the current as-built conditions of the building. Submit the revised Construction BIM to the CMAR as soon as updates are made. Submit a final Construction BIM to CMAR within 5 days of the date when the project achieves Substantial Completion.

END OF DOCUMENT