

PORT OF WILMINGTON
UPGRADES TO THE SOUTH GATE COMPLEX
FOR
NORTH CAROLINA STATE PORTS AUTHORITY

PROJECT BID MANUAL
FEBRUARY 3, 2020

Owner: NORTH CAROLINA PORTS

North Carolina State Ports Authority
2202 Burnett Blvd
Wilmington, NC 28401

Architect: M MOTT MACDONALD

Mott MacDonald
PO Box 700
Fuquay Varina, NC 27526

Contractor: BARNHILL CONTRACTING COMPANY

Barnhill Contracting Company
4325 Pleasant Valley Road
Raleigh, NC 27612

BCC PROJECT NO: 1105119
NCSPA PROJECT NO: C-1289(W)

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Section One

General Information

NOTICE TO PREQUALIFIED BIDDERS

Date: February 12, 2020

RE: **Port of Wilmington Upgrades South Gate Complex**
BCC Project No.: 1105119

To All Bidders:

Your firm is encouraged to participate on a Prequalified Bidders List for the Work on the above referenced project. Work includes construction of a new two-story 8,241 sqft control building, premanufactured booths and canopies, asphalt & concrete paving, infrastructure for multiple locations of security and weighing of inbound and outbound traffic. The civil work consists of development of an existing asphalt paved storage area, to a fully functional truck terminal, including site utilities, milling and asphalt paving along with concrete paving. The building consists of structural steel with slab on deck 2nd floor and roof, with Modified Bit Roofing. The skin will be metal studs, sheathing, air barrier, masonry and insulated metal panels, including Curtainwall and Storefront windows. Interiors will be resilient, carpet, and ceramic tile flooring, drywall and acoustical ceilings, wood doors and hardware, casework, and signage. Landscaping consists of seeding/sod and irrigation. Final phase consisting of demolition of existing structures onsite, utility removal and asphalt patch back.

Work is for the North Carolina State Ports Authority located on the existing South Gate Complex located at 1 Shipyard Blvd, Wilmington NC 28401.

Barnhill Contracting Company has been retained by the Owner, North Carolina State Ports Authority, as the Construction Manager at Risk for the construction of the South Gate Complex Upgrade. The Design Professional is Mott MacDonald.

1. Complete plans, specifications, and contract documents will be available after 1:00 PM February 12, 2020 for inspection to view, purchase or download for free in the online digital plan room of Barnhill Contracting Company at **www.barnhillplanroom.com**.

Hard copies of project documents will also be available to purchase through the online plan room of Barnhill Contracting Company at **www.barnhillplanroom.com** or by contacting Digital Print & Imaging (DPI) at 910-341-3005.

The pre-bid meeting will be held at NC Ports Materials Management Building 2508 Burnett Blvd, Wilmington NC 28401.

Monday, February 17, 2020 from 5:30 PM to 6:30 PM

Attendance at the pre-bid meeting is strongly encouraged. Failure to attend the pre-bid meeting is in no way an avenue to apply for additional consideration or change order compensation at a later date.

Sealed bid submissions are due at Date and Times listed below for bid packages listed. Facsimile or email Bid Proposals will **NOT** be accepted.

DO NOT MAIL BID FORMS DIRECTLY TO NORTH CAROLINA STATE PORTS AUTHORITY

Sealed Bids can also be delivered before **5:00 PM on the day before** the scheduled bid opening to the Wilmington office of Barnhill Contracting Company at the address listed below:

Barnhill Contracting Company
272 North Front St., Suite 420

Wilmington, NC 28401
Attn: Robert Eagle

Barnhill Contracting Company will receive, open and read publicly all bid proposals received at:
NC Ports Maritime Building, Room 100 Executive Board Room
2202 Burnett Blvd, Wilmington NC 28401. ** Please note that you will need to park in the Visitor Lot South of the Building**

Bid Date: Tuesday, 03/17/20 at 1:00 PM

BP100-General Trades
BP105-Final Cleaning
BP205-Demolition
BP390-Turnkey Concrete
BP400-Turnkey Masonry
BP500-Structural Steel
BP740-Roofing
BP750-Metal Wall Panels
BP790-Caulking & Waterproofing
BP800-Turnkey Doors, Frames, Hardware
BP840-Curtainwall, Storefronts, Glass & Glazing
BP925-Metal Studs & Drywall
BP930-Ceramic Tile
BP960-Resilient, Carpet, Base
BP980-Acoustical Ceilings

Bid Date: Wednesday, 03/18/20 at 1:00 PM

BP990-Painting
BP1005-Toilet Specialties & Accessories, Div 10
BP1010-Identifiying Devices
BP1230-Millwork
BP1350-General Contracting
BP1400-Elevators
BP2100-Fire Protection
BP2200-Plumbing
BP2300-HVAC
BP2600-Turnkey Electrical
BP3100-Turnkey Sitework
BP3213-Heavy Duty Concrete Paving
BP3231-Fences & Gates
BP3290-Landscaping
BP3370-Site Electrical

All Bidders are strongly encouraged to include opportunities for Minority Business participation wherever possible in their respective Bid submission. Minority Business is a part of this contract and must comply with the State of North Carolina General Statutes.

Bid Security (Bid Bond) Requirement: **Bid Bonds are required on ALL bid packages that meet or exceed $300,000.00.**

Performance and Payment Bond Requirement: **Noted on bid forms as an ADD Alternate Price.**

The Construction Manager and Owner reserve the right to add pre-qualified bidders. The Construction Manager and Owner reserve the right to reject any and all proposals. Additional Bid Packages may be added and/or deleted at the discretion of the Construction Manager.

All bidders are responsible for reviewing the enclosed information and verifying the drawings and specifications listed are in fact included. All bidders must contact Barnhill Contracting Company within forty-eight (48) hours of receipt of this bid package if for any reason any drawing or specification information is not included.

All questions will be expeditiously answered via addendum to be shared with all Bidders. Questions will be accepted up to **10-days** prior to the published bid date. Questions received after the fact will not be addressed. All technical questions must be submitted in writing.

On behalf of North Carolina State Ports Authority, Mott MacDonald, and Barnhill Contracting Company, we ***"Thank You"*** in advance for the valuable time and effort you will be expending pursuing and preparing your Bid Proposal. Should you require additional direction, please contact Barnhill Contracting Company's, Senior Project Manager, **Robert Eagle, at 919-422-9006, reagle@barnhillcontracting.com.**

END OF SECTION

Project Information Sheet

PROJECT NAME:	**Port of Wilmington Upgrades South Gate Complex** **BCC Job # 1105119**	
LOCATION:	**Port of Wilmington South Gate Complex** 1 Shipyard Blvd Wilmington, NC 28401	
OWNER:	**North Carolina State Ports Authority** 2202 Burnett Blvd Wilmington, NC 28401	
CONSTRUCTION MANAGER:	**Barnhill Contracting Company** 272 North Front Street, Suite 420 Wilmington, NC 28401	Phone 919-422-9006
	Bidding/Construction Phase Robert Eagle Senior Project Manager	Email: reagle@barnhillcontracting.com Phone 919-422-9006
	Prequalification Forms/Bid Documents Carie Lamson	Email: clamson@barnhillcontracting.com Phone 919-785-9176
ARCHITECT:	**Mott MacDonald Architects, P.C.** 7621 Purfoy Rd Fuquay-Varina, NC 27526	Phone 910-552-2253
STRUCTURAL:	**Mott MacDonald Architects, P.C.** 7621 Purfoy Rd Fuquay-Varina, NC 27526	Phone 910-552-2253
PME:	**Mott MacDonald Architects, P.C.** 7621 Purfoy Rd Fuquay-Varina, NC 27526	Phone 910-552-2253
CIVIL	**Curry Engineering** 205 S. Fuquay Ave Fuquay-Varina, NC 27526	Phone 919-552-0849

END OF SECTION

INSTRUCTIONS TO BIDDERS

ARTICLE 1. DEFINITIONS

1.1 All definitions set forth in the General Conditions and Supplemental/Supplementary General Conditions apply to these Instructions to Bidders.

1.2 The Contract Documents (Drawings, Specifications, Bid Manual, etc.) shall also serve as the bidding documents.

1.3 An "Alternate Bid" or "Alternate" is an amount stated in the proposal to be added to or deducted from the amount of the base bid if the corresponding change in the Work, as described in the Contract Documents, is accepted.

ARTICLE 2. BIDDERS' REPRESENTATIONS

2.1 It is understood and mutually agreed that by submitting a bid the bidder acknowledges that he has carefully examined all documents pertaining to the work and has visited the site to become familiar with, the location, accessibility and general character of the site of the work and all existing buildings and structures within and adjacent to the site, and has satisfied himself as to the nature of the work, the condition of existing buildings and structures, the conformation of the ground, the character, quality and quantity of the material to be encountered, the character of the equipment, machinery, plant and any other facilities needed preliminary to and during prosecution of the work, the general and local conditions, laws, ordinances, codes, rules and regulations, the construction hazards, and all other matters, including, but not limited to, the labor situation which can in any way affect the work under the contract, and including all safety measures required by the Occupational Safety and Health Act of 1970 and all rules and regulation issued pursuant thereto. Further, that the bidder has studied and carefully correlated its observation with the Contract Documents in preparing the pricing.

2.2 Reference is made to Contract Documents for the identification of those surveys and investigation reports of subsurface or latent physical condition at the site or otherwise affecting performance of the work which have been relied upon by the designer in preparing the document. The Owner will make copies of all such surveys and reports available to the bidder through the construction manager upon request. Unless otherwise specified in the Bid Documents, borings, test excavations and other subsurface information, if any, are provided solely to share information and any use of, or reliance upon, such items by the Bidder is at the risk of the Bidder. The Bidder shall be afforded access to the Project site to obtain the Bidder's own borings, test excavations and other subsurface information upon request made to the Construction Manager.

2.3 Each bidder may, at his own expense, make such additional surveys and investigations as may deem necessary to determine his bid price for the performance of the work. Any on-site investigation shall be done at the convenience of the Owner. Any reasonable request for access to the site will be honored by the Owner.

2.4 By submitting a bid, each bidder represents that its bid is based upon the personnel, materials, systems, and equipment required by the Contract Documents without exception and that it has sufficient personnel, materials, systems, and equipment available to complete the Work as and when specified or required**. The Bidder acknowledges that it has thoroughly reviewed all Bid Document information for the Project and that it is intimately familiar with such information. Bidder acknowledges that the Construction Manager is relying on the Bidder's review of all Bid Document information to be "biddable" and "buildable" and otherwise fully adequate to account all work, labor, and materials required for the completion of the Project.**

ARTICLE 3. INTERPRETATION OR CORRECTION OF THE CONTRACT DOCUMENTS

3.1 Should bidders find any discrepancies in, or omission from, ambiguity, inconsistency, or error, in the drawings or documents, or should bidder be in doubt as to their meaning upon examination of the Contract Documents or of the Project Site and local conditions, bidder shall at once notify the Construction Manager who will confer with the Designers and will send written instructions in the form of addenda to all bidders.

3.2 Bidders requiring, clarification or interpretation of the Contract Documents must submit a written request to the Construction Manager at least Ten (10) days prior to the date for receipt of bids.

3.3. All interpretations, corrections, or changes of the Contract Documents will be made by Addendum. Interpretations, corrections, or changes of the Contract Documents made in any other manner are not binding, and no bidder may rely upon such interpretations, corrections, or changes.

3.4. Any addenda to specifications issued during the time of bidding are to be considered covered in the proposal and in closing a contract they will become a part thereof. It shall be the bidder's responsibility to ascertain prior to bid time the addenda issued and to see that his bid includes any changes thereby required.

3.5. All addenda shall be acknowledged by the bidder(s) on the Form of Proposal.

ARTICLE 4. SUBSTITUTIONS

4.1 In accordance with the provisions of G.S. 133-3, material, product, or equipment substitutions proposed by the bidders to those specified herein can only be considered during the bidding phase until **ten (10)** days prior to the receipt of bids when submitted to the Construction Manager for review and forwarding to the Designer with sufficient data to confirm material, product, or equipment equality. Proposed substitutions submitted after this time will be considered only as potential change order.

4.2 Submittals for proposed substitutions shall include the following information:

a. Name, address and telephone number of manufacturer and supplier as appropriate.

b. Trade name, model or catalog designation.

c. Product data including performance and test data, reference standards, and technical descriptions of material, product, or equipment. Include color samples and samples of available finishes as appropriate.

d. Detailed comparison with specified products including performance capabilities, warranties, and test results.

e. Other pertinent data including data requested by the CM @ Risk or Designer to confirm product equality.

4.3.1 If the Construction Manager and Designer approve a proposed substitution, the Construction Manager will set forth the substitution in an Addendum to all bidders of record. If such approval is provided, the Bidder shall be responsible for any and all domino impacts attributable to such substitution if incurred during the course of the project's construction duration.

4.3.2 A completed Substitution Request Form (attached under "Section 1-General Information within Project Bid Manual) is required to be submitted to the Construction Manager by the party proposing any substitution for the review of all requests for substitution.

ARTICLE 5. PREPARATION AND SUBMISSION OF BIDS

5.1 All bids must be prepared on the Form of Proposal provided herein and must be submitted in accordance with the Instructions to Bidders.

Any modification to the Form of Proposal (including alternates and/or unit prices or qualifications) will disqualify the bid and may cause the bid to be rejected.

5.2 All blank spaces for bids, alternates, and unit prices applicable to bidder's work in the Bid Form must be filled in order for the bid to be accepted. When alternates requested are not bid, the proposal may be considered incomplete. The bidder agrees that bid on Form of Proposal detached from specification will be considered and will have the same force and effect as if attached thereto. Email proposals will not be considered. Numbers shall be stated both in writing and in figures for the base bids and alternates. All words and figures must be in ink or typed. **If a bid items has NO value or results in a NO CHANGE adjustment then the bidder must use "$0" in the blank. Use of a "N/C" (no change), or "NIC" (not in contract), may render the bid "non-responsive".**

5.3 The bidder shall fill in the Form of Proposal as follows;

a. Each bid must give the full business address of the bidder.

b. If the documents are executed by a sole owner, the fact shall be evidenced by the word "Owner" appearing after the name of the person executing them.

c. If the documents are executed by a partnership, that fact shall be evidenced by the word "Co-Partner" appearing after the name of the partner executing them.

d. If the documents are executed on the part of a corporation, they shall be executed by either the president or the vice president and attested by the secretary or assistant secretary in either case, and the title of the office of such persons shall appear after their signatures. The seal of the corporation shall be impressed on each signature page of the documents.

e. If the proposal is made by a joint venture, each member of the joint venture in the above form shall execute it for sole owner, partnership or corporation, whichever form is applicable.

f. **All signatures shall be properly witnessed.**

g. If a person other than an owner holds the contractor's license of a bidder, partner or officer of a firm, then the licensee shall also sign and be a party to the proposal. The title "Licensee" shall appear under his/her signature.

5.4 The Bidder shall price the Work to include all labor, material, equipment, supervision, administration and management (home office and field), scheduling, quality control, testing and inspection, training, transportation of manpower and materials and equipment, information technology, consumables, applicable taxes, required fees and permits, daily clean-up and daily safety, and whatever else is deemed necessary to complete the Work.

5.4 Bidders must provide amounts on the Unit Price Schedule for labor, material, equipment, supervision, general conditions, overhead, fee, and preparation of performance and payment bond costs of all work items. The quantities listed in the Bid Form for unit price items are to be considered as approximate and are to be used only for the comparison of the bids and as a basis for computing amounts of security or penal sums of bonds to be furnished. Payments will only be for the actual quantities of the Work performed and accepted or materials furnished and accepted in accordance with the Contract Documents. The scheduled quantities of Work to be done and material to be furnished may each be increased, decreased, or omitted as provided in the Contract Documents.

5.5 The inclusion of a Unit Price Schedule, including unit prices for labor, materials and equipment, in the bid is for informational purposes only and shall in no way obligate the Construction Manager or Owner to pay the unit rates provided in the Unit Price Schedule for any additional work performed pursuant to a modification should the bidder be awarded the Subcontract. The Construction Manager may agree to pay unit rates included in the Unit Price Schedule, or agree to pay adjusted unit rates reflecting the bidder's actual costs, after review

by the Construction Manager and Owner and receipt by the bidder of written approval from the Construction Manager for the use of approved rates.

5.6 The completed bid shall be placed in a sealed opaque envelope so marked as to indicate: "Proposal/Bid", the identity of the Project (name of Project), the respective Bid package Number and Name, the name and address of the bidder and License number of the bidder. Bidders must clearly mark on the outside of the envelope which Bid Package(s) they are bidding. Bids must be received at the location as designated on the Notice to Bidders, by the specified time and date. Bids must be submitted directly to the Construction Manager Representative. If forwarded by mail or express courier, the envelope containing the proposal must be placed in another envelope which shall be sealed and addressed to the location(s) as designated on the Notice to Bidders. The bidder uses the mail or courier service at its own risk. Bids received after the advertised time for opening of bids will be returned to the bidder unopened.

5.7 Bidder shall identify in the bid form, the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit (Affidavit A) listing good faith efforts or an affidavit (Affidavit B) indicating work under contract will be self-performed, as required by G.S. 143-128.2(c) and G.S. 143-128.2(f). Failure to comply with these requirements is grounds for rejection of the bid.

5.8 Bids will be opened and read aloud at the specified time and location indicated in the advertisement.

ARTICLE 6. QUALIFICATION OF BIDDERS

6.1 Within three days (72) hours after the bid time, any bidder to whom the award of the contract might be considered must submit to the Construction Manager a properly executed State of North Carolina – Affidavit C Portion of the Work to Performed by Minority Firms, and/or Affidavit D – Good Faith Efforts in the form included in the Project Bid Manual.

ARTICLE 7. Not Used

ARTICLE 8. FORM OF BID FORM

8.1 The Form of Proposal is included in the Project Bid Manual for reference only. **Specific Bid Proposal Forms will be supplied by the Construction Manager for each bid package.**

8.2 Form of Bonds are included in the sample contract form. Subcontracts are required to use the forms provided. Surety firm executing the bonds must be a Class "A" or better rated bonding firm as ranked by A.M. Best and be registered with the State of North Carolina department of insurance. **Any packages over $300,000.00 MUST include a Bid Bond.**

8.3 Construction Manager at its sole discretion may choose to include any subcontractor in a SubGuard Insurance program in lieu of requesting a Payment and Performance Bond. Subcontractors included in the program may be required to submit additional confidential financial information for review by the Construction Manager prior to enrollment in the program.

8.4 If the Construction Manager elects to enroll the subcontractor in the SubGuard Program the Construction Manager will deduct the full amount listed on the bid form by the Subcontractor for the Payment and Performance Bonds.

ARTICLE 9. Not Used

ARTICLE 10 AWARD OF CONTRACT

10.1 Subject to the right of the Construction Manager & Owner to reject any or all bids, the Construction Manager will award the Subcontract to the bidder deemed by the Construction Manager & Owner in their sole discretion to be the lowest responsive and responsible bidder. In determining which bidder is the lowest responsive and responsible, the Construction Manager & Owner, in their discretion, may take into

consideration not only the amount of the bid, but also such of the following criteria as it deems appropriate and may give such weight thereto as it deems appropriate:

10.1.1 The bidder's financial ability to complete the Subcontract successfully and on time without resort to its surety;

10.1.2 The bidder's prior experience with comparable or more complex projects;

10.1.3 The bidder's prior history for successful and timely completion of projects;

10.1.4 The bidder's equipment and facilities;

10.1.5 The adequacy, in numbers and experience, of the bidder's work force to complete the Contract successfully and on time;

10.1.6 The bidder's prior experience on other projects of the Construction Manager & Owner, including the bidder's demonstrated ability to complete its work in accordance with the requirements of the contract documents;

10.1.7 The bidder's compliance with federal, state, and local laws, rules, and regulations, including but not limited to equal employment opportunity requirements and the Occupational Safety and Health Act.

10.1.8 The bidder's demonstrated commitment to achieve the Contract HUB/MWBE/SDMWOB goals or its good-faith effort to meet those goals.

10.1.9 Depending on the type of the Work, other factors which the Construction Manager & Owner considers material.

10.2 In determining the lowest responsible, responsive bidder, the Construction Manager & Owner shall take into consideration the bidder’s compliance with the requirements of G.S. 143-128.2(c), the past performance of the bidder on construction contracts for the Construction Manager & Owner with particular concern given to completion times, quality of work, cooperation with other contractors, and cooperation with the Designer and Owner. Failure of the low bidder to furnish affidavit and/or documentation as required by G.S. 143-128.2(c) may constitute a basis for disqualification of the bid.

10.3 The Construction Manager & Owner reserve the right to waive any informality or irregularity in bids when such waiver is in the Owner's interest.

10.4 Each Low Bidder shall submit a post bid list of any and all subcontractors and identify all small disadvantaged minority & women-owned business contacted for quotes and an indication of whether each such subcontractor's quote was accepted or rejected for use on the Project. If a subcontractor's quote is accepted, the bidder is required to use that subcontractor to perform the Work unless otherwise approved in writing by the Construction Manager & Owner. The Owner reserves the right to reject any or all proposed subcontractor(s) listed thereon before the bid is awarded. In such event the Construction Manager & Owner will give the bidder an opportunity to either withdraw the bid or substitute subcontractor(s) who is acceptable to the Construction Manager & Owner, provided such substitution does not change the amount of the bid.

10.5 At the request of the Construction Manager and before any contract is awarded, the bidder may be required to furnish a complete statement of the origin, composition, and manufacturer of any or all materials to be used in the construction of the Work, together with samples. Such samples may be subjected to the tests provided for in the Contract Documents to determine their quality and fitness for the Work.

10.6 At the request of the Construction Manager and before any contract is awarded, the bidder may be required to furnish the Construction Manager with a complete breakdown of the lump sum bid items to the satisfaction of the Construction Manager & Owner. The lump sum breakdown shall be in such detail as the Construction Manager & Owner may reasonably require.

10.7 The Construction Manager & Owner reserves the right to issue subcontracts to the selected bidder at any time up to **one hundred twenty (120) days** after the receipt of bids. The bidder must sign and return the Agreement within **ten (10) days** of receiving it. Failure to do so will be considered as refusal on the part of the selected bidder to enter into the Agreement. Upon such refusal, the Construction Manager & Owner may award the Contract to the next qualified bidder, at the Construction Manager & Owner's option, with the initially selected bidder's bid guaranty being retained as provided by law.

10.8 Should the Construction Manager & Owner adjudge that the apparent low bidder is not the lowest responsible, responsive bidder by virtue of the above information, said apparent low bidder will be so notified and his bid security shall be returned.

ARTICLE 11. MINORITY BUSINESS CONTRACT PROVISIONS (CONSTRUCTION)

11.1 MINORITY BUSINESS SUBCONTRACT GOALS:

The goals for participation by minority firms as subcontracts on this project have been set at **10%**.

The bidder must identify on its bid, the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and (Affidavit A) listing good faith efforts **or** affidavit (Affidavit B) of self-performance of work, if the bidder will perform work under contract by its own workforce.

a. The lowest responsible, responsive bidder must provide Affidavit C, which includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the applicable goal **or** provide Affidavit D that includes a description of the portion of work to be executed by small disadvantaged minority & women-owned businesses, expressed as a percentage of the total contract price, with documentation of Good Faith Effort, if the percentage is not equal to the applicable goal.

The above information must be provided as required. Failure to submit these documents is grounds for rejection of the bid.

11.2 MINIMUM COMPLIANCE REQUIREMENTS:

All written statements, affidavits or intentions made by the Bidder shall become a part of the agreement between the Subcontractor and the Construction Manager for performance of this contract. Failure to comply with any of these statements, affidavits or intentions or with the minority business Guidelines shall constitute a breach of the contract. A finding by the Construction Manager or Owner that any information submitted either prior to award of the contract or during the performance of the contract is inaccurate, false or incomplete, shall also constitute a breach of the subcontract. Any such breach may result in termination of the subcontract in accordance with the termination provisions contained in the contract. It shall be solely at the option of the Construction Manager & Owner whether to terminate the contract for breach.

In determining whether a contractor has made good faith efforts, the Construction Manager will evaluate all efforts made by the Contractor and will determine compliance in regard to quantity, intensity, and results of these efforts. The Construction Manager may take into account any or all of the following:

1. Whether the Bidder attended any prebid meetings that were scheduled by the Construction Manager;

2. Whether the Bidder advertised in general circulation, trade association, and minority-focus media concerning the subcontracting opportunities;

3. Whether the Bidder provided written notice to a minimum of three SDMWOB's of each portion of the work subcontracted, that their interest in the contract was being solicited in sufficient time to allow the MWBE's to participate effectively;

4. Whether the Bidder followed up initial solicitations of interest by contacting SDMWOB's to determine with certainty whether the SDMWOB's were interested;

5. Whether the Bidder selected portions of the work to be performed by SDMWOB's in order to increase the likelihood of meeting SDMWOB goals (including, where appropriate, breaking down contracts into economically feasible units to facilitate MWBE participation);

6. Whether the Bidder provided interested SDMWOB's with adequate information about the plans, specifications and requirements of the contract;

Whether the Bidder negotiated in good faith with interested SDMWOB's, not rejecting SDMWOB's as unqualified without sound reasons based on a thorough investigation of their capabilities.

11.3 Minority participation shall be credited toward the Subcontractor's achievement of the Minority Goal and good-faith efforts only after payments are actually made by the Subcontractor to Minority Subcontractors as recorded by Appendix 'E' - SDMWOB Documentation for Contract Payment Affidavit. Each Subcontractor shall maintain records and documents of payments to SDMWOB Subcontractors for a minimum of "three years following final acceptance of the Project by the Owner. Records shall be made available by the Subcontractor for inspection upon request by any authorized representative of the Construction Manager. The Subcontractor shall include similar reporting requirements in any Sub-subcontract with any certified SDMWOB Sub-subcontractors.

ARTICLE 12. WITHDRAWAL OF BIDS

12.1 A bidder may withdraw a bid only by submitting a written request to the Owner prior to the time fixed for the opening of bids.

12.2 Except as otherwise provided by law or in any supplement to these Instructions to Bidders, no bidder is permitted to modify, withdraw, or cancel its bid or any part thereof for **one hundred twenty (120)** days after the time fixed of the opening of bids.

ARTICLE 13. REJECTION OF BIDS

13.1 The bidder acknowledges the Owner's right to reject any and all bids and to waive any informality or irregularity in any bid received. In addition, the bidder recognizes the Owner's right to reject a bid if the bidder fails to submit the data required by the bid documents or if the bid is irregular or incomplete in any way or if for any reason the Owner considers being in its best interest to reject the bid.

ARTICLE 14. PRE-BID CONFERENCE:

14.1 Prior to the date set for receiving bids, the Construction Manager will arrange and conduct a Pre-Bid Conference for all prequalified bidders. The purpose of this conference is to review project requirements and to respond to questions from prequalified bidders and their subcontractors or material suppliers related to the intent of bid documents. Attendance by prequalified bidders shall be **strongly encouraged** as noted by the "Notice to Bidders".

14.2 The agenda for the Pre-Bid Conference will include project team introductions, project overview, explanation of project involvement expectations, review of project procedures, review of bidding procedures, review of bid documents and bid form, review of project schedule milestone dates, review of project procedures and site utilization/logistics, contract work scope(s), safety, and address bidder questions.

14.3 The Construction Manager will prepare minutes of the pre-bid meeting and provide them to Bidders in the form of a Supplement to the Bid Documents. Failure of the Bidder to attend the pre-bid conference, or to obtain, review and act on the minutes thereof, which results in the Bidder not being fully acquainted with the requirements of the Project, will not be considered as a basis for additional compensation.

END OF SECTION

BARNHILL CONTRACTING COMPANY

REQUEST FOR INFORMATION

RFI Number:

Project: Port of Wilmington South Gate Complex No: 1105119

Location: _____

Request Date: _____

Response Needed By: _____

Subject: _____

From: _____

Contract For: _____

Subcontract For: _____

To: _____

Attn: _____

Project Implications: Cost ☐ Time ☐ Information Only x

Reference: Drawing Number: _____ Detail Number: _____ Specification Volume/Section: _____

Information Needed:

1.
2.
3.
4.

Contractor Recommendation:

Submitted by: _____ Date: _____

Response: ☐ Proceed with recommendation ☐ Proceed with the following instructions:

Date: _____

Architect/Engineer's Signature

cc: BCC Project w/File

BARNHILL CONTRACTING COMPANY

Substitution Request Form

Submit to Barnhill on Supplier/Trade/Subcontractor Company Letterhead

Date: _____ Request No.: _____

Project: _____

We hereby submit for your consideration the following product instead of the specified item for the above project:

Section	Paragraph	Specified Item Description

Proposed Substitution:

Attach complete technical data including laboratory tests if applicable. ☐ **YES** ☐ **NO**

Include complete information detailing changes to Drawings and/or Specifications which proposed substitution will require for proper installation. Complete all blanks below:

A. Does the substitution affect dimensions shown on Drawings? ☐ **YES** ☐ **NO**

If YES, explain:

B. Will substitution have impact on other trades? ☐ **YES** ☐ **NO**

If YES, explain:

C. Differences between proposed/specified item? ☐ **YES** ☐ **NO**

If YES, explain:

D. Substitute product(s) have/has been reviewed to ensure all are compatible for installation in accordance with project requirements? ☐ **YES** ☐ **NO**

If NO, explain:

E. Manufacturer's guarantees of proposed/specified items meet specifications? ☐ **YES** ☐ **NO**

If NO, explain:

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F. Will substitution have impact on project schedule? ☐ **YES** ☐ **NO**

If YES, explain:

G. Savings or Credit to the project for accepting substitution?

$

Provide calculation of how credit or savings was determined:	

H. The undersigned agrees to pay all associated costs for changes to building design (including engineering and detailing costs) and impact to other trades (if any) caused by substitution? ☐ **YES** ☐ **NO**

If NO, explain:

The undersigned states that the function, appearance and quality are equivalent or superior to the specified item.

Submitted By: _____
Company Name, Address

_____ Date: _____
Signature

_____
Contact Number

For Internal Barnhill Use Only

Barnhill Review Completed by: _____ Date: _____

☐ Approved to Submit to Design Professional
☐ Additional Details/Information Required
☐ Not Approved/Rejected

Comment:

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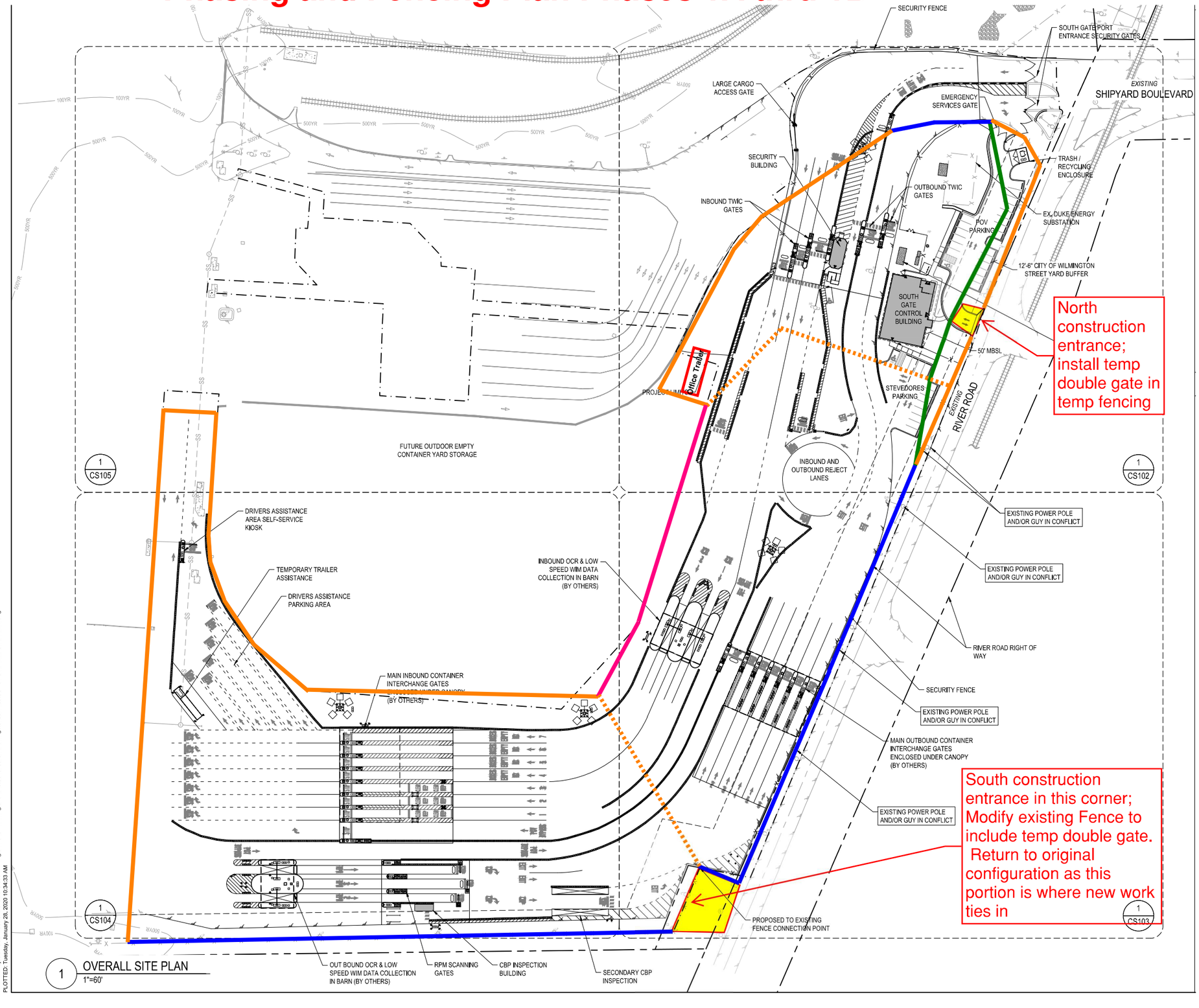
Phasing and Fencing Plan Phases 1A thru 1B



North construction entrance; install temp double gate in temp fencing

South construction entrance in this corner; Modify existing Fence to include temp double gate. Return to original configuration as this portion is where new work ties in

Existing Fence to Remain

Existing Fence to be Removed Phase 1A

Phase 1A Temp Fence

Phase 1A Temp Fence; Relocated to area indicated as Phase 1B

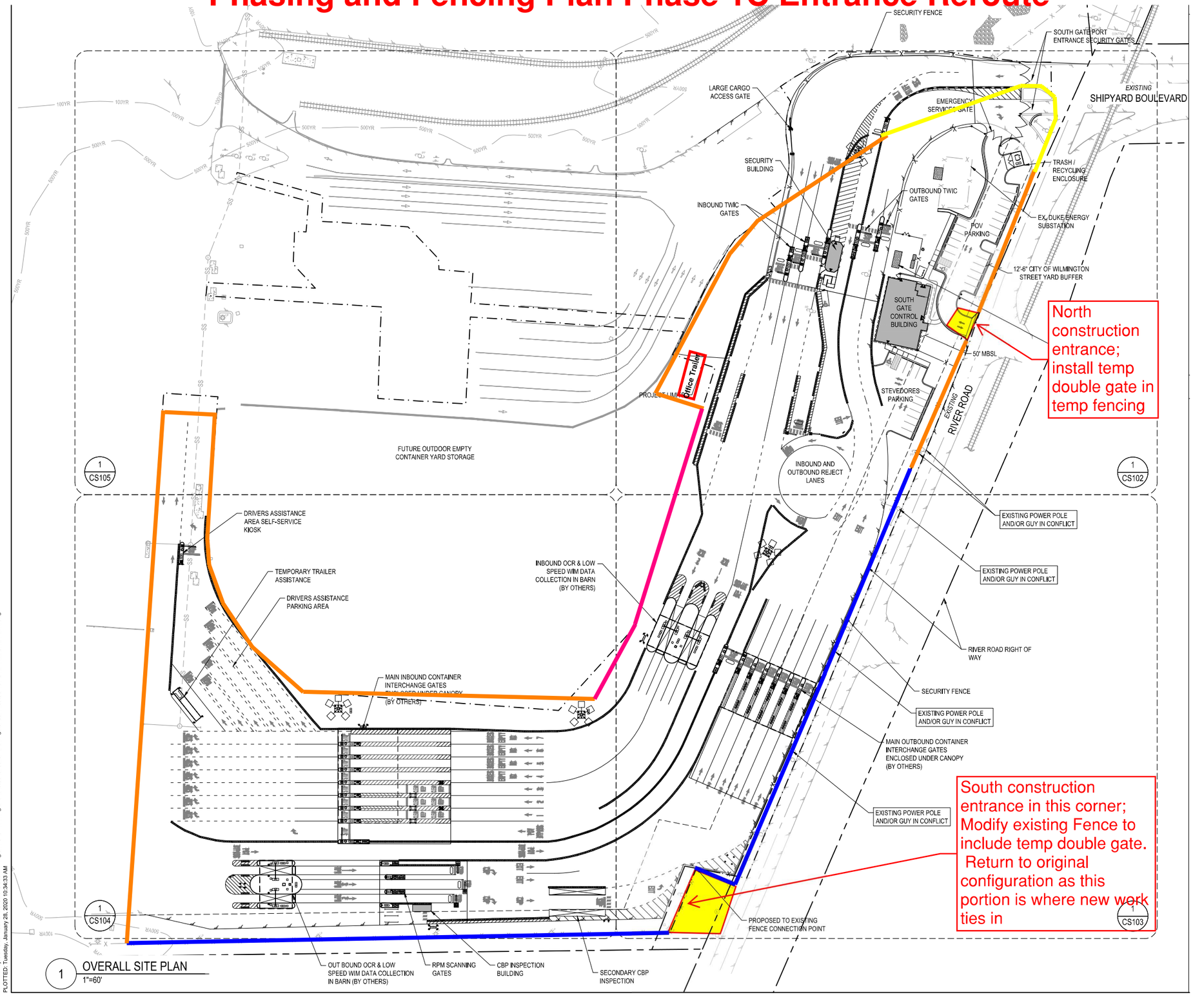
Phase 1B Fence, relocated from (dashed) Phase 1A

Phase 1A: 04/13/2020

Phase 1B: Modifications approx 05/13/2020

FILE: Z:\Projects Folder-Zebulon\2018\2018-053 Wilmington Ports - Wilmington\Plans\Construction Drawings\Sheet Files\CS-101 OVERALL SITE PLAN.dwg
PLOTTED: Tuesday, January 28, 2020 10:34:33 AM

Phasing and Fencing Plan Phase 1C Entrance Reroute



North construction entrance; install temp double gate in temp fencing

South construction entrance in this corner; Modify existing Fence to include temp double gate. Return to original configuration as this portion is where new work ties in

Existing Fence to Remain

Phase 1A Temp Fence

Phase 1B Fence, relocated from (dashed) Phase 1A

Phase 1C Fence adjustment at main entrance for permanent concrete pavement install

Phase 1C: Modifications approx 04/21/2021

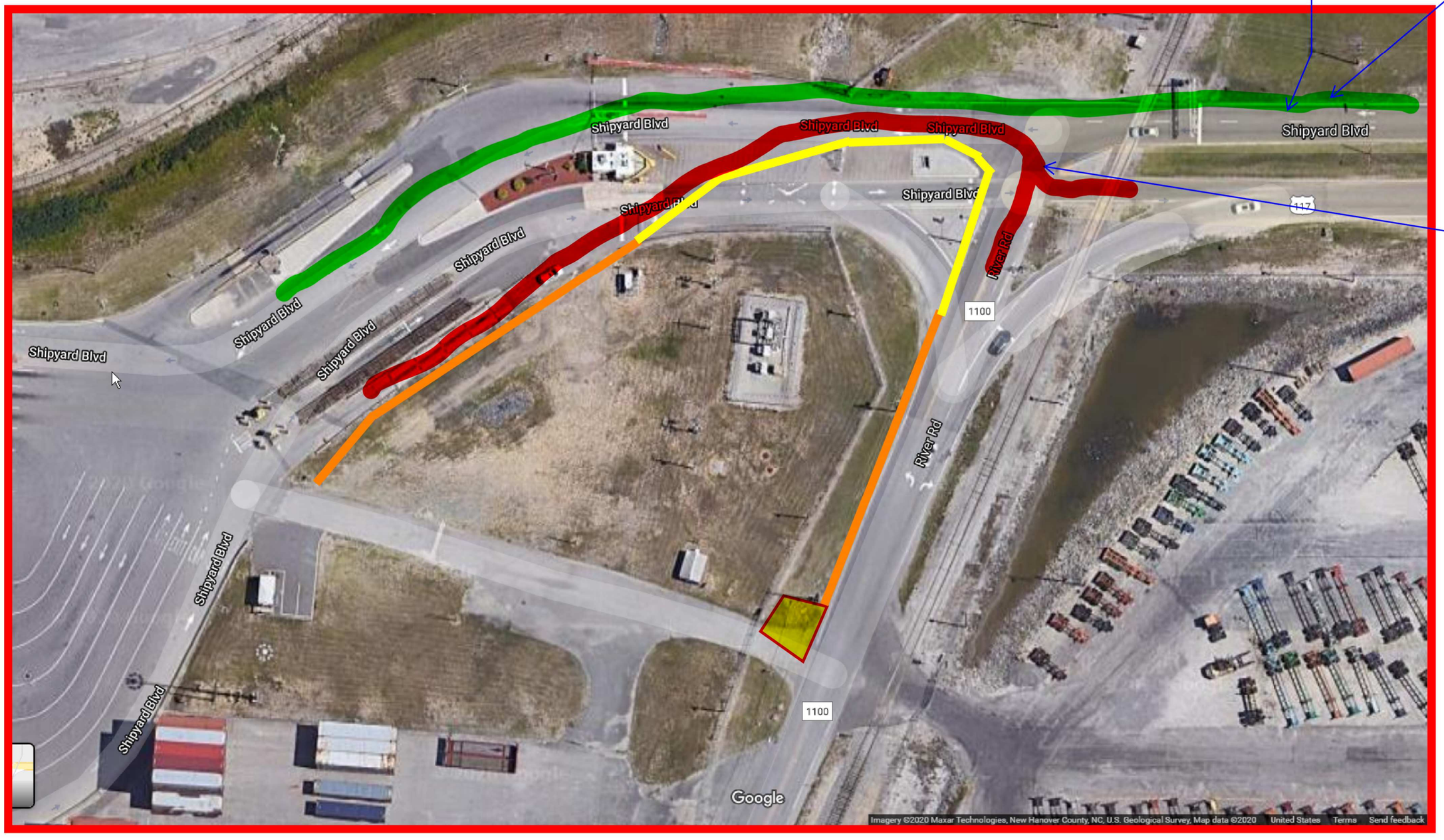
FILE: Z:\Projects Folder-Zabulon\2018\2018-053 Wilmington Ports - Wilmington\Plans\Construction Drawings\Sheet Files\CS-101 OVERALL SITE PLAN.dwg
PLOTTED: Tuesday, January 28, 2020 10:34:33 AM

Phase 1C Entrance Reroute Detail with Traffic Flow

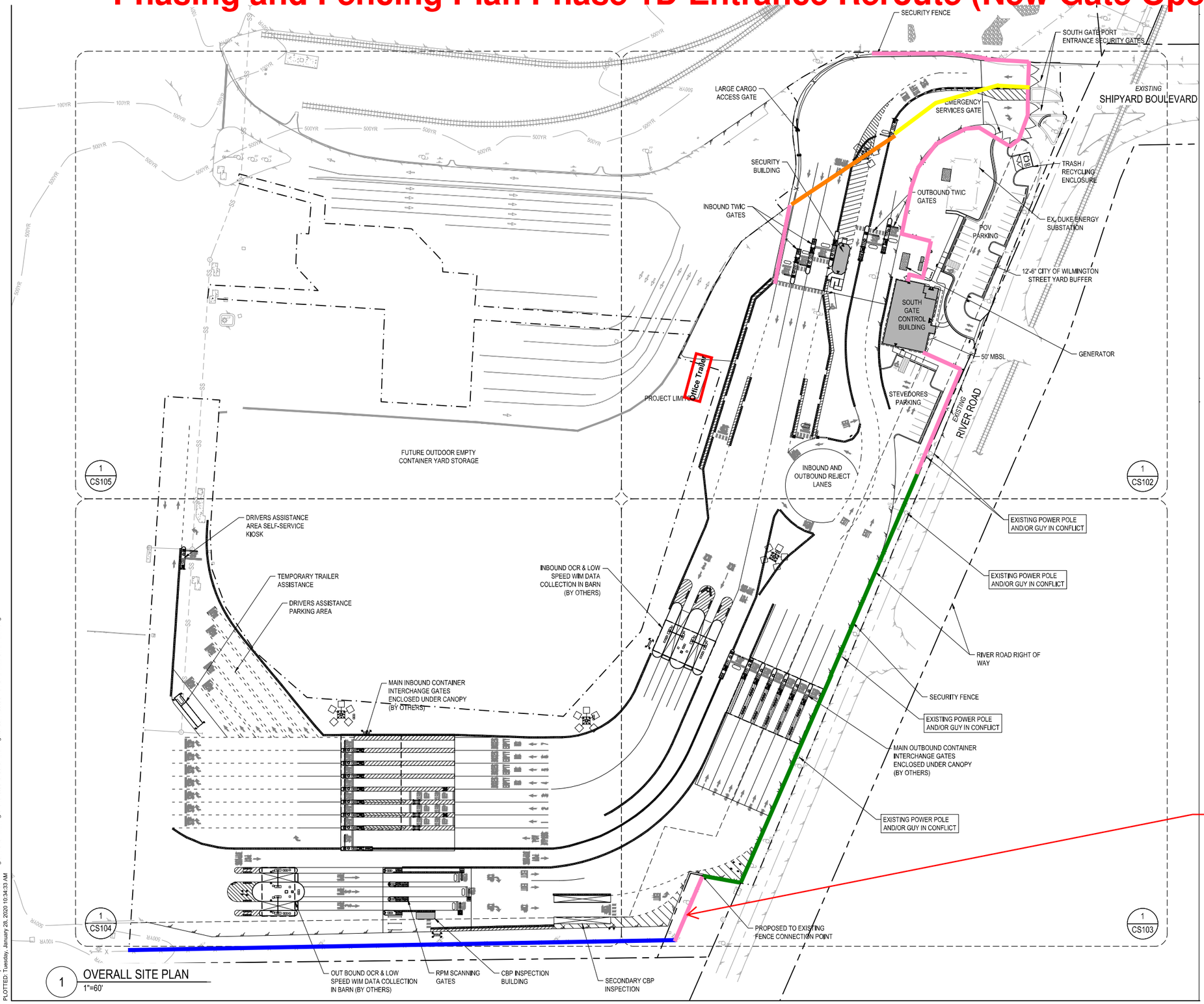
BP3100 Sitework to Coordinate with NCDOT to reroute traffic to accept one lane traffic only

Green Inbound traffic

Red Outbound traffic



Phasing and Fencing Plan Phase 1D Entrance Reroute (New Gate Operational)



Existing Fence to Remain

Phase 1A Temp Fence

Phase 1B Fence, relocated from (dashed) Phase 1A

Phase 1C Fence adjustment at main entrance for permanent concrete pavement

Existing Fence to be Removed and Permanent installed

Permanent Fencing Install

Permanent Fencing: Approx 06/01/2021

Reworked to remove construction double gate.

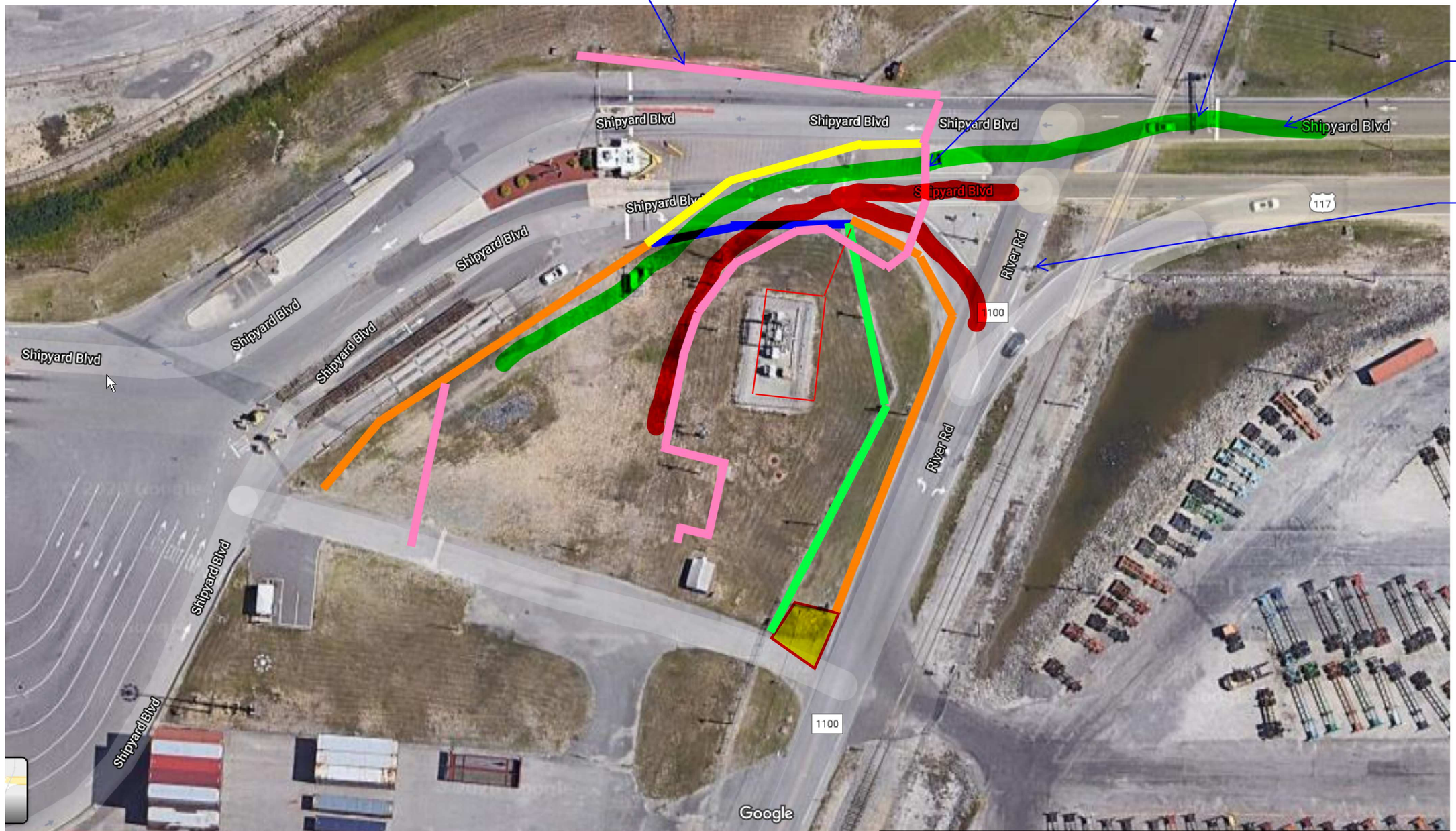
FILE: Z:\Projects Folder-Zebulon\2018\2018-053 Wilmington Ports - Wilmington\Plans\Construction Drawings\Sheet Files\CS-101 OVERALL SITE PLAN.dwg
PLOTTED: Tuesday, January 28, 2020 10:34:33 AM

Phase 1D Entrance Reroute Detail with Traffic Flow

Island to be removed for inbound traffic, and reinstalled at final phase

BP3100 Sitework to Coordinate with NCDOT to reroute traffic to accept one lane traffic only

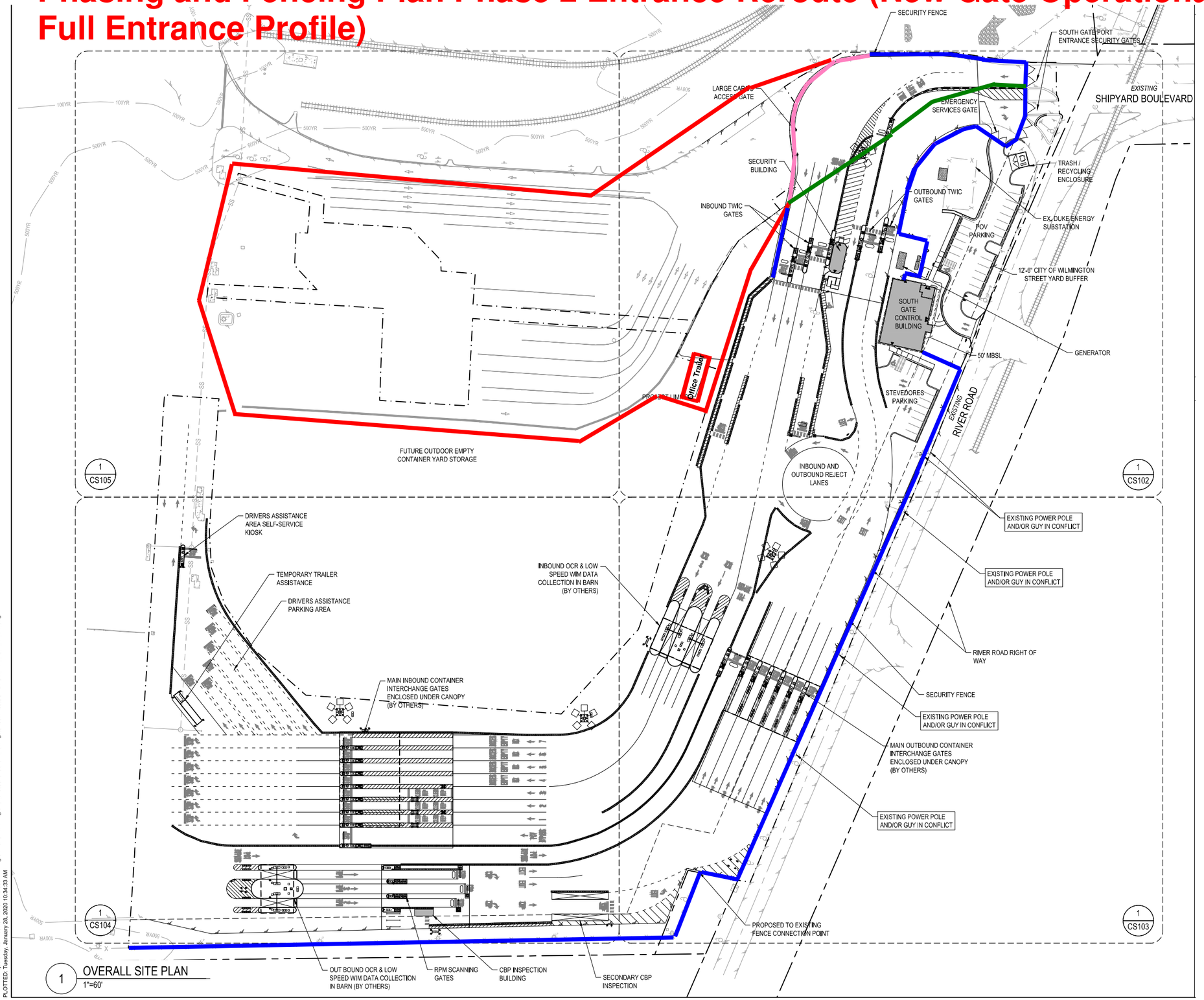
Remove portion of existing fence and install new



Green Inbound traffic

Red Outbound traffic

Phasing and Fencing Plan Phase 2 Entrance Reroute (New Gate Operational; Full Entrance Profile)



FILE: Z:\Projects Folder-Zebulon\2018\2018-053 Wilmington Ports - Wilmington\Plans\Construction Drawings\Sheet Files\CS-101 OVERALL SITE PLAN.dwg
PLOTTED: Tuesday, January 28, 2020 10:34:33 AM

Permanent Fence from previous Phases

Temp Fencing from Phase 1D

Permanent Fencing Install

Phase 2 temp fence panels with sandbags; tied into the new construction permanent fence

Phase 2:
06/09/2021 to 08/09/2021

PROJECT CONTRACT DOCUMENTS

ARTICLE 1 - GENERAL

1. Attached is a list of drawings pertinent to the Work related to the Agreement. The actual Drawings are attached under separate cover, to this Agreement. The attached Drawings depict all the scope of work to be performed pursuant to the completion of the Project, including work to be performed by other contractors, which is shown for information and coordination purposes.

2. It is intended that the latest revision of each drawing shall be applicable, and all previous revisions shall be superseded as a result.

Subcontractor is responsible for a **comprehensive review** of **ALL** drawings as scope responsibilities may be included throughout the set, and may not be specific to a certain set (i.e.: Electrical).

ARTICLE 2 - DRAWING LIST

G-001	COVER SHEET
G-002	SHEET INDEX AND LEGEND
	CIVIL
C-001	LOCATION MAPS
C-002	CIVIL NOTES
C-003	BORING LOCATION MAP
C-004	BORING LOGS - 1 OF 2
C-005	BORING LOGS - 2 OF 2
CX-101	OVERALL EXISTING CONDITIONS PLAN
CX-102	PARTIAL EXISTING CONDITIONS PLAN - 1 OF 4
CX-103	PARTIAL EXISTING CONDITIONS PLAN - 2 OF 4
CX-104	PARTIAL EXISTING CONDITIONS PLAN - 3 OF 4
CX-105	PARTIAL EXISTING CONDITIONS PLAN - 4 OF 4
CD-101	OVERALL DEMOLITION PLAN
CD-102	PARTIAL DEMOLITION PLAN - 1 OF 4
CD-103	PARTIAL DEMOLITION PLAN - 2 OF 4
CD-104	PARTIAL DEMOLITION PLAN - 3 OF 4
CD-105	PARTIAL DEMOLITION PLAN - 4 OF 4
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CE-102	EROSION CONTROL PLAN - CONSTRUCTION PHASE
CE-501	EROSION CONTROL DETAILS
CE-502	EROSION CONTROL DETAILS
CE-503	EROSION CONTROL DETAILS
CS-101	OVERALL SITE PLAN
CS-102	PARTIAL SITE PLAN - 1 OF 4
CS-103	PARITAL SITE PLAN - 2 OF 4
CS-104	PARITAL SITE PLAN - 3 OF 4
CS-105	PARTIAL SITE PLAN - 4 OF 4
CS-501	SITE DETAILS

CS-502	SITE DETAILS
CS-503	SITE DETAILS
CS-504	SITE DETAILS
CS-505	SITE DETAILS
CS-506	SITE DETAILS
CP-101	OVERALL PAVING PLAN
CP-102	PARTIAL PAVING PLAN - 1 OF 4
CP-103	PARTIAL PAVING PLAN - 2 OF 4
CP-104	PARTIAL PAVING PLAN - 3 OF 4
CP-105	PARTIAL PAVING PLAN - 4 OF 4
CP-501	PAVING DETAILS
CP-502	PAVING DETAILS
CG-101	OVERALL GRADING & DRAINAGE PLAN
CG-102	PARTIAL GRADING & DRAINAGE PLAN - 1 OF 4
CG-103	PARTIAL GRADING & DRAINAGE PLAN - 2 OF 4
CG-104	PARTIAL GRADING & DRAINAGE PLAN - 3 OF 4
CG-105	PARTIAL GRADING & DRAINAGE PLAN - 4 OF 4
CG-501	GRADING & DRAINAGE DETAILS
CG-502	GRADING & DRAINAGE DETAILS
CG-503	GRADING & DRAINAGE DETAILS
CG-504	GRADING & DRAINAGE DETAILS
CG-505	GRADING & DRAINAGE DETAILS
CU-101	OVERALL UTILITY PLAN
CU-102	PARTIAL UTILITY PLAN - 1 OF 4
CU-103	PARTIAL UTILITY PLAN - 2 OF 4
CU-104	PARTIAL UTILITY PLAN - 3 OF 4
CU-105	PARTIAL UTILITY PLAN - 4 OF 4
CU-201	FORCE MAIN PROFILE
CU-202	FORCE MAIN PROFILE
CU-203	WATER MAIN PROFILE
CU-204	WATER MAIN PROFILE
CU-205	WATER MAIN PROFILE
CU-501	UTILITY DETAILS
CU-502	UTILITY DETAILS
CU-503	UTILITY DETAILS
CM - 101	PAVEMENT MARKING PLAN (1 OF 3)
CM - 102	PAVEMENT MARKING PLAN (2 OF 3)
CM - 103	PAVEMENT MARKING PLAN (3 OF 3)
CM - 104	FIRE LANE PAVEMENT MARKING DETAIL
CQ - 101	SIGNING PLAN (1 OF 2)
CQ - 102	SIGNING PLAN (2 OF 2)
SW-501	STORMWATER MANAGEMENT PLAN

LP-100	LANDSCAPE PLAN
	ARCHITECTURAL
A-001	ARCHITECTURAL - GENERAL NOTES, SYMBOLS + ABBREV.
A-002	ARCHITECTURAL - ARCHTIECTURAL SITE PLAN
A-003	ARCHITECTURAL - CODE ANALYSIS AND LIFE SAFETY PLANS
A-004	ARCHITECTURAL - CODE ANALYSIS AND LIFE SAFETY PLANS
A-101	ARCHITECTURAL - FIRST FLOOR PLAN
A-102	ARCHITECTURAL - SECOND FLOOR PLAN
A-103	ARCHITECTURAL - FIRST FLOOR REFLECTED CEILING PLAN
A-104	ARCHITECTURAL - SECOND FLOOR REFLECTED CEILING PLAN
A-105	ARCHITECTURAL - ROOF PLAN
A-106	ARCHITECTURAL - ROOFING SYSTEM BASIS OF DESIGN
A-107	ARCHITECTURAL - ROOF DETAILS
A-108	ARCHITECTURAL - ROOF DETAILS
A-201	ARCHITECTURAL - EXTERIOR ELEVATIONS
A-202	ARCHITECTURAL - EXTERIOR ELEVATIONS
A-301	ARCHITECTURAL - BUILDING SECTIONS
A-401	ARCHITECTURAL - EXTERIOR WALL SECTIONS
A-402	ARCHITECTURAL - WALL SECTIONS AND DETAILS
A-501	ARCHITECTURAL - FINISH SCHEDULE AND DETAILS
A-502	ARCHITECTURAL - ENLARGED PLAN + INTERIOR ELEVATIONS
A-503	ARCHITECTURAL - ENLARGED PLANS + INTERIOR ELEVATIONS
A-504	ARCHITECTURAL - ENLARGED PLANS AND DETAILS
A-505	INTERIOR DESIGN - CASEWORK DETAILS
A-506	ARCHITECTURAL - SIGNAGE
A-507	ARCHITECTURAL - SIGNAGE
A-601	ARCHITECTURAL - DOOR, FRAME AND WINDOWSCHEDULES
A-602	ARCHITECTURAL - CURTAIN WALL AND STOREFRONT DETAILS
A-603	ARCHITECTURAL - CURTAIN WALL DETAILS
A-604	ARCHITECTURAL - DOOR AND WINDOW DETAILS
A-605	ARCHITECTURAL - STOREFRONT DETAILS
A-606	ARCHITECTURAL - STOREFRONT DETAILS
A-607	ARCHITECTURAL - TYPICAL CEILING DETAILS
A-701	ARCHITECTURAL - PARTIAL PLANS AND SECTIONS AT STAIRS
A-702	ARCHITECTURAL - STAIR & ELEVATOR SECTIONS AND DETAILS
A-703	ARCHITECTURAL - WALL PARTITION TYPE AND DETAILS
A-704	ARCHITECTURAL - UL DESIGNS
A-705	ARCHITECTURAL - UL DESIGNS
A-706	ARCHITECTURAL - UL DESIGNS
A-707	ARCHITECTURAL - UL DESIGNS
A-708	ARCHITECTURAL - UL DESIGNS
A-709	ARCHITECTURAL - UL DESIGNS

A-801	INTERIOR DESIGN - FIRST FLOOR FINISH PLAN
A-802	INTERIOR DESIGN - SECOND FLOOR FINISH PLAN
A-901	ARCHITECTURAL - GUARD BUILDING DRAWING 1 OF 3
A-902	ARCHITECTURAL - GUARD BUILDING DRAWING 2 OF 3
A-903	ARCHITECTURAL - GUARD BUILDING DRAWING 3 OF 3
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S-002	GENERAL NOTES (2 OF 2)
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S-101	FOUNDATION PLAN
S-102	SLAB ON GRADE PLAN
S-103	2nd FLOOR FRAMING PLAN
S-104	CANOPY FRAMING PLAN AND SECTIONS
S-105	ROOF FRAMING PLAN
S-106	SOUTHEAST METAL PANEL FRAMING
S-107	NORTHEAST METAL PANEL FRAMING
S-108	SOUTHWEST METAL PANEL FRAMING
S-109	NORTHWEST METAL PANEL FRAMING
S-110	STAIR ROOF FRAMING PLANS
S-200	COLUMN SCHEDULE AND BASE PLATE DETAILS
S-201	BUILDING SECTION (1 OF 2)
S-202	BUILDING SECTION (2 OF 2)
S-203	STRUCTURAL FRAMING ELEVATIONS
S-204	STRUCTURAL FRAMING ELEVATIONS
S-205	PANEL WALL FRAMING ELEVATIONS (1 OF 2)
S-206	PANEL WALL FRAMING ELEVATIONS (2 OF 2)
S-207	WALL SECTIONS (1 OF 2)
S-208	WALL SECTIONS (2 OF 2)
S-209	ELEVATOR SECTION AND ROOF FRAMING PLAN
S-210	STAIR SECTIONS
S-211	STAIR FRAMING SECTIONS AND DETAILS (1 OF 2)
S-212	STAIR FRAMING SECTIONS AND DETAILS (2 OF 2)
S-213	STAIR ROOF FRAMING DETAILS
S-301	SLAB AND FOUNDATION DETAILS (1 OF 2)
S-302	SLAB AND FOUNDATION DETAILS (2 OF 2)
S-401	TYPICAL CONCRETE MASONRY DETAILS
S-402	CONCRETE MASONRY WALL DETAILS
S-501	TYPICAL STEEL FRAMING DETAILS
S-502	MOMENT CONNECTION DETAILS
S-503	STEEL FRAMING SECTIONS AND DETAILS (1 OF 4)
S-504	STEEL FRAMING SECTIONS AND DETAILS (2 OF 4)
S-505	STEEL FRAMING SECTIONS AND DETAILS (3 OF 4)

S-506	STEEL FRAMING SECTIONS AND DETAILS (4 OF 4)
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S-602	LIGHT GAUGE FRAMING DETAILS
S-701	HIGH MAST LIGHTING POLE FOUNDATION NOTES
S-702	HIGH MAST LIGHTING POLE FOUNDATION DETAILS
S-703	HIGH MAST LIGHTING POLE BOLLARD DETAILS
S-801	GUARD BLDG FOUNDATION & SLAB PLAN
S-802	GUARD BLDG ROOF FRAMING & WIND PRESSURES
S-803	GUARD BLDG FRAMING SECTIONS
S-804	GUARD BLDG FOUNDATION & SLAB DETAILS
S-805	GUARD BLDG ROOF FRAMING DETAILS
	MECHANICAL
M-001	MECHANICAL - LEGEND, ABBREVIATIONS, AND NOTES
M-101	MECHANICAL - FIRST FLOOR PLAN
M-102	MECHANICAL - SECOND FLOOR PLAN
M-103	MECHANICAL - ROOF PLAN
M-501	MECHANICAL - DETAILS - 1 OF 3
M-502	MECHANICAL - DETAILS - 2 OF 3
M-503	MECHANICAL - DETAILS - 3 OF 3
M-601	MECHANICAL - SCHEDULES - 1 OF 2
M-602	MECHANICAL - SCHEDULES - 2 OF 2
M-603	MECHANICAL - CONTROLS
M-604	MECHANICAL - CONTROLS
M-801	MECHANICAL - GUARD BUILDING DRAWINGS
	PLUMBING
PL-001	PLUMBING - LEGEND, ABBREVIATIONS, AND NOTES
PL-101	PLUMBING - FIRST FLOOR UNDERSLAB PLAN
PL-102	PLUMBING - FIRST FLOOR SANITARY PLAN
PL-103	PLUMBING - FIRST FLOOR PLAN
PL-104	PLUMBING - SECOND FLOOR SANITARY PLAN
PL-105	PLUMBING - SECOND FLOOR DOMESTIC WATER PLAN
PL-106	PLUMBING - ROOF PLAN
PL-107	PLUMBING - GUARD BUILDING PLAN
PL-501	PLUMBING - DETAILS
PL-601	PLUMBING - SCHEDULES
PL-602	PLUMBING - RISER DIAGRAMS SHEET 1 OF 3
PL-603	PLUMBING - RISER DIAGRAMS SHEET 2 OF 3
PL-604	PLUMBING - RISER DIAGRAMS SHEET 3 OF 3
	PROTECTION
FP-001	FIRE PROTECTION - LEGEND, ABBREVIATIONS, AND NOTES
FP-101	FIRE PROTECTION - FIRST FLOOR PLAN

FP-102	FIRE PROTECTION - SECOND FLOOR PLAN
FP-501	FIRE PROTECTION - DETAILS
FP-601	FIRE PROTECTION - RISER
FP-602	FIRE PROTECTION - CLEAN AGENT SCHEMATIC & SCHEDULE
	ELECTRICAL
E-001	ELECTRICAL SYMBOLS LEGEND, ABBREVIATIONS, AND NOTES
ED-100	ELECTRICAL - DEMOLITION SITE PLAN
ES-101	ELECTRICAL - SITE PLAN
ES-102	ELECTRICAL - PARTIAL PLAN I
ES-103	ELECTRICAL - SITE PLAN II
ES-104	ELECTRICAL - SITE PLAN III
E-101	ELECTRICAL - FIRST FLOOR LIGHTING PLAN
E-102	ELECTRICAL - SECOND FLOOR LIGHTING PLAN
E-201	ELECTRICAL - FIRST FLOOR POWER PLAN
E-202	ELECTRICAL - SECOND FLOOR POWER PLAN
E-203	ELECTRICAL - ROOF POWER PLAN
E-301	ELECTRICAL - FIRST FLOOR FIRE ALARM PLAN
E-302	ELECTRICAL - SECOND FLOOR FIRE ALARM PLAN
E-401	ELECTRICAL - LIGHTNING PROTECTION PLAN
E-501	ELECTRICAL - LIGHTING FLOOR PLAN
E-601	ELECTRICAL - ONE LINE DIAGRAM
E-602	ELECTRICAL - FIRE ALARM RISER DIAGRAM
E-603	ELECTRICAL - FIRE ALARM MATRIX AND SOO
E-701	ELECTRICAL - DETAILS SHEET 1 OF 3
E-702	ELECTRICAL - DETAILS SHEET 2 OF 3
E-703	ELECTRICAL - DETAILS SHEET 3 OF 3
E-801	ELECTRICAL - SCHEDULES SHEET 1 OF 9
E-802	ELECTRICAL - SCHEDULES SHEET 2 OF 9
E-803	ELECTRICAL - SCHEDULES SHEET 3 OF 9
E-804	ELECTRICAL - SCHEDULES SHEET 4 OF 9
E-805	ELECTRICAL - SCHEDULES SHEET 5 OF 9
E-806	ELECTRICAL - SCHEDULES SHEET 6 OF 9
E-807	ELECTRICAL - SCHEDULES SHEET 7 OF 9
E-808	ELECTRICAL - SCHEDULES SHEET 8 OF 9
E-809	ELECTRICAL - SCHEDULES SHEET 9 OF 9
EA-001	ELECTRICAL NOTES, LEGENDS, SCHEDULE
EA-101	ELECTRICAL AUXILIARY SYSTEMS - 1ST FLOOR PLAN
EA-102	ELECTRICAL AUXILIARY SYSTEMS - 2ND FLOOR PLAN
EA-103	ELECTRICAL AUXILIARY SYSTEMS - SERVER ROOM PLAN
EA-104	ELECTRICAL AUXILIARY SYSTEMS - GUARD BUILDING
EA-501	ELECTRICAL AUXILIARY SYSTEMS DETAILS
EA-502	ELECTRICAL AUXILIARY SYSTEM DETAILS

ES - 101	ELECTRICAL SITE LIGHTING PLAN
ES - 102	ELECTRICAL SITE AUXILIARY SYSTEMS PLAN
ES - 103	ELECTRICAL ENLARGED SITE AUXILIARY PLAN
ES-501	ELECTRICAL SITE DETAILS
ES-502	ELECTRICAL SITE DETAILS
ES-503	ELECTRICAL SITE DETAILS
F0-100	FIBER COMMUNICATION LEGEND
F0- 101	FIBER COMMUNICATION PLAN
F0- 102	COMMUNICATION PLAN DETAILS

END OF SECTION

PROJECT SPECIFICATIONS

ARTICLE 1 - GENERAL

The following section (Article 2 - Specifications) contains, as a supplement under separate cover, the Specifications pertinent to the Work related to this Agreement.

It is intended that the latest revision of each drawing and specification section(s) shall be applicable, and all previous revisions shall be superseded as a result.

ARTICLE 2 - SPECIFICATIONS

1. As noted on Drawings and indicated in the Specifications dated February 4, 2020 entitled "Submission Specifications".

2. Specifications Issue Date: 02-04-20

Design Professional: Mott MacDonald
7621 Purfoy Rd
Fuquay-Varina, NC 27526

**See Project Directory for Design Team listing.

ARTICLE 2.1 - SPECIFICATIONS LIST

Specifications:

DIVISION 01 – GENERAL

	GENERAL CONDITIONS OF THE CONTRACT – OC-15CM
	SUPPLEMENTARY GENERAL CONDITIONS
	TABLE OF CONTENTS
011000	SUMMARY OF WORK
011400	WORK RESTRICTIONS
012900	PAYMENT PROCEDURES
013100	PROJECT MANAGEMENT AND COORDINATION
013300	SUBMITTAL PROCEDURES
014000	QUALITY REQUIREMENTS
017300	EXECUTION
017700	CLOSEOUT PROCEDURES
017839	PROJECT RECORD DOCUMENTS

DIVISION 02 – EXISTING CONDITIONS

024119	SELECTIVE STRUCTURE DEMOLITION

DIVISION 03 – CONCRETE

033000 CAST-IN-PLACE CONCRETE

DIVISION 04 – MASONRY

042300 CONCRETE UNIT MASONRY

042613 MASONRY VENEER

DIVISION 05 – METALS

051200 STRUCTURAL STEEL FRAMING

053100 STEEL DECKING

054000 COLD-FORMED METAL FRAMING

055000 METAL FABRICATIONS

055113 METAL PAN STAIRS

055213 PIPE AND TUBE RAILINGS

DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES

061600 SHEATHING

064116 PLASTIC-LAMINATE-CLAD ARCHITECTURAL CABINETS

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

071113 BITUMINOUS DAMPPROOFING

071300 SHEET WATERPROOFING

072100 THERMAL INSULATION

072600 VAPOR RETARDERS

072715 NONBITUMINOUS SELF-ADHERING SHEET AIR BARRIERS

074213.19 INSULATED METAL WALL PANELS

074293 SOFFIT PANELS

075216 STYRENE-BUTADIENE-STYRENE MODIFIED BITUMINOUS MEMBRANE ROOFING

076200 SHEET METAL FLASHING AND TRIM

077100 ROOF SPECIALTIES

077200 ROOF ACCESSORIES

078413 PENETRATION FIRESTOPPING

079200 JOINT SEALANTS

DIVISION 08 – OPENINGS

081113	HOLLOW METAL DOORS AND FRAMES
081416	FLUSH WOOD DOORS
083113	ACCESS DOORS AND FRAMES
084213	ALUMINUM-FRANED ENTRANCES
084313	ALUMINUM-FRAMED STOREFRONTS
084413	GLAZED ALUMINUM CURTAIN WALLS
085113	ALUMINUM WINDOWS
087100	DOOR HARDWARE
088000	GLAZING
088813	FIRE-RESISTANT GLAZING
089119	FIXED LOUVERS

DIVISION 09 – FINISHES

092116	GYPSUM BOARD ASSEMBLIES
092216	NON-STRUCTURAL METAL FRAMING
092900	GYPSUM BOARD
093013	TILING
095000	WOOD PANEL CEILINGS
095123	ACOUSTICAL TILE CEILINGS
096513	RESILIENT BASE AND ACCESSORIES
096519	RESILIENT TILE FLOORING
096536	STATIC-CONTROL RESILIENT FLOORING
096813	TILE CARPETING
099123	INTERIOR PAINTING

DIVISION 10 – SPECIALTIES

101400	SIGNAGE
101400.13	SIGNAGE
102113.19	PLASTIC TOILET COMPARTMENTS
102800	TOILET, BATH, AND LAUNDRY ACCESSORIES
104413	FIRE PROTECTION CABINETS
104416	FIRE EXTINGUISHERS
105113	METAL LOCKERS

DIVISION 12 – FURNISHINGS

122413	ROLLER WINDOW SHADES

123661.16 SOLID SURFACING COUNTERTOPS
123661.19 QUARTZ AGGLOMERATE COUNTERTOPS
124813 ENTRANCE FLOOR MATS AND FRAMES

DIVISION 13 – STEEL BUILDINGS

131290 PREFABRICATED STEEL BUILDINGS

DIVISION 14 – ELEVATORS

142400 HYDRAULIC ELEVATORS

DIVISION 21 – FIRE SUPPRESSION

210517 SLEEVES AND SLEEVE SEALS FOR SPRINKLER PIPING
210518 ESCUTCHEONS FOR SPRINKLER PIPING
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END OF SECTION

INSURANCE

ARTICLE 1 - POLICIES OF INSURANCE

Immediately upon receiving an order to proceed with the Project, Subcontractor shall, at his/her own expense, procure and maintain insurance from carriers approved by Construction Manager until the Project Completion Date specified in the Project Schedule, as provided in the Bid Default Schedule. Insurance Companies/Carriers utilized shall have a minimum rating of "A" or better and no smaller than "X" financial size as rated by the most current A M Best Rating Guide. All agents and brokers shall hold valid licenses from the State of North Carolina.

Subcontractor's insurance either shall cover, in addition to the Construction Manager and its affiliates, subcontractors, employees, agents, partners and consultants as additional insurers, or Subcontractor shall cause such third parties to procure and maintain equivalent coverage.

Subcontractor's insurance shall cover the Owner, its affiliates, employees, agents, partners, and consultants, as "additional insured".

Subcontractor's insurance shall be primary and non-contributing with respect to any other insurance carried by Construction Manager for operations related to the Project.

ARTICLE 1.1 - WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY

Statutory Workers' Compensation and Employer's Liability Insurance in compliance with the laws of the State of North Carolina & Applicable Federal.

E.L. Each Accident	$500,000
E.L. Disease – Each Employee	$500,000
E.L. Disease – Policy Limit	$500,000

If Subcontractor is self-insured, Subcontractor must submit evidence of insurance to the Construction Manager.

ARTICLE 1.2 - COMPREHENSIVE GENERAL LIABILITY

Comprehensive General Liability Insurance including, without limitation, premises and operations, contractual, independent contractors, broad form property damage, products and completed operations, with not less than the following limits:

Each Occurrence	$1,000,000
Damage to Rented Premises (Each Occurrence)	$100,000
Med Exp (Any one person)	$5,000
Personal & Adv Injury	$1,000,000
General Aggregate	$2,000,000
Products - Comp/Op Aggregate	$2,000,000

ARTICLE 1.3 - AUTOMOBILE LIABILITY

Automobile Liability, including any owned, non-owned, and hired cars and all other vehicles:

Combined Single limit (Each Accident)	$1,000,000

ARTICLE 1.4 - UMBRELLA EXCESS LIABILITY

Each Occurrence	$1,000,000
Aggregate	$1,000,000

ARTICLE 1.5 - ALL RISK

All Risk Insurance, including perils of earthquake and flood, with limits adequate to cover the value of the Work installed and materials while in transit and while stored at the Project Site, equipment, machinery, tools and supplies of any nature whatsoever, including buildings and temporary structures to be used, or incidental to the fabrication, erection, testing or completion of the Work.

ARTICLE 2 - CERTIFICATES

No later than **five (5) days** after receiving an order to proceed with the Project, Subcontractor shall furnish Construction Manager original certificates, in ACCORD form, from its insurance carriers showing that the insurances specified are in force, stating policy numbers, effective dates, expiration dates, and limits of liability thereunder. All policies providing the above insurance shall be endorsed to provide that the insurance company shall notify Construction Manager in writing **thirty (30) days** prior to any cancellation, change, or expiration of the above insurance. If Subcontractor is self-insured, evidence of self-insurance shall be provided.

ARTICLE 3 - RIGHT OF GENERAL CONTRACTOR

If Subcontractor fails to procure and maintain at least the above insurance with the minimum limits of liability shown, Construction Manager shall have the right to procure and maintain the insurance for and in the name of Subcontractor, and Subcontractor shall pay the cost thereof and shall furnish all necessary information to make effective and maintain such insurance.

ARTICLE 4 - OTHER INSURANCE

Construction Manager shall have no liability or obligation for the cost of any increase in the premiums, or the limits of liability or of obtaining any other type of insurance not described in the Agreement, which Construction Manager may deem necessary or desirable.

ARTICLE 5 - CLAIMS COOPERATION

Construction Manager and Subcontractor shall cooperate fully with each other and their respective insurance carriers with respect to any reasonable safety and accident prevention program and any claims handling procedures established for the Project.

ARTICLE 6 - SAMPLE INSURANCE CERTIFICATE

Subcontractor upon selection will be required to meet all insurance criteria as indicated on the sample "Certificate of Liability Insurance Form". Specific compliance to all posted limited description of operations/special provision, cancellation, and certificate holder must remain unchanged on the Subcontractor's insurance certificate.

END OF SECTION

Section Two

MWBE Participation Plan

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Section Two

MWBE Participation Plan

MWBE PARTICIPATION PLAN

BARNHILL CONTRACTING COMPANY MWBE PARTICIPATION PLAN

ARTICLE 1 – POLICY

1.1 It is the policy of Barnhill Contracting Company that small, minority, disadvantaged and women businesses shall have the maximum opportunity to participate in the performance of contracts undertaken by Barnhill Contracting Company. Barnhill Contracting Company will utilize its resources to assist Minority Business Enterprises (MBE) and Women Business Enterprises (WBE) to the fullest extent possible. It is our intent to provide meaningful opportunities for small and disadvantaged business.

ARTICLE 2 - OBLIGATION

2.1 Barnhill Contracting Company and our majority Subcontractors shall endeavor to ensure that minority and women businesses have the maximum opportunity to participate in the performance of our work included in our contracts. Barnhill Contracting Company and any subsequent Subcontractors shall take all necessary and reasonable steps to endeavor to ensure that minority and women businesses have the maximum opportunity to compete for and perform a portion of the work included in our contracts and shall not discriminate on the basis of race, color, national origin or sex. Barnhill Contracting Company will do a better job than any other contractor in the state of North Carolina. We will know the capacities and capabilities of the minority contracting community and provide them with fair and reasonable opportunities.

ARTICLE 3 - GOALS

3.1 Barnhill Contracting Company has established the following goals for participation on all of our contracts:

3.1.1 Minority & Women Business Enterprises **20%**

3.2 Barnhill Contracting Company shall exercise all necessary and reasonable steps to ensure that MWBE's participate in at least the percents of our contracts as set forth above.

3.3 A minimum overall goal of participation by minority and women-owned firms (SDMWOB) has been established by the State of North Carolina for this project at **10%**.

ARTICLE 4 – REQUIRED INFORMATION

4.1 Barnhill Contracting Company will maintain for the purposes of tracking our participation the following information:

4.1.1 The names of MWBE firms;

4.1.2 The Contract Item Numbers of work performed by each MWBE firm; and

4.1.3 The total dollar amount to be paid to each MWBE based on agreed upon price.

ARTICLE 5 – GOOD FAITH EFFORTS

5.1 Barnhill Contracting Company will make the following good faith efforts:

5.1.1 Provide adequate public notification regarding bid opportunities for targeted firms;

5.1.2 Undertake direct solicitation of MWBE firms either by phone, email or letter regarding bid opportunities;

5.1.3 Provide a bid list posted in our plan room of the projects we are bidding;

5.1.4 Whenever possible advertise in minority owned publications;

5.1.5 Provide a plan room that is available whenever MWBE businesses need access to it;

5.1.6 Provide professional assistance to MWBE firms during the bid process;

5.1.7 Attended any pre-bid meetings or trade fairs that inform MWBE firms of subcontracting opportunities;

5.1.8 Follow up on initial solicitations of interests by contacting MWBE firms to determine with certainty whether they are interested in projects we are bidding;

5.1.9 Whenever possible carve out portions of the work for MWBE firms so we will have a greater likelihood of meeting our goals;

5.1.10 Provide interested MWBE firms with adequate information about the plans, specifications and requirements of the contract;

5.1.11 Negotiate in good faith with interested MWBE firms;

5.1.12 Provide payments to MWBE firms (if required) before we get paid from owners; and

5.1.13 Treat MWBE firms with respect and dignity.

ARTICLE 6 – DIRECTORY OF CERTIFIED BUSINESSES

6.1 Barnhill Contracting Company will only recognize firms that are properly certified. We will utilize the lists of businesses which have been certified by the North Carolina Department of Transportation, the State of North Carolina, Minority Supplier Development Council, School Boards, and local cities. Only those MWBE firms with current certification will be used to meet our goals.

ARTICLE 7 – DEFINITIONS

7.1 Minority Business Enterprise of MBE means a small business concern, which is owned and controlled by one or more minorities. Except that such term shall not include any concern or group of concerns controlled by the same minority or minorities which has average annual gross receipts over the preceding 3 fiscal years in excess of $14,000,000, as adjusted by the Department for inflation. For the purposes of this part, owned and controlled means a business:

7.1.1 Which is at least 51 percent owned by one or more minorities or in the case of a publicly owned business, at least 51 percent of the stock of which is owned by one or more minorities; and

7.1.2 Whose management and daily business operations are controlled by one or more such individuals.

7.1.3 Minority is defined as a citizen or lawful permanent resident of the United States and who is:

7.1.3.1 Black (a person having origins in any of the black racial groups of Africa);

7.1.3.2 Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless or race);

7.1.3.3 Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); and

7.1.3.4 American Indian

7.2 Women Business Enterprise or WBE means a small business concern, which is owned and controlled by one or more women. Except that such term shall not include any concern or group of concerns controlled by the same woman or women which has average annual gross receipts over the preceding 3 fiscal years in excess of $14,000,000, as adjusted by the Department for inflation. For the purposes of this part, owned and controlled means a business:

7.2.1 Which is at least 51 percent owned by one or more women or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

7.2.2 Whose management and daily business operations are controlled by one or more of the women who own it.

ARTICLE 8 – ELIGIBILTY OF PARTICIPATION TOWARD MEETING MWBE GOALS

8.1 If a firm is determined to be an eligible MWBE firm and certified by an agency, the total dollar value of the participation by the MWBE will be counted toward the appropriate MWBE goal. The total dollar value of participation by a certified MWBE will be based upon the contract amount agreed upon by Barnhill Contracting Company and the MWBE Subcontractor.

8.2 Barnhill Contracting Company will count toward our MWBE goals a portion of the total dollar value of the participation with a joint venture, eligible under the standards of this provision, equal to the percentage of the ownership and controls of the MWBE partner in the joint venture.

8.3 We will also count toward our goals only expenditures from firms that perform a commercially useful function in the work of a contract. An MWBE is considered to perform a commercially useful function when it is responsible for execution of a distinct element. Of the work of a contract and carrying out its responsibilities by actually performing, managing, and supervising the work involved.

8.4 Consistent with normal industry practices, an MWBE may enter into subcontracts. If an MWBE Contractor or Subcontractor subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of normal industry practices, the MWBE shall be presumed not to be performing a commercially useful function. It is not out intent to use "front companies."

8.5 We will count toward our goals 60 percent of any expenditure for materials and supplies required to complete the contract and obtained from MWBE regular dealers and 100 percent of such expenditures to MWBE manufacturers.

8.5.1 For purposes of this provision, a manufacturer is a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by Barnhill Contracting Company.

8.5.2 For purposes of this provision, a regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. To be a regular dealer, the firm must engage in, as its principal business and in its own name, the purchase and sale of the products in question. A regular dealer in such bulk items as steel, cement, gravel, stone and petroleum products need not keep such products in stock, if it owns or operates distribution equipment. Brokers and packagers shall not be regarded as manufacturers or regular dealers within the meaning of this section.

8.6 Barnhill Contracting Company will count toward its goals the following expenditures to MWBE firms that are not manufacturers or regular dealers:

8.6.1 The fees or commissions charged for providing a bona fide service, such as professional, technical, consultant or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for performance of the contract, provided that the fee or commission is determined by Barnhill Contracting Company to be reasonable and not excessive as compared with fees customarily allowed for similar services.

8.6.2 The fees charged for delivery of materials and supplies required on a job site (but not the cost of the materials and supplies themselves) when the hauler, trucker, or delivery service is not also the manufacturer of a regular dealer in the materials and supplies, provided that the fee is determined by Barnhill Contracting to be reasonable and not excessive as compared with fees customarily allowed for similar services.

8.6.3 The fees or commissions charged for providing any bonds or insurance specifically required for the performance of the contract provided that the fee or commission is determined by Barnhill Contracting

Company to be reasonable and not excessive as compared with fees customarily allowed for similar services.

ARTICLE 9 – REPORTS

9.1 Barnhill Contracting will maintain a proper accounting of MWBE firm usage. All accounting information will be certified as proper and accurate on an annual basis by our independent auditors. We will have the capability of providing a detailed report of all MWBE firm usage listed by project or by owner.

Section Two

MWBE Participation Plan

MWBE BID FORMS

EQUAL OPPORTUNITY CERTIFICATE OF ASSURANCE

FIRM NAME

_____

_____

_____, the undersigned

Certifies that he does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that the Undersigned does not and will not permit its employees to perform their services at any location, under the Undersigned's control, where segregated facilities are maintained. The Undersigned understands that the phrase "segregated facilities" means any waiting rooms, work areas, rest rooms, and wash rooms, restaurants, and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. The Undersigned understands and agrees that maintaining or providing segregated facilities for its employees to perform their services at any locations, under the Undersigned's control, where segregated facilities are maintained, is a violation of the Equal Opportunity Clause required by Executive Order 11246 of September 24, 1965 and 11375 of October 13, 1967 and the rules and regulations thereunder.

The Undersigned further agrees that it will obtain identical certifications from proposed subcontractors prior to the award of agreements exceeding $10,000.00, which are not exempt from the provisions of the Equal Opportunity Clause.

The Undersigned agrees to comply with all reporting requirements of Executive Order 11246 of September 24, 1965 and 11375 of October 13, 1967 and regulations issued by the Department of Labor. Employer Information Report EED-1 (standard form 100) must be filed with the Joint Reporting Committee no later than May 31 each year.

If a current government approved Equal Employment Opportunity Affirmative Action Program pursuant of 41CFR 60-2 is available, please check here _____. If a currently approved program is not available, the Undersign hereby agrees to develop and secure government approval of an Equal Employment Opportunity Action Program within 120 days after receipt of any agreement of $50,000.00 or more and if the Undersign has over fifty (50) employees.

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

_____ _____

Authorized Signature Date

IDENTIFICATION OF MINORITY BUSINESS PARTICIPATION

I, _____,
(Name of Bidder)

do hereby certify that on this project, we will use the following minority business enterprises as construction subcontractors, vendors, suppliers or providers of professional services.

Firm Name, Address and Phone #	Work Type	Minority	Category	Percentage

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**AA**), American Indian (**AI**), White Female (**CF**)

The total value of minority business contracting will be ($) _____.

AFFIDAVIT A – LISTING OF THE GOOD FAITH EFFORT

County of _____

Affidavit of_____
(Name of Bidder)

I have made a good faith effort to comply under the following areas checked:
(A minimum of 50 points must be obtained in order to have achieved a "good faith effort")

☐ 1. 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.
Value = 10 points.

☐ 2. 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**. Value = 10 points.**

☐ 3. Broken down or combined elements of work into economically feasible units to facilitate minority participation. **Value = 15 points.**

☐ 4. Worked with minority trade, community, or contractor organizations identified by the Office of business Assistance Program and included in the bid documents that provide assistance in recruitment of minority businesses. **Value =10 points.**

☐ 5. Attended prebid meetings scheduled by the public owner. **Value = 10 points.**

☐ 6. Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors. **Value = 20 points.**

☐ 7. 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. **Value = 15 points.**

☐ 8. Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure pay 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. **Value = 25 points.**

☐ 9. 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. **Value = 20 points.**

☐ 10. Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands. **Value = 20 points**.

TOTAL POINTS OBTAINED_____

In accordance with GS 143.128.2(d) the undersigned will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon execution of a contract with the CM/Owner. 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: _____

SEAL

State of North Carolina, County of _____

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

Notary Public _____ My commission expires _____

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 CM/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: _____

SEAL

State of North Carolina, County of _____

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

Notary Public _____

My commission expires _____

AFFIDAVIT C – PORTION OF THE WORK TO BE PERFORMED BY MINORITY FIRMS

County of _____

*****(NOTE: THIS FORM IS NOT TO BE SUBMITTED WITH THE BID PROPOSAL)*****

If the portion of the work to be executed by minority businesses as defined in GS 143-128.2(g) 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 hereby certify that on the
(Name of bidder)

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

I will expend a minimum of _____% to Minority and _____% to Women 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 (**AA**), American Indian (**AI**), White Female (**CF**)

Pursuant to GS 143-128.2(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 CM/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: _____

SEAL

State of North Carolina, County of _____

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

Notary Public _____ My commission expires _____

AFFIDAVIT D – GOOD FAITH EFFORTS

County of _____

If the goal 10% participation by minority business **is not** achieved, the Bidder shall provide the following documentation to the CM/Owner of his Good Faith Efforts:

Affidavit of _____
(Name of Bidder)

I do hereby certify the attached documentation as true and accurate representation of my good faith efforts.
(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 (**AA**), American Indian (**AI**), White Female (**CF**)

Documentation of the Bidder's good faith efforts to meet the goals set forth in these provisions. Examples of documentation include, but are not limited to, the following evidence:

A. Copies of solicitations for quotes to at least three (3) minority business firms form the source list provided by the City of Raleigh for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitations 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 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/letter.
G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
H. Letter detailing reasons for rejections of minority businesses 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.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____

SEAL

State of North Carolina, County of _____

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

Notary Public _____My commission expires _____

Section Two

MWBE Participation Plan

MWBE DOCUMENTATION FOR CONTRACT PAYMENTS

MWBE DOCUMENTATION FOR CONTRACT PAYMENTS

Subcontractor Name: _____

Address & Phone: _____

Project Name: _____

Pay Application #: _____ Period: From_____To_____

The following is a list of payments to be made to minority business contractors on this project for the above-mentioned period.

Firm Name	* Indicate Type of Minority	Payment Amount this Period	Total Amount Paid to Date	Total Amount Committed

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**), American Indian (**AI**), White Female (**CF**)

Date: _____ Approved/Certified By: _____
Name

_____
Title

_____
Signature

THIS DOCUMENT MUST BE SUBMITTED WITH EACH PAY REQUEST & FINAL PAYMENT

Section Three

Bid Packages

BIM Requirements
&
Bid Package Scopes of Work

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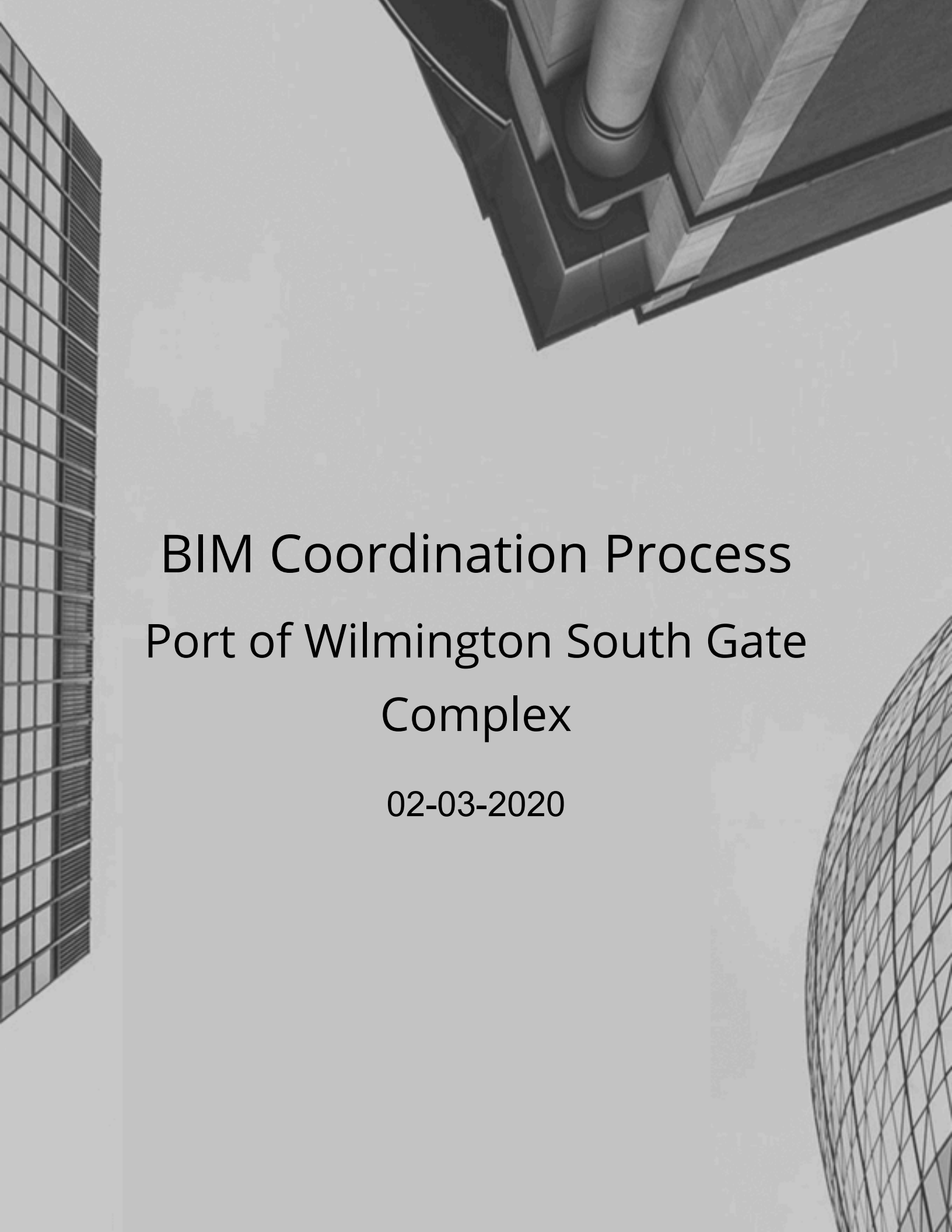


BIM Coordination Process

Port of Wilmington South Gate Complex

02-03-2020

NORTH CAROLINA PORTS

PROJECT TYPE

Government



LOCATION

1 Shipyard Blvd, Wilmington, NC 28412, USA

BARNHILL CONTRACTING COMPANY

Layton Lomax's Team
CMAR

CM

	Layton Lomax	llomax@barnhillcontracting.com	919-441-1833

Plumbing Subcontractor
Plumbing Subcontractor

PLU

Mechanical Subcontractor
Mechanical Subcontractor

MEC

Electrical Subcontractor
Electrical Subcontractor

ELE

Sprinkler Subcontractor
Fire Suppression Subcontractor

FIR

1 Untitled Category
- 1.1 Additional Details
- 1.2 Successful BIM
- 1.3 BIM Uses
- 1.4 Software Versions
- 1.5 File Naming Standard
- 1.6 Project Meetings
- 1.7 Project Coordination Process
- 1.8 Quality Control
- 1.9 Attachments

1 Untitled Category

1.1 Additional Details

Type:	Information:
Project Number:	1105119
Project Owner:	North Carolina Ports
Contract Type / Delivery Method:	CM@R

Project Description:

Upgrades to the South Gate Complex for the Port of Wilmington

1.2 Successful BIM

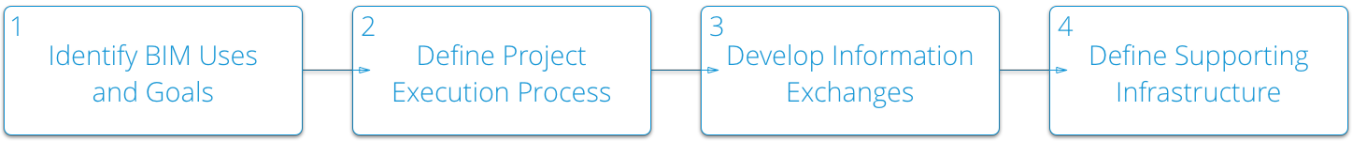
To successfully implement BIM on this project we must have a comprehensive plan.

A well documented BIM Project Execution Plan + Scope will ensure that all parties are clearly aware of the opportunities and responsibilities associated with the incorporation of BIM into the project workflow.

Our completed Plan will define the uses for BIM (e.g., trade coordination, site logistics, cost estimation), along with detailed documentation of the process for executing BIM throughout the project's lifecycle.

Once the plan is created, the team can follow and monitor their progress against this plan to gain the maximum benefits from BIM implementation.

On this project we will follow these four steps:



1. Identify high value BIM uses during preconstruction, construction and operational phases
2. Design the BIM execution process by creating process maps
3. Define the BIM deliverables in the form of information exchanges
4. Develop the infrastructure in the form of contracts, communication procedures, technology and quality control to support the implementation

1.3 BIM Uses

BIM Use	Description	Priority (High/ Med/Low)	Business Dev./ Precon/ Construct/ Operate			
			BD	P	C	O
Site Analysis	Coordination of existing and new utilities					
Constructability Reviews	Review of design documents and models prior to 100% CD					
3D Trade Coordination	Subcontractor modeling and clash detection					
Site Logistics Planning	site safety, traffic planning					
Record Modeling	As-Built modeling and updating throughout construction					
Matterport	Owner marketing, misc. project records					

1.4 Software Versions

We do not mandate the use of any specific software tool; however, any software proposed for use on our projects must be agreed by the team prior to use and included in the table below:

Discipline	Use	Software + Link	Version	Icon
Architecture	Design	Revit	2018	
Structure	Design	Revit	2018	
Civil	Design	Revit	2018	
Mechanical	Design	Revit	2018	
Electrical	Design	Revit	2018	
Plumbing	Design	Revit	2018	
Fire Protection	Design	AutoCAD	2018	
Common Data Environment	File Sharing	Egnyte	N/A	
All	Clash Detection	Navisworks / BIM 360 Glue	2018	

1.5 File Naming Standard

Example: HVAC_PORT_BLDG2_01

Trade (2-6 Characters)	Project (2-6 characters)	Area (3-6 Characters)	Levels (2 characters)
HVAC	PORT	BLDGX	01

1.6 Project Meetings

Meeting Type	Project Stage	Frequency	Participants	Location
BIM Kickoff Meeting	Construction	Once	All Stakeholders	Jobsite Office
Trade Coordination	Construction	Twice Weekly	All Stakeholders	Webex
Constructability Review	Preconstruction	Ongoing	Barnhill, Design Team	Barnhill Office
As-Built Updating	Construction	Monthly	All Stakeholders	Webex

1.7 Project Coordination Process

Milestone	Date
Project Coordination Kickoff	January, 2020 (Tentative)
Site Utilities and Underground Coordination Signoff	February, 2020 (Tentative)
Roof Openings Provided to Steel Contractor	March, 2020 (Tentative)
Systems Support Bldg. Coordination Signoff	April, 2020 (Tentative)

It is the Design/Construction Team's responsibility to conduct and manage an adequate and thorough Clash Detection process so that all major interference between building systems will have been detected and resolved before construction. It shall be the goal of the Design/Construction Teams to reduce the number of changes during construction due to major building interferences to zero. This coordination effort will be led by the CM@R with input from all PME, fire protection, and site infrastructure as described below:

1. The Subcontractor shall be responsible for creating 3D and 2D coordination shop drawings of all vertical and horizontal work required to responsibly coordinate each trade.
2. The CMAR shall provide a base line 3D model and 2D base line CAD file to base all coordination documents from. This model shall be produced per the contract construction drawings and specs.
3. The order of precedence for location above the ceilings is to be as follows (i.e. Gravity piping systems will take precedence over non-gravity systems): recessed electrical light fixtures, overhead casework or structural supports (modifications not included), fire protection piping, plumbing sloped systems, ductwork and above ceiling mounted equipment, electric cable tray, HVAC piping, plumbing piping (domestic water, and special gases), and electrical conduit.
4. All ceiling overhead items must be coordinated to provide accessibility to accommodate lower ceiling heights. This subcontractor shall include all necessary offsets, etc., to provide drop downs or other means of providing more accessible overhead devices. All costs associated with relocating above ceiling overhead to more accessible elevations due to improper coordination efforts shall be borne by this subcontractor.
5. An initial "kickoff" meeting will be held prior to the production of any coordination drawings to establish milestone dates, sequencing, resolve major interferences, etc. After that, Weekly Coordination Meetings will be required and scheduled by the CMAR. These meetings will be mandatory for all trades involved in coordination and will continue until all clashes have been resolved.
    - Every contractor shall be represented at each meeting (2nd tier BIM detailers are not considered representatives). It is mandatory to have 1st tier representation on each call. The Architect and Engineers are encouraged to attend as well.
    - Each trade/subcontractor shall make each respective team available for **two meetings per**

week (of a minimum 8 hours) for duration of notice of award until all buildings have completed coordination drawings.

- The cost for BIM coordination will be broken out as a separate value in each contractor's schedule of values. Monthly billings will be prorated based on actual meeting attendance.

6. The preliminary coordination meeting will establish parameters that cannot be changed during the process such as "(0,0,0)" for all the trades to use for their drawings insertion point. Once this is agreed upon it cannot be moved.
7. The frequency of coordination meetings will be determined by the progress of coordination and as required to maintain the project schedule. At a minimum, coordination meetings will be held at least twice per week until coordination is complete. It is the intent to hold the majority of meetings via Webex but Barnhill Contracting Company reserves the right to hold on site meetings as required to maintain the project schedule.
8. The General Contractor will build the federated model and generate the clash reports using Autodesk Navisworks 2019. Each contractor revises their models based upon resolution decided during coordination meetings, to be completed prior to the next coordination meetings.
9. File sharing software and frequency of upload will be discussed at this meeting.
10. Coordination efforts are not to take place strictly on the day of the in-person meeting. Coordination efforts shall be ongoing at all times during the week. The intent of the in-person meetings is to evaluate any major conflicts or areas of concern and to collaborate on the drawings generated over the past week. Coordination Meetings are **NOT** to be used as clash detection meetings.
11. The Architect may be required to update the Architectural design model to reflect necessary changes that are surfaced during the coordination process.
12. The CMAR shall publish a list of the required 3D coordination drawings with due dates for each.

    - Subcontractor is responsible for identifying all potential conflicts with building structure systems/elements. Subcontractor shall include all required piping/duct modifications, fittings, etc. to comply with final system layouts with approved coordination drawings and/or to comply with field conditions for connections to existing utilities at no additional cost to Contractor.

13. After each subcontractor has fulfilled its obligations it shall return the drawings and electronic files to the CMAR. The CMAR shall be responsible for merging the drawings into a single coordination drawing for submittal to the Architect/Engineer for review and comments.
14. Each Subcontractor having input into the production of 3D coordination drawings will be required to sign off on acceptance of the final coordination drawings prior to the commencement of its or other participants work in any given area. All costs attributable to failure of a subcontractor to provide its timely approval of the coordination drawings or failure to cooperate in the production or assembly of input for said drawings shall be borne by such Subcontractor.
15. This coordination activity includes above and below ground work of HVAC, plumbing, fire protection, electronic systems integrator, telecommunications, AV, fire alarm, electrical work, etc. within five feet (5') of the building line.
16. The coordination activity is to include work in all above/below grade, exterior/site, and interior locations.

17. Provide all coordination necessary to be certain that all device outlets are installed level, plumb, and flush with respective finishes.
18. Include all necessary coordination with the architectural model so as to provide all outlet(s) and raceway openings made by the architectural model. This contractor will be solely responsible for all cost associated with repair and/or replacement of architectural feature damaged due to outlet(s) and/or raceway openings being made by him or his subcontractors and or incorrect coordination and direction provided by this subcontractor.
19. If any subcontractor fails to produce all of its initial 3D coordination drawings within the time allocated, the CM will produce said drawings, and all the costs of producing said drawings will be at the expense of the Subcontractor.
20. The CMAR will 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 will be the responsibility of the Subcontractor having installed affected items. In the event of a dispute, CMAR's decision will be final.
21. Upon completion of the Coordination Drawings it shall be the responsibility of each subcontractor to provide sufficient copies of the accepted coordination drawings to their respective Superintendents, Foreman's, lower tiered subcontractors and installers in the field. As a minimum each subcontractor shall have (1) set of the accepted coordination drawings on each floor of the project. It is the responsibility of each subcontractor to continually review and communicate with all other Trades in advance of the installation any issues and/or conflicts that require variance from the reviewed and accepted coordinated drawings.
    - All plans (minimum ¼" scale) and sections (3/8" scale) shall show building room layouts, structural steel elements, sprayed fireproofing, pipe with insulation, conduit over one and one-half inch (1½"), racks of more than three (3) pipes or conduit, and all ductwork including insulation thickness, regardless of size.
    - 2D Coordination drawings showing all horizontal and vertical dimensions of the work shall be prepared by mechanical, electrical, plumbing and fire protection subcontractor's as well as others as required or designated by the Contract Documents, Scope of Work or as directed by the Construction Manager (CM). This information is to be generated directly from the 3D coordinated model. Additionally, each subcontractor is responsible for getting this information into a usable format for their surveyors.
22. Subcontractor to verify equipment layouts can achieve maintenance needs, coil removals, etc.
23. Subcontractor is responsible for developing all floor and ceiling layout back drop files and shall not assume Architect files will be available for use to develop shop drawings or coordination drawings. As indicated above, any drawings released by the Design Team to the Construction Manager will be made available to the coordinating subcontractors.
24. Completion of the coordination drawing process will be a requirement for pay request release of funds after the allotted specified time period.
25. Right hand vs. left hand equipment to be provided as required and deemed necessary by the Construction Manager during the MEP coordination process. For example, if a condensate riser is

installed between two FCU's, one unit shall have the condensate stubbed out the left side of the equipment while the other unit shall be stubbed out the right side of the equipment. The intent of this comment is not to be limited to FCU's; it shall encompass all equipment.

26. In general, each coordinating subcontractor shall have minimum of 3 previous projects that they have created 3D Building Information Models for the purposes of coordination. In addition, have a minimum of three (3) persons on staff that are capable of performing the required 3D modeling responsibilities for this project. If additional manpower is required to maintain schedule, such manpower shall be provided at no cost to the Construction Manager or Owner. Shall a prequalified Subcontractor not meet this requirement, they shall hire a local consultant to complete the work on their behalf; local consultant shall be able to participate in weekly coordination meetings in person (if required.)

27. Upon completion of the MEP coordination efforts, this subcontractor shall continuously maintain as-built drawings as the project progresses. As built drawings shall be distributed to the project team on a monthly basis and shall be updated with changes as issued by the design team. Should drawing changes be issued by the design team and need to be incorporated into the model immediately, Subcontractor agrees to expedite the incorporation of stated drawings into the model as directed by Construction Manager with no overtime charges.

28. At the completion of the submittal process, this Subcontractor shall be responsible to upload all submittal information into the Building Information Model. This includes product data and shop drawings for valves, FCU's, motors, starters, VFD's, AHU's, etc. The format for including this information in the model shall be discussed during the MEP/BIM kickoff meeting.

29. At the completion of the project, as-built drawings shall be completed in the Building Information Model and turned over to the Construction Manager, both in a model compatible with Navisworks as well as 2D CAD drawings.

1.8 Quality Control

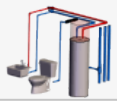
Prior to upload, each trade is responsible for ensuring there are no unintended model components and the design intent has been followed. This includes but is not limited to:

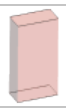
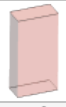
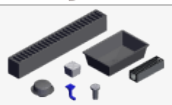
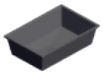
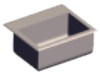
1. Model elements not related to your respective work are hidden or removed.
2. 2D linework, gridlines, and dimensions not relevant to coordination have been hidden or removed.
3. Relevant insertion points are clearly depicted in the model for alignment verification.
4. Initial interference checks have been perform and coordinated around structural and architectural elements.
5. All clearances, insulation, sloped pipe, and any elements affecting proper spatial coordination have been accounted for and are modeled accordingly
6. Filenames are to be kept consistent. Do not add date stamps or any unique identifiers to filenames after the naming conventions have been established.
7. Ensure routing of systems has been coordinated with and approved by respective trade contractor field teams and project management.

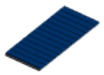
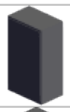
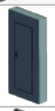
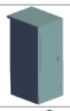
1.9 Attachments

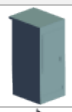
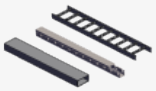
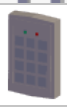
Add attachments here:

CW_STRAT 1 0 - Typical Stratifications.pdf

	Milestone 1
Plumbing Model Scope	
Domestic Water Distribution	350  PLU
Domestic Water Equipment	 PLU
Domestic Water Equipment Clearances	 PLU
Domestic Water Piping Risers	 PLU
Domestic Water Piping Mains	 PLU
Domestic Water Piping Branches	 PLU
Domestic Water Piping Fittings / Elbows / Tees	 PLU
Domestic Water Piping Insulation	 PLU
Plumbing Fixtures	 PLU
Sanitary Drainage	350  PLU
Sanitary Sewerage Equipment	 PLU
Sanitary Sewerage Piping Risers	PLU
Sanitary Sewerage Piping Mains	 PLU
Sanitary Sewerage Piping Branches	 PLU
Sanitary Sewerage Piping Vents	PLU
Plumbing Equipment	350  PLU
Water Pumps	 PLU

	Milestone 1
Water Heaters	 PLU
Water Filters	 PLU
Water Pump Clearances (Installation / Maintenance / Use)	 PLU
Water Heater Clearances (Installation / Maintenance / Use)	 PLU
Water Filters Clearances (Installation / Maintenance / Use)	 PLU
Sanitary Plumbing Fixtures	350  PLU
Floor Drains	 PLU
Storm Drains	 PLU
Area Drains	 PLU
Trench Drains	 PLU
Roof Drains	 PLU
Floor Sinks	 PLU
Mop Sinks	 PLU
Bathroom Plumbing Fixtures	350  PLU
Bathroom Sinks	 PLU
Bathroom Toilets / Water Closets	 PLU
Bathroom Urinals	 PLU

	Milestone 1	
Bathroom Urinal Flush Valve		PLU
Bathroom Tubs / Showers		PLU
Bathroom Tubs / Shower Head / Faucets		PLU
Common Space Plumbing Fixtures	350 	PLU
Drinking Fountains		PLU
Hose Bibs		PLU
Electrical Model Scope		
Facility Power Generation	350 	ELE
Packaged Generator Assemblies		ELE
Photovoltaic Collectors		ELE
Fuel Cells		ELE
Transfer Switches		ELE
Electrical Service and Distribution	350 	ELE
Electrical Service		ELE
Electrical Service Meters		ELE
Electrical Service Transformers		ELE
Electrical Service Switchgear		ELE
Electrical Service Switchboards		ELE

	Milestone 1
Power Distribution	 ELE
Power Distribution Conduit	 ELE
Power Distribution Conduit Fittings	 ELE
Power Distribution Pull Boxes	 ELE
Power Distribution Banks	 ELE
Power Distribution Panelboards	 ELE
Electrical Equipment Clearances	 ELE
General Purpose Electrical Power	350  ELE
Cable Trays	 ELE
Raceways	 ELE
Electrical Ducts	 ELE
Lighting	350  ELE
Lighting Fixtures	 ELE
Data Communications	350  ELE
Data Cable Trays	 ELE
Access Control And Intrusion Detection	350  ELE
Security Entry Keypads	 ELE

	Milestone 1
Security Entry Card Readers	 ELE
Security Entry Fingerprint Readers	 ELE
Security Vehicle Keypads	 ELE
Security Alarm Panel	 ELE
Intrusion Detection Sensors	 ELE
Disabled Access Controls	 ELE
Electronic Surveillance	350  ELE
Interior Surveillance Camera	 ELE
Exterior Surveillance Camera	 ELE
Surveillance Hardware	 ELE
HVAC Model Scope	
Central Cooling Equipment	350  MEC
Refrigerant Compressors	 MEC
Refrigerant Condensers	 MEC
Packaged Compressor and Condenser Units	 MEC
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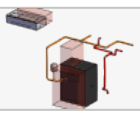
Cooling Towers	 MEC
HVAC Distribution Systems	350  MEC

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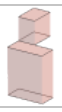
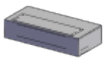
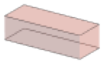
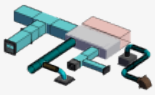
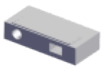
Hydronic Boilers	MEC 
Hydronic Expansion Tanks	MEC 
Hydronic Boiler Clearances	MEC 
HVAC / AHU Equipment	MEC 
HVAC Equipment Clearances	MEC 
Ventilation	350 MEC 
Ventilation Supply Air Equipment	MEC 
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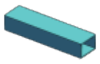
Ventilation Supply Air Duct Branches	MEC 
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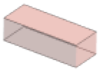
Ventilation Supply Equipment Clearance	MEC 
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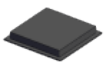
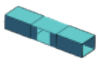
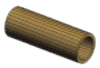
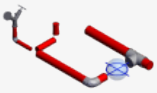
Ventilation Return Air Duct	MEC 
Ventilation Return Air Terminals	MEC 
Ventilation Exhaust Air	MEC 
Ventilation Exhaust Air Duct	MEC 

	Milestone 1
Ventilation Exhaust Air Terminals	MEC 
Exhaust Air Fire Dampers	MEC 
Ventilation Outside Air Duct Mains	MEC 
Ventilation Outside Air Duct	MEC 
Ventilation Outside Air Terminals	MEC 
Outside Air Fire Dampers	MEC 
Variable Air Volume (VAV) Control Boxes	MEC 
Ventilation Duct Insulation	MEC 
Fire Suppression Model Scope	
Site Fire Protection Distribution	350 FIR 
Site Fire Piping Mains	FIR 
Site Fire Piping	FIR 
Site Fire Point of Connections (POC)	FIR 
Site Fire Valves	FIR 
Fire Suppression	350 FIR 
Fire Suppression Standpipes	FIR
Fire Suppression Piping Mains	FIR 
Fire Suppression Piping Branches	FIR 

	Milestone 1
Fire Suppression Sprinkler Heads	FIR 
Fire Suppression Fittings	FIR 
Fire Suppression Tanks	FIR 
Fire Suppression Pumps	FIR 
Fire Suppression Valves	FIR 
Fire Suppression Piping Flanges	FIR 
Fire Controls	FIR 
Fire Protection Specialties	350 FIR 
Fire Protection Cabinets	FIR 

Bid Package: BP 001 - GENERAL SCOPE INCLUSION ITEMS

Introduction:

Each Bid Package Scope of Work shall include all of the following as required to complete the Work as indicated on the Drawings, Specifications and Project Manual, and all Addendums.

Scope Intent:

In general, each Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications, Project Manual, Project Bid Manual and all Addendums. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents.

Scope Inclusion Items:

The following requirements shall be included in **ALL** Bid Package Scope of Work Summaries. The degree of inclusion shall be based upon specific Bid Package requirements necessary to facilitate Project completion:

1. The Subcontractor will include the below items in their bid price and agrees upon execution of the bid proposal these items are acknowledged and included.
2. The Subcontractor understands that this document is a summary of items and does not waive any other requirements specified in the Bid or Contract Documents.
3. The Subcontractor has reviewed ALL Bid/Contract Documents/Project Bid Manual.
4. The Subcontractor has reviewed the Subcontract and Exhibits included with the bid documents and takes No Exceptions. The successful bidder will execute the Subcontract in its current form without any modification. No previous Terms or Agreements will apply to the Subcontract.
5. The Subcontractor shall be responsible for examining all of the Documents listed in Section One of the Project Bid Manual, “Project Contract Documents” and “Project Specifications” and all referenced documents. All items related to this Subcontractor’s Work and included in these Documents shall be included in the Subcontract Amount. All work shall be performed in accordance with the Contract Documents.
6. All references to ‘by Contractor, ‘by General Contractor’, ‘by Construction Manager, ‘by CM’, ‘by Construction Manager at Risk’, ‘by CMAR’, or any other similar language on the drawings and specifications in reference to this scope shall be inferably assumed as ‘By this Subcontractor’ unless otherwise specified.
7. The Subcontractor has reviewed the lien waiver requirements and will provide the necessary documentation on a monthly basis with that month’s application for payment. Specifically this contractor understands the requirements for 2nd and 3rd tier subcontractor and supplier lien waivers based on the previous month’s payment. This will be covered in Scope Review and an example exhibit document provided for subcontractor use with your accounting department.
8. Pre-Installation Meetings: This subcontractor shall schedule, coordinate and conduct pre-installation meetings for all activities so as not to impact the construction schedule and installation of work. The Pre-Installation Meetings will include the CM, other Subcontractors, Architect, Owner Representative, and Manufacturer Representative. The purpose of the meetings is to verify project requirements, substrate conditions, manufacturer’s installation instructions, manufacturer’s warranty requirements, architectural details, mock ups, quality control, and safety program.
9. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
10. Subcontractor is to submit all submittals to the CM only. Submittals (other than shop drawings) are to be broken up into individual products and transmitted with appropriate, individual cover sheets and/or identifiers, as described in specification sections. Shop drawings are to be packaged together in logical breakdowns of work or "element of construction". Packages of materials lumped together, with no separation of products properly identified and referenced to appropriate specification sections with cover sheets clearly denoting the intent of the product will be returned by the CM as ""Not Reviewed"". The subcontractor is wholly responsible for any schedule or monetary consequences of such action.
11. Background checks for all onsite construction personnel are required to be completed prior to commencing work, refer to Sexual Offender Registry Check Certification Form included in Section Seven. Construction Manager will provide site identification hard hat stickers for all construction personnel.
12. This is an active Port owned and operated by The State of North Carolina, All personnel working inside or around the exterior of the project MUST execute the pinnacle of professional conduct. ZERO tolerance policy on any

person/persons that are brought to the attention of the CM by the Port or other management personnel. Those who illegally cross outside of the project limits are submit to rules/laws of the Port Authority, Homeland Security or others.

13. Provide all field supervision and labor, materials, equipment, tools, field measuring and accessories required to complete the Work. Include all necessary coordination with the work by others as required.
14. All hoisting, unloading, deliveries, and inventory are the responsibility of this package. The CM will not accept deliveries on behalf of subcontractors, and may not have direct access to a forklift on-site.
15. Provide all necessary home office and field administration required to facilitate timely completion of this Contract to include not more than a 10 workday turnaround on all administrative paperwork requirements and/or requests from Construction Manager.
16. Subcontractor is required to attend weekly project coordination meetings while work on site is taking place. For phased work, Subcontractor is required to attend such meetings two-weeks **prior to** work starting on site. Subcontractor meeting participation at weekly project coordination meetings is **mandatory**. This shall be a line item on your schedule of values and if you do not attend the site meeting then this amount will be deducted from your payment.
17. Inspection of all equipment, tools, etc. is required on a **daily** basis and must be reported to the Construction Manager via daily inspection reports.
18. All mandatory OSHA regulated paperwork to be turned over to the CM. This includes but not limited to:
    a. Weekly toolbox talks
    b. Daily reports
    c. Fire extinguisher training
    d. Forklift/CCO certifications
    e. Equipment training certifications
    f. Rigging certifications
    g. Signalman certifications
    h. Welding certifications
    i. Frequent and regular inspections (1926) 20. (b) 2
    j. Scaffold/Trenching competent person certifications
    k. Silica Training
    l. Traffic Control certifications
    m. Etc.etc.etc

19. Subcontractor is required to submit daily construction reports to the Construction Manager describing that day's events. Daily reports must be turned into the Construction Manger by the end of each working day. Failure to submit reports as requested may delay processing of monthly payment to Subcontractor.
20. Complete all Work in accordance the Construction Manager's Site Specific Safety Plan and must meet all local, state and federal (OSHA) safety regulations, guidelines and/or requirements including rules, regulations and interpretations of the NCDOL relating to OSHA for the Construction Industry. The strictest of the above shall govern at all times.
21. Subcontractor will read, acknowledge and sign Barnhill's safety orientation form prior to the start of the first day's work. A 20 minute safety orientation video or live orientation will be given by the CM to every employee prior to obtaining access the jobsite. A numbered picture ID badge/sticker will be given to each employee that has signed the orientation notice. This badge/sticker is to be worn so that it is easily visible at all times. Any employee found working on the site without this badge/sticker will be removed from the jobsite.
22. The use of tobacco and e-cigarettes may be restricted per the policy of the Port Authority, the construction site will abide by their guidlines.
23. The playing of radios and other entertainment devices (or using cell phones as such) are not permitted.
24. Furnish and install all necessary equipment for safety protection (floor opening protection, temp rails, safety harness, work boots, hard hats, etc.) in accordance with all OSHA and local guidelines and regulations as it relates to the work specific to complete the Work.
25. Provide all necessary engineering, layout, and coordination required to complete Work. CM to provide onsite vertical and horizontal control and one (1) benchmark for subcontractor use. All other layout to complete the Work is the responsibility of the subcontractor requiring unless noted otherwise.
26. Include necessary mobilizations and material/equipment staging relocations as required to facilitate construction progress and/or as directed by Construction Manager.

27. All Work to be completed in accordance with construction progress schedules, weekly meeting coordination, and subsequent updates completed and provided by the Construction Manager. **BCC reserves the right to modify construction schedule based on job progress, conditions, performance, and areas available for work. Subcontractor required to man project based on the above conditions, this could require multiple crews working in multiple areas.**
28. Strict compliance with project site utilization plan/phasing plan/site logistics plan and work rules as issued or directed by Construction Manager.
29. Unless changed by the Construction Manager, standard working hours will be from 7:00AM to 5:00PM Monday through Friday. Outside Activities and/or noise generating activities may be restricted at specific times during the calendar year as requested by the Port.
30. **On a daily basis** clean and remove all construction debris, regardless of location, and dispose of into dumpster supplied by Construction Manager. Work area is to be "broom clean". Failure to comply will result in CM acquiring temporary/supplemental labor to conduct cleanup at responsible party expense via back charge.
31. Store on site only necessary materials and equipment to facilitate 10 days of work. Consult Construction Manager for long-term storage if required. Subcontractors must receive prior approval from Construction Manager for onsite storage.
32. The initial testing of soils, concrete, and steel is included in the special inspections, which will be furnished by the Owner. Each subcontractor will be responsible for any re-inspection costs & rectification work cost from any failed inspections of their contract work. Each subcontractor responsible for any testing required outside of that to be provided by the Owner. Subcontractor is responsible for repair of all work to the pre-disturbed condition applicable to the area that may be impacted by Work.
33. Provide all fabrication, delivery and unloading / stocking as required for the Work. Any large shipments that have to be unloaded by a forklift will have to be scheduled with the CM's onsite Superintendent within 24 hours of delivery. The contractor will have to be on site to unload the materials and place in the appropriate location for staging. A forklift may not be available on the project, all unloading is the responsibility of the bidder.
34. Subcontractors performing excavation or digging activities are responsible to contact existing utility locate services **prior to** excavation start. Subcontractor is responsible for repair of all work to the pre-disturbed condition applicable to the Project site, public and private area that may be impacted by Work.
35. Designated concrete wash-out area(s) will be provided. Each subcontractor will be responsible for own cleanup and disposal of excess concrete. Mortar mixing station will be required to clean on regular basis as directed by CM.
36. Maintain dust control of own work while performing work on site.
37. Protect finished flooring work with craft paper or CM approved equal. This includes taping of all seams with heavy duty tape and wrapping protection up walls as required and sealing with tape approved not to damage wall finish.
38. All dewatering of this scope of work as may be necessary to satisfactorily facilitate performance and completion of the work.
39. Provide and maintain all traffic control that pertains to their work, including daily street cleaning as required.
40. All Task lighting as required for your scope of work. BP2600 will provide temp power panels at main work areas (Control and Guard Buildings). Temp power outside of this direct area is the responsibility of the bidder.
41. Provide all required Mockups/Samples per Project Documents.
42. Hot and cold weather measures as necessary to facilitate completion of this work and in accordance with design criteria and manufacturer recommendations. Subcontractor to provide specific QA/QC plan for items related to scope of work.
43. Firestopping and/or fire-safing all penetrations through fire-rated assemblies is included in this scope of work.
44. Layout and installation of ALL penetrations including core drilling, saw cutting and sleeves for this scope of work.
45. Layout and installation of ALL penetrations for slabs on grade and slabs on deck is included in this scope of work as applicable.
46. Removal of all temporary labels and protective coatings/coverings after completion of installation of work.
47. Subcontractor responsible for any/all coordination, scheduling and applicable fees for inspections required for completing Work.
48. Protection of work-in-progress and/or work-in-place is required. Damage to the installed work of others will be charged to the responsible party damaging such work.
49. Protection of adjacent work areas will be required.

50. All subcontractors will be required to use the Procore Field Software provided by the CM. Software can be run via an application on a phone or Ipad, so nothing special is needed. The CM will provide training for designated person(s) of each BP. Project Managers and Field Supervision of each BP are responsible for distribution of all Issue Reports to field staff for issue correction. Each BP is responsible for the issues assigned to them. If an item is incorrectly assigned, please notify the CM immediately through the comments function in the software.
51. Each Bid Package is responsible for all Quality Assurance / Quality Control of their work by completing and submitting an evaluation of their work before the CM performs their punch list. The list the CM creates will be generated and completed in the Procore Field Software.
52. Procore will be used for: Ongoing QA / QC Activities, work to complete list, non-conforming work list, housekeeping list, safety audits and commissioning checklists, including material tracking and commissioning of all systems. All punch list activities by the CM, including CM, Architect, Owner, Engineer and Commissioning Authority/Agent Punch List, viewing all Contract Documents, Scopes of Work, Addenda, RFI's, Submittals, As-Builts, Pictures, and any other pertinent information related to the project.
53. The roofing will be protected at all times. All work occurring on the roof after the roof installation will include all protection required. Each subcontractor must submit their plan for roof protection in advance and in writing prior to work activities. Each subcontractor **must execute a pre-task plan daily** requesting roof access and secure approval from the CM.
54. This subcontractor to ensure proper, competent and authorized personnel on hand during Fire Marshall and all other inspections.
55. Include all necessary punch list work. Coordinate with Construction Manager as to timing of punch list work to be completed prior to starting such Work. Provide complete as-built documentation and O&M documents per the Project Specifications and Contract Documents as part of "Punch list work" or as requested or directed by Construction Manager. Once the subcontractor is presented the punch list in writing the subcontractor then has three working days to start performing corrective measures. If the subcontractor doesn't meet this obligation then is shall be the right of the Construction Manager to supplement the subcontractor and back charge the cost to the prime subcontractor. Mobilization for this work shall be covered under this scope along with any per diem, mileage and hotel.
56. Provide all project closeout documentation required in Contract Documents within **90 calendar days** and not less than **30 calendar days** of substantial completion of this contract or specific phase of work as directed or requested by the Construction Manager.
57. All warranties, including any special warranties, as required and for the period specified per the specifications. Unless otherwise stated or required by the contract documents, this subcontractor unconditionally warrants and guarantees all materials and workmanship against patent defects arising from faulty materials, faulty workmanship or negligence for a period of **twelve (12)** months following the date of substantial completion of the Work and beneficial occupancy and shall replace such defective materials or workmanship without cost to the CM or Owner.
58. Proper testing, start-up and demonstration of all equipment as required per specifications. Include authorized representatives of equipment manufacturers at testing, start-up and demonstration dates.
59. All necessary Owners' maintenance/attic stock in accordance with and as indicated in the project specifications.
60. Any equipment/material maintenance agreement for the period as indicated in the project specifications to be included in base bid.
61. Portable sanitary facilities will be provided on the project, all persons performing work onsite are to utilize these only. Use of the Owner's facilities is prohibited and violation may result in the responsible party being removed from the project.
62. Include all necessary mobilizations for labor, material and/or equipment to be in accordance with the Site Logistics/Phasing Plan. Onsite parking will be extremely limited.
    A. Clean up of trash in parking areas will be mandatory, all subcontractors will be held responsible for clean up in their designated parking area.
63. A FULL TIME competent superintendent is required while working onsite (the goal is to have one person who is knowledgeable with this specific project and is familiar with the day-to-day operations of the entire project). The supervision must be qualified in all aspects of each scope and have the authority to make financial decisions. (A Superintendent or Foreman who cannot make a decision in the field is not qualified to run this type of work and the CM will ask they be replaced immediately). This scope includes (1) Competent Superintendent on site at all times while work is in progress. This Superintendent cannot be removed for the duration of this project unless he is terminated from the company or as directed by CM.

64. A Supervisor from the awarded company is required to be onsite at all times during work of any lower tier subcontractor.
65. All deliveries must be signed for by the contractor performing this scope of work. CM will not sign for any items (including: UPS, FedEx, DHL, etc.).
66. Coordination between all plans shall be performed and if any discrepancies are found notify CM for clarification. No compensation will be granted due to lack of plan review and coordination.
67. It is understood that this is a complete working package that meets all codes requirements and is in compliance with AHJ (Authority Having Jurisdiction) and manufacturers. It will be the responsibility of the supplier to acknowledge any circumstances where the drawings or specifications do not meet these requirements. No additions will be granted for failure to disclose any circumstances where the package is incomplete.
68. Any change order that is discovered must be submitted **within ten (10) days** of its discovery to the CM. If the contractor does not turn in the appropriate request for change the contractor will forfeit his right for extra compensation and the work still must be installed per contract documents.
69. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact. Store materials protected from exposure to harmful weather conditions. Handle material and components to avoid damage. Protect materials against damage from elements, construction activities, and other hazards before, during and after installation. Responsible contractor will be held liable for any damages to any existing roads, asphalt, sidewalks, curb & gutter, lawn/grassed areas, utilities, etc.
70. No burning is allowed on site.
71. Refer to individual Bid Package Scopes for additional specific requirements.

Priority Task Items:

The Construction Manager is committed to starting on site construction as soon as possible; therefore, as part of this Bid Package there are **priority task items** that must be preplanned, organized, scheduled and completed on site first, prior to beginning other work scope responsibilities. Priority task items do not necessarily need to be completed in sequential order; they can be completed concurrently where it makes sense for construction and as necessary to expedite completion. Priority task items, in a proposed order of completion are as follows.

1. Submit to the Construction Manager certificate of insurance within **5 workdays** of receipt of Notice to Proceed.
2. Submit to the Construction Manager executed contract within **10 workdays** of receipt of Notice to Proceed.
3. Submit to the Construction Manager **all submittals** and the Schedule of Values within **20 calendar days** of receipt of Notice to Proceed.
    a. Reference the SOW for additional critical submittal components of the work, these submittals may need to be turned in quicker.
4. Submit to the Construction Manager Subcontractor's project safety plan prior to commencing Work (to include tiered subcontractor plan if applicable).
5. Submit to Construction Manager a "Project Participation List" listing of all subcontractors, material and equipment suppliers, vendors and anyone else who may be providing goods and services to the project. Include company names, address and contact numbers, contact name, email address, scope of work, and anticipated contract or purchase order amounts. No Subcontractor payment shall be released until this list is received and approved by the Construction Manager.
6. Within **10 workdays** of receipt of Notice to Proceed, the Subcontractor shall have permanent project personnel assigned to participate in the Construction Manager's project scheduling sessions.
7. Prior to commencing work on site, Subcontractor shall arrange for all site personnel to complete the Construction Manager's project specific safety orientation program.
8. Subcontractor will comply with all quality related requirements listed in the contract documents. Subcontractor shall follow the protocols and procedures listed in the Quality Control Plan for this project. Within **10 workdays** of execution of the subcontract, Subcontractor will submit a Quality Control Plan to the Project's Quality Control/Quality Assurance Manager for review and approval. This plan shall outline the quality practices that the subcontractor will implement to meet the quality requirements of this project. The plan shall also designate the subcontractor's point of contact for all quality related issues. Subcontractor shall utilize only pre-approved manufacturers and installers for all work in this scope. Subcontractor will inform the QA/QC Manager of all inspections, tests and off- site inspection dates scheduled for the project in a timely manner.
9. Refer to individual Bid Package Scopes for additional specific requirements.

Allowances:

1. Allowance as may be contained in specific Bid Package Scope(s) shall be included as part of the total lump sum Bid Proposal amount. **An allowance shall include all costs including overhead, profit (mark-up) and exclude performance and payment bond costs.** The allowance is available for application at the discretion of the Construction Manager and the unused portion credited against the Contract amount. All Contract allowances will be identified in the Schedule of Values as an individual line item.
2. Utilization of any allowance shall be documented by **daily** documentation as directed by the Construction Manager.
3. Refer to individual Bid Package Scopes for specific requirements.

Unit Prices:

1. Unit Prices as listed may be utilized by the Construction Manager to make contract cost adjustments for changes in the Work. Unit prices for completed in place Work shall include cost for labor, materials, equipment, insurances, taxes, bond premium, overhead and profit fifteen percent (15%) and other related incidentals and remain firm and in effect for the duration of the contract. Solicited unit prices for deleted Work shall be calculated at not less than fifteen percent (15%) for overhead and profit.
2. Refer to individual Bid Package Scopes for specific requirements.

Alternates:

1. Alternate Prices shall include all cost associated with the changes, omissions, additions or other adjustments to the work of the Bid Package as described in the alternate, or are reasonably inferable there from. Claims for extras resulting from changes caused by the acceptance or rejection of any Alternate will not be allowed.
2. Alternate Prices shall also include all cost of overhead, profit, and bond premiums associated with the work of the Alternate whether additive or deductive. The Drawings, Specifications, Project Manual, Addendum(s), and other Contract Documents shall be considered appropriately modified by either the acceptance or rejection of the various Alternatives.
3. The Construction Manager and Owner expressly reserve the right to accept or reject any, or all, Alternate Prices and in any sequence. Acceptance or rejection of any alternate does not relieve the Bidder of timely completion of the Work within the time periods indicated.
4. Refer to individual Bid Package Scopes for additional specific requirements.

Work Scope Sequence:

1. The Construction Manager proposes the following work scope sequence for preplanning purposes:
    1. Refer to Phasing Plan Section 1

2. The Construction Manager Reserves the right to change work scope sequence as may be necessary to promote construction progress.

END OF SECTION

Bid Package: BP 100 - GENERAL TRADES

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all General Trades duties as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. Include labor on the project as follows: Two (2) workers for the first two (2) months, Four (4) workers for the next eleven (11) months, Two (2) workers for the last two (2) months; each worker to work forty (40) labor hours per week performing ongoing (interior and exterior) cleanup duties, light carpentry, and light unloading / moving of materials as directed by the Construction Manager. Total manhours to bid 9,000. 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. One of the laborers shall be a qualified/competent Foreman for duration onsite.
    a) To support SOW item above include:
        i. Duration of the Project should be indicated as 15 months.
        ii. Provide commercial grade brooms, mops, mop buckets, mop cleaning solution, vacuums, trash bags, pumps, rakes, shovels, hoses, sweeping compounds, etc. as necessary.
        iii. Provide and maintain a commercial grade pressure washer, minimum 3,500 PSI type, including all operational costs, for duration of project to be used at direction and discretion of CM.
        iv. Provide small commercial grade portable generator for the duration of the project. All fuel and maintenance included.
        v. Include (1) 10'x40' Connex/Storage Unit for storage of materials for the duration of the project. Placement to be as directed by the Construction Manager.
        vi. Include (20), 10lb. fire extinguishers for the duration of the project. Include annual inspections, stands and proper labeling and record keeping for fire extinguishers.
        vii. Provide and maintain approximately three (3) commercial grade trash cans with lids (secured per OSHA Standards) and three (3) Steel trash drums for the site, minimum 55-gallon capacity and include heavy duty trash bags/can liners for duration of project.
        viii. Include two (2) rolling trash carts for general labor usage, for the duration of the project as directed by the Construction Manager.
        ix. Include a heavy duty type/commercial grade door mat at each entrance to the building for the duration of the job.
3. Provide and maintain a forklift with, at a minimum, a 42 foot extension and 8,000-pound capacity for the duration of the project (15 Months). Forklift to be provided with loader type bucket or 2.5yard dump bucket attachment for exterior trash hauling duties. No handmade trash buckets will be allowed. Provide certified/qualified forklift operator for duration of time. Operator shall perform general labor activities at discretion of the Construction Manager while not operating forklift. **Operator shall be the "competent Foreman" in laborer total indicated above SOW Item#2.** Provide all fuel and maintenance as required for the duration of the project. Equipment provided by this contract to be less than 5 years old.
4. Provide OSHA approved 100gal fuel cell to support fueling needs of the provided forklift, with a weekly fill-up.

5. Provide a "gator type" gas/diesel UTV 4 seater with ROPS (roll-over protection system) for the duration of the project. All fuel and maintenance included.
6. Include weekly, thorough cleaning of CM Office Trailer. This includes dusting/cleaning of all desks, tables, bathrooms, chairs and cleaning of windows.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. Not applicable.

Unit Prices:
1. Rate per laborer hour regular time
2. Rate per laborer hour overtime

Alternates:
1. Not applicable.

END OF SECTION

Bid Package: BP 105 – FINAL CLEANING

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**

Furnish all labor, material, equipment, and supervision required to complete all Final Cleaning as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. Complete cleaning of the new construction (Control and Guard Building) is to be completed by this package. Site cleaning by others.
3. Interior Cleaning Scope of Work for New Construction
    a) VCT – Stripping and waxing with 5 coats using NCSPA approved floor finish
    b) Carpet – Vacuum all loose foreign material, spot clean
    c) Baseboard of all types – Wipe clean by hand to be free of blemishes, foreign matter or streaks
    d) Ceramic Tile and Grout - Mop and sanitize to be free of all foreign matter or discoloration
    e) Wall Gypsum Board – Dust or vacuum until free of surface debris
    f) Concrete Floors without paint coverings – Wet mop
    g) Concrete Floors with painted coverings – Wet mop until free of blemishes
    h) Acoustical Ceilings and Grid – Dust or vacuum and wipe free of blemishes
    i) Mechanical, Electrical Equipment – Dust and/or wipe all surfaces until clean
    j) HVAC Grilles/Diffusers - Dust and/or wipe until clean
    k) Restroom Fixtures and Hardware – Wipe clean and sanitize all surfaces
    l) Woodwork and Casework – Dust and/or wipe clean all surface. Cleaning products to be approved prior to use.
    m) Fire Extinguishers and Cabinets, Misc. Mechanical/Electrical Accessories – Wipe clean
    n) Drinking Fountains – Wipe clean, sanitize
    o) Doors and Hardware – Wipe clean all surfaces
    p) Interior Glass and Mirrors – Wipe clean free of blemishes, smudges, etc.
    q) Resilient Floor – Sweep and mop clean
    r) Vertical Blinds and Window Treatments – Dust and wipe clean
    s) Metal Handrails and Stairs - Vacuum and wipe clean
    t) Light Fixtures and Cover Plates – Dust and wipe clean
    u) Exposed Piping and Risers – Dust and wipe clean
    v) Windows – Brush with soft bristle brush, wipe down with clean potable water and cotton cloths, clean paint drips with approved solvent. Windows will be streak free at time of turnover.
    w) Appliance – Dust and/or wipe until clean
    x) Lockers – Dust and or wipe clean

4. Exterior Cleaning Scope of Work for New Construction:
    a) Exterior Glass - Brush with soft bristle brush, wipe down with clean potable water and cotton cloths, clean paint drips with approved solvent. Windows will be streak free at time of turnover.
    b) Exterior Sitework – Work cleaned by others.

5. Miscellaneous Scope Items:

a) Include multiple mobilizations as required to facilitate construction progress and/or as directed by CM.
b) Provide all necessary cleaning materials and equipment, including hoisting/lifts to complete this scope of work
c) Provide 2-phases (2 pre-final and final) of cleaning for the building interior including all glass surfaces. Cleaning shall include vacuuming with filters in lieu of sweeping. Provide a cleaning during the final punch list walk in order to ensure that there are no cleaning items on the final list. Provide one time cleaning for the exterior glass.
d) Include 40 man hours of labor time for discretionary use by the CM's Superintendent, general cleaning materials included.
e) Removal of all adhesive tabs and films on mirrors, windows, doors, hardware and appliances. Any damages and/or scratches to surfaces caused by this removal shall be the responsibility of Subcontractor.
f) Subcontractor understands and agrees that a "reasonable" amount of drywall mud, glue, paint, and other related items are expected and shall be removed as part of this Agreement.
g) Subcontractor understands that all cleaning products must be approved by or recommended by the flooring manufacturer. Any damaged caused to flooring products shall be the responsibility of Subcontractor.
h) Maintain building cleaning during final building phase, including but not limited to, entryways stairways and main entrances.
i) Subcontractor to submit cleaning procedures and materials for approval prior to commencing work.
j) Cleaning materials data sheets must be submitted to the CM prior to commencement for approval.
k) Provide all necessary cleaning materials and equipment to complete this work including lifts as needed.
l) Subcontractor acknowledges that damages can occur at final cleaning stages of the windows. This contractor is to perform a site survey prior to cleaning and submit to CMR by written notification of damaged/scratched windows prior to cleaning. Failure to do so and any damages/scratches on windows following the commencement of cleaning will be the sole responsibility of this subcontractor.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Rate per laborer hour regular time
2. Rate per supervisor hour regular time

Alternates:
1. None.

END OF SECTION

Bid Package: BP 205 – DEMOLITION

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 2 Existing Conditions**

Furnish all labor, material, equipment, and supervision required to complete all Demolition as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
4. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, trash chutes, excavation, etc.
5. Procurement of all demo permits that are required by county, AHJ, and port will be the responsibility of this contractor.
6. Generator power as needed for your scope of work in areas where temp power is not available.
7. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
8. All surveying and layout to be provided by this scope. CM will provide site control.
9. All general notes called out on CD 101 can be applicable to this scope
10. Included in this scope is all aspects of the structural demo called out on the CD drawings. Demo will include the entirety of the structures, everything inside and down to below footing including but not limited to; ceiling grid, ceiling tiles, floor tile, VCT/carpet, walls (CMU/GWB/RACO type), plumbing fixtures, marker boards, cabinets, remaining furniture, light fixtures, conduit, electrical gear, circuitry, ductwork, hangers, unistrut, ceiling wire, beam clamps, wall base, doors and frames, slabs, footings, structural steel, bar joists, etc.
    a) Demolition keynotes to include in this scope on the CD drawings are:
        i. #5, #12, #13, #14 (all other items called out on CD "demolition notes" will be covered under related subcontract)
        ii. For #12 above, repair of asphalt will be by BP3100.
11. Legal disposal of all generated debris (listed in Item #10 above) from demo process will be the responsibility of this contractor.
12. Any items called out to be turned over to the Owner will be coordinated with CM. All transportation of these items to be salvaged, will be the responsibility of this contract and shall be coordinated with the Owner and assumed to be turned over within Port property.
13. Contractor to take all precautionary measures not to damage items to be turned over to the owner.
14. All structures called for demo in the contract documents will be made safe by BP 2200, BP 2300, and BP 2600.
15. Daily cleanup of debris caused by this work.
16. Contractor is required to provide noise and dust control measures including but not limited to, wet cutting, dust down, misters, etc.
17. No dry cutting of any silica based material will be allowed.
18. Following completion of work, area shall be left clean and "to asphalt subgrade" any holes or negative depressions to be filled in with ABC stone. Edges of the asphalt demo shall be clean cut and subgrade shall be compacted per the contract documents prior to ABC being installed. Asphalt patching will be by BP3100 Turnkey Sitework.

19. Saw cut clean and remove any damaged asphalt caused by equipment used from the demo process. Excess patching due to carelessness will be the responsibility of this package.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. Include 40 additional man hours for discretionary use by the CM's Project Superintendent for additional demolition.

Unit Prices:
1. Rate per laborer hour regular time
2. Rate per supervisor hour regular time

Alternates:
1. None.

END OF SECTION

Bid Package: BP 390 – TURNKEY CONCRETE

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 3 Concrete (all sections as they apply to this scope)**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 14 Hydraulic Elevators (all sections as they apply to this scope)**
- **Division 33 Utilities (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Turnkey Concrete as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. **Scope Clarification:** This package will be responsible for all building foundations, slabs, concrete stairs and ramps as shown on the contract documents, including Control and Guard building as shown on the contract documents. (EXCLUDING: High mast pole light foundations provided by BP3370 Site Electrical and Sidewalks provided by BP3100 Sitework)
3. Refer to "Barn and Canopy Foundation Assumptions" document located in Section 8 Appendix. This bid package to include these assumed foundations as part of this work (210 CYs). Assume top of footing elevation to be -2'-0" FFE and #6 rebar 12" on center each way; top and bottom mat. (Final foundation design will occur once Canopy reactions are provided and EOR establishes final footing design).
4. All task lighting as may be required for scope of work.
5. Generator power as needed for your scope of work in areas where temp power is not available.
6. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope. (including items furnished by others to be installed under this contract).
7. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
8. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
9. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
10. All surveying and layout to be provided by this scope. CM will provide site control.
11. Complete all Work in accordance with local, state and federal (OSHA) safety regulations and/or requirements.
12. Coordination with special inspector/testing agency as required. CM will schedule.
13. Include necessary mobilizations and material/equipment staging relocations as required to facilitate construction progress and/or as directed by Construction Manager.
14. No dry cutting of silica based materials. All OSHA silica guidelines apply.
15. Exclude all PME interior and exterior housekeeping pads
16. All Concrete Locker Bases as per Contract Documents if required.
17. All concrete materials required for this scope of work. Include all excavation, all preparations and placement of building foundations and slabs. NOTE: ALL sidewalks are provided by BP3100
18. All backfill and fine grading associated (with compaction) with item above in accordance with the contract requirements.
19. Included in this scope, all excavation spoils following completion of this scope will be hauled offsite and disposed of.
20. Concrete washout pit to be provided and maintained by BP 3100 Turnkey Sitework. Washout in this location only.

21. BP3100 to provide building pad at -.33' from FFE (+/- .1').
22. Include installation of all reinforcing steel materials/accessories, including but not limited to any necessary supports, welded wire mesh (if applicable), foundation steel, forming materials, epoxy, dowels, sleeves, mesh supports, etc. required for this scope of work. Include installation of items provided by BP 500 (Anchor bolts, nuts and washers, and any steel embedded items).
23. NOTE: All foundation work is to be formed. Reference details of installation on the contract documents.
24. All formed concrete work as it relates to the ramps and walls at the guard house.
25. All formed work as it related to the elevator pit including water stop and vapor barrier.
26. Setting anchor bolts and embedded plates/angles/dowels/sleeves, etc. Setting of all leveling nuts to elevation of column base plates. Setting (1) anchor bolt per set to correct elevation and marking with spray paint.
27. Anchor bolts are to be protected during installation from concrete coverage. It is the responsibility of this contractor to turn over clean and usable bolts to BP500 for steel setting.
28. ALL anchor bolts are to be set via surveyor or with total station off the site control. Verified prior to and following concrete placement.
29. Provide anchor bolt survey and Any/ALL repair work to be complete prior to BP 500 mobilizing.
30. Vapor barrier installation as required per plans and specifications.
31. Formwork at doors, windows, etc. and all edge forming as necessary.
32. Column isolations and grouting of base plates.
33. Placement of all poured pan stairs are included in this contract.
34. Include all concrete reinforcement that develops from footing and ties into masonry (with proper lap splice as required). Include in shop drawings at such conditions. BP 400 will be responsible for all reinforcement following.
35. Curing compounds or other specified curing methods – furnish and install per specifications, including all concrete sealing/curing material and application.
36. All required finishes and floor flatness per Contract Documents.
37. Include all key joints, control joints, isolation joints, contracting joints, expansion joints, waterstop, construction joints, column block-outs, saw-cutting and chamfer strips as required and/or indicated on Contract Documents.
38. Placing and finishing of slabs as specified (including all pumping or conveyance) – slabs on grade, elevated slabs, roof slab, repaired areas, installation of inserts and accessories as shown on drawings and in specifications, etc.
39. Traffic control as required for this scope of work.
40. Hot and cold weather concrete measures and protection as required completing this work.
41. Dewatering and pumping of water for this scope of work as necessary.
42. Rebar caps; furnish/install and maintain for duration of this scope of work.
43. Coordinate all work with other trades as it relates to PME in-slab rough in, block outs, etc.
44. All necessary remedial work such as rubbing/patching/grinding, point up as needed for this scope of work to be in conformance with Contract Documents. And acceptable finish to the end user
45. All termite treatment as indicated on plans and specifications including, but not limited to surface preparation of treatment area, foundations, masonry, penetrations, treatment of area under all slabs on grade, foundations, columns and perimeter treatment around buildings. Include all warning signage per specifications. Include necessary coordination and inspection with CM. Include submittal of all required documentation for each treatment. Include multiple mobilizations as required to facilitate construction progress and/or as directed by CM. Include warranty per specifications. Start of warranty to be coordinated with CM. Treatment to occur prior to any concrete/mud sill installation. Treatment to occur before any Mud Mats. No change orders will be accepted for additional mobilizations.
46. Include any Concrete Admixtures called out in the Specifications.
47. Only the personnel of this subcontractor or concrete supplier are to authorize the addition of water to concrete, coordinate with onsite SI. Subcontractor shall be responsible for all consequences resulting from the addition of water to concrete, including all cost for removal, repairs and the cost involved with other trades' work that may be affected, and delays to the overall and near-term schedule. In no case will Barnhill Contracting accept concrete delivery tickets that indicate the addition of water onsite.

Priority Task Items:

1. As directed by Construction Manager.

Work Scope Sequence:

1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Rate per laborer hour regular time
2. Rate per laborer hour overtime
3. Rate per finisher hour regular time
4. Rate per finisher hour overtime
5. Rate per supervisor hour regular time
6. Rate per supervisor hour overtime
7. Rate for Undercut & Removal per cubic yard and replace with ABC Stone
8. Rate for Undercut & Removal per cubic yard and replace with Concrete

Alternates:
1. None.

END OF SECTION

Bid Package: BP 400 – TURNKEY MASONRY

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 3 Concrete (all sections as they apply to this scope)**
- **Division 4 Masonry (all sections as they apply to this scope)**
- **Division 5 Metals (all sections as they apply to this scope)**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 8 Openings (all sections as they apply to this scope)**
- **Division 9 Finishes (all sections as they apply to this scope)**
- **Division 10 Specialties (all sections as they apply to this scope)**
- **Division 14 Hydraulic Elevators (all sections as they apply to this scope)**
- **Division 26 Electrical (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Turnkey Masonry as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Generator power as needed for your scope of work in areas where temp power is not available.
4. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
5. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
6. Daily cleanup and removal of all general CD demo material to dumpster provided by CM
7. This subcontractor to supply masonry dumpster for cut/broken block, mortar debris, floor scrapping materials, for any and all general masonry debris.
8. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
9. All surveying and layout to be provided by this scope. CM will provide site and vertical control.
10. NOTE: All masonry to be plumb and level and in accordance with spec section 042200-1 and 042613-6 to be within ½" total in total height.
11. All concrete materials required for this scope of work.
12. All masonry and associated reinforcement/grout necessary for a complete scope of work.
13. All reinforcing steel materials/accessories and installation per Plans and Specifications, including delivery and NC Sales Tax, including necessary supports, protective caps, rigid anchors, masonry-veneer anchors/ties, brick-veneer anchors/ties, wall bolsters, wall reinforcement, masonry walls, load bearing walls, weld on masonry ties, horizontal joint reinforcement, etc. required for this scope of work.
14. All block regardless of size, shape, and location.
15. All brick regardless of size, shape and location.
16. No dry cutting of silica based materials will be allowed. Only wet cutting.
17. All necessary sand and mortar (regular and colored) as required per Specifications.
18. All necessary flashings/weeps/mortar net.
19. Block out for all accessories that are recessed in walls (I.E. - fire extinguisher cabinets, toilet accessories, windows, etc.)

20. All necessary brick/block cleaning, point up, etc.
21. All ground face units and specialty units.
22. All brick/block ties installation at metal stud veneer or steel column locations.
23. All ridged insulation included.
24. All CMU tight to deck and fire stopping to top of deck or as called out on the documents.
25. All column wraps.
26. All setting of hollow metal door and window frames in masonry walls, (BP800 will furnish all frames and anchors).
27. All concrete block fill installation for CMU including any pumping required and grouting of joints below FFE.
28. Scaffolding/equipment required for this scope of work. Scaffold erection, areas and durations shall be coordinated with the Construction Manager so as to maintain safe access for all other subcontractors. Include all covered walkways beneath scaffold systems as may be necessary and multiple relocations as directed by Construction Manager. **Competent person training certificates required**
29. All bracing of walls as needed.
30. Installation/setting of all loose steel lintels, bearing and leveling plates, shelf angles, etc. (furnished by others). All steel to steel welding is performed by BP500.
31. Unload/disbursement of materials for this scope of work including items furnished by others but installed in this package.
32. Grouting of hollow metal frames in masonry walls per Specifications. Coordinate with BP2600 and BP800 prior to grouting for in-wall rough-in requirements
33. Brick/Block pockets and infill of same for steel, etc. Coordinate with BP500.
34. Hot and cold weather measures as necessary to facilitate completion of this work.
35. Protection of this work until contract completion.
36. All masonry cleaning per Specifications.
    a) NOTE: On exterior polished face CMU, if etching occurs from chemical cleaning and factory polished face is damaged, exterior block may require re-polishing. If required, a mock-up will be required prior to proceeding.
37. All bond beams/concrete lintels as indicated.
38. Rebar caps furnish/install and maintain for duration of this scope of work.
39. Dewatering as required for this scope of work.
40. CM will coordinate with special inspector/testing agency as required. Correct any/all deficiencies as noted.
41. Contractor shall include the repair of all land disturbances caused by equipment utilized by this Scope, regardless of wet/dry conditions. This is to include excessive rutting, damages to erosion control devices and temporary or permanent roads, curbs and gutter, etc. Coordinate with Construction Manager for transporting materials to and from work areas.
42. All substrates scheduled to receive waterproofing/air barrier/weather barrier (provided by BP 790) etc. will be inspected prior to installation of veneer by Construction Manager. Install veneer ONLY after having received authorization from Construction Manager. Veneer installed without authorization from Construction Manager can be removed for inspection and reinstalled (or replaced if damaged during removal process) at no additional cost.
43. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed within 30 to 60 days from NTP (notice to proceed) or LOI (letter of intent).
44. All mixing (with sand box) will be at central location, and transportation to work area will be required
45. Spotters required for all operators while working in congested areas.
46. Daily cleanup (broom swept) of work area will be required. Excess debris caused by this contract will be cleaned up by the CM at the expense of BP 400.

Priority Task Items:

1. As directed by Construction Manager.
2. Pre-installation meeting including mockup meeting required per specifications.
3. Mockup/Samples

Work Scope Sequence:

1. As directed by Construction Manager.

Allowances:

1. None

Unit Prices:
1. Rate per laborer hour regular time.
2. Rate per laborer hour overtime.
3. Rate per mason hour regular time.
4. Rate per mason hour overtime.
5. Rate per supervisor hour regular time.
6. Rate per supervisor hour overtime.

Alternates:
1. None

END OF SECTION

Bid Package: BP 500 – TURNKEY STRUCTURAL STEEL

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 3 Concrete (all sections as they apply to this scope)**
- **Division 5 Metals (all sections as they apply to this scope)**
- **Division 9 Finishes (all sections as they apply to this scope)**
- **Division 10 Specialties (all sections as they apply to this scope)**
- **Division 13 Steel Buildings (all sections as they apply to this scope)**
- **Division 31 Earthwork (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Structural Steel as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Generator power as needed for your scope of work in areas where temp power is not available. Temporary power is not provided for use by welding machines. It is assumed that welding machines are diesel or gas powered.
4. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope. (including items furnished by others to be installed under this contract).
5. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
6. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
7. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
8. All surveying and layout to be provided by this scope. CM will provide site control.
9. Complete all Work in accordance with local, state and federal (OSHA) safety regulations and/or requirements.
10. Coordination with special inspector/testing agency as required. CM will schedule
11. It will be the responsibility of this contractor to make a site visit prior to installation to verify installed anchor bolts, prior to steel erection. This will be in enough time for BP390 to make any necessary repairs.
12. All structural steel columns, beams, joists, HSS members, bent plates, cross bracing, erection, connections, decking, girders, channels, lintels, studs, all accessories, etc. Beam members are to be set with natural camber up and camber is furnished where required.
13. NOTE: ALL steel to be plumb and level. Pay special attention to tolerances needed for exterior metal panel installation.
14. All miscellaneous site steel: railings, bollards (installed by BP3213)
15. Refer to detail on S-703, at High Mast Lighting this package to furnish 8" Bollards installation by others.
16. All steel to steel items are responsible by this bid package.
17. All miscellaneous steel clips, embeds, angles, etc. All support steel at new roof, wall openings and CMU bracing back to structural steel.
18. All tube steel and angle at vanity supports per 5/A-504
19. All interior and exterior steel stairs and handrails (Steel or Aluminum)
20. All anchor bolts, interior and exterior locations (furnish and deliver only). Coordinate with installing party through the Construction Manager for material turnover.
21. Anchor Bolts for High Mast Lighting provided by others.

22. Provide (1) anchor bolt template for each type of base plate.
23. Provide Anchor bolts immediately upon approved submittals
24. BP390 will turn over anchor bolts with (1) nut leveled and painted
25. This package to provide and turn over (1) die to match each anchor bolt diameter to CM.
26. All floor, non-composite floor, acoustical and roof deck including all necessary closure plates, strips, studs, angles and sound absorbing batts.
27. Metal decking to be painted or primed shall not receive passivator per specifications.
28. All framing for all floor and roof openings – including all installations and any necessary removal of metal decking as may be directed by the CM.
29. All blockouts and openings per drawings – coordinate with other trades.
30. Include installation of all steel items bolted to concrete or masonry surfaces (including all anchors).
31. All top of CMU wall bracing to the structure per the plans and specs.
32. All steel lintels. Including galvanized
33. Repair of damaged surfaces on steel materials (i.e. touch up painting) to comply with Specifications. Cleaning of all exposed and/or painted steel free of mud, dirt, debris, etc. ready for paint by others.
34. All exposed welds shall be prepped in a manner to turn over clean and free of slag, primed, and presentable. Any remedial work needed to achieve this will be the responsibility of this contractor.
35. Install and **maintain** fall protection for this scope of work per OSHA standards and removal of when directed by Construction Manager. (I.E. perimeter cable railing at all floors/leading edges, roof to have vertical angle installed to allow for perimeter cable installation and around mechanical chases) Cable rail to be removed by BP925 as exterior walls are erected. All angle installed at finished concrete areas are to be on the exterior of the pour stop.
36. All finishes required per specifications (primed/galvanized/etc.). Include field touch-up paint as may be required.
37. Field measuring as required. Provide engineered drawings/calculations per Specifications.
38. Submit structural welding and steel certifications requirements as listed.
39. CM will coordinate with special inspector/testing agency as required. Correct any/all deficiencies noted by special inspector or EOR.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Rate per laborer hour regular time
2. Rate per laborer hour overtime
3. Rate per erector hour regular time
4. Rate per erector hour overtime
5. Rate per welder hour regular time
6. Rate per welder hour overtime
7. Rate per supervisor hour regular time
8. Rate per supervisor hour overtime
9. Rate for crane operator regular time.

Alternates:
1. None.

END OF SECTION

Bid Package: BP 740 – ROOFING

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 3 Concrete (all sections as they apply to this scope)**
- **Division 4 Masonry (all sections as they apply to this scope)**
- **Division 5 Metals (all sections as they apply to this scope)**
- **Division 6 Wood, Plastics, and Composites (all sections as they apply to this scope)**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 8 Openings (all sections as they apply to this scope)**
- **Division 22 Plumbing (all sections as they apply to this scope)**
- **Division 23 HVAC (all sections as they apply to this scope)**
- **Division 26 Electrical (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Roofing as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. **Scope Clarification** – This scope will include turn key installation of roofing for the control building and guard building.
3. All task lighting as may be required for scope of work.
4. Generator power as needed for your scope of work in areas where temp power is not available.
5. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
6. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
7. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
8. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
9. All surveying and layout to be provided by this scope. CM will provide site control.
10. In general the expectation is for this bid package to cover the roofing scope in its entirety for both the control building and the guard building per A-105 thru A-108 and A-901 (2-ply cold applied modified bitumen system with granular cap). All accessories included for a complete system. Include all details around the elevator bump up and canopy roof flashing.
11. All wood blocking, wood nailers and fasteners as necessary for this scope of work. Include installation of all top of parapet wall blocking.
12. Include furnish and installation of ALL break metal as required for this Scope of Work.
13. Furnish and install ALL roofing, flashing and sheet metal per the plans and specifications for a complete system. Include MBIT roofing, membrane, walkpads, metal coping, fascia coping, counter flashing, counter flashing clips, base flashing, reglets, scuppers, gutters, downspouts, downspout boots, sealants, underlayment materials, encapsulating layers, expansion joints, fasteners, clamps, terminations/trim, closures, metal nosings, miscellaneous materials, etc. for a complete and functional weather tight system per Contract Documents.
14. Coordinate flashing requirements with adjacent work to insure a weather tight system.
15. All roof curbs and hatches will be by this contract; other than as provided by others (BP2300 to provide mechanical roof curbs).

16. Roof and Overflow drains are to be provided and installed by BP2200. Include all coordination for final height adjustments.
17. All roof accessories per Specifications.
18. Provide fasteners as required per Specifications, no exposed fasteners permitted on horizontal surfaces.
19. All roof insulation, gypboard for roof assemblies or back of parapet, vapor barrier for roof work, downspouts, downspout transitions and boots, tie-off hook flashing, ridge cap, etc. for a complete installation.
20. Coordinate the tie in of roof and overflow drain piping with plumbing contractor (roof and overflow drain supplied by plumbing contractor and installed by this scope of work).
21. All vent pipe flashing as required.
22. All caulking/sealants related to this scope of work.
23. Coordinate with BP2600 for lightning protection attachments to roof surface.
24. Furnish & install walk-pads as required.
25. Provide boot/flashing for PME equipment & penetrations. All coordination for all roof penetrations with PME contractors.
26. Furnish surplus roofing material to BP2200/BP2300 to install between pipe supports and new roof.
27. Coordinate with all necessary parties to meet inspection and testing requirements as outlined in the Specifications.
28. Roofing Flood Tests if required per Specifications.
29. All warranties as required per Specifications.
30. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed within 90 to 120 days from NTP (notice to proceed) or LOI (letter of intent).
31. Include all splash blocks per Contract Documents.
32. Include all DenseDeck pertinent to roof details.
33. Final cleaning of roof prior to building turnover is by this scope of work.

Priority Task Items:
1. As directed by Construction Manager.
2. Pre-installation conference and mockups as required in Specifications.
3. Mockup/Samples

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. Not applicable.

Unit Prices:
1. Rate per laborer hour regular time.
2. Rate per laborer hour overtime.
3. Rate per installer hour regular time.
4. Rate per installer hour overtime.
5. Rate per supervisor hour regular time.
6. Rate per supervisor hour overtime.

Alternates:
1. Not applicable.

END OF SECTION

Bid Package: BP 750 – METAL WALL PANELS

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary for Metal Wall Panels:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 5 Metals (all sections as they apply to this scope)**
- **Division 6 Wood, Plastics, and Composites (all sections as they apply to this scope)**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 8 Openings (all sections as they apply to this scope)**
- **Division 9 Finishes (all sections as they apply to this scope)**
- **Division 10 Specialties (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Metal Wall Panels as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Generator power as needed for your scope of work in areas where temp power is not available.
4. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
5. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
6. Daily cleanup and removal of all general CD demo material to dumpster provided by CM
7. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
8. All surveying and layout to be provided by this scope. CM will provide site control.
9. Provide all labor, material, fabrication, and services necessary to provide turnkey installation of all insulated metal wall panels per Plans and Specifications **AT MAIN BUILDING AND GUARD HOUSE**. Coordinate installation of external wall studs/furring strip for insulated metal/aluminum wall panels. All anchors, screws, inserts, fasteners and accessories. Factory finish per Specifications. This bid package shall verify the alignment of structural support and wall opening dimensions by conducting field measurements prior to panel fabrication. Any corrections necessary shall be completed prior to panel installation. This bid package shall remove all protective materials, coverings, strippable films and labels as panels are installed. Final cleaning at the direction of the Construction Manager. Work is to be coordinated with BP500, BP925, BP740 and BP400.
10. Furnish and install ALL flashing and sheet metal per the plans and specifications that interfaces with the insulated metal wall panels. Include all counter-flashing, wind restraint clips, base flashing, jamb flashing, head flashing, sill flashing, metal trim, coping and all other sheet metal accessories and materials. Coordinate with BP 740 at roof/insulated panel transitions.
11. Refer to details, this package to provide and install metal head, jamb, sill trim with cleat continuous with end dams at interface with Aluminum Storefront. (All trim for metal panels around the windows will be installed prior to storefront).
12. Supply and install all sheet metal accessories needed for a complete system as called out in the plans or specs including but not limited to: intermediate sub framing, z girt, fasteners, blocking, and shims as required to provide a complete, flush system per the plans and specifications.
13. Supply and install all joint sealers, sealants and gaskets required for weatherproof performance of metal wall panel assemblies.

14. This package is responsible for coordinating all insulated metal wall panel assemblies with rain drainage work, flashing, trim, and construction of secondary framing and supports and other adjoining work to provide a leak-proof, secure, and non-corrosive installation. Subcontractor must also coordinate all work with the BP740, BP840, BP400 and BP790 to insure a leak-proof system.
15. Include all system components, including but not limited to: attachment systems, miscellaneous metal framing, any and all accessories such as trim, closure strips, flashings, z-girts/hat track, furring strips etc. for a complete weather-tight, flush wall system.
16. Include all miscellaneous backing and blocking as required to provide a complete assembly. Blocking and backing required, but not shown on architectural drawings is the responsibility of this package.
17. Include site visitation(s) prior to mobilizing for installations to perform any and all necessary field measuring to verify support and structure conditions at locations where insulated metal panel systems are to be installed. Any areas found to be non-compliant must be reported to the Construction Manager the same day of discovery. This bid package shall be responsible for all field measuring as necessary prior to panel fabrication.
18. Subcontractor to include all touch-up and final clean.
19. Coordinate with BP1010 and BP 2600 on sleeves/penetrations and blocking requirements for exterior signage.
20. Coordinate with BP1010 and BP2600 on the exterior illuminated LED sign (S-3) on the contract documents. Include within the insulated panel embedded blocking/support and located conduit penetrations as a factory finished product. BP2600 will provide building sleeves to the interior and final connection to building power.
21. Coordinate with Construction Manager and all other trades regarding penetrations of metal panel systems to facilitate other trades work. This Scope shall be responsible for ensuring all penetrations through metal panels are sealed and weather-tight with approved color match sealant
22. All substrates will be inspected prior to installation of metal panel systems by Construction Manager. Install metal panel systems ONLY after having received authorization from Construction Manager. Metal panel systems installed without authorization from Construction Manager can be removed for inspection and reinstalled (or replaced if damaged during removal process) at no additional cost.
23. Include all samples, certificates, design data, submittals, etc. per Specifications.
24. Provide fasteners as required per Specifications, no exposed fasteners.
25. Include all caulking and sealants related to this scope of work.
26. Include protection of building interior from weather damage at any/all incomplete areas in cases such as missing materials, rework due to poor workmanship or unacceptable or damaged materials, etc.
27. Coordinate with all necessary parties to meet inspection and testing requirements as outlined in the Specifications.
28. All warranties as required per Specifications.
29. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed within 30 days from NTP (notice to proceed) or LOI (letter of intent).
30. Furnish and install all formed aluminum trim.
31. Coordinate with other trades where Insulated metal wall panels tie-into other materials as required for a complete and functional system per Contract Documents.

Priority Task Items:
1. As directed by Construction Manager.
2. Pre-installation conference and mockups as required in Specifications.
3. Mockup/Samples

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. Allow for (5) skins for the building from potential damage.

Unit Prices:
1. Rate per installer hour regular time.
2. Rate per installer hour overtime.

Alternates:
1. None.

END OF SECTION

Bid Package: BP 790 – CAULKING & WATERPROOFING

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Caulking and Waterproofing as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Generator power as needed for your scope of work in areas where temp power is not available.
4. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
5. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
6. Daily cleanup and removal of all general CD demo material to dumpster provided by CM
7. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
8. All surveying and layout to be provided by this scope. CM will provide site control.
9. This scope will include ALL caulking. ALL building/building skin related caulking including but not limited to: masonry expansion control joints, construction joints in cast in place concrete interior/exterior, interior vertical/horizontal joints between different materials, vertical control & expansion joints on exposed interior surfaces of exterior walls, interior perimeter joints of exterior openings, vertical joints on exposed surfaces of interior unit masonry and concrete walls and partitions, control/expansion/isolation joints in horizontal traffic surfaces of concrete slabs, interior acoustical joints in vertical surfaces & horizontal non-traffic surfaces, etc.
10. Furnish and installation of all Air Barriers/weather barriers for a complete system and installation of the work as required per Contract Documents including but not limited to behind all brick/block veneer, behind insulated metal wall panels, over CMU and over metal angles/steel/plates/light gauge metal framing/metal studs/etc. Include all sealants and accessories for a complete system. Include tie-ins to all roof areas, below grade areas, insulated panel flashings, etc. per plans, specifications and manufacturers recommendations for a complete building envelope.
11. Caulking of any item requiring backer rod.
12. Caulking of all interior corners of CMU walls
13. Caulking of all interior and exterior HM/Steel door frames to drywall, CMU, concrete, etc.
14. Caulking of all louvers, interior and exterior.
15. Caulking of exterior downspout boots at downspout and at concrete.
16. Caulking at plumbing fixtures and toilet partitions, including exterior hose bibs
17. NOTE: CAULKING OF STOREFRONT AND CURTAIN WALL EXCLUDED
18. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed within 90 to 120 days from NTP (notice to proceed) or LOI (letter of intent).
19. All below grade waterproofing / damp-proofing/sheet goods up to bottom of masonry thru wall flashing and around elevator pits and below elevator pit.
20. Subcontractor is required to be accredited by the Air Barrier Association of America (ABAA).

Priority Task Items:

1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. Provide an additional 500 LF of exterior and 200 LF of interior caulking work as requested by Construction Manager. All materials included. Additional caulking will be tracked via daily reports and any remaining unused additional caulking will be credited back to the CM/Owner at the lineal footage rate for this work.

Unit Prices:
1. NA

Alternates:
1. None.

Exclusions to this Scope of Work:
1. Caulking at casework, cabinets and countertops by BP1230.
2. Paint related caulk by BP990.
3. Caulking of interior and exterior storefront and curtain wall by BP840
4. Caulking of exterior site work, ie. Concrete, sidewalks, etc. To be performed by BP3100 and BP3213.

END OF SECTION

Bid Package: BP 800 – DOORS/FRAMES/HARDWARE

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 8 Openings (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Doors, Frames and Hardware Materials as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Generator power as needed for your scope of work in areas where temp power is not available.
4. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
5. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
6. Daily cleanup and removal of all general CD demo material to dumpster provided by CM
7. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
8. Provide and install temporary doors and hardware on all electrical and mechanical closets, all hardware included.
9. All surveying and layout to be provided by this scope. CM will provide site control.
10. All furnish/delivery/unloading/stocking/installation/adjustment including, but not specifically limited to the following items:
    a. All HM frames (furnish/delivery/unload/protection and stock only – NO install).
    b. Wood doors.
    c. Finish Hardware including all necessary adjustments.
    d. Key Cabinet.
    e. Knox Box
    f. Door Thresholds.
11. Furnish and turnover to BP400 the HMF for masonry openings. Expedite this frame submittal and delivery as this will be required before remaining frames.
12. Furnish and turnover to BP925 the HMF for metal stud openings. Expedite this frame submittal and delivery.
13. All door and frame schedule remarks on A-601 can apply for this scope of work.
14. Furnish and turnover to Construction Manager/BP840 the door hardware for the aluminum doors including automatic door operators. Expedite this hardware submittal and delivery, as this will be required before aluminum doors can be released for fabrication. Hardware in Aluminum Doors will be installed by BP840.
15. All doors and frames to have correct fire labels either embossed or with metal label (no peel off labels permitted).
16. All doors/frames shall be marked in a conspicuous location with the applicable opening numbers.
17. All HM doors and frames shall come with sufficient primer to not rust. Prep door frames/doors to accept hardware.
18. HM frames shall be supplied with all necessary clips and attachments to install, include all glazing stops with screws (holes predrilled – no loose stops). Masonry frames will be installed by BP 400, and HMF's framed in metal studs will be installed by BP 925.
19. All wood doors to be pre-finished, fire rating labels attached with all louvers as indicated; package doors in accordance with specifications and include wood frames for light openings in doors, etc.

20. Ensure all doors are furnished with undercut as required per Plans and Specifications.
21. All doors to be keyed per NCSPA requirements. This subcontractor will be responsible for Keying meeting with CMR and NCSPA following submittal approval.
22. All door hardware, including but not limited to the following items: hinges, locksets/cylinders/keys, latch sets, bolts, closers, drop/adaptor plates (for storefront as required), mullions, protection plates, astragal's, door bumpers/stops/silencers/etc.
23. Included in this contract will be any/all electronic hardware called out in the plans and specs; specifically anything called out on the door schedule or hardware schedule. Including but not limited to the following: door control devices including automatic operators/HC door openers, electronic locksets, mag locks, FA door hold opens, electronic latches and panics, etc. Including interfacing with NCSPA building automation software, for ALL hardware only provided by this contract. CM will coordinate meeting with NCSPA locksmith BP 800 for all final coordination prior to the ordering hardware. BP 2600 will install all infrastructure and piping. BP 800 installer will be responsible for all LV wiring of said hardware back to 120V power supply.
24. BP800 will furnish all to BP840 all hardware per project specifications and drawings. BP840 must receive this hardware and install on all doors, frames, etc. for a complete installation. BP840 will provide a list of all required hardware, templates, etc. as required to BP800 for coordination and hardware buy out.
25. This Subcontractor will coordinate with steel framing and masonry contractors, to ensure door frames are installed correctly. This contractor will review the door frames during installation and confirm door frames openings have been installed correctly and will accept future doors. This subcontractor to issue a list for deficient openings. Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions. Verify openings are sized to receive the work and is in accordance with manufacturer's acceptable tolerances. Subcontractor acknowledges that the structural steel, metal framing, CMU, and concrete is installed to the tolerances required by their respective specification section(s) and any additional work required to accommodate these tolerances will be done at no cost to the Construction Manager and/or Owner.
26. This contractor to coordinate with BP2600 to ensure all infrastructure for security is fabricated in the HMF's.
27. Include twenty hours of unidentified wood door repair.
28. Daily cleanup will be required
29. Include Owner's Training and Owner's Maintenance Stock.
30. Field measurements as necessary.
31. All warranties.
32. Coordination of this scope of work as it relates to work installed or provided by others.
33. Removal of all temporary labels and protective coatings/coverings after completion of installation of work.
34. Any bituminous paint as may be required by the Contract Documents.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Rate per hour of door repair man (i.e. ALKAT)

Alternates:
1. None.

END OF SECTION

Bid Package: BP 840 – CURTAINWALL, STOREFRONTS, GLASS & GLAZING

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 5 Metals (all sections as they apply to this scope)**
- **Division 6 Wood, Plastics, and Composites (all sections as they apply to this scope)**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 8 Openings (all sections as they apply to this scope)**
- **Division 10 Specialties (all sections as they apply to this scope)**
- **Division 12 Furnishings (all sections as they apply to this scope)**
- **Division 26 Electrical (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Curtainwall, Storefronts, Glass & Glazing as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Generator power as needed for your scope of work in areas where temp power is not available.
4. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
5. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
6. Daily cleanup and removal of all general CD demo material to dumpster provided by CM
7. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
8. All surveying and layout to be provided by this scope. CM will provide site control.
9. All field measuring, fabrication, furnishing and installation of new aluminum windows/storefront entrances, curtain walls, for a complete structural and weather-tight system including but not limited to the following items: aluminum windows, glass and glazing, all operable hardware, weather stripping, insect screens, trim and stops, metal panning/trim/accessories/etc., flat clad panels, interior and exterior caulking related to this scope of work, bituminous paint, concealed sealants, welding, setting blocks, shims, spacers, edge blocks, glazing points, angle clips, beads, application of interior and exterior trim/stops associated with the windows, and insulation as pertains to this work, etc. Include any and all structural support as may be required by this scope to meet wind loads and not scheduled to be furnished by BP500.
10. Supply/fabricate/install all aluminum frames and doors as called out on the contract documents, regardless of size; All accessories included. ALL hardware to be provided by BP800 and turned over to BP840.
11. All aluminum frames and aluminum doors be supplied by BP 840 and installed as part of this package. BP800 will furnish to this bid package all hardware per project specifications and drawings. BP840 must receive this hardware and install on all doors, frames, etc. for a complete installation. NOTE BP840 will install all power supplies related to aluminum hardware and be responsible for LV wiring back to the 120V power supply. BP2600 to provide line side power to power supply. CM will coordinate meeting with NCSPA and BP800 for final coordination. Reference BP800 scope of work relating to electronic hardware.
12. All door and frame schedule remarks on A-601 can apply for this scope of work.

13. Subcontractor shall coordinate curtain wall and storefront assemblies with electrician (includes fire alarm), hardware, and security contractor, etc., so that outlets, switches, security devices, conduit pathways etc., can be rough-in flush. BP2600 to supply all infrastructure for LV
14. All aluminum materials and accessories needed for a complete system.
15. All necessary glass and glazing including, but not limited to the following: fire-protection-rated glazing, tempered glass, transom glass, frosted glass, tinted glass, glass in HM frames, HM doors, wood doors, steel doors, aluminum doors, FRP doors, aluminum storefronts, accessories, etc. as described in the contract documents
16. All necessary fasteners, flashings and/or break metal associated with this work, Coordinate with BP750 and BP790 on flashing requirements at exterior openings.
17. Caulking of ALL interior and exterior window frames, including storefront and curtainwall.
18. Furnish and install all trim connecting window mullions to interior partitions.
19. Install and maintain temporary building enclosure at all window openings and storefront openings until frames and glass are installed.
20. Install automatic door opener(s) including all prep work as it relates to aluminum doors. Coordination of this work as it relates to other trades.
21. Install and maintain fall protection for this scope of work per OSHA standards and removal of when directed by Construction Manager.
22. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed within 90 to 120 days from NTP (notice to proceed) or LOI (letter of intent).
23. All closed back framing members for aluminum windows/doors per Contract Documents.
24. Provide and install all sub sill pans set in sealant, shimming, and required flashing for Windows, Storefronts, and Curtain wall installation.
25. Refer to details, coordinate with BP742 Metal Panels to provide and install all metal sill, jamb and head break metal with end dams at interface with Aluminum Storefront; refer to details on A-606. NOTE: windows cannot be installed prior to metal panel flashings. Coordinate with BP740 and BP790.
26. Furnish and install all sill extensions, infill panels, break metal, back boxes and flashing as it relates to this scope of work.
27. All welding pertaining to this scope (if required) is to be performed by certified welders.
28. In determining the location size and extent of structural support, back-up metal, for points of attachment and bearing locations, the Subcontractor shall refer to the Structural Drawings and Details. Any blocking needed for the install of this system will be the responsibility of this contractor.
29. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions. Field verify openings are sized to receive curtain wall system and sill plate is level in accordance with manufacturer's acceptable tolerances.
30. Seal all framed and glazed surfaces with specified sealant materials to assure waterproof installation. Verify compatibility of all sealants used with surrounding surfaces to assure bonding and avoid chemical incompatibility. Use bonding agents and/or primers as prescribed by the product manufacturer.
31. This Subcontractor is responsible for providing solid heads, jambs, and filler pieces as required to tie the building air barrier systems together at all exterior locations.
32. Install curtain wall systems plumb, level, and true to line, without warp or rack of frames with manufacturer's prescribed tolerances and installation instructions. Provide support and anchor in place.
33. Field verify prior to fabrication and glass order. NO guaranteed dimensions will be given.
34. Subcontractor is responsible for all testing as required by Project Specifications. Provide all test equipment and access to areas to be tested per project requirements, locations TBD by Design team.
35. Store materials protected from exposure to harmful weather conditions. Handle storefront material and components to avoid damage. Protect curtain wall material against damage from elements, construction activities, and other hazards before, during and after curtain wall installation.
36. Final cleaning of store front and curtain wall will be included prior to turn over. Including minor touch up of painted surfaces.
37. This bid package shall remove all protective materials, coverings, strippable films and labels as glazing and frames are installed.
38. During repair or replacement of damaged or improperly installed materials, provide all temporary protection of adjacent or finished work in place at time of remediation.

Priority Task Items:
1. As directed by Construction Manager.
2. Mockup/Samples

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Not applicable.

Alternates:
1. None.

END OF SECTION

Bid Package: BP 925 – METAL STUDS & DRYWALL

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 5 Metals (all sections as they apply to this scope)**
- **Division 6 Wood, Plastics, and Composites (all sections as they apply to this scope)**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 8 Openings (all sections as they apply to this scope)**
- **Division 9 Finishes (all sections as they apply to this scope)**
- **Division 10 Specialties (all sections as they apply to this scope)**
- **Division 12 Furnishings (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Metal Studs/Drywall/Insulation as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. **SCOPE CLARIFICATION**: This package will be responsible for ALL Framing/hanging/insulation/finishing ETC and all items noted below across the site and including the main building and guard house.
3. All task lighting as may be required for scope of work.
4. Generator power as needed for your scope of work in areas where temp power is not available.
5. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
6. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
7. Daily cleanup and removal of all general CD demo material to dumpster provided by CM
8. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
9. All surveying and layout to be provided by this scope. CM will provide site control.
10. NOTE: ALL steel to be plumb and level. This building to be set to within ½" from FFE to top of building. Insulated metal panels have a 1/2 " tolerance for installation.
11. This package will furnish and install all interior and exterior cold-formed metal framing, blocking, bracing, soffits, hard ceilings, partitions infill and parapets. Including all, framing accessories, anchors, clips, fasteners, miscellaneous materials, equipment, hoisting, fees, layout, scaffolding, ladders, staging, tools, rigging, safety, and any other facilities necessary to complete the work and provide a complete system.
12. All interior gypsum wall board – including hanging and finishing – ready to paint per finishes required by the spec.
13. Allow for multiple deliveries and phasing as required to facilitate construction progress for this scope of work.
14. Supply and install all exterior gypsum and framing as required.
15. Building and sound insulation in metal stud walls and ceilings and at top of metal stud walls per Contract Documents.
16. This subcontractor is responsible for all closed cell spray foam.
17. Ceiling expansion joint systems as required per Specifications.
18. All trim and accessories as required per Specifications.
19. ALL Light-gauge metal framing of walls/ceilings/soffits/banding/bulkheads etc.
20. All top of wall bracing for as it relates to this scope.

21. Include all Cold formed steel framing (Structural) engineering and/or engineered partition/stud layout. Shop drawings to be stamped and signed by registered professional engineer in the State of North Carolina for Cold Formed Metal Stud framing.
22. Include all removal and disposal of perimeter safety cable and angles installed by BP500 at the time of exterior wall installation. This package will maintain areas of perimeter cable to meet OSHA requirements during the installation of exterior framing.
23. Install and maintain fall protection for this scope of work per OSHA standards and removal of when directed by Construction Manager.
24. Shaft wall systems/chases as required per Plans and Specifications.
25. All column wraps and enclosures.
26. All furring as indicated – including hat channel at soffits.
27. This bid package to furnish and install all exterior plywood on the building envelope as shown on the contract documents.
28. Expansion/control joints as required per drawings and/or manufacturer's specifications as pertain to this scope of work for walls and hard ceilings.
29. This package to provide all blocking at windows and openings that occur within metal stud walls. Subcontractor acknowledges that the Contract Drawings are diagrammatic when referring to wood blocking and Subcontractor will provide the necessary amount of blocking regardless of what is shown in the Drawings. Including but not limited to toilet accessories, toilet partitions, aluminum door jambs, marker boards, tack boards, fire extinguisher cabinets, water fountains, handrails, casework, etc. (all blocking to be fire rated) No metal strap blocking will be accepted.
30. Frame out for all items in metal stud walls (i.e.: fire ext. cabinets, access doors/panels, toilet accessories, etc.)
31. Hollow metal frames within this work are to be furnished by BP800 to the jobsite and installed by this Subcontractor. Unloading, inventory, and staging by this scope. Provide list of missing or damaged door frames to the CM.
32. This contractor will review the door frames during and after installation and confirm door frames openings have been installed correctly and will accept future doors. This subcontractor to issue a list for deficient openings. Verify openings are sized to receive the work and is in accordance with manufacturer's acceptable tolerances required by their respective specification section(s) and any additional work required to accommodate these tolerances will be done at no cost to the Construction Manager and/or Owner by this subcontractor .
33. Insulate and seal all openings at exterior wall to structure that pertain to this scope of work including back of parapet framing and DenseDeck
34. Framing & GWB soffits at varying heights in locations required per Plans.
35. Provide all firestop shown on or required by the Contract Documents, or required by code, at locations where it is trapped by or abuts the Work. This Subcontractor will furnish and install all fire-safing insulation, fire rated caulking, baker rod, fire spray, and compressive filler where indicated and required by the contract documents. This Subcontractor will provide an enclosure of these systems, especially at the underside of the metal decking to maintain the rating and/or integrity of the system. (Note: Fire stopping at the MEP sleeves will be provided by the MEP trades, and BP 400 is responsible for their scope.)
36. Coordinate framing block-outs for MEP trades.
37. Include rough opening and framing for all access panels. Locations of panels to be provided by other trades to this contractor, and installation of panels are by their respective trade.
38. Furnish and install plywood backboard in electrical/telephone closets as required per Plans and Specifications. Coordinate with CM and BP2600 prior to ordering material and installation.
39. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed within 30 days from NTP (notice to proceed) or LOI (letter of intent).
40. Provide all point-up of GWB assemblies prior to final paint and during punchlist timeframe.
41. Include all floor scraping following finishing and daily dust control and cleanup of work.

Priority Task Items:

1. As directed by Construction Manager.
2. Mockup/Samples

Work Scope Sequence:

1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Rate per laborer hour regular time
2. Rate per laborer hour overtime
3. Rate per framer/hanger hour regular time
4. Rate per framer/hanger hour overtime
5. Rate per finisher hour regular time
6. Rate per finisher hour overtime
7. Rate per supervisor hour regular time
8. Rate per supervisor hour overtime

Alternates:
1. None.

END OF SECTION

Bid Package: BP 930 – CERAMIC TILE

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 7 Thermal and Moisture Protections (all sections as they apply to this scope)**
- **Division 9 Finishes (all sections as they apply to this scope)**
- **Division 10 Specialties (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Ceramic Tile as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Generator power as needed for your scope of work in areas where temp power is not available.
4. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
5. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
6. Daily cleanup and removal of all general CD demo material to dumpster provided by CM
7. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
8. All surveying and layout to be provided by this scope. CM will provide site control.
9. This subcontract will furnish and install all floor tile, wall tile, unglazed paver tile, glazed wall tile, quarry tile, and all associated accessories as indicated in plans and specifications in BOTH the main building and the guard building; including but not limited to:
   a. Trim units / Shulter strips as indicated on the drawings and specs
   b. Grout and sealer as required
   c. All crack isolation membrane and associated accessories as required per plans and specifications and recommended by manufacturer, including but not limited to all control joints on drawings.
   d. All waterproof membrane.
   e. Setting Materials
   f. Mortar beds
   g. All grout beds and materials associated with grout beds
   h. Furnish and install all tile backing panels.
   i. Edge Strips
   j. Testing per the specifications
   k. All joint sealants as required for this work including all caulking/preparation/etc. Includes caulking at top of all base, top run of any tile, at tile edges, all bullnose tile, and any other tile to other materials. Furnish and install all sealant filled expansion joints as indicated and related to this scope of work.
   l. All stone (marble) thresholds as required for installation of this work. Assume stone thresholds at all floor tile transitions to other material.
10. All testing of sub-floor as needed to ensure compliance with Specifications and manufacturer recommendations. This is to be done in **sufficient time** prior to installation to afford the Construction Manager time to correct any deficiencies with moisture levels in the concrete.

11. Included in this scope, site visits prior to installation for substrate verification, floors and walls. Any out of tolerance substrates to be notified in writing to the CM prior to mobilizing to the project for installation of your work.
12. Where applicable verify floor slopes to drain prior to tile installation.
13. All tile layout to be completed to avoid less than ¼ tile width in any direction. Coordinate tile layout plan with the Construction Manager.
14. All waterproof membranes and flood testing as required per the plans and specifications.
15. Cleaning of all completed work prior to installation of protective covering.
16. Protect finished tile work with Ramboard or equivalent over entire floor as installation completes. Joints are to be taped 100% and protection is to be maintained for the duration of the work. All protection shall be removed prior to cleaning by this subcontractor as directed by the Construction Manager.
17. Owner's Maintenance training and provide Owner attic stock per specifications.
18. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed within 90 to 120 days from NTP (notice to proceed) or LOI (letter of intent).

Priority Task Items:

1. As directed by Construction Manager.

Work Scope Sequence:

1. As directed by Construction Manager.

Allowances:

1. 50 bags of floor (installed) patch as needed. CM to be notified prior to usage

Unit Prices:

1. Supply and install per bag of floor patch

Alternates:

1. None

END OF SECTION

Bid Package: BP 960 – RESILIENT, CARPET & BASE

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 9 Finishes (all sections as they apply to this scope)**
- **Division 12 Furnishings (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Resilient Flooring, Carpet and Base as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. **SCOPE CLARIFICATION:** Note all floor coverings with exception of porcelain tile will be provided by this contract in all buildings across the site.
3. All task lighting as may be required for scope of work.
4. Generator power as needed for your scope of work in areas where temp power is not available.
5. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
6. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
7. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
8. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
9. All surveying and layout to be provided by this scope. CM will provide site control.
10. Multiple mobilizations as needed to complete the scope of work.
11. Subcontractor acknowledges that sweeping compound will be provided by this scope and used during floor sanding of patch to minimize airborn dust and to protect building mechanical systems.
12. Floor patching/buffing/leveling as may be required for this work, including the treatment of cracks/control joints/depressions/high spots/low spots, etc.
13. All substrate preparation including any necessary sweeping/vacuuming/etc. in accordance with Specifications.
14. ALL VCT, carpet, LVT or any other floor finish as noted on A-501 other than porcelain tile. Include all accessories as needed for a complete system, including but not limited to: floor patch, glue (for high RH), transitions strips, setting materials, base, etc.
15. All installation of rubber base to be included in this scope
16. Layout all rooms to minimize small borders regardless of floor material
17. All moisture testing of sub-floor to ensure compliance with Specifications and manufacturer recommendations.
18. Final cleaning of installed work to a broom clean and mopped finish prior to installation of protective floor covering (ramboard or equivalent) by this contract. Install, maintain and removal.
19. All related punchlist work.
20. Include Owner's Maintenance Stock per Specifications.
21. Include Owner's Training per Specifications.
22. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed within 10 days from NTP (notice to proceed) or LOI (letter of intent).
23. In addition to punchlist work, Include 5% of total floor area to remove and replace damaged VCT/LVT and 5% of carpet as directed by the CM.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:

Allowances:
1. Supply and install 50 bags of floor patch as directed by the CM

Unit Prices:
1. Supply and install per bag of additional floor patch

Alternates:
1. None

END OF SECTION

Bid Package: BP 980 – ACOUSTICAL CEILINGS

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 5 Metals (all sections as they apply to this scope)**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 9 Finishes (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Acoustical Ceilings as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Generator power as needed for your scope of work in areas where temp power is not available.
4. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
5. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
6. Daily cleanup and removal of all general CD demo material to dumpster provided by CM
7. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
8. All surveying and layout to be provided by this scope. CM will provide site control.
9. All necessary shop drawings/submittals, samples, testing, O&M Manuals, warranties and extra materials per specifications.
10. Furnish and install all acoustical tile and grid systems and all associated accessories including but not specifically limited to fasteners, anchors, etc. for a complete installation as indicated in plans and specifications. **NOTE**: this will include both the main building and the guard house. Including fire rated ceilings.
11. This contractor will be responsible for the procurement and installation of the wood panel ceilings shown on A-103 and A-607 (all details included) along with the wood panels on the walls below including; all fasteners, trim units, glue, sealants, shims, hangers, cleats, blocking, nailers, etc needed for a complete system. Coordinate with BP2600 and BP1010 on requirements embedded within wood panels.
12. All seismic fastening as described in the contract documents and specifications.
13. Hold down clips as indicated and if required per Specifications.
14. Subcontractor is to review reflected ceiling drawings and coordinate installation of grid as to minimize small border cuts, equal border cuts is mandatory.
15. Additional wire supports for light fixtures, grills, dampers, etc. as required to meet codes, regardless if attachment is to grid, fixture, grill, damper, etc. No wires are permitted to be tied to bridging. Coordinate hanger requirements with BP2600, BP 2300, BP2200
16. Owner's Maintenance Stock per Specifications.
17. Wire supports are to be cut off to prevent eye injuries above ceiling.
18. No exposed fasteners including pop rivets on moldings and trim.
19. Caulking (color to match wall molding) along wall molding as required or where necessary at gaps or voids ¼". If required, caulk entire room.
20. The use of stilts will be allowed as long as this contractor is working in a safe and clean environment, cleaning of work area prior (if needed) by this subcontractor to maintain schedule, CMR can remove this privilege if needed.

21. Per CM direction, include the removal, disposal of, and replacement with new materials equal to 5% of previously installed ceiling grid, accessories, and tile at no additional cost to this subcontract.
22. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed within 90 to 120 days from NTP (notice to proceed) or LOI (letter of intent).

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None

Unit Prices:
1. Rate per laborer hour regular time
2. Rate per laborer hour overtime
3. Rate per supervisor hour regular time
4. Rate per supervisor hour overtime

Alternates:
1. None

END OF SECTION

Bid Package: BP 990 – PAINTING

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 9 Finishes (all sections as they apply to this scope)**
- **Division 21 Fire Suppression (all sections as they apply to this scope)**
- **Division 22 Plumbing (all sections as they apply to this scope)**
- **Division 23 HVAC (all sections as they apply to this scope)**
- **Division 26 Electrical (all sections as they apply to this scope)**
- **Division 31 Earthwork (all sections as they apply to this scope)**
- **Division 32 Exterior Improvements (as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Painting as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. **SCOPE CLARIFICATION:** 100% of all the painting called out on the contract documents will be covered under this scope. All building (interior and exterior) painting for both the main building and guard house and all site related painting (excluding traffic striping, this will be the responsibility of BP 3100).
3. All task lighting as may be required for scope of work.
4. Generator power as needed for your scope of work in areas where temp power is not available.
5. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
6. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
7. Daily cleanup and removal of all general CD demo material to dumpster provided by CM
8. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
9. All surveying and layout to be provided by this scope. CM will provide site control.
10. Assume multiple mobilizations as needed to complete this scope of work.
11. This scope of work includes the painting and preparation of all required areas and items except pre-finished items. Reference schedules in plans and specifications as related to this scope of work including, but not specifically limited to the following items as required per plans and specifications:
    a. All prep of hard surfaces to receive paint
    b. Any special coatings as may be required per specifications.
    c. Stenciling of all fire/smoke rating notices above ceilings on walls.
    d. All gypsum board assemblies
    e. All ceilings scheduled to receive paint
    f. All masonry scheduled to receive paint
    g. All concrete scheduled to receive paint and/or sealer.
    h. All concrete floor sealer/paint/epoxy in rooms as specified, including buffing, scraping, etching, scarifying cleaning of all foreign debris, mopping, etc. prior to installing floor sealers as per manufacturer's recommendations. Sealing of floors will be done during the final cleaning stage of the project and applied by rolling in compliance with manufacture recommendations.

i. All painting of all HM doors and frames (including any metal frames for wood doors)
j. Painting/sealing/staining Wood and Wood trim
k. This contractor to paint all exposed mechanical/electrical/plumbing/fire protection items
l. All exterior steel including, Hand railings, Bollards, Lintels, Gates, etc.
m. Access doors
n. Miscellaneous steel
o. All exposed decking/steel in exposed areas (cleaning included if required)
p. All painting or installation of interior and exterior high performance coatings as indicated or specified.
q. All epoxy coating in its entirety (including priming as may be required). This is inclusive of the proper installation of epoxy coatings in compliance with all project documents and manufacturer's recommendations.
r. Countertop supports

12. All surface preparation and application operations, including but not specifically limited to the following
    a. Masking
    b. Block Fill
    c. Filling of voids
    d. Caulking
    e. Cleaning
    f. Protection
    g. NOTE: Contractor to ensure protection of all items not to receive paint while performing work.
13. Work to include all painting related caulk, including, but not specifically limited to the following items as required per plans and specifications:
    a. Caulking of all interior hollow metal door frames
    b. Gypsum board to masonry/concrete
    c. Gypsum board to gypsum board at interior corners
    d. Tile to other surfaces
    e. Hollow metal door frames to VCT
    f. Access door frames
    g. NOTE: Paint related caulking is determined to be any caulking which does not require a backer rod to caulk.
14. All adhesion testing as required to ensure proper bonding of materials. Reference plans and specs. All proper primers to achieve proper adhesion included.
15. Painting contractor to inspect all areas to receive paint to ensure compliance with Specifications and shall accept these items/areas prior to painting.
16. Painting of each individual area of work on the project shall be completed in phases: 1st phase: prime coat; 2nd phase: first coat paint; 3rd phase: complete touch-up of installed work (including repair of any incidental damages and point-up required due to construction operations) & final paint. CM superintendent shall sign off and approve all painting prior to final coat application.
17. Include Eighty hours of misc painting as directed by the CM, all materials included.
18. All punchlist work included
19. Owner's Maintenance Stock per Specifications.
20. Submit painting schedule prior to starting work.
21. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed within 90 to 120 days from NTP (notice to proceed) or LOI (letter of intent).
22. This BP to protect all fire sprinkler heads, and any other ceiling accessories from paint overspray.

Priority Task Items:

1. As directed by Construction Manager.

Work Scope Sequence:

1. As directed by Construction Manager.

Allowances:

1. None.

Unit Prices:

1. Rate per laborer hour regular time

2. Rate per laborer hour overtime
3. Rate per supervisor hour regular time
4. Rate per supervisor hour overtime

Alternates:
1. None.

END OF SECTION

Bid Package: BP 1005 – TOILET PARTITIONS, ACCESSORIES, DIVISION 10

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 6 Wood, Plastics, and Composites (all sections as they apply to this scope)**
- **Division 10 Specialties (all sections as they apply to this scope)**
- **Division 12 Furnishings (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Toilet Partitions, Accessories and Division 10 as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Generator power as needed for your scope of work in areas where temp power is not available.
4. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
5. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
6. Daily cleanup and removal of all general CD demo material to dumpster provided by CM
7. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
8. All surveying and layout to be provided by this scope. CM will provide site control.
9. **NOTE: In both the main building and guard house**, this package will furnish / delivery / unloading / stocking /installation/adjustment including, but not specifically limited to the following items as required per plans and specifications (Please Note that drawings may indicate items below with other symbols. Refer to specifications, abbreviation page on A-502, equipment schedule, etc. to ensure all items are picked up correctly):
    a. Equipment Legend items "FE / FEC" – Fire extinguishers and cabinets. Include extinguishers that may not be installed in cabinets.
    b. All specification related items shown on plans.
    c. Furnish and install all fire protection specialties, including all accessories and extinguishers for a complete install.
    d. Commercial Toilet Accessories
    e. Commercial Shower and Bath Accessories including recessed soap dish 1 per shower
    f. All hanging rod and shelf where indicated in closets.
    g. Furnish and Install under lavatory guards at ADA sinks
    h. Custodial Accessories – Utility Shelf and Mop/Broom Holder include even though not shown on drawings
    i. Toilet Partitions (fire rated if required)
    j. Installation of items indicated as furnished by Owner
    k. All accessories for this scope of work, including Misc. Metal Hooks, latches, keepers, hardware, bumpers, pulls, etc. for a complete and functional installation as specified and required.
10. Roller Shades as indicated on the plans to be furnished and installed by this bid package, coordinate this work and install with BP 2600. All final connections of electronic LV to be installed by this package. BP2600 to provide line side power to power supply.
11. All Metal Lockers, Locker Benches and ADA Benches as indicated.

12. Any required sleeves/block outs for this scope of work shall be furnished under this scope of work.
13. ALL blocking to be coordinated with BP 925. This contractor to provide accurate rough in dimensions for all toilet partitions, accessories, fire extinguisher cabinets, etc. to CM prior to construction of walls for blocking coordination with BP925 for installation; Verified by this package prior to hanging drywall
14. All required adjusting.
15. Include all field measuring prior to release of material
16. All spare parts, keys (amount per specifications), and O/M Manuals must be turned over and signed for by Barnhill representative. Leaving with equipment/material is not acceptable.
17. Certification of fire extinguishers and proper labeling by this Contractor to be performed by an independent testing agency acceptable to AHJs. Timing of certification to be coordinated with Construction Manager.
18. All warranties as required per plans and specifications.
19. Owner's Maintenance Stock.
20. Coordination of this scope of work as it relates to work installed or provided by others.
21. Multiple mobilizations as necessary to facilitate construction progress and as directed by Construction Manager.
22. Removal of all temporary labels and protective coatings/coverings after completion of installation of work.
23. Provide all necessary protection of completed work installed by others if required to complete this scope of work.
24. All necessary shop drawings/submittals, samples, testing, O&M Manuals, warranties and extra materials per Contract Documents.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Not applicable

Alternates:
1. None.

END OF SECTION

Bid Package: BP 1010 – SIGNAGE

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 10 Specialties (all sections as they apply to this scope)**
- **Division 26 Electrical (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Signage as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Inclusion Items as applicable to complete Work.
2. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
3. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
4. Daily cleanup and removal of all general CD demo material to dumpster provided by CM
5. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
6. All surveying and layout to be provided by this scope. CM will provide site control.
7. Furnish & install all building signage (interior and building mounted exterior) as indicated in plans and specifications. Includes both Control and Guard buildings.
8. Furnish and install of project signage includes all accessories as specified (including any brackets, posts, backplates, caulking, fasteners, etc. as required).
9. Dimensional lettering and logo at Reception & Exterior Illuminated Dimensional Signage, refer to A-507. Coordinate with BP2600 on power requirements for the exterior illuminated sign. Template to be provided by this contractor to CM and BP2600 for coordination of in-wall rough in for all illuminated exterior signage.
10. Provide one sign for the following locations: (1) Main Electrical Room Sign, and (1) Fire Alarm Control Panel.
11. EXCLUSION: Sitework traffic/directional signage by others.
12. Coordinate with CMR and NCSPA on room # identification prior to manufacturing and immediately following final sample approval
13. Multiple mobilizations as necessary to facilitate construction progress and as directed by Construction Manager.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Not applicable

Alternates:
1. None.

END OF SECTION

Bid Package: BP 1230 – MILLWORK

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 6 Wood, Plastics, and Composites (all sections as they apply to this scope)**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 10 Specialties (all sections as they apply to this scope)**
- **Division 12 Furnishings (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Millwork outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
4. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
5. Daily cleanup and removal of all general CD demo material to dumpster provided by CM
6. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
7. All surveying and layout to be provided by this scope. CM will provide site control.
8. Furnish, deliver, uncrate, and install, but not specifically limited to, the following items in **both** the Control Building and Guard Building: Wall Cabinets, Base Cabinets with Countertops & Splashes, Bathroom Vanities, all accessories and miscellaneous materials/hardware, wood ledgers, etc.
9. Include any and all HPL, Solid Surface, Quartz and Resin countertops that are called out on the drawings
10. Main Reception Desk including all framing, sheathing, HDPL, SS Shelf Support, Alum Support Bracket, SS barrels, Solid Surface, blocking Chroma Panel, grommets (to be located by Port staff prior to install), etc. for a complete installation.
11. All spare parts, keys, and O&M Manuals must be turned over and signed for by BCC representative. Leaving with equipment is not acceptable.
12. EXCLUDE: Wood Ceilings/Wall Panels, Closet Shelf & Rods, Vanity Steel tube supports, plywood in Electrical rooms.
13. Ensure compliance with ADA Standards for all necessary items pertaining to this scope of work.
14. Contractor to provide accurate rough in dimensions for required blocking to CM prior to construction of walls, BP 925 to install blocking.
15. Cleaning and touch up work of any damaged or soiled areas at completion of installation to match original factory finish. (use of a 3rd party repair/restoration contractor will be the responsibility of this scope if required)
16. All work to be installed free from scratches, chips, or dents. Field repairs, if required, shall be reviewed by CM prior to completing repairs at no cost to the owner.
17. ALL Caulking of finish carpentry and casework components to similar and dissimilar materials and caulking of countertops, backsplashes, cabinetry, etc. will be included, all caulk to be color matched.
18. Protection of work as required per specifications
19. Field measuring as required prior to fabrication.
20. All warranties including any special warranties required per specifications.

21. BP1230 will coordinate with BP2200 Plumbing for sink locations and templates for all related plumbing work. BP1230 to provide openings for the plumber.
22. BP1230 will coordinate with BP2600 for any necessary electrical requirements associated with this scope of work, and cut all penetrations in casework.
23. Contractor will coordinate with Construction Manager to ensure necessary building conditions (humidity controls) are established before installation of this scope of work.
24. All punchlist work included
25. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed within 30 days from NTP (notice to proceed) or LOI (letter of intent).

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. Not applicable.

Unit Prices:
1. Not applicable.

Alternates:
1. None.

END OF SECTION

Bid Package: BP 1350 – GENERAL CONSTRUCTION

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 3 (all Sections as they apply to this scope of work)**
- **Division 5 (all Sections as they apply to this scope of work)**
- **Division 6 (all Sections as they apply to this scope of work)**
- **Section 131290 Prefabricated Steel Buildings**
- **Division 26 (all sections as they apply to this scope)**
- **Division 27 (all sections as they apply to this scope)**
- **Division 28 (all sections as they apply to this scope)**
- **Division 31 (all sections as they apply to this scope)**

Furnish all labor, material, equipment, and supervision required to complete all General Construction duties as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Generator power as needed for your scope of work in areas where temp power is not available.
4. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
5. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
6. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
7. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
8. All surveying and layout to be provided by this scope. CM will provide site control.
9. Full submittal package for review and approval
10. Prefabricated Buildings – Marsec Security Booth (Keynote 15 CS series drawings) also referred to as "Guard Booths" and Shelters (indicated at Inbound Interchange Gate)
    a) Furnish, Delivery and Installation of units Turnkey
    b) Electrical & Mechanical supply as indicated
    c) Units with Power are assumed to be prewired; Line side termination of units "load center" to be by BP3370 Site Electrical. Any other necessary wiring/termination by this package
    d) Finishes as described
11. Weigh in Motion Scales – Qty of 4 total; 2 each at Inbound OCR Gates & Outbound OCR Gates
    a) Crane or hoisting for installation
    b) Final Electrical and low voltage connections
    c) Foundations as designed by Scale supplier; furnished and installed by this package turnkey
    d) Supply and install scales
    e) Software package to allow communication back to the Port
    f) All testing, calibration and checkout for a complete functional system.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Rate per installer hour regular time
2. Rate per installer hour overtime

Alternates:
1. None.

END OF SECTION

Bid Package: BP 1400 - ELEVATOR

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 14 Hydraulic Elevators (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Elevators as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. Provide all fabrication, delivery, materials and unloading/stocking as required for the Work.
3. All Work required for Hydraulic Elevator(s) per Contract Documents for a complete and functional system.
4. Proper personnel on hand during Fire Marshall and all other inspections.
5. Firestopping all penetrations through fire-rated assemblies,
6. This contractor is responsible for all block outs or sleeves in CMU walls as it relates to this scope.
7. Furnishing sill plates, angles, sleeves, block outs, rail embed plates, etc. that are embedded or inserted in concrete or masonry for installation by others. All coordination of this work with concrete and/or masonry contractor.
8. Subcontractor is responsible for initial elevator inspection before state inspection. If state inspection fails after subcontractor's initial inspection and failure is due to the fault of the subcontractor, then all re-mobilization and inspection fees will be voided. The initial inspection puts the responsibility of the elevator solely on the subcontractor. Subcontractor shall provide for elevator inspection a detailed check list of required items by the State Department of Labor. Upon satisfying these requirements subcontractor shall (at his cost) request an inspection from the State. Barnhill Contracting Company will only pay for any re-inspections required when they are due to items that could not have been foreseen by the subcontractor as being required by the State.
9. Subcontractor shall be responsible for coordination and layout of all floor, deck and wall penetrations with required trades. This subcontractor will be responsible for any patching and floor cutting due to the lack of coordination by this subcontractor. Actual penetrations and/or sealing of these penetrations are not by Otis.
10. Subcontractor is responsible for verifying the trueness and plumbness of substructure prior to the start of work. Commencement of this scope of work shall indicate acceptance of the existing conditions and any increase in the contract amount will not be authorized for corrective measures related to the existing conditions.
11. Coordination of work with other trades that have work related to this scope of work.
12. Provide protective coverings (freight pads/barriers/devices/signs/etc.) to protect finishes of cab.
13. All inspections and certifications as required.
14. At time of acceptance of elevator shaft BP1400 shall accept and maintain all shaft openings to comply with OSHA and BCC safety regulations/policy.
15. All Submittals required per specifications.
16. All warranties per specifications.
17. Maintenance Service agreement per specifications.
18. Proper demonstration and training required per specifications.
19. As-built drawings for this scope of work.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. Not applicable.

Unit Prices:
1. Not applicable.

Alternates:
1. None.

END OF SECTION

Bid Package: BP 2100 – FIRE PROTECTION

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 0 Bidding and Contract Requirements**
- **Division 1 General Conditions**
- **Division 2 Existing Conditions**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 21 Fire Suppression (all sections as they apply to this scope)**
- **Division 22 Plumbing (all sections as they apply to this scope)**

Furnish all labor, material, equipment, and supervision required to complete all Fire Protection as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
4. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
5. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
6. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
7. All surveying and layout to be provided by this scope. CM will provide site control.
8. Provide a turnkey installation of the new fire protection system for the inside of the Control Building, per the FP drawings including but not limited to pipe, hangers, supports, trim covers, concealed and exposed heads, specialty systems, testing, etc.
9. Provide Clean Agent system as indicated in the documents, turnkey furnish and install.
10. Provide all design, flow testing, calculations, drawings, and CAD files prepared by registered professional engineer.
11. Fire Protection contractor must obtain flushing certificate before assembling riser or BFP inside building from Construction Manager.
12. Fire protection systems starting at a flange installed 1’ above finished floor elevation. This package to provide CAD layout for BP3100 to install underground piping to location indicated on the drawings.
13. Provide flow and tamper switches for monitoring by the fire alarm system as indicated by the contractual documents or local AHJ requirements.
14. All pre action heads and clean agent system for the server room
15. Refer to BIM Requirements document titled BIM Coordination Process in Section 3 of the Bid Manual for requirements of the BIM process that this bid package is expected to adhere to.
16. Coordination drawings as required by Construction Manager including corridors, chase, mechanical, electrical rooms, etc. Coordinate with Mechanical, Electrical, and Plumbing Contractors. Drawings to be provided at a minimum in Auto CAD form.
17. Subcontractor agrees to participate in all BIM coordination meetings, as well as, subsequent meetings to ensure all clearances are achieved.
18. Coordination with Commissioning agents, Fire Marshall, and State and Local inspectors for all inspections and final approvals.
19. This Subcontractor is responsible for cleaning all pipe that receives paint at exposed ceiling locations, free of dirt, rust and oil.

20. Any cutting/patching as necessary for this scope of work.
21. Coordinate with Site Utilities, Electrical, Plumbing, and Mechanical Contractors as required to provide for a complete and functional installation of the Work.
22. Include provisions for zone testing of fire protection system if required. Coordinate zone locations with Construction Manager.
23. Provide all necessary temporary protection as may be required during construction.
24. Ensure locations of Siamese connections are consistent with local Fire Department requirements. Provide FDC signage per code.
25. Include access doors not shown but required by code for components provided under this scope of work.
26. Include additional supports horizontally and vertically to support work specified under this scope of work.
27. Include setting of all sleeves and embedded items in concrete slabs and masonry walls - Responsible for work during concrete pours.
28. All housekeeping pads as required for this scope of work. Include chamfered edges at all pads. Include painting yellow.
29. All caulking as required for this scope of work, and through any wall penetration regardless of rating and location.
30. All required Fire-stopping for work installed in or penetrating through fire-rated assemblies.
31. Seismic bracing as may be required to meet the seismic zone for this project.
32. Include all necessary isolation and/or expansion connections as required to complete work.
33. Compliance with all NFPA Code requirements and final testing of the system.
34. All tagging & stenciling of equipment & identification and painting as specified and/or required by code.
35. Provide final set of As-Built drawings.
36. Subcontractor acknowledges that small adjustments in sprinkler piping is inherently inevitable and will adjust as needed to make other systems work within the limits of the ceiling space.
37. Provide a headbox with spare heads as required, including wrenches. Furnish SCO approved fire sprinkler drawings with approval letter, installed in a tube mounted on the wall.
38. Subcontractor to install sprinkler heads in the center of ceiling tiles consistent with quality workmanship, unless otherwise specified on the CDs.
39. When draining any stagnant water during testing of fire protection system, the subcontractor must pipe water to prevent any kind of staining, discoloration, or damage to the finished exterior.

Priority Task Items:

1. As directed by Construction Manager.

Work Scope Sequence:

1. As directed by Construction Manager.

Allowances:

1. None

Unit Prices:

1. Rate per laborer hour regular time
2. Rate per laborer hour overtime
3. Rate per mechanic hour regular time
4. Rate per mechanic hour overtime

Alternates:

1. None

END OF SECTION

Bid Package: BP 2200 – PLUMBING

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 5 Metals (all sections as they apply to this scope)**
- **Division 6 Wood, Plastics, and Composites (all sections as they apply to this scope)**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 10 Specialties (all sections as they apply to this scope)**
- **Division 22 Plumbing (all sections as they apply to this scope)**
- **Division 23 HVAC (all sections as they apply to this scope)**
- **Division 31 Earthwork (all sections as they apply to this scope)**
- **Division 33 Utilities (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Plumbing as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Generator power as needed for your scope of work in areas where temp power is not available.
4. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
5. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
6. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
7. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
8. All interior and exterior concrete housekeeping pads pertinent to this bid package will be the responsibility of this subcontractor.
9. All surveying and layout to be provided by this scope. CM will provide site control.
10. All required shop drawings, submittals, closeout documents and warranties per Plans and Specifications.
11. Refer to BIM Requirements document titled BIM Coordination Process in Section 3 of the Bid Manual for requirements of the BIM process that this bid package is expected to adhere to.
12. Coordination drawings as required by Construction Manager including corridors, chase, mechanical, electrical rooms, etc. Coordinate with Mechanical, Electrical, and Plumbing Contractors. Drawings to be provided at a minimum in Auto CADD form.
13. Subcontractor agrees to participate in all BIM coordination meetings, as well as, subsequent meetings to ensure all clearances are achieved.
14. Coordination with Commissioning agents, Fire Marshall, and State and Local inspectors for all inspections and final approvals.
15. Coordination of work with other trades as necessary to provide for a complete and functional installation of the work.
16. Provide asbuilts for the complete scope of this work per plans and specs.
17. Assume multiple mobilizations to complete this scope of work.
18. Installation, maintenance and removal of temporary water supply including hook up to Construction Manager office trailer at adjacent hydrant. This package to procure and utilize a hydrant connection (certified by CFPUA)

and furnish/install of commercial grade hose bibs for water supply, two (2) affixed to office trailer. All heat trace included. Include all costs for removal when directed by the CM. Water usage paid by the CM.
19. Provide, fabricate and install waste riser manifold for CM office trailer to holding tank.
20. Final connection of all plumbing in buildings from a point 5' outside of the building line.
21. Firestopping all penetrations through rated assemblies, per approved UL details.
22. Layout and installation of ALL penetrations including core drilling, saw cutting and sleeves for this scope of work.
23. Layout and installation of ALL penetrations for slabs on grade and slabs on deck is included in this scope of work as required.
24. Provide and install all required access panels. Coordinate layout and size with the BP925
25. Backfill and excavation of all underground piping related to plumbing scope of work. It is the responsibility of this subcontractor to remove spoils from piping installation, backfill to the specified compaction requirements at underslab locations, and the removal of spoils to the outside of building walls. Excess spoils are to be placed in designated area on site as directed by the Construction Manager for removal of spoils by BP3100.
26. All plumbing fixtures and equipment. Ensure compliance with all applicable ADA Codes and Regulations. Ensure no conflicts exist with any toilet accessories. Including hot water heaters, circulation pumps, ADA drain covers, mixing valves, booster pumps, boilers, etc.
27. Connection of items as it relates to other scopes of work as required per Plans and Specifications.
28. All underground, overhead, in wall plumbing including, waste, vent, water, storm, roof drains, valves, pumps, specialties, eyewashes, etc.
29. All plumbing insulation.
30. This Bid Package responsible for all gas piping from the outlet of the meter on per the plans and specs, all material and accessories included for a complete and functional system. CM to coordinate with local Gas Company on setting of the meter.
31. All testing included (Bact, Backflow, Booster pumps, pressure testing, etc.)
32. Furnish, install all SS surrounds at all mop sinks 2' high
33. All plumbing identification including any necessary stenciling per Plans and Specifications.
34. Seismic bracing as may be required to meet the seismic zone for this project.
35. Coordination of caulking as it pertains to this scope of work
36. This subcontractor is responsible for "making safe" all existing plumbing equipment to be demolished in the existing structures indicated to be removed. Coordinate with BP 3100 on domestic water main. All piping is to be drained empty and left for demo by BP 205.
37. It is required by this contractor to notify the CM prior to shutdown of any existing utility and/or valves in the process of completion of this scope 48hrs in advance (minimum) to coordinate with owner.
38. Roof and Overflow drains are to be provided and installed by this scope of work. Include all coordination and tie-ins with BP740 Roofing and BP3100 Turnkey Sitework. Include all roof drain piping to 5' outside of the building. Coordinate with BP3100 Turnkey Sitework.
39. Coordinate all drains and cleanouts with flooring/concrete contractors to ensure proper installation and elevation(s). Plumbing contractor to be on site during all concrete slab pours.
40. Coordinate work with millwork contractors for openings needed for this scope, BP 1230 will cut all openings
41. Under lavatory guards are being furnished and installed by BP1005.
42. Make sure protection is provided to keep concrete, trash, debris, etc. out of lines. Capping and plugging is required. Verify lines are cleaned and thoroughly flushed at completion.
43. No unscheduled/unapproved cutting of structural members is permitted.
44. Include all required isolation and/or expansion supports for piping.
45. This contract shall furnish all motor starters, disconnect switches and combo starters for Plumbing Equipment and turn over to Electrical Contractor/BP2600 for installation.
46. Include pre-start up for equipment with factory representative prior to commissioning.
47. As-builts are required for this work.
48. Install furnish & installation of all concrete collars per Contract Documents.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Rate per laborer hour regular time
2. Rate per laborer hour overtime
3. Rate per supervisor hour regular time
4. Rate per supervisor hour overtime
5. Rate per mechanic hour regular time
6. Rate per mechanic hour overtime

Alternates:
1. None.

END OF SECTION

Bid Package: BP 2300 – HVAC

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 5 Metals (all sections as they apply to this scope)**
- **Division 6 Wood, Plastics, and Composites (all sections as they apply to this scope)**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope)**
- **Division 8 Openings (all sections as they apply to this scope)**
- **Division 9 Finishes (all sections as they apply to this scope)**
- **Division 23 HVAC (all sections as they apply to this scope)**
- **Division 26 Electrical (all sections as they apply to this scope)**
- **Division 33 Utilities (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete **ALL** HVAC Systems, **ALL** Controls work and **ALL** Test and Balance as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

ALL HVAC SYSTEMS RELATED TO THE CONTRACT DOCUMENTS WILL BE INCLUDED IN THIS SCOPE:

1. BP001 – General Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
4. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
5. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
6. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
7. All surveying and layout to be provided by this scope. CM will provide site control.
8. All interior and exterior concrete housekeeping pads pertinent to this bid package will be the responsibility of this subcontractor.
9. Refer to BIM Requirements document titled BIM Coordination Process in Section 3 of the Bid Manual for requirements of the BIM process that this bid package is expected to adhere to.
10. Coordination drawings as required by Construction Manager including corridors, chase, mechanical, electrical rooms, etc. Coordinate with Mechanical, Electrical, and Plumbing Contractors. Drawings to be provided at a minimum in Auto CADD form.
11. Subcontractor agrees to participate in all BIM coordination meetings, as well as, subsequent meetings to ensure all clearances are achieved.
12. Coordination with Commissioning agents, Fire Marshall, and State and Local inspectors for all inspections and final approvals.
13. All necessary mobilizations as required to facilitate construction progress.
14. Competent personnel on hand during Fire Marshall and all other inspections.
15. Coordination of work with other trades as necessary to provide for a complete and functional installation of the work.
16. Coordination with EOR/SCO inspections and CM for all inspections and final approvals.

17. All schedules, as-builts, identification, etc. as required per Plans and Specifications.
18. This subcontractor is responsible for "making safe" all existing HVAC equipment to be demolished in the existing structures indicated to be removed. All vapors and liquids are to be disposed of properly in ordinance with state laws. All piping is to be drained empty and left for demo by BP 205.
19. Placing heating/cooling systems into service as early as possible to coordinate with construction schedule requirements.
20. While work zones are active all maintenance of filters will be the responsibility of this contract, including filter media over return grills for temporary protection.
21. Units are to be turned over with new filters at the time of occupancy, including an additional full set (for all units) at date of substantial completion of the project, or per the specification.
22. ALL materials and accessories as it pertains to the installation of new ductwork including but not limited to, duct, duct insulation, hangers, uni-strut, fasteners, adhesives, dampers, motorized dampers, fire dampers, diffusers, flex duct, filters etc.
23. Furnish and install all flue and combustion air intake for the hot water heater, including wall caps/louvers.
24. All mechanical piping and condensate piping, pipe supports included.
25. Firestopping all penetrations through fire-rated assemblies. Sealing all penetrations through exterior walls.
26. Layout and installation of ALL penetrations including core drilling, saw cutting and sleeves for this scope of work.
27. Layout and installation of ALL penetrations for slabs on grade and slabs on deck is included in this scope of work as required.
28. All fire dampers and access doors in ductwork as required.
29. Provide and install all required access panels. Coordinate layout and size with the BP925
30. Installation of duct detectors in this work, duct detectors furnished by BP2600 Electrical. Coordinate work with BP2600.
31. All required hanger wire and supports.
32. All HVAC equipment as noted in the plans, schedules and specifications.
33. All new roof curbs and equipment rails included for all roof mounted HVAC equipment; Refer to Architectural Roof details for additional information. Coordinate locations/sizes of roof curbs/equipment rails with roofing contractor (mechanical roof curbs/equipment rails to be furnished/installed by BP2300/coordinate with BP740 Roofing Contractor). Include all required layout.
34. Concrete Pads for outdoor grade-mounted HVAC equipment by this package.
35. Refer to the Architectural Roofing drawings, this bid package responsible to furnish and install "Pipe Penetration Curb with Roof Curb" refer to A-107.
36. Seismic bracing as may be required to meet the seismic zone for this project.
37. All vibration isolation as required by the Contract Documents.
38. All identification per Specifications, including all stenciling, stencil painting, pipe markers, tagging, nameplates, track markers, etc. per Plans and Specifications.
39. Furnish and install all louvers, FBL, louvered penthouse at elevator, and wall caps as indicated and as penetrates the exterior wall, including at the Guard Building. Include removal of all temporary labels and protective coatings/coverings after completion of installation of work. Include all layout as required in masonry or stud walls.
40. Furnish splash block where condensate piping exits the Guard Building.
41. No unscheduled/unapproved cutting of structural members is permitted.
42. Include all necessary isolation and expansion control requirements to complete work.
43. Coordinate all ductwork layout with other trades to avoid congestion and interference.
44. The HVAC Contractor/BP2300 shall furnish all motor starters, disconnect switches and combo starters for HVAC Equipment and turn over to Electrical Contractor/BP2600 for installation. BP2600 to make final connections. BP2300 is responsible for all LV control wiring.
45. Any costs associated with maintaining the equipment, devices, etc. while units are in operation but still being utilized for the final stages of construction shall be the responsibility of this subcontractor and the subcontractor whose system is utilized. All warranties shall start at substantial completion.
46. Include startup and testing of all equipment with factory representative.
47. Regardless of specification requirement, provide phenolic labeling for all equipment.
48. Subcontractor is responsible for final cleaning HVAC units upon completion

ALL CONTROLS WORK RELATED TO THE CONTRACT DOCUMENTS WILL BE INCLUDED IN THIS SCOPE:

1. ALL General notes above for HVAC systems will apply to 2nd tier sub performing this work.
2. Provide all necessary material and labor for a complete and operational Building Automation System (BAS). The system shall provide Direct Digital Control (DDC), Energy Management, and Building Automation for the air conditioning, heating & ventilating systems, lighting controls, and shall interface with other microprocessor based subsystems per the plans and specifications.
3. The system is to be consistent with BAS systems throughout NCSPA facilities running the framework as specified by the contract documents
4. This contract will be responsible for all startup and commissioning with EOR and NCSPA maintenance.
5. All required shop drawings, submittals, closeout documents and warranties per plans and specifications.
6. As per NCSPA/SCO Guidelines all components of the BAS system and systems associated with BAS must be operational on or before the date of Substantial Completion
7. This scope of work includes but is not limited to all raceways, boxes, wiring, devices, software, and graphic interface.
8. Include all necessary conduit, wiring, enclosures, and panels, for all DDC temperature control equipment and devices. Installation shall comply with applicable local and national codes.
9. BAS Contractor shall be responsible for all electrical work associated with the BAS control system and as defined in the Contract Documents. This BAS control wiring shall be furnished and installed in accordance with the electrical requirements as specified in Division 26, the National Electric Code, and all applicable local codes.
10. BAS Contractor shall provide programming modifications necessary to fine tune sequences during commissioning and through the warranty period of system
11. This Contractor shall be responsible for coordination with the other associated trades, in order to install a fully functional Automatic Controls system.
12. This Contractor shall attend meetings with the Owner during construction and prior to 100% acceptance to coordinate and demonstrate the operation of the controls system. This shall include an any sessions at the completed facility for specific facility hardware orientation and basic graphical user interface training classes.
13. Controls Contractor shall provide onsite representation to participate in the commissioning process as put forward in the project specifications.
14. BAS Contractor to furnish the following to the Electrical Contractor for installation by the Electrical contractor:
    a. Variable Frequency Drives and disconnects
    b. Location of all Variable Frequency Drives
15. Integration of lighting control as part of the BAS system if required. Line side wiring by BP 2600

ALL TEST AND BALANCE WILL BE INCLUDED IN THIS SCOPE OF WORK:

1. ALL General notes above for HVAC systems will apply to 2nd tier sub preforming this work.
2. All required shop drawings, submittals, closeout documents and warranties per plans and specifications.
3. Provide all necessary equipment and labor in order to test the indicated Heating, Ventilating and Air Conditioning systems in this project. Complete an accurate Testing and Balancing Report as per all plans and specifications for this project and submit Final TAB **PRIOR** to Substantial Completion.
4. The Contractor shall be responsible for coordination with the other associated trades, in order to accurately test and balance the system.
5. The Contractor shall provide a review of the design for the Heating, Ventilating and Air Conditioning systems to be installed in the project and provide a report of any questions for the Design Engineer with regard to system operations and design intent.
6. The Contractor shall provide an onsite inspection of the installed Heating, Ventilating and Air Conditioning systems in the project and provide a report of any system deficiencies or additional requirements that have to be addressed by other trades.
7. The Contractor shall be involved in the onsite inspections of the installed Heating, Ventilating and Air Conditioning systems in the project with the Engineer of Record. The EOR will review the submitted Test and Balance Report. Objectionable noise due to velocity, distribution, vibration, or inability to achieve required air is to be brought to the attention of the Construction Manager any remedial work to achieve specified performance will be the responsibility of BP2300.

Priority Task Items:
1. As directed by Construction Manager.
2. All long lead submittal items to be expedited and submitted to Construction Manager.
3. Commissioning meetings as required per specifications including pre-installation conference.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Rate per laborer hour regular time
2. Rate per laborer hour overtime
3. Rate per supervisor hour regular time
4. Rate per supervisor hour overtime
5. Rate per mechanic hour regular time
6. Rate per mechanic hour overtime

Alternates:
1. None.

END OF SECTION

Bid Package: BP 2600 – ELECTRICAL

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Electrical Work, referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 3 (all sections as they apply to this scope)**
- **Division 5 (all sections as they apply to this scope)**
- **Division 6 (all sections as they apply to this scope)**
- **Division 7 (all sections as they apply to this scope)**
- **Division 8 (all sections as they apply to this scope)**
- **Division 11 (all sections as they apply to this scope)**
- **Division 12 (all sections as they apply to this scope)**
- **Division 22 (all sections as they apply to this scope)**
- **Division 23 (all sections as they apply to this scope)**
- **Division 26 (all sections as they apply to this scope)**
- **Division 27 (all sections as they apply to this scope)**
- **Division 28 (all sections as they apply to this scope)**
- **Division 31 (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Turnkey Electrical as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. **GENERAL SCOPE CLARIFICATION:** The work of this bid package BP2600 Electrical generally relates to the building structure (Control and Guard) Electrical work consisting of ALL interior electrical power and distribution, some outside ductbank, a couple exterior manholes, building generator, generator yard panels, concrete materials for this scope, data/Comm, interior building security, etc. There is a separate bid package BP3370 Site Electrical for the Electrical work around the site, general consisting of ductbank, high pole mast lighting, wire, site security, gate systems. Please review both bid packages to ensure you are familiar with where one scope stops and the other starts. Delineation as follows:
    - **a.** For POWER -
        - i. Provide all infrastructure, conduit, concrete, wire and building/generator grounding loop, including the new 1000 Kva transformer, generator, ATS's, DP-1 & DP-2, XFMR3, panel "LC1", Generator Panelboard, UPS, UPS-GB and panel "E" thru Panel PP-ER1 (per the one line) to be provided by BP2600. All above infrastructure to be routed via ductbank thru and including EMH-3, EMH-2 & EMH-1 into the main control building. All Control Building and Guard Building Power.
        - ii. All site related power fed from DP-2 & panel Panel PP-ER1 will fall under BP3370. Stub out from Generator yard conduits from PP-ER1 related to pump station, pump station lighting, backflow hotbox, lift station, etc coordinate with Panel schedule.
        - iii. BP3370 ductbank will start at EMH-3.
        - iv. BP3370 will be responsible for all feeders leaving Panel PP-ER1 and DP-2 for site power requirements.
        - v. BP2600 to provide feeders for the guard building pulled thru conduit provided by others.
        - vi. All spare conduits in ductbank to have pull strings

b. For Site Fiber –
   i. Responsible for coordination of offsite fiber service into the building
   ii. Responsible for the fiber backbone from control building to the guard building via conduit pathway by others
   iii. All interior data room servers, racks and distribution.
   iv. BP2600 to provide all underground conduit/ductbank from control building to CMH-2 location.
   v. All communication ductbank (as it relates to this scope) including all concrete, manholes, handholes, conduit, supports, tacer wire, forming, excavation, etc for a complete system
   vi. All testing reports to be turned over prior to operation.
   vii. All spare conduits in ductbank to have pull strings

3. All task lighting as may be required for scope of work.
4. Generator power as needed for your scope of work in areas where temp power is not available.
5. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
6. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
7. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
8. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
9. All surveying and layout to be provided by this scope. CM will provide site control.
10. All concrete materials required for this scope of work.
11. All interior and exterior concrete housekeeping pads pertinent to this bid package will be the responsibility of this subcontractor.
12. All required shop drawings, submittals, closeout documents and warranties per Plans and Specifications.
13. Refer to BIM Requirements document titled BIM Coordination Process in Section 3 of the Bid Manual for requirements of the BIM process that this bid package is expected to adhere to.
14. Coordination drawings as required by Construction Manager including corridors, chase, mechanical, electrical rooms, etc. Coordinate with Mechanical, Electrical, and Plumbing Contractors. Drawings to be provided at a minimum in Auto CADD form.
15. Subcontractor agrees to participate in all BIM coordination meetings, as well as, subsequent meetings to ensure all clearances are achieved.
16. Coordination with Commissioning agents, Fire Marshall, and State and Local inspectors for all inspections and final approvals.
17. Provide temporary power and hookup to CM Office Trailer and coordinate this work with CM and DEP on site. Temporary power to CM Office Trailer to be completed as early as possible and as directed by CM. Include maintenance and removal. Expectations as follows:
    a. Temp service from existing OH lines from River Road run underground providing centrally located service to the control building (1st and 2nd floors), providing temp service to the guard building and providing temp service to the office trailer location shown on the Phasing and Logistics plan.
    b. Expectation is the CM Office temp power is to be fed from an extra conduit installed within the ductbank system to final locations. (Extra conduit furnished by this package, in BP2600 installed ductbank, and extra conduit with BP3370 ductbank by others)
    c. Assume outdoor NEMA rated panels
    d. Panels sized for all temp power requirements for the (2) buildings and a double wide office trailer.
    e. This contract to provide temp whisper-watt diesel generator to power the office trailer until the temp service is installed. CM to provide all fuel.
    f. At the earliest time possible, ALL temp power to be transferred from the temp power location to the main building panels. Coordinate breaker requirements within permanent panels to power all temp services.
18. Furnish, installation, maintenance of temporary lighting to meet OSHA standards. Work also includes removal at completion of project and weekly review to ensure safety compliance.
    a. Provide temp site lighting (LED flood type) affixed to the site construction fencing that separates the Port from the work area. Assume 200' maximum spacing. Light shall be facing River Road.
    b. Provide (4) LED flood type lights on corners of control building for site security, tied to building temp power and photocell operated.
19. ALL electrical work as called out in the contract documents for a complete and turnkey installation inside the Control and Guard building, including but not limited to:

a. All conduit and raceways and floor boxes
b. All wire (above and below ground)
c. All equipment needed to install a complete system
d. All testing and certifications
e. All new switchgear and panels
f. All hangers, fasteners, boxes, mudrings, couplers, unistrut, all thread, cover plates and any and accessories needed for a complete system.
g. Installation of all owner provided equipment
h. All labeling and stenciling
i. Building generator and grounding loop
j. Lightning Protection System
k. Manholes (as it pertains to this scope, refer to delineation between BP2600 and BP3370)
l. Ductbank (as it pertains to this scope, refer to delineation between BP2600 and BP3370)

20. Competent personnel on hand during Fire Marshall and all other inspections.
21. Coordination of work with other trades as necessary to provide for a complete and functional installation of the work.
22. Coordination with EOR/SCO and NCSPA maintenance agents for all inspections and final approvals, NOTE: SCO electrical inspector is in Wilmington only (1) day a week, all inspections shall be coordinated with their schedule.
23. Placing electrical systems into service as early as possible.
24. It will be the responsibility of this contractor to "make safe" all Electrical elements/equipment to be demolished in the existing structures indicated to be removed. Removal and disposal of all work will be by BP 205. An evaluation should be made prior to make safe/demo to ensure that power within the structures to be demolished doesn't have any secondary feeds.
25. Backfill and excavation for all under slab electrical to all specified compaction requirements related to electrical scope of work. It is the responsibility of this subcontractor to remove spoils from underground installation, and the removal of spoils to the outside of building walls. Excess spoils are to be placed in designated area on site as directed by the Construction Manager for removal of spoils by BP3100.
26. It is required by this contractor to notify the CM prior to shutdown of any existing utility and/or valves in the process of completion of this scope 48hrs in advance (minimum) to coordinate with owner.
27. Provide adequate lighting in those areas where other interior painting and finishing is being performed.
28. Firestopping all penetrations through fire-rated assemblies included.
29. Include all building electrical work for the entire work areas for a complete turnkey electrical system.
30. All lighting fixtures as described on the contract documents, included in this scope is "tenting" of fixtures located within room 103 per UL A002 on A707
31. BP2600 will provide building sleeves thru the building to the interior and final connection of the exterior signage to building power.
32. Provide and install all required access panels. Coordinate layout and size with the BP925
33. Layout and installation of ALL penetrations including core drilling, saw cutting and sleeves for this scope of work.
34. Layout and installation of ALL penetrations for slabs on grade is included in this scope of work as required.
35. All saw cutting for any slab penetrations as required. NO dry cutting of Silica based material will be allowed
36. Seismic bracing as may be required to meet the seismic zone for this project.
37. All required hanger wire and supports.
38. Include cutting of all ceiling mounted devices in tiles provided by BP980
39. **All systems related to the Control and Guard buildings including; ALL fire alarm system, telecom, data, intercom, CCTV, MATV (if required), AiPhone installation, Area of Rescue (if required), security, TWIC, sound system, etc. will be included in this contract**;
    a. All conduit and raceways
    b. All wiring/cabling
    c. All ceiling mounted devices and control panels
    d. All equipment needed to install a complete system
    e. All testing and certifications
    f. All system integration with existing NCSPA infrastructure
    g. All card readers and pedestals
    h. All Access control infrastructure to ALL site related locations, including all conduit and wire completed by BP3370; BP 2600 to supply, install and integrate all card readers and intercom to existing NCSPA software.

i. All cable tray
j. All gear and equipment needed in MDF rooms (plywood provided by BP925)
k. All hangers, fasteners, boxes, cover plates and accessories
l. Installation of all owner provided equipment
m. All labeling and stenciling
n. System Interface Requirements:
    i. Access controller shall provide a signal that is compatible with the existing Johnson Controls P2000 ACS headend.
    ii. Card reader with pin pad shall read existing Port proximity cards in order to ensure system operation and shall also read TWIC cards.
    iii. Existing card media is dual frequency 13.56MHZ and 125 kHz
    iv. All building integration to existing NCSPA software is included.

40. BP2600 to provide all infrastructure for door electronic door hardware for a complete and functional system, coordinate with BP800. BP800 to provide all power supply's as it pertains to their scope of work for installation and line side wiring by BP2600. Include all raceways, boxes, flex, conduit, supports, hangers, etc needed for a complete installation. Reference plans/specs and line items noted in BP 800 on electronic hardware needs for infrastructure.
41. Exclude ALL HVAC Control LV wiring, this will be provided by BP 2300
42. Provide line side power connection to all equipment that is furnished by others which requires power (i.e.: Plumbing equipment, HVAC equipment, Division 10, Division 11, etc.) by BP2600. This includes complete installation of raceways and electrical components and Final Connections specified under each specification but not specifically shown on drawings.
43. The BP2200 and BP2300 shall furnish all motor starters, disconnect switches and combo starters for Equipment and turn over to BP2600 for installation.
44. Occupancy sensor system as indicated on documents.
45. All schedules, as-builts, identification, etc. as required per Plans and Specifications.
46. Smoke and duct detectors are furnished and wired by BP2600. Installation of duct detectors is by BP2300.
47. Wire guards required for items as indicated in Plans and Specifications.
48. Ensure exposed conduits are installed parallel or perpendicular to structure. Vertical runs are to be plumb.
49. Include all necessary isolation and/or expansion connections as required to complete work.
50. Additional to requirements on the Contract Documents, BP2600 will be responsible to provide all line side power and electrical connections, conduit, boxes, back boxes and wiring to power sources and control locations for other electrically powered devices provided by BP1005.
51. Include pre-startup of all equipment with factory representative prior to commissioning.
52. Include ground fault testing of switchgear(s) prior to building being energized.

Priority Task Items:

1. As directed by Construction Manager.
2. Prioritized material deliveries as directed by Construction Manager.
3. Pre-installation conference.

Work Scope Sequence:

1. As directed by Construction Manager.

Allowances:

1. None.

Unit Prices:

1. Rate per laborer hour regular time
2. Rate per laborer hour overtime
3. Rate per supervisor hour regular time
4. Rate per supervisor hour overtime
5. Rate per mechanic hour regular time
6. Rate per mechanic hour overtime

Alternates:
1. None.

END OF SECTION

Bid Package: BP 3100 – TURNKEY SITEWORK

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and **ALL** related Site Work **(Earthwork, Utilities, Storm drainage, and Asphalt)** as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual including **ALL Site Concrete** work. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 2 Existing Conditions (all sections as they apply to this scope)**
- **Division 3 Concrete (all sections as they apply to this scope)**
- **Division 4 Masonry (all sections as they apply to this scope)**
- **Division 10 Specialties (all sections as they apply to this scope)**
- **Division 13 Steel Buildings (all sections as they apply to this scope)**
- **Division 31 Earthwork (all sections as they apply to this scope)**
- **Division 32 Exterior Improvements (all sections as they apply to this scope)**
- **Division 33 Utilities (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Earthwork, Storm Drainage, Erosion Control and Stone Base as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. All task lighting as may be required for scope of work.
3. Generator power as needed for your scope of work in areas where temp power is not available.
4. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope. (including items furnished by others to be installed under this contract).
5. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
6. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
7. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
8. All surveying and layout to be provided by this scope. CM will provide site control.
9. Complete all Work in accordance with local, state and federal (OSHA) safety regulations and/or requirements.
10. Coordination with special inspector/testing agency as required. CM will schedule.
11. Include necessary mobilizations and material/equipment staging relocations as required to facilitate construction progress and/or as directed by Construction Manager.
12. All Work shall be in accordance with all NCSPA/NCDOT/OSHA/NCSBC/NC E&S standards and Specifications.
13. All Backfill as required per Contract Documents and as it relates to this scope of work.
14. Included in this scope is specific site demo as called out below and on the CD drawings.
    a. Demo of underground utilities noted will include the saw-cutting of existing asphalt, excavation, removal of corresponding utility, and backfill and compaction with ABC to subgrade
    b. All removed asphalt will be removed from the site by this package.
    c. Demolition keynotes to include on the CD drawings are:
        i. #3, #4, #8, #9, #10, #11, #15, #20, #22; (all other items called out on CD-102 "demolition notes" will be covered under related subcontract),
        ii. For notes #9 & #10 above this contractor will leave areas at +-.1 of subbase elevation. BP3213 will be responsible for all ABC and compaction for new concrete pavement.

   d. This contractor will have ALL Asphalt patch called out in the CD general notes regardless of Bid Package (where BP3100 did not demo utility, BP3370 will be responsible for installation of ABC and compaction to subgrade and BP 3100 will be responsible for only the asphalt patch.)
15. Any items called out to be turned over to the Owner will be coordinated with CM. All transportation of said items within the Port property to be coordinated with the Owner and the responsibility of this contract.
16. All site amenities that are called out on the site staking plan. i.e. bike racks, etc.
17. This contractor will be responsible for installation and maintenance of all temporary concrete washout pits including signage and offsite removal when required. Include relocations and removal as directed by Construction Manager.
18. This bid package to provide building pad at -.33' from FFE with a tolerance of +/- .1'.
19. This subcontractor shall provide and maintain suitable all-weather access to the building throughout duration of project.
20. Contractor shall provide all barricades and at protective barriers around all excavations as required for safety and per Plans and Specifications.
21. All concrete materials required for this scope of work.
22. Generator power as needed for your scope of work in areas where temp power is not available.
23. Installation, maintenance and removal of erosion control measures per Plans and Specifications throughout course of project duration. Maintain erosion control installations until they are no longer required to facilitate the completion of the Project and/or NCDENR permits final removal. Include all proper inspections, documentation and maintenance to comply with all applicable State and Local guidelines. This includes proper inspection, maintenance, and documentation after each rainfall event.
24. Installation, maintenance and removal of all silt fence, super silt fence, baffle fence, temporary inlet structures/protection and tree protection fencing including all necessary signage as shown on the contract documents
25. Provide and maintain construction entrance(s) as indicated on the Project Documents/Project Phasing Plan. Include maintenance as directed by Construction Manager
26. Provide sweeping of all paved area within the project limits as needed, this will be at the direction of the CM.
27. All unsuitable waste (as defined by the Soils Engineer) generated from site construction operations shall be removed from the project site or wasted on site according to Plans and Specifications and as directed by Soils Engineer.
28. Any and all dewatering as necessary to facilitate the completion of Work.
29. Include all grading necessary to promote **positive drainage** throughout the entire site. This is to be maintained on a **daily** basis for the duration of the project.
30. All site grading to grades as indicated to include rough/fine grading, topsoil furnish/install, backfill of curb/gutter, backfill of pavement, curb islands, backfilling edge of sidewalks and backfill to compaction requirements at all areas as indicated.
31. Grading for all paved areas (rough and fine) will include proof rolls to insure proper compaction. Ensure compliance of all grades. Grading tolerances shall be per specifications and acceptance of asphalt installer.
32. BP3100 to demo and remove existing asphalt and aggregate subbase and/or existing dirt subgrade in all areas shown to be Heavy Duty Concrete. Areas are to be left compacted to +/- .1', graded to allow Heavy Duty Concrete profile of 6" concrete and 8" aggregate base matching contours indicated.
33. Demo all areas full depth in locations indicated as concrete islands.
34. Include temp seeding of all disturbed areas.
35. Haul off site all any excess soils from site and/or import any soils as necessary to achieve final grades.
36. Fine grading to tolerances as specified to facilitate landscaping. Coordination with landscape subcontractor as required.
37. All required import for site areas that will support plant life will be topsoil, approved by the site EOR and installed per the details on the contract documents. These areas include: backfill of sidewalk, grade and seed at sidewalk, curbs and islands, etc. (anywhere that will receive grass seed or new plant life). BP3290 will be responsible for fine grading prior to seed installation.
38. DOT ROW encroachment permits as may be required
39. All Storm Sewer/Drain work shown on the drawings will be the responsibility of this scope of work. Including the turn key installation of the underground StormTech System and Bay Filter shown on CG drawings. All structures, slot drains, accessories, concrete, pipe, fabric, stone, manholes, vaults, protection, tie-ins, etc needed to furnish a complete system.

40. All site related roof drain leader tie-in work shown on the contract documents will be the responsibility of this contract (coordinate with BP 1540). All materials included but not limited to piping, fasteners, fittings, adhesive, concrete materials.
41. All flushing of sediment/debris from storm sewer after site stabilization and any interior flushing of system as needed to maintain proper functioning of system throughout duration of project. Coordinate with Construction Manager for field verification purposes.
42. Provide all traffic control related to this scope of work. Include all necessary permits through New Hanover County/or NCDOT for any road or lane closures. No work performed within this scope shall disrupt the daily activities of the NCSPA, emergency facilities or businesses.
43. Refer to the Temp Fencing Phasing Plan – This bid package to coordinate with the CM, NCSPA, County and NCDOT as necessary to provide all signage, traffic control etc at Shipyard Boulevard toward the end of Phase 1 to reroute incoming and outgoing traffic into the existing and new South Gate with work is being completed at the new main entrance. It is required that access be maintained in and out of the Port with this transition takes place.
44. Daily cleanup of debris caused by ALL scopes of this work.
45. Slope and surface stabilization. Temporary seeding, rip rap outlets, fabric, rip-rap, grass lined channels as indicated including necessary maintenance of installed work as needed.
46. No burning permitted on site.
47. No dry cutting of silica based materials. All OSHA silica guidelines apply.
48. All undercut must be certified by the owner's testing agency and project engineer of record upon incurring such work.
49. Adjustment of existing utilities (i.e. manholes, valve boxes, vaults, cleanouts, utility poles, etc.) to final grade as necessary to match new grades.
50. Dust control as necessary to complete this scope of work and as directed by Construction Manager.
51. Provide access to water truck as needed or at the direction of the CM for site cleaning, also provide and maintain broom tractor for pavement cleaning as directed by the CM
52. Compliance with all notes per Plans and Specifications regarding land disturbing activities.
53. Include all Work associated with all Stone Base, including but not limited to the following: curb/gutter, light and heavy duty asphalt areas, etc., including all prep work and stone base under this scope of work as outlined in respectively, for Work in accordance with all Project Documents and all work to be performed.
54. At the time of final completion all work shall be washed down, swept cleaned and left in final presentable state.

ALL SITE UTILITIES INCLUDED:

55. ALL above general notes apply to this scope
56. Include necessary coordination and inspection with NHC inspector and all proper backfill and compaction in accordance with specifications and testing agency.
57. Surveyed As-Built Drawings are required for this scope of work.
58. Include multiple necessary mobilizations and material/equipment staging relocations as required to facilitate construction progress and/or as directed by Construction Manager.
59. All concrete materials required for this scope of work.
60. Dewatering of this scope of work as necessary to complete this work.
61. Furnish and install all water lines, sanitary sewer lines and structures, services, all cleanouts, tapping sleeves, saddles, taps, tees, bends, steel cased sleeves, water meters and vaults, gate valves and valve boxes, valve box extensions, blow-off assemblies, backflow within heated enclosure, air release valves, reducers, meter boxes, meter assemblies, thrust blocking (rodding if acceptable), identification materials/devices, any and all required certifications, pigging, pressure testing, disinfection, bacteriological testing, vacuum testing, etc. for a complete and functional installation of this work.
62. NOTE: The force main serving control building runs thru phase 2 of the project. This contractor to provide a plan for pump and haul from possible additional SS manhole for a duration of 4 months. Completion of the FM in phase 2 of the project will be a critical activity.
    a. Run the FM to the limits of phase 1, set a temp manhole 4'x10' for the temporary pump and haul location, use this for the connection and completion of FM thru phase 2 and abandon in place following completion. Submit plan to CM for approval upon NTP.
63. This contractor to run water and sewer utilities to within 5' of the buildings; final connections to the control building by BP2200

64. Furnish/Install and Maintain a CFPUA 3" hydrant water meter with 2" backflow with minimum (2) spigots and 2" fire hose quick connect. All fees and permits included. (no PVC fittings). All cold weather protection. Furnish 500' of 2" fire hose and nozzle.
65. All demo as required for this scope of work per Plans and Specifications. Include restoration of work areas to pre-existing conditions.
66. This subcontractor is responsible for "making safe" all existing site related utilities for the existing structures indicated to be demolished/removed. Coordinate with BP205 on requirements. All piping is to be drained empty and left for demo by BP 205.
67. It is required by this contractor to notify the CM prior to shutdown of any existing utility and/or valves in the process of completion of this scope 48hrs in advance (minimum) to coordinate with owner.
68. Haul off site of all debris and demo created by this work.
69. Coordinate with BP2100 on final elevations of fire riser. Assume 1' AFF.
70. Trench boxes/shoring as needed for depths encountered. This contractor shall comply with all OSHA Regulations in regards to trenching/excavations and required documentation.
71. Valves and valve boxes including cleanout collars.
72. Coordination of this scope of work as it relates to work installed or provided by others.
73. Coordination of tie-ins associated with the work installed or provided by others (i.e. canopy drainage, roof drainage, etc.).
74. All connections to existing utility services as required by this scope of work.
75. Required clearances of installed work as indicated in Plans and Specifications and in accordance with AHJs.
76. Benching, sloping or the use of trench boxes or shoring as needed for excavations to install work in this Bid Package. This contractor shall comply with all OSHA Regulations related to trenching/excavating and required documentation.
77. All site work area to be restored to existing conditions following completion of this bid package.
78. Adjustment of all utilities to finish grades in pavement and graded areas.
79. Install furnish & installation of all concrete collars per Contract Documents.

ALL ASPHALT PAVING INCLUDED:

80. ALL above general notes apply to this scope
81. All staking/surveying/layout for scope of work.
82. All equipment as needed to perform this scope of work and unload deliveries.
83. Include ALL necessary mobilizations and material/equipment staging relocations as required to facilitate construction progress and/or as directed by Construction Manager.
84. All Work shall be in accordance with local AHJ and all plans and specifications.
85. All reinforcing steel materials/accessories and installation, including delivery and NC Sales Tax, including necessary supports, protective caps, etc. required for this scope of work.
86. All asphalt materials required for this scope of work.
87. All milling and overlay as called out on the drawings.
88. NOTE: old abandoned concrete encased fence posts are present across the site at grade. Included in this scope is all prep for milling in these areas.
89. All light, medium and heavy duty asphalt pavement including handicapped access, gravel paving/driveways, curb & gutter, striping, walkways, tracks, etc. for Work in accordance with all Project Documents.
90. Finished paving elevations that are to be flush with finished sidewalk elevations are the responsibility of this Bid Package.
91. All fine grading for the installation of asphalt included.
92. Coordinate with BP3213 on transitions from concrete to asphalt on final elevations prior to the placement of concrete.
93. Cleaning of asphalt off all manholes, cleanout covers, frames and grates, sidewalk, valve boxes, etc.
94. All saw cutting of asphalt as needed to facilitate work.
95. Verify all final elevations of sewer lids, grates, manholes, cleanouts, inlets, etc. are installed at proper elevations prior to placement of asphalt.
96. Implement necessary protective measures to protect completed pavement from unnecessary traffic. Coordinate with Construction Manager.

97. Refer to the demo drawings: Following the completion of demo in Phase 2, this bid package to repaving the areas to a final state. BP205 Demolition to leave pavement edges clean cut and hole backfilled and compacted to receive new asphalt +/- .1'.
98. Include all asphalt resurfacing work as noted in the project documents, including removal and re-install of wheel stops, and any other affixed accessory.
99. Include all Pavement Markings (thermoplastic or polyurea) as indicated on the Pavement Marking Plans.
100. Dewatering of this scope of work as may be necessary to facilitate completion of the work.
101. All Off Site work by this contractor including necessary restoration to existing conditions.
102. Provide all traffic control related to this scope of work. Include all necessary permits through New Hanover County and/or NCDOT for any road or lane closures. No work performed within this scope shall disrupt the daily activities of the Port or Wilmington.
103. Contractor will responsible for all "birdbath" repairs prior to final lift of asphalt being placed. Flood test will be required.
104. Asphalt price fluctuations will be adjusted in accordance with NCDOT Monthly Terminal FOB Asphalt Binder Price
    The NCDOT post the FOB terminal index price on it's website at the following address; http://www.ncdot.org/doh/operations/dp_chief_eng/constructionunit/paveconst/Asphalt_Mgmt/acprices/. The percent of asphalt binder used to calculate the price adjustment for this project will be 6.7% and the formula used to calculate the increase OR decrease is as follows: A=B X (D-C) X E where:
    i. A = the adjusted contract
    ii. B = tons of asphalt at the new index price
    iii. C = posted index price at the time of bid
    iv. D = posted index price at the time of construction
    v. E = percent of asphalt binder (6.7% for this project)
105. BIDDER SHALL FURNISH ASPHALT TONNAGE **AND** THE INDEX PRICE OF ASPHALT ON THE BID FORM.
106. All site striping & pre-cast wheel stops shall comply with the Plans and Specifications.
107. Provide and install all site, specialty, and special parking and directional signage as indicated on Plans and in Specifications. Coordinate surveyed sign locations with landscape installations. Any discrepancies shall be brought to the attention of the Construction Manager prior to installations.

ALL SITE SIDEWALKS/ CURB AND GUTTER INCLUDED:

108. Include all staking/surveying/layout and grading for this scope of work to tolerances indicated include compaction as indicated. GC to provide site control.
109. All equipment as needed to perform this scope of work and unload deliveries
110. Include all necessary mobilizations and material/equipment staging relocations as required to facilitate construction progress and/or as directed by Construction Manager.
111. All Work shall be in accordance with plans and specs and local AHJ.
112. All reinforcing steel materials/accessories and installation, including delivery and NC Sales Tax, including welded wire fabric, necessary supports, protective caps, etc. required for this scope of work.
113. All concrete materials required for this scope of work including pumping or conveyance.
114. All required finishes per Contract Documents.
115. All site concrete for sidewalks and curb and gutter. All concrete accessories/reinforcing to such.
116. All repair of existing curb as shown on CS-102
117. All concrete sidewalk edges and control/expansion joints shall be tooled correctly per the contract documents.
118. Furnish and install all caulking, sealants, and expansion joint material as specified/shown and required expansion joints in sidewalks/curbs that receive caulking per Plans and Specifications to be installed with proper amount of recess to allow for required caulking and "Zip Strips" (regardless of contract documents) cover per sealant manufacturer required bond breaker.
119. All subgrade compaction if required by specifications.
120. Furnish and install all detectable warning surface as required per Plans and Specifications.
121. All frames and grates embedded in the curb and gutter.
122. Reference Plans and detail sheets and Specifications for clarifications to construction and finishes of work within this Scope.
123. This contractor will be responsible for all excess spoils and concrete debris associated with this scope of work

124. Verify all final elevations of sewer lids, grates, manholes, inlets, etc. are installed at proper elevations prior to placement of concrete.
125. Implement necessary protective measures to protect adjacent structures/finishes, completed concrete/pavement from unnecessary traffic. Coordinate with Construction Manager.
126. Dewatering of this scope of work as may be necessary to facilitate completion of the work.
127. All Off Site work by this contractor including necessary restoration to existing conditions if applicable.
128. Proper installation & compaction of all subgrade materials in accordance with the Specifications and the Owner's independent testing agency.
129. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed at the direction of the CM
130. Include replacement of all stress cracked concrete prior to final completion and as directed by the CM.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. Unsatisfactory soil excavation and disposal off-site and replacement with satisfactory soil material from off-site, as specified in Division 31 Section "Earth Moving" quantity 1,000 cubic yards.
2. 100 sqft of sidewalk replacement at the discretion of the CM
3. 200 linear feet of curb and gutter at the discretion of the CM
4. 100 manhours of misc demo across the site for items not called out on the drawings (all disposal included)

Unit Prices:
1. Rate per laborer hour regular time.
2. Provide rate per cubic yard for removal and replacment of unsuitable soil
3. Provide rate per cubic yard for install of select fill
4. Provide rate per cubic yard for install of washed 57 stone
5. Provide rate per cubic yard for install of ABC
6. Provide rate per sqft of sidewalk install
7. Provide rate per sqft for tear out, dispose of and replace sidewalk

Alternates:
1. None.

END OF SECTION

Bid Package: BP 3213 – HEAVY DUTY CONCRETE PAVING

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 2 Existing Conditions (all sections as they apply to this scope of work)**
- **Division 3 Concrete (all sections as they apply to this scope of work)**
- **Division 5 Metals (all sections as they apply to this scope of work)**
- **Division 7 Thermal and Moisture Protection (all sections as they apply to this scope of work)**
- **Division 31 Earthwork (all sections as they apply to this scope of work)**
- **Division 32 Exterior Improvements (all sections as they apply to this scope of work)**
- **Division 33 Utilities (all sections as they apply to this scope of work)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Heavy Duty Concrete Paving duties as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. In general this bid package includes turn key installation of **ALL Heavy Duty Concrete Paving and Concrete Island** work. Include all prep, forming, placement, reinforcing, drilling, dowels, caulking, all tooled/cut joints, epoxy, stone base, ADA requirements, finishing, etc. all details as shown on the CP series of drawings.
    a) Prior to placement of concrete underground rough-in to be signed off (by pour card) by BP2600, BP3370, and CM/NCSPA
3. All task lighting as may be required for scope of work.
4. Generator power as needed for your scope of work in areas where temp power is not available.
5. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope. (including items furnished by others to be installed under this contract).
6. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
7. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
8. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
9. All surveying and layout to be provided by this scope. CM will provide site control.
10. Complete all Work in accordance with local, state and federal (OSHA) safety regulations and/or requirements.
11. Coordination with special inspector/testing agency as required. CM will schedule.
12. Include necessary mobilizations and material/equipment staging relocations as required to facilitate construction progress and/or as directed by Construction Manager.
13. Dust control as necessary to complete this scope of work and as directed by Construction Manager.
14. No dry cutting of silica-based material, all OSHA Silica protection included.
15. Include all excavation/grading of work areas and removal off-site of all spoils.
16. Any and all pumping/conveyance of concrete will be covered by this contractor
17. Furnish and install all caulking, sealants, and expansion joint material as specified/shown and required for this scope of work.
18. BP3100 to demo and remove existing asphalt and aggregate subbase and/or existing dirt subgrade in all areas shown to be Heavy Duty Concrete. Areas are to be left compacted to +/- .1', graded to allow Heavy Duty Concrete profile of 6" concrete and 8" aggregate base matching contours indicated.
19. This BP to fine grade and install all aggregate subbase and concrete to finish elevations/contours indicated.

20. Subbase and concrete islands as indicated. Sequencing of the work would be to have Concrete islands blocked out from the HD concrete paving and placed separately.
21. Coordinate with BP3100 on transitions from concrete to asphalt on final elevations prior to the placement of concrete.
22. Installation of all bollards across the site will be by this subcontractor. All bollards will be provided and turned over by BP500 and installed by BP3213.
23. Refer to detail on S-703, at High Mast Lighting this package to install 8" Concrete slab as detailed, High Mast Lighting Foundation by others, 8" Bollards provided by BP500 Steel but installed by this package. Include concrete fill and safety yellow cover as specified.
24. At the completion of this scope final cleaning of installed pavement will be by this contractor at the direction of the CM.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Rate per laborer hour regular time
2. Rate per laborer hour overtime
3. Rate per finisher hour regular time
4. Rate per finisher hour overtime
5. Rate per supervisor hour regular time
6. Rate per supervisor hour overtime

Alternates:
1. None.

END OF SECTION

Bid Package: BP 3231 – FENCES & GATES

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 2 Existing Conditions (all sections as they apply to this scope of work)**
- **Division 3 Concrete (all sections as they apply to this scope of work)**
- **Division 5 Metals (all sections as they apply to this scope of work)**
- **Division 10 Specialties (all sections as they apply to this scope of work)**
- **Division 26 Electrical (all sections as they apply to this scope of work)**
- **Division 28 Electronic Safety and Security (all sections as they apply to this scope of work)**
- **Division 32 Exterior Improvements (all sections as they apply to this scope of work)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Fences & Gates duties as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. **This contractor WILL have to be TWIC certified for port access to install construction fencing initially per the phasing plan for construction delineation.**
3. All task lighting as may be required for scope of work.
4. Generator power as needed for your scope of work in areas where temp power is not available.
5. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope. (including items furnished by others to be installed under this contract).
6. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
7. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
8. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
9. All surveying and layout to be provided by this scope. CM will provide site control.
10. This Subcontractor is responsible for providing, installing and removal of all **construction temporary fencing** as indicated on the phasing plan for the project. Existing Fencing along River Road to be utilized with new fencing tying into it. All construction delineation fencing shall match existing fencing on River Rd. for security reasons.
11. Refer to Site staking plan in the contract documents and the Site Fencing Phasing Plan in the Bid Manual for referencing this Scope of work as there are multiple phases of fencing installation and removal.
12. Refer to "CD" drawings – Note 6. This bid package to be responsible for the removal of existing fencing as indicated. Coordinate this removal with the "Temporary Fencing Phasing Plan" and CM.
13. Temp Fencing should be installed such that the Permanent Concrete Barriers at the perimeter of the project can be installed without having to move or remove temp fencing.
14. Provide (2) 20' access gates with wheels at the two indicated construction entrances, modify existing fencing as necessary for this purpose.
    a) Possible reuse of existing gates "to be demoed" for site construction gates is acceptable to CM.
15. Provide 15 additional temporary fence panels, stands, sandbags, and hardware to be erected by others.
16. Provide all new **Site and Security Fencing** as indicated on the drawings, including tying back into existing as indicated including but not limited to dumpster gates and fencing, man gates, rolling security gates (all electrical will be by BP3370), site fencing, including all accessories.
17. All posts set in concrete will be -6" from finished grade.

Priority Task Items:
1. As directed by Construction Manager.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. 100 crew hours for miscellaneous repairs or adjustments at the direction of the CM.

Unit Prices:
1. Rate per installer hour regular time
2. Rate per installer hour overtime

Alternates:
1. None

END OF SECTION

Bid Package: BP 3290 – LANDSCAPING

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 3 Concrete (all sections as they apply to this scope)**
- **Division 31 Earthwork (all sections as they apply to this scope)**
- **Division 32 Exterior Improvements (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Landscaping as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. Provide all fabrication, delivery, materials and unloading/stocking as required for the Work.
3. Provide all layout as needed to complete this scope of work.
4. Daily cleanup will be required. CM will provide dumpster near the office trailer.
5. It is desirable for all landscaping to be completed prior to resurfacing of asphalt.
6. All permanent seeding and matting including erosion control materials and maintenance, ONSITE and OFFSITE, in accordance with plans and specifications.
7. All Off Site work by this contractor per Contract Documents as it relates to this Scope of Work.
8. All plant materials, trees, shrubs, lawns, no-mow vegetation, sod areas, topsoil soil amendments, fertilizers, herbicides and mulches, stakes and guy wires, landscape edging, anti-dessicant, wrapping, weed control fabric, planting area and plant bed preparation, etc. Reference LP-100 for required trees/plantings/etc.
9. All mulch and mulch placement. Mulch to be provided per specifications and must be approved by Landscape Architect prior to installation.
10. No rocks allowed in surface soils to receive seed per the specification.
11. All maintenance/watering (including water source) of all sod/lawns/plants/etc. as specified until the date of Final Completion per Contract Documents.
12. Staking and support of trees.
13. Landscape edging.
14. All sod, lawn areas, topsoil/soil amendments, etc., to include initial watering and maintenance thru germination and in accordance with project specifications for coverages.
15. Work to include all fine grading.
16. Initial placement of topsoil by BP3100, final grading by this package.
17. Coordinate plantings placement with traffic signage to promote clear lines of sight to identification signage.
18. Check elevations of manholes, catch basins, valves and inlets, etc. are coordinated to finish grades as required on landscape drawings. Coordinate with other trades for leveling manhole and structure frames prior to seed placement.
19. Include all necessary coordination and inspection with Landscape Architect and local municipality.
20. Include all Mockups/Samples as may be required per Plans and Specifications, to be completed within 90 to 120 days from NTP (notice to proceed) or LOI (letter of intent).
21. All requirements for Substantial and Final Completion as per specifications.
22. Subcontractor to provide and install any sleeves required for this scope of work.

Priority Task Items:
1. As directed by Construction Manager.
2. The contractor shall **NOT** be compensated for additional watering costs for plantings which are installed during the summer as per specifications.
3. Plant material shall not be delivered to the site more than 72 hours before planting takes place. The landscape architect reserves the right to reject all material not planted within that time period unless the landscape contractor makes heeling-in and irrigation provisions within 24 hours of plant delivery as per specifications.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Not applicable.

Alternates:
1. None.

END OF SECTION

Bid Package: BP 3370 – SITE ELECTRICAL

Intent:
In general, this Bid Package is comprehensive to specific CSI Division Site Electrical Work, referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Scope of Work Summary:

- **Division 00 Bidding and Requirements**
- **Division 1 General Requirements**
- **Division 3 (all sections as they apply to this scope)**
- **Division 5 (all sections as they apply to this scope)**
- **Division 6 (all sections as they apply to this scope)**
- **Division 7 (all sections as they apply to this scope)**
- **Division 8 (all sections as they apply to this scope)**
- **Division 11 (all sections as they apply to this scope)**
- **Division 12 (all sections as they apply to this scope)**
- **Division 22 (all sections as they apply to this scope)**
- **Division 23 (all sections as they apply to this scope)**
- **Division 26 (all sections as they apply to this scope)**
- **Division 27 (all sections as they apply to this scope)**
- **Division 28 (all sections as they apply to this scope)**
- **Division 31 (all sections as they apply to this scope)**
- **All Related Sections/Requirements as noted within each Division and/or Section**

Furnish all labor, material, equipment, and supervision required to complete all Site Electrical Construction as outlined for Work in accordance with all Contract Documents as listed in Attachment B of this Subcontract and all work to be performed. This Bid Package includes, but is not specifically limited to:

1. BP001 – General Scope Inclusion Items as applicable to complete Work.
2. **GENERAL SCOPE CLARIFICATION:** The work of this bid package BP3370 Site Electrical generally relates to the Electrical work around the site, consisting of ALL electrical/data/security distribution ductbank, wire, high pole lights, site security, gate system infrastructure, panels, conduit, concrete, etc. There is a separate bid package BP2600 Electrical for building structure (Control and Guard buildings) Electrical work. Please review both bid packages to ensure you are familiar with where one scope stops and the other starts. Delineation as follows:
    a. For POWER -
        i. BP3370 will be responsible for all site related conduit, feeders, manholes, ductbank, etc. leaving EMH-3 located near the generator yard.
        ii. From the 1000 KVA transformer thru DP-1 & DP-2 (per the one line) & thru Panel PP-ER1, all panels and infrastructure will be provided by BP2600 to manhole EMH-3. All conduit feeds from DP-2 (as it relates to site electrical) will be installed with pull string from EMH-3 to DP-2.
        iii. BP3370 will be responsible for all load side terminations inside DP-2 & panel "PP-ER1", including wire (pathway from EMH-3 to DP-2/Panel PP-ER1 by BP2600).
        iv. All site distribution power ductbank including all concrete, manholes, handholes, conduit, supports, tracer wire, forming, excavation, etc. for a complete system.
        v. Power Feeders to Guard Building – Conduit/Pathway stubbed up into Guard Building by BP3370; Wire and terminations by BP2600.
        vi. All spare conduits in ductbank to have pull strings

    b. For Site Fiber –
        i. Interior data room server racks (both Buildings) by BP2600
        ii. BP2600 to provide all underground conduit from building to CMH-2

iii. BP2600 responsible for the fiber backbone from control building to the guard building via conduit pathway by BP3370 (leaving CMH-2)
iv. This package is responsible for all site conduit from CMH-2 to final destination on the site;
v. ALL FIBER and TERMINATIONS at both ends included, excluding backbone fiber from Control Building to Guard Building. (Refer to FO-101 & FO-102)
vi. BP2600 to stub out of the Guard Building all conduits related to inbound/outbound communication lines. This package to intercept and route to final location. Final cable pulls and terminations by this package. Coordinate with BP2600 for quantities and locations.
vii. Supply and install all fiber enclosures at the high mast lighting and Gate/Canopy Racks including all details shown on ES-501 thru ES-503
viii. All communication ductbank (as it relates to this scope) including all concrete, manholes, handholes, conduit, supports, tacer wire, forming, excavation, etc for a complete system
ix. All spare conduits in ductbank to have pull strings
x. All testing reports to be turned over prior to operation.

3. All task lighting as may be required for scope of work.
4. Generator power as needed for your scope of work in areas where temp power is not available.
5. Unloading of all items as pertains to this scope of work. This scope to provide a certified forklift operator to unload materials that affect this scope.
6. Include all equipment and tools as needed to complete this scope of work; Including all lifting, hoisting, material handling, excavation, saw cutting, etc.
7. Daily cleanup and removal of all general CD demo material to dumpster provided by CM.
8. Provide all fabrication, delivery, materials and equipment for unloading/stocking as required for the Work.
9. All surveying and layout to be provided by this scope. CM will provide site control.
10. All concrete materials required for this scope of work.
11. Included in this scope is specific site demo as called out below and on the CD drawings. Demo will include the saw-cutting of existing asphalt, excavation, removal of corresponding utility, and backfill with ABC to subgrade and compacted.
    a. All generated spoils removed by the respective trade.
    b. Demolition keynotes to include on the CD drawings are:
        i. #1, #2, #7 (EC to coordinate with DEP), #16, #17, #18, #19, #21 (including foundation); (all other items called out on CD-102 "demolition notes" will be covered under related subcontract)
        ii. Any asphalt patch called out in the items above will be the responsibility of BP3100
12. Any items called out to be turned over to the Owner will be coordinated with CM. All transportation of said items within the Port property to be coordinated with the Owner and the responsibility of this contract.
13. All demo debris generated by the demo process will be hauled offsite by this contractor including but not limited to demoed manholes, duct banks, footings, curb/gutter, concrete spoils, etc.
14. It is required by this contractor to notify the CM prior to shutdown of any existing utility and/or valves in the process of completion of this scope 48hrs in advance (minimum) to coordinate with owner.
15. ALL site electrical work as called out in the contract documents including but not limited to:
    a. All high mast lighting including foundations and anchor bolts. Refer to S-702 and S-703 for foundations, reinforcing, anchor bolt requirements furnished and installed turnkey by this Bid Package. 8" Bollards furnished by BP500 and installed by BP3213 Heavy Duty Concrete.
    b. All ductbank regardless of voltage, DATA included (from BP2600 delineation point)
    c. All manholes/handholes
    d. All wire (above and below ground)
    e. All equipment and panels needed to install a complete system
    f. All site fiber as indicated in Fiber Optic drawings
    g. Include all raceway & wiring for power and data to all gate islands
        i. Includes "Electrical Rack" for each of the four Gates/Interchanges ER-2, ER-3 ER-4
        ii. Includes Power/Comm handholes at Gate Islands
        iii. Includes distribution conduit & wire as shown to each component within the gate islands (ie gate operator, traffic light, kiosk, security booth etc)
        iv. Coordinate stub out of barn/canopy power/lighting with CM for final location
        v. Wire pulled to final location and tested; final terminations to be made by Owner's "Gate Equipment" vendor; In the case of the Marsec Security Booths, provide final terminations to

units furnished by BP1350. Refer to Specification 131290 Prefabricated Steel Buildings for additional information.

vi. Coordinate UG electrical requirements for installation of detector loop per note 26 on CS-102, with Gate Equipment vendor

h. Include all raceway & wiring for power and data to all truck scales at OCR barns
i. All testing and certifications
j. All hangers, fasteners, boxes, mudrings, couplers, unistrut, all thread, cover plates and any and accessories needed for a complete system.
k. All labeling and stenciling

16. Refer to Phasing Drawings for CM Office location. BP2600 to provide temp power from temp power service to the Control Building. Expectation is the CM Office temp power is to be fed from an extra conduit installed within the ductbank system. (Extra conduit furnished by BP2600 in ductbank installed by them and extra conduit within ductbank installed by this package BP3370 to final location)
17. Included in this contract is All **Site** related auxiliary systems as shown on ES (Electrical Site Auxiliary System Plans) series drawings including but not limited to: telecom, data, WIFI, CCTV, Fiber, security, etc. will be included in this contract;
    a. All conduit and raceways
    b. All wiring/cabling/Fiber
    c. All control panels and enclosures
    d. All equipment needed to install a complete system
    e. All testing and certifications
    f. All cable management
    g. All hangers, fasteners, boxes, cover plates and accessories
    h. All labeling and stenciling
    i. All Access control infrastructure to ALL site related locations. Including all conduit and wire; BP 2600 to supply, install and integrate all card readers and intercom to existing NCSPA software.
    j. BP3370 will be responsible for power/data to sliding gate controller/hardware; Access Control components by BP2600.
18. All exterior concrete housekeeping pads pertinent to this bid package will be the responsibility of this subcontractor.
19. Backfill and excavation for all below grade electrical to all specified compaction requirements related to electrical scope of work. It is the responsibility of this subcontractor to remove spoils from underground installation. Excess spoils are to be placed in designated area on site as directed by the Construction Manager for removal of spoils by this contractor.
20. All required shop drawings, submittals, closeout documents and warranties per Plans and Specifications.
21. Refer to BIM Requirements document titled BIM Coordination Process in Section 3 of the Bid Manual for requirements of the BIM process that this bid package is expected to adhere to.
22. Coordination drawings as required by Construction Manager including corridors, chase, mechanical, electrical rooms, etc. Coordinate with Mechanical, Electrical, and Plumbing Contractors. Drawings to be provided at a minimum in Auto CADD form.
23. Subcontractor agrees to participate in all BIM coordination meetings, as well as, subsequent meetings to ensure all clearances are achieved.
24. Competent person on-hand during coordination with Commissioning agents, Fire Marshall, and State and Local inspectors for all inspections and final approvals.
25. Coordination of work with other trades as necessary to provide for a complete and functional installation of the work.
26. Coordination with EOR/SCO and NCSPA maintenance agents for all inspections and final approvals NOTE: SCO electrical inspector is in Wilmington only (1) day a week, all inspections shall be coordinated with their schedule.
27. Placing electrical systems into service as early as possible.
28. Firestopping all penetrations, by this scope, through fire-rated assemblies included.
29. Layout and installation of ALL penetrations including core drilling, saw cutting and sleeves for this scope of work.
30. No dry cutting of any silica based material will be allowed.
31. Seismic bracing as may be required to meet the seismic zone for this project.
32. All schedules, as-builts, identification, etc. as required per Plans and Specifications.
33. Ensure exposed conduits are installed parallel or perpendicular to structure. Vertical runs are to be plumb. In areas where existing work may become exposed, rework as necessary for a clean appearance.

34. Include all necessary isolation and/or expansion connections as required to complete work.
35. Include pre-startup of all equipment with factory representative prior to commissioning.

Priority Task Items:
1. As directed by Construction Manager.
2. Prioritized material deliveries as directed by Construction Manager.
3. Pre-installation conference.

Work Scope Sequence:
1. As directed by Construction Manager.

Allowances:
1. None.

Unit Prices:
1. Rate per laborer hour regular time
2. Rate per laborer hour overtime
3. Rate per supervisor hour regular time
4. Rate per supervisor hour overtime
5. Provide rate per cubic yard for removal of unsuitable soil
6. Provide rate per cubic yard for install of select fill
7. Provide rate per cubic yard for install of washed 57 stone
8. Provide rate per cubic yard for install of ABC

Alternates:
1. None

END OF SECTION

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Section Four

Schedule

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Port of Wilmington South Gate Complex

BID DEFAULT SCHEDULE NARRATIVE

The attached Bid Default Schedule has been compiled for each bidder's use in determining approximate time frames for work of their bid packages. This schedule has been compiled to assist each bidder and give approximate durations for work as well as to provide clear information as to how the project will be constructed. The CM will not accept any costs above the bid due to time periods being modified upon completion of the final project construction schedule. By submitting a bid for this project it is understood that your firm has carefully reviewed this schedule and does not take issue with the time frames and/or sequence set forth and understand that subcontractor feedback will be required to finalize the project construction schedule once all bidders are on board.

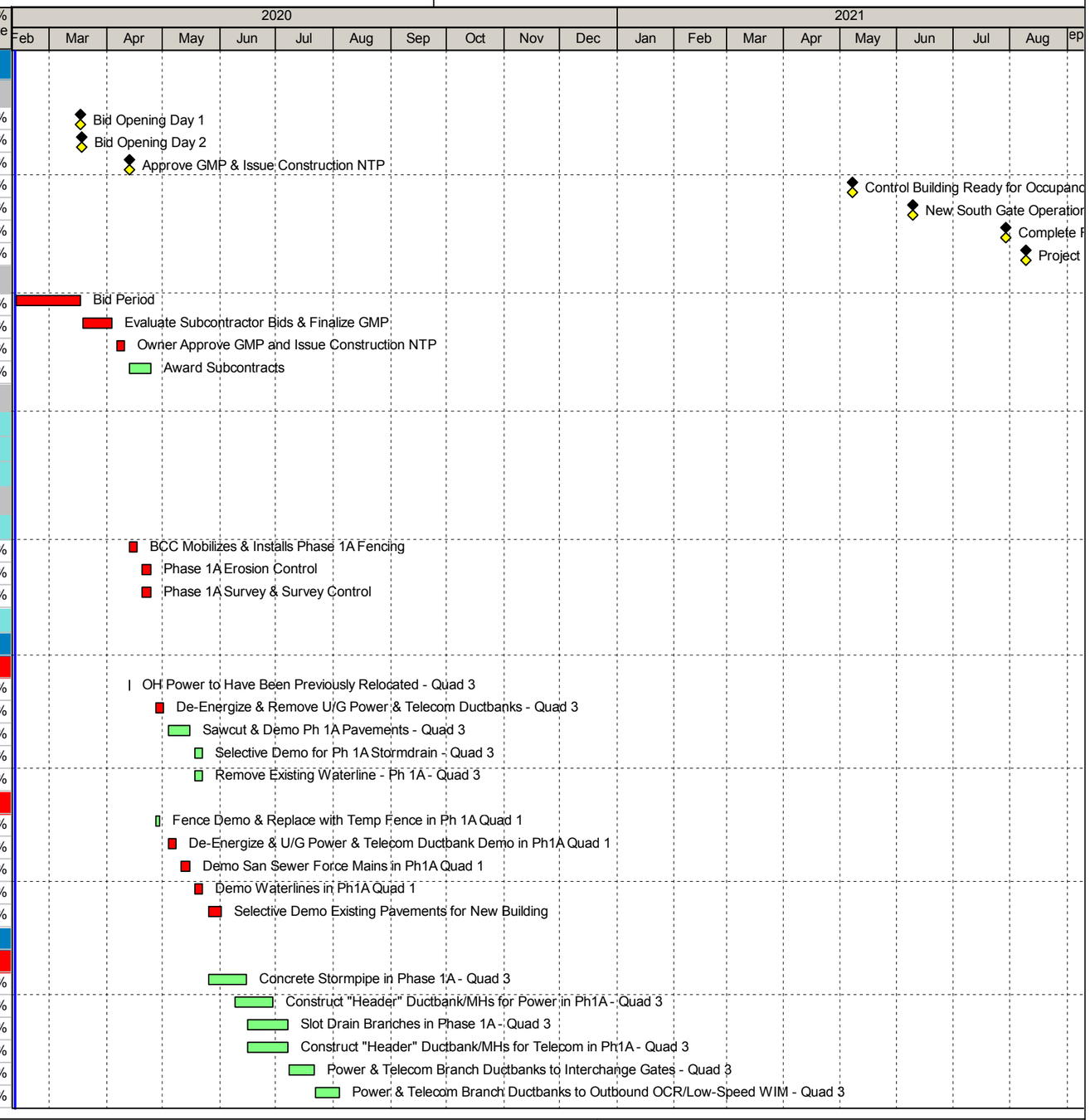
It should be understood that a detailed schedule will be produced prior to starting work on this project. Upon notification of Letter of Intent, the CM will request participation in schedule development from each bidder and will consider modifications to the schedule considering it does not impact the overall schedule and/or delay the schedule as currently built.

PROJECT MILESTONE DATES

The schedule below contains certain specific dates derived from the Bid Default Schedule which are shown for reference only. All dates indicate midnight unless otherwise stipulated. Refer to Paragraph 4 in the Subcontract Agreement for further details.

Notice to Proceed on Site Construction Activities	April 10, 2020
New South Gate Operational	June 09, 2021
Final Completion	August 09, 2021

Activity ID	Activity Name	Start	Finish	OD	Activity % Complete
Detailed Bid Schedule - NCSPA South Gate Upgrades		12-Feb-20	09-Aug-21	379	
Project Milestones		17-Mar-20	09-Aug-21	355	
MILE 105	Bid Opening Day 1		17-Mar-20	0	0%
MILE 140	Bid Opening Day 2		18-Mar-20	0	0%
MILE 110	Approve GMP & Issue Construction NTP	13-Apr-20		0	0%
MILE 115	Control Building Ready for Occupancy		07-May-21	0	0%
MILE 125	New South Gate Operational		09-Jun-21	0	0%
MILE 130	Complete Full South Gate Entrance		29-Jul-21	0	0%
MILE 135	Project Final Completion		09-Aug-21	0	0%
Bidding & Subcontractor Awards		12-Feb-20	24-Apr-20	53	
BID 100	Bid Period	12-Feb-20	17-Mar-20	25	0%
BID 105	Evaluate Subcontractor Bids & Finalize GMP	19-Mar-20	03-Apr-20	12	0%
BID 110	Owner Approve GMP and Issue Construction NTP	06-Apr-20	10-Apr-20	5	0%
BID 115	Award Subcontracts	13-Apr-20	24-Apr-20	10	0%
Submittals & Reviews & Fabrication				0	
Prepare & Submit Submittals				0	
Review & Approve Submittals				0	
Fabrication & Delivery of Key Materials & Equipment				0	
Construction		13-Apr-20	09-Aug-21	337	
Mobilization		13-Apr-20	24-Apr-20	10	
MOB 100	BCC Mobilizes & Installs Phase 1A Fencing	13-Apr-20	17-Apr-20	5	0%
MOB 105	Phase 1A Erosion Control	20-Apr-20	24-Apr-20	5	0%
MOB 110	Phase 1A Survey & Survey Control	20-Apr-20	24-Apr-20	5	0%
Phase 1A - U/G Construction Away from Refrigeration Storage Zone		13-Apr-20	11-Nov-20	150	
Demolition - Phase 1A		13-Apr-20	01-Jun-20	35	
PH 1A Demo in Plan Quadrant 3		13-Apr-20	22-May-20	30	
DEM 1A 300	OH Power to Have Been Previously Relocated - Quad 3	13-Apr-20	13-Apr-20	0	0%
DEM 1A 305	De-Energize & Remove U/G Power & Telecom Ductbanks - Quad	27-Apr-20	01-May-20	5	0%
DEM 1A 310	Sawcut & Demo Ph 1A Pavements - Quad 3	04-May-20	15-May-20	10	0%
DEM 1A 315	Selective Demo for Ph 1A Stormdrain - Quad 3	18-May-20	22-May-20	5	0%
DEM 1A 320	Remove Existing Waterline - Ph 1A - Quad 3	18-May-20	22-May-20	5	0%
PH 1A Demo in Plan Quadrant 1		27-Apr-20	01-Jun-20	25	
DEM 1A 100	Fence Demo & Replace with Temp Fence in Ph 1A Quad 1	27-Apr-20	29-Apr-20	3	0%
DEM 1A 105	De-Energize & U/G Power & Telecom Ductbank Demo in Ph1A Qu	04-May-20	08-May-20	5	0%
DEM 1A 110	Demo San Sewer Force Mains in Ph1A Quad 1	11-May-20	15-May-20	5	0%
DEM 1A 115	Demo Waterlines in Ph1A Quad 1	18-May-20	22-May-20	5	0%
DEM 1A 120	Selective Demo Existing Pavements for New Building	26-May-20	01-Jun-20	5	0%
Underground Utility Infrastructure - Ph1A		26-May-20	11-Nov-20	120	
PH 1A Utilities in Plan Quadrant 3		26-May-20	25-Aug-20	65	
UT 1A 300	Concrete Stormpipe in Phase 1A - Quad 3	26-May-20	15-Jun-20	15	0%
UT 1A 305	Construct "Header" Ductbank/MHs for Power in Ph1A - Quad 3	09-Jun-20	29-Jun-20	15	0%
UT 1A 310	Slot Drain Branches in Phase 1A - Quad 3	16-Jun-20	07-Jul-20	15	0%
UT 1A 315	Construct "Header" Ductbank/MHs for Telecom in Ph1A - Quad 3	16-Jun-20	07-Jul-20	15	0%
UT 1A 320	Power & Telecom Branch Ductbanks to Interchange Gates - Quad	08-Jul-20	21-Jul-20	10	0%
UT 1A 325	Power & Telecom Branch Ductbanks to Outbound OCR/Low-Spee	22-Jul-20	04-Aug-20	10	0%

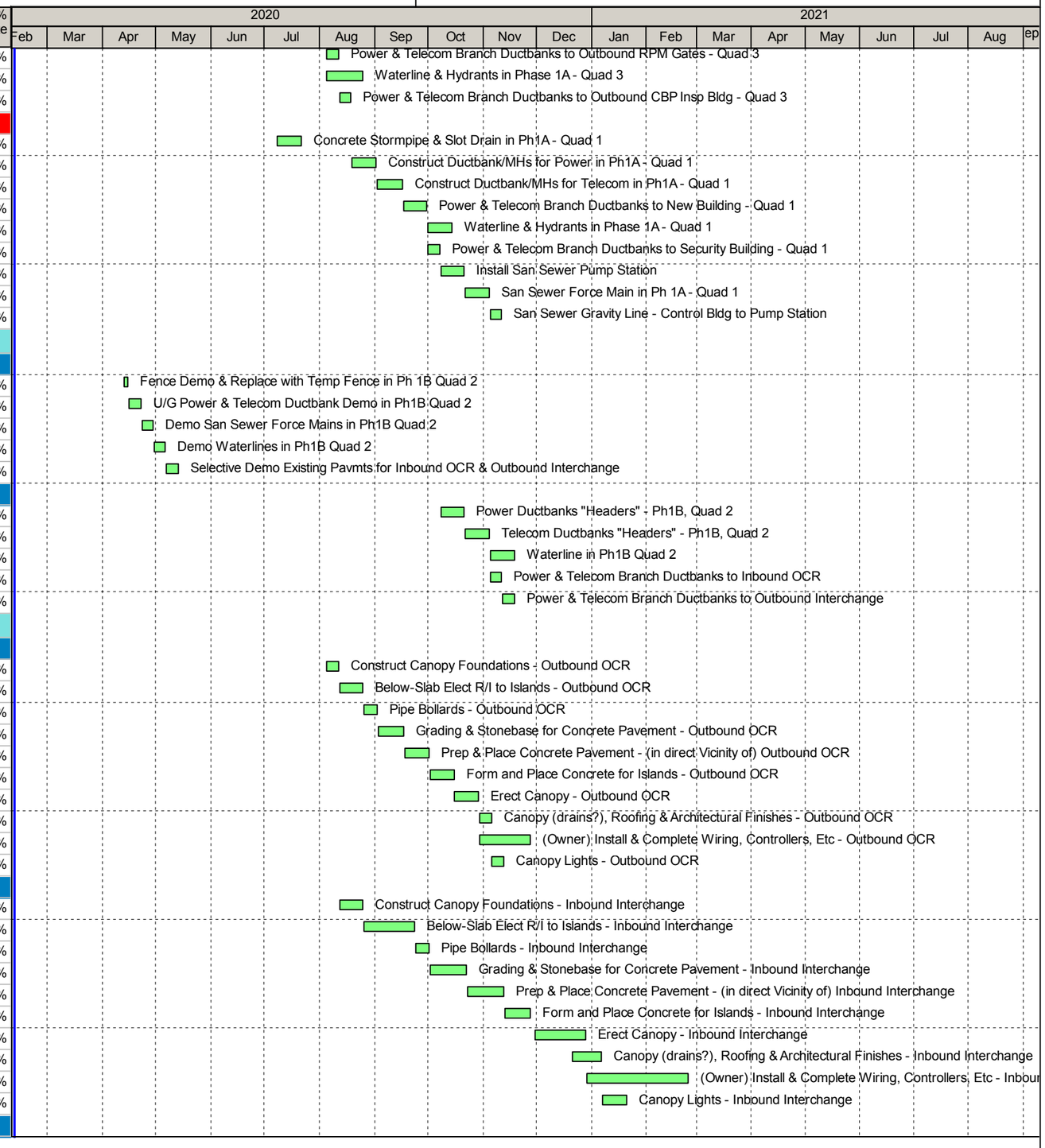


Actual Work
Remaining Work
Critical Remaining Work
Baseline Milestone
Milestone

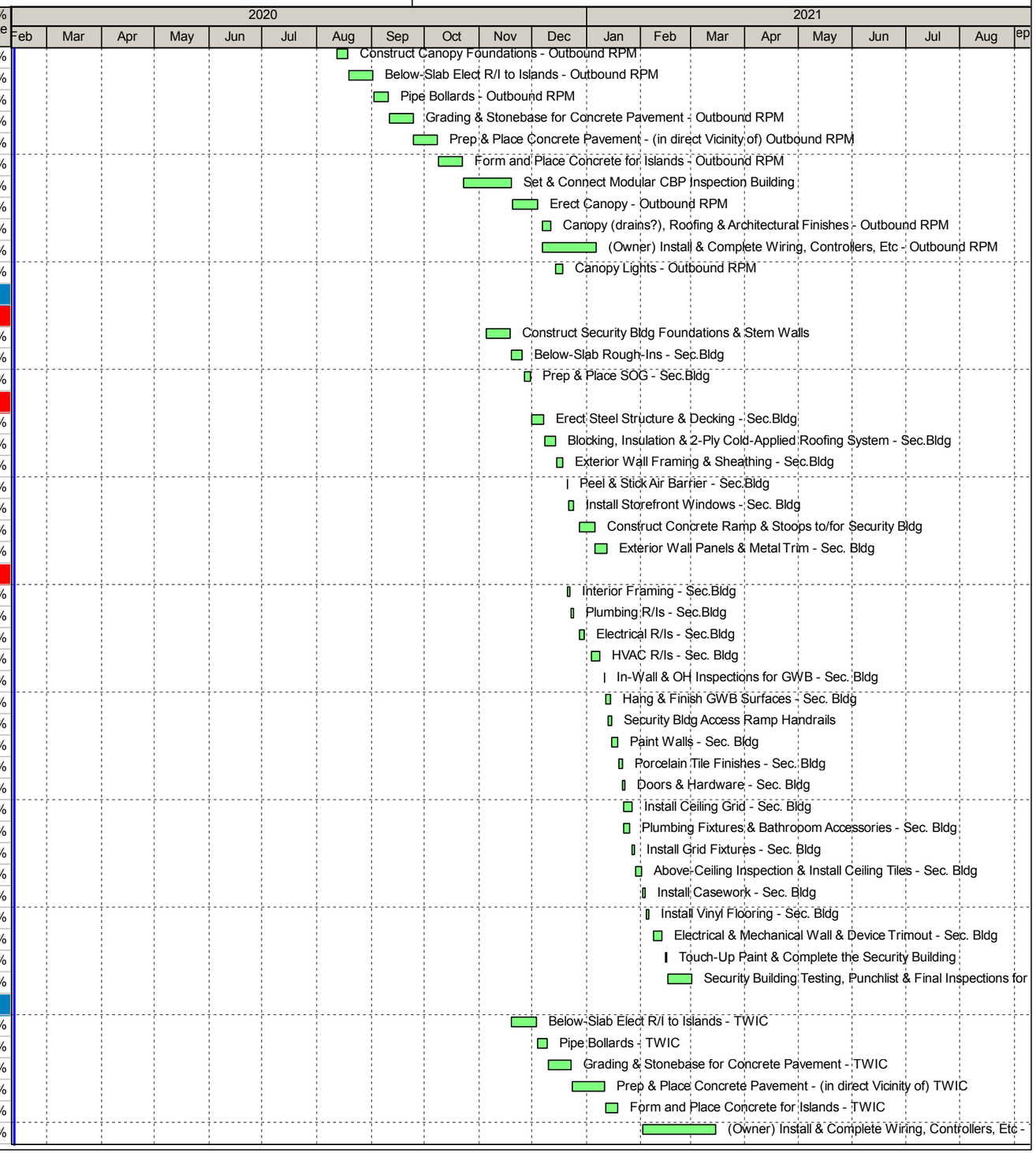
NC Port Authority South Gate
Project Bid Default Schedule Schedule - 02-12-2020

BARNHILL CONTRACTING COMPANY

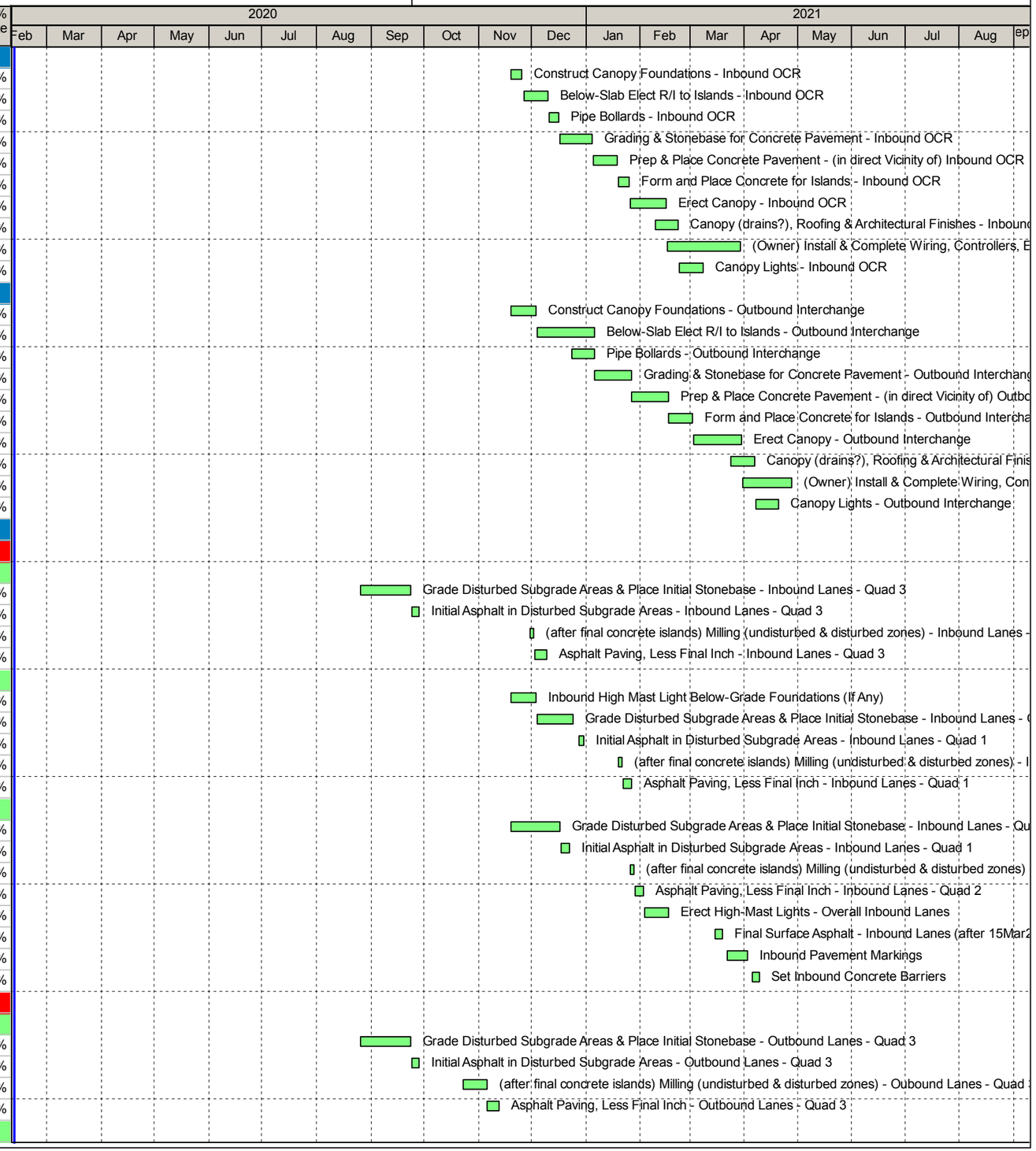
Activity ID	Activity Name	Start	Finish	OD	Activity % Complete
UT 1A 330	Power & Telecom Branch Ductbanks to Outbound RPM Gates - Q	05-Aug-20	11-Aug-20	5	0%
UT 1A 335	Waterline & Hydrants in Phase 1A - Quad 3	05-Aug-20	25-Aug-20	15	0%
UT 1A 340	Power & Telecom Branch Ductbanks to Outbound CBP Insp Bldg -	12-Aug-20	18-Aug-20	5	0%
PH 1A Utilities in Plan Quadrant 1		08-Jul-20	11-Nov-20	90	
UT 1A 100	Concrete Stormpipe & Slot Drain in Ph1A - Quad 1	08-Jul-20	21-Jul-20	10	0%
UT 1A 105	Construct Ductbank/MHs for Power in Ph1A - Quad 1	19-Aug-20	01-Sep-20	10	0%
UT 1A 110	Construct Ductbank/MHs for Telecom in Ph1A - Quad 1	02-Sep-20	16-Sep-20	10	0%
UT 1A 115	Power & Telecom Branch Ductbanks to New Building - Quad 1	17-Sep-20	30-Sep-20	10	0%
UT 1A 125	Waterline & Hydrants in Phase 1A - Quad 1	01-Oct-20	14-Oct-20	10	0%
UT 1A 120	Power & Telecom Branch Ductbanks to Security Building - Quad 1	01-Oct-20	07-Oct-20	5	0%
UT 1A 130	Install San Sewer Pump Station	08-Oct-20	21-Oct-20	10	0%
UT 1A 135	San Sewer Force Main in Ph 1A - Quad 1	22-Oct-20	04-Nov-20	10	0%
UT 1A 140	San Sewer Gravity Line - Control Bldg to Pump Station	05-Nov-20	11-Nov-20	5	0%
Phase 1B - U/G Construction In Refrigeration Storage Zone		13-Apr-20	18-Nov-20	155	
Demolition - Phase 1B		13-Apr-20	13-May-20	23	
DEM 1B 100	Fence Demo & Replace with Temp Fence in Ph 1B Quad 2	13-Apr-20*	15-Apr-20	3	0%
DEM 1B 105	U/G Power & Telecom Ductbank Demo in Ph1B Quad 2	16-Apr-20	22-Apr-20	5	0%
DEM 1B 110	Demo San Sewer Force Mains in Ph1B Quad 2	23-Apr-20	29-Apr-20	5	0%
DEM 1B 115	Demo Waterlines in Ph1B Quad 2	30-Apr-20	06-May-20	5	0%
DEM 1B 120	Selective Demo Existing Pavmts for Inbound OCR & Outbound Int	07-May-20	13-May-20	5	0%
Underground Utility Infrastructure - Ph1B		08-Oct-20	18-Nov-20	30	
UT 1B 100	Power Ductbanks "Headers" - Ph1B, Quad 2	08-Oct-20	21-Oct-20	10	0%
UT 1B 105	Telecom Ductbanks "Headers" - Ph1B, Quad 2	22-Oct-20	04-Nov-20	10	0%
UT 1B 115	Waterline in Ph1B Quad 2	05-Nov-20	18-Nov-20	10	0%
UT 1B 110	Power & Telecom Branch Ductbanks to Inbound OCR	05-Nov-20	11-Nov-20	5	0%
UT 1B 120	Power & Telecom Branch Ductbanks to Outbound Interchange	12-Nov-20	18-Nov-20	5	0%
Phase 1 - Unrestricted Site Construction		05-Aug-20	27-Apr-21	185	
Outbound OCR & Low-Speed Wim Gates		05-Aug-20	27-Nov-20	81	
OCR OB 100	Construct Canopy Foundations - Outbound OCR	05-Aug-20	11-Aug-20	5	0%
OCR OB 105	Below-Slab Elect R/I to Islands - Outbound OCR	12-Aug-20	25-Aug-20	10	0%
OCR OB 110	Pipe Bollards - Outbound OCR	26-Aug-20	02-Sep-20	6	0%
OCR OB 115	Grading & Stonebase for Concrete Pavement - Outbound OCR	03-Sep-20	17-Sep-20	10	0%
OCR OB 120	Prep & Place Concrete Pavement - (in direct Vicinity of) Outbound	18-Sep-20	01-Oct-20	10	0%
OCR OB 125	Form and Place Concrete for Islands - Outbound OCR	02-Oct-20	15-Oct-20	10	0%
OCR OB 130	Erect Canopy - Outbound OCR	16-Oct-20	29-Oct-20	10	0%
OCR OB 135	Canopy (drains?), Roofing & Architectural Finishes - Outbound OC	30-Oct-20	05-Nov-20	5	0%
OCR OB 145	(Owner) Install & Complete Wiring, Controllers, Etc - Outbound O	30-Oct-20	27-Nov-20	20	0%
OCR OB 140	Canopy Lights - Outbound OCR	06-Nov-20	12-Nov-20	5	0%
Inbound Interchange Gates		12-Aug-20	24-Feb-21	136	
I/C IB 100	Construct Canopy Foundations - Inbound Interchange	12-Aug-20	25-Aug-20	10	0%
I/C IB 105	Below-Slab Elect R/I to Islands - Inbound Interchange	26-Aug-20	23-Sep-20	20	0%
I/C IB 110	Pipe Bollards - Inbound Interchange	24-Sep-20	01-Oct-20	6	0%
I/C IB 115	Grading & Stonebase for Concrete Pavement - Inbound Interchan	02-Oct-20	22-Oct-20	15	0%
I/C IB 120	Prep & Place Concrete Pavement - (in direct Vicinity of) Inbound I	23-Oct-20	12-Nov-20	15	0%
I/C IB 125	Form and Place Concrete for Islands - Inbound Interchange	13-Nov-20	27-Nov-20	10	0%
I/C IB 130	Erect Canopy - Inbound Interchange	30-Nov-20	28-Dec-20	20	0%
I/C IB 135	Canopy (drains?), Roofing & Architectural Finishes - Inbound Inter	21-Dec-20	06-Jan-21	10	0%
I/C IB 145	(Owner) Install & Complete Wiring, Controllers, Etc - Inbound Inte	29-Dec-20	24-Feb-21	40	0%
I/C IB 140	Canopy Lights - Inbound Interchange	07-Jan-21	20-Jan-21	10	0%
RPM Scanning & CBP Inspection Gates		12-Aug-20	06-Jan-21	101	



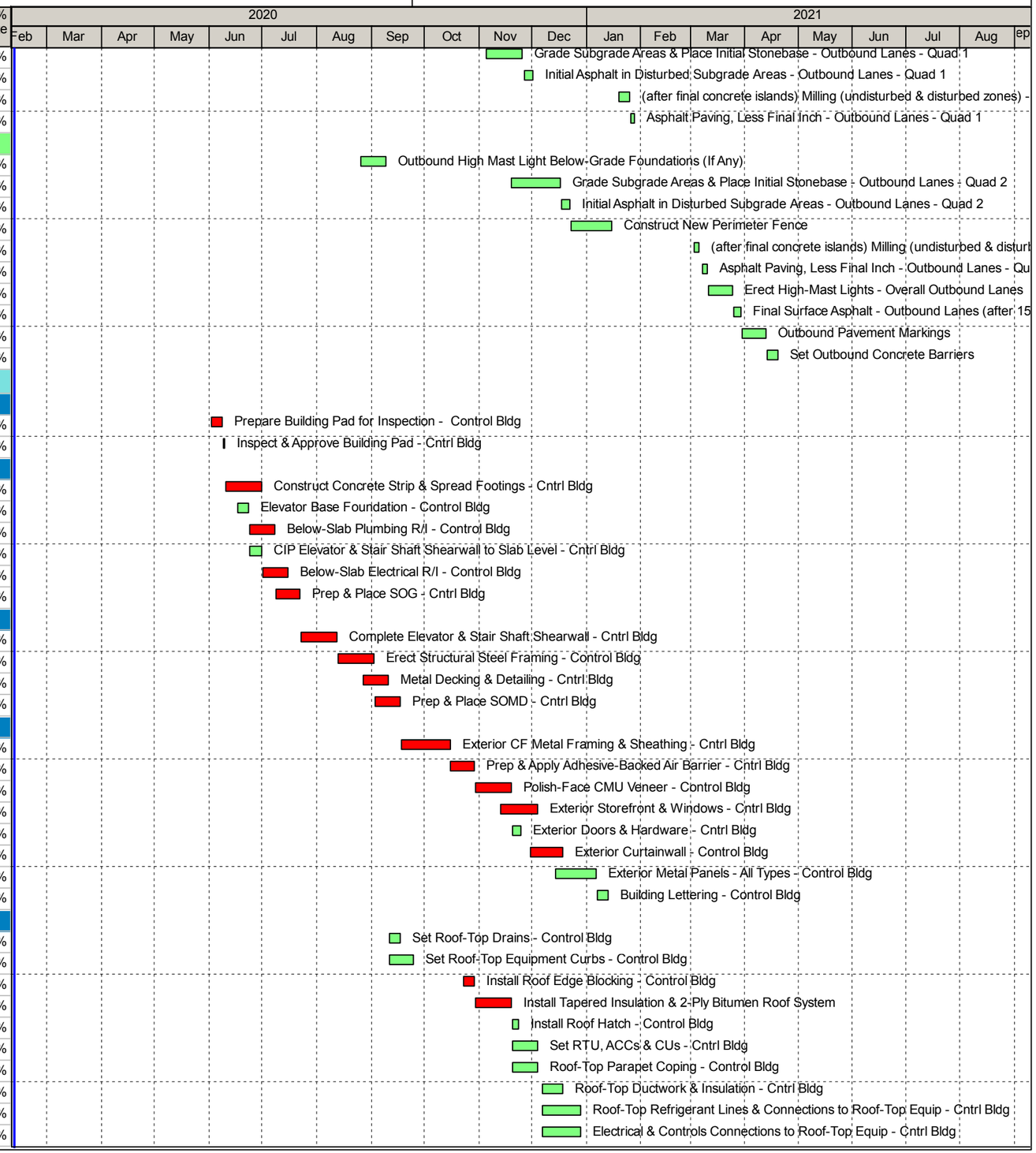
Activity ID	Activity Name	Start	Finish	OD	Activity % Complete
RPM OB 100	Construct Canopy Foundations - Outbound RPM	12-Aug-20	18-Aug-20	5	0%
RPM OB 105	Below-Slab Elect R/I to Islands - Outbound RPM	19-Aug-20	01-Sep-20	10	0%
RPM OB 110	Pipe Bollards - Outbound RPM	02-Sep-20	10-Sep-20	6	0%
RPM OB 115	Grading & Stonebase for Concrete Pavement - Outbound RPM	11-Sep-20	24-Sep-20	10	0%
RPM OB 120	Prep & Place Concrete Pavement - (in direct Vicinity of) Outbound	25-Sep-20	08-Oct-20	10	0%
RPM OB 125	Form and Place Concrete for Islands - Outbound RPM	09-Oct-20	22-Oct-20	10	0%
RPM OB 130	Set & Connect Modular CBP Inspection Building	23-Oct-20	19-Nov-20	20	0%
RPM OB 135	Erect Canopy - Outbound RPM	20-Nov-20	04-Dec-20	10	0%
RPM OB 140	Canopy (drains?), Roofing & Architectural Finishes - Outbound RF	07-Dec-20	11-Dec-20	5	0%
RPM OB 150	(Owner) Install & Complete Wiring, Controllers, Etc - Outbound RI	07-Dec-20	06-Jan-21	20	0%
RPM OB 145	Canopy Lights - Outbound RPM	14-Dec-20	18-Dec-20	5	0%
Security Building		05-Nov-20	01-Mar-21	79	
Foundations & Slab - Sec. Bldg		05-Nov-20	30-Nov-20	17	
SEC 100	Construct Security Bldg Foundations & Stem Walls	05-Nov-20	18-Nov-20	10	0%
SEC 105	Below-Slab Rough-Ins - Sec.Bldg	19-Nov-20	25-Nov-20	5	0%
SEC 110	Prep & Place SOG - Sec.Bldg	27-Nov-20	30-Nov-20	2	0%
Structure & Shell - Sec. Bldg		01-Dec-20	12-Jan-21	28	
SEC 200	Erect Steel Structure & Decking - Sec.Bldg	01-Dec-20	07-Dec-20	5	0%
SEC 205	Blocking, Insulation & 2-Ply Cold-Applied Roofing System - Sec.Blc	08-Dec-20	14-Dec-20	5	0%
SEC 210	Exterior Wall Framing & Sheathing - Sec.Bldg	15-Dec-20	18-Dec-20	4	0%
SEC 215	Peel & Stick Air Barrier - Sec.Bldg	21-Dec-20	21-Dec-20	1	0%
SEC 220	Install Storefront Windows - Sec. Bldg	22-Dec-20	24-Dec-20	3	0%
SEC 225	Construct Concrete Ramp & Stoops to/for Security Bldg	28-Dec-20	05-Jan-21	5	0%
SEC 230	Exterior Wall Panels & Metal Trim - Sec. Bldg	06-Jan-21	12-Jan-21	5	0%
Interior Work & Testing - Sec. Bldg		21-Dec-20	01-Mar-21	48	
SEC 300	Interior Framing - Sec.Bldg	21-Dec-20	22-Dec-20	2	0%
SEC 305	Plumbing R/Is - Sec.Bldg	23-Dec-20	24-Dec-20	2	0%
SEC 310	Electrical R/Is - Sec.Bldg	28-Dec-20	30-Dec-20	3	0%
SEC 315	HVAC R/Is - Sec. Bldg	04-Jan-21	08-Jan-21	5	0%
SEC 320	In-Wall & OH Inspections for GWB - Sec. Bldg	11-Jan-21	11-Jan-21	1	0%
SEC 325	Hang & Finish GWB Surfaces - Sec. Bldg	12-Jan-21	14-Jan-21	3	0%
SEC 330	Security Bldg Access Ramp Handrails	13-Jan-21	15-Jan-21	3	0%
SEC 335	Paint Walls - Sec. Bldg	15-Jan-21	18-Jan-21	2	0%
SEC 340	Porcelain Tile Finishes - Sec. Bldg	19-Jan-21	21-Jan-21	3	0%
SEC 345	Doors & Hardware - Sec. Bldg	21-Jan-21	22-Jan-21	2	0%
SEC 355	Install Ceiling Grid - Sec. Bldg	22-Jan-21	26-Jan-21	3	0%
SEC 350	Plumbing Fixtures & Bathrooom Accessories - Sec. Bldg	22-Jan-21	25-Jan-21	2	0%
SEC 360	Install Grid Fixtures - Sec. Bldg	27-Jan-21	28-Jan-21	2	0%
SEC 365	Above-Ceiling Inspection & Install Ceiling Tiles - Sec. Bldg	29-Jan-21	01-Feb-21	2	0%
SEC 370	Install Casework - Sec. Bldg	02-Feb-21	03-Feb-21	2	0%
SEC 375	Install Vinyl Flooring - Sec. Bldg	04-Feb-21	05-Feb-21	2	0%
SEC 380	Electrical & Mechanical Wall & Device Trimout - Sec. Bldg	08-Feb-21	12-Feb-21	5	0%
SEC 385	Touch-Up Paint & Complete the Security Building	15-Feb-21	15-Feb-21	1	0%
SEC 390	Security Building Testing, Punchlist & Final Inspections for Occupar	16-Feb-21	01-Mar-21	10	0%
Inbound & Outboound TWIC Gates		19-Nov-20	15-Mar-21	79	
TWIC 105	Below-Slab Elect R/I to Islands - TWIC	19-Nov-20	03-Dec-20	10	0%
TWIC 110	Pipe Bollards - TWIC	04-Dec-20	09-Dec-20	4	0%
TWIC 115	Grading & Stonebase for Concrete Pavement - TWIC	10-Dec-20	23-Dec-20	10	0%
TWIC 120	Prep & Place Concrete Pavement - (in direct Vicinity of) TWIC	24-Dec-20	11-Jan-21	10	0%
TWIC 125	Form and Place Concrete for Islands - TWIC	12-Jan-21	18-Jan-21	5	0%
TWIC 135	(Owner) Install & Complete Wiring, Controllers, Etc - TWIC	02-Feb-21	15-Mar-21	30	0%



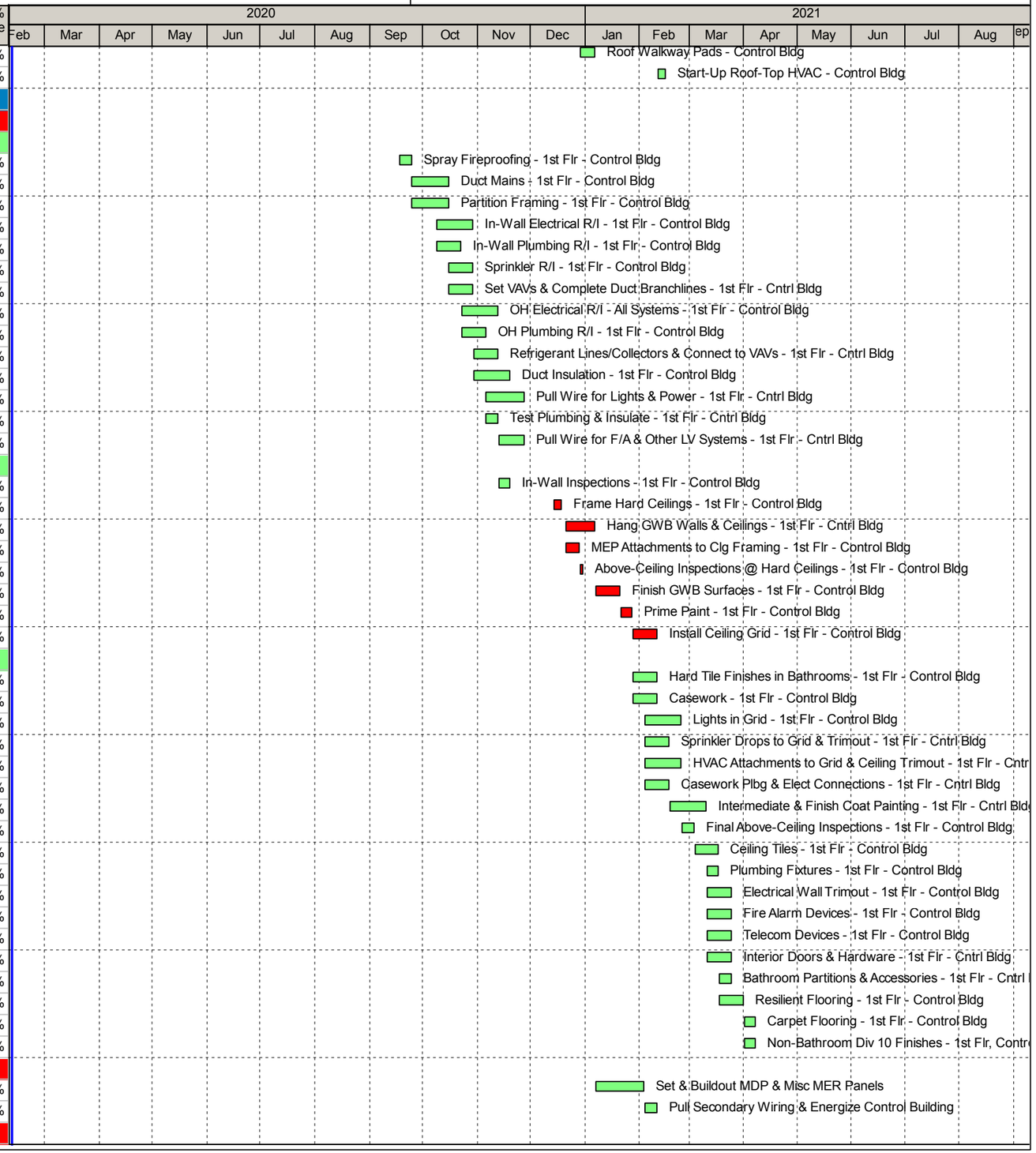
Activity ID	Activity Name	Start	Finish	OD	Activity % Complete
Inbound OCR/Low-Speed WIM Gates		19-Nov-20	29-Mar-21	89	
OCR IB100	Construct Canopy Foundations - Inbound OCR	19-Nov-20	25-Nov-20	5	0%
OCR IB105	Below-Slab Elect R/I to Islands - Inbound OCR	27-Nov-20	10-Dec-20	10	0%
OCR IB110	Pipe Bollards - Inbound OCR	11-Dec-20	16-Dec-20	4	0%
OCR IB115	Grading & Stonebase for Concrete Pavement - Inbound OCR	17-Dec-20	04-Jan-21	10	0%
OCR IB120	Prep & Place Concrete Pavement - (in direct Vicinity of) Inbound C	05-Jan-21	18-Jan-21	10	0%
OCR IB125	Form and Place Concrete for Islands - Inbound OCR	19-Jan-21	25-Jan-21	5	0%
OCR IB130	Erect Canopy - Inbound OCR	26-Jan-21	15-Feb-21	15	0%
OCR IB135	Canopy (drains?), Roofing & Architectural Finishes - Inbound OCF	09-Feb-21	22-Feb-21	10	0%
OCR IB140	(Owner) Install & Complete Wiring, Controllers, Etc - Inbound OCI	16-Feb-21	29-Mar-21	30	0%
OCR IB145	Canopy Lights - Inbound OCR	23-Feb-21	08-Mar-21	10	0%
Outbound Interchange Gates		19-Nov-20	27-Apr-21	110	
I/C OB 100	Construct Canopy Foundations - Outbound Interchange	19-Nov-20	03-Dec-20	10	0%
I/C OB 105	Below-Slab Elect R/I to Islands - Outbound Interchange	04-Dec-20	05-Jan-21	20	0%
I/C OB 110	Pipe Bollards - Outbound Interchange	24-Dec-20	05-Jan-21	6	0%
I/C OB 115	Grading & Stonebase for Concrete Pavement - Outbound Intercha	06-Jan-21	26-Jan-21	15	0%
I/C OB 120	Prep & Place Concrete Pavement - (in direct Vicinity of) Outbound	27-Jan-21	16-Feb-21	15	0%
I/C OB 125	Form and Place Concrete for Islands - Outbound Interchange	17-Feb-21	02-Mar-21	10	0%
I/C OB 130	Erect Canopy - Outbound Interchange	03-Mar-21	30-Mar-21	20	0%
I/C OB 135	Canopy (drains?), Roofing & Architectural Finishes - Outbound Int	24-Mar-21	06-Apr-21	10	0%
I/C OB 140	(Owner) Install & Complete Wiring, Controllers, Etc - Outbound In	31-Mar-21	27-Apr-21	20	0%
I/C OB 145	Canopy Lights - Outbound Interchange	07-Apr-21	20-Apr-21	10	0%
All Phase 1 Connective Roadwork & Asphalt Pavement		26-Aug-20	19-Apr-21	164	
Inbound Lanes		26-Aug-20	09-Apr-21	158	
Plan Quadrant 3		26-Aug-20	09-Dec-20	74	
RW IB 300	Grade Disturbed Subgrade Areas & Place Initial Stonebase - Inbou	26-Aug-20	23-Sep-20	20	0%
RW IB 305	Initial Asphalt in Disturbed Subgrade Areas - Inbound Lanes - Qua	24-Sep-20	28-Sep-20	3	0%
RW IB 310	(after final concrete islands) Milling (undisturbed & disturbed zones	30-Nov-20	02-Dec-20	3	0%
RW IB 315	Asphalt Paving, Less Final Inch - Inbound Lanes - Quad 3	03-Dec-20	09-Dec-20	5	0%
Plan Quadrant 1		19-Nov-20	26-Jan-21	45	
RW IB 100	Inbound High Mast Light Below-Grade Foundations (If Any)	19-Nov-20	03-Dec-20	10	0%
RW IB 105	Grade Disturbed Subgrade Areas & Place Initial Stonebase - Inbou	04-Dec-20	24-Dec-20	15	0%
RW IB 110	Initial Asphalt in Disturbed Subgrade Areas - Inbound Lanes - Qua	28-Dec-20	30-Dec-20	3	0%
RW IB 115	(after final concrete islands) Milling (undisturbed & disturbed zones	19-Jan-21	21-Jan-21	3	0%
RW IB 120	Asphalt Paving, Less Final Inch - Inbound Lanes - Quad 1	22-Jan-21	26-Jan-21	3	0%
Plan Quadrant 2 & Final Inbound Paving		19-Nov-20	09-Apr-21	98	
RW IB 200	Grade Disturbed Subgrade Areas & Place Initial Stonebase - Inbou	19-Nov-20	17-Dec-20	20	0%
RW IB 205	Initial Asphalt in Disturbed Subgrade Areas - Inbound Lanes - Qua	18-Dec-20	22-Dec-20	3	0%
RW IB 210	(after final concrete islands) Milling (undisturbed & disturbed zones	26-Jan-21	28-Jan-21	3	0%
RW IB 215	Asphalt Paving, Less Final Inch - Inbound Lanes - Quad 2	29-Jan-21	02-Feb-21	3	0%
RW IB 220	Erect High-Mast Lights - Overall Inbound Lanes	03-Feb-21	16-Feb-21	10	0%
RW IB 225	Final Surface Asphalt - Inbound Lanes (after 15Mar21)	15-Mar-21*	19-Mar-21	5	0%
RW IB 230	Inbound Pavement Markings	22-Mar-21	02-Apr-21	10	0%
RW IB 235	Set Inbound Concrete Barriers	05-Apr-21	09-Apr-21	5	0%
Outbound Lanes		26-Aug-20	19-Apr-21	164	
Plan Quadrant 3		26-Aug-20	12-Nov-20	56	
RW OB 300	Grade Disturbed Subgrade Areas & Place Initial Stonebase - Outb	26-Aug-20	23-Sep-20	20	0%
RW OB 305	Initial Asphalt in Disturbed Subgrade Areas - Outbound Lanes - Qu	24-Sep-20	28-Sep-20	3	0%
RW OB 310	(after final concrete islands) Milling (undisturbed & disturbed zones	23-Oct-20	05-Nov-20	10	0%
RW OB 315	Asphalt Paving, Less Final Inch - Outbound Lanes - Quad 3	06-Nov-20	12-Nov-20	5	0%
Plan Quadrant 1		05-Nov-20	28-Jan-21	57	



Activity ID	Activity Name	Start	Finish	OD	Activity % Complete
RW OB 100	Grade Subgrade Areas & Place Initial Stonebase - Outbound Lane	05-Nov-20	25-Nov-20	15	0%
RW OB 105	Initial Asphalt in Disturbed Subgrade Areas - Outbound Lanes - Qu	27-Nov-20	01-Dec-20	3	0%
RW OB 110	(after final concrete islands) Milling (undisturbed & disturbed zones	19-Jan-21	25-Jan-21	5	0%
RW OB 115	Asphalt Paving, Less Final Inch - Outbound Lanes - Quad 1	26-Jan-21	28-Jan-21	3	0%
Plan Quadrant 2 & Final Outbound Paving		26-Aug-20	19-Apr-21	164	
RW OB 200	Outbound High Mast Light Below-Grade Foundations (If Any)	26-Aug-20	09-Sep-20	10	0%
RW OB 205	Grade Subgrade Areas & Place Initial Stonebase - Outbound Lane	19-Nov-20	17-Dec-20	20	0%
RW OB 210	Initial Asphalt in Disturbed Subgrade Areas - Outbound Lanes - Qu	18-Dec-20	22-Dec-20	3	0%
RW OB 215	Construct New Perimeter Fence	23-Dec-20	15-Jan-21	15	0%
RW OB 220	(after final concrete islands) Milling (undisturbed & disturbed zones	03-Mar-21	05-Mar-21	3	0%
RW OB 225	Asphalt Paving, Less Final Inch - Outbound Lanes - Quad 2	08-Mar-21	10-Mar-21	3	0%
RW OB 230	Erect High-Mast Lights - Overall Outbound Lanes	11-Mar-21	24-Mar-21	10	0%
RW OB 235	Final Surface Asphalt - Outbound Lanes (after 15Mar21)	25-Mar-21*	29-Mar-21	3	0%
RW OB 240	Outbound Pavement Markings	30-Mar-21	12-Apr-21	10	0%
RW OB 245	Set Outbound Concrete Barriers	13-Apr-21	19-Apr-21	5	0%
Phase 1 - Control Building		02-Jun-20	07-May-21	238	
Building Pad & Early Sitework - Control Building		02-Jun-20	09-Jun-20	6	
CB GR 100	Prepare Building Pad for Inspection - Control Bldg	02-Jun-20	08-Jun-20	5	0%
CB GR 105	Inspect & Approve Building Pad - Cntrl Bldg	09-Jun-20	09-Jun-20	1	0%
Foundations & Slab-On-Grade - Control Building		10-Jun-20	22-Jul-20	30	
CB FN 100	Construct Concrete Strip & Spread Footings - Cntrl Bldg	10-Jun-20	30-Jun-20	15	0%
CB FN 105	Elevator Base Foundation - Control Bldg	17-Jun-20	23-Jun-20	5	0%
CB FN 115	Below-Slab Plumbing R/I - Control Bldg	24-Jun-20	08-Jul-20	10	0%
CB FN 110	CIP Elevator & Stair Shaft Shearwall to Slab Level - Cntrl Bldg	24-Jun-20	30-Jun-20	5	0%
CB FN 120	Below-Slab Electrical R/I - Control Bldg	01-Jul-20	15-Jul-20	10	0%
CB FN 125	Prep & Place SOG - Cntrl Bldg	09-Jul-20	22-Jul-20	10	0%
Structural Work - Control Building		23-Jul-20	17-Sep-20	40	
CB ST 100	Complete Elevator & Stair Shaft Shearwall - Cntrl Bldg	23-Jul-20	12-Aug-20	15	0%
CB ST 105	Erect Structural Steel Framing - Control Bldg	13-Aug-20	02-Sep-20	15	0%
CB ST 110	Metal Decking & Detailing - Cntrl Bldg	27-Aug-20	10-Sep-20	10	0%
CB ST 115	Prep & Place SOMD - Cntrl Bldg	03-Sep-20	17-Sep-20	10	0%
Exterior Cladding - Control Building		18-Sep-20	13-Jan-21	80	
CB CL 100	Exterior CF Metal Framing & Sheathing - Cntrl Bldg	18-Sep-20	15-Oct-20	20	0%
CB CL 105	Prep & Apply Adhesive-Backed Air Barrier - Cntrl Bldg	16-Oct-20	29-Oct-20	10	0%
CB CL 110	Polish-Face CMU Veneer - Control Bldg	30-Oct-20	19-Nov-20	15	0%
CB CL 115	Exterior Storefront & Windows - Cntrl Bldg	13-Nov-20	04-Dec-20	15	0%
CB CL 120	Exterior Doors & Hardware - Cntrl Bldg	20-Nov-20	24-Nov-20	3	0%
CB CL 125	Exterior Curtainwall - Control Bldg	30-Nov-20	18-Dec-20	15	0%
CB CL 130	Exterior Metal Panels - All Types - Control Bldg	14-Dec-20	06-Jan-21	15	0%
CB CL 135	Building Lettering - Control Bldg	07-Jan-21	13-Jan-21	5	0%
Roofing & Roof-Top Work - Control Building		11-Sep-20	15-Feb-21	108	
CB RF 100	Set Roof-Top Drains - Control Bldg	11-Sep-20	17-Sep-20	5	0%
CB RF 105	Set Roof-Top Equipment Curbs - Control Bldg	11-Sep-20	24-Sep-20	10	0%
CB RF 110	Install Roof Edge Blocking - Control Bldg	23-Oct-20	29-Oct-20	5	0%
CB RF 115	Install Tapered Insulation & 2-Ply Bitumen Roof System	30-Oct-20	19-Nov-20	15	0%
CB RF 120	Install Roof Hatch - Control Bldg	20-Nov-20	23-Nov-20	2	0%
CB RF 125	Set RTU, ACCs & CUs - Cntrl Bldg	20-Nov-20	04-Dec-20	10	0%
CB RF 130	Roof-Top Parapet Coping - Control Bldg	20-Nov-20	04-Dec-20	10	0%
CB RF 135	Roof-Top Ductwork & Insulation - Cntrl Bldg	07-Dec-20	18-Dec-20	10	0%
CB RF 140	Roof-Top Refrigerant Lines & Connections to Roof-Top Equip - Cı	07-Dec-20	28-Dec-20	15	0%
CB RF 145	Electrical & Controls Connections to Roof-Top Equip - Cntrl Bldg	07-Dec-20	28-Dec-20	15	0%



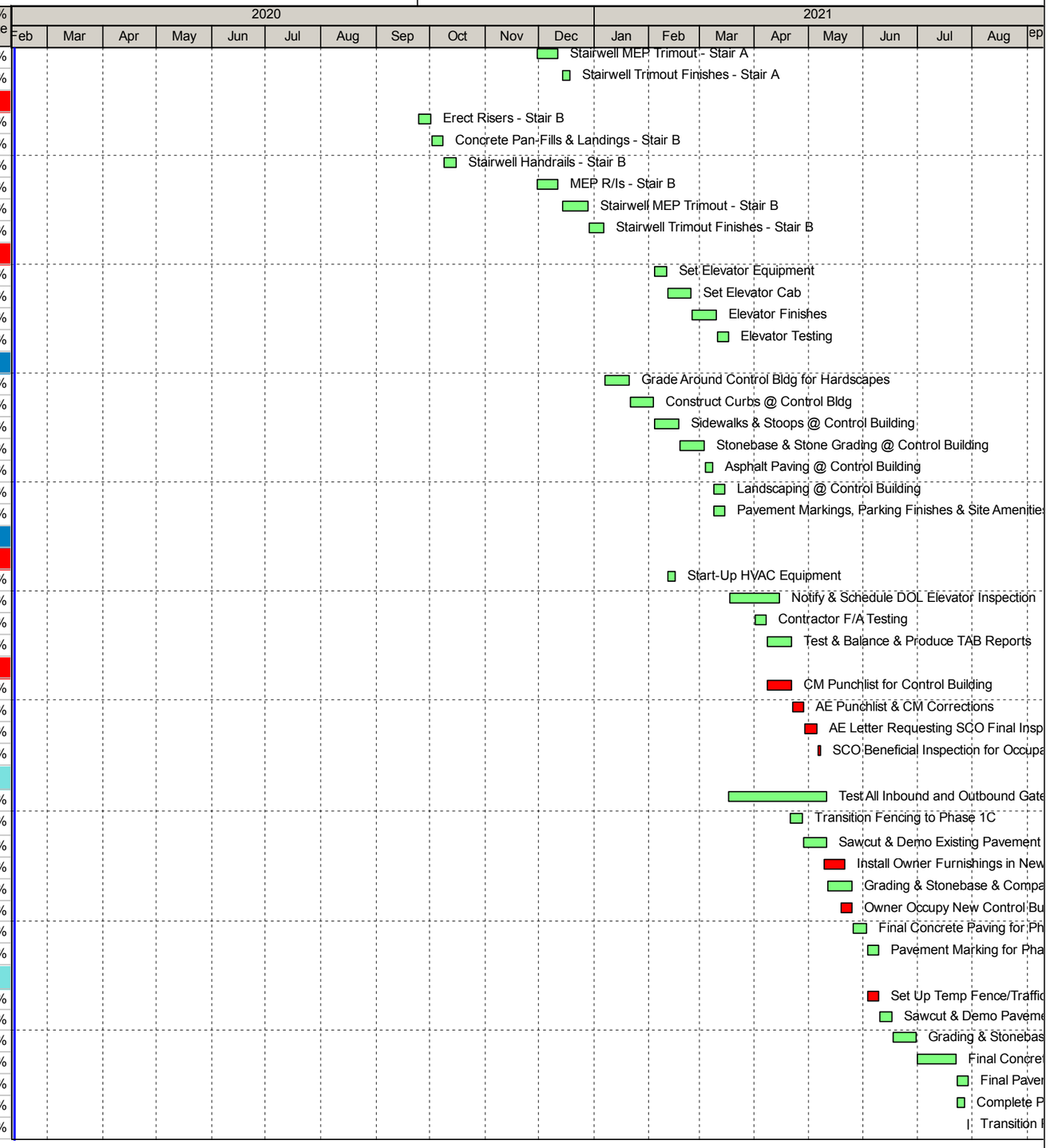
Activity ID	Activity Name	Start	Finish	OD	Activity % Complete
CB RF 150	Roof Walkway Pads - Control Bldg	29-Dec-20	06-Jan-21	5	0%
CB RF 155	Start-Up Roof-Top HVAC - Control Bldg	11-Feb-21	15-Feb-21	3	0%
Interior Work - Control Building		18-Sep-20	14-Apr-21	145	
First Floor		18-Sep-20	07-Apr-21	140	
Interior Rough-Ins & Partitions		18-Sep-20	27-Nov-20	50	
CB RI 100	Spray Fireproofing - 1st Flr - Control Bldg	18-Sep-20	24-Sep-20	5	0%
CB RI 105	Duct Mains - 1st Flr - Control Bldg	25-Sep-20	15-Oct-20	15	0%
CB RI 110	Partition Framing - 1st Flr - Control Bldg	25-Sep-20	15-Oct-20	15	0%
CB RI 120	In-Wall Electrical R/I - 1st Flr - Control Bldg	09-Oct-20	29-Oct-20	15	0%
CB RI 115	In-Wall Plumbing R/I - 1st Flr - Control Bldg	09-Oct-20	22-Oct-20	10	0%
CB RI 130	Sprinkler R/I - 1st Flr - Control Bldg	16-Oct-20	29-Oct-20	10	0%
CB RI 125	Set VAVs & Complete Duct Branchlines - 1st Flr - Cntrl Bldg	16-Oct-20	29-Oct-20	10	0%
CB RI 140	OH Electrical R/I - All Systems - 1st Flr - Control Bldg	23-Oct-20	12-Nov-20	15	0%
CB RI 135	OH Plumbing R/I - 1st Flr - Control Bldg	23-Oct-20	05-Nov-20	10	0%
CB RI 145	Refrigerant Lines/Collectors & Connect to VAVs - 1st Flr - Cntrl Blc	30-Oct-20	12-Nov-20	10	0%
CB RI 150	Duct Insulation - 1st Flr - Control Bldg	30-Oct-20	19-Nov-20	15	0%
CB RI 160	Pull Wire for Lights & Power - 1st Flr - Cntrl Bldg	06-Nov-20	27-Nov-20	15	0%
CB RI 155	Test Plumbing & Insulate - 1st Flr - Cntrl Bldg	06-Nov-20	12-Nov-20	5	0%
CB RI 165	Pull Wire for F/A & Other LV Systems - 1st Flr - Cntrl Bldg	13-Nov-20	27-Nov-20	10	0%
Drywall, Hard Ceilings & Grid		13-Nov-20	10-Feb-21	60	
CB DW 100	In-Wall Inspections - 1st Flr - Control Bldg	13-Nov-20	19-Nov-20	5	0%
CB DW 105	Frame Hard Ceilings - 1st Flr - Control Bldg	14-Dec-20	18-Dec-20	5	0%
CB DW 115	Hang GWB Walls & Ceilings - 1st Flr - Cntrl Bldg	21-Dec-20	06-Jan-21	10	0%
CB DW 110	MEP Attachments to Clg Framing - 1st Flr - Control Bldg	21-Dec-20	28-Dec-20	5	0%
CB DW 120	Above-Ceiling Inspections @ Hard Ceilings - 1st Flr - Control Bldg	29-Dec-20	30-Dec-20	2	0%
CB DW 125	Finish GWB Surfaces - 1st Flr - Control Bldg	07-Jan-21	20-Jan-21	10	0%
CB DW 130	Prime Paint - 1st Flr - Control Bldg	21-Jan-21	27-Jan-21	5	0%
CB DW 135	Install Ceiling Grid - 1st Flr - Control Bldg	28-Jan-21	10-Feb-21	10	0%
Fixtures & Finishes		28-Jan-21	07-Apr-21	50	
CB FIN 100	Hard Tile Finishes in Bathrooms - 1st Flr - Control Bldg	28-Jan-21	10-Feb-21	10	0%
CB FIN 105	Casework - 1st Flr - Control Bldg	28-Jan-21	10-Feb-21	10	0%
CB FIN 120	Lights in Grid - 1st Flr - Control Bldg	04-Feb-21	24-Feb-21	15	0%
CB FIN 110	Sprinkler Drops to Grid & Trimout - 1st Flr - Cntrl Bldg	04-Feb-21	17-Feb-21	10	0%
CB FIN 125	HVAC Attachments to Grid & Ceiling Trimout - 1st Flr - Cntrl Bldg	04-Feb-21	24-Feb-21	15	0%
CB FIN 115	Casework Plbg & Elect Connections - 1st Flr - Cntrl Bldg	04-Feb-21	17-Feb-21	10	0%
CB FIN 130	Intermediate & Finish Coat Painting - 1st Flr - Cntrl Bldg	18-Feb-21	10-Mar-21	15	0%
CB FIN 135	Final Above-Ceiling Inspections - 1st Flr - Control Bldg	25-Feb-21	03-Mar-21	5	0%
CB FIN 140	Ceiling Tiles - 1st Flr - Control Bldg	04-Mar-21	17-Mar-21	10	0%
CB FIN 145	Plumbing Fixtures - 1st Flr - Control Bldg	11-Mar-21	17-Mar-21	5	0%
CB FIN 150	Electrical Wall Trimout - 1st Flr - Control Bldg	11-Mar-21	24-Mar-21	10	0%
CB FIN 155	Fire Alarm Devices - 1st Flr - Control Bldg	11-Mar-21	24-Mar-21	10	0%
CB FIN 160	Telecom Devices - 1st Flr - Control Bldg	11-Mar-21	24-Mar-21	10	0%
CB FIN 165	Interior Doors & Hardware - 1st Flr - Cntrl Bldg	11-Mar-21	24-Mar-21	10	0%
CB FIN 170	Bathroom Partitions & Accessories - 1st Flr - Cntrl Bldg	18-Mar-21	24-Mar-21	5	0%
CB FIN 175	Resilient Flooring - 1st Flr - Control Bldg	18-Mar-21	31-Mar-21	10	0%
CB FIN 180	Carpet Flooring - 1st Flr - Control Bldg	01-Apr-21	07-Apr-21	5	0%
CB FIN 185	Non-Bathroom Div 10 Finishes - 1st Flr, Control Bldg	01-Apr-21	07-Apr-21	5	0%
Electrical Room 120		07-Jan-21	10-Feb-21	25	
MER 100	Set & Buildout MDP & Misc MER Panels	07-Jan-21	03-Feb-21	20	0%
MER 105	Pull Secondary Wiring & Energize Control Building	04-Feb-21	10-Feb-21	5	0%
2nd Floor		30-Oct-20	14-Apr-21	115	



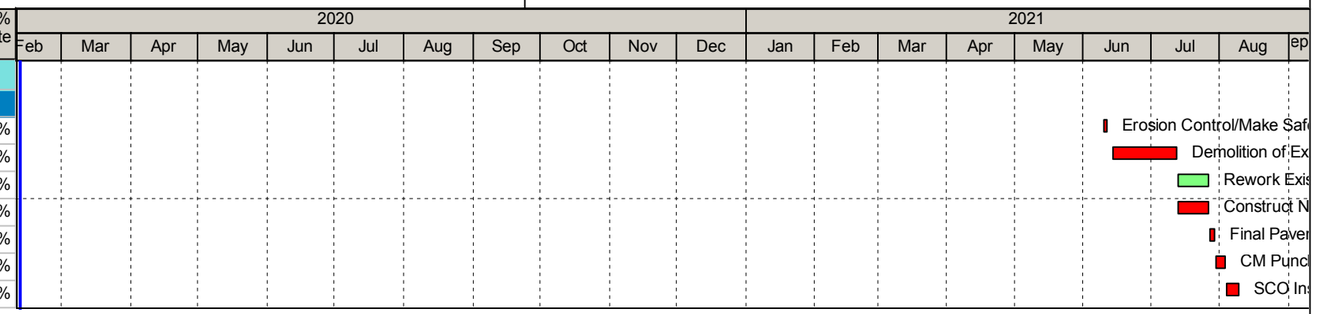
Activity ID	Activity Name	Start	Finish	OD	Activity % Complete
Interior Rough-Ins & Partitions		30-Oct-20	20-Jan-21	55	
CB RI 200	Spray Fireproofing - 2nd Flr - Control Bldg	30-Oct-20	05-Nov-20	5	0%
CB RI 205	Duct Mains - 2nd Flr - Control Bldg	06-Nov-20	27-Nov-20	15	0%
CB RI 210	Partition Framing - 2nd Flr - Control Bldg	06-Nov-20	27-Nov-20	15	0%
CB RI 220	In-Wall Electrical R/I - 2nd Flr - Control Bldg	20-Nov-20	11-Dec-20	15	0%
CB RI 215	In-Wall Plumbing R/I - 2nd Flr - Control Bldg	20-Nov-20	04-Dec-20	10	0%
CB RI 225	Sprinkler R/I - 2nd Flr - Control Bldg	30-Nov-20	11-Dec-20	10	0%
CB RI 230	Set VAVs & Complete Duct Branchlines - 2nd Flr - Cntrl Bldg	30-Nov-20	11-Dec-20	10	0%
CB RI 235	Duct Insulation - 2nd Flr - Control Bldg	30-Nov-20	18-Dec-20	15	0%
CB RI 245	OH Electrical R/I - All Systems - 2nd Flr - Control Bldg	07-Dec-20	06-Jan-21	20	0%
CB RI 240	OH Plumbing R/I - 2nd Flr - Control Bldg	07-Dec-20	18-Dec-20	10	0%
CB RI 250	Refrigerant Lines/Collectors & Connect to VAVs - 2nd Flr - Cntrl Bl	14-Dec-20	28-Dec-20	10	0%
CB RI 255	Elect & Controls Connections to VAVs - 2nd Flr - Cntrl Bldg	14-Dec-20	28-Dec-20	10	0%
CB RI 260	Test Plumbing & Insulate - 2nd Flr - Cntrl Bldg	21-Dec-20	28-Dec-20	5	0%
CB RI 265	Pull Wire for Lights & Power - 2nd Flr - Cntrl Bldg	29-Dec-20	20-Jan-21	15	0%
CB RI 270	Pull Wire for F/A & Other LV Systems - 2nd Flr - Cntrl Bldg	07-Jan-21	20-Jan-21	10	0%
Drywall, Hard Ceilings & Grid		29-Dec-20	24-Feb-21	40	
CB DW 200	In-Wall Inspections - 2nd Flr - Control Bldg	29-Dec-20	06-Jan-21	5	0%
CB DW 205	Frame Hard Ceilings - 2nd Flr - Control Bldg	29-Dec-20	06-Jan-21	5	0%
CB DW 215	Hang GWB Walls & Ceilings - 2nd Flr - Cntrl Bldg	07-Jan-21	20-Jan-21	10	0%
CB DW 210	MEP Attachments to Clg Framing - 2nd Flr - Control Bldg	07-Jan-21	13-Jan-21	5	0%
CB DW 220	Above-Ceiling Inspections @ Hard Ceilings - 2nd Flr - Control Bld	14-Jan-21	15-Jan-21	2	0%
CB DW 225	Finish GWB Surfaces - 2nd Flr - Control Bldg	21-Jan-21	03-Feb-21	10	0%
CB DW 230	Prime Paint - 2nd Flr - Control Bldg	04-Feb-21	10-Feb-21	5	0%
CB DW 235	Install Ceiling Grid - 2nd Flr - Control Bldg	11-Feb-21	24-Feb-21	10	0%
Fixtures & Finishes		11-Feb-21	14-Apr-21	45	
CB FIN 200	Hard Tile Finishes in Bathrooms - 2nd Flr - Control Bldg	11-Feb-21	24-Feb-21	10	0%
CB FIN 205	Casework - 2nd Flr - Control Bldg	11-Feb-21	24-Feb-21	10	0%
CB FIN 220	Lights in Grid - 2nd Flr - Control Bldg	18-Feb-21	10-Mar-21	15	0%
CB FIN 210	Sprinkler Drops to Grid & Trimout - 2nd Flr - Cntrl Bldg	18-Feb-21	03-Mar-21	10	0%
CB FIN 225	HVAC Attachments to Grid & Ceiling Trimout - 2nd Flr - Cntrl Bldg	18-Feb-21	10-Mar-21	15	0%
CB FIN 215	Casework Plbg & Elect Connections - 2nd Flr - Cntrl Bldg	18-Feb-21	03-Mar-21	10	0%
CB FIN 230	Intermediate & Finish Coat Painting - 2nd Flr - Cntrl Bldg	04-Mar-21	24-Mar-21	15	0%
CB FIN 235	Final Above-Ceiling Inspections - 2nd Flr - Control Bldg	11-Mar-21	17-Mar-21	5	0%
CB FIN 240	Ceiling Tiles - 2nd Flr - Control Bldg	18-Mar-21	24-Mar-21	5	0%
CB FIN 245	Plumbing Fixtures - 2nd Flr - Control Bldg	25-Mar-21	31-Mar-21	5	0%
CB FIN 250	Electrical Wall Trimout - 2nd Flr - Control Bldg	25-Mar-21	31-Mar-21	5	0%
CB FIN 255	Fire Alarm Devices - 2nd Flr - Control Bldg	25-Mar-21	31-Mar-21	5	0%
CB FIN 260	Telecom Devices - 2nd Flr - Control Bldg	25-Mar-21	31-Mar-21	5	0%
CB FIN 265	Resilient Flooring - 2nd Flr - Control Bldg	25-Mar-21	07-Apr-21	10	0%
CB FIN 270	Interior Doors & Hardware - 2nd Flr - Cntrl Bldg	25-Mar-21	07-Apr-21	10	0%
CB FIN 275	Bathroom Partitions & Accessories - 2nd Flr - Cntrl Bldg	01-Apr-21	07-Apr-21	5	0%
CB FIN 280	Carpet Flooring - 2nd Flr - Control Bldg	08-Apr-21	14-Apr-21	5	0%
Server Room 221		16-Feb-21	15-Mar-21	20	
TEL 100	Install Telecom Backboard	16-Feb-21	22-Feb-21	5	0%
TEL 105	Punchdown Telecom	23-Feb-21	15-Mar-21	15	0%
Stair A		18-Sep-20	18-Dec-20	65	
STA 100	Erect Risers - Stair A	18-Sep-20	24-Sep-20	5	0%
STA 105	Concrete Pan-Fills & Landings - Stair A	25-Sep-20	01-Oct-20	5	0%
STA 110	Stairwell Handrails - Stair A	02-Oct-20	08-Oct-20	5	0%
STA 115	MEP R/Is - Stair A	13-Nov-20	27-Nov-20	10	0%



Activity ID	Activity Name	Start	Finish	OD	Activity % Complete
STA 120	Stairwell MEP Trimout - Stair A	30-Nov-20	11-Dec-20	10	0%
STA 125	Stairwell Trimout Finishes - Stair A	14-Dec-20	18-Dec-20	5	0%
Stair B		25-Sep-20	06-Jan-21	70	
STB 100	Erect Risers - Stair B	25-Sep-20	01-Oct-20	5	0%
STB 105	Concrete Pan-Fills & Landings - Stair B	02-Oct-20	08-Oct-20	5	0%
STB 110	Stairwell Handrails - Stair B	09-Oct-20	15-Oct-20	5	0%
STB 115	MEP R/Is - Stair B	30-Nov-20	11-Dec-20	10	0%
STB 120	Stairwell MEP Trimout - Stair B	14-Dec-20	28-Dec-20	10	0%
STB 125	Stairwell Trimout Finishes - Stair B	29-Dec-20	06-Jan-21	5	0%
Elevator		04-Feb-21	17-Mar-21	30	
ELEV 100	Set Elevator Equipment	04-Feb-21	10-Feb-21	5	0%
ELEV 105	Set Elevator Cab	11-Feb-21	24-Feb-21	10	0%
ELEV 110	Elevator Finishes	25-Feb-21	10-Mar-21	10	0%
ELEV 115	Elevator Testing	11-Mar-21	17-Mar-21	5	0%
Mid & Late Project Sitework Local to Control Building		07-Jan-21	15-Mar-21	48	
LS 100	Grade Around Control Bldg for Hardscapes	07-Jan-21	20-Jan-21	10	0%
LS 105	Construct Curbs @ Control Bldg	21-Jan-21	03-Feb-21	10	0%
LS 110	Sidewalks & Stoops @ Control Building	04-Feb-21	17-Feb-21	10	0%
LS 115	Stonebase & Stone Grading @ Control Building	18-Feb-21	03-Mar-21	10	0%
LS 120	Asphalt Paving @ Control Building	04-Mar-21	08-Mar-21	3	0%
LS 125	Landscaping @ Control Building	09-Mar-21	15-Mar-21	5	0%
LS 130	Pavement Markings, Parking Finishes & Site Amenities @ Control	09-Mar-21	15-Mar-21	5	0%
Systems Start-Up, Inspections, Testing & Punchlist - Control Building		11-Feb-21	07-May-21	62	
Start-Up & Test Systems		11-Feb-21	21-Apr-21	50	
TEST 100	Start-Up HVAC Equipment	11-Feb-21	15-Feb-21	3	0%
TEST 105	Notify & Schedule DOL Elevator Inspection	18-Mar-21	14-Apr-21	20	0%
TEST 110	Contractor F/A Testing	01-Apr-21	07-Apr-21	5	0%
TEST 115	Test & Balance & Produce TAB Reports	08-Apr-21	21-Apr-21	10	0%
Punchlist & Final Inspections for Occupancy		08-Apr-21	07-May-21	22	
P/L 100	CM Punchlist for Control Building	08-Apr-21	21-Apr-21	10	0%
P/L 105	AE Punchlist & CM Corrections	22-Apr-21	28-Apr-21	5	0%
P/L 110	AE Letter Requesting SCO Final Inspection	29-Apr-21	05-May-21	5	0%
P/L 115	SCO Beneficial Inspection for Occupancy	06-May-21	07-May-21	2	0%
Transition Port Entry to Phase 1C		17-Mar-21	09-Jun-21	60	
1C 100	Test All Inbound and Outbound Gate, OCR & RPM Systems	17-Mar-21	11-May-21	40	0%
1C 110	Transition Fencing to Phase 1C	21-Apr-21	27-Apr-21	5	0%
1C 120	Sawcut & Demo Existing Pavement Phase 1C	28-Apr-21	11-May-21	10	0%
1C 130	Install Owner Furnishings in New Control Building	10-May-21	21-May-21	10	0%
1C 140	Grading & Stonebase & Compaction for Phase 1C	12-May-21	25-May-21	10	0%
1C 150	Owner Occupy New Control Building	19-May-21	25-May-21	5	0%
1C 160	Final Concrete Paving for Phase 1C	26-May-21	02-Jun-21	5	0%
1C 170	Pavement Marking for Phase 1C	03-Jun-21	09-Jun-21	5	0%
Transition Port Entry Operations to Phase 1D		03-Jun-21	29-Jul-21	40	
1D 100	Set Up Temp Fence/Traffic Pattern for Phase 1D & Switch Traffic	03-Jun-21	09-Jun-21	5	0%
1D 110	Sawcut & Demo Pavement	10-Jun-21	16-Jun-21	5	0%
1D 120	Grading & Stonebase & Compaction for Phase	17-Jun-21	30-Jun-21	10	0%
1D 130	Final Concrete Paving for Complete Entrance	01-Jul-21	22-Jul-21	15	0%
1D 140	Final Pavement Marking for Complete Entrance	23-Jul-21	29-Jul-21	5	0%
1D 145	Complete Permanent Fencing	23-Jul-21	27-Jul-21	3	0%
1D 150	Transition Port Inbound & Outbound Traffic to Final Configuration	29-Jul-21	29-Jul-21	1	0%



Activity ID	Activity Name	Start	Finish	OD	Activity % Complete
Phase 2 - Existing Building Demo & Re-Pave		10-Jun-21	09-Aug-21	42	
Pavement & Building Demolition		10-Jun-21	09-Aug-21	42	
2B 105	Erosion Control/Make Safe	10-Jun-21	11-Jun-21	2	0%
2B 100	Demolition of Existing Control Building & Pavements	14-Jun-21	12-Jul-21	20	0%
2B 115	Rework Existing Utilities	13-Jul-21	26-Jul-21	10	0%
2B 110	Construct New Pavement In Place of Demolished Control Building	13-Jul-21	26-Jul-21	10	0%
2B 120	Final Pavement Markings	27-Jul-21	29-Jul-21	3	0%
2B 125	CM Punch & Final Cleanup	30-Jul-21	03-Aug-21	3	0%
FI 100	SCO Inspection for Final Contract Completion	04-Aug-21	09-Aug-21	4	0%



Section Five

General Requirements

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PROJECT SPECIFIC REQUIREMENTS 20

PROJECT SPECIFIC REQUIREMENTS

DEFINITIONS

Where used in these PROJECT SPECIFIC REQUIREMENTS, the following terms are defined as follows:

Project:	Port of Wilmington Upgrades to South Gate Complex
Location:	Wilmington, NC
Owner:	North Carolina State Ports Authority
Architects:	Mott MacDonald Group
Construction Manager:	Barnhill Contracting Company

WORKING HOURS

A. The site will be open from 7:00am to 5:30pm Monday through Friday at a minimum. Work hours may be revised to be in the best interest of the project. If change is required, consult with the Construction Manager.

B. It is agreed that the Subcontractor will utilize weekday overtime, additional shifts, and/or weekends, as necessary to maintain the project schedule at no additional cost to the Project. Subcontractors shall not utilize overtime and weekend work in lieu of providing adequate manpower through the normal workweek.

FIELD OFFICES

A. The Construction Manager will provide field office and telephone for his exclusive use. The project will endeavor to make space available for subcontractor field offices. Each subcontractor is responsible to provide his own field office trailer/up fit, security, telephone and other utilities. The Construction Manager must approve location and availability.

SECURITY

A. Responsibility for the security of materials and facilities shall remain that of the subcontractor, providing/installing same.

TEMPORARY AND REQUIRED FIRE PROTECTION

A. Each subcontractor must provide temporary fire protection system(s) within the immediate area of his work, as required by the local Fire Marshal, local, state and federal and insurance underwriter requirements. Subcontractors welding and/or utilizing a cutting torch or any other operation involving fire potential, shall utilize an individual Fire Watch at all times.

HOISTING AND SCAFFOLDING

A. Training, planning, certification and inspections in accordance with the Project Safety Plan and all OSHA requirements.

B. Subcontractors shall provide all scaffolding, hoisting, ladders or lifts required to complete their scope of work, including professional design services relating to structural loading of the structure.

C. Hoisting/Vertical transportation for men and materials will be furnished by subcontractor. Temporary ladders or stairs to each floor of the building will be furnished by others.

EXISTING STREETS/ACCESS TO WORK

A. Each subcontractor is responsible for the necessary cleaning and repairing of existing streets resulting from said Subcontractor's operations including deliveries of materials or equipment to that subcontractor.

This subcontractor shall be responsible for cleaning trucks prior to leaving the site to prevent the distribution of mud and debris onto private or **City of Wilmington** owned streets.

B. All subcontractors shall be responsible for damage to adjacent existing areas resulting from operations and in performing work under this contract. Damage resulting from the transportation of materials through the grounds shall be repaired by the responsible party or parties.

C. Use of parking on site is limited. Coordinate parking with Construction Manager. Offsite parking if required will be the responsibility of the subcontractor.

D. Any damage to streets, drives, curb and gutters, lawns or structures shall be repaired and or replaced at no cost to the Owner. See Plans for areas that will be removed and must be replaced following installation of new work.

E. All Construction Personnel associated with the project will strictly comply with the Behavior of Construction Personnel as outlined in the Project Specific Requirements contained herein. Any deviation to the required Conduct will be swiftly and severely dealt with by the Construction Manager, including immediate discharge of offending personnel.

F. Subcontractors are prohibited from discharging any waste products from concrete trucks or any other unsuitable materials, fluids or products on the site or into the sewer system. A concrete wash area will be identified at the project site or on surrounding properties.

EXCAVATION — EROSION CONTROL

A. Each subcontractor performing excavation, trenching, etc. must provide and maintain proper shoring, bracing slope protection and access in accordance with OSHA requirements AND the Project Safety Plan. Engineering services required to meet OSHA and SSIPP regulations shall be the responsibility of the subcontractor. Subcontractor is responsible for all notifications to both public and private utility companies for the purpose of locating and protecting existing utility installations.

B. Any land disturbing activity performed by the subcontractor, in connection with the project, shall comply with all erosion control measures set forth in the contract documents and any additional measures which may be required in order to ensure that the project is in full compliance with the Sedimentation Pollution Control Act of 1973, as implemented by Title 15, North Carolina Administrative Code, Chapter 4, Sedimentation Control, Subchapters 4A, 4B and 4C, as amended (15 N.C.A.C 4A, 4B and 4C). In addition, the subcontractor shall comply with the following requirements:

1. Equipment utilized during the construction activity on a site must be operated and maintained in such a manner as to prevent the potential or actual pollution of the surface or ground waters. Fuels, lubricants, coolants, and hydraulic fluids, or any other petroleum products shall not be discharged on to the ground or into surface waters. Spent fluids shall be disposed of in a manner so as not to enter the waters, surface or ground, and in accordance with applicable state and federal disposal regulations. Any spilled fluids shall be cleaned up to the extent practicable and disposed of in a manner so as not to allow their entry into the waters, surface of the ground, storm sewers, or drains on private or public (State) property.

2. Herbicide, pesticide, and fertilizer usage during the construction activity shall be restricted to those materials approved by EPA and shall be used in accordance with label restrictions.

3. Minimum Monitoring and Reporting Requirements (unless otherwise approved in writing) by the Division of Environmental Management shall be complied with. The subcontractor installing any erosion control device shall comply with the following requirements:

   a. All sedimentation and erosion control of facilities shall be inspected by the responsible

subcontractor at least once every **seven (7)** calendar days and within **24 hours** after any storm event of greater than one half inch (0.5") inch of rain per 24-hour period and documented.

b. Storm water runoff discharges shall be inspected by visual observation for color, foam, outfall staining, visible sheen; dry weather flows and muddy water (at the frequency described above) to evaluate the effectiveness of the pollution control facilities or practices. If any visible off-site sedimentation is leaving the site, corrective action shall be taken immediately to reduce the discharge of sediments.

c. The subcontractor shall submit to the Owner & Construction Manager a written report of weekly inspections. Visible sedimentation found off the site shall be recorded with a brief explanation as to the measures taken to prevent future releases as well as any measures taken to clean up the sediment that has left the site. This record shall be made available to NCDENR or authorized agent upon request.

5. The subcontractor shall keep all erosion controls devices and materials in good repair. The Construction Manager / Owner reserve the right, with 24 hours prior notice to the subcontractor to repair any erosion control measures or materials as required, and deduct the cost of those repairs from the sub/trade contractor's application for payment.

OPENINGS, BLOCKING, BACKING AND GROUNDS

A. Unless noted otherwise in the Bid Package Scope of Work Summaries, each Subcontractor must be responsible for furnishing and installing the blocking, backing and grounds necessary for the installation of their work.

B. Each subcontractor must make suitable preparations for the installation of their 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. Each subcontractor must provide and install proper sleeves, boxes, receptacles or chases for all openings or recesses to receive his 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. If required to meet the project schedule or directed by the Construction Manager, this work will be installed on overtime at no additional cost. Core drilling is the responsibility of each subcontractor and will occur only under the supervision of the Construction Manager and with the approval of the Structural Engineer.

EXISTING UTILITIES AND STRUCTURES

A. The term existing utilities shall be deemed to refer to both publicly-owned and privately-owned utilities such as, but not limited to, electric power and lighting, telephone, cable TV, water, gas, storm drains, and sanitary sewers, and all appurtenant structures.

B. Where possible, the pipe alignment has been selected to avoid existing structures (including utility poles and buildings) and utilities.

C. The work shall be carried out in a manner to prevent disruption of existing services and to avoid damage to the existing utilities. Temporary connections shall be provided, as required, to ensure continued operation of existing services. Any damage resulting from the work of this Contract shall be promptly repaired by the subcontractor at his own expense in a manner approved by the Engineer and further subject to the requirements of any authority having jurisdiction. Where it is required by the authority having jurisdiction that they perform their own repairs or have them done by others, the subcontractor

shall be responsible for all cost thereof. Where excavations by the subcontractor require any utility lines or appurtenant structures to be temporarily supported and otherwise protected during the construction work, such support and protection shall be provided by the subcontractor. All such work shall be performed in a manner satisfactory to the Engineer and the respective authority having jurisdiction over such work. In the event that the subcontractor fails to provide proper support of protection to any existing utility, the Engineer may, at his discretion, have the respective authority provide such support or protection as may be necessary to insure the safety of such utility; and the costs of such measures shall be paid by the subcontractor.

FIELD VERIFICATION OF UTILITIES AND INTERFERENCES

A. The subcontractor shall be responsible for field verification of the location and elevation of all utilities and structures which cross the work site or which may be affected by his/her operations. Whenever directed by the Engineer, the subcontractor shall excavate to verify exact locations or elevations of utilities or other interferences in order to assure proper protection of existing utilities or structures. No extra payment will be made for such field verification or any excavations or other work or expense incurred by the subcontractor in properly locating and protecting utilities or other interferences.

CUTTING AND PATCHING

A. The subcontractor shall ensure satisfactory performance of all cutting, fitting or patching that may be required to make the Work come together properly and fit to receive or be received by Work of other subcontractors shown upon or reasonably implied by the drawings and specifications for the completed structure, as the Construction Manager may direct.

B. Any cost brought about by defective or ill-timed Work shall be borne by the party responsible.

C. No subcontractor shall endanger any Work of another such subcontractor by cutting, digging, or other means, nor shall he cut or alter the Work of any other such subcontractor without the consent of the Construction Manager.

D. Prior to cutting, which affects structural safety of project or work of another contractor, submit written notice to The Construction Manager requesting consent of the Architect/Engineer to proceed with cutting, including:

1. Description of affected work and necessity for cutting.
2. Affect on other work on structural integrity of project.
3. Description of proposed work. Designate the scope of cutting and patching; contractor and trades to execute work; products proposed to be used, extent of refinished; required shoring/bracing.
4. Designation of party responsible for cost of cutting and patching.

CLEANING UP

Each subcontractor must:

A. Clean up all waste materials, rubbish and debris resulting from operations on a daily basis to trash receptacles provided for either by this subcontractor or others.

B. Remove grease, dirt, stains, labels, scribe lines, prints and other foreign materials from the interior and exterior surfaces of material, fixtures, hardware and equipment furnished as a part of the subcontract.

C. Repair, patch and touch-up or replace marred surfaces damaged prior to final acceptance by the Owner, in accordance with the requirements of the Contract Documents.

D. The continuous cleanup of waste materials, packaging materials and general debris generated by this subcontractor is the responsibility of this subcontractor. Clean up includes removal of debris from the

building to an area or dumpsters located as designated by the Construction Manager. Designated area or dumpsters may be located on-site or at a location adjacent to the site. Construction Manager will provide dumpsters for project use. In addition, some subcontractors will have dumpster requirements as part of their specific scope of work, subcontractors such as masonry/stone, cast in place concrete, structural steel, intumescent and spray-on fire proofing, roofing, drywall, mechanical and electrical. These contractors may be required to provide their own dumpsters, with specific requirements identified in the bid packages.

COORDINATION DRAWINGS

This project will utilize Building Information Modeling (BIM) to help facilitate the preparation of coordinated drawings for submission to the Architect. This coordination effort will be led by the CMAR with input from all PME trades as described below. (For a more additional info please refer to BIM Coordination Process, located in Section 3):

1. The Subcontractor shall be responsible for creating 3D and 2D coordination shop drawings of all vertical and horizontal work required to responsibly coordinate each trade.

2. The CMAR shall provide a base line 3D model and 2D base line CAD file to base all coordination documents from. This model shall be produced per the contract construction drawings and specs.

3. The order of precedence for location above the ceilings is to be as follows (i.e. Gravity piping systems will take precedence over non-gravity systems): recessed electrical light fixtures, overhead casework or structural supports (modifications not included), plumbing sloped systems, ductwork and above ceiling mounted equipment, electric cable tray, HVAC piping, plumbing piping (domestic water, and special gases), fire protection, and electrical conduit.

4. All ceiling overhead items must be coordinated to provide accessibility to accommodate lower ceiling heights. This subcontractor shall include all necessary offsets, etc., to provide drop downs or other means of providing more accessible overhead devices. All costs associated with relocating above ceiling overhead to more accessible elevations due to improper coordination efforts shall be borne by this subcontractor.

5. An initial "kickoff" meeting will be held prior to the production of any coordination drawings to establish milestone dates, sequencing, resolve major interferences, etc. After that, Weekly Coordination Meetings will be required and scheduled by the CMAR. These meetings will be mandatory for all trades involved in coordination and will continue until all clashes have been resolved.

    i. Each trade/subcontractor shall make each respective team available for one meeting per week (of a minimum 8 hours) for duration of notice of award until all buildings have completed coordination drawings.
        1. Coordination efforts are not to take place strictly on the day of the in-person meeting. Coordination efforts shall be ongoing at all times during the week. The intent of the in-person meetings is to evaluate any major conflicts or areas of concern and to collaborate on the drawings generated over the past week.

6. The CMAR shall publish a list of the required 3D coordination drawings with due dates for each.

7. Subcontractor is responsible for identifying all potential conflicts with building structure systems/elements. Subcontractor shall include all required piping/duct modifications, fittings, etc. to

comply with final system layouts with approved coordination drawings and/or to comply with field conditions for connections to existing utilities at no additional cost to Contractor.

8. After each subcontractor has fulfilled its obligations it shall return the drawings and electronic files to the CMAR. The CMAR shall be responsible for merging the drawings into a single coordination drawing for submittal to the Architect/Engineer for review and comments.

9. Each Subcontractor having input into the production of 3D coordination drawings will be required to sign off on acceptance of the final coordination drawings prior to the commencement of its or other participants work in any given area. All costs attributable to failure of a subcontractor to provide its timely approval of the coordination drawings or failure to cooperate in the production or assembly of input for said drawings shall be borne by such Subcontractor.

10. This coordination activity includes above and below ground work of HVAC, plumbing, fire protection, electronic systems integrator, telecommunications, AV, fire alarm, electrical work, etc. within five feet (5') of the building line.

11. The coordination activity is to include work in all above/below grade, exterior/site, and interior locations.

12. Provide all coordination necessary to be certain that all device outlets are installed level, plumb, and flush with respective finishes.

13. Include all necessary coordination with the architectural model so as to provide all outlet(s) and raceway openings made by the architectural model. This contractor will be solely responsible for all cost associated with repair and/or replacement of architectural feature damaged due to outlet(s) and/or raceway openings being made by him or his subcontractors and or incorrect coordination and direction provided by this subcontractor.

14. All plans (minimum ¼" scale) and sections (3/8" scale) shall show building room layouts, structural steel elements, sprayed fireproofing, pipe with insulation, conduit over one and one-half inch (1½"), racks of more than three (3) pipes or conduit, and all ductwork including insulation thickness, regardless of size.

15. If any subcontractor fails to produce all of its initial 3D coordination drawings within the time allocated, the CM will produce said drawings, and all the costs of producing said drawings will be at the expense of the Subcontractor.

16. The CMAR will determine the method to be used to resolve interference problems not identified prior to execution of the work. The cost of rework and relocations directed by the CM will be the responsibility of the Subcontractor having installed affected items. In the event of a dispute, CMAR's decision will be final.

17. Upon completion of the Coordination Drawings it shall be the responsibility of each subcontractor to provide sufficient copies of the accepted coordination drawings to their respective Superintendents, Foreman's, lower tiered subcontractors and installers in the field. As a minimum each subcontractor shall have (1) set of the accepted coordination drawings on each floor of the project. It is the responsibility of each subcontractor to continually review and communicate with all other Trades in advance of the installation any issues and/or conflicts that require variance from the reviewed and accepted coordinated drawings.

18. Coordination drawings as detailed are included:
    2D Coordination drawings showing all horizontal and vertical dimensions of the work shall be prepared by mechanical, electrical, plumbing and fire protection subcontractor's as well as others as required or designated by the Contract Documents, Scope of Work or as directed by the Construction Manager (CM). This information is to be generated directly from the 3D coordinated model. Additionally, each subcontractor is responsible for getting this information into a usable format for their surveyors.

19. Subcontractor to verify equipment layouts can achieve maintenance needs, coil removals, etc.

20. Subcontractor is responsible for developing all floor and ceiling layout back drop files and shall not assume Architect files will be available for use to develop shop drawings or coordination drawings. As indicated above, any drawings released by the Design Team to the Construction Manager will be made available to the coordinating subcontractors.

21. Completion of the coordination drawing process will be a requirement for pay request release of funds after the allotted specified time period.

22. Right hand vs. left hand equipment to be provided as required and deemed necessary by the Construction Manager during the MEP coordination process. For example, if a condensate riser is installed between two FCU's, one unit shall have the condensate stubbed out the left side of the equipment while the other unit shall be stubbed out the right side of the equipment. The intent of this comment is not to be limited to FCU's; it shall encompass all equipment.

23. In general, each coordinating subcontractor shall have minimum of 3 previous projects that they have created 3D Building Information Models for the purposes of coordination. In addition, have a minimum of three (3) persons on staff that can perform the required 3D modeling responsibilities for this project. If additional manpower is required to maintain schedule, such manpower shall be provided at no cost to the Construction Manager or Owner. Shall a prequalified Subcontractor not meet this requirement, they shall hire a local consultant to complete the work on their behalf; local consultant shall be able to participate in weekly coordination meetings in person (if required.)

24. Upon completion of the MEP coordination efforts, this subcontractor shall continuously maintain as-built drawings as the project progresses. As built drawings shall be distributed to the project team on a monthly basis and shall be updated with changes as issued by the design team. Should drawing changes be issued by the design team and need to be incorporated into the model immediately, Subcontractor agrees to expedite the incorporation of stated drawings into the model as directed by Construction Manager with no overtime charges.

25. At the completion of the submittal process, this Subcontractor shall be responsible to upload all submittal information into the Building Information Model. This includes product data and shop drawings for valves, FCU's, motors, starters, VFD's, AHU's, etc. The format for including this information in the model shall be discussed during the MEP/BIM kickoff meeting.

26. At the completion of the project, as-built drawings shall be completed in the Building Information Model and turned over to the Construction Manager, both in a model compatible with Navisworks as well as 2D CAD drawings.

GENERAL PROTECTION

A. Where work is conducted above or adjacent to existing construction, each subcontractor must protect the

existing construction, as necessary.

B. 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 and then only with approval of the engineer, and installation of adequate protection.

C. 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 require protection of the floors by the trade contractor performing the work or may require relocation to an alternate location, at the discretion of the project superintendent.

D. Smoking, eating and drinking (other than water) will not be permitted in the building or building structure at any time during the construction process. Reference "Behavior of Construction Personnel" for more details and requirements.

E. The subcontractor must not cut, weld or use other open flame or spark producing equipment until the location where the work is to be performed is examined by the subcontractor, adequate protection is provided, and a fire watch is in place.

F. Any trade creating penetrations through existing walls will be required to patch or seal the area adjacent to those penetrations upon completion of work. Provide all caulking, sating and fire stopping as required for sealing penetrations through all walls, ceilings and floors. All penetrations will be sealed to maintain the rating of the wall, ceiling or floor penetrated.

G. The existing walks, landscaping, lighting, utilities, streets, paving, curb and gutter and the like shall be protected from damage and any such damage shall be repaired/replaced regardless of the safeguards employed.

BEHAVIOR OF CONSTRUCTION PERSONNEL

A. The Construction Manager and Owner will not tolerate any unseemly or detrimental behavior from the construction personnel. If such behavior results, the Owner and Construction Manager may demand immediate dismissal of the offending person from the job site. Any incidents of disrespect, verbal abuse, threatening statements, unwelcome comments, unwelcome interaction or any form of harassment from any construction personnel toward any member of the community is strictly prohibited. Any such act shall constitute sufficient cause for the Construction Manager to request removal of any individual permanently from the project. In addition, any subcontractor, his representative or any project personnel who ignores or refuses to take action on any requirements of the contract documents; ignores or refuses to take immediate action to correct any endangerment to the health and safety of the public, as solely determined by the Construction Manager/Owner, then such inaction shall be sufficient cause for the Construction Manager to permanently remove those individuals from the project. Such action taken by the Construction Manager/Owner shall not constitute grounds for a claim. The Construction Manager/Owner will not be responsible for any delays caused to the project due to any individual being removed from the project by the Construction Manager/Owner.

B. No unsanitary actions will be tolerated on the construction site during the project. Any persons caught performing unsanitary actions will be removed from the jobsite immediately at the sole discretion of the Construction Manager.

C. Harassment of any type will not be tolerated and will result in immediate and permanent dismissal from the project. "Cat calls" are grounds for immediate removal from the project.

D. No personal radios or tape decks will be allowed on site.

E. Subcontractor acknowledges that his employees are required to wear shirts with sleeves and covering the entire upper anatomy of the worker, work boots, eye protection and hard hats with Company Logo and the person's name at all times while on site. No shorts will be permitted. Additional personal protective equipment to be utilized as required.

F. All Construction Traffic and personnel will adhere to the Site Logistics Plan and parking policies. Parking of company owned/insured vehicles and lay down areas will be assigned to subcontractors by the Construction Manager based on availability. Subcontractors will be responsible for providing offsite parking and / or transportation for employee personal vehicles. Designated entry and exit roads will be utilized for deliveries and construction personnel. All deliveries must be scheduled with the Construction Manager. Notification and documentation of all deliveries to the project will also be required. All costs associated with off-site storage and transportation of materials is by the subcontractor.

G. All subcontractors and their employees shall not possess or carry, whether openly or concealed, any gun, rifle, or explosive on any property owned by the Owner. This includes firearms locked in containers, vehicles or firearm racks within vehicles.

H. All subcontractors and their employees are prohibited from profane, lewd, obscene or offensive conduct, including engaging in sexual harassment.

I. Subcontractors shall not manufacture, transmit, conspire to transmit, possess, use or be under the influence of any alcoholic or other intoxicating beverage, narcotic drug, hallucinogenic drug, amphetamine, barbiturate, marijuana or anabolic steroids, or possess, use, transmit or conspire to transmit drug paraphernalia on any property owned by the Owner, except pursuant to a drug prescription by a physician.

J. Smoking or use of any tobacco product is prohibited in any enclosed or occupied facility at all times. The use of tobacco products is prohibited at all times on this site in area routinely occupied by staff, and in enclosed areas of unoccupied sites. An enclosed area for construction projects shall be defined as any dried-in area or as designated by the Construction Manager. Smoking shall be located in designated areas only and as directed by Construction Manager.

K. Subcontractors and their employees shall not solicit from or sell within the Owner’s facilities.

L. Operators of all commercial vehicles on any property owned by the Owner shall be subject to post-accident, random, reasonable suspicion and follow-up testing for drugs and alcohol.

M. The subcontractors shall at all times enforce strict discipline and good order among their employees and shall not employ any unfit person or anyone not skilled in the task assigned to them. The Construction Manager or Owner may require the subcontractor to remove any employee that is deemed incompetent, careless, or otherwise objectionable.

LICENSING FOR UTILITY WORK

A. All utility work must be performed by subcontractors licensed to perform that work and should be so indicated on the bid proposal.

SUBMITTALS / SHOP DRAWINGS

A. Submittals and shop drawings will be in accordance with specification requirements and the submittal schedule or as required by the Architect/Engineer. All submittals and shop drawings excluding fully coordinated MEP SHOP drawings, must be submitted within **30 days** of execution of the subcontract or sooner if required by schedule. COORDINATION drawings must be submitted within the required timeline and due dates provided by the CM. Subcontractors are fully responsible for meeting the required submittal dates and allowing for submittal review and resubmittal review time periods.

Submittals and shop drawings, if so permitted and/or required by the Contract documents, may be submitted electronically to the Construction Manager.

B. Shop, erection and setting drawings, certificates, catalog cuts and schedules required for work of various trades, shall be checked before submission as hereafter specified, by technically qualified employees of the contractor for accuracy, completeness, and compliance with contract documents. Shop drawings are defined as drawings in excess of 11x17. Data submittals are sheets from 8.5x11 to 11x17.

C. Shop drawings and samples shall be dated and contain the name of the project, description or names of equipment, materials and items and complete identifications of locations at which materials or equipment are to be installed.

D. No portion of the work shall commence, nor materials ordered, until Architect or Engineer has reviewed shop drawings and samples relative to this portion for compliance. All portions of the work are to be done in accordance with shop drawings and samples bearing the stamp of the Architect or Engineer.

E. Prior to the first shop drawing submittal, each subcontractor shall submit to the Construction Manager, a composite list of all proposed shop drawings and submittals. Schedule will be forwarded to the Architect/Engineer. Identify all items requiring priority review.

F. For all shop drawings, submit one CD of PDF electronic files along with six (6) copies of black line drawings. Each drawing shall have a clear space for stamps. Electronic files will also be acceptable. Contact Construction Manager for final direction.

G. For standard catalog cuts and illustrated items not requiring special shop drawings, submit one CD of PDF electronic files along with six (6) copies for review for compliance with contract documents. Electronic files will also be acceptable. Contact Construction Manager for final direction.

H. Samples

1.) The subcontractor shall be responsible for securing and submitting samples as specified and/or as required by the Architect for his selection and/or review of the products, finish, and colors. Samples shall carry the same identifying items as shop drawings. Minimum Three (3) each of each type of material or color.

2.) The Architect will retain items requiring color selection by the Architect until color samples of all materials requiring color selection have been submitted.

I. **PRE-INSTALLATION CONFERENCE**: Subcontractor shall attend a pre-installation conference conducted by the Construction Manager which may be attended by Architect/Engineer, Owner's representative and Construction Manager's staff as deemed necessary by Contract documents and scope of work. At this conference, subcontractor's personnel, including Project Manager, Superintendent and any other key personnel (including those specifically requested to be in attendance by the Construction Manager) will be introduced and the Scope of work will be discussed along with other key issues such as workmanship, quality control, schedule, safety, logistics, etc.

PROJECT MEETINGS

A. A weekly meeting will be held during progress of the job. The subcontractor is required to have its Project Manager and Superintendent present at these meetings. Information, which must be provided at this meeting, includes:

1. **Written** Status Report indicating the following will be submitted to the Construction Manager by **Noon** of the day before the meeting:

a) Safety Review

b) Quality Program
c) Review of total job schedule, plus two-week look ahead
d) Equipment and Materials Submittal Status, Current Ship Date and Delivery status for equipment and material
e) Job progress
f) RFI Status
g) Coordination Issues

B. The subcontractor shall assure full representation of its company at all job site progress meetings when working on site or when otherwise advised. Representative shall be knowledgeable of the project, their field staff, their field progress, status of equipment and deliveries, work schedule and have the authority to make decisions and commitments to the Construction Manager.

C. In addition to the weekly project meetings, a monthly jobsite progress conference may be held with the owner and designers in attendance. Subcontractor shall be represented at these job progress conferences by both home office and project personnel as directed by the Construction Manager. The purpose of these conferences is to effect coordination, cooperation, and assistance in every practical way toward the end of maintaining progress of the project on schedule and to complete the project within the specified contract time.

SPECIAL PROVISIONS

A. Subcontractor shall visit the Project site to fully acquaint and familiarize itself with the site, surrounding and subsurface conditions and the character of the operations to be carried on at the site, and make such investigations as subcontractor may deem fit or as may be prudent for subcontractor to fully understand the facilities, physical conditions and restrictions attending the Work. It is the intent of this Subcontract that Subcontractor is to furnish for the price, all items required for proper completion of the Work.

B. It is understood and agreed that subcontractor is aware of the necessity of working in cooperation with all the other trades on the Project. It is further understood and agreed that the subcontractor shall perform to Construction Manager's satisfaction at all times with regard to progress and workmanship and to provide sufficient time for the performance of all Work required by the Contract Documents.

C. All safety regulations will be adhered to as required by the local and state codes, the Federal Occupational Safety and Health Act and the Project Safety Plan. Subcontractor will be held liable for any fines levied or delays to the job progress because of his failure to do so.

D. All subcontractors are required to protect and have respect for all adjacent property Owners' fences, entrances, curbs, and green areas. Responsibility and cost of restoration due to subcontractor abuse shall be borne by the subcontractor.

E. Before starting any Work, the Subcontractor shall inspect all surfaces to be finished. He shall notify the Construction Manager in writing of the unsuitability of surfaces for finishing. The commencing of 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.

F. All subcontractors shall provide and maintain quality workmanship and installations. Any Work that is unacceptable, i.e. does not meet specifications, shall be removed and replaced and/or repaired at no additional cost to the Construction Manager or Owner.

G. The subcontractor shall be responsible for protection of his own work. Subcontractor is liable for damage caused by his forces, sub-subcontractors material suppliers, other subcontractors, until such time as the Owner takes full acceptance of the project. It is the responsibility of the subcontractor(s) to protect all work in place. All materials, equipment, furnishings and finishes required to be new shall be in "new condition" at the time of final acceptance. Those that are deemed as not in "new condition" at the sole discretion of the Designer or Owner shall be removed and replaced with new items(s) at no additional

cost to the Owner or Construction Manager.

H. The subcontractor shall in no way interfere with or endanger the pedestrian and vehicular traffic adjacent to and immediately surrounding the project site. Subcontractor shall be fully responsible for all permits, barricades, signage and supervision required for pedestrian/traffic redirection. All requests shall be submitted to the Construction Manager Project Superintendent, prior to proceeding.

I. Adequate and competent supervision will be provided by the subcontractor, on-site at all times when the subcontractor or a sub-subcontractor is performing Work. Supervision cannot be removed from the project without the written permission of the Construction Manager. The name of the subcontractor's superintendent/foreman shall be submitted with qualifications of same prior to start of the Work and shall be approved by the Construction Manager prior to start of the Work. The superintendent/foreman so named by the subcontractor shall be employed by the subcontractor and shall have served in a supervisory capacity on at least one Project of like description and size performed by the subcontractor.

J. Should a conflict be discovered within the Contract Documents, Trade Contractor shall be deemed to have included the greater quantity and/or higher quality.

K. The CM will provide drinking water in the CM Office Trailer. Subcontractor shall also furnish drinking water, coolers, and ice for their personnel.

L. Subcontractor shall replace any safety handrails and barriers taken down or removed during the process of their work and is required fully protect all workers/visitors from any exposure during execution of The Work. Subcontractor must notify the Construction Manager before safety rails, barriers, blockout protection, etc. can be removed, and must proceed in accordance with the Project Safety Plan.

M. Subcontractor shall be responsible for all pumping, demucking and dewatering of their own work or required to perform their work, including rainwater on floors where this subcontractor's operations are in progress and at exterior site excavations or building foundations prior to steel erection, masonry installation or the like.

N. Temporary area lighting per OSHA regulations shall be provided and maintained via the Electrical Subcontractor so designated by the Construction Manager. Task lighting, if required for this subcontractor's work shall be provided by this subcontractor. Subcontractor shall notify the Construction Manager in writing of any area lighting concerns prior to starting work in that area. Temporary power outlets, 110-volt/20 amps will be provided at various locations, utilizing 100 ft maximum distance criteria unless noted otherwise in the Bid Package Scope of Work. Power for electric welding/stud machines will not be provided; subcontractors shall be responsible for providing power for these purposes.

O. Subcontractor is responsible for protection and storage of his work and additional handling. Any available onsite storage space will be coordinated and approved by the Construction Manager. All materials staged/stored in the building shall be placed on pallets in a neat and orderly fashion such that the material maybe moved should it be necessary.

P. All overtime required to obtain project milestones, maintain schedule, and as required for testing and commissioning shall be included in this subcontractor's work.

Q. All applicable taxes and fees associated with this scope of work. This subcontractor shall conform to all tax record keeping and documentation requirements as required by the State of North Carolina.

R. It is understood that this subcontractor, consistent with the terms outlined within the Subcontract Agreement, assumes toward the Construction Manager (CM) and the Owner all obligations that the Construction Manager assumes toward the Owner in the Construction Manager Subcontractor Agreement: Construction Services (Owner Contract) with respect to the work to be performed by the Subcontractor under the Subcontract and that the Construction Manager (CM) shall have the benefits of all rights, redress and

remedies against the Subcontractor that the Owner has against the Construction Manager (CM) under the Owner Contract. The Owner Contract is available for review at contractor's field office upon request. It is the Subcontractor's responsibility to review and familiarize itself with the Owner contract and by executing this Subcontract the Subcontractor represents that it has done so. In the event of a conflict between one or more of the Contract documents, the provision imposing the more demanding term, condition, duty or standard of performance, or the greater limitation on the nature and type of relief or damages allowed to the subcontractor, shall control.

S. Any demolition required for the installation of new work but not noted or shown to be demolished, is the responsibility of the subcontractor installing new work. The word "Contractor" shall mean the trade or subcontractor whose work is governed by the specification section.

T. This subcontractor is responsible for all layout and/or Field Engineering of their Work unless noted otherwise by the Construction Manager. ~~Reference Bid Package 221 Surveying Scope of Work for details regarding CM provided layout, control points, bench marks, etc.~~ Permanent site and building control to be established by the Construction Manager. Permanent building control may be located on adjacent properties. Field measurements are the responsibility of this subcontractor.

U. Subcontractor shall proceed with the utmost caution when excavating, grading, or constructing in the vicinity of existing utilities. The subcontractor shall also notify all public/private utility companies and contractor prior to beginning any excavation work. Subcontractor shall be responsible for locating all public and private utilities in accordance with local requirements and state and federal laws and guidelines and the "Underground Facility Damage & Safety Act". Each subcontractor doing excavation work is responsible for developing an excavation plan prior to commencing excavation. Each subcontractor must provide and maintain proper shoring and bracing for existing underground utilities, sewers and building foundations, encountered during his excavation work, to protect them from collapse or other type of damage, until such time as they are to be removed, incorporated into the new work, or can be properly backfilled upon completion of new work. The subcontractor shall be responsible for the associated cost of any utility interruption and repair due to his excavation. The subcontractor shall immediately restore the service of any utility disrupted due to excavation or other contractor action whatever the circumstance. The subcontractor is required to hand excavate to expose all known or located underground utilities prior to using backhoes, trenchers or motorized excavation equipment.

V. All fastening devices, adhesives, shims, supports, and braces required for a complete installation of the materials and equipment supplied under this Contract shall be provided by this subcontractor. Pipe sleeves and inserts must be placed and checked prior to concrete pours – subcontractor will monitor during concrete pour to insure accuracy.

W. Subcontractor is responsible for notifying all Agencies and Inspectors as required. All cost for additional Inspection Services incurred due to lack of coordination by subcontractor causing unnecessary visits by the Inspection Agency shall be paid by the subcontractor. Subcontractor will contact the inspector and coordinate an inspection schedule with the governing authority so as not to impede construction progress. **Permit** and **Inspection Fees** shall be obtained by the **Owner** (Building Permit/Site Plan Permit/NCDENR Permit) unless otherwise noted or stated elsewhere by the Construction Manager. All Work shall conform to the North Carolina Building Code and other State, local and national codes as are applicable.

Inspections, re-inspections, testing or retesting beyond that normally provided by the Construction Manager or Owner shall be the financial responsibility of the subcontractor requiring same.

X. In connection with its furnishing of the temporary facilities indicated, Construction Manager shall not be liable for conditions beyond the control of Construction Manager which may interrupt, delay or otherwise interfere with the availability of such facilities to Subcontractor. Unless otherwise expressly indicated, the temporary facilities furnished by the Construction Manager shall not be for the exclusive use of subcontractor, but shall be shared by others performing work on the Project. Construction Manager

therefore reserves the exclusive right to schedule the use of any facilities in accordance with its determination as to the needs of the Project, and shall incur no liability as a result thereof.

Y. Construction Manager shall provide subcontractors with temporary portable sanitary facilities for the duration of the Project. Use of the permanent building water closets is strictly prohibited. Anyone using the permanent water closets shall be removed from the Project, and the subcontractors responsible for that person shall clean up the area at his expense.

Z. Temporary Water & Sewer – Temporary water service, including any permits, fees or connection costs, shall be provided to project site by the subcontractor so designated by the Construction Manager unless noted otherwise by the Construction Manager.

AA. Cold Weather Protection – Each subcontractor will provide adequate weather protection and heat in order to maintain a satisfactory work environment.

BB. Liquidated Damages for this project are **$500.00** as Substantial Completion Liquidated Damages for each consecutive calendar day beyond the date of established substantial completion and **$750.00** as Final Completion Liquidated Damages for each consecutive calendar day beyond the date of established final completion. In addition to the foregoing liquidated damages, the CM and Owner may recover utility charges as expressly set forth elsewhere in the Contract documents. The amount of liquidated damages set forth herein above shall not include additional legal or design professional costs that may result from the contractor default. If such legal or design professional costs are incurred by the owner, the contractor shall be liable to the owner for those costs in addition to the liquidated damages amount set forth herein above.

CC. All agents and workers of the contractor and its subcontractors shall wear identification badges at all times they are on the owner's property. The identification badges shall at a minimum display the company name, telephone number, employee name and a picture of the employee.

ADMINISTRATIVE REQUIREMENTS

A. The subcontractor shall obtain and submit any required Permits not specifically noted under Special Provisions, Item W that may be required to complete scope of work (unless noted otherwise by the Construction Manager), Insurance Certificates and Payment and Performance Bond Documents (as applicable) prior to starting Work on the project.

B. This subcontractor shall submit a complete listing of the Subcontractor's Tier I, II or III subcontractors, material and/or labor suppliers **two (2) weeks** after receipt of a contract. 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. In case emergency contact is required, the subcontractor shall furnish the Owner and Construction Manager with the names, pager numbers, and telephone numbers (day and night) of the Subcontractor's project manager and superintendent. The numbers shall remain current or be updated as required for the duration of the project. The subcontractor shall be responsible for the security and safety of the project. The Owner must approve any "watchman" service instituted by the subcontractor.

C. A **Schedule of Values** is required to be submitted with each Pay Application on an AIA G703 continuation sheet. All subcontractors shall include the following line items in their schedule of values. A final list of items to be included in the schedule of values will be provided by the Construction Manager. Required percentages will be provided per addenda if applicable.

FORM OF SUBMITTAL FOR SCHEDULE OF VALUES:

1. Mobilization

2. Insurance
3. Bond (if applicable)
4. Submittals
5. Project Meeting Attendance
6. Project Safety
7. Schedule/Milestone Date Adherence
8. Timely Paperwork Processing
9. Daily Clean-up
10. Punchlist
11. Project Closeout
12. Cost of Work Breakdown by Labor & Material for each respective Area

PREPARING SCHEDULE OF VALUES:

Itemize separate line item cost for work required. Round off figures to the nearest dollar. Make sum of total costs of all items listed in schedule equal to total contract sum. Itemize separate line item costs for labor and materials. After review by Construction Manager, Designer and Owner, revise and resubmit Schedule of Values as required and as directed by CM.

D. When subcontractor proposes to sub-let portions of its Work, approval of the Construction Manager is required. Subcontractor shall remain responsible for all it's Work, regardless of whether it is performed by Subcontractor or its subcontractors. Subcontractor shall be responsible for assuring the sub-subcontractor maintains adequate insurance and safety programs.

E. If approval is granted to allow portions of the subcontractor's Work to be sub-let, the second/third tier contractor will adhere to all rules and requirements of subcontractor. Supervision, in the employ of the Tier I Subcontractor, shall be present at all times work is performed under that Subcontract.

F. CM will provide digital Contract Documents upon request by Subcontractor.

G. Daily Work Reports are required to be turned in daily to the Construction Manager by 12:00 P. M. of the following work day. Daily reports shall include total number of crew members, weather description, work description, safety, total man-hours worked along with equipment hours utilized. Reports may be submitted electronically but will be subject to same submittal requirements and timeframe. Contact Construction Manager for required and final details for submittal requirements.

H. Subcontractor shall maintain on the jobsite, one set of drawings on which to record, on a day-to-day basis, a record of work in place that is at variance with the contract documents. Such variations shall be fully noted on final as-built drawings. Final as-built documents will be submitted in both hard copy and electronic form.

I. For the purpose of determining extent of delay attributable to unusual weather, subcontractors shall submit their requests in accordance with the requirements of the Owner Contract. Rain days to be included in subcontractor’s base bid contract utilizing the national average for the jobsite location and actual rainfall as recorded at the local airport or per Contract Documents as required.

J. Payment for stored materials that are stored within the project limits is on a case-by-case basis and requires written consent of the Owner and Construction Manager. Proof of insurance and a bill of sale must be provided.

K. All Insurance companies providing coverage to subcontractors or sub-subcontractors shall be a

company or companies licensed to do business in North Carolina.

INTENT AND EXECUTION:

A. Intent and Execution of Documents

Contract Documents are Complementary.

The Contract Documents are intended to be read as a whole, and any Work required by one part and not mentioned in another (e.g., item shown in drawing and not mentioned in the specifications, or mentioned in the specifications and not shown in drawing), shall be executed to the same extent as though required by all. The addition, omission or incorrect placement of a word or character in one part of the Subcontract shall not change the intent of the Subcontract as a whole, and shall not constitute the basis for a claim by the subcontractor for an increase in the Subcontract Amount or an extension of time within which to perform and complete the Work. In the event of a conflict between one or more provisions of the Contract Documents, the provision imposing the more demanding term, condition, duty or standard of performance, or the greater limitation on the nature and type of relief or damages allowed to subcontractor, shall control. A conflict exists in the Contract Documents when the same subject matter is addressed by two or more provisions of the Contract Documents in a manner that cannot be reconciled to give effect to all provisions. In the various parts of the Contract Documents where reference is made to applicable codes and standards, the Work shall, except as otherwise specified, conform to the latest issue of the referenced code or standard available at the time the Work is performed.

All the work shall conform to the contract documents. Where more detail information is needed, or when an interpretation of the contract documents is required, the subcontractor shall refer the matter in writing to the Construction Manager prior to proceeding with the work. The designer shall furnish the sub, through the Construction Manager, an interpretation in writing. If the subcontractor discovers errors, inconsistencies, discrepancies or omissions in the contract documents, the subcontractor shall inform the Construction Manager of such condition prior to proceeding with the work.

If prior to bid, the subcontractor realizes errors, inconsistencies, discrepancies or omissions in the contract documents that is not resolved by the order of precedence, the subcontractor shall request clarifications from the Construction Manager and shall include in the bid price all work required to deliver a complete, fully operational and ready to use system. **If inconsistencies, discrepancies or contradictions in the contract documents are discovered after the bid that cannot be resolved by the order of precedence then the subcontractor shall be deemed by submittal of his bid, to have bid the most costly as to labor, materials, duration, sequence and method of construction to provide the work**.

All manufactured items or fabricated assemblies shall carry an Underwriters Laboratories approval or third party testing-listing-labeling that is in conformance with NC Building Codes and meets the full approval of the City/County Inspectors responsible for this project.

B. Clarification and Detail Drawings:

If the subcontractor realizes errors, inconsistencies, discrepancies or omissions in the contract documents, the subcontractor shall inform the Construction Manager of such condition prior of proceeding with the Work. The designer shall furnish the subcontractor, through the Construction Manager, written clarification in a reasonable time, so as not to impact the progress of the work. Clarifications for inconsistencies, discrepancies, or contradictions shall not be a basis for deductive or additive change orders.

C. Clarification of Change Orders:

The change order cost breakdown shall include: Labor ($/hr) and material ($ ea, lf, sq./ft., etc.) quantities, unit prices (as listed in the contract documents) including such breakdowns for work performed by the subcontractors and the cost extensions for the labor and material quantities. The cost extensions shall be added into a labor and material subtotal. The labor shall then show a percentage for labor burden, the materials shall show the applicable state sales tax. These subtotals shall then be shown as a total for labor and material costs. The labor and material cost shall then show the allowed mark-up

(Maximum combined **15%** O & P for ADDS and no less than **15%** O & P for CREDITS), and a final total. Subcontractor quotes shall be presented in the same format on the subcontractor's letterhead. Failure by the subcontractor to provide the information requested in this paragraph shall result in rejection of the change order by the designer and a request for resubmittal. Delay in the processing of the change order due to lack of proper submittal by the subcontractor in accordance with this paragraph, or due to errors in the change order calculations shall not constitute grounds for a time extension or basis for a claim. Subcontractor responsible for submitting all changes on required change proposal form with all required auditable backup documentation. Reference change proposal form(s) in Section Seven of the Project Bid Manual.

D. Clarification of Final Payment:
Final Payment to the subcontractor shall also be contingent on the furnishing of satisfactory evidence to the Construction Manager that there are no claims, obligations, and liens outstanding or unsatisfied for labor, services, materials, equipment, taxes or other items performed, furnished or incurred in connection with the Work.

E. The period of Warranty and Guarantee as detailed in the Owner Contract is for a period of **twelve (12)** months following the date of substantial completion of the work and beneficial occupancy, whereby the Subcontractor unconditionally warrants and guarantees all materials and workmanship against patent defects arising from faulty materials, faulty workmanship or negligence for a period of **twelve (12)** months following the date of substantial completion of the Work and beneficial occupancy and shall replace such defective materials or workmanship without cost to the CM or Owner.

Unless otherwise noted or required, GS 143-134.2 shall apply to any claims filed by the Subcontractor involving the Owner.

F. Except with the Owner's prior approval, payments allocated to Subcontractors shall be subject to **retention of five (5%)**. When the project is fifty (50%) percent complete, the owner, with written consent of the surety, shall not retain any further retainage from periodic payments due the contractor if the contractor continues to perform satisfactorily and any nonconforming work identified in writing prior to that time by the architect, engineer, or owner has been corrected by the contractor and accepted by the architect, engineer, or owner. If the owner determines the contractor's performance is unsatisfactory, the owner may reinstate retainage for each subsequent periodic payment application as authorized in this subsection up to the maximum amount of five percent (5%). The project shall be deemed fifty percent (50%) complete when the contractor's gross project invoices, excluding the value of materials stored off-site, equal or exceed fifty percent (50%) of value of the contract, except the value of stored materials stored on-site shall not exceed twenty percent (20%) of the contractor's gross project invoices for the purpose of determining whether the project is fifty percent (50%) complete. A subcontract on a contract governed by this section may include a provision for the retainage on periodic payments made by the prime contractor to the subcontractor. However, the percentage of the payment retained shall be paid to the subcontractor under the same terms and conditions as provided in the General Assembly of NC Session Law 2007-365, and shall not exceed the percentage of retainage on payments made by the owner to the prime contractor. Also, any percentage of retainage on payments made by the prime contractor to the subcontractor that exceeds the percentage of retainage on payments made by the owner to the prime contractor shall be subject to interest paid by the prime contractor to the subcontractor at the rate of one percent (1%) per month or fraction thereof. Reference General Assembly of NC Session Law 2007-365 for more information if needed as it relates to this section.

G. Project Closeout Requirements
- Complete construction and provide start-up testing of equipment
- Conduct a final walk-through inspection to ensure completion of punch list items
- Provide on-site instruction and training as required
- Remove all temporary facilities and utilities
- Repair or replace property damaged by construction activities or temporary facilities
- Complete final cleaning activities
- Submit as-built drawings and other record documents in required quantity, in addition to hard

copies, all closeout documents will be required to be submitted in a to be specified electronic format.
- Store spare parts and products and submit list of items stored
- Provide sets in the required quantity of O&M data, spare parts lists, warranties, guarantees, instruction manuals, users manuals, etc. for equipment provided and as required by the Contract Documents
- Submit a final billing with final release of lien and other required paperwork for processing
- Submit a list that includes name, address, and telephone number of each entity installing product or equipment. Include local representatives and service organizations most convenient to the Project site.
- MWBE Closeout documents and reports

H. As-Built Drawing Requirements
- The initials of the person making the entry and the date change shall be recorded for each revision
- All construction changes authorized by change order and not incorporated into the Contract Documents shall be recorded
- Dimensions of buried or concealed Work not originally shown on the drawings shall be indicated.
- Drawings shall be protected in a secure fireproof housing

I. Project Punch List Requirements
- Subcontractor shall resolve all CM, A/E, Owner punch list items as required and as a condition of payment.

E-VERIFY GUIDELINES

A. Applicable Laws. This Contract and the relationship of the parties shall be governed by the laws of the state of North Carolina. Contractor shall comply with all applicable laws and regulations in providing services under this Contract. Contractor shall not employ any individuals to provide services to the Owner who are not authorized by federal law to work in the United States. The Contractor represents that it is aware of and in compliance with the Immigration Reform and Control Act and North Carolina law (Article 2 of Chapter 64 of the North Carolina General Statutes) requiring use of the E-Verify system. The Contractor further warrants that it will use the E-Verify system to verify employment eligibility of all its employees throughout the term of this Contract, and that it will remain in compliance with all I-9 requirements throughout the term of this Contract. The Contractor shall also ensure that any subcontractors use the E-Verify system at all times while providing subcontracted services in connection with this Contract. Contractor is responsible for providing affordable health care coverage to all of its full-time employees providing services to the school system. The definitions of "affordable coverage" and "full-time employee" are governed by the Affordable Care Act and accompanying IRS and Treasury Department regulations.

B. Lunsford Act/ Criminal Background Checks. Contractor also acknowledges that G.S. § 14-208.18 prohibits anyone required to register as a sex offender under Article 27A of Chapter 14 of the General Statutes from knowingly being on the premises of any school. The Contractor shall conduct or arrange to have conducted, at its own expense, sexual offender registry checks on each of its employees, agents, ownership personnel, or contractors ("contractual personnel") who will engage in any service on or delivery of goods to school system property or at a school-system sponsored event, except checks shall not be required for individuals who are solely delivering or picking up equipment, materials, or supplies at: (1) the administrative office or loading dock of a school; (2) non-school sites; (3) schools closed for renovation; or (4) school construction sites. The checks shall include at a minimum check of the State Sex Offender and Public Protection Registration Program, the State Sexually Violent Predator Registration Program, and the National Sex Offender Registry ("the Registries"). For the Contractor's convenience only, all of the required registry checks may be completed at no cost by accessing the United States Department of Justice Sex Offender Public Website at http://www.nsopw.gov/. The Contractor shall provide certification on the Sexual Offender Registry Check Certification Form that the registry checks were conducted on each of its contractual personnel providing services or delivering goods under this Agreement prior to the commencement of

such services or the delivery of such goods. The Contractor shall conduct a current initial check of the registries (a check done more than 30 days prior to the date of this Agreement shall not satisfy this contractual obligation). In addition, the Contractor agrees to conduct the registry checks and provide a supplemental certification form before any additional contractual personnel are used to deliver goods or provide services pursuant to this Agreement. The Contractor further agrees to conduct annual registry checks of all contractual personnel and provide annual certifications at each anniversary date of this Agreement. The Contractor shall not assign any individual to deliver goods or provide services pursuant to this Agreement if said individual appears on any of the listed registries. The Contractor agrees that it will maintain all records and documents necessary to demonstrate that it has conducted a thorough check of the registries as to each contractual personnel, and agrees to provide such records and documents to the Owner upon request. The Contractor specifically acknowledges that the Owner retains the right to audit these records to ensure compliance with this section at any time in the Owner's sole discretion. Failure to comply with the terms of this provision shall be deemed a material breach of the Agreement. In addition, the Owner may conduct additional criminal records checks at the Owner's expense. If the Owner exercises this right to conduct additional criminal records checks, the Contractor agrees to provide within seven (7) days of request the full name, date of birth, state of residency for the past ten years, and any additional information requested by the Owner for all contractual personnel who may deliver goods or perform services under this Agreement. The Contractor further agrees that it has an ongoing obligation to provide the Owner with the name of any new contractual personnel who may deliver goods or provide services under the Agreement. The Owner reserves the right to prohibit any contractual personnel of the Contractor from delivering goods or providing services under this Agreement if the Owner determines, in its sole discretion, that such contractual personnel may pose a threat to the safety or well-being of students, school personnel or others.

END OF SECTION

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2011

SESSION LAW 2012-175
HOUSE BILL 1052

AN ACT TO MAKE VARIOUS AMENDMENTS TO NORTH CAROLINA'S MECHANICS LIEN AND PAYMENT BOND LAWS, AS RECOMMENDED BY THE LEGISLATIVE RESEARCH COMMISSION'S MECHANICS LIENS ON REAL PROPERTY COMMITTEE.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 44A-7 reads as rewritten:

"**§ 44A-7. Definitions.**

Unless the context otherwise ~~requires in this Article:~~requires, the following definitions apply in this Article:

(1) Contractor. – A person who contracts with an owner to improve real property.

(2) First tier subcontractor. – A person who contracts with a contractor to improve real property.

~~(1)~~(3) ~~"Improve" means to~~ Improve. – To build, effect, alter, repair, or demolish any improvement upon, connected with, or on or beneath the surface of any real property, or to excavate, clear, grade, fill or landscape any real property, or to construct driveways and private roadways, or to furnish materials, including trees and shrubbery, for any of such purposes, or to perform any labor upon such improvements, and shall also mean and include any design or other professional or skilled services furnished by architects, engineers, land surveyors and landscape architects registered under Chapter 83A, 89A or 89C of the General Statutes, and rental of equipment directly utilized on the real property in making the improvement.

~~(2)~~(4) ~~"Improvement" means all~~ Improvement. – All or any part of any building, structure, erection, alteration, demolition, excavation, clearing, grading, filling, or landscaping, including trees and shrubbery, driveways, and private roadways, on real property.

(5) Obligor. – An owner, contractor, or subcontractor in any tier who owes money to another as a result of the other's partial or total performance of a contract to improve real property.

~~(3)~~(6) ~~An "owner" is a~~ Owner. – A person who has an interest in the real property improved and for whom an improvement is made and who ordered the improvement to be made. "Owner" includes successors in interest of the owner and agents of the owner acting within their authority.

~~(4)~~(7) ~~"Real property" means the~~ Real property. – The real estate that is improved, including lands, leaseholds, tenements and hereditaments, and improvements placed thereon.

(8) Second tier subcontractor. – A person who contracts with a first tier subcontractor to improve real property.

(9) Third tier subcontractor. – A person who contracts with a second tier subcontractor to improve real property."

SECTION 2. G.S. 44A-11 reads as rewritten:

"**§ 44A-11. Perfecting claim of lien on real property.**

(a) Perfection. – A claim of lien on real property granted by this Article shall be perfected as of the time provided in G.S. 44A-10 upon the ~~filing of the claim of lien on real~~

~~property under G.S. 44A-12 and may be enforced pursuant to G.S. 44A-13.~~occurrence of all of the following:

(1) Service of a copy of the claim of lien on real property upon the record owner of the real property claimed to be subject to the claim of lien and, if the claim of lien on real property is being asserted pursuant to G.S. 44A-23, also upon the contractor through which subrogation is being asserted.

(2) Filing of the claim of lien on real property under G.S. 44A-12.

(b) Method of Service. – Service of the claim of lien on real property pursuant to subsection (a) of this section shall not require proof of actual receipt by the listed recipient and shall be complete upon the occurrence of any of the following:

(1) Personal delivery of a copy of the claim of lien on real property upon the recipient.

(2) Deposit of a copy of the claim of lien on real property in a postpaid, properly addressed wrapper in either of the following:

a. A post office or official depository under the exclusive care and custody of the United States Postal Service.

b. An authorized depository under the exclusive care and custody of a designated delivery service authorized pursuant to 26 U.S.C. § 7502(f)(2).

(c) Service Address. – For purposes of this section, a wrapper addressed to a party required to be served under subdivision (1) of subsection (a) of this section shall be conclusively deemed properly addressed if it uses any of the following addresses:

(1) The address for the party to be served listed on the permit issued for the improvement.

(2) The address for the party to be served listed with the tax rolls for any county in North Carolina.

(3) The address of the registered agent for the party to be served listed with the North Carolina Secretary of State's office."

SECTION 3. G.S. 44A-12(c) reads as rewritten:

"**§ 44A-12. Filing claim of lien on real property.**

…

(c) Contents of Claim of Lien on Real Property to Be Filed. – All claims of lien on real property must be filed using a form substantially as follows:

CLAIM OF LIEN ON REAL PROPERTY

(1) Name and address of the person claiming the claim of lien on real property:

(2) Name and address of the record owner of the real property claimed to be subject to the claim of lien on real property at the time the claim of lien on real property is ~~filed:~~filed and, if the claim of lien on real property is being asserted pursuant to G.S. 44A-23, the name of the contractor through which subrogation is being asserted:

(3) Description of the real property upon which the claim of lien on real property is claimed: (Street address, tax lot and block number, reference to recorded instrument, or any other description of real property is sufficient, whether or not it is specific, if it reasonably identifies what is described.)

(4) Name and address of the person with whom the claimant contracted for the furnishing of labor or materials:

(5) Date upon which labor or materials were first furnished upon said property by the claimant:

(5a) Date upon which labor or materials were last furnished upon said property by the claimant:

(6) General description of the labor performed or materials furnished and the amount claimed therefor:

I hereby certify that I have served the parties listed in (2) above in accordance with the requirements of G.S. 44A-11.

_____

Lien Claimant

Filed this ____ day of ____, ____

Clerk of Superior Court

A general description of the labor performed or materials furnished is sufficient. It is not necessary for lien claimant to file an itemized list of materials or a detailed statement of labor performed."

SECTION 4. G.S. 44A-13 is amended by adding new subsections to read:

"**§ 44A-13. Action to enforce claim of lien on real property.**

…

(d) Former Owner Not a Necessary Party to Action. – In an action brought under this section, a former owner of the improved property at the time the lien arose, who holds no ownership interest in the property at the time the action is commenced and against whom the plaintiff seeks no relief, is not a necessary party to the action.

(e) Subsequent Purchaser and Lender Not Necessary or Proper Parties to Action Filed After Claim of Lien Is Discharged. – If a claim of lien on real property filed under this Article is discharged pursuant to G.S. 44A-16(a)(5) or G.S. 44A-16(a)(6) prior to the filing of an action to enforce the claim of lien under this section, then neither a subsequent purchaser of the real property upon which the lien is claimed nor the subsequent purchaser's lender shall be a necessary or proper party to the action. However, nothing herein precludes the lien claimant from asserting any claims against any party that are separate and distinct from enforcement of the lien.

(f) Subsequent Purchaser and Lender No Longer Necessary or Proper Parties Upon Discharge of Claim of Lien After Action Is Filed. – If an action to enforce a lien under this section is commenced before the claim of lien is discharged pursuant to G.S. 44A-16(a)(5) or G.S. 44A-16(a)(6), a subsequent purchaser of the real property upon which the lien is claimed and the subsequent purchaser's lender shall cease to be a necessary or proper party to the action, and any claim for lien enforcement asserted against the subsequent purchaser of the real property upon which the lien is claimed or the subsequent purchaser's lender shall be dismissed upon motion of any party upon a showing that the claim of lien was discharged pursuant to G.S. 44A-16. However, nothing herein precludes the lien claimant from continuing to pursue any claims against any party that are separate and distinct from enforcement of the lien.

(g) Bonds Prohibited From Requiring Subsequent Purchaser or Lender to Remain Parties to Action After Discharge of Claim of Lien. – The fact that a subsequent purchaser of the real property upon which the lien is claimed or the subsequent purchaser's lender is not a party to an action to enforce a claim of lien on real property subsequent to discharge of that claim of lien by the contractor under G.S. 44A-16 shall not invalidate the claim of lien under this Chapter, nor shall it invalidate any bond filed under G.S. 44A-16 to discharge the claim of lien. Further, a bond filed under G.S. 44A-16(a)(6) shall not require that a subsequent purchaser of the real property upon which the lien is claimed or the subsequent purchaser's lender remain a party to an action to enforce a claim of lien after the claim of lien has been discharged pursuant to G.S. 44A-16.

(h) Definition of "Subsequent Purchaser." – For purposes of this section, a "subsequent purchaser" means a party whose record interest is protected under G.S. 47-18, including any beneficiary of a deed of trust or mortgagee of that party, the priority of whose interest is protected under the provisions of G.S. 47-20, and who was not the owner of the real property at the time of the improvements giving rise to the lien claim as defined in G.S. 44A-7(6)."

SECTION 5. G.S. 44A-17 is repealed.

SECTION 6. G.S. 44A-18 reads as rewritten:

"**§ 44A-18. Grant of lien upon funds; subrogation; perfection.**

~~Upon compliance with this Article:~~

~~(1)~~(a) A first tier subcontractor who furnished labor, materials, or rental equipment at the site of the improvement shall ~~be entitled to~~ have a lien upon funds that are owed to the contractor with whom the first tier subcontractor dealt and that arise out of the improvement on which the first tier subcontractor worked or furnished materials.

~~(2)~~(b) A second tier subcontractor who furnished labor, materials, or rental equipment at the site of the improvement shall ~~be entitled to~~have a lien upon funds that are owed to the first tier subcontractor with whom the second tier subcontractor dealt and that arise out of the improvement on which the second tier subcontractor worked or furnished materials. A second tier subcontractor, to the extent of the second tier subcontractor's lien provided in this subdivision, shall also be ~~entitled to be~~ subrogated to the lien upon funds of the first tier

subcontractor with whom the second tier contractor dealt provided for in subdivision (1) of this section and shall ~~be entitled to~~ perfect it by service of the notice of claim of lien upon funds to the extent of the claim.

~~(3)~~(c) A third tier subcontractor who furnished labor, materials, or rental equipment at the site of the improvement shall ~~be entitled to~~have a lien upon funds that are owed to the second tier subcontractor with whom the third tier subcontractor dealt and that arise out of the improvement on which the third tier subcontractor worked or furnished materials. A third tier subcontractor, to the extent of the third tier subcontractor's lien upon funds provided in this subdivision, shall also ~~be entitled to~~ be subrogated to the lien upon funds of the second tier subcontractor with whom the third tier contractor dealt and to the lien upon funds of the first tier subcontractor with whom the second tier subcontractor dealt to the extent that the second tier subcontractor is ~~entitled to be~~ subrogated thereto, and in either case shall ~~be entitled to~~ perfect ~~the same~~it by service of the notice of claim of lien upon funds to the extent of the claim.

~~(4)~~(d) Subcontractors more remote than the third tier who furnished labor, materials, or rental equipment at the site of the improvement shall ~~be entitled to~~have a lien upon funds that are owed to the person with whom they dealt and that arise out of the improvement on which they furnished labor, materials, or rental equipment, but such remote tier subcontractor shall not be entitled to subrogation to the rights of other persons.

~~(5)~~(e) The liens upon funds granted under this section shall secure amounts earned by the lien claimant as a result of having furnished labor, materials, or rental equipment at the site of the improvement under the contract to improve real property, including interest at the legal rate provided in G.S. 24-5, whether or not such amounts are due and whether or not performance or delivery is complete. In the event insufficient funds are retained to satisfy all lien claimants, subcontractor lien claimants may recover the interest due under this subdivision on a pro rata basis, but in no event shall interest due under this subdivision increase the liability of the obligor under G.S. 44A-20.

~~(6)~~(f) A lien upon funds granted under this section arises, attaches, and is ~~perfected~~effective immediately upon the first furnishing of labor, materials, or rental equipment at the site of the improvement by a subcontractor. Any lien upon funds granted under this section is perfected upon the giving of notice of claim of lien upon funds in writing to the obligor as provided in ~~G.S. 44A-19 and shall be effective upon the obligor's receipt of the notice. The subrogation rights of a first, second, or third tier subcontractor to the claim of lien on real property of the contractor created by Part 1 of Article 2 of this Chapter are perfected as provided in G.S. 44A-23.~~ G.S. 44A-19.

(g) Until a lien claimant gives notice of a claim of lien upon funds in writing to the obligor as provided in G.S. 44A-19, any owner, contractor, or subcontractor against whose interest the lien upon funds is claimed may make, receive, use, or collect payments thereon and may use such proceeds in the ordinary course of its business."

SECTION 7. G.S. 44A-19 reads as rewritten:

"**§ 44A-19. Notice of claim of lien upon funds.**

(a) Notice of a claim of lien upon funds shall set forth all of the following information:

(1) The name and address of the person claiming the lien upon funds.

(2) A general description of the real property improved.

(3) The name and address of the person with whom the lien claimant contracted to improve real property.

(4) The name and address of each person against or through whom subrogation rights are claimed.

(5) A general description of the contract and the person against whose interest the lien upon funds is claimed.

(6) The amount of the lien upon funds claimed by the lien claimant under the contract.

(b) All notices of claims of liens upon funds by first, second, or third tier subcontractors must be given using a form substantially as follows:

NOTICE OF CLAIM OF LIEN UPON FUNDS BY FIRST, SECOND, OR THIRD TIER SUBCONTRACTOR

To:

1._____, owner of property involved.

(Name and address)

2._____, ~~general~~ contractor.

(Name and address)
3._____, first tier subcontractor against or through
(Name and address) whom subrogation is claimed, if any.
4._____, second tier subcontractor against or through
(Name and address) whom subrogation is claimed, if any.
General description of real property ~~where~~on which labor performed or material furnished:
_____
_____
_____
General description of undersigned lien claimant's contract including the names of the parties thereto:
_____
_____
The amount of lien upon funds claimed pursuant to the above described contract:
$_____
The undersigned lien claimant gives this notice of claim of lien upon funds pursuant to North Carolina law and claims all rights of subrogation to which he is entitled under Part 2 of Article 2 of Chapter 44A of the General Statutes of North Carolina.
Dated_____
_____, Lien Claimant
_____
(Address)

(c) All notices of claims of liens upon funds by subcontractors more remote than the third tier must be given using a form substantially as follows:

NOTICE OF CLAIM OF LIEN UPON FUNDS BY SUBCONTRACTOR MORE REMOTE THAN THE THIRD TIER

To:
_____, person holding funds against which lien upon funds is claimed.
(Name and Address)
General description of real property ~~where~~on which labor performed or material furnished:_____
_____
_____
General description of undersigned lien claimant's contract including the names of the parties thereto:
_____
_____
The amount of lien upon funds claimed pursuant to the above described contract:
$ _____
The undersigned lien claimant gives this notice of claim of lien upon funds pursuant to North Carolina law and claims all rights to which he or she is entitled under Part 2 of Article 2 of Chapter 44A of the General Statutes of North Carolina.
Dated:_____
_____, Lien Claimant
(Address)

(d) Notices of claims of lien upon funds under this section shall be served upon the obligor by personal delivery or in any manner authorized by Rule 4 of the North Carolina Rules of Civil Procedure. A copy of the notice of claim of lien upon funds shall be attached to any claim of lien on real property filed pursuant to ~~G.S. 44A-20(d) or G.S. 44A-23.~~G.S. 44A-20(d).

(e) Notices of claims of lien upon funds shall not be filed with the clerk of superior court and shall not be indexed, docketed, or recorded in any way as to affect title to any real property, except a notice of a claim of lien upon funds may be filed with the clerk of superior court under either of the following circumstances:

(1) When the notice of claim of lien upon funds is attached to a claim of lien on real property filed pursuant to ~~G.S. 44A-20(d) or G.S. 44A-23.~~G.S. 44A-20(d).

(2) When the notice of claim of lien upon funds is filed by the obligor for the purpose of discharging the claim of lien upon funds in accordance with G.S. 44A-20(e).

(f) Filing a notice of claim of lien upon funds pursuant to subsection (e) of this section is not a violation of G.S. 44A-12.1."

SECTION 8. G.S. 44A-20 reads as rewritten:

"**§ 44A-20. Duties and liability of obligor.**

(a) Upon receipt of the notice of claim of lien upon funds provided for in this Article, the obligor shall be under a duty to retain any funds subject to the lien or liens upon funds under this Article up to the total amount of such liens upon funds as to which notices of claims of lien upon funds have been received.

(b) If, after the receipt of the notice of claim of lien upon funds to the obligor, the obligor makes further payments to a contractor or subcontractor against whose interest the lien or liens upon funds are claimed, the lien upon funds shall continue upon the funds in the hands of the contractor or subcontractor who received the payment, and in addition the obligor shall be personally liable to the person or persons entitled to liens upon funds up to the amount of such wrongful payments, not exceeding the total claims with respect to which the notice of claim of lien upon funds was received prior to payment.

(c) If an obligor makes a payment after receipt of notice of claim of lien on funds and incurs personal liability under subsection (b) of this section, the obligor shall be entitled to reimbursement and indemnification from the party receiving such payment.

(d) If the obligor is an owner of the property being improved, the lien claimant shall be entitled to a claim of lien upon real property upon the interest of the obligor in the real property to the extent of the owner's personal liability under subsection (b) of this section, which claim of lien on real property shall be enforced only in the manner set forth in G.S. 44A-7 through G.S. 44A-16 and which claim of lien on real property shall be entitled to the same priorities and subject to the same filing requirements and periods of limitation applicable to the contractor. The claim of lien on real property is perfected as of the time set forth in G.S. 44A-10 upon the filing of the claim of lien on real property pursuant to G.S. 44A-12. A lien waiver signed by the contractor prior to the commencement of an action to enforce a perfected claim of lien on real property granted under G.S. 44A-23 waives the subcontractor's right to enforce the contractor's claim of lien on real property, but does not affect the subcontractor's right to a claim of lien on funds or the subcontractor's right to a claim of lien on real property allowed under this subsection. The claim of lien on real property as provided under this subsection shall be in the form set out in G.S. 44A-12(c) and shall contain, in addition, a copy of the notice of claim of lien upon funds given pursuant to G.S. 44A-19 as an exhibit together with proof of service thereof by affidavit, and shall state the grounds the lien claimant has to believe that the obligor is personally liable for the debt under subsection (b) of this section.

(e) A notice of claim of lien upon funds under G.S. 44A-19 may be filed by the obligor with the clerk of superior court in each county where the real property upon which the filed notice of claim of lien upon funds is located for the purpose of discharging the notice of claim of lien upon funds by any of the methods described in G.S. 44A-16.

(f) A bond deposited under this section to discharge a filed notice of claim of lien upon funds shall be effective to discharge any claim of lien on real property filed by the same lien claimant pursuant to subsection (d) of this section or G.S. 44A-23 and shall further be effective to discharge any notices of claims of lien upon funds served by lower tier subcontractors or any claims of lien on real property filed by lower tier subcontractors pursuant to subsection (d) of this section or G.S. 44A-23 claiming through or against the contractor or higher tier subcontractors up to the amount of the bond."

SECTION 9. G.S. 44A-23 reads as rewritten:

"**§ 44A-23. Contractor's claim of lien on real property; perfection of subrogation rights of subcontractor.**

(a) First tier subcontractor. – A first tier ~~subcontractor, who gives notice of claim of lien upon funds as provided in this Article,~~subcontractor may, to the extent of ~~this~~ its claim, enforce the claim of lien on real property of the contractor created by Part 1 of this Article. The manner of such enforcement shall be as provided by G.S. 44A-7 through 44A-16. The claim of lien on real property is perfected as of the time set forth in G.S. 44A-10 upon filing of the claim of lien on real property pursuant to G.S. 44A-12. When completing the claim of lien on real property form, the subcontractor may use as the date upon which labor or materials were first or last furnished on the real property either the date of the first or last furnishing of labor or materials on the real property by the subcontractor making the claim or the date of the first or last furnishing of labor or materials on the real property by the contractor through which the claim

of lien on real property is being asserted. Upon the filing of the claim of lien on real ~~property, with the notice of claim of lien upon funds attached,~~ property and the commencement of the action, no action of the contractor shall be effective to prejudice the rights of the subcontractor without his written consent.

(b) Second or third tier subcontractor. –

(1) A second or third tier ~~subcontractor, who gives notice of claim of lien upon funds as provided in this Article,~~subcontractor may, to the extent of his claim, enforce the claim of lien on real property of the contractor created by Part 1 of Article 2 of the Chapter except when:

a. The owner or contractor, within 30 days following the date the ~~building~~ permit is issued for the improvement of the real property ~~involved,~~ involved or within 30 days following the date the contractor is awarded the contract for the improvement of the real property involved, whichever is later, posts on the property in a visible location adjacent to the posted ~~building permit~~ permit, if a permit is required, and files in the office of the clerk of superior court in each county wherein the real property to be improved is located, a completed and signed notice of contract form and the second or third tier subcontractor fails to serve upon the contractor a completed and signed notice of subcontract form by the same means of service as described in G.S. 44A-19(d); or

b. After the posting and filing of a signed notice of contract and the service upon the contractor of a signed notice of subcontract, the contractor serves upon the second or third tier subcontractor, within five days following each subsequent payment, by the same means of service as described in G.S. 44A-19(d), the written notice of payment setting forth the date of payment and the period for which payment is made as requested in the notice of subcontract form set forth herein.

(2) The form of the notice of contract to be so utilized under this section shall be substantially as follows and the fee for filing the same with the clerk of superior court shall be the same as charged for filing a claim of lien on real property:

"NOTICE OF CONTRACT

"(1) Name and address of the Contractor:

"(2) Name and address of the owner of the real property at the time this Notice of Contract is recorded:

"(3) General description of the real property to be improved (street address, tax map lot and block number, reference to recorded instrument, or any other description that reasonably identifies the real property):

"(4) Name and address of the person, firm or corporation filing this Notice of Contract:

"Dated:_____

_____

"Contractor

"Filed this the____day of _____, ____.

_____

Clerk of Superior Court"

(3) The form of the notice of subcontract to be so utilized under this section shall be substantially as follows:

"NOTICE OF SUBCONTRACT

"(1) Name and address of the subcontractor:

"(2) General description of the real property ~~where~~ on which the labor was performed or the material was furnished (street address, tax map lot and block number, reference to recorded instrument, or any description that reasonably identifies the real property):

"(3)

"(i) General description of the subcontractor's contract, including the names of the parties thereto:

"(ii) General description of the labor and material performed and furnished thereunder:

"(4) Request is hereby made by the undersigned subcontractor that he be notified in writing by the contractor of, and within five days following, each subsequent payment by the contractor to the first tier subcontractor for labor performed or material furnished at the improved real property within the above descriptions of such in paragraph (2) and subparagraph (3)(ii), respectively, the date payment was made and the period for which payment is made.
"Dated:_____

_____
Subcontractor"

(4) The manner of such enforcement shall be as provided by G.S. 44A-7 through G.S. 44A-16. The lien is perfected as of the time set forth in G.S. 44A-10 upon the filing of a claim of lien on real property pursuant to G.S. 44A-12. Upon the filing of the claim of lien on real ~~property, with the notice of claim of lien upon funds attached,~~ property and the commencement of the action, no action of the contractor shall be effective to prejudice the rights of the second or third tier subcontractor without his written consent.

(c) A lien waiver signed by the contractor prior to the commencement of an action to enforce a perfected claim of lien on real property granted under this section waives the subcontractor's right to enforce the contractor's claim of lien on real property, but does not affect the subcontractor's right to a claim of lien on funds or the subcontractor's right to a claim of lien on real property allowed under G.S. 44A-20(d)."

SECTION 10. G.S. 44A-24 reads as rewritten:

"**§ 44A-24. False statement a ~~misdemeanor.~~misdemeanor and grounds for disciplinary action against a licensed contractor or qualifying party.**

If any contractor or other person receiving payment from an obligor for an improvement to real property or from a purchaser for a conveyance of real property with improvements subject to this Article or to Article 3 of this Chapter shall knowingly furnish to such obligor, purchaser, or to a lender who obtains a security interest in said real property, or to a title insurance company insuring title to such real property, a false written statement of the sums due or claimed to be due for labor or material furnished at the site of improvements to such real property, then such contractor, subcontractor or other person shall be guilty of a Class 1 misdemeanor. Upon conviction and in the event the court shall grant any defendant a suspended sentence, the court may in its discretion include as a condition of such suspension a provision that the defendant shall reimburse the party who suffered loss on such conditions as the court shall determine are proper.

The elements of the offense herein stated are the furnishing of the false written statement with knowledge that it is false and the subsequent or simultaneous receipt of payment from an obligor or ~~purchaser, and in any~~ purchaser by the person signing the document, a person directing another to sign the document, or any person or entity for whom the document was signed. In any criminal prosecution hereunder it shall not be necessary for the State to prove that the obligor, purchaser, lender or title insurance company relied upon the false statement or that any person was injured thereby.

In addition to the criminal sanctions created by this section, conduct constituting the offense herein stated and causing actual harm to any person by any licensed contractor or qualifying party, as that term is used in Chapter 87 of the General Statutes, shall constitute deceit and misconduct subject to disciplinary action under Chapter 87 of the General Statutes, including revocation, suspension, or restriction of a license or the ability to act as a qualifying party for a license."

SECTION 11. G.S. 44A-27 reads as rewritten:

"**§ 44A-27. Actions on payment bonds; service of notice.**

(a) Subject to the provision of subsection (b) hereof, any claimant who has performed labor or furnished materials in the prosecution of the work required by any contract for which a payment bond has been given pursuant to the provisions of this Article, and who has not been paid in full therefor before the expiration of 90 days after the day on which the claimant performed the last such labor or furnished the last such materials for which he claims payment, may bring an action on such payment bond in his own name, to recover any amount due him for such labor or materials and may prosecute such action to final judgment and have execution on the judgment.

(b) Any claimant who has a direct contractual relationship with any subcontractor but has no contractual relationship, express or implied, with the contractor may bring an action on

the payment bond only if he has given written notice of claim on payment bond to the contractor within 120 days from the date on which the claimant performed the last of the labor or furnished the last of the materials for which he claims payment, stating with substantial accuracy the amount claimed and the name of the person for whom the work was performed or to whom the material was furnished. The contractor shall furnish a copy of the payment bond required by this Article within seven calendar days in response to a written request served by any claimant in accordance with the provisions of subsection (c) of this section. Subject to the exception set forth in subsection (e) of this section, unless the contractor has failed to satisfy its obligation to timely furnish a copy of the payment bond to a claimant upon proper request by the claimant, the claim of such a claimant shall not include labor or materials provided more than 75 days prior to the claimant's service, in accordance with subsections (c) and (d) of this section, of its written notice of public subcontract to the contractor.

(c) The ~~notice~~notices required by and any requests for copy of payment bond referenced by subsection ~~(b),~~(b) of this section, ~~above,~~ shall be served by ~~registered or~~ certified mail, or by signature confirmation as provided by the United States Postal Service, postage prepaid, in an envelope addressed to such contractor at any place where his office is regularly maintained for the transaction of business or to such agent identified in the contractor's project statement referenced in subdivision (1) of subsection (f) of this section or served in any manner provided by law for the service of summons.

(d) The form of the notice of public subcontract to be served pursuant to subsection (b) of this section shall be substantially as follows:

"NOTICE OF PUBLIC SUBCONTRACT

(1) Name and address of the subcontractor giving notice of public subcontract:
(2) General description of the real property on which the labor was or is to be performed or the material was or is to be furnished (street address, tax map lot and block number, reference to recorded instrument, or any description that reasonably identifies the real property):
(3) General description of the subcontractor's contract, including the names and addresses of the parties thereto:
(4) General description of the labor and material performed and furnished thereunder:

Dated: _____

_____
Subcontractor"

(e) Notwithstanding subsections (b), (c), and (d) of this section, the obligation to provide a notice of public subcontract shall not apply to claims of twenty thousand dollars ($20,000) or less and, for any claim exceeding twenty thousand dollars ($20,000), shall apply only to that portion of the claim in excess of twenty thousand dollars ($20,000).

(f) In connection with any construction contract for which a bond is required by G.S. 44A-26(a), all of the following shall apply:

(1) The contractor shall provide to each subcontractor that it engages to perform labor or furnish materials in the performance of the construction contract a contractor's project statement containing all of the following information:
  a. The name of the project.
  b. The physical address of the project.
  c. The name of the contracting body.
  d. The name of the contractor.
  e. The name, phone number, and mailing address of an agent authorized by the contractor to accept service of the requests for payment bond, the notice of public subcontract, and the notice of claim on payment bond referenced in subsection (b) of this section.
  f. The name and address of the principal place of business of the surety issuing the payment bond required by G.S. 44A-26(a) for the construction contract.
(2) Each subcontractor shall provide each subcontractor that it engages to perform labor or furnish materials in the performance of the construction contract a copy of the contractor's project statement.

(3) No agreement entered into between a contractor and a subcontractor or between a subcontractor and its subcontractor shall be enforceable against the lower tier party until the contractor's project statement has been provided to the lower tier party."

SECTION 12.(a) G.S. 44A-4(b) reads as rewritten:

"**§ 44A-4. Enforcement of lien by sale.**

…

(b) Notice and Hearings. –

(1) If the property upon which the lien is claimed is a motor vehicle that is required to be registered, the lienor following the expiration of the relevant time period provided by subsection (a) shall give notice to the Division of Motor Vehicles that a lien is asserted and sale is proposed and shall remit to the Division a fee of ten dollars ($10.00). The Division of Motor Vehicles shall issue notice by ~~registered or~~ certified mail, return receipt requested, to the person having legal title to the property, if reasonably ascertainable, to the person with whom the lienor dealt if different, and to each secured party and other person claiming an interest in the property who is actually known to the Division or who can be reasonably ascertained. The notice shall state that a lien has been asserted against specific property and shall identify the lienor, the date that the lien arose, the general nature of the services performed and materials used or sold for which the lien is asserted, the amount of the lien, and that the lienor intends to sell the property in satisfaction of the lien. The notice shall inform the recipient that the recipient has the right to a judicial hearing at which time a determination will be made as to the validity of the lien prior to a sale taking place. The notice shall further state that the recipient has a period of 10 days from the date of receipt in which to notify the Division by ~~registered or~~ certified mail, return receipt requested, that a hearing is desired and that if the recipient wishes to contest the sale of his property pursuant to such lien, the recipient should notify the Division that a hearing is desired. The notice shall state the required information in simplified terms and shall contain a form whereby the recipient may notify the Division that a hearing is desired by the return of such form to the Division. The Division shall notify the lienor whether such notice is timely received by the Division. In lieu of the notice by the lienor to the Division and the notices issued by the Division described above, the lienor may issue notice on a form approved by the Division pursuant to the notice requirements above. If notice is issued by the lienor, the recipient shall return the form requesting a hearing to the lienor, and not the Division, within 10 days from the date the recipient receives the notice if a judicial hearing is requested. If the ~~registered or~~ certified mail notice has been returned as undeliverable and the notice of a right to a judicial hearing has been given to the owner of the motor vehicle in accordance with G.S. 20-28.4, no further notice is required. Failure of the recipient to notify the Division or lienor, as specified in the notice, within 10 days of the receipt of such notice that a hearing is desired shall be deemed a waiver of the right to a hearing prior to the sale of the property against which the lien is asserted, and the lienor may proceed to enforce the lien by public or private sale as provided in this section and the Division shall transfer title to the property pursuant to such sale. If the Division or lienor, as specified in the notice, is notified within the 10-day period provided above that a hearing is desired prior to sale, the lien may be enforced by sale as provided in this section and the Division will transfer title only pursuant to the order of a court of competent jurisdiction.

If the ~~registered or~~ certified mail notice has been returned as undeliverable, or if the name of the person having legal title to the vehicle cannot reasonably be ascertained and the fair market value of the vehicle is less than eight hundred dollars ($800.00), the lienor may institute a special proceeding in the county where the vehicle is being held, for authorization to

sell that vehicle. Market value shall be determined by the schedule of values adopted by the Commissioner under G.S. 105-187.3.

In such a proceeding a lienor may include more than one vehicle, but the proceeds of the sale of each shall be subject only to valid claims against that vehicle, and any excess proceeds of the sale shall be paid immediately to the Treasurer for disposition pursuant to Chapter 116B of the General Statutes.

The application to the clerk in such a special proceeding shall contain the notice of sale information set out in subsection (f) hereof. If the application is in proper form the clerk shall enter an order authorizing the sale on a date not less than 14 days therefrom, and the lienor shall cause the application and order to be sent immediately by first-class mail pursuant to G.S. 1A-1, Rule 5, to each person to whom notice was mailed pursuant to this subsection. Following the authorized sale the lienor shall file with the clerk a report in the form of an affidavit, stating that the lienor has complied with the public or private sale provisions of G.S. 44A-4, the name, address, and bid of the high bidder or person buying at a private sale, and a statement of the disposition of the sale proceeds. The clerk then shall enter an order directing the Division to transfer title accordingly.

If prior to the sale the owner or legal possessor contests the sale or lien in a writing filed with the clerk, the proceeding shall be handled in accordance with G.S. 1-301.2.

(2) If the property upon which the lien is claimed is other than a motor vehicle required to be registered, the lienor following the expiration of the 30-day period provided by subsection (a) shall issue notice to the person having legal title to the property, if reasonably ascertainable, and to the person with whom the lienor dealt if different by ~~registered or~~ certified mail, return receipt requested. Such notice shall state that a lien has been asserted against specific property and shall identify the lienor, the date that the lien arose, the general nature of the services performed and materials used or sold for which the lien is asserted, the amount of the lien, and that the lienor intends to sell the property in satisfaction of the lien. The notice shall inform the recipient that the recipient has the right to a judicial hearing at which time a determination will be made as to the validity of the lien prior to a sale taking place. The notice shall further state that the recipient has a period of 10 days from the date of receipt in which to notify the lienor by ~~registered or~~ certified mail, return receipt requested, that a hearing is desired and that if the recipient wishes to contest the sale of his property pursuant to such lien, the recipient should notify the lienor that a hearing is desired. The notice shall state the required information in simplified terms and shall contain a form whereby the recipient may notify the lienor that a hearing is desired by the return of such form to the lienor. Failure of the recipient to notify the lienor within 10 days of the receipt of such notice that a hearing is desired shall be deemed a waiver of the right to a hearing prior to sale of the property against which the lien is asserted and the lienor may proceed to enforce the lien by public or private sale as provided in this section. If the lienor is notified within the 10-day period provided above that a hearing is desired prior to sale, the lien may be enforced by sale as provided in this section only pursuant to the order of a court of competent jurisdiction."

SECTION 12.(b) G.S. 44A-24.10 reads as rewritten:

"**§ 44A-24.10. Lien extinguished for lien claimant failing to file suit or answer in pending suit within 30 days after service on owner.**

If a lien claimant fails to file a suit to enforce the lien or fails to file an answer in a pending suit to enforce a lien within 30 days after a properly served written demand of the owner, lienee, or other authorized agent, the lien shall be extinguished. Service of the demand shall be by ~~registered or~~ certified mail, return receipt requested, or by personal service. The claimant shall file proof of properly served written demand with the clerk of the superior court. The provisions of this section shall not extend to any other deadline provided by law for the filing of any pleadings or for the foreclosure of any lien governed by this Part."

SECTION 12.(c) G.S. 44A-43 reads as rewritten:

"**§ 44A-43. Enforcement of self-service storage facility lien.**

…

(b) Notice and Hearing:

(1) If the property upon which the lien is claimed is a motor vehicle, the lienor, following the expiration of the 15-day period provided by subsection (a), shall give notice to the Division of Motor Vehicles that a lien is asserted and that a sale is proposed. The lienor shall remit to the Division a fee of two dollars ($2.00); and shall also furnish the Division with the last known address of the occupant. The Division of Motor Vehicles shall issue notice by ~~registered or~~ certified mail, return receipt requested to the person having legal title to the vehicle, if reasonably ascertainable, and to the occupant, if different, at his last known address. The notice shall:

…

c. State that the legal title holder and the occupant have a period of 10 days from the date of receipt of the notice in which to notify the Division of Motor Vehicles by ~~registered or~~ certified mail, return receipt requested, that a hearing is desired to contest the sale of the vehicle pursuant to the lien.

The person with legal title or the occupant must, within 10 days of receipt of the notice from the Division of Motor Vehicles, notify the Division of his desire to contest the sale of the vehicle pursuant to the lien, and that the Division should so notify lienor.

Failure of the person with legal title or the occupant to notify the Division that a hearing is desired shall be deemed a waiver of the right to a hearing prior to sale of the vehicle against which the lien is asserted. Upon such failure, the Division shall so notify the lienor; the lienor may proceed to enforce the lien by a public sale as provided by this section; and the Division shall transfer title to the property pursuant to such sale.

If the Division is notified within the 10-day period provided in this section that a hearing is desired prior to the sale, the lien may be enforced by a public sale as provided in this section and the Division will transfer title only pursuant to the order of a court of competent jurisdiction.

…

(c) Public Sale. –

(1) Not less than 20 days prior to sale by public sale the lienor:

a. Shall cause notice to be delivered by ~~registered or~~ certified mail to the person having a security interest in the property if reasonably ascertainable, and to the occupant at the occupant's last known address. Notice given pursuant to this subdivision shall be presumed delivered when it is properly addressed, first-class postage prepaid, and deposited with the United States Postal Service.

…."

SECTION 13. Sections 1 through 3 and Sections 5 through 11 of this act become effective January 1, 2013, and apply to improvements to real property for which the first permit required to be obtained is obtained on or after that date or, with respect to projects for which no permit is required, apply to improvement to real property commenced on or after that date. Sections 4, 12, and 13 of this act are effective when this act becomes law.

In the General Assembly read three times and ratified this the 29th day of June, 2012.

s/ Neal Hunt
Presiding Officer of the Senate

s/ Paul Stam
Presiding Officer of the House of Representatives

s/ Beverly E. Perdue
Governor

Approved 4:48 p.m. this 12th day of July, 2012

Section Six

Safety

PROJECT SAFETY PLAN

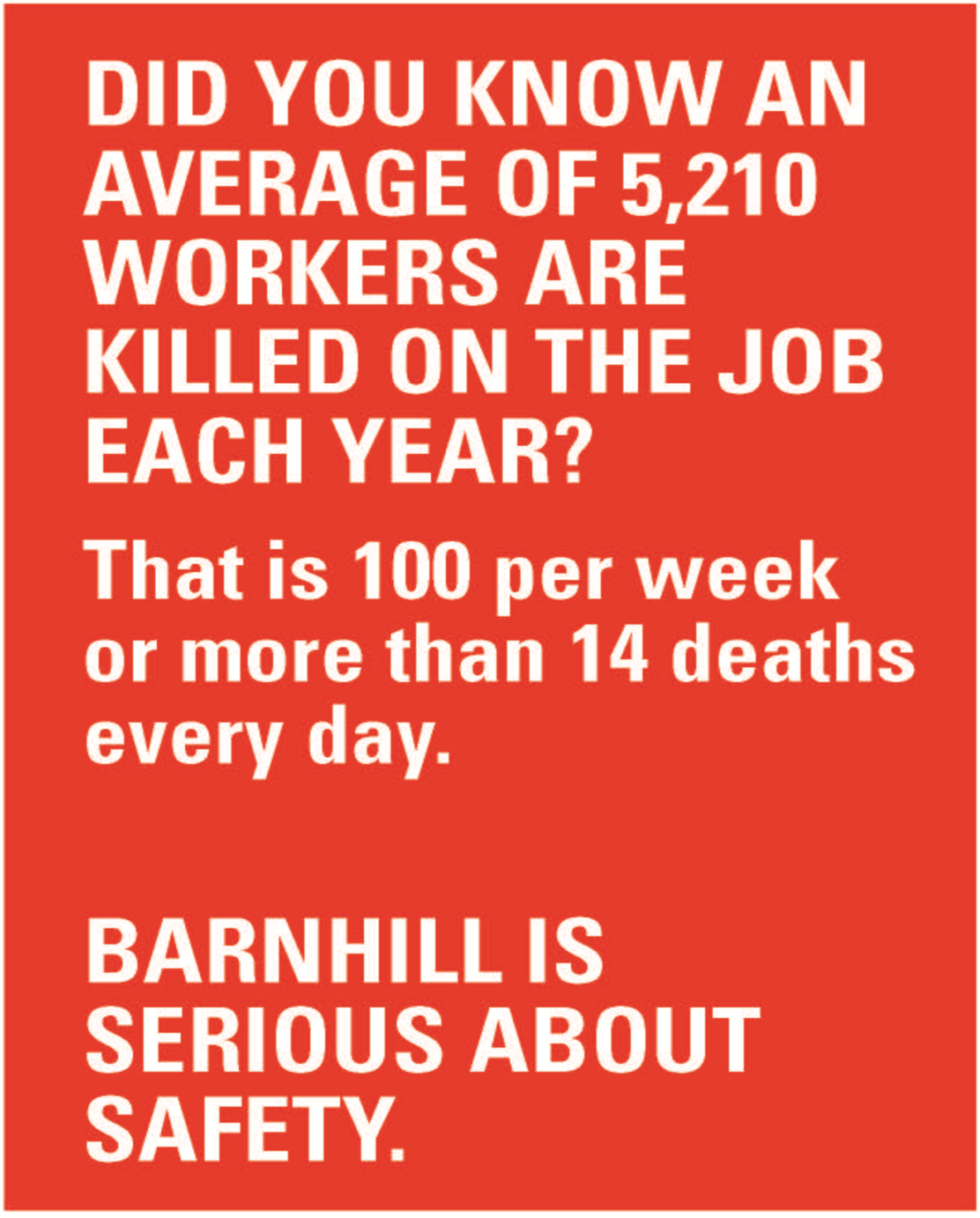
PROJECT NAME:	Port of Wilmington Upgrades to South Gate Complex
LOCATION:	1 Shipyard Boulevard Wilmington, NC 28412
BCC PROJECT NUMBER:	1105119
DATE:	February 3, 2020

BARNHILL CONTRACTING COMPANY

BARNHILL CONTRACTING COMPANY SAFETY MANUAL

A guide to **safety** in the **workplace**




DID YOU KNOW AN AVERAGE OF 5,210 WORKERS ARE KILLED ON THE JOB EACH YEAR?
That is 100 per week or more than 14 deaths every day.
BARNHILL IS SERIOUS ABOUT SAFETY.



Statement of Policy

At Barnhill Contracting Company, we are committed to ensuring a safe jobsite and strive to provide a safe and healthy work environment for employees, subcontractors, suppliers and the general public. All employees of Barnhill Contracting Company are responsible for conducting duties in accordance with our safety policy and will be held accountable for their safety performance. We strive to provide each employee with the training and tools to be successful. We will, at a minimum, fully comply with all local, state and federal safety, health and environmental regulations.

We are fully committed to the implementation of this policy and will make decisions that reflect our concern for our staff, subcontractors and community.

Sincerely,

Robert E. Barnhill, III
President

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01 PROGRAM OVERVIEW



Corporate Safety & Health Program

This policy is intended to: help prevent accidents, illnesses and injuries; increase safety awareness; meet requirements of environmental, occupational health, and safety laws and regulations; reduce corporate liability; and establish safety responsibilities for members of Barnhill Contracting Company's community, visitors to the company's jobsites and properties.

At Barnhill Contracting Company, safety is everyone's responsibility. All members of the company are expected to be thoroughly familiar with their safety responsibilities, strive to follow safety practices at all times, act proactively to prevent accidents and injuries, communicate hazards to supervisors and be prepared for emergencies that may occur in the workplace.

This Corporate Safety and Health Policy reaffirms Barnhill Contracting Company's commitment to safety and good environmental stewardship and establishes a uniform system to help individuals, departments and divisions meet their health and safety responsibilities. This policy outlines safety responsibilities and training requirements to ensure individual and corporate compliance with relevant environmental health and safety laws, regulations, policies and guidelines.

Barnhill Contracting Company's Safety Department will work closely with departments, divisions, safety committees, subcontractors, suppliers and individual employees throughout the company to ensure compliance with this policy.

Responsibility Overview

Management Responsibilities

» Provide time, training, tools, equipment and funds to ensure a safe jobsite

» Ensure funds for safety, OSHA and MSHA compliance are included in the bid process

» Implement quality assurance procedures throughout each project to prevent construction defects

» Hold company supervisors and subcontractors responsible for complying with the Corporate Safety and Health Program

» Encourage owners, subcontractors and suppliers to comply with the Corporate Safety and Health Program and to document violations

» Select subcontractors who are capable of performing at a high level of quality in a safe manner



» Ensure selected subcontractors provide a written copy of their safety program

» Ensure subcontractors have a signed contract and proof of adequate insurance on a project-by-project basis. The use of second tier subcontractors requires written authorization from Barnhill Contracting Company, in addition to proof of contractor's adequate insurance

Supervisor Responsibilities

» Wear appropriate personal protective equipment on jobsites

» Ensure all employees have completed the Barnhill Contracting Company Employee Orientation prior to starting work

» Verify each new employee has read and signed the acknowledgements in the Barnhill Contracting Company Safety and Health Program, New Employee Orientation and Training Checklist and Driver Safety Program

» Proactively manage day-to-day safety on the jobsite

» Identify hazards on the jobsite each day, develop a plan to eliminate hazards and document in your Daily Job Report

» Conduct weekly "Tool Box Safety Talks" and document attendance

» Review the Subcontractor Safety Addendum with all new subcontractors

» Stop and correct any work being performed in an unsafe manner immediately

» Practice good housekeeping – remove debris daily, store materials properly

2

- Maintain current on-site Safety Data Sheets (SDS) inventory as necessary
- Investigate all incidents promptly to determine root causes and make corrections
- Report all incidents in writing (near misses, injuries, property damage) to the office as soon as possible
- Secure prompt medical attention for any injured employee
- Prevent and/or stop water from entering buildings, using temporary means if necessary, to eliminate potential mold growth
- Protect materials from water saturation if stored outside
- Secure equipment and remove keys at the end of the day

Employee Responsibilities

- Report to work with a clear mind – drug and alcohol free
- Wear your personal protective equipment at all times
- Wear your seat belt at all times
- Wear your fall protection equipment or work behind guardrails if you are working in an area higher than six feet
- Wear proper clothing as defined under Proper Attire in Section 5
- Work safely. If you have a question about working safely, ask your supervisor
- Be familiar with Barnhill Contracting Company's safety policies and abide by them
- Report hazardous situations and accidents to your supervisor immediately
- Report to restricted work assignment (light duty) when offered

02 RULES OF OPERATION



Compliance with federal law is the responsibility of Barnhill Contracting Company (the employer). The prime contractor's representative will coordinate with subcontractors to ensure their safety compliance, which may be more appropriately treated on a jobsite basis rather than individually. All subcontractors and their employees are, by contract, subject to the safety rules while working on Barnhill Contracting Company projects and shall be responsible to the full extent of laws or regulations for their actions.

General Health & Safety Requirements

» Upon employment each employee shall receive a copy of Barnhill Contracting Company's Corporate Safety and Health Program

» Each employee shall be instructed in the identification and avoidance of unsafe conditions

» Programs shall be developed to provide for the frequent and regular inspections of the jobsite, materials and equipment to be made by a competent person designated by their employer

Incident Investigation & Reporting

All accidents on the jobsite, regardless of how minor, must be promptly reported to your immediate supervisor. Accidents may consist of employee injuries, damage to equipment and/or facilities or some combination of the above. Barnhill Contracting Company investigates accidents as part of our Corporate Safety and Health Program. All employees who are involved in a vehicular or personal accident must submit to a post-accident screening for alcohol and controlled substances. Refusal to submit to testing will result in immediate termination. Positive results of screening will subject the employee to a suspension of up to 45 days without pay.

Refer to the Drug and Alcohol Testing section of the Barnhill Contracting Company Employee Handbook for additional information.

Investigating Incidents

Barnhill Contracting Company will investigate all incidents, but the extent of such investigation will reflect the seriousness of the incident utilizing a root cause analysis process or other similar method.

Reporting Sequence

Reporting of the incident must occur in a specified manner and the reporting sequence must be posted. For example, in the event of an incident, the following are contacted in this order:

» 911

» Foreman or superintendent

» Division vice president

» Safety director

» Human resources and other personnel as required

Barnhill Contracting Company will also report required incidents to OSHA within eight hours of the incident. Incidents must also be reported to the owner representative as soon as possible or within 24 hours of the incident.

Defining Reportable Incidents

OSHA requires reporting of work-related incidents resulting in the death of an employee or the hospitalization of three or more employees. Owner representatives require all incidents to be reported including, but not limited to, injuries, spills, property damage, fires, explosions and vehicle damage.

Responsibilities

The company's Safety Director will be responsible for overseeing the investigation of all incidents. The Safety Director, along with employees, will be trained at the time they are hired, annually and when deemed necessary.

Employee Training

Barnhill Contracting Company will train employees in their roles and responsibilities for incident response and incident investigation techniques. Employees will be trained on incident investigation and reporting annually. Training will include: awareness, first responder and investigation.

Equipment

The company will have proper equipment available to assist in conducting an investigation. Equipment may include some or all of the following items: writing equipment such as pens and paper, measurement equipment such as tape measures, rulers, cameras, small tools, audio recorder, PPE, marking devices such as flags, equipment manuals, etc.

First Response

Employees who will be designated as First Responders will be trained and qualified in first aid techniques to control the degree of loss during the immediate post-incident phase.

Controlling Further Losses

After immediate rescue, actions to prevent further loss should occur. For example, maintenance personnel should be summoned to assess integrity of buildings and equipment, engineering personnel to evaluate the need for bracing of structures, and special equipment/response requirements such as safe rendering of hazardous materials or explosives employed.

Initial Identification & Assessments of Evidence

An initial identification/assessment of evidence will be performed immediately following the incident and will include:

» A list of people/employees involved

» Equipment and materials involved

» A recording of environmental factors such as the weather, illumination, temperature, noise, ventilation, etc.

Collection, Preservation & Security of Evidence

Evidence such as people, positions of equipment, parts and papers must be preserved, secured and collected through notes, photographs, witness statements, flagging and impoundment of documents and equipment.

Witness Interviews & Statements

Witness interviews and statements must be collected. Locating witnesses, ensuring unbiased testimony, obtaining appropriate interview locations and use of trained interviewers should be detailed. If follow-up interviews are required, the person conducting the investigation will notify the witnesses.

Identifying Corrective Actions

Barnhill Contracting Company will ensure incident investigations result in corrective actions. Employees will be assigned their responsibilities relative to the corrective actions, and these actions will be tracked to closure.

Preparing Incident Report

Written incident reports will include an incident report form and a detailed narrative statement concerning the events. The format of the narrative report will include an introduction, methodology, summary of the incident, investigation board member names, narrative of the event, findings and recommendations. Photographs, witness statements, drawings, etc. will also be included.

Lessons Learned

The company will review and communicate the lessons learned to all employees. Barnhill Contracting Company will ensure changes to processes are placed into effect to prevent reoccurrence of similar events.

This policy is intended to provide rules and guidelines for administering disciplinary action to Barnhill Contracting Company employees who violate safety rules and procedures or who, by their record or

actions, indicate a disregard for safety. Safety related disciplinary action will be administered through the Safety Director.

The purpose of this policy is to enhance safety awareness in all employees, and to motivate them to perform their work safely, in accordance with established safety rules, procedures and instructions.

Circumstances Leading to Disciplinary Action

Listed below are conditions that could be considered for disciplinary action under the provisions of the policy:

» Violation of a supervisor's safety related instructions

» Violation of established safety rules and/or procedures

» Violation of instructions posted on safety-related signs

» Obvious unsafe actions as may be indicated by the improper use of equipment, horseplay or practical joking, poor housekeeping practices, etc.

» Lack of concern toward safety instructions and programs

The above circumstances are not intended to be all inclusive. Any other circumstances that indicate an employee's disregard, for their safety, the safety of others or the neglect of proper care for equipment, may also result in disciplinary action under the provisions of this policy.

Procedures

Whenever a supervisor or other member of management observes an employee committing an unsafe act or creating or allowing a hazardous condition to exist, a Safety Violation Notice should be completed. The Safety Director will investigate any violation of the safety procedures and any accident where the cause is not clear. Their recommendation as to cause, preventable or non-preventable, will be made to the management. If the employee feels they have been treated unjustly, they will be allowed to appeal the decision. The appeal will be reviewed by the Safety Director and the employee's supervisor.

A copy of the violation form will be retained in the employee's personnel file, and each time a new violation form is received, the employee's file will be reviewed for previous violations. Where previous violations appear during a 12-month continuous period, the sanctions below will be implemented.

Employee Sanctions

The following sanctions apply for violations of safety procedures or involvement in any preventable accident:

» First incident - verbal warning with documentation

» Second incident - written warning with possible suspension

» Third incident - disciplinary action up to, and including, dismissal

» Fourth incident - dismissal

Supervisor Sanctions

The above sanctions also apply to supervisors who may be subject to disciplinary action when their employee receives some form of disciplinary action as noted above, or those who demonstrate negligence in their implementation or enforcement of written policy.

Barnhill Contracting Company wants to ensure supervisors are committed to the company's safety goals. Supervisors will be under the same level of disciplinary action; therefore, the Safety Director or a member of management will conduct physical inspections for violations that indicate a lack of commitment to the company's safety practices. Any member of the company's management and supervision team may be subject to these disciplinary guidelines as an individual or as a member of management.

Summary

The above disciplinary actions are a minimal guideline. Depending on the circumstances or the severity of the violation or incident, the level of discipline that is most appropriate for the time and action, up to and including, termination of employee or supervisor may be implemented.

Horseplay

Horseplay, being under the influence of alcohol or drugs, or consuming alcohol or drugs at work, will not be tolerated. Employees engaging in these practices will be subject to immediate dismissal.

Alcohol & Drug Use

Barnhill Contracting Company requires pre-employment, post accident/cause and random drug testing. Refusal to comply with testing is grounds for dismissal. Positive results of a substance abuse screen will subject the employee to suspension of up to 45 days without pay. The employee will have 45 days to clear his/her system of the involved substance and provide a negative urine sample or blood alcohol test. If the employee fails to provide a negative urine sample within 45 days, he/she will be terminated. If the employee clears his/her system within 45 days, he/she will be considered for return to full-work status. However, a second positive result within two years of such return to work will result in automatic dismissal.

Refer to the Drug and Alcohol Testing section of the Barnhill Contracting Company Employee Handbook for additional information.

Subcontractor Management Plan

Subcontractors shall not be allowed to begin work on a Barnhill Contracting Company project without a signed contract and adequate proof of insurance.

Subcontractor Pre-Qualification

Subcontractors will be pre-qualified by reviewing their safety programs, safety training documents and safety statistics.

Criteria for Selecting Subcontractors

Barnhill Contracting Company will use an acceptable safety metric to compare and qualify the

subcontractor's safety manual, safety programs, safety training, documentation and safety statistics. The company will select a contractor based on their safety performance and lowest risk and injury ratings including Total Recordable Incidence Rate (TRIR), Experience Modification Rate (EMR), Days Away, Restricted or Transferred Rate (DART) and fatality rate. If only two contractors remain for selection, the subcontractor with the best safety and lowest injury rating will be chosen.

Pre-Job Meetings & Safety Orientations

Barnhill Contracting Company will ensure all subcontractors are included in pre-job meetings, kick-off meetings and safety orientations. Each subcontractor will be contacted directly by the company and made aware of any such meeting or safety orientation. Each individual subcontractor will print their name and place their signature on the "Meeting Sign-In Sheet."

Tailgate Safety Meetings - Job Safety Analysis - Hazard and Job Safety Inspections

Barnhill Contracting Company will make sure all subcontractors are included in tailgate safety meetings, job safety analysis or hazard assessments and on-the-job safety inspections. Each subcontractor will be contacted directly by the company and made aware of any such tailgate safety meeting, job safety analysis or hazard and job safety inspections. Each individual subcontractor will print their name and place their signature on the "Tailgate Safety Meeting Sign-In Sheet." Otherwise, each subcontractor will take part in each job safety analysis or hazard and job safety inspection.

Conducting Post-Job Safety Performance Reviews

Barnhill Contracting Company will conduct post-job safety performance reviews on all subcontractors.

Safety Orientation for New Employees

When a new employee is hired by Barnhill Contracting Company, the employee's supervisor must conduct a safety orientation prior to the new employee beginning work. Supervisors must fill out a New Employee Orientation Checklist.

Project Preparation Checklist

When starting a new project, the project manager and superintendent will ensure the following preparations are made on the jobsite:

» Federal and state employment and safety posters posted

» Emergency telephone numbers posted

» Nearest medical facility posted

» Copy of Barnhill Contracting Company's Corporate Safety and Health Program

» Barnhill Contracting Company's Hazard Communication Program with specific Safety Data Sheets

» Charged fire extinguishers available

» Fully stocked first-aid kit available

» An adequate supply of drinking water and individual cups shall be available. Portable containers used

to dispense water should be tightly closed and equipped with a top – water should not be dipped from the container. The container shall be clearly marked "DRINKING WATER" and not be used for any other purpose. Cups shall be stored in a sanitary container and a receptacle for discarding used cups shall be available

- Adequate restroom facilities available. Restroom facilities will be provided for employees with at least one toilet seat and urinal for 20 workers. An additional restroom will be added for each 20 workers of fraction thereof
- Safety and personal protective equipment secured
- Adequate protection for the general public available
- Established, safe traffic routes for equipment and vehicles including designated employee parking
- Proper traffic control procedures provided
- Adequate security of tools and equipment provided
- Good housekeeping is required in all areas

Emergency Action Plan

Each office and jobsite will have an Emergency Action Plan. The Barnhill Contracting Company Emergency Action Plan serves as an avenue to inform all contractors, emergency personnel, employees and designated medical personnel of the procedures which will be followed in the event of an emergency or severe weather conditions on the jobsite.

If an emergency or severe weather conditions arise on the jobsite, the superintendent or foreman will make the response determination and notify all construction personnel on site. The notification signal will consist of three short blasts of an air horn followed by a 30-second delay. This signal will be repeated until all construction personnel have evacuated the jobsite. Additionally, announcements and warnings will be issued verbally, electronically or by telephone.

In conjunction with the air horn signal, the Barnhill Contracting Company primary contact person will contact all contractor's superintendents on the jobsite to notify them of the situation. Each contractor's superintendent will be responsible for notifying their employees who may not be able to hear the air horn signal. All Barnhill Contracting Company employees and contractor personnel should report to the predetermined site as specified in the project's Emergency Action Plan.

Representatives from Barnhill Contracting Company and each contractor will conduct a "head count" and report the findings as "all accounted for" or "missing employees" to the Barnhill Contracting Company project superintendent of foreman.

Monitoring Extreme Weather Conditions

Monitoring of extreme weather such as high winds, precipitation, extremely high or low temperatures, tornadoes, floods, hurricanes, earthquakes and lightning is necessary to determine timely implementation of the Emergency Action Plan. In the event of an extreme weather situation, employees may be allowed to go home to prepare for such conditions.

Emergency Evacuation Plan

If evacuation of the site is required, the Barnhill Contracting Company superintendent or foreman will make the determination and notify all construction personnel on site. Emergency evacuation of the site may be necessitated by any of the following conditions:

» Natural disasters

» Transportation accidents

» Utility emergencies

» Chemical/toxic substance release

» Material or machinery failures

» Electrical emergencies

» Fire or explosions

» Search and rescue

» Bomb threats

» Terrorist threat and/or attack

Emergency Response - Fire/Emergency Medical/Law Enforcement Agencies

In case of an emergency involving fire, emergency medical, or law enforcement agencies on the jobsite, the following procedures shall be followed:

Fire - Call 911

Fire extinguishers will be located on the jobsite to contain small fires. In the event of a fire on the jobsite, the site will be evacuated as outlined above (air horn signaling) and the designated primary contact person will notify each contractor's superintendent. Construction personnel should never re-enter the building or site during evacuation and should never attempt to fight a blazing fire. The Barnhill Contracting Company superintendent or foreman will meet with fire fighting personnel.

Emergency Medical - Call 911

In the event of a medical emergency on the jobsite, a Barnhill Contracting Company staff member will be the first responder and will render first aid if required. A Barnhill Contracting Company staff member will notify the jobsite's designated primary contact person and briefly describe the injury or occurrence so that the contact person can give the proper information to the 911 dispatcher. The primary contact person will call 911 and stay on the line until the dispatcher releases them and/or emergency medical personnel arrive on the jobsite. If other contractors on the jobsite have personnel who are certified in first aid and CPR, those people will be incorporated into the emergency response plan as first responders.

In the event of a non-life-threatening medical emergency, a Barnhill Contracting Company staff member will be the first responder. If required, the staff member will escort the individual to an appropriate medical facility.

03 OSHA/MSHA INSPECTIONS



Authorization

Under the Occupational Safety and Health Act of 1970 (the Act) and the Federal Mine Safety and Health Act of 1977 (the Act), the Occupational Safety and Health Administration (OSHA) and Mine Safety and Health Administration (MSHA) are authorized to conduct workplace inspections and investigations to determine whether employers are complying with standards issued by the agencies for safe and healthful workplaces.

Workplace inspections and investigations are conducted by OSHA or MSHA compliance safety and health officers, who are safety and health professionals trained in the disciplines of safety and industrial hygiene.

If OSHA/MSHA request to do an inspection on your jobsite, please notify the Safety Director immediately.

Credentials

When the OSHA compliance officer arrives at the jobsite, he/she displays official credentials and asks to meet an appropriate Barnhill Contracting Company representative. You should always ask to see the compliance officer's credentials.

You may verify the OSHA federal or state compliance officer credentials by calling the nearest federal or state OSHA office. Compliance officers may not collect a penalty at the time of the inspection or promote the sale of a product or service at any time; anyone who attempts to do so is impersonating a government inspector and you should contact the Federal Bureau of Investigation or local law enforcement officials immediately.

Opening Conference

In the opening conference, the compliance officer explains how the jobsite was selected and what the

likely scope of the inspection will be. The compliance officer will ascertain whether an OSHA-funded consultation visit is in progress or whether the worksite is pursuing, or has received, an inspection exemption through the consultation program; if so, the inspection may be limited or terminated.

The compliance officer explains the purpose of the visit, scope of the inspection, and the standards that apply. The compliance officer gives Barnhill Contracting Company information on how to obtain a copy of applicable safety and health standards as well as a copy of any employee complaint that may be involved (with the employee's name deleted if the employee has requested anonymity).

The highest-ranking project team members from Barnhill Contracting Company will accompany the compliance officer on the inspection and participate in the opening conference.

The Act does not require an employee representative for each inspection. Where there is no authorized Barnhill Contracting Company representative, however, the compliance officer must consult with a reasonable number of employees concerning safety and health matters in the workplace.

Walk-Through

After the opening conference, the compliance officer and Barnhill Contracting Company representatives proceed through the workplace to inspect work areas for safety and health hazards.

The compliance officer determines the route and duration of the inspection. While talking with employees, the compliance officer makes every effort to minimize work disruptions. The compliance officer observes safety and health conditions and practices; consults with employees privately, if necessary; takes photos, videotapes and instrument readings; examines records; collects air samples; measures noise levels; surveys existing engineering controls; and monitors employee exposure to toxic fumes, gases and dusts.

The Barnhill Contracting Company representative should accompany the compliance officer and document as the compliance officer documents – taking photographs, videotaping and instrument readings for company records.

An inspection tour may cover part or all of a worksite, even if the inspection resulted from a specific complaint, fatality or catastrophe. If the compliance officer finds a violation in open view, he/she may ask permission to expand the inspection.

The compliance officer keeps all trade secrets observed confidential.

The compliance officer consults employees during the inspection tour. He/she may stop and question workers, in private, about safety and health conditions and practices in their workplaces. Each employee is protected by the Act from discrimination by Barnhill Contracting Company for exercising his/her safety and health rights.

OSHA places special importance on posting and record-keeper requirements. The compliance officer will inspect records of deaths, injuries and illnesses that Barnhill Contracting Company is required to keep. He/she will check to see that a copy of the totals from the last page of the OSHA Form Number 300 are posted as required and that the OSHA workplace poster (OSHA 3165), which explains employees' safety and health rights, is prominently displayed. Where records of employee exposure to toxic substances and harmful physical agents are required, the compliance officer will examine them for compliance with record-keeper requirements.

The compliance officer also requests a copy of Barnhill Contracting Company's Hazard Communication Program contained in this handbook. Under OSHA's Hazard Communication Standard, employers must establish a written, comprehensive hazard communication program that includes provisions for container labeling, safety data sheets and an employee training program. The program must contain a list of the hazardous chemicals in each work area and the means Barnhill Contracting Company will use to inform employees of all the hazards associated with these chemicals.

During the course of the inspection, the compliance officer will point out to Barnhill Contracting Company any unsafe or unhealthful working conditions observed. At the same time, the compliance officer will discuss possible corrective action if Barnhill Contracting Company so desires.

Some apparent violations detected by the compliance officer can be corrected immediately. When corrected on the spot, the compliance officer records such corrections to help in judging Barnhill Contracting Company's good faith in compliance. Although corrected, the apparent violations will serve as the basis for a citation and, if appropriate, a notice of proposed penalty. OSHA may reduce the penalties for some types of violations if they are corrected immediately.

Closing Conference

At the conclusion of the inspection, the compliance officer conducts a closing conference with Barnhill Contracting Company employees and/or Barnhill Contracting Company representatives.

The compliance officer gives Barnhill Contracting Company and all parties involved a copy of the Employer Rights and Responsibilities Following an OSHA Inspection (OSHA 3000) for review and discussion.

The compliance officer discusses with Barnhill Contracting Company all unsafe or unhealthful conditions observed during the inspection and indicates all apparent violations for which he/she may issue or recommend a citation and a proposed penalty. The compliance officer will not indicate any specific proposed penalties but will inform Barnhill Contracting Company of their right to appeal.

During the closing conference, Barnhill Contracting Company may want to produce records to show compliance efforts and provide information to help OSHA determine how much time may be needed to abate an alleged violation.

When appropriate, the compliance officer may hold more than one closing conference. This is usually necessary when the inspection includes an evaluation of health hazards, after a review of additional laboratory reports or after the compliance officer obtains additional factual evidence while concluding an accident investigation.

04 OCCUPATIONAL HEALTH & ENVIRONMENTAL CONTROL



First Aid & CPR Program

In the absence of an available infirmary, clinic, hospital or physician that is reasonably accessible to the worksite, both in terms of time and distance, a person with a valid certificate in first-aid training will be available at the worksite to render first aid.

Upon request, the company will make available a valid certificate in first-aid training from the US Bureau of Mines, American Red Cross, or equivalent training that will be verified by documentary evidence.

Jobsite-Specific

Provisions shall be made prior to the start of the project for prompt medical attention in case of serious injury, including a written Accident Report that is available at the company's office.

First Aid Kits

All first aid supplies shall be reasonably accessible when required. Every company first aid kit shall consist of the following items, as required in OSHA 29 CFR 1910.266 Appendix A:

Items Required for First Aid Kits	
Item	**Number**
32" absorbent compress	1
1" x 3" adhesive bandages	16
Adhesive tape	5 yards total
40" triangular bandage	1
1" roller gauze	1

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Items Required for First Aid Kits	
3"x 3" sterile pads	4
Antiseptic ointment applicators	10
Burn treatment ointment applicators	6
Disposable latex gloves	2 pair
Antibiotic treatments	6
Antibiotic wipes	10
Antiseptic towelettes	10
4" x 6" bandages	1
2" x 6" bandages	2
Eye wash	2
Eye patches	2
Coldpack	1
4" x 4" burn dressing	1

The contents of the first aid kit shall be placed in a weatherproof container with individual sealed packages of each item, and shall be checked by the company before being sent out to each jobsite and on a weekly basis by the foreman or superintendent to ensure that expended items are replaced.

Eye Wash

Where a person's eyes or body may be exposed to injurious corrosive materials, suitable facilities for quick drenching of the eyes and body shall be provided within the work area for immediate emergency use. The Safety Director will ensure that, when required, the company will have a certified eye wash device on site at all times.

Emergency Procedures/Requirements

The Safety Director will ensure a weekly review of the company's written procedures for each jobsite is performed and will be responsible for ensuring that in areas where 911 service is unavailable, the telephone numbers of the physicians, hospitals or ambulances are conspicuously posted. Proper equipment for prompt transportation of the injured person to a physician or hospital, or a communication system for contacting necessary ambulance service, shall be provided at each jobsite.

Heat-Related Illness Prevention Program

Work involving high temperature, radiant heat sources, high humidity, direct physical contact with hot objects or strenuous physical activities have a high potential for inducing heat stress in workers.

Potable Drinking Water

Barnhill Contracting Company will ensure employees have access to potable drinking water. Where it is not plumbed or otherwise continuously supplied, drinking water will be provided in sufficient quantity at the beginning of the work shift.

Shade

The company will ensure employees suffering from heat illness or who believe that a preventative

recovery period is needed, will be provided access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes. When temperatures are at, or below, 85°F, employees will have timely access to shade upon request. For temperatures at, or above, 85°F, one or more areas with shade will be provided at all times while employees are present.

High-Heated Temperatures

The company has established high-heat procedures when the temperature exceeds 95°F. High-heat procedures will include, but are not limited to:

- Effective communication by voice, observation or electronic means
- Observation of employees for alertness
- Reminder to employees to drink water throughout the shift
- Close supervision of employees for their first 14 days of employment



Employee Training

The company will provide employee training on the following:

- Environmental and personal risk factors for heat illness
- Procedures for complying with the requirements of this standard
- Importance of the frequent consumption of small quantities of water (up to four cups per hour) when the work environment is hot and employees are likely to be sweating more than usual during the performance of their duties
- Importance of acclimatization
- Different types of heat illness and the common signs and symptoms of each.
- Importance of immediately reporting to the company, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves or in coworkers
- Company's procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary
- Company's procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider
- Company's procedures for ensuring that, in an emergency, clear and precise directions to the worksite can and will be provided as needed to the emergency responders

Supervisor Training

The company will ensure supervisors are trained in heat-related illness prior to the supervision of employees working in heat. Training on the following topics will be provided:

» Procedures the supervisor is to follow to implement the applicable procedures to prevent heat illness

» Procedures the supervisor is to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures

» Supervisors will take into consideration personal factors that contribute to heat-related illness before assigning a task where there is a possibility of the occurrence of a heat-related illness. The most common personal factors contributing to heat-related illness are age, weight, fitness, drug or alcohol use, prior heat-related illness, etc.

Physical Work Factors

Barnhill Contracting Company will ensure physical factors that contribute to heat-related illness are taken into consideration before performing a task. The most common physical factors that can contribute to heat-related illness are type of work, level of physical activity and duration, and clothing color, weight and breathability.

Back Injury Prevention Procedures

Most back injuries can be avoided by using correct lifting procedures. Though the back can absorb some of the shock of the body being put into stress, a healthy back can be damaged if lifting and carrying are not performed correctly. Supervisors are responsible for ensuring that all employees follow these procedures.

Lifting Procedures

» Primary Rule of Lifting: GET HELP IF YOU HAVE TO STRAIN TO LIFT THE LOAD!

» Look at the area around the load to ensure you have a clear work area, or path, prior to lifting

» Size up the load before lifting. Test lift the load to determine the weight and center of load. DO NOT lift more than you can handle. Always get help for loads weighing more than 50 pounds

» Position yourself over the load with your feet in a forward/backward stride, with one foot at the side of the object. Space your feet far enough apart to ensure good balance

» Bend your knees and lower your body, keeping your back straight. Tuck your chin in under your chest so that your head and neck line up with your back to keep your back straight



» Place your hands under the object and grip firmly with your palms. Wrap your arms around the object or grasp any handles. If an object is flat on the floor, use both hands to lift a corner of the object, and then slip your hand under it. You can then lift the object to get the other hand underneath the object

» Pull the object close to your body, tucking arms and elbows into your sides to center your body weight

» Lift straight with a thrust of your rear foot. Slowly straighten your legs, keeping your chin tucked in and your back straight. Keep the object's weight over your legs as much as possible. The muscles in your legs should be lifting the load, not your back muscles

» Pick up the object in the direction of travel to prevent twisting your knees or back. If you must turn to another direction while carrying a load, do not rotate your body. Take short steps to turn in the direction of travel

» Prepare to land the load by pre-planning and clearing the intended path of travel. Make sure you have a solid place to land the load

» Do not pull an object off a shelf without knowing its weight. Position a secure work platform so that your chest is even with, or above, the load. Test it before you lift it

» Floppy rods, pipes, or lumber should be tied together in several places before carrying

» When carrying long objects, use caution when turning to avoid swinging the ends of the material around and striking another employee

» After temporary electricity is established on the project, metal objects longer than ten feet require one person on each end of the object exercising total control to prevent the object from coming in contact with energized electrical devices

Back Injury Prevention Tips for Equipment Operators & Truck Drivers

Entering the Cab Safely:

» Face the vehicle or machine

» Grasp the handhold to steady yourself

» Step up lifting yourself with your legs, not your arms

» When you reach the top and settle into the cab, grasp the wheel, keeping your back as straight as possible

Safe Driving Posture:

» Align your ears, shoulders and hips into a straight line

» If possible, adjust your seat so that your knees are level with your hips and the steering wheel is at a comfortable angle for your shoulders and arms

» If necessary, use a back support (rolled up towel) to cushion your lower back

» Stretch to loosen your back while in the cab (unless prohibited to do so by doctor's orders)

» Gently roll your neck in a circular motion, keeping your eyes on the road. Roll your neck three to four times in each direction, letting your head rest briefly in places that feel right. Repeat this exercise hourly

» Raise both shoulders as high as you can (try to touch your ears). Hold for a count of five, repeat five times at least once per hour

» Tighten your stomach muscles, pushing back and down into the seat. Flatten your back and hold for several seconds. Repeat two to three times at least once an hour

Exiting the Cab Safely:

» Grasp the wheel and back out of the cab

» Reach for the handhold and gently lower yourself all the way to the ground. DO NOT JUMP

» Perform a "back break" after exiting the cab. Stand with your feet apart and place your hands on the small of your back. Gently arch your back, bending your head and neck backward. Hold for a count of five, repeat five times

05 PERSONAL PROTECTIVE & LIFESAVING EQUIPMENT



Personal Attire

OSHA requires employers to establish and enforce a personal attire policy to ensure a safe work operation. It is the responsibility of all employees to comply with this policy.

» **Footwear** - leather uppers high or low quarter shoes, sturdy sole with heel, laces without buckle. Steel-toed or composite-toed footwear shall be worn when there is danger of material or items falling on the toes of the feet or when working on a client's property where they are required

» **Pants** - top of length instep, sturdy and comfortable with or without cuffs, but not excessively cuffed or flared

» **Shirts** - knit or woven material styled to cover upper arm, shoulders, chest and midriff

Personal Protective Equipment Program & PPE Assessments

Training

Barnhill Contracting Company shall provide training to each employee who is required to use the Personal Protective Equipment (PPE). Each employee will be trained to know the following, at a minimum:

» When PPE is necessary

» What PPE is necessary

» How to properly put on, take off, adjust and wear PPE

» Limitations of the PPE



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» Proper care, maintenance, useful life and disposal of the PPE

Each affected employee shall demonstrate an understanding of the training specified in the list above and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE. When the company has reason to believe that any affected employee who has already been trained does not have the understanding and skill required, the company will retrain such employee.

Circumstances where retraining of an employee is required include, but are not limited to, the following:

» Changes in the workplace render previous training obsolete

» Changes in the types of PPE to be used render previous training obsolete

» Inadequacies in an affected employee's knowledge or use of assigned PPE indicate that the employee has not retained the requisite understanding or skill

The company shall verify that each affected employee has received and understood the required training program through a written certification that will include:

» Name of each employee trained

» Date(s) of training

» Name of division or office

» Subject of the certification

Personal Protective Equipment

Protective equipment for the company employees includes personal protective equipment for:

» Eyes

» Face

» Head

» Extremities

» Protective clothing

» Respiratory devices

» Protective shields and barriers

The PPE will be provided, used and maintained in a sanitary and reliable working condition wherever it is necessary by reason of:

» Hazards of processes or environment

» Chemical hazards

» Radiological hazards

» Mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact

Head Protection

Hardhats are required for workers:

» In areas where there is danger of a head injury from impact, falling objects or debris, or where there is danger of electrical shock or burns

» In a trench or other excavation where soil or other objects could strike the head from above

» Working in or near a building under construction or repair

» Working in or around asphalt plants

» Working on a jobsite where the owner requires employees to wear safety headgear

Safety Vest or Coat

All field employees will be required to wear a safety vest or jacket that meets the requirements of ANSI 107-2004 Class II. Class III safety vests or jackets should be worn at night and in low-light conditions.

Hearing Protection

When it is impossible to reduce noise levels or the duration of exposure, ear protection devices will be provided for worker's use. Approved hearing protection will be worn as specified in posted areas while working with, or around, high-noise level producing machines, tools or equipment. Rule of thumb - when you must raise your voice to be heard, you need hearing protection!

Permissible Noise Exposures	
Duration per day (hours)	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1.5	105
.5	110
.25 or less	115
Sound Levels	
Equipment/Tool	Sound Level Created
Pneumatic chipping hammer	103-113
Jackhammer	102-111
Concrete joint cutter	99-102
Skill saw	88-102
Stud welder	101
Bulldozer	93-95
Crane	90-96
Hammer	87-95
Backhoe	84-93

Eye & Face Protection

Employees will be provided with eye and face protection equipment when operations present the potential for eye or face injury from physical, chemical or radiation agents. Choice of eye or face protection will be determined per the hazard and each employee will be trained in the proper selection of eye and face protection as needed. Workers wearing prescription glasses may do the following:

» Obtain prescription safety glasses with side shields

» Wear over-the-counter safety glasses

» Wear mono-goggles

Additionally, the following eye/face equipment must be used when performing the following work activities:

Work Activity	Required Eye/Face Equipment
Welding	Welding hood
Burning	Burning goggles
Grinding	Face shield
Chemical handling	Face shield
Molten materials	Face shield
Corrosive Liquids	Face shield
Concrete Pouring	Face shield

Employee-Owned Equipment

Where employees provide their own protective equipment, the company will continue to be responsible to assure its adequacy, including proper maintenance and sanitation of such equipment.

Hazard Assessment & Equipment Selection

Barnhill Contracting Company shall assess the workplace to determine if any hazards are present, or are likely to be present, which necessitate the use of PPE. The company will verify that the required workplace hazard assessment has been performed through a written certification that will include:

» Workplace evaluated

» Identity of the person certifying that the evaluation was performed

» Dates of the hazard assessment

» Identify the document as a certification of hazard assessment

If such hazards are present, or are likely to be present, the company will:

» Communicate selection decisions to each affected employee

» Select the types of PPE that will properly fit and best protect the affected employee from the hazards identified in the hazard assessment

» Defective or damaged PPE shall not be used

06 RESPIRATORY PROTECTION



Respiratory Protection Overview

Barnhill Contracting Company will provide effective training to employees who are required to use respirators. The training must be comprehensive, understandable, and recur annually and more often if necessary. If company employees choose to voluntarily use respirators, they will be required to review and comprehend some basic information about respirators such as:

» Why the respirator is necessary and how improper fit, usage or maintenance can compromise the protective effect of the respirator

» What the limitations and capabilities of the respirators are

» 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

» How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators

» General requirements of this section

The training will be conducted in a manner that is understandable to the employee. The company shall provide the training prior to requiring the employee to use a respirator in the workplace. Previous training not repeated initially by the company must be provided no later than 12 months from the date of the previous training.

Retraining shall be administered annually, and when the following situations occur:

» Changes in the workplace or the type of respirator 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

» Any other situation arises in which retraining appears necessary to ensure safe respirator use

General Practices

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, the substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used:

» When the atmosphere is oxygen with oxygen content below 19.5% by volume

» When such equipment is necessary to protect the health of the employee. The company shall provide respirators that are applicable and suitable for the purpose intended

Program Administrator

Barnhill Contracting Company has designated the Safety Director as the program administrator who is qualified through appropriate training or experience commensurate with the complexity of the program to oversee the Respiratory Protection Program and conduct the required evaluations of program effectiveness.

Surveillance

Appropriate surveillance of work area conditions and degree of employee exposure or stress shall be maintained. When there is a change in work area that may affect respirator effectiveness, the company shall re-evaluate the continued effectiveness of the respirator. The program administrator will ensure employees leave the area to wash, change cartridges or if they detect break-through or resistance.

Plan

In any workplace where respirators are necessary to protect the health of the employee or whenever respirators are required by the company a written Respiratory Protection Program with worksite-specific procedures will be implemented. The program shall be updated as necessary to reflect those changes in workplace conditions that affect respirator use.

Selection of Respirators

Barnhill Contracting Company shall select and provide an appropriate respirator based on the respiratory hazard(s) to which the worker is exposed as well as workplace and user factors that affect respirator performance and reliability. The respirator shall be a National Institute for Occupational Safety and Health (NIOSH)-certified respirator used in compliance with the conditions of its certification.

The company will identify and evaluate the respiratory hazard(s) in the workplace. This evaluation includes a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form.

The company shall select respirators from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

Where the company cannot identify or reasonably estimate the employee exposure, the company will consider the atmosphere to be Immediately Dangerous to Life or Health (IDLH).

Respirators for Immediately Dangerous to Life or Health (IDLH) Atmospheres

The company provides the following respirators for employee use in IDLH atmospheres:

» A full facepiece pressure demand self-contained breathing apparatus (SCBA) certified by NIOSH for a minimum service life of 30 minutes

» A combination full facepiece 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

» All oxygen-deficient atmospheres shall be considered IDLH. **Exception:** If the company demonstrates that, under all foreseeable conditions, the oxygen concentration can be maintained within the ranges specified in the following table (i.e. for the altitudes set out in the table), then any atmosphere-supplying respirator may be used

Oxygen Concentration Ranges	
Altitude (feet)	Oxygen deficient atmospheres (% 0_2) for which the employer atmosphere-may rely on supplying respirators
Less than 3,001	16.0 - 19.5
3,001 - 4,000	16.4 - 19.5
4001 - 5,000	17.1 - 19.5
5,001 - 6,000	17.8 - 19.5
6,001 - 7,000	18.5 - 19.5
7,001 - 8,000	19.3 - 19.5
Above 8,000 feet the exception does not apply. Oxygen-enriched breathing air must be supplied above 14,000 feet.	

Medical Conditions

Barnhill Contracting Company shall provide a medical evaluation to determine the employee's ability to use a respirator before the employee is fit tested or required to use the respirator in the workplace. The company may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.

Administration of the Medical Questionnaire & Evaluations

The medical questionnaire and examinations shall be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee. The medical questionnaire shall be administered in a manner that ensures that the employee understands its content. The company shall provide the employee with an opportunity to discuss the questionnaire and examination results with a physician or other licensed healthcare professional.

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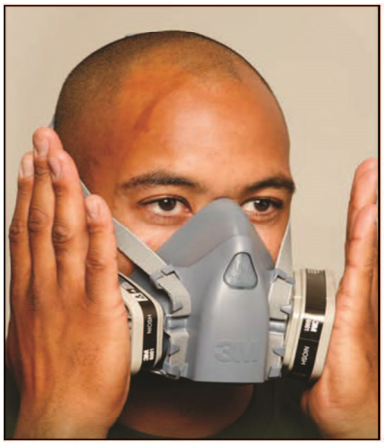
Fit Testing

Before an employee is required to use any respirator with a negative or positive pressure tight-fitting facepiece, the employee must be fit tested with the same make, model, style and size of respirator that will be used. The company requires all employees using a tight-fitting facepiece respirator to pass an appropriate qualified fit test (QLFT) or quantitative fit test (QNFT). The company requires that an employee using a tight-fitting facepiece respirator is fit tested prior to initial use of the respirator, whenever a different respirator facepiece (size, style, model or make) is used, and at least annually thereafter.





The company shall conduct an additional fit test whenever the employee reports, or a physician or other licensed healthcare professional, supervisor, or company's program administrator makes visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

If after passing a QLFT or QNFT, the employee subsequently notifies the company's program administrator, the physician or other licensed healthcare professional that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator facepiece and be retested. The fit test shall be administered using OSHA-accepted QLFT or QNFT protocol. QLFT may only be used to fit test negative pressure air-purifying respirators that must achieve a fit factor of 100 or less.

If the fit factor, as determined through an OSHA-accepted QNFT protocol, is equal to or greater than 100 for tight-fitting half facepieces, or equal to or greater than 500 for tight-fitting full facepieces, the QNFT has been passed with that respirator.

Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.

Qualitative fit testing of these respirators shall be accomplished by temporarily converting the respirator user's actual face piece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure air-purifying respirator facepiece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator facepiece.

Quantitative fit testing of these respirators shall be accomplished by modifying the facepiece to allow sampling inside the facepiece in the breathing zone of the user, midway between the nose and mouth. This requirement shall be accomplished by installing a permanent sampling probe onto a surrogate

facepiece, or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the facepiece.

Modifications to the respirator facepiece for fit testing shall be completely removed, and the facepiece restored to NIOSH-approved configuration, before that facepiece can be used in the workplace.

Facepiece Seal Protection

Barnhill Contracting Company shall not permit respirators with tight-fitting facepieces to be worn by employees who have:

» Facial hair that comes between the sealing surface of the facepiece and the face or that interferes with the valve function

» Any condition that interferes with the face-to-facepiece seal or valve function

If an employee wears corrective glasses or goggles or other personal protective equipment, the company shall ensure that such equipment is worn in a manner that does not interfere with the seal of the facepiece to the face of the user.

For all tight-fitting respirators, the company shall ensure that employees perform a user seal check each time they put on the respirator using CFR 1910.134 Respiratory Protection Appendix B-1: User Seal Check Procedures, or the procedures recommended by the respirator manufacturer when the company can demonstrate that they are as effective.

Procedures for IDLH Atmospheres

For all IDLH atmospheres, Barnhill Contracting Company's procedures are:

» One employee, or when needed, more than one employee is located outside the ILDH atmosphere

» Visual, voice or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the ILDH atmosphere

» The employee(s) located outside the ILDH atmosphere is trained and equipped to provide effective emergency rescue

» The company, or designee, is notified before the employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue

» The company, or designee authorized to do so by the company once notified, provides necessary assistance appropriate to the situation

Employee(s) located outside the IDLH atmospheres are equipped with:

» Pressure demand or other positive pressure SCBA, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA

» Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry

» Equivalent means for rescue where retrieval equipment is not required

Maintenance & Care

Barnhill Contracting Company will provide for the cleaning and disinfecting, storage, inspection and repair of respirators used by employees.

Cleaning & Disinfecting

The company will provide each employee with a respirator that is clean, sanitary and in good working order. The company shall ensure that respirators are cleaned and disinfected using the procedures recommended by the respirator manufacturer, provided that such procedures are of equivalent effectiveness.

The respirators shall be cleaned and disinfected at the following intervals:

» Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition

» Respirators issued to more than one employee shall be cleaned and disinfected before being worn by different individuals

» Respirators maintained for emergency use shall be cleaned and disinfected after each use

» Respirators used in fit testing and training shall be cleaned and disinfected after each use

The program administrator must address appropriate surveillance and ensure employees leave the area to wash, change cartridges or if they detect break-through or resistance.

Storage

All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture and damaging chemicals. They shall be packed or stored to prevent deformation of the facepiece and exhalation valve. In addition to these requirements, 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 instructions

Inspection

Barnhill Contracting Company shall ensure that respirators are inspected as follows:

» All respirators used in routine situations shall be inspected before each use and during cleaning

» All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations, and shall be checked for proper function before and after each use

» Emergency escape-only respirators shall be inspected before being carried into the workplace for use

The company shall ensure that respirator inspections including the following:

» A check for respirator function, tightness of connections and the condition of the various parts including, but not limited to, the facepiece, head straps, valves, connecting tube, cartridges, canisters or filters

» A check of elastomeric parts for pliability and signs of deterioration

Self-contained breathing apparatuses shall be inspected monthly. Air and oxygen cylinders shall be Maintained in a fully charged state and shall be recharged when the pressure falls to 90% of the manufacturer's recommended pressure level. The company shall determine that the regulator and warning devices function properly.

For respirators maintained for emergency use, the company shall:

» Certify the respirator by documenting the date the inspection was performed, the name (or signature) of the person who made the inspection, the findings, required remedial action and a serial number or other means of identifying the inspected respirator

» Provide this information on a tag or label that is attached to the storage compartment for the respirator, is kept with the respirator, or is included in inspection reports stored as paper or electronic files. This information shall be maintained until replaced following a subsequent certification

Breathing Air Quality & Use

Barnhill Contracting Company will provide employees using atmosphere-supplying respirators (supplied-air and SCBA) with breathing gases of high purity. The company shall ensure that compressed air, compressed oxygen, liquid air and liquid oxygen used for respiration accords with the following specifications:

» Compressed and liquid oxygen shall meet the US Pharmacopoeia's requirements for medical and breathing oxygen

» Compressed breathing air shall meet at least the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air G-7.1-1989, to include:

* Oxygen content (v/v) of 19.5 - 23.5%

* Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less

* Carbon monoxide (CO) content of 10 ppm or less

* Carbon dioxide content of 1,000 ppm or less

Lack of Noticeable Odor

The company shall ensure that compressed oxygen is not used in atmosphere supplying respirators that have previously used compressed air; oxygen concentrations greater than 23.5% are used only in equipment designed for oxygen service or distribution; and that cylinders used to supply breathing air to respirators meet the following requirements:

» Tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR Part 173 and Part 178)

» Cylinders of purchased breathing air have certificate of analysis from the supplier that the breathing air meets the requirements for Grade D Breathing Air

» The moisture content in the cylinder does not exceed a dew point of -50° F (-45.6° C) at 1 atmosphere pressure

Program Evaluation

Barnhill Contracting Company will conduct evaluations of the workplace to ensure that the written Respiratory Protection Program is being properly implemented, and to consult employees to ensure that they are using respirators properly.

Evaluations of the workplace will be conducted by the Safety Director, as necessary but not less than every 30 days, to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

The company shall regularly consult 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

The company will establish and 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.

Medical Evaluation

Records of medical evaluations required by this section must be retained and made available in accordance with 29 CFR 1910.1020.

Fit Testing

The company shall establish a record of the qualitative and quantitative fit tests administered to an employee including:

» Name or identification of the employee tested

» Type of fit test performed

» Specific make, model, style, and size of respirator tested

» Date of test

» The pass/fail results for QLFT's of the fit factor and strip chart recording or other recording of the test results for QNFT's

The fit tests shall be retained for respirator users until the next fit test is administered. Written materials required to be retained under this paragraph shall be made available upon request to affected employees and to designated representatives of the Assistant Secretary of Labor for Occupational Safety and Health, US Department of Labor and Director of the National Institute for Occupational Safety and Health.

Respiratory Hazards

Lead

» When welding, cutting, burning, grinding, chipping, abrasive blasting or rivet busting on painted surfaces, you are required to determine if the surfaces contain lead based paint. If sampling results indicated lead-based paint 0.02% lead by weight, OSHA regulations shall be followed

» An initial hazard assessment is required and shall be performed to determine worker exposure levels. The assessment involves personal sampling of a representative group of workers performing different tasks. During the initial exposure assessment, workers shall wear protective clothing and the proper respiratory protection until the results of the assessment are known

» If trade/subcontractors are performing this work, the subcontractor shall provide copies of sampling results to Barnhill Contracting Company

» Area sampling of a work area shall not be used to determine worker exposure levels

If sampling results indicate the exposure limits are above 30 ug/m3, but below 50 30 ug/m3, the following is required:

» Written compliance plan

» Medical surveillance (blood level and ZPP)

» Personal monitoring

» Hazard communication training for lead

If sampling results are above 50 ug/m3, the following is required:

» Written compliance plan

» Engineering controls

» Respiratory protection

» Protective clothing

» Medical surveillance

» Clean change rooms and showers

» Clean lunchrooms

» Warning signs

» Training

Workers shall be notified in writing of their blood and/or personal monitoring results within five working days after the results are known.

Silica

Employees who perform any of the following work tasks shall be protected from exposure to silica dust:

» Chipping, hammering or mixing of refractory

» Abrasive blasting using silica sand as a blasting medium

» Abrasive blasting of concrete, regardless of the type of medium

» Sawing, hammering, drilling, grinding or chipping of concrete or masonry products

» Chipping, hammering or mixing of concrete grout

» Demolition of concrete or masonry structures

» Dry sweeping or compressed air blowing of concrete, masonry, rock or sand dust

» Employees performing any of the above tasks, or who could be exposed to silica dust, shall receive hazard communication training on silica

Acceptable engineering controls will be used when exposure to silica is likely. Examples of acceptable engineering controls include:

» Substitute blasting medium for less hazardous material with less than 1% silica

» Maintain an effective dust control program

» Use internal blast-cleaning machines

» Wet saw

» Use water through the drill stern

When acceptable engineering controls cannot be used, workers will wear respiratory protection, protective coveralls and gloves.

Employees shall follow these safe work rules when exposed to silica:

» Do not eat, drink or use tobacco products in areas where silica dust is present

» Always wash hands and face before eating, drinking or using tobacco products

First-line supervisors should consult their safety representative or Safety Director for further assistance.

07 FALL PROTECTION



Fall Protection & Prevention

Barnhill Contracting Company expects 100% continuous fall protection whenever the potential exists for a worker to be exposed to fall hazards of six feet or greater. All employees, trade contractors, vendors or other third-party individuals will take all practical measures to eliminate, prevent and control fall hazards. Trade and subcontractors will maintain records of fall protection training for review by Barnhill Contracting Company.

All work will be planned with the intent to eliminate identified fall hazards. If a fall hazard cannot be eliminated, then effective means of fall protection will be implemented. Effective means of fall protection includes:

» Guardrail systems

» Safety netting

» Floor and wall coverings

» Positioning device systems

» Controlled access zones

» Protection from falling objects

» Personal fall arrest systems consisting of ANSI-certified full-body harness, lanyard with shock absorbing device or retractable lifeline, locking snap hook and properly engineered anchorage point

Workers who are exposed to fall hazards that cannot be eliminated will be uniformly equipped, trained and given periodic refresher training in fall protection at specific intervals to minimize the adverse effects of accidental falls.

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- Workers will not tie off to a perimeter cable or wire rope handrail unless the perimeter railing or handrail has been properly engineered as a horizontal lifeline. Ropes will not be used as horizontal lifelines. Lanyards will not be tied back to themselves unless the lanyard is specifically manufactured for that use
- Workers who are exposed to falls six feet or greater while working from elevated decks, elevated platforms, stairwells, reinforced steel or any other elevated areas or equipment will be protected from falls
- Workers are not required to tie off on properly constructed scaffold, elevated decks and elevated platforms that have perimeter guardrail systems consisting of top rail and mid rail. If the perimeter guardrail system must be removed, workers will wear full-body harnesses with double shock absorbing lanyards
- Floor and wall coverings will be guarded or covered and properly marked "COVER. DO NOT REMOVE." When no other practical means of fall protection can be used, workers will be tied off at all times using a full-body harness, shock absorbing lanyards or retractable lanyards
- Workers will be protected from falling objects from above

Fall Prevention and Protection for Employees Working Over or Around Water

Employees working over or near water, whether the danger of drowning exists, shall be provided with a US Coast Guard-approved life jacket or buoyant work vests.

- Prior to, and after each use, the buoyant work vest or life jacket will be inspected for defects which alter their strength of buoyancy
- Damaged life jackets or buoyant work vests must be labeled "DEFECTIVE" and discarded immediately
- Ring buoys with at least 90 feet of line will be readily available for emergency rescue operations. The distance between ring buoys will not exceed 200 feet
- At least one lifesaving skiff will be immediately available at locations where employees are working over or adjacent to water

Training Program Overview

Barnhill Contracting Company will provide a training program for each employee who might be exposed to fall hazards. The program shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to be followed in order to minimize these hazards.

The company shall verify the compliance of employee training described in the paragraph above and will document the training with written certification records including:

- Name or other identity of the employee trained
- Date of training
- Signature of the company's "competent person" who conducted the training.

If the company relies on training conducted by another employer or training completed prior to

the effective date of this section, the certification record shall indicate the date that the company determined the prior training was adequate rather than the date of actual training. The latest training certification shall be maintained in the records of Barnhill Contracting Company.

Re-Training

When the company has reason to believe that any affected employee who has already been trained does not have the understanding and skill required, the company shall re-train each such employee. Circumstances where re-training is required include, but are not limited to, situations where:

» Changes in the workplace render previous training obsolete

» Changes in the types of fall protection systems or equipment to be used render previous training obsolete

» Inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill

Employee Exposure

The company's fall protection safety starts with an inspection every week and at every new jobsite to determine if the walking/working surfaces on which its employees are to work will have the strength and structural integrity to support employees safely. Employees are authorized to work only on approved surfaces and only when those surfaces have the required strength and structural integrity.

Unprotected Sides & Edges

Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is six feet (1.8 m) or above a lower level shall be protected from falling by the use of guardrail systems, safety net systems or personal fall arrest systems.

Other Measures

The company's Fall Protection Plan may include a written discussion of other measures that might be implemented to reduce or eliminate the fall hazard for workers who cannot be provided with fall protection (without regards to the use of PPE) from the conventional fall protection systems. In this event, the company will document the reasons why the use of conventional fall protection systems (guardrail systems, safety net systems or personal fall arrest systems) is feasible of why their use would create a greater hazard. For example, Barnhill Contracting Company shall discuss the extent to which scaffolds, ladders or vehicle mounted work platforms can be used to provide a safer working surface and thereby reduce the hazard of falling.

Plan Qualifications

The Fall Protection Plan shall be prepared by an OSHA-defined, qualified "competent person" with each plan developed specifically for each jobsite and systematically maintained to be up to date. The "competent person" must be qualified in the following areas:

» Nature of fall hazards in the work area

» Correct procedures for erecting, maintaining, disassembling and inspecting the fall protection systems to be used

» Use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones and other equipment to be used

» Limitations on the use of mechanical equipment during the performance of roofing work or on low-sloped roofs

» Correct procedures for the handling and storage of equipment and materials and the erection of overhead protection

» Role of employees in fall protection plans

» Standards contained in this section

Controlled Access Zones

The Fall Protection Plan will also identify each location where conventional fall protection methods cannot be used. These locations shall then be classified as controlled access zones. Controlled access zones and their use shall conform to the following provisions:

» When used to control access to areas where leading edge and other operations are taking place the controlled access zone shall be defined by a control line or by any other means that restricts access

» When control lines are used, they shall be erected not less than six feet (1.8 m) nor more than 25 feet (7.7 m) from the unprotected or leading edge, except when erecting precast concrete members

» When erecting precast concrete members, the control line shall be erected not less than six feet (1.8 m) nor more than 60 feet (18 m) or half the length of the member being created, whichever is less, from the leading edge

» The control line shall extend along the entire length of the unprotected or leading edge and shall be approximately parallel to the unprotected or leading edge

When and where there has been no other alternative methods implemented, the company will implement a safety monitoring system.

Designated Safety Monitor

The company will designate a person whose qualifications meet the OSHA definition of "competent person" to be the "safety monitor" for the company. He/she will monitor the safety of other employees. The company will take an active part to ensure the "safety monitor" complies with the following:

» Is competent to recognize fall hazards

» Warns the employee when it appears the employee is unaware of a fall hazard or is acting in an unsafe manner

» Is on the same walking/working surface and within visual sighting distance of the employee being monitored

» Is close enough to communicate orally with the employee

» Shall not have any other responsibilities which could take the monitor's attention from the monitoring function

Accident Procedures

In the event an employee falls, or some other related, serious incident occurs (e.g. a near miss) the company shall investigate the circumstances of the fall or other incident to determine if the Fall Protection Plan needs to be changed (e.g. new practices, procedures or training) and shall implement those changes to prevent similar types of falls or incidents.

American National Standards Institute (ANSI) & American Society for Testing and Materials (ASTM) Requirements

Barnhill Contracting Company recommends that fall arrest and restraint equipment be used in accordance with the manufacturer's instructions. When purchasing equipment and raw materials for use in fall protection systems, applicable ANSI and ASTM requirements should be met.

Selection & Equipment Use

The kind of personal fall arrest system selected should match the particular work situation, and any possible free fall distance should be kept to a minimum. Consideration should be given to the particular work environment.

For example, the presence of acids, dirt, moisture, oil, grease, etc. and their effect on the system should be evaluated. Hot or cold environments may also have an adverse effect on the system. Wire rope should not be used where an electrical hazard is anticipated.

The company will have means available to promptly rescue an employee should a fall occur, since the suspended employee may not be able to reach a work level independently.

08 FIRE PROTECTION, WELDING, CUTTING & HOT WORK



Fire Prevention & Protection

Each supervisor will develop a Fire Protection Program, incorporating the following guidelines, to be followed throughout all phases of construction:

- All fire fighting equipment should be periodically inspected and maintained in operating condition in accordance with the National Fire Protection Agency (NFPA) No. 10A-1970
- Defective equipment shall be labeled "DEFECTIVE" and discarded immediately
- All employees must be trained in the proper use of a fire extinguisher
- All foremen and superintendents will have a portable fire extinguisher with a minimum rating of 1-A:10-B:C mounted in their company-owned vehicle
- All mobile equipment shall be equipped with a minimum of one portable fire extinguisher
- At least one 5-pound fire extinguisher will be provided for every 3,000 square feet of building
- There shall be no more than 100 feet of travel between fire extinguishers
- Storage sites should be kept clear of unnecessary accumulation of combustible materials
- Weeds and grass shall be kept trimmed and storage areas shall be routinely cleaned and maintained

Training & Education

The company will provide portable fire extinguishers for employee use in the workplace. The company

shall also provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with incipient stage fire fighting.

The company shall provide every employee with the training and education required in the above paragraph upon initial assignment and at least annually thereafter.

Fire Fighting Equipment

The company shall maintain and inspect, at least annually, fire fighting equipment to assure the safe operational condition of the equipment. Portable fire extinguishers and respirators shall be visually inspected at least monthly.

The company shall record the annual maintenance date and retain this record for one year after the last entry of the life of the shell, whichever is less.

Fire extinguishers which have been listed or approved by a nationally-recognized testing laboratory shall be used to meet the requirements of this section.

Fire Watch Training

The company's fire watchers will have fire extinguishing equipment readily available and be trained in its use. They will be familiar with the facility's sounding alarm in the event of a fire.

The company's safety program requires that cutters or welders and their supervisors be suitably trained in the safe operation of their equipment and the safe use of the process.

Fire Hazards

If the object to be welded or cut cannot be readily moved, all movable fire hazards in the vicinity will be taken into a safe place.

Guards

If the object to be welded or cut cannot be moved and if all the fire hazards cannot be removed, then guards will be used to confine the heat, sparks and slag, and to protect the immovable fire hazards.

Restrictions

If the requirements stated above cannot be followed then welding and cutting will not be performed.

Fire Watch

Fire watchers will be required whenever welding or cutting is performed in locations where other than minor fire might develop, or any of the following conditions exist:

» Appreciable combustible material, in building construction or contents, is closer than 35 feet (10.7 m) to the point of operation

» Appreciable combustibles are more than 35 feet (10.7 m) away but are easily ignited by sparks

» Wall or floor openings within a 35-foot (10.7 m) radius expose combustible material in adjacent areas including concealed spaces in walls or floors

» Combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings, or roofs and are likely to be ignited by conduction or radiation

» Firewatchers will watch for fires in all exposed areas, try to extinguish them only when obviously within the capacity of the equipment available, or otherwise sound the alarm

» Suitable fire extinguishing equipment will be maintained in a state of readiness for instant use. Such equipment may consist of pails of water, buckets of sand, hose or portable extinguishers depending upon the nature and quantity of the combustible material exposed

» A fire watch must be maintained for at least a half hour after completion of welding or cutting operations to detect and extinguish possible smoldering fires

Authorization

Before cutting or welding is permitted, the area will be inspected by the designated site safety person and a written hot work permit will be used to authorize welding and cutting operations. The Safety Director will designate precautions to be followed in granting authorization to proceed preferably in the form of a written permit.

Work in Confined Spaces

Ventilation

Ventilation is a prerequisite to working in confined spaces. Ventilation requirements can be found within this program.

Defined

Confined space, as used herein, is intended to mean a relatively small or restricted space such as a tank, boiler, pressure vessel, or small compartment of a ship.

Securing Cylinders & Machinery

When welding or cutting is performed in any confined spaces, the gas cylinders and welding machines will be left on the outside. Before operations begin, heavy portable equipment mounted on wheels will be securely blocked to prevent accidental movement.

Lifelines

Where a welder must enter a confined space through a manhole or other small opening, means will be provided for quickly removing the welder in case of an emergency. When safety belts and lifelines are used for this purpose they will be so attached to the welder's body that their body cannot be jammed in a small exit opening. An attendant with a pre-planned rescue procedure will be stationed outside to observe the welder at all times and be capable of putting rescue operations into effect.

Electrode Removal

When arc welding is to be suspended for any substantial period of time, such as during lunch or overnight, all electrodes will be removed from the holders and the holders carefully located so that accidental contact cannot occur and the machine disconnected from the power source.

Gas Cylinder Shutoff

In order to eliminate the possibility of gas escaping through leaks of improperly closed valves, when gas welding or cutting, the torch valves will be closed and the fuel-gas and oxygen supply to the torch positively shut off at some point outside the confined area whenever the torch is not used for substantial period of time, such as during lunch hour or overnight. Where practical, the torch and hose shall also be removed from the confined space.

Warning Sign

After welding operations are completed, the welder shall mark the hot metal or provide some other means of warning other workers.

Health Protection & Ventilation

Evolution

Procedures will be developed when evolution of hazardous fumes, gases or dust according to the metals involved, are possible. Any welding, cutting or burning of lead base metals, zinc, cadmium, mercury, beryllium or exotic metals or paints not listed will have proper ventilation or respiratory protection.

Maximum Allowable Concentration

Local exhaust or general ventilating systems will be provided and arranged to keep the amount of toxic fumes, gases or dusts below the maximum allowable concentration as specified in 29 CFR 1910.94 Ventilation.

Precautionary Labels

A number of potentially hazardous materials are employed in fluxes, coatings, coverings and filler metals are released to the atmosphere during welding and cutting. These include but are not limited to the materials itemized in this section. The suppliers of welding materials shall determine the hazard, if any, associated with the use of their materials in welding, cutting, etc.

All filler metals and fusible granular materials will carry the following notice, as a minimum, on tags, boxes and other containers:

CAUTION
WELDING MAY PRODUCE FUMES AND GASES HAZARDOUS TO HEALTH
AVOID BREATHING THESE FUMES AND GASES
USE ADEQUATE VENTILATION
ANSI Z.49.1-1967

Brazing (welding) filler materials containing cadmium in significant amounts shall carry the following notice on tags, boxes or other containers:

WARNING
CONTAINS CADMIUM - POISONOUS FUMES MAY BE FORMED ON HEATING
DO NOT BREATHE FUMES
USE ONLY WITH ADEQUATE VENTILATION SUCH AS FUME COLLECTORS, EXHAUST VENTILATORS OR AIR-SUPPLIED RESPIRATORS
ANSI Z49.1-1967

Airline Respirators

In circumstances for which it is impossible to provide such ventilation, airline respirators or hose masks approved for this purpose by the NIOSH under 42 CFR 1910.84 must be used.

Self-Contained Units

In areas immediately hazardous to life, a full-facepiece, pressure-demand, self-contained breathing apparatus or a combination full-facepiece, pressure-demand supplied-air respirator with an auxiliary, self-contained air supply approved by NIOSH under 42 CFR 1910.84 must be used.

Local Ventilation

In confined spaces or indoors, welding or cutting operations involving metals containing lead, other than as an impurity, or metals coated with lead-bearing materials, including paint, must be performed using local exhaust ventilation or airline respirators. Such operations, when performed outdoors, must be done using respirators approved for this purpose by NIOSH under 42 CFR1910.84. In all cases, workers in the immediate vicinity of the cutting operation must be protected by local exhaust ventilation or airline respirators.

Beryllium

Welding or cutting indoors, outdoors or in confined spaces involving beryllium-containing base or filler metals will be performed using local exhaust ventilation and airline respirators unless atmospheric tests under the most adverse conditions have established that the workers' exposure is within the acceptable concentrations defined by 29 CFR 1910.1000. In all cases, workers in the immediate vicinity of the welding or cutting operations will be protected as necessary by local exhaust ventilation or airline respirators.

Cadmium

In confined spaces or indoors, welding or cutting operations involving cadmium-bearing or cadmium-coated base metals must be performed using local exhaust ventilation or airline respirators unless atmospheric tests under the most adverse conditions show that employee exposure is within the acceptable concentrations specified by 29 CFR 1910.1000. Such operations, when done outdoors, must be done using respirators, such as fume respirators, approved for this purpose by NIOSH under 42 CFR 1910.84.

Welding (brazing) involving cadmium-bearing filler metals must be performed using ventilation if the work is to be done in a confined space.

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First Aid Equipment

First aid equipment will be available at all times, including an OSHA-certified First Aid Kit on every jobsite. All injuries will be reported as soon as possible for medical attention. First aid will be rendered until medical attention can be provided.

Oxygen/Fuel Welding Cutting

Workmen in charge of the oxygen or fuel-gas supply equipment, including generators and oxygen or fuel-gas distribution piping systems will be instructed and judged competent by the company for this important work before being left in charge.

Arc Welding & Cutting

Instruction

Workmen designated to operate arc welding equipment will be properly instructed and qualified to operate such equipment as specified within this program.

Operation

Workmen assigned to operate or maintain arc welding will be trained on the OSHA Standard 1910.254 Arc Welding and Cutting on the General Requirements of Welding, Cutting and Brazing of the OSHA Standard 1910.253 a, b and c.

Maintenance

The operator will report any defective equipment or safety hazard to his/her supervisor and to the Safety Director. The use of the equipment will be discontinued until its safety has been assured. Repairs will be made only by the company's qualified personnel.

Machines that become wet will be thoroughly dried and tested before being used. Cables with damaged insulation or exposed bare connectors will be replaced. Joining lengths of work and electrode cables will be done by the use of connecting means specifically intended for this purpose. The connecting means will have adequate insulation for the service conditions.

Compressed Gas Cylinders Program

Gas identification should be stenciled or stamped on the cylinder or label. No compressed gas cylinder should be accepted for use that does not legibly identify its content by name.

Visual Inspections of Cylinders

The company will determine that compressed gas cylinders under the company's control are in a safe condition to the extent that this can be determined by visual inspection. Visual and other inspections shall be conducted as prescribed in the Hazardous Materials Regulations of the Department of Transportation (49 CFR parts 171-179 and 14 CFR part 103). Where those regulations are not applicable, visual and other inspections shall be conducted in accordance with the Compressed Gas Association.

Removing Cylinder Caps

When cylinder caps cannot be removed by hand, cylinders should be tagged "DO NOT USE" and returned to the designated storage area for return to vendor.

Proper Use of Compressed Gas Cylinders

» Valves must be closed when cylinders are not in use

» Cylinders shall not be used as rollers or supports

» Cylinders shall not be placed where they can come in contact with electrical circuits

» Cylinders must be protected from sparks, slag or flame from welding, burning or cutting operations

» Empty cylinders must be returned to designated storage areas as soon as possible after use

Use and Inspection of Proper Regulators of Tools

Cylinders must be equipped with the correct regulators. Regulators and cylinder valves should be inspected for grease, oil, dirt and solvents. Only tools provided by the supplier should be used to open and close cylinder valves.

Proper Storage of Cylinders & Storage Areas

Cylinders must be secured at all times in such a way as to avoid them being knocked over or damaged, stored in a vertical position, not in public hallways, and segregated based on contents. A minimum of 20 feet should be maintained between oxidizers and flammable, or firewalls should be erected at least five feet high, with a rating of 30 minutes. Cylinders must be protected from damage, corrosion, sunlight and kept away from heat sources. Cylinders should be capped when not in use.

Cylinders stored inside buildings shall be stored in a well-protected, well-ventilated, dry location. Cylinders shall not be kept in unventilated enclosures such as lockers and cupboards. Storage areas for full and empty cylinders must be designated and labeled. Cylinders should be stored in definitely-assigned places away from elevators, stairs and gangways.

Proper Transportation of Cylinders

Cylinders must be transported in a vertical, secured position using a cylinder basket or cart, and must not be rolled. Regulators should be removed from cylinders and cylinders should be capped before movement. Cylinders should not be dropped or struck violently and protective caps are not to be used to lift cylinders.

Training in Use, Handling & Storage of Cylinders

All employees should be trained on the use, handling and storage of compressed gas cylinders.

Handling of Leaking Cylinders

Leaking cylinders should be moved to an isolated, well ventilated area, away from ignition sources. Soapy water should be used to detect leaks. If the leak is at the junction of the cylinder valve and cylinder, do not try to repair it. Contact the supplier and ask for response instructions.

Marking Cylinders That Are No Longer Needed

Only professionals should refill cylinders and gases should never be mixed in a cylinder. The same safety precautions should be taken when handing empty cylinders as would be taken when handing full cylinders.

Inspections of Hoses and Connections

Hoses and connections should be regularly inspected for damage. Hoses should be stored in cool areas and protected from damage.

Use of Engineering Controls

Engineering controls such as emergency shutoff switches, gas cabinets and flow restrictors should be used whenever possible to control hazards. Emergency eye wash facilities should be present where corrosive gases or materials are used.

09 ELECTRICAL SAFETY



Working With or Around Electricity

Barnhill Contracting Company will ensure that electrical equipment is free from recognized hazards that are likely to cause death of serious physical harm to employees. The following guidelines shall be followed when using electrical equipment:

» Ground-fault circuit interrupters or an Assured Equipment Grounding Program shall be used to protect employees on all construction sites (refer to end of section for the Assured Equipment Grounding Conductor Program)

» Extension cord sets used with portable electrical tools and appliances shall be a 3-wire type designed for hard and extra-hard usage

» Each cord set, attachment cap, plug and receptacle of cord sets and any equipment connected by cord and plug, except cord sets which are fixed and not exposed to damage, shall be visually inspected before each day's use for external defects such as deformed or missing pins or insulation damage, and for indication of possible internal damage. Worn or frayed electrical cords shall not be used

» Equipment that is damaged shall not be used until it is properly repaired

» Flexible cords shall only be used in continuous lengths without splices or repair. Hard service flexible cords No. 12 or larger may be repaired if spliced so that the splice retains the insulation, outer sheath properties and usage characteristics of the cord being spliced

» Flexible cords shall be connected to devices and fittings so that the strain relief is provided to prevent pull from being directly transmitted to joints or terminal screws

» Flexible cords and cables shall be protected by bushings or fittings where passing through holes in covers, outlet boxes or similar enclosures

» Conductors entering boxes, cabinets or fittings shall be protected from abrasion, and openings through which conductors enter shall be effectively closed. Unused openings in cabinets shall be effectively closed

» All pull boxes, junction boxes and fittings will be provided with covers. If metal covers are used they shall be grounded. In energized installations each outlet box should have a cover, faceplate or fixture canopy

» Fixtures, lamp holders, lamps, rosettes and receptacles shall have no live parts normally exposed to employee contact. However, rosettes and cleat-type lamp holders and receptacles located at least eight feet above the floor may have exposed parts

» Electrical installations that are opened to unqualified people shall be made with metal-enclosed equipment or shall be in a vault or an area where access is controlled by a lock. Metal enclosed switchgear, unit substations, transformers, pull boxes, connection boxes and other similar associated equipment shall be marked with appropriate caution signs

Training

The training requirements of the company's Electrical Safety Program contained in this section apply to employees who face a risk of electric shock that is not reduced to a safe level and who are not qualified persons. Unqualified persons should be trained in, and be familiar with, any electrically-related safety practices not specifically addressed but which are necessary for their safety.

The training requirements of the company's Electrical Safety Program contained in this section do not apply to employees who are qualified to face a risk of electric shock that is not reduced to a safe level. Their training requirements are not covered in this manual and any work requiring that level of training and knowledge will be performed by a qualified person.

General

Safety-related work practices will be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts, when work is performed near, or on , equipment or circuits which are, or may be, energized. The specific safety-related work practices will be consistent with the nature and extent of the associated electrical hazards.

Working On or Near Exposed De-Energized Parts

This paragraph applies to work on exposed de-energized parts or near enough to them to expose the employee to any electrical hazard they present. Conductors and parts of electric equipment that have been de-energized, but have not been locked out or tagged out in accordance with this section will be treated as live parts.

Lockout/Tagging

While any employee is exposed to contact with parts of fixed electric equipment or circuits which have been de-energized, the circuits energizing the parts will be locked out or tagged or both, in accordance with the requirements of this paragraph. Please refer to the Lockout/Tagout Program in Section 28.

Working On or Near Energized Parts

This applies to work performed on exposed live parts (involving either direct contact or by means of tools or materials) or near enough to them for employees to be exposed to any hazard present.

Working on Energized Equipment

Only qualified persons may work on electric circuit parts or equipment that have not been de-energized under the procedures in the De-energizing Equipment section of this manual. Such persons will be capable of working safely on energized circuits and will be familiar with the proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools.

Overhead Lines

If work is to be performed near overhead lines, protective measures will be taken before work is started, such as providing clearance distances and lines will be de-energized and grounded. If the lines are to be de-energized, arrangements will be made with the person or organization that operates or controls the electric circuits involved to de-energize and ground them. If protective measures, such as guarding, isolating or insulating are provided, these precautions will prevent employees from contacting such lines directly with any part of their body or indirectly through conductive materials, tools or equipment.

Note: The work practices used by qualified persons installing insulating devices on overhead power transmission or distribution lines are covered by 1910.269 of this Part, not by 1910.332 - 1910.335 of this Part. Unqualified persons are prohibited from performing this type of work.

Approach Distances for Unqualified/Qualified Persons

Unqualified Employees (elevated): When an unqualified employee is working in an elevated position near overhead lines, the location shall be such that the person and the longest conductive object he/she may contact cannot come closer to any unguarded, energized overhead line than the following distances:

» Voltages to ground 50kV or below - 10 feet (305 cm)

» Voltages to ground over 50kV - 10 feet (305 cm) plus 4 inches (10 cm) for every 10kV over 50kV

Unqualified Employees (ground): Unqualified employees working on the ground in the vicinity of overhead lines may not bring any conductive object closer to unguarded, energized overhead lines than the following distances:

» Voltages to ground 50kV or below - 10 feet (305 cm)

» Voltages to ground over 50kV - 10 feet (305 cm) plus 4 inches (10 cm) for every 10kV over 50kV

Qualified Persons: When a qualified person is working in the vicinity of overhead lines, whether in an elevated position or on the ground, the person may not approach or take any conductive object without an approved insulating handle closer to exposed energy parts than shown in the following table, unless:

» The person is insulated from the energized parts (gloves, with sleeves if necessary, rated for the voltage involved are considered to be insulation of the person from the energized part on which work is performed.)

» The energized part is insulated both from all other conductive objects at a different potential and from the person

» The person is insulated from all conductive objects at a potential different from that of the energized part

Approach to Distances for Qualified Employees - Alternating Current	
Voltage Range (phase to phase)	Minimum Approach Distance
300V or less	avoid contact
over 300V, not over 750V	1 foot (30.5 cm)
over 750V, not over 2kV	1 foot, 6 inches (46 cm)
over 2kV, not over 15kV	2 feet (61 cm)
over 15kV, not over 37kV	3 feet (91 cm)
over 37kV, not over 87.5kV	3 feet, 6 inches (107 cm)
over 87.5kV, not over 121kV	4 feet (122 cm)
over 121kV, not over 140kV	4 feet, 6 inches (137 cm)

Vehicular and Mechanical Equipment

Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines will be operated so that a clearance of ten feet (305 cm) is maintained. If the voltage is higher than 50kV, the clearance will be increased four inches (10 cm) for every 10kV over that voltage. However, under any of the following conditions, the clearance may be reduced:

If the vehicle is in transit with its structure lowered, the clearance may be reduced to four feet (122 cm). If the voltage is higher than 50kV, the clearance will be increased four feet (10 cm) for every 10kV over the voltage

If insulating barriers are installed to prevent contact with the lines, and if the barriers are rated for the voltage of the line being guarded and are not part of, or an attachment to, the vehicle or its raised structure, the clearance may be reduced to a distance within the designed working dimensions of the insulating barrier.

If the equipment is an aerial lift insulated for the voltage involved, and if the work is performed by a qualified person, the clearance (between the insulated portion of the aerial lift and the power line) may be reduced to the distance given in the table above.

Illumination

Employees may not enter spaces containing exposed energy parts, unless illumination is provided that enables the employees to perform the work safely.

Where lack of illumination of an obstruction precludes observation of the work to be performed, employees may not perform tasks near exposed energized parts. Employees may not reach blindly into areas which may contain energized parts.

Confined or Enclosed Work Spaces

When an employee works in a confined or enclosed space (such as a manhole or vault) that contains

exposed, energized parts, the company will provide, and the employee will use, protective shields, protective barriers or insulating materials necessary to avoid inadvertent contact with these parts. Doors and hinged panels will be secured to prevent them from swinging into an employee and cause the employee to contact exposed energized parts.

Conductive Materials & Equipment

Conductive materials and equipment that are in contact with any part of an employer's body will be handled in a manner that will prevent them from contacting exposed energized conductors or circuit parts. If an employee must handle long dimensional conductive objects (such as ducts and pipes) in areas with exposed live parts, the company will institute work practices (such as the use of insulation, guarding and material handling techniques) which will minimize the hazard.

Portable Ladders

Portable ladders will have non-conductive side rails if they are used where the employee or the ladder could contact exposed energized parts.

Conductive Apparel

Conductive articles of jewelry or clothing (such as watch bands, bracelets, rings, key chains, necklaces, metallized aprons, cloth with conductive thread, or metal headgear) may not be worn if they might contact exposed energized parts. However, such articles may be worn if they are rendered non-conductive by covering, wrapping or other insulating means.

Assured Equipment Grounding Conductor Program

If the company implements an assured equipment grounding conductor program, rather than a ground fault circuit interrupter program, the program should cover all cord sets, receptacles that are not part of the building or structure, and equipment connected by cord and plug which are available for use or used by employees. This program should consist of the following minimum requirements:

» A written description of this program, including the specific procedures, will be available at the jobsite for inspection and copying by the Safety Director and any affected employee

» The company will designate one or more "competent persons" as defined by OSHA Standard 1926.32(f), to implement this program

Inspection

Each cord set, attachment cap, plug and receptacle of cord sets, and any equipment connected by cord and plug, except cord sets and receptacles which are not fixed and not exposed to damage, will be visually inspected before each day's use for external defects, such as deformed or missing pins or insulation damage, and for indications of possible internal damage. Equipment found damaged or defective will not be used until repaired. All damaged equipment will be removed from service and attached with a "DO NOT USE" tag.

Testing

The following tests will be performed on all cord sets, receptacles which are not part of the permanent wiring of the building or structure, and cord and plug connected equipment required to be grounded:

» All equipment grounding conductors will be tested for continuity and will be electrically continuous

» Each receptacle and attachment cap or plug will be tested for correct attachment of the equipment grounding conductor. The equipment grounding conductor will be connected to its proper terminal

All required test will be performed:

» Before first use

» Before equipment is returned to service following any repairs

» Before equipment is used after any incident which can be reasonably suspected to have caused damage (for example, when a cord set is run over)

» At intervals not to exceed three months, except those cord sets and receptacles which are fixed and not exposed to damage will be tested at intervals not exceeding six months

Tests performed as required in this program will be recorded. This test record will identify each receptacle, cord set, and cord and plug connected equipment that passed the test and will indicate the last date it was tested or the interval for which it was tested. This record will be kept by means of logs, color coding, or other effective means and is maintained until replaced by the current record. The record is available on the jobsite for inspection by the Safety Director and any affected employee.

10 RIGGING & MATERIAL HANDLING



This program applies to rigging and slings used with other material handling equipment for the movement of material by hoisting. The types of rigging and slings covered are those made with alloy steel chain, rope, metal mesh, natural or synthetic fiber rope and synthetic web.

A competent person will be designated for rigging and hoisting operations. The competent person shall ensure that all safety measures and systems are in place, all safety procedures are followed and ensure regular inspections of the operational site and rigging equipment are made. The company has implemented and will enforce the following work practices and procedures to ensure that employees are not exposed to hazards during rigging and hoisting operations.

Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to ensure that it is safe. Defective rigging equipment shall be removed from service. Barnhill Contracting Company shall ensure rigging equipment:

» Has permanently affixed and legible identification markings as prescribed by the manufacturer that indicate the recommended safe working load

» Is not loaded in excess of its recommended safe working load as prescribed on the identification markings by the manufacturer

» Not be used without affixed, legible identification markings, required by 29 CFR 1926.251 (a)(2)(1)

» Rigging or equipment, when not in use, shall be removed from the immediate work area so as not to present a hazard to employees

Material Storage

All material stored in tiers shall be stacked, racked, blocked or otherwise secured to prevent sliding, falling or collapsing. Rigging equipment (alloy steel chains, wire rope, synthetic slings) shall be inspected prior to use and durable identification permanently affixed stating size, rated capacity and sling manufacturer. Defective equipment shall be labeled "DEFECTIVE" and discarded immediately.

Wire Rope

» Wire rope slings shall have permanently affixed, legible identification markings prescribed by the manufacturer with rated load capacities

» When U-bolt wire clips are used to form eyes, Table H-20 of the 1926 OSHA Standards shall be used to determine the number and spacing of clips

» When used for eye splices, the U-bolt shall be applied so that the "U" section is in contact with the dead end of the rope. Protruding ends of strands in splices, on slings and on bridles shall be covered or blunted. Wire rope shall not be secured by knots, except on haul back lines or scrapers for pulling purposes only

» Eye splices made in any wire rope shall have a minimum of three full tucks. However, this requirement shall not preclude the use of another form of splice or connection, which can be shown to be efficient and which is not otherwise prohibited

» Except for eye splices in the ends of wires and for endless rope slings, each wire rope used in hoisting or lowering, or in pulling loads, shall consist of one continuous piece without splice

» Eyes in wire rope bridles, slings or bull wires shall not be formed by rope clips or knots

» Wire rope slings shall not be used when there are ten randomly broken wires in any one lay or five wires in one strand or one lay, or if the rope shows other signs of excessive wear, corrosion or defect

Synthetic Slings

Each synthetic sling (nylon, polyester or polypropylene) shall be marked or coded to show:

» Name and trademark of manufacturer

» Rated capacities for each type of hitch

» Type of material

Synthetic slings shall be marked "DEFECTIVE" and discarded immediately if 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 torn stitches

» Distortion of fittings

11 HAND & POWER TOOLS



Hand & Power Tools

» All hand, power tools and similar equipment, whether furnished by Barnhill Contracting Company, or by the employee, shall be maintained in safe condition

» When power operated tools are designed to accommodate guards, they shall be equipped with such guards when in use. The guard may not be manipulated in any way that will compromise its integrity or compromise the protection for which it was intended. Guarding shall meet the requirements set forth in ANSI B15.1

» Impact tools such as wedges and chisels shall be kept free of mushroomed heads. The wooden handle of the tool shall be free of splinters or cracks and shall be kept tightly inserted into the tool

» Employees using hand and power tools and who are exposed to falling, flying, abrasive and splashing objects, or exposed to harmful dusts, fumes, mists, vapors or gases shall be provided with the particular personal protective equipment necessary to protect them from the hazard

» All personal protective equipment shall meet the requirements of this program and will be maintained in good working order

» All hand-held power tools shall be equipped with a constant pressure switch that will shut power off when the pressure is released

Power-Operated Hand Tools

» Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming disconnected

» Compressed air shall not be used for cleaning purposes, except where reduced to less than 30 psi, and then used only with proper personal protective equipment

» All hoses greater than ¼" in diameter shall have a safety device at the power supply or branch line to reduce pressure in case of hose failure

» All fuel-powered tools shall be stopped while being refueled, serviced or maintained

» All employees using abrasive wheels shall wear eye protection equipment and a face shield

Woodworking Tools

» All portable power driven circular saws will be equipped with guards above and below the base plate or shoe

Power Actuated Tools

» Only employees who possess a valid operator's card issued for the make and model of the tool are permitted to use the tool

» Only low velocity or captive studs are permitted

» Do not over load the tool

» The tool shall be tested each day before loading to ensure the device is working properly. Test the tool according to manufacturer's instruction

» Tools that are not working properly shall be labeled "DEFECTIVE" and immediately discarded

» Minimum protective gear includes safety glasses and earplugs

» Tools shall not be loaded until just prior to intended firing time

» Never point a loaded or empty tool at anyone

» Keep hands clear of the open barrel

» Never leave the tool unattended

» Never drive fasteners into very hard or brittle materials like cast iron, glazed tile, glass block, life rock or hollow tile

» No fastener shall be driven into spalled areas too close to the edge of concrete

» Always use the guard required by the manufacturer

» Plastic strips holding several charges must be placed in a metal container filled with water and a cover, if any charges have not been fired

12 TRENCHING & EXCAVATION



A "competent person" in trenching and excavation must be present at all times while employees are in the excavation. Prior to employees entering an excavation, a "competent person" in trenching and excavation shall perform an inspection to determine if the excavation is safe. Inspections shall be made after every rainstorm or any hazard-increasing occurrence.

Specific Excavation Requirements

» All slopes shall be excavated to at least the angle of repose, except those areas where solid rock allows for line drilling or pre-splitting

» Excavated or other material shall not be stored closer than two feet from the edge of any excavation

» Water shall not be allowed to accumulate in an excavation

» Banks greater than five feet high shall be shored or sloped to the angle of repose where a danger of slides or cave-ins exists as a result of excavation

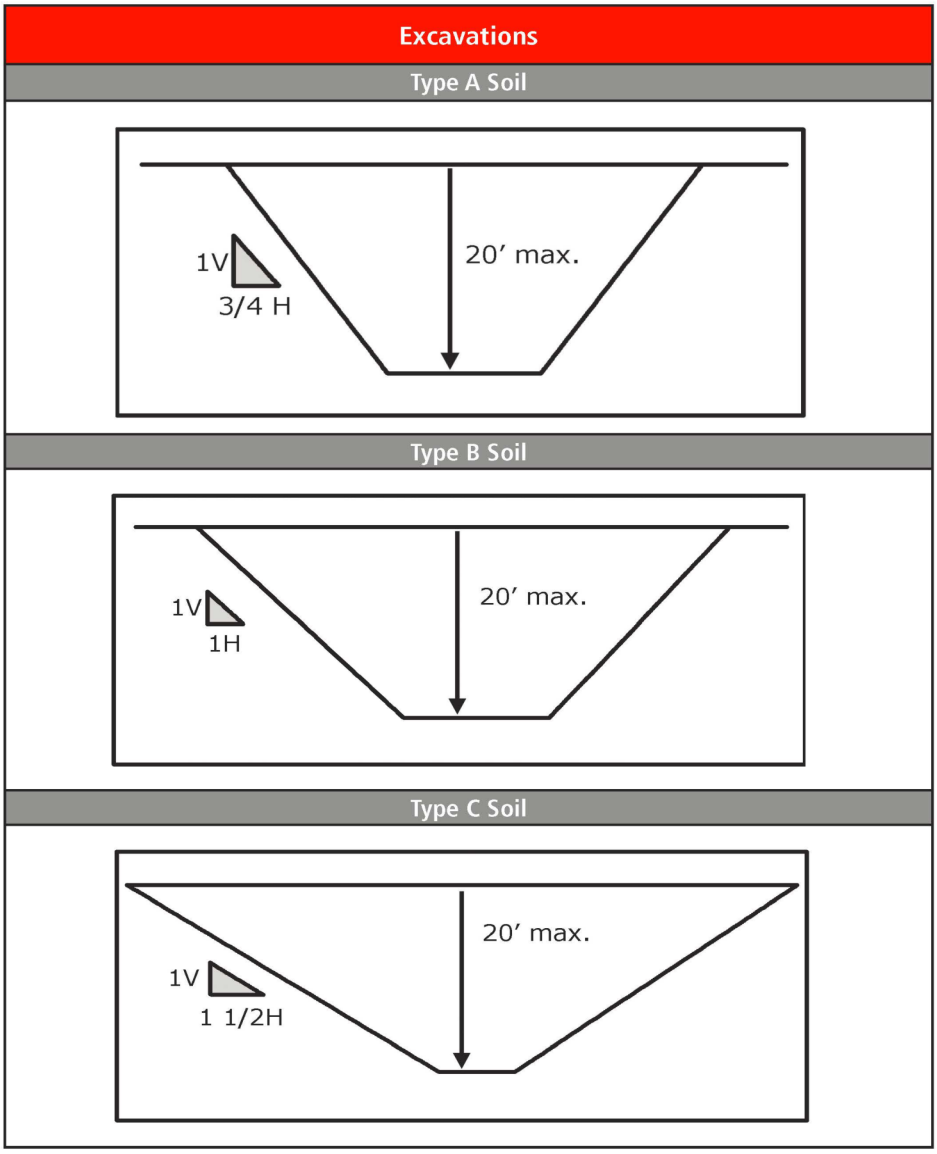
Appropriate Angles of Repose for Sloping Sides of Excavations	
Soil Class	**Angles of Repose**
Class A Soil	¾ to 1 (53°)
Class B Soil	1 to 1 (45°)
Class C Soil	1½ to 1 (34°)

Where employees are required to be in trenches or excavations four feet deep or more, ladders extending from the floor of the trench excavation to at least three feet above the top of the excavation shall be located to provide a means of exit without more than 25 feet of lateral travel or in an area where employees can walk out of the trench without using their hands for assistance.

When shielding (trench box) is used to protect employees, the tabulated data for the trench box must

be present on the job. The box cannot be any higher than two feet off the bottom of the trench, and the box must be backfilled per manufacturer's recommendations (up to a maximum of 18 inches from the top).

No person shall be permitted under loads handled by power equipment. Employees exposed to vehicular traffic shall wear an ANSI 107-2004 Class II vest.



13 WORKING WITH CONCRETE



The following guidelines shall be followed when working with concrete:

» No loads shall be placed on a concrete structure unless a qualified person determines the structure is capable of supporting the load

» All vertical and horizontal rebar, including dowels, onto or into which someone could fall, must provide protection against impalement

» Rebar for walls, piers, columns and similar vertical structures shall be guyed and supported if the danger of collapse exists

» Wire mesh rolls shall be secured at each end to prevent recoiling

» Employees who are not essential to post tensioning operations should not be permitted behind the jack tensioning operations

» Signs and barriers must be erected to limit employees' access to post tensioning operations

» Employees shall not work under concrete buckets when the buckets are being raised or lowered

» Formwork shall support all loads placed on them

» Gloves shall be worn when handling tie wire and wire mesh

» Safety glasses, gloves, boots and long sleeves shall be worn when placing concrete

» Employees shall stay at least ten feet from overhead power lines when using long-handled tools and concrete hoses

» Employees shall not get between a concrete truck and pump, building, concrete pump, etc.

» Employees shall maintain visual contact between the driver or operator

» Employees shall use caution when riding buggies. Routes shall be planned in advance

» Employees shall wear harness and lanyard when working six feet or higher

» Pull nails or bend them over when stacking forms

» Use a leaf blower to clean forms or decks

» Remove debris, materials (forms, braces, etc.) and scraps daily

» Scrap and debris shall be kept clear from work areas and passageways

» Aisles, walkways and exits must be kept clear of materials and equipment

» Containers shall be provided for the collection and separation of waste, trash, oil, rags and other refuse

» There must be three feet of clearance around electrical panels, portable extinguishers, exits and first aid/safety equipment

» Stored materials shall be stable, secure and have proper support

Pre-Cast Concrete

A qualified rigger who is responsible for the inspection of all rigging and hardware shall be on site to supervise the rigging of precast concrete members. Prior to unloading pre-cast concrete members, a qualified rigger will:

» Inspect all rigging and hardware

» Ensure load is stable before releasing binders

» Ensure pre-cast member is properly rigged

Placement of Concrete Members:

» Precast members are not to be moved over other workers

» Workers involved in the setting or connection of precast members will strictly adhere to the 100% fall protection policy, with no exceptions

» No workers will use their hands to reach under a precast member to adjust a shim or bearing pad

Post Tensioning Operations

» Only workers essential to the post-tensioning operations shall be permitted behind the jack

» Warning signs and barriers to limit access to the post-tensioning operations shall be erected

Caissons

When workers are required to work inside a caisson, there shall be a detailed work plan developed. The plan will include, but not be limited to:

» Type of shield to be used

» Means of access for the worker

» Method of atmosphere monitoring to be used

» Training to be provided to the worker

When workers are required to enter a caisson four feet deep or greater, the workspace will be considered a "permit-required" confined space. All requirements of the confined space section in OSHA regulations shall be strictly followed.

A guardrail system shall be erected around the caisson opening when the sleeve does not extend 44 inches above ground level.

Each worker shall receive confined space entry training and understand the contents of the written work plan.

14 EMPLOYEES WORKING ON THE GROUND



General Job Requirements

» Wear your hard hat when required

» Report any unsafe act to your immediate supervisor right away

Spotters

» Spotters are required when employees are on the ground involved in a work activity area where dump trucks or mechanized equipment are in close proximity. Spotters are required to wear a yellow/green vest, designating him/her as a spotter. The spotter will be trained in the proper signaling of backing of vehicles and equipment and shall be trained in the hazards of their environment. Note: Contact your immediate supervisor for detailed spotter procedures for grading, asphalt and military safety action plans.

General Laborers

» Always watch for moving machines and stay clear

» Avoid injury by avoiding a job that is too strenuous for one person

» Make sure handles on shovels and all tools are in good condition

Site Clearing Equipment

» All equipment to be used in site clearing shall comply with OSHA Standards 29 CFR 1910.266 - Logging Operations

» Site clearing equipment manufactured after August 1, 1996 shall have a cab that is fully enclosed with mesh material with openings no greater than two inches at its least dimension. The cab may be enclosed with other materials where the employer demonstrates such materials provide equivalent protection and visibility. **Exception:** Equivalent visibility is not required for the lower portion of the cab where there are control panels or similar obstructions in the cab, or where visibility is not necessary for safe operation of the machine

» The protective canopy shall be constructed to protect the operator from injury from falling trees, limbs, saplings, or branches which might enter the compartment side areas and from snapping winch lines or other objects

Site Clearing Laborers

» Employees engaged in site clearing shall be protected from toxic plants and instructed in the available first aid treatments

» Employees exposed to falling or flying objects shall wear a hardhat

» Each employee that uses a chainsaw shall be trained in the safe use of the equipment and wear proper personal protection consisting of chaps, hardhat, ear muffs, eye and face protection

15 MOTOR VEHICLES & MECHANIZED EQUIPMENT



Mobile Equipment Program

Operation of Mobile Equipment

Only authorized employees shall be allowed to operate mobile equipment. Authorization to operate mobile equipment will be issued to employees qualifying under appropriate training and proficiency testing.

Pre-Shift Inspections

At the beginning of each shift, the operator shall inspect and check the assigned equipment, reporting immediately to his/her supervisor any malfunction of the clutch or of the braking system, steering, lighting, or control system and locking/tagging out the equipment if necessary.

Passengers Riding Equipment

Unauthorized personnel shall not be permitted to ride on equipment unless it is equipped to accommodate riders safely.

Back-Up Alarm

The operator shall ensure the warning signal is operating when the equipment is backing up. It is the responsibility of the company to purchase and properly maintain working back up alarms for mobile equipment.

Proper Access

The operator shall use access provided to get on or off of equipment. Do not jump to the ground.

Eye Protection

No operator shall operate mobile equipment without the protection of an enclosed cab or approved eye protection.

Seat Belts

Before starting the engine, the driver shall fasten seat belts and adjust them for a proper fit.

Proper Equipment Use

The operator shall not use, or attempt to use, any vehicle in a manner for any purpose other than for which it is designated.

The operator shall not load the vehicle/equipment beyond its established load limit and shall not move loads which because of the length, width or height have not been centered and secured for safe transportation.

Fueling Procedures

The operator of a gasoline or diesel vehicle shall shut off the engine before filling the fuel tank and shall see that the nozzle of the filling hose makes contact with the filling neck of the tank. No one shall be on the vehicle during fueling operations except as specifically required by design. There shall be no smoking or open flames in the immediate area during fueling operation.

General Job Requirements

» Wear your hardhat when required

» Report any unsafe act to your direct supervisor immediately

» Report any machine malfunction immediately

» Never carry additional people on the machine unless there are additional seats with seat belts

» Remove master key from equipment after finishing work

» Stand back from cable when pulling equipment

» Keep grease off equipment where you have to walk

Motor Vehicles

» All vehicles shall have a service brake, emergency brake, parking brake, back-up alarm, rollover protection and seat belts.

» Employees shall not use any mechanized equipment that has an obstructed view to the rear unless the equipment has a reverse signal alarm or is backed up using a spotter

» All vehicles with cabs shall be equipped with windshields and powered wipers

» Cracked and broken glass shall be replaced

» All haulage vehicles, with payload loaded by crane or similar means, shall have an adequate cab shield to protect the operator

» Tools and materials shall be secured when transported in the same compartment with employees

Dump Trucks

» Refer to Dump Truck Safety Policy

» Ensure all safety devices on dump trucks function properly

» Ensure back-up alarms are audible above the surrounding noises

» Seat belts must be worn

» Sound the horn prior to movement in any direction while on a worksite where workers are on the ground

» A spotter, wearing a yellow/green vest to distinguish him/her from other employees, shall be used to safely back the dump truck to its desired location when there are workers in the immediate area

» Ensure tailgates are open before dumping

» Do not dump trucks when sitting one sided

» Park in level place or against a bank. This is especially true for rear-dumps

» Do not back rear-dumps down steep grade, especially if it can be driven down the grade

» Give loaded trucks the right of way

» A courteous driver is a safe driver

Articulated Dump Trucks

» Always face the machine and use steps and grab handles when mounting and dismounting the machine. Always have three-point contact

» Only operate the machine while you are in the seat. The seat belt must be fastened prior to operation

» Do not allow riders on the machine unless there is an additional seat and seat belt

» Do not get too close to the edge of cliffs, excavations or overhangs

» Keep the machine straight and level when loading and dumping

» The operator shall stay in the cab while machine is being loaded

» All six wheels must be in contact with firm ground. Dumping without firm ground support under the rear wheels changes the balance of the machine. It is possible for the tractor and/or trailer to overturn if dumping incorrectly

» Avoid dumping while on an incline. Use caution if dumping the load while on a shallow slope

» Park on a level surface. If you must park on a grade, block the machine's wheels

» When parking the machine, place transmission control lever in NEUTRAL position and engage the parking brake

Scrapers

» Lock transmission in neutral when getting off the machine

» Lower the bowl to the ground before getting off the machine

» Do not reverse the machine unless you can see behind it or have someone guiding you

» Drain the air tank daily so that water will not get in the tank and cause brakes to fail

» There is a risk of the machine over-turning on steep slopes or when driving over bumps

» Be conscious of the employees working on the ground

» Do not spin tires

» Stay away from the edge of the fill when driving down haul roads

» Always keep the bowl as close to the ground as possible

» Loaded scraper should have the right of way

» Seat belts shall be worn at all times

Dozers

» Throttle the engine back to idle, lower blade, and place transmission control lever in neutral position when getting off the machine

» Look before backing

» Lock brakes if the machine is on a hill and remove master key

» Do not leave the machine on a slope

» Seat belts shall be worn at all times

Rubber Tire Loaders

» Lower the bucket to the ground when not in use and park on level ground when possible

» Do not allow anyone access to areas where there is no clearance when machine is operating or when the machine is being serviced

» Check hydraulic hose and fitting for wear and leaks daily

» Carry bucket at a safe height so the machine is not top heavy

» Seat belts shall be worn at all times

Motorgraders

» When mounting and dismounting the machine, always face the machine and dismount where steps and/or handholds are provided. Always use three-point contact

» Only operate the machine while you are in the seat. The seat belt must be fastened prior to operation

» Do not allow riders on the machine unless there is an additional seat with seat belt

» Do not drive the machine near an overhang, edge of a cliff, or near the edge of an excavation

» Avoid any ground conditions that could cause tip over, such as working on hills, banks or on slopes

» Avoid operating machine across the slope-operate machine up and down slopes when possible

» Always look before backing. If you are unsure of whether the path is clear, get out and look

» Park on a level surface. If you must park on a grade, block the machine's wheels

» When parking machine, place transmission control lever in neutral position and engage the parking brake

» Lower the blade and attachments to the ground

Excavators

» When mounting and dismounting the machine, always face the machine and dismount where steps and/or handholds are provided. Always use three-point contact

» Only operate the machine while you are in the seat. The seat belt must be fastened prior to operation

» When the machine is moving, watch the clearance of the boom. Uneven ground can cause the boom to move in all directions

» Do not allow riders on the machine unless additional seats with seat belts are provided

» Hold attachments (bucket) approximately 15" above ground during travel

» Be careful to avoid any ground condition that could cause the machine to tip. Tipping can occur when you work on hills, banks or slopes

» Avoid operating machine across the slope-operate machine up and down slopes when possible

» Do not overload the machine beyond capacity

» Before operating the machine, check for locations of buried pipes and cables

» Always stay at least 10' away from any overhead electrical lines

» Park the machine on a level surface. If you must park on a grade, chock the tracks of the machine

» Always lower bucket to the ground or block up the bucket before leaving operator's station

» Always move the hydraulic activation control lever to the LOCKED position before shutting off the engine or immediately after the engine stops running

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Rollers

» Always mount and dismount the machine where steps and/or handholds are provided. Always use three-point contact

» Always wear seat belt if the machine has rollover protective structure (ROPS)

» Operate the machine only while seated

» Do not allow riders on the machine unless additional seat and seat belt are provided

» Stay an adequate distance from the edge of cliffs, overhangs and slide areas

» Avoid operating machine across the slope - operate machine up and down slopes when possible

» Always look before backing

» Always park machine on a level surface. If it is necessary to park on a grade, block the machine and engage the parking brake

Pre-Shift Vehicle & Equipment Checks

All vehicles and equipment in use shall be checked at the beginning of each shift to ensure that the following parts, equipment, and accessories are in safe operating condition and free of apparent damage that could cause failure while in use:

» Parking system (hand brake)

» Emergency stopping system (brakes)

» Tires

» Horn

» Steering mechanism

» Coupling devices

» Seat belts

» Operating controls

» Safety devices

All defects shall be corrected before the vehicle or equipment is placed in service. These requirements also apply to equipment such as lights, reflectors, windshield wipers, defrosters, fire extinguishers, etc., where such equipment is necessary.

Employees operating motor vehicles or mechanized equipment shall:

» Complete a vehicle/equipment inspection checklist at the start of each shift and give it to the supervisor

» Wear seat belt at all times. Passengers in trucks will ride in the cab

» Only authorized persons shall operate equipment, vehicles and cranes

» All earth moving or compacting equipment which has an obstructed view to the rear, is not to be used in reverse gear unless the equipment has an operational, reverse signal alarm distinguishable from the surrounding noise level

Equipment

At night, any equipment left unattended adjacent to highways shall be clearly marked with reflectors to identify the location of the equipment. A safety tire rack, cage or equivalent protection shall be provided and used when inflating, mounting or dismounting tires installed on split rims. Bulldozer and scraper blades and similar equipment shall be either fully lowered or blocked when being repaired or when not in use. All cab glass shall be constructed of safety glass or equivalent and shall introduce no visible distortion.

Mobile Cranes

Using Cranes

The company will ensure that equipment will not be assembled or used unless ground conditions are firm, drained and graded to a sufficient extent so that, if necessary with the use of supporting materials, the equipment manufacturer's specifications for adequate support or degree of level of the equipment are met.

Manufacturer's Instructions

The company will ensure employees follow the manufacturer's procedures and prohibitions when assembling and disassembling equipment.

Competent/Qualified Person

The contractor that is responsible for the crane will designate a competent and qualified person who will be responsible for directing the assembly and disassembling of the equipment.

Pre-Operation Hazard Assessment

The company will conduct a pre-operation hazard assessment to identify the work zone and to determine if any part of the equipment could reach closer than 20 feet to a power line. The work zone will be identified by demarcating boundaries such as flag and range limiting devices, or defining the work zone as 360° around the equipment up to a maximum working radius.

If it is determined that any part of the equipment, load line or load could get closer than 20 feet to a power line then at least one of the following measures will be taken:

» Ensure the power lines have been de-energized and visibly grounded.

» Ensure no part of the equipment, load line or load gets closer than 20 feet to the power line.

Determine the line's voltage and minimum approach distance permitted in the following table:

Minimum Clearance Distances	
Voltage (nominal kV, alternating current)	Minimum Clearance Distance
Up to 50kV	10 feet
Over 50kV - 200kV	15 feet
Over 200kV - 350kV	20 feet
Over 350kV - 500kV	25 feet
Over 500kV - 750kV	35 feet
Over 750kV - 1000kV	45 feet
Over 1000kV	As established by the by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution.

Visual Inspections

The company will ensure a competent person will document visual inspection of equipment prior to each shift. The inspection will consist of observing for apparent deficiencies. Inspection items will include control mechanisms, pressurized lines, hooks and latches, wire rope, electrical apparatus, tires (when used) and ground conditions.

Monthly Inspections

The company will ensure equipment is inspected monthly by a competent person and inspections will be documented. Documentation will include the following:

» Items checked

» Results of inspections

» Name and signature of inspector

Safety Devices

Safety devices are required to be on all equipment, therefore, the company will ensure safety devices are in proper working order before operations begin. If any of the devices are not in proper working order, the equipment will be taken out of service and operations will not resume until the device is working properly again. Examples of safety devices include crane level indicator, boom stops, jib stops, foot pedal brake locks, horns, etc.

Manufacturer Procedures

The company will ensure all compliance with manufacturer procedures applicable to the operational functions of the equipment, including its use with attachments.

Operators will have access to procedures applicable to the operation of the equipment. Procedures include rated capacities (load charts), recommended operating speeds, special hazard warnings, instructions and operator's manual. These shall be available in the cab at all times for employee access.

Stop Work Authority

Whenever there is a safety concern, the operator will have authority to stop and refuse to handle loads until a qualified person has determined that safety has been assured.

Signal Person

The company will ensure a signal person is provided if:

» The point of operation is not in full view of the operator

» The view is obstructed when the equipment is traveling

» The operator or the person handling the load determines it necessary due to site-specific concerns

Marking Hazard Areas

The company will identify hazard areas where the equipment has the potential to strike and injure an employee or pinch/crush an employee against any other object by marking the boundaries of the crane swing radius with warning lines, railings or similar barriers.

Operator Certification/Qualification

The company will ensure only those employees who are qualified by training or experience will be allowed to operate equipment and machinery. Qualifications include:

» Certification by an accredited crane operating testing organization

» Qualification by an audited company program.

» Qualification by the US military

» Licensing by a government entity

Modifications/Additions

The company will ensure that modifications or additions that may affect the capacity or original safe operation of the equipment will only be made with written approval from a registered professional engineer.

Mobile Cranes & Rigging

» Mobile cranes shall be operated in strict accordance with OSHA and ANSI regulations

» Cranes brought onto a jobsite shall have an annual inspection and applicable load charts

» Crane operators shall perform daily and monthly crane safety inspections and return them to their supervisor every day

» All cranes shall be equipped with anti-two block devices on both the load and whip lines

» Hooks shall be equipped with safety latches. Moused hooks are not allowed

» When rigging the hook of a crane, ensure there is only one eye in the hook

» Accessible areas within the swing radius of the rear of the rotating superstructure of the crane shall be barricaded to prevent an employee from being struck or crushed by the crane

» Supervisors will review the safe operations of the crane with each operator

» Supervisors will designate a qualified person to monitor all rigging. When the rigging does not fall within the expertise of the designated person, the load will not be lifted until a qualified person has reviewed the rigging

» The manufacturer's operating manual, instructions, and load charts of each individual crane shall be used to determine the safe operation of the crane

The manufacturer's load charts are developed under ideal conditions and typical field conditions are rarely ideal. Therefore, the following guidelines shall be used when operating the crane:

» The ground where the crane is to be set up must be solid and able to support the weight of the loaded crane. Determine if underground utilities exist near where the crane will be set up

» Ensure the crane is level 360° and maintained during operation

» Extend outriggers fully or set them per the manufacturer's recommendation for a particular lift configuration. Weight must be off the tires

» Cribbing or mats under outrigger pads shall be of sufficient size and properly placed to ensure adequate soil bearing

» Before a lift, determine the load weight and load capacity. Crane capacity charts are the ideal gross capacity of the crane at certain boom lengths, boom angles and load radius from the crane center pin

» Deductions to the net capacity shall be made per the manufacturer's load chart or operating manual for attachments such as jibs (stowed or attached), headache balls, wind, less than ideal setups, etc. to determine the load that can be safely listed

» Additional deductions to the net capacity are the weight of the crane's load block, rigging, and amount of load line required to make the lift. Some manufacturers include the load line in their load charts while others (e.g. Manitowoc) do not

» A designated, qualified person will determine the load weight. Note: OEM drawings listing the equipment or machinery assemblies are not always accurate. Refer to the shipping weight or have the equipment or machinery assembly weighed. Calculate all structural loads and determine the center of gravity. Cranes equipped with systems that provide weight of a load as it is lifted will not be used to weigh equipment or machinery assemblies

» Determine the radius from the center pin of the crane to the load using a steel ruler. This is required for capacity and near capacity lifts

» Determine the boom length, counterweight, and crane configuration to determine the correct load chart required

» Position the hook over the center of gravity of the load before starting the lift

» Position the crane so there is a minimum swing and load path clearance of two feet. Distance from overhead electrical will be a minimum of 10'. When working near electrical sources (overhead lines or lighting) the crane should be grounded

Crane operators are to know the weight of the load they are lifting. A written lift or rigging plan is required for any lift where:

» The load is greater than 85% of the crane capacity as configured for the lift

» Two cranes are used

» The Project Manager/Superintendent or Safety Supervisor determines any lift to be non-routine

Work Practices

» Employees shall keep all parts of the body inside the platform during raising, lowering and positioning. This provision does not apply to an occupant of the platform performing the duties of a signal person

» Before employees exit or enter a hoisted personnel platform that is not landed, the platform shall be secured to the structure where the work is to be performed, unless securing to the structure creates an unsafe condition

» Tag lines shall be used unless their use creates an unsafe condition

» The crane or derrick operator shall remain at the controls at all times when the crane engine is running and the platform is occupied

» Hoisting of employees shall be promptly discontinued upon indication of any dangerous weather conditions or other impending danger

» Employees being hoisted shall remain in continuous sight of, and in direct communication with, the operator or signal person. In those situations where direct visual contact with the operator is not possible, and the use of a signal person would create a greater hazard for the person, direct communication alone, such as by radio, may be used

» Except over water, employees occupying the personnel platform shall use a body belt/harness systems, with lanyard appropriately attached to the lower load block or overhaul ball, or to a structural member within the personnel platform capable of supporting a fall impact for employees using the anchorage. When working over water, the requirements of 29 CFR1926.106 shall apply

» No lifts shall be made on another of the crane's or derrick's loadlines while personnel are suspended on a platform

Rigging

» When a wire rope bridle is used to connect the personnel platform to the load line, each bridle leg shall be connected to a master link or shackle to ensure that the load is evenly divided among the bridle legs

» Hooks on overhaul ball assemblies, lower load blocks, or other attachment assemblies shall be a type that can be closed or locked, eliminating the hook throat opening. Alternatively, an alloy anchor type shackle, with a bolt, nut and retaining pin may be used

- Wire rope, shackles, rings, master links and other rigging hardware must be capable of supporting, without failure, at least five times the maximum intended load applied or transmitted to that component. Where rotation resistant rope is used, the slings shall be capable of supporting, without failure, at least ten times the maximum intended load
- All eyes in wire rope slings shall be fabricated with thimbles
- Bridles and associated rigging for attaching the personnel platform to hoist line shall be used only for the platform and necessary employees, their tools and the materials necessary to do their work and shall not be used for any other purpose when not hoisting personnel

Tower Cranes

- Tower cranes shall be equipped with a substantial and durable load chart both in the operator cab and/or on the remote control console
- No employee shall work or ride on any part of the crane boom without proper personal fall arrest equipment. No employee is to climb the tower or get on the boom when the crane is in operation
- Crane operators shall perform daily and monthly safety inspections
- Supervisors will ensure all tower crane operators are trained, experienced and competent
- No load shall be swung over a public street that is occupied by the general public
- Prior to a load being swung over other workers, the subcontractor using the crane shall provide a spotter who will sound an alarm as the load is moved across the work area. The spotter shall wear a yellow or green fluorescent ANSI Class 2-approved safety vest with high visibility
- The subcontractor shall submit a written crane-dismantling plan to Barnhill Contracting Company for review prior to dismantling the crane

Forklifts or Powered Industrial Trucks

- No employee shall operate a forklift or powered industrial truck without having successfully completed a documented training program, with the exception of doing so as part of a training exercise
- Any modification or addition performed by the customer or user to the equipment affecting capacity and safe operation without approval from the manufacturer is strictly prohibited
- Capacity, operation and maintenance instruction plates, tags, decals and nameplates must be changed accordingly and maintained in legible condition
- Forklifts and powered industrial trucks shall be inspected prior to operation each day and seat belts must be worn at all times
- Forklift operators shall be re-evaluated by a competent person every three years

Aerial Lifts

» Aerial lifts include the following types of vehicles: mounted aerial devices used to elevate personnel to above-ground jobsites, extension boom platforms, aerial ladders, articulating boom platforms, vertical towers.

The following guidelines should be used when operating aerial lifts:

» Lift controls shall be tested before use every day, to determine controls are in safe working condition

» Only authorized personnel shall operate an aerial lift

» Employees shall stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders or other devices for work position

» A body belt shall be worn and a lanyard attached to the boom or basket when working from an aerial lift

16 MECHANICS



General Job Requirements

» Wear your hardhat when required

» Report any unsafe act to your direct supervisor immediately

» Report any machine malfunction immediately

» Keep grease off equipment where you have to walk

Mechanics & Mechanics' Helpers

» Always chock and block raised equipment before working on it

» Equipment shall have the wheels chocked before working on it

» Lock brakes and transmission safety latch and lower blade before working on a machine

» Use safety glasses when there is a danger of small particles getting in the eye

» Keep equipment as free from grease and oil as possible where you or the operator must walk

» Secure ladders before using them to work on equipment

» Keep hand tools in good condition, no mushroom head, etc.

» Make sure all hand power tools have direct pressure switches and are grounded

» Always use lockout/tagout procedures when working on equipment

17 LADDER SAFETY



Specifications

Ladder rungs, cleats and steps shall be parallel, level and uniformly spaced when the ladder is in position for use.

Rungs, cleats and steps of portable and fixed ladders (including individual-rung/step ladders) shall be spaced not less than ten inches and no more than 14 inches apart, as measured between center lines of the rungs, cleats and steps.

Inspections

All company ladders are to be inspected by a qualified, competent person. The inspections will include checking for visible defects every 30 days and after any occurrence that could affect their safe use.

Ladder components shall be surfaced to prevent injury to any employee from punctures or lacerations, and to prevent snagging of clothing.

Wood ladders shall not be coated with any opaque covering, except for identification or warning labels which may be placed on only one face of the side rail.

Defective Ladders

Portable ladders with structural defects, such as, but not limited to, broken or missing rungs, cleats or steps; broken or split rails or corroded components will be withdrawn from service until repaired. The requirement to withdraw a defective ladder from service is satisfied if the ladder is either:

» Immediately tagged with "DO NOT USE" or similar language

» Marked in a manner that readily identifies it as defective

» Blocked (such as with plywood attachment that spans several rungs)

Use & Requirements

The following requirements apply to the use of all ladders, including job-made ladders, except as otherwise indicated:

» Ladders shall be maintained free of oil, grease and other slipping hazards

» Wood job-made ladders with spliced side rails shall be used at an angle such that the horizontal distance is 1/8 the working length of the ladder

» Fixed ladders shall be used at a pitch no greater than 90° from the horizontal, as measured to the back side of the ladder

» Ladders shall be used only on stable and level surfaces unless secured to prevent accidental displacement

» Ladders shall not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental displacement

» Slip-resistant feet shall not be used as substitute for care in placing, lashing or holding a ladder that is used upon slippery surfaces including, but not limited to, flat metal or concrete surfaces

» Ladders placed in any location where they can be displaced by workplace activities or traffic, such as passageways, doorways or driveways, shall be secured to prevent accidental displacement, or barricade shall be used to keep the activities or traffic away from the ladder

» The area around the top and bottom of ladders shall be kept clear

» The top of a non-self-supporting ladder shall be placed with the two rails supported equally unless it is equipped with a single support attachment

» Ladders shall not be moved, shifted or extended while occupied

» Ladders shall not have conductive siderails if they are used where the employee or the ladder could come into contact with exposed energized electrical equipment

» The top or top step of a step ladder shall not be used as a step

» Cross-bracing on the rear section of step ladders shall not be used for climbing unless the ladders are designed and provided with steps for climbing on both the front and rear sections

» When portable ladders are used for access to an upper landing surface, the ladder side rails shall extend at least three feet (.9 m) above the upper landing surface to which the ladder is used to gain access or when such an extension is not possible because of the ladder's length. Then the ladder shall be secured at its top to a rigid support that will not deflect, and a grasping device, such as a grabrail, shall be provided to assist employees in mounting and dismounting the ladder

» Ladder deflection under a load should never, by itself, cause the ladder to slip off its support due to extension

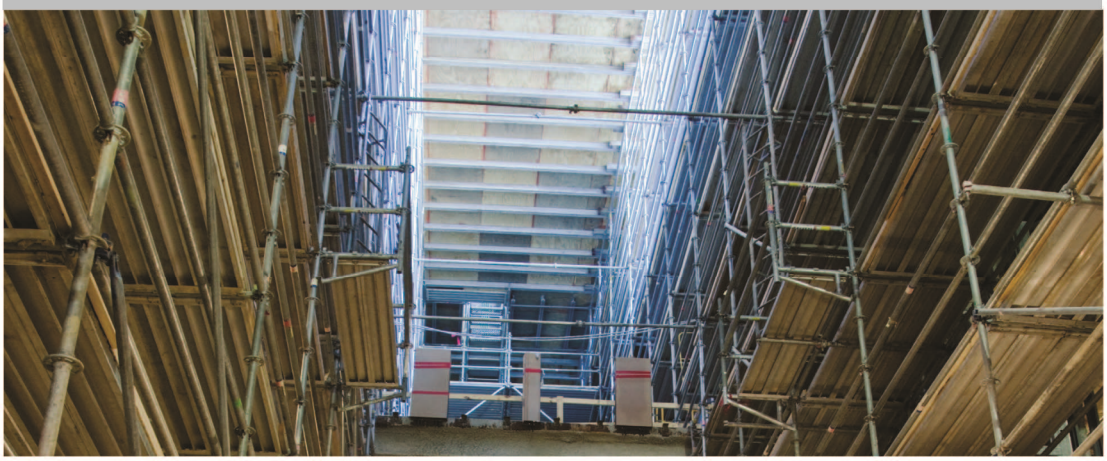
» Non-self-supporting ladders shall be used at an angle such that the horizontal distance from the top

support to the foot of the ladder is approximately ¼ of the working length of the ladder (the distance along the ladder between the foot and top support)

» Ladders shall not be loaded beyond the maximum intended load for which they were built, nor beyond the manufacturer's rated capacity

» Ladders shall only be used for the purpose for which they were designed

18 SCAFFOLDING SAFETY



Training Requirements

Every employee who performs work while on a scaffold must complete Barnhill Contracting Company's training course taught by a trainer who is well qualified with the subject matter to recognize the hazards associated with the type of scaffold being used and understands the procedures to control and/or minimize those hazards. The training program includes the following areas, as applicable:

» The nature of any electrical, fall or falling object hazards in the work area

» The correct procedures for dealing with electrical hazards and for erecting, maintaining and disassembling the fall protection systems and falling object protection systems being used

» The proper use of the scaffold and the proper handling of materials on the scaffold

» The maximum intended load and the load-carrying capacities of the scaffolds used

» Any other pertinent requirements of this section

When the company has reason to believe that an employee lacks the skill or understanding needed for safe work involving the erection, use of dismantling of scaffolds, each such employee shall be re-trained so that the requisite proficiency is regained. Re-training is required in at least the following situations:

» Where changes at the worksite present a hazard about which the employee has not been previously trained

» Where changes in types of scaffolds, fall protection, falling object protection or other equipment present a hazard about which the employee has not been previously trained

» Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency

Competent Person

The company's competent person has acquired the experience, knowledge, and training to allow them to be:

» One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them

» A competent person will be knowledgeable about the requirements of this standard and has sufficient training or knowledge to identify and correct hazards encountered in scaffold work

» Will have had specific training in and be knowledgeable regarding the structural integrity of scaffolds and the procedures needed to maintain them

» By definition, the competent person must have the authority to take prompt corrective measures to abate potentially hazardous worksite conditions

» A competent person is also required to inspect the scaffold and its components for visible defects before each work shift and after any occurrence which could affect the scaffold's structural integrity

Tags

Use of Tags

Tags shall be used as a means to prevent accidental injury or illness to employees who are exposed to hazardous or potentially hazardous conditions, equipment or operations which are out of the ordinary, unexpected or not readily apparent. Tags shall be used until such time as the identified hazard is eliminated or the hazardous operation is completed. Tags need not be used where signs, guarding or other positive means of protection are being used.

General Tag Criteria

All required tags shall meet the following criteria:

» Tags shall contain a signal word and a major message

» The signal word shall be either "DANGER" or "CAUTION"

» The major message shall indicate the specific hazardous condition of the instruction to be communicated to the employee

» The signal word shall be readable at a minimum distance of five feet (1.52 m) or such greater distance as warranted by the hazard



» The tag's major message shall be presented in either pictographs, written text or both

» The signal word and the major message shall be understandable to all employees who may be exposed to the identified hazard

» All employees shall be informed as to the meaning of the various tags used throughout the workplace and what special precautions are necessary

» Tags shall be affixed as close as safely possible to their respective hazards by a positive means such as string, wire, or adhesive that prevents their loss or unintended removal

Danger Tags

Danger tags shall be used ONLY in major hazard situations where an immediate hazard presents a threat of death or serious injury to employees.

Caution Tags

Caution tags shall be used ONLY in minor hazard situations where a non-immediate, potential hazard or unsafe practice presents a lesser threat of employee injury.

Warning Tags

Warning tags may be used to represent a hazard level between "Caution" and "Danger," instead of the required "Caution" tag, provided they have a signal word of "Warning," an appropriate major message.

19 STEEL ERECTION



Overview

» The steel erector will be notified in writing when concrete or mortar in footings, piers, walls or masonry piers and walls has reached 75% of minimum design strength or will support load

» Erection is prohibited until adequate strength is properly documented

» Adequate access into and through the site will be provided and maintained for erector's equipment and materials

» Contractor will provide a safe area for the erector to set up cranes

» Erector will provide fall protection for crews when working six feet from the ground

» Erector will provide the following training documentation for each member of their crew: Fall Hazards and Prevention, Connecting Safety, Decking Safety and Rigging Safety



Overview

» Prior to the start of any demolition work, Barnhill Contracting Company, or a representative subcontractor, will perform an engineering survey of the building or area to be demolished to determine the condition of the area. No work will begin until this engineering survey has been completed

» Debris and material shall not be dropped through walls, floor holes, windows or other elevated work areas without barricading and properly signing the area below

» Debris chutes shall have a substantial gate at all elevated openings

» Barnhill Contracting Company will require the demolition contractor to submit a site-specific fall protection plan if the work requires removal of flooring

» Demolition activities shall follow OSHA rules

» If demolition of a building requires implosions, the demolition contractor shall submit a detailed safety plan specifically addressing site preparation, installation of explosives, debris/dust control and blaster qualifications to Barnhill Contracting Company

21 HAZARD COMMUNICATION, SDS, JSHAs



The hazard communication plan not only complies with the OSHA standard requirements, but also ensures that all Barnhill Contracting Company employees are effectively informed concerning potential and existing workplace safety and health hazards, especially chemical hazards. Hazard communication is only one of the many important aspects of this company's occupational safety and health program including:

» Enforcement of safety rules and procedures

» Effective education and training programs

» Assigned safety and health responsibility and accountability

» Management commitment and active support

» Engineering controls for safety and health hazards

» Recognition (hazard communication), evaluation, and control of occupational safety and health hazards

» Medical surveillance

It must be emphasized that safety and health hazards cannot be eliminated or effectively controlled unless they are recognized as "hazards." Thus, hazard communication is considered to be one of the first steps in establishing and maintaining an effective Occupational Safety and Health Program.

Basic fundamentals used by the company to ensure employees are effectively informed concerning workplace safety and health hazards include:

» Container labeling and other forms of warning

» Safety data sheets (SDS)

» Employee education and training

This Hazard Communication Program applies to known occupational safety and health hazards and chemicals known to be present in the workplace in such manner that employees may be exposed under normal conditions of use or in a foreseeable emergency.

Barnhill Contracting Company identifies workplace safety and health hazards using:

» Safety data sheets (SDS) provided by chemical manufacturers and distributors

» Information provided by machinery and equipment manufacturers

» Safety and health standards, codes and regulations

» Company Job Safety and Health Analysis (JSHA)

Employee Information & Training

Barnhill Contracting Company provides employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard is introduced into their work area. Information and training is designed to cover categories of hazards (e.g. flammability, carcinogenicity) or specific chemicals. Chemical-specific information is always available at the worksite through labels and safety data sheets (SDS).

Information

Employees will receive information, including the following:

» The requirements of training following this section

» Any operations in their work area where hazardous chemicals are present

» The location and availability of the written Hazard Communication Program, including the required list(s) of hazardous chemicals and SDS

Training

Employee training incorporates the following:

» Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the company, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.)

» The physical and health hazards of the chemicals in the work area

» The measures employees can take to protect themselves from these hazards, including specific procedures the company has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures and personal protective equipment to be used

» The details of the Hazard Communication Program developed by the company including an explanation of the labeling system and SDS and how employees can obtain and use the appropriate hazard information

The training checklist to be used by all employees when possible exposure to any potentially hazardous material includes:

» Requirements

» Responsibility for tasks

» Master SDS list for chemicals

» SDS for each chemical

» A copy of written program

» Emergency procedures

» Any additional training required

» Procedures to maintain current program

» Procedures to evaluate effectiveness

Written Hazard Communication Program

The company will develop, implement and maintain a written hazard communication program at each workplace. The company's Safety Director is responsible for ensuring that the labels are maintained as required on the containers at the facility, and that newly purchased materials are checked for labels prior to use.

A description of the criteria for labels and others forms of warning, safety data sheets and employee information and training will be readily available to any company and employee which includes the following:

» A list of the hazardous chemicals known to be present using an identity that is referenced on the appropriate SDS (the list may be compiled for the workplace as a whole of for individual work areas)

» The company will inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels, etc.) and the hazards associated with chemicals contained in unlabeled pipes in their work areas

» The method the company will use to inform employees is conducting a job hazard analysis prior to the non-routine task being performed and then hold a meeting with affected employees to discuss the hazards

Multi-Employer Workplaces

Other employers, including the company who produces, uses or stores hazardous chemicals at a workplace in such a way that the employees of other employers may be exposed (for example, employees of a construction contractor working on site) are required by OSHA to additionally ensure that their hazard communication programs implement the following:

» The methods used to provide the other employer(s) on-site access to safety data sheets for each hazardous chemical the other employer's employees may be exposed to while working

» The methods to inform the other employer(s) of any precautionary measures to be taken to protect employees during the workplace's normal operating conditions and in foreseeable emergencies

» The methods to inform the other employer(s) of the labeling system used in the workplace

The company will make their written hazard communication program available, upon request, to employees, their designated representatives, the Assistant Secretary of Labor for Occupational Safety and Health, US Department of Labor of The National Institute for Occupational Safety and Health, in accordance with the requirements of 29 CFR 1910.1020(e).

Where employees must travel between workplaces during a work shift (i.e. their work is carried out at more than one geographical location) the written hazard communication program may be kept at the primary workplace facility.

Labels & Other Forms of Warning

The company will not remove or deface existing labels on incoming containers of hazardous chemicals, unless the container is immediately marked with the required information.

The company may use signs, placards, process sheets, batch tickets, operating procedures or other such written materials in lieu of affixing labels to individual stationary, process containers, as long as the alternative method identifies the containers to which it is applicable and conveys the information below to be on the label:

» Identity of the hazardous chemical

» Appropriate hazard warnings

» Name and address of the chemical manufacturer, importer or other responsible party

The written materials shall be readily accessible to the employee in their work area throughout each work shift.

Other Hazard Warnings

Appropriate hazard warnings (or alternatively, words, pictures, symbols or combination thereof) which provide at least general information regarding the hazards of the chemicals, in which, in conjunction with the other information immediately available to employees under the hazard communication, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

Control Banding

Control banding is a process in which control technology is applied to a chemical. The control banding approach focuses resources on exposure controls and describes how strictly a risk needs to be managed. The control banding process emphasizes controls needed to prevent hazardous substances from causing harm to people at work. The greater the potential for harm, the greater the degree of control needed to manage the situation and make the risk "acceptable."

Control Bands for Exposure to Chemicals by Inhalation			
Band No.	Range of Exposure Concentrations	Hazard Group	Control
1	>1 to 10mg/m^3 dust .50 to 500 ppm vapor	skin and eye irritants	use good industrial hygiene and general ventilation
2	>0.1 to 1mg/m^3 dust >5 to 50 ppm vapor	harmful on single exposure	use local exhaust ventilation
3	>0.01 to 0.1 mg/m^3 dust	severely irritating and corrosive	enclose the process
4	<0.01 mg.m^3 dust <0.5 ppm vapor	very toxic on single exposure reproductive hazard, *sensitizer	seek expert advice
*Exposure to any concentration of a sensitizer requires expert advice			

Non-English Hazard Communication

The company shall ensure that labels and other forms of warning are legible, in English, and prominently displayed on the container, or readily available in the work area throughout each work shift. If the company has employees who speak other languages, they may add the information in their language to the material presented, as long as the information is also presented in English.

Safety Data Sheets (SDS)

Chemical manufacturers are responsible for Safety Data Sheets. The company shall have a SDS for each chemical used at the facility or jobsite, with the exception of consumer products. The company maintains in the workplace copies of the required Safety Data Sheets for each individual hazardous chemical in the workplace, and ensures it is readily accessible during each work shift to employees when they are in their work area(s). Electronic access and other alternatives to maintaining paper copies of the SDS are permitted as long as no barriers to immediate employee access in each workplace are created by such options.

Where employees must travel between workplaces during a work shift (i.e. their work is carried out at more than one geographical location), the SDS may be kept in the primary workplace facility. In this situation, the company shall ensure that employees can immediately obtain the required information in an emergency.

Safety Data Sheets may be kept in any form, including operating procedures, and may be designed to cover groups of hazardous chemicals in a work area where it may be more appropriate to address the hazards of a process rather than individual hazardous chemicals. However, the company shall ensure that in all cases the required information is provided for each hazardous chemical, and is readily accessible during each work shift to employees when they are in their work area(s).

Safety Data Sheets are also readily available, upon request, to designated representatives and to the Assistant Secretary of Labor for Occupational Safety and Health, US Department of Labor and Director of the National Institute for Occupational Safety and Health in accordance with the requirements of 29 CFR 1910.1020(e).

Hazardous Chemical List

Barnhill Contracting Company maintains a list of the hazardous chemicals known to be present in the workplace. This list is kept in each department along with the SDSs. The identity of each chemical

is referenced on the appropriate SDS. Employees who desire to see this list should contact their immediate supervisor.

Machinery & Equipment Hazard Warnings

Barnhill Contracting Company provides safety rules and procedures that include pertinent information provided by machine and equipment manufacturers. Some manufacturers provide warning signs, pamphlets and other safety related materials that the company uses to protect employees.

Safety & Health Standards, Codes & Regulations

The company uses occupational safety and health voluntary general consensus standards and safety codes prepared by safety, fire protection and health standard-making organizations, governmental, regulatory and research organizations.

Job Safety & Health Analyses (JSHAs)

Barnhill Contracting Company conducts Job Safety and Health Analyses to review job methods and uncover hazards which:

» May have been overlooked in the initial building layout and design of machinery, equipment, tools, workstations, and processes

» May have developed after initial operation

» Resulted from changes in work procedures or personnel

Basic Steps of JSHAs

The four basic steps used by supervisors and employees in making a JSHA include:

1. Select the job to be analyzed
2. Break the job down into successive steps or activities, and observe how these actions are performed
3. Identify the existing and potential hazards
4. Develop appropriate safety and health procedures to eliminate the hazards and prevent potential injuries and illness

New Employee Safety & Health Training

All new employees receive appropriate safety and health information, education, and training during their initial assignment. The measures employees can take to protect themselves from hazards including pertinent work practices, company emergency procedures and personal protective equipment are covered.

This training includes information concerning hazardous chemicals in the workplace.

Barnhill Contracting Company's New Employee Safety and Health Training Program begins upon hire by the personnel department and continues with on-site training by the new employee's department supervision. Specific information in the safety and health training includes:

» General safety and health rules and procedures

» General chemical hazards

» Recognition, evaluation, and control of hazards

» Chemical labeling

» Hazards associated with unlabeled piping and process systems

» Safety Data Sheets

» Access to safety and health Information

» Compliance with safety and health rules and procedures

» Requirements of the OSHA hazard communication standard

» Specific operations in work areas where hazardous chemicals are present

» The location and availability of the company's written Hazard Communication Program and all contents

The New Employee Hazard Communication Orientation and Training Checklist at the end of this manual shows the system for assuring effective employee training.

Department supervisors will utilize appropriate Job Safety and Health Analysis Sheets to train new employees when they are assigned to the work area. Work area supervisors will train employees concerning methods and observations the employee may use to detect the presence or release of hazardous chemical in the work area. These techniques will also include monitoring devices and systems, visual appearance or odor of hazardous chemicals.

Re-Training

It is necessary for work area supervisors to provide additional employee training concerning workplace hazards when:

» New chemicals are introduced into the workplace

» Process or equipment changes are made which could cause new or increased employee exposures

» Procedures and work practices are introduced or changed which could cause changes in the employees' exposure

» Employees are transferred from one work area to another where different hazards are present

The supervisor conducting the retraining will make a written record of the training provided and request the employee receiving the training to sign and date the record. A permanent record of all employee training is maintained in the employee's personnel folder.

Trade Secrets

Special governmental regulations (29 CFR 1910.1200) are provided to ensure that the required safety and health information may be obtained concerning specified trade secret chemicals. The

specific chemical identity must be made available to health professionals, in accordance with applicable provisions of the OSHA standard. Refer to the OSHA hazard communication standard (1910.1200) for specific details.

Non-Routine Tasks

The supervisor of an employee performing a non-routine task (i.e. cleaning process equipment and vessels) is responsible for adequately training employee's concerning the potential hazards associated with the non-routine task. The employee shares in this responsibility by ensuring his/her immediate supervisor knows that the non-routine task will be performed.

Barnhill Contracting Company requires that special work permits be required for some non-routine tasks, such as confined space entry permits, breaking and opening piping systems and welding and burning permits. Some special tasks require employees to shutdown, lockout power sources with padlocks, ensure all motion has stopped and energy is released or isolated prior to performing work. These special company procedures and work practices must be followed by employees to ensure their safety.

Contractors

Barnhill Contracting Company management will inform all contractors working on property concerning applicable workplace hazardous chemicals to which the contractor's employees may be exposed and the appropriate control measures.

Each contractor is advised by company management that they must comply with all OSHA standards while working on company property. Proper controls should be established to ensure company operations do not expose contractor employees to hazards.

A copy of Safety Data Sheets concerning any chemicals to which the contractor's employees may be exposed will be provided to the contractor by Barnhill Contracting Company management.

Program Availability

Barnhill Contracting Company's Hazard Communication Program is available, upon request, to:

» Employees

» Designated employee representatives

» OSHA representatives

» NIOSH (National Institute for Occupational Safety and Health) representatives

22 BLOOD BORNE PATHOGENS



This policy covers blood borne pathogens and other potentially infectious materials and includes Barnhill Contracting Company's Exposure Control Plan as required by 29 CFR 1910.1030(c). The only circumstance under which employees are expected to come into contact with blood borne pathogens or potentially infectious materials are when rendering first aid and CPR or cleaning after an accident.

Responsibilities

Employee - Understands and complies with all phases of Barnhill Contracting Company's policies and procedures for situations involving blood borne pathogens or other potentially infectious materials. Employees not having formal first aid training shall maintain a "hands off" practice in the event of an emergency. These employees should contact a first aid responder as quickly as possible.

Supervisor - Ensures that all employees who may have come into contact with a blood borne pathogen or other potentially infectious material are familiar with Barnhill Contracting Company's policies and that those policies are implemented.

Safety Department - Ensures that protective equipment as specified in this policy is available and properly maintained.

Communication of Hazards to Employees

Exposure

The company has developed this written Exposure Control Plan which is designed to eliminate or minimize employees' occupational exposures to blood or other potentially infectious materials.

The Safety Director will be responsible for the Company's Occupational Exposure Program, with the host facilities acting representative designated with all day-to-day operations. The company is also required to maintain the written medical records and training documentation records.

Occupational Exposure

Defined by OSHA 1910.1030.b as a state in which reasonably anticipated skin, eye, mucous membrane, or parental contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Materials

This program also addresses other potentially infectious materials including:

» The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood and all body fluids in situations where is it difficult or impossible to differentiate between body fluids

» Any unfixed tissue or organ (other than intact skin) from a human (living or dead)

» HIV-containing cell or tissue cultures, organ cultures, and HIV or HBV-containing culture medium or other solutions; and blood, organs and other tissues from experimental animals infected with HIV or HBV

Exposure Control Plan

The following Exposure Control Plan procedures are designed to eliminate or minimize employee exposure. Employee participation in the Exposure Control Plan is mandatory and contains the schedule and implementation for the following elements:

» Methods and compliance

» HIV and HBV research laboratories and production facilities

» Hepatitis B vaccination and post-exposure evaluation and follow up

» Communication of hazards to employees

Record Keeping

The company will provide a copy of the Exposure Control Plan to employees in accordance with the Record Keeping Reports section that follows.

Review & Update

The Exposure Control Plan will be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and company procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. The review and update of such plans will also:

» Reflect changes in technology that eliminate or reduce exposure to blood borne pathogens

» Document consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate and minimize occupational exposure annually

The company may survey any employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation and selection of effective engineering and work practice controls and will document the results in the Exposure Control Plan.

The Exposure Control Plan is available to the representatives of the Assistant Secretary and to representatives of the Director under the Occupational Safety and Health Act upon request for examination and copying.

Exposure Determination

The company having an employee(s) with occupational exposure as defined by the Occupational Exposure section will prepare an exposure determination. This exposure determination will contain the following:

» A list of all job classifications in which employees in those job classifications have occupational exposure

» Employees who are trained in first aid or those are expected to provide emergency help

» A list of job classifications in which some employees have occupational exposure

» A list of all company tasks and/or closely related tasks in which occupational exposure may occur to the employee in accordance with this section. This exposure determination is made without regard to the use of personal protective equipment

Exposure Incident

Following a report of an exposure incident, the company will immediately make available to the exposed employee a confidential medical evaluation and follow-up, including the following elements:

» Documentation of the route(s) of exposure and the circumstances under which the exposure incident occurred.

» Identification and documentation of the source individual, unless the identification is infeasible or prohibited by state or local law.

» The source individual's blood will be tested as soon as feasible and after consent is obtained in order to determine the HBV or HIV infectivity. If consent is not obtained, the company will document that legally required consent cannot be obtained.

» When the source individual's consent is not required by law, the source individual's blood, if available, is to be tested and the results documented.

Information & Training

The company requires that all employees who could possibly face occupational exposure participate in a training program during working hours which is provided at no cost to the employee. Training is provided as follows:

» At the time of initial assignment to tasks where occupational exposure may take place

» Annual training for all employees within one year of previous training.

Labels & Signs

Warning labels are required to be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials.

Labels required by this section will including the following legend:

» Labels will be fluorescent orange-red or predominantly so, with lettering and symbols containing contrasting color

» Labels will be affixed as close as feasible to the container by string, wire, adhesive or other method that prevents their loss or unintentional removal

» Labels required for contaminated equipment will be in accordance with this section and will state which portions of the equipment remain contaminated

» Red bags or red containers may be substituted for labels



Exemptions: Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from the labeling requirements of the above labels section.

Individual containers of blood and other potentially infectious materials that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirements.

Regulated waste that has been decontaminated need not be labeled or color coded.

Signs

The company will post signs at the entrance to any work area where potential exposure may exist. These signs will be fluorescent orange-red or predominantly so, with lettering and symbols in contrasting colors.

Methods of Compliance

Universal precautions are observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids will be considered potentially infectious materials.

The company will provide a copy of the Exposure Control Plan to employees at such a time as:

» Whenever an employee or designated representative requests access to a record, the company will assure access is provided in a reasonable time, place and manner

» If the company cannot reasonably provide access to the record within 15 working days, the company will, within those 15 working days, apprise the employee or designated representative requesting the record of the reason for the delay and the earliest date when the record can be made available

Engineering & Work Practice Controls

Engineering and work practice controls have been put in place to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment will be issued to employees.

The company's engineering controls will be examined and maintained or replaced every 30 days to ensure their effectiveness.

Hand Washing

The company will provide handwashing facilities which are readily accessible to employees. When provision of handwashing facilities is not feasible, the company will provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels, antiseptic hand cleansers, or towelettes. Hands will be washed with soap and running water as soon as feasible.

The company requires its employees to wash their hands immediately or as soon as possible after removal of gloves or other personal protective equipment.

The company will ensure that employees wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.

Specimens of blood or other potentially infectious materials are to be placed in a container that prevents leakage during collection, handling, processing, storage, transport or shipping.

Personal Protective Equipment

When there is occupational exposure, the company will provide appropriate personal protective equipment such as, but not limited to: gloves, gowns, lab coats, face shields, or masks and eye protection and mouthpieces, resuscitation bags, pocket masks or other ventilation devices at no cost to the employee.

Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth or other mucous membranes under normal conditions of use and for the duration of time that the protective equipment will be used.

Use of Personal Protective Equipment

The company policy requires that all employees use the appropriate personal protective equipment provided to them whenever the possibility of exposure exists or when directed to do so in the safety policies of the company.

Exception - An employee may temporarily and briefly decline to use personal protective equipment

when, in the employee's professional judgement, that in the specific instance its use would pose an increased hazard to the safety of the worker or coworker.

Investigation - When the employee makes this judgement, the circumstances will be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

Accessibility

The company will ensure that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypo-allergenic gloves, glove liners, powderless gloves or other similar alternatives will be readily accessible to those employees who are allergic to the gloves normally provided.

Cleaning, Disposal, Repair & Replacement

The company will clean and dispose of personal protective equipment and will repair or replace personal protective equipment as needed to maintain its effectiveness at no cost to the employee.

Housekeeping - Laundry - Cleaning of Contaminated Areas

The company will ensure the worksite is maintained in a clean and sanitary condition. The company will implement any appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present and tasks or procedures being performed in the area.

Decontaminated Surfaces

All equipment and work surfaces will be cleaned and decontaminated after contact with blood or other potentially infectious materials.

Contaminated work surfaces will be decontaminated with an appropriate disinfectant after completion of procedures immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials ; and at the end of the work shift if the surface may have become contaminated during the shift.

Waste Receptacles

All bins, pails, cans and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials will be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

Broken glassware that may be contaminated will not be picked up directly with the hands. It will be cleaned up using mechanical means, such as a brush and dust pan, tongs or forceps.

Reusable sharps that are contaminated with blood or other potentially infectious materials will not be stored or processed in a manner that requires employees to reach by hand into containers where these sharps have been placed.

Regulated Waste

Contaminated Sharps Discarding & Containment

Contaminated sharps will be discarded immediately or as soon as feasible in containers that are:

» Closeable

» Puncture resistant

» Leak proof on sides and bottom

» Labeled or color-coded in accordance with the Labels & Signs paragraph of this section

During use, containers for contaminated sharps will be:

» Easily accessible to personnel and located as close as feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g. laundries)

» Maintained upright throughout use

» Not overfilled and replaced routinely

When moving containers of contaminated sharps from the area of use, the containers will be:

» Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport or shipping

» Placed in a secondary container if leakage is possible

The secondary container will be:

» Closeable

» Constructed to contain all contents and prevent leakage during handling, storage, transport or shipping

» Labeled or color-coded according to the Labels Program of this section

Reusable containers will not be opened, emptied, or cleaned annually in any other manner which would expose employees to risk of percutaneous injury.

Other Regulated Waste Containment

Regulated waste will be placed in containers that are:

» Closeable

» Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping

» Labeled or color-coded in accordance with the Labels & Signs paragraph of this section

» Closed prior to removal to prevent spillage or protrusion of contents during handling, storage or shipping

If outside contamination of the regulated waste container occurs, it will be place in a secondary container. The secondary container will be:

» Closeable

» Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping

» Labeled or color-coded in accordance with the Labels & Signs paragraph of this section

» Closed prior to removal to prevent spillage or protrusion of contents during handling, storage or shipping

Disposal of all regulated waste will be in accordance with applicable local, state and federal regulations.

Laundry

Contaminated laundry will be handled as little as possible, with a minimum of agitation. Contaminated laundry will be bagged and containerized at the location where it was used and will not be sorted or rinsed in the location of use.

Hepatitis B Vaccination & Post-Exposure Evaluation and Follow-Up

The company policy includes ensuring that Hepatitis B vaccine and vaccination series are available to all employees who have occupational exposure and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

The company also ensures that all medical evaluations and procedures, including Hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, are made available to the employee at no cost.

Information Provided to the Healthcare Professional

The company will ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination or evaluating an employee after an exposure incident, is provided with the following information:

» Copy of this program

» Description of the exposed employee's duties as they relate to the exposure incident

» Documentation of the route(s) of exposure and circumstances under which exposure occurred

» Results of the source individual's blood testing, if available

» All medical records relevant to the appropriate treatment of the employee, including vaccination status, which is the responsibility of the company to maintain

Healthcare Professional's Written Opinion

The company will obtain and provide the employee with a copy of the evaluation healthcare professional's written opinion within 15 days of the completion of the evaluation.

The healthcare professional's written opinion for Hepatitis B vaccination will be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

The healthcare professional's written opinion for post-exposure evaluation and follow-up will be limited to the following information:

» The employee has been informed of the results of the evaluation

» 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

» All other findings or diagnoses will remain confidential and will not be included in the written report

Record Keeping - Reports

Medical Records

The company will establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.1020. This record will include:

» Name and social security number of employee

» Copy of the employee's Hepatitis B vaccination status, including the dates of all Hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required by this program

» Company's copy of the healthcare professional's written opinion as required in this program

» Copy of the information provided to the healthcare professional as required by this program

Confidentiality

The company will require that all employee medical records required by this section are:

» Kept confidential

» Not disclosed or reported without the employee's express written consent to any person within or outside the workplace, except as required by the section or as may be required by law

» Records are maintained in accordance with this program for at least the duration of the employee's employment plus 30 years, in accordance with 29 CFR 1910.1020

Training Records

Training records will be maintained for three years from the date which training occurred. Records will include the following information:

» Dates of training sessions

» Contents or summary of the training sessions

» Names and qualifications of persons conducting the training

» Names and job titles of all persons attending the training sessions

The company will ensure that all employee training records required to be maintained by this program will be made available, upon request, to all employees, authorized employee representatives, Assistant Secretary of Labor for Occupational Safety and Health, US Department of Labor and Director of the National Institute for Occupational Safety and Health under the Occupational Safety and Health Act for examination and copying.

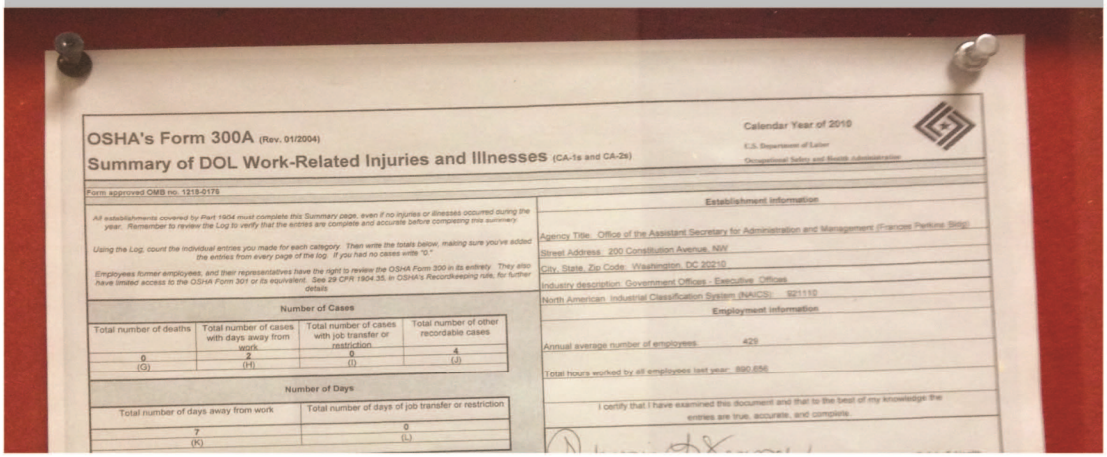
Employee medical records required by this program will be provided upon request for examination and copying to the subject employee, representatives of the subject employee having written consent, and to provide representatives of the Assistant Secretary a right of access to these records in order to fulfill responsibilities under the Occupational Safety and Health Act - reference section 29 CFR 1910.1020.

Transfer of Records

The company will comply with the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

If the company ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the company will notify the Assistant Secretary of Labor for Occupational Safety and Health, US Department of Labor and Director of the National Institute for Occupational Safety and Health at least three months prior to the record's disposal and transmit the records, if required, within that three month period.

23 INJURY & ILLNESS RECORD KEEPING PROGRAM



OSHA's Form 300A (Rev. 01/2004)
Summary of DOL Work-Related Injuries and Illnesses (CA-1s and CA-2s)
Calendar Year of 2010

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0 (G)	2 (H)	0 (I)	4 (J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
7 (K)	0 (L)

Establishment information

Agency Title: Office of the Assistant Secretary for Administration and Management (Frances Perkins Bldg)
Street Address: 200 Constitution Avenue, NW
City, State, Zip Code: Washington, DC 20210
Industry description: Government Offices - Executive Offices
North American Industrial Classification System (NAICS): 921110

Employment information

Annual average number of employees: 429
Total hours worked by all employees last year: 890,656

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Record-Keeping Program

The company fully understands that companies with 11 or more employees at any time during the calendar year, must comply with the provisions of 29 CFR 1904. This standard provides for record keeping and reporting requirements under 29 CFR 1904 as necessary or appropriate for developing information regarding the causes and prevention of occupational accidents and illnesses, and for maintaining a program of collection, compilation and analysis of occupational safety and health statistics both for the company and as part of the national system for analysis of occupational safety and health.

Records provide employers and OSHA with statistical data to enable safety programs to determine where emphasis should be placed in order to mitigate or eliminate injuries or accidents in the future. The OSHA Record Keeping Standard establishes uniform requirements to make sure that the illnesses and injuries sustained in US workplaces are evaluated, and that this information is properly collected, compiled, retained, analyzed and transmitted to all affected workers and to OSHA.

The company is required to keep records of fatalities, injuries and illnesses.

Recordable Illnesses & Injuries

The company must enter each recordable injury or illness on an OSHA 300 Log and 301 Incident Report, or other equivalent form, within seven calendar days of receiving information that a recordable injury or illness has occurred. Computerized versions are acceptable as long as they contain the same information as the OSHA version.

The log will be used for classifying occupational injuries and illnesses, and for noting the extent of each case. The log shows when the occupational injury or illness occurred, to whom, the regular job of the injured or ill person at the time of the injury or illness exposure, the division in which the person was employed, the type of injury or illness, how much time was lost, whether the case resulted in a fatality, etc. The company will maintain a log and summary of all recordable occupational injuries and illnesses by calendar year.

OSHA 300 Summary

A company executive will certify that he/she has examined the OSHA 300 Log and that he/she reasonably believes, based on his/her knowledge of the process by which the information was recorded, that the annual summary is correct and complete.

The company will post an annual summary of occupational injuries and illnesses for each facility under its control on February 1st for three months (February 1 - April 30). The summary will contain information from the previous year. This summary will consist of a copy of the year's totals from OSHA Form 300 and the following information contained on that form:

» Calendar year covered

» Company name and address

» Certification signature, title and date by company executive

» Form OSHA 300A will be used in presenting the summary. If no injuries or illnesses occurred in the year, zeroes will be entered on the totals line, and the form will be posted

» The company will post a copy of the company's summary in each facility in the manner required under 29 CFR 1904 and 1903. The summary will be completed in the detail prescribed in the accompanying instructions provided by OSHA. Computerized versions are acceptable as long as they contain the same information as the OSHA version

Maintaining Record Keeping Forms

The company will maintain records for the following time periods following the end of the year to which they relate:

» Log occupational injuries and illnesses (OSHA 300 or equivalent) as described in 29 CFR 1904.2 - retained for five years

» Supplementary records (OSHA 301 or equivalent) for each occupational injury or illness for the facility as described in 29 CFR 1904.4 - retained for five years

» Employee exposure and medical records for company employees as described in 29 CFR 1910.1020 - retained for 30 years

» Noise exposure measurement records as described in 29 CFR1910.96 - retained for 25 years.

» Audiometric test records as described in 29 CFR 1910.95 - retained for the duration of the affected employee's employment

24 SPILL PREVENTION & RESPONSE PROGRAM



Storing Chemicals

Barnhill Contracting Company will ensure that the hazards of all chemicals used within the facility and worksites are evaluated, and that information concerning their hazards is transmitted to all employees. Chemical substances will be stored in proper containers to minimize the potential for a spill. Whenever possible, chemicals will be kept in closed containers and stored so they are not exposed to storm water.

Spills/Releases

The company will identify and inform all employees of chemicals that may potentially spill or be released. Employees will be advised on the chemicals used at the company or that are brought on to the owner client's worksite.

Spill Prevention Kits

The company will ensure that proper spill kits contain the appropriate supplies for materials that may be spilled. Supplies will be easily accessible when required, and considerations will be made for the type and quantity of materials.

The company will ensure that spill response materials and kits are adequately available by conducting periodic inspections to assess their availability and adjust inventory as needed.

Employee Training

Employees will be trained on the precautions for safe handling, use and proper response procedures for any spilled materials. The training will include materials available for use, proper waste disposal and communication procedures.

Housekeeping

The company will ensure that areas where chemicals may be used or stored will be maintained using good housekeeping best management practices. This includes, but is not limited to, clean and organized storage, labeling and secondary containment where necessary.

Communication

In the event of a spill/release or contamination of a hazardous chemical, employees are instructed to notify their supervisor immediately. The employee must inform their supervisor of the type of chemical spilled/release and the quantity that was released/spilled. This will help determine what proactive measures to take and the procedures for clean up of the chemical.

25 GENERAL WASTE MANAGEMENT PROGRAM



Estimating Waste Generated Per Project

Barnhill Contracting Company will estimate the waste generated prior to work being performed on each project so the need for containers and waste removal, if necessary, can be determined.

Disposing of Waste/Scrap Metal

The company will coordinate with the owner client to ensure proper disposal of waste or scrap materials (i.e. the company will ensure the owner client is aware of whether waste and scrap materials will be taken off site by the company or will be disposed of on the owner client's site).

Individual/Group or Responsible

To ensure proper disposal or reuse, the company will assign responsibility for proper waste or scrap materials to an employee either by title or position. This person will be responsible for the disposal waste generated during work being performed on the project or owner client's site.

Safety Hazards

The company will address safe practices related to the immediate storage and handling of waste, scrap, or leftover materials. Employees will wear proper personal protective equipment when necessary.

Proper Handling, Organization & Storage

The company will ensure that project-related waste is stored and maintained in an organized fashion to encourage proper disposal and minimize risk to employees. For example, proper waste receptacles will be provided for trash and materials that may be reused or recycled during a project.

Waste materials will be properly stored and handled to minimize the potential for a spill or impact to the environment. During outdoor activities, receptacles will be covered to prevent dispersion of waste materials and to control the potential for run-off.

Proper Disposal Methods

Employees will be trained and instructed on the proper disposal method of waste. This may include general instruction on the disposal of non-hazardous waste, trash or scrap materials. If generated waste is classified as hazardous, employees will be trained to ensure proper disposal.

Segregation & Recycling of Waste

The company encourages proper segregation of waste materials to ensure opportunities for reuse or recycling.

26 LONE WORKER PROGRAM



Hazard Assessment

Barnhill Contracting Company considers working alone a hazard and will conduct a hazard assessment to address the hazards and identify control measures to minimize the risk associated with working alone. The hazard assessment is used to anticipate the type of work, travel time, weather, communication, employee medical conditions and training that are required.

Monitoring Device

The company will provide all employees who will be working alone with an effective communication system consisting of:

» Radio communication

» Landline or cellular/satellite telephone communication

» Electronic monitoring device

» Another form of direct and reliable communication that includes regular contact by the company or designated contact at intervals appropriate to the nature of the hazard associated with the employee's work

Check-In/Check-Out Process

The company has a check-in/check-out process for employees working alone. Employees working alone will contact the company at a predetermined interval based on the findings of the hazard assessment.

Contacting Lone Workers

A designated individual will be responsible for checking in with the lone worker at regular intervals. If for some reason, the designated individual is unable to establish contact with the lone worker through

radio, landline or cellular telephone, the designated individual will check in with the lone worker at the jobsite. The designated individual will have the lone worker sign a check-in form that will include the lone worker's status at the time of check-in interval.

27 CONFINED SPACE ENTRY



It is the responsibility of the immediate Supervisor to ensure compliance with this policy on all Barnhill Contracting Company jobsites or property. Project Managers and Supervisors are authorized to halt any operation of the company where there is a danger of serious personal injury, including confined space hazards. A confined space includes all of the following characteristics:

» Large enough that a person can enter and do work

» Limited or restricted means for entry or exit

» Not designed for continuous human occupancy

Examples of confined spaces on company jobsites or property include pits, sewers, trenches and tanks

Confined Spaces Requiring A Permit & Associated Hazards

A permit is required when the potential for one of the following hazards exists:

Hazards	Description
Hazardous atmospheres	Oxygen (0_2) levels outside the range of 19.5-23%. Flammable or explosive levels of gases or vapors in excess of 10% of its lower flammable (LF) limit. Toxic substances in dangerous concentration levels.
Engulfment or Entrapment	Contains material (i.e. sand, aggregate, etc.) with the potential for engulfing the entrant.
Inwardly Converging Walls	Entrant could be trapped or asphyxiated by inwardly converging walls or by a floor, which slopes downward and tapers to a small cross-section
Any Other Serious Hazards	Falls, electrical, mechanical, hydraulic, etc.

Refer to Lock and Tag Policy if you are unsure of permit status.

Examples of a Pre-Entry Checklist and Confined Space Entry Permit Form are located on pages 126-127. This permit must be completed by the Supervisor before any employee enters the confined space, unless it has been determined through the Pre-Entry Checklist that no hazard exists or through alternate procedures that the atmosphere is safe.

Training

The company's Confined Space Program begins with training procedures for all employees whose duties or responsibilities might expose them to any elements regarding confined space. The company provides this training so that all employees whose work is regulated by this section will acquire the understanding, knowledge and skills necessary for the safe performance of the duties assigned for their position.

Completion of training is mandatory for each employee:

» Before the employee is first assigned duties under this section

» Before there is a change in assigned duties

» Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained

» Whenever the company has reason to believe that there are deviations from the permit space entry training procedures that are required by his section or there are inadequacies in the employee's knowledge or use of these procedures

The training establishes and documents employee proficiency in their duties and shall introduce new or revised procedures, as necessary, for compliance with this program. The company also certifies that the required training described above has been accomplished. The certification will also include:

» Each employee's name

» Signatures or initials of the trainers

» Dates of training

The certification is available for inspection by employees and their authorized representatives.

Permit Space Overview

The company will develop and implement a written Permit Space Program that has been documented and recorded. This written program shall be available for inspection by employees and their authorized representatives.

The company's Permit Space Program will also:

» Implement the measures necessary to prevent unauthorized entry

» Identify and evaluate the hazards of permit spaces before employees enter them

» Develop and implement the means, procedures and practices necessary for safe permit space entry operations including, but not limited to, the following:

  » Specifying acceptable entry conditions

  » Providing each authorized entrant or that employee's authorized representative with the opportunity to observe any monitoring or testing of permit spaces

  » Isolating the permit space

  » Purging, inverting, flushing or ventilating the permit space as necessary to eliminate or control atmospheric hazards

  » Providing pedestrian, vehicle or other barriers as necessary to protect entrants from external hazards

  » Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry

Equipment

The company provides and maintains the equipment listed below at no cost to the employee. The company will ensure the proper use of the equipment by:

» Testing and monitoring equipment needed to comply with this program

» Ventilating equipment needed to obtain acceptable entry conditions

» Communications equipment necessary for compliance with this section

» Personal protective equipment insofar as feasible, engineering and work practice controls do not adequately protect employees

» Lighting equipment needed to enable employees to see well enough to work safely and to exit the space quickly in an emergency

» Barriers and shields as required within this program

» Equipment, such as ladders, needed for safe ingress and egress by authorized entrants

» Rescue and emergency equipment needed to comply with this program except to the extent that the equipment is provided by rescue services

» Any other equipment necessary for safe entry into and rescue from permit spaces

Pre-Entry Testing

To evaluate permit space conditions before any entry operations are commenced, use the following controls:

» Test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin, except that, if isolation of the space is not feasible because the space is large or is part of a continuous system (such as a sewer), pre-entry testing shall be performed to the extent

feasible before entry is authorized and, if entry is authorized, entry conditions shall be continuously monitored in areas where authorized entrants are working

» Test or monitor the permit space as necessary to determine if acceptable entry conditions are being maintained during the course of entry operations

» When testing for atmospheric hazards, test first for oxygen, then for combustible gases and vapors and then for toxic gases and vapors

» Provide each authorized entrant or that employee's authorized representative an opportunity to observe the pre-entry and any subsequent testing or monitoring of permit spaces

A re-evaluation of the permit space in the presence of any authorized entrant of that employee's authorized representative who requests that the company conduct such reevaluation because the entrant or representative has reason to believe that the evaluation of that space may not have been inadequate.

Immediately provide each authorized entrant of that employee's authorized representative with the results of any testing conducted in accordance with this program.

Note: Atmospheric testing conducted in accordance with Appendix B to Section 1910.146 would be considered as satisfying this requirement of this section. The permit space operations in sewers, atmospheric testing conducted in accordance with Appendix B, as supplemented by Appendix E to section 1910.146, would be considered as satisfying the requirements of this section.

Single Attendant

If more than one confined space is to be monitored by a single attendant, means and procedures available to enable the attendant to respond to emergencies in one or more permit spaces that he/she is monitoring without distraction from all responsibilities.

Note: Attendants may be assigned to monitor more than one permit space provided the duties described in paragraph Duties of Company's Attendants can be effectively performed for each permit space.

Multiple Monitoring

If multiple spaces are to be monitored by a single attendant, the company shall establish procedures to be used to allow the attendant to respond to an emergency affecting one or more of the permit spaces being monitored without distracting attendant from his/her responsibilities and maintain a satisfactory level of job performance.

Designated Persons

When work conditions require, the company will compile a list of the following designated persons:

» Authorized entrants

» Attendants

» Entry supervisors

» Persons who test or monitor the atmosphere in a permit space.

The designated person will certify that each employee has completed the required training in accordance with this program. The company will also document and keep on record the duties of each position that is listed above.

Duties of the Company's Authorized Entrants

The company requires that all authorized entrants:

» Know the hazards that may be faced during entry, including information on the mode, signs or symptoms and consequences of the exposure

» Properly use and have been trained on the provided equipment

» Recognizes any warning sign or symptom of exposure to a dangerous situation

» Communicate with the attendant as necessary to enable the attendant to monitor entrant status alert entrants of the need to evacuate the space as required

» Alert the attendant whenever the entrant recognizes any warning sign or symptom of exposure to a dangerous situation or the entrant detects a prohibited condition

» Exit the permit space as quickly as possible whenever an order to evacuate is given by the attendant or entry supervisor

Duties of the Company's Attendants

The company requires that all company attendants:

» Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure

» Are aware of possible behavioral effects of hazard exposure in authorized entrants

» Continuously maintains an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants detailed in this section accurately identifies who is in the permit space

» Remains outside the permit space during entry operations until relieved by another attendant

» Communicates with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space

» Monitors activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions:

  » If the attendant detects a prohibited condition

  » If the attendant detects that behavioral effects of hazard exposure in an authorized entrant

  » If the attendant detects a situation outside the space that could endanger the authorized entrant

- If the attendant cannot effectively and safely perform all the duties required by this program
- Summon rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards
- Takes the following actions when unauthorized persons approach or enter a permit space while entry is underway: Warns the unauthorized persons that they must stay away from the permit space; advise the unauthorized persons that they must exit immediately if they have entered the permit space; inform the authorized persons and the entry supervisor if unauthorized persons have entered the permit space; performs non-entry rescues as specified by the company's rescue procedure and performs no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants

Duties of the Company's Entry Supervisors

The company requires all entry supervisors:

- Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure
- Verifies, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin
- Terminates the entry and cancels the permit as required by this program
- Verifies that rescue services are available and that the means for summoning them are operable
- Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations
- Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained

Rescue and Emergency Services

The company has developed and implemented procedures for summoning rescue and emergency services for rescuing entrants from permit spaces, for providing necessary emergency services to rescued employees and for preventing unauthorized personnel from attempting a rescue mission.

The company will:

- Evaluate a prospective rescuer's ability to respond to a rescue summons in a timely manner, considering the hazard(s) identified; summon rescue and other emergency services by radio communication or other effective means as soon as the attendant determines that entrants may need assistance to escape from permit space hazards. Attendant shall also notify the entry supervisor of the emergency as soon as feasibly possible. Attendant shall provide first aid services, to the extent of individual training, provided that attention is not taken from monitoring the safety of other permitted spaces

Note: What will be considered timely will vary according to the specific hazards involved in each entry (i.e. 29 CFR 1910.134 Respiratory Protection requires that the company provide standby person(s) capable of immediate action to rescue employee(s) wearing respiratory protection while in work areas as defined by IDLH atmospheres)

» Evaluate a prospective rescue service's ability, in terms of proficiency with rescue-related tasks and equipment, to function appropriately while rescuing entrants from the particular permit space or types of permit spaces identified

» Select a rescue team or service from those evaluated that:

  » Has the capability to reach the victim(s) within a time frame that is appropriate for the permit space hazard(s) identified and is equipped for and proficient in, performing the needed rescue services

  » Inform each new rescue team or service of the hazards they may confront when called on to perform rescue at the site

  » Provide the rescue team or service selected with access to all permit spaces from which rescue may be necessary so that the rescue service can develop appropriate rescue plans and practice rescue operations

» The company's employees who have been designated to provide permit space rescue and emergency services will take the following measures:

  » Provide affected employees with the personal protective equipment (PPE) needed to conduct permit space rescues safely and train affected employees so they are proficient in the use of that PPE, at no cost to the employee

  » Train affected employees to perform assigned rescue duties ensuring that such employees successfully complete the training required to establish proficiency as an authorized entrant

  » Train affected employees in basic first aid and cardiopulmonary resuscitation (CPR). The company shall ensure that at least one member of the rescue team or service holding a current certification in first aid and CPR is available

  » Ensure that affected employees practice making permit space rescues at least once every 12 months, by means of simulated rescue operations in which they remove dummies, manikins or actual persons from the actual permit spaces or from representative permit spaces. Representative permit spaces shall simulate the types of permit spaces from which rescue is to be performed with respect to opening size, configuration and accessibility

To facilitate non-entry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant. Retrieval systems shall meet the following requirements:

» Each authorized entrant shall use a chest of full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, above the entrant's head, or at another point which the company can establish presents a profile small enough for the successful removal of the entrant

» Wristlets may be used in lieu of the chest or full body harness if the company can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative

» The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from vertical type permit spaces more than five feet (1.52 m) deep

If an injured entrant is exposed to a substance for which a Safety Data Sheet or other similar written information is required to be kept at the worksite, that SDS or written information shall be made available to the medical facility treating the exposed entrant.

Multiple Employer Procedures

The company's policy for a multiple employer worksite is to take complete control of the permit space and procedures. **Exceptions:** If they receive written documentation from a certified company or organization requesting the release of the permit space control and procedures to coordinate entry operations where employees of more than one employer are working simultaneously as authorized entrants in a permit space, so that employees of one employer to not endanger the employees of any other employer.

Entry Permits

A permit signed by the entry supervisor will be posted at all entrances and will otherwise be made available to entrants before they enter the permit space. The permit must verify that pre-entry preparations outlined in this section have been completed. The duration of entry permits must not exceed the time required to complete an assignment.

Entry permits must include:

» Permit space to be entered

» Purpose of the entry

» Date and authorized duration of the entry permit

» Authorized entrants within the permit space, by name or by such other means (i.e. through the use of rosters or tracking systems) as will enable the attendant to determine quickly and accurately, for the duration of the permit, which authorized entrants are inside the permit space. **Note:** This requirement may be met by inserting a reference on the entry permit as to the means used, such as roster or tracking system, to keep track of the authorized entrants within the permit space

» Personnel, by name, currently serving as attendants

» Individual, by name, currently serving as entry supervisor, with a space for the signature or initials of the entry supervisor who originally authorized entry

» Hazards of the permit space to be entered

» Measures used to isolate the permit space and to eliminate or control permit space hazards before

entry. **Note:** Those measures can include the lockout or tagging of equipment and procedures for purging, inverting, ventilating and flushing permit spaces

» Acceptable entry conditions

» Results of initial and periodic tests performed under this section, accompanied by the names and initials of the testers and by an indication of when the tests were performed

» Rescue and emergency services that can be summoned and the means (such as the equipment to use and the numbers to call) for summoning those services

» Communication procedures used by authorized entrants and attendants to maintain contact during the entry

» Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems and rescue equipment to be provided for compliance with this section

» Any other information that is necessary, given the circumstances of the particular confined space, in order to ensure employee safety

» Any additional permits, such as for hot work, that have been issued for authorized work in the permit space

Concluding/Canceling Entry Permits

Upon completion of operations within a permitted confined space, the lead worker will:

» Close off the permitted confined space

» Return the entry permit to the entry supervisor for cancellation

The entry supervisor will cancel entry and entry permit when the entry operations covered by the entry permit have been completed and a condition that is not allowed under the permit arises in or near the permit space. New conditions will be noted on the cancelled permit and used in revising the permit space program. The standard requires that the company maintain all cancelled entry permits for at least one year.

Unauthorized Entry

A review of entry operations will be implemented at any time when the company has reason to believe that the measures taken under the permit space program may not protect employees and will revise the program to correct deficiencies found to exist before subsequent entries are authorized. **Note:** Examples of circumstances requiring the review of the permit space program are: any unauthorized entry of a permit space, detection of a condition prohibited by the permit, occurrence of an injury or near-miss during entry, change in the use or configuration of a permit space and employee complains about the effectiveness of the program.

Review of Procedures

The company will perform an annual review covering all entries performed during the last 12-month period. **Exception:** If no entries were performed during the 12-month period, no review is necessary.

The company will review the permit space program, using the cancelled permits retained within one year after each entry and revise the program as necessary, to ensure that employees participating in entry operations are protected from permit space hazards.

Air Testing & Monitoring

Barnhill Contracting Company will evaluate every workplace to determine if any spaces are permit-required confined spaces. If a workplace contains permit spaces, the company will inform exposed employees and other employees performing work in that area, by posting danger signs or by any other equally effective means, of the existence, location of and the danger posed by the permit spaces. **Note:** A sign reading "DANGER - PERMIT REQUIRED CONFINED SPACE, DO NOT ENTER" or other similar language would satisfy the requirement for a sign.

If the company decides that its employees will enter permit spaces, the company's Confined Space Program must be implemented. The written program shall be available for inspection by employees and their authorized representatives and will include:

» Testing or monitoring of the confined space as necessary to determine if acceptable entry conditions are being maintained during the course of entry operations

» When testing for atmospheric hazards, test first for oxygen, then for combustible gases and then for toxic gases and vapors

» Provide each authorized entrant or that employee's authorized representative an opportunity to observe the pre-entry and subsequent testing or monitoring of permit spaces

Re-Evaluation

The company will re-evaluate the permit space in the presence of any authorized entrant or the employee's authorized representative who requests the company conduct such re-evaluation because the entrant or representative has reason to believe that the evaluation of that space have been inadequate.

Jobsite Name: _____

Date & Time Issued: _____

BARNHILL CONTRACTING COMPANY

PRE-ENTRY CHECKLIST

Job to be Performed: _____

PRE-ENTRY

Atmosphere Checks:	Time: _____	
	Oxygen: _____	%
	Explosive: _____	% L.F.L.
	Toxic: _____	P.P.M.
Source Isolation (no entry):	( ) N/A ( ) Yes ( ) No	
Pumps or lines blinded, disconnected or blocked:	( ) N/A ( ) Yes ( ) No	

VENTILATION

Mechanical:	( ) N/A ( ) Yes ( ) No	
Natural Ventilation Only:	( ) N/A ( ) Yes ( ) No	
Atmospheric Check After Isolation and Ventilation:	Time: _____	
	Oxygen: _____	%
	Explosive: _____	% L.F.L.
	Toxic: _____	P.P.M.
Engulfment or entrapment hazards:	( ) N/A ( ) Yes ( ) No	
Walls of the space converge to a small area of floor sloping?	( ) N/A ( ) Yes ( ) No	
Other serious hazards? (e.g. electrical, mechanical, pneumatic)	( ) N/A ( ) Yes ( ) No	
Additional hazards to be introduced? (e.g. welding fumes, cleaning solvents)	( ) N/A ( ) Yes ( ) No	

If conditions are in compliance with the requirements above and there is no reason to believe conditions may change adversely, then proceed to enter the space withour a permit (exception: safety harness and lifeline if space is greater than five feet deep).

If conditions are **NOT** in compliance with the requirements above or if there is reason to believe that conditions may change adversely, proceed to the Permit Form.

Checklist Prepared by: _____ (competent person)

Approved by: _____ (supervisor)

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BARNHILL CONTRACTING COMPANY

ENTRY PERMIT

_____ Confined Space _____ Hazardous Area Permit No._____

*Permit valid for 8 hours only *All copies of permit will remain at jobsite until job is completed

Site Location/Description: _____

Purpose of Entry: _____

Date: _____ Permit Expiration Date/Time: _____

Crew Supervisor: _____ Type of Crew: _____ Phone: _____

Requirements to be completed prior to entry (bold denotes minimum requirements to be completed and reviewed prior to entry, Enter N/A for items that do not apply):

	Date	Time		Date	Time
Lock Out/De-Energize/Try Out	____	____	**Lifelines**	____	____
Line(s) Broken - Capped - Blanket	____	____	**Resuscitator - Inhilator**	____	____
Purge - Flush and Vent	____	____	**Standby Safety Personnel**	____	____
Ventilation	____	____	**Full Body Harness (with D ring)**	____	____
Breathing Aparatus	____	____	Fire Extinguishers	____	____
Emergency Escape Retrieval Equipment	____	____	Lighting (explosive proof)	____	____
Communication Device(s)	____	____	Protective Clothing	____	____
Atmosphere Monitoring Device(s)	____	____	Respirator(s) (air purifying)	____	____
Secure Area (pose and flag)	____	____	Burning and Welding Permit	____	____

Continuous Monitoring (results to be recorded every 2 hours)
(+ indicates 8-hour time-weighted average: employee can work in area 8 hours or longer with an appropriate respitory system/* indicates short-term exposure limit: employee can work in the area up to 15 minutes)

Test	**Permissable Levels**	**Monitoring Results (record time of each test)**
Percent of Oxygen	19.5-23.5%	____ ____ ____ ____ ____ ____ ____ ____
Lower Flammable Limit	Under 10%	____ ____ ____ ____ ____ ____ ____ ____
Carbon Monoxide	+35 PPM	____ ____ ____ ____ ____ ____ ____ ____
Methane	+1 PPM *5 PPM	____ ____ ____ ____ ____ ____ ____ ____
Hydrogen Sulfide	+10 PPM *15 PPM	____ ____ ____ ____ ____ ____ ____ ____
Sulfur Dioxide	+2 PPM *5 PPM	____ ____ ____ ____ ____ ____ ____ ____
Other		____ ____ ____ ____ ____ ____ ____ ____

Remarks: _____

Gas Tester Name & Check No. _____ Instruments Used:_____

Model/Type:_____ Serial No./Unit No._____

Rescue Procedure:_____

Contacts: Ambulance_____ Safety_____ Fire_____ Rescue_____ Gas Coordinator_____

Permit Authorization (pink copy to Safety Department): I certify that all required precautions have been taken and necessary equipment is provided for safe entry and work in this space.

_____ _____ _____

name signature date

Required Safety Standby Personnel _____ Check No. _____

Required Safety Standby Personnel _____ Check No. _____

Authorized Entrants _____ Check No. _____

Authorized Entrants _____ Check No. _____

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28 LOCKOUT/TAGOUT PROGRAM



Program Implementation

The company has established a program that will utilize procedures for affixing appropriate lockout devices or tagout devices to energy isolating devices, and to otherwise disable machines or equipment to prevent unexpected energization, start-up or release of stored energy including electrical, steam, hydraulic, tension, gravity, etc. in order to prevent injury to employees.

Definitions

Affected Employee - An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in area in which such servicing or maintenance is being performed.

Authorized Employer - A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered under this section.

Capable of Being Locked Out - An energy-isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild or replace the energy-isolating device or permanently alter its energy control capability.

Energized - Connected to an energy source or containing residual or stored energy.

Energy-Isolating Device - A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: A manually operated electrical circuit breaker; disconnect switch; manually operated switch by which the conductors of a circuit can be disconnected from all underground supply conductors, and, in addition, no pole can be operated independently; line

valve; block; and any similar device used to block or isolate energy. Push buttons, selector switches and other control circuit type devices are not energy-isolating devices.

Energy Source - Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy.

Hot Tap - A procedure used in the repair, maintenance and service activities which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam and petrochemical distribution systems.

Lockout - The placement of a lockout device on an energy-isolating device, in accordance with an established procedure, ensuring that the energy-isolating device and equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device - A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy-isolating device in the safe position and prevent the energizing of a machine or equipment. Blank flanges and bolted slip blinds are included.

Normal Production Operations - The utilization of a machine or equipment to perform its intended production function.

Servicing and/or Maintenance - Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying and maintaining, and/or servicing machines or equipment. These activities include lubrication, cleaning, unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or start-up of the equipment or release of hazardous energy.

Setting Up - Any work performed to prepare a machine or equipment to perform its normal production operation.

Tagout - The placement of a tagout device on an energy-isolating device, in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout Device - A prominent warning device, such as a tag, and a means of attachment, which can be securely fastened to an energy-isolating device in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Training & Communication

The Safety Director is the primary individual responsible for the company's Lockout/Tagout Program. He/she will provide training to ensure that the purpose and function of the energy control procedures are understood by employees and that the knowledge and skills required for the safe application, usage and removal of energy controls are acquired by employees. The training shall include the following:

» Each authorized employee shall receive training in the recognition of applicable hazards and energy sources

» Type and magnitude of the energy available in the workplace

» Methods and means necessary for energy isolation and control

Each affected employee will also receive training procedures for affixing appropriate lockout devices or tagout devices to energy-isolating devices, and to otherwise disable machines or equipment to prevent unexpected energization, start-up or release of stored energy in order to prevent injury to employees.

Procedure Limitations

All employees whose work operations are, or could possibly be, in an area where energy control procedures may be utilized, shall be instructed in the logout/tagout procedure, and about prohibiting the restart or reenergizing of machines or equipment that is locked out or tagged out.

When tagout systems are used, employees are required to be training in the following limitations:

» Locks provide physical restraint on devices, tags are essentially warning devices affixed to energy-isolating devices, and do not provide restraint

» When a tag is attached to an energy-isolating device, it is not to be removed without approval of the authorized person responsible for it, and it is never to be bypassed, ignored or otherwise defeated

» To be effective, tags must be legible and understandable to all employees whose work operations are, or may be, in the affected area

» Tags and their means of attachment are to be made of materials that will withstand the environmental conditions encountered in the workplace

» Tags may evoke a false sense of security, therefore the tag meaning needs to be understood as part of the overall energy control program

» Tags must be securely attached to energy-isolating devices so that they cannot be inadvertently or accidently detached during use

Employee Re-Training

The company's safety policy mandates that employees training to be comprehensive and the documentation of training is kept up to date. The company will issue certification for completion of the Lockout/Tagout Training Program which will contain each employee's name and the dates of training.

Re-training is provided to all authorized and affected employees whenever there is a change in their job assignment, a change in machine, equipment or processes that present a new hazard or when there is a change in the energy control procedures.

Additional re-training shall also be conducted whenever the company has reason to believe that there are deviations from, or inadequacies in, the employee's knowledge or use of the energy control procedures.

The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

Energy Control Procedures

The following Energy Control Procedures have been developed by the company to utilize and control

potentially hazardous energy when employees are engaged in any activities defined in this section.

Scope

This covers the servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machines or equipment, or release of stored energy could cause injury to employees.

Application of Control

The company has integrated the following procedures for the application of energy control (the lockout or tagout procedures). These will be performed in the following sequence:

1. Preparation for Shutdown - Before an authorized or affected employee turns off a machine or piece of equipment, the authorized employee shall have knowledge of the type and magnitude of the energy, hazards of the energy to be controlled and the method or means to control the energy
2. Machine or Equipment Shutdown - The machine or equipment shall be turned off or shut down using the procedures established for the machine or equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees due to the equipment stoppage
3. Machine or Equipment Isolation - All energy-isolating devices that are needed to control the energy to the machine or equipment, shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s)

Lockout/Tagout Devices

Protective Materials & Hardware

Locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners or other hardware shall be provided by the company for isolating, securing or blocking of machines or equipment from energy sources.



Lockout devices and tagout devices shall be similarly identified; shall be the only device(s) used for controlling energy; shall not be used for other purposes and shall meet the following requirements:

Durable - Lockout and tagout devices shall be capable of withstanding the environment to which they are exposed for the maximum period of time

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that exposure is expected. Tagout devices shall be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible. Tags shall not deteriorate when used in corrosive environments such as areas where acid and alkali chemicals are being handled or stored.

Standardized - Lockout and tagout devices shall be standardized within the facility in at least one of the following criteria:

» Color

» Shape

» Size

Additionally, in the case of tagout devices, print and format will be standardized.

Substantial - Lockout devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as the use of bolt cutters or other metal cutting tools. Tagout devices, including their means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tagout attachment means shall be of a non-reusable type, attachable by hand, self-locking and non-releasable with a minimum unlocking strength of no less than 50 pounds and have the general design and basic characteristics of being at least equivalent to a one-piece, all environment-tolerant nylon cable case.

Identifiable - Lockout devices and tagout devices shall indicate the identity of the employee applying the device(s). Tagout devices shall warn against hazardous conditions; if the machine or equipment is energized; and shall include a legend such as the following:

» DO NOT START

» DO NOT OPEN

» DO NOT CLOSE

» DO NOT ENERGIZE

» DO NOT OPERATE

Lockout or Tagout Device Application

Lockout or tagout devices shall be affixed to each energy-isolating device by authorized employees.

Lockout devices, where used, shall be affixed in a manner so that the energy-isolating devices are in a "safe" or "off" position.

Tagout devices, where used, shall be affixed in such a manner that will clearly indicate that the operation and movement of energy-isolating devices from the "safe" or "off" position is prohibited.

Where tagout devices are used with energy-isolating devices designed with the capability of being locked, the tag attachment shall be fastened at the same point at which the lock would have been attached.

Where a tag cannot be affixed directly to the energy-isolating device, the tag shall be located as close

as safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.

Stored Energy

Following the application of lockout or tagout devices to energy-isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained and otherwise rendered safe.

If there is a possibility of re-accumulation of stored energy to a hazardous level, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.

Group Lockout or Tagout

When servicing or maintenance is performed by a crew, craft, department or other group, they shall utilize a procedure which grants the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.

Group lockout or tagout devices used in accordance with the procedures required by this program, including, but not necessarily limited to the following requirements:

Primary responsibility is vested in an authorized employee for a set number of employees working under the protection of a group lockout or tagout device (such as an operations lock).

Provision for the authorized employee to ascertain the exposure status of individual group members with regard to the lockout or tagout of the machine or equipment.

When more than one crew, craft, department, etc. is involved, assignment of overall job-associated lockout or tagout control responsibility to an authorized employee designated to coordinate affected work forces and ensure continuity of protection.

Each authorized employee shall affix a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when he or she begins work, and shall remove those devices when he or she stops working on the machine or equipment being serviced or maintained.

Authorized Employee

A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered within this program.

29 TRANSPORTING & HANDLING HAZARDOUS MATERIALS



Barnhill Contracting Company recognizes the Hazardous Material Regulations located in CFR 49 Parts 100-177 as law when transporting and using all applicable hazardous materials in our daily operations. The company makes every effort to recognize, mark, label and placard the applicable materials set forth in the Hazardous Material Regulations.

Barnhill Contracting Company ensures all drivers considered to be HAZMAT employees possess and maintain a current Commercial Drivers License (CDL) and the necessary endorsement to transport the materials that are defined as hazardous materials. Additionally, the company trains all HAZMAT employees and their supervisors in the required areas of hazardous material and security awareness. This training is performed within 90 days of employment or job transfer and recurrent training is performed in three year intervals.

As a carrier, Barnhill Contracting Company requires each shipment of HAZMAT to carry the appropriate shipping paper or bill of lading as well as emergency response information. This ensures the safety of the driver and the general public as well as the environment when materials are in transit. The company provides each driver with emergency spill information and contact information in the event of a spill or HAZMAT incident. All HAZMAT employees must read and understand the contents of this policy and follow all rules of hazard communication while loading, unloading and transporting identified hazardous materials.

Hazardous Materials

Transporting hazardous materials involves a number of regulations concerning packaging, markings and labels, shipping papers, proper material descriptions, placarding, driver's license, driver training, designated routes, emergency response, drivers' hours of service logs, parking restrictions, etc. The intent of this policy is to provide an overview and reference applicable regulations.

A hazardous material is a substance or material including a hazardous substance, hazardous waste, marine pollutant or elevated-temperature material which the Secretary of Transportation has been determined and designated to be capable of posing an unreasonable risk to health, safety and property when transported in commerce. A listing of these materials is available in 49 CFR 172.101, 102 and the Appendix to 172.101.

While some materials are clearly recognized as hazardous, many common items are also including paint, pesticides and insecticides, batteries, cleaning solvents and compressed oxygen. There are numerous exceptions pertaining to total quantity shipped, size of each individual container, amount loaded at one stop, etc. Many items do not require placards, unless there is a combined total of more than 1,000 pounds or more on one truck; however, some items require placards for any amount. Most regulations can be found in 49 CFR parts 100-177.

The shipper is responsible for properly preparing hazardous materials for transportation, including proper markings, labels, shipping papers and placards. However, that does not relieve the carrier of the responsibility to ensure the materials offered for shipment are prepared according to regulation. Obvious indications are boxes or drums having hazardous markings or labels and any material noted on the shipping papers that include a UN or NA number (i.e. a typical description is: paint related materials, 3, UN1263, II). If the proper shipping name is incorrect, or not in the proper order, this may result in significant fines to the motor carrier during a roadside inspection or DOT audit.

Applicable provisions to the transportation of hazardous materials by private and for-hire transporters include:

» Compliance with federal, state and local requirements. Transportation must be in compliance with all other provisions of the Federal Motor Carrier Safety Regulations (Part 397) and all state and local requirements unless the regulations are less stringent than comparable requirements of the Federal Motor Carrier Safety Regulations (Part 397)

» Vehicles must not be parked on, or within five feet of a roadway unless operating conditions preclude parking elsewhere. The vehicle must be attended by the driver unless it is necessary for the driver to leave because of the nature of his/her duties

» Shipping papers must be visible while en route and within reach of the driver

» If practical, drivers must avoid operating in congested areas or narrow streets. Some cities and tunnels do not allow placarded loads. Many states require a permit or registration fee to transport a placarded load. The federal government requires a registration for shippers and carriers meeting certain criteria

» A vehicle must not operate near an open flame unless the driver has determined that it can be done safely. The vehicle must not be parked within 300 feet of an open fire

» Smoking is prohibited within 25 feet of any vehicle transporting explosives, oxidizing materials, flammable liquids, flammable solids, or flammable gases

» Smoking is prohibited within 25 feet of an empty tank vehicle which must be placarded for the transportation of flammable gases of liquids

» The engine must be off and a person must be in physical control of the nozzle while fueling

» Tires must be checked at the start of a trip and each time the vehicle is parked. If an overheated tire is found, the driver must correct the cause of overheating before continuing to drive

» A commercial driver's license (CDL) with a hazardous materials endorsement is required for a driver of any size vehicle required to be placarded for transporting hazardous materials

» Before any hazardous materials are transported, the company must ensure that the shipment is in the proper container with the correct labels, that the driver is trained and has the correct shipping papers and the vehicle displays the correct placards. Requirements can be found in the Federal Motor Carrier Safety Regulations, Part 397

» All HAZMAT employees are required to have HAZMAT training per 49 CFR 172.704. The purpose of the training requirements is to ensure each HAZMAT employer trains its HAZMAT employees regarding safe loading, unloading, handling, storing and transporting of hazardous materials and emergency preparedness for responding to accidents or incidents involving the transportation of hazardous materials

A HAZMAT employer must train and test every HAZMAT employee who in the course of employment directly affects hazardous material's transportation safety. A HAZMAT employee refers to an individual, including a self-employed individual who, during the course of employment:

» Loads, unloads or handles hazardous materials

» Tests, reconditions, repairs, modifies, marks or otherwise represents containers, drums or packaging as qualified for use in the transportation of hazardous materials

» Prepares hazardous materials for transportation

» Is responsible for safety of transporting hazardous materials

» Operates a vehicle used to transmit hazardous materials. This includes any amount of hazardous materials being transported in commerce

Hazardous materials training shall include:

» General awareness/familiarization training designed to provide familiarity with the requirements of the hazardous materials regulations and to enable the employee to recognize and identify hazardous materials consistent with the hazard communication standards in the hazardous materials regulations

» Function-specific training concerning the hazardous materials regulations which are specifically applicable to the functions the employee performs

» Safety training concerning the emergency response information measures to protect the employee from hazards associated with the materials to which they may be exposed to in the workplace, and the methods and procedures of avoiding accidents

A HAZMAT employee who repairs, modifies, reconditions or tests packaging as qualified for use in the transportation of hazardous materials and who does not perform any other function subject to the regulations does not have to receive safety training.

Requirements for Loading & Unloading HAZMAT

While loading and unloading HAZMAT, employees should:

» Pre-trip the vehicle before it is put into operation

» Close all manholes, valves and lines before the vehicle is placed in motion

» Check all tanks, gaskets, hoses and valves for leaks before the vehicle is put into motion

» Properly check and secure the vehicle loading and unloading

» Remain at the nozzle at all times when fueling service tanks or vehicles carrying hazardous materials. This includes distributing fuels and oils into the tanks of heavy equipment

» Obey state and federal laws concerning no smoking while using flammable and combustible liquids at all times

» Secure all cargo, including materials of trade, before beginning each trip and check often

» Immediately report all spills and accidents

» Complete all required paperwork in a timely manner

30 DRIVER SAFETY PROGRAM



Accident prevention is the responsibility of every driver at Barnhill Contracting Company. There is no place within the company for those who does not obey traffic laws or who takes unnecessary risks. Safety should be your primary responsibility when operating a company vehicle.

Driver Selection

It is a privilege, not a right, to drive a Barnhill Contracting Company-owned vehicle. Before anyone in the company is allowed to drive a company vehicle, a current two-year Motor Vehicle Report (MVR) must be obtained. The MVR will then be obtained on an annual basis. Only those employees approved by Barnhill Contracting Company are permitted to drive a company vehicle.

Minimum Driver Eligibility Criteria

» 21 years of age

» Possess a valid driver's license issued by the Department of Motor Vehicles

» Have less than 25 points within the previous 24 months as reflected on the MVR using the form shown below:

MVR POINTS SYSTEM EVALUATION	
Violations/Convictions	Points per Violation
DWI, DUI or refusal to test	25
Leaving scene of an accident	25
Reckless driving	25
Currently suspended license	25
Vehicular homicide	25
Speeding (less than 10mph over speed limit)	5

Speeding (10-14mph over speed limit)	8
Speeding (15mph or more over speed limit)	10
Failure to obey traffic device	8
Failure to yield right of way	8
Passing stopped school bus	13
Driving on the wrong side of the road	8
Illegal passing	8
Following too closely	8
All other moving violations	5
Non-moving violations	3
Major preventable accident	13
Other preventable accident	8

Permitted Users

Authorized employees who meet the Minimum Driver Eligibility Criteria contained above and who have a Barnhill Contracting Company driver's license may drive company-owned vehicles. Occasional drivers of company-owned vehicles and employees who drive their personal vehicle for company business, must also meet the requirements listed above and have a Barnhill Contracting Company driver's license.

Prohibited Actions

The following actions are prohibited and may result in the immediate revocation of driving privileges:

» Driver must not operate a vehicle at any time when his/her ability to do so is impaired, affected, influenced by alcohol, illegal drugs, prescribed or over-the counter medication, illness, fatigue or injury

» Drivers must not use radar detectors, laser detectors or similar devices

» Drivers must not tow, push or pull another vehicle or trailer, unless authorized

» Drivers must not transport any hazardous materials, unless authorized

Offering Assistance to Disabled Motorists

Drivers must not assist disabled motorists or accident victims beyond their level of medical expertise. If a driver is unable to provide the proper medical care, he/she must restrict his/her assistance to the notification of proper authorities.

Reporting Accidents & Violations

Drivers and permitted users must adhere to the following accident, license suspension and violation reporting criteria:

» Accidents must be reported immediately

» License suspension or revocation of driving privileges must be reported the next business day

» Moving violations must be reported within three business days of conviction

» Serious moving violations must be reported within one day of citation. Serious moving violations include driving while impaired or intoxicated, reckless driving, leaving the scene of an accident and speeding that is equal to, or greater than, 15mph over the posted speed limit

Cooperation with Company Management & Law Enforcement Agencies

Drivers and permitted users must cooperate with company officials and/or law enforcement agencies in matters such as violation of company policies and/or accident investigation.

Seat Belt Use

Occupants of vehicles are required to wear safety belts when the vehicle is in motion. The driver is responsible for ensuring passengers wear their safety belts. Drivers must comply with applicable local, state and federal child safety seat requirements.

Compliance with Traffic Laws

Drivers must abide by federal, state and local motor vehicle regulations, laws and ordinances.

Evaluating At-Risk Behavior

Barnhill Contracting Company uses the MVR Point System Evaluation to minimize at-risk behavior, which causes accidents, injuries and property damage. Each current and prospective driver must meet these standards to qualify for and maintain his/her Company vehicle driving privileges. Each driver will be evaluated using this system Evaluations will occur prior to granting driving privileges and at least once every year thereafter.

Driver Improvement Clinics

If a driver is convicted of a motor vehicle violation points may be placed against your driving record. If the driver accumulates seven points, he/she may be assigned to a Driver Improvement Clinic by a court or Hearing Officer. Upon satisfactory completion of the clinic, three points are deducted from the driver's record. Drivers are eligible to attend driving improvement clinics once every five years to reduce points.

Accident Scene Procedures

Employees should take the following actions when there are injuries to people and/or damage to other vehicles or property:

» Stop immediately and determine the damage

» Avoid obstructing traffic or creating a greater hazard

» Check on the other party to determine if they need medical attention. As a reminder, company policy on offering assistance is that drivers must not assist disabled motorists or accident victims beyond their level of medical expertise. If a driver is unable to provide the proper medical care, he/she must restrict his/her assistance to the notification of proper authorities

» Contact the police and emergency services

» Protect the scene of the accident

» Place emergency reflectors, flares, lanterns or flags

» Contact your company representative.

» If possible, exchange insurance and other information from the other party involved but do not discuss the accident

» Get witness information

» Take photos of the accident scene, if it is safe to do so

» Do not make any statements (other than to police, company officials and company insurance representatives), admit fault or sign anything

Note: Accident reporting kits are contained in each company vehicle. The kit contains a brochure describing your accident scene responsibilities, a disposable camera, pen or pencil and accident form.

Accident Review

Accidents will be reviewed by the driver's immediate supervisor and a representative from the Safety Department. The review will be based on driver and police reports and available witness accounts. The purpose of the review is to collect the necessary information to defend the company in any litigation proceedings, determine accident preventability and to consider improvements to avoid future accidents.

Accident Classifications

Non-Preventable Accidents

Accidents that occur despite the fact that the driver exercised every reasonable precaution to avoid the incident. Examples of non-preventable accidents include, but are not limited to:

» Animal strikes

» Struck while legally parked

» Struck by other vehicle while stopped in traffic

Preventable Accidents

An accident, as ruled by the review committee, where the driver failed to exercise every reasonable precaution to avoid the incident.

Major Preventable Accidents

A preventable accident arising from a lane change, rear end collision or intersection incident which resulted in a fatality, injury requiring treatment away from the scene or disabling damage (tow away) to any vehicle.

Maintenance & Garaging

Drivers are not expected to perform maintenance tasks on vehicles, unless it is the functional responsibility of an employee. However, it is the responsibility of drivers to become familiar with

established vehicle maintenance and garaging practices.

Maintenance And Inspections

Drivers must ensure that the vehicle is well maintained and safe to operate. Drivers should be cognizant of the appearance of the vehicle, including the condition of the upholstery, body, paint, decals, windows and overall general condition. Drivers must ensure that the applicable state vehicle inspection and registration is current and valid.

Drivers should conduct routine vehicle inspections to ensure the vehicle is in safe operating condition. Such inspections should be documented using the Vehicle Inspection Form and include the following:

» Fluid levels and scheduled changes (oil level, brake fluid, transmission fluid, window washer fluid and cooling system fluid)

» Oil or grease leaks in, around or under the vehicle

» Belts and hoses (cracks, swells, wear and tear)

» Tires (inflation and tread wear)

» Wheels, rims and fasteners

» Lights, reflectors and mirrors

» Wipers and washers, air conditioner, heater, defroster(s)

» Brakes (service, parking, emergency)

In the event of a defect, the driver must take action to repair the defect. Repairs outside the scope of normal wear and routine maintenance must be authorized by the Fleet Manager and performed at company-approved facilities.

Cell Phone Use While Driving

Using a cell phone while driving is dangerous. If a driver must make or receive a call he/she must pull over to a safe area. Using a cell phone while driving is a safety violation and will be documented as such. The only exception that may be considered is if a hands free device is being used. The use of a cell phone or similar device in any work zone is not allowed.

Texting or the use of any electronic device while driving is against the law and will not be tolerated. This also includes dialing a full number without the use of one touch dialing. If cited by law enforcement or if any driver is found to be negligent, the driver may be subject to the disciplinary action described below.

» Verbal warning

» Written warning

» Final written warning

» Dismissal

Additional Procedures for Commercial Motor Vehicle Drivers

These additional requirements are designed to enforce the Federal Motor Carrier Safety (FMCSA) regulations to comply with the Compliance, Safety, Accountability (CSA) and the Safety Measurement System (SMS). This system is used to measure both the company (carrier) and driver. To comply with these measurement systems and to maintain an acceptable safety performance score, Barnhill Contracting Company must be proactive in road safety and continually improve our compliance with federal regulations.

SMS uses a motor carrier's data from roadside inspections, including all safety-based violations, state-reported crashes and the federal motor carrier census to quantify performance in the following Behavior Analysis and Safety Improvement Categories (BASICs). CSA BASICs include:

Unsafe Driving – Operation of commercial motor vehicles (CMVs) by drivers in a dangerous or careless manner. Example violations: Speeding, reckless driving, improper lane change, and inattention. (FMCSR Parts 392 and 397)

Hours-of-Service (HOS) Compliance – Operation of CMVs by drivers who are ill, fatigued or in non-compliance with the HOS regulations. This BASIC includes violations of regulations pertaining to records of duty status (RODS) as they relate to HOS requirements and the management of CMV driver fatigue. Example violations: HOS RODS, and operating a CMV while ill or fatigued. (FMCSR Parts 392 and 395)

Driver Fitness – Operation of CMVs by drivers who are unfit to operate a CMV due to lack of training, experience or medical qualifications. Example violations: Failure to have a valid and appropriate commercial driver's license (CDL) and being medically unqualified to operate a CMV. (FMCSR Parts 383 and 391)

Controlled Substances/Alcohol – Operation of CMVs by drivers who are impaired due to alcohol, illegal drugs, and misuse of prescription or over-the-counter medications. Example violations: Use or possession of controlled substances/alcohol. (FMCSR Parts 382 and 392)

Vehicle Maintenance – Failure to properly maintain a CMV and/or properly prevent shifting loads. Example violations: Brakes, lights, and other mechanical defects, failure to make required repairs, and improper load securement. (FMCSR Parts 392, 393 and 396)

Hazardous Materials (HM) Compliance – Unsafe handling of HM on a CMV. Example violations: Release of HM from package, no shipping papers (carrier), and no placards/markings when required. (FMCSR Part 397 and Hazardous Materials Regulations Parts 171, 172, 173, 177, 178, 179, and 180)

Crash Indicator – Histories or patterns of high crash involvement, including frequency and severity. It is based on information from State-reported crashes

A carrier's measurement for each BASIC depends on the following:

» The number of adverse safety events (violations related to that BASIC or crashes)

» The severity of violations or crashes

» When the adverse safety events occurred (more recent events are weighted more heavily)

» After a measurement is determined, the carrier is then placed in a peer group (e.g., other carriers with similar numbers of inspections). Percentiles from 0 to 100 are then determined by comparing the BASIC measurements of the carrier to the measurements of other carriers in the peer group. A percentile 100 indicates the worst performance

New Employee Orientation And Training Checklist

Name_____ Social Security No._____

Job Assignment_____ Supervisor_____

Employment Date_____

By Human Resources Department on first day of employment:

[ ] Management's safety and health philosophy

[ ] Management's, supervisors, and employee's safety and health responsibilities.

[ ] General safety and health rules.

[ ] Hazard Communication audiovisual presentation.

[ ] Location and availability of the program.

HR Representative Signature_____ Date_____

By Employee's Immediate Supervisor on first day in work area:

[ ] Introduction to operations where chemical and physical hazards are present – types of hazards encountered.

[ ] Required work practices.

[ ] Personal Protective Equipment.

[ ] Emergency Procedures

[ ] Detection of Chemical Hazards

[ ] Location and availability of program and manual

[ ] Labeling systems

Supervisor Signature_____ Date_____

By Employee's Immediate Supervisor after one week of employment:

[ ] Review Work practices and procedures with employee

[ ] Answer employee questions

[ ] Return completed checklist to Human Resources Department for filing in employee personnel folder.

Supervisor Signature_____ Date_____

Employee Signature_____ Date_____

Employee Training Acknowledgement

I have received a copy of the Barnhill Contracting Company Safety Manual, which describes in general my responsibilities and policies of the company. I will read this book carefully, and follow the rules and procedures.

If I have questions about the training, materials presented or Barnhill Contracting Company policy and procedures regarding safety, or about tasks that affect my safety and health or the safety and health of others, I understand it is my responsibility to seek clarification from my supervisor before attempting to perform the task.

Employee Signature _____

Print name _____

Date _____

Driver Acknowledgement Of Policies

Barnhill Contracting Company has provided me with a copy of the policies defining use of company-owned vehicles. A representative of Barnhill Contracting Company has reviewed these policies with me and I understand and agree to comply with them.

I have received a copy of an Accident Reporting Kit and have been trained on its use in the event of an accident. I agree to comply with its instructions and understand that it is my responsibility to inform my direct supervisor as soon as possible following any accident or incident. I further understand that it is my responsibility to notify proper law enforcement agencies as soon as possible and to prepare a written report describing the accident events.

I agree not to operate any company vehicle while under the influence of drugs or alcohol. I fully understand that, should I be found operating a company vehicle while under the influence of drugs or alcohol, it shall constitute grounds for immediate revocation of driving privileges.

I agree to abide by all federal, state and local laws and ordinances regarding the operation and storage of the company-assigned vehicle. I understand that it is my responsibility, as a holder of a driver's license, to remain informed of and to fully comply with current and future laws and ordinances governing the operation and storage of motor vehicles.

I understand that I must report to the company any suspension, revocation or cancellation of a driver's license at the beginning of the business day following the day that I received notice of the suspension, revocation or cancellation.

I agree to allow the company to request copies of my Motor Vehicle Report as often as the company see fit.

I understand that my use of any company vehicle may be revoked or restricted in accordance to the provisions outlined in company policies, which I have read and reviewed.

Should the revocation or suspension of these privileges affect the performance of my assigned job responsibilities, I understand that this will constitute grounds for suspension without pay or dismissal from my position.

Employee Signature_____ Date_____



BARNHILL CONTRACTING COMPANY

Barnhill Contracting Company
www.barnhillcontracting.com

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Section Seven

Bid & Subcontract Forms

BARNHILL CONTRACTING COMPANY

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Tarboro, North Carolina 27886
252-823-1021 Fax: 252-824-8277
www.barnhillcontracting.com

BARNHILL CONTRACTING COMPANY

STANDARD SUBCONTRACT DOCUMENT

Contractor Job Number

«PROJECT_JOB_NUMBER»

Date

«SCOPE_OF_WORK_DATE_CREATED»

THIS AGREEMENT made on «SCOPE_OF_WORK_DATE_CREATED» by and between «SUBCONTRACTOR_NAME» «SUBCONTRACTOR_ADDRESS1», «SUBCONTRACTOR_ADDRESS2», «SUBCONTRACTOR_CITY», «SUBCONTRACTOR_STATE» «SUBCONTRACTOR_POSTAL_CODE» hereinafter called the Subcontractor and

Barnhill Contracting Company, P.O. Box 1529, Tarboro, NC 27886 hereinafter called the Contractor.

WORK:	«SCOPE_OF_WORK_DESCRIPTION»	
PROJECT:	«PROJECT_DESCRIPTION» «PROJECT_DESCRIPTION_2»	("Project")
OWNER:	«OWNER_NAME»	("Owner")
ARCHITECT-ENGINEER:	«DETAIL_DESCRIPTION»	("Architect")
PRIME CONTRACT:	«CONTRACTOR_NAME»	("Contract")
SUBCONTRACT PRICE:	$ «SCOPE_OF_WORK_CONTRACT_AMOUNT»	("Price")

Scope of Work Breakdown:

Item No.	Description Of Work	Cost Distribution	Cost Type	U/M	Unit Price	Quantity	Amount	Retained Percent

SUBCONTRACTOR AGREES TO PROVIDE A DETAILED SCHEDULE TO THE CONTRACTOR FOR USE IN PREPARING A C.P.M. ON OR BEFORE:
See Schedule “A”

SUBCONTRACTOR AGREES TO PROVIDE ALL SUBMITTALS TO THE CONTRACTOR ON OR BEFORE:
See Schedule “A”

MONTHLY BILLING DATE: 20th of Each Month ("Monthly Billing Date")

PAYMENT AND PERFORMANCE BOND: Required _____ Not Required _____

Initials: _____

_____

SAMPLE

*** SUBCONTRACTOR MUST EXECUTE AND RETURN THE SUBCONTRACT WITHIN TEN (10) CALENDAR DAYS OF THE AGREEMENT DATE LISTED ABOVE OR BARNHILL WILL HAVE THE OPTION TO DECLARE THE DOCUMENT VOID.**

SAMPLE

Initials: _____

_____

1. **SCOPE OF WORK.** Subcontractor shall perform and furnish all labor, supervision, services, materials, equipment, tools, scaffolds, transportation, storage and all other things necessary to prosecute and complete the work identified and described in **ATTACHMENT "A"** attached hereto (the "Work") being a portion of the Work required of Contractor under the Contract between Owner and Contractor. The Work shall be performed by Subcontractor in a good and workmanlike manner strictly in accordance with the Contract Documents, consisting of the Contract and the plans, specifications including, but not limited to, general, special and supplemental conditions, addenda and other documents identified in **ATTACHMENT "B"** attached hereto and all subsequently and duly issued modifications thereto.

Subcontractor shall give his personal supervision to the work or have a competent foreman or superintendent, satisfactory to the Contractor, on the Work at all times during progress, with full authority to act for the Subcontractor. The Contractor may remove any employee of the Subcontractor who is considered unsatisfactory. Subcontractor agrees to cooperate fully with the Contractor, the Contractor's project superintendent, and all other subcontractors that the Contractor may employ on the Project.

With respect to the Work, Subcontractor agrees to be bound to Contractor by the terms and conditions of the Contract Documents and this Subcontract and hereby assumes toward Contractor all of the duties, obligations and responsibilities that contractor, by the Contract, has assumed toward Owner. The contract agreement between Contractor and Owner is available for Subcontractor's review at the Contractor's office during normal working hours.

It is expected that Subcontractor has received Specifications and/or Drawings appropriate for his needs in purchasing material and performing the Work. If this is not the case, it is the duty of the Subcontractor to notify in writing and request information from the Contractor.

Subcontractor represents and warrants that it has, prior to entering into this Subcontract, carefully examined and fully understands all contract documents, physically inspected the premises, fully investigated the type and nature of work to be performed by it, and all of the conditions (both natural and artificial) and circumstances surrounding or in any way affecting such work, the difficulty of such work and the time within which it must be performed. Further, Subcontractor represents that it enters into this Subcontract solely on the basis of such examination, inspection and investigation, and upon its asserted knowledge and experience performing the work described herein, and not because of, nor in reliance upon, any representation or opinion rendered by either the Contractor or the Owner or any of their representatives, officers, employees or agents.

2 **PRICE.** Contractor shall pay to Subcontractor for the satisfactory performance and completion of its Work and all the duties, obligations and responsibilities of Subcontractor under this Subcontract, the sum set forth above as the Price, subject to additions and deductions herein provided. To the extent this Subcontractor's Work is to be performed on a unit price basis, the Price shall be computed in accordance with the unit prices set forth in **ATTACHMENT "C"**, based on actual quantities determined in accordance with the Contract Documents and this Subcontract. The Price and all unit prices shown in **ATTACHMENT "C"** shall be deemed to include all costs of Subcontractor's performance of the Work, including, but not limited to, the costs of labor, supervision, services, materials, equipment, tools, scaffolds, transportation, storage, insurance and taxes, and allowance for overhead and profit.

Within 10 days from date of subcontract, Subcontractor shall submit to Contractor a detailed schedule showing a cost breakdown (with proper share of associated overhead and profit) of the Price according to the various line items, or parts, of the Work. If Subcontractor fails to deliver its cost breakdown, Barnhill will have the right to make a cost breakdown, which Subcontractor shall be deemed to have accepted as its own. This breakdown is required for Owner's accounting records and for use only as a basis of checking Subcontractor's applications for payment or supporting Contractor's applications for payments under the Contract.

3. **TIME.** TIME IS OF THE ESSENCE. Therefore, Subcontractor shall: (a) submit to Contractor within 10 days a detailed, reasonable proposed schedule for Subcontractor's part of the Work for Contractor's use in preparing an overall progress schedule for the entire work and its several parts under the Contract, as provided in ¶ 4 hereof and **ATTACHMENT "D"** if subcontractor fails to submit such a schedule, or if Barnhill finds the submittal unreasonable, Barnhill will meet with the Subcontractor to reasonably schedule its work within the overall schedule; (b) begin the Work upon Contractor's order to do so; (c) coordinate and perform the Work; and its several parts, diligently and promptly and in such order and sequence as Contractor may direct and as will assure the efficient and timely prosecution, and will not delay completion, of the entire work and its several parts under the Contract; and (d) furnish at all times sufficient, qualified and competent forces and supervision, and adequate, conforming and usable materials, equipment, plant, tools and everything necessary to achieve progress according to Contractor's progress schedule

Initials: _____

including any specific schedule for Subcontractor's Work attached hereto as **ATTACHMENT "D"** and any revisions thereof by Contractor. If Subcontractor fails to perform as outlined in this paragraph, Barnhill shall have the right to supplement the Subcontractor's work force and/or equipment, as required to maintain the schedule and backcharge the Subcontractor therefore.

Without limiting the generality of the foregoing, Subcontractor shall: (a) submit, with its proposed schedule, information showing the time required to prepare and approve shop drawings, to fabricate and deliver materials and equipment, and to install the Work; (b) order (for manufacture and/or purchase and delivery) all materials required for performance of the Work within 10 days of the date of this subcontract in order to avoid delays caused by unavailability; (c) furnish Contractor within 10 days of the date of this subcontract a list of major materials and equipment required for the Work, showing the name, address and telephone number of the supplier and the date on which such materials purchase orders and subcontracts (with price information deleted); (e) cause a qualified home office supervisory representative (while Subcontractor has forces at the Project site and for two weeks prior thereto) to attend weekly (or as scheduled) progress meetings; and (f) notify Contractor immediately by telephone and confirm in writing within 72 hours, if Subcontractor finds that any items cannot be delivered as required to maintain Contractor's progress schedule. If Subcontractor fails to have a qualified representative attend any meeting at which attendance is required, Subcontractor shall be deemed to have accepted all decisions made at such meeting and shall perform in accordance with all such decisions.

4. **Performance Schedule.** TIME IS OF THE ESSENCE. This is repeated herein for special emphasis. Contractor will issue a Performance Schedule for the Project and a copy will be provided to each Subcontractor. All work shall be performed in accordance with the Performance Schedule. The Performance Schedule will be updated or revised from time to time in order to properly coordinate and sequence the work. Contractor will consult with Subcontractor on updates or revisions to the Performance Schedule; however, it is specifically agreed that Contractor shall manage the schedule and may deviate from prior schedules in order to resequence and compress durations to react to changing conditions.

Subcontractor shall commence work immediately in accordance with notification by Contractor and the Performance Schedule and shall maintain progress in strict compliance with the Performance Schedule. Subcontractor shall supply sufficient manpower, equipment and competent supervision to accomplish the work in all areas, at whatever rate, is required to maintain its schedule and the Project Performance Schedule. Work shall be done in such a manner as not to delay, hinder or interfere with any other items of work or the final completion of the project, but in no event shall progress be less than as set forth in Subcontractor's Performance Schedule as set forth in **ATTACHMENT "D".**

Subcontractor will have two weeks from the issuance of the Master Performance Schedule to review and return written comments to Contractor concerning the sequence and duration of Subcontractor's activities. Also, within two weeks, Subcontractor shall send to Contractor a complete list of shop drawings and submittal data to be submitted with specific information regarding time to prepare shop drawings, fabricate and deliver materials after the approval of shop drawings. Subcontractor shall also submit a complete list of its material orders for all major and critical items showing the items, supplier and promised delivery date for each item and a breakdown of the Subcontractor's manpower estimate for each area, by activity, for scheduling purposes.

Subcontractor will immediately submit all shop drawings, samples, catalog data, certificates and sepia forms and other submittal data as required by the Contract Documents and Paragraph 21 of this Subcontract. Subcontractor must expedite and follow up on all submittals and resubmittals to ensure approval and delivery as early as possible so there will be no delay to this Project. Field use drawings will be issued by Subcontractor promptly and in sufficient quality immediately after the return of approved submittals.

If anything occurs which may delay Subcontractor's work, Subcontractor shall notify Contractor, in writing, within twenty-four (24) hours after the occurrence of the event which may cause delay. Subcontractor's failure to so notify Barnhill will make Subcontractor liable, and Barnhill shall backcharge, for any liability Barnhill may incur as a result of Subcontractor's failure to report the delay event. Subcontractor agrees that it shall be liable for actual damages resulting from its delays.

5. **Progress Payments.** On or before each Monthly Billing Date, Subcontractor shall deliver to Contractor, on the form shown on **ATTACHMENT "E"** and supported by such data as Contractor may require, an Application for Payment showing the value of the Work installed ("Completed Work"), plus the value of the material and equipment for incorporation in the Work suitably (to the satisfaction of Contractor and Architect) stored at the Project site or other

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approved location ("Stored Materials") **ATTACHMENT "F"**, if, and only if, the Contract Documents provide for payments to Contractor on that basis, as of such date. With the Applications for payment, Subcontractor shall also submit as an integral part of the Application (a) a Waiver and Release Upon Progress Payment, **ATTACHMENT "G"**, (b) materials and equipment status report updated with current information, **ATTACHMENT "H"**, (c) sales tax report for the County in which the project is located which will be supplied as **ATTACHMENT "I"**; (d) estimated percentage completion for each area, by activity, to match Subcontractor's price schedules, and (e) a lower tier subcontractor and supplier conditional release of claims, **ATTACHMENT "N"**, from all companies with a total project cost of $10,000.00 or more.

Within 7 days after receiving a Progress Payment from Owner under the Contract for work done by Subcontractor, Contractor shall make a progress payment to Subcontractor equal to the value of the Completed Work and Stored Work as of the corresponding Monthly Billing Date, to the extent approved by Contractor and allowed and paid by Owner on account of the Work, after deducting: (a) all previous payments; (b) current retainage (meaning a reserve equal to the Retained Percentage times the allowed value of Completed Work and Stored Work, plus any extraordinary reserve provided herein); and (c) all setoffs, charges or backcharges for services, materials, equipment and other items furnished or otherwise chargeable by Contractor to Subcontractor.

Nothing contained in this Subcontract to the contrary, the Subcontractor agrees that the Contractor shall be under no obligation to pay the Subcontractor for labor or materials required under this Subcontract, and such payments shall not actually become due, until the Contractor has been paid therefore by the Owner. The provisions of this Subcontract stating the time for payment of progress and final payments and the amount thereof are subject to the condition precedent that the Contractor shall receive from the Owner progress or final payments on account of work done by the Subcontractor in at least the amounts for which the Subcontractor has made application for payment. Otherwise, the time when such payments shall actually become due to the Subcontractor shall be postponed until the Contractor has received same from the Owner. The Subcontractor contemplates, understands, and agrees that payments to him are expressly contingent upon the Contractor receiving payment from the Owner for the Subcontractor's work, and the Subcontractor expressly agrees to accept the risk of nonpayment by the Owner to the Contractor. The Subcontractor agrees that, to the fullest extent permitted by law, payment by the Owner to the Contractor for work performed by the Subcontractor shall be a condition precedent to any payment obligation of the Contractor to the Subcontractor. Subcontractor further agrees that the liability of the surety on Contractor's payment bond, if any, for payments to the Subcontractor, is subject to the same conditions precedent as are applicable to the Contractor's liability to the Subcontractor.

Contractor reserves the right to advance the date of any payment (including final payment) under this Subcontract, if, in its sole judgment, it becomes desirable to do so.

6. **Final Payment.** Final Payment consisting of the unpaid balance of the Price minus all setoffs, charges or backcharges for services, materials, equipment and other items furnished or otherwise chargeable by Contractor to Subcontractor, shall be made within 45 days after the last of the following to occur: (a) completion of the Work by Subcontractor; (b) acceptance thereof by the Architect and Owner; c) final payment by Owner to Contractor under the Contract on account of the Work; (d) furnishing of evidence satisfactory that there are no claims, obligations, or liens outstanding or unsatisfied for labor, services, materials, equipment, taxes or other items performed, furnished or incurred in connection with the Work; (e) delivery of all guarantees, warranties, bonds, instructions manuals, performance charts, diagrams, as-built drawings and similar items required of Subcontractor or its suppliers or subcontractors; and (f) delivery of an Unconditional Final Waiver and Release, on the form **ATTACHMENT "J",** executed by Subcontractor running to and in favor of Contractor and Owner. Subcontractor shall also submit lower tier subcontractor and supplier unconditional final release of claims, **ATTACHMENT "O"**, prepared by all companies with a total project cost of $10,000.00 or more.

Acceptance of final payment by Subcontractor shall constitute a waiver of claims by Subcontractor and any of its subcontractors and material suppliers except those previously made in writing and identified by the payee as unsettled at the time of application for final payment.

7. **Payment Conditions.** Subcontractor will receive the payments made by Contractor and will hold the right to receive such payments as a trust fund to be applied first to the payment of laborers, suppliers, subcontractors and others responsible for the Work justifying such payments and all taxes and insurance applicable thereto; and Subcontractor will so apply the payments from Contractor.

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Subcontractor shall, as often as requested by Contractor, furnish such information, evidence and substantiation as Contractor may require with respect to the extent and value of current progress and the nature and extent of all obligations incurred by Subcontractor in connection with the Work and all payments made by Subcontractor on such obligations.

If Contractor is requested by Subcontractor or its subcontractors or vendors, and Subcontractor agrees, to a joint check arrangement to pay Subcontractor's subcontractors and/or vendors, and if Contractor agrees to such arrangement, nothing herein obligating Contractor to so agree, Contractor shall be entitled, at is sole option, to deduct five per cent (5%) of the amount of each such joint check from any other sums due Subcontractor. Such deduction to be made at the time the joint check is negotiated. Further, Subcontractor agrees that it will not deposit, or otherwise negotiate, any joint checks without first obtaining the endorsement of all joint payees.

Contractor may withhold Progress Payments and/or Final Payment in whole or in part because of:

a. defective work not remedied;
b. third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to Contractor is provided by Subcontractor;
c. failure of Subcontractor to make payments properly to its subcontractors or for labor, materials, or equipment;
d. damage to Owner, another contractor or subcontractor;
e. reasonable evidence that the Work will not be completed within the Contract time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
f. failure to carry out the Work in accordance with the Contract Documents, or this Subcontract.

No payment hereunder shall be conclusive evidence of the performance or progress of the work and no payment shall be construed to be acceptance of defective, faulty or improper work or materials.

8. **Extension of Time.** Should Subcontractor, without fault or neglect on its own part, be delayed in the commencement, prosecution, or completion of the Work by the fault or neglect of Contractor, by an act of God or any other cause beyond the control of Contractor and Subcontractor that entitles Contractor to an extension of time under the Contract Documents, determined in accordance with the Contract Documents. Subcontractor shall be entitled only to a reasonable extension of time. In no event shall Subcontractor be entitled to compensation or damages for any delay in the commencement, prosecution, or completion of the Work, except to the extent that Contractor shall receive such compensation or damages from Owner or other third party.

Notwithstanding anything to the contrary in the Contract Documents, or this Subcontract, Subcontractor shall not be entitled to an extension of time unless Subcontractor shall have delivered written notice of delay to Contractor within 24 hours after commencement of the cause of the claimed delay.

9. **Change Orders.** Owner reserved the right under the Contract Documents to require Contractor to make changes in the Project Work, including additions thereto and deletions therefrom. Without notice to any surety and without invalidating this Subcontract, Contractor may from time to time, by written order ("Change Order") to Subcontractor, make changes in the Work to the same extent and in the same manner as may be required of Contractor by Owner under the Contract Documents and Subcontractor shall thereupon perform the changed Work in accordance with the terms of the Contract Documents and this Subcontract.

Upon request of Contractor, and in time and manner sufficient to permit Contractor to comply with its obligations under the Contract Documents, Subcontractor shall submit a written proposal for any applicable Price or Time adjustment attributable to the changed Work, amply detailed, supported and conforming to the requirements of the Contract Documents.

The Price shall be adjusted by the net amount of any direct savings and direct costs (plus an allowance for overhead and profit) attributable to the Change Order, and the Time for performance of the Work shall be adjusted to the extent necessary, subject, however, in each instance to the following limitations: (a) the Price and Time adjustments hereunder shall be limited to the amount and extent of adjustments actually allowed Contractor under the Contract Documents (less, in the case of Price, any markup or other similar amount allowed by Owner for Contractor's account); (b) where the Work affected by Change Order is the subject of unit prices, under **ATTACHMENT "C",** the Price adjustment shall be limited to the amounts obtained by applying such unit prices; and c) the amount allowable for

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overhead and profit shall be limited to an allowance obtained by applying the Profit Percentage to the net amount of the Subcontractor's direct savings and direct costs.

As used in this Subcontract, Subcontractor's direct savings and direct costs shall mean and be limited to the actual amount of the following: materials, including sales tax and cost of delivery; cost of labor, including social security, old age and unemployment insurance, and fringe benefits required by agreement or custom; workmen's compensation insurance; bond premiums; and actual rent of, or reasonable rental value of Subcontractor owned, equipment and machinery.

If the parties are able to agree upon the amount of the Price adjustment and the extent of any Time adjustment, such adjustments shall be written in the Change Order which shall be signed on behalf of Subcontractor. If the parties are unable to agree upon such adjustments, Contractor may elect to issue the Change Order to Subcontractor, and any adjustments to Price or Time shall be determined in accordance herewith; and Subcontractor shall, nonetheless, proceed immediately with the Work required by the Change Order.

10. **Extra Work.** In addition to Change Orders issued as a result of changes ordered by Owner or Architect, Contractor, from time to time, without notice to any surety and without invalidating this Subcontract, may require by written Change Order that Subcontractor perform extra work reasonably related to the original Work hereunder. Contractor or Subcontractor may also perform extra Work (meaning work or services not required by the Subcontract or by Change Order) pursuant to written agreements made from time to time for the benefit of the other party, or persons, or entities responsible to such other party. Such extra Work shall be invoiced weekly, in reasonable detail and amply supported, on the basis of the performing party's actual direct costs, and without overhead or profit or allowance therefore. Payment of such invoices shall be made at the time of the next ensuing progress payment or final payment hereunder.

In no event shall Subcontractor proceed with changed or extra Work without a written Change Order issued under Paragraph 9 or this Paragraph 10 and approved by Contractor's Project Manager or Superintendent; and Contractor shall not be liable for any additional costs incurred or delays encountered in the performance of such Work without such a written Change Order.

11. **Bonds.** If so indicated on Page 1 hereof, Subcontractor shall furnish, within 10 days of the date of this Subcontract, at its expense, a performance bond and a payment bond, each in an amount equal to the Price, on Contractor's standard form and with sureties satisfactory to Contractor.

12. **INSURANCE REQUIREMENTS – (Including Attachment K)**

Before commencing the Work and until the completion and final acceptance thereof by Owner, Subcontractor shall obtain and maintain, at its sole expense, at least the insurance coverages specified in Attachment K hereto which is incorporated by reference and made a part of this contract. Subcontractor shall furnish copies of such Certificates of Insurance to Contractor prior to commencement of the Work, and when requested by Contractor. The insurance required to be furnished by Subcontractor shall be obtained from a responsible company or from responsible companies.

Additional Insured:

All insurance policies obtained by Subcontractor pursuant to this Agreement, except workers' compensation, must name Contractor and any other Contractor designated party as an additional insured, and the Contractor will be expressly identified as such on each applicable Certificate of Insurance. Contractor will also be identified on each applicable Certificate of Insurance as a Certificate Holder. The additional insured endorsements must comply with Attachment K-Insurance which is incorporated by reference into this contract. Such polices shall provide primary coverage for all losses and damages covered thereby, and shall include contractual liability insurance covering the Subcontractor's obligations. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage by the Subcontractor's insurer(s), that such insurer(s) shall have no right of recovery against any additional insured thereunder.

ALL ADDITIONAL INSURED OBLIGATIONS SET FORTH ABOVE SHALL BE FOR THE FULL POLICY LIMITS AND ENFORCED TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW FOR THE BENEFIT OF THE CONTRACTOR, REGARDLESS OF THE CAUSES ALLEGED OR THE CAUSES OF THE CLAIMS.

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Waiver of Subrogation:

Subcontractor hereby waives all rights against Contractor, Owner, and any other Contractor designated party and their shareholders, officers, directors, employees, agents, consultants for recovery of any damages to the extent that these damages are covered by commercial general liability insurance, commercial umbrella liability insurance, business auto liability insurance, or workers' compensation and employer's liability insurance maintained per the requirements of this Agreement. To the extent that Subcontractor maintains insurance coverage for loss or damage to property, Subcontractor hereby waives subrogation of such a claim against Contractor and it agents, employees, and servants.

Workers Compensation:

Subcontractor shall maintain workers' compensation and employer's liability insurance in accordance with the laws of the state or states in which the work is performed, but with employer's liability limits of at least $500,000.00 per accident for bodily injury by accident and at least $500,000.00 for each employee for injury by disease.

Subcontractor's workers' compensation and employer's liability insurance shall apply to all individuals who qualify for such coverage pursuant to the language of such policies for insurance and the laws of the state or states in which the work is performed. Subcontractor further covenants and agrees that its workers' compensation and employer's liability insurance policies shall afford full and exclusive coverage to Subcontractor's officers, directors, shareholders, agents, and consultants. Subcontractor further covenants and agrees that Contractor's worker's compensation and employer's liability insurance policies shall not afford any coverage to Subcontractor's employees, officers, directors, shareholders, agents, or consultants.

Certificates of Insurance:

Current Certificates of Insurance as required by this contract, including Attachment K, are to be furnished to the Contractor on or before each renewal date. No less than 30 days written notice shall be provided to Contractor of the cancellation, material modification, or the fact that any applicable aggregate policy limits are reasonably likely to be exceeded.

13. **Indemnity.** To the full extent permitted by law, Subcontractor agrees to defend, indemnify and save harmless Contractor and Owner, and their agents, servants and employees, from and against any claim, cost, expense, or liability (including attorneys' fees), attributable to bodily injury, disease, or death, or to damage to, or destruction of, property (including a loss of use thereof), caused by, arising out of, resulting from or occurring in connection with the performance of the Work by Subcontractor, its subcontractors, or their agents, servants, or employees, whether or not caused in part by the active or passive negligence or other fault of a party indemnified hereunder, provided, however, Subcontractor's duty hereunder shall not arise if such injury, sickness, disease, death, damage, or destruction is caused by the sole negligence of a party indemnified hereunder. Subcontractor's obligation hereunder shall not be limited by the provisions of any workmen's compensation or similar act.

Should Owner or any other person assert a claim or institute a suit, action, or proceeding against Contractor involving the manner or sufficiency of the performance of the Work, Subcontractor, upon request of Contractor, shall promptly assume the defense of such claim, suit, action or proceeding, at Subcontractor's expense, and Subcontractor shall indemnify and save harmless Contractor and its agents, servants and employees, from and against any liability, loss, damage, or expense arising out of or related to such claim, suit, action, or proceeding.

14. **Assignment.** Subcontractor shall not assign this Subcontract or any monies due or to become due hereunder, or subcontract any substantial part of the Work, without the prior written consent of Contractor. Subcontractor shall not be relieved of its duties and obligations hereunder by any assignment or subcontract and shall be and remain as fully responsible and liable for the acts and omission of its assignees and subcontractors, and all persons directly or indirectly employed by them, as Subcontractor is for its own acts and omissions and those of its agents, servants and employees.

15. **Compliance.** Subcontractor shall, at its own expense, obtain all necessary licenses and permits pertaining to the Work and comply with all statutes, ordinances, rules, regulations and orders of any governmental or quasi-governmental authority having jurisdiction over the Work or the performance thereof, including, but not limited to, those relating to safety, wages, discrimination and equal employment opportunity. Subcontractor shall promptly correct any violations of such statutes, ordinances, rules, regulations and orders committed by Subcontractor, its agents, servants

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and employees; and Subcontractor shall receive and respond to, and shall defend, indemnity and save harmless Contractor and Owner and their agents, servants and employees from and against any loss, liability or expense arising from, any such violations and any citations, assessments, fines or penalties resulting therefrom.

16. **Safety.** Subcontractor agrees that the prevention of accidents to workmen engaged upon or in the vicinity of the work is its responsibility, even if Contractor establishes a safety program for the entire Project. Subcontractor shall establish and implement safety measures, policies and standards conforming to those required or recommended by governmental and quasi-governmental authorities having jurisdiction and by Contractor and Owner, including, but not limited to, any requirements imposed by the Contract Documents. Subcontractor shall comply with the reasonable requirements of insurance companies having an interest in the Project. Subcontractor shall stop any part of the Work which Contractor deems unsafe and immediately take corrective measures satisfactory to Contractor before commencing the Work. Contractor's failure to stop Subcontractor's unsafe practices shall not relieve Subcontractor of its responsibilities therefore.

Subcontractor is responsible for the safe use, storage, and disposal, in accordance with all laws, ordinances, codes, rules and regulations, of any chemicals or other materials that Subcontractor uses in the performance of Subcontractor's Work. Subcontractor shall provide Contractor with a list of all chemicals or materials used in performance of the Work and a copy of the Material Safety Data Sheet for each chemical. All chemicals Subcontractor brings on the Project site, shall bear a label stating the identity of the chemical, any hazards associated with it, and the Subcontractor's name, the name of any of the Subcontractors' subcontractors.

This Project is a hard-hat job. All personnel are required to wear head protection. Failure to comply will be cause for termination.

A Job Safety Meeting will be held at least monthly. Subcontractor must have a qualified representative present at each meeting capable of authorizing, making decisions, and responding to safety needs. This representative shall be responsible to communicate to all Subcontractor's employees the decision, concerns, action required, and possible safety hazards addressed during this meeting.

To the fullest extent permitted by law, the Subcontractor shall indemnify and hold harmless the Owner, the Contractor, and each of their agents and employees from and against any and all OSHA violation penalties, as well as all expenses and Attorneys' fees which may arise out of or result from the imposition or proposed imposition of such penalties, arising out of or resulting from performance of the Subcontractor's work under this subcontract to the extent caused in whole or in part by negligent acts or omissions of the Subcontractor, the Subcontractor's subcontractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not the penalty or proposed penalty is caused in part by a party indemnified hereunder. This obligation shall not affect or limit the other rights of indemnification described in this Agreement.

Repeated safety violations after warnings by Contractor shall be grounds for termination of Subcontractor's services and/or of this Subcontract.

17. **Cleaning up.** Subcontractor shall, at its own expense: (a) keep the premises at all times free from waste materials, packaging and other debris accumulated in connection with the Work, by collecting and removing such debris from the job site on a daily basis;(b) clean-up includes all removal of debris, overspray, and rubbish from adjacent surfaces; c) at the completion of the Work in each area, sweep and otherwise make the Work and its immediate vicinity "broom-clean"; (d) at final completion of the Work remove all of its tools, equipment, scaffolds, temporary structures and surplus materials as directed by Contractor; and (e) for final inspection clean and prepare the Work for inspection by Owner.

18. **Temporary Facilities.** Temporary facilities and services shall be provided in accordance with **ATTACHMENT "L"** hereto.

19. **Quality.** Subcontractor shall provide quality materials and workmanship conforming to Contract requirements and good industry practices. Subcontractor shall provide proper facilities and opportunity at all times for the inspection of the Work by Contractor, Architect and Owner and their representatives, and shall, within 24 hours after receiving written notice from Contractor or Architect, proceed to demolish and remove promptly all portions of the Work which the Contractor or Architect shall have condemned as unsound, improper, or in any way failing to conform to the Contract Documents or this Subcontract and shall replace the same with proper and satisfactory Work and make good all work damaged or destroyed by such demolition and/or removal. Contractor's failure to discover and notify

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Subcontractor of defective or nonconforming Work, at the time the Work or any portion thereof is performed or completed, shall not relieve Subcontractor of responsibility for replacement of the defective or nonconforming Work and all damages resulting therefrom. If the Owner elects to accept defective or nonconforming Work, Contractor may require an appropriate and equitable adjustment in the Price to the extent required of Contractor.

Subcontractor will not be allowed to make substitutions except as authorized in writing. It is understood that the procedures for substitution under the Contract Documents shall apply. It is understood that the procedures for substitutions under the Contract Documents shall apply.

All shop drawings, catalog data, certificates, and other submittal data as required by the Contract shall be specially annotated, highlighted or otherwise clearly show all exceptions to, or variances from, the Specifications or Contract Drawings. If this is not done, Subcontractor is presumed to have judged the variances to be equal and acceptable to the Contractor under the Contract Documents.

20. **Warranties.** Subcontractor warrants and guarantees the Work to the full extent provided for in the Contract Documents. Without limiting the foregoing or any other liability or obligation with respect to the Work, Subcontractor shall, at its expense and by reason of its express warranty, make good any faulty, defective, or improper parts of the Work discovered within one year from the date of final acceptance of the Project by the Architect and Owner or within any such longer period as may be provided in the Contract Documents or this Subcontract.

21. **Submittals.** Subcontractor shall immediately prepare or obtain and promptly submit to Contractor shop and erection drawings, samples, product data, catalogue cuts, laboratory and inspection reports and engineering calculations, all as may be required by the Contract Documents, or as may be necessary or appropriate to describe the details of the Work. Approval of drawings or other submittals by Contractor or Architect shall not relieve Subcontractor of its obligation to perform the Work in strict accordance with the Contract Documents or its responsibility for the proper matching of the Work to contiguous work.

22. **Performance.** The Work shall be performed and furnished under the direction and to the satisfaction of the Architect and Contractor, but Subcontractor shall not thereby be relieved of its obligation to supervise the Work, using its best skill and attention, or its obligation to perform the Work as provided for herein. Subcontractor shall be bound by the interpretation and decisions of the Architect and Owner to the same extent as Contractor may be bound thereby under the Contract Documents.

If part of Subcontractor's Work depends for proper execution or results upon construction or operations by the Owner, a separate contractor, or another subcontractor, the Subcontractor shall, prior to proceeding with that portion of the Work, promptly report to Contractor apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of Subcontractor so to report shall constitute an acknowledgment that the Owner's, separate contractors', or another subcontractor's completed or partially completed construction is fit and proper to receive Work, except as to defects not then reasonably discoverable.

Special coordination will be required on this Project due to the sequencing requirements and complexity. All work shall be executed as directed by Contractor with as little inconvenience, noise, dust and dirt as possible, and be in compliance with Local and Federal Safety and Environmental Regulations.

A weekly Progress and Coordination meeting will be held at the jobsite. Subcontractor must have a qualified representative, capable of authorizing and making decisions regarding the Subcontractor's work, attend each weekly meeting while the Superintendent has work in progress and for at least two (2) meetings prior to starting work.

Subcontractor shall provide a daily progress report, **ATTACHMENT "M"**, to Contractor's representative.

Subcontractor is responsible for the protection of completed or partially completed work of other trades during his own work. Should damage occur as a result of Subcontractor's activities, Subcontractor shall repair and/or replace at its own cost, all damaged work in a timely fashion so as not to delay the progress of a job.

The accuracy of all shop drawing dimensions shall be the responsibility of Subcontractor. Contractor shall make only a cursory review of general design during the processing of shop drawings. It will be the full responsibility of Subcontractor to insure that his completed, installed product is in conformance with the Contract Documents.

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23. **Liens.** Subcontractor shall defend, indemnity and save harmless Contractor, Contractor's sureties and Owner from any lien or claim of lien filed or maintained by any laborer, materialman, subcontractor, or other person directly or indirectly acting for, through, or under Subcontractor, against the Project or any part thereof or any interest therein or against any monies due or to become due from Owner to Contractor or from Contractor to Subcontractor. Without limiting the foregoing, Subcontractor shall cause any such lien or claim of lien to be satisfied, removed or discharged by bond, payment, or otherwise within 10 days from the date of filing or receipt.

24. **Patents.** Subcontract shall defend, indemnify and save harmless Contractor and Owner, from and against any claim, cost, expense, or liability (including attorneys' fees) arising out of or resulting from infringement or alleged infringement of any patent rights attributable to the Work, except to the extent that Owner may have assumed responsibility therefore under the Contract Documents.

25. **Labor.** Subcontractor agrees that where its work is stopped, delayed or interfered with by strikes, slowdowns or similar interruptions or disturbances (including cases where the Subcontractor's employees are engaged in a work stoppage solely as a result of a labor dispute involving Contractor or others and not in any manner involving Subcontractor), Contractor shall have the rights and remedies provided for in Paragraph 27. Subcontractor shall maintain and exercise control over all employees engaged in the performance of the Work, and Subcontractor shall, to the extent permitted by law, remove or cause to be removed from the Project any employee whose presence is detrimental to the orderly prosecution of the Work.

26. **Damage.** Contractor shall not be liable or responsible for loss or damage to the equipment, tools, facilities, or other personal property owned, rented, or used by Subcontractor, or anyone employed by Subcontractor, in the performance of the Work. Subcontractor shall maintain such insurance and take such protective action as it deems desirable with respect to such property. Except to the extent of any proceeds received by Contractor for the benefit of Subcontractor under a policy of builders' risk or fire insurance, Contractor shall not be liable or responsible for any loss or damage to the Work, and Subcontractor shall be responsible for the correction or restoration of any such loss or damage to the Work, or to the work of Contractor, another contractor, any other subcontractor, resulting from the operations of Subcontractor, or its subcontractors, agents, servants, or employees. Subcontractor shall take reasonable precautions to protect the Work from loss or damage prior to acceptance by Owner.

27. **Default.** Should Subcontractor at any time: (a) fail to supply the labor, materials, equipment, supervision and other things required of it in sufficient quantities and of sufficient quality to perform the Work with the skill, conformity, promptness, and diligence required by the Contract Documents or this Subcontract; (b) cause stoppage, delay of, or interference with, the Project work; c) become insolvent, or (d) fail in the performance or observance of any of the covenants, conditions, or terms of the Contract Documents, as applicable, or this Subcontract, then, in any such event, each of which shall constitute a default hereunder by Subcontractor, Contractor, after giving notice of default and 48 hours within which to cure, shall have the right to exercise any one or more of the following remedies:

(i) require that Subcontractor utilize, at its own expense, overtime labor (including Saturday, Sunday and holiday work) and additional shifts as necessary to overcome the consequences of any delay attributable to Subcontractor's default.

(ii) remedy the default by whatever means Contractor may deem necessary or appropriate, including, but not limited to, correcting, furnishing, performing, or otherwise completing the Work, or any part thereof, by itself or through others (utilizing where appropriate any materials and equipment previously purchased for that purpose by Subcontractor) and deducting the cost thereof (plus an allowance for administration burden equal to 15% of such costs) from monies due, or to become due, to Subcontractor whether on this or any other Project.

(iii) after giving Subcontractor an additional 48 hours notice (at any time following the expiration of the initial 48 hours curative period) terminate either Subcontractor's services under, or this Subcontract, without thereby waiving or releasing any rights or remedies against Subcontractor or its sureties, and by itself or through others take possession of the Work, and all materials, equipment, plant, tools, scaffolds and appliances of Subcontractor relating to work, for the purposes of completing the Work and securing to Contractor the payment of its costs (plus an allowance for administrative burden equal to 15% of such costs) and other damages under the Subcontract and for the breach thereof, it being intended that Contractor shall, for the stated purposes, be the assignee of and have a security interest in the property described above to the extent located on or off the Project site (and Contractor may at any time file this Subcontract as a financing statement under applicable law); and

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(iv) recover from Subcontractor all losses, damages, penalties and fines, whether actual or liquidated, direct or consequential, and all reasonable attorneys' fees suffered or incurred by Contractor by reason of, or as a result of, Subcontractor's default.

Should any termination for default under Paragraph 27 (iii) be determined to be invalid, improper or wrongful, such termination shall be deemed to have been a termination for convenience as provided in Paragraph 28 below.

After completion of the Work by the exercise of any one or more of the above remedies and acceptance of the Work by Architect and payment therefore by Owner, Contractor shall promptly pay Subcontractor any balance of the Price. If the cost of completion of the Work, plus the allowance for administrative burden, together with any other damages or losses sustained or incurred by Contractor, shall exceed the undisbursed balance of the Price, Subcontractor and its surety or sureties shall pay the difference within fifteen (15) days of documented demand from Contractor.

The foregoing remedies shall be considered separate and cumulative and shall be in addition to every other remedy given hereunder or under the Contract Documents, or now or hereafter existing at law or in equity.

Except as limited by this Subcontract, Subcontractor shall have the rights and remedies available at law or in equity for a breach of this Subcontract by Contractor. Any default by Contractor shall be deemed waived unless Subcontractor shall have given Contractor written notice thereof within 7 days after the occurrence of such default. Subcontractor shall not be entitled to stop the Work or terminate this Subcontract on account of Contractor's failure to pay an amount claimed due hereunder (including changed or extra Work) so long as Subcontractor shall not have adequately substantiated the amount due or so long as a good faith dispute exists as to the amount due. Subcontractor shall not be entitled to stop the Work on account of a default by Contractor unless such default shall have continued for more than 7 days after Contractor's receipt of Subcontractor's written notice of such default.

Subcontractor shall not be entitled to terminate this Subcontract except for a substantial and material breach by Contractor which shall have continued, uncured, for at least an additional 30 days after (1) Subcontractor shall have stopped work in accordance with the requirements hereof and (2) Contractor shall have received written notice of Subcontractor's intention to terminate this Subcontract.

28. **Disputes.** In the event of any dispute between Subcontractor and Contractor arising under or relating to this Subcontract, or the breach thereof, which involves the correlative rights and duties of Owner, the dispute shall be decided in accordance with the Contract Documents and Subcontractor, and its sureties, shall be bound to Contractor to the same extent that Contractor is bound to Owner by the terms of the Contract Documents and by any decisions or determination made under the Contract Documents by any authorized person, board, court or other tribunal. Subcontractor shall be afforded a reasonable opportunity to present information and testimony involving its rights and shall have the duty to cooperate with Contractor.

It is specifically understood and agreed between the parties that One Hundred Dollars ($100.00) of the Subcontract Price is being paid by Contractor to Subcontractor as consideration for the discretionary arbitration provisions hereinafter agreed to by the parties. If a controversy or claim should arise between Subcontractor and Contractor under or relating to this Subcontract, or the breach thereof, which does not involve the correlative rights and duties of Owner and is not, therefore, controlled by the foregoing provision, then Contractor, in its sole discretion, may elect to submit such dispute to arbitration, in which event the dispute(s), shall be determined by arbitration, pursuant to the Uniform Arbitration Act of the State of North Carolina, before the American Arbitration Association and in accordance with the AAA's Construction Industry Arbitration Rules then in effect. The locale for all hearings shall be Tarboro, North Carolina. If the amount in dispute, including counterclaims, is less than $50,000, one arbitrator, who shall be an attorney who is experienced in arbitration and construction law, shall be appointed pursuant to said Rules. If the amount in dispute is $50,000 or more, three arbitrators, at least one of whom shall be an attorney, who is experienced in arbitration and construction law, shall be appointed, in the event the Contractor elects to submit the dispute to arbitration. It is agreed that the following claims shall not be arbitrable: any claim requesting punitive damages; any claim arising from the Architect's decision relating to artistic effect and any claim based upon an alleged deceptive trade practice - consumer protection act.

The parties consent to the personal jurisdiction of the General Courts of Justice of the State of North Carolina, County of Edgecombe and of the United States District Court for the Eastern District of North Carolina, and further consent that any process or notice of motion or other application to the Court or a Judge thereof may be served

Initials: _____

_____

SAMPLE

outside the State of North Carolina by registered or certified mail or by personal service, provided a reasonable time for appearance is allowed.

During arbitration or court proceedings, the Subcontractor shall proceed diligently with the performance of the Work. Likewise, Contractor may proceed, in good faith, to remedy an alleged default by Subcontractor.

29. **Early Termination.** If Owner terminates the Contract or stops the Work for a reason other than default of Contractor, Contractor may terminate this Subcontract or stop the Work for the same reason, and Subcontractor's rights and remedies (including the basis for compensation) shall be limited to the corresponding rights and remedies available to Contractor under the Contract Documents, in no event shall Subcontractor be entitled to consequential damages or loss of profits on portions of the Work not yet performed.

30. **Notices.** All written notices provided for in this Subcontract or in the Contract Documents shall be deemed given if delivered personally to a responsible representative of the party or if sent by telegram (with written confirmation copy following) or by regular mail to the party at its address specified herein. Either party may from time to time, by written notice to the other, as herein provided, designate a different address to which to send notices.

31. **SET OFF.** If Subcontractor has performed work, is currently performing work, or hereafter begins performing any work for Contractor other than the work under this Agreement, Contractor is hereby granted the right of setoff against amounts due under this Agreement or any other agreement with Subcontractor to compensate Contractor for damages or losses that Contractor does or is likely to incur as result of Subcontractor's negligence or failure to perform its work in accordance with the applicable standards and contract requirements for said agreement. Specifically, to the extent that the price for any agreement (including but not exclusively this Agreement) between Contractor and Subcontractor is insufficient to pay Contractor's claims against Subcontractor under said agreement, Subcontractor hereby authorizes Contractor, in its sole discretion and judgment, to use the funds due Subcontractor under any agreement to pay amounts due or likely to become due Contractor in connection with Subcontractor's work under any other agreement between Subcontractor and Contractor, including but not exclusively this Agreement.

32. **Project Statement.** Subcontractor has received Exhibit P attached hereto which is the Project Statement for the project. Subcontractor shall provide a copy of this Project Statement to any subcontractor or supplier from whom subcontractor procures labor or materials for use on this project.

SUBCONTRACTOR ACKNOWLEDGES THAT IS HAS RECEIVED FULL AND SUFFICENT CONSIDERATION FOR THIS PROVISION AND THAT THIS PROVISION IS A MATERIAL INDUCEMENT FOR THE CONTRACTOR ENTERING INTO THIS AGREEMENT.

33. **Miscellaneous.**

(a) All matters relating to the validity, performance, or interpretation of this Subcontract shall be governed by the law of the State of North Carolina.

(b) This Subcontract, including the Contract Documents and other documents incorporated herein by reference, embodies the entire agreement of the parties and supersedes all prior negotiations, proposals, agreements, purchase orders and understandings relating to the subject matter hereof.

(c) This Subcontract may not be changed and no requirement hereof may be waived except as herein provided or by a writing signed by a duly authorized officer or agent of each party.

(d) The provisions of this Subcontract and the Contract Documents are intended to supplement and complement each other. If, however, any provision of this Subcontract irreconcilably conflicts with a provision of the Contract, the provision imposing the greater duty on the Subcontractor shall govern.

(e) A waiver by Contractor of any term, condition, or requirement of this Subcontract shall be not deemed a waiver of any of the other terms, conditions, or requirements. None of the remedies provided Contractor by this Subcontract are intended to be exclusive, and Contractor expressly reserves the right to exercise any other remedy provided at law or in equity.

(f) Where the context requires, neuter terms used herein shall include the masculine and feminine, and singular terms shall include the plural, and vice versa.

Initials: _____

_____

SAMPLE

(g) If the Prime Contract is, or is determined to be, under seal, then the parties agree this Subcontract shall be deemed to be under seal; otherwise this Subcontract shall not be under seal.

(h) Storage of materials on site will be restricted. Material deliveries, jobsite storage, etc. must be coordinated with the Contractor's Superintendent. The Subcontractor shall be responsible for the delivery, unloading, storage, and protection of all materials and supplies used in connection with the Work covered under this Subcontract. The Subcontractor is responsible for protection of his own work and materials and is to take special care in material inventories to guard against weather damage, misplacement and theft.

(i) Contractor will be arbiter in any case where the Contract Documents are in conflict, incomplete or unclear. Contractor's decision in the matter shall be final.

(j) No broadcast radios will be allowed on the project.

SAMPLE

Initials: _____

_____

IN WITNESS WHEREOF, the parties have duly executed this Subcontract as of the date first above written.

BARNHILL CONTRACTING COMPANY

By: _____
Barry Harden Vice President Operations

Attest:

_____ Date: _____
Asst. Secy.

Subcontractor: _____

Attest: By: _____

_____ Date: _____

Subcontractor Check One:

_____ Corporation

_____ Partnership/Joint Venture

_____ Individual

Initials: _____

_____

SAMPLE

ATTACHMENT A – SCOPE OF WORK

Pursuant to Paragraph1 of this Subcontract, Subcontractor shall prosecute and complete the following Work:

ACCEPTED ALTERNATES INCLUDED IN THIS SUBCONTRACT:

Initials: _____

_____

ATTACHMENT B – CONTRACT DOCUMENTS

The Contract Documents referred to in Paragraph 1 and elsewhere in this Subcontract consist of the Prime Contract and the following:

Initials: _____

_____

ATTACHMENT C – SUPPLEMENTAL PRICE SCHEDULE

Unit Prices - Pursuant to Paragraphs 2, 9, and 10 of this Subcontract, the following unit prices shall be used in determining the Price and any adjustments thereto, without limitation unless expressly provided herein.

Allowances - The Price specified on Page 1 of the Subcontract includes the following allowances for the parts of the Work specified below, to be furnished by Subcontractor in accordance with the Contract Documents.

Initials: _____

_____

ATTACHMENT D – PERFORMANCE SCHEDULE

Pursuant to Paragraph 4 of this Subcontract and without limiting the provisions thereof, Subcontractor shall perform the Work and its several parts according to the following specific schedule, and as the same may be revised from time to time by Contractor.

Subcontractor understands the intense construction effort required for this project and will exercise detailed planning for procurement, delivery scheduling and supplying the various areas of construction for the project in such a manner as to not pose a hindrance to other trades or Contractor's work.

Subcontractor is responsible for fully coordinating its Work with all work shown by the Contract, i.e. Mechanical, Plumbing and Electrical Drawings.

This Subcontract includes the necessary number of trips to the jobsite to maintain the Construction Schedule.

Enclosed is a preliminary schedule for your review. Refer to Paragraph 4 in Subcontract for details.

TIME IS OF THE ESSENCE in this Subcontract. This is repeated herein for special emphasis.

Initials: _____

_____

ATTACHMENT E – APPLICATION FOR PAYMENT

TO: BARNHILL CONTRACTING COMPANY, BUILDING DIVISION, P O BOX 1529, TARBORO, NC 27886

FROM: _____

PROJECT: _____

PAYMENT REQUEST NO.: _____ SUBCONTRACT NO.: _____

PERIOD: _____ TO _____

STATEMENT OF CONTRACT ACCOUNT:

1.	Original Contract Amount	_____
2.	Approved Changes (Net) (Add/Deduct) (per attached breakdown)	_____
3.	Adjusted Contract Amount	_____
4.	Value of Work Completed to Date: (per attached breakdown)	_____
5.	Value of Approved Change Orders Completed to Date: (per attached breakdown)	_____
6.	Materials Stored on Site: (per attached breakdown)	_____
7.	Subtotal (lines 4 + 5 + 6)	_____
8.	Less Amount Retained (_____ %)	(_____)
9.	Subtotal Less Retainage (line 7 - 8)	
10.	Less Total Previously Certified	(_____)
11.	Net Amount of this Request (line 9 - 10)	_____

CERTIFICATE OF SUBCONTRACTOR:

I hereby certify that the work performed and the materials supplied to date, as shown above represent the actual value of accomplishment under the terms of the Contract (and all authorized changes thereto) between the undersigned and BARNHILL CONTRACTING COMPANY relating to the above referenced project.

I also certify that all payments have been made through the period covered by previous payments received from the contractor, to (1) all my subcontractors (sub-subcontractors) and (2) for all materials and labor used in or in connection with the performance of this Contract. I further certify that I have complied with Federal, State, and local tax laws, including Social Security laws and Unemployment Compensation laws and Workmen's Compensation laws.

I further understand and agree that payments previously received or requested herein do not relieve me in any way of any responsibility for compliance with all the terms and conditions of the contract agreement with BARNHILL CONTRACTING COMPANY.

DATE: _____ _____
SUBCONTRACTOR

Subscribed and sworn before me this _____

day of _____, 20_____. _____
AUTHORIZED SIGNATURE

Notary Public: _____ _____
PRINTED NAME

My Commission Expires: _____

Printed Name: _____ _____
TITLE

Initials: _____

_____

ATTACHMENT F – CERTIFICATE OF STORED MATERIALS

TO: BARNHILL CONTRACTING COMPANY

The below listed materials, supplies and equipment (hereinafter defined as material) are stored and can be inspected with reasonable notification.

Stored Material Item-Description	Stored Location	Quantity	Invoice Value (Invoice Copy Attached)

(Append additional sheets as needed.)

Subcontractor's material handling costs $ _____

Total Costs (invoice value plus handling cost) $ _____

Upon receipt of payment (payment defined as invoiced cost plus material handling cost without overhead and profit) as petitioned by the Subcontractor's Application for Payment No. _____

Item 6, dated _____, the undersigned hereby certifies the following:

1. Full, clear and unencumbered title and ownership of the material is transferred, assigned and vested to: _____.
   (Name of Owner)

2. The material is to be held in trust for the benefit of _____ and for the exclusive use of the _____ (Project Name) until such time as the materials are incorporated into the work. The Subcontractor re-affirms his continued obligation to store and protect the material until completion of the work. All cost related to procuring, transporting, insuring and improving, repairing or leasing facilities for storage of the material, is the sole cost of the Subcontractor.

   As evidenced and surety of this obligation and for protection of the Owner's property, the Subcontractor will provide and maintain an "All Risks" insurance policy for the invoiced value of the material. Further, the Subcontractor agrees to be responsible and accountable for any and all damage to or destruction of the material, insurance coverage notwithstanding.

3. A current Certificate of Insurance coverage is attached or presently on file with Barnhill Contracting Company.

ATTEST: (Notary Public)

_____
SUBCONTRACTOR NAME

By: _____
Signature

_____
Title

Initials: _____

_____

ATTACHMENT G – WAIVER AND RELEASE UPON PROGRESS PAYMENTS

FOR USE BY SUBCONTRACTOR

The undersigned supplier/subcontractor/materialman/laborer ("Supplier") acknowledges that Supplier has certain lien rights which are created by statute as a result of furnishing labor, materials, or rental equipment at the site ("Premises") of the improvement ("Improvement") which is the site of the Project described below. Supplier either directly or indirectly through a subcontractor or Barnhill Contracting Company ("Contractor") has made a written application for a Progress Payment as indicated below. Supplier knowingly WAIVES and RELEASES any and all lien rights it has or may have for furnishing labor, materials, or rental equipment at the site of the Improvement as of the date of the application for the Progress Payment as indicated below.

Upon receipt of this Progress Payment by Contractor, Supplier acknowledges and agrees that Contractor has paid for all labor, materials, or rental equipment furnished by Supplier, directly or indirectly, pursuant to Supplier's contract with Contractor, or with any supplier and or subcontractor of Contractor, or with any supplier and/or subcontractor at any tier thereafter for furnishing labor, materials, or rental equipment at the Premises, which is the site of the Project described below.

For and in consideration of this Progress Payment and other valuable considerations, and for the purpose of inducing the making of this Progress Payment, Supplier hereby waives, releases, warrants and agrees, as follows:

1) WAIVER and RELEASE: Supplier hereby waives, releases and relinquishes any and all rights to any mechanics, laborers' and/or materialmen's liens (including both liens on funds and on real property), and any and all other rights (including, but not limited to, equitable liens, rights to obtain the issuance of stop notice, and rights to assert any claim with respect to any payment or surety bond) relating to the Project, or to funds paid or to be paid in connection with any work done to and/or Improvements made on or to the Premises. This WAIVER and RELEASE relates and applies only to labor, materials or rental equipment furnished to the Improvements by Supplier through the date of the application for this Progress Payment.
2) WARRANTIES: Supplier represents and warrants that:
   a) The person executing this Waiver and Release Upon Progress Payment has the right and authority to sign and execute this document on behalf of Supplier.
   b) Supplier has fully paid or within five (5) days of the date of this Progress Payment, shall fully pay:
      i) all persons who have performed or furnished labor or professional design or surveying services at the site of the Improvement; and
      ii) all persons who have furnished any materials or rental equipment, on the Premises or to the Project; and
      iii) all taxes, licenses, fees, assessments or any other payments required to be made by Supplier to any governmental authority having jurisdiction to assess same.
   c) Supplier has not signed or executed any security agreement or other document which affects title to any part of the Premises or to any material used in connection with Improvements to the Premises:
   d) Supplier has not asserted and shall not assert a lien on funds or on the Premises, and
   e) Supplier has not assigned and shall not assign to any person or entity any right or claim for payment regarding labor, materials, or rental equipment furnished on or to the Premises.
3) INDEMNITY: Supplier agrees to defend and indemnify the owner of the Premises which is the site of the Project described below ("Owner"), Contractor, and Contractor's supplier or subcontractor with whom Supplier has a contract for which this Progress Payment has been received, from and against any and all demands or claims for payment and losses (including reasonable attorney's fees) made by any person or entity who has furnished labor, materials, or rental equipment to Supplier for Improvements on the Premises, or made by any governmental authority for taxes, licenses, fees, assessments or other payments.

NOTICE: THIS IMPORTANT LEGAL DOCUMENT UNCONDITIONALLY WAIVES YOUR LIEN RIGHTS AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THESE RIGHTS. It is a crime (punishable by a fine not exceeding One Thousand and No/100 dollars ($1,000.00) or by imprisonment not to exceed two (2) years, or by both) to make any written statement relating to sums due or claimed to be due for labor, materials, or rental equipment furnished, at the site of Improvements to the Premises which is known to be false. N.C. General Statutes ' 44A-24.

Barnhill Project Number _____ Name of Owner: _____

County/State of Project: _____ Owner Project Number: _____

Progress Payment: _____ Amount $ _____ Date: _____

IN TESTIMONY WHEREOF, the Supplier has caused this Waiver and Release Upon Progress payment to be executed in its name by its _____ President (or General Partner), attested by its _____ Secretary, and its corporate seal to be hereto affixed (for Corporate Suppliers), by the authority of its Board of Directors (or Partners) first duly given, this _____ day of _____, 20 _____.

Subscribed and sworn before me this _____

day of _____, 20_____.

Notary Public: _____

My Commission Expires: _____

(Notary Seal)

_____
(Corporate Name, Individual or Partnership Name)

(Corp. Seal)
(If Applicable)

BY: _____

_____
(Print Name and Title)

ATTEST: _____
(Corp. Secretary)

Initials: _____

ATTACHMENT H – SUPPLIER/SUBCONTRACTOR INFORMATION SCHEDULE

Submitted by: _____
(Subcontractor Company Name)

Project Name: _____

Barnhill Project No.: _____

The following is a complete listing of the subcontractors and suppliers to be used by the Subcontractor named above as sources for furnishing and/or installing materials or equipment, the total value of which for any one such sub or supplier is expected to be $10,000.00 or more in connection with work on the above named project:

Sub/Supplier Name and Address	Sub/Supplier Contact Person	Contact's Telephone Number	Estimated Total Dollars to be Paid	Item of Work or Material Furnished

The information shown above is complete, true and correct to the best of my knowledge and belief.

_____
Subcontractor Signature

_____
Printed Name

Initials: _____

_____

ATTACHMENT I – SALES TAX SUMMARY

State of North Carolina
County Sales and Use Tax Report
Summary Totals & Certification

Contractor/Subcontractor: _____

Project Name: _____ For Period Ending: _____

	Total for County of:	Total for County of:	Total for County of:	Total for County of:	Total for County of:	Total for County of:	Total for County of:	Total All Counties**	Total for State**
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 on supplies, tools, and equipment which were used to perform this contract and only include those building material supplies, fixtures and equipment which actually became 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.

Subscribed and sworn before me this _____

day of _____, 20_____.

Notary Public: _____

My Commission Expires: _____

Printed Name: _____

_____
Signature of Preparer

_____
Printed Name of Preparer

Note: This Certified Statement May be Subject to audit.

Initials: _____

_____

ATTACHMENT I – SALES TAX DETAIL

SALES TAX REPORT

Project Name: _____

General Contractor: Barnhill Contracting Company

Owner: _____

Subcontractor: _____

Period: _____ To _____

Vendor	Address	Invoice #	Date	Net Amount	NC Tax Amount	County Tax Amt	County Name
Total							

_____, being duly sworn, certifies that the foregoing statement of sales taxes paid in connection with the referenced contract is true to the best of his or her knowledge and belief.

_____

Signature and Title)

_____

Printed Name

_____

Company Name and Address

Subscribed and sworn before me this _____

day of _____, 20_____.

Notary Public: _____

My Commission Expires: _____

Printed Name: _____

Initials: _____

_____

ATTACHMENT J – UNCONDITIONAL FINAL WAIVER AND RELEASE

FOR USE BY SUBCONTRACTOR

The undersigned supplier/subcontractor/materialman/laborer ("Supplier") acknowledges that Supplier has certain lien rights which are created by statute as a result of furnishing labor, materials, or rental equipment at the site ("Premises") of the improvement ("Improvement") which is the site of the Project described below. Supplier either directly or indirectly through a subcontractor or Barnhill Contracting Company ("Contractor") has made a written application for Final Payment as indicated below. Supplier knowingly WAIVES and RELEASES any and all lien rights it has or may have for furnishing labor, materials, or rental equipment at the site of the Improvement.

Upon receipt of this Final Payment by Contractor, Supplier acknowledges and agrees that Contractor has paid for all labor, materials, or rental equipment furnished by Supplier, directly or indirectly, pursuant to Supplier's contract with Contractor, or with any supplier and or subcontractor of Contractor, or with any supplier and/or subcontractor at any tier thereafter for furnishing labor, materials, or rental equipment at the Premises, which is the site of the Project described below.

For and in consideration of this Final Payment and other valuable considerations, and for the purpose of inducing the making of this Final Payment, Supplier hereby waives, releases, warrants and agrees, as follows:

1) WAIVER and RELEASE: Supplier hereby waives, releases and relinquishes any and all rights to any mechanics, laborers' and/or materialmen's liens (including both liens on funds and on real property), and any and all other rights (including, but not limited to, equitable liens, rights to obtain the issuance of stop notice, and rights to assert any claim with respect to any payment or surety bond) relating to the Project, or to funds paid or to be paid in connection with any work done to and/or Improvements made on or to the Premises.
2) WARRANTIES: Supplier represents and warrants that:
   a) The person executing this Unconditional Final Waiver and Release has the right and authority to sign and execute this document on behalf of Supplier.
   b) Supplier has fully paid:
      i) all persons who have performed or furnished labor or professional design or surveying services at the site of the Improvement; and
      ii) all persons who have furnished any materials or rental equipment, on the Premises or to the Project; and
      iii) all taxes, licenses, fees, assessments or any other payments required to be made by Supplier to any governmental authority having jurisdiction to assess same.
   c) Supplier has not signed or executed any security agreement or other document which affects title to any part of the Premises or to any material used in connection with Improvements to the Premises:
   d) Supplier has not asserted and shall not assert a lien on funds or on the Premises, and
   e) Supplier has not assigned and shall not assign to any person or entity any right or claim for payment regarding labor, materials, or rental equipment furnished on or to the Premises.
3) INDEMNITY: Supplier agrees to defend and indemnify the owner of the Premises which is the site of the Project described below ("Owner"), Contractor, and Contractor's supplier or subcontractor with whom Supplier has a contract for which this Final Payment has been received, from and against any and all demands or claims for payment and losses (including reasonable attorney's fees) made by any person or entity who has furnished labor, materials, or rental equipment to Supplier for Improvements on the Premises, or made by any governmental authority for taxes, licenses, fees, assessments or other payments.

NOTICE: THIS IMPORTANT LEGAL DOCUMENT UNCONDITIONALLY WAIVES YOUR LIEN RIGHTS AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THESE RIGHTS. It is a crime (punishable by a fine not exceeding One Thousand and No/100 dollars ($1,000.00) or by imprisonment not to exceed two (2) years, or by both) to make any written statement relating to sums due or claimed to be due for labor, materials, or rental equipment furnished, at the site of Improvements to the Premises which is known to be false. N.C. General Statutes ' 44A-24.

Barnhill Project Number _____ Name of Owner: _____

County/State of Project: _____ Owner Project Number: _____

Final Payment: _____ Amount $ _____ Date: _____

IN TESTIMONY WHEREOF, the Supplier has caused this Waiver and Release Upon Progress payment to be executed in its name by its _____ President (or General Partner), attested by its _____ Secretary, and its corporate seal to be hereto affixed (for Corporate Suppliers), by the authority of its Board of Directors (or Partners) first duly given, this _____ day of _____, 20 _____.

Subscribed and sworn before me this _____

day of _____, 20_____.

Notary Public: _____

My Commission Expires: _____

(Notary Seal)

_____
(Corporate Name, Individual or Partnership Name)

(Corp. Seal)
(If Applicable)

BY: _____

_____
(Print Name and Title)

ATTEST: _____
(Corp. Secretary)

Initials: _____

_____

ATTACHMENT K – INSURANCE

Pursuant to the Insurance requirements outlined in this contract, the Subcontractor shall acquire and maintain at least the following insurance coverage in addition to any other coverage or any greater limits required by the contract documents both during the entire phase of construction as well as for other time durations where specifically noted:

Type of Insurance	Required Coverage /Minimum Limits	Policy / Coverage Provisions Required
Workers' Compensation & Employer Liability	1. **Statutory Coverage** in accordance with the laws of the state(s) in which the work will be performed. 2. Employers Liability – Minimum limits of **$500,000.00** Per Occurrence for Bodily Injury by Accident as well as Injury by Disease.	▪ Coverage will cover all of Subcontractor's Employees, officers, directors, shareholders, agents, owners, volunteers and consultants. ▪ Policy will contain a "Waiver of Subrogation" that runs in favor of the Contractor as outlined in the terms and conditions of the contract. Policy should contain ISO "Waiver of Subrogation: Endorsement #WC000313 (04/84) or Equivalent Form or language. ▪ Where applicable, USL&H Endorsement will be attached to the policy. ▪ Where applicable, the Maritime Coverage Endorsement will be attached to the policy.
Commercial Automobile Liability Coverage	1. Combined Single limit of **$1,000,000.00** for Bodily Injury and Property Damage per each Occurrence.	▪ Policy will provide Liability coverage for all owned, non-owned, and hired vehicles. ▪ Contractor, and any other designated parties named by the Contractor, will be listed as an "Additional Insured" on the policy for the duration of the Subcontractor's work. ▪ The policy will provide a "Waiver of Subrogation" Endorsement. ISO Form # CA0444 (03/08) is recommended or use of equivalent form or language. Such Waiver will be in favor of the Contractor and any other parties designated by the Contractor.
Property / Inland Marine Coverage	1. Subcontractor will maintain their own Property and/or Inland Marine Insurance to cover their tools, equipment, materials, etc. against loss.	▪ All such policies shall contain the appropriate "Waiver of Subrogation" endorsement that runs in the favor of the Contractor and any other parties designated by the Contractor to be included in such endorsements. ▪ Contractor will advise Subcontractor as to whether or not a "Builders Risk" policy has been obtained by the Contractor or Owner that includes the Subcontractor as a "Scheduled Named Insured".
Commercial General Liability Coverage	1. **$1,000,000.00** Per Occurrence for Bodily Injury and Property Damage. 2. **$2,000,000.00** "**Per Project /Per Location Aggregate** specific to the job location noted in this contract. (ISO Form CG2503 (03-97) or a manuscript endorsement using similar language and equivalent coverage, is to be added to the policy to satisfy this requirement)	▪ Coverage to be written on CGL ISO Form CG0001 (10-01) Occurrence Based Policy form to provide liability arising from the premises, operations, independent contractors, products & completed operations, personal injury & advertising injury as well as exposure to explosion, collapse and underground hazards (XCU), ▪ Contractor, Owner and all other Contractor designated parties will be named as "Additional Insureds" on the policy using a combination of ISO Form CG2033 as well as CG2037 or any manuscript forms containing similar wording and equivalent coverage for ongoing operations as well as Products and Completed Operations. The endorsements will also reflect that such coverage of the Subcontractor will apply on a "primary and non-contributing basis" before any other insurance, including self-insurance or deductibles, is considered. ▪ Subcontractor will maintain the CGL Policy and denoted coverage form and endorsements for a period of three (3) years following the completion of the project. All terms and conditions outlined in this section must be included in the continuation of coverage for the period noted.
Commercial Umbrella / Excess Coverage	1. Minimum of **$1,000,000.00** Per Occurrence/Aggregate Limits.	▪ The policy must be endorsed to "be as broad as the primary policies" in regard to coverage provisions. ▪ Additional Insured's required on the Auto and General Liability Policies must also be included on the Umbrella / Excess Policy. ▪ The umbrella policy for such additional insured(s) shall apply as primary coverage before any other insurance, including self-insurance or deductibles, maintained by, or provided to, the additional insured (s) is considered.

Initials: _____

_____

ATTACHMENT K – INSURANCE

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

PRODUCER	THIS CERTIFICATION IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
Insurance Company Name Address City, State, ZIP	INSURERS AFFORDING COVERAGE	NAIC #
INSURED Contractor Name Address City, State, ZIP	INSURER A: Insurance Company Name	
	INSURER B: Insurance Company Name	
	INSURER C:	
	INSURER D:	
	INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS	
		GENERAL LIABILITY	GL123456	07/01/2009	07/01/2010	EACH OCCURRENCE	$ 1,000,000
		[X] COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
		[ ] CLAIMS MADE [X] OCCUR				MED EXP (Any one person)	$ 5,000
		[X] Contractural				PERSONAL & ADV INJURY	$ 1,000,000
		[X] XCU, Indp Contrs				GENERAL AGGREGATE	$ 2,000,000
		GEN'L AGGREGATE LIMIT APPLIES PER:				PRODUCTS - COMP/OP AGG	$ 2,000,000
		[ ] POLICY [X] PRO-JECT [X] LOC					$
		AUTOMOBILE LIABILITY	BA123456	07/01/2009	07/01/2010	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
		[X] ANY AUTO				BODILY INJURY (Per person)	$
		[ ] ALL OWNED AUTOS				BODILY INJURY (Per accident)	$
		[ ] SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident)	$
		[X] HIRED AUTOS					
		[X] NON-OWNED AUTOS					
		[ ]					
		GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
		[ ] ANY AUTO				OTHER THAN AUTO ONLY: EA ACC	$
						AGG	$
		EXCESS / UMBRELLA LIABILITY	UM123456	07/01/2009	07/01/2010	EACH OCCURRENCE	$ 1,000,000
		[X] OCCUR [ ] CLAIMS MADE				AGGREGATE	$ 1,000,000
		[ ] DEDUCTIBLE					$
		[X] RETENTION $ 10,000					$
							$
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	WC123456	07/01/2009	07/01/2010	[X] WC STATU-TORY LIMITS [ ] OTH-ER	
		ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N [N]				E.L. EACH ACCIDENT	$ 500,000
		(Mandatory in NH) If yes, describe under SPECIAL PROVISIONS below				E.L. DISEASE - EA EMPLOYEE	$ 500,000
						E.L. DISEASE - POLICY LIMIT	$ 500,000
		OTHER					

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

BCC Job # Name of Project:

Certificate Holder, Owner, and any other parties required by contract are Additional Insured under Commercial General Liability (per endmts CG 20 33 and CG 20 37 or equivalent form), Auto Liability, and Umbrella Liability regarding captioned project. Waiver of Subrogation applies in favor of Certificate Holder, Owner, and any other parties required by contract on all policies. Coverage on General Liability and Umbrella Liability is primary and non-contributory. Coverages afforded by the above described policies will not be cancelled without 30 days prior written notice to the certificate holder.

CERTIFICATE HOLDER	CANCELLATION
Barnhill Contracting Company P O Box 1529 Tarboro, NC 27886	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE

ACORD 25 (2009/01)

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Initials: _____

IMPORTANT

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statment on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

This Certificate of Insurance does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

ACORD 25 (2009/01)

Initials: _____

ATTACHMENT L – TEMPORARY FACILITIES

The temporary facilities furnished by Contractor shall be without charge to Subcontractor, except as otherwise indicated.

In connection with its furnishing of the temporary facilities indicated, Contractor shall not be liable for conditions beyond the control of Contractor which may interrupt, delay or otherwise interfere with the availability of such facilities to Subcontractor. Unless otherwise expressly indicated, the temporary facilities furnished by Contractor shall not be for the exclusive use of Subcontractor, but shall be shared by others performing work on the Project. Contractor therefore reserves the exclusive right to schedule the use of any facilities in accordance with its determination as to the needs of the Project, and shall incur no liability as a result thereof.

If either party from time to time furnishes the other a crane, hoisting equipment, or other machinery or equipment, with or without an operator, for such party's exclusive use, then the using party shall at all times furnish adequate professional certified and competent supervision and direction therefore and shall be fully liable and responsible for safe and proper care, use and custody of such machinery or equipment.

1. a. Temporary lighting for the building interior shall be provided by the Electrical Subcontractor and shall comply with OSHA requirements at no less than one light per room, and one light per stair landing. The Electrical Subcontractor shall maintain temporary lighting during construction, including furnishing and installation of all bulbs required. Should any Subcontractor require lighting in excess of this amount for the performance of his own work, additional lighting shall be each Subcontractor's responsibility.

   b. All temporary power and lighting installation by the Electrical Subcontractor shall be installed and maintained in a neat and orderly manner and during construction shall give continuous service and provide safe working conditions.

   c. All routing of temporary power and lighting shall be subject to approval by the Contractor's Project Superintendent, in conjunction with OSHA regulations so as not to interfere with the Work.

   d. It is Contractor's intent that the temporary electric service shall remain in service, until such time as the permanent electric service is certified ready for use by the Power Company and/or completion of this Project. However, should a Subcontractor require the use of permanent power prior to Project completion, a written request shall be delivered to Contractor sixty (60) days in advance indicating conditions requiring such usage.

   e. The Electrical Subcontractor shall provide 110 volts temporary power for the building and trailer compound area. The Electrical Subcontractor shall provide adequate 20 amp/110 volt duplex outlets on each floor such that no extension cord exceeds 100 feet in length. All transformers, disconnects, poles, conduits, wiring, breakers, fuses and switches, and flood lighting adequate for night work mounted on skids shall be provided by the Electrical Subcontractor. The Electrical Subcontractor shall provide appropriate enclosures for environment in which used, in compliance with N.E.C., N.E.M.A. and local standards. Each Subcontractor shall provide their own extension cords from these outlets. Electrical Subcontractor shall also provide power for personnel hoists and tower cranes.

   f. Utility current usage costs for temporary power and lighting shall be paid by The Contractor. However, the Electrical Subcontractor shall pay for all costs of establishment of temporary electrical service.

2. a. The Contractor shall provide safety rails as required to maintain OSHA approved safety requirements. Safety rails required solely for Subcontractor's work shall be provided by Subcontractor at its cost. Each Subcontractor shall be responsible for maintenance and replacement of safety rails that are removed or damaged in connection with its own work and shall be responsible for safety regulation violations created by such removal or damage. No handrails shall be removed without Contractor's Project Superintendent's permission. Failure of Subcontractor to maintain and replace the safety rails or post which they have removed shall be grounds for termination and/or expulsion immediate from the jobsite at the discretion and direction of Contractor's Project Superintendent. Further, Subcontractor shall be responsible for all costs incurred by Contractor to replace said safety railing.

Initials: _____

_____

Subcontractor hereby waives any notification requirements.

b. Unless otherwise noted in the Scope of Work, Attachment "A", each Subcontractor shall provide all scaffolding and/or hoisting that is required for the performance of his own work. Swinging stages shall be protected, so as not to damage exterior finishes, windows, and roof areas.

c. Should the safety railing not be installed in an area where this Subcontractor is currently working, it shall be this Subcontractor's responsibility to insure that his workmen are properly tied off and otherwise adequately protected.

3. All hoisting and/or scaffolding required for work under this Subcontract is the responsibility of the Subcontractor.

4. a. Specific reference for emphasis is made to Paragraph 17 of this Subcontract regarding the Subcontractor's responsibility for cleaning up. These clean-up procedures will be strictly enforced.

b. Contractor will provide a trash dumpster on the jobsite for the use of all Subcontractors to aid in the removal of trash and debris.

5. a. Coordination of all on-site and off-site and other construction parking areas shall be allocated to Subcontractors' employees and suppliers by Contractor's Project Superintendent. All off-site parking shall be provided to this Subcontractors' employees, its subcontractors and material suppliers by each Subcontractor, inclusive of security and/or protection. Violators of any restrictions on parking shall be dismissed from the Project.

b. Subcontractor shall be responsible for the delivery, unloading, storage, and protection of all materials and supplies used in connection with the Work covered under this Subcontract. Storage of materials on site will be restricted. Material deliveries, jobsite storage, etc. must be coordinated with Contractor's Superintendent.

6. Any Subcontractor requiring a telephone for its own field office shall first coordinate his request with Contractor's Project Superintendent. All cost, including installation of the temporary telephone service, and removal shall be paid by Subcontractor. No temporary telephones shall be placed in the new building areas, and all installations shall be made so as not to interfere with traffic, work areas, cranes, material handling equipment, or work of other Subcontractors.

7. Break or lunch trucks are excluded from the construction site unless authorized by Contractor's Project Superintendent.

8. A totally fenced job site shall be arranged at the discretion of Contractor's Project Superintendent. Floodlights shall be provided on the site by the Electrical Subcontractor, at his expense.

9. a. Temporary water service, including any permits, fees or connection costs, shall be provided to the building by the Site Utilities Subcontractor. The Plumbing Subcontractor shall provide one (1) hose bib per floor consisting of two spigots per location and two (2) maintenance and removal shall be provided by the Plumbing Subcontractor through the building construction period.

b. Plumbing Subcontractor shall determine the best location for the source of water, and coordinate with Sitework Subcontractor and Contractor prior to installation. Installation of riser and branch piping shall be coordinated and approved by Contractor's Project Superintendent, so as not to interfere with the Scope of Work of other subcontractors.

c. Contractor shall pay for costs of temporary water usage.

Initials: _____

_____

d. Plumbing Subcontractor shall provide Contractor's job trailers with temporary water hookup to sinks and toilets. Waste piping and vents shall be provided by the Plumbing subcontractor. However, the waste holding tank and disposal fees shall be paid by Contractor.

e. Contractor shall provide all Subcontractors adequate temporary portable sanitary facilities for the duration of the Project. Use of the permanent building water closets is strictly prohibited. Anyone using the permanent water closets shall be expelled from the Project, and the Subcontractors responsible for that person shall clean up the area at his expense.

10. a. Each individual Subcontractor shall be required to furnish and maintain fire extinguishers for all their equipment, as required by the latest Federal, State and Local regulations. All Subcontractors involved in burning, welding, or cutting operations shall furnish their own adequate fire extinguishers (tested and full) or protective enclosures.

b. During roofing and upon completion of roofing operations, Contractor shall provide a lock on the roof hatches and doors leading onto the roof areas. Only authorized Subcontractor's workmen shall be allowed onto the roof. Contractor shall implement a sign-in and-out log for authorized employees who have signed for keys to the locks. Responsibility for roof damages will be borne by those trades who checked out keys. All keys are to be returned to Contractor's Project Superintendent on a daily basis. Similar programs shall be instituted for electrical closets, elevator room and penthouse areas.

c. All Subcontractors are required to protect and have respect for all adjacent property owners' fences, entrances, curbs, and green areas. Responsibility and cost of restoration due to Subcontractor abuse shall be borne by the responsible Subcontractor. The health, welfare, and safety of all persons working on the Project and of adjacent property owners is everyone's responsibility and shall be treated with the utmost consideration. Violators shall be released from the Project at Contractor's Project Superintendent's discretion.

11. Subcontractor will be responsible for supplying his own ice, water, cups, dispensers, etc., for all of Subcontractor's employees for the duration of its work on the Project.

12. Safety Netting - Contractor will assure proper installation of safety nets in order to protect workers, pedestrians, on site and adjacent to property.

13. Cold weather protection - Contractor will provide adequate weather protection and heat in order to maintain a satisfactory work environment. Subcontractor's individual needs will be dealt with on a one-to-one basis and unless otherwise noted, is the responsibility of Subcontractor.

14. OPEN FIRES ON JOBSITE ARE FORBIDDEN.

Initials: _____

_____

BARNHILL CONTRACTING COMPANY
Subcontractor Daily Progress Report

Project:_____ Job #:_____ Date:_____ Day: _____

A. Subcontractor: _____ Number of Workers on Site:_____

1. Company Owned Equipment on Site: _____

_____

_____

2. Rental Equipment on Site: _____

_____

_____

B. Second Tier Subcontractor:_____ Number of Workers on Site: _____

1. Company Owned Equipment on Site: _____

_____

_____

2. Rental Equipment on Site: _____

_____

_____

Summary of Work Performed: _____

_____

_____

_____

_____ _____

Subcontractor Signature BCC Superintendent Signature

Initials: _____

_____

Attachment N
Barnhill Contracting Company
Lower Tier Subcontractor/Supplier Conditional Release of Claim

TO: Barnhill Contracting Company
FROM: _____
(Lower Tier Subcontractor or Supplier)
PROJECT: _____
OWNER: _____
LOCATION: _____

The undersigned being duly sworn certifies that he/she is the _____ (Title) of _____ (Lower tier Subcontractor/Supplier), hereinafter referred to as the "Company", a party to a contract with _____ (First tier contracted with Barnhill Contracting) on the above named project.

The undersigned makes this affidavit well knowing that Barnhill Contracting Company relies upon the truth of this affidavit in making payment. Further, the undersigned makes this affidavit and certificate to induce Barnhill Contracting to make payment for work performed and/or invoiced on this project for the period through _____ (Date) where the amount of $_____ is owed, and that upon the condition of receipt of said payment, the company fully releases all claims and waives all liens against the owner, its premises and property, Barnhill Contracting Company and its surety, if any.

Previous payment(s) for work performed and/or supplied on this project have been received by the undersigned from the beginning of the work through _____ (Date) in the amount of $_____. Total contract and/or purchase order commitments the company is obligated to perform on this project, both paid and unpaid, are the total sum of $_____.

I do hereby certify that all persons, firms or corporations, without limitation, who have performed work, rendered services, provided labor, materials, equipment, supplies or any other items used by the company in connection with the project have been paid in full for same up to the current period of _____(Date) and that other than those exceptions listed, there is no entitlement by the company's employees, subcontractors, material suppliers, or service providers to a lien against the owner, its premises or property, or claim against Barnhill Contracting Company or any funds owed to Barnhill Contracting Company on account of the project.

I further certify that all of the foregoing work has been properly provided, and if applicable, installed in accordance with the contract documents governing the project, and in accordance with all authorities having jurisdiction over said project.

I further certify that all workers compensation, social security, unemployment insurance and other insurance, and all federal, state and local taxes or fees have been paid in full to date; and that a proper reserve has been set up for those taxes or premiums which have been incurred but are not yet due.

I further certify that the company is complying with all applicable federal, state and local laws with respect to the requirements of this project.

In full agreement conditioned only by the above, I affix my signature this ___day of _____, 20___.

By: _____, _____ (Signature, title)

Printed name: _____

I, _____, a notary public for_____ county, _____, do hereby

certify that _____ personally appeared before me and acknowledged the due execution of the

foregoing instrument. Witness my hand and official seal on this ____ day of _____, 20 ___.

_____ (Seal) _____ (Printed name)

My commission expires on _____.

Initials: _____

_____

Attachment O
Barnhill Contracting Company
Lower Tier Subcontractor/Supplier Unconditional Final Release of Claim

TO: Barnhill Contracting Company
FROM: _____
(Lower Tier Subcontractor or Supplier)
PROJECT: _____
OWNER: _____
LOCATION: _____

The undersigned being duly sworn certifies that he/she is the _____ (Title) of _____ (Lower tier Subcontractor/Supplier), hereinafter referred to as the "Company", a party to a contract with _____ (First tier contracted with Barnhill Contracting) on the above named project.

The undersigned makes this affidavit well knowing that Barnhill Contracting Company relies upon the truth of this affidavit in making payment. Further, the undersigned makes this affidavit and certificate to induce Barnhill Contracting to make final payment for work performed and/or invoiced on this project for the period through _____ (Date) where the amount of $_____ is owed, and that upon the condition of receipt of said payment, the company fully and unconditionally releases all claims and waives all liens against the owner, its premises and property, Barnhill Contracting Company and its surety, if any.

Previous payment(s) for work performed and/or supplied on this project have been received by the undersigned from the beginning of the work through _____ (Date) in the amount of $_____. Total contract and/or purchase order commitments the company is obligated to perform on this project, both paid and unpaid, are the total sum of $_____.

I do hereby certify that all persons, firms or corporations, without limitation, who have performed work, rendered services, provided labor, materials, equipment, supplies or any other items used by the company in connection with the project have been paid in full for same up to the current period of _____(Date) and that other than those exceptions listed, there is no entitlement by the company's employees, subcontractors, material suppliers, or service providers to a lien against the owner, its premises or property, or claim against Barnhill Contracting Company or any funds owed to Barnhill Contracting Company on account of the project.

I further certify that all of the foregoing work has been properly provided, and if applicable, installed in accordance with the contract documents governing the project, and in accordance with all authorities having jurisdiction over said project.

I further certify that all workers compensation, social security, unemployment insurance and other insurance, and all federal, state and local taxes or fees have been paid in full to date; and that a proper reserve has been set up for those taxes or premiums which have been incurred but are not yet due.

I further certify that the company is complying with all applicable federal, state and local laws with respect to the requirements of this project.

In full agreement conditioned only by the above, I affix my signature this ___day of _____, 20___.

By: _____, _____ (Signature, title)

Printed name: _____

I, _____, a notary public for_____ county, _____, do hereby

certify that _____ personally appeared before me and acknowledged the due execution of the

foregoing instrument. Witness my hand and official seal on this ____ day of _____, 20 ___.

_____ (Seal) _____ (Printed name)

My commission expires on _____.

Initials: _____

_____

Attachment P
Contractor's Project Statement

Pursuant to N.C. Gen. Stat. 44A-27(f) (eff.1/1/13), the contractor shall provide to each subcontractor that it engages to perform labor or furnish material in the performance of the construction contract all the following information:

1) The name of the project:

2) The physical address of the project:

3) The name of the contracting body:

4) The name of the contractor:

   Barnhill Contracting Company

5) The name, phone number, and mailing address of an agent authorized be the contractor to accept service for the request for payment bond, the notice of public subcontract, and the notice of claim on payment bond referenced in N.C. Gen. Stat. 44A-27(b):

   Barry Harden
   Barnhill Contracting Company
   P.O. Box 31765
   Raleigh North Carolina 27622
   919-785-9181
   bharden@barnhillcontracting.com

6) The name and address of the principal place of business of the surety issuing the payment bond required by G.S. 44A-26(a) for the construction contract:

   Travelers Casualty and Surety Company of America
   Bond and Financial Products Construction Services
   1 Tower Square, 2S2B
   Hartford, Connecticut 06183

   Each subcontractor shall provide to each subcontractor or supplier with which it contracts to perform labor or furnish material in the performance of the construction contract a copy the Contractor's Project Statement.

Initials: _____

_____

ATTACHMENT E – APPLICATION FOR PAYMENT

Barnhill Contracting Company, 800 Tiffany Blvd., PO Box 7948, Rocky Mount, NC 27804

FROM: _____

PROJECT: Port of Wilmington Upgrades to South Gate Complex

PAYMENT REQUEST NO.: _____ SUBCONTRACT NO.: _____

PERIOD: _____ TO _____

STATEMENT OF CONTRACT ACCOUNT:

1. Original Contract Amount _____
2. Approved Changes (Net) (Add/Deduct) (per attached breakdown) _____
3. Adjusted Contract Amount _____
4. Value of Work Completed to Date: (per attached breakdown) _____
5. Value of Approved Change Orders Completed to Date: (per attached breakdown) _____
6. Materials Stored on Site: (per attached breakdown) _____
7. Subtotal (lines 4 + 5 + 6) _____
8. Less Amount Retained (_____ %) (_____)
9. Subtotal Less Retainage (line 7 - 8)
10. Less Total Previously Certified (_____)
11. Net Amount of this Request (line 9 - 10) _____

CERTIFICATE OF SUBCONTRACTOR:

I hereby certify that the work performed and the materials supplied to date, as shown above represent the actual value of accomplishment under the terms of the Contract (and all authorized changes thereto) between the undersigned and BARNHILL CONTRACTING relating to the above referenced project.

I also certify that all payments have been made through the period covered by previous payments received from the contractor, to (1) all my subcontractors (sub-subcontractors) and (2) for all materials and labor used in or in connection with the performance of this Contract. I further certify that I have complied with Federal, State, and local tax laws, including Social Security laws and Unemployment Compensation laws and Workmen's Compensation laws.

I further understand and agree that payments previously received or requested herein do not relieve me in any way of any responsibility for compliance with all the terms and conditions of the contract agreement with BARNHILL CONTRACTING.

DATE: _____ _____
SUBCONTRACTOR

Subscribed and sworn before me this _____

day of _____, 20_____. _____
AUTHORIZED SIGNATURE

Notary Public: _____ _____
PRINTED NAME

My Commission Expires: _____

_____
TITLE

Printed Name: _____

ATTACHMENT F – CERTIFICATE OF STORED MATERIALS

TO: BARNHILL CONTRACTING COMPANY

The below listed materials, supplies and equipment (hereinafter defined as material) are stored and can be inspected with reasonable notification.

Stored Material Item-Description	Stored Location	Quantity	Invoice Value (Invoice Copy Attached)

(Append additional sheets as needed.)

Subcontractor's material handling costs $ _____

Total Costs (invoice value plus handling cost) $ _____

Upon receipt of payment (payment defined as invoiced cost plus material handling cost without overhead and profit) as petitioned by the Subcontractor's Application for Payment No. _____

Item 6, dated _____, the undersigned hereby certifies the following:

1. Full, clear and unencumbered title and ownership of the material is transferred, assigned and vested to: New Hanover County Schools (Name of Owner).

2. The material is to be held in trust for the benefit of North Carolina State Ports Authority and for the exclusive use of the Port of Wilmington Upgrades to South Gate Complex (Project Name) until such time as the materials are incorporated into the work. The Subcontractor re-affirms his continued obligation to store and protect the material until completion of the work. All cost related to procuring, transporting, insuring and improving, repairing or leasing facilities for storage of the material, is the sole cost of the Subcontractor.

   As evidenced and surety of this obligation and for protection of the Owner's property, the Subcontractor will provide and maintain an "All Risks" insurance policy for the invoiced value of the material. Further, the Subcontractor agrees to be responsible and accountable for any and all damage to or destruction of the material, insurance coverage notwithstanding.

3. A current Certificate of Insurance coverage is attached or presently on file with Barnhill Contracting Co.

ATTEST: (Notary Public)

_____
SUBCONTRACTOR NAME

By: _____
Signature

_____
Title

ATTACHMENT G – WAIVER AND RELEASE UPON PROGRESS PAYMENTS

FOR USE BY SUBCONTRACTOR

The undersigned supplier/subcontractor/materialman/laborer ("Supplier") acknowledges that Supplier has certain lien rights which are created by statute as a result of furnishing labor, materials, or rental equipment at the site ("Premises") of the improvement ("Improvement") which is the site of the Project described below. Supplier either directly or indirectly through a subcontractor or Barnhill Contracting Co. ("Contractor") has made a written application for a Progress Payment as indicated below. Supplier knowingly WAIVES and RELEASES any and all lien rights it has or may have for furnishing labor, materials, or rental equipment at the site of the Improvement as of the date of the application for the Progress Payment as indicated below.

Upon receipt of this Progress Payment by Contractor, Supplier acknowledges and agrees that Contractor has paid for all labor, materials, or rental equipment furnished by Supplier, directly or indirectly, pursuant to Supplier's contract with Contractor, or with any supplier and or subcontractor of Contractor, or with any supplier and/or subcontractor at any tier thereafter for furnishing labor, materials, or rental equipment at the Premises, which is the site of the Project described below.

For and in consideration of this Progress Payment and other valuable considerations, and for the purpose of inducing the making of this Progress Payment, Supplier hereby waives, releases, warrants and agrees, as follows:

1) WAIVER and RELEASE: Supplier hereby waives, releases and relinquishes any and all rights to any mechanics, laborers' and/or materialmen's liens (including both liens on funds and on real property), and any and all other rights (including, but not limited to, equitable liens, rights to obtain the issuance of stop notice, and rights to assert any claim with respect to any payment or surety bond) relating to the Project, or to funds paid or to be paid in connection with any work done to and/or Improvements made on or to the Premises. This WAIVER and RELEASE relates and applies only to labor, materials or rental equipment furnished to the Improvements by Supplier through the date of the application for this Progress Payment.
2) WARRANTIES: Supplier represents and warrants that:
   a) The person executing this Waiver and Release Upon Progress Payment has the right and authority to sign and execute this document on behalf of Supplier.
   b) Supplier has fully paid or within five (5) days of the date of this Progress Payment, shall fully pay:
      i) all persons who have performed or furnished labor or professional design or surveying services at the site of the Improvement; and
      ii) all persons who have furnished any materials or rental equipment, on the Premises or to the Project; and
      iii) all taxes, licenses, fees, assessments or any other payments required to be made by Supplier to any governmental authority having jurisdiction to assess same.
   c) Supplier has not signed or executed any security agreement or other document which affects title to any part of the Premises or to any material used in connection with Improvements to the Premises:
   d) Supplier has not asserted and shall not assert a lien on funds or on the Premises, and
   e) Supplier has not assigned and shall not assign to any person or entity any right or claim for payment regarding labor, materials, or rental equipment furnished on or to the Premises.
3) INDEMNITY: Supplier agrees to defend and indemnify the owner of the Premises which is the site of the Project described below ("Owner"), Contractor, and Contractor's supplier or subcontractor with whom Supplier has a contract for which this Progress Payment has been received, from and against any and all demands or claims for payment and losses (including reasonable attorney's fees) made by any person or entity who has furnished labor, materials, or rental equipment to Supplier for Improvements on the Premises, or made by any governmental authority for taxes, licenses, fees, assessments or other payments.

NOTICE: THIS IMPORTANT LEGAL DOCUMENT UNCONDITIONALLY WAIVES YOUR LIEN RIGHTS AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THESE RIGHTS. It is a crime (punishable by a fine not exceeding One Thousand and No/100 dollars ($1,000.00) or by imprisonment not to exceed two (2) years, or by both) to make any written statement relating to sums due or claimed to be due for labor, materials, or rental equipment furnished, at the site of Improvements to the Premises which is known to be false. N.C. General Statutes ' 44A-24.

Barnhill Contracting Co. Project Number 1105119 Name of Owner: Port of Wilmington South Gate Complex

County/State of Project: New Hanover / North Carolina Owner Project Number: _____

Progress Payment: _____ Amount $ _____ Date: _____

IN TESTIMONY WHEREOF, the Supplier has caused this Waiver and Release Upon Progress payment to be executed in its name by its _____ President (or General Partner), attested by its _____ Secretary, and its corporate seal to be hereto affixed (for Corporate Suppliers), by the authority of its Board of Directors (or Partners) first duly given, this _____ day of _____, 20 _____.

Subscribed and sworn before me this _____

day of _____, 20_____.

Notary Public: _____

My Commission Expires: _____

(Notary Seal)

_____
(Corporate Name, Individual or Partnership Name)

(Corp. Seal)
(If Applicable)

BY: _____

_____
(Print Name and Title)

ATTEST: _____
(Corp. Secretary)

ATTACHMENT H – SUPPLIER/SUBCONTRACTOR INFORMATION SCHEDULE

Submitted by: _____
(Subcontractor Company Name)

Project Name: Port of Wilmington Upgrades to South Gate Complex

Barnhill Contracting Co. Project No.: 1105119

The following is a complete listing of the subcontractors and suppliers to be used by the Subcontractor named above as sources for furnishing and/or installing materials or equipment, the total value of which for any one such sub or supplier is expected to be $10,000.00 or more in connection with work on the above named project:

Sub/Supplier Name and Address	Sub/Supplier Contact Person	Contact's Telephone Number	Estimated Total Dollars to be Paid	Item of Work or Material Furnished

The information shown above is complete, true and correct to the best of my knowledge and belief.

_____
Subcontractor Signature

_____
Printed Name

ATTACHMENT I – SALES TAX SUMMARY

State of North Carolina
County Sales and Use Tax Report
Summary Totals & Certification

Contractor/Subcontractor: _____

Project Name: Port of Wilmington Upgrades to South Gate Complex For Period Ending: _____

	Total for County of:	Total for County of:	Total for County of:	Total for County of:	Total for County of:	Total for County of:	Total for County of:	Total All Counties**	Total for State**
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 on supplies, tools, and equipment which were used to perform this contract and only include those building material supplies, fixtures and equipment which actually became 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.

Subscribed and sworn before me this _____

day of _____, 20_____.

Notary Public: _____

My Commission Expires: _____

Printed Name: _____

_____
Signature of Preparer

_____
Printed Name of Preparer

Note: This Certified Statement May be Subject to audit.

ATTACHMENT I – SALES TAX DETAIL

Page _____ of _____

SALES TAX REPORT Project Name: Port of Wilmington Upgrades to South Gate Complex

General Contractor: Barnhill Contracting Co. Owner: North Carolina State Ports Authority

Subcontractor: _____ Period: _____ To _____

Vendor	Address	Invoice #	Date	Net Amount	NC Tax Amount	County Tax Amt	County Name
Total							

_____, being duly sworn, certifies that the foregoing statement of sales taxes paid in connection with the referenced contract is true to the best of his or her knowledge and belief.

_____
Signature and Title)

_____
Printed Name

_____
Company Name and Address

Subscribed and sworn before me this _____

day of _____, 20_____.

Notary Public: _____

My Commission Expires: _____

Printed Name: _____

Attachment N
Barnhill Contracting Co.
Lower Tier Subcontractor/Supplier Conditional Release of Claim

TO: Barnhill Contracting Co.
FROM: _____
(Lower Tier Subcontractor or Supplier)
PROJECT: **Port of Wilmington Upgrades to South Gate Complex**
OWNER: **North Carolina State Ports Authority**
LOCATION: **1 Shipyard Boulevard, Wilmington, NC 28412**

The undersigned being duly sworn certifies that he/she is the _____ (Title) of _____ (Lower tier Subcontractor/Supplier), hereinafter referred to as the "Company", a party to a contract with _____ (First tier contracted with Barnhill Contracting Co.) on the above named project.

The undersigned makes this affidavit well knowing that Barnhill Contracting Co. relies upon the truth of this affidavit in making payment. Further, the undersigned makes this affidavit and certificate to induce Barnhill Contracting Co. to make payment for work performed and/or invoiced on this project for the period through _____ (Date) where the amount of $_____ is owed, and that upon the condition of receipt of said payment, the company fully releases all claims and waives all liens against the owner, its premises and property, Barnhill Contracting Co. and its surety, if any.

Previous payment(s) for work performed and/or supplied on this project have been received by the undersigned from the beginning of the work through _____ (Date) in the amount of $_____. Total contract and/or purchase order commitments the company is obligated to perform on this project, both paid and unpaid, are the total sum of $_____.

I do hereby certify that all persons, firms or corporations, without limitation, who have performed work, rendered services, provided labor, materials, equipment, supplies or any other items used by the company in connection with the project have been paid in full for same up to the current period of _____(Date) and that other than those exceptions listed, there is no entitlement by the company's employees, subcontractors, material suppliers, or service providers to a lien against the owner, its premises or property, or claim against Barnhill Contracting Co. or any funds owed to Barnhill Contracting Co. on account of the project.

I further certify that all of the foregoing work has been properly provided, and if applicable, installed in accordance with the contract documents governing the project, and in accordance with all authorities having jurisdiction over said project.

I further certify that all workers compensation, social security, unemployment insurance and other insurance, and all federal, state and local taxes or fees have been paid in full to date; and that a proper reserve has been set up for those taxes or premiums which have been incurred but are not yet due.

I further certify that the company is complying with all applicable federal, state and local laws with respect to the requirements of this project.

In full agreement conditioned only by the above, I affix my signature this ___day of _____, 20___.

By: _____, _____ (Signature, title)

Printed name: _____

I, _____, a notary public for_____ county, _____, do hereby

certify that _____ personally appeared before me and acknowledged the due execution of the

foregoing instrument. Witness my hand and official seal on this ____ day of _____, 20 ___.

_____ (Seal) _____ (Printed name)

My commission expires on _____.

MBE DOCUMENTATION FOR CONTRACT PAYMENTS

Prime Contractor: _____

Address & Phone: _____

Project Name: __Port of Wilmington Upgrades to South Gate Complex_____

Pay Application #: _____ Period: _____

The following is a list of payments to be made to minority business contractors on this project for the above-mentioned period.

Firm Name	* Indicate Type of Minority	Payment Amount this Period	Total Amount Paid to Date	Total Amount Committed

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

Date: _____ Approved/Certified By: _____

Name

_____

Title

_____

Signature

THIS DOCUMENT MUST BE SUBMITTED WITH EACH PAY REQUEST & FINAL PAYMENT

CHANGE PROPOSAL FORM

Project: Port of Wilmington Upgrades to South Gate Complex
Proposal #:
Contract:
Project #: 1105119
Contractor:
Contractor #: Bid Package No.

Description of change:

					SUBTOTALS
Materials	(Attach list with Qty, Item, Unit $, Unit mh, Total mh, OT mh, Total $)				
	1 Total Direct Cost of Materials			**$0.00**	
	2 Overhead & Profit on Item 1.			**$0.00**	
	(15% maximum, includes small tools & consumables)				
	3 Sales Tax			**$0.00**	
	4 Shipping & Transportation			**$0.00**	**$0.00**
Labor					
	5 Total Manhours:	**0** MH @	**$0.00** /hr.	**$0.00**	
	6 Overhead & Profit on Item 5.			**$0.00**	
	(15% maximum on straight labor cost, not premium portion)				
	(O & P includes supervisor's time)				
	7 Payroll Taxes & Insurance	**0.0%**		**$0.00**	**$0.00**
Equipment	(Include quotes)				
	8 Equipment			**$0.00**	
	9 Overhead & Profit on Item 8.			**$0.00**	**$0.00**
	(6% maximum)				
Subcontractors	(Include quotes with material & equipment backup)				
	10 Subcontractors			**$0.00**	
	11 Overhead & Profit on Item 10.			**$0.00**	**$0.00**
	(6% maximum)				
				Subtotal of Proposal	**$0.00**
	12 Bonds (% of subtotal of proposal)	**0.0%**			**$0.00**
				TOTAL OF CHANGE PROPOSAL	**$0.00**

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

The Contractor 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.

Contractor's Signature: _____ **Date:** _____

Approval Recommended by Design Consultant: _____ **Date:** _____

Owner's Representative Approval: _____ **Date:** _____

CHANGE PROPOSAL FORM
Time and Material / Unit Price Estimate

Project: Port of Wilmington Upgrades to South Gate Complex

Proposal #:

Contract:

Project #: 1105119

Contractor:

Contractor #: Bid Package No.

Description of change:

	SUBTOTALS
Materials & Labor Estimated cost of labor & materials including shipping, overtime, payroll taxes and insurance, and overhead and profit. Maintain accurate records for billing purposes.	**$0.00**
Unit Price Work Estimated quantity of units required less allowance units not used, times the established unit cost. Maintain accurate records for billing purposes. Third party records may be required.	**$0.00**
Equipment Rental Estimated cost of equipment rental including shipping, taxes and overhead and profit. Maintain accurate records for billing purposes.	**$0.00**
Subcontractors Estimated cost of subcontracts including all subcontractor expenses. Maintain accurate records for billing purposes.	**$0.00**
Subtotal of Proposal	**$0.00**
Bonds (% of subtotal of proposal) **0.0%**	**$0.00**
*** TOTAL NOT TO EXCEED CHANGE PROPOSAL ESTIMATE**	**$0.00**

Time Extension Requests: ___day(s) Schedule Activity # Affected: _____

The Contractor agrees to perform the work outlined in this change proposal for an amount that shall not exceed the amount stated above and in accordance with the Contract documents if the work is authorized by the Owner. If the price to perform the work is expected to exceed the above stated amount, a new change proposal form for the additional work is required.

* Actual amount paid will be based on actual documented expenses.

Contractor's Signature: _____ **Date:** _____

Approval Recommended by Design Consultant: _____ **Date:** _____

Owner's Representative Approval: _____ **Date:** _____

Form OC-10

SECTION 308 FORM OF PAYMENT BOND

Date of Contract: _____

Date of Execution: _____

Name of Principal: _____

(Contractor)

_____

Name of Surety: _____

_____

Name of Contracting Body: _____

_____

Amount of Bond: _____

Project: _____

_____

KNOW ALL MEN BY THESE PRESENTS, that we, the principal and surety above named, are held and firmly bound unto the above named contracting body, hereinafter called the contracting body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the contracting body identified as shown above and hereto attached:

NOW, THEREFORE, if the principal shall promptly make payment to all persons supplying labor/material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in _____ counterparts.

Witness:

_____
(Proprietorship or Partnership)

Attest: (Corporation)

By: _____

Title: _____
(Corp. Sec. or Asst. Sec. only)

_____
Contractor: (Trade or Corporate Name)

By: _____

Title: _____
(Owner, Partner, or Corp. Pres. or Vice Pres. only)

(Corporate Seal)

_____
(Surety Company)

Witness:

_____

By: _____

Title: _____
(Attorney in Fact)

Countersigned:

_____

(Surety Corporate Seal)

_____
(N.C. Licensed Resident Agent)

_____

_____
Name and Address-Surety Agency

_____

_____
Surety Company Name and N.C. Regional or Branch Office Address

FORM OF PERFORMANCE BOND

Date of Contract: _____

Date of Execution: _____

Name of Principal: _____
(Contractor)

_____

Name of Surety: _____

_____

Name of Contracting Body: _____

_____

Amount of Bond: _____

Project: _____

_____

KNOW ALL MEN BY THESE PRESENTS, that we, the principal and surety above named, are held and firmly bound unto the above named contracting body, hereinafter called the contracting body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind, ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the contracting body, identified as shown above and hereto attached:

NOW, THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the contracting body, with or without notice to the surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in _____ counterparts.

Witness:

_____
(Proprietorship or Partnership)

Attest: (Corporation)

By: _____

Title: _____
(Corp. Sec. or Asst. Sec. only)

_____
Contractor: (Trade or Corporate Name)

By: _____

Title: _____
(Owner, Partner, or Corp. Pres. or Vice Pres. only)

(Corporate Seal)

_____
(Surety Company)

Witness:

_____

By: _____

Title: _____
(Attorney in Fact)

Countersigned:

_____

(Surety Corporate Seal)

_____
(N.C. Licensed Resident Agent)

_____

_____
Name and Address-Surety Agency

_____

_____
Surety Company Name and N.C. Regional or Branch Office Address

APPENDIX "E"

Port of Wilmington Upgrades to South Gate Complex
MWBE/SMWOB DOCUMENTATION FOR
CONTRACT PAYMENTS

Subcontractor Name: _____

Address & Phone: _____

Project Name: **Port of Wilmington Upgrades to South Gate Complex**

Pay Application #: _____ Period: From: _____To:_____

The following is a list of payments to be made to minority business contractors on this project for the above-mentioned period.

Firm Name	***Minority Category**	**Payment Amount this Period**	**Total Amount Paid to Date**	**Total Amount Committed**

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**AI**), American Indian (**AI**), White Female (**CF**)

Date: _____ Approved/Certified By: _____
Name

_____
Title

_____
Signature

****THIS DOCUMENT MUST BE SUBMITTED WITH EACH PAY REQUEST & FINAL PAYMENT****

IMPORTANT! PLEASE READ THIS FIRST!

BID FORMS ATTACHED

BP 100 – General Trades

The attached Bid Forms have been prepared specifically for your firm for the Bid Packages that you requested. If you are bidding more than one package, each Bid Package must be bid on a separate form.

Do not write anything on the form except where a blank space is provided. **All of the blanks must be filled in.**

Hand Deliver Bid Forms to the following Location:
2508 Burnett Blvd
Wilmington, NC, 28402
Delivery (Before 1:00PM) on March 10, 2020

If you elect to Mail or Overnight Bid forms send to:
Barnhill Contracting Company
272 North Front Street, Suite 420
Wilmington, NC, 28401
Delivery (Before 12:00PM) on day prior to bid

DO NOT MAIL BID FORMS DIRECTLY TO NORTH CAROLINA PORT AUTHORITY

The State of North Carolina will not allow us to accept or open bids that arrive late.

If you lose your Bid Forms, contact Barnhill Contracting Company immediately, and we will replace them for you.

It is important to look these forms over carefully as soon as you receive them. Make sure you have the correct forms. **If you are not sure how to fill out any part of the forms,** contact Barnhill Contracting Company immediately, and we will assist you in any way we can.

DOCUMENTS TO BE INCLUDED IN BID

SAMPLE

The following documents MUST BE INCLUDED in the bid proposal package, and MUST BE FULLY COMPLETED AND EXECUTED at the time of the submission of the bid.

1. Bid Form – Including Base Bid, Allowances, Unit Prices, and Alternate Pricing

   Each and every blank must be filled in

2. Acknowledgement of receipt of addenda

3. Certificate of non-collusion

4. Identification of Minority Business Participation

5. State of North Carolina Affidavit A – Listing of the Good Faith Effort

6. State of North Carolina Affidavit B – Intent to Perform Contract with Own Workforce (if you are a HUB contractor).

7. Bid Bond Form or Cashier's Check in the amount of 5% of Bid Proposal for packages that meet or exceed $300,000.00.

DOCUMENTS TO BE SUBMITTED WITHIN 72 HRS OF BID

The following document are to be prepared and submitted with supporting documentation within 72 hours of the bid time – if you are the apparent low bidder.

1. State of North Carolina Affidavit C – Portion of the Work to be Performed by Minority Firms (if you are not submitting Affidavit B above)

2. State of North Carolina Affidavit D – Good Faith Effort

3. List of all tiered subcontractors that is planned to perform work or provide material for this project.

SAMPLE

BID OPENING LOCATION AND TIME

Date: March 10, 2020
TIME: 1:00PM

LOCATION: NC Ports Materials Management Building, 2508 Burnett Blvd, Wilmington, NC, 28402

FORM OF PROPOSAL

Project: **Port of Wilmington Upgrades South Gate Complex**
Wilmington, NC
To: **North Carolina State Ports Authority**
Wilmington, NC
c/o Barnhill Contracting Company – Construction Manager

This BID PACKAGE: *BP100 General Trades*

BIDDER: _____

NC LICENSE #: _____

DATE **March 10, 2020**

BID TIME: **1:00PM**

The undersigned, as bidder, hereby declares that the only person or persons interested in this proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this proposal or in the contract to be entered into; that this proposal is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud. The bidder further declares that he has examined the site of the work and the contract documents relative thereto, and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed.

The Bidder proposes and agrees if this proposal is accepted to contract with **Barnhill Contracting Company** in the form of contract specified in the Project Bid Manual, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary to complete the construction of:

Bid Package – BP100 General Trades

in full in complete accordance with the plans, specifications and contract documents, within the overall project time – refer to E.A. Laney High School Bid Default Schedule for Milestones, to the full and entire satisfaction of the New Hanover County Public School System and Barnhill Contracting Company with a definite understanding that no money will be allowed for extra work except as set forth in the Project Bid Manual and the Contract Documents, for the sum of:

BID PACKAGE: 100 General Trades

Port of Wilmington South Gate BASE BID:

_____ Dollars ($) _____

(Write the Base Bid Amount in Words)

SAMPLE

ALLOWANCES:

1. Allowance as may be contained in specific Bid Package Scope(s) shall be included as a part of the total lump sum Bid Proposal amount. **An allowance shall include all costs including overhead, profit (mark-up) and exclude performance and payment bond costs.** The allowance is available for application at the discretion of the Construction Manager and the unused portion credited against the Contract amount. All Contract allowances will be identified in the Schedule of Values as an individual line item.
2. Utilization of any allowance shall be documented by **daily** documentation as directed by the Construction Manager.

ALLOWANCES REQUIRED IN THIS BID PACKAGE

Allowance #01 – Unit Price Allowance No. 1: Provide additional 1000 man hours of labor time for discretionary use by Construction Manager: **1000-HR.**

1000 man hours @ $_____/HR = $_____.
(Include in Base Bid)

UNIT PRICES:

1. Unit Prices as listed may be utilized by the Construction Manager to make contract cost adjustments for changes in the Work. Unit prices for completed in place Work shall include cost for labor, materials, equipment, insurances, taxes, bond premium, overhead and profit of fifteen percent (15%) and other related incidentals and remain firm and in effect for the duration of the contract. Solicited unit prices for deleted Work shall be calculated at not less than ten percent (15%) for overhead and profit.

Unit Price #01 Rate per laborer hour regular time = $_____.

Unit Price #02 Rate per laborer hour overtime = $_____.

Unit Price #03 Rate per carpenter hour regular time = $_____.

Unit Price #04 Rate per carpenter hour overtime = $_____.

ALTERNATES:

1. Alternate Prices shall include all cost associated with the changes, omissions, additions or other adjustments to the work of the Bid Package as described in the alternate, or are reasonably inferable there from. Claims for extras resulting from changes caused by the acceptance or rejection of any Alternate will not be allowed.
2. Alternate Prices shall also include all cost of overhead, profit, and bond premiums associated with the work of the Alternate whether additive or deductive. The Drawings, Specifications, Project Bid Manual, Addendum(s), and other Contract Documents shall be considered appropriately modified by either the acceptance or rejection of the various Alternatives.
3. The Construction Manager and Owner expressly reserve the right to accept or reject any, or all, Alternate Prices and in any sequence. Acceptance or rejection of any alternate does not relieve the Bidder of timely completion of the Work within the time periods indicated.

SAMPLE

ALTERNATES REQUIRED IN THIS BID PACKAGE

Alternate No. G-2: All work associated with renovations to the athletic support spaces. State an alternate price to remove and reinstall lockers in the designated area.

ADD / DEDUCT _____ Dollars $_____
(Circle One) (Write the Amount in Words)

SAMPLE

MINORITY BUSINESS PARTICIPATION REQUIREMENTS;

Provide with the bid - Under GS 143-128.2(c) the undersigned bidder shall identify **on its bid** (Identity of Minority Business Participation Form) the minority businesses that it will use on the project with the total dollar value of the bids that will be performed by the minority businesses. **Also** list the good faith efforts (Affidavit **A**) made to solicit minority participation in the bid effort.

NOTE: A contractor that performs all of the work with its own workforce may submit an Affidavit (**B)** to that effect in lieu of the participation form and Affidavit (**A)** required above.

After the bid opening - The Owner will consider all bids and alternates and determine the lowest responsible, responsive bidder. Upon notification of being the apparent low bidder, the bidder shall then file within 72 hours of the notification of being the apparent lowest bidder, the following:

An Affidavit (**C**) that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is **equal to or more than the 10% goal** established. This affidavit shall give rise to the presumption that the bidder has made the required good faith effort and Affidavit **D** is not necessary;

OR

If less than the 10% goal, Affidavit (**D**) of its good faith effort to meet the goal shall be provided. The document must include evidence of all good faith efforts that were implemented, including any advertisements, solicitations and other specific actions demonstrating recruitment and selection of minority businesses for participation in the contract.

Note: Bidders must submit **with their bid** the Identification of *Minority Business Participation* list and *Affidavit A* **or** *Affidavit B* as applicable. Failure to file a required affidavit or documentation with the bid or after being notified apparent low bidder may be grounds for rejection of the bid.

SAMPLE

PROPOSAL SIGNATURE PAGE

The bidder further proposes and agrees to commence work under this contract on a date to be specified by the Construction Manager at Risk, and shall pursue the scope of work included in his contract in accordance with the schedule prepared by the Construction Manager at Risk.

Respectfully submitted this,

_____ Day of _____, 2016

(Write the Date of the Month in Words) (Write the Name of the Current Month)

WITNESS:

_____

(Witness Signs Here if you are a Proprietorship or Partnership)

By: _____

(Printed Name of Person Signing Bid)

_____

(Signature)

ADDRESS:

_____

_____

_____

TITLE: _____

(Owner, Partner, President or Vice President)

LICENSE # _____

FEDERAL ID # _____

ATTEST:

By: _____

TITLE: _____

(Corporate Secretary or Asst. Secretary only)

(CORPORATE SEAL)

SAMPLE

Addendum received and used in computing bid. The Bid Price(s) stated in this Bid Proposal **(circle one)** INCLUDES DOES NOT INCLUDE all Addenda. In space provided below **write** the addendum number(s) received:

List of Addenda Received by Number: _____

FORM OF NON-COLLUSION & CONTRACT AFFIDAVIT

STATE OF: NORTH CAROLINA

COUNTY OF: _____

PROJECT NAME: Port of Wilmington South Gate Complex
North Carolina State Ports Authority
Wilmington, NC

CONTRACTOR _____, being first duly sworn, deposes

and says that he is_____ (sole owner, a partner, president, secretary, etc.) of

_____, the party making the forgoing bid;

1) That such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization or corporation;
2) That the proposal is made without contact or collusion, directly or indirectly, with any other person, partnership, company, association, organization or corporation making a bid proposal;
3) That said bidder has not directly or indirectly induced or solicited any other bidder to submit a false or sham bid;
4) That said bidder has not directly or indirectly induced, colluded, or conspired, convinced or agreed with any bidder or anyone else to refrain from bidding;
5) That said bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with anyone to fix the Bid Price of said bidder or any other bidder, or to fix any overhead, profit or cost element of such Bid Price, or of that of any other bidder, or to secure any advantage against the New Hanover County Public School System or any party interested in the proposed Contract;
6) That the bidder declares that he/she has examined the site of the work and the contract document relative to thereto, and has read all special provisions furnished prior to the opening of bids; that he /she has satisfied themselves relative to the work to be performed
7) That the bidder proposes and agrees if this proposal is accepted to contract with Barnhill Contracting Company on behalf of the New Hanover County Public School System in the form of contract specified and to furnish all necessary material, equipment machinery, tools, apparatus, means of transportation and labor necessary to complete the construction of E.A. Laney High School as reflected in the scope of work as listed on the attached bid form.
8) And that in full satisfaction of the New Hanover County Public School System, Sawyer Sherwood & Associate Architecture and Barnhill Contracting Company with a definite understanding that no money will be allowed for extra work except as set forth in the General Conditions, the Supplementary/Supplemental General Conditions and the Contract Documents.

I hereby submit that all statements contained above in all respects are made in good faith and are true as written.

Signed: _____

Title: _____

State of ____, County of _____

Sworn to and subscribed before me,

This the _____ day of _____, 20____

_____
Notary Public

Seal

My Commission Expires: _____

SAMPLE

FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS THAT _____ _____ as principal, and _____, as surety, who is duly licensed to act as surety in North Carolina, are held and firmly bound unto the State of North Carolina* through __Barnhill Contracting Company_____ as obligee, in the penal sum of 5% of Amount of Bid DOLLARS, lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Signed, sealed and dated this ____ day of _____ 20__

WHEREAS, the said principal is herewith submitting proposal for and the principal desires to file this bid bond in lieu of making the cash deposit as required by G.S. 143-129.

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION is such, that if the principal shall be awarded the contract for which the bid is submitted and shall execute the contract and give bond for the faithful performance thereof within ten days after the award of same to the principal, then this obligation shall be null and void; but if the principal fails to so execute such contract and give performance bond as required by G.S. 143-129, the surety shall, upon demand, forthwith pay to the obligee the amount set forth in the first paragraph hereof. Provided further, that the bid may be withdrawn as provided by G.S. 143-129.1

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

Appendix F

Sexual Offender Registry Check Certification Form

PLEASE SUBMIT THIS FORM TO YOUR OWNER'S REPRESENTATIVE

Project Name: _____Port of Wilmington Upgrades to South Gate Complex_____
Contract: BP No. & Name _____

Check the appropriate box to indicate the type of check:

☐ Initial ☐ Supplemental ☐ Annual

I, _____ (insert name), _____ (insert title) of _____ (insert company name) hereby certify that I have performed all of the required sexual offender registry checks required under this Agreement for all contractual personnel (employees, agents, ownership personnel, or contractors) who may be used to deliver goods or provide services under this Agreement, including the North Carolina Sex Offender and Public Protection Registration Program, the North Carolina Sexually Violent Predator Registration Program, and the National Sex Offender Registry. I further certify that none of the individuals listed below appears on any of the above-named registries and that I will not assign any individual to deliver goods or perform services under this Agreement if said individual appears on any of the sex offender registries. I agree to maintain all records and documents associated with these registry checks, and that I will provide such records and documents to the school system upon request. I specifically acknowledge that the school system retains the right to audit these records to ensure compliance with this section at any time in the school system's sole discretion. I acknowledge that I am required to perform these checks and provide this certification form before any work is performed under the Agreement (initial check), any time additional contractual personnel may perform work under the Agreement (supplemental check), and at each anniversary date of the Agreement (annual check).

	Contractual Personnel Names	**Job Title**
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____

I attest that the forgoing information is true and accurate to the best of my knowledge.

_____ (print name)

_____ (signature / date)

BARNHILL CONTRACTING COMPANY

Submittal Cover Form

Project: Port of Wilmington Upgrades to South Gate Complex

Date of Submittal: _____

Project #: _____

Architect (name & address): Mott MacDonald Architects – 7621 Purfoy Rd, Fuquay-Varina, NC 27526

Contractor (name & address): CM@ Risk (Barnhill Contracting Company)

272 North Front St, Suite 420 Wilmington NC 28401

Subcontractor (name & address): _____

_____

Supplier (name & address): _____

_____

Manufacturer (name & address): _____

_____

SPECIFICATION SECTION	SPECIFICATION PARAGRAPH	DESCRIPTION OF ITEM SUBMITTED

We warrant the following:

a. We have personally investigated the proposed product and determined that it is equal in all respects to that specified and/or performance specification requirements.
b. We will provide the specified guarantee for this product.
c. We will coordinate installation of this product into the work, making such changes as may be required for the work to be complete in all aspects.
d. We have clearly indicated by marking as "Non-Complying Feature" each and every requirement of the specifications that this product does not meet.
e. And, we waive all claims for additional costs related to this product which subsequently become apparent.

Submitted by: _____
(Your Signature)

Barnhill Contracting Company's Review	Architect/Engineer's Review

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Section Eight

Appendices

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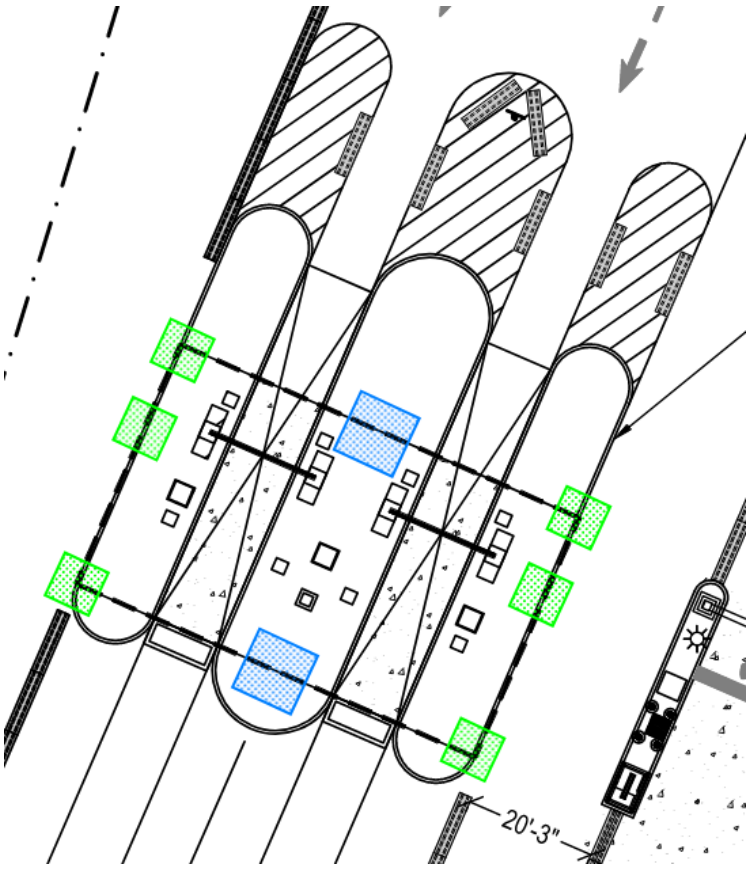
Barn and Canopy Foundation Assumptions

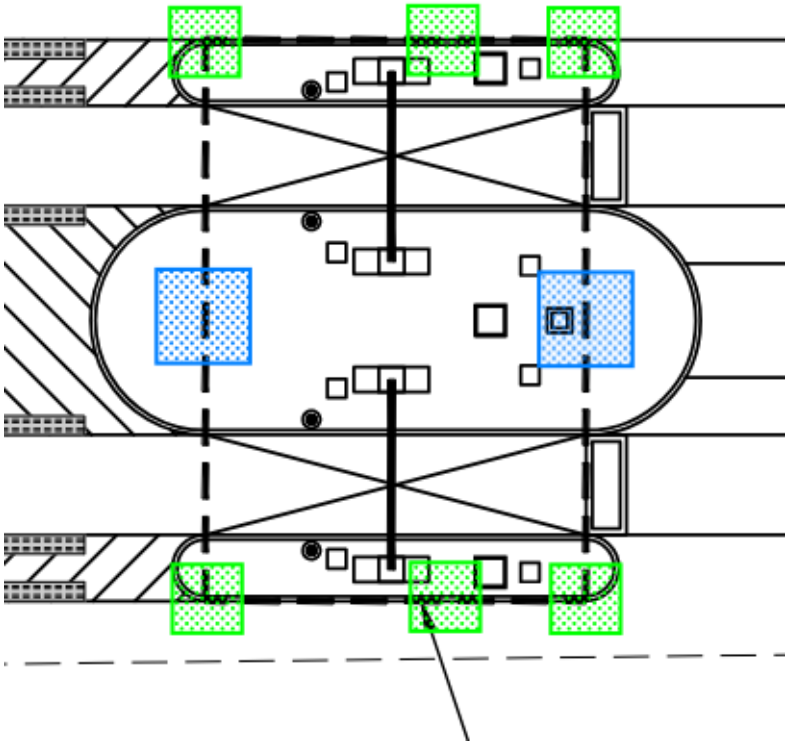
Inbound OCR Barn (reference CS-103)



OCR Perimeter Footing - 7.5'x7.5'x1.5' x (6) locations = ~~ 19 CY

OCR Interior Footing - 10'x10'x1.5' x (2) locations = ~~ 12 CY

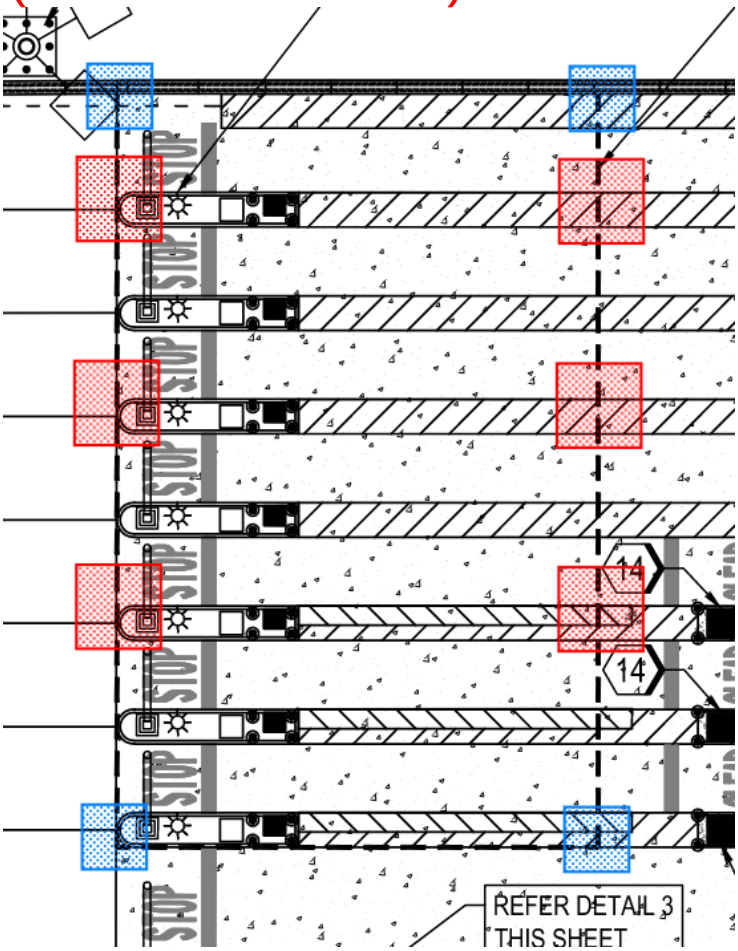
Outbound OCR Barn (reference CS-104)



OCR Perimeter Footing - 7.5'x7.5'x1.5' x (6) locations = ~~ 19 CY

OCR Interior Footing - 10'x10'x1.5' x (2) locations = ~~ 12 CY

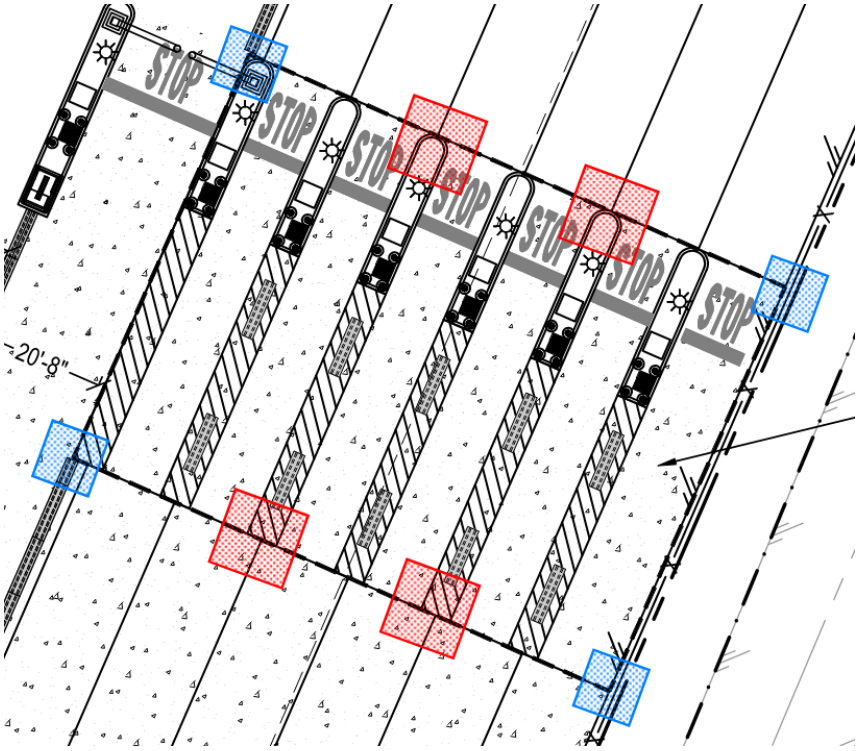
Inbound Interchange Canopy (reference CS-104)



OCR Perimeter Footing - 10'x10'x1.5' x (4) locations = ~~ 23 CY

OCR Interior Footing - 13.5'x13.5'x1.5' x (6) locations = ~~ 61 CY

Outbound Interchange Canopy (reference CS-103)



OCR Perimeter Footing - 10'x10'x1.5' x (4) locations = ~~ 23 CY

OCR Interior Footing - 13.5'x13.5'x1.5' x (4) locations = ~~ 41 CY

ASBESTOS ASSESSMENT

CONTAINER OFFICE AND INSPECTION SHED

PORT OF WILMINGTON
WILMINGTON, NORTH CAROLINA 28402

ECS PROJECT NO. 49:8300-A

FOR: NC STATE PORTS AUTHORITY

SEPTEMBER 9, 2019

September 9, 2019

Mr. Todd Walton
NC State Ports Authority
2202 Burnett Blvd.
Wilmington, North Carolina 28402

ECS Project No. 49:8300-A

Reference: Asbestos Assessment, Container Office and Inspection Shed, Port of Wilmington, Wilmington, North Carolina

Dear Mr. Walton:

ECS Southeast, LLP (ECS) is pleased to provide the NC State Ports Authority with the results of the above referenced Asbestos Assessment performed at the Container Office and Inspection Shed located at Port of Wilmington in Wilmington, North Carolina. This report summarizes our observations, analytical results, findings, and recommendations related to the work performed. The work described in this report was performed by ECS in general accordance with the Scope of Services described in ECS Proposal Number 49:15445 and the terms and conditions of the agreement authorizing those services.

ECS appreciates this opportunity to provide NC State Ports Authority with our services. If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely,

ECS Southeast, LLP

Amy DeSaix, REM
Environmental Assistant Department Manager
adesaix@ecslimited.com
910-319-1000

Lindsey Lucas, REM
Environmental Principal
llucas1@ecslimited.com
864-987-1810

EXECUTIVE SUMMARY

ECS was contacted by the North Carolina State Port Authority to perform an asbestos assessment of the Container Office and Inspection Shed at the Port of Wilmington. The Container Office is an approximate 3,186 square foot, single-story office building constructed in 1987. The Inspection Shed is an approximate 11,407 square foot drive-through shelter with seven inspector booths constructed in 1986.

The purpose of the assessment was to determine if asbestos-containing materials (ACMs) are present on the subject property. The assessment was performed within interior and exterior areas of the subject buildings as well as accessible areas of the roof.

Sampled material consisted of black and brown cove base and mastic, cream and green vinyl floor tile and mastic, ceramic tile with black mastic, textured rubber tile with mastic, sink coating, drywall and joint compound, suspended ceiling tiles, vibration dampener, exterior window caulk, exterior stucco, and exterior caulk in the Container Office. Ceiling tiles were sampled in the exterior walkway separating the Container Office from the Inspections Shed. Materials sampled in the Inspection Shed included cove base and mastic, drywall and joint compounds, floor tile and mastic, and exterior caulking. Both buildings contained a metal roof.

Based on the laboratory analysis of the bulk samples collected during the assessment, none of the materials tested were reported to contain asbestos.

The executive summary is an integral portion of this report, however, ECS recommends the report be read in its entirety.

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1.0 SITE DESCRIPTION

The site is the Container Office and Inspection Shed at the North Carolina State Port Authority - Port of Wilmington. The Container Office is an approximate 3,186 square foot, single story office building constructed in 1987. The Inspection Shed is an approximate 11,407 square foot drive-through shelter with seven inspector booths which were constructed in 1986. The site is occupied with an approximately 3,186 square foot, single-story office building as well as a shipping-container building. Building finishes observed within the buildings appeared to consist of a concrete sub-floor, vinyl floor tiles and ceramic tiles; the wall systems consist of drywall wallboard; and the ceiling systems consist of a suspended drop ceiling which is composed of ceiling tiles and drywall. The exterior walls of the buildings consist mainly of stucco and metal siding with a metal roof.

2.0 PURPOSE

The purpose of the limited asbestos assessment was to identify asbestos-containing materials (ACMs) which may require special handling and/or disposal if removed during construction activities. The identification of ACMs may require trained labor, regulated work practices, and special disposal.

3.0 METHODOLOGY

ECS performed the authorized Scope of Services in general accordance with our proposal, standard industry practice(s) and methods specified by regulation(s) for the identification of ACMs.

3.1 Asbestos-Containing Materials

The non-destructive asbestos assessment was performed on August 28, 2019 by asbestos inspector, Ms. Amy DeSaix, who has received EPA accredited training and is licensed by North Carolina (NC Inspector No. 12107). Samples of suspect ACMs were collected utilizing hand tools and placed into individual, labeled plastic bags. Unique bulk suspect ACM samples were submitted to EMSL Analytical Inc. (EMSL)in Pinesville, North Carolina for analysis via Polarized Light Microscopy (PLM) in accordance with current Environmental Protection Agency EPA-600 methodology. Materials consisting of additional layers were analyzed separately. EMSL is listed as an accredited laboratory by the National Voluntary Laboratory Accreditation Plan (NVLAP) managed by the National Institute of Standards and Technology (NIST) for bulk sample analysis by currently approved EPA methodology by PLM.

During the survey, ECS attempted to identify suspect ACMs in readily accessible areas. However, due to the destructive means required to identify some materials, certain areas were deemed inaccessible (i.e. behind walls or sub grade materials) and were not surveyed for suspect ACMs.

Samples were collected in general accordance with EPA Standard 40 CFR 763 Subpart E, Asbestos Hazard Emergency Response Act (AHERA) and OSHA Standard 29 CFR 1926.1101 Inspection Protocol. Multiple samples of each unique material were submitted. Samples were analyzed using “Positive Stop” methodology. If one sample of a homogeneous material is reported to contain asbestos, the remaining samples of that material are not analyzed. EPA regulations stipulate that if one sample contains asbestos the entire quantity of that material contains asbestos, regardless of additional analysis.

Sampled material consisted of black and brown cove base and mastic, cream and green vinyl floor tile and mastic, ceramic tile with black mastic, textured rubber tile with mastic, sink coating, drywall and joint compound, suspended ceiling tiles, vibration dampener, exterior window caulk, exterior stucco, and exterior caulk in the Container Office. Ceiling tiles were sampled in the exterior walkway separating the Container Office from the Inspections Shed. Materials sampled in the Inspection Shed included cove base and mastic, drywall and joint compounds, floor tile and mastic, and exterior caulking.

4.0 RESULTS

The following is a summary of laboratory results, findings and observations.

4.1 Asbestos-Containing Materials

In total, 46 bulk samples from 21 homogeneous areas were submitted to the laboratory of which 68 layers were analyzed. An ACM is defined as any material containing more than one percent (>1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 Code of Federal Regulations (CFR) Part 763, Section 1, PLM. Materials are categorized by the U.S. EPA in the following categories:

- Friable ACMs are defined as any ACM that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. Non-friable ACMs are defined as any ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
- Category I non-friable ACM are listed as following: packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than one percent (>1%) asbestos.
- Category II non-friable ACM are listed as any material, excluding Category I non-friable ACM, containing more than one percent (>1%) asbestos.

Regulated Asbestos Containing Materials (RACM) are friable ACM or non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading or has crumbled, been pulverized, or reduced to powder in the course of renovation and/or demolition operations.

EMSL submitted a signed final laboratory report to ECS on September 4, 2019. None of the materials submitted for analysis to EMSL were reported to contain asbestos. A complete list of the sampled materials submitted for analysis and sample locations are located in the Appendix of this report. Photographs of collected samples are also located in the Appendix of this report.

4.2 Suspect or Assumed Asbestos-Containing Materials

Due to the inaccessibility or the destructive means that asbestos sampling requires, additional suspect ACMs may remain within the building hidden behind inaccessible areas that include, but are not limited to, sub-grade walls, structural members, topping slabs, sub-grade sealants, flooring located below underlayments, areas behind exterior walls, pipe trenches, and subsurface utilities, etc. Additionally, the upper roof of the Container Office and the roof of the Container Shed were inaccessible and were not assessed.

If these materials are discovered during construction activities, they should be presumed to contain asbestos and be treated as ACMs or be sampled immediately upon discovery and prior to disturbance

for asbestos content by a certified asbestos inspector in accordance with 29 CFR 1926.1101.

5.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS

Based on our understanding of the purpose of the Asbestos Assessment, the results of laboratory analysis, and our findings and observations, ECS presents the following recommendations.

5.1 Asbestos-Containing Materials

None of the bulk samples submitted to EMSL were reported to contain detectable concentrations of asbestos. If additional suspect asbestos-containing materials are uncovered which were not accessible during this sampling event, it is recommended that these materials be sampled or tested immediately upon discovery for asbestos content by an asbestos inspector in accordance with 29 CFR 1926.1101.

6.0 LIMITATIONS

The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards that may potentially cause damage, accidents, or injuries.

The observations, conclusions, and recommendations pertaining to environmental conditions at the subject site are necessarily limited to conditions observed, and/or materials reviewed at the time this study was undertaken. No warranty, expressed or implied, is made with regard to the conclusions and recommendations presented within this report. This report is provided for the exclusive use of the client. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties without the written consent of ECS and the client.

Our recommendations are in part based on federal, state, and local regulations and guidelines. ECS does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies, any conditions at the site that may present a potential danger to public health, safety, or the environment. Under this scope of services, ECS assumes no responsibility regarding any response actions initiated as a result of these findings. General compliance with regulations and response actions are the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements.

Appendix I: Figures

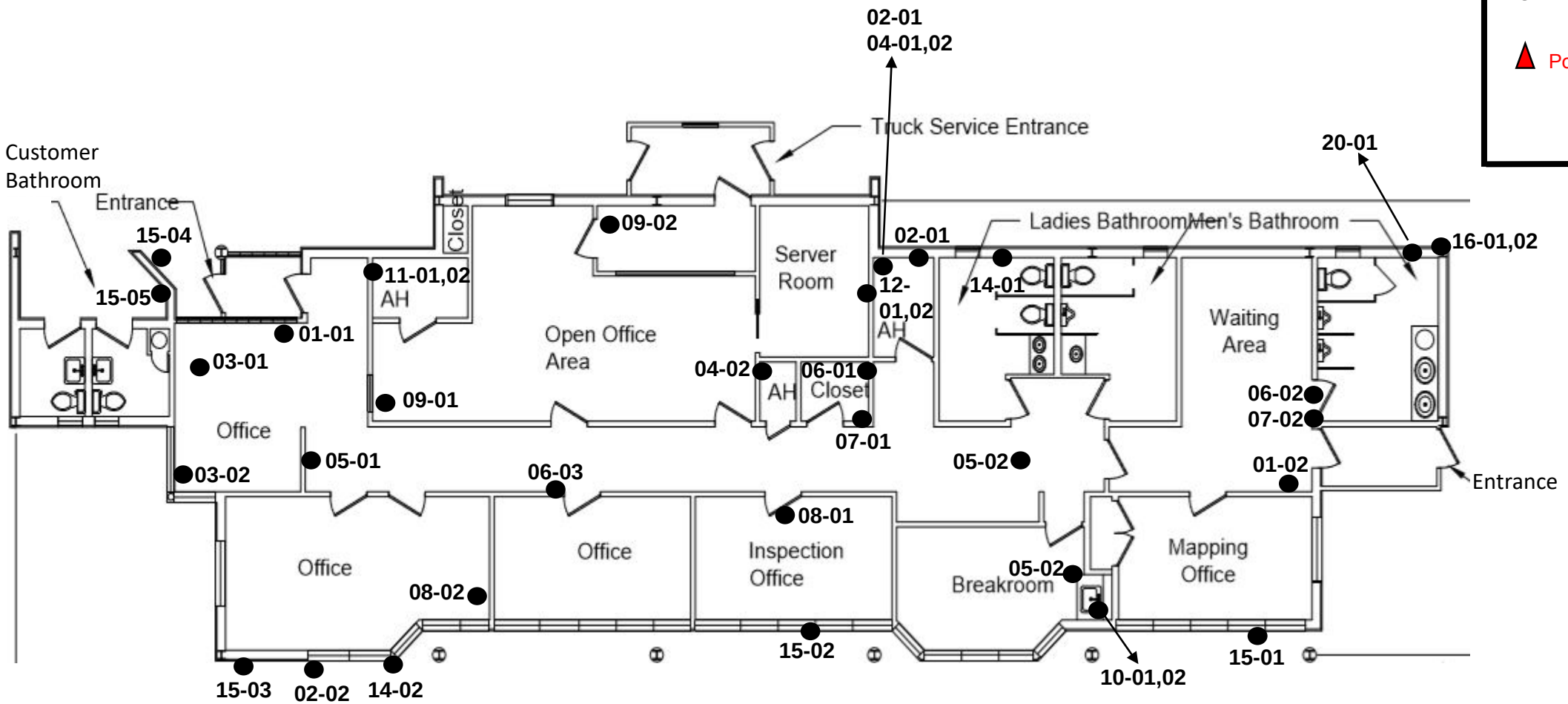


NEW □AN□□E□ C□□NT□
□□S

N□T T□ SCA□E

FIGURE 1
S□TE □□CAT□□N
C□NTA□NE□ □□□□CE □
□NSPECT□□NS S□E□
STATE P□□TS, W□□M□N□T□N,
N□□T□ CA□□□□NA 28401

ECS P□□□ECT N□. 49-8300-A



B□□□□N□ □A□□AM
P□□□□E□ B□ NCSPA

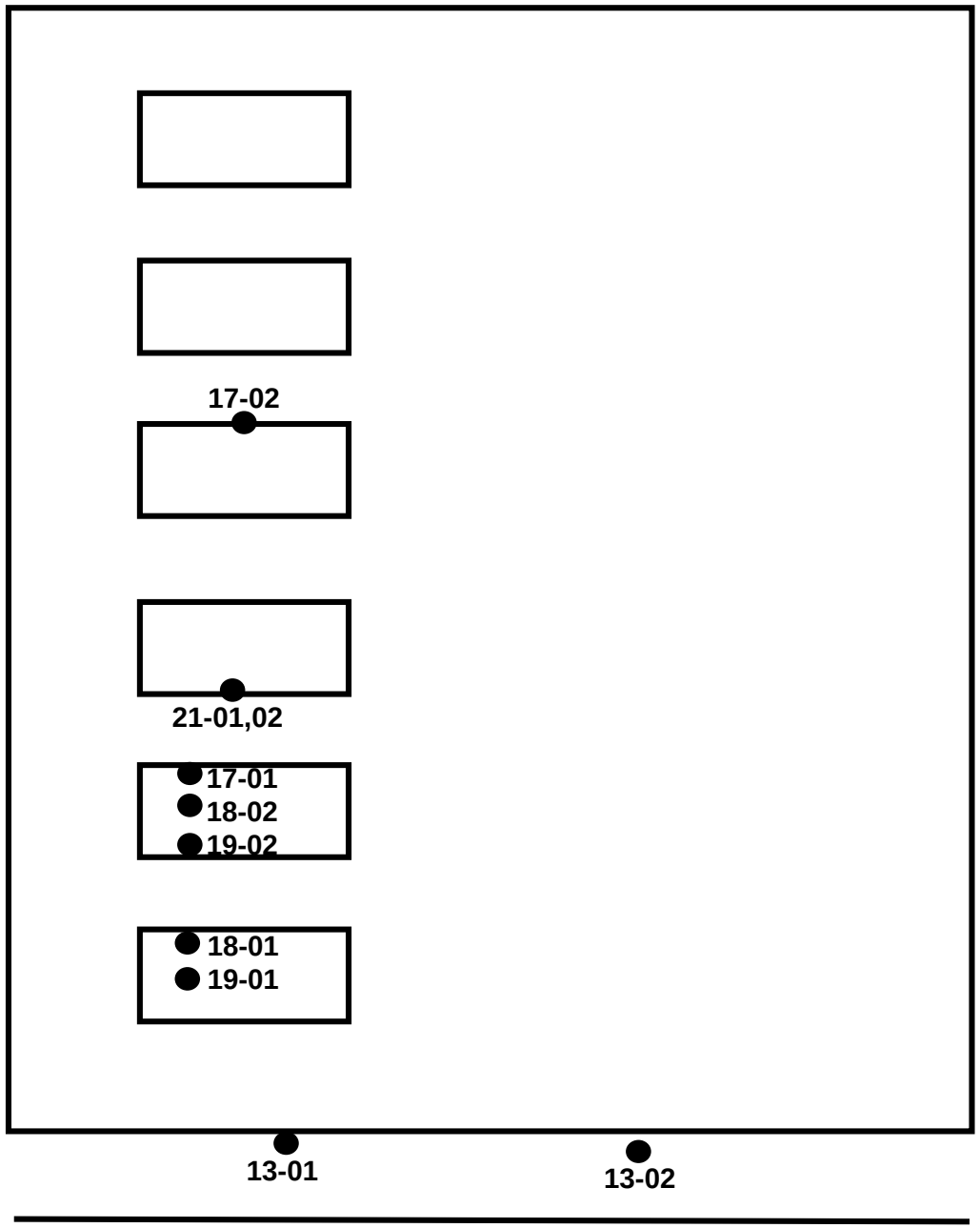
□ETA□S B□ ECS

N□T T□ SCA□E

FIGURE 2
ASBEST□S SAMP□E □□CAT□NS

C□NTA□NE□ □□□□CE
STATE P□□TS, W□M□N□T□N,
N□□T□ CA□□□NA 28401

ECS P□□□ECT N□. 49-8300-A



Legend

Negative Sample Location

Positive Sample Location

B□□□□N□ □A□□AM
P□□□□E□ B□ NCSPA

□ETA□S B□ ECS

N□T T□ SCA□E

FIGURE 3
ASBEST□S SAMP□E □□CAT□NS

□NSPECT□N S□E□
STATE P□□TS, W□M□N□T□N,
N□□T□ CA□□□NA 28401

ECS P□□□ECT N□. 49-8300-A

Appendix II: Site Photographs



1 - View of the Inspection Shed and associated booths



2 - Exterior view of the Container Office with attached walkway and Inspections Shed to the left



3 - Image of Roofing Structure



4 - Interior of the Inspection Shed



5 - Black cove base in the Container Office (HA-1)



6 - Brown cove base in the Container Office (HA-2)



7 - Cream floor tile in the Container Office (HA-3)



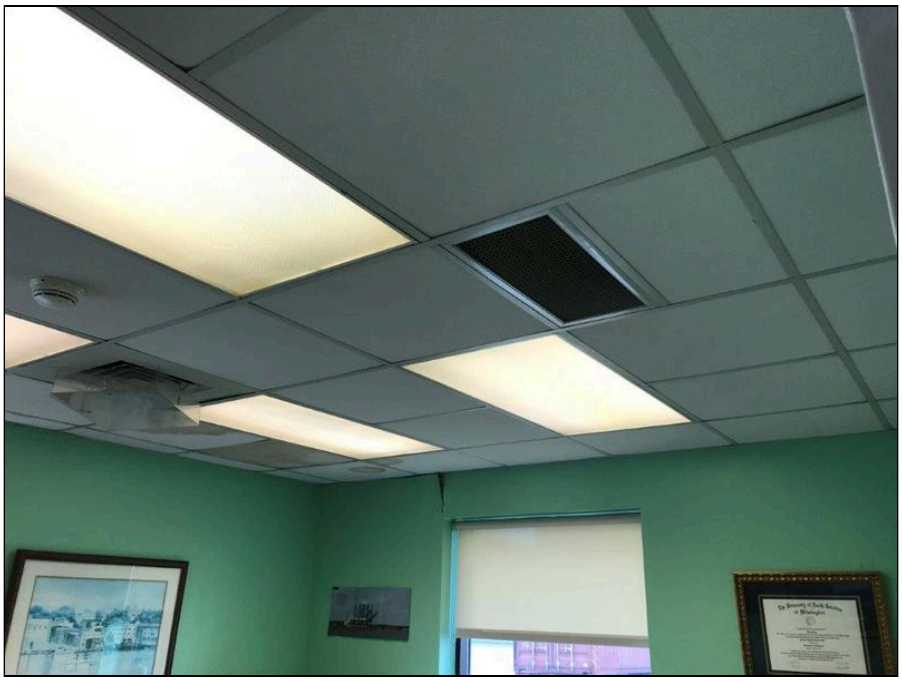
8 - Green floor tile in the Container Office (HA-4)



9 - Ceramic floor tile in the Container Office (HA-5)



10 - Drywall and joint compound in the Container Office (HA-6)



11 - Ceiling tiles in the Container Office (HA-7)



12 - Textured rubber floor tile in Container Office (HA-8)



13 - Grey floor tile with white spots in the Container Office (HA-9)



14 - Under sink coating in the Container Office (HA-10)



15 - Ceiling tile within the Container Office (HA-11)



16 - Ceiling tile in the walkway (HA-13)



17 - Window caulk on the Container Office (HA-14)



18 - Stucco exterior of the Container Office (HA-15)



19 - White caulk on the Container Office (HA-16)



20 - Cove base, drywall, and floor tile in the Inspection Shed (HA-17, 18, and 19)



21 - Black exterior caulk on the Container Office (HA-20).



22 - Caulk around AC units at Inspection Shed kiosks (HA-21)

Appendix III: Asbestos Bulk Sample Results

EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

http://www.EMSL.com / charlottelab@emsl.com

EMSL Order:	411908681
Customer ID:	ENCS55
Customer PO:	
Project ID:	

Attention:	ECS Southeast, LLP - Wilmington ECS Southeast, LLP 6714 Netherlands Drive Wilmington, NC 28405	**Phone:**	(910) 686-9114
		Fax:	(864) 987-1615
		Received Date:	08/30/2019 8:00 AM
		Analysis Date:	09/04/2019
		Collected Date:	08/28/2019
Project:	NCSPA/ 49-8300A Dept 8.4		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1-1-Cove Base *411908681-0001*	Interior (Main Building) - Black Covebase	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1-1-Mastic *411908681-0001A*	Interior (Main Building) - Black Covebase	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1-2-Cove Base *411908681-0002*	Interior (Main Building) - Black Covebase	Black Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-2-Mastic *411908681-0002A*	Interior (Main Building) - Black Covebase	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-1-Cove Base *411908681-0003*	Air Handling Room - Brown Covebase	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-1-Mastic *411908681-0003A*	Air Handling Room - Brown Covebase	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-2-Cove Base *411908681-0004*	Air Handling Room - Brown Covebase	Brown Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
2-2-Mastic *411908681-0004A*	Air Handling Room - Brown Covebase	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
3-1-Floor Tile *411908681-0005*	Office - Cream Floor Tile w/ Yellow Mastic	Gray/White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
3-1-Mastic *411908681-0005A*	Office - Cream Floor Tile w/ Yellow Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
3-2-Floor Tile *411908681-0006*	Office - Cream Floor Tile w/ Yellow Mastic	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
3-2-Mastic *411908681-0006A*	Office - Cream Floor Tile w/ Yellow Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
4-1-Floor Tile *411908681-0007*	Alt Closet - Green Floor Tile w/ Yellow Mastic	White/Green Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
4-1-Mastic *411908681-0007A*	Alt Closet - Green Floor Tile w/ Yellow Mastic	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-2-Floor Tile *411908681-0008*	Alt Closet - Green Floor Tile w/ Yellow Mastic	Green Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
4-2-Mastic *411908681-0008A*	Alt Closet - Green Floor Tile w/ Yellow Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

Initial report from: 09/04/2019 15:32:06

EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 411908681
Customer ID: ENCS55
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
5-1-Floor Tile *411908681-0009* *No ceramic tile present*	Hallway - Ceramic Floor Tile w/ Black Mastic	Gray Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
5-1-Mastic *411908681-0009A*	Hallway - Ceramic Floor Tile w/ Black Mastic	Black Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
5-2-Floor Tile *411908681-0010* *No ceramic tile present*	Hallway - Ceramic Floor Tile w/ Black Mastic	Gray Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
5-2-Mastic *411908681-0010A*	Hallway - Ceramic Floor Tile w/ Black Mastic	Black Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
6-1-Drywall *411908681-0011*	Interior (Main Building) - Drywall & Joint Compound	Brown/Gray Fibrous Homogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
6-1-Joint Compound *411908681-0011A*	Interior (Main Building) - Drywall & Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
6-1-Tape *411908681-0011B*	Interior (Main Building) - Drywall & Joint Compound	Beige Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
6-2-Drywall *411908681-0012*	Interior (Main Building) - Drywall & Joint Compound	Brown/Gray Fibrous Homogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
6-2-Joint Compound *411908681-0012A*	Interior (Main Building) - Drywall & Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
6-3-Drywall *411908681-0013*	Interior (Main Building) - Drywall & Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
6-3-Joint Compound *411908681-0013A*	Interior (Main Building) - Drywall & Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
7-1 *411908681-0014*	Interior (Main Building) - Ceiling Tile	Gray/White Fibrous Homogeneous	45% Cellulose 15% Min. Wool	10% Perlite 30% Non-fibrous (Other)	None Detected
7-2 *411908681-0015*	Interior (Main Building) - Ceiling Tile	Gray/White Fibrous Homogeneous	55% Cellulose 15% Min. Wool	10% Perlite 20% Non-fibrous (Other)	None Detected
8-1-Floor Tile *411908681-0016*	Offices - Texture Rubber Floor Tile Yellow Mastic	Gray Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
8-1-Mastic *411908681-0016A*	Offices - Texture Rubber Floor Tile Yellow Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
8-2-Floor Tile *411908681-0017*	Offices - Texture Rubber Floor Tile Yellow Mastic	Gray Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
8-2-Mastic *411908681-0017A*	Offices - Texture Rubber Floor Tile Yellow Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
9-1-Floor Tile *411908681-0018*	Main Office - Floor Tile-Grey w/ White Spots & Black Mastic	Gray Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected

Initial report from: 09/04/2019 15:32:06

EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 411908681
Customer ID: ENCS55
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
9-1-Mastic *411908681-0018A*	Main Office - Floor Tile-Grey w/ White Spots & Black Mastic	Black Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
9-2-Floor Tile *411908681-0019*	Main Office - Floor Tile-Grey w/ White Spots & Black Mastic	Gray Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
9-2-Mastic *411908681-0019A*	Main Office - Floor Tile-Grey w/ White Spots & Black Mastic	Black Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
10-1 *411908681-0020*	Break Room - Under Sink Coating	White Non-Fibrous Homogeneous	3% Cellulose	10% Ca Carbonate 87% Non-fibrous (Other)	None Detected
10-2 *411908681-0021*	Break Room - Under Sink Coating	White Fibrous Homogeneous	4% Cellulose	10% Ca Carbonate 5% Mica 81% Non-fibrous (Other)	None Detected
11-1 *411908681-0022*	Alt Room - Pinhole Ceiling Tile	Gray/White Fibrous Homogeneous	45% Cellulose 15% Min. Wool	10% Perlite 30% Non-fibrous (Other)	None Detected
11-2 *411908681-0023*	Alt Room - Pinhole Ceiling Tile	Gray/White Fibrous Homogeneous	55% Cellulose 15% Min. Wool	10% Perlite 20% Non-fibrous (Other)	None Detected
12-1 *411908681-0024*	Alt Room - Vibration Dampener	Black Fibrous Homogeneous	10% Synthetic	90% Non-fibrous (Other)	None Detected
12-2 *411908681-0025*	Alt Room - Vibration Dampener	Black Fibrous Homogeneous	10% Synthetic	90% Non-fibrous (Other)	None Detected
13-1 *411908681-0026*	Exterior Walkway - Textured Ceiling Tile	Gray Fibrous Homogeneous	60% Min. Wool	40% Non-fibrous (Other)	None Detected
13-2 *411908681-0027*	Exterior Walkway - Textured Ceiling Tile	Gray Fibrous Homogeneous	80% Min. Wool	15% Ca Carbonate 5% Non-fibrous (Other)	None Detected
14-1 *411908681-0028*	Exterior - Exterior Window Caulk	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
14-2 *411908681-0029*	Exterior - Exterior Window Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
15-1 *411908681-0030*	Exterior - Stucco	White Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
15-2 *411908681-0031*	Exterior - Stucco	White Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
15-3 *411908681-0032*	Exterior - Stucco	White Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
15-4 *411908681-0033*	Exterior - Stucco	White Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
15-5 *411908681-0034*	Exterior - Stucco	White Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
16-1 *411908681-0035*	Exterior Base of Siding - Exterior White Caulk	Gray/White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected

Initial report from: 09/04/2019 15:32:06

EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 411908681
Customer ID: ENCS55
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
16-2 *411908681-0036*	Exterior Base of Siding - Exterior White Caulk	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
17-1-Cove Base *411908681-0037*	Outdoor Kiosk - Covebase & Mastic	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
17-1-Mastic *411908681-0037A*	Outdoor Kiosk - Covebase & Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
17-2-Cove Base *411908681-0038*	Outdoor Kiosk - Covebase & Mastic	Black Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
17-2-Mastic *411908681-0038A*	Outdoor Kiosk - Covebase & Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
18-1-Drywall *411908681-0039* *No joint compound present*	Outdoor Kiosk - Drywall & Joint Compound	Brown/Gray Fibrous Homogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
18-2-Drywall *411908681-0040* *No joint compound present*	Outdoor Kiosk - Drywall & Joint Compound	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
19-1-Floor Tile *411908681-0041*	Outdoor Kiosk - Blue Floor Tile & Yellow Mastic	Gray Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
19-1-Mastic *411908681-0041A*	Outdoor Kiosk - Blue Floor Tile & Yellow Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
19-2-Floor Tile *411908681-0042*	Outdoor Kiosk - Blue Floor Tile & Yellow Mastic	Gray Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
19-2-Mastic *411908681-0042A*	Outdoor Kiosk - Blue Floor Tile & Yellow Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
20-1 *411908681-0043*	Exterior - Black Exterior Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
20-2 *411908681-0044*	Exterior - Black Exterior Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
21-1 *411908681-0045*	Kiosk AC Units - Caulking	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
21-2 *411908681-0046*	Kiosk AC Units - Caulking	Gray/White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected

Initial report from: 09/04/2019 15:32:06

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10801 Southern Loop Blvd Pineville, NC 28134
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EMSL Order:	411908681
Customer ID:	ENCS55
Customer PO:	
Project ID:	

Analyst(s)

Anupriya Tyagi (32)
Kyle Collins (36)

Lee Plumley, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from: 09/04/2019 15:32:06

OrderID: 411908681

EMSL Analytical, Inc.
2500 Gateway Centre Boulev

Morrisville, NC 27560
PHONE: 919-465-3900
FAX: 919-465-3950

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*: 411908681

Company: ECS Southeast LLP	**EMSL-Bill to:** ☑ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 6714 Netherlands Drive	
City: Wilmington **State/Province:** NC	**Zip/Postal Code:** 28405 **Country:** US
Report To (Name): Amy DeSaix	**Telephone #:** 910-386-1798
Email Address: adesaix@ecslimited.com	**Fax #:** 910-686-9666 **Purchase Order:**
Project Name/Number: NCSPA / 49-8300A Dept 8.4	**Please Provide Results:** ☐ Fax ☑ Email ☐ Mail
U.S. State Samples Taken: NC	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ■ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM – Bulk
■ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method	

■ **Check For Positive Stop – Clearly Identify Homogenous Group** **Date Sampled:** 8/28/19

Samplers Name: Amy DeSaix **Samplers Signature:**

Sample #	HA #	Sample Location	Material Description
1-1 & 1-2	1	interior (main building)	black cove base
2-1 & 2-2	2	~~office~~ Air handling room	brown cove base
3-1 & 3-2	3	office	cream floor tile w/ yel. mastic
4-1 & 4-2	4	Att closet	green floor tile w/ yellow mastic
5-1 & 5-2	5	hallway	ceramic floor tile w/ black ~~yellow~~ mastic
6-1, 6-2, 6-3	6	interior (main building)	Drywall & joint compound
7-1, 7-2	7	interior (main building)	ceiling tile
8-1, 8-2	8	offices	textured rubber floor tile yellow mastic
9-1, 9-2	9	main office	Floor tile - grey w/ white spots & black mastic
10-1, 10-2	10	break room	under sink coating

Client Sample # (s): 1-1 - 21-2. **Total # of Samples:** 46

Relinquished (Client): [signature] **Date:** 8/29/19 **Time:**

Received (Lab): SD **Date:** 8/30/19 **Time:** 8:00 A

Comments/Special Instructions: DB

Page 1 of 2 pages

OrderID: 411908681

EMSL Analytical, Inc.
2500 Gateway Centre Boulev

Morrisville, NC 27560
PHONE: 919-465-3900
FAX: 919-465-3950

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*): 411908681

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
11-1, 11-2	11	Att room	Pinhole ceiling tile
12-1, 12-2	12	Att room	Vibration dampener
13-1, 13-2	13	exterior walkway	textured ceiling tile
14-1, 14-2	14	exterior	exterior window caulk
15-1, 15-2, 15-3, 15-4, 15-5	15	exterior	Stucco
16-1, 16-2	16	exterior base of siding	exterior white caulk
17-1, 17-2	17	outdoor kiosk	covebase & mastic
18-1, 18-2	18	outdoor kiosk	~~blue floor tile & yellow mastic~~ Drywall & joint comp.
19-1, 19-2	19	outdoor kiost	blue floor tile & yellow mastic
20-1, 20-2	20	exterior	Black exterior caulk
21-1, 21-2	21	Kiosk AC units	caulking

*Comments/Special Instructions:

Appendix IV: Certifications/ Licenses

NC DEPARTMENT OF
HEALTH AND
HUMAN SERVICES

ROY COOPER • Governor

MANDY COHEN, MD, MPH • Secretary

DANNY STALEY • Director, Division of Public Health



Amy C Desaix
7424 Ern Way
Wilmington, NC 28411

124225

North Carolina
Asbestos Accreditation

EXPIRATION			
04-30-2020			
DOB	SEX	HT	WT
07-19-1977	F	5'4"	128
CLASS		#	EXP
INSPECTOR		12107	04-20

April 22, 2019

Amy C Desaix
7424 Ern Way
Wilmington, NC 28411

Dear Ms. Desaix:

Based upon the review of your accreditation application, the Health Hazards Control Unit (HHCU) has determined that you have fulfilled the requirements and are eligible for asbestos accreditation as a(n) INSPECTOR. Your assigned North Carolina accreditation number is 12107, which is reflected on your enclosed North Carolina Accreditation card. Please be sure to take this card with you to any asbestos work site where you are employed. The State requires that all persons conducting asbestos abatement or asbestos management activities be accredited and have their identification card on site.

Your North Carolina Inspector accreditation will expire on APRIL 30, 2020. It is NOT the policy of the HHCU to issue renewal notices. If you wish to continue working as a(n) Inspector after this expiration date, you must successfully complete the required training and submit a completed application to this office prior to April 30, 2020. If you should continue to perform asbestos management activities as a(n) Inspector without a valid North Carolina accreditation, you will be in violation of State regulations and may be cited for noncompliance.

Sincerely,

Ed Norman
Program Manager
Health Hazards Control Unit

Enclosure

North Carolina
Asbestos Accreditation



Lindsey B Lucas
225 Highgate Circle
Greer, SC 29650

97339

EXPIRATION			
04-30-2020			
DOB	**SEX**	**HT**	**WT**
11-10-1978	F	5'7"	155
CLASS		**#**	**EXP**
AIR MONITOR		80793	04-20
DESIGNER		40513	08-19
INSPECTOR		12480	04-20

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NORTH CAROLINA STATE PORTS AUTHORITY
POLICE DEPARTMENT

FACILITY COMPLIANCE

The North Carolina State Ports Authority (NCSPA) marine terminals are federally regulated maritime facilities that must adhere to and enforce the Maritime Transportation Security Act (MTSA) regulations. The NCSPA is fully compliant with the provisions of the MTSA and utilizes the Transportation Workers Identification Credential (TWIC) as the primary credential to initiate unescorted access.

FACILITY ACCESS POLICY

1. Individuals with a valid TWIC card will be granted access under the following conditions:

    a. They must have a valid TWIC card in their possession,

    b. They must be able to demonstrate a legitimate reason to enter the port,

    c. They must possess a valid photo government issued identification (i.e. driver's license),

    d. They must register in the NCSPA Access Control System by obtaining a Port Access Card.

2. Individuals with a payment receipt, or an enrollment email confirmation showing they have applied for their initial or first TWIC card will be granted escorted access for thirty (30) consecutive calendar days.

3. Individuals with a payment receipt, or an enrollment email confirmation showing they have applied for a renewal of their TWIC card will be granted unescorted access for thirty (30) consecutive calendar days provided the payment receipt, or the enrollment email confirmation is dated before the expiration of the original TWIC card.

4. Individuals with a payment receipt, or an enrollment email confirmation showing they have reported their TWIC card lost, stolen or damaged will be granted thirty-seven (37) consecutive calendar days of unescorted access provided the individual was previously enrolled in the NCSPA Access Control System.

5. Individuals without a valid TWIC (Non-TWIC holders) will be granted access under the following conditions:

    a. Individuals without a TWIC who regularly access NCSPA facilities must obtain a Port Access Card upon their first visit to any NCSPA facility. Regular access is defined as an individual that will access the facility five (5) times in a 365-day period. Regular Access users include but are not limited to; Port Employees, Port Tenants, Stevedores, Contractors, Longshoremen, Vendors, Truck Drivers, Customers, etc.

    b. Individuals without a TWIC will be granted a maximum of thirty (30) escorted facility visits.

    c. Individuals without a TWIC must apply for their TWIC card before the expiration of their thirtieth (30th) visit.

    d. Individuals without a TWIC must produce a payment receipt, or an enrollment email confirmation before the expiration of their thirtieth (30th) escorted visit. Failure to do so will result in their access to NCSPA restricted or secure areas being denied.

e. Individuals who have applied for their TWIC card and are waiting for its arrival can present their payment receipt, or the enrollment email confirmation to Port Police and the individual will be granted an additional thirty (30) consecutive calendar days of escorted access. In the event individual's TWIC card is delayed beyond thirty (30) days, the individual can present a letter from TSA explaining why their card has been delayed to receive an extension.

f. Individuals who are denied a TWIC by TSA will not be granted access to any NCSPA restricted or secure areas.

NORTH CAROLINA PORTS

NORTH CAROLINA STATE PORTS AUTHORITY

SAFETY and SECURITY

HOT WORK PERMIT PROCEDURES

December 2016

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HOT WORK PERMIT PROCEDURES

A. PURPOSE:

This program establishes the minimum safe working procedures and guidelines for the operation cutting, welding, brazing, grinding and soldering or any other similar operation throughout the North Carolina State Ports Authority (NCSPA). It also covers the control of ignition sources such as spark-producing tools and devices in hazardous areas. The program meets the basic requirements of the NFPA 51B Standard and federal regulations.

B. SCOPE:

These procedures are intended to protect life, health and property from fire and the products of combustion, which might result from the use of welding and cutting equipment, open flames and ignition sources. All employees of North Carolina State Ports Authority and outside contractors/sellers/service companies involved in the use of flame or spark-producing equipment on NCSPA premises are required to conform to these guidelines.

C. POLICIES AND PROCEDURES:

1. It is the policy at NCSPA that a Hot Work Permit shall be issued by the Port Police Department before conducting any operation involving welding or cutting, or use of flame or spark-producing equipment in the areas not specifically designated for such use.
2. Port Police Department shall be notified in writing by the Project Manager or Contractor Supervisor at least 48 hours in advance of intended hot work operation. A copy of these Hot Work Procedures shall be provided to the contractor at time of notification.
3. In order to obtain a Hot Work Permit:
   a) Contact Port Police and obtain a copy of the NCSPA Hot Work Permit Procedures.
   b) Review the NCSPA Hot Work Procedures and complete the applicable portions of the Hot Work Request and submit the Jobsite Hazard Analysis (JHA) form to the Port Police for review.
   c) Complete a joint safety inspection with the NCSPA Port Police prior to hot work operations.
4. The Hot Work Permit shall be valid for the day and the operation for which it is issued only. Jobs requiring more than one day shall require a separate permit for each day's work.
5. When means other than gas or electric arc cutting or welding can provide equal or superior work quality, the least hazardous means of performing the job should be used.
6. Contractors conducting hot work on NCSPA facilities must supply their own approved Personal Protective Equipement (PPE) and fire extinguishing media suitable for the work being conducted. Proper PPE shall include applicable personal safety gear, precautions, signage, barricades, etc.
7. A minimum of one qualified Fire Watch must be on continuous duty during hot work operations. Additional fire watch persons may be required depending on the nature of hot work operation. This person shall continously monitor the exposed areas to ensure the safety of the operation.

8. The Fire Watch shall have proper fire extinguishing equipment and be trained in its use. Fire extinguisher shall be readily accessible within 30 ft. of location where hot work is performed.
9. The fire watch shall be present for the JHA inspection and the pre-start safety inspection with the Port Police Department.
10. Fire Watches will conduct continuous inspections before, during and after all hot work operations and remain onsite for a minimum of 30 minutes and until the hot work area is cool to the touch.
11. The Fire Watch is responsible for completing the post hot work operation verification on the hot work permit and submitting the permit to Port Police. In every circumstance, the Port Police shall be notified when approved Hot Work operations are complete.
12. A copy of the signed Hot Work Permit shall be posted at the job site and maintained throughout the entire operation.
13. Port Police Department who will maintain a copy of the permit on file for a period of 48 hours after completion of work.
14. Under NO circumstances will hot work in confined spaces or other such hazardous areas be completed unless certified safe by a licensed Marine Chemist.
15. While working in confined spaces certified and approved by a licensed Marine Chemist, a trained Confined Space Response and Rescue Team will be present at the work area.
16. Welding on any vessel is prohibited without prior notification and approval by the US Coast Guard, Captain of the Port (COPT). This includes freight vessels although not required by federal regulations

D. PORT ENGINEERING FACILITIES:

1. Certain areas of maintenance repair shops shall be designated welding areas and comply with the following requirements:
   a) Maintenance and repair personnel shall submit a preliminary Hot Work JHA form to the Port Police Department when requesting a designated hot work area. The Police Department will inspect the area and issue a Hot Work Permit valid for one year. The designated area will be inspected and the permit renewed annually.
   b) A copy of the approved annual permit shall be posted in the work shop area.
   c) Facility maintenance personnel shall be responsible for conducting monthly inspections using the NCSPA Monthly Workspace Safety Inspection Form.
   d) Welding areas shall be cleaned regularly and maintained free of dirt and debris and subject to inspection at any time by Police and Safety personnel.
   e) Designated areas shall be free of combustible materials, including stored materials and construction material components.
   f) The designated area shall remain free of gaseous fuels, hazardous vapors, fumes from liquid fuels or other flammable/combustible liquids and gases.
   g) All welding equipment and PPE shall be regularly inspected, tested and maintained in accordance with the manufactures requirements.

E. LIMITATIONS:

A Hot Work Permit will be issued with the understanding that the welder will **NOT** perform the following activities:

1. Weld when the NCSPA Port Police has not issued an approved permit for Hot Work in a specific area.
2. A pre-work JHA has not been completed.
3. A qualified Fire Watch is not available and/or assigned during the entire operation.
4. Sprinkler protection is impaired. (Unless operation requires securing of automatic sprinkler systems).
5. Appropriate fire extinguisher equipment is not serviceable and readily available.
6. Explosive, flammable or other hazardous vapors, gases or dusts may be present in the area. Hot Work operations are prohibited port-wide during any ongoing gas freeing operations.
7. There is a potential for heat transfer along or through walls, pipes, tanks or other metal surfaces that may cause ignition or decomposition of ignitable or toxic substances in contact with the metal.
8. There is potential for production of sparks, slag or molten metal by welding or cutting within 100 feet of unprotected combustible or flammable substances that may cause fire.
9. The area is a confined space. All confined space Hot Work operations shall be inspected and certified safe for hot work by a licensed Marine Chemist.
10. If the supervisor, welder, or any member of the Hot Work Team believes that hot work could result in undue hazards of any nature, STOP work immediately, maintain a fire watch, and notify the Port Police.
11. Proper signs and placards are not posted to inform people in the area.
12. Proper engineering controls are not in place to prevent exposure to fumes of adjacent area occupants.
13. Proper barriers are not in place to prevent people from inadvertently entering into the area.

F. GENERAL FIRE SAFETY REQUIREMENTS

1. **Separation from combustibles.**

   Hot work areas shall not be less than 100 feet from combustible materials and combustible waste or shall be provided with appropriate shielding to prevent sparks, slag or heat from igniting exposed combustibles.

2. **Openings.**

   Openings or cracks in walls, floors, ducts or shafts within 35 feet of the hot work area shall be tightly covered (with non-combustible materials or sealed) to prevent the passage of sparks to adjacent combustible areas, or shielded by metal fire-resistant guards, or provided with curtains to prevent passage of sparks or slag.

3. **Housekeeping.**

   Combustible waste shall not be allowed to accumulate on floors and other surfaces within the hot work area. Contractors working in hot work permitted areas must regularly clean and lawfully dispose of combustible waste.

4. **Partitions.**

   Partitions segregating hot work areas from other areas of the building shall be of noncombustible construction. Partitions shall prevent the passage of sparks, slag, and heat from the hot work area.

5. **Precautions in hot work.**

   Hot work shall not be performed on a container or equipment that contains or has contained flammable liquids, gases or solids until the container or equipment has been thoroughly cleaned, inerted or purged by qualified and licensed personnel and approved in writing by a certified Marine Chemist.

6. **Sprinkler protection.**

   Sprinkler system protection shall not be shut off or impaired while hot work is performed unless approved by the NCSPA Safety and Security Director. Where hot work is performed close to sprinklers, noncombustible barriers or damp cloth guards shall shield the individual sprinkler heads and shall be removed when the work is completed. If the work extends over several days, the shields shall be removed at the end of each workday.

7. **Construction sites and torch-applied roof systems.**

   A Fire Watch shall be provided for each torch operation at a construction site and in connection with torch applied roofing system operations. A Fire Watch shall be provided for each torch in operation. An additional Fire Watch shall be provided on the floor or level below the torch operation.

8. **Fire detection systems.**
   Approved special precautions shall be taken to avoid accidental operation of automatic fire fighting and detection systems.

G. PRE-HOT WORK JOB HAZARD ANALYSIS FORM

A pre-hot work JHA shall be conducted by the responsible person prior to work to ensure that all equipment is safe and hazards are recognized and protected. A copy of the JHA shall be kept at the work site during the work and made available for inspection. The pre-hot work JHA shall be conducted at least once per day and shall verify the following:

1. Fire Watch personnel are present.
2. All persons performing hot work possess any required certifications.
3. Fire extinguishers are operable and available.
4. The hot work equipment is inspected and in good working order.
5. The hot work area is clear of combustibles and flammable solids or that such materials present in the area at a distance of 100 feet.

6. Exposed construction is of noncombustible materials or, if combustible, is protected.
7. All building exits are clearly marked and unobstructed.
8. Hot work area floors are clear of combustible waste accumulation.
9. Approved actions have been taken to prevent accidental activation of extinguishing and detection equipment in accordance with the ports "Lockout Tag out Procedures".

H. HOT WORK PERMIT:

The attached Hot Work Permit form shall be completed and signed by the Port Police and the welder. A signed copy shall be posted at the work site. Hot Work Permits will be maintained by the NCSPA Police Department for 48 hours from date of permit.

NORTH CAROLINA PORTS

Pre-Hot Work Jobsite Hazard Analysis Form

Instructions:

The Pre-Hot Work Jobsite Hazard Analysis (JHA) must be conducted by the person responsible for conducting the hot work, prior to issuance of permit to ensure that all equipment is safe and hazards are recognized and protected. The JHA must be completed once daily. The Fire Watch is responsible for maintaining the JHA form at the work site and making it available for inspection. This Form must be returned to Port Police and will be maintained on the premises for a minimum of 48 hours after work is complete.

Checklist:

1. **Equipment:**
   a. Available sprinklers, hose streams, and extinguishers are available and operable. ❑ Yes
   b. Approved actions have been taken to prevent accidental operation of automatic fire detection systems. ❑ Yes
   c. Hot work equipment inspected and in good maintenance and repair. ❑ Yes
2. **Requirements within 35 feet of work area:**
   a. Flammable liquids, dust, lint, and oil deposits removed. ❑ Yes
   b. Floor swept clean. ❑ Yes
   c. Combustible floors wet down and or covered with fire-resistant sheet. ❑ Yes
   d. Remove other combustibles where possible. Otherwise protect with fire-resistant cover or metal shields. ❑ Yes
   e. All wall and floor openings covered (ventilation ducts and drains). ❑ Yes
   f. Combustibles on other side of walls moved away. ❑ Yes
3. **Fire Watch/ hot work area monitoring:**
   a. Fire Watch will be provided during, 30 minutes after work, and cool to touch. ❑ Yes
   b. Fire Watch is supplied with fire extinguishers and proper training. ❑ Yes
   c. Fire Watch may be required for adjoining areas and below. ❑ Yes
4. **Permit, Licensing, and Insurance:**
   a. Signed Hot Work Permit on-site and posted. ❑ Yes
   b. Contractors; appropriate licensing and adequate Certificate of Insurance. ❑ Yes

Responsible Person:

Name:_____ Date:____/____/_____

Company:_____ Title: _____

Signature: _____

NORTH CAROLINA PORTS

HOT WORK PERMIT

Fire Department Emergency Phone Number: 911

PLEASE NOTE: Print form, sign and submit to the NCSPA Police Department for approval.

Notification must be made to the Port Police before any welding/cutting operations start. All welding/cutting operations shall be performed in accordance with the requirements established by the Ports Authority Hot Work Fire Prevention Policy, OSHA, and NFPA 51B Standards.

1. A copy of this permit must be on the jobsite until applicable work finish date.
2. Provide a minimum of one (1) 2A 10BC Fire Extinguisher at site.
3. No hot work within one hundred (100) feet of any cargo or combustable material.
4. After hot work has been completed, remain on site for a minimum of thirty (30) minutes and until cool to touch for possible fire hazards.
5. Use shielding or separation in hazardous areas at all times.
6. Follow all Port Authroity rules and requirements of NFPA 51 Standards.
7. JHA must be completed prior to starting Hot Work each day.

Date Work to Begin	Today's Date	Intended Date of Completion / Expiration
Project Name		
Contractor Name	Contractor's Emergency Contact Name and Number	
Supervisor / Foreman	Cell	Fax
Office Telephone	Hours of Hot Operation	
Location of Site where work is to be performed *(please note building and floor if applicable)*		
Description of work to be performed		
Equipment to be used		
Fire System Shutdown Required		

Person(s) Performing Hotwork	Name of Firewatch *(Cannot be same as person(s) perfoming work)*
Fire Watch Completed *(Date & Time)*	Signature of Firewatch at Completion
Police Department Representative Name and Date	Contractors On-Site Supervisors Name and Date
Police Department Representatives Signature	Contractors On-Site Supervisors Signature