OFFICIAL BID DOCUMENT
FOR
NON-HEATED STORAGE BUILDING
SPRINGFIELD READINESS CENTER
DEPARTMENT OF MILITARY AFFAIRS
SPRINGFIELD, KENTUCKY

This Official Bid Document consisting of pages 1 through 12, shall be used in submitting a bid document for the work. Copies will be furnished upon request by the authority issuing the Contract Documents.

THIS BID DOCUMENT SUBMITTED BY_____

_____
(Name and Address of Bidder)

DATE:_____ TELEPHONE:_____

GENTLEMEN:

This Bidder, in compliance with your Request for Bid No. RFB-242-23, and having carefully examined the Drawings and complete Contract Documents as defined in Article 1 of the General Conditions as well as the Specifications for the work as prepared by Kesler Simpson Architects, LLC, N3D Group,; hereby proposes to furnish all labor, materials, supplies and services required to perform the specifics of the Contract Documents, within the time set forth therein and for the stated Lump Sum Bid Amount.

The Bidder hereby acknowledges receipt of the following Addenda:

ADDENDUM NO._____	DATED_____	ADDENDUM NO._____	DATED_____
ADDENDUM NO._____	DATED_____	ADDENDUM NO._____	DATED_____
ADDENDUM NO._____	DATED_____	ADDENDUM NO._____	DATED_____
ADDENDUM NO._____	DATED_____	ADDENDUM NO._____	DATED_____

(IF NONE HAVE BEEN ISSUED AND RECEIVED, INSERT THE WORD NONE.)

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ALL BLANKS IN THE BID DOCUMENTS SHALL BE COMPLETED AND ALL REQUIRED SUPPORT DATA SHALL BE FURNISHED. IF INDICATED I N THE BIDDING DOCUMENTS, SUMS SHALL BE EXPRESSED IN BOTH WORDS AND FIGURES. IN THE CASE OF DESCREPANCY BETWEEN THE TWO, THE AMOUNT IN WORDS SHALL PREVAIL.

LUMP SUM BASE BID:

The Bidder agrees to furnish all labor, materials, supplies and services required to complete this project defined as Non-Heated Storage Building, Springfield Readiness Center, Department of Military Affairs, Springfield, Kentucky for the Department for Facilities and Support Services, Commonwealth of Kentucky, in accordance with the Drawings, Specifications, and Contract Documents, and any duly issued Addenda for the LUMP SUM BID AMOUNT set forth below:

LUMP SUM BASE BID AMOUNT:

_____DOLLARS
(USE WORDS)

_____CENTS ($_____)
(USE WORDS) (USE FIGURES)

NOTE: THE AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST PAGE MUST BE PROPERLY EXECUTED FOR THE LUMP SUM BASE BID TO BE VALID.

OFFICIAL BID DOCUMENT

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST

I, HEREBY CERTIFY:

1. That I am the bidder (if the bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer and employee of the bidding corporation having authority to sign on it's behalf (if the bidder is a corporation);

2. That the submitted bid or bids covering Division of Engineering and Contract Administration Request for Bid No. RFB-242-23 have been arrived at by the bidder independently and have been submitted without collusion with, and without any agreement, understanding or planned common course of action with any other contractor, vendor of materials, supplies, equipment or services described in the Request for Bid, designed to limit independent bidding or competition; as prohibited by provision KRS 45A.325;

3. That the contents of the bid or bids have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder, its surety on any bond furnished with the bid or bids and will not be communicated to any such person prior to the official opening of the bid or bids.

4. That the bidder is legally entitled to enter into the contract with the Commonwealth of Kentucky and is not in violation of any prohibited conflict of interest, including those prohibited by the provisions of KRS 164.390; and 45A.330 to 45A.340 and 45A.455;

5. This offer is for thirty (30) calendar days from the date this bid is opened. In submitting the above it is expressly agreed that upon proper acceptance by the Division of Engineering and Contract Administration of any or all items bid above, a contract shall thereby be created with respect to the items accepted;

6. That I have fully informed myself regarding and affirm the accuracy of all statements made in this Official Bid Document including Bid Amount.

7. Unless otherwise exempted by KRS 45.590, the bidder intends to comply in full with all requirements of the Kentucky Civil Rights Act and to submit data required by the Kentucky Equal Employment Act upon being designated the successful bidder.

8. That the bidder, if awarded a contract, would not be in violation of the Executive Branch Code of Ethics established by KRS 11A.001 through KRS 11A.990.

9. That the bidder is not debarred from doing business with federal agencies and that, if debarred during the life of the contract, the bidder will notify the Commonwealth buyer of record within seventy-two (72) hours of the federal debarment.

READ CAREFULLY – SIGN IN SPACE BELOW – FAILURE TO SIGN INVALIDATES BID

SIGNED BY:_____

PRINT NAME:_____

TITLE:_____

DATE:_____

_____
FEDERAL ID. NO. OR SOCIAL SECURITY NO.

FIRM:_____

ADDRESS:_____

_____
CITY STATE ZIP CODE

TELEPHONE NO:_____

EMAIL: _____

***Disadvantaged Contractors, check type of certification:**
☐ WBE ☐ MBE ☐ DBE ☐ SERVICE-DISABLED VETERAN

***Disadvantaged Contractors attach a copy of certification.**

OFFICIAL BID DOCUMENT – SUBMITTAL DATA

THE FOLLOWING ITEMS ARE HEREWITH ENCLOSED AS REQUIRED:

- ☐ Sworn Required Affidavit For Bidders, Offerors And Contractors
- ☐ Sworn Affidavit for Claiming Resident Bidder Status
- ☐ Vendor Report of Prior Violations of KRS Chapters, 136, 139, 141, 337, 338, 341 and 342.
- ☐ Bidder's Qualifications.
- ☐ Disadvantaged Business Enterprises (DBE) Participation

The utilization of minority/disadvantaged vendors and subcontractors is encouraged, whenever possible, on public projects. The bidder and contractor should make full efforts to locate disadvantaged business persons.
Bidders may use the following resources:
Commonwealth of Kentucky's SMALL BUSINESS CONNECTION website: https://secure.kentucky.gov/sbc/default.aspx
Kentucky Minority and Women Business Enterprise website: https://mwbe.ky.gov/Pages/default.aspx
Kentucky Service-Disabled Veteran-Owned Small Business website:
https://finance.ky.gov/initiatives/sdvosb/Pages/default.aspx
Kentucky Transportation Cabinet Disadvantaged Business Enterprise directories: http://transportation.ky.gov/Civil-Rights-and-Small-Business-Development/Pages/Certified-DBE-Directory.aspx
Finance and Administration Cabinet, Office of EEO/Contract Compliance: email Finance.ContractCompliance@ky.gov or call 502-564-2874
U.S. Small Business Administration, Dynamic Small Business Search website: http://dsbs.sba.gov/dsbs/search/dsp_dsbs.cfm
Louisville/ Jefferson County Metropolitan Sewer District website: http://www.msdlouky.org/insidemsd/diverse/find.html

A bidder must include a list of all disadvantaged vendors and/or subcontractors contacted in order to prepare a bid (ATTACH TO OFFICIAL BID DOCUMENT).

If the bidder fails to utilize any disadvantaged vendors and/or subcontractors, a statement must be included to describe actions to include disadvantaged vendors and/or subcontractors (ATTACH TO OFFICIAL BID DOCUMENT).

The Finance and Administration Cabinet will review all submissions by bidders to determine compliance with this provision.

- ☐ List of Unit Prices, if applicable
- ☐ List of Subcontractors, if applicable
- ☐ List of Materials and Equipment, if applicable
- ☐ Bid Guaranty in the amount of no less than five percent (5%) of the TOTAL BID AMOUNT.
- ☐ Roofing Certifications, if applicable.

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
SWORN STATEMENT REGARDING CAMPAIGN FINANCE LAWS
PURSUANT TO KRS 45A.110 AND KRS 45A.115

The following form (page 5) relative to Campaign Finance Laws shall be completed in total, notarized and returned with your bid. Responsibility of a bidder or offeror for a contract award shall not be made until the bidder or offeror provides this sworn statement.

Rev. 9-16-22

Required Affidavit for Bidders, Offerors and Contractors
(KRS 45A.110 & 45A.115)

Affidavit Effective for One (1) Year from Date of Execution

Instructions: Pursuant to KRS 45A.110 and 45A.115, a bidder, offeror, or contractor ("Contractor") is required to submit a Required Affidavit for Bidders, Offerors, and Contractors to be awarded a contract, or for the renewal of a contract. An authorized representative of the contracting party must complete the attestation below, have the attestation notarized, and return the completed affidavit to the Commonwealth.

Attestation

As a duly authorized representative for the Contractor, I swear and affirm under penalty of perjury, that that the Contractor has not knowingly violated campaign finance laws of the Commonwealth of Kentucky and that the award of a contract will not violate any provision of the campaign finance laws of the Commonwealth. For purposes of this attestation, "Knowingly" means that the bidder or offeror is aware or should have been aware of the existence of a violation. The bidder or offer understands that the Commonwealth retains the right to request an updated affidavit at any time.

Signature	Printed Name
Title	Date

Bidder or Offeror Name: _____

Address: _____

_____

_____

Commonwealth of Kentucky Vendor Code (If known): _____

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

State of: _____ Notary: _____

County of: _____ My Commission Expires: _____

REQUIRED AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS CLAIMING RESIDENT BIDDER STATUS

FOR BIDS AND CONTRACTS IN GENERAL:
The bidder or offeror hereby swears and affirms under penalty of perjury that, in accordance with KRS 45A.494(2), the entity bidding is an individual, partnership, association, corporation, or other business entity that, on the date the contract is first advertised or announced as available for bidding:

1. Is authorized to transact business in the Commonwealth;
2. Has for one year prior to and through the date of advertisement
    a. Filed Kentucky income taxes;
    b. Made payments to the Kentucky unemployment insurance fund established in KRS 341.49; and
    c. Maintained a Kentucky workers' compensation policy in effect.

The BIDDING AGENCY reserves the right to request documentation supporting a bidder's claim of resident bidder status. Failure to provide such documentation upon request shall result in disqualification of the bidder or contract termination.

_____ _____
Signature Printed Name

_____ _____
Title Date

Company Name _____

Address _____

_____

_____

Subscribed and sworn to before me by _____ _____
(Affiant) (Title)

of _____ this _____day of _____,20___.
(Company Name)

_____
Notary Public

[seal of notary] My commission expires: _____

VENDOR REPORT OF PRIOR VIOLATIONS
ON CONSTRUCTION SEALED BIDS

This form is applicable to all sealed bids for construction projects issued by the Finance and Administration Cabinet, Division of Engineering and Contract Administration (DECA) in accordance with KRS 45A.080.

The **Prime Bidder** on any construction sealed bid **shall** provide the required information attached, for the Prime Bidder, as **an attachment to the bid**.

The information required is specifically - **any violations issued within the last five (5) calendar years of the following:**

1. Violations of KRS Chapter 136 (Corporation and Utility Taxes);
1. Violations of KRS Chapter 139 (Sales and Use Taxes);
2. Violations of KRS Chapter 141 (Income Taxes);
3. Violations of KRS Chapter 337 (Wages and Hours);
4. Violations of KRS Chapter 338 (Occupational Safety and Health of Employees);
5. Violations of KRS Chapter 341 (Unemployment Insurance);
6. Violations of KRS Chapter 342 (Workers Compensation); and
7. Violations of Occupational Safety and Health Laws **in any other states and at the federal level**.

If there are no violations for a particular category, vendor should attach a statement to that effect.

If there are violations for a particular category, the vendor should list them and provide the following information for each: the date of the violation, a short description of the violation (including statutory citation), the name of the governmental enforcement agency involved, and the amount of any penalties imposed as a result of the final determination.

Please note that this information may be provided to other governmental agencies, such as the Kentucky Labor Cabinet, as part of the bid process. DECA reserves the unqualified right to disqualify any vendors from participating further in this bid process.

In addition, the successful prime bidder and subcontractors shall remain in continuous compliance with KRS 45A.485 during the life of any contract awarded, and shall notify DECA of any new final determinations of violations in **any** of the above-mentioned categories, which occur after contract award, and during the life of any contract awarded. Failure to comply with these requirements may result in the bidder and subcontractors being disqualified from participating in future bid opportunities for the Commonwealth.

COMPANY NAME: _____

TAX PAYER ID #: _____

THIS VENDOR VIOLATION FORM MAY BE SENT TO THE LABOR CABINET FOR VERIFICATION. PLEASE MAKE SURE ALL YOUR VIOLATIONS ISSUED WITHIN THE LAST FIVE (5) YEARS ARE LISTED. IF YOU LIST "NONE" BUT THE LABOR CABINET'S RECORDS SHOW OTHERWISE, YOUR BID MAY BE REJECTED. FOR A LIST OF YOUR VENDOR VIOLATIONS, YOU CAN FAX OR EMAIL THE LABOR CABINET WITH YOUR REQUEST.
FAX NUMBER IS (502) 696-1984 OR EMAIL: wages@ky.gov .

Violation Category	Date	Description	Govt. Enforcement Agency	Amount of Penalties

BIDDER'S QUALIFICATIONS

The Bidder's Qualifications are required by the owner to be submitted as set forth herewith:

1. This firm is a Corp._____, Partnership_____, or Proprietorship_____.

2. A permanent place of business is maintained at:

_____
STREET CITY STATE ZIP CODE

_____
TELEPHONE NUMBER

3. The following construction plant and equipment will be made available for use on this contract:

_____

_____

4. In the event the contract is awarded the undersigned, surety bonds will be furnished by:

_____

5. Experience of Contractor on other similar work:

_____

_____

_____

_____

6. We now have the following jobs under contract and bonded:

JOB	TOTAL CONTRACT	PERCENT COMPLETED
_____	$_____	_____%
_____	$_____	_____%
_____	$_____	_____%
_____	$_____	_____%
_____	$_____	_____%

P-2

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

1.01 **CERTIFICATION OF DBE:** Any DBE utilized pursuant to this Section shall be certified as a DBE by one of the following: Kentucky Finance and Administration Cabinet, Kentucky Transportation Cabinet or other state Transportation agencies, the Louisville/Jefferson County Metropolitan Sewer District, the Tri-State Minority Supplier Development Council or other state Minority Supplier Development Councils, the Ohio River Valley Women's Business Council, the Women's Business Enterprise National Council, the National Women Business Owners Council, or the Small Business Administration.

1.02 **OBLIGATION OF BIDDER/CONTRACTOR:** Bidder/Contractor shall make a good faith effort to meet the DBE contract goal set by the Commonwealth by including DBE's as subcontractors and/or material suppliers on 10% of the total estimated cost of the Contract. The failure to meet the foregoing goal shall not result in disqualification from bidding or being awarded a contract. However, Bidders/Contractors not meeting the DBE goal shall be expected to provide written proof of their good faith efforts. Award of the contract shall be conditioned upon satisfaction of the requirements established by this section. The Bidder/Contractor shall attempt to divide the work in the contract to facilitate use of DBE's (however, there is no requirement that the work be artificially divided or divided in a way that raises the bid price of the Bidder/Contractor).

1.03 **PROOF REQUIRED:** Each bidder shall furnish written proof in their bid package that they reached the DBE participation goal for this Contract, or of their good faith efforts to meet the DBE participation goal. A copy of each participating DBE's certification shall accompany the required forms. All submissions shall be subject to verification of the Commonwealth.

A. Proof that the apparent successful bidder reached the DBE goal shall consist of the following and shall be made on form DB-2-A, attached hereto:

1. The names and addresses of DBE firms that will participate in the contract;
2. A description of the work each named DBE firm will perform;
3. The dollar amount of participation by each named DBE firm;
4. The percentage amount of participation by each named DBE firm;

B. Proof that the apparent successful bidder made a good faith efforts to meet the DBE participation goal may include the following:

1. Advertisement by the Bidder/Contractor of DBE contracting opportunities associated with this contract in at least one of each of the following periodicals: a periodical in general circulation throughout the Commonwealth, a trade periodical focused on DBE contractors/suppliers in general circulation throughout the Commonwealth, and a minority-focused periodical in general circulation throughout the Commonwealth. The Bidder/Contractor shall include copies of the dated advertisements in his bid package;

2. Written notice of DBE opportunities in this contract to at least five pertinent DBE's at least seven days prior to the bid opening date. Copies of the written notices shall be included in the bid package;

3. The Bidder/Contractor's response(s) to those DBE's who requested plans, specifications and/or contracting requirements. Copies of said responses shall be included in the bid package;

4. Documentation on form DB-2-B of good faith negotiations with at least three DBE's, with no rejection of a qualified DBE without sound reason, including price quotes that are above other subcontractor's price quotes;

5. Utilization of the Finance and Administration Cabinet's Office of Equal Employment Opportunity and Contract Compliance for referrals to organizations that assist in locating DBE's. Proof of use of such referrals and contacts made as a result thereof shall be included in the bid package.

DB-2-A

DISADVANTAGED BUSINESS AVAILABILITY VERIFICATION

_____ does commit itself that on the following project:
NAME OF COMPANY

_____ _____
PROJECT NAME REQUEST FOR BID NUMBER

The Bidder agrees to furnish information required by the Commonwealth of Kentucky to indicate the Disadvantaged Business which it intends to utilize. Breach of this commitment constitutes breach of the Bidder's contract if awarded.

NAME OF DISADVANTAGED BUSINESS	TELEPHONE	TYPE OF WORK

DOLLAR VALUE	PERCENT	DISADVANTAGED CLASSIFICATION

The undersigned shall enter into a formal agreement with the Disadvantaged business firms for work listed in this schedule conditioned upon execution of a contract with the Commonwealth of Kentucky.

Disadvantaged business firms listed above by the Bidder and accepted by the Owner and the Architect/Engineer shall be used on the work for which they were proposed and accepted and shall not be changed except with the written approval of the Owner and the Architect/Engineer. 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.

Signature and title of authorized official of the company and the data shall be properly executed on this document or the bid will be deemed nonresponsive.

_____ _____
NAME OF AUTHORIZED OFFICER TITLE

_____ _____
SIGNATURE DATE

If you are bidding as a General Contractor on this project i.e. direct bidding and a Disadvantaged as defined herein, please provide a copy of your DBE Certification.

_____

Submit with Bid.
(Please copy additional Disadvantaged Business Availability Forms as necessary.)

DB-2-B

DISADVANTAGED BUSINESS UNAVAILABILITY VERIFICATION

I, _____, _____
(TITLE)

of _____
(PRIME BIDDER)

certify that on _____ I contacted the following Disadvantaged owned business by: (circle one) Certified Mail, Phone, In Person to obtain a bid for work items to be performed on the Contract.

DISADVANTAGED CLASSIFICATION (IE. WBE, MBE, DBE, SDVOSB) CONTRACTOR	**WORK ITEMS SOUGHT**	**FORM OF BID SUPPORT (I.E., UNIT PRICE, MATERIALS LABOR & LABOR ONLY)**

To the best of my knowledge and belief, said Disadvantaged owned business was unavailable (exclusive of unavailability due to lack of agreement on price) for work on this project, or unable to prepare a bid, for the following reason(s):

_____
_____
_____
_____
_____

SIGNATURE _____

DATE _____

_____ was offered an
(NAME OF DISADVANTAGED BUSINESS)

opportunity to bid on the above-identified work on _____by

_____
(SOURCE)

The above statement is a true and accurate account of why I did not submit a bid on this project.

_____
(SIGNATURE OF DISADVANTAGED BUSINESS)

_____
(TITLE) (DATE)

Submit with Bid if Applicable.
(Please copy additional Disadvantaged Business Unavailability Forms as needed.)

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DEPARTMENT OF MILITARY AFFAIRS
SPRINGFIELD, KENTUCKY

LIST OF MATERIALS AND EQUIPMENT (MUST BE COMPLETELY FILLED OUT WHEN BID IS SUBMITTED):

Every item listed under the different phases of construction must be clearly identified so the Owner will know what the bidder proposes to furnish. Bidders be hereby advised that this list is required by the owner to be executed, completed, and submitted with bid.

The use of the manufacturer's dealer's name only, or stating "as per plans and specifications", will not be considered as sufficient identification.

Where more than one "Make or Brand" is listed for any one item, the Owner has the right to select the one to be used.

Failure to submit a proper list may result in rejection of the bid.

	MATERIAL AND/OR EQUIPMENT:	**MANUFACTURER AND BRAND NAME:**
1.	Pre-Engineered Metal Building Manufacturer	

FINANCE AND ADMINISTRATION
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING AND CONTRACT ADMINISTRATION

REQUEST FOR BID NO. RFB-242-23
NON-HEATED STORAGE BUILDING
SPRINGFIELD READINESS CENTER
DEPARTMENT OF MILITARY AFFAIRS
SPRINGFIELD, KENTUCKY

Agency: 095
Fund: CAR7

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NON-HEATED STORAGE BUILDING
SPRINGFIELD READINESS CENTER
DEPARTMENT OF MILITARY AFFAIRS
SPRINGFIELD, KENTUCKY

PLEASE NOTE THE FOLLOWING:

THE VENDOR VIOLATION FORM IN THE BID DOCUMENTS IS BEING SENT TO THE LABOR CABINET FOR VERIFICATION. PLEASE MAKE SURE ALL YOUR VIOLATIONS ARE LISTED WITHIN THE LAST FIVE (5) YEARS. IF A BIDDER LISTS "NONE" AND HAS SOME, THEIR BID MAY BE REJECTED. FOR A LIST OF YOUR VENDOR VIOLATIONS, YOU CAN FAX OR EMAIL THE LABOR CABINET WITH YOUR REQUEST. FAX NUMBER IS (502) 696-1984 OR EMAIL: wages@ky.gov. CONTRACTORS MUST ALLOW THREE (3) DAYS IN ORDER TO GET INFORMATION FROM THE LABOR CABINET.

THERE IS A CHECKLIST ON PAGE 4 OF THE OFFICIAL BID DOCUMENT FOR CONTRACTORS TO MAKE SURE ALL OF BID DOCUMENT IS ENCLOSED WHEN SUBMITTING THEIR BID.

IMPORTANT: Please follow current state COVID guidelines for all Commonwealth of Kentucky construction projects. All information and/or instructions will be in the Notice to Contractors and Advertisement for Bids.

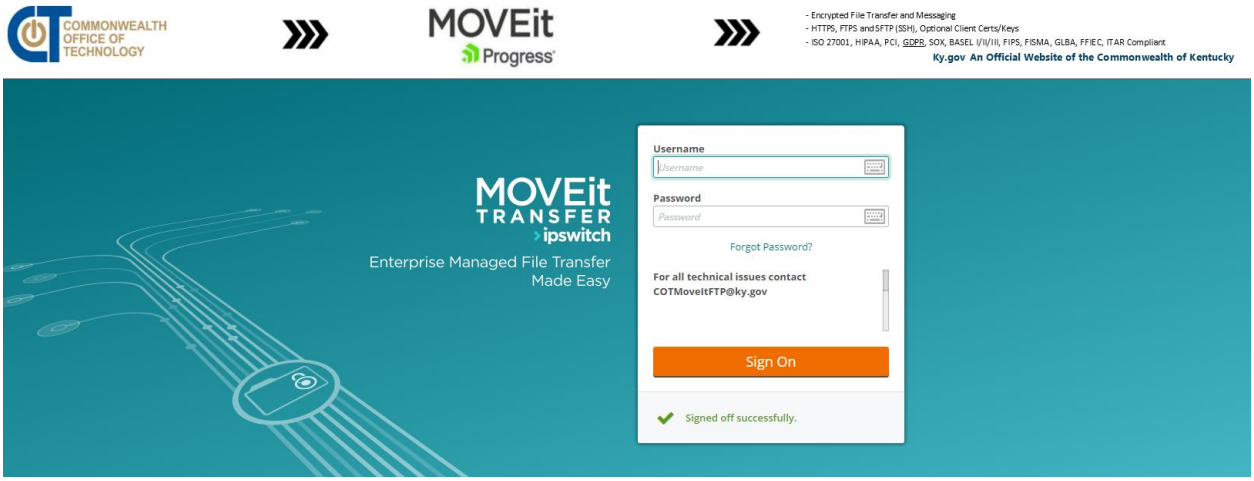
Contractors must load their Bid Documents under the corresponding RFB in MOVEit in order for it to be received. IF BID IS NOT UPLOADED IN THE CORRECT FOLDER IN MOVEit, THE BID WILL BE DEEMED NON-RESPONSIVE. BID MUST BE LOADED IN ONE COMBINED PDF FILE WHICH SHALL INCLUDE YOUR BID BOND.

MOVEit TRANSFER

https://ftp.ky.gov

This application is used for

Secure File Transfer: upload/download files with the FTP application and share the secure location with other registered MOVEit users with no size limit. NOTE: the retention of files on all MOVEit applications is 90 days unless otherwise requested.



Login. **The log in is case sensitive.**

Username: kyrfb

Password: Submitter2020

Unable to login –

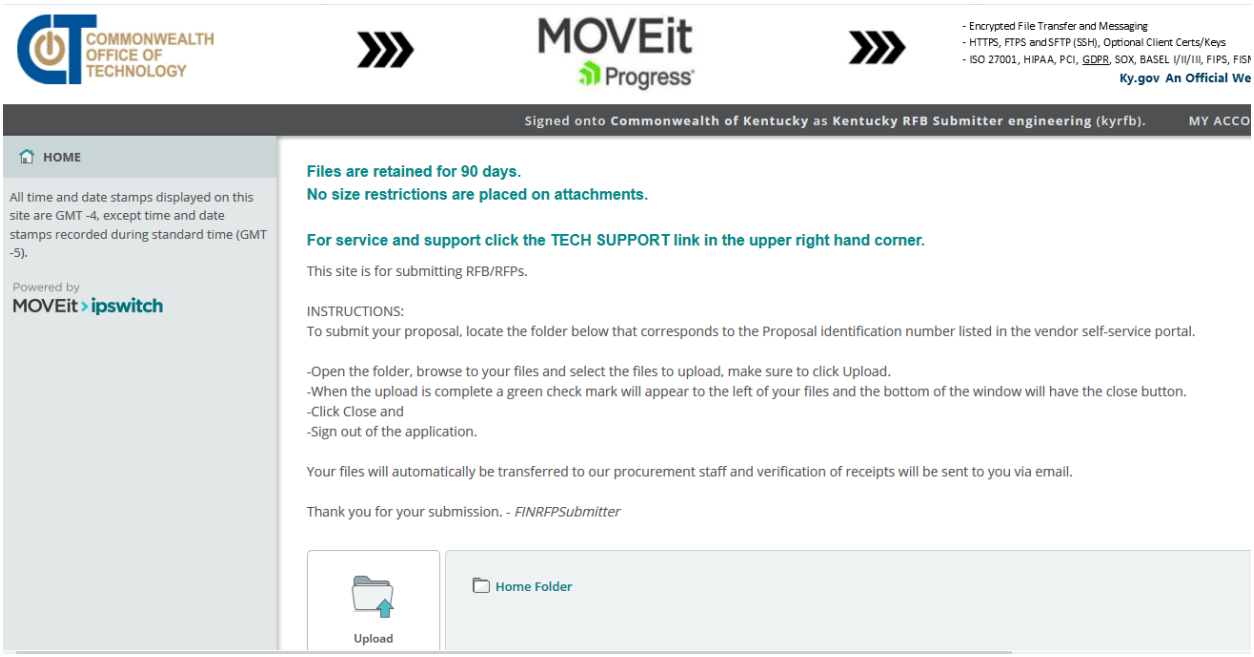
Contact the CommonwealthServiceDesk@ky.gov and they will notify the MOVEit team to assist you. You can also call 502-564-7576.

Forgot Password - YOU CANNOT CHANGE THE PASSWORD ON THIS ACCOUNT. DO NOT ATTEMPT TO CHANGE IT.

NOTE: You should not be prompted to change the password, if this occurs contact the Commonwealth buyer on the project.

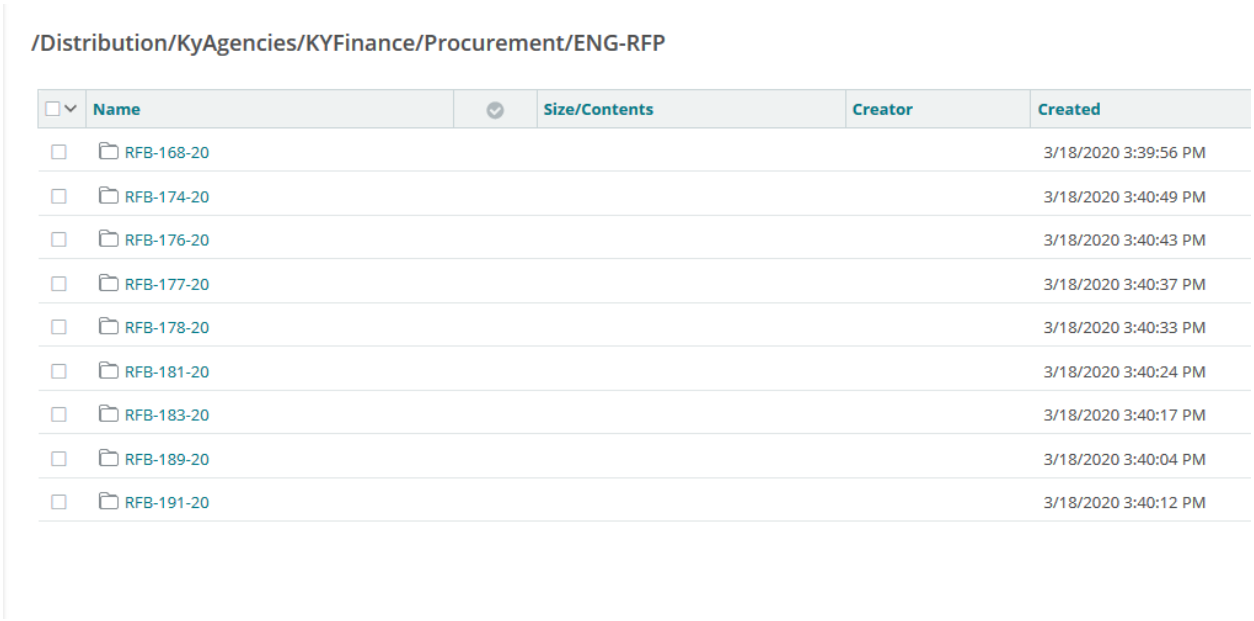
IMPORTANT: Please include company name and RFB# in the file name. Contractors must load their Bid Documents COMBINED into one PDF document under the corresponding RFB in MOVEit in order for it to be received. IF BID IS NOT UPLOADED IN THE CORRECT FOLDER IN MOVEit, THE BID WILL BE DEEMED NON-RESPONSIVE.

After you login to the system, you will see this screen.



Notice the instructions on the screen for submission.

Scroll down to find the RFB/RFP you are submitting on. Open the folder by clicking on the folder with the correct RFB/RFP. Do **NOT** check the box. Click upload on the right side of the screen. Upload your proposal to the correct RFB/RFP.



** Highly Recommended **

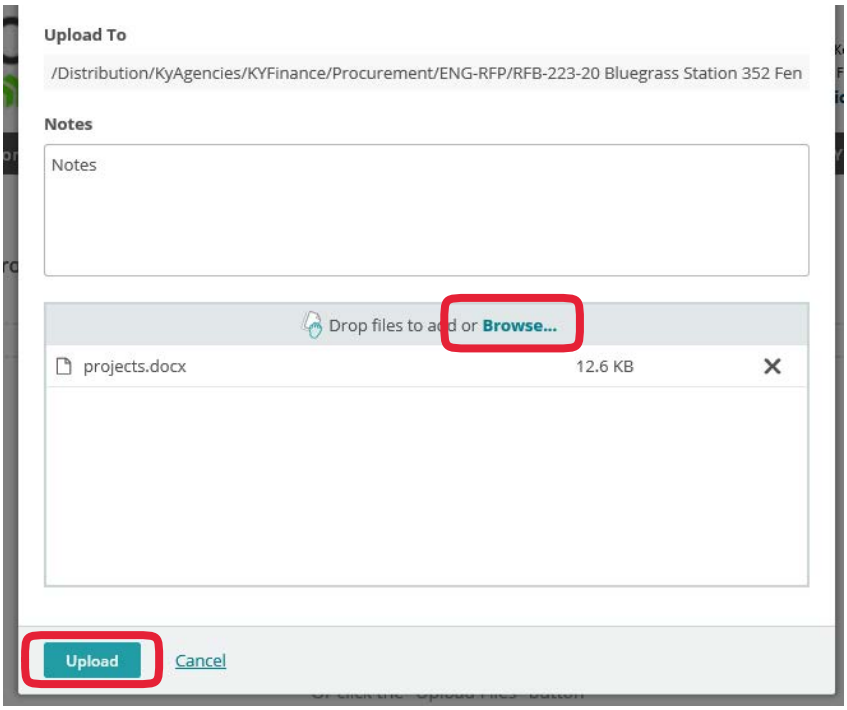
Before uploading your files, add your Company name to the front of all file names.
Example: AcmeCoyote_Filename.pdf

NOTES Section – Use this section to input your contact information or make comments about the files being uploaded.

Browse to your files and select the files to upload - Do **NOT** use drag and drop.

Make sure to click Upload.

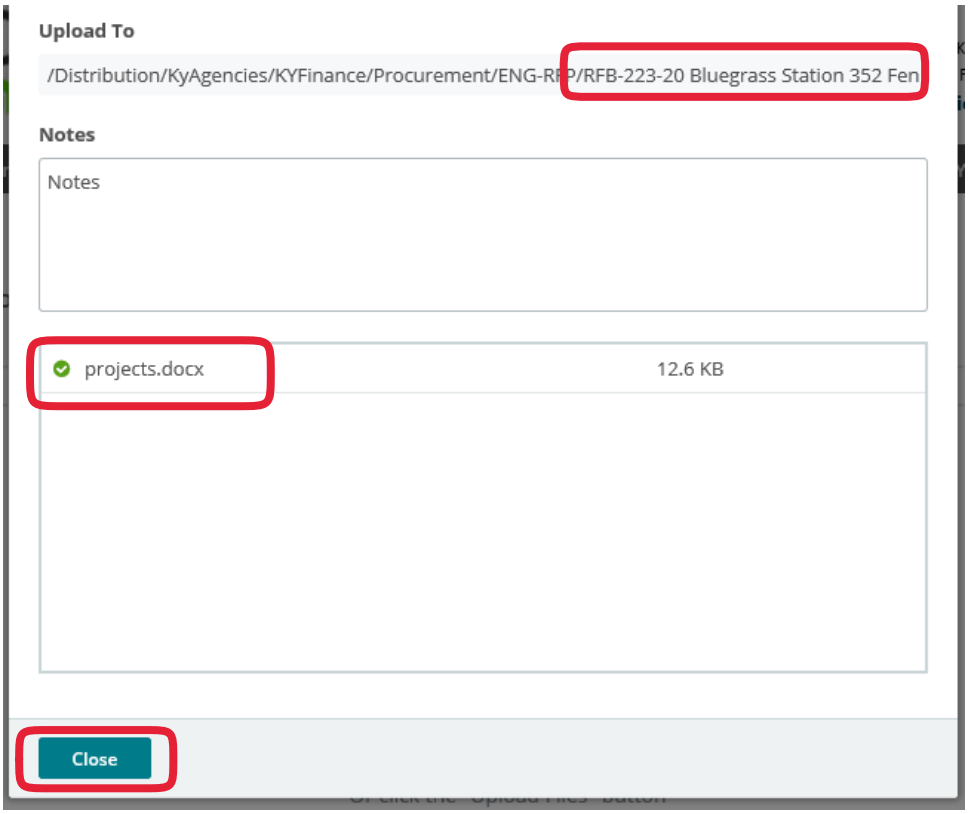
There is not a size limit for file uploads.



When the upload is complete a check mark will appear to the left of your files and the bottom of the window will show the close button.

** We highly recommend that you print the screen as verification for your records that the file(s) were submitted. There is no other verification of receipt of files.

Verify that the file was uploaded to the correct folder by reviewing the file path (see below). The last part of the path will show the folder it was uploaded to.



Click Close at the bottom of the window.
Sign out.

The **Sign Out** Link will exit you from the application.
Your files will automatically be transferred to our procurement staff

The **Tech Support Link** will provide links to the User Guide under MOVEit Transfer Help, and Information on how to Contact the COT MOVEit Team.

FOR TECHNICAL ASSISTANCE WITH MOVEit/FTP

- Non-Commonwealth third parties should contact the Commonwealth Service Desk. Commonwealthservicedesk@ky.gov and cc: COTMOVEITFTP@ky.gov. Or call 502-564-7576.
    - In the request for assistance please include the following -- username, telephone number, RFP number, list of any files you are uploading, and a detailed description of any errors or messages received.

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_____
(Name and Address of Bidder)

DATE:_____ TELEPHONE:_____

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ADDENDUM NO._____	DATED_____	ADDENDUM NO._____	DATED_____
ADDENDUM NO._____	DATED_____	ADDENDUM NO._____	DATED_____
ADDENDUM NO._____	DATED_____	ADDENDUM NO._____	DATED_____

(IF NONE HAVE BEEN ISSUED AND RECEIVED, INSERT THE WORD NONE.)

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SPRINGFIELD READINESS CENTER
DEPARTMENT OF MILITARY AFFAIRS
SPRINGFIELD, KENTUCKY

ALL BLANKS IN THE BID DOCUMENTS SHALL BE COMPLETED AND ALL REQUIRED SUPPORT DATA SHALL BE FURNISHED. IF INDICATED I N THE BIDDING DOCUMENTS, SUMS SHALL BE EXPRESSED IN BOTH WORDS AND FIGURES. IN THE CASE OF DESCREPANCY BETWEEN THE TWO, THE AMOUNT IN WORDS SHALL PREVAIL.

LUMP SUM BASE BID:

The Bidder agrees to furnish all labor, materials, supplies and services required to complete this project defined as Non-Heated Storage Building, Springfield Readiness Center, Department of Military Affairs, Springfield, Kentucky for the Department for Facilities and Support Services, Commonwealth of Kentucky, in accordance with the Drawings, Specifications, and Contract Documents, and any duly issued Addenda for the LUMP SUM BID AMOUNT set forth below:

LUMP SUM BASE BID AMOUNT:

_____DOLLARS
(USE WORDS)

_____ CENTS ($ _____)
(USE WORDS) (USE FIGURES)

NOTE: THE AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST PAGE MUST BE PROPERLY EXECUTED FOR THE LUMP SUM BASE BID TO BE VALID.

OFFICIAL BID DOCUMENT

AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST

I, HEREBY CERTIFY:

1. That I am the bidder (if the bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer and employee of the bidding corporation having authority to sign on it's behalf (if the bidder is a corporation);

2. That the submitted bid or bids covering Division of Engineering and Contract Administration Request for Bid No. RFB-242-23 have been arrived at by the bidder independently and have been submitted without collusion with, and without any agreement, understanding or planned common course of action with any other contractor, vendor of materials, supplies, equipment or services described in the Request for Bid, designed to limit independent bidding or competition; as prohibited by provision KRS 45A.325;

3. That the contents of the bid or bids have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder, its surety on any bond furnished with the bid or bids and will not be communicated to any such person prior to the official opening of the bid or bids.

4. That the bidder is legally entitled to enter into the contract with the Commonwealth of Kentucky and is not in violation of any prohibited conflict of interest, including those prohibited by the provisions of KRS 164.390; and 45A.330 to 45A.340 and 45A.455;

5. This offer is for thirty (30) calendar days from the date this bid is opened. In submitting the above it is expressly agreed that upon proper acceptance by the Division of Engineering and Contract Administration of any or all items bid above, a contract shall thereby be created with respect to the items accepted;

6. That I have fully informed myself regarding and affirm the accuracy of all statements made in this Official Bid Document including Bid Amount.

7. Unless otherwise exempted by KRS 45.590, the bidder intends to comply in full with all requirements of the Kentucky Civil Rights Act and to submit data required by the Kentucky Equal Employment Act upon being designated the successful bidder.

8. That the bidder, if awarded a contract, would not be in violation of the Executive Branch Code of Ethics established by KRS 11A.001 through KRS 11A.990.

9. That the bidder is not debarred from doing business with federal agencies and that, if debarred during the life of the contract, the bidder will notify the Commonwealth buyer of record within seventy-two (72) hours of the federal debarment.

READ CAREFULLY – SIGN IN SPACE BELOW – FAILURE TO SIGN INVALIDATES BID

SIGNED BY:_____

PRINT NAME:_____

TITLE:_____

DATE:_____

_____
FEDERAL ID. NO. OR SOCIAL SECURITY NO.

FIRM:_____

ADDRESS:_____

_____
CITY STATE ZIP CODE

TELEPHONE NO:_____

EMAIL: _____

***Disadvantaged Contractors, check type of certification:**
☐ WBE ☐ MBE ☐ DBE ☐ SERVICE-DISABLED VETERAN

***Disadvantaged Contractors attach a copy of certification.**

OFFICIAL BID DOCUMENT – SUBMITTAL DATA

THE FOLLOWING ITEMS ARE HEREWITH ENCLOSED AS REQUIRED:

- ☐ Sworn Required Affidavit For Bidders, Offerors And Contractors
- ☐ Sworn Affidavit for Claiming Resident Bidder Status
- ☐ Vendor Report of Prior Violations of KRS Chapters, 136, 139, 141, 337, 338, 341 and 342.
- ☐ Bidder's Qualifications.
- ☐ Disadvantaged Business Enterprises (DBE) Participation

The utilization of minority/disadvantaged vendors and subcontractors is encouraged, whenever possible, on public projects. The bidder and contractor should make full efforts to locate disadvantaged business persons.
Bidders may use the following resources:
Commonwealth of Kentucky's SMALL BUSINESS CONNECTION website: https://secure.kentucky.gov/sbc/default.aspx
Kentucky Minority and Women Business Enterprise website: https://mwbe.ky.gov/Pages/default.aspx
Kentucky Service-Disabled Veteran-Owned Small Business website:
https://finance.ky.gov/initiatives/sdvosb/Pages/default.aspx
Kentucky Transportation Cabinet Disadvantaged Business Enterprise directories: http://transportation.ky.gov/Civil-Rights-and-Small-Business-Development/Pages/Certified-DBE-Directory.aspx
Finance and Administration Cabinet, Office of EEO/Contract Compliance: email Finance.ContractCompliance@ky.gov or call 502-564-2874
U.S. Small Business Administration, Dynamic Small Business Search website: http://dsbs.sba.gov/dsbs/search/dsp_dsbs.cfm
Louisville/ Jefferson County Metropolitan Sewer District website: http://www.msdlouky.org/insidemsd/diverse/find.html

A bidder must include a list of all disadvantaged vendors and/or subcontractors contacted in order to prepare a bid (ATTACH TO OFFICIAL BID DOCUMENT).

If the bidder fails to utilize any disadvantaged vendors and/or subcontractors, a statement must be included to describe actions to include disadvantaged vendors and/or subcontractors (ATTACH TO OFFICIAL BID DOCUMENT).

The Finance and Administration Cabinet will review all submissions by bidders to determine compliance with this provision.

- ☐ List of Unit Prices, if applicable
- ☐ List of Subcontractors, if applicable
- ☐ List of Materials and Equipment, if applicable
- ☐ Bid Guaranty in the amount of no less than five percent (5%) of the TOTAL BID AMOUNT.
- ☐ Roofing Certifications, if applicable.

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
SWORN STATEMENT REGARDING CAMPAIGN FINANCE LAWS
PURSUANT TO KRS 45A.110 AND KRS 45A.115

The following form (page 5) relative to Campaign Finance Laws shall be completed in total, notarized and returned with your bid. Responsibility of a bidder or offeror for a contract award shall not be made until the bidder or offeror provides this sworn statement.

Rev. 9-16-22

Required Affidavit for Bidders, Offerors and Contractors
(KRS 45A.110 & 45A.115)

Affidavit Effective for One (1) Year from Date of Execution

Instructions: Pursuant to KRS 45A.110 and 45A.115, a bidder, offeror, or contractor ("Contractor") is required to submit a Required Affidavit for Bidders, Offerors, and Contractors to be awarded a contract, or for the renewal of a contract. An authorized representative of the contracting party must complete the attestation below, have the attestation notarized, and return the completed affidavit to the Commonwealth.

Attestation

As a duly authorized representative for the Contractor, I swear and affirm under penalty of perjury, that that the Contractor has not knowingly violated campaign finance laws of the Commonwealth of Kentucky and that the award of a contract will not violate any provision of the campaign finance laws of the Commonwealth. For purposes of this attestation, "Knowingly" means that the bidder or offeror is aware or should have been aware of the existence of a violation. The bidder or offer understands that the Commonwealth retains the right to request an updated affidavit at any time.

Signature _____ Printed Name _____

Title _____ Date _____

Bidder or Offeror Name: _____

Address: _____

_____

_____

Commonwealth of Kentucky Vendor Code (If known): _____

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

State of: _____ Notary: _____

County of: _____ My Commission Expires: _____

REQUIRED AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS CLAIMING RESIDENT BIDDER STATUS

FOR BIDS AND CONTRACTS IN GENERAL:
The bidder or offeror hereby swears and affirms under penalty of perjury that, in accordance with KRS 45A.494(2), the entity bidding is an individual, partnership, association, corporation, or other business entity that, on the date the contract is first advertised or announced as available for bidding:

1. Is authorized to transact business in the Commonwealth;
2. Has for one year prior to and through the date of advertisement
    a. Filed Kentucky income taxes;
    b. Made payments to the Kentucky unemployment insurance fund established in KRS 341.49; and
    c. Maintained a Kentucky workers' compensation policy in effect.

The BIDDING AGENCY reserves the right to request documentation supporting a bidder's claim of resident bidder status. Failure to provide such documentation upon request shall result in disqualification of the bidder or contract termination.

_____ _____
Signature Printed Name

_____ _____
Title Date

Company Name _____

Address _____

_____

_____

Subscribed and sworn to before me by _____ _____
(Affiant) (Title)

of _____ this _____day of _____,20___.
(Company Name)

_____
Notary Public

[seal of notary] My commission expires: _____

VENDOR REPORT OF PRIOR VIOLATIONS
ON CONSTRUCTION SEALED BIDS

This form is applicable to all sealed bids for construction projects issued by the Finance and Administration Cabinet, Division of Engineering and Contract Administration (DECA) in accordance with KRS 45A.080.

The **Prime Bidder** on any construction sealed bid **shall** provide the required information attached, for the Prime Bidder, as **an attachment to the bid**.

The information required is specifically - **any violations issued within the last five (5) calendar years of the following:**

1. Violations of KRS Chapter 136 (Corporation and Utility Taxes);
1. Violations of KRS Chapter 139 (Sales and Use Taxes);
2. Violations of KRS Chapter 141 (Income Taxes);
3. Violations of KRS Chapter 337 (Wages and Hours);
4. Violations of KRS Chapter 338 (Occupational Safety and Health of Employees);
5. Violations of KRS Chapter 341 (Unemployment Insurance);
6. Violations of KRS Chapter 342 (Workers Compensation); and
7. Violations of Occupational Safety and Health Laws **in any other states and at the federal level**.

If there are no violations for a particular category, vendor should attach a statement to that effect.

If there are violations for a particular category, the vendor should list them and provide the following information for each: the date of the violation, a short description of the violation (including statutory citation), the name of the governmental enforcement agency involved, and the amount of any penalties imposed as a result of the final determination.

Please note that this information may be provided to other governmental agencies, such as the Kentucky Labor Cabinet, as part of the bid process. DECA reserves the unqualified right to disqualify any vendors from participating further in this bid process.

In addition, the successful prime bidder and subcontractors shall remain in continuous compliance with KRS 45A.485 during the life of any contract awarded, and shall notify DECA of any new final determinations of violations in **any** of the above-mentioned categories, which occur after contract award, and during the life of any contract awarded. Failure to comply with these requirements may result in the bidder and subcontractors being disqualified from participating in future bid opportunities for the Commonwealth.

COMPANY NAME: _____

TAX PAYER ID #: _____

THIS VENDOR VIOLATION FORM MAY BE SENT TO THE LABOR CABINET FOR VERIFICATION. PLEASE MAKE SURE ALL YOUR VIOLATIONS ISSUED WITHIN THE LAST FIVE (5) YEARS ARE LISTED. IF YOU LIST "NONE" BUT THE LABOR CABINET'S RECORDS SHOW OTHERWISE, YOUR BID MAY BE REJECTED. FOR A LIST OF YOUR VENDOR VIOLATIONS, YOU CAN FAX OR EMAIL THE LABOR CABINET WITH YOUR REQUEST.
FAX NUMBER IS (502) 696-1984 OR EMAIL: wages@ky.gov .

Violation Category	Date	Description	Govt. Enforcement Agency	Amount of Penalties

BIDDER'S QUALIFICATIONS

The Bidder's Qualifications are required by the owner to be submitted as set forth herewith:

1. This firm is a Corp._____, Partnership_____, or Proprietorship_____.

2. A permanent place of business is maintained at:

_____

STREET CITY STATE ZIP CODE

_____

TELEPHONE NUMBER

3. The following construction plant and equipment will be made available for use on this contract:

_____

_____

4. In the event the contract is awarded the undersigned, surety bonds will be furnished by:

_____

5. Experience of Contractor on other similar work:

_____

_____

_____

_____

6. We now have the following jobs under contract and bonded:

JOB	TOTAL CONTRACT	PERCENT COMPLETED
_____	$_____	_____%
_____	$_____	_____%
_____	$_____	_____%
_____	$_____	_____%
_____	$_____	_____%

P-2

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

1.01 **CERTIFICATION OF DBE:** Any DBE utilized pursuant to this Section shall be certified as a DBE by one of the following: Kentucky Finance and Administration Cabinet, Kentucky Transportation Cabinet or other state Transportation agencies, the Louisville/Jefferson County Metropolitan Sewer District, the Tri-State Minority Supplier Development Council or other state Minority Supplier Development Councils, the Ohio River Valley Women's Business Council, the Women's Business Enterprise National Council, the National Women Business Owners Council, or the Small Business Administration.

1.02 **OBLIGATION OF BIDDER/CONTRACTOR:** Bidder/Contractor shall make a good faith effort to meet the DBE contract goal set by the Commonwealth by including DBE's as subcontractors and/or material suppliers on 10% of the total estimated cost of the Contract. The failure to meet the foregoing goal shall not result in disqualification from bidding or being awarded a contract. However, Bidders/Contractors not meeting the DBE goal shall be expected to provide written proof of their good faith efforts. Award of the contract shall be conditioned upon satisfaction of the requirements established by this section. The Bidder/Contractor shall attempt to divide the work in the contract to facilitate use of DBE's (however, there is no requirement that the work be artificially divided or divided in a way that raises the bid price of the Bidder/Contractor).

1.03 **PROOF REQUIRED:** Each bidder shall furnish written proof in their bid package that they reached the DBE participation goal for this Contract, or of their good faith efforts to meet the DBE participation goal. A copy of each participating DBE's certification shall accompany the required forms. All submissions shall be subject to verification of the Commonwealth.

A. Proof that the apparent successful bidder reached the DBE goal shall consist of the following and shall be made on form DB-2-A, attached hereto:

1. The names and addresses of DBE firms that will participate in the contract;
2. A description of the work each named DBE firm will perform;
3. The dollar amount of participation by each named DBE firm;
4. The percentage amount of participation by each named DBE firm;

B. Proof that the apparent successful bidder made a good faith efforts to meet the DBE participation goal may include the following:

1. Advertisement by the Bidder/Contractor of DBE contracting opportunities associated with this contract in at least one of each of the following periodicals: a periodical in general circulation throughout the Commonwealth, a trade periodical focused on DBE contractors/suppliers in general circulation throughout the Commonwealth, and a minority-focused periodical in general circulation throughout the Commonwealth. The Bidder/Contractor shall include copies of the dated advertisements in his bid package;

2. Written notice of DBE opportunities in this contract to at least five pertinent DBE's at least seven days prior to the bid opening date. Copies of the written notices shall be included in the bid package;

3. The Bidder/Contractor's response(s) to those DBE's who requested plans, specifications and/or contracting requirements. Copies of said responses shall be included in the bid package;

4. Documentation on form DB-2-B of good faith negotiations with at least three DBE's, with no rejection of a qualified DBE without sound reason, including price quotes that are above other subcontractor's price quotes;

5. Utilization of the Finance and Administration Cabinet's Office of Equal Employment Opportunity and Contract Compliance for referrals to organizations that assist in locating DBE's. Proof of use of such referrals and contacts made as a result thereof shall be included in the bid package.

DB-2-A

DISADVANTAGED BUSINESS AVAILABILITY VERIFICATION

_____ does commit itself that on the following project:
NAME OF COMPANY

_____ _____
PROJECT NAME REQUEST FOR BID NUMBER

The Bidder agrees to furnish information required by the Commonwealth of Kentucky to indicate the Disadvantaged Business which it intends to utilize. Breach of this commitment constitutes breach of the Bidder's contract if awarded.

NAME OF DISADVANTAGED BUSINESS	TELEPHONE	TYPE OF WORK

DOLLAR VALUE	PERCENT	DISADVANTAGED CLASSIFICATION

The undersigned shall enter into a formal agreement with the Disadvantaged business firms for work listed in this schedule conditioned upon execution of a contract with the Commonwealth of Kentucky.

Disadvantaged business firms listed above by the Bidder and accepted by the Owner and the Architect/Engineer shall be used on the work for which they were proposed and accepted and shall not be changed except with the written approval of the Owner and the Architect/Engineer. 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.

Signature and title of authorized official of the company and the data shall be properly executed on this document or the bid will be deemed nonresponsive.

_____ _____
NAME OF AUTHORIZED OFFICER TITLE

_____ _____
SIGNATURE DATE

If you are bidding as a General Contractor on this project i.e. direct bidding and a Disadvantaged as defined herein, please provide a copy of your DBE Certification.

Submit with Bid.
(Please copy additional Disadvantaged Business Availability Forms as necessary.)

DB-2-B

DISADVANTAGED BUSINESS UNAVAILABILITY VERIFICATION

I, _____, _____
(TITLE)

of _____
(PRIME BIDDER)

certify that on _____ I contacted the following Disadvantaged owned business by: (circle one) Certified Mail, Phone, In Person to obtain a bid for work items to be performed on the Contract.

DISADVANTAGED CLASSIFICATION (IE. WBE, MBE, DBE, SDVOSB)	**CONTRACTOR**	**WORK ITEMS SOUGHT**	**FORM OF BID SUPPORT (I.E., UNIT PRICE, MATERIALS LABOR & LABOR ONLY)**

To the best of my knowledge and belief, said Disadvantaged owned business was unavailable (exclusive of unavailability due to lack of agreement on price) for work on this project, or unable to prepare a bid, for the following reason(s):

_____
_____
_____
_____
_____

SIGNATURE _____

DATE _____

_____ was offered an
(NAME OF DISADVANTAGED BUSINESS)

opportunity to bid on the above-identified work on _____by

_____
(SOURCE)

The above statement is a true and accurate account of why I did not submit a bid on this project.

_____
(SIGNATURE OF DISADVANTAGED BUSINESS)

_____
(TITLE) (DATE)

Submit with Bid if Applicable.
(Please copy additional Disadvantaged Business Unavailability Forms as needed.)

OFFICIAL BID DOCUMENT
FOR
NON-HEATED STORAGE BUILDING
SPRINGFIELD READINESS CENTER
DEPARTMENT OF MILITARY AFFAIRS
SPRINGFIELD, KENTUCKY

LIST OF MATERIALS AND EQUIPMENT (MUST BE COMPLETELY FILLED OUT WHEN BID IS SUBMITTED):

Every item listed under the different phases of construction must be clearly identified so the Owner will know what the bidder proposes to furnish. Bidders be hereby advised that this list is required by the owner to be executed, completed, and submitted with bid.

The use of the manufacturer's dealer's name only, or stating "as per plans and specifications", will not be considered as sufficient identification.

Where more than one "Make or Brand" is listed for any one item, the Owner has the right to select the one to be used.

Failure to submit a proper list may result in rejection of the bid.

	MATERIAL AND/OR EQUIPMENT:	MANUFACTURER AND BRAND NAME:
1.	Pre-Engineered Metal Building Manufacturer	

Andy Beshear
GOVERNOR

FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
OFFICE OF FACILITY DEVELOPMENT
AND EFFICIENCY
403 Wapping Street
Frankfort, Kentucky 40601-3462

Holly M. Johnson
SECRETARY

Sam Ruth
COMMISSIONER

NOTICE TO CONTRACTORS
FOR
NON-HEATED STORAGE BUILDING
SPRINGFIELD READINESS CENTER
DEPARTMENT OF MILITARY AFFAIRS
SPRINGFIELD, KENTUCKY

Attached hereto is a copy of the "Advertisement for Bids" for furnishing all labor, equipment, appliances and materials necessary for Non-Heated Storage Building, Springfield Readiness Center, Department of Military Affairs, Springfield, Kentucky.

SAME IS DESIGNATED AS:

REQUEST NO.	Request for Bid No. RFB-242-23
BID ON:	NON-HEATED STORAGE BUILDING SPRINGFIELD READINESS CENTER DEPARTMENT OF MILITARY AFFAIRS SPRINGFIELD, KENTUCKY
BID DATE:	May 15, 2023 2:00 P.M., Eastern Time

Responsible Contractors who have proper experience, equipment and qualifications are invited to bid on this work. These factors will be considered in the Award of Contract and all work will be performed under the standard regulations for construction of the Commonwealth of Kentucky.

IMPORTANT:

FOR ANY SITE VISIT OR PREBID INFORMATION REFER TO ARTICLE 10, ITEM I.

FOR COVID RELATED INFORMATION REFER TO ARTICLE 10, ITEM J.

PART I
ADVERTISEMENT FOR BIDS

1. **INVITATION:**

Sealed bid documents for the following work will be received by the Division of Engineering and Contract Administration. Bids will be received through MOVEit as described in the manner and on the date hereinafter specified for the furnishing of all labor, materials, supplies, tools, appliances, equipment, services, etc., necessary for Non-Heated Storage Building, Springfield Readiness Center, Department of Military Affairs, Springfield, Kentucky, as set forth in the specifications and as shown on the drawings prepared by Andrew Kesler, Kesler Simpson Architects, LLC, 3728 Willow Ridge Road, Lexington, KY 40514; John Newman, N3D Group, 1204 Winchester Road, Lexington, KY 40505, and approved by the Department for Facilities and Support Services of the Commonwealth of Kentucky and under the terms and conditions to this Request for Bid.

2. **PROJECT DESCRIPTION:**

The goal of this project is to build an unheated storage building for the Springfield RC. The building will be approximately 42’ by 62’. The building structure will be Pre-Engineered Metal Building with 12’ eave height. Building manufacturer’s standard siding and roof panels will be used. Two 8’x10’ overhead doors are included. One prefinished hollow metal frame man door is included. A 10’ wide concrete apron will be provided at the front of the building. All necessary site work is included to provide for adequate drainage and building access. Minimum required LED lighting fixtures to achieve code required light levels are included. No mechanical HVAC is included.

3. **METHOD OF BIDDING:**

Bids will be received from Prime Contractors on a Lump Sum Bid Basis for the total project. All phases of work shall be bid to and through the Prime Contracting Firms. Bids shall be submitted in the manner herein described and on the official bid document form included with the conditions and specifications and shall be subject to all the conditions as set forth and described in the Bid Documents.

SPECIAL NOTE:

Bids shall be submitted on the Official Form supplied by the Division of Engineering and Contract Administration. Failure to comply with the foregoing requirements will be cause for invalidation of bid.

4. **METHOD OF AWARD:**

Award shall be issued on the lowest responsive bid by a responsible bidder. The Bid Document shall contain all qualifying requirements and forms. It is the intent of the Commonwealth of Kentucky to use all available funds.

Kentucky Workers’ Compensation:
Pursuant to KRS 45A.480, the Commonwealth of Kentucky may not contract with any person not in compliance with Kentucky’s KRS Chapter 342 workers’ compensation insurance requirements.

Bid is subject to **Reciprocal preference for Kentucky resident bidders and Preferences for a Qualified Bidder or the Department of Corrections, Division of Prison Industries (KAR 200 5:410).**

KRS 45A.490 Definitions for KRS 45A.490 to 45A.494.
As used in KRS 45A.490 to 45A.494:
(1) "Contract" means any agreement of a public agency, including grants and orders, for the purchase or disposal of supplies, services, construction, or any other item; and

(2) "Public agency" has the same meaning as in KRS 61.805.

KRS 45A.492 Legislative declarations.

The General Assembly declares:

(1) A public purpose of the Commonwealth is served by providing preference to Kentucky residents in contracts by public agencies; and
(2) Providing preference to Kentucky residents equalizes the competition with other states that provide preference to their residents.

KRS 45A.494 Reciprocal preference to be given by public agencies to resident bidders -- List of states -- Administrative regulations.

(1) Prior to a contract being awarded to the lowest responsible and responsive bidder on a contract by a public agency, a resident bidder of the Commonwealth shall be given a preference against a nonresident bidder registered in any state that gives or requires a preference to bidders from that state. The preference shall be equal to the preference given or required by the state of the nonresident bidder.
(2) A resident bidder is an individual, partnership, association, corporation, or other business entity that, on the date the contract is first advertised or announced as available for bidding:
    (a) Is authorized to transact business in the Commonwealth; and
    (b) Has for one (1) year prior to and through the date of the advertisement, filed Kentucky corporate income taxes, made payments to the Kentucky unemployment insurance fund established in KRS 341.490, and maintained a Kentucky workers' compensation policy in effect.
(3) A nonresident bidder is an individual, partnership, association, corporation, or other business entity that does not meet the requirements of subsection (2) of this section.
(4) If a procurement determination results in a tie between a resident bidder and a nonresident bidder, preference shall be given to the resident bidder.
(5) This section shall apply to all contracts funded or controlled in whole or in part by a public agency.
(6) The Finance and Administration Cabinet shall maintain a list of states that give to or require a preference for their own resident bidders, including details of the preference given to such bidders, to be used by public agencies in determining resident bidder preferences. The cabinet shall also promulgate administrative regulations in accordance with KRS Chapter 13A establishing the procedure by which the preferences required by this section shall be given.
(7) The preference for resident bidders shall not be given if the preference conflicts with federal law.
(8) Any public agency soliciting or advertising for bids for contracts shall make KRS 45A.490 to 45A.494 part of the solicitation or advertisement for bids.

The reciprocal preference as described in KRS 45A.490-494 above shall be applied in accordance with 200 KAR 5:400.

Determining the residency of a bidder for purposes of applying a reciprocal preference

Any individual, partnership, association, corporation, or other business entity claiming resident bidder status shall submit along with its response the attached Required Affidavit for Bidders, Offerors, and Contractors Claiming Resident Bidder Status. The BIDDING AGENCY reserves the right to request documentation supporting a bidder's claim of resident bidder status. Failure to provide such documentation upon request shall result in disqualification of the bidder or contract termination.

A nonresident bidder shall submit, along with its response, its certificate of authority to transact business in the Commonwealth as filed with the Commonwealth of Kentucky, Secretary of State. The location of the principal office identified therein shall be deemed the state of residency for that bidder. If the bidder is not required by law to obtain said certificate, the state of residency for that bidder shall be deemed to be that which is identified in its mailing address as provided in its bid.

5. **PROJECT CONTACTS:**

1. Architect: Andrew Kesler, Kesler Simpson Architects, LLC, (859) 523-4324, andrew@ksa-llc.com
2. Consultant: John Newman, N3D Group, (859) 303-5708, jnewman@n3dgroup.com
3. Project Manager: Carl Kratzer, Division of Engineering and Contract Administration, (502) 330-7180, Carl.Kratzer@ky.gov
4. Agency: James Otta, Department of Military Affairs, (502) 607-1547, james.r.otta.nfg@army.mil
5. Purchasing Agent: Susan Ward, Division of Engineering and Contract Administration, (502) 226-0335, Susan.Ward@ky.gov

6. **BID SUBMITTAL:**

Bids will no longer be accepted via postal carrier (USPS, UPS, FED EX, etc.) nor can bids be delivered to the Bush Building. All forms in your bid document shall be completely filled out when your bid is submitted. **Bids must be submitted electronically through MOVEit in order to be accepted**. Instructions are attached. **Contractors must load their Bid Documents *COMBINED* into one PDF document under the corresponding RFB in MOVEit in order for it to be received. IF BID IS NOT UPLOADED IN THE CORRECT FOLDER IN MOVEit, THE BID WILL BE DEEMED NON-RESPONSIVE.** *Bidders are encouraged to take a screen shot verifying bid submittal*. This is a secure website, no one can see these bids but the buyers. They are date and time stamped when submitted.

Please note that the instructions for MOVEit state that contractors will be notified when their bid is received. Buyers will NOT be notifying contractors.

All results will be posted to Lynn Imaging planroom after the bid opening and review. If additional information is needed from the successful bidder, the buyer will be in contact.

NOTE: Your bid must be uploaded prior to the bid closing date and time. THE UPLOAD TIME MAY VARY DUE TO THE SIZE OF YOUR BID/PROPOSAL AND/OR INTERNET SPEED. NO LATE BIDS WILL BE ACCEPTED.

Bidder assumes full responsibility for timely delivery of the bid in compliance with the above-described procedures and conditions.

There will be a public bid reading by conference call on the bid opening date at 2:30 PM, ET.
The dial in number is 502-782-2663 or 844-603-5060.
Participant code is 960605#

7. **BID WITHDRAWAL:**

No bidder may withdraw his bid for a period of thirty (30) days after the date set for the opening of bids.

8. **BONDING:**

All bids shall be accompanied by a bid guarantee (in the form of a bid bond or certified check) of not less than five (5%) percent of the amount of the lump sum base bid. A 100% Performance Bond and a separate 100% Payment Bond shall be furnished by the successful bidder. All bonding and insurance requirements are contained in the Instructions to Bidders and/or General Conditions. Bonds should be executed by a surety company authorized to do business in the Commonwealth of Kentucky.

9. **RIGHT TO REJECT:**

The Division of Engineering and Contract Administration, Commonwealth of Kentucky, reserves the right to reject any and all bids and to waive all informalities and/or technicalities where the best interest of the Commonwealth may be served.

10. **GENERAL INFORMATION:**

A. Bidder's Qualifications, Unit Prices, Proposed Subcontractors, and List of Materials are required to be submitted with the bid.

B. All documents related to this project shall be submitted, transmitted, transferred, reviewed, approved or rejected, and/or otherwise processed using the Owner's Document Collaboration System (eCommunications) which is the Owner's web-based document collaboration system that shall be used by all project participants. No submission, transmittal, transfer, review, approval or processing shall be deemed Official without the use of this system. All additions or deletions of employees to their ecomm vendor record will be the responsibility of the contractor.

C. KRS 337.550 (1) Provides that if any contractor or subcontractor is found to be in violation of any provisions of KRS 337.505 to 337.550 by the Department of Labor and upon notification to the Commissioner of the Department for Facilities and Support Services, the Commissioner of the Department for Facilities and Support Services shall hold such contractor or subcontractor ineligible to bid on public works until such a time as that contractor or subcontractor is in substantial compliance as determined by the Commissioner of Labor.

D. Each demolition/renovation project must comply with Kentucky Division of Air Pollution Control Regulation 401 KAR 57:011. This includes notification, in writing, to the Division of Air Pollution Control, ten (10) days before start of the project.

E. **Tobacco-Free:** Pursuant to Executive Order, use of any tobacco products (including e-cigarettes) is prohibited in all Executive Branch buildings and parking lots and on the grounds. Please refer to Executive Order # 2014-747 for complete details.
For FAQ's go to: http://tobacco-free.ky.gov/Pages/FAQs.aspx

F. **EEO Requirements:**
The Equal Employment Opportunity Act of 1978 applies to All State government projects with an estimated value exceeding $500,000. The contractor shall comply with all terms and conditions of the Act. **The buyer will get EEO forms from the successful bidder, if required.**

G. **REGISTRATION WITH SECRETARY OF STATE:**

Domestic and foreign corporations shall be registered with the Kentucky Secretary of State and declared to be in "good standing" prior to award of contract. Offeror should verify status at the following website: http://www.sos.ky.gov and click on "Business Services". Failure to comply with this requirement within (5) days after notification may render your bid non-responsive.

H. **REGISTRATION WITH SECRETARY OF STATE BY A FOREIGN ENTITY:**

Pursuant to KRS 45A.480(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by KRS 14A.9-010 to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under KRS 14A.9-030 unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. Therefore, foreign entities should submit a copy of their certificate with their solicitation response. If the foreign entity is not required to obtain a certificate as provided in KRS 14A.9-010, the foreign entity should identify the applicable exception in its solicitation response. Foreign entity is defined within KRS 14A.1-070.

For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.

Businesses can register with the Secretary of State at https://secure.kentucky.gov/sos/ftbr/welcome.aspx.

I. **REGISTRATION with eMARS (eProcurement)**:

In order to receive a contract in the State's electronic procurement system (eMARS/eProcurement), a vendor/contractor shall be registered to conduct business therein. Business entities not already registered may register by visiting the eProcurement website at https://finance.ky.gov/eprocurement/pages/default.aspx and complete the registration information. The website has phone numbers and email addresses to facilitate answering any questions you may have with the registration or update process. Failure to comply with this requirement within (5) days after notification may render your bid non-responsive.

J. **SITE VISIT INFORMATION:**

There will be a site visit on this project. Interested contractors are encouraged to attend. The site visit will be held on 4/26/2023 at 10:00 A.M. Eastern Time. James Otta, 502-607-1547, email: james.r.otta.nfg@army.mil, with Military Affairs, will meet contractors at 1079 Highway 555 Springfield, KY.

NO QUESTIONS WILL BE ANSWERED AT THE SITE VISIT. ALL TECHNICAL QUESTIONS SHALL BE EMAILED TO THE ARCHITECT/ENGINEER OF RECORD FOR THIS PROJECT.

ALL PROCUREMENT QUESTIONS SHALL BE DIRECTED TO BUYER OF RECORD FOR THIS PROJECT.

K. **COVID INFORMATION:**

IMPORTANT: For any COVID information refer to the Team Kentucky website:

https://govstatus.egov.com/kycovid19.

Definitions

1. “Addendum” means a written or graphic instrument issued by the purchasing agency prior to the execution of the contract that modifies or interprets the Bidding Documents by addition, deletion, clarification or correction.

2. “Alternate” means an optional item stated in the bid the amount of which is to be added to or deducted from the amount of the base bid.

3. “Architect” or “Engineer” means a firm that provides professional design services and is engaged by the Division of Engineering and Contract Administration for Capital Construction Projects, and identified as such in the Contract Documents. The term refers to the design team, consisting of the prime architect/engineer and all Sub-Consultants (if used) or consultant identified by the owner.

4. “Bid” means the sum stated in the Bid Response for which the bidder offers to perform the work described in the specifications and detailed on the plans.

5. “Bidder” means one who submits a bid directly to the owner for the work described in the bidding documents.

6. “Bidding Documents” means the Solicitation, including Instructions to Bidders, General Conditions, Special and Supplemental Conditions, Forms for Response, plans, specifications and Addenda issued prior to receipt of bids.

7. “Bid Response” means a complete and properly signed document, offering to do the work or designated portion thereof, supported by data called for by the bidding documents.

8. “Chief Purchasing Officer” means the secretary of the Finance and Administration Cabinet, who shall be responsible for all procurement of the Commonwealth except as provided by KRS Chapters 175, 176, 177, and 180. KRS 45A.030(3).

9. “Commonwealth” means the Commonwealth of Kentucky.

10. “Construction” means the process of building, altering, repairing, improving or demolishing any public structures or buildings, or other public improvements of any kind to any public real property. It does not include the routine maintenance of existing structures, buildings or real property. KRS 45A.030(4).

11. “Contract (CT/CT2)” means a document established to purchase a specific quantity or amount of goods or non-professional services at a specific price. KRS 45A.030(8).

12. “Contract Modification” means any written alteration in the specifications, delivery point, rate of delivery, contract period, price, quantity or other contract provisions of any existing contract, whether accomplished by unilateral action in accordance with a contract provision or by mutual action of the parties to the contract. It includes bilateral actions, such as supplemental agreements, and unilateral actions, such as change orders, administrative changes, notices of termination and notices of the exercise of a contract option. KRS 45A.030(9).

13. “DECA” means the Division of Engineering and Contract Administration within the Department for Facilities and Support Services, Finance and Administration Cabinet.

14. Delivery Order (DO/DO2)” means a document established by a state agency to purchase a specific quantity at a specific price referencing a Master Agreement. DO documents are generally used for commodities and DO2 documents are used for services.

15. “DFSS” means the Department for Facilities and Support Services within the Finance and Administration Cabinet.

16. “DRP” means the Division of Real Properties within the Department for Facilities and Support Services, Finance and Administration Cabinet.

17. “Electronic Offer” means an online bid through the state’s eProcurement system, an offer submitted by electronic mail, or an offer submitted by facsimile.

18. “FAC” means the Finance and Administration Cabinet.

19. “Government Body” means any department, commission, council, board, bureau, committee, institution, legislative body, agency, government, corporation or other establishment of the executive or legislative branch of the state government. KRS 45A.030(17).

20. “Master Agreement (MA)” means a document that establishes a price agreement for use by state agencies with a vendor for supplying specific goods and services at specific unit prices during a specified time period. It does not place an order for goods and services.

21. “Offer” means a bid, proposal, Solicitation response or quotation.

22. “OPS” means the Office of Procurement Services within the Finance and Administration Cabinet.

23. “Owner” means the Commonwealth of Kentucky.

24. “Person” means any business, individual, organization or group of individuals. KRS 45A.030(20).

25. “Planholder” means any entity, supplier and/or subcontractor that has purchased plans and specifications from the Division of Engineering and Contract Administration’s reprographics vendor in order to submit a bid with the Commonwealth of Kentucky.

26. “Procurement” means the purchasing, buying, renting, leasing or otherwise obtaining of any supplies, services or construction. It includes all functions that pertain to the procurement of any supply, service or construction item, including description of requirements, selection and solicitation of sources, preparation and award of contract, and all phases of contract administration. KRS 45A.030(21).

27. “Proof of Necessity Agreement (PON2)” means a type of contract established by a state agency to purchase professional services (i.e. personal service contracts, grants and memoranda of agreements).

28. “Purchase Order (PO/PO2)” means a type of contract established by a state agency to purchase a specific quantity or amount of goods or non-professional services at a specific price and is generally for a one-time purchase. A PO2 for non-professional services may contain an option to renew for an additional time period.

29. “Purchasing Agency” means any governmental body that is authorized by this code or its implementing administrative regulations or by way of delegation from the chief purchasing officer to contract on its own behalf rather than through the central contracting authority of the chief purchasing officer. KRS 45A.030(23).

30. “Purchasing Officer” means any person authorized by a governmental body in accordance with procedures prescribed by administrative regulations to enter into and administer contracts and make written determinations and findings with respect thereto. The term includes an authorized representative acting within the limits of authority. KRS 45A.030(24).

31. “Quote” or “Quotation Response” means a complete offer to perform the work specified in the Request for Quotation.

32. “RFB” means a Request for Bids.

33. “RFI” means a Request for Information.

34. “RFP” means a Request for Proposals. KRS 45A.070(5).

35. “RFQ” means a Request for Quotations.

36. “SAS” means the Office of Statewide Accounting Services within the Finance and Administration Cabinet.

37. “Secretary” means the secretary of the Finance and Administration Cabinet.

38. “Solicitation” means an RFB, RFI, RFP or RFQ.

39. “Sub-bidder” or “Subcontractor” means one who submits a bid to a prime bidder for materials or labor for a portion of the work described in the bidding documents.

40. “Tiered Pricing” means a determination of price based on volume, where the larger the volume, the larger the discount offered.

41. “Time” means calendar days.

42. “Unit Price” means an amount stated in the bid as a price per unit of measurement for materials or services as described in the bidding documents.

43. “Using Agency” means the state government entity that utilizes the work being contracted.

1. Bidder's Representations: Each bidder, by submitting a bid, swears or affirms, under penalty of law, that:

a. The bidder has read and understands the bidding documents and the bid is made in accordance with the bidding documents.

b. The bidder has carefully examined the site of the proposed work and is familiar with the local conditions under which the work is to be performed.

c. The bid is premised upon furnishing the work required by the bidding documents.

d. The bid amount has been arrived at by the bidder independently and has been submitted without collusion with, and without any agreement, understanding or planned common course of action with any other contractor, vendor of materials, supplies, equipment or services described in the Solicitation, that is designed to limit independent bidding or competition.

e. The contents of the bid have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder, or its surety on any bond furnished with the bid and will not be communicated to any such person prior to the bid opening.

f. The bidder is legally entitled to enter into a contract with the Commonwealth and the award of a contract shall not create any conflict of interest, including those set out in KRS 45A.330 – KRS 45A.340; KRS 45A.455 and KRS 164.390.

2. Bidding Documents:

a. A bidder, sub-bidder, sub-contractor and others may obtain bidding documents in the manner and for the charge, if any, stated in the Solicitation.

b. A complete set of bidding documents shall be used in preparing bids. The Commonwealth assumes no responsibility for misinterpretations resulting from the use of incomplete sets of bidding documents. The bidder shall supply all information called for in the Solicitation. Failure to supply the specified information may be cause for determining the bid nonresponsive.

c. The Commonwealth, in providing bidding documents, does so only for the purpose of obtaining bids on the work and does not confer a license or grant for any other use.

d. A bidder shall promptly notify the purchasing officer of any ambiguity, inconsistency or error, which it may discover upon examination of the bidding documents or of the site and local conditions.

e. All questions regarding the meaning or interpretation of the bidding documents shall be directed in writing to the purchasing officer. Unless otherwise specified in the Solicitation, questions received less than ten (10) calendar days prior to the date for receipt of bids may not be answered.

f. Any interpretation, correction or change of the bidding documents shall be made by an addendum issued by the purchasing agency. Interpretations, corrections or changes of the bidding documents made in any other manner shall not be binding and bidders shall not rely upon such interpretations, corrections or changes.

g. Unless otherwise indicated in the bidding documents, the materials, products and equipment described or referenced by manufacturers' or vendors' names, trade names and catalog numbers are intended to establish a standard of required function, dimension, appearance and quality. Unless otherwise stated, equal items may be furnished or used if approved by the purchasing officer in consultation with the architect or the director of DECA.

h. Addenda shall be published on the Commonwealth's eProcurement web site, and shall be issued to all who are registered planholders with the contracted reprographics company or other distribution authorized by the director of DECA.

i. Copies of addenda shall be made available for inspection wherever bidding documents are on file.

j. No addenda of a material nature shall be issued later than seven (7) calendar days prior to the date for receipt of bids, except for addenda postponing the date for receipt of bids or withdrawing the Solicitation.

k. The bidder shall ascertain prior to submitting a bid that the bidder has received all addenda issued by the purchasing officer for the particular solicitation. The bidder shall acknowledge receipt of all addenda on the Bid Response or by a separate letter to the purchasing officer, which shall be received at or prior to the hour and date specified for receipt of bids.

3. Bidding Procedure:

a. Bids shall be submitted on the Bid Documents provided by the purchasing officer.

b. All blanks in the Bid Documents shall be completed and all required support data shall be furnished.

c. If required in the bidding documents, sums shall be expressed in both words and numerical figures. In the case of discrepancy between the two, the amount in words shall prevail.

d. The authorized representative of the bidder, who signed the Bid Response, shall initial any alteration or erasure in ink.

e. The bid shall be firm in offer and conform substantially to the advertised terms, plans and specifications. Any qualifications or reservation imposed by a bidder in the bid retaining the option of accepting, modifying or rejecting an offered contract shall be cause to render the bid not firm and ineligible for consideration of award. Any offer in response to the Solicitation that includes terms contrary or in addition to those in the Solicitation may be considered non-responsive and may be rejected by the Commonwealth.

f. All alternates specifically called for by the Commonwealth shall be bid. Voluntary alternate bids or an alternate to a lump sum bid shall not be considered.

g. The bidder shall make no stipulations on the Bid Response nor qualify the bid in any manner.

h. A person legally authorized to bind the bidder to a contract shall sign the Bid Response. The Bid Response shall also include the legal name of the bidder and a statement indicating whether the bidder is a sole proprietorship, a partnership, a corporation or other legal entity. A bid by a corporation shall also identify the state of incorporation and federal employer identification number.

i. The purchasing officer shall retain the bid security of bidders until:

   1. The contract has been executed and performance and payment bonds have been furnished;

   2. The specified time has elapsed so that bids may be withdrawn; or

   3. All bids have been rejected.

j. The completed Bid Response, bid security, and required support data shall be enclosed in a sealed envelope. The envelope shall be addressed to the bid receipt clerk stated in the Solicitation and shall identify the bidder's name and address, the invitation number stated in the bidding documents, closing date and hour. If the bid is sent by mail, the sealed envelope shall contain the notation "BID ENCLOSED" on the face thereof.

k. Bids shall be received at the designated location prior to the closing time and date for receipt of bids indicated in the Solicitation or any extension thereof made by addendum. Bids received after the closing time and date for receipt of bids may be considered for evaluation and award only if:

   1. No other bids were received within the advertisement period;

   2. The readvertisement time delay would seriously affect the operations of the using agency; and

   3. In the reasonable judgment of the purchasing officer, the bid was finalized prior to the official closing time and date for the receipt of bids.

l. A bidder shall assume full responsibility for timely delivery at the location designated for receipt of bids.

m. Oral, telephonic, facsimile or telegraphic bids or changes in bids by such methods are not permitted and shall not be considered.

n. A competitively solicited contract shall be awarded from a bid evaluation in the state's eProcurement system or all bidders shall be notified of the award in writing.

4. Modification or Withdrawal of a Bid:

a. A bid may be withdrawn prior to the closing time and date for receipt of bids by written request from an authorized representative of the bidder. The modification or withdrawal of a bid shall be received by the receipt clerk stated in the Solicitation prior to bid closing time to be considered valid.

b. A withdrawn bid may be resubmitted up to the closing time designated for the receipt of bids.

c. No bidder may withdraw, modify or cancel its bid for a period of thirty (30) calendar days following closing time and date for receipt of bids without the bid security being subject to forfeiture.

5. Legal Requirements:

a. A foreign corporation submitting a bid shall be registered with the Kentucky Secretary of State and be declared in good standing prior to the issuance or receipt of a contract.

b. A domestic corporation submitting a bid shall be in good standing in accordance with the requirements of the Kentucky Secretary of State.

6. Taxes:

a. The winning bidder shall be liable for payment of Kentucky sales and use tax.

b. The winning bidder is deemed the end user of all building materials used in construction projects for the Commonwealth.

c. The winning bidder may not separately state Kentucky sales or use tax payable by the Commonwealth.

7. Planholder's List: The published planholder and addenda listing is for general information purposes and the exclusion or inclusion of any firm in no way expresses or implies Commonwealth approval or disapproval of the qualifications of any listed bidder, subcontractor, or material or equipment supplier.

8. Bid Bonds: Pursuant to KRS 45A.185, DECA or the using agency may require a bid bond as surety that a bidder will hold its offer firm for a specified period of time. If the Solicitation requires a bid bond, a bidder shall file with the requesting agency a bid bond or certified check in the amount and form specified by the Solicitation with the requesting agency. The bond shall be received either with the bid or prior to the bid closing to be considered.

a. The bond shall be in an amount equal to at least five percent (5%) of the amount of the bid or as stated in the Solicitation.

b. In addition to signing the bid bond as principal, the bidder shall have the bond signed by a surety company authorized to do business in the Commonwealth. A list of surety companies may be obtained from the Kentucky Department of Insurance. If the surety on a bond has its authority to do business in Kentucky revoked or, if for any reason it ceases to do business in the Commonwealth, the bidder shall promptly obtain another surety on the bond.

c. The bond shall be conditioned on full performance of all obligations imposed on the bidder by the Solicitation, including the obligation to keep the price firm for as long a period as specified in the Solicitation, obligation to enter into a contract with the Commonwealth, and the obligation to file a performance payment bond if required by contract. The bid bond shall provide that upon failure to perform an obligation, the Commonwealth may recover from the bidder and the surety, or either of them, any and all damages suffered because of the failure.

d. If a bidder elects to submit a certified check in lieu of a bid bond, it shall be security for full performance of all obligations referred to in subsection c. of this Section.

e. If a bidder is not awarded a contract, the certified check shall be returned to that bidder promptly after the award is made. The successful bidder's check shall be returned after the contract is awarded or as soon as the bidder has filed a performance bond, if required. Checks may be returned by certified mail, return receipt requested. The return receipts shall be electronically attached or hard copies attached to each bidder's bid and filed in the bid folder.

9. Consideration of Bids:

a. Unless the bidding documents indicate otherwise, all properly identified, timely bids shall be publicly opened, read aloud, and listed on the official bid tabulation. Tabulations shall be made available to bidders upon written request to the FAC's Open Records Custodian.

b. The Commonwealth retains the right to cancel the Solicitation, to reject any and all bids, and to waive technicalities and minor irregularities in bids, if such action is determined to be in the best interest of the Commonwealth.

c. Grounds for the disqualification of bids are stated in 200 KAR 5:306(4)(2).

d. Minor or technical deficiencies or irregularities in a bid may be waived by the purchasing officer on behalf of the Commonwealth, if:

1. The purchasing officer determines that it is in the Commonwealth's best interest to do so;

2. The technicalities or irregularities are mere matters of form not affecting the material substance of a bid, represent an immaterial deviation from or variation in the precise requirements of the Solicitation, and have no more than a trivial or negligible effect on price, quality, quantity or delivery of supplies or performance of services being procured; and

3. The correction or waiver of the technicality or irregularity does not affect the relative standing of, or prejudice other bidders.

e. If the Commonwealth does not waive the deficiency, the deficient bid shall be rejected.

10. Acceptance of Bid:

a. A contract shall be awarded, after a reasonable bid evaluation period, in accordance with the Solicitation, if the acceptable bid is within the amount budgeted by the agency.

b. The Commonwealth reserves the right to accept or reject any alternate bid. If alternates designated by the Commonwealth are considered in the award, the alternates shall be accepted in the sequence in which they are listed on the Bid Documents and the lowest bid sum shall be computed on the basis of the sum of the base bid plus any alternates accepted.

11. Qualification of Contractors:

a. A bidder shall submit a statement of the bidder's qualifications as part of the Bid Response. The purchasing officer shall have the right to make such inquiry as deemed necessary to determine the ability of the bidder to perform the work in a prompt and efficient manner in accordance with the contract documents. The failure of a bidder to promptly supply information in connection with the purchasing officer's inquiry may be grounds for a determination that such bidder is nonresponsive.

b. In determining the qualifications and responsibility of a bidder, the purchasing officer shall consider the bidder's experience, facility, previous work standing, financial standing, skill, quality and efficiency of construction plant, and equipment proposed to be utilized on the project.

c. The Commonwealth may reject any bid if an investigation and evaluation of the bidder's qualifications give reasonable doubt that the bidder can perform the work in a prompt and efficient manner in accordance with the contract documents.

12. Unit Prices:

a. If requested in the Solicitation, a bidder shall submit a list of unit prices in accordance with the Bid Document instructions, which shall include labor, materials, equipment, appliances, supplies, overhead and profit, as applicable.

b. Unit prices shall be used for the pricing of changes in the quantity of work from that indicated by the contract drawings and specifications, if the Commonwealth has authorized such changes in writing.

c. Only one (1) unit price shall be quoted for each designated item of work. The unit price shall be used to calculate price adjustments based on deductive as well as additive changes.

d. Unit prices shall apply to all phases of the work whether the work is performed by the bidder or by the bidder's subcontractor.

e. For unit prices of a lump sum bid contract, the Commonwealth reserves the right, prior to an award of contract, to evaluate the unit prices and adjust or reject any unit price that is determined by the purchasing officer to be unreasonable in amount.

f. If a total sum bid is made by line item, and unit prices are quoted for estimated quantities of units of work, such unit prices are not subject to change. However, the purchasing officer reserves the right to correct mathematical errors in extensions and additions by the bidder. In the latter case, the purchasing officer's corrected bid sum total shall supersede the bidder's incorrect computed bid sum total.

13. Subcontractor Listing:

a. If requested, a bidder shall list the names of subcontractors proposed for each of the principal portions of the work, including those persons or entities who are to furnish material or equipment fabricated to a special design, in the designated place on the Bid Documents.

b. When a listed subcontractor is proposed for a principal portion of the work as required in subsection a. above, and that subcontractor is not self-performing the work, but is subcontracting the work to lower tier subcontractor, each lower tier subcontractor shall be listed in parenthesis after the name of the main subcontractor. Without such listing of lower tier contractors, the main subcontractor must perform the work of that principal portion of the work with its own forces in its entirety.

c. A bidder shall establish, to the satisfaction of the purchasing officer, the reliability and responsibility of the listed subcontractors. The bidder may be required by the purchasing officer to provide additional information regarding listed subcontractors, including listed lower tier subcontractors.

d. If, after due investigation, there is reasonable objection to the qualifications of a listed subcontractor or a listed lower tier subcontractor, the bidder shall, upon written direction of the purchasing officer, submit the name of an acceptable substitute subcontractor or lower tier subcontractor with no change in bid price. The failure of the bidder to promptly comply with this requirement may be grounds for rejection of the bid.

e. Any listed subcontractor or listed lower tier subcontractor to whom the purchasing officer does not make written objection prior to the award of the contract shall be deemed acceptable to the Commonwealth.

f. A bidder shall make no other substitution for any listed subcontractor or listed lower tier subcontractor without first receiving the approval of the purchasing officer in writing of the intended substitution and the specific reason for the substitution. A substitution may be disapproved if the purchasing officer has reasonable objection. The purchasing officer may require a written agreement from the subcontractor being released.

g. Any work performed by a lower tier subcontractor that is not listed on the form of proposal in the manner described above, where required by the purchasing officer, shall be deemed to have been installed at the risk of the general contractor and the Commonwealth reserves the right, at its sole discretion, to reject that portion of the work and require that the work be removed and installed by a listed subcontractor or that the Commonwealth otherwise be compensated by a credit change order for an amount determined by the Commonwealth as reasonable for acceptance of such work installed by a non-listed lower tier subcontractor.

h. Nothing contained in the bidding documents shall be deemed to create a contractual relationship between the Commonwealth and any subcontractor.

14. Materials and Contractor Listing:

a. If requested, a bidder shall submit a listing of primary materials and equipment, including manufacturer's name, brand and catalog number. The materials and equipment listing shall be bound with the Bid Response or completed in the time period designated in Section 15.b. of this FAP.

b. Prior to the final acceptance of a bid, the purchasing officer shall make a preliminary review of the bidder's list of materials and equipment. The purchasing officer shall advise the bidder of the tentative acceptability of such materials and equipment, subject to satisfactory completion and approval of shop drawings, or direct such other action as may be necessary in order to meet the requirements of the contract documents. If any of the listed material or equipment is determined not to meet the requirements of the contract documents, the bidder shall be required to furnish other material or equipment meeting those requirements at no change in bid price. Preliminary review and acceptance of the above list shall not relieve the bidder, as the contractor, of the obligation to furnishing equipment and materials in accordance with the contract documents.

15. Post-Bid Review:

a. A bidder may have an authorized representative at the bid opening for the submittal of the material and equipment listing and the post-bid review of the apparent winning bid.

b. Unless otherwise provided in the bidding documents or authorized by the purchasing officer, the apparent winning bidder shall submit the material and equipment listing no later than one (1) hour after the close of the reading of the bids. The materials and equipment listing shall be that listing bound with the Bid Documents.

c. After opening, the scope of work bid by each bidder shall be reviewed by representatives of the purchasing agency, the using agency, the architect or engineer, and the apparent winning bidder. Review shall be directed toward subcontractors, material listing, unit prices and qualifications of the bidder.

d. The bidder's representative shall have the authority and ability to respond to questions that arise during the review.

16. Equal Employment and Nondiscrimination:

a. The Commonwealth is committed to a policy of providing equal job opportunities on public contracts and prohibiting discrimination based on race, creed, color, sex, age, religion, national origin or disability in employment. KRS 45.560 – KRS 45.640.

b. The utilization of minority vendors and subcontractors is encouraged, whenever possible, on public works contracts. The bidder and contractor should make full efforts to locate minority business persons. KRS 45A.610.

c. Unless exempted in accordance with KRS 45.590, the provisions of KRS 45.560 – KRS 45.640 shall be binding upon the declared successful bidder and the resulting contract shall contain the provisions set forth in KRS 45.570(2).

d. Unless a bidder is exempt under KRS 45.560 – KRS 45.640, the apparent successful bidder shall submit to the purchasing agency in the manner described and on the form(s) required, the information required by KRS 45.600 within five (5) calendar days of being declared the apparent low bidder. The form(s) shall be reviewed by the FAC Office of Equal Employment Opportunity and Contract Compliance.

17. Performance and Payment Bonds:

a. Pursuant to KRS 45A.190 and KRS 45A.195, a bidder shall deliver the required performance and payment bonds to the purchasing agency upon notification of intent to award, or, with the approval of the purchasing officer, within fourteen (14) calendar days after that date. Otherwise, the Commonwealth may determine that the proposed awardee has abandoned the Bid Response and the bid shall become null and void.

b. Unless otherwise specified in the bidding documents, the bonds shall be written on the form bound in the bidding document in the number of copies to be specified by the purchasing officer.

c. A bidder shall require the attorney-in-fact, who executes required bonds on behalf of the surety, to affix thereto a certified and current copy of his/her Power of Attorney. The date of the Power of Attorney shall not precede the date of the bonds. The bonds shall be executed with a licensed resident or non-resident agent, who represents insurance companies authorized to do business in Kentucky.

18. Award of Contract:

a. The issuance of an award of a contract is contingent upon securing an acceptable bid that is within the amount of budgeted funds and determining that the award of contract is in the best interest of the Commonwealth.

b. Unless otherwise provided in the bidding documents, the Agreement between the Commonwealth and the contractor shall be written on the standard form of agreement bound within the Solicitation. The Commonwealth shall not be required to enter into or sign further agreements, leases, company orders or other documents to complete the Agreement.

c. The Commonwealth's acceptance of the bidder's offer in response to the Solicitation, indicated by the issuance of a contract award, shall create a binding agreement between the parties consisting of the documents listed below. In the event of a conflict between the provisions contained in the contract, the order of precedence shall be in the same listing order as below.

    1. Solicitation including any addenda;

    2. Specifications;

3. Special Conditions;

4. General Conditions;

5. Technical provisions of the specifications;

6. Drawings/plans; and

7. Bid Response to the Solicitation.

19. Award of Construction and Construction-Related Contracts: Capital construction funded contracts require properly authorized Appropriation, Allotment, Revenue Budget, Project Management Master and Journal Voucher Transfer documents (SAS-5, SAS-14) for award of contract and allocation of construction funds. The issuing agency shall execute a construction contract using agency or general fund accounts on the basis of a duly signed agency Purchase Request.

FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES MANAGEMENT
DVISION OF ENGINEERING AND CONTRACT ADMINISTRATION

GENERAL CONDITIONS of the Contract for Construction - General Contractor

These **General Conditions of the Contract for Construction – General Contractor** have been implemented by the Kentucky Division of Engineering and Contract Administration for the purpose of delineating the provisions of the Contract for Construction when the Commonwealth has entered into a Contact with a General Contractor to accomplish a Capital Construction Project. The Document as a whole outlines the primary obligations and basic expectations for each entity involved in the Project.

These General Conditions apply to each section of the specifications and to the Contract Documents as a whole and are binding upon the Contractor and all Subcontractors as each are subject to the provisions contained herein.

These General Conditions are intended to define and establish certain definitions, procedures, rules and provisions of the Contract governing the operation so that the Work may be continued and be completed in an orderly, expeditious and workmanlike manner.

These General Conditions, together with the specifications and Contract Documents, shall further establish the standards of material and workmanship for the Work.

Specific Project requirements may alter the provisions indicated herein where strict adherence to the provisions of this document are not warranted or applicable. The Special Conditions and Supplemental Conditions contained in the Contract Documents, if present, modify and take precedence over the provisions of these General Conditions for this specific Project.

These General Conditions are based on and are consistent with the specific Kentucky Revised Statues passed by the Kentucky Legislature and signed into effect by the Governor; specific Kentucky Administrative Regulations promulgated by State Agencies to enhance and clarify procedures that are authorized by a specific statute; specific Finance Cabinet Administrative Regulations; and the DECA Procedures Manual.

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Articles

'1. Definitions of Terms

Wherever used in these General Conditions or in other Contract Documents, the following terms have the meaning indicated which are applicable to both the singular and plural thereof:

'1.1 Addenda Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the Bidding Requirements or the Contract Documents. An Addendum supersedes related provisions of the Contract Documents which are clarified, corrected or changed by the addenda.

'1.2 Agency or Using Agency, defined by KRS 45a.030, and is the state government entity which utilizes the Work being contracted. The Agency is a "client" of the Owner and advises the Owner of the needs, requirements and desires of the Agency related to the project. The Owner consults with the Agency on matters related to the Project. The Agency does not possess the legal authority of the Owner (see KRS 45a.045).

'1.3 Architect, Engineer or Consultant (A-E) is the person or entity, either a registered Architect, Registered Engineer, or Consultant, who is identified as such in the Contract Documents and on the drawings or any replacement Registered Architect, Registered Engineer, or consultant identified by the Owner. The A-E is a separate contractor and not an agent of the Owner. The term includes any associates or consultants employed by the A-E to assist in providing the required professional services to the Owner.

'1.4 ***Certification of Payment*** is the Owner's Progress Payment Forms, DOA-24 and DOA-25. All Payments made to the Contractor under this contract shall be on the appropriate Owner's Progress Payment Form.

'1.5 Change Order means a written order to the Contractor executed by the Owner and the A-E after execution of the Contract, directing a change in the Work and may include a change in the Contract Price or the Contract Time, or any combination thereof. There shall be no authorized changes in the Work, which affect either Contract Price or Contract Time, without a fully executed Change Order, except as provided elsewhere herein.

'1.6 Contract is the legal relationship, duties and obligations between the Owner and Contractor as evidenced by the Contract Documents for the Project.

'1.7 Contract Time is the number of calendar days between the Date of Commencement and the dates set for Substantial Completion and Final Completion of the Work, including any adjustments thereto, all as established in the Contract between Owner and Contractor

'1.8 Contract Documents include the Invitation for Bids, the Instructions to Bidders, the Payment and Performance Bonds, the General Conditions, the Special or Supplemental Conditions, the drawings, specifications, solicitation addenda, the contractors response to the solicitation, any written clarification of the response, the award document containing the Agreement between Owner and Contractor, and modifications issued after execution of the Contract. Modifications include (1) Change Orders issued as provided in Article 14, and (2) Field Orders for minor changes in the work issued by the A-E as provided in Article 14. Documents not included or expressly contemplated in this Paragraph, 1.8, do not, and shall not, form any part of the Contract between the Owner and the Contractor.

'1.9 Contract Sum means the sum stated in the Contract including any authorized adjustments thereto and is the total amount payable by the Owner to the Contractor for the performance of the Work under the Contract Documents.

'1.10 Contractor or General Contractor means the person or entity with whom the Owner has executed the Contract for construction. The Contractor may also be referred to as General Contractor. The Contractor shall hold his subcontractors, suppliers and others under his employ or contract to the terms and conditions of the Contract Documents.

'1.11 Damages for untimely performance means a calculated monetary amount to be paid to the Owner, based on real costs which the Commonwealth incurs, due to the Contractor's failure to complete the Work within the allowable time identified in the Contract Documents. This term may also be referred to as "Liquidated Damages" where the actual cost of damages for untimely performance cannot be readily calculated and a definite sum is predetermined to be paid to the Owner. The amount of Liquidated Damages shall be defined in the Special Conditions of this Project.

'1.12 Date of Commencement is the date specified in the Contract as the date upon which the Contractor is authorized to begin work. The Contract Time as set forth in paragraph 1.7 is determined using this Date of Commencement as the starting date.

'1.13 DECA Project Manager means the person(s) delegated authority to act on behalf of the Owner. Such person(s) is employed by the Owner, DECA's Project Manager(s) will be designated at the Pre-Construction Meeting. DECA reserves the right to change its designated Project Manager(s) at any stage of the Work, for the sole purpose or benefit of the Commonwealth.

'1.14 Delay means an event that causes an increase in the duration of the Project, or that changes the sequence of the Work or individual Work activities, thereby preventing completion of the Project within the time period specified in the Contract Documents. An event that does not cause an increase in the duration of the Project or prevents the completion of the Project within the time period specified in the Contract Documents, such as an event that is not on the critical path of the project schedule, is not a delay under this Contract.

'1.15 Direct Expenses is defined as "All items of expenses directly incurred by or attributable to a specific project, assignment or task" and "Direct costs consist of direct materials, direct labor, subcontract costs, and other miscellaneous direct costs such as bonding and equipment rentals, that are directly related to and can be specifically attributed to an individual contract."

'1.16 Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued , showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams. Where it is obvious that a drawing illustrates only a part of the given work or of a number of items, the remainder shall be deemed repetitious and so construed.

'1.17 Document Collaboration is the Owner's web-based document collaboration system that shall be used by all project participants for the submission, transmittal, transfer, review, approval, processing of all documents related to this project. Where the General Conditions, the technical specifications, or the Contract for Construction indicates that a submission of documents is required, this submission shall be through the Owner's Document Collaboration System.

'1.18 Extra Work as used in Article 14 is defined as Work not part of the existing Contract Documents which is being added to the Contract by a fully executed Change Order.

'1.19* A *Field Order is a written order issued by the A-E which clarifies or interprets the Contract Documents, or orders minor changes in the Work which does not require a change under Article 14. Field Orders are issued to the Contractor through the Owner's Document Collaboration System. Field Orders are also called A-E's Supplemental Instructions (ASIs).

'1.20 Final Completion is defined as the Work being acceptable under the Contract Documents and the Contract fully performed in accordance with the terms and conditions of the Contract Documents and the entire payment balance due the Contractor is due and payable.

'1.20.1 Final Completion Date shall have the meaning as described to it in Article '19.5.

'1.21 Notice of Intent to Award is a written letter issued to the apparent successful contractor after acceptance of bid price, unit prices, subcontractors and equipment and materials to inform them of such acceptance and request the required additional documentation to initiate the Contract. **This is NOT an authorization to proceed.**

'1.22 Owner means the Commonwealth of Kentucky, acting through the Finance and Administration Cabinet and its Administrative Agent, the Department for Facilities and Support Services, Division of Engineering and Contract Administration. The Owner is represented solely by the Division of Engineering and Contract Administration. The Owner is represented by the DECA Project Manager for the specific Project.

'1.23 The ***Project*** is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by other Contractors, working under separate Contract with the Owner.

'1.24 Resident Observer means an individual who has a direct contract with the A-E to observe and report on activities at the work site. A Resident Observer employed by the A-E is not authorized to serve as the Owners Representative, unless so designated by the Owner in writing.

'1.25 Retainage means money earned by a contractor for work accepted by the Owner, but withheld to ensure proper performance by the contractor. Retainage is further defined in Article '18.

'1.26 Shop Drawings means drawings, completion diagrams, schedules, and other data specially prepared for the Work by the Contractor or any Subcontractor, lower tier subcontractors, manufacturer, supplier, or distributor to illustrate some portion of the Work. Shop Drawings and other submittals from the Contractor to the A-E shall be transmitted through the Owner's Document Collaboration System. Unless other requirements are indicated in the Special Conditions for this project or unless otherwise permitted by the A-E in writing, all shop drawings required by the Contract Documents shall to be submitted to the A-E for review and acceptance within the time indicated below:

'1.26.1 For **Projects of less than 180 calendar day duration:** thirty (30) calendar days of the Date of Commencement.

'1.26.2 For **Projects of more than 181 calendar days and less than 360 calendar days duration:** less than sixty (60) calendar days of the Date of Commencement.

'1.26.3 **For Projects of more than 361 calendar days duration**: less than ninety (90) calendar days of the Date of Commencement.

'1.26.4 In circumstances where a specific shop drawing required by the Contract Documents cannot reasonably be submitted to the A-E for review and acceptance, the Contractor shall notify the A-E in writing within the time periods indicated above for submission, and if the A-E finds it reasonable to waive this submission time period requirement, the A-E may do so in writing.

'1.26.5 In circumstances where a specific shop drawing required by the Contract Documents cannot be reasonably reviewed by the A-E within the time prescribed elsewhere in the Contract Documents, the A-E shall notify the Contractor in writing prior to the date required for the review of the reasons for the time needed for reviewing the Shop Drawing.

'1.27 Specifications are the descriptive and written portions of the Contract Documents, wherever located and whenever issued, that describe the quality and performance of building materials and systems, using code citations and published standards. The drawings and specifications are complementary, together providing the information required for a complete facility. However, the specifications overrule the drawings where there is a conflict or contradiction. However, the Contractor shall inquire of the A-E for a determination of the resolution of the conflict or contradiction.

'1.28 Subcontractor means the person or entity having a direct contract with the Contractor for the performance of a part of the Work. The Owner has no direct contractual relationship with the subcontractor.

'1.29 Substantial Completion is the point at which, as certified in writing by the A-E and accepted by the Owner that the Project is: 1) at a level of completion in strict compliance with the Contract (see article '19.4 for a complete listing of requirements for compliance); 2) all necessary approvals by public authorities has been given; and, 3) that the Owner or the Agency can enjoy beneficial use or occupancy and can use, operate and maintain (the Owner has received all required warranties and documentation) it in all respects, for its intended purpose. Partial use or occupancy of the Project shall not result in the Project being deemed substantially complete and such partial use or occupancy shall not be evidence of Substantial Completion.

'1.29.1 Substantial Completion Date shall have the meaning as described to it in Article 19.

'1.30 **Warranty, General.** The Contractor shall warrant all equipment, materials, products, and workmanship provided by the Contractor under these Contract Documents for a period of twelve (12) months after the Date of Final Completion. This period of time is called the One-Year Warranty Period and is further defined in Article 9.2.

'1.31 **The *Work*** includes the construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, supervision, materials, equipment, services, and things provided or to be provided by the Contractor to fulfill the Contractor's obligations.

'2. Intent and Interpretation

The A-E shall be the authority of the Contract Documents as to their intent or interpretation, except as defined below and/or as provided in paragraph 3.4.

'2.1 Anything that may be required, implied or inferred by the documents which make up the Contract, or any one or more of them, shall be provided by the Contractor for the Contract Sum;

'2.2 Nothing contained in the Contract Documents shall create, nor be interpreted to create, privity or any other relationship whatsoever between the Owner and any person except the Contractor;

'2.3 When a word, term, or phrase is used in the Contract Documents, it shall be interpreted or construed first, as defined herein; second, if not defined, according to its generally accepted meaning in the construction industry; and third, if there is no generally accepted meaning in the construction industry, according to its common and customary usage;

'2.4 The words "include", "includes", or "including", shall be deemed to be followed by the phrase, "without limitation".

'2.5 The specification herein of any act, failure, refusal, omission, event, occurrence or condition as constituting a material breach of the resulting Contract shall not imply that any

other, non-specified act, failure, refusal, omission, event, occurrence or condition shall be deemed not to constitute a material breach of the resulting Contract;

'2.6 In the event of any conflict, discrepancy, or inconsistency, the following shall control:

'2.6.1 As between figures given on plans and scaled measurements, the figures shall govern; When two or more figures given on the plans are in conflict, the Contractor shall inform the A-E of such conflict immediately and the A-E shall clarify the correct figure to be used. The Contractor shall not proceed with any work related to the figures in conflict until the A-E has provided this clarification.

'2.6.2 As between large scale plans and small scale plans, the large scale plans shall govern;

'2.6.3 As between plans and specifications, the requirements of the specifications shall govern; When there is a conflict between the plans and specifications, the Contractor shall inform the A-E of such conflict immediately and the A-E shall clarify the correct interpretation to be used. The Contractor shall not proceed with any work related to the conflict until the A-E has provided this clarification.

'2.6.4 When any conflict, discrepancy, or inconsistency exists as described in Article '2.6, and when there is a necessary determination by the A-E, with agreement by the Owner, that the provisions indicated above do not result in the proper interpretation and resolution of the conflict, the A-E may provide written directive as to how the conflict is to be resolved.

'2.6.4.1 When such written directive, as indicated in '2.6.4 results in a cost difference to properly resolve the conflict, discrepancy, or inconsistency, a cost adjustment may be determined by the A-E to be appropriate.

'2.6.4.2 The Contractor shall notify the A-E/ Owner of his proposed necessity of a cost difference result within fourteen (14) calendar days of the receipt of the directive to resolve the conflict.. However, should the Contractor proceed with the work related to the conflict resolution without written notice of the proposed cost difference to the A-E within the prescribed time, no cost adjustment will be granted.

'2.7 Meaning of Execution. Execution of the Contract Documents by the Contractor is a representation that the Contractor has thoroughly examined the site of the Work, become familiar with the local conditions under which the Work is to be performed, and correlated personal observations with the requirements of the Contract Documents.

'2.7.1 Execution of the Contract Documents is a further representation that Contractor has received, reviewed and carefully examined all of the Contract Documents, and has found them in all respects to be complete, accurate, adequate, consistent, coordinated and sufficient for construction, the Contractor is fully qualified to act as the contractor for the Project and has, and shall maintain, any and all licenses, permits or other authorizations necessary to act as the contractor for, and to construct the Project.

'2.8 Prior Agreements. The Contract Documents supersede any and all prior discussions, communications, representations, understandings, negotiations or agreements between the Owner and the Contractor and the Agency and the Contractor.

'2.9 Contractor's Performance. The Contractor shall perform all of the Work required, implied or reasonably inferable from the Contract including, but not limited to, the following:

'2.9.1 Construction of the Project;

'2.9.2 The furnishing of any required surety bonds and insurance;

'2.9.3 The provision or furnishing, and prompt payment therefor, of labor, supervision, services, materials, supplies, equipment, fixtures, appliances, facilities, tools, transportation, storage, power, fuel, heat, light, cooling, or other utilities, required for construction and all necessary building permits and other permits required for the construction of the Project;

'2.9.4 The creation and submission to the A-E of detailed and comprehensive record drawings and specifications, depicting all as-built construction. Said as-built drawings shall be submitted to the Owner by the A-E upon Final Completion of the Project and receipt of same by the Owner shall be a condition precedent to final payment to the Contractor and to the A-E.

'2.10 Time. All limitations of time set forth in the Contract Documents are material and are of the essence of the Contract. The Contractor shall execute the work in such a manner as consistent with the limitations of time set forth. The Contractor shall make reasonable progress on the completion of the Work on a continual and consistent basis. Any failure of the Contractor to execute the Work in a timely manner consistent with the limitations of time set forth in the Contract Documents may be deemed at a Material Breach of Contract.

'2.11 Intent of Contract Documents. The intent of the Contract Documents is to include all items necessary for the proper completion of the Work by the Contractor. Labor or materials which are evidently necessary to produce the desired results, even though not specifically mentioned in the Contract Documents, shall be included in the Work. The A-E is the interpreter of the Contract Documents and where any clarification regarding interpretation of the Documents is required the A-E shall be notified in writing pursuant to paragraph 2.13 below.

'2.12 Contract Documents Complementary, etc. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all. In case of conflicts between the various Contract Documents, the order of precedence shall be as follows: (1) Addenda, (2) Special Conditions, (3) General Conditions, (4) Division 1 - General Requirements of the Specifications; (5) Technical provisions of the Specifications; (6) Drawings.

'2.13 Questions to A-E. In the event a question arises regarding the meaning or intent of the drawings and specifications, the Contractor shall report it at once to the A-E by the submission of a Request for Information through the Owner's Document Collaboration System. The A-E shall furnish, with reasonable promptness, as defined by the Contract between the Owner and the A-E, additional instructions, by means of drawings or otherwise, necessary for the proper execution of the work, consistent with the requirements of Article 3.

'2.14 Paragraph, titles, headings, and drawing numbers are for convenience only and form no operative part of the Contract. The General Contractor, and by the "flow down" provisions of these General Conditions, every subcontractor, shall provide all Work defined, identified, enumerated, specified or otherwise indicated to be provided by the Contract Documents.

'3. <u>The Architect, Engineer, Consultant (A-E)</u>

Unless otherwise directed by the Owner in writing, the A-E shall perform those duties and discharge those responsibilities allocated to the A-E in the Contract Documents. The duties, obligations and responsibilities of the A-E shall include, but are not limited to, the following:

'3.1 Owner's Representative. The A-E will be the Owner's Agent during construction, through issuance of final payment, and during the contractor's One Year Warranty period. The A-E will advise and consult with the Owner. In the event the Owner should find it necessary or

convenient to replace the A-E, the Owner shall retain a replacement A-E and the role of the replacement A-E shall be the same as the role of the A-E.

'3.2 Communication through A-E. Except as otherwise provided in the Contract Documents, the Owner's instructions to the Contractor shall be through the A-E and the Contractor's communications with the Owner shall be through the A-E. Should the contractor act on communications from any other entity, other than through the A-E, he is acting at his own risk and may be required to reverse the actions taken as his own expense.

'3.2.1 All documents related to this project shall be submitted, transmitted, transferred, reviewed, approved or rejected, and/or otherwise processed using the Owner's Document Collaboration System which is the Owner's web-based document collaboration system that shall be used by all project participants. No submission, transmittal, transfer, review, approval or processing shall be deemed Official without the use of this system.

'3.2.1.1 All documents transmitted for purposes of administration of the Contract are to be in electronic (PDF) format and transmitted via the Commonwealth's Document Collaboration System that receives, logs and store documents, processes documents through workflows and notifies addressees via email.

3.2.1.2 The A-E/ Engineer and the Contractor are required to become familiar with this system, to use this for all official transmittal of information pertaining to this project, and to respond to the requirements of this system within a reasonable time as defined elsewhere herein and/or by the terms of their Contract with the Owner.

3.2.1.2.1 Training: The Owner has an agreement with the service provider of the Document Collaboration System to provide training, support and assistance to users of the system via a web-based training session which can be arranged upon request. Further training as may be required by a specific user of the system is the responsibility of the user of the system.

'3.3 Review of Work. The A-E shall approve, or respond otherwise, in a timely manner, as defined by the Contract between the Owner and the A-E, as necessary concerning shop drawings or other submittals received from the Contractor. Should the A-E have reasonable cause to be unable to approve, or respond otherwise to submissions from the Contractor, the A-E shall provide written explanation of the reasonable cause within the timely manner, as defined by the Contract between the Owner and the A-E.

'3.3.1 The A-E shall be authorized to refuse to accept work which is defective or otherwise fails to comply with the requirements of the Contract. The A-E shall refuse the work in writing when he deems it necessary to refuse the work. If the A-E deems it appropriate, the A-E shall be authorized to call for extra inspection or testing of the work for compliance with requirements of the Contract.

'3.3.1.1 The costs of the extra inspection or testing shall be paid by the Contractor, unless the results of the extra inspection or testing find that the work was originally in conformance with the Contract requirements and that the extra inspection or testing was not necessary. A reduction in the Contract Sum shall be provided by Change Order to reimburse the Owner for the costs of the extra inspection or testing.

'3.3.1.2 In cases where the Contractor covers up work that is required by the Contract Documents to be inspected or tested prior to the inspection or testing, the cost of uncovering the work and performing the inspection or testing shall be at the

Contractor's expense even if the work is found to have been originally in conformance with the Contract Documents. A reduction in the Contract Sum shall be provided by Change Order to reimburse the Owner for the costs of the extra inspection or testing.

'3.3.2 The A-E shall review the Contractor's Payment Requests and shall approve in writing those amounts which, in the opinion of the A-E, are properly owing to the Contractor as provided in the Contract. The A-E shall perform this review, approval and submission of his recommendation to the Owner, within ten (10) business days of receipt of the Payment Request from the General Contractor.

'3.3.3 The A-E shall perform those inspections required by the Owner.

3.4 Interpretation of Contract Documents. The A-E shall be the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder by the Contractor, subject to the provisions of Article 26.

'3.4.1 Claims, disputes, and other matters in question that arise relating to the execution or progress of the Work shall be referred initially to the A-E for decision, which he will render in writing within a reasonable time, as defined by the Contract between the Owner and the A-E.

'3.4.2 Should the Contractor find disagreement with the A-E as to the proper interpretation of the Contract Documents or other decision of the A-E, he must refer the A-E's decision to the Director of the Division of Engineering in writing within seven (7) days. The Director of the Division of Engineering will then discuss and negotiate the A-E's decision with the A-E to seek reasonable resolution of the matter. Following these discussions and negotiations, the A-E's initial decision or revised decision shall be binding, unless the Contractor appeals the A-E's initial or revised decision to the Secretary of the Finance and Administration Cabinet in accordance with the provisions of Article 26.

'3.4.3 Should the Director of the Division of Engineering find disagreement with the A-E as to the proper interpretation of the Contract Documents or any other decision of the A-E, the Director of the Division of Engineering may appeal the A-E's initial or revised decision to the Secretary of the Finance and Administration Cabinet in accordance with the provisions of Article 26.

'3.4.4 The A-E shall have authority to reject Work which does not conform to the Contract Documents. In the event of rejection, the A-E may recommend in writing withholding payment to the Contractor for the rejected Work, and such recommendation shall give the Owner the authority to withhold payment for such Work.

'3.5 Review of Shop Drawings, etc. The A-E shall review and approve, or take other appropriate action upon Contractor's submittals (such as Shop Drawings, product data, and samples) for conformance with the design concept and the information given in the Contract Documents. Such action shall be taken with reasonable promptness, as defined by the Contract between the Owner and the A-E, so as to cause no delay. The A-E may determine concurrently with the Contractor the timing and scheduling of the A-E's Review, with the understanding that some submittals are more critical to the Critical Path of the Completion of the project than others.

'3.5.1 The A-E's approval of a specific item shall not indicate approval of an assembly of which the item is a component. The A-E's approval of Shop Drawings or samples shall not relieve the Contractor from his responsibility for any deviations from the requirements of the Contract Documents unless the Contractor has in writing called the A-E's attention to such deviation at the time of submission and the A-E has given written approval to the specific deviation, nor shall any approval by the A-E relieve the Contractor from responsibility for errors or omissions in the Shop Drawings.

‘3.5.2 If, for any reason, any item specified and approved by the A-E as a shop drawing submittal, will not be available when needed in the course of the work, and Contractor can show he has made a reasonable, persistent effort to obtain item in question, the Contractor is to notify the A-E in writing, immediately, and the A-E will either determine the source of the supply or arrange with the Owner for appropriate substitution, within the terms of the Contract. Otherwise, the Contractor will not be excused for delays in securing materials or products specified, and will be held accountable if completion of the project is thereby delayed.

‘3.6 Preparation of Change Orders. The A-E, in consultation with the Owner, shall prepare Change Orders. The A-E shall also have authority to order minor changes in the Work as provided in Article 14.2.

‘3.7 Final Inspections, Certification. The A-E, in consultation with the Owner, shall conduct inspections to determine the dates of Substantial Completion and Final Completion. The A-E shall also receive and forward to the Owner, for the Owner’s review, written warranties and related documents required by the Contract and assembled by the Contractor.

‘3.8 The A-E shall review the Contractor’s Payment Requests and shall approve in writing those amounts which, in the opinion of the A-E, are properly owing to the Contractor as provided in the Contract. The A-E will perform this review, approval and submission of his recommendation to the Owner, within ten (10) business days of receipt of the Payment Request from the Contractor.

3.8.1 When there is reasonable justification that causes the A-E to be unable to perform this review, approval and submission of his recommendation to the Owner within the time prescribed in paragraph 3.8 above, the A-E will notify the Contractor in writing as to the justification and as to the time that will be required for this review, approval and submission of his recommendation to the Owner.

‘3.8.2 The Contractor may submit no more than one (1) payment request each thirty (30) calendar day period, except where specifically agreed by the Owner that additional payment requests may be submitted within the thirty (30) calendar day period for reasons consistent with the Contractor’s performance of the Contract.

‘3.9 **The A-E, in consultation with the Owner, shall be authorized to require the Contractor to make changes or deviations in the work** which do not involve a change in the Contract Sum or in the Contract Time for the Contractor’s performance consistent with the intent of the Contract. The A-E shall make such changes or deviations in the work by written Field Order.

‘3.10 **The duties, obligations and responsibilities of the Contractor under the Contract** shall in no manner whatsoever be changed, altered, discharged, released, or satisfied by any duty, obligation or responsibility of the A-E. The Contractor is not a third-party beneficiary of any Contract by and between the Owner and the A-E. It is expressly acknowledged and agreed that the duties of Contractor to the Owner are independent of, and are not diminished by, any duties of the A-E to the Owner.

‘3.11 **The duties, obligations and responsibilities of both the A-E and the Contractor,** under their respective Contracts, shall in no manner whatsoever be changed, altered, discharged, released, or satisfied by any duty, obligation or responsibility of the Resident Observer. It is expressly acknowledged and agreed that the duties of Contractor and/or A-E to the Owner are independent of, and are not diminished by, any duties of the Resident Observer to the A-E/Owner. A copy of the Resident Observers Duties, Responsibilities and Limitations

are enumerated in the DECA Procedures Manual, are to be discussed at the Pre-Construction Meeting and are by reference made a part of these General Conditions.

'4. Construction Schedule

The Contractor, within fifteen (15) days of the Date of Commencement shall prepare and submit for the Owner and A-E's approval a construction schedule for completing the Work. This submission shall be transmitted through the Owner's Document Collaboration System. The schedule shall indicate the starting and completion dates of the various stages of the Work, shall not exceed time limits established by the Contract Documents for the various stages of Work, shall be updated monthly and furnished to the Owner and A-E, shall be related to the Work of any other contractors on the Project to the extent required by the circumstances, and shall provide for expeditious and practicable execution of the Work. Progress *Payments to the Contractor are contingent upon receipt of the updated monthly project schedule and schedule of submittals.*

'4.1 Time Frame of Schedule: *Extend schedule form date established* ***for commencement of the Work*** *(the Notice of Award or Notice to Proceed) to* ***Substantial Completion****, to* ***Final Completion****, and indicating all critical milestones along the time of the schedule.*

> ***'4.1.1 Work by Owner****: Include a separate activity for each portion of the Work to be performed by the Owner or by others working under separate contract with the Owner.*
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> ***'4'1.2 Products Ordered in Advance:*** *Include a separate activity for each product pre-ordered by the Owner. Include the delivery date indicated in the Special Conditions or as relayed to the Contractor from the Owner.*
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> ***'4.1.3 Work Restrictions and "blackout dates":*** *Show the effect of specified work restrictions and "blackout dates" as defined in the Special Conditions.*
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> ***'4.1.4 Commissioning:*** *Show separate activities for each building system to receive commissioning by others working under separate contract with the Owner, allowing sufficient time for functional startup, commissioning, correction of commissioning issues and final commissioning. Note: Commissioning must be accomplished in its entirety by the Date of Substantial Completion.*
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> ***'4.1.5 Testing and Balancing:*** *Show separate activity for testing and balancing by others working under separate contract with the Owner. Note: Testing and Balancing must be accomplished in its entirety by the Date of Substantial Completion.*

'4.2 The original schedule shall be accompanied by a proposed schedule of values as described in Article 18.1. The original Project Schedule, Schedule of Submittals and the Schedule of Values are to be submitted to the A-E, reviewed and accepted by the A-E and the Owner, prior to submittal of the first Progress Payment. No payment will be made to the Contractor without an approved Schedule of Values and a Project Schedule.

> **'4.2.1 The original schedule** shall show the project being completed on the established Date of Substantial Completion. To do this, the Contractor shall include in the flow of work any existing "float" which may be identified during the layout of the project schedule.
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> **'4.2.2 The Contractor acknowledges that all float** (including Total Float, Free Float, and Sequestered Float) is a shared commodity available to the Project and is not for the exclusive benefit of any party; float is an expiring resource available to accommodate changes in the Work, however originated, or to mitigate the effect of events that may delay performance or completion of all or part of the Work.

‘4.3 The Contractor shall promptly notify the A-E and Owner if the Contractor is materially ahead of, or behind the updated construction schedule. Failure to so notify the A-E and Owner shall relieve the Owner from liability for damages caused by delay or impact. Strict compliance with the requirements of this article shall be a condition precedent to payment to the Contractor, and failure by the Contractor to strictly comply with said requirements shall constitute a material breach of the Contract.

> **‘4.3.1 On projects where a CPM schedule is required, the Contractor shall report on the status of any “float”,** including the addition of “float”, the use of “float”, and the anticipation of the use of “float” at each project Progress Meeting.

‘4.4 For projects with a Contract Sum of $1,000,000 or greater the schedule shall be in critical path method (CPM) format. The schedules shall include all activities necessary for performance of the work showing logic (sequences, dependencies, etc.) duration of each activity with the critical path highlighted. The schedules shall include, but not be limited to, submittal processing and review time required by the A-E, fabrication and delivery of materials, construction, testing clean-up, work and/or materials to be provided by the Owner, dates and durations for major utility outages requiring coordination with the Owner and the Owner’s operations, and significant milestones related to the completion of the Project.

> **‘4.4.1 For projects where the CPM format is required for schedules,** any subsequent adjustment, modification or change in the schedule shall include an indication of the original Critical Path and the adjustment, modification, or change shall clearly delineate the adjustment, modification or change in the schedule and shall be accompanied by a written statement of the cause and reason for the adjustment, modification or change.
>
> **‘4.4.2 For projects where the CPM format is required for schedules and subsequent adjustment, modification or change in the schedule** does not include the information required by paragraph 4.3.1 above, the revised schedule shall be rejected and payment of the Contractor’s General Conditions costs suspended until this provision is complied with satisfactorily.

‘4.5 Work Hours on site shall be coordinated with the A-E, Owner and Using Agency and shall be initially defined and scheduled at the Pre-Construction Conference, adjusted by notification to the A-E, Owner and Using Agency during each monthly Progress Meeting, and shall comply with the following criteria:

> **‘4.5.1 Generally, work hours on site shall be** from 7am to 4pm, weekdays, unless otherwise defined in the Special Conditions. However, unless restricted or modified by the Special Conditions, the Contractor may propose a different work hour schedule up to 24/7/365 with acceptance by the Owner.
>
> **‘4.5.2 The Contractor shall have job site supervision on site** during any work hours scheduled and/or any extended work hours accepted by the Owner.

‘5. Shop Drawings; Submittals

‘5.1 Schedule for Submittals. Prior to submission of the first application for payment and in sufficient time to allow the A-E reasonable time for review, the Contractor shall submit to the A-E a schedule of submittals which shall be coordinated with the construction schedule. This submission shall be transmitted through the Owner’s Document Collaboration System. The Contractor shall keep the schedule of submittals current and present an updated schedule of submittals at each project progress meeting. This schedule of submittals shall contain anticipated and actual dates of the submittal of shop drawings and shall be consistent with the requirements for scheduling submittals defined in Article 1.26 of these General Conditions.

'5.2 Submittals of Shop Drawings, Samples, etc. The Contractor shall review, approve, and submit Shop Drawings, samples, and product data in accordance with the approved schedule as herein detailed.

'5.2.1 The Contractor's stamp of approval on any Shop Drawing or sample shall constitute a representation to Owner and A-E that the Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, or he assumes full responsibility for doing so, and that he has reviewed or coordinated each Shop Drawing or sample with the requirements of the Work and the Contract Documents.

'5.2.2 The A-E shall review and approve, with reasonable promptness as defined by the Contract between the Owner and A-E, the Shop Drawings, or return for corrections as required. The review and approval shall be for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents. The approval of a separate item will not indicate approval of the assembly in which the item functions.

'5.2.3 The Contractor shall make any corrections required by the A-E for compliance to the Contract and shall return the required number of corrected copies of Shop Drawings and resubmit new samples until approved. The Contractor shall direct specific attention, in writing, or on resubmitted Shop Drawings, to revisions other than the corrections called for by the A-E on previous submissions.

'5.2.4 Where a Shop Drawing or sample submission is required by the specifications, no related work shall be commenced until the submission has been approved by the A-E. A copy of each approved Shop Drawing and each approved sample shall be kept in good order by the Contractor at the site and shall be available to the A-E, Owner and Resident Observer.

'5.2.5 The A-E's approval of Shop Drawings or samples shall not relieve the Contractor from his responsibility for any deviations from the requirements of the Contract Documents unless the Contractor has in writing called the A-E's attention to such deviation at the time of submission and the A-E has given written approval to the specific deviation, nor shall any approval by the A-E relieve the Contractor from responsibility for errors or omissions in the Shop Drawings.

'5.2.5.1 Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to the A-E for decision before proceeding with the work.

'5.2.6 The Contractor shall maintain a submittal log which shall include, at a minimum, the date of each submittal, the date of any resubmittal, the date of any approval or rejection, and the reason for any approval or rejection. The Contractor shall provide copies of this submittal log with the current status of submittals clearly indicated therein to the A-E and the Owner at each progress meeting until such time as all submittals are complete and accepted.

'5.3 Photographic Documentation: Provide Pre-Construction Photographs, Construction Progress Photographs and Substantial Completion construction photographs. Submit photographs in the Owner's Document Collaboration System with a key plan or description of the location of the photograph taken.

'5.3.1 Pre-Construction Photographs: Take a minimum of 20 photographs to show existing conditions of the project site and adjacent property prior to the start of construction activities. Take additional photographs as necessary to adequately document the existing physical conditions of all improvements to the project site or adjacent property that might be affected by the activities of construction.

'5.3.2 Construction Progress Photographs: Take a minimum of 10 photographs DAILY to document the progress of construction. Take additional photographs as necessary to adequately document the progress of construction indicating all key elements of the construction and any significant progress.

'5.3.3 Substantial Construction Photographs: Take a minimum of 20 photographs to show conditions of the project site and adjacent property at the time of substantial completion of the work at the conclusion of construction activities. Take additional photographs as necessary to adequately document the current physical conditions of all improvements to the project site or adjacent property that might have been affected by the activities of construction.

'6. Documents and Samples at the Site

Unless otherwise provided in the Contract Documents, the General Contractor shall print and copy any drawings and specifications as are reasonably necessary for the execution of the Work. Each Subcontractor shall have the ability to download the entire set of drawings and specifications at its option, however, every Subcontractor shall be responsible for the scope of their work indicated in any location throughout the drawings and specifications. There is NO GUARANTEE of the division of the scope of work to specific specifications sections or specific drawings.

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'6.1 The Contractor shall maintain at the site one record copy of the drawings, specifications, addenda, Change Orders and other modifications, in good order and marked currently to record changes and selections made during construction. Unless otherwise directed, the Contractor shall also keep approved Shop Drawings, product data, samples and similar required submittals on hand. These shall be available to the A-E, Owner, and Resident Observer as requested.

'6.1.1 When the Contractor fails to maintain the record copies indicated in paragraph 6.1 above, payment of the Contractor's General Conditions costs may be suspended until this provision is complied with satisfactorily.

'6.2 Upon completion of the Work, the record documents described above shall be delivered to the A-E for submittal to the Owner along with the as-built drawings.

'7. Contract Documents Property of Owner

The Contract Documents, and each of them, as well as any other documents furnished by the Owner, shall remain the property of the Owner. The Contractor shall have the right to keep one (1) copy of the Contract Documents upon completion of the Project; provided, however, that in no event shall the Contractor use, or permit to be used, any portion or all of such Contract Documents on other projects without the Owner's prior written authorization.

'8. Supervision and Construction Procedures

'8.1 Supervision of the Work. The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention so as to ensure expeditious, workmanlike performance in accordance with the requirements of the Contract Documents. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences

and procedures. He shall be responsible for the acts and omissions of persons directly employed by him, as he is for Subcontractors and others under Article 17. He shall be responsible for coordinating all portions of the Work under the Contract unless the Contract Documents give other specific instructions concerning these matters.

'8.2 Obligation to Follow Contract Requirements. The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents by the activities or duties of the A-E in the A-E's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

'8.3 **The Contractor shall not perform Work without adequate plans and specifications,** or, as appropriate, approved Shop Drawings, or other submittals. If the Contractor performs Work knowing or believing it involves an error, inconsistency or omission without first providing written notice to the A-E and Owner, the Contractor shall be responsible for such Work and pay the cost of correcting same.

'8.4 **All Work shall strictly conform** to the requirements of the Contract Documents. The Contractor shall not commence or continue any portion of the Work where there is not a complete understanding of the requirements of the Contract Documents. When the Contractor believes that he does not have a complete understanding of the requirements of the Contract Documents, he shall immediately notify the A-E of this fact and shall issue a Request for Information to obtain this complete understanding of the requirements.

'8.4.1 All branches of work shown on the plans or specified, whether specifically mentioned or not, shall be executed in strict compliance with all local, state or federal regulations and codes, where the same have jurisdiction. Where the Contractor may be in doubt as the application of a state regulation or code on a specific branch of work, the Contractor shall ask for an interpretation from the A-E prior to proceeding with the work.

'8.5 **The Work shall be continually supervised**, the Contractor bearing full responsibility for any and all acts or omissions of those engaged in the Work on behalf of the Contractor

'8.5.1 The Contractor shall prepare Daily Construction Reports and submit these reports through the Owner's Document Collaboration System a minimum of weekly. Failure to submit these Daily Construction Reports in a timely manner shall be reason for withholding of General Conditions amounts from the Contractor's payment requests until such submittal is completed.

8.5.2 The Contractor's Daily Construction Report shall contain as a minimum the following information in enough detail as to provide an accounting of the construction site conditions, activities and issues:

- Contractor's Name
- Job Superintendent's Name
- Date of Report
- Weather Conditions – precipitation, temperature, etc.
- Manpower – by trade including number of workmen.
- Brief description of work performed that day.
- Conditions which delay progress of the work.
- Issues that arose needing resolution.
- Resolution of prior issues that were implemented.
- Project Photographs, where appropriate.

'8.6 **The Contractor shall at all times enforce strict discipline and good order** among his employees and Subcontractors and shall not employ on the Work any person not skilled in the Work assigned to him. Strict discipline shall include a prohibition of the use of drugs, alcohol or

any other controlled substance; prohibition of firearms or other weapons; prohibition of unnecessary contact with building occupants; and other objectives of good discipline.

'8.7 The Contractor shall employ and maintain at the Project site only competent supervisory personnel. Failure to provide proper job site supervision AT ALL TIMES THAT WORK IS IN PROGRESS shall be reason for a change order deduction of a portion of the General Conditions amounts from the Contractor's payment requests for the period of time that job site supervision is not provided.

'8.8 **The Contractor shall have a continuing duty** to read, examine, review, compare and contrast each of the Contract Documents, Shop Drawings, and other submittals and shall give written notice to the Owner and the A-E of any potential conflict, ambiguity, error or omission which the Contractor may find with respect to these documents and their adequacy and sufficiency for construction as required by the Contract before proceeding with the affected Work. The express or implied approval by the Owner or the A-E of any Shop Drawings or other submittals shall not relieve the Contractor of the continuing duties imposed hereby, nor shall any such approval be evidence of the Contractor's compliance with the resulting Contract.

'8.8.1 The **Owner has relied upon the A-E to prepare** documents for the Project, including the plans and specifications for the Project, which are accurate, adequate, consistent, coordinated and sufficient for construction, and in issuing the Contract to the Contractor, the Owner's established legal duties to the Contractor notwithstanding, the Owner has relied upon the A-E's professional expertise in fulfilling its legal duty to the Owner in addition to the Contractor's full and good faith compliance with its duties set forth above.

'8.9 Superintendent. The Contractor shall employ a qualified, competent full-time superintendent and any necessary assistants. This superintendent shall be present on site at all times that Work of this contract is underway except with prior written consent of the A-E. It shall be the responsibility of the superintendent to coordinate the work of all the Subcontractors.

'8.9.1 The Owner reserves the right to accept the Superintendent selected by the Contractor. This full-time Project Superintendent shall be qualified and experienced to supervise the work of this Contract. The Contractor shall notify the A-E and Owner in writing for acceptance prior to any change in supervisory personnel. This change shall be for reasons outlined below.

'8.9.1.1 The Contactor shall immediately replace a Superintendent upon written notice from the Owner that the current Superintendent is unsatisfactory. The Owner has the right to require replacement of a Superintendent at any time that the Owner loses confidence in the Superintendent: to adequately perform the duties required of the Contract Documents: to complete the Work in strict adherence to the Contract Documents; to maintain the project schedule; or to be present at the project site at all times Work is in progress, except as authorized by the A-E. The Owner also has the right to require the replacement of the Superintendent for inappropriate or unprofessional conduct either on the project site or directed toward the A-E/ Engineer, the Owner's Representatives (DECA personnel), the Using Agency Representatives, or the general public.

'8.9.2 This Superintendent shall have full and complete authority to act on behalf of the Contractor in all matters related to this project, except as defined in written form by the Contractor and accepted in writing by the Owner. All instructions given to the superintendent shall be considered as given to the Contractor.

'8.9.3 The superintendent shall not be changed except under the following circumstances:

'8.9.3.1 where the superintendent proves to be unsatisfactory to the Contractor or ceases to be in his employ, in which case the Contractor shall give timely prior written notice to the Owner of the impending change in superintendent and a reasonable explanation for the change; or

'8.9.3.2 where the Owner has reasonable grounds for dissatisfaction with the performance of the superintendent and gives written notice to the Contractor of these grounds. The Contractor, upon receiving such written notice, shall replace the existing superintendent with a successor, to whom the Owner has no objection.

'8.9.4 Should the Contractor not provide the superintendent as required by the Contract Documents to oversee all work being performed on this Contract, the Owner has the right to deduct by Change Order the amount of General Conditions costs from the Contract Sum for the period in which proper Superintendence of the Work is not provided. This amount is determined by dividing the complete amount of General Conditions indicated in the approved Schedule of Values by the number of months of project duration according to the approved Project Schedule.

'8.10 Contractor's Project Manager. In addition to the Superintendent required in article '8.9, the Contractor may employ a qualified, competent Project Manager. In the absence of an assigned Project Manager, the principal owner of the Contractor's Company shall be considered as the Project Manager. This Project Manager is not required be present on site at all times that Work of this contract is underway, but shall be intimately familiar with the status of the Work of the Project at all times. It shall be the responsibility of the Project Manager to supervise the Superintendent and represent the Contractor in all matters.

'8.10.1 The Owner reserves the right to accept the Project Manager selected by the Contractor. This Project Manager shall be qualified and experienced to manage the work of this Contract and represent the Contractor in all matters. The Contractor shall notify the A-E and Owner in writing for acceptance prior to any change in project management personnel. This change shall be for reasons outlined below.

'8.10.1.1 The Contactor shall immediately replace a Project Manager upon written notice from the Owner that the current Project Manager is unsatisfactory. The Owner has the right to require replacement of a Project Manager at any time that the Owner loses confidence in the Project Manager to adequately perform the duties required of the Contract Documents: to manage the Work in strict adherence to the Contract Documents; to maintain the project schedule; or to supervise the Superintendent. The Owner also has the right to require the replacement of the Project Manager for inappropriate or unprofessional conduct either on the project site or directed toward the A-E/ Engineer, the Owner's Representatives (DECA personnel), the Using Agency Representatives, or the general public.

'8.10.2 This Project Manager shall have full and complete authority to act on behalf of the Contractor in all matters related to this project. All instructions given to the Project Manager shall be considered as given to the Contractor.

'8.10.3 The Project Manager shall not be changed except under the following circumstances:

'8.10.3.1 where the Project Manager proves to be unsatisfactory to the Contractor or ceases to be in his employ, in which case the Contractor shall give timely prior written notice to the Owner of the impending change in Project Manager and a reasonable explanation for the change; or

'8.10.3.2 where the Owner has reasonable grounds for dissatisfaction with the performance of the Project Manager and gives written notice to the Contractor of these grounds. The Contractor, upon receiving such written notice, shall replace the existing Project Manager with a successor, to whom the Owner has no objection.

'8.10.4 Should the Contractor fail to replace an unsatisfactory Project Manager as required by written notice of the Owner, the Owner has the right to deduct by Change Order the amount of General Conditions costs from the Contract Sum for the period in which there is a refusal to make the required replacement. This amount is determined by dividing the complete amount of General Conditions indicated in the approved Schedule of Values by the number of months of project duration according to the approved Project Schedule.

'8.11 Temporary Support Facilities Required: The Contractor shall provide temporary job offices for use by the Job Superintendent, A-E, Resident Observer (if applicable) and the Owner during the course of construction from the time of commencement of the Work until Substantial Completion. Provide electric, water, HVAC internet access and telephone for all areas of the temporary job office. This job office shall be large enough to accommodate project meetings and to provide for construction management operations. Where a Resident Observer is utilized on the project, a separate office shall be provided for the Resident Observer's use with electric, water, HVAC, telephone and internet access.

'9. Labor, Material, and General Contractor Warranty

'9.1 Contractor Provisions. Unless otherwise stipulated, the Contractor shall provide and pay for all materials, supervision, labor, water, tools, equipment, light, power, temporary heat, hoist, supplies, appliances, transportation, and other facilities and things necessary for the execution and completion of the Work.

'9.1.1 In the event the Owner elects to make available the electric power or domestic water, at no cost, to the Contractor for construction purposes, the election to do so will be spelled out in the Special Conditions for this project. Available electric power provided by the Owner, at his election, shall not be utilized as a means for temporary heat without specific approval from the Owner in writing.

'9.1.2 Additionally, the Owner reserves the right to cease to provide this available electric power and/or domestic water, at no cost to the Contractor, should it be found that the electric power and/or domestic water is not reasonably used economically.

'9.2 General Contractor Warranty. The Contractor warrants to the Owner and A-E that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will strictly conform with the requirements of the Contract Documents.

'9.2.1 The Contractor shall warrant all equipment, materials, products, and workmanship provided by the Contractor under these Contract Documents not only during the Contract period but also for a period of twelve (12) months after the Date of Final Completion.

'9.2.1.1 The One Year Warranty period for correction of Work shall be extended with respect to portions of the Work first performed after the Date of Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

‘9.2.2 *Work* not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. While, the Contractor’s warranty excludes remedy for damage or defect caused by abuse by the Owner or building occupants, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage, if the Work is not conforming to the requirements of the Work and that has been determined to be defective, is not excluded from the Contractor’s One Year Warranty.

‘9.2.3 If, during the Contract Period or during the One Year Warranty period (a) any equipment, materials or products furnished and/or installed by the Contractor are found to be defective in service by reason of the Contractor's faulty process, structural and/or mechanical design or specification, or (b) any equipment , materials, or products furnished and/or installed by the Contractor are found to be defective by reason of defects in material or workmanship, the Contractor shall, promptly after receipt of written notice from the Owner or A-E, repair or cause to be repaired such defective equipment, materials or products, or replace such defective equipment, materials, or products.

‘9.2.3.1 During the One Year Warranty Period for correction of the Work, if the Owner fails to notify the Contractor and give the Contractor the opportunity to make correction, the Owner waives the right to require correction by the Contractor and to claim a breach of Warranty. However, this inaction during the Warranty Period by the Owner does not imply any limitation of the Contractor's liability as indicated in paragraph ‘9.2.7.

‘9.2.3.2 During the One Year Warranty Period for correction of the Work, if the Owner notifies the Contractor and gives the Contractor the opportunity to make correction, and the Contractor fails to correct the Work with reasonable promptness, the Owner has the right to claim a breach of Warranty.

‘9.2.4 **The Contractor’s warranty shall not exclude** remedy for damage or defect caused by abuse by the Contractor, his subcontractors, or others within his control during the construction period or during work related to Contractor warranty.

‘9.2.4.1 Any portion of the Work required by the Contract Documents shall not be waived as a requirement for Completion of the Work*, except by specific written authorization from the Associate Director of the Division of Engineering and Contract Administration for reasons where, by no fault of the Contractor, could not be completed within the time established for Completion of the Work.*

‘9.2.5 If during the Contractor’s warranty period, there is a question concerning the quality or kind of materials and equipment installed in this project, and requested by the A-E, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

‘9.2.6 In the event of multiple failures of major consequence in similar equipment, products, components or systems, prior to the expiration of the one-year warranty described above, the affected equipment, product, component or system shall be disassembled, inspected, and modified or replaced as necessary to prevent further occurrences. All related components which may have been damaged or rendered non-serviceable as a consequence of the equipment, product, component or system failure shall be replaced.

‘9.2.6.1 As used herein, multiple equipment, product, component or system failures shall be interpreted to mean two (2) or more successive failures of the same kind in the same item of equipment, product, component or system or

failures of the same kind in two (2) or more items of equipment or product, or in a specific building system or component.

‘9.2.6.2 Major equipment failures may include, but are not limited to, cracked or broken housings, piping, or vessels, excessive deflections, bent or broken shafts or structural members, broken or chipped gear teeth overheating, premature bearing failure, excessive wear, or excessive leakage around the seals.

‘9.2.6.2.1 Equipment failures which are directly and clearly traceable to operator abuse, such as substitution of unauthorized replacement parts, use of incorrect lubricants or chemicals, flagrant over or under lubrication and using maintenance procedures not conforming with published maintenance instructions, shall be exempted from the scope of the one-year warranty.

‘9.2.6.3 Major product, component or system failures may include, but are not limited to, failure of the item to perform as intended, excessive wear, discoloration due to defective finish application, leakage, or inadequacy of performance as specified.

‘9.2.6.3.1 Product, component, or system failures which are directly and clearly traceable to building user or operator abuse, such as substitution of unauthorized replacement parts, use of incorrect lubricants or chemicals, flagrant over or under lubrication, using maintenance procedures not conforming with published maintenance instructions, and abuse or vandalism, shall be exempted from the scope of the one-year warranty.

‘9.2.6.4 Should multiple equipment, product, component or system failures occur in a given item or type of equipment, product, component or system, all items of the same size and type shall be disassembled, inspected, modified or replaced, as necessary, and re-warranted for one year.

‘9.2.6.5 A new twelve (12) month warranty against defective or deficient design, workmanship, and materials shall commence on the day that the item of equipment is reassembled and placed back into operation.

‘9.2.7 No specific provision of this Article nor any provision in the Contract Documents, nor any special guarantee time limit implies any limitation of the Contractor's liability with the laws of the Commonwealth of Kentucky.

‘9.3 Substitution - Materials and Equipment. Substitution of previously approved equipment and materials shall be submitted to the A-E for acceptance and will be considered only for the following reasons:

‘9.3.1 unavailability of the material or equipment due to conditions beyond the control of the Contractor

‘9.3.2 inability of the supplier to meet Contract schedule; or

‘9.3.3 technical and immaterial noncompliance to specifications.

Inclusion of a certain, make or type of materials or equipment by the Contractor shall not obligate the A-E or Owner to accept such material or equipment if it does not meet the requirements of the plans and specifications.

Substitutions not properly approved and authorized by the A-E and Owner may be considered defective work. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials and equipment.

'9.4 **Recycled Content:** KRS 45A.520 mandates that every state agency require a minimum recycled content for those materials it purchases. In accordance with 200 KAR 5:330, all listed products are to be offered by the awarded contractor ONLY as a recycled product. Except as provided in KRS 45A.510, construction related materials requiring a minimum recycled content include Building Insulation, Aluminum products, concrete, cement and steel products. For a complete listing of those items requiring minimum recycled content please refer to 200 KAR 5:330 http://www.lrc.state.ky.us/kar/200/005/330.htm

'10. Surveys, Permits, Fees, Notices, and Tests

'10.1 Owner-Furnished Surveys. The Owner shall furnish whatever surveys are specifically required by the Contract Documents. Approvals, assessments, easements for permanent structures or permanent changes in existing facilities, and utility tap-on fees shall be secured and paid for by the Owner, unless otherwise provided in the Contract Documents.

'10.1.1 Prior to start of Construction, the Owner will furnish all land and rights-of-way necessary for the carrying out and completion of the Work to be performed under this Contract, except as outlined in the Special Conditions should any conditions exist at the start of construction which does not make this possible at the start of construction.

'10.2 Permits. Building, sewer, and water permits and similar kinds of permits required by local ordinances shall be obtained by the General Contractor. Note: no building permit fee shall be charged to or paid by the Contractor as the Commonwealth is exempt from such charges levied by Local Government Jurisdictions. The Contractor shall procure and pay for any necessary licenses to do business in the locale of the Work.

'10.3 Notices. The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities bearing on the performance of the Work.

'10.4 Required Regulatory Tests and Inspections. Regulatory agencies of the State and Federal governments having jurisdiction may require any Work to be inspected, tested or approved. The Contractor shall assume full responsibility therefore, including related costs, unless otherwise noted, and shall furnish the A-E the required certifications of inspection, testing or approval.

'10.4.1 The Contractor shall pay the electrical inspection fees directly to the Commonwealth of Kentucky, Department for Housing and Building Construction. The Electrical subcontractor is responsible for the payment of this fee. The Electrical subcontractor is responsible for coordination of the required electrical inspections as required by the Department for Housing and Building Construction.

'10.5 **Any delays by governmental agencies in obtaining Permits, Notices, Required Regulatory Tests and Inspections (10.2, 10.3, 10.4)** and not the fault of one of the parties shall be shared by the Contractor and Owner with appropriate time extensions only. Liquidated damages and Contractor compensation for such delays or impact are not applicable and shall not be payable.

'10.6 Payment for Tests. Tests of materials, products and equipment in place, required by the A-E or the Owner, to prove quality standards shall be paid by the Contractor. Should results of testing indicate that construction is not in compliance with Contract Documents, the Contractor shall bear the cost of any additional tests of the materials, products or equipment.

’10.6.1 The Contractor shall give the A-E timely notice of readiness of the Work for all inspections, tests or approvals. This timely notice of readiness shall be no less than 72 hours except by prior agreement between the A-E and the Contractor.

’10.7 Local Building Permits and fees. The Commonwealth’s Construction projects are exempt from Building Permit requirements of Local Governments. The Contractor is not obligated to obtain a local building permit or to pay a building permit fee. However, this exemption does not waive the requirement for fees to make connection to utilities owned by a local municipality, Local Health Department Fees, or other such requirements.

’11. Protection of Work, Property, Employees and Public

’11.1 Safety Precautions and Programs. The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Project. The Contractor shall be responsible for compliance with all State and Federal OSHA rules and regulations.

’11.2 Safety of Persons and Property. The Contractor shall continuously maintain adequate protection of all Work from damage and shall protect the Owner’s property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by agents or employees of the Owner. He shall adequately protect adjacent property as provided by law and the Contract Documents.

’11.2.1 The Contractor shall take all necessary precautions for the safety of his employees and the employees of his subcontractors on the Work site, and shall comply with all applicable provisions of federal, state, and municipal safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where the Work is being performed.

’11.2.2 The Contractor shall provide and maintain a Work environment and procedures which will safeguard the public and State personnel and agents, property, material, supplies and equipment exposed to Contractor operations and activities; avoid interruptions of user agency operations; and avoid delays in Contract completion dates.

’11.2.2.1 Utilities which serve occupied building(s) shall not be interrupted unless absolutely necessary. When temporary utility interruptions are necessary, the Contractor shall provide the A-E and Owner a notice seven (7) calendar days prior to the temporary interruption. Where it is not practical to provide a seven (7) calendar day notice, the Contractor shall notify the A-E and Owner of the temporary interruption in advance and confirm the actual utility outage/ interruption a MINIMUM of seventy-two (72) hours ahead of the outage/ interruption.

’11.2.2.2 When utilities are accidentally interrupted that serve occupied building(s), the Contractor shall immediately notify the A-E, the Owner and the Building Operations Representative, and work consistently and persistently to restore the utilities immediately. The Contractor will be responsible for any costs or damages incurred by the Owner or adjacent property owners in the event of an accidental interruption.

’11.2.3 For the purposes of protecting the safety of persons and property, the Contractor shall provide appropriate safety barricades, signs and signal lights; Comply with any safety requirement published by any governmental authority with jurisdiction over the

site, including Federal, State or local jurisdictions; and ensure that any additional measures which are reasonably necessary for these purposes are taken.

'11.2.4 The Contractor shall designate a responsible member of his organization present on the Work site as safety officer whose duty shall be to enforce safety regulations. The name and position of the person so designated shall be reported to the A-E by the Contractor at the beginning of the project. Should the Contractor have reason to change the responsible member designated with this task, he shall immediately inform the A-E in writing.

'11.2.5 In an emergency affecting the safety of life, or of the Work, or of adjoining property, the Contractor, without special instruction or authorization from the A-E or Owner, shall act at his discretion to prevent such threatened loss or injury. Immediately following the emergency, the Contractor shall file a written report to the A-E and Owner detailing the incident and the actions taken to mitigate the condition.

'11.2.6 If the A-E or the Owner becomes aware of any noncompliance by the Contractor with the safety conditions of this Contract or of any condition caused by the Contractor, which poses a serious or imminent danger to the health or safety of the public or to State personnel, they shall notify the Contractor orally, with written confirmation, and direct immediate initiation of corrective action.

'11.2.6.1 This provision of providing notice to Contractor for noncompliance with safety issues does not in any way relieve the Contractor from his responsibilities, either in part or in full, to provide adequate precautions to insure the safety of persons and property.

'11.2.6.2 This Notice, when given to the Contractor or his representative at the Work site, shall be deemed sufficient notice of noncompliance and that corrective action is required.

'11.2.6.3 After receiving the Notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the A-E may issue an order stopping all or part of the Work until satisfactory corrective action has been taken.

'11.2.6.3.1 The Contractor shall not be entitled to an equitable adjustment of the Contract price or an extension of the performance schedule by reason of the issuance of any stop Work order under this Article.

'11.3 Hazardous Materials. In the event the Contractor unexpectedly encounters on the site material reasonably believed to be asbestos, lead based paint, polychlorinated biphenyl (PCB) or other classified hazardous substances/materials which have not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and A-E in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of the Owner and Contractor if in fact the material is asbestos, lead based paint, polychlorinated biphenyl (PCB), or other classified hazardous substances/materials which have not been rendered harmless. The Work in the affected area shall be resumed in the absence of any classified hazardous substances/materials or when it or they have been rendered harmless.

'11.3.1 The Contractor shall at all times safely guard the Owner's property and adjacent property from injury and/or loss resulting from the release of hazardous or toxic materials, or similar damage in connection with the Contract Documents or the performance of the Work hereunder. The Contractor shall replace or make good any damage, loss or injury caused as a result of failure to comply with Contract Documents.

'12. Inspection of Work / Defective or Incomplete Work / Special Inspections

The Owner, the A-E, Special Inspector Agency and their representatives shall at all times have access to the Work whenever it is in preparation or progress and the Contractor shall provide proper facilities for such access and for inspection. This access shall include access to approved Construction Documents and Submittals. The Contractor shall be given timely notification in order to arrange for proper inspection of any Work performed outside of the normal working day or week.

'12.1 If **the specifications, the A-E's instructions, laws, ordinances, or any public authority require any Work to be specially tested or approved,** the Contractor shall give the A-E timely notice of its readiness for inspection. Inspections by the A-E shall be made promptly, as defined by the Contract between the Owner and the A-E.

'12.2 In the event that the Contractor covers, conceals or obscures its Work in violation of the Contract or in violation of a directive from the Owner or the A-E, such Work shall be uncovered and displayed for the Owner's or A-E's inspection upon request, and shall be reworked at no cost in time or money to the Owner.

'12.2.1 If any of the Work is covered, concealed or obscured in a manner not covered by the above paragraph, it shall, if directed by the Owner or the A-E be uncovered and displayed for the Owner's or A-E's inspection. If the uncovered Work conforms strictly to the Contract, the costs incurred by the Contractor to uncover and subsequently, replace such Work shall be borne by the Owner. Otherwise, such costs shall be borne by the Contractor.

'12.3 The Contractor shall, at no cost in time or money to the Owner, correct Work rejected by the Owner or by the A-E as defective or failing to conform to the Contract. Additionally, the Contractor shall reimburse the Owner for all testing, inspections and other expenses incurred as a result thereof.

'12.4 The Owner may, but shall in no event be required to, choose to accept defective or nonconforming Work. In such event, the Contract Price shall be reduced by the greater of (1) the reasonable costs of removing and correcting the defective or nonconforming Work, and (2) the difference between the fair market value of the Project as constructed and the fair market value of the Project had it not been constructed in such a manner as to include defective or nonconforming Work. If the remaining portion of the unpaid Contract Sum, if any, is insufficient to compensate the Owner for the acceptance of defective or nonconforming Work, the Contractor shall, upon written demand from the Owner, pay the Owner such remaining compensation for accepting defective or nonconforming Work.

'12.5 When Special Inspections are required by Section 1704 of the Kentucky Building Code for any portion of the work, the following provisions shall apply:

'12.5.1 Special Inspector Agency or Special Inspector: An independent agency/ registered professional Contracted by the Owner, required by the Kentucky Building Code Chapter 17, and responsible for conducting special inspections and testing defined as such in the technical specifications for this project.

'12.5.1.1 The costs of the initial special inspections and testing shall be borne by the Owner by separate contract with the Special Inspection Firm.

'12.5.1.2 The costs of re-inspections and/or re-testing, should discrepancies be found, shall be paid by the Owner, but is recoverable by the Owner from the Contractor by a credit change order.

'12.5.1.3 The costs of re-scheduling inspections and/or testing, where the Contractor through his lack of reasonable control of scheduling causes the Special Inspector to spend time in preparation for an inspection and/or test that did not occur as scheduled, shall be paid by the Owner, but is recoverable by the Owner from the Contractor by a credit change order.

'12.5.2 Contract Document Compliance: Special Inspection and testing as defined in the technical specifications is for the purpose of verifying compliance with requirements specified or indicated. This does not relieve the Contractor of the responsibility for compliance with the Contract Document requirements.

'12.5.2.1 Should the Special Inspector identify through inspection and testing that a portion of the Work is not in compliance with the technical specifications, the Special inspector is to provide notice to the A-, Owner and Contractor concurrently that a deviation exists. The Special Inspection Firm does not possess the authority to modify the requirements of the technical specifications, but to inspect, test and notify of any non-compliance or deficiencies.

'12.5.2.2 When a non-compliance or deficiency exists as reported by the Special Inspection Firm, the A-E is to review the Special Inspection Report and, when necessary, issue a "Defective Work in Place Notice" to the contractor to require correction or modification.

'12.5.2.3 Should the Special Inspector consider that there are a potential issue with the requirements of the technical specifications due to discovered existing field conditions, the Special Inspector is to include such consideration in the Special Inspection Report for review and interpretation by the A-E. The decision of the A-E is final.

'12.5.3 Notify the Special Inspector: The Contractor shall be responsible for notifying the Special Inspector and/or Special Inspection Agency regarding individual inspections required by the Contract Documents and coordinating the schedule of inspections and testing with the Contractor's approved construction schedule. Adequate notice shall be provided so that the Special Inspector has time to become familiar with the project.

'12.5.4 Deficiencies: The Contractor shall be responsible to ensure that deficiencies are corrected and shall coordinate with the Special Inspector to ensure that the Special Inspector has observed the corrected deficiency prior to the work involved in the discrepancy being concealed or made inaccessible by subsequent work. Concealing or making inaccessible such deficiencies shall constitute another deficiency subject to removal to allow observation of the work involved in the initial discrepancy.

'12.5.5 Reporting Requirements: The Special Inspection Agency/ Special Inspector shall keep records of all inspections and testing, re-inspections and re-testing, and other related events. The Special Inspector shall furnish inspection and testing reports to the Owner, Contractor, and A-Eing concurrently and as construction progresses. Reports shall be submitted immediately following each site visit, inspection and when determinations of results of off-site testing are available.

'12.5.5.1 Reports shall include date of issue; project title and number; name/ address/ telephone number of testing agency; dates and locations of samples and tests or inspections; names of individuals making tests and inspections; description of the work being tested or inspected; test and inspection method; specification section related to work; complete test or inspection data; test and inspection results; interpretation of results; all non-conforming items/ discrepancies observed and corrective actions implemented by the Contractor; re-testing and re-inspection

performed; ambient conditions at time of sampling, testing or inspection; comments or professional opinion on whether tested or inspected work complies with the Contract Documents and name/ signature of inspector with registration number.

'12.5.6 Notification of non-conforming or deficiency of the Work: The Special Inspection Firm/ Special Inspector shall immediately bring non-conforming or discrepancy work to the attention of the Owner, A-E and Contractor. The A-E shall make a determination as to the need for correction.

'12.5.6.1 If non-conforming or deficiency work is not corrected in a timely manner or are about to be incorporated into the Work, the Special Inspector shall bring the non-conforming or discrepancy work to the immediate attention of the Authority Having Jurisdiction, Owner, Contractor, and the A-E, and that item shall be highlighted in the Special Inspector's written report.

'12.5.6.2 Defective Work in Place Notice: The A-E is to review the Special Inspector's report and when necessary shall issue a "Defective Work in Place Notice" and issue it through the Document Collaboration System. The Special Inspector shall cause the Notice to be posted at the Project Site regarding the noted discrepancies and which shall contain, at a minimum, the following information about the non-conforming item: 1) Description and exact location; 2) Reference to applicable detail of the approved Construction Documents (Drawings and Specifications); 3) name and title of each individual notified and method of notification; and, 4) Resolution or corrective action taken or to be taken.

'13. Royalties and Patents

The Contractor shall pay all royalties and license fees and shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof.

'14. Changes in the Work/ Change Orders

'14.1 Change Orders. One or more changes to the Work within the general scope of the Contract may be ordered by Change Order. The Contractor shall proceed with any such changes, (including additions, reductions, deletions, other revisions), and same shall be accomplished in strict accordance with the following:

'14.1.1 Change Order means a written order to the Contractor executed by the Owner and the A-E after execution of the Contract, directing a change in the Work and may include a change in the Contract Price, or the Contract Time, or any combination thereof. There shall be no authorized changes in the Work which affect either Contract Price or Contract Time without a fully executed Change Order.

'14.1.1.1 In specific instances where the progress of the Work would be negatively affected by a delay in the Work while a fully executed Change Order is being processed.. Upon approval by the Associate Director of the Division of Engineering, and with an agreed to Contract Sum/Contract Time adjustment, the A-E may issue a written authorization to proceed with the proposed change (with the change in Contract Sum/ Contract Time clearly indicated) prior to the issuance and execution of the formal Change Order. Following this written authorization to proceed with the proposed change, the A-E will prepare and process for execution the required Change Order.

’14.1.1.2 In these specific instances where a written authorization to proceed is provided prior to execution of the required Change Order, the action of the Contractor to proceed with the authorized work shall be deemed as agreement to the change for the Amount and Time extension indicated in the written notice to proceed with the change.

’14.1.2 Any change in the Contract Sum or Contract Time resulting from a Change Order shall be determined by one of the following methods:

(1) **by mutual agreement of a lump sum amount** and/or Time adjustment between the Owner and the Contractor as evidenced by (a) the Change in the Contract Sum or Contract Time being set forth in the Change Order, (b) such change in the Contract Sum or Contract Time, together with any conditions or requirements relating thereto, being initialed by both parties and (c) the Contractor’s execution of the Change Order;

(2) **by unit prices stated in the Contract Documents** or subsequently agreed upon by the Owner and the Contractor

(3) **on a time and materials basis with a not to exceed price limitation**, when the scope of the Work is not readily determined prior to the execution of the Work. Prior to the use of a time and materials basis, approval of the Associate Director of the Division of Engineering is required. Additionally, the Contractor must provide detailed labor and materials documentation of the Work once performed for the reconciliation of the time and materials basis cost of the work. The A-E shall monitor the Work performed by this basis during the execution of the work; or

(4) **If no mutual agreement occurs** between the Owner and the Contractor, the Change in the Contract Sum, if any, shall be derived by determining the reasonable actual costs or savings achieved resulting from revisions in the Work. This determination shall be made by the A-E, who has the responsibility of interpretation of the Contract Documents.

’14.1.2(4).1 When a determination by the A-E is required for a Change Order due to no mutual agreement being reached between the Owner and the Contractor, the provisions of paragraph ’14.1.3 and ’14.1.4 shall apply. Additionally, the Contractor shall not refuse the perform the Work indicated by the Change Order and shall execute the Work in a timely manner, even if the Contractor intends to protest the determination as provided in paragraph ‘3.4

’14.1.3 Items (1), (3), and (4) above shall include a component for all overhead, profit, indirect costs or other items not to exceed fifteen percent (15%). Any such costs or savings shall be documented in the format and with such content and detail as the Owner or the A-E requires. The Contractor shall only receive one fifteen percent (15%) for the “jobsite overhead and profit” component whether such work be done by the Contractor or by his Subcontractor.

’14.1.3.1 Contractor’s Overhead and Profit percentages shall be considered to include bonds and insurance, field and office supervisors and assistants (including Project Manager(s), Job Site Superintendent(s), Project Engineers and assistants, and Crew Foremen), Job Office and storage Trailers, sanitary facilities, communications (telephone and internet), temporary utilities, temporary facilities, testing, security, use of small tools, incidental job burdens, and general home office expenses and no separate allowance shall be made therefore.

’14.1.3.2 Assistants to field and office supervisors include all clerical, stenographic and general office help. Incidental job burdens include, but are not

necessarily limited to, office equipment and supplies, and conformance to OSHA requirements and no separate allowance shall be made therefore.

'14.1.3.3 Items such as, but not necessarily limited to, review and coordination, estimating and expediting relative to contract changes are associated with field and office supervision and are considered to be included in the contractor's overhead and/or fee percentage.

'14.1.4 For all charges relating to any Change Order, whether determined under subparagraph (2), (3) or (4) above, the following provisions shall apply:

(1) **The Contractor shall keep and present in such form as the A-E may direct**, a correct account of all items in such form comprising the net cost of such Work, together with vouchers.

(2) **The determination of the A-E shall be final (except as provided in paragraph '3.4)** upon all questions of the amount and cost of Changes in the Work, and it shall include in such cost, the cost to the Contractor of all materials used, of all labor, common and skilled, or foremen, trucks and teams, and the fair rental of all machinery used and for the period of such use.

(3) **If said Work requires the use of machinery not already upon the work or to be otherwise used upon the Work**, then the cost of transportation of such machinery to and from the Work shall be added to the fair rental, but said transportation shall not cover a distance exceeding one hundred (100) miles.

(4) **The A-E shall not include in the net cost** of Work any cost or rental or small tools, or any portion of time of the Contractor or his Superintendent, or any allowance for the use of capital, or any additional bond premium, insurance cost applicable to the Work or any actual or anticipated profit, or any job or office overhead not previously mentioned, these items being considered as being covered by the added fifteen (15%) percent for the jobsite overhead and profit component.

(5) **In all cases where Changes in the Work are covered by unit prices set forth in the Contract,** the value of such Work shall be determined only upon the basis of such unit prices.

(6) **Pending final determination of value,** payments on Changes in Work shall be made only upon the estimate of the A-E.

'14.1.5 If the Contractor claims that any instructions by the A-E involve additional cost and/or time extension, he shall give the A-E written notice thereof **within a reasonable time after the receipt of such instructions and before proceeding to execute the change in Work.**

'14.1.6 No work related to a Change Order shall be undertaken without a fully executed Change Order. However, should the Owner and Contractor agree that time is of the essence for the execution of said work, the Owner will issue through the A-E in writing a notice to proceed with the said work prior to the full execution of the Change Order. This notice is to be upon acceptance by the Associate Director of the Division of Engineering. This notice to proceed with said work will include an acceptance of the proposed pricing of the work or will indicate that the pricing of the work is still being negotiated.

‘14.1.7 If the Owner and Contractor cannot agree on the effect of an ordered change on the adjustment to the Contract Sum or Contract Time, this matter may also be referred to the A-E for determination.

’14.1.7.1 If the Owner and/or Contractor do not agree with the A-E’s determination regarding the valuation of a change, the related adjustment to the Contract Sum or to the Contract Time, the matter shall be subject to the disputes procedure set out in Article 3.4 and Article 26.

‘14.1.8 The execution of a Change Order by the Contractor shall constitute conclusive evidence of the Contractor’s agreement to the ordered changes in the Work, the resulting Contract as thus amended, the Contract Sum and the Contract Time for performance by the Contractor. The Contractor, by executing the Change Order, waives and forever releases any claim against the Owner for additional time or compensation for matters relating to or arising out of or resulting from the Work included within or affected by the executed Change Order.

‘14.1.9 The Contractor shall notify and obtain the consent and approval of the Contractor’s Payment and Performance Bond sureties with reference to all Change Orders if such notice, consent or approval are required by the Owner, the A-E, the Contractor’s sureties or by law. The Contractor’s execution of the Change Order shall constitute the Contractor’s warranty to the Owner that the sureties have been notified of, and consent to, such Change Order and the sureties shall be conclusively deemed to have been notified of such Change Order and to have expressly consented thereto.

’14.2 Cash Allowance: It is understood that the Contractor has included in the Contract Price all allowances (see Article ’30 for more information) so named in the Contract Documents and shall cause the Work so covered to be furnished and performed for such sums as may be acceptable to A-E and the Owner. The Contractor agrees that:

’14.2.1 The allowances include the cost to Contractor (less any applicable trade in counts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

’14.2.2 The Contractor’s cost for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances and no demand for additional payment on account of any of the foregoing will be valid; and

’14.2.3 Prior to final payment of the full amount of the allowance (on the schedule of values), an appropriate Change Order will be issued as recommended by A-E reflect actual amounts due the Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

’14.3 Minor Changes. The A-E may authorize minor changes in the Work which do not involve additional cost or extension of the Contract Time, and which are not inconsistent with the intent of the Contract Documents. Such changes shall be effected by a Field Order issued by the A-E to the Contractor and Owner concurrently, which shall be binding on the Owner and Contractor. The Contractor shall carry out such orders promptly.

’14.3.1 However, if the Contractor claims that a Field Order involves additional cost or a delay to completion of the Work, he shall give the A-E written notice thereof within a reasonable time after receipt of the Field Order. Otherwise, he shall be deemed to have waived any right to claim an adjustment to the Contract Sum or to the Contract Time.

'15 Project Records

'15.1 All documents relating in any manner whatsoever to the Project, or any designated portion thereof, which are in the possession of the Contractor, or any Subcontractor of the Contractor, shall be made available to the Owner or the A-E for inspection and copying upon written request by the Owner.

Furthermore, said documents shall be made available, upon request by the Owner, to any state, federal or other regulatory authority and any such authority may review, inspect and copy such records.

Said records include, but are not limited to all drawings, plans, specifications, submittals, correspondence, minutes, memoranda, tape recordings, videos, or other writings or things which document the Project, its design, and its construction.

Said records expressly include those documents reflecting the cost of construction to the Contractor.

'15.2 The Contractor shall maintain and protect these documents for no less than ten (10) years after final completion of the Project, or for any longer period of time as may be required by law or good construction practice.

'16. Delays and Extensions of Time

'16.1 It is agreed that time is of the essence for each and every portion of the resulting Contract and where under the Contract an additional time is allowed for the completion of any Work, the new time limit fixed by such extension shall be of the essence of the Contract. Provided, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the Work is due to:

(1) any preference, priority, or allocation order duly issued by the government;

(2) unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather; or

(3) any delays of Subcontractors or suppliers occasioned by any of the causes specified in subsections (1) and (2) of this Article.

16.1.1 Delay that is NOT caused by the Owner or Contractor, that delays the critical path of the project schedule, may result in extension of Contract Time but not an increase in Contract Sum. Such delay includes: Acts of God; Labor disputes/ Strikes; Freight embargos; Fire (when not attributable to act of Contractor); Unusual delays in deliveries (when not attributable to act of Contractor); Health epidemics that affect Contractor forces; and, Other causes beyond the control of the Contractor or Owner. Note: an increase of time caused by a delay that is NOT caused by the Owner or Contractor, does not constitute reason for an increase in Contract Sum.

'16.1.1.1 The Contractor shall, within fifteen (15) **calendar days of the occurrence** of the event that caused a delay not caused by the Owner or Contractor, notify the A-E and Owner in writing. The A-E shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order. Such a claim shall not result in an increase in Contract Sum.

'16.1.1.1.1 Should the Contractor NOT provide written notification to the A-E and Owner within the prescribed period of time indicated above, the Contractor, by his failure to properly notify, forfeits the right to seek a Contract Time Extension for said occurrence.

'16.1.1.2 Should the Owner determine that it is in the Owner's best interest to avoid an extension of Contract time due to a delay not caused by the Owner or Contractor, the Owner, through the A-E, may request the Contractor to provide a plan of action to mitigate the delay through changes in the sequence of operations or through an extended workday for specific trades that will mitigate the delay. In such instances, the Owner may elect to pay the Contractor reasonable and justified additional costs required to mitigate the delay in lieu of a contract time extension. This additional costs shall be limited to the overtime premium of the extended workday for specific trades or shall be limited to actual and proven costs of a change in sequence of operations.

16.1.2 Delay due to adverse weather conditions: The Contractor shall have incorporated into the Project Schedule at the time of execution of the Contract for Construction all anticipated delay caused by normally occurring adverse weather. Adverse weather is that which normally occurring (as defined as the average of the preceding ten (10) years) according to the records of the National Oceanic Atmospheric Administration (NOAA).

'16.1.2.1 When adverse weather exceeds that which is normally expected, as defined above, and the Contractor is making a claim for delay due to adverse weather, the Contractor shall submit to the A-E and Owner the following at the Project Progress Meeting immediately following the month in which the excessive adverse weather occurred:

1) Current weather data from NOAA for the project site which documents and proves that the adverse weather occurred at the project site on days in which work was scheduled to occur.
2) Historical weather data from NOAA for the project site which documents and proves that the adverse weather that occurred at the project site was more than anticipated.
3) Contractor's daily field reports showing that the adverse weather that was experienced at the project site caused delay in the work that was scheduled to be performed on during the period in which adverse weather was experienced.
4) Contractor's written detailed explanation of the delay in the work and how it was caused by the abnormal adverse weather that was experienced at the project site and was beyond the ability of the Contractor to control or mitigate the delay for each occurrence.

'16.1.2.1.1 Should the Contractor NOT provide the information indicated above to the A-E and Owner, within the prescribed period of time indicated above, the Contractor, by his failure to properly notify, forfeits the right to seek a Contract Time Extension for said occurrence.

'16.1.2.1.2 When the Contractor is behind the critical path of the schedule, it shall be the determination of the A-E as to whether the Contractor should be eligible for a time extension due to adverse weather delay. In making this determination, the A-E shall determine and conclude that the Contractor would have been delayed by adverse weather had the Contractor been on schedule of the critical path before determining that the Contractor is eligible for a time extension due to adverse weather delay. The Contractor shall provide evidence to the A-E for the A-E's use in making such determination.

‘16.1.2.2 When adverse weather is significantly less than that which is normally expected, as defined above, the A-E will prepare for the Owner, at its request, a claim for a reduction in Contract Time by providing current and historical weather data from NOAA for the project site which documents and proves that the adverse weather was less than anticipated at the Project Progress Meeting immediately following the month in which the adverse weather that occurred was significantly less than anticipated. The number of days in the claim shall be added to the project float and is made available to the Contractor and/or Owner to mitigate other types of delay in the project completion. Generally, a reduction of time caused by less than anticipated adverse weather does not constitute reason for a decrease in Contract Sum.

16.1.2.3 When the A-E determines that adverse weather has delayed the project and that the claim of the Contractor for delay due to adverse weather is justified, the Contractor will provide an accounting of float held in the project (see Article 16.2.1.4.1) that may be applied to the weather delay. Should the amount of weather delay exceed the available amount of float held on the project, the A-E will issue a Change Order extending the Contract Time by the number of days in which the Contractor was actually delayed due to adverse weather. Generally, an extension of time for delays caused by adverse weather does not constitute reason for an increase in Contract Sum.

’16.1.2.3.1 Should the Owner determine that it is in the Owner’s best interest to avoid an extension of Contract time due to a delay caused by adverse weather, the Owner, through the A-E, may request the Contractor to provide a plan of action to mitigate the delay through changes in the sequence of operations or through an extended workday for specific trades that will mitigate the delay. In such instances, the Owner may elect to pay the Contractor reasonable and justified additional costs required to mitigate the delay in lieu of a contract time extension. This additional costs shall be limited to the overtime premium of the extended workday for specific trades or shall be limited to actual and proven costs of a change in sequence of operations.

’16.2.1 Delay that is caused by the Owner, that delays the critical path of the project schedule, may result in extension of Contract Time and may result in an increase in Contract Sum. Generally, delays of this type which do not delay the critical path of the project schedule shall not result in extension of Contract Time nor result in an increase in Contract Sum.

‘16.2.1.1 The Contractor shall, within seven (7) calendar days of the occurrence of the event, notify the A-E in writing. The A-E shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.

’16..2.1.1.1 Should the Contractor NOT provide the information indicated above to the A-E and Owner, within the prescribed period of time indicated above, the Contractor, by his failure to properly notify, forfeits the right to seek a Contract Time Extension for said occurrence.

‘16.2.1.2 An extension of time shall not be construed as cause for extra compensation under the Contract. Extensions of time relating to concealed conditions as defined in Article 26 shall be governed by the provisions of that Article.

‘16.2.1.3 Should the Contractor claim that an extension of time is cause for extra compensation under the Contract, he shall make such claim in writing to the A-E within fifteen (15) calendar days of the occurrence of the event. This claim shall be in sufficient detail to support the Contractor’s claim. In instances where the final determination of the costs associated with such delay is not readily calculable, the Contractor shall provide an ESTIMATED cost of the delay per day of delay. If this estimated cost of delay per day is

accepted by the Owner, the actual amount compensable by the delay will be based on this estimate.

16.2.1.3.1 A Contractor's claim for extra compensation under the Contract may include: Job Office expenses (for a delay in access of sixteen (16) calendar days in any given month / each month considered separately), extended equipment-left-idle costs (rented or owned), increased labor and material costs (for extended delays), loss of efficiency (for extended delays), increased insurance premiums, excess storage costs, etc.

16.2.1.3.2 A Contractor's claim for extra compensation under the Contract shall not include: home office costs, equipment-not-left-idle costs (rented or owned), increased labor or material costs (for short delays), job site forces costs, loss of efficiency (for short delays), etc.

'16.2.1.4 When the Contractor experiences a delay caused by the Owner, the Contractor shall work to mitigate the delay to be best of his ability and to make a claim for the delay must prove that he mitigated the delay to the greatest extent possible.

16.2.1.4.1 Since the Owner and Contractor share as a commodity, all float (including Total Float, Free Float and Sequestered Float) (See Article '4.2), this float is available to the Owner to mitigate the effect of events that may delay performance or completion of all or part of the Work that has been caused by the Owner.

16.2.1.5 When the Contractor experiences a delay caused by the Owner, the delay must result in a delay to the critical path of the project schedule which is not readily recoverable by the Contractor without actual damage. In making a claim for the delay the Contractor must prove that the delay was a delay to the critical path of the project schedule and that he was not readily able to recover without actual damage.

16.2.1.6 When the Contractor experiences a delay caused by the Owner, the Contractor may not be entitled to a claim for the delay if a concurrent delay is present that is caused by the actions or inaction of the Contractor. When a concurrent Contractor caused delay exists, both delays shall be reviewed together and the Contractor is only eligible to make a claim for a delay caused by the Owner that extends beyond the concurrent delay caused by the Contractor.

16.2.1.7 When there is a delay caused by the Contractor that is concurrent with a delay caused by the Owner, there may be an extension of Contract Time, if found warranted, but no compensation to the Contractor will be made.

16.2.1.8 When the Contractor is behind the accepted Project Schedule (related to the Critical Path), and there occurs a delay caused by the Owner (that would have affected the Critical Path had the Contractor been on schedule), no time extension or compensation will be due the Contractor during the period of time that he is behind schedule.

16.2.1.9 When the Contractor fails to plan his work in a manner than permits him to ask questions of the A-E/Owner reasonable ahead of the time he requires to the answer to avoid a delay caused by the Owner, the delay will be a considered a concurrent delay and while an extension of time may be found as reasonable to grant the Contractor, no compensation for the delay will be provided. This situation is considered a concurrent delay since the Contractor participated in creation of the delay by his failure to plan the work adequately to avoid or reduce the delay.

'17 Subcontractors

'17.1 Contractor Fully Responsible for Subcontractors. The Contractor is fully responsible to the Owner for the acts and omissions of his Subcontractors and of persons and entities either directly or indirectly employed by them. Nothing contained in the Contract Documents shall create any contractual relationship between the Owner and a Subcontractor.

'17.1.1 The Contractor has the contractual obligation to adjust differences between his several Subcontractors. Attempts to have the A-E and/or Owner settle disputes between the Contractor and his Subcontractors or between Subcontractors will not be given consideration.

'17.1.2 The Contractor shall not submit any claim from a Subcontractor to the A-E and/or Owner. Should the Contractor receive a claim from a Subcontractor, it is his obligation to satisfy the claim with his subcontractor. Should the Contractor determine that a claim from a Subcontractor is valid and should be considered by the A-E and/or Owner, the Contractor shall make the claim as himself with the subcontractor's claim as supporting documentation. The Contractor shall also provide documentation and reason for supporting the claim to the A-E and/or Owner.

'17.1.2.1 The A-E and/or Owner have no responsibility or obligation to meet with a subcontractor to resolve a dispute or claim. Should the Contractor desire to have a subcontractor accompany the Contract in a meeting to resolve a dispute or claim, a request shall be made prior to the meeting requesting the Owner's acceptance of such accompaniment. Granting of this acceptance shall be solely at the discretion of the Owner and does not establish any contractual relationship of the Owner with the subcontractor in any respects.

'17.1.3 The Contractor is responsible for the performance of his several subcontractors including, but not necessarily limited to: any delay in completion of the work of a subcontractor; sequencing of work among his several subcontractors; covering up of work requiring inspection or observation; and/or the quality of workmanship in completing the Work.

'17.1.4 The Contractor shall not submit to the A-E and/or Owner any document, submittal, manual, or price proposal directly from his several Subcontractors without first having reviewed such and determined that it is reasonable, complete, and compliant with the Contract Documents.

'17.2 Flow-down Requirement. By contract, the Contractor shall require each Subcontractor:

(1) to be bound to the Contractor by the terms of the Contract Documents insofar as they apply to the Work to be performed by the Subcontractor; and

(2) to assume toward the Contractor all the obligations which the Contractor, by the Contract Documents, assumes toward the Owner.

'17.3 Contracts with Subcontractors. The Contractor shall contract with those Subcontractors listed in the Contractors Bid Response and deemed acceptable by the Owner in accordance with the procedure outlined in the Instruction to Bidders. All subcontracts shall afford the Contractor rights against the Subcontractor which correspond to those rights afforded to the Owner against the Contractor herein, including those rights of Contract termination as set forth herein.

'17.4 Substitution of Subcontractors. The Contractor shall not contract with any substitute Subcontractor or change a Subcontractor without providing timely written notice of the

proposed substitution to the A-E and Owner. The substitution shall not be made if the A-E and Owner object in writing to such change.

17.4.1 Release required of original Subcontractor. When the Contractor finds it necessary to propose a substitute Subcontractor or change a Subcontractor he shall provide to the Owner a written release from the Subcontractor being substituted or changed indicating that they are not able, or not willing to, provide the work in which they were originally contracted to provide.

17.4.1.1 This written release shall be on the official letterhead of the Subcontractor, when obtainable, stating that the Subcontractor is agreeable to being substituted on the project and that the Subcontractor waives all current and future claims resultant from the substitution.

17.4.1.2 When the Contractor cannot obtain the release required of original Subcontractor he shall provide in written form a statement, on the letterhead of the Contractor with proof that the Contractor has attempted to obtain such a release, that the Subcontractor is non-responsive in not only providing the release but is also non-responsive in providing the work being subcontracted, and that the Contractor fully accepts any future liability from the original subcontractor making a claim related to being substituted.

17.4.1.3 Prior to the substitution being made, the Contractor shall obtain written approval from the Purchasing Officer indicating that the Commonwealth has reviewed the documents provided as indicated above and has concluded that it is in the best interests of the Commonwealth that such a substitution is accepted.

'18. Payment

The Owner shall make payments, less held retainage (defined in paragraph 18.5), to the Contractor on the amount of the Work performed or materials furnished for the Work in accordance with the following procedures:

'18.1 Schedule of Values. At the same time it submits a construction schedule, within fifteen (15) days of the Date of Commencement, as provided in Article 4, the Contractor shall submit a Schedule of Values apportioning the Contract Sum among the different elements of the Project for purposes of periodic and final payment, prepared in such form and supported by such data to substantiate its accuracy as the A-E may require. The Contractor shall not imbalance its Schedule of Values, nor artificially inflate any element thereof. The violation of this provision by the Contractor shall constitute a material breach of the Contract. Upon written approval by the A-E and the Owner, the Schedule of Values and construction schedule shall become the basis for the Contractor's Payment Requests during construction.

'18.2 Application for Progress Payment. Not more often than once a month (except as provided in paragraph 3.8), the Contractor shall submit to the A-E a signed application for payment (sometimes referred to as Payment Request), for the Work completed as of the date of the application and accompanied by such data and schedules as the A-E may reasonably require.

'18.2.1 Therein, the Contractor may request payment less held retainage, of that part of the Contract Sum allocable to Contract requirements properly provided, labor, materials and equipment properly incorporated in the Project.

'18.2.2 If payment is requested on the basis of materials and equipment not incorporated in the Project, but delivered and suitably stored at the Project site or at another location agreed to in writing by the Owner, the application for payments shall also

be accompanied by such data, satisfactory to Owner, as will establish the Owner's title to the material and equipment and protect his interest therein, including written documentation of full insurance against loss or damage and the bonding of the storage sites. Storage sites must be bonded.

'18.2.3 Each subsequent application for payment shall include an affidavit of the Contractor stating that all previous progress payments received on account of the Work have been applied to discharge in full all of the Contractor's obligations reflected in prior applications for payment.

'18.2.4 Each Payment Request shall be signed by the Contractor and shall constitute the Contractor's representation that the quantity of Work has reach the level for which payment is requested, that the Work has been properly installed or performed in strict compliance with this Contract, and that the Contractor knows of no reason why payment should not be made as requested.

'18.3 Approval of Payments. The A-E shall review the application for payment and shall review the work at the Project site or elsewhere to determine whether the quantity and quality of the Work is as represented in the application for payment and is as required by this Contract.

'18.3.1 The A-E shall, within ten (10) business days after receipt of each application for payment, approve in writing the amount which, in the opinion of the A-E, is properly owing to the Contractor.

'18.3.1.1 When there is reasonable justification that causes the A-E to be unable to perform this review, approval and submission of his recommendation to the Owner within the time prescribed in paragraph 18.3.1 above, the A-E will notify the Contractor in writing as to the justification and as to the time that will be required for this review, approval and submission of his recommendation to the Owner.

'18.3.2 The Owner shall make payment to the Contractor within twenty (20) business days following the A-E's written approval of each application for payment. A reasonable delay on the part of the Owner in making payment to the Contractor for any given payment shall not be a breach of contract.

'18.3.2.1 When there is reasonable justification that causes the Owner to be unable to make payment within the time prescribed in paragraph 18.3.2 above, the Owner will notify the Contractor in writing as to the justification as to why this payment cannot be made.

'18.3.2.2 The Owner will not be required to make payment to the Contractor within the time prescribed in paragraph 18.3.2 above, when the Owner has justification for the holding of this payment such as when the Owner's payment is conditional on submission of required documents from the Contractor.

'18.3.3 The amount of each such payment shall be the amount approved for payment by the A-E less such amounts, if any, otherwise owing by the Contractor to the Owner or which the Owner shall have the right to withhold as authorized by this Contract. The A-E's approval of the Contractor's application for payment shall not preclude the Owner from the exercise of any of its rights as set forth herein. The Contractor warrants and represents that, upon payment of the application for payment, title to all Work included in such payment shall be vested in the Owner.

'18.4 Contractor's Warranty of Title. The Contractor warrants and guarantees that title to all Work, materials and equipment covered by any application for payment, whether incorporated

in the project or not, will pass to Owner at the time of payment free and clear of all encumbrance.

'18.5 Held Retainage/ Retainage Reduction. Until fifty percent (50%) of the construction work has been completed in accordance with the contract, the Owner may withhold no more than ten percent (10%) retainage from the amount of any undisputed payment due, and retainage held after fifty-one percent (51%) of the construction project has been completed shall not be more than five percent (5%) of the total Contract Sum.

'18.5.1 Subsequently, the Contractor shall withhold no more than ten percent (10%) retainage from the amount of any undisputed payment due to a subcontractor, and retainage held after fifty-one percent (51%) of the construction project has been completed shall not be more than five percent (5%) of the total amount contracted with a subcontractor.

'18.6 Completion, Acceptance and Final Payment. Upon certification by the A-E of Substantial Completion of the Work, the Contractor shall continue to make normal pay requests as defined within this document.

'18.6.1 Within thirty (30) calendar days after substantial completion or within twenty (20) calendar days after receipt of the A-E's recommendation for payment (whichever comes last), the Owner shall release the retainage less an amount equal to two hundred percent (200%) of the Owner's reasonably estimated cost of the balance of any contractor's contractually obligated, yet uncompleted, work remaining plus the following:

'18.6.1.1 Should the Contractor not fulfill the requirements for Substantial Completion by the date established by the Contract Documents for Substantial Completion, the Owner may withhold an additional amount of retainage to cover the anticipated application of "Liquidated Damages" or "Damages for Untimely Performance".

'18.6.2 Final payment shall be made by the Owner to the Contractor when the Contract has been fully performed by the Contractor in accordance with the Contract Documents and a final Certificate of Payment is submitted by the A-E to the Owner. Such final payment shall be made by the Owner not more than twenty (20) calendar days after the submittal by the A-E of the final Certificate of Payment, except:

'18.6.2.1 when the Owner is anticipating applying "Liquidated Damages" or "Damages for Untimely Performance", the amount of this anticipated application of damages may be withheld from Final Payment until such damages are resolved between the Owner and the Contractor.

'18.6.3 The Contractor shall submit with the application for final payment an affidavit that all payrolls, bills for materials, supplies and equipment, and other indebtedness connected with the Work have been paid or otherwise satisfied, along with such supporting evidence of payment as the A-E requires. Final payment is conditioned on satisfactory compliance with this requirement.

'18.7 Waiver of Claims. The making of final payment shall constitute a waiver of all claims by the Owner except those arising from:

'18.7.1 unsettled liens;
'18.7.2 faulty or defective Work appearing after Substantial Completion;
'18.7.3 failure of the Work to comply with the requirements of the Contract Documents; or
'18.7.4 terms of any special warranties required by the Contract Documents.

The acceptance of final payment by the Contractor shall constitute a waiver of all claims except those previously made in writing and identified by the Contractor as unsettled at the time of the final application for payment.

'18.8 Contractor's Payment to Subcontractors. Within fourteen (14) calendar days of when payment is received from the Owner, the Contractor shall pay all Subcontractors, materialmen, laborers and suppliers the amounts they are due for the Work covered by such payment.

'18.8.1 In the event the Owner becomes informed that the Contractor has not paid a Subcontractor, material-man, laborer, or supplier as provided herein, the Owner shall have the right, but not the duty, to issue future checks and payment to the Contractor of amounts otherwise due hereunder naming the Contractor and any such Subcontractor, material-man, laborer, or supplier as joint payees. Such joint check procedure, if employed by the Owner, shall create no rights in favor of any person or entity beyond the right of the named payees to payment of the check and shall not be deemed to commit the Owner to repeat the procedure in the future.

'18.8.2 The Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payment to his subcontractors in similar manner.

'18.8.3 The A-E or Owner may, on request, furnish to any Subcontractor information regarding the percentage of completion of the amounts applied for by the Contractor and the action thereon by the A-E.

'18.8.4 Neither the Owner nor the A-E shall have any obligation to make payment to any Subcontractor except as may otherwise be required by law.

'18.9 Owner's Rights Relating to Payments. Neither payment to the Contractor, utilization of the project for any purpose by the Owner, nor any act or omission by the Owner shall be interpreted or construed as an acceptance of any Work of the Contractor not strictly in compliance with this Contract.

'18.9.1 The Owner shall have the right to refuse to make payment and, if necessary, may demand the return of a portion or all of the amount previously paid to the Contractor due to:

'18.9.1.1 The quality of a portion, or all, of the Contractor's Work not being in accordance with the requirements of this Contract;
'18.9.1.2 The quantity of the Contractor's Work not being as represented in the Contractor's Payment Request, or otherwise;
'18.9.1.3 The Contractor's rate of progress being such that, in the Owner's opinion, substantial or final completion, or both, may be inexcusably delayed;
'18.9.1.4 Claims made, or likely to be made, against the Owner;
'18.9.1.5 Loss caused by the Contractor;
'18.9.1.6 The Contractor's failure or refusal to perform any of its obligations to the Owner under this Contract.

In the event that the Owner makes written demand upon the Contractor for amounts previously paid by the Owner as contemplated in this Paragraph, the Contractor must promptly comply with such demand.

'19. Completion

'19.1 Commencement and Completion of Work. The Contractor shall begin the Work on the Date of Commencement as specified in the Contract issued by the Owner.

'19.1.1 The Contractor is expected to mobilize on site and begin work no later than fifteen (15) calendar days after the Date of Commencement, unless he has notified the A-E and Owner in writing of acceptable reasons why it is not in the best interest of the Commonwealth and the Project that he will not mobilize by that date.

'19.1.2 The Contractor shall diligently and expeditiously continue the performance of the Contract continuously to and until Substantial Completion and Final Completion of the Project. All time limits stated in the Contract Documents are the essence of the Contract.

'19.1.3 The Contractor shall accomplish the Work in accordance with the construction schedule (as provided in Article 4) so as to achieve Substantial Completion and Final Completion dates as defined in the Contract Documents.

'19.2 Date for Commencement of Commissioning. Commissioning of specified building systems shall be scheduled to allow for the completion of the commissioning process by the Date of Substantial Completion. The Contractor shall work to complete the initial installation and startup of equipment involved in these building systems early enough in the project that the complete and properly conducted commissioning process can be completed including any corrective work and verification identified by the commissioning process. (See the associated sections of the technical specifications for the commissioning requirements and procedures for each building system which is to be commissioned).

'19.3 Date for Commencement of Testing and Balancing. Testing and Balancing of HVAC systems shall be scheduled to allow for the completion of the Testing and Balancing process by the Date of Substantial Completion. The Contractor shall work to complete the initial installation and startup of HVAC equipment early enough in the project that the complete and properly conducted testing and balancing process can be completed including any corrective work and verification identified by the testing and balancing process.

'19.4 Substantial Completion of the Work. The Substantial Completion Date shall be that date certified by the A-E, in consultation with the Owner, in accordance with the following procedures.

'19.4.1 **"Substantial Completion"** or "Substantially Complete" means the point in time when:

'19.4.1.1 **The progress of the Work,** or designated portion of the Work (as agreed in writing advance by the Owner, A-E and Contractor), is fully complete and functional in accordance with the requirements of the Contract Documents such that only items listed in the Punch list remain and the Work, or designated portion thereof, is ready to be occupied and/or utilized for its intended purpose;

'19.4.1.2 **The applicable Governmental Authorities** have issued a certificate of occupancy (or where Substantial Completion only applies to a designated portion of the Work, a temporary certificate of occupancy) and/or any other applicable approvals, licenses, certifications or other written evidence from the applicable Governmental Authority that said Work, or designated portion of the Work, has been completed to such authority's satisfaction and is ready to be occupied and/or used for its intended purpose.

'19.4.1.2.1 **Where the project requires specialized Governmental Authorities to inspect and accept the construction (i.e. Office of Inspector General, Federal Agencies, etc.)** a determination is to be made in the 'Special Conditions" of this Contract as to the timing of these

inspections or acceptances and how they affect the Date of Substantial Completion, Date of Final Completion or an Extended Date for Compliance for that specific inspection or acceptance requirement.

'19.4.1.3 **The A-E has issued an Owner approved certificate of Substantial Completion for the Work,** or designated portion of the Work, in accordance with the terms of the Contract Documents;

'19.4.1.4 **Operations and Maintenance Manuals**, have been received for review by the A-E and the A-E has determined that the Operations and Maintenance Manuals are complete.

'19.4.1.4.1 Note that the Contractor shall submit Operations and Maintenance Manuals prior to the anticipated Date of Substantial Completion in order to allow the A-E reasonable time to review and approve or reject the submittal.

'19.4.1.4.2 The A-E shall review and approve or reject the Operations and Maintenance Manuals within fourteen (14) calendar days of receipt from the Contractor. The Date of Substantial Completion shall not be earlier than the date of approval of the Operations and Maintenance Manuals by the A-E.

'19.4.1.5 **Warranty Samples**, have been reviewed and approved by the A-E.

'19.4.1.5.1 **Note that the Contractor shall submit samples of each required Warranty** prior to the anticipated Date of Substantial Completion in order to allow the A-E reasonable time to review and approve or reject the submittal.

'19.4.1.5.2 **The A-E shall review and approve or reject the sample Warranties within fourteen (14) calendar days of receipt** from the Contractor. The Date of Substantial Completion shall not be earlier than the date of approval of the samples of Warranties by the A-E.

'19.4.1.6 **With respect to all of the Project's building systems, including, without limitation, all systems being Commissioned,** the Work, or designated portion of the Work (as agreed in writing in advance by the Owner, A-E and Contractor), is fully commissioned, balanced, tested and operational in compliance with the Contract Documents and applicable Laws ("Systems Commissioning"); The Date of Substantial Completion shall not be earlier than the date in which Systems Commissioning is completed.

'19.4.1.7 **All required initial and follow-up orientation and training** has been accomplished in accordance with the requirements of the Contract Documents ("Systems Training"). The Date of Substantial Completion shall be no earlier than the date in which the final training session has been satisfactorily completed.

'19.4.1.8 **The Contractor shall have advised the Owner of insurance requirements** including a list of all fixed and non-fixed equipment provided under the Work including replacement values for each item of equipment.

'19.4.2 **When the Contractor determines that Substantial Completion has been achieved,** the Contractor shall notify the Owner and the A-E in writing. The notification shall be accompanied by a Contractor prepared list of those items of Work still to be completed or corrected. The failure of the Contractor to include any item or items on such list not completed or needing correction shall not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

'19.4.3 **The A-E shall**, within a reasonable time after receipt of notification from the Contractor of Substantial Completion, make such inspection, with consultation of the Owner, to confirm that the Work has achieved Substantial Completion. If the Contractor's notification is not accompanied by the list provided in paragraph '19.2.1, the A-E and Owner may elect to postpone this inspection until receipt of the list proscribed.

'19.4.4 **Upon its confirmation** that the Contractor's work is substantially complete, the A-E shall prepare a Certificate of Substantial Completion which shall establish the Substantial Completion Date and the responsibilities between the Owner and Contractor for security, maintenance, heat, utilities and insurance, if not otherwise provided for in the Contract Documents, and a tentative list of items to be completed or corrected, within thirty (30) calendar days from the Substantial Completion Date. The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of the responsibilities assigned to them in the certificate.

'19.4.4.1 Should the A-E confirm that the Work has achieved Substantial Completion on the date of his inspection, the A-E shall derive that the Contractor was Substantially Complete on the date of receipt of the notification from the Contractor indicated above.

'19.4.4.2 When the Owner accepts Substantial Completion and occupies a building, all operations, maintenance, utilities and insurance become the responsibility of the Owner, except those items specifically identified in the Certificate of Substantial Completion as remaining to be completed by the Contractor.

'19.4.4.3 If, after making the inspection, the A-E fails to find that the Contractor's Work has achieved Substantial Completion, he will notify the Contractor in writing, giving the reasons therefore.

'19.4.4.4 If the A-E through its inspection fails to find that the Contractor's Work has not achieved Substantial Completion and is required to repeat all, or any portion, of its inspection, the Contractor shall bear the cost of such repeat inspections which cost may be deducted by the Owner from any payment then or thereafter due the Contractor. This deduction by the Owner from any payment for this reason will be by a credit to the Contract Sum by Change Order.

'19.5 Final Completion of the Work. The A-E, upon receipt of written notice from the Contractor that the Work is finally complete and is ready for final inspection and acceptance, will promptly make such inspection and when he finds the Work completed and acceptable under the Contract Documents and the Contract fully performed, he will so notify the Contractor in writing, and the Contractor shall promptly issue a final Certificate of Payment to the Owner.

'19.5.1 "Final Completion or "Finally Complete" means the point in time when:

'19.5.1.1 **The progress of the Work**, is fully complete and functional in accordance with the requirements of the Contract Documents such that no items listed in the Punch list remain uncorrected;

'19.5.1.2 **The applicable Governmental Authorities** have issued a final certificate of occupancy;

'19.5.1.3 **The A-E** has issued an Owner approved certificate of Final Completion for the Work, in accordance with the terms of the Contract Documents;

'19.5.1.4 **Warranty Binder**, have been reviewed and approved by the A-E.

'19.5.1.4.1 Note that the Contractor shall submit a binder with original copies of all required Warranties prior to the anticipated Date of Final Completion in order to allow the A-E reasonable time to review and approve or reject the submittal.

'19.5.1.4.2 The A-E shall review and approve or reject the Warranties within a reasonable time after receipt from the Contractor. The Date of Final Completion shall not be earlier than the date of receipt of the Warranty Binder by the A-E where the Warranty Binder is subsequently approved by the A-E.

'19.5.1.5 **With respect to all of the Project's building systems, including, without limitation, all systems being Commissioned,** the Work, is fully commissioned without "Corrective Actions" remaining to be completed in compliance with the Contract Documents and applicable Laws ("Systems Commissioning"); The Date of Final Completion shall not be earlier than the date in which Systems Commissioning is fully completed including all "Corrective Actions".

'19.5.1.6 **The Contractor has submitted a final Application for Payment** including a Final Affidavit as required by the Commonwealth.

'19.5.1.7 **The Contractor and the A-E** have submitted to the Owner a report of the status of LEED Certification documentation when required by a project that is under LEED Certification. Included in these reports is a listing of documentation that will be required for the final LEED Certification during the one year warranty period.

'19.5.2 Should the A-E confirm that the Work has achieved Final Completion on the date of his inspection, the A-E shall derive that the Contractor was Finally Complete on the date of receipt of the notification from the Contractor indicated above.

'19.5.3 If the A-E is unable to issue its final Certificate of Payment and is required to repeat its final inspection of the Project, the Contractor shall bear the cost of such repeat inspection(s), which costs may be deducted by the Owner from the Contractor's final payment;

'19.6 Use of Adequately Complete Portions. The Owner may use or occupy a specified portion of the Work at any stage, provided that:

'19.6.1 such use or occupancy is consented to by insurers and

'19.6.2 it is authorized by the issuance of a Temporary Certificate of Occupancy or a Certificate of Occupancy by public regulatory bodies having jurisdiction over the Work; and

'19.6.3 prior to such use or occupation, the affected portion of the Work is jointly inspected by the Owner, Contractor and A-E to determine the precise stage of completion.

Such possession and use shall not be deemed an acceptance of any Work not completed in accordance with the Contract Documents. The Owner's use of adequately completed portions (with the Contractor's agreement), while the Work of

the Project is not actually Substantially Complete, shall not be deemed as a defining factor in determining that the Project has reached Substantial Completion.

'19.7 Liquidated Damages/ Damages from Untimely Performance

'19.7.1 **The Contractor shall pay the Owner an amount identified in the Contract Documents** for each and every calendar day of unexcused delay in achieving Substantial Completion and Final Completion beyond the date set for each.

'19.7.1.1 Any sums due and payable hereunder by the Contractor shall be payable, not as a penalty, but as liquidated damages representing delay damages sustained by the Owner, estimated at the time of executing this Contract.

'19.7.1.2 When the Owner is able to determine an actual sum of Damages from Untimely Performance, and that sum is less than the predetermined "Liquidated Damages", the Owner may, upon review of the particular circumstances of this specific Project, elect to apply the lesser amount of damages.

'19.7.2 **When the Owner reasonably believes that Substantial Completion will be inexcusably delayed, the Owner shall be entitled, but not required, to withhold from any amounts otherwise due the Contractor an amount then believed by the Owner to be adequate to recover liquidated damages applicable to such delays.** If and when the Contractor overcomes the delay in achieving Substantial Completion, or any part thereof, for which the Owner has withheld payment, the Owner shall promptly release to the Contractor those funds withheld, but no longer applicable, as liquidated damages.

'19.7.3 The Contractor shall not have the right without justifiable cause to contest the Owner's assessment of Liquidated Damages as defined by this Article and as indicated in the Special Conditions.

'19.7.3.1 Should the Contractor believe he has justifiable cause for contesting the Owner's assessment of Liquidated Damages, once the project work has achieved FINAL COMPLETION, the Contractor may submit to the Director of the Division of Engineering and Contract Administration written detailed explanation of the justifiable cause for contesting the Owner's assessment of Liquidated Damages.

'19.7.3.1.1 Within fifteen (15) calendar days of the issuance of a Change Order which includes the Owner's assessment of Liquidated Damages, the Contractor shall provide written notification to the Director of the Division of Engineering and Contract Administration of the Contractor's intent to contest the Owner's assessment of Liquidated Damages. Failure of the Contractor to make such written notification shall cause the Owner to execute the Change Order which includes the Owner's assessment of Liquidated Damages.

'19.7.3.1.2 The Contractor's submission of the Final Application for Payment shall be evidence that the Contractor does not desire to contest the Owner's assessment of Liquidated Damages and shall be evidence of the Contractor's agreement with the Owner's assessment of Liquidated Damages.

'19.7.3.1.3 When the Director of the Division of Engineering and Contract Administration has reviewed the submitted evidence from the Contractor, gathered other evidence and information related to the Contractor's contesting of the Owner's assessment of Liquidated Damages, and made a determination as to the, reasonableness, validity

and standing of the Contractor's contesting, the Director shall issue a final determination in the matter.

'20. Correction of Work

'20.1 Correction of Work Prior to Final Payment. The Contractor shall promptly correct Work which is rejected by the A-E as failing to conform to the requirements of the Contract Documents. Such correction shall be required regardless of whether or not the nonconformities are observed before or after Substantial Completion, or whether or not the work has been fully fabricated, installed or completed.

'20.2 Correction of Work After Final Payment. Neither the Final Certificate of payment nor any provisions in the Contract Documents shall relieve the Contractor of responsibility for failure to conform to the requirements of the Contract Documents.

'20.2.1 If within one year after the date of Final Completion of the Work or designated portion thereof or after the date for commencement of warranties, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct the Work promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition.

'20.2.1.1 This period of one year shall be extended with respect to portions of Work first performed after Final Completion by the period of time between Final Completion and the actual performance of the Work. This obligation under this paragraph shall survive acceptance of the Work under the Contract and termination of the Contract. The Owner shall give such notice promptly after discovery of the conditions.

'20.3 Responsibility for Related Costs. In addition to being responsible for correcting the Work and removing any nonconforming Work or materials which are not corrected from the jobsite, the Contractor shall bear all other costs of bringing the affected Work into compliance with the Contract Documents. These include costs of any required additional testing and inspection services, A-E's services, and any resulting damages to property or to construction Work of other contractors or of the Owner.

'20.4 Correction by Owner. If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may take steps to correct the Work itself. If, within a ten (10) business day period after receipt of written notice to correct the nonconformity, the Contractor has not made serious efforts to correct the nonconformity, the Owner may without prejudice to any other remedies it may have, proceed to correct the non-conforming Work.

'20.4.1 In such cases a Change Order shall be issued by the Owner with the approval of the A-E reflecting an equitable deduction from the Contract Sum to cover the cost of correcting the Work, including compensation for the A-E's additional services and other related expenses and damages. The amount of the Change Order shall be deducted from payments then or thereafter due the Contractor. If final payment has already been made, the Contractor shall pay the difference within a reasonable time, which is generally defined as 30 calendar days from the date of written request for such reimbursement by the Owner.

'20.5 Ongoing Liability of Contractor for Defective Work. The foregoing provisions establishing the specific obligation of the Contractor to perform corrective Work do not establish a period of limitations on other obligations of the Contractor under the Contract Documents. Even after the Contractor is no longer specifically obligated to perform corrective Work itself, it

shall still be held liable for nonconforming Work and for other breaches of its obligations under the Contract Documents.

'20.6 Deduction for Uncorrected Work. If the Owner deems it not expedient to correct Work which is not in accordance with the requirements of the Contract Documents, an appropriate Change Order shall be issued by the Owner with the approval of the A-E reflecting an equitable deduction from the Contract Sum on account of the uncorrected Work. The amount of the Change Order shall be deducted from payments then or thereafter due the Contractor. If final payment has already been made, the Contractor shall be responsible for paying the difference to the Owner within a reasonable time, which is generally defined as 30 calendar days from the date of written request for such reimbursement by the Owner.

'21. Suspension of Work

'21.1 Suspension by the Owner. The Owner shall have the right at any time to direct the contractor to suspend its performance, or any portion thereof for a period of not more than thirty (30) calendar days. The notice of suspension shall be in writing and shall set forth the reason for the suspension. The written notice shall fix the approximate date on which Work is contemplated to be resumed. The Owner shall pay the Contractor as full compensation for such suspension the Contractor's Direct Job Expenses.

'21.1.1 Should the Contractor believe that the Owner, by its actions, has suspended the Work, but has not received a written notice of suspension from the Owner, the Contractor shall notify the Owner in writing that he believes a suspension of the Work has occurred and seek clarification from the Owner that such suspension of the Work is the Owner's intent by its actions. The Owner will promptly clarify for the Contractor its intensions related to suspension of the Work.

'21.1.2 Without such written notice of suspension of the Work by the Owner, the Contractor shall proceed with the Work as if it was not suspended and shall not be eligible for compensation as indicated in paragraph '21.1 above.

'21.2 Other Suspension. In the event the Owner should be prevented from proceeding with the work due to a bid protest, or enjoined by court order from proceeding with the Work or from authorizing its prosecution, either before or after the award, for a period up to ninety (90) calendar days, the delay shall not constitute cause for termination by the Contractor and the Contractor shall not be entitled to make or assert claim for damage by reason of said delay, but time for completion of Work shall be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay. Such determination shall be set forth in a Change Order shall be final and binding upon both parties, and shall not require the signature of the Contractor to be in effect.

The Owner shall pay the Contractor as full compensation for such suspension the Contractor's reasonable costs actually incurred and paid as follows:

'21.2.1 demobilization and remobilization, including such costs paid to subcontractors;
'21.2.2 preserving and protecting work in place;
'21.2.3 storage of materials or equipment purchased for the Project, including insurance thereon:
'21.2.4 performing in a later, or during a longer, time frame than contemplated by this Contract.

'21.3 Termination by the Contractor due to Suspension of the Work by the Owner. If, through no act or fault of the Contractor, the Work is suspended for a period of more than thirty (30) calendar days by the Owner, or more than ninety (90) calendar days under an Order of

the Court or other public authority, then the Contractor may, after ten (10) business days from delivery of a written notice to the Owner and the A-E, terminate the Contract and recover from the Owner payment for all Work executed and reasonable expenses sustained.

'21.3.1 If the A-E has failed to act on a request for payment, within thirty (30) calendar days of submission, or if the Owner has failed to make any payment, within forty-five (45) calendar days of receipt of an approval application for payment, the Contractor may, upon ten (10) business days written notice to the Owner and the A-E stop the Work until he has been paid all amounts then due, in which event and upon resumption of the Work, a Change Order shall be issued adjusting the Contract Price or extending the Contract Time, or both, to compensate for the costs and delays attributable to the stoppage of the work, any such compensation being subject to the provisions, conditions and limitations contained in Article 26.

'22. Termination

'22.1 Termination of Contract for Convenience of Owner. The Owner, for any reason whatsoever, may terminate the Contract for its own convenience when it determines that such termination will be in the best interest of the Commonwealth of Kentucky. The Owner shall give written notice of such termination to the Contractor specifying when termination becomes effective. The Contractor shall incur no further obligations in connection with the Work and the Contractor shall stop Work when such termination becomes effective. The Contractor shall also terminate outstanding orders and subcontracts. The Contractor shall settle the liabilities and claims arising out of the termination of Subcontracts and orders. The Owner may direct the Contractor to assign the Contractor's right, title and interest under termination orders or subcontracts to the Owner or its designee. The Contractor shall transfer title and deliver to the Owner such completed or partially completed Work and materials, equipment, parts, fixtures, information and Contract rights as the Contractor has. The Commonwealth shall negotiate a fair and just settlement with the Contractor in accordance with 200 KAR 5:312 Section 2. In such event, the following procedure shall be required:

'22.1.1 **The Contractor shall submit a termination claim to the Owner and the A-E** specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the Owner or the A-E. If the Contractor fails to file a termination claim within one (1) year from the effective date of termination, the Owner shall pay the Contractor, an amount derived in accordance with paragraph (3) below;

'22.1.2 **The Owner and the Contractor may agree to the compensation**, if any, due to the Contractor hereunder pursuant to 200 KAR 5:312 Section 2;

'22.1.3 **Absent agreement to the amount due to the Contractor**, the Owner shall pay the Contractor the following amounts:

'22.1.3.1 Contract prices for labor, materials, equipment and other services accepted under this Contract;

'22.1.3.2 Reasonable costs incurred in preparing to perform and in performing the terminated portion of the Work and in terminating the Contractor's performance, plus a fair and reasonable allowance for direct jobsite overhead and profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it appears that the Contractor would have not profited or would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;

’22.1.3.3 Reasonable costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to the initial Paragraph of 22.1. These costs shall not include amounts paid in accordance with other provisions hereof.

’22.1.3.4 The total sum to be paid the Contractor under 22.1 shall not exceed the total Contract Sum, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

‘22.2 Termination of Contract for Cause. If the Contractor should be adjudged as bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency or, if the Contractor does not perform the Work, or any part thereof, in a timely manner, supply adequate labor, supervisory personnel or proper equipment or materials, or if it fails to timely discharge its obligations for labor, equipment and materials, or proceeds to disobey applicable law, or otherwise commits a violation of a material provision of the resulting Contract, then the Owner, in addition to any other rights it may have against the Contractor or others, may terminate the performance of the Contractor upon ten (10) days written notice by registered mail of declaration of default and assume possession of the Project site and of all materials and equipment at the site and may complete the Work.

‘22.2.1 **In such case, the Contractor shall not be paid further until the Work is complete.** After final completion has been achieved, if any portion of the Contract Sum, as it may be modified hereunder, remains after the cost to the Owner of completing the Work, including all costs and expenses of every nature incurred, has been deducted by the Owner, such remainder shall belong to the Contractor. Otherwise, the Contractor shall pay and make whole the Owner for such cost. This obligation for payment shall survive the termination of the Contract. In the event the employment of the Contractor is terminated by the Owner for cause pursuant to this Paragraph 22.2 and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under Paragraph 22.1 and the provisions of Paragraph 22.1 shall apply.

’23. Indemnification

The Contractor shall indemnify and hold the Owner harmless from any and all claims, liability, damage, loss, cost and expense of every type whatsoever, regardless of whether such liability, claim, damage, loss, cost or expense is caused in part by the Owner, including, without limitation, attorneys’ fees and expenses, in connection with the Contractor’s performance of this Contract, provided that such claims, liability, damage, loss, cost or expense is due to sickness, personal injury, disease or death, or to loss or destruction of tangible property (other than the Work itself), including loss of use resulting therefrom, to the extent caused by the Contractor, or anyone for whose acts the Contractor may be liable.

’24. Insurance

’24.1 **The Contractor shall furnish the Owner with certificates evidencing the required insurance coverage** prior to commencing work. Contractor shall keep up-to-date copies of such certificates on file with Owner until work is completed. Owner may require Contractor to submit policy endorsements or complete policy copies of the required insurance.

’24.2 **Contractor shall procure and maintain for the duration of the contract insurance** against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by Contractor, its agents, representatives, employees or subcontractors.

’24.3 Minimum Scope of Insurance Coverage shall be at least as broad as:

24.3.1 Insurance Services Office commercial general liability coverage ("occurrence" Form CG 0001, Ed. 10/93).
24.3.2 Insurance Services Office Form CA 0001 (Ed. 12/93) covering automobile liability, Code 1 "any auto."
24.3.3 Workers' compensation insurance as required by the Workers' Compensation Act (as contained in KRS Chapter 342) and employers liability insurance.

'24.4 Minimum Limits of Insurance Contractor shall maintain limits no less than:

24.4.1 **Commercial General Liability:**
$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage with a $3,000,000 annual aggregate. The deducible or Self-Insured Retention per occurrence shall not be more than $10,000.
24.4.2 **Automobile Liability:** $500,000 combined single limit per accident for bodily injury and property damage.
24.4.3 **Workers' Compensation and Employers Liability:** Workers' compensation with statutory benefits without limit, as required by the Kentucky Workers Compensation Act, and employer's liability limits of $1,000,000 per accident.

'24.5 Other Insurance Provisions The policies are to contain, or be endorsed to contain, the following provisions:

'24.5.1 Commercial General Liability and Automobile Liability Coverages.

'24.5.1.1 Owner, its officers and employees are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the Contractor; general supervision of the work by Owner; products and completed operations of the Contractor; premises owned, occupied or used by the Contractor, or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to Owner, its officers or employees.

'24.5.1.2 The Contractor's insurance coverage shall be primary insurance as respects Owner, its officers and employees. Any insurance of self-insurance maintained by Owner shall be excess of the Contractor's insurance and shall not contribute to it.

'24.5.1.3 Any failure to comply with reporting provisions of the policies shall not affect coverage provided to Owner, its officers or employees.

'24.5.1.4 The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought except with respect to the limits of the insurer's liability.

'24.5.2 **All Coverages.** Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to Owner.

'24.6 Acceptability of Insurers Insurance is to be placed with insurers with an A.M. Best's rating of no less than A VII, authorized to write insurance in the Commonwealth of Kentucky.

'24.7 Verification of Coverage The Contractor shall furnish the Owner with certificates evidencing the required insurance coverage prior to commencing work. Contractor shall keep up-to-date copies of such certificates on file with Owner until work is completed. Owner may

require Contractor to submit policy endorsements or complete policy copies of the required insurance.

'24.8 Subcontractors Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

'24.9 **The Contractor shall provide all Risks Insurance** in an amount of not less than one hundred percent (100%) of the insurable value of all the work. The coverage, is to be written on CP 00 20 06 95 or equivalent acceptable to the Commonwealth. All coinsurance clauses in the Risks Insurance policy will be waived. All rights of subrogation against the Owner (i.e. the Commonwealth) will be waived by the insurer. Such insurance shall be for the benefit of the Contractor, Owner and any Subcontractor engaged on this project, as the Owner shall find their respective interest may appear. The Risks Insurance must be dated and in force on the date indicated in the Contract to begin work.

'24.10 **The insurance coverage required by the contract documents shall be in compliance with the laws of the Commonwealth of Kentucky** and shall be placed with a licensed resident or non-resident agent who represents insurance companies authorized to do business in Kentucky.

'24.11 The Certificate of Insurance or Certificates of Insurance will have the following endorsements as an attachment to the Certificate or Certificate's.

'24.11.2 The Commonwealth of Kentucky, Division of Engineering and Contract Administration will be named as an additional insured.

'24.11.3 The policy is primary coverage and any insurance or self-insurance maintained by the Commonwealth of Kentucky shall be excess.

'24.11.4 Any failure of the named insured to comply with the reporting provisions of the policy shall not affect coverage provided to the Commonwealth of Kentucky, it's officers or employees.

'24.11.5 All Coverages. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, cancelled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to Owner.

'25. Performance and Payment Bonds

The Contractor shall furnish separate performance and payment bonds to the Owner. The Contractor shall furnish a performance bond satisfactory to the Owner in an amount equal to one hundred percent (100%) of the Contract Sum as security for the faithful performance of the Contract. The Contractor shall also furnish a payment bond satisfactory to the Owner in an amount equal to one hundred percent (100%) of the Contract Sum for the protection of all persons performing labor or furnishing materials, equipment or supplies for the Contractor or his Subcontractor for the performance of the Work provided for in the Contract, including security for payment of all unemployment contributions which become due and payable under Kentucky Unemployment Insurance Law.

'25.1 **Each bond furnished by the Contractor shall incorporate** by reference the terms of the Contract as fully as though they were set forth verbatim in such bonds. In the event the Contract Sum is adjusted by Change Order executed by the Contractor, the penal sum of both the performance bond and the payment bond shall be deemed increased by like amount.

'25.2 **The performance and payment bonds shall be executed** by a surety company authorized to do business in this Commonwealth, and the contract instrument of bonds must be countersigned by a duly appointed and licensed resident agent.

'26. Claims by the Contractor/ Concealed Conditions/ Disputes

'26.1 Claims by the Contractor against the Owner are subject to the following:

'26.1.1 **All Contractor claims against the Owner shall be initiated by a written claim** submitted to the Owner and the A-E. Such claim shall be filed with the Owner and the A-E no later than seven (7) calendar days after the event, or the first appearance of the circumstances, causing the claim, and same shall set forth in detail all known facts and circumstances supporting the claim;

'26.1.2 The **Contractor and the Owner shall continue their performance** regardless of the existence of any claims submitted by the Contractor.

'26.1.3 **In the event the Contractor discovers previously concealed and unknown site conditions** which differ materially from those indicated in the Contract Documents, or unknown site conditions which are materially at variance from those typically and ordinarily encountered in the general geographical location of the Project, the Contract Sum shall be modified, either upward or downward, upon the written claim made by either party within seven (7) calendar days after the first appearance to such party of the circumstances.

'26.1.3.1 As a condition precedent to the Owner having any liability to the Contractor due to concealed and unknown conditions, the Contractor must give the Owner and the A-E written notice of, and an opportunity to observe, such condition prior to disturbing it.

'26.1.3.2 The failure by the Contractor to give the written notice and make the claim as provided by this paragraph shall constitute a waiver by the Contractor of any rights arising out of or relating to such concealed and unknown condition;

'26.1.4 **In the event the Contractor seeks to make a claim** for an increase in the Contract Sum, as a condition precedent to any liability of the Owner therefor, the Contractor shall strictly comply with the requirements of the first paragraph of this Article and such claim shall be made by the Contractor before proceeding to execute any additional or changed Work. Failure of the condition precedent to occur shall constitute a waiver by the Contractor of any claim for additional compensation;

'26.1.5 **In connection with any claim by the Contractor** against the Owner for compensation in excess of the Contract Sum, any liability of the Owner for the Contractor's cost shall be strictly limited to direct cost incurred by the Contractor and shall in no event include indirect cost or consequential damages of the Contractor. The Contractor shall provide a detailed breakdown of the direct cost incurred by the Contractor. The inclusion of the Contractor's 15% OHP to this direct cost shall constitute the Owner's reimbursement to the Contractor for all indirect cost and consequential damages.

'26.1.6 **The Owner shall not be liable to the Contractor** for claims of third-parties including subcontractors, unless and until liability of the Contractor has been established therefor in a court of competent jurisdiction;

'26.2 **In the event the Contractor should be delayed in performing any task** which at the time of the delay is then critical, or which during the delay becomes critical, as the sole result of any act or omission by the Owner or someone acting in the Owner's behalf, or by Owner-authorized Change Orders, unusually bad weather not reasonably anticipatable, fire or other

Acts of God, the date for achieving Substantial Completion, or, as applicable, final completion, shall be appropriately adjusted by the Owner upon the written claim of the Contractor to the Owner and the A-E.

'26.2.1 An extension of time shall not mean that the Contractor is entitled to additional compensation.

'26.2.2 A task is critical within the meaning of this paragraph if, and only if, said task is on the critical path of the Project schedule so that a delay in performing such task will delay the ultimate completion of the Project.

'26.2.3 Any claim for an extension of time by the Contractor shall strictly comply with the requirements of the first paragraph of this Article above. If the Contractor fails to make such claim as required in this paragraph, any claim for an extension of time shall be waived.

'26.3 All **claims under this Contract shall be made in accordance** with KRS 45A.225 to 45A.290. The provisions of these statutes do not toll the running of the Statute of Limitations set forth in KRS 45A.260. Any suit pursuant to KRS 45A.245 shall be commenced within one (1) year of the Substantial Completion Date specified in the Contract. If the Contractor does not commence suit within one (1) year of the date specified in the Contract, the Contractor shall be foreclosed from proceeding in court pursuant to KRS 45A.245.

'26.3.1 The Owner and Contractor agree that any suit, action or proceeding with respect to this Contract may only be brought in or entered by the courts of the Commonwealth of Kentucky situated in Frankfort, Franklin County, Kentucky, or the United States District Court for the Eastern District of Kentucky, Frankfort Division, and the parties hereby submit to the non-exclusive jurisdiction of such courts for the purpose of any such suit, action, proceeding or judgment and waive any other preferential jurisdiction by reason of domicile or location. The parties hereby agree that any such legal action shall be tried by the court sitting without a jury. The parties hereby irrevocably waive any objection that they may now or hereafter have to the laying of venue of any suit, action or proceeding arising out of or related to this Contract brought in the courts of the Commonwealth of Kentucky situated in Frankfort, Franklin County, Kentucky, or the United States District Court for the Eastern District of Kentucky, Frankfort Division, and also hereby irrevocably waive any claim that any such suit, action or proceeding brought in any one of the above-described courts has been brought in an inconvenient forum.

'27 Liens

The filing and perfection of liens for labor, materials, supplies and rental equipment supplied on the work are governed by KRS 376.195 to 376.260.

'27.1 **The lien shall attach only to any unpaid balance** or retainage due the Contractor for the improvement from the time a copy of statement of lien, attested by the County Clerk, is delivered to the Owner, pursuant to the provisions of KRS 376.240

'27.2 **Statements of lien shall be filed with the Franklin County Clerk** and action to enforce the same must be instituted in the Franklin Circuit Court, Frankfort, Kentucky, pursuant to KRS 376.250(2).

'28 Assignments

Neither party to the Contract shall assign the Contract, or any portion thereof without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him hereunder without notification to the Owner. Notification of Assignments, shall be given on State

forms and in accordance with the procedures and regulations of the Finance and Administration Cabinet.

'29 Separate Contracts

'29.1 Owner's Right to Perform Construction and to Award Separate Contracts. The Owner reserves the right to let other contracts in connection with the Project or to perform Work with its own forces. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their Work and shall properly connect and coordinate his Work with theirs.

'29.1.1 If any part of the Contractor's Work depends for proper execution or results upon the Work of any other contractor, the Contractor shall promptly report to the A-E any observed defects in such Work that render it unsuitable for proper execution or connection. His failure to inspect and report shall constitute an acceptance of the other contractor's Work as fit and proper for the reception of his Work, except as to defects which may develop in the other contractor's Work after the execution of his Work.

'29.1.2 If any part of another contractor's work depends on the Contractor's Work for proper execution, the Contractor shall promptly perform that Work as required to allow the other contractor's work to progress as originally intended by the Owner's separate contract with that contractor.

'29.1.3 Whenever Work being done by the Owner's forces or by other Contractors work under separate agreement with the Owner is contiguous to Work covered by this Contract, the respective rights of the various interests involved shall be established by the A-E to secure the completion of the various portions of the Work in general harmony.

'29.2 Mutual Responsibility of Contractors. Should the Contractor cause damage to any separate contractor on the Work, the Contractor agrees, upon due notice, to settle with such contractor if he will so settle. If such separate contractor sues the Owner on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor who shall defend such proceedings at the Contractor's expense and if any judgment against the Owner arises therefrom, the Contractor shall pay or satisfy it and pay all costs incurred by the Owner.

'30 Allowances

'30.1 The Contractor shall have included in the Contract Sum all allowances stated in the Contract Documents and shall cause the Work so designated to be done as the Owner may direct. If the actual price for purchasing the "allowed material" is more or less than the "cash allowance," the Contract Sum shall be adjusted accordingly.

'30.2 The adjustment in Contract Sum shall be made on the basis of the purchase price without additional charges for overhead, profit, insurance or any other incidental expenses. The cost of installation of the "allowed materials" shall be included in the applicable sections of the Contract specifications covering this Work. (see Article 14, paragraph 14.2 for more information).

'31 Project Meetings

'31.1 Pre-Construction Conference: No later than 10 calendar days after execution of the Contract a Pre-Construction Conference will be held at the Project Site or another convenient location. This meeting will be scheduled by the Owner through the A-E.

'31.1.1 Attendance at the Pre-Construction conference is mandatory for the following personnel: Authorized Representatives of the Owner; A-E and their

consultants; Contractor and his Project Manager, Job Superintendent and key personnel; all major subcontractors; Using Agency on-site personnel; and other persons designated by the A-E, Owner, or Contractor to be critical to the project.

'31.1.2 All participants shall be familiar with the Project and authorized to conclude matters relating to the Work.

'31.1.3 Agenda for the meeting will include all matters indicated in the DECA Capital Construction Procedures Manual related to the project. The meeting will be conducted by the A-E and minutes distributed within three working days following the meeting.

'31.2 Pre-Installation Conferences: Pre-installation Conferences shall be held at the Project Site or another convenient location for any item of the work requiring a pre-installation conference. The conference is required PRIOR to each construction activity that requires coordination with other construction.

'31.2.1 Attendance at the Pre-Installation Conference is mandatory for the following personnel: Authorized Representatives of the Owner; A-E and their consultants who have responsibilities related to the installation; Contractor and his Project Manager, Job Superintendent and key personnel; all subcontractors with work related to the installation; Installers of the work; Manufacturer's and Fabricator's Representatives related to the installation; and other persons designated by the A-E, Owner, or Contractor to be critical to the project.

'31.2.2 All participants shall be familiar with the up-coming installation and authorized to conclude matters relating to the Work.

'31.2.3 Agenda for the meeting will include all matters indicated in the DECA Capital Construction Procedures Manual related to the project. The meeting will be conducted by the Contractor and minutes distributed within three working days following the meeting.

'31.3 Project Progress Meetings: At regular intervals during the construction (a minimum of monthly, but may be more frequently at the discretion of the A-E/ Owner, Project Progress Meetings will be held at the Project Site or another convenient location. This meeting will be scheduled at the Pre-Construction Conference or when more frequently needed by the Owner through the A-E.

'31.3.1 Attendance at the Project Progress Meeting is mandatory for the following personnel: Authorized Representatives of the Owner; A-E and their consultants; Contractor and his Project Manager, Job Superintendent and key personnel; all major subcontractors who have work completing, continuing or commencing; Using Agency on-site personnel; and other persons designated by the A-E, Owner, or Contractor to be critical to the project.

'31.3.2 All participants shall be familiar with the Project and authorized to conclude matters relating to the Work.

'31.3.3 Agenda for the meeting will include all matters indicated in the DECA Capital Construction Procedures Manual related to the project. The meeting will be conducted by the A-E and minutes distributed within three working days following the meeting.

’31.3.4 Elsewhere in these General Conditions are submittals and other requirements of the Contractor that are to be provided at each Project Progress Meeting (i.e. updated Project Schedule, updated submittal log; updated RFI log, etc.

’32. Miscellaneous Provisions Regarding Contractor’s Work

’32.1 Project Site Limits. The Contractor shall confine his apparatus, the storage of materials, and the operations of his workmen to Project site limits indicated by the Contract Documents.

’32.2 Points of Reference. The Contractor shall carefully preserve bench marks, reference points and stakes, and in case of willful or careless destruction, he shall be charged with the resulting expense of replacement and shall be responsible for any mistake that may be caused by their unnecessary loss or disturbance.

’32.3 Cutting and Patching. The Contractor shall be responsible for cutting, fitting or patching required to complete the Project or make its parts fit together in a proper manner. The Contractor shall not endanger other parts of the Project, including work by the Owner or other contractors as provided in Article 29, by cutting, patching, or excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a separate contractor without written consent of the Owner or such separate contractor. Such consent shall not be unreasonably withheld.

’32.4 Cleanup. The Contractor shall at all times keep the Project premises and surrounding area free from the accumulation of waste materials or rubbish caused by his operations in connection with the Project. Upon completion of the Work, and prior to final inspection and acceptance, the Contractor shall remove all remaining waste materials, rubbish, Contractor’s construction equipment, tools, machinery, and surplus materials and leave the Project (including but not limited to glass, hardware, fixtures, masonry, tile and marble) in a clean and usable condition satisfactory to the A-E. Floors shall be cleaned and waxed in accordance with the requirements of the Contract specifications. If the Contractor fails to clean up as provided in the Contract Documents, the Owner may perform the cleaning tasks and charge the cost to the Contractor by Change Order.

’32.5 Guarantees, Warranties and “As-Built” Drawings.

’32.5.1 Prior to final payment for the Work, the Contractor shall assemble and present to the A-E all guarantees and warranties required by the Contract Documents.

’32.5.2 All warranties for materials, equipment and installations constructed by this project shall commence on the Date of Substantial Completion and continue for the period of time indicated for the specific material, equipment or installation.

’32.5.3 Additionally the Contractor shall provide “Record” Drawings prior to final payment.

’32.6 Governing Law. The Contract shall be governed by the laws of the Commonwealth of Kentucky.

’32.6.1 Statutory Limitation Periods. Statutes of Limitations are governed by KRS 45A.260(2).

’32.6.2 Written Notice. Written notice shall be deemed to have been given if delivered in person to the individual or to a member of the organization or entity or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last known business address known to the notifying party.

'33. Apprentices

Apprentices (for all classifications of work) shall be permitted to work only under an apprenticeship agreement approved by the Kentucky Supervisor of Apprenticeship and by the Kentucky Apprenticeship Council which is recognized by the Bureau of Apprenticeship and Training, U. S. Department of Labor.

'34. Nondiscrimination in Employment

During the performance of the Contract, the Contractor agrees as follows:

'34.1 The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, national origin, or disability in employment.

'34.2 The Contractor will take affirmative action in regard to employment, upgrading, demotion, transfer, recruitment, recruitment advertising, layoff, termination, rates of pay or other forms of compensation, and selection for training, so as to ensure that applicants are employed and that employees during employment are treated without regard to their race, color, religion, sex, age, or national origin; however, when layoffs occur, employees shall be laid off according to seniority with the youngest employees being laid off first. When employees are recalled, this shall be done in the reverse way the employees were laid off;

'34.3 The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age, or national origin;

'34.4 The Contractor will post notices in conspicuous places, available to employees and applicants for employment, setting forth the provisions of the nondiscrimination clauses required by this section;

'34.5 The Contractor shall send to each labor union or representatives of workers with which he has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or workers' representatives of the Contractor's commitments under this section.

Failure to comply with the above nondiscrimination clause constitutes material breach of Contract.

'35 Affirmative Action; Reporting Requirements

'35.1 **The Contractor and Subcontractors are exempt from any affirmative action or reporting requirements, under the Kentucky Equal Employment Act of 1978, KRS 45.560 to 45.640 hereinafter referred to as The Act, if any of the following conditions are applicable:**

(1) the Contract or subcontract awarded is in the amount of five hundred thousand dollars ($500,000) or less, and the amount of the contract is not a subterfuge to avoid compliance with the provisions of The Act; or

(2) the Contractor or Subcontractor utilizes the services of fewer than eight (8) employees during the course of the Contract ; or

(3) the Contractor or subcontractor employs only family members or relatives; or

(4) the Contractor or Subcontractor employs only persons having a direct Ownership interest in the business and such interest in not a subterfuge to avoid compliance with the provisions of The Act.

'35.2 **The Contractor or Subcontractor not otherwise exempted** shall for the duration of the Contract, hire minorities from within the drawing area to satisfy the agreed upon goals and timetables set out in addenda to the Contract. Should the union with which the Contractor has collective bargaining agreements be unwilling to provide sufficient minorities to satisfy the goals and timetables, the Contractor shall hire minorities from other sources within the drawing area to satisfy the goals and timetables in the addenda to the Contract.

'35.3 The equal employment provisions of The Act may be met in part by the Contractor subcontracting to a minority contractor or subcontractor. A minority contractor or subcontractor shall be defined by the addenda to this Contract, or if none, by the Act.

'35.4 Each Contractor shall, for the length of the Contract, furnish such information as required by The Act and by such rules, regulations and orders issued pursuant thereto and will permit access to all books and records pertaining to his employment practices and work sites by the contracting agency and the department for purposes of investigation to ascertain compliance with The Act and such rules, regulations and orders issued pursuant thereto.

'35.5 If the Contractor is found to have committed an unlawful practice against a provision of The Act during the course of performing under this Contract, (if covered by The Act), the Owner may cancel or terminate the Contract, conditioned upon a program for future compliance approved by the Owner. The Owner may also declare such Contractor ineligible to bid on further contracts until such time as the Contractor complies in full with the requirements of The Act.

'35.6 The Contractor shall not be required to terminate an existing employee, upon proof that employee was employed prior to the date of the Contract nor hire anyone who fails to demonstrate the minimum skills required to perform a particular job.

'36 Access to Records

'36.1 **The contractor, as defined in KRS 45A.030(7), agrees that the contracting agency**, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review.

'36.2 **Furthermore, any books, documents, papers, records, or other evidence provided to the contracting agency,** the Finance and Administration Cabinet, the Auditor of Public Accounts, or the Legislative Research Commission which are directly pertinent to the contract shall be subject to public disclosure regardless of the proprietary nature of the information, unless specific information is identified and exempted and agreed to by the Secretary of the Finance and Administration Cabinet as meeting the provisions of KRS 61.878(1)(c) prior to the execution of the contract.

'36.3 **The Secretary of the Finance and Administration Cabinet shall not restrict** the public release of any information which would otherwise be subject to public release if a state government agency was providing the service. (22 Ky.R. 1510; eff. 5-16-96.)

'37 Commonwealth Project Forms and other weblinks:

'37.1 **The Commonwealth of Kentucky does not recognize any project forms from third party sources** (i.e. American Institute of A-Es; Association of Construction and Development; Association of General Contractors; etc.) unless the Commonwealth has not adopted specific documents.

'37.1.1 When the Commonwealth has not adopted specific documents for a construction document purpose, other documents may be used provided that they do not conflict with these General Conditions and other documents and contracts of the Commonwealth in any respect.

'37.1.2 Any conflict between a construction document utilized and any provision of these General Conditions or other documents and Contracts of the Commonwealth, shall be immediately considered null and void.

'37.2 The weblink to the State Planroom site where Commonwealth Construction forms, contracts, and manuals are located is:

https://finance.ky.gov/services/stateplan/Pages/ConstructionFormsandInformation.aspx

37.2.1 A listing of documents available on this site includes the following:

Required Affidavits and Statements

- Affidavit for Final Payment (B-210-13)
- Affidavit for Bidder, Offerors and Contractors
- Vendor Report of Prior Violations

Invoices and Change Order Form

- DOA-24 Invoice *For contracts greater than $400,000 (05-06-08)
- SAS-25 Invoice Short Form *For contracts less than $400,000 (09-29-11)
- SAS-25 A-Eing Consultants Form (11-19-10)
- SAS-42 Change Order Form (09-27-06)

Example Invoice Forms

- DOA-24 Continuation Sheet (Example)
- DOA-24 Long Form (Example) (09-27-06)
- SAS-25 Short Form (Example) (09-29-11)

EEO Forms

- Affidavit of Intent to Comply
- EEO-1: Employer Information Report
- Subcontractor Reporting Part

Manuals

- Capital Construction Project Procedures Manual (Updated 6-22-13)
- Technical Guidelines and Specifications - Complete Version (12-15-13)
- Capital Construction Project Procedures manual (Full collection)

'37.3 The weblink to the State's Document Collaboration System is:

https://www.stateofkyprojects.com/

'37.3.1 This Document Collaboration System shall be used for all official and/or required communication and documentation of any Capital Construction Project where these General Conditions apply.

END OF GENERAL CONDITIONS

Bond Number: _____

Commonwealth of Kentucky
Finance and Administration Cabinet
Department for Facilities and Support Services
Division of Engineering and Contract Administration

Payment Bond - Part IV

CONTRACTOR (Name and Address):

_____
_____
_____

OWNER (Name and Address):
Commonwealth of Kentucky
Finance and Administration Cabinet
Bush Building 1st Floor
403 Wapping Street
Frankfort, KY 40601-2638

CONSTRUCTION CONTRACT -

DATE: _____
AMOUNT: _____

DESCRIPTION (Name and Location)

_____
_____
_____

BOND

DATE: _____
AMOUNT: _____

CONTRACTOR AS PRINCIPAL

Company:_____

(Corporate Seal)

Signature: _____

_____
Name

_____
Title

SURETY (Name and Principal Place of Business):

_____

_____

_____

_____

Phone:_____

AGENT or BROKER information:

Name: _____

Title:_____

License Number:_____

Address: _____

_____

Phone: _____

Email: _____

SURETY

(Corporate Seal)

Signature:_____

_____
Name

_____
Title

Whereas, the Owner has required the Contractor to furnish this Payment Bond containing the terms and conditions set forth herein as a condition to executing the Construction Contract with the Contractor;

Now therefore, the Surety and the Contractor, both severally, and for themselves, their heirs, administrators, executors and successors agree:

1. The Construction Contract is hereby incorporated herein and by reference made a part hereof to the same extent and effect as though it were copied verbatim herein. The Surety and the Contractor are bound for the full performance of the Construction Contract including without exception all of its terms and conditions, both express and implied, and, without limitation, specifically including Contractor's obligation to pay for labor, materials, services and equipment provided in connection with the Construction Contract performance.

2. For purposes of this Payment Bond, Beneficiary is defined as person or entity who has actually provided labor, material, equipment, services or other items for use in furtherance of the Construction Contract, and having:

(A) a direct contract with the Contractor; or

(B) a direct contract with a subcontractor of the Contractor; or

(C) rights, under the laws of the jurisdiction where the Project is located, to file a lien, a claim or notice of lien, or otherwise make a claim against the Project or against funds held by the Owner, if the Project is, or were, subject to such filing.

3. The Surety shall not be obligated hereunder to a Beneficiary other than a Beneficiary having a direct contract with the Contractor unless such Beneficiary has given written notice of its claim to the Contractor and the Surety as follows:

(A) the period of time provided by the jurisdiction wherein the Project is located for (1) filing a lien, claim of lien, notice of lien, if the Project is, or were, subject to such filing (KRS 376.230), or (2) otherwise making a claim against the Project or against funds held by the Owner;

(B) address, the person or entity to whom such labor, material, equipment, services or other items were provided.

4. In no event shall the Surety be obligated hereunder for sums in excess of the Penal Sum as it may be modified by addendum.

5. Upon receipt of claim from a Beneficiary hereunder, the Surety shall promptly, and in no event later than 30 days after receipt of such claim, respond to such claim in writing (furnishing a copy of such response to the owner) by:

(A) making payment of all sums not in dispute; and

(B) stating the basis for disputing any sums not paid.

6. No action shall be commenced by a Beneficiary hereunder after the passage of the longer of two (2) years following the date on which the final payment of the contract falls due or, if this bond is provided in compliance with applicable law, any limitation period provided therein. If the limitation period contained in this Paragraph is unenforceable, it shall be deemed amended to provide the minimum period for an action against the Surety on a payment bond by a third-party beneficiary thereof.

7. Any and all notices to the Surety or the Contractor shall be given by Certified Mail, Return Receipt Requested, to the address set forth for each party above.

Bond Number: _____

Commonwealth of Kentucky
Finance and Administration Cabinet
Department for Facilities and Support Services
Division of Engineering and Contract Administration

Performance Bond - Part V

CONTRACTOR (Name and Address):

_____
_____
_____

OWNER (Name and Address):
Commonwealth of Kentucky
Finance and Administration Cabinet
Bush Building 1st Floor
403 Wapping Street
Frankfort, KY 40601-2638

CONSTRUCTION CONTRACT -

DATE: _____
AMOUNT: _____

DESCRIPTION (Name and Location)

_____
_____
_____

BOND

DATE: _____
AMOUNT: _____

CONTRACTOR AS PRINCIPAL

Company:_____

(Corporate Seal)

Signature: _____

_____
Name

_____
Title

SURETY (Name and Principal Place of Business):

_____

_____

_____

_____

Phone:_____

AGENT or BROKER information:

Name: _____

Title:_____

License Number:_____

Address: _____

_____

Phone: _____

Email: _____

SURETY

(Corporate Seal)

Signature:_____

_____
Name

_____
Title

Whereas, the Owner has required the Contractor to furnish this Performance Bond containing the terms and conditions set forth herein as a condition to executing the Construction Contract with the Contractor;

Now therefore, the Surety and the Contractor, both severally, and for themselves, their heirs, administrators, executors and successors agree:

1. The Construction Contract is hereby incorporated herein and by reference made a part hereof to the same extent and effect as though it were copied verbatim herein. The Surety and the Contractor are bound for the full performance of the Construction Contract including without exception all of its terms and conditions, both express and implied.

2. If the Contractor is in default of the Construction Contract and the Owner, by written notice to the Contractor and the

Surety, declares the Contractor to be in default and terminates the right of the Contractor to proceed, the Surety shall thereupon promptly notify the Owner in writing as to which of the actions permitted to the Surety in Paragraph 3 it will take.

3. Upon the default and termination of the Contractor and notice to the Contractor and Surety as provided in Paragraph 2 above, the Surety shall within 30 days proceed to take one or, at its option, more than one of the following courses of action:

(A) Proceed itself, or through others acting on its behalf, to complete full performance of the Construction Contract including, without limitation, correction of defective and nonconforming work performed by or on behalf of the Contractor. During such performance by the Surety the Owner shall pay the Surety from its own funds only such sums as would have been due and payable to the Contractor in the absence of the default and termination.

(B) Applicable law permitting, and with the prior written consent of the Owner, obtain bids or proposals from contractors previously identified as being acceptable to the Owner, for full performance of the Construction Contract. The Surety shall furnish the Owner a copy of such bids or proposals upon receipt of same. The Surety shall promptly select, with the agreement of the Owner, the best responsive bid or proposal and shall promptly tender the contractor submitting it, together with a contract for fulfillment and completion of the Construction Contract executed by the completing contractor, to the Owner for the Owner's execution. Upon execution by the Owner of the contract for fulfillment and completion of the Construction Contract, the completing contractor shall furnish to the Owner a Performance Bond and a separate payment bond, each in the form of those bonds previously furnished to the Owner for the project by the Contractor. Each such bond shall be in the penal sum of the (1) fixed price for completion. (2) guaranteed maximum price for completions, or (3) estimated price for completion, whichever is applicable. The Owner shall pay the completing contractor from its own funds only such sums as would have been due and payable to the Contractor under the Construction Contract as and when they would have been due and payable to the Contractor in the absence of the default and termination. To the extent that the Owner is obligated to pay the completing contractor sums which would not have then been due and payable to the Contractor under the Construction Contract, the Surety shall provide the Owner with such sums in a sufficiently timely manner that the Owner can utilize such sums in making timely payment to the completing contractor; or.

(C) Take any and all other acts if any, mutually agreed upon in writing by the Owner and the Surety.

4. In addition to those duties set forth hereinabove, the Surety shall promptly pay the Owner all loss, costs and expenses resulting from the Contractor's default(s), including, without limitation, fees, expenses and costs for architects, engineers, consultants, testing, surveying and attorneys, liquidated or actual damages, as applicable, for delay in completion of the Project, and fees, expenses and costs incurred at the direction, request, or as a result of the acts or omissions of the Surety.

5. In no event shall the Surety be obligated to the Owner hereunder for any sum in excess of the Penal Sum as it may be modified by addendum.

6. The Surety waives notice of any changes to the Construction Contract including, without limitation, changes in the contract time, the contract price, or the work to be performed.

7. This Performance Bond is provided by the Surety for the sole and exclusive benefit of the Owner, and, if applicable, any dual obligee designated by rider attached hereto, together with their heirs, administrators, executors, successors or assigns. No other party, person or entity shall have any rights against the Surety hereunder.

8. No action shall be commenced hereunder after the passage of the longer of two (2) years following the date on which the final payment of the contract falls due or, if this bond is provided in compliance with applicable law, any limitation period provided therein. If the limitation period contained in the Paragraph is unenforceable, it shall be deemed amended to provide the minimum period for an action against the Surety on a performance bond.

9. Any and all notices to the Surety, the Contractor or the Owner shall be given by Certified Mail, Return Receipt Requested, to the address set forth for each party above.

10. Any statutory limitation, which may be contractually superseded, to the contrary notwithstanding, any action hereon may be instituted so long as the applicable statute of limitations governing the Construction Contract has not run or expired.

PART VI

FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVIION OF ENGINEERING AND CONTRACT ADMINISTRATION

AGREEMENT BETWEEN OWNER AND CONTRACTOR

This **AGREEMENT,** between the Owner, the **COMMONWEALTH OF KENTUCKY,** and the Contractor _____

_____

The Architect is: _____

This Agreement, properly by the parties, shall be final and binding only upon the issuance of the Finance and Administration Cabinet Construction Contract.

The Owner and Contractor agree as set forth below.

Article No. 1 THE CONTRACT DOCUMENTS:

The Contract Documents consist of the Agreement, the Official Bid Documentl, the Invitation to Bids, the Instructions to Bidders, the General Conditions, Supplement Conditions, Drawings, Specifications, and Addenda issued prior to the execution of this Agreement, and modifications made after the execution of this Agreement. The Contract Documents represent the entire and integrated agreement between the parties. All of these documents are as fully a part of this Agreement as if attached to this Agreement or repeated herein.

Article No. 2 SCOPE OF WORK:

The Contractor shall execute the entire work described in the Contract Documents entitled: **INVITATION TO BID NO.** _____
SOLICITATION NO. _____

_____
_____
_____
_____
_____

A listing of the Specifications, Drawings and Addenda are contained in Article 11 of this Agreement

.**Article No. 3 TIME OF COMPLETION:**

The date of commencement for the work shall be the date upon which the Owner issues the Contract Documents. The Contractor shall achieve substantial completion of the entire work (as defined by Article 19.4 of the General Conditions) not later than _____ calendar days/date after the date of commencement for the work, subject to adjustments of contract time as provided in the Contract Documents. Final completion of the work shall be achieved _____ calendar days/date after the scheduled date of substantial completion.

Article No. 4 LIQUIDATED DAMAGES:

It is understood by the parties that time is of the essence of this contract, and that the Owner will sustain substantial financial damages and other injuries in the event of a failure of the Contractor to complete the work in a timely manner. In light of these foreseeable losses, and the difficulty of proof of loss, the Contractor shall be assessed liquidated damages in the amount of _____ for each calendar day between the date set for substantial completion of this work and the actual date upon which substantial completion is achieved in accordance with Article 19.4 of the General Conditions. The Contractor shall be assessed liquidated damages in the amount of _____ for each calendar day between the date set for final completion of this work and the actual date upon which final completion is achieved in accordance with Article 19.5 of the General Conditions. In the event that the Contractor abandons the work prior to the substantial completion or is terminated for default under Article 22.2 of the General Conditions, the Owner may upon completion of the work recover either (1) liquidated damages for the entire period of delay to substantial completion or final completion under this Article, or (2) actual delay-related damages. This recovery will be in addition to any other rights and remedies the Owner may have against the Contractor.

Article No. 5 CONTRACT SUM:

The Owner shall pay the Contractor for the Contractor's performance of the contract the sum of _____, (_____), subject to additions and deductions as provided in the Contract Documents. The Contract Sum is based upon the alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner.

Article No. 6 PROGRESS PAYMENTS:

Based upon applications for payment submitted to the Architect by the Contractor, the Owner shall make progress payments on the account of the Contract Sum to the Contractor in accordance with Article 18 of the General Conditions.

Article No. 7 ACCEPTANCE AND FINAL PAYMENT:

Final payment shall be due in accordance with Article 18.7 of the General Conditions provided, that all work has been fully completed in accordance with the plans and specifications as evidenced by a certificate by the Architect for the project, and it has been accepted by the Owner. Further, final payment is contingent upon receipt of "As-Built" drawings from the Contractor. The Contractor shall submit with his final payment application evidence satisfactory to the Architect that all payrolls, material bills and other indebtedness connected with the work have been paid or that provisions for the satisfaction thereof have been made.

Article No. 8 CHANGES IN THE WORK:

The Owner, without invalidated the contract, may delete, add to or modify the work in accordance with Article 14 of the General Conditions.

Article No. 9 SPECIAL NOTICE REGARDING PAYROLL TAXES, ETC:

The Contractor hereby certifies that he has fully informed himself of the conditions relating to construction and labor under which the work under this contract is to be performed, and accepts liability for payment of all payroll taxes on deductions required by local, state, and federal law, including but not limited to old age pension, social security, or annuities, and agrees that he shall employ, so far as is predictable, methods and means in carrying out his work as will not interfere with or interrupt the work of any other contractor working on or adjacent to the site for this work.

Article 10 TERMINATION OR SUSPENSION:

The contract may be terminated by the Owner upon the default of the Contractor and terminated for convenience of the Owner as provided for in Article 22 of the General Conditions.

Article No. 11 ENUMERATION OF SPECIFICATIONS, DRAWINGS AND ADDENDA:

The Contract Documents, except for Modifications issued after the execution of this Agreement, include the following specifications, drawings and addenda:

SPECIFICATIONS:

DOCUMENT	TITLE	PAGES

DRAWINGS:

SHEET NUMBERS

ADDENDA:

NUMBERS

PROJECT MANAGER: _____
AGENCY CONTACT: _____
ARCHITECT: _____
CONSULTANT: _____

Date for Substantial Completion: _____
Date for Final Completion: _____

Contents

Articles

‘1 Special Conditions:

These Special Conditions are a provided as a supplement to the General Conditions in the Specifications. Special Conditions will also supersede General Conditions where changes are necessary to coordinate with specific project requirements.

‘2 The Project:

These specifications and drawings accompanying them describe the work to be performed and materials to be furnished for the:

DMA – Springfield RC Non-Heated Storage
1079 KY-555, Springfield, KY 40069
Account No.: 095-CAR7-SP07-00

Project Description:

The goal of this project is to build an unheated storage building for the Springfield RC. The building will be approximately 42’ by 62’. The building structure will be Pre-Engineered Metal Building with 12’ eave height. Building manufacturer’s standard siding and roof panels will be used. Two 8’x10’ overhead doors are included. One prefinished hollow metal frame man door is included. A 10’ wide concrete apron will be provided at the front of the building. All necessary site work is included to provide for adequate drainage and building access. Minimum required LED lighting fixtures to achieve code required light levels are included. No mechanical HVAC is included.

‘3 Project Contacts:

(Refer to Drawings for Company Addresses / Phone Numbers)

In the roles defined by the General Conditions as “Architect” and as used throughout the Contract Documents as the Architect of the work being constructed, the following firm and its sub-consultants are working under separate contract with the Owner to provide the services under this role:

Architect:
Company Name: Kesler Simpson Architects, LLC
Principal-In-Charge: Andrew Kesler
Project Manager: Kevin Setser

Engineer/s:
Company Name: N/A
Principal-In-Charge: N/A
Project Manager: N/A

In the roles defined by the General Conditions as “Owner” and as used throughout the Contract Documents as the Owner of the work being constructed, is the Commonwealth of Kentucky, acting through the Finance and Administration Cabinet, Department for Facilities Management and Support Services, Division of Engineering and Contract Administration. The Owner is solely represented by the following:

Owner:
Finance and Administration Cabinet
Facilities and Support Services
Division of Engineering and Contract Administration
Project Manager: Carl Kratzer
Associate Director: Frieda Myers
Executive Director:

In the role defined by General Conditions, “Agency or Using Agency”, is a state government entity which utilizes the work being constructed. This agency is a client of the Owner and advises the Owner on matters related to the project. This Using Agency does not possess the legal authority of Owner:

Using Agency:
Department of Military Affairs
Project Manager: Ben Thompson
Director: Joe Sanderson

In the roles defined by the General Conditions as “Commissioning Authority” and as used throughout the Contract Documents as the Commissioning Agent of the work being constructed, the following firm is working under separate contract with the Owner to provide the services under this role:

Commissioning Authority:
Company Name: NA
Principal-In-Charge: NA
Project Manager: NA

In the roles defined by the General Conditions as "Special Inspector" and as used throughout the Contract Documents as the firm performing Special Inspections as required by the Kentucky Building Code for the work being constructed, the following firm is working under separate contract with the Owner to provide the services under this role:

Special Inspector: Company Name: NA
Principal-In-Charge: NA
Project Manager: NA

'4 Times of Completion:

Subject to the conditions of Article '16 – "Delays and Extension of Time" of the General Conditions, the work to be performed under this Contract shall be completed as follows:

Substantial Completion 270 Calendar Days from date of Executed Contract for Construction. Article '19.4 of the General Conditions set forth specific requirements of the Commonwealth of Kentucky that are necessary to be fulfilled by the Contractor in order to be determined to have accomplished Substantial Completion by this date. Refer to Article '11 of these Special Conditions for additional requirements of this specific project required to accomplish Substantial Completion.

Final Completion 30 Calendar Days beyond Substantial Completion. Article '19.5 of the General Conditions set forth specific requirements of the Commonwealth of Kentucky that are necessary to be fulfilled by the Contractor in order to be determined to have accomplished Final Completion by this date. Refer to Article '11 of these Special Conditions for additional requirements of this specific project required to accomplish Final Completion.

As indicated in Article '4 of the General Conditions, "Construction Schedule", the following limitations of work times are set forth herein that are to be accounted for by the Contractor in scheduling and sequencing of the work:

Work Restrictions and "Black-Out" Dates: None

Project Phasing (Separate start and completion dates): None

Limitations on daily work times: None

Work being Performed by the Owner or by Others: None

Products ordered by the Owner in Advance/ Anticipated Delivery Dates: None

Construction Contract Time required for Commissioning: NA

Construction Contract Time required for Testing and Balancing: NA

‘5 Liquidated Damages / Damages from Untimely Performance*:*

In accordance with Article ’19.7 of the General Conditions, the Contractor shall pay the Owner the following identified amount for each and every calendar day of unexcused delay in achieving Substantial Completion and Final Completion beyond the date set for below for each:

Substantial Completion Liquidated Damages are $____400____/calendar day for each day beyond the established Date of Substantial Completion until the Actual Date of Substantial Completion is achieved. (See Article ’19.4 of the General Conditions and Article ’11 of these Special Conditions for requirements for Substantial Completion).

Final Completion Liquidated Damages are $____200____/calendar day for each day beyond the established Date of Final Completion until the Actual Date of Final Completion is achieved. (See Article ’19.5 of the General Conditions and Article ’11 of these Special Conditions for requirements for Final Completion).

‘6 Contractor Provided Temporary Facilities and Controls:

Construction Office/Trailer: to be located at pre-construction conference or if owner allowed, contractor trailer can be omitted for smaller projects and run through a temporary use of room in building

Staging / Parking: to be identified at Pre-Construction Conference

Temporary Fencing and Signage: Orange Plastic Fence or Portable Chainlink with Concrete Blocks or as required for project specific security or safety.

Portable Toilet Facilities: are Required and to be located within construction fencing.

Utilities: Contractor to set up new temporary utilities or coordinate with owner for hook-up of existing where applicable

Water:	Use Owner Existing Utility or Provide New Temporary Service (AE to confirm with Owner during design). Contractor to include any tap fee for sewer or water in bid.
Electric:	Use Owner provided for Renovation or Contractor provided for New Construction. Contractor to set up temporary meter and panel for new construction.
Gas:	Owner provided unless specified otherwise or total New Construction on New Site

‘7 Special Inspections and Testing:

Article ’12 of the General Conditions and the technical specifications of the Contract Documents define and establish the requirements and provisions for Inspection of the Work, Special Inspections performed by others working under separate contract with the Owner, and testing to be provided by the Contractor.

Structural Special Inspections and Testing: Reference Specification Section 014110 – STRUCTURAL SPECIAL CONDITIONS

Site Special Inspections and Testing: TBD

Contractor Provided Testing: All other testing required by the Contract Documents are Contractor Provided Testing.

'8 Allowances included in the Contract Amount:

The Contractor is required by Article '30 of the General Conditions to include in the Contract Amount the following Allowances:

None.

Allowances shall include all necessary materials, costs of delivery, installation labor, tools and equipment necessary to provide the item or services indicated in the Allowance. When the item of work or service is completed, the Contact Amount is modified by Change Order to reconcile the Allowance with the actual cost of the item or service provided. The contractor's overhead, profit, insurance and bonds, and administrative costs are included in the prescribed markup permitted by Article '14 of the General Conditions "Changes in the Work" and are not to be included in the Allowance.

'9 Unit Prices established by the Form of Proposal:

The Contractor is required at time of submitting a bid proposal for this work to provide specific Unit Prices that will be used to add or deduct those specific work items or services by an established unit of measure and the stated price per unit.

Unit prices include all necessary materials, costs of delivery, installation labor, tools and equipment necessary to provide the unit measured item. If a unit price is used in a change to the work by Change Order, the contractor's overhead, profit, insurance and bonds, and administrative costs are included in the prescribed markup permitted by Article '14 of the General Conditions "Changes in the Work" and are not to be included in the unit price.

For a schedule of Unit Prices see the "Unit Prices" section of the Bid Form of Proposal.

'10 Schedule of Additive Alternates:

The Bid Form of Proposal includes Additive Alternates that, if accepted by the Owner during review of bids, become a part of the Contract Amount. Additive Alternates are listed in the order which they will be considered and may be accepted by the Owner to be included in the base Contract of the Work. The following is the sequential listing and description of Additive Alternates:

None

Additive Alternates include all necessary materials, costs of delivery, installation labor, tools and equipment, contractor's overhead, profit, insurance and bonding, and administrative costs. All work necessary to provide the work described in the Additive Alternate is to be included.

'11 Additional Project Completion or Project Close-Out Required:

Article '19.4 of the General Conditions "Substantial Completion" defines the specific MANDATORY requirements to be accomplished or provided to achieve Substantial Completion of the Project. In addition

to those requirements, the following requirements are also MANDATORY requirements to be accomplished or provided to achieve Substantial Completion of this Project:

No additional Final Completion requirements beyond those listed in Article 19.4 of the General Conditions.

Article '19.5 of the General Conditions "Final Completion" defines the specific MANDATORY requirements to be accomplished or provided to achieve Final Completion of the Project. In addition to those requirements, the following requirements are also MANDATORY requirements to be accomplished or provided to achieve Final Completion of this Project:

No additional Final Completion requirements beyond those listed in Article 19.5 of the General Conditions.

'12 Special Project Site Security or Access Requirements:

No additional requirements beyond those listed in the General Conditions.

'13 Special Delegated Design Requirements:

Pre-engineered Metal Building Engineering is delegated design requirements in Scope of Work.

'14 Other Special Conditions of Contract:

No additional requirements beyond those listed in the General Conditions of the Contract.

END OF SPECIAL CONDITIONS

SECTION 014110 – STRUCTURAL SPECIAL INSPECTION & CONTRACTOR RESPONSIBILITY

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

B. General Conditions of the Construction Contract Inspection of Work / Defective or Incomplete Work / Special Inspections shall apply in its entirety to this project. Where any conflict exists between this Specification Section and the General Conditions, the General Conditions provisions shall supersede in all aspects.

1.2 SUMMARY

A. Special Inspections as defined in Section 1704 of The Kentucky Building Code are required.

B. The Risk Category, Seismic Criteria, and Basic Wind Speed for the structure are shown in the General Notes section of the structural drawings.

C. Special inspections per Kentucky Building Code Sections 1704 and 1705 are required for the following materials and work:

1. Inspection of Fabricators per Section 1704.2.5 of the Kentucky Building Code.
2. Steel Construction per Section 1705.2 of the Kentucky Building Code.
3. Concrete Construction per Section 1705.3 of the Kentucky Building Code.
4. Prepared Fill per Section 1705.6 of the Kentucky Building Code.
5. Additional materials and work as/if indicated on the Construction Drawings.

D. The structural special inspections required on this project are further defined in the Special Inspections section of the structural drawings. Other, non-structural special inspections may be required and are specified elsewhere if applicable.

1.3 SCOPE

A. The scope of the construction work to be inspected / tested / observed is that structural and foundation work shown on the structural construction drawings (S- sheets) as well as the following:

1. Geotechnical fill immediately below and within the footprint of the building.

B. All inspections and tests performed shall be documented by report including, but not limited to, reinforcing inspection, curing, fabricators, etc.

1.4 DEFINITIONS

A. In accordance with the intent of the Building Code, inspection work specified to be “continuous” shall be inspected the full, uninterrupted time that the Contractor is performing said construction work. Work specified to be “periodic” may be inspected as convenient to the Inspector, except that all work must be inspected prior to being covered by other work, during the working hours of the Contractor, and in a fashion that does not delay the Contractor. Regardless as to whether inspections are performed in “continuous” or “periodic” fashion, 100% of the construction work shall be inspected, unless noted otherwise.

1.5 SELECTION AND PAYMENT

A. The Inspection Agency shall be retained by the Owner. Costs for reinspection and retesting, should discrepancies be found, will be paid for by the Owner, except where rework is due to negligence or omission deemed excessive by the Owner.

1. In case of excessive rework, such retesting and reinspection shall be paid for by the Owner as an additional service of the Inspection Agency, but will be backcharged by deductive change order to the Contractor's contract.
2. In case of excessive waste/lost time of the Special Inspector due to inadequate scheduling by the General Contractor, such time shall be paid for by the Owner as an additional service of the Inspection Agency but will be backcharged by deductive change order to the Contractor's contract.

B. Special Inspections are additional to testing and inspection requirements shown elsewhere in the specifications and on the drawings, which is to be paid for by the Contractor. The Contractor shall also pay for additional structural testing and inspection required for their convenience. Inspection work not part of the Structural Special Inspections may be performed by an Inspection Agency of the Contractor's choosing, unless noted otherwise.

1.6 INFORMATIONAL SUBMITTALS

A. General: Furnish submittals in quantity, format, and other Conditions of the Contract and as specified in Division 1 of the Project Manual.

B. Fabricator certificate of current good standing with Qualified Certification Program.

C. Fabricators exempt from special inspection shall submit a *Certificate of Compliance* to the structural engineer of record at the completion of fabrication stating that all work was completed in accordance with the approved construction documents.

1.7 QUALITY ASSURANCE

A. Qualified Certification Authorities: Subject to compliance with Kentucky Building Code Requirements, Qualified Certification Authorities providing certification which may be applicable to Project include:

1. American Concrete Institute (ACI).
2. American Institute of Steel Construction (AISC).
3. American Society of Nondestructive Testing (ASNT).
4. American Welding Society (AWS).
5. International Accreditation Service (IAS).
6. International Code Council (ICC).
7. National Institute of Certified Engineering Technology (NICET).

PART 2 – EXECUTION

2.1 PROGRESS MEETINGS

A. The Special Inspector's designated Project Manager is to attend any pre-construction meetings which may be conducted at the construction site by the Structural Engineer to discuss quality issues.

B. The Special Inspector's designated Project Manager is to attend construction progress meetings which will be held at the construction site by the Architect, Engineer, and General Contractor.

2.2 CONTRACTOR'S RESPONSIBILITIES

A. Provide a complete copy of all structural shop drawings to the Structural Testing/Inspection Agency.

B. Arrange the preconstruction meeting to discuss quality issues.

C. Notify the Structural Testing/Inspection Agency sufficiently in advance of operations to allow assignment of personnel and scheduling of tests.

D. Cooperate with Structural Testing/Inspection Agency and provide access, including equipment with operator, to work. Access equipment includes, but is not limited to, man lifts, excavation equipment, etc.

E. Provide samples of materials to be tested in required quantities.

F. Provide storage space for Structural Testing/Inspection Agency's exclusive use, such as for storing and curing concrete testing samples. If required by Special Inspector, General Contractor shall provide cure box with electricity, water, and blankets for curing concrete specimens.

G. Provide labor to assist the Structural Testing/Inspection Agency in performing tests/inspections.

H. Construction and work for which Special Inspection is required shall remain accessible and exposed for special inspection purposes until the completion of the inspections and tests.

I. All parties who are to receive inspection and testing reports shall maintain an active email account to receive reports by.

J. General Contractor shall create and maintain a discrepancy log on site. Log shall list each discrepancy documented by the Special Inspector; state the date of discovery and Special Inspector's report number; and provide room for the Special Inspector to sign and date when said discrepancy is corrected. No work containing discrepancy shall be covered prior to having reinspection and approval by the Special Inspector.

K. Neither the observation of the Architect/Structural Engineer in the administration of the contract, nor tests/inspections by the Testing/Inspection Agency, nor approvals by any other person(s) shall relieve the Contractor from their obligation to perform the work in accordance with the Contract Documents.

2.3 SPECIAL INSPECTOR'S RESPONSIBILITIES

A. Cooperate with the Contractor and provide timely service.

B. Notify Contractor of minimum advance notice for each type of inspection/test.

C. Upon arriving at the construction site, sign in and notify the Contractor of presence.

D. Select the representative samples that are to be tested/inspected.

E. Perform tests/inspections as outlined in the Contract Documents, the applicable codes, and as directed by the Structural Engineer.

F. Keep records of all inspections.

G. Furnish inspection reports to the Architect, Structural Engineer, and General Contractor weekly as construction progresses.

1. Each report shall include photographs of the project status and the typical work inspected and documented in that subject report. These general photographs are in addition to the required photograph at discrepancies.

H. Inform General Contractor and / or Fabricator of all discrepancies immediately for correction.

1. Document in writing correction of discrepancies.
2. Highlight discrepancies within the report.

a. The report shall include a text description of each discrepancy. Description shall convey the discrepancy location on the project and the issue.
b. The report shall include a photograph of each discrepancy observed in the field and/or in the shop. Photograph shall be labeled to convey location on project and the issue shown. (Photographs of material strength tests for concrete and/or masonry are not required, unless otherwise instructed.)
c. The report shall document the date that each discrepancy was initially discovered.
d. Inspection related discrepancies shall be reinspected by the Special Inspector along the course of the project and prior to concealment by other work. Subsequent reports shall document date that prior discrepancy was confirmed to be corrected.

3. If discrepancies are not corrected, the discrepancies shall be brought to the attention of the Code Official and the Structural Engineer prior to the completion of that phase of the work.

I. Leave copies of field notes with the Contractor prior to leaving the construction site. Field notes shall include the message given to the Contractor, date, time of message, name of Contractor's representative informed, type and location of work or materials tested/inspected, whether the work or materials complies with Contract Documents and name of the Structural Testing/Inspection Agency's representative.

J. Immediately notify General Contractor, Architect, and Structural Engineer by separate letter if work yet to be inspected is found on site that is either being covered by other work or was to receive continuous inspection.

K. Structural Testing/Inspection Agency shall not alter requirements of Contract Documents, approve or reject any portion of the work, or perform duties of the Contractor.

L. Submit a final report of inspections documenting completion of **all** required Special Inspections and correction of any discrepancies noted in inspections to the Structural Engineer. Final report shall be prepared by, sealed, and signed by the Special Inspector and shall include a complete list of materials and work inspected during the course of the project. One copy of said report is to be provided to the Contractor for their records.

END OF SECTION 014110

SECTION 030300 – STRUCTURAL EXCAVATION AND BACKFILL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Structural Excavation and Backfill includes:

1. Preparing subgrades for slabs on grade.
2. Excavating and backfilling for building foundations from subgrade.
3. Over-excavation and structural backfill to achieve adequate support for foundations.
4. Subsurface drainage backfill for foundation walls.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 1 Section “Structural Special Inspection.”
2. Division 3 Section "Cast-in-Place Concrete."
3. Division 31 Section "Dewatering."
4. Division 31 Section “Earth Moving.”
5. Division 33 Section "Subdrainage."

1.3 DEFINITIONS

A. Backfill: Soil material or controlled low-strength material (flowable fill) used to fill an excavation.

B. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

C. Drainage Course: Free-draining aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

D. Excavation: Removal of material encountered above bearing elevations and to lines and dimensions indicated.
1. Authorized Additional Excavation (Over-excavation): Excavation below bearing elevations or beyond indicated lines and dimensions as directed by Special Inspector and confirmed by Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work. No work performed through or into mass undercut or mass fill performed as part of this Construction Project or required to remediate inadequate Dewatering/Rainwater Control practices or required to remediate wet/freezing weather will be applicable for Authorized Additional Excavation payment.
2. Bulk (Mass) Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
3. Unauthorized Excavation: Excavation below bearing elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.

E. Fill: Soil materials used to raise existing grades.

F. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed 3/4 cu. yd. for footing excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:

1. Excavation of Footings: Late-model, track-mounted hydraulic excavator; equipped with a 42-inch- wide, maximum, short-tip-radius rock bucket; rated at not less than 138-hp flywheel power with bucket-curling force of not less than 28,700 lbf and stick-crowd force of not less than 18,400 lbf with extra-long reach boom; measured according to SAE J-1179.

G. Structures: Buildings, footings, foundations, slabs, or other man-made stationary features constructed above or below the ground surface as shown on the structural drawings.

H. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

I. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 SUBMITTALS

A. General: Furnish submittals in quantity, format, and other Conditions of the Contract and as specified in Division 1 of the Project Manual.

B. Material Test Reports: For each on-site and borrow soil material proposed for fill and backfill as follows:

1. Classification according to ASTM D 2487.
2. Laboratory compaction curve according to ASTM D 698.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, GC, SW, SP, SM, SC, CH, and CL according to ASTM D 2487, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter. No concentration of large fragments is permitted unless approved by Geotechnical Engineer and Architect.

1. Plasticity Index: Less than 30.
2. Liquid Limit: Less than 50.
3. Swell potential: Less than 50 psf.
4. Maximum dry density of at least 100 pounds per cubic foot.

C. Unsatisfactory Soils: Soil Classification Groups ML, OL, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.

1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
2. Shot rock, asphalt, and coal fragments.

3. Organics content shall be less than 5%. Limit total depth of soil fills with organic contents over 4% to 24".

D. Subbase Material (Crushed Stone): Narrowly graded mixture of crushed stone, or crushed or uncrushed gravel; meeting Kentucky Transportation Cabinet Standard Specification for #57 stone; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve.

2.2 CONTROLLED LOW-STRENGTH MATERIAL

A. Controlled Low-Strength Material Performance Additive:

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:

a. Darafill or Darafill Dry, W.R. Grace & Co.
b. Rheomac VMA 362, BASF Corporation – Admixture Systems

B. Prohibited Admixture: Calcium chloride thiocyanates or admixture containing more than 0.05 percent chloride ions.

C. Controlled Low Strength Material CLSM (Flowable fill): Self-compacting, flowable concrete material. Provide blend of cement, flyash, and sand with minimum cementitious content as follows:

1. Excavatable flowable fill: 100 lb cement and 250 lb fly ash per cubic yard.
2. Structural flowable fill (250 psi): 175 lb cement and 200 lb fly ash per cubic yard. Add CLSM performance additive at manufacturer's recommended dosage rate, adjusting water content to provide desired flow and strength characteristics.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.

B. Protect and maintain erosion and sedimentation controls during earth moving operations.

C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.

1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

C. All undercut and engineered backfill remedial work recommended by the Special Inspector and caused by inadequate dewatering and drainage practices during construction shall be provided at no additional cost to Owner.

3.3 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.

1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:

a. 24 inches outside of concrete forms other than at footings.
b. 12 inches outside of concrete forms at footings.
c. 24 inches below bottom of footings where footings specified to be soil bearing.
d. 6 inches outside of minimum required dimensions of concrete cast against grade.
e. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
f. 6 inches beneath bottom of concrete slabs-on-grade.

B. All overexcavation of soft and/or saturated soils caused by dewatering/rainwater control practices and wet/freezing weather, excavation of soils into mass undercut or mass fill performed as part of this Construction Project, and subsequent backfill, as directed by Special Inspector shall be performed at no additional cost to Owner. Contractor shall notify General Contractor of work required, perform work where directed by General Contractor, and coordinate with other trades who may be required to perform such work.

3.4 STRUCTURAL EXCAVATION

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.

1. Excavations for footings and foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
2. Recompact areas loosened by excavation operations prior to reinforcing steel placement.
3. Remove loose soil, debris, and excess surface water from the bearing surface prior to concrete placement.

B. Over-excavate all soft and deleterious material below foundations as directed by Special Inspector and backfill back to foundation bearing elevation with approved fill material.

C. For foundations classified as soil bearing on the structural drawings, undercut and maintain similar bearing material type and depths.

1. Remove all rock within two feet below bottom of foundation and replace with approved engineered soil backfill.

3.5 SUBGRADE INSPECTION

A. Notify Architect when excavations have reached required subgrade.

B. If Special Inspector determines that unsatisfactory soil is present, notify Architect and receive direction. Once received, continue excavation and replace with compacted backfill or fill material as directed.

C. Proof-roll subgrade below the building slabs with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons to identify soft pockets and areas of excess yielding. A loader scraper is also permitted. Do not proof-roll wet or saturated subgrades.

1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Architect, and replace with compacted backfill or fill as directed.

D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.

E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect, without additional compensation.

3.6 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 1500 psi, may be used when approved by Architect.

1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Architect.

3.7 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.8 BACKFILL, GENERAL

A. Place and compact backfill in excavations promptly, but not before completing the following:

1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
2. Surveying locations of underground utilities for Record Documents.
3. Testing and inspecting underground utilities.
4. Removing concrete formwork.
5. Removing trash and debris.
6. Removing temporary shoring and bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

C. Do not backfill below footings with crushed stone where building foundations classified as soil bearing on the structural drawings.

3.9 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact engineered fill material in layers to required elevation.

C. Place fill on subgrades free of mud, frost, snow, or ice.

3.10 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight. Maintain the moisture content as such.

3.11 COMPACTION OF SOIL/GRAVEL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place backfill gravel (KYTC #57 stone) in layers not more than 8 inches in loose depth and tamp in place. Use hand-operated tampers (plate compactors) where grade differential, at time of tamping, is more than 12-inches on each side of wall or where backfill area extent or accessibility does not facilitate the use of heavy compaction equipment.

C. Place backfill gravel and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

D. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698:

1. Scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 98 percent.
2. When the fill depth will exceed 10 feet, the excess lower portion shall be compacted to at least 100 percent.

3.12 CEMENTITIOUS FILL

A. Place fill on subgrades free of mud, frost, snow, or ice.

B. Place and consolidate in accordance to the recommendations of the Geotechnical Report.

3.13 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

1. Provide a smooth transition between adjacent existing grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

3.14 SUBBASE UNDER CONCRETE SLABS-ON-GRADE

A. Place subbase on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place and compact subbase under cast-in-place concrete slabs-on-grade as follows:

1. Place subbase 6 inches or less in compacted thickness in a single layer.
2. Compact each layer of subbase to required cross sections and thicknesses to not less than 98 percent of maximum dry unit weight according to ASTM D 698.

3.15 FIELD QUALITY CONTROL

A. General: The Owner will employ a testing agency that meets the requirements of ASTM E329 to perform tests and to submit test reports. Failure to detect any defective materials shall not prevent later rejection when such defect is discovered or obligate the Architect or Owner for final acceptance.

1. See Section 014110 – Structural Special Inspections and Contract Drawings for testing and inspection to be performed.
2. Test results will be reported in writing to the Architect, Engineer, and General Contractor within 24 hours after tests.

B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent backfill or foundation placement only after test results for previously completed work comply with requirements.

C. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.16 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Architect.

1. Remove waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 030300

SECTION 033000 – CAST-IN-PLACE CONCRETE

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section specifies cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes. This section applies to concrete work shown on the structural drawings. See Division 32 for site concrete.

B. Cast-in-place concrete includes the following:

1. Lean concrete backfill and mudmats.
2. Foundations and footings.
3. Slabs-on-grade.
4. Foundation walls.

C. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 1 Section “Structural Special Inspection.”
2. Division 3 Section “Structural Excavation and Backfill” for preparation and excavation of foundations and stone drainage fill.
3. Division 7 Section “Thermal and Moisture Protection.”

D. Coordination: Unless other satisfactory agreements are specifically entered into by contractors concerned, all miscellaneous iron and steel, sleeves, anchors, etc., required by work of other contractors, will be furnished and installed by such other contractors with the cooperation of this contractor.

1.3 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, other pozzolans, and silica fume; materials subject to compliance with requirements.

B. W/C Ratio: The ratio by weight of water to cementitious materials.

1.4 ACTION SUBMITTALS

A. General: Furnish submittals in quantity, format, and other Conditions of the Contract and as specified in Division 1 of the Project Manual.

B. Design Mixtures: For each concrete mixture with laboratory test reports for the following data. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1. Method used to determine the proposed mix design (per ACI 301, Section 4).
2. Gradation and quantity of fine and coarse aggregates.
3. Proportions of all ingredients including all admixtures added either at the time of batching or at the job site. Indicate amounts of mixing water to be withheld for later addition at Project site.
4. Water/cement ratio and water/cementitious ratio.

5. Slump – ASTM C143.
6. Certification and test results of the total water-soluble chloride ion content of the design mix – FHWA RD-77 or AASHTO T 260-84.
7. Air content of freshly mixed concrete by the pressure method, ASTM C231, or the volumetric method, ASTM C173.
8. Unit weight of concrete – ASTM C138.
9. Strength at 7- and 28-days for structural concrete– ASTM C39. Document strength on basis of previous field experience or trial mixtures, per ACI 301 Section 4. Submit strength test records, mix design materials, conditions, and proportions for concrete used for record of tests, standard calculation, and determination of required average compressive strength.
10. Complete and include Structural Engineer's standard mix design submittal form for each mix. A blank copy is included at the end of this section.

C. Steel Reinforcement Shop Drawings: Fabrication and placing drawings for reinforcement detailing, fabricating, bending, and placing concrete reinforcement. Comply with ACI SP-066(04) "ACI Detailing Manual" showing bar sizes, lengths, material, grade, bar schedules, bent bar diagrams, bar arrangement, splices and laps, tie spacing, and supports for concrete reinforcement. Include special reinforcing required for openings through concrete structures.

1. Computer generated electronic structural construction document files (ACAD) will be made available to the Contractor. The Contractor will be required to sign the Engineer's standard release of liability form prior to receiving the drawing files. Rules for use of said files shall be as defined in the CRSI "Code of Standard Practice" Sections 4.19 and 6.4.1.
2. Shop drawing resubmittals are reviewed for conformance with review marks only. Any changes or questions originating on a resubmittal shall be clearly clouded.

D. Product Data: For proprietary materials and items, including reinforcement and forming accessories, admixtures, patching compounds, vapor retarder/barrier, construction joint slip dowels, joint systems, curing compounds, and others if requested by Architect.

1.5 INFORMATIONAL SUBMITTALS

A. General: Furnish submittals in quantity, format, and other Conditions of the Contract and as specified in Division 1 of the Project Manual.

B. Laboratory test reports for concrete materials or material certificates in lieu of material laboratory test reports. Material certificates shall be signed by Manufacturer and Contractor, certifying that each material item complies with or exceeds specified requirements. Provide certification from admixture manufacturers that chloride content complies with specification requirements.

C. Survey of the as-built locations of anchor rods, foundation bolts, and other embedded items shall be submitted to the Architect, Engineer, and General Contractor.

D. Written notification that the concrete in the footings, piers, walls, or other bearing support has attained, on the basis of an appropriate ASTM standard test method of field-cured samples, a minimum of 75% of the intended minimum compressive design strength.

1.6 QUALITY ASSURANCE

A. Codes and Standards: Comply with provisions of the following codes, specifications, and standards, except where more stringent requirements are shown or specified. Each contractor having reference to ACI Documents shall maintain copies of same on project site.

AMERICAN CONCRETE INSTITUTE

1. ACI 117-10 – Specifications for Tolerances for Concrete Construction and Materials.
2. ACI 211.1-91 – Standard Practice for Selecting Proportions Normal, Heavyweight and Mass Concrete (Reapproved 2009).
3. ACI 301-10 – Specification for Structural Concrete.
4. ACI 302.1R-04 – Guide for Concrete Floor and Slab Construction.
5. ACI 304.2R-96 – Placing Concrete by Pumping Methods (Reapproved 2008).
6. ACI 305R-10 – Guide to Hot Weather Concreting.
7. ACI 306R-10 – Guide to Cold Weather Concreting.
8. ACI 308R-01 – Guide to Curing Concrete (Reapproved 2008).
9. ACI 309R-05 – Guide for Consolidation of Concrete.
10. ACI 311.1R-07 – ACI Manual of Concrete Inspection.
11. ACI 318-14 – Building Code Requirements for Structural Concrete and Commentary.
12. ACI 347-04 – Guide to Formwork for Concrete.
13. SP-66 – ACI Detailing Manual.

CONCRETE REINFORCING STEEL INSTITUTE (CRSI):

1. CRSI – Manual of Standard Practice.
2. CRSI RB4.1 – Supports for Reinforcement Used in Concrete (2014a)
3. CRSI – Placing Reinforcing Bars (2011)

B. Qualifications of Workers: Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper execution of the work required by this Division.

C. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94 requirements for production facilities and equipment.

D. Contractor shall be responsible for conducting a survey of the as-built locations of anchor rods, foundation bolts, and other embedded items. Survey to include embed placement, bolt projection, and top of foundation elevation. Survey to be conducted by a Professional Land Surveyor.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver steel reinforcement and concrete to Project site in such quantities and at such times to ensure continuity of installation.

B. Store materials to permit easy access for inspection and identification. Keep steel reinforcement off ground by using pallets, platforms, dunnage, or other supports and spacers.

C. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.

D. Store packaged materials in sealed containers with manufacturer's labels intact. Place under cover to protect from moisture, sunlight, dirt, oil, and other contaminants.

PART 2 - PRODUCTS

2.1 FORM MATERIALS

A. Forms for Exposed (Smooth) Finish Concrete: Exterior-grade high-density overlay (Class 1 or better), medium-density overlay (Class 1 or better with mill-release agent treated and edge sealed), or Structural1 or Class 1 (B-B or better, mill oiled and edge sealed) plywood panels complying with DOC PS1; or new metal-framed and metal faced panels; or other acceptable panel-type materials to provide continuous, straight, and smooth exposed surfaces. Furnish in largest practicable sizes to minimize number of joints.

B. Forms for Unexposed, Rough-Formed Finish Concrete: Plywood, lumber, metal or another acceptable material. Provide lumber dressed on at least two edges and one side for tight fit.

C. Form-Release Agent: Commercially formulated form-release agent with maximum volatile organic compounds (VOCs) not to exceed those allowable by jurisdictional regulations that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

D. Form Ties (Standard): Factory-fabricated, adjustable-length, removable or snap-off glass-fiber-reinforced plastic or metal form ties designed to resist lateral pressure of plastic concrete on forms, prevent form deflection, and to prevent spalling of concrete upon removal.

1. Furnish units that leave no corrodible metal closer than 1 inch to the plane of the exposed concrete surface.
2. Furnish ties that, when removed, leave holes no larger than 1 inch in diameter in concrete surface.
3. Furnish ties with integral water-barrier plates to walls indicated to receive dampproofing or waterproofing.

E. Form Joint Tape: Compressible foam tape; pressure sensitive; AAMA800, “Specification 810.1, Expanded Cellular Glazing Tape”; minimum ¼ inch thick.

F. Form Joint Sealant: Elastomeric sealant complying with ASTM C920, Type M or S, Grade NS, that adheres to form joint substrates.

G. Sealer: Penetrating, clear, polyurethane wood form sealer formulated to reduce absorption of bleed water and prevent migration of set-retarding chemicals from wood.

2.2 REINFORCING MATERIALS

A. Reinforcing Bars: ASTM A 615, Grade 60, deformed.

B. Smooth Joint Dowel Bars: ASTM A36, plain-steel bars, cut true to length with ends square and free of burrs.

C. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:

2.3 CONCRETE MATERIALS

A. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.

B. Cementitious Materials:

1. Portland Cement: ASTM C 150, Type I. One brand of cement shall be used throughout Project duration unless otherwise acceptable to Engineer.
2. Fly Ash: ASTM C 618, Class F or C, except maximum loss on ignition: 3%.

C. Normal-Weight Aggregates: ASTM C 33 Class 3S coarse aggregate or better, graded, and as specified. Provide aggregates from a single source for exposed concrete.

1. For exposed exterior surfaces, do not use fine or coarse aggregates that contain substances considered deleterious or that cause spalling or surface discoloration due to oxidation.
2. Fine Aggregate to be free of materials with deleterious reactivity to alkali in cement.

D. Water: ASTM C 1602 and potable.

E. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494, Type A.
2. Retarding Admixture: ASTM C 494, Type B.
3. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.
4. Water-Reducing and Accelerating Admixture: ASTM C 494, Type E.
5. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.
6. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494, Type G.
7. Plasticizing and Retarding Admixture: ASTM C 1017, Type II.
8. Air-Entraining Admixture: ASTM C 260.

F. Controlled Low Strength Material (CLSM) Performance Additive

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:

a. Darafill or Darafill Dry, GCP Applied Technologies, Inc.
b. MasterMatrix VMA 362, BASF Corporation.
c. RUSS-FLO, RussTech Admixtures, Inc.

2.4 RELATED MATERIALS

A. Anchor Rods, Bolts, Nuts, and Washers: As follows:

1. Non-High Strength Rods (Straight, Headed or Threaded) for heavy structural steel, PEMB: ASTM F1554 Grade 36 and heavy hex carbon-steel nuts.
2. Plate Washers: ASTM A36.

B. Construction joint slip dowels: steel rod or plate in a plastic insert to allow contraction of the concrete while preventing vertical differential displacement.

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:

a. #4x1’-6” long, Speed Dowel by Sika Greenstreak.
b. ¼” plate, Diamond Dowel by PNA, Inc.
c. ¼” plate, Speed Plate by Sika Greenstreak.

C. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber or non-impregnated, flexible, synthetic foam with standard bonding agent to hold in place.

D. Sheet Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 10 mils thick.

E. Bonding Agent: ASTM C 1059, Type II, nonredispersible, acrylic emulsion or styrene butadiene.

2.5 LIQUID FLOOR TREATMENTS

A. Penetrating Concrete Sealer: Clear, chemically reactive, waterborne solution of inorganic silicate or siliconate materials and proprietary components; odorless; that penetrates, hardens, and densifies concrete surfaces.

1. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:

a. BASF Corporation; Construction Systems.
b. ChemMasters, Inc.
c. Dayton Superior.
d. Euclid Chemical Company.
e. Kaufman Products, Inc.
f. L&M Construction Chemicals, Inc.
g. Metalcrete Industries.
h. PROSOCO, Inc.
i. SpecChem, LLC.
j. W. R. Meadows, Inc.

2.6 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

D. General: All non-dissipating compounds shall be certified by curing compound manufacturer to not interfere with bonding of floor covering. Where liquid floor treatment is used, provide material recommended by the manufacturer of the treatment for use in a compatible, integrated system.

E. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete for temporary protection from rapid moisture loss.

1. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:

a. BASF Corporation.
b. ChemMasters, Inc.
c. Dayton Superior.
d. Euclid Chemical Company.
e. Kaufman Products, Inc.
f. L&M Construction Chemicals, Inc.
g. Lambert Corporation.
h. Metalcrete Industries.
i. RussTech Admixtures, Inc. (EVRT)
j. Sika Corporation.
k. SpecChem, LLC.
l. W. R. Meadows, Inc.

F. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

1. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:

a. BASF Corporation.
b. ChemMasters, Inc.
c. Dayton Superior.
d. Euclid Chemical Company.
e. Kaufman Products, Inc.
f. L&M Construction Chemicals, Inc.
g. Lambert Corporation.
h. SpecChem, LLC.
i. W. R. Meadows, Inc.

G. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, nondissipating.

1. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:

a. BASF Corporation.
b. ChemMasters, Inc.
c. Dayton Superior.
d. Euclid Chemical Company.
e. Kaufman Products, Inc.
f. L&M Construction Chemicals, Inc.
g. Lambert Corporation.
h. Metalcrete Industries.
i. SpecChem, LLC.
j. W. R. Meadows, Inc.

2.7 PROPORTIONING AND DESIGNING MIXES

A. Prepare design mixes for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field data methods, or both, according to ACI 301. Mix proportions shall be established so that the concrete can be placed readily without segregation into forms and around reinforcement under anticipated placement conditions. Use an independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures. Trial batch and field experience tests shall have been performed within 24 months of submittal date. Use mix design submittal form included at the end of this section.

1. Do not use the same testing agency for field quality control testing.

B. Submit written reports to Architect of each proposed concrete mix type at least 15 days prior to start of Work. Do not begin concrete production until proposed mix designs have been reviewed by Architect. The approved mix designs shall be used throughout this project unless changes are approved by the Architect/Engineer prior to use.

C. Cementitious Materials: Supplier shall coordinate surface treatment compatibility with cementitious materials. Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash: 20 percent for Type F or 25% for Type C except for lean or flowable backfill. Use of fly ash in concrete where incompatible with admixtures or other treatments is prohibited.

D. Admixtures: Use admixtures according to manufacturer's written instructions.

1. Use water-reducing, high-range water-reducing, or plasticizing admixture in concrete as required for placement and workability.
2. Use accelerating and retarding admixtures at Contractor's discretion to control set time when required by extreme temperatures or humidity, or other adverse placement conditions. Use accelerating admixture in concrete slabs placed at ambient temperatures below 35 deg F.

E. The minimum compressive strength measured 28 days after placement (f'_c), minimum cementitious content, slump, maximum water/cementitious content ratio (W/C), and air content of the concrete for each portion of the structure shall be as follows:

1. Mix Type **1**. Controlled Low Strength Material CLSM (Flowable fill). Provide blend of cement, flyash, and sand with minimum cementitious content as follows:

   a. Excavatable flowable fill: 100 lb cement and 250 lb fly ash per cubic yard.
   b. Structural flowable fill (250 psi): 175 lb cement and 200 lb fly ash per cubic yard. Add CLSM performance additive at manufacturer's recommended dosage rate, adjusting water content to provide desired flow and strength characteristics.

2. Mix Type **2**. Lean Concrete Backfill and Mudmats. Normal-weight concrete.

   a. Minimum Design Compressive Strength: 1,500 psi.
   b. Minimum Cementitious Material: 200 lbs/cy.
   c. Slump Limit: N/A.
   d. Air Content: Natural.

3. Mix Type **3**. Footings. Normal-weight concrete.

   a. Minimum Design Compressive Strength: 3,000 psi.
   b. Minimum Cementitious Material: 470 lbs/cy.
   c. Slump Limit: Minimum of 4 inches and maximum of 6 inches, plus or minus 1 inch.
   d. Air Content: Natural.

4. Mix Type **4**. Interior Slab on Grade. Normal-weight concrete.

   a. Minimum Design Compressive Strength: 4,000 psi.
   b. Minimum Cementitious Material: 505 lbs/cy.
   c. Water Reducing Admixture: Mandatory.
   d. Slump Limit: Maximum 8 inches after adding water reducing admixture to 2-to-3-inch slump concrete, plus or minus 1 inch.
   e. Air Content: Maximum 3 percent.

5. Mix Type **5**. Exterior Walls and Piers. Normal-weight concrete.

   a. Minimum Design Compressive Strength: 4,500 psi.
   b. Minimum Cementitious Material: 550 lbs/cy. With an approved water-reducing agent, minimum cement content may be reduced by 47 pounds of cement per cubic yard.
   c. Maximum W/C Ratio: 0.45.
   d. Water Reducing Admixture: Optional.

e. Slump Limit: Maximum 4 inches or 8 inches after adding admixture to 2-to-3-inch slump concrete, plus or minus 1 inch.
f. Air Content: 5.5 percent for 1 ½-inch maximum aggregate.
6.0 percent for 1-inch maximum aggregate.
6.0 percent for ¾-inch maximum aggregate.
7.0 percent for ½-inch maximum aggregate.

F. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant, as accepted by Architect. Laboratory test data for revised mix design and strength results must be submitted to and accepted by Architect before using in Work.

2.8 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.9 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.

1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
2. For mixer capacity larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd.
3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixture time, quantity, and amount of water added. Record approximate location of final deposit in structure.

PART 3 - EXECUTION

3.1 GENERAL

A. Coordinate the installation of joint materials, vapor retarder, and other related materials with placement of forms and reinforcing steel.

3.2 FORMWORK INSTALLATION

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied until concrete structure can support such loads.

B. Construct formwork so concrete members and structures are of correct size, shape, lines, alignment, elevation, position, level, plumb, and dimension and indicated. Maintain formwork construction tolerances and surface irregularities within limits of ACI 117.

C. Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:

1. Class A, 1/8-inch tolerances for smooth-formed concrete surfaces exposed to view.

2. Class D tolerances for earth formed foundation elements. Tolerance applies as a variation inward towards reinforcing only. No tolerance limit away from reinforcing applies.
3. Class C, ½-inch tolerances for other concrete surfaces.

D. Solidly butt joints and provide backup at joints to prevent cement paste from leaking.

E. Construct forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast-concrete surfaces. Kerf wood inserts for forming keyways, recesses, and the like for easy removal.

F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and contours in finished surfaces. Provide and secure units to support screed strips using strike-off templates or compacting-type screeds.

G. Provide temporary openings for cleanouts and inspections where interior area of formwork is inaccessible before and during concrete placement. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

H. Form openings, chases, offsets, sinkages, keyways, recesses, moldings, blocking, screeds, bulkheads, and other features required in the Work.

I. Provisions for Other Trades: Provide openings in concrete formwork to accommodate work of other trades. Determine size and location of openings, recesses, and chases from trades providing such items. Accurately place and securely support items built into forms.

J. Earthen forms may be used for footings and foundation elements when ground is stable and capable of resisting erosion and fluid pressure of wet concrete without sloughing. All tolerances and clear covers shall be maintained. Excavation shall be clean of all loose soil and mud along bottom and sides.

K. Use selected materials to obtain required finishes.

L. Cleaning and Tightening: Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, or other debris just before placing concrete. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

M. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

1. Do not allow excess form-coating material to accumulate in forms or come into contact with in-place concrete surfaces against which fresh concrete will be placed.
2. Do not spray reinforcing with form oil.
3. Coat steel forms with a nonstaining, rust-preventative material. Do not use rust-stained steel form-facing material.

3.3 INSTALLING EMBEDDED ITEMS

A. Place and secure anchorage devices, anchor rods, and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, diagrams, templates, instructions, and directions furnished with items to be embedded.

1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC 303. Column anchor rods shall be set in a rigid

template and securely braced to formwork or ground prior to placing concrete. Anchor rods shall not be “wet set” in plastic concrete.

2. Aluminum conduit shall not be installed in concrete.

3.4 REMOVING AND REUSING FORMS

A. Formwork not supporting weight of concrete, such as sides of walls, piers, and similar parts of the work, may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete. Concrete must first be sufficiently hard to not be damaged by form-removal operations, and provided curing and protection operations shall be maintained.

B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent as specified for new formwork.

C. When forms are reused, clean surfaces, remove fins and laitance, and tighten forms to close joints. Align and secure joint to avoid offsets.

1. Do not use patched forms for exposed concrete surfaces except as acceptable to Architect.

3.5 STEEL REINFORCEMENT INSTALLATION

A. General: Comply with Concrete Reinforcing Steel Institute’s (CRSI) "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

B. Deliver reinforcement to job site bundled, tagged and marked. Use waterproof tags indicating bar size, length, and mark corresponding to placing drawings.

C. Clean reinforcement of loose rust and mill scale, earth, ice, and other materials that reduce or destroy bond with concrete.

D. When permitted, field bend bars cold, except during cold weather when moderate heating is necessary to avoid brittle failures.

E. Accurately position, support, and secure all bar reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum coverages as indicated for concrete protection.

1. Arrange, space and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations.
2. All walls shall have chairs or bolsters placed between reinforcing mat and both form faces spaced a maximum of 6 feet on center to maintain clear cover.

F. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

G. Do not tack weld crossing reinforcing bars.

H. Construction tolerances shall be in accordance with ACI 117 and the following:

1. For member depths 12” and smaller, tolerance on concrete cover shall be the smaller of -3/8” and -(1/3)*[specified cover].
2. For member depths larger than 12”, tolerance on concrete cover shall be the smaller of -1/2” and -(1/3)*[specified cover].
3. Tolerance for longitudinal location of bends and ends of reinforcement:

a. At discontinuous ends of brackets and corbels, ±1/2”.
b. At discontinuous ends of other members, ±1”.
c. At other locations, ±2”.

3.6 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints in Reinforced Structure and Foundations: Locate and install construction joints so they do not impair strength or appearance of the structure, at locations indicated or otherwise as acceptable to Architect.

1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints unless otherwise indicated.
2. Form continuous keyways as indicated. Embed keys at least 1-1/2 inches into concrete. Provide keyways 1/3 the member thickness, or 3 ½” minimum, in walls, footings, and between walls and footings centered in the member thickness unless shown otherwise.
3. Locate horizontal joints in walls and piers at the top of footings or floor slabs.
4. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

C. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as piers, foundation walls, and other locations, as indicated.

1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated.
2. Terminate full-width joint-filler strips flush with top of slab to prevent contact or bonding between the slab and the adjoining member.
3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.
4. At locations where drawings do not specifically call for premolded filler, provide bond breaker between slab and vertical surface. The vapor retarder may be turned up and used for this purpose.
5. Provide ½” expansion joint between slab and all door jambs (at end of walls in opening).

D. Contraction (Control) Joints in Slabs-on-Grade: Construct weakened-plane contraction joints, sectioning concrete into areas as indicated, and to a depth equal to at least one-fourth depth of concrete thickness as follows:

1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch-wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
2. Contraction joints may be formed by saw cuts as soon as possible after slab finishing as may be safely done without dislodging aggregate.

3.7 VAPOR RETARDER INSTALLATION

A. Sheet vapor retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions. Place sheeting in position with longest dimension parallel with direction of pour.

1. Extend film fully over slab area to the full perimeter of the slab. Turn film up 2” onto surrounding wall/pier/etc. and seal to vertical element with continuous mastic or tack

tape capable of adhering to concrete. Film and tape shall not extend above finished floor.

a. At the point of termination, seal vapor retarder to the foundation wall, footing, or slab itself. Where obstructed by impediments (such as dowels or any other site condition requiring early termination of the vapor retarder), use manufacturer's recommended accessories for such non-standard terminations.

2. Lap joints 6 inches and seal with manufacturer's recommended mastic or pressure-sensitive tape.
3. Apply seam tape to a clean and dry film only.

B. Seal around all penetrations (including all conduit and pipes) through film with manufacturer's recommended mastic or pressure-sensitive tape. Cut slit around penetrations to place initial layer of film.

1. For small penetrations, tape film directly to the penetrating element.
2. For penetrations larger than 2", create collar for penetration of 12" wide by 1 ½ times the penetration's circumference with fingers cut half the width of the film. Wrap the collar around the penetration, tape the collar onto the strip of film, and tape the fingers at each edge/slit to the initial layer of film.

C. Avoid the use of non-permanent stakes driven through film. If non-permanent stakes are driven through film, repair and seal as recommended by film manufacturer.

D. Repair damaged areas of film material of similar (or better) permeance, puncture resistance, and tensile strength.

3.8 CONCRETE PLACEMENT

A. Inspection: Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast in. Notify other trades to permit installation of their work.

B. General: Comply with ACI 304, "Guide for Measuring, Mixing, Transporting, and Placing Concrete," and as specified. Concrete delivery tickets shall show:

1. Batch number.
2. Mix by number with cement content in pounds and maximum size aggregate.
3. Admixtures.
4. Air content.
5. Slump.
6. Time dispatched and discharged.
7. Date.
8. Contractor.
9. Ready Mix Supplier.
10. Project Name and Address.
11. Volume of Concrete.

C. Do not add water to the concrete mix during delivery, at Project site, or during placement unless approved by the General Contractor's representative, noted on the delivery ticket with the amount of water, and signed by the General Contractor's representative. The maximum water/cement ratio of an approved mix design shall not be exceeded.

1. When the ambient air temperature is between 80 and 90 degrees Fahrenheit, one (1) gallon of water per cubic yard of concrete may be added at the job site to compensate for water evaporation during transit.

2. When the ambient air temperature exceeds 90 degrees Fahrenheit, two (2) gallons of water per cubic yard of concrete may be added at the job site to compensate for water evaporation during transit.
3. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

D. Discharge concrete within 1 ½ hours after water has been added to the cement, unless a longer time has been authorized by the Architect/Engineer. During hot weather or other conditions contributing to a quick stiffening of the concrete, the Architect/Engineer may require discharge in less than 1 ½ hours.

E. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation. Do not allow concrete to drop more than 5 feet or from a height which allows concrete to fall against reinforcing.

1. Deposit concrete in forms in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints. Do not subject concrete to any procedure that will cause segregation. Deposit concrete as near as possible to the final position to avoid segregation.
2. Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures for consolidation of concrete complying with ACI 301.
3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations no farther than the visible effectiveness of the machine. Place vibrators to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to set. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mix to segregate.

F. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Consolidate concrete during placement operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.
2. Maintain reinforcement in proper position on chairs during concrete placement.
3. Screed slab surfaces with a straightedge and strike off to correct elevations.
4. Slope surfaces uniformly to drains where required.
5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

G. Cold-Weather Placement: When air temperature is expected to fall below 40 degrees Fahrenheit (4 deg C) within the first 72 hours after concrete placement, comply with provisions of ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

1. When mean daily air temperature is expected to fall below 40 deg F (4 deg C) for more than three successive days after concrete placement, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature at point of placement as follows:

a. Not less than 55 deg F (13 deg C) or more than 75 deg F (24 deg C) for concrete sections less than 12 inches in the least dimension (width or thickness).
b. Not less than 50 deg F (10 deg C) or more than 70 deg F (21 deg C) for concrete sections 12 inches or greater in the least dimension (width or thickness).

2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise accepted in mix designs.

H. Hot-Weather Placement: When hot weather conditions exist that would impair quality and strength of concrete, place concrete complying with ACI 305.1 and as specified.

1. Cool ingredients before mixing to maintain concrete temperature at time of placement to below 90 deg F (32 deg C). Mixing water may be chilled or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel temperature will not exceed the ambient air temperature immediately before embedding in concrete.
3. Fog spray forms, reinforcing steel, and subgrade just before placing concrete. Keep subgrade moisture uniform without puddles or dry areas.
4. Use water-reducing retarding admixture when required by high temperatures, low humidity, or other adverse placing conditions, as acceptable to Architect.

I. Pumping Concrete: Grout used to prime a pump shall not be placed in the forms of any concrete exposed to view in the final structure. Concrete shall not be pumped through pipe made of aluminum or aluminum alloys.

3.9 FINISHING FORMED SURFACES

A. Rough-Formed Finish: Provide a rough-formed finish on formed concrete surfaces not exposed to view in the finished Work or concealed by other construction. This is an as-cast concrete surface having texture imparted by form-facing material used. Repair and patch tie holes, honeycombing over ½ inch in depth, and other defective areas. Remove fins and other projections exceeding ¼ inch in height by rubbing down, chipping, or grinding off.

B. Smooth-Formed Finish: Provide a smooth-formed finish on formed concrete surfaces exposed to view. This is an as-cast concrete surface obtained with selected form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes, honeycombing over ¼" in depth, and other defective areas. Remove fins and other projections exceeding 1/8" in height by rubbing down or grinding off until completely removed and smoothed.

C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike-off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.10 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Trowel Finish: Apply a trowel finish to monolithic slab surfaces exposed to view.

1. After screeding, consolidating, and leveling concrete slabs, do not work surface until ready for floating. Begin floating, using float blades or float shoes only, when surface water has disappeared, or when concrete has stiffened sufficiently to permit operation of power-driven floats, or both. Consolidate surface with power-driven floats or by hand-floating if area is small or inaccessible to power units.
2. Allow moisture film or sheen to disappear from the floated surface and allow the concrete to harden enough to prevent fine material and water from being worked into the concrete surface. Then begin first trowel-finish operation using a power-driven trowel. Begin final troweling when surface produces a ringing sound as trowel is moved over surface. Consolidate concrete surface by final hand-troweling operation, free of trowel marks and uniform in texture and appearance.

3.11 MISCELLANEOUS CONCRETE ITEMS

A. Filling In: Fill in holes and openings left in concrete structures for passage of work by other trades, unless otherwise shown or directed, after work of other trades is in place. Mix, place, and cure concrete as specified to blend with in-place construction. Provide other miscellaneous concrete filling shown or required to complete Work.

3.12 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

B. Compatibility: Use membrane curing compounds that will not affect surfaces to be covered with finish materials applied directly to concrete.

C. For cold-weather protection during curing, comply with ACI 306.1 and the following:

1. All freshly placed concrete shall be kept from freezing for the following periods:

   a. 3 days for all concrete with an air entraining admixture.
   b. 4 days for all concrete without an air entraining admixture.

2. A cumulative curing time of seven days at a minimum surface temperature of 50 degrees F (10 degrees C) shall be provided or until concrete has attained 75% of its design strength. This shall be followed by cooling of concrete in a gradual transition to surrounding conditions. The temperature drop during this period shall not be at a rate exceeding 2 degrees F per hour until the outside or surrounding temperature is reached.
3. When concrete is placed under conditions of cold weather concreting (defined as a period when the mean daily temperature drops below 40 degrees F for more than three successive days), take additional precautions as specified in “Cold Weather Concreting” by the American Concrete Institute (ACI Report 306) when placing, curing, monitoring and protecting the fresh concrete.

D. For hot-weather protection during curing, comply with ACI 301 and the following:

1. When concrete is placed under conditions of hot weather concreting, provide extra protection of the concrete against excessive placement temperatures and excessive drying throughout the placing and curing operations. Hot weather is defined as air temperature which exceeds 80 degrees F or any combination of high temperature, low humidity and/or high wind velocity that causes a rate of evaporation in excess of 0.2 pounds per square foot per hour as determined by Figure 2.1.5 of ACI Report 305. Hot weather curing is required if these conditions occur within a 24-hour period after completion of concrete placement.
2. Forms, reinforcing and the air shall be cooled by water fog spraying immediately before placing concrete.

3. Immediately following screeding, protect concrete by applying the specified evaporation retarder in accordance with the recommendations of the manufacturer.

E. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

F. Formed Surfaces: Cure formed concrete surfaces, including walls, piers, and other similar surfaces, by moisture curing with forms in place for 7 days or until forms are removed. If forms are removed within the first 7 days, continue moisture curing without forms for the balance of the 7-day curing period.

1. For vertical surfaces, after the concrete has hardened and while the forms are still in place, the form ties shall be loosened and water shall be applied to run down the inside of the form to keep the concrete wet.
2. After formwork has been removed from vertical surfaces, keep surface continuously wet by water spray or water-saturated absorptive cover.

G. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs and other surfaces.

1. Cure interior and exterior slab surfaces exposed to deicing salts and slabs where the finish flooring is not compatible with curing compounds by Moisture Curing.

H. Cure concrete according to ACI 308.1 by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:

a. Water.
b. Continuous water-fog spray.
c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period, using cover material and waterproof tape.

a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.

3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.13 LIQUID FLOOR TREATMENT APPLICATION

A. General: Prepare, apply, and finish penetrating liquid floor treatment according to manufacturer's written instructions.

1. Remove curing compounds, sealers, oil, dirt, laitance, and other contaminants and complete surface repairs.
2. Do not apply to concrete that is less than seven days old.

3. Apply liquid until surface is saturated, scrubbing into surface until a gel forms; rewet; and repeat brooming or scrubbing. Rinse with water; remove excess material until surface is dry. Apply a second coat in a similar manner if surface is rough or porous.

B. Sealing Coat: Uniformly apply a continuous sealing coat of curing and sealing compound to hardened concrete by power spray or roller according to manufacturer's written instructions.

C. Penetrating Concrete Sealer

1. Apply penetrating concrete sealer to all concrete floor surfaces exposed to view in the finished structure.
2. Coverage rate shall be 300 square feet (maximum) per gallon.

3.14 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval. Repair exposed slab surfaces only with specific prior approval by Architect (cutting, grinding, and patching of these surfaces will generally be prohibited).

B. Patching Mortar: Mix dry-pack patching mortar, consisting of 1-part portland cement to 2-1/2 parts fine aggregate passing a No. 16 sieve, and a 50:50 mixture of acrylic or styrene butadiene-based bonding admixture and water. Use only enough liquid as required for handling and placing.

C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.

1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension to solid concrete. Limit cut depth to 3/4 inch. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried.
2. Cut tie rods and bolts flush with the surface and drill out to minimum depth of 1 inch below the surface.
3. Fill through wall tie holes with nonmetallic, shrinkage-resistant grout to within 1 ½” of wall face using a grout bag or other similar means to completely fill the void. Fill any remaining tie hole, including holes from snap-off type form ties, with patching mortar or cone plugs secured in place with bonding agent.
4. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar matches surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
5. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Architect.

D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.

1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.

2. After concrete has cured at least 14 days, correct high areas by grinding smooth (at covered slabs only) any surface defects that would telegraph through applied floor covering system.
3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
4. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.
5. Repair defective areas, except random cracks to be covered with covering capable of bridging and concealing crack and single holes 1 inch or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a 3/4-inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete, except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
6. Repair random cracks to be covered with covering capable of bridging and concealing crack and single holes 1 inch or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.

E. Perform structural repairs of concrete, subject to Architect's approval, using epoxy adhesive and patching mortar.

F. Repair methods not specified above may be used, subject to acceptance of Architect.

3.15 QUALITY CONTROL

A. The Owner will employ an independent testing and inspection agency that meets the requirements of ASTM E329 to perform inspections and tests and to prepare test reports. The agency will monitor concrete quality by means of site and laboratory tests. They will be authorized to reject plastic concrete not conforming to specifications. Failure to detect any defective materials shall not prevent later rejection when such defect is discovered, or obligate the Architect or Owner for final acceptance.

1. See Section 014110 – Structural Special Inspections and Contract Drawings for testing and inspection to be performed.
2. Test results will be reported in writing to the Architect, Engineer, ready-mix producer and General Contractor within 24 hours after tests.
3. Additional Tests: The testing agency will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by Architect.

B. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

3.16 PROTECTION

A. The General Contractor shall provide for protection of exposed slab surfaces both before and after treatment by liquid floor treatments. General Contractor shall coordinate all other construction activities to ensure slab surfaces are not damaged or stained.

B. Use protective methods and materials, including temporary covering, recommended in writing by installer's manufacturer.

C. Do not allow contaminants including acids, oils, resins, etc. to contact surface. Provide continuous scuff-preventing pads covered in lapped and sealed water and oil resistant film.

D. Do not place any material onto surface that may cause etching, scuffing, chips, or scratches. Provide protection boards below scaffolding legs. Do not allow tracked vehicles on surface.

END OF SECTION 033000

BROWN + KUBICAN, PSC

STRUCTURAL ENGINEERS

CONCRETE MIX DESIGN SUBMITTAL FORM

Project: _____

City, State: _____

General Contractor: _____

Concrete Contractor: _____

Mix Design Number: _____

Concrete Strength (Mix Type): _____

Use (describe): _____

Design Mix Information

	Check one
Based on Standard Deviation Analysis	
Based on Trial Mix Laboratory Test Data	

Design Characteristics

Density		pcf
Strength		psi (28 days)
Air		%
Slump		inches

If trial mixes are used, the Mix Design is proportioned to achieve f'cr = f'c + 1200 psi (1400 psi for strength higher than 5000 psi at 28 days)

Materials

	Type	Source	Specific Gravity	Weight (lb.)	Absolute Vol. (cu. ft.)
cement					
flyash					
silica fume					
coarse aggregate					
fine aggregate					
water					
other ( )					
			Total		27.0 cu. ft.

Water/Cementitious Ratio (W/C) = _____% (lbs. water /lbs. cementitious)

Admixtures

	Manufacturer	Dosage (oz./cwt)
water reducer		
air entraining agent		
high range water reducer		
non-corrosive accelerator		
other ( )		

Slump before high range water reducer = _____inches
Slump after high range water reducer = _____inches

Standard Deviation Analysis (field experience records)

Number of test cylinders evaluated: _____ Standard deviation (s): _____
k-factor:

Number of Tests	k
15	1.16
20	1.08
25	1.03
≥30	1.00

Required avg. compressive strength (≤5000 psi: Max [f'c + 1.34ks, f'c + 2.33 ks – 500])
(>5000 psi: Max [f'c + 1.34ks, 0.9f'c + 2.33ks]): _____
Actual avg. compressive strength:_____
(Refer to ACI 301 for standard deviation calculation – attach copies of laboratory test reports)

Trial Mix Laboratory Test Data

	Mix #1 (w/c=)		Mix #2 (w/c=)		Mix #3 (w/c=)	
Age	Date	Compressive Strength	Date	Compressive Strength	Date	Compressive Strength
7 days		psi		psi		psi
7 days		psi		psi		psi
28 days		psi		psi		psi
28 days		psi		psi		psi
28 days average	NA	psi	NA	psi	NA	psi

(Refer to ACI 301 for trial mix procedure – attach copies of laboratory test reports)

Required Attachments

	Please check
Coarse aggregate gradation report	
Fine aggregate gradation report	
Laboratory test reports (strength tests)	
Admixture compatibility certification letters	

Ready Mix Supplier

Name and Address:

_____

_____

Phone: _____ Miles from project: _____ Date: _____

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Exterior standard steel doors and frames.

1.2 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings in accordance with NAAMM-HMMA 803 or ANSI/SDI A250.8.

1.3 COORDINATION

A. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

B. Coordinate requirements for installation of door hardware, electrified door hardware, and access control and security systems.

1.4 ACTION SUBMITTALS

A. Product Data:
   1. Exterior standard steel doors and frames.

B. Product Data Submittals: For each product.

   1. Include construction details, material descriptions, core descriptions, and finishes.

C. Samples for Initial Selection: For hollow-metal doors and frames with factory-applied color finishes.

D. Samples for Verification:

   1. Finishes: For each type of exposed finish required, prepared on Samples of not less than 3 by 5 inches.
   2. Fabrication: Prepare Samples approximately 12 by 12 inches to demonstrate compliance with requirements for quality of materials and construction:

      a. Doors: Show vertical-edge, top, and bottom construction; core construction; and hinge and other applied hardware reinforcement. Include separate section showing glazing if applicable.
      b. Frames: Show profile, corner joint, floor and wall anchors, and silencers. Include separate section showing fixed hollow-metal panels and glazing if applicable.

E. Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.

1.5 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow-metal doors and frames palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.

1. Provide additional protection to prevent damage to factory-finished units.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow-metal doors and frames vertically under cover at Project site with head up. Place on minimum 4-inch-high wood blocking. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

PART 2 - PRODUCTS

2.1 HOLLOW METAL DOORS AND FRAMES

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. Airtec Corporation.
2. Apex Industries, Inc.
3. BARON Metal Industries, Inc.; ASSA ABLOY of Canada, Ltd.; ASSA ABLOY.
4. Ceco Door; AADG, Inc.; ASSA ABLOY.
5. Daybar Industries, Ltd.
6. Republic Doors and Frames; a Allegion brand.
7. Steelcraft; Allegion plc.

2.2 PERFORMANCE REQUIREMENTS

A. Thermally Rated Door Assemblies: Provide door assemblies with U-factor of not more than 0.50 deg Btu/F x h x sq. ft. when tested in accordance with ASTM C1363 or ASTM E1423.

2.3 EXTERIOR STANDARD STEEL DOORS AND FRAMES

A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Heavy-Duty Doors and Frames: ANSI/SDI A250.8, Level 2; ANSI/SDI A250.4, Level B..

1. Doors:

    a. Type: As indicated in the Door and Frame Schedule on Drawings.
    b. Thickness: 1-3/4 inches.
    c. Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch, with minimum A40 coating.
    d. Edge Construction: Model 1, Full Flush.
    e. Edge Bevel: Provide manufacturer's standard beveled or square edges.
    f. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
    g. Bottom Edges: Close bottom edges of doors where required for attachment of weather stripping with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape.
    h. Core: Manufacturer's standard.

2. Frames:

    a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch, with minimum A40 coating.
    b. Construction: Full profile welded.

3. Exposed Finish: Factory.

2.4 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A1008/A1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A1011/A1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

C. Metallic-Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B.

D. Inserts, Bolts, and Fasteners: Hot-dip galvanized in accordance with ASTM A153/A153M.

E. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.

2.5 FABRICATION

A. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.

1. Sidelite and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by welding, or by rigid mechanical anchors.
2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
3. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.

a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.

B. Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping in accordance with ANSI/SDI A250.6, the Door Hardware Schedule on Drawings, and templates.

1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
2. Comply with BHMA A156.115 for preparing hollow-metal doors and frames for hardware.

2.6 STEEL FINISHES

A. Factory Finish: Clean, pretreat, and apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat, complying with ANSI/SDI A250.3.

1. Color and Gloss: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 PREPARATION

A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.

B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.2 INSTALLATION

A. Install hollow-metal doors and frames plumb, rigid, properly aligned, and securely fastened in place. Comply with approved Shop Drawings and with manufacturer's written instructions.

B. Hollow-Metal Frames: Comply with ANSI/SDI A250.11.

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.

a. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.
b. Install frames with removable stops located on secure side of opening.

2. Floor Anchors: Secure with postinstalled expansion anchors.

a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.

3. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:

a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

C. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.

1. Non-Fire-Rated Steel Doors: Comply with ANSI/SDI A250.8.

3.3 REPAIR

A. Factory-Finish Touchup: Clean abraded areas and repair with same material used for factory finish in accordance with manufacturer's written instructions.

B. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION 081113

SECTION 083613 - SECTIONAL DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes manually operated sectional doors.

1.3 PERFORMANCE REQUIREMENTS

A. General Performance: Sectional doors shall meet performance requirements specified without failure due to defective manufacture, fabrication, installation, or other defects in construction and without requiring temporary installation of reinforcing components.

B. Air Infiltration: Maximum rate not more than indicated when tested according to ASTM E 283.

1. Air Infiltration: Maximum rate of 0.08 cfm/sq. ft. at 15 and 25 mph.

1.4 SUBMITTALS

A. Product Data: For each type and size of sectional door and accessory.

B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data. Include plans, elevations, sections, details, and attachments to other work.

C. Maintenance data.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.

B. Standard for Sectional Doors: Fabricate sectional doors to comply with DASMA 102 unless otherwise indicated.

1.6 WARRANTY

A. Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of sectional doors that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Manufacturers standard warranty from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 STEEL DOOR SECTIONS

A. Exterior Section Faces and Frames: Fabricate from manufacturer's standard zinc-coated (galvanized), cold-rolled, steel sheet.

1. Roll horizontal meeting edges to a continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove weathertight seal, with a reinforcing flange return.
2. For insulated doors, provide sections with continuous thermal-break construction, separating the exterior and interior faces of door.

B. Section Ends and Intermediate Stiles: Enclose open ends of sections with channel end stiles formed from galvanized-steel sheet welded to door section. Provide intermediate stiles formed from galvanized-steel sheet, cut to door section profile, and welded in place. Space stiles not more than 48 inches apart.

C. Reinforce bottom section with a continuous channel or angle conforming to bottom-section profile and allowing installation of astragal.

D. Reinforce sections with continuous horizontal and diagonal reinforcement, as required to stiffen door and for wind loading. Provide galvanized-steel bars, struts, trusses, or strip steel, formed to depth and bolted or welded in place. **Ensure that reinforcement does not obstruct vision lites.**

E. Provide reinforcement for hardware attachment.

F. Thermal Insulation: Insulate interior of steel sections with door manufacturer's standard **CFC-free** insulation, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, according to ASTM E 84. Enclose insulation completely within steel sections that incorporate the following interior facing material, with no exposed insulation:

1. Interior Facing Material: Zinc-coated (galvanized), cold-rolled, commercial steel (CS) sheet.

2.2 TRACKS, SUPPORTS, AND ACCESSORIES

A. Tracks: Manufacturer's standard, galvanized-steel track system of configuration indicated, sized for door size and weight, designed for lift type indicated and clearances shown on Drawings. Provide complete track assembly including brackets, bracing, and reinforcement for rigid support of ball-bearing roller guides for required door type and size. Slot vertical sections of track spaced 2 inches apart for door-drop safety device. Slope tracks at proper angle from vertical or design tracks to ensure tight closure at jambs when door unit is closed.

B. Track Reinforcement and Supports: Galvanized-steel track reinforcement and support members. Secure, reinforce, and support tracks as required for door size and weight to provide strength and rigidity without sag, sway, and vibration during opening and closing of doors.

C. Weatherseals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom and top of sectional door unless otherwise indicated.

2.3 HARDWARE

A. General: Provide heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless-steel, or other corrosion-resistant fasteners, to suit door type.

B. Hinges: Heavy-duty, galvanized-steel hinges at each end stile and at each intermediate stile, according to manufacturer's written recommendations for door size. Attach hinges to door sections through stiles and rails.

C. Rollers: Heavy-duty rollers with steel ball-bearings in case-hardened steel races, mounted with varying projections to suit slope of track. Provide 3-inch-diameter roller tires for 3-inch-wide track and 2-inch-diameter roller tires for 2-inch-wide track.

D. Push/Pull Handles: For push-up or emergency-operated doors, provide galvanized-steel lifting handles on each side of door.

2.4 LOCKING DEVICES

A. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on single-jamb side, operable from inside only.

2.5 COUNTERBALANCE MECHANISM

A. Torsion Spring: Counterbalance mechanism consisting of adjustable-tension torsion springs mounted on torsion shaft made of steel tube or solid steel. Provide springs designed for number of operation cycles indicated.

B. Cable Drums and Shaft for Doors: Cast-aluminum or gray-iron casting cable drums mounted on torsion shaft and grooved to receive door-lifting cables as door is raised. Mount counterbalance mechanism with manufacturer's standard ball-bearing brackets at each end of torsion shaft.

C. Cables: Galvanized-steel lifting cables.

D. Cable Safety Device: Include, on each side-edge of door, a device designed to automatically stop door if either lifting cable breaks.

E. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level the shaft and prevent sag.

F. Provide a spring bumper at each horizontal track to cushion door at end of opening operation.

2.6 MANUAL DOOR OPERATORS

A. Equip door with manufacturer's recommended manual door operator unless another type of door operator is indicated.

B. Push-up Operation: Lift handles and pull rope for raising and lowering doors, with counterbalance mechanism designed so that required lift or pull for door operation does not exceed 25 lbf.

2.7 DOOR ASSEMBLY

A. Steel Sectional Door: Provide sectional door formed with hinged sections and fabricated so that finished door assembly is rigid and aligned with tight hairline joints; free of warp, twist, and deformation; and complies with requirements in DASMA 102.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. C.H.I. Overhead Doors, Inc.
b. Clopay Building Products.
c. Raynor Garage Doors.
d. Rite-Hite Holding Corporation.
e. Wayne Dalton; a division of Overhead Door Corporation.

B. Operation Cycles: Not less than 50,000.

C. R-Value: 5.

D. Steel Sections: Zinc-coated (galvanized) steel sheet, formed into sections [[**1-3/4 inches**] > thick.

1. Exterior-Face Surface: Flat.

E. Track Configuration: Standard-lift track.

F. Weatherseals: Fitted to bottom and top and around entire perimeter of door

G. Windows: none.

H. Locking Devices: Equip door with **slide bolt for padlock** .

I. Manual Door Operator: Chain-hoist operator.

J. Door Finish:
1. Baked-Enamel : **Color and gloss as selected by Architect from manufacturer's full range**.
2. Finish of Interior Facing Material: **Match finish of exterior section face**.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install sectional doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.

B. Tracks: Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment. Repair galvanized coating on tracks according to ASTM A 780.

C. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion. **Adjust doors and seals to provide weathertight fit around entire perimeter.**

3.2 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain sectional doors.

END OF SECTION 083613

SECTION 102213 - WIRE MESH PARTITIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Heavy-duty wire mesh partitions.

1.2 DEFINITIONS

A. Intermediate Crimp: Wires pass over one and under the next adjacent wire in both directions, with wires crimped before weaving and with extra crimps between the intersections.

B. Lock Crimp: Deep crimps at points of the intersection that lock wires securely in place.

1.3 ACTION SUBMITTALS

A. Product Data:

   1. Wire mesh partitions.

B. Shop Drawings:

   1. Include plans, elevations, sections, and attachment details.
   2. Indicate clearances required for operation of doors.

C. Samples for Initial Selection: Manufacturer's standard color sheets, showing full range of available colors for units with factory-applied color finishes.

D. Samples for Verification: Panel constructed of specified frame members and wire mesh. Show method of finishing members at intersections.

   1. Size: 12 by 12 inches.

1.4 INFORMATIONAL SUBMITTALS

A. Certificates:

   1. Welding certificates.

B. Qualification Statements: For Installer.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For wire mesh partition hardware.

1.6 MAINTENANCE MATERIAL SUBMITTALS

1.7 QUALITY ASSURANCE

A. Qualifications:

1. Installers: Authorized representative who is trained and approved by manufacturer.
2. Welding Qualifications: Qualify procedures and personnel in accordance with the following welding codes:

a. AWS D1.1/D1.1M.
b. AWS D1.3/D1.3M.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver wire mesh items with cardboard protectors on perimeters of panels and doors and with posts wrapped to provide protection during transit and Project-site storage. Use vented plastic.

1.9 FIELD CONDITIONS

A. Field Measurements: Verify actual dimensions of construction contiguous with wire mesh units by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Folding Guard, Incorporated.
2. G-S Company (The).
3. Indiana Wire Products, Inc.
4. Kenco Wire & Iron Products Inc.
5. King Wire Partitions, Inc.
6. Miller Wire Works, Inc.
7. Newark Wire Works Inc.
8. R. J. Donaldson, Inc.
9. SpaceGuard Products.
10. Standard Wire & Steel Works.
11. WIPCO; a division of Jesco Industries, Inc.
12. WireCrafters, LLC.

2.2 SOURCE LIMITATIONS

A. For wire mesh products, obtain each color, grade, finish, type, and variety from single source with resources to provide products of consistent quality in appearance and physical properties.

2.3 HEAVY-DUTY WIRE MESH PARTITIONS

A. Mesh:

1. 0.192-inch-diameter, intermediate-crimp steel wire woven into 2-inch diamond mesh.

B. Vertical and Horizontal Panel Framing: 1-1/2-by-3/4-by-1/8-inch cold-rolled steel channels; with holes for 3/8-inch-diameter bolts not more than 12 inches o.c.

C. Horizontal Panel Stiffeners: Two cold-rolled steel channels, 1 by 1/2 by 1/8 inch, bolted or riveted toe to toe through mesh.

D. Top Capping Bars: 3-by-1-inch steel channels.

E. Posts for 90-Degree Corners: **2-by-2-by-0.075-inch cold-rolled steel angles or tubes**, with holes for 3/8-inch-diameter bolts aligning with bolt holes in vertical framing; with 1/4-inch steel base plates.

F. Posts for Other-Than-90-Degree Corners: 2-inch-OD by 1/8-inch steel pipe or round tube, with holes for 3/8-inch-diameter bolts aligning with bolt holes in vertical framing; with 1/4-inch steel base plates.

G. Adjustable Corner Posts: Two 1-1/2-by-3/4-by-1/8-inch cold-rolled, steel channels or 2-by-2-by-0.075-inch steel tubes connected by steel hinges at 36 inches o.c. attached to posts; with 1/4-inch-diameter bolt holes aligning with bolt holes in vertical framing; with 1/4-inch steel base plates.

H. Line Posts: 3-inch-by-4.1-lb or 3-1/2-by-1-1/4-by-1/8-inch steel channels; with 1/4-inch steel base plates.

I. Three- and Four-Way Intersection Posts: 2-by-2-by-0.075-inch steel tubes, with holes for 3/8-inch-diameter bolts aligned for bolting to adjacent panels; with 1/4-inch steel base plates.

J. Floor Shoes: Metal, not less than 2 inches high; sized to suit vertical framing, drilled for attachment to floor, and with setscrews for leveling adjustment.

K. Swinging Doors: Fabricated from same mesh as partitions, with framing fabricated from 1-1/2-by-3/4-by-1/8-inch steel channels, banded with 1-1/2-by-1/8-inch flat steel bar cover plates on four sides, and with 1/8-inch-thick angle strike bar and cover on strike jamb.

1. Hinges: Full-surface type, 3-1/2-by-3-1/2-inch steel, three per door; bolted, riveted, or welded to door and jamb framing.
2. Padlock Lug: Mortised into door framing and enclosed with steel cover.
3. Inactive Leaf Hardware: Cane bolt at bottom and chain bolt at top.

L. Sliding Doors: Fabricated from same mesh as partitions, with framing fabricated from 1-1/2-by-3/4-by-1/8-inch steel channels, banded with 1-1/2-by-1/8-inch flat steel bar cover plates on four sides.

1. Hardware: Two, four-wheel roller-bearing carriers; box track; and bottom guide channel for each door.
2. Padlock Lug: Mortised into door framing and enclosed with steel cover.
3. Provide opening to permit chain and padlock securement.

M. Accessories:

1. Sheet Metal Base: 0.060-inch-thick, steel sheet.
2. Adjustable Filler Panels: 0.060-inch-thick, steel sheet; capable of filling openings from 2 to 12 inches.
3. Wall Clips: Manufacturer's standard, cold-rolled steel sheet; allowing up to 1 inch of adjustment.

N. Finish: Hot-dip galvanized and Powder-coated finish unless otherwise indicated.

1. Color: As selected by Architect from manufacturer's full range.

2.4 MATERIALS

A. Steel Wire: ASTM A510/A510M.

B. Steel Plates, Channels, Angles, and Bars: ASTM A36/A36M.

C. Steel Sheet: Cold-rolled steel sheet, ASTM A1008/A1008M, Commercial Steel (CS), Type B.

D. Steel Pipe: ASTM A53/A53M, Schedule 40, unless another weight is indicated or required by structural loads.

E. Steel Tubing: ASTM A500/A500M, cold-formed structural-steel tubing or ASTM A513/A513M, Type 5, mandrel-drawn mechanical tubing.

F. Metallic-Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B; with G60 zinc (galvanized) or A60 zinc-iron-alloy (galvannealed) coating designation.

G. Panel-to-Panel Fasteners: Manufacturer's standard steel bolts, nuts, and washers.

H. Post-Installed Anchors: Capable of sustaining, without failure, a load equal to 6 times the load imposed when installed in unit masonry and 4 times the load imposed when installed in concrete, as determined by testing in accordance with ASTM E488/E488M, conducted by a qualified independent testing agency.

1. Material for Interior Locations: Carbon-steel components are zinc plated to comply with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5, unless otherwise indicated.
2. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 stainless steel bolts, ASTM F593, and nuts, ASTM F594.

I. Power-Driven Fasteners: ICC-ES AC70.

J. Seismic Bracing: Angles with legs not less than 1-1/4 inches wide, formed from 0.040-inch-thick, metallic-coated steel sheet; with bolted connections and 1/4-inch-diameter bolts.

K. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer, complying with MPI#79.

1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

L. Zinc-Rich Primer: Compatible with topcoat, complying with SSPC-Paint 20 or SSPC-Paint 29.

M. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in steel, complying with SSPC-Paint 20.

2.5 FABRICATION

A. General: Fabricate wire mesh items from components of sizes not less than those indicated. Use larger-sized components as recommended by wire mesh item manufacturer. Furnish bolts, hardware, and accessories required for complete installation with manufacturer's standard finishes.

1. Fabricate wire mesh items to be readily disassembled.
2. Welding: Weld corner joints of framing and finish sand.

B. Heavy-Duty Wire Mesh Partitions: Fabricate wire mesh partitions with cutouts for pipes, ducts, beams, and other items indicated. Finish edges of cutouts to provide a neat, protective edge.

1. Mesh: Securely clinch mesh to framing.
2. Framing: Fabricate framing with mortise-and-tenon corner construction.

    a. Provide horizontal stiffeners as indicated or, if not indicated, as required by panel height and as recommended by wire mesh partition manufacturer. Weld horizontal stiffeners to vertical framing.
    b. Fabricate three- and four-way intersections using intersection posts.
    c. Fabricate partition and door framing with slotted holes for connecting adjacent panels.

3. Fabricate wire mesh partitions with 3 to 4 inches of clear space between finished floor and bottom horizontal framing.
4. Fabricate wire mesh partitions with bottom horizontal framing flush with finished floor.
5. Doors: Align bottom of door with bottom of adjacent panels.

    a. For doors that do not extend full height of partition, provide transom over door, fabricated from same mesh and framing as partition panels.

6. Hardware Preparation: Mortise, reinforce, drill, and tap doors and framing as required to install hardware. Doors to have openings appropriate for a chain and padlock security.

2.6 STEEL AND IRON FINISHES

A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A153/A153M for steel and iron hardware and with ASTM A123/A123M for other steel and iron products.

1. Do not quench or apply post-galvanizing treatments that might interfere with paint adhesion.

B. Preparation for Shop Priming Galvanized Items: After galvanizing, thoroughly clean items of grease, dirt, oil, flux, and other foreign matter, and treat with metallic phosphate process.

C. Shop Priming: Apply shop primer to uncoated surfaces of wire mesh units unless otherwise indicated. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

D. Powder-Coat Finish: Immediately after cleaning and pretreating, apply manufacturer's standard baked-on powder-coat finish, suitable for use indicated, with a minimum dry film thickness of 2 mils.

1. Color and Gloss: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine floors for suitable conditions where wire mesh items will be installed.

C. Examine walls to which wire mesh items will be attached for properly located blocking, grounds, and other solid backing for attachment of support fasteners.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF WIRE MESH PARTITIONS

A. Anchor wire mesh partitions to floor with 3/8-inch-diameter, postinstalled expansion anchors at 12 inches o.c. through anchor clips located at each post and corner. Shim anchor clips as required to achieve level and plumb installation.

1. Anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if indicated on Shop Drawings.

B. Anchor wire mesh partitions to floor with 3/8-inch-diameter, postinstalled expansion anchors at 12 inches o.c. through floor shoes located at each post and corner. Adjust wire mesh partition posts in floor shoes to achieve level and plumb installation.

1. Anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if indicated on Shop Drawings.

C. Anchor wire mesh partitions to walls at 12 inches o.c. through back corner panel framing and as follows:

1. For concrete and solid masonry anchorage, use expansion anchors.
2. For hollow masonry anchorage, use toggle bolts.
3. For wood stud partitions, use lag bolts set into wood backing between studs. Coordinate with carpentry work to locate backing members.
4. For steel-framed gypsum board assemblies, use lag bolts set into wood backing between studs. Coordinate with stud installation to locate backing members.
5. For steel-framed gypsum board assemblies, fasten brackets directly to steel framing or concealed reinforcements using self-tapping screws of size and type required to support structural loads.

D. Secure top capping bars to top framing channels with 1/4-inch-diameter, "U" bolts spaced not more than 28 inches o.c.

E. Provide line posts at locations indicated or, if not indicated, as follows:

1. On each side of sliding-door openings.
2. For partitions that are 7 to 9 ft. high, spaced at 15 to 20 ft. o.c.
3. For partitions that are 10 to 12 ft. high, located between every other panel.
4. For partitions that are more than 12 ft. high, located between each panel.

F. Provide seismic supports and bracing as indicated or, if not indicated, as recommended by manufacturer and as required for stability, extending and fastening members to supporting structure.

G. Where standard-width wire mesh partition panels do not fill entire length of run, provide adjustable filler panels to fill openings.

H. Install doors complete with door hardware.

I. Install service windows complete with window hardware.

J. Weld or bolt sheet metal bases to wire mesh partitions and doors where indicated.

K. Bolt accessories to wire mesh partition framing.

3.3 REPAIR

A. Repair Painting:

1. Wire brush and clean rust spots, welds, and abraded areas immediately after installation, and apply repair paint with same material as used for shop painting to comply with SSPC-PA 1 requirements for touching up shop-painted surfaces.

    a. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

2. Wire brushing, cleaning, and repair painting of rust spots, welds, and abraded areas are included in Section 099113 "Exterior Painting" and Section 099123 "Interior Painting."

B. Repair of Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A780/A780M.

3.4 ADJUSTING

A. Adjust doors to operate smoothly and easily, without binding or warping. Adjust hardware to function smoothly. Verify that latches and locks engage accurately and securely without forcing or binding.

3.5 PROTECTION

A. Remove and replace defective work, including doors and framing that are warped, bowed, or otherwise unacceptable.

END OF SECTION 102213

SECTION 133419 – METAL BUILDING SYSTEMS – STRUCTURAL FRAMING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes design, shop-fabrication and erection of pre-engineered steel building structural frame, as shown on drawings including plans, notes and details showing size and location of members.

B. Work supplied but installed under other Sections:

1. Division 3 Section “Cast-in-Place Concrete” for anchor bolts.

C. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 1 Section “Structural Inspection.”
2. Division 3 Section “Cast-in-Place Concrete.”
3. Division 8 Section “Overhead Coiling Doors.”
4. Division 9 Section “Painting.”
5. Division 13 Section “Pre-Engineered Building Components.”

1.3 DEFINITIONS

A. Terminology Standard: See MBMA's "Metal Building Systems Manual" for definitions of terms for metal building system construction not otherwise defined in this Section or in referenced standards.

B. IAS: International Accreditation Service.

1.4 PERFORMANCE REQUIREMENTS

A. Structural Performance: Engineer, fabricate, and install pre-engineered structural steel frame to withstand design loadings indicated within limits and under conditions required.

1. The design of the pre-engineered building frame shall be in accordance with the 2018 Kentucky Building Code, 2nd Edition (2018 KBC) (2015 International Building Code).
2. Manufacturer shall use contract drawing information indicating maximum depth, size, and spacing limitations.
3. The magnitude of the structure’s mass dead load (W) for seismic calculations shall be determined by the engineer responsible for the design of the pre-engineered building structure. The pre-engineered building structure is the sole lateral force resisting system and shall be designed as such. All components of the building including, but not limited to, mechanical units, etc. shall be considered when calculating W.

B. Engineering Responsibility: Engage a fabricator who uses a qualified professional engineer to prepare design calculations, shop drawings, and other structural data.

C. Wind loads shall be in accordance with chapter 16 of the 2018 KBC, chapters 26 through 30 of the ASCE 7-10 *Minimum Design Loads for Buildings and Other Structures*, and as indicated on the drawings.

D. Seismic loads shall be in accordance with chapter 16 of the 2018 Kentucky Building Code, chapters 11 and 12 of ASCE 7-10 *Minimum Design Loads for Buildings and Other Structures,* and as indicated on the drawings.

E. Snow loads shall be in accordance with chapter 16 of the 2018 KBC, chapter 7 of ASCE 7-10 *Minimum Design Loads for Buildings and Other Structures*, and as indicated on the drawings.

F. Live loads shall be in accordance with the 2018 KBC.

1. Live loads on roofs shall not be reduced for tributary live load reduction.

G. Dead loads shall include the self-weight of the pre-engineered building components, any roof supported mechanical equipment, and a collateral dead load for dead load imposed by ceilings, lights, mechanical ductwork, etc. as follows:

1. Roof Collateral Dead Load: 5 psf.

H. Building drift shall be limited to a maximum of H/100, where H equals the building height, for load combinations which include wind.

1. Drift limitations for seismic loading shall be as defined in the Kentucky Building Code. Use of Building Code exemption to drift design for buildings with partitions designed to accommodate story drift is prohibited.

I. Deflection of structural members shall be limited to the following:

1. Wind girts and wind columns: Horizontal deflection of L/180 due to wind load, where L is the member length.
2. Primary and Secondary roof framing members: L/120 due to total load and L/180 due to live load, where L is the member length or horizontal distance from eave to eave.
3. Design secondary-framing system to accommodate deflection of primary framing and construction tolerances, and to maintain clearances at openings.

J. Thermal Movements: Allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss when subjected to a temperature range of 125 degrees F.

1.5 ACTION SUBMITTALS

A. General: Furnish submittals in quantity, format, and other Conditions of the Contract and as specified in Division 1 of the Project Manual.

1. Shop drawings which show the Architect’s or Engineer’s title block, logo and/or seal will be rejected and returned unchecked.
2. Computer generated electronic structural construction document files (ACAD) will be made available to the Contractor. The Contractor will be required to sign the Engineer’s standard release of liability form prior to receiving the drawing files.

3. Shop drawing resubmittals are reviewed for conformance with review marks only. Any changes or questions originating on a resubmittal shall be clearly clouded.
4. Architect's and Engineer's review of the calculations is for general conformance with the contract documents. Actual calculations are the responsibility of the Metal Building System design engineer and shall not be reviewed for content or accuracy by the Architect or Engineer.

B. Building Permit Issuance: Contractor shall submit Anchor Bolt Plans and Reactions, calculations, and Shop Drawings to the Building Official. Submittal must be signed and sealed by a professional engineer registered in the state where the project is situated. Submittal typically must be received prior to processing of the building permit by the plans reviewer.

C. Anchor-Bolt Plans: Submit anchor-bolt plans and templates before foundation work begins.

1. Provide setting drawings, templates, and directions for installation of anchor rods and other anchorages.
2. Include location, diameter, and projection of anchor bolts required to attach metal building to foundation
3. Indicate design criteria and loading (wind, snow, seismic, live) as specified in section 1603 of the Kentucky Building Code on the shop drawing cover sheet.
4. Provide foundation reactions for each load type.

D. Shop Drawings detailing fabrication and erection of pre-engineered building structural components. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes

1. Indicate profiles, sizes, spacing, and locations of structural members, connections, attachments, openings, fasteners, and ASTM specifications for materials.
2. Indicate field welds by standard AWS symbols, showing size, length, and type of each weld.
3. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Include erection plans and details.
4. Include ASTM material specifications and grade of steel.
5. Provide erection details of all field connections.
6. Indicate surface preparation for primer, primer, and galvanizing to be used.
7. To the extent pre-engineered building design considerations are indicated as fabricator's responsibility, provide shop drawings signed and sealed by the qualified professional engineer, registered in the State of Kentucky, responsible for their preparation. The shop drawings will be reviewed for design intent only. Engineering and detailing shall be solely the responsibility of the manufacturer and the professional engineer responsible for their preparation.
8. Shop drawing resubmittals are reviewed for conformance with review marks only. Any changes or questions originating on a resubmittal shall be clearly clouded.

1.6 INFORMATIONAL SUBMITTALS

A. General: Furnish submittals in quantity, format, and other Conditions of the Contract and as specified in Division 1 of the Project Manual.

B. Fabricator shall participate in the certified Quality Certification Program and shall submit, at the completion of fabrication, a certificate of compliance stating that the work was performed in accordance with the approved construction documents.

C. Metal Building System Certificates: For each type of metal building system, from manufacturer.

1. Letter of Design Certification: Signed and sealed by a qualified professional engineer. Include the following:

a. Name and location of Project.
b. Order number.
c. Name of manufacturer.
d. Name of Contractor.
e. Building dimensions including width, length, height, and roof slope.
f. Indicate compliance with AISC standards for hot-rolled steel and AISI standards for cold-rolled steel, including edition dates of each standard.
g. Governing building code and year of edition.
h. Design Loads: Include dead load, roof live load, collateral loads, roof snow load, deflection, wind loads/speeds and exposure, seismic design category or effective peak velocity-related acceleration/peak acceleration, and auxiliary loads (cranes).
i. Load Combinations: Indicate that loads were applied acting simultaneously with concentrated loads, according to governing building code.
j. Building-Use Category: Indicate category of building use and its effect on load importance factors.

2. IAS Certification: Copy of IAS certification.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed pre-engineered building structure work similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.

B. Fabricator Qualifications: Engage a firm experienced in fabricating pre-engineered building structure similar to that indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to fabricate structural steel without delaying the Work.

1. Fabricator must participate in and be accredited by the International Accreditation Service, Inc (IAS) Inspection Programs for Manufacturers of Metal Building Systems, AC472.

C. Erector Qualifications: An experienced erector who specializes in erecting and installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer.

D. Professional Engineer Qualifications: A professional engineer who is legally authorized to practice in the State of Kentucky and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for projects with structural steel framing that are similar to that indicated for this Project in material, design, and extent.

E. Comply with applicable provisions of the following specifications and documents:

1. AISC 360 “Specification for Structural Steel Buildings.”
2. AISC 303 “Code of Standard Practice for Steel Buildings and Bridges.”
3. AISC Design Guide 7 “Industrial Buildings – Roofs to Anchor Rods”, Second Edition.

4. Research Council on Structural Connections' (RCSC) "The Specification for Structural Joints Using High-Strength Bolts, 2009."
5. American Welding Society's (AWS) D1.1-2010 "Structural Welding Code – Steel."
6. ASTM A 6 "Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling."
7. AGA – American Galvanizers Association publication "Recommended Details for Galvanized Structures".
8. AWS – "AWS Standard for Certification AWS Certified Welders" AWS QC7-93.
9. AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members" for design requirements and allowable stresses.
10. SSPC – Steel Structures Painting Manual, Volume 1 and 2, latest edition.
11. SSPC Surface Preparation Specification, SP1 through SP15.

F. Welding Standards: Comply with applicable provisions of AWS D1.1 "Structural Welding Code – Steel."

1.8 PROJECT CONDITIONS

A. Shop Drawings: Comply with established column layout and grid, column base elevation, and frame type shown on the Drawings establishing foundation dimensions.

B. Established Dimensions for Foundations: Install anchor rods per established dimensions on approved anchor-bolt plans, proceeding with fabricating structural framing without field measurements. Coordinate anchor-bolt installation to ensure that actual anchorage dimensions correspond to established dimensions.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver pre-engineered building structure components to Project site in such quantities and at such times to ensure continuity of installation.

B. Store materials to permit easy access for inspection and identification. Keep steel members off ground by using pallets, platforms, or other supports. Protect steel members and packaged materials from erosion and deterioration.

1. Store fasteners in a protected place. Clean and relubricate bolts and nuts that become dry or rusty before use.
2. Do not store materials on structure in a manner that might cause distortion or damage to members or supporting structures. Repair or replace damaged materials or structures as directed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. A&S Building Systems, Inc.; Division of NCI Building Systems,L.P.
2. American Steel Building Co., Inc.
3. Butler Manufacturing Company; a BlueScope Steel company.
4. Ceco Building Systems; Division of NCI Building Systems, L.P.
5. Chief Buildings; Division of Chief Industries, Inc.
6. Gulf States Manufacturers, Inc.; Division of Magnatrax Corp.
7. Kirby Building Systems; Division of Magnatrax Corp.

8. Metallic Building Company; Division of NCI Building Systems, L.P.
9. Nucor Building Systems.
10. Star Building Systems; an NCI company.
11. USA, Inc.
12. VP Buildings; a United Dominion company.

2.2 SYSTEM DESCRIPTION

A. Description: Provide a complete, integrated set of metal building system manufacturer's standard mutually dependent components and assemblies that form a metal building system capable of withstanding structural and other loads, thermally induced movement, and exposure to weather without failure or infiltration of water into building interior

B. Primary Framing: Manufacturer's standard primary-framing system, designed to withstand required loads and specified requirements. Primary framing includes transverse and lean-to frames; rafter, rake, and canopy beams; sidewall, intermediate, end-wall, and corner columns; and wind bracing.

1. General: Provide frames with attachment plates, bearing plates, and splice members. Factory drill for field-bolted assembly. Provide frame span and spacing indicated.
2. Primary framing to be prime painted.
3. Rigid Clear-Span Frames: I-shaped frame sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Interior columns are not permitted.

C. Endwall Framing: Endwall framing shall include the corner columns and endwall columns and wind girts, and shall be manufactured of I-shaped sections fabricated from structural-steel shapes; shop-welded, built-up steel plates; or C-shaped, cold-formed, structural-steel sheet according to the following:

1. Structural members to be prime painted. All cold- or roll-formed sheet (gauge) material to be galvanized with clear acrylic secondary coating.
2. Load-bearing end-wall and rigid frame capable of supporting the tributary one-half bay design load. No additional lateral X-bracing is permitted along end wall.

D. Secondary Framing: Manufacturer's standard secondary framing, including purlins, girts, eave struts, flange bracing, base members, gable angles, clips, headers, jambs, and other miscellaneous structural members. Unless otherwise indicated, fabricate framing from either cold-formed, structural-steel sheet or roll-formed, steel sheet to comply with the following:

1. Structural members to be prime painted. All cold- or roll-formed sheet (gauge) material to be galvanized with clear acrylic secondary coating.
2. Wall girts shall be nominal 8” deep “C” or “Z” shaped members fabricated from built-up steel plates, steel sheet, or structural-steel shapes. Form edges of sections with stiffening lips angled 40 to 50 degrees from flange, with minimum 2-1/2-inch wide flanges. Design as simple span, continuous, or partially continuous for the specified loads. Wall girts shall be fabricated to be run outside the primary frame columns.
3. Roof purlins shall be manufacturer’s standard depth “C” or “Z” shaped members fabricated from built-up steel plates, steel sheet, or structural-steel shapes. Form edges of sections with stiffening lips angled 40 to 50 degrees from flange, with minimum 2-1/2-inch wide flanges. Design as simple span, continuous, or partially continuous for the specified loads.
4. Eave Struts: Unequal-flange, C-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes; to provide adequate backup for metal panels.
5. Flange Bracing: Minimum 2-by-2-by-1/8-inch structural-steel angles or 1-inch diameter, cold-formed structural tubing to stiffen primary-frame flanges.
6. Sag Bracing: Minimum 1-by-1-by-1/8-inch structural-steel angles.

7. Base or Sill Angles: Minimum 3-by-2-inch (76-by-51-mm) zinc-coated (galvanized) steel sheet.
8. Purlin and Girt Clips: Manufacturer's standard clips fabricated from steel sheet. Provide galvanized clips where clips are connected to galvanized framing members.
9. Secondary End-Wall Framing: Manufacturer's standard sections**.**
10. Framing for Openings: Channel shapes; fabricated from cold-formed, structural-steel sheet or structural-steel shapes. Frame head and jamb of door openings and head, jamb, and sill of other openings.
11. Miscellaneous Structural Members: Manufacturer's standard sections fabricated from cold-formed, structural-steel sheet; built-up steel plates; or zinc-coated (galvanized) steel sheet; designed to withstand required loads.
12. Wind bracing shall be a system of diagonal cable bracing. Unless otherwise noted, column bases shall be designed as pinned as to not transfer moment into the foundations.
13. Metal roofing shall be assumed to have zero capacity for diaphragm action. Cable or rod bracing shall be utilized in the plane of the roof to transfer lateral loads into the primary and secondary frames.

E. Column Type

1. Straight column at wind columns.
2. Tapered column at rigid frames.

F. Bay Spacing: As shown.

G. Eave Height: As shown.

H. Roof Slope

1. Dual slope as shown on drawings.

2.3 MATERIALS

A. All structural steel shapes shall be new, unused and perfect stock, free from millscale, rust, flake, pitting, and imperfections, without bends, kinks, and distortions.

B. Wide Flange and Tee Shapes (Designated as W and WT): ASTM A36 or ASTM A992.

C. Channels, Angles, M-Shapes, and S-Shapes: ASTM A36.

D. Plates and Bars: ASTM A36; ASTM A572, Grade 50 or 55; or ASTM A529, Grade 50 or 55.

E. Structural-Steel Sheet: Hot-rolled, ASTM A 1011, Structural Steel (SS), Grades 30 through 55, or High-Strength Low-Alloy Steel (HSLAS), Grades 45 through 70; or cold-rolled, ASTM A 1008, Structural Steel (SS), Grades 25 through 80, or High-Strength Low-Alloy Steel (HSLAS), Grades 45 through 70. Prime painted.

F. Non-High-Strength Bolts, Nuts, and Washers: ASTM A 307, Grade A, carbon-steel, hex-head bolts; ASTM A 563 carbon-steel hex nuts; and ASTM F 844 plain (flat) steel washers.

1. Finish: Plain.

G. High-Strength Bolts, Nuts, and Washers: ASTM A325 or A490, Type 1, heavy hex steel structural bolts; ASTM A563 heavy hex carbon-steel nuts; and ASTM F436 hardened carbon-steel washers.

1. Finish: Plain.

H. Welding Electrodes: Comply with AWS requirements.

2.4 PRIMER

A. Primer: SSPC-Paint 15.

2.5 GALVANIZING MATERIALS

A. Galvanizing: The zinc used for the coating shall conform to the specifications for slab zinc (Spelter) ASTM designation: B6.

B. Galvanizing Repair Paint: High zinc dust content paint for regalvanizing welds and repair painting of galvanized steel, with dry film containing not less than 93 percent zinc dust by weight and complying with DOD-P-21035 A or SSPC-Paint 20, Type II.

PART 3 - EXECUTION

3.1 FABRICATION

A. General: Design components and field connections required for erection to permit easy assembly.

1. Mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams, and instruction manuals.
2. Fabricate structural framing to produce clean, smooth cuts and bends. Punch holes of proper size, shape, and location. Members shall be free of cracks, tears, and ruptures.
3. Anchor rods shall not be located closer than 4” to any edge of concrete from centerline of rod.

B. Tolerances: Comply with MBMA's "Metal Building Systems Manual" for fabrication and erection tolerances.

C. Fabricate and assemble pre-engineered building structure in shop to greatest extent possible.

D. Fabricate building structure components exposed to view with exposed surfaces smooth, square, and free of surface blemishes, including pitting, rust and scale seam marks, roller marks, rolled trade names, and roughness.

1. Remove blemishes by filling, grinding, or by welding and grinding, prior to cleaning, treating and shop priming.

E. Primary Framing: Shop fabricate framing components to indicated size and section, with baseplates, bearing plates, stiffeners, and other items required for erection welded into place. Cut, form, punch, drill, and weld framing for bolted field assembly.

1. Make shop connections by welding or by using high-strength bolts.
2. Join flanges to webs of built-up members by a continuous, submerged arc-welding process.
3. Brace compression flange of primary framing with steel angles or cold-formed structural tubing between frame web and purlin web or girt web, so flange compressive strength is within allowable limits for any combination of loadings.

4. Weld clips to frames for attaching secondary framing.

F. Secondary Framing: Shop fabricate framing components to indicated size and section by roll-forming or break-forming, with baseplates, bearing plates, stiffeners, and other plates required for erection welded into place. Cut, form, punch, drill, and weld secondary framing for bolted field connections to primary framing.

1. Make shop connections by welding or by using non-high-strength bolts.

3.2 SHOP PRIMING

A. Shop prime steel surfaces, except the following:

1. Surfaces embedded in concrete or mortar other than column bases. Extend priming of partially embedded members to a depth of 2 inches (50 mm).
2. Surfaces to be field welded.
3. Surfaces to be high-strength bolted with slip-critical connections.

B. Surface Preparation: Clean surfaces to be painted. Remove loose rust, loose mill scale, and spatter, slag, or flux deposits. Prepare surfaces according to SSPC specifications as follows:

1. SSPC-SP 2 “Hand Tool Cleaning,” all steel except as otherwise specified.

C. Priming: Immediately after surface preparation, apply primer according to manufacturer’s instructions and at rate recommended by SSPC to provide a dry film thickness of not less than 1.0 mils (0.025 mm). Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.

3.3 GALVANIZING

A. All welded assemblies to be galvanized shall be prepared according to Recommended Practice for Providing High Quality Zinc Coatings (Hot-Dip) on Assembled Products (ASTM A385).

B. Steel shall be thoroughly cleaned by solvent cleaning in accordance with latest edition of Steel Structures Painting Council “Surface Preparation Specification No. 1 (SSPC-SP1).

C. Steel shall be hot-dip galvanized in accordance with ASTM A123.

D. Hardware and threaded fasteners shall be galvanized in accordance with ASTM A153.

E. Safeguard products against steel embrittlement according to ASTM A143.

F. Handle all articles to be galvanized in such a manner as to avoid any mechanical damage and to minimize distortion.

G. Coating weight shall conform with paragraph 5.1 of ASTM A123 or Table 1 of ASTM A153, as appropriate.

H. Surface finish shall be continuous, adherent, as smooth and evenly distributed as possible and free from any defect detrimental to the stated end use of the coated article.

I. Adhesion shall withstand normal handling consistent with the nature and thickness of the coating and normal use of the article.

3.4 EXAMINATION

A. Before erection proceeds, and with the erector present, verify elevations of concrete bearing surfaces and locations of anchorages for compliance with requirements.

B. Do not proceed with erection until unsatisfactory conditions have been corrected.

3.5 PREPARATION

A. Provide temporary shores, guys, braces, and other supports during erection to keep pre-engineered building structure secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent building structure, connections, and bracing are in place, unless otherwise indicated.

3.6 ERECTION

A. Erect metal building system according to manufacturer's written erection instructions and erection drawings.

B. Set pre-engineered building structure accurately in locations and to elevations indicated and according to AISC specifications referenced in this Section.

C. Maintain structural stability of frame during erection.

D. Do not field cut, drill, or alter structural members without written approval from metal building system manufacturer's professional engineer.

E. Base Plates: Clean concrete-bearing surfaces of bond-reducing materials. Clean bottom surface of plates.

1. Tighten anchor rods after supported members have been positioned and plumbed.

F. Align and adjust structural framing before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with framing. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1. Level and plumb individual members of structure.
2. Make allowances for difference between temperature at time of erection and mean temperature when structure will be completed and in service.

G. Primary Framing and End Walls: Erect framing level, plumb, rigid, secure, and true to line.

1. Make field connections using high-strength bolts installed according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for bolt type and joint type specified.

H. Secondary Framing: Erect framing level, plumb, rigid, secure, and true to line. Field bolt secondary framing to clips attached to primary framing.

1. Provide rake or gable purlins with tight-fitting closure channels and fasciae.
2. Locate and space wall girts to suit openings such as doors.
3. Provide supplemental framing at entire perimeter of openings, including doors, windows, louvers, ventilators, and other penetrations of roof and walls.

I. Bracing: Install bracing in roof and sidewalls where indicated on erection drawings.

1. Tighten rod and cable bracing to avoid sag.

J. Framing for Openings: Provide shapes of proper design and size to reinforce openings and to carry loads and vibrations imposed, including equipment furnished under mechanical and electrical work. Securely attach to structural framing.

K. Maintain erection tolerances of structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."

3.7 QUALITY CONTROL

A. General: The Owner will engage an independent testing and inspecting agency to perform inspections and tests and to prepare test reports. Testing agency will conduct and interpret tests and state in each report whether tested Work complies with or deviates from requirements. Failure to detect any defective materials shall not prevent later rejection when such defect is discovered, or obligate the Architect or Owner for final acceptance.

1. See Section 014110 – Structural Special Inspections for testing and inspection to be performed.
2. Provide access for testing agency to places where structural framing work is being installed so that required inspection and testing can be accomplished.
3. The General Contractor shall provide the testing agency a complete set of approved shop drawings.
4. Reports will be delivered to the Architect, Engineer, and the General Contractor within one week of inspection.
5. Deviations from requirements of the contract documents will be reported in writing to the General Contractor within 24 hours.

B. Correct deficiencies in or remove and replace structural steel that inspections and test reports indicate do not comply with specified requirements.

3.8 CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint. Apply paint to exposed areas using same material as used for shop painting.

1. Apply by brush or spray to provide a minimum dry film thickness of 1.5 mils.

B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and apply galvanizing repair paint according to ASTM A780. Minimum thickness requirements for the repair are those described in ASTM A123, Section 4.6.

END OF SECTION 133419

SECTION 26 00 00 – GENERAL ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.1 CONTRACTOR'S UNDERSTANDING

A. Contractors bidding work under this Contract shall read and understand Division Zero and Division 1 - General Requirements. If any discrepancies are discovered between the Basic Electrical Materials and Methods and General Requirements, the above-mentioned documents shall overrule this section. The Basic Electrical Materials and Methods are intended as a supplement to the above-mentioned documents.

B. The Contractor shall bid as outlined in the above-mentioned Specifications and shall be governed by any alternates or unit prices called for in the form of proposal.

C. Each Contractor bidding on the work included in these Specifications shall view the building site and carefully examine the contract Drawings and Specifications, so that he/she may fully understand what is to be done, and to document existing conditions.

1.2 SCOPE OF WORK

A. Work included in this section of the Specifications includes the furnishing of all labor, material, tools, approvals, utility connection fees, excavation, backfill, and other equipment and services necessary to install the electrical system as shown on the Contract Drawings and as specified herein.

B. It also includes the connection of all equipment included in this Contract but furnished by other contractors or suppliers.

C. It is the general intent that all motors shall be furnished with the particular object of equipment it drives, except where a new motor is to be provided for an item of existing equipment (a replacement motor), then it shall be provided under this Division of the Specifications.

D. The Contractor shall furnish and install all conduit, wire, safety switches and miscellaneous material to make all electrical connections to all items of equipment or wiring devices except as otherwise specified.

E. Equipment connections shall be made with flexible or rigid conduit as required. Controllers for motors, safety switches, and all control, protective and signal devices for motor circuits, except where such apparatus is furnished mounted and connected integrally with the motor driven equipment, shall be installed, connected and left in operating condition. The number and size of conductors between motors and control or protective apparatus shall be as required to obtain the operation described in these Specifications, and/or by the Contract Documents, and/or as shown in manufacturer furnished Engineer reviewed Shop Drawings.

F. All devices and items of electrical equipment, including those shown on the Contract Drawings but not specifically mentioned in the Specifications or those mentioned in the Specifications but not shown on the Contract Drawings, are to be furnished under this section of the Specifications. Any such device or item of equipment, if not defined in quality, shall be equal to similar equipment and/or devices specified herein.

G. All devices and items of equipment mentioned in this section of the Specifications whether electrical or not or whether furnished under this or other Division of the Specifications, shall be installed under this Division of the Specifications, unless specifically indicated otherwise.

H. Where wiring diagrams are not shown on the Contract Drawings, they are to be provided by the supplier of the equipment served and such diagrams shall be adhered to except as herein modified.

I. All raceways and wiring shall be firestopped where required by code, as indicated in the Contract Drawings, and as specified in Division 07.

1.3 SHOP DRAWINGS, DESCRIPTIVE LITERATURE, INSTALLATION, OPERATION AND MAINTENANCE INFORMATION

A. Shop Drawings including descriptive literature and/or installation, operation and maintenance instructions shall be submitted in the amount of copies indicated in the General Conditions.

B. Shop Drawings shall be clearly marked and or highlighted as to which product, type, option, etc. is being submitted. Non-applicable catalog data shall be marked out. Product literature with one or more styles / configurations for a single product shall have a written description of use for each of the styles / configurations represented on the literature. For example: Device boxes – Styles shall be listed as: For masonry walls, for electrical devices, for ceiling mounted light fixtures, etc.

C. Shop Drawings shall be submitted on the materials listed in individual sections.

D. The Engineer reserves the right to make modifications to motor control and power distribution equipment ratings after Shop Drawing review if the motor control and power distribution Shop Drawings are submitted prematurely (prematurely meaning submitted before all utilization equipment has been reviewed and accepted). Cost of modifications shall be the Contractor's responsibility.

E. Submit for each Section individually. No combined files will be accepted.

F. Incomplete submittals will be rejected. For example, if a section calls for layout drawings and product data, these items shall be submitted together and at the same time, or they will be rejected.

G. Three sets of O&M instructions and manuals shall be submitted in loose-leaf 3-ring cardboard reinforced vinyl binders to the Engineer in accordance with the General Conditions.

H. Contained in each binder shall also be vendors, warranty information, vendor phone numbers, list of materials, and materials parts list.

I. O & M Manuals shall be available to the Owner prior to equipment training.

J. General and Supplemental General Conditions shall supersede this paragraph where conflicts occur.

K. O & M manuals shall be submitted on CD disk in PDF format along with the required paper copies.

1.4 SYMBOLS AND ABBREVIATIONS

A. The symbols and abbreviations generally follow standard electrical and architectural practice; however, exceptions to this shall be as shown on the Contract Drawings.

1.5 COORDINATION WITH OTHER TRADES

A. The Contractor shall coordinate the electrical work with that of other trades to ensure proper final location of all electrical equipment and/or connections. The Contractor shall verify door swings to see that light switches are located properly.

1.6 CODES

A. The minimum standard for all work shall be the latest revision of the Kentucky Building Code (KBC), and the National Electrical Code (NEC). Whenever and wherever state and/or local laws or ordinances and/or regulations and/or the Engineer's design require a higher standard than the current NEC or KBC, then these laws and/or regulations and/or the design shall be followed.

1.7 INSPECTIONS AND PERMITS

A. Contractor shall obtain electrical system and low-voltage system inspections and permits.

B. Inspection of the electrical system on all construction projects is required. If the local government has appointed a state licensed inspector, the Contractor shall be required to use that person to perform the inspections. If a locally mandated inspector does not exist, the Contractor shall select and hire a state licensed inspector, who has jurisdiction before any work is concealed. The Contractor shall notify the electrical inspector in writing, immediately upon notice to proceed, and a copy of the notice shall be submitted to the Engineer. All costs incurred by the Contractor to execute the above-mentioned requirements shall be paid by the Contractor at no extra cost to the Owner. All permits necessary for the complete electrical system shall be obtained by the Contractor from the authorities governing such work.

C. At the time of completion of the project, there shall be furnished to the Owner a certificate of compliance, from the agency having jurisdiction pursuant to all electrical work performed. The Engineer shall also receive a photostatic copy.

1.8 STORAGE

A. All work, equipment, and materials shall be protected against dirt, water, or other injury during the period of construction.

B. Sensitive electrical equipment such as light fixtures, motor starters, control panels, and panelboards, delivered to the job site, shall be protected against injury or corrosion due to atmospheric conditions or physical damage by other means. Protection is interpreted to mean that equipment shall be stored under roof, in a structure properly heated in cold weather and ventilated in hot weather. Provision shall be made to control the humidity in the storage area to 50 percent relative. The stored equipment shall be inspected periodically, and if it is found that the protection is inadequate, further protective measures shall be employed. Electrical equipment other than boxes and conduit shall not be installed until the structure is under roof with doors and windows installed.

C. No light fixtures or device plates shall be hung or installed until after painting is completed; however, temporary lighting shall be provided by the Contractor.

1.9 MATERIALS

A. All materials used shall be new and at least meet the minimum standards as established by the NEC and/or National Electrical Manufacturers Association (NEMA). All materials shall be UL listed for the application, where a listing exists. All equipment shall meet applicable FCC requirements and restrictions.

B. The reuse of salvaged electrical equipment and/or wiring will not be permitted unless specified herein or indicated on the Contract Drawings.

C. All salvaged or abandoned electrical materials shall become the property of the Contractor and shall be removed from the job site upon completion of the project, unless otherwise noted on the Contract Drawings or specified herein.

D. Existing fluorescent light fixtures to be abandoned and removed this Contract, shall be assumed to be equipped with PCB filled ballasts. Light fixtures shall be disassembled and the ballast removed prior to salvage and/or disposal. Ballasts containing PCB's shall be disposed per requirements of the Toxic Substances Control Act (TSCA). Manifests shall be submitted to the Owner documenting proper transportation and disposal of PCB contaminated ballasts.

1.10 ERRORS, CORRECTIONS, AND/OR OMISSIONS

A. Should a piece of equipment be supplied of a different size or horsepower than shown on the Contract Drawings, the Contractor shall be responsible for installing the proper size wiring, conduit, starters, circuit breakers, etc., for proper operation of that unit and the complete electrical system at no extra cost to the Owner.

B. It is the intent of these Specifications to provide for an electrical system installation complete in every respect, to operate in the manner and under conditions as shown in these Specifications and on the Contract Drawings. The Contractor shall notify the Engineer, in writing, of any omission or error at least 8 days prior to opening of bids. In the event of the Contractor's failure to give such notice, he/she may be required to correct work and/or furnish items omitted without additional cost. Further requirements on this subject may be found in the General Requirements.

C. Necessary changes or revisions in electrical work to meet any code or power company requirement shall be made by the Contractor without additional charge.

1.11 GUARANTEES AND WARRANTIES

A. The Contractor shall guarantee all work including equipment, materials, and workmanship. This guarantee shall be against all defects of any of the above and shall run for a period of 1 year from the date of acceptance of the work, concurrent with the one-year guarantee period designated for the general construction contract under which electrical work is performed. Date of acceptance shall be considered to be the date on which all "punch list" items are completed ("punch list" is defined to be the written listing of work that is incomplete or deficient that must be finished or replaced/repaired before the Contractor receives final payment).

B. Repair and maintenance for the guarantee period is the responsibility of the Contractor and shall include all repairs and maintenance other than that which is considered as routine. (That is oiling, greasing, etc.) The Engineer shall be the judge of what shall be considered as routine maintenance.

C. See General Conditions and individual equipment's specification sections for additional warranty requirements.

1.12 TESTING

A. After the wiring system is complete, and at such time as the Engineer may direct, the Contractor shall conduct an operating test for acceptance. The equipment shall be demonstrated to operate in accordance with the requirements of these Specifications and the Contract Drawings. The test shall be performed in the presence of the Engineer or his authorized representative. The Contractor shall furnish all instruments and personnel required for the tests, as well as the necessary electrical power.

B. Before energizing the system, the Contractor shall check all connections and set all relays for proper operation. He/she shall obtain all necessary clearances, approvals, and instructions from the serving utility company and/or equipment manufacturers prior to placing power on the equipment.

C. Tests may be performed by the Engineer to determine integrity of insulation on wiring circuits selected by the Engineer at random.

D. Cost of utilities for testing done prior to beneficial occupancy by the Owner shall be borne by the Contractor.

1.13 CLEANUP

A. Cleanup shall be completed as soon as possible after the electrical installation is complete. All light fixtures, outlets, switches, starters, motor control centers, disconnect switches and other electrical equipment shall be free of shipping tags, stickers, etc. All painted equipment shall be left free of scratches or other blemishes, such as splattered or blistered paint, etc. All light fixture diffusers shall be clean and the interior of all motor controls, etc., shall be free of dust, dirt, wire strippings, etc. Surplus material, rubbish and equipment resulting from the work shall be removed from the job site by the Contractor upon completion of the work.

B. During construction, cover all Owner equipment and furnishings subject to damage or contamination in any way.

1.14 CUTTING AND PATCHING

A. Cutting and patching shall be held to an absolute minimum and such work shall be done only under the direction of the Owner's representative. The Contractor shall be responsible for and shall pay for all openings that may be required in the floors or walls, and he shall be responsible for putting said surfaces back in their original condition. Every attempt shall be made to avoid cutting reinforcing steel bars when an opening is required in a reinforced concrete wall or floor slab.

B. Prior to cutting of any floors or walls, all conduits must be located prior to the cutting through the use of sounding test equipment. Such equipment is readily available through local electrical

companies and other sources. If a pipe or electrical circuit is damaged during cutting/demolition the Contractor shall repair the damaged item back to original condition. Absolutely no extras will be allowed for the replacement of damaged electrical conduits, pipes, etc. in floors walls, and ceilings that are to remain.

1.15 DEMOLITION

A. Demolition notes on the Drawings shall be followed. All device boxes that are abandoned shall be covered with smooth device cover plates. All holes and openings left in all walls shall be patched back to match adjacent surrounding surfaces.

1.16 EXCAVATION AND BACKFILL

A. Excavation

1. Excavation for conduits shall be of sufficient width to allow for proper jointing and alignment of the type conduit used. Conduit shall be bedded on original ground. Where conduit is in solid rock, a 6-inch earth cushion must be provided. Conduit shall be laid in straight lines between pull boxes and/or structures unless otherwise noted on the Contract Drawings. The cost of solid rock excavation shall be included in the lump sum bid with no extra pay allowed (unclassified).

B. Backfill

1. Backfill shall be hand placed, loose granular earth for a height of 6 inches above the top of the largest conduit. This material shall be free of rocks over ½ inches in diameter. Above this, large rocks may be included but must be mixed with sufficient earth to fill all voids.

1.17 SLEEVES, CHASES AND OPENINGS

A. Sleeves shall be required at all points where exposed conduits pass through new concrete walls, slabs, or masonry walls. Sleeves that must be installed below grade or where subject to high water conditions must be installed watertight.

B. Wiring chases shall be provided where shown on the Contract Drawings. The Contractor shall have the option of installing chases below surface mounted panelboards provided all structural requirements are met.

C. It is the Contractor’s responsibility to leave openings to allow installation of the complete, operational electrical system. Openings required but not left shall be cut as outlined under cutting and patching. The Contractor shall coordinate all holes and other openings with necessary diameters for proper firestopping.

1.18 POWER COMPANY COORDINATION

A. The Contractor is responsible for coordinating all activities onsite by the power company.

B. All power company metering equipment shall be electrically located “upstream” of any manual/automatic transfer equipment on projects requiring onsite emergency power generation equipment.

C. Any special provisions required by the serving electrical utility shall be as outlined on the Contract Drawings or as advised by the utility at the time of construction, and work required by these special provisions shall be executed with no extra cost to the Owner.

1.19 TEMPORARY ELECTRICAL POWER

A. The Contractor shall be responsible for providing temporary electrical power as required during the course of construction and shall remove the temporary service equipment when no longer required. Temporary power is also addressed in general and special requirements.

1.20 OVERCURRENT PROTECTION

A. Circuit breakers or fused switches shall be the size and type as written herein and shown on the Contract Drawings. Any additional overcurrent protection required to maintain an equipment listing by an authority having jurisdiction shall be installed by the Contractor at no extra cost to the Owner.

1.21 TRAINING

A. All manufacturers supplying equipment for this division shall provide the Owner's operations staff with training in the operation and maintenance on the equipment being furnished. The training shall be conducted at the project site by a qualified representative of the manufacturer. Refer to individual equipment specifications for training requirements.

1.22 RECORD DRAWINGS

A. The Contractor shall maintain one (1) set of the Contract Drawings on the job in good condition for examination at all times. The Contractor's qualified representative shall enter upon these drawings, from day to day, the actual record of construction and/or alteration progress. Entries and notes shall be made in a neat and legible manner and these drawings delivered to the Engineer after completion of the construction, for use in preparation of Record Drawings.

B. Specific attention shall be given to the exact location of any underground lines installed under this Contract. These lines shall be dimensioned to easily identifiable points on permanent structures.

1.23 MAINTAINING CONTINUOUS ELECTRICAL SYSTEM AND SERVICE

A. Existing service(s) continuity shall be maintained at all times. In no way shall the installation and/or alteration of the electrical work interfere with or stop the normal operation of the existing facilities, except where prior arrangements have been made.

B. When additions and taps to existing service(s) require electrical outages of duration in excess of a few minutes, arrangements shall be made in advance for such outages. All outages shall be held to an acceptable minimum with none exceeding 8 hours continuous duration. If necessary, cuts shall be performed on premium time. If performed at night, requiring a general outage, the Contractor shall furnish an auxiliary source of light and power as required. Under no circumstances shall an electrical outage of any duration be initiated until the Owner and Engineer have concurred, and as far as possible in advance.

1.24 GROUNDING AND BONDING

A. All metallic conduit, cabinets, equipment, and service shall be grounded in accordance with the latest issue of the National Electrical Code. All supporting framework and other metal or metal clad equipment or materials which are in contact with electrical conduit, cable and/or enclosures, shall be properly grounded to meet the code requirements.

1.25 SERVICE ENTRANCE

A. Conductors and terminations for service entrances shall be furnished and installed by the Contractor. Voltage, phase, and number of wires shall be as shown on the Drawings. Clearances for overhead entrance wires shall be per Power Company, NEC, and NESC requirements.

1.26 CONTRACTOR LICENSING

A. The Contractor performing the electrical work on this project shall be a licensed electrical contractor in the state of <Kentucky><Ohio><Indiana>.

1.27 ANCHORING/MOUNTING

A. Electrical conduits and/or equipment shall be rigidly supported. Anchors used shall be metallic expansion type, or if appropriate to prevent spalling concrete, epoxy set type. Plastic or explosive type anchors are prohibited.

B. Contractor shall provide all necessary supports in accordance with KBC Seismic requirements.

1.28 ELECTRICAL COMPONENT MOUNTING HEIGHTS

A. Unless otherwise indicated, mounting height for components shall be as defined on the Drawings.

1.29 RECEIPTS

A. Some sections of the Specifications call for equipment, materials, accessories, etc. to be provided and “turned over to the Owner” or like requirements. The Contractor shall obtain a receipt for each item turned over, signed by the Owner or his representative. A copy of this receipt shall be transmitted to the Engineer.

B. When a question arises concerning whether items have been turned over to the Owner, and there is no signed receipt, it may be assumed that the items were not provided.

1.30 DEFINITIONS

A. Furnish – Procure equipment/materials and deliver and unload at the project site.

B. Install – Enter the equipment/materials permanently into the project and make operational.

C. Remove – Completely remove from site and dispose of properly. Owner assumes no future liability of the item.

D. Provide – Furnish and Install subject to discussion.

E. NEC – National Electrical Code

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION

SECTION 26 05 19 – CONDUCTORS, CABLES, AND CIRCUITS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. All wire and cable shall conform to the latest requirements of the NEC and shall meet all ASTM/UL specifications. Wire and cable shall be new; shall have size, grade of insulation, voltage rating and manufacturer's name permanently marked on the outer covering at regular intervals. Complete descriptive literature shall be submitted to the Engineer for review and acceptance prior to installation.

B. Building wire shall be based on a 75-degree Celsius temperature rise, unless noted otherwise.

1.2 SUBMITTALS

A. Submit product data on all conductors and cables.

B. See Section 26 00 00 for additional instructions for submittals.

1.3 DELIVERY, STORAGE AND HANDLING

A. Wire and cable shall be suitably protected from weather and damage during storage and handling and shall be in first class condition when installed.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Building Wire (types "THWN" and "THW"-cu.) - "Southwire," "Cerrowire," "American," "Okonite," or equal.

B. Flexible Cords and Cables (Types "SO" (600V) "SJO" - 300V) "Collyer," "American," "Carol," or equal.

2.2 GENERAL

A. General Building Wire

1. In general, all conductors shall be 98 percent conductive, annealed copper unless otherwise noted on the Contract Drawings.

2. Conductors shall be type THW or THWN insulation. Conductor size shall be AWG (American Wire Gauge) Standard. Minimum conductor size shall be AWG number 12 except branch circuits in excess of 75 feet from panel to first outlet not smaller than no. 10 AWG. Minimum voltage rating shall be 600 volts. Conductors for #12 and #10 may be solid or stranded. All conductors larger than #10 shall be stranded.

3. Conductors with high temperature rated insulations and special construction shall be used where required in connecting to light fixtures or appliances that have special requirements.

4. Metal Clad (MC) Cable – Shall comply with NEC and UL 1569.

PART 3 - EXECUTION

3.1 INSTALLATION/APPLICATION/ERECTION

A. General

1. Conductors shall be continuous from outlet to outlet and no splices shall be made except accessible in junction or outlet boxes. Wire connectors of insulating material or solderless pressure connectors, properly taped, shall be used for all splices in wiring wherever possible.

2. When a home run is drawn to a GFIC receptacle and other receptacles follow, they shall be wired such that all receptacles are GF protected down line.

3. Torque all circuit connections to NEC requirements.

4. Termination of existing older aluminum clad copper conductors with cambric insulation. Provide corrosion inhibitor on the new terminal and properly torque. Use anti-oxidant and Morrison connectors.

5. Feeder conductors shall be color coded in accordance with the following schedule:

	480/227V 3 Phase	208/240V 3 Phase	120/240 Single Phase
Phase A	Brown	Black	Black
Phase B	Orange	Red	Red
Phase C	Yellow	Blue	
Neutral (Grounded)	White or Light Gray	White or Light Gray	White or Light Gray
3-Way Tracers			Blue
Grounding	Green	Green	Green
Remote Energized Conductors (Control)			Yellow

Control Std. Code Std. Code

6. Conductors shall be pulled into raceways in strict accordance with manufacturer's recommendations. Use manufacturer approved pulling compound or lubricant where necessary. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

7. Use pulling means, including fish tape, cable, rope, and basket-weave/cable grips, that will not damage cables or raceway.

8. Ample slack conductors shall be allowed at each terminal point, and pull or junction box, to permit installation with ease and without crowding.

9. No conductors shall be drawn into conduits until all work which may cause wire or cable damage is completed. Wire pulling shall be accomplished utilizing machinery and accessories intended for the purpose.

10. All connections and splices shall be made in accordance with conductor manufacturer's recommendations, and as written herein.

11. If the size and number of conductors in a conduit on the Drawings is not shown, then it shall be assumed to be 4 #12, 3/4" C.

12. Sharing of neutral conductors is prohibited.

13. An equipment grounding conductor, sized per NEC, shall be installed in each power, signaling, or instrumentation circuit whether indicated or not.

B. Feeders

1. Wire shall be factory color coded for each phase and neutral, with green used for the ground conductor. As far as practical, all feeders shall be continuous from origin to panel termination without running splices in intermediate pull boxes.

C. Metal-Clad (MC) Cable Installation

1. MC cable shall only be used for lighting circuits accessible above suspended acoustical tile ceilings. A junction box fed with conduit shall be installed in the plenum space above each room for conversion from conduit to MC cable.

2. **The use of MC cable in walls, slabs, or to jump between rooms is prohibited**.

3. MC cable termination shall be prepared using a pre-engineered fitting designed specifically for the purpose.

END OF SECTION

SECTION 26 05 26 – SECONDARY GROUNDING

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Grounding shall be provided in accordance with the NEC, as described in these Specifications, and as shown on the Contract Documents.

1.2 SUBMITTALS

A. Submit product data on all grounding equipment.

B. Test Reports upon completion of installation.

C. See Section 26 00 00 for additional instructions for submittals.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Grounding equipment shall be Cadweld, Thomas and Betts/Blackburn, Erico, Copperweld Bimetallics Group, Cathodic Engineering Equipment Co., or equal.

2.2 GROUND RODS

A. Ground rods shall be copper-clad steel with minimum diameter of ¾" and length of 10'. They shall confirm to UL467 requirements.

2.3 CONDUCTORS

A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.

B. Bare Copper Conductors:

1. Solid Conductors: ASTM B 3.

2. Stranded Conductors: ASTM B 8.

3. Tinned Conductors: ASTM B 33.

4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch in diameter.

5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.

6. Bonding Jumper: Copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

C. Grounding Bus: Rectangular bars of annealed copper, 1/4 by 2 inches in cross section, unless otherwise indicated; with insulators.

2.4 CONNECTORS

A. Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.

B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure-type, with at least two bolts.

1. Pipe Connectors: Clamp type, sized for pipe.

C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

PART 3 - EXECUTION

3.1 INSTALLATION/APPLICATION/ERECTION

A. Grounding shall utilize a supplemental driven ground rod system in a bed to achieve the design ground resistance.

B. The ground system shall be continuous with all structures on a common ground. This can be accomplished by bonding all conduits together and bonding to the ground bus at each motor control center. Bonding jumpers shall be required at all pull boxes, and at all motor casings. A separate grounding conductor shall be pulled in all conduits in addition to wire counts shown on Drawings.

C. Where multiple rods are driven, they shall be separated by at least 10 feet to assure maximum effect.

D. Ground resistance between ground and absolute earth shall not exceed 5 ohms. <UK - 0.5 ohms>.

E. All grounding and grounding electrode systems shall be as required by the NEC as for types of electrodes utilized and sizing of grounding conductor to service equipment from the electrode system. These shall include footer rebar, buried metal water pipe, buried bare copper conductor, etc.

F. All grounding electrode system connections shall be made using exothermic welds, Cadweld, or equal. No splices are allowed in the grounding electrode conductor.

G. [DELETE IF NOT USING AN ISOLATED GROUND] An insulated, isolated ground shall be run from the service entrance to panels serving computers.

H. Should ground rods be impractical for use due to rocky conditions, then grounding electrode plates may be used after acceptance by the Engineer on a case by case basis.

3.2 EQUIPMENT GROUNDING

A. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:

1. Feeders and branch circuits.
2. Lighting circuits.
3. Receptacle circuits.
4. Single-phase motor and appliance branch circuits.
5. Three-phase motor and appliance branch circuits.
6. Flexible raceway runs.
7. Armored and metal-clad cable runs.
8. Busway Supply Circuits: Install insulated equipment grounding conductor from grounding bus in the switchgear, switchboard, or distribution panel to equipment grounding bar terminal on busway.
9. Computer and Rack-Mounted Electronic Equipment Circuits: Install insulated equipment grounding conductor in branch-circuit runs from equipment-area power panels and power-distribution units.
10. X-Ray Equipment Circuits: Install insulated equipment grounding conductor in circuits supplying x-ray equipment.

B. Poles Supporting Outdoor Lighting Fixtures: Install grounding electrode and a separate insulated equipment grounding conductor in addition to grounding conductor installed with branch-circuit conductors.

3.3 FIELD QUALITY CONTROL

A. Testing

1. The Contractor shall provide all labor, tools, instruments, and materials as necessary to perform testing of the grounding electrode system. Results shall be submitted in writing to the Engineer. The testing shall be done to determine the effectiveness of the selected grounding scheme and to see that it conforms with resistance specified (5 ohms maximum).

2. The testing should be done using a fall-of-potential method test at the point of grounding electrode conductor connection to main power distribution equipment and at each separately derived system or MCC. The test shall be performed no sooner than 48 hours after a rainfall event.

3. The written report should contain the following information:

   a. Type of ground scheme used, i.e., building steel, driven rod, mat, etc.

   b. Type of instrument used.

      1) Manufacturer
      2) Model Number
      3) Confirm fall-of-potential test
      4) *Serial Number
      5) *Where instrument was obtained

*These 2 items are required so that the same instrument may be utilized should reproduction of the test be necessary due to unsatisfactory readings/instrument miscalibration.

c. Ground resistance readings obtained at various test distances.

d. Ground resistance/distance curve.

e. Value of Grounding Electrode Resistance at knee of curve.

f. Sketch showing setup of instrumentation and location of grounding electrode and test probes.

g. Proposed method to achieve the specified resistance, should an unacceptable reading be obtained.

h. Ground resistance readings obtained (if applicable) after modifications incorporated.

3.4 GROUND ENHANCEMENT MATERIAL

A. Where indicated on the Drawings or as deemed necessary by the Contractor to achieve design grounding electrode system resistance, a ground enhancement material shall be utilized, in accordance with manufacturer's recommendations.

B. The ground enhancement material must be permanent and maintenance free (no recharging with salts or chemicals which may be corrosive) and maintains its earth resistance for the life of the system. It must set up firmly and not dissolve or decompose, or otherwise pollute the soil or local water table. The material shall be capable of being applied dry or in a slurry form, and shall reduce resistance by at least 40 percent.

C. Basic components of this material shall be carbon, hydraulic cements, and hydrous aluminum silicates. Minimum 4-inch diameter holes shall be used with ground rod installations, with depth 6" shorter than length of rod, completely filled with the material. Trenches for grounding electrode conductor shall also utilize this material the full length from electrode to building, in accordance with manufacturer installation recommendations, except trench depth shall allow buried conductor to be at least 2'-6" deep.

D. Ground enhancement material shall be GEM by Erico Products, Powerfill by Cathodic Engineering Equipment Company, or equal.

END OF SECTION

SECTION 26 05 29 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Hangers and supports for electrical equipment and systems.

1.2 PERFORMANCE REQUIREMENTS

A. Design supports for multiple raceways capable of supporting combined weight of supported systems and its contents.

1.3 ACTION SUBMITTALS

A. Product Data: For steel slotted support systems.

1.4 QUALITY ASSURANCE

A. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

A. Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Allied Tube & Conduit.
b. Cooper B-Line, Inc.; a division of Cooper Industries.
c. ERICO International Corporation.
d. GS Metals Corp.
e. Thomas & Betts Corporation.
f. Unistrut; Tyco International, Ltd.

2. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
3. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
4. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
5. Channel Dimensions: Selected for applicable load criteria.

B. Raceway and Cable Supports: As described in NECA 1 and NECA 101.

C. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.

D. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.

E. Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.

F. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:

1. Do not use drilled or powder-actuated fasteners for attaching accessory items to precast, prestressed units. Attachment to the precast plank shall be located around tendon layout and shall incorporate fasteners designed for use in hollow concrete and that do not penetrate the concrete more than ¾" (such as drop-in anchors).

2. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened Portland cement concrete with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.

    a. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    b. Subject to compliance with requirements, provide products by one of the following:

        1) Cooper B-Line, Inc.; a division of Cooper Industries.
        2) Empire Tool and Manufacturing Co., Inc.
        3) Hilti Inc.
        4) ITW Ramset/Red Head; a division of Illinois Tool Works, Inc.

3. Concrete Inserts: Steel or malleable-iron, slotted support system units similar to MSS Type 18; complying with MFMA-4 or MSS SP-58.
4. Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
6. Toggle Bolts: All-steel springhead type.
7. Hanger Rods: Threaded steel.

PART 3 - EXECUTION

3.1 APPLICATION

A. Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.

B. Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for EMT, required by NFPA 70. Minimum rod size shall be 1/4 inch (6 mm) in diameter.

C. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted support system, sized so capacity can be increased by at least 25percent in future without exceeding specified design load limits.

1. Secure raceways and cables to these supports with two-bolt conduit clamps.

D. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch (38-mm) and smaller raceways serving branch circuits and communication systems above suspended ceilings and for fastening raceways to trapeze supports.

3.2 SUPPORT INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article.

B. Raceway Support Methods: In addition to methods described in NECA 1, EMT may be supported by openings through structure members, as permitted in NFPA 70.

C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb (90 kg).

3.3 INSTALLATION OF FABRICATED METAL SUPPORTS

A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.

B. Field Welding: Comply with AWS D1.1/D1.1M..

3.4 PAINTING

A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.

1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils (0.05 mm).

B. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION

SECTION 26 05 33 - RACEWAYS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. This section of the Technical Specifications includes all raceways for accommodation of electrical conductors, communications conductors, sleeves for underground electrical installations, conduit stubs for future installations, fittings and accessories.

B. All raceways and fittings shall be painted to match existing or surrounding surfaces except in mechanical spaces.

1.2 SUBMITTALS

A. Submit product data on all raceways and accessories.

B. See Section 26 00 00 for additional instructions for submittals.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Tubular Raceways

1. Steel, Galvanized, Electric-Metallic-Tubing (EMT)

    a. VAW
    b. Triangle
    c. Allied Tube & Conduit Corp
    d. Wheatland Tube Co.
    e. or equal.

2. Plastic (PVC); Type 40 (or Schedule 40); Type 80 (or Schedule 80) (Heavy -Wall)

    a. Robin-Tech
    b. Carlon
    c. or equal.

3. Steel, Galvanized, Rigid, Heavy-Wall, Threaded

    a. Wheatland Tube Co.
    b. Triangle
    c. Allied Tube & Conduit Corp.
    d. or equal.

4. Flexible Metal Conduit

a. AFC
b. Alflex
c. or equal.

5. Liquidtight Flexible Metal Conduit

a. Southwire
b. Superflex
c. Carlon
d. or equal.

6. PVC Coated Rigid Steel

a. Perma Cote
b. Robroy
c. Korkap
d. or equal.

B. Raceway Fittings

1. Conduit fittings

a. Crouse-Hinds
b. Appleton
c. OZ Gedney
d. or equal.

2. Non-metallic conduit fittings

a. Robin-Tech
b. Carlon
c. Scepter
d. or equal.

3. PVC coated rigid steel fittings shall be provided by the conduit manufacturer.

4. Flexible conduit fittings

a. Raco
b. Thomas & Betts
c. OZ Gedney
d. or equal.

C. All raceways shall be marked with the manufacturer's name or trademark as well as type of raceway and size. This marking shall appear at least once every 10 feet and shall be of sufficient durability to withstand the environment involved. All raceways shall be furnished and installed as outlined under Part 3 of this Specification.

2.2 MATERIALS

A. Electrical Metallic Tubing (EMT)

1. EMT shall be high grade steel with an exterior galvanized coating of zinc applied uniformly by the electro-galvanized process. The interior surface shall be uniformly

coated with aluminum lacquer or enamel. After galvanizing, it shall be dipped in a chromic acid bath to chemically form a protective coating of zinc chromate. The conduit shall conform to UL standards and be listed as well as labeled by UL.

B. Polyvinychloride (PVC) Conduit

1. PVC conduit and fittings shall be Schedule 40, 80 heavy wall, as indicated in these Specifications manufactured to conform to UL standards. It shall be listed and labeled by UL. It shall have at least the same temperature rating as the conductor insulation. Expansion joints shall be used as recommended by the manufacturer in published literature. PVC systems shall be 90 degrees Celsius minimum UL rated, have a tensile strength of 7,000 psi @ 73.4 degrees Fahrenheit, flexural strength of 11,000 psi and compressive strength of 8,000 psi.

C. Rigid Steel Conduit

1. Rigid steel conduit and fittings shall be of mild steel piping, galvanized inside and out, and shall conform to UL standards. The conduit and fittings hall be listed and labeled by UL as well. The galvanized coating of zinc shall be of uniform thickness applied by the hot-dipped process, and shall be applied also to the threads. It shall be further dipped in a chromic acid bath so as to chemically form a corrosion resistant protective coating of zinc chromate which has a characteristic yellow-green color. Each piece of conduit shall be straight, free from blisters and other defects, cut square, and taper reamed. It shall be delivered with plastic protectors on the threads.

D. Flexible Conduit

1. Flexible metallic conduit shall be constructed from flexibly or spirally wound elecro-galvanized steel. Connections shall be by means of galvanized malleable iron squeeze type fittings, or tomic twist-in type in sizes not exceeding 3/4 inch. Liquidtight conduit shall be light gray in color and have sealtight fittings, type UA.

E. Manufactured Wiring Systems

1. Manufactured wiring systems shall be acceptable for lighting in areas with accessible finished ceilings. The system shall conform to NEC Article 604 and be UL 183 listed. The system shall be Lithonia Reloc system 840 or equal.

F. Conduit Fittings

1. Rigid Steel and IMC Conduit Fittings

a. Standard threaded couplings, locknuts, bushings, and elbows made only of steel or malleable iron are acceptable. [Integral retractable type IMC couplings are acceptable also.]

b. Locknuts: Bonding type with sharp edges for digging into the metal wall of an enclosure.

c. Bushings: Metallic insulating type, consisting of an insulating insert molded or locked into the metallic body of the fitting. Bushings made entirely of metal or nonmetallic material are not permitted.

d. Erickson (union-type) and set screw type couplings: Approved for use in concrete are permitted or use to complete a conduit run where conduit is installed in

concrete. Use set screws of case-hardened steel with hex head and cup point to firmly seat in conduit wall for positive ground. Tightening of set screws with pliers is prohibited.

e. Sealing fittings: Threaded cast iron type. Use continuous drain type sealing fittings to prevent passage of water vapor. In concealed work, installed fittings in flush steel boxes with blank cover plates having the same finishes as that of other electrical plates in the room.

f. Fittings for PVC coated rigid conduit shall be manufactured by the maker of the conduit.

2. Electrical Metallic Tubing Fittings

a. Only material of steel or malleable iron is acceptable.

b. Couplings and connectors: Concrete tight and rain tight, with connectors having insulated throats. Use gland and ring compression type couplings and connectors for all conduit sizes.

c. Set screw indent type connectors or couplings are prohibited.

d. Die-cast or pressure-cast zinc-alloy fittings or fittings made of “pot metal” are prohibited.

3. Expansion and Deflection Couplings

a. Accommodate 1.9 cm (0.75 inch) deflection, expansion, or contraction in any direction, and allow 30-degree angular deflections.

b. Include internal flexible metal braid sized to guarantee conduit ground continuity and fault currents in accordance with UL, and the NEC code tables for ground conductors.

c. Watertight, seismically qualified, corrosion-resistant, threaded for and compatible with rigid or intermediate metal conduit.

d. Jacket: Flexible, corrosion-resistant, watertight, moisture and heat resistant molded rubber material and stainless-steel jacket clamps.

G. Corrosion Coating – Shall be either epoxy coating or adhesive tape:

1. Epoxy Coating – Carboline 888 epoxy, or equal.

2. Adhesive Tape – Polyken 826 black corrosion control tape, or equal.

PART 3 - EXECUTION

3.1 PREPARATION

A. Exterior underground metallic conduits shall be degreased, pretreated, and coated with 2 coats of epoxy coating or wrapped with adhesive corrosion control tape. Other finishes may be acceptable upon the Engineer’s review.

3.2 INSTALLATION

A. Conduit

1. See Division 27 for horizontal and backbone cable pathway installation requirements. No telecommunication conduits shall run under slab unless noted otherwise.

2. Conduit shall not be installed in wall cavities between face brick and block. The only time this will be allowed is for serving an exterior receptacle or light fixture.

3. All conduit installed outdoors shall be installed to allow an air gap between the conduit and adjoining surface such as concrete or wall, etc. Provide malleable iron spacers, or galvanized steel strut for support. This is required for ALL conduit materials.

4. All conduits shall have an insulated ground wire pulled to all equipment and receptacles.

5. All raceway runs are shown diagrammatically to outline the general routing of the raceway. The installation shall be made to avoid interference with pipes, ducts, structural members or other equipment. Should structural or other interference prevent the installation of the raceways, or setting of boxes, cabinets, or the electrical equipment, as indicated in the Drawings, deviations must be approved by the Engineer, and after approval, shall be made without additional charges and shown on the Record Drawings.

6. Fire Stop: Where conduits, wireways, and other electrical raceways pass through fire partitions, fire walls, smoke partitions, or floors, install a fire stop that provides an effective barrier against the spread of fire, smoke and gases, with UL listed sealants only. Completely fill and seal clearances between raceways and openings with the fire stop material. See [Section 21 00 00] for complete fire stop requirements.

7. Assure conduit installation does not encroach into the ceiling height head room, walkways, or doorways.

8. No conduit shall be run exposed across roofs without first obtaining permission from the Engineer.

9. Conduit may be run inside concrete slabs as long as the slab is at least 6-inches thick and conduit will have at least 1 ½-inches of cover on both sides.

10. No conduit shall be run exposed across floors.

11. Electrical conduits and/or equipment shall be rigidly supported. Anchors used shall be metallic expansion type, or if appropriate to prevent spalling concrete, epoxy set type.

12. Contractor shall provide all necessary supports in accordance with KBC Seismic requirements.

13. All conduit shall be installed in a first class workmanship manner. It shall be installed in horizontal and vertical runs in such a manner as to ensure against trouble from the collection of trapped condensation and shall be arranged so as to be devoid of traps wherever possible. Special care shall be used in assuring that exposed conduit runs are parallel or perpendicular to walls, structural members, or intersections of vertical planes and ceilings. No open wiring is allowed.

14. Fittings or symmetrical bends shall be required wherever right angle turns are made in exposed work. Bends and offsets shall be avoided wherever possible, but where

necessary, they shall be made with an approved conduit bending machine. All conduit joints shall be cut square, reamed smooth and drawn up tight, using couplings intended for the purpose.

15. Conduits shall be securely fastened to all sheet metal outlets, junction and pull boxes with double galvanized locknuts and insulating-grounding bushings as required by the NEC. Conduit crossings in insulating roof fill will require both conduits to be secured to the roof deck, and these crossings can only be made where the insulating fill is a minimum of 3 inches deep. Runs of exposed conduit shall be supported in accordance with the NEC using cast aluminum or malleable iron one-hole pipe straps with spacers to provide an air space behind the conduit. Stainless steel minerallaac, one-piece conduit clamps shall be acceptable where located such that building occupants are not in danger of inadvertent contact, since this type fitting has several sharp edges. In general terms, they may be considered in areas such as on or above ceilings, or high on walls. All conduit in walls and slabs shall be securely braced, capped (wooden plugs are prohibited), and fastened to the forms to prevent dislodgement during vibration and pouring of concrete.

16. During construction, all conduit work shall be protected to prevent lodgment of dirt, plaster or trash in conduits, fittings or boxes. Conduits which have been plugged shall be entirely freed of accumulations or be replaced. All conduits in floors or below grade shall be swabbed free of debris and moisture before wires are pulled. Crushed or deformed conduit shall not be permitted.

17. All open conduit work through floor slabs shall be made watertight by grouting around conduit. Provide coating where conduit comes in contact with all concrete.

18. Where [IMC or] GRS conduit penetrates a floor slab the conduit shall be painted with 2 coats of Carboline 888 epoxy paint or equal to a point 6 inches above the penetration.

19. All underground conduits entering a building shall be sealed against water/condensate entering around the conductors. Sealant may be silicone rubber based caulk.

20. In certain situations, conduit expansion joints shall be required to ensure against conduit and/or cable damage due to settling or thermal expansion and contraction. These expansion joints shall be required where required by the manufacturer or the Contract Drawings and shall be installed per manufacturer’s instructions.

21. All conduit work in the finished space of each new structure shall be concealed except for conduits to lighting fixtures in buildings with precast roof slabs, or excepted as noted on the Contract Drawings. All conduit work below ground floor level in each structure shall be exposed. Conduits entering from underground into buildings shall be watertight through the wall, both inside and outside.

22. Where PVC conduit is installed, underground transition shall be made to GRS conduit at bends where wire pulling could cut conduit.

23. Aluminum conduit shall not be used underground or placed in concrete slabs, unless it is UL listed for the purpose and factory pre-coated.

24. Conduit stubs, for future use, extended through outside walls shall be capped with threaded pipe caps and coated to prevent corrosion. Stubs shall extend 5 feet beyond the walls from which they are stubbed unless otherwise indicated on the Contract Drawings.

25. All metal raceway systems shall be grounding conductive, solidly bonded throughout and grounded in accordance with NEC requirements and/or as noted on the Contract Drawings. In addition, all raceway systems shall be provided with separate grounding conductors.

26. Minimum conduit size shall be 3/4 inch.

27. The following table shows the minimum burial depth required for all exterior conduit or cable:

Direct Burial Cable (Suitable for that use)	30"
Rigid Metal Conduit	30"
Schedule 80 PVC	30"
Schedule 40 PVC or fiber duct, Concrete Encased (for low voltage service entrance)	30"

28. Wire pulling shall be facilitated by the use of a UL approved pulling compound in pulls over 30 feet in length or where there are 2 or more 90 degree bends. Only polypropylene, nylon, or manila pulling ropes will be permitted. Standard industry recognized wire pulling equipment shall be used.

29. Areas of use for each type of conduit:

Buildings - Interior	Schedule 40/80 PVC	PVC Coated GRS	EMT	GRS	IMC	Aluminum
Building Interior (Concealed)	X*		X	X	X	X
Building Interior (Exposed)			X	X	X	X
Exterior Underground						
Underground Circuits	X			X	X	

3.3 SERVICE ENTRANCE

A. Conductors and terminations for service entrances shall be furnished and installed by the Contractor. Voltage, phase, and number of wires shall be as shown on the Drawings. Clearances for overhead entrance wires shall be per Power Company, NEC, and NESC requirements.

END OF SECTION

SECTION 26 05 34 - BOXES

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Outlet and junction boxes shall be furnished and installed where indicated on the Contract Drawings, and\or as required by the work in accordance with the NEC.

1.2 SUBMITTALS

A. Submit product data on all boxes.

B. See Section 26 00 00 for additional instructions for submittals.

PART 2 - PRODUCT

2.1 ACCEPTABLE MANUFACTURERS

A. Boxes - “Queen,” “Wiegmann,” “Appleton,” “Raco,” “Bauers,” “Crouse-Hinds,” “Hoffman,” “Robroy Industries,” “Cloud Concrete Products,” “Steel City,” “Carlon,” “Sedco,” or equal.

B. Floor Boxes, Projector Boxes, Fittings, Poke-throughs – “Legrand, Wiremold”, “Hubbell”, “OZ Gedney”, “FSR”, or equal.

2.2 GENERAL

A. All junction and/or pull boxes for dry (non-corrosive) areas shall be of code gauge sheet metal construction, of the inside dimensions as required by code, with covers.

B. Junction and/or pull boxes for wet or damp locations shall be cast metal, rust and corrosion resistant (NEMA 4X), with at least 5 ½ full threads for each (bossed) conduit opening, and shall be suitable for flush or surface mounting as required with drilled external, cast mounting extensions (bossed to provide at least 1/8" between back of box and mounting surface for drainage). Box covers shall be hinged or cap screw retained as required, of the same material as the box and provided with stainless steel (rustproof) hardware.

C. Junction boxes for out-of-doors use, not mounted in concrete may be sheet metal (NEMA 4X), waterproof, rustproof, rain and sleetproof, with hinged covers and latches and provided means of locking by means of keyed locks, tamper-resistant screws or padlocking as required and with clamping cap-screws top and bottom door edges to provide firm contact with gasketing. All gaskets shall be molded (unbroken) neoprene or butyl rubber.

D. NEMA 4X junction and/or pull boxes may be stainless steel, if called for on the Contract Drawings; or non-metallic or cast aluminum.

E. Underground junction or pull boxes or handholes shall be constructed of reinforced concrete cast-in-place or pre-fabricated as detailed on the Contract Drawings. Strength of manholes,

handholes, and pullboxes and their frames and covers shall conform to the requirements of IEEE C2. Precast-concrete manholes shall have the required strength established by ASTM C 478, ASTM C 478M. Frames and covers shall be made of gray cast iron and a machine-finished seat shall be provided to ensure a matching joint between frame and cover. Cast iron shall comply with ASTM A 48/A 48M, Class 30B, minimum. Handholes for low voltage cables installed in parking lots, sidewalks, and turfed areas shall be fabricated from an aggregate consisting of sand and with continuous woven glass strands having an overall compressive strength of at least 10,000 psi and a flexural strength of at least 5,000 psi. Pullbox and handhole covers in sidewalks and turfed areas shall be of the same material as the box. Concrete pullboxes shall consist of precast reinforced concrete boxes, extensions, bases, and covers.

2.3 Wall Boxes

A. Wall Box
1. Available in 2-gang or 4-gang
2. Suitable for new and old work applications.
3. Stamped steel back box with minimum 3 ½" inches behind devices.
4. Removable modules, storage module for active AV equipment.
5. Include low-profile cover and trim flange.
6. Built in tunnel and feed through capability
7. Accepts standard size wall plates.
8. Finished interior
9. UL Listed
10. Box shall be Legrand Evolution Series Wall Box, or equivalent

PART 3 - EXECUTION

3.1 INSTALLATION, APPLICATION, AND ERECTION

A. General

1. Boxes shall be installed in the locations shown on the Contract Drawings. The Contractor shall study the general building plans in relation to the space surrounding each outlet, in order that his work may fit the other work required by these Specifications. When necessary, the Contractor shall relocate devices so that when fixtures or other fittings are installed, they will be symmetrically located according to room layout and will not interfere with other work or equipment.

2. All supports for outlet boxes shall be furnished and installed by the electrical trades.

B. Concealed Work

1. All outlet boxes shall be 4" x 4" standard galvanized steel type at least 1½ inches deep. Exceptions shall be noted on the Contract Drawings. Provide two inch single plaster ring for single devices in all CMU walls.

C. Exposed Work

1. Outlet or junction boxes for use with exposed steel conduit shall be cast steel. In dry areas sheet steel with rounded corners, made for the purpose.

2. Outlet or junction boxes for use with exposed aluminum conduit shall be copper free, cast aluminum type.

D. Interior Pull Boxes

1. Interior pull boxes are not shown but shall be used as needed. Pull box types are as follows:

a. Interior pull boxes in dry areas shall be of code gauge steel of not less than the minimum required by the NEC and shall be provided with hinged covers.

E. Manholes, Handholes, and Pullboxes - Exterior Underground

1. General

a. Manholes, handholes, and pull boxes for exterior underground work are shown on the Contract Drawings and are the minimum number required. Others may be added at the Contractor's option, but no extra pay shall be allowed. See detail on the Contract Drawings.

2. Handholes

a. Handholes shall be located approximately as shown. Handholes shall be of the type noted on the drawings and shall be constructed in accordance with the details shown.

3. Pullboxes

a. Pullbox tops shall be flush with sidewalks or curbs or placed 1/2 inch above surrounding grades when remote from curbed roadways or sidewalks. Covers shall be marked "Low-Voltage," "Communications," or "Instrumentation" as applicable and provided with 2 lifting eyes and 2 hold-down bolts. Each box shall have a suitable opening for a ground rod. Conduit, cable, ground rod entrances, and unused openings shall be sealed with mortar.

4. Ground Rods

a. A ground rod shall be installed at the manholes, handholes and pullboxes. Ground rods shall be driven into the earth before the manhole floor is poured so that approximately 4 inches of the ground rod will extend above the manhole floor. When precast concrete manholes are used, the top of the ground rod may be below the manhole floor and a No. 1/0 AWG ground conductor brought into the manhole through a watertight sleeve in the manhole wall.

F. Openings in Electrical Boxes

1. All openings in electrical equipment, enclosures, cabinets, outlet and junction boxes shall be by means of welded bosses, standard knockouts, or shall be sawed, drilled, or punched with tools specially made for the purpose. The use of a cutting torch is prohibited. Unused openings shall be plugged per the NEC.

END OF SECTION

SECTION 26 05 53 - ELECTRICAL IDENTIFICATION

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Provide electrical identification of equipment, boxes, and conductors as specified herein.

1.2 SUBMITTALS

A. Submit product data on self-adhesive signs and wire labels.

B. See Section 26 00 00 for additional instructions for submittals.

PART 2 - PRODUCT

2.1 MANUFACTURERS

A. Brady, Safety Sign Company, Seton or equal.

2.2 EQUIPMENT AND BOX LABELS

A. Individual wall mounted starters, panelboards, and disconnect switches shall be labeled with vinyl self-adhesive signs that warn of “High Voltage” (state the specific voltage). The type of labels to be used shall have orange as the basic color to conform to OSHA requirements, letters shall be black. The labels shall be of proper size to fit flatly on the surface of the enclosure to make for a neat appearance and not interfere with the operating function of the device to which it is attached.

B. Provide all appropriate Arc-Flash warning labels in accordance with the National Electric Code.

C. Provide a label on the Main Distribution Panel that indicates the available fault current (L to L) and (L to G) as determined by the system study and in accordance with the National Electric Code.

D. Labels for all exterior equipment and panelboards shall be sun-resistant, weather resistant engraved laminated acrylic or melamine label.

2.3 CONDUCTOR LABELS

A. Shall be machine printed, heat-shrink type.

PART 3 - EXECUTION

3.1 EQUIPMENT LABELING

A. Provide labels for each of the following:

1. Panelboards as described below.
2. Enclosures and electrical cabinets.
3. Access doors and panels for concealed electrical items.
4. Switchgear.
5. Switchboards.
6. Enclosed switches.
7. Enclosed circuit breakers.

B. Branch circuits in lighting panels shall be typed on a card suitable for the card frame furnished with the panel. The card shall bear the panel designation listed on the Contract Drawings where this information is given, as well as indicate what each circuit controls. The Contractor shall retype new cards for all existing panelboards modified.

C. All starters, feeder units in panelboards, disconnects, instruments, etc. shall be marked to indicate the motor, outlet, or circuit they control. Marking is to be done with engraved laminated nameplates and shall bear the designation shown on the Contract Drawings where this information is given. Nameplates shall be fastened to equipment with stainless steel screws, minimum of one each side. In no way shall the installation of mounting screws void the NEMA enclosure rating of the equipment in which they are installed. Nameplate background color shall be white, with black engraved letters, unless otherwise noted.

D. Panelboards shall be labeled with an engraved laminated acrylic or melamine label. Labels shall be punched or drilled for screw mounting. Label shall be black with white letters for panels fed from normal power and red with white letters for panels fed from the emergency system. Each label shall contain the following information:

1. Line 1: Name (i.e. PANEL A)
2. Line 2: Voltage/Phase (i.e. 480V, 3 PH)
3. Line 3: Panel from which this panel is fed. (i.e. FROM MDP or FROM MDP VIA XFMR)

E. Labels for switchgear breakers shall be engraved laminated acrylic or melamine label. Label shall be black with white letters.

3.2 BOX LABELING

A. Label each box with the voltage and circuit numbers contained with permanent marker in legible penmanship.

3.3 CONDUCTOR LABELING

A. Label each conductor to match the circuit number or manufacturer’s shop drawing wiring diagrams.

END OF SECTION

SECTION 26 24 16 - PANELBOARDS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes distribution panelboards and lighting and appliance branch-circuit panelboards.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For each panelboard and related equipment.

1. Include dimensioned plans, elevations, sections, and details. Show tabulations of installed devices, equipment features, and ratings.
2. Detail enclosure types and details for types other than NEMA 250, Type 1.
3. Detail bus configuration, current, and voltage ratings.
4. Short-circuit current rating of panelboards and overcurrent protective devices.
5. Include evidence of NRTL listing for series rating of installed devices.
6. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
7. Include wiring diagrams for power, signal, and control wiring.
8. CIRCUIT BREAKERS MUST BE PLACED ON CIRCUITS EXACTLY AS INDICATED IN THE PANEL SCHEDULES ON THE DRAWINGS.

1.3 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

B. Panelboard schedules for installation in panelboards.

1.4 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

1.5 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with:
1. NEMA PB 1
2. UL 67 – Panelboards
3. UL 50 – Cabinets and Boxes
4. Fed. Spec. W-P-115C
5. UL 98 – Fusible Switches

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace transient voltage suppression devices that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR PANELBOARDS

A. Enclosures: Flush- and surface-mounted cabinets.

1. Rated for environmental conditions at installed location.

a. Indoor Dry and Clean Locations: NEMA 250, Type 1.

2. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover flush lock with two keys.
3. Directory Card: Inside panelboard door, mounted in transparent card holder.

B. Incoming Mains Location: Top and bottom.

C. Phase, Neutral, and Ground Buses: Tin-plated aluminum

D. Conductor Connectors: Suitable for use with conductor material and sizes.

E. Service Equipment Label: NRTL labeled for use as service equipment for panelboards with one or more main service disconnecting and overcurrent protective devices.

F. Future Devices: Mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.

G. Panelboard Short-Circuit Current Rating:
1. If not indicated on plan, provide minimum rating of 22kAIC.
2. Fully rated or series rated to interrupt symmetrical short-circuit current available at terminals.

2.2 DISTRIBUTION PANELBOARDS

A. Subject to compliance with requirements, provide comparable product by one of the following:
1. Eaton
2. Square D; a brand of Schneider Electric.
3. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
4. Siemens Energy & Automation, Inc.

B. Panelboards: NEMA PB 1, power and feeder distribution type.

C. Doors: Secured with vault-type latch with tumbler lock; keyed alike.

D. Mains: As noted on the Drawings.

E. Branch Overcurrent Protective Devices: For Circuit-Breaker Frame Sizes 125 A and Smaller: Bolt-on circuit breakers.

F. Branch Overcurrent Protective Devices: For Circuit-Breaker Frame Sizes Larger Than 125 A: Bolt-on circuit breakers.

2.3 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

A. Subject to compliance with requirements, provide product indicated on Drawings by one of the following:
1. Eaton
2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
3. Siemens Energy & Automation, Inc.
4. Square D; a brand of Schneider Electric.

B. Panelboards: NEMA PB 1, lighting and appliance branch-circuit type.

C. Mains: As noted on the Drawings.

D. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.

E. Doors: Entire front trim hinged to box and with standard door within hinged trim cover flush lock with two keys.

F. Integral Transient Voltage Surge Suppressors – Refer to Section 26 43 13 Transient Voltage Surge Suppression for requirements of these units.

2.4 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

A. Subject to compliance with requirements, provide comparable product by one of the following:

1. Eaton
2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
3. Siemens Energy & Automation, Inc.
4. Square D; a brand of Schneider Electric.

B. Molded-Case Circuit Breaker (MCCB): Comply with UL 489, with interrupting capacity to meet available fault currents.

1. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
2. Adjustable Instantaneous-Trip Circuit Breakers: Magnetic trip element with front-mounted, field-adjustable trip setting.
3. Electronic trip circuit breakers with rms sensing; field-replaceable rating plug or field-replicable electronic trip; and the following field-adjustable settings:

    a. Instantaneous trip.
    b. Long- and short-time pickup levels.

c. Long- and short-time time adjustments.
d. Ground-fault pickup level, time delay, and I^2t response.

4. Current-Limiting Circuit Breakers: Frame sizes 400 A and smaller; let-through ratings less than NEMA FU 1, RK-5.
5. GFCI Circuit Breakers: Single- and two-pole configurations with Class A ground-fault protection (6-mA trip).
6. Ground-Fault Equipment Protection (GFEP) Circuit Breakers: Class B ground-fault protection (30-mA trip).
7. Arc-Fault Circuit Interrupter (AFCI) Circuit Breakers: Comply with UL 1699; 120/240-V, single-pole configuration.
8. Molded-Case Circuit-Breaker (MCCB) Features and Accessories:

a. Standard frame sizes, trip ratings, and number of poles.
b. Lugs: suitable for number, size, trip ratings, and conductor materials.
c. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and high-intensity discharge (HID) lighting circuits.
d. Ground-Fault Protection: Integrally mounted relay and trip unit with adjustable pickup and time-delay settings, push-to-test feature, and ground-fault indicator.
e. Shunt Trip: 120 -V trip coil energized from separate circuit, set to trip at 75 percent of rated voltage.
f. Handle Clamp: Loose attachment, for holding circuit-breaker handle in on position.

2.5 ACCESSORY COMPONENTS AND FEATURES

A. Portable Test Set: For testing functions of solid-state trip devices without removing from panelboard. Include relay and meter test plugs suitable for testing panelboard meters and switchboard class relays.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Receive, inspect, handle, store and install panelboards and accessories according to NEMA PB 1.1

B. Mount panelboard cabinet plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish and mating with back box.

C. Install overcurrent protective devices and controllers not already factory installed.

1. Set field-adjustable, circuit-breaker trip ranges.

D. Install filler plates in unused spaces.

E. Stub four 1-inch (27-GRC) empty conduits from panelboard into accessible ceiling space or space designated to be ceiling space in the future. Stub four 1-inch (27-GRC) empty conduits into raised floor space or below slab not on grade.

F. Arrange conductors in gutters into groups and bundle and wrap with wire ties.

G. Comply with NECA 1.

3.2 IDENTIFICATION

A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs complying with Section 260553 "Identification for Electrical Systems."

B. Create a directory to indicate installed circuit loads and incorporating Owner's final room designations. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.

C. Panelboard Nameplates: Label each panelboard with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

D. Device Nameplates: Label each branch circuit device in distribution panelboards with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.3 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Acceptance Testing Preparation:

1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
2. Test continuity of each circuit.

C. Tests and Inspections:

1. Perform each visual and mechanical inspection and electrical test per manufacturer, NEMA, and IEEE standards.
2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

D. Panelboards will be considered defective if they do not pass tests and inspections.

E. Prepare test and inspection reports, including a certified report that identifies panelboards included and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

END OF SECTION

SECTION 26 27 26 - WIRING DEVICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Receptacles, receptacles with integral GFCI, and associated device plates.
2. Weather-resistant receptacles.
3. Snap switches and wall-box dimmers.
4. Exhaust fan timer switch
5. Wall-switch and exterior occupancy sensors.
6. Motor Starter Switch

1.2 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Receptacles for Owner-Furnished Equipment: Match plug configurations.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: List of legends and description of materials and process used for pre-marking wall plates.

1.4 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

1.5 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:

1. Cooper Wiring Devices; Division of Cooper Industries, Inc. (Cooper).
2. Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
3. Leviton Mfg. Company Inc. (Leviton).

4. Pass & Seymour/Legrand (Pass & Seymour).
5. Legrand

B. Source Limitations: Obtain each type of wiring device and associated wall plate from single source from single manufacturer.

2.2 GENERAL WIRING-DEVICE REQUIREMENTS

A. Wiring Devices, Components, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

C. Devices that are manufactured for use with modular plug-in connectors may be substituted under the following conditions:

1. Connectors shall comply with UL 2459 and shall be made with stranding building wire.
2. Devices shall comply with the requirements in this Section.

2.3 STRAIGHT-BLADE RECEPTACLES

A. Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498, and FS W-C-596.

1. Products: Subject to compliance with requirements, provide one of the following:

a. Cooper; 5351 (single), CR5362 (duplex).
b. Hubbell; HBL5351 (single), HBL5352 (duplex).
c. Leviton; 5891 (single), 5352 (duplex).
d. Pass & Seymour; 5361 (single), 5362 (duplex).

2.4 GFCI RECEPTACLES

A. General Description:

1. Straight blade, feed-through type.
2. Comply with NEMA WD 1, NEMA WD 6, UL 498, UL 943 Class A, and FS W-C-596.
3. Include indicator light that shows when the GFCI has malfunctioned and no longer provides proper GFCI protection.
4. All exterior receptacles shall be weather-proof, GFCI rated and installed in metal, while-in-use enclosure.

B. Duplex GFCI Convenience Receptacles, 125 V, 20 A:

1. Products: Subject to compliance with requirements, provide one of the following:

a. Cooper; VGF20.
b. Hubbell; GFR5352L.
c. Pass & Seymour; 2095.
d. Leviton; 7590.

2.5 TOGGLE SWITCHES

A. Comply with NEMA WD 1, UL 20, and FS W-S-896.

B. Switches, 120/277 V, 20 A:

1. Products: Subject to compliance with requirements, provide one of the following:

1) Single Pole:
   a) Cooper; AH1221.
   b) Hubbell; HBL1221.
   c) Leviton; 1221-2.
   d) Pass & Seymour; CSB20AC1.

2) Two Pole:
   a) Cooper; AH1222.
   b) Hubbell; HBL1222.
   c) Leviton; 1222-2.

3) Three Way:
   a) Cooper; AH1223.
   b) Hubbell; HBL1223.
   c) Leviton; 1223-2.
   d) Pass & Seymour; CSB20AC3.

4) Four Way:
   a) Cooper; AH1224.
   b) Hubbell; HBL1224.
   c) Leviton; 1224-2.
   d) Pass & Seymour; CSB20AC4.

5) Pilot Light:
   a) Single pole, with neon-lighted handle, illuminated when switch is "off."

C. Key-Operated Switches, 120/277 V, 20 A:

1. Products: Subject to compliance with requirements, provide one of the following

   a. Cooper; AH1221L.
   b. Hubbell; HBL1221L.
   c. Leviton; 1221-2L.
   d. Pass & Seymour; PS20AC1-L.

2. Description: Single pole, with factory-supplied key in lieu of switch handle.

2.6 WALL PLATES

A. Single and combination types shall match corresponding wiring devices.

1. Plate-Securing Screws: Metal with head color to match plate finish.
2. Material for Finished Spaces: Smooth, high-impact thermoplastic Nylon Material for Unfinished Spaces: Smooth, high-impact thermoplastic Nylon.

B. Exterior weather-proof covers shall be metal, while-in-use type.

2.7 FINISHES

A. Device Color:

1. Wiring Devices Connected to Normal Power System: As selected by Architect unless otherwise indicated or required by NFPA 70 or device listing.

B. Wall Plate Color: For plastic covers, match device color.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1, including mounting heights listed in that standard, unless otherwise indicated. See mounting height table on the Drawings for device height requirements.

B. Coordination with Other Trades:

1. Protect installed devices and their boxes. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of boxes.
2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.
4. Install wiring devices after all wall preparation, including painting, is complete.

C. Conductors:

1. Do not strip insulation from conductors until right before they are spliced or terminated on devices.
2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.

D. Device Installation:

1. Replace devices that have been in temporary use during construction and that were installed before building finishing operations were complete.
2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, two-thirds to three-fourths of the way around terminal screw.
6. Use a torque screwdriver when a torque is recommended or required by manufacturer.
7. When conductors larger than No. 12 AWG are installed on 20-A circuits, splice No. 12 AWG pigtails for device connections.
8. Tighten unused terminal screws on the device.

9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device-mounting screws in yokes, allowing metal-to-metal contact.

E. Receptacle Orientation:

1. For vertically mounted receptacles below 48 inches install so ground pin is on top.

2. Install horizontally mounted receptacles so ground pin is on the right.

3. For vertically mounted receptacles above 48 inches install so ground pin is on bottom.

F. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

G. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

H. Installation of GFIC receptacles shall be wired to protect all downline receptacles if shown, whether indicated as GFIC or not.

3.2 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Test Instruments: Use instruments that comply with UL 1436.
2. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated digital-display indicators of measurement.

B. Tests for Convenience Receptacles:

1. Line Voltage: Acceptable range is 105 to 132 V.
2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is unacceptable.
3. Ground Impedance: Values of up to 2 ohms are acceptable.
4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
5. Using the test plug, verify that the device and its outlet box are securely mounted.
6. Tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

C. Wiring device will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports.

END OF SECTION

SECTION 26 27 28 - WIRE CONNECTIONS AND CONNECTING DEVICES

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Wire connection and connecting devices shall be as herein specified.

1.2 SUBMITTALS

A. Provide product data for each type of connecting device used. Provide table listing type of connection used for each application.

B. Cross out all non-used items on data sheets.

C. See Section 26 00 00 for additional instructions for submittals.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Connectors, Lugs, etc. - “T & B”, “Anderson”, “Burndy”, or equal.

B. Ties and Servings - “T & B”, “Panduit”, or equal.

C. Termination and splice connectors - “3M Scotch Lok”, “Anderson”, “T & B”, “Burndy”, or equal.

2.2 MATERIALS

A. Wire Splicing and Terminations (600 Volts and Below)

1. Electrical Terminal and Splice Connectors (#22 - #4 AWG)

a. Terminals and splice connectors from #22 - #4 AWG shall be compression types with barrels to provide maximum conductor contact and tensile strength. Performance, construction, and materials shall be in conformance with UL standards for wire connectors and rated for 600 volts and 105 degrees Celsius.

b. Connectors shall be manufactured from high conductivity copper and entirely tin plated. Terminal barrels shall be serrated on the inside surface and have a chamfered conductor entry. Terminals shall have funnel entry construction to prevent strand fold-back. All barrels shall be brazed seam or seamless construction.

c. Spade type terminals shall be sized for the appropriate stud and shall be locking type that snap firmly onto studs with a close fit for maximum retention. Spade type terminals shall be insulated with an insulation suitable for maintaining a high dielectric strength when crimped and be made from nylon, PVC, or equal.

2. Electrical Lugs and Connectors (#6 AWG - 1000 Kcmil)

    a. Lugs and splice connectors from #6 AWG - 1000 Kcmil shall be compression types with barrels to provide maximum conductor contact and tensile strength. They shall be manufactured from high conductivity copper and entirely tin plated. They shall be crimped with standard industry tooling. The lugs and connectors must have a current carrying capacity equal to the conductors for which they are rated and must also meet all UL requirements. All lugs above 4/0 AWG shall be 2-hole lugs with NEMA spacing. The lugs shall be rated for operation through 35 KV. The lugs shall be of closed end construction to exclude moisture migration into the cable conductor.

3. Twist-on Wire Connectors (#22 AWG - #10 AWG)

    a. All twist-on wire connectors must have a corrosion resistant spring that is free to expand within a steel jacket. The steel jacket must be insulated with a flexible vinyl jacket capable of withstanding 105 degrees Celsius ambient temperatures and of sufficient length to cover wires that are inadvertently over stripped.

    b. Each connector size must be listed by UL for the intended purpose and color coded to assure that the proper size is used on the wire combinations to be spliced. The connectors must be compatible with all common rubber and thermoplastic wire insulations.

4. Solderless/re-usable lugs shall be used only when furnished with equipment such as control panels, furnished by others, where specification of compression type lugs is beyond the Contractor's control. In the event their use is necessary, the Contractor shall be responsible for assuring that they are manufactured to NEMA standards, with proper number and spacing of holes and set screws.

PART 3 - EXECUTION

3.1 INSTALLATION, APPLICATION, & ERECTION

A. Insulation of Splices and Connections

1. Connections/splices with a smooth even contour shall be insulated with a conformable 7 mil thick vinyl plastic insulating tape which can be applied under all weather conditions and is designed to perform in a continuous temperature environment up to 105 degrees Celsius. The tape shall have excellent resistance to abrasion, moisture, alkalis, acids, corrosion, and varying weather conditions (including sunlight). The tape shall be equal to Scotch 33+ and shall be applied in conformance with manufacturer's recommendations. In addition, it shall be applied in successive half-lapped layers with sufficient tension to reduce its width to 5/8 of its original width. The last inch of the wrap shall not be stretched.

2. Connections/splices with irregular shapes or sharp edges protruding shall be first wrapped with 30 mil rubber tape to smooth the contour of the joint before being insulated with 33+ insulating tape specified in the previous paragraph. The rubber tape shall be high voltage (69 KV) corona-resistant based on self-fusing ethylene propylene rubber and be capable of operation at 130 degrees Celsius under emergency conditions. The tape must be capable of being applied in either the stretched or unstretched condition without any loss in either physical or electrical properties. The tape must not split, crack, slip, or flag when exposed to various environments. The tape must be compatible with all

synthetic cable insulations. The tape must have a dissipation factor of less than 5 percent at 130 degrees Celsius, be non-vulcanizing, and have a shelf life of a least 5 years. The rubber tape shall be applied in successive, half-lapped wound layers and shall be highly elongated to eliminate voids. Other manufacturer's recommendations on installation shall be adhered to. The rubber tape shall be equal to Scotch 23 or 130C electrical splicing tape.

3. Splices made in wet or damp locations shall be made submersible and watertight with special kits made for the application and compatible with type of cables employed.

B. Connection Make-up

1. Connections of lugs to bus bars, etc., shall be made up with corrosion resistant steel bolts having non-magnetic properties with matching nuts, and shall utilize a Belleville spring washer (stainless steel) to maintain connection integrity. Connections shall be torqued to the proper limits. Prior to bolting up the connection, electrical joint compound shall be brushed on the contact faces of the electrical joint.

2. All motor lead connections shall be made up to match the type of lead furnished on the motor. If the lead is not lugged, then twist-on wire connectors may be used. To prevent possible vibration problems, twist-on connectors shall be taped after installation.

3. All lugged motor lead connections (excluding motors over 200 horse-power) shall be made up using ring tongue compression lugs with proper size stainless steel nuts and bolts. Belleville type spring shall be used to maintain tension on the connections. The connections shall then be insulated using the procedure described for irregular shapes, utilizing rubber tape in conjunction with vinyl electrical tape.

4. At the time of final inspection, the Engineer may request the Contractor to disassemble 3 randomly selected motor lead connections in the Engineer's presence, to assure conformance with these Specifications.

5. The Contractor shall include all necessary tools, materials, and labor in his bid for disassembly of the connections and for remaking them with new insulating materials after inspection.

END OF SECTION

SECTION 26 28 16 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fusible switches.
2. Non-fusible switches.
3. Molded-case circuit breakers (MCCBs).
4. Enclosures.

1.2 DEFINITIONS

A. NC: Normally closed.

B. NO: Normally open.

C. SPDT: Single pole, double throw.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of enclosed switch, circuit breaker, accessory, and component indicated.

1.4 QUALITY ASSURANCE

A. Comply with NFPA 70.

B. All safety switches installed outdoors shall be heavy-duty Nema 3R type.

C. All safety switches installed in welding areas shall be heavy-duty, Nema 12 type.

PART 2 - PRODUCTS

2.1 NON-FUSIBLE SAFETY SWITCHES

A. Equipment shall be the same manufacturer as the Panelboard manufacturer accepted for this project.

B. Type HD, Heavy Duty, Single Throw, 600-V ac, 1200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.

C. Accessories:

1. Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
2. Neutral Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.
3. Lugs: Suitable for number, size, and conductor material.

2.2 MOLDED-CASE CIRCUIT BREAKERS

A. Equipment shall be the same manufacturer as the Panelboard manufacturer accepted for this project.

B. General Requirements: Comply with UL 489, NEMA AB 1, and NEMA AB 3, with interrupting capacity to comply with available fault currents.

C. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.

D. Electronic Trip Circuit Breakers: Field-replaceable rating plug, rms sensing, with the following field-adjustable settings:

1. Instantaneous trip.
2. Long- and short-time pickup levels.
3. Long- and short-time time adjustments.
4. Ground-fault pickup level, time delay, and I^2t response.

E. Current-Limiting Circuit Breakers: Frame sizes 400 A and smaller, and let-through ratings less than NEMA FU 1, RK-5.

F. Features and Accessories:

1. Standard frame sizes, trip ratings, and number of poles.
2. Lugs: Suitable for number, size, trip ratings, and conductor material.
3. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and high-intensity discharge lighting circuits.
4. Ground-Fault Protection: Comply with UL 1053; [integrally mounted, self-powered] type with mechanical ground-fault indicator; relay with adjustable pickup and time-delay settings, push-to-test feature, internal memory, and shunt trip unit; and three-phase, zero-sequence current transformer/sensor.
5. Shunt Trip: Trip coil energized from separate circuit, with coil-clearing contact.
6. Auxiliary Contacts: One SPDT switch Two SPDT switches with "A" and "B" contacts; "A" contacts mimic circuit-breaker contacts, "B" contacts operate in reverse of circuit-breaker contacts.
7. Alarm Switch: One NO contact that operates only when circuit breaker has tripped.

2.3 ENCLOSURES

A. Enclosed Switches and Circuit Breakers: NEMA AB 1, NEMA KS 1, NEMA 250, and UL 50, to comply with environmental conditions at installed location.

1. Indoor, Dry and Clean Locations: NEMA 250, Type 1.
2. Outdoor Locations: NEMA 250, Type 3R.

3. Kitchen Wash-Down Areas: NEMA 250, Type 4X, [stainless steel]

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install individual wall-mounted switches and circuit breakers with tops at uniform height unless otherwise indicated.

B. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.

C. Install fuses in fusible devices.

D. Comply with NECA 1.

3.2 IDENTIFICATION

A. Comply with requirements in Section 260553 "Identification for Electrical Systems."

1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
2. Label each enclosure with engraved metal or laminated-plastic nameplate.

3.3 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Acceptance Testing Preparation:

1. Test insulation resistance for each enclosed switch and circuit breaker, component, connecting supply, feeder, and control circuit.
2. Test continuity of each circuit.

C. Tests and Inspections:

1. Perform each visual and mechanical inspection and electrical test per manufacturer, NEMA, and IEEE requirements. Certify compliance with test parameters.
2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

D. Enclosed switches and circuit breakers will be considered defective if they do not pass tests and inspections.

E. Prepare test and inspection reports, including a certified report that identifies enclosed switches and circuit breakers and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

END OF SECTION

SECTION 265100 - INTERIOR LIGHTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Interior lighting fixtures, lamps, and ballasts.
2. Emergency lighting units.
3. Lighting fixture supports.

1.2 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color Rendering Index.

C. Fixture: See "Luminaire."

D. IP: International Protection or Ingress Protection Rating.

E. LED: Light-emitting diode.

F. Lumen: Measured output of lamp and luminaire, or both.

G. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of lighting fixture, arranged in order of fixture designation. Include data on features, accessories, and finishes.

B. Shop Drawings: Show details of nonstandard or custom lighting fixtures. Indicate dimensions, weights, methods of field assembly, components, features, and accessories. Product Certificates: For each type of ballast for bi-level and dimmer-controlled fixtures, from manufacturer.

1.4 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

B. Sample warranty.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For luminaires and lighting systems to include in operation and maintenance manuals.

1.6 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

C. Provide luminaires from a single manufacturer for each luminaire type.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide products by the following:

1. See Light Fixture Schedule for Manufacturers.

2.2 GENERAL REQUIREMENTS FOR LIGHTING FIXTURES AND COMPONENTS

A. Recessed Fixtures: Comply with NEMA LE 4 for ceiling compatibility for recessed fixtures.

B. Metal Parts: Free of burrs and sharp corners and edges.

C. Sheet Metal Components: Steel unless otherwise indicated. Form and support to prevent warping and sagging.

D. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally when secured in operating position.

E. Diffusers and Globes:

1. Acrylic Lighting Diffusers: 100 percent virgin acrylic plastic. High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.

a. Lens Thickness: At least 0.125 inch minimum unless otherwise indicated.
b. UV stabilized.

2.3 EXIT SIGNS

A. General Requirements for Exit Signs: Comply with UL 924; for sign colors, visibility, luminance, and lettering size, comply with authorities having jurisdiction.

B. Internally Lighted Signs:

1. Lamps for AC Operation: LEDs, 50,000 hours minimum rated lamp life.
2. Self-Powered Exit Signs (Battery Type): Integral automatic charger in a self-contained power pack.

a. Battery: Sealed, maintenance-free, nickel-cadmium type.
b. Charger: Fully automatic, solid-state type with sealed transfer relay.

c. Operation: Relay automatically energizes lamp from battery when circuit voltage drops to 80 percent of nominal voltage or below. When normal voltage is restored, relay disconnects lamps from battery, and battery is automatically recharged and floated on charger.
d. Test Push Button: Push-to-test type, in unit housing, simulates loss of normal power and demonstrates unit operability.
e. LED Indicator Light: Indicates normal power on. Normal glow indicates trickle charge; bright glow indicates charging at end of discharge cycle.

2.4 EMERGENCY LIGHTING UNITS

A. General Requirements for Emergency Lighting Units: Self-contained units complying with UL 924.

1. Battery: Sealed, maintenance-free, lead-acid type.
2. Charger: Fully automatic, solid-state type with sealed transfer relay.
3. Operation: Relay automatically turns lamp on when power-supply circuit voltage drops to 80 percent of nominal voltage or below. Lamp automatically disconnects from battery when voltage approaches deep-discharge level. When normal voltage is restored, relay disconnects lamps from battery, and battery is automatically recharged and floated on charger.
4. Test Push Button: Push-to-test type, in unit housing, simulates loss of normal power and demonstrates unit operability.
5. LED Indicator Light: Indicates normal power on. Normal glow indicates trickle charge; bright glow indicates charging at end of discharge cycle.
6. Wire Guard: Heavy-chrome-plated wire guard protects lamp heads or fixtures.
7. Integral Time-Delay Relay: Holds unit on for fixed interval of 15 minutes when power is restored after an outage.

2.5 LED LUMINAIRES AND DRIVERS

A. All Luminaires

1. Comply with IES LM-79-08 Approved Method for measuring lumen maintenance of LED light sources.
2. Comply with IES LM-80-08 Approved Method for electrical and photometric measurement of SSL product.
3. Comply with In-Situ testing for more reliable results.
4. LED’s shall be Restriction of Hazardous Substances Directive (RoHS) compliant.
5. LED arrays shall be sealed, high performance, long life type; minimum 70% rated output at 50,000 hours.
6. LED luminaires shall deliver a minimum of 60 lumens per watt.
7. Drivers shall be solid state and accept 120 through 277 VAC at 60 Hz input.
8. The LED light source shall be fully dimmable with use of compatible dimmers switch designated for low voltage loads.
9. LED color temperatures: as noted.
10. Luminaires shall have internal thermal protection.
11. Luminaires shall not draw power in the off state. Luminaires with integral occupancy, motion, photo-controls, or individually addressable luminaires with external control and intelligence are exempt from this requirement. The power draw for such luminaires shall not exceed 0.5 watts when in the off state.
12. Color spatial uniformity shall be within .004 of CIE 1976 diagram.
13. Color maintenance over rated life shall be within .007 of CIE 1976.
14. Indoor luminaires shall have a minimum CRI of 80.

15. Luminaire manufacturers shall adhere to device manufacturer guidelines, certification programs, and test procedures for thermal management

B. Power Supplies and Drivers

1. Power Factor: 0.90 or higher
2. Maximum driver case temperature not to exceed driver manufacturer recommended operation temperature.
3. Output operating frequency: 60Hz.
4. Interference: EMI and RFI compliant with FCC 47 CFR Part 15.
5. Total Harmonic Distortion Rating: 20% Maximum.
6. Meet electrical and thermal conditions as described in LM-80 Section 5.0.
7. Primary Current: Confirm primary current with Drawings.
8. Secondary Current: Confirm secondary current specified by individual luminaire manufacturers.
9. Compatibility: Certified by manufacturer for use with individually specified luminaire and individually specified control components.
10. Solid-state control components to be integral or external per each specified luminaire.
11. Solid-state control components to be integral or external per each specified luminaire. Remote control gear to be enclosed in Class 1, Class 2, or NEMA 3R enclosures as required.

2.6 LIGHTING FIXTURE SUPPORT COMPONENTS

A. Comply with Section 260529 "Hangers and Supports for Electrical Systems" for channel- and angle-iron supports and nonmetallic channel and angle supports.

B. Wires: Adjustable aircraft cable provided by the manufacturer.

C. Rod Hangers: Cadmium-plated, threaded steel rod.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Lighting fixtures: Set level, plumb, and square with ceilings and walls. Install lamps in each fixture.

B. Comply with NFPA 70 for minimum fixture supports.

C. Supports for Suspended Light Fixtures:

1. Light fixtures shall be installed and secured per the Manufacturer’s requirements.

2. Extra / slack aircraft cable shall be trimmed.

3. Light fixtures shall be level (parallel) with finished floor. Adjust aircraft cable as required for sloped ceilings.

D. Adjust aimable lighting fixtures to provide required light intensities.

E. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

3.2 FIELD QUALITY CONTROL

A. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery and retransfer to normal.

B. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

END OF SECTION

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY
SPRINGFIELD, KENTUCKY

ANDY BESHEAR, GOVERNOR
HOLLY M. JOHNSON - SECRETARY, FINANCE & ADMINISTRATION CABINET

Commonwealth of Kentucky, Finance and Administration Cabinet
Department for Facilities and Support Services, Division of Engineering
Frankfort, Kentucky

ACCOUNT # 095-CAR7-SP07-00

RTA DOCUMENTS

DRAWING INDEX:

CONTACTS

ARCHITECTURE	CIVIL ENGINEER	STRUCTURAL ENGINEER	ELECTRICAL ENGINEER	MECHANICAL ENGINEER	FIRE PROTECTION ENGINEER
KESLER SIMPSON ARCHITECTS, LLC 3728 Willow Ridge Rd Lexington, Kentucky 40514 Phone: (859) 523-4324 ARCHITECT OF RECORD: Andrew Kesler, AIA HOME OFFICE PHONE: (859) 523-4324 E-MAIL: andrew@ksa-llc.com REGISTRATION # : KY 6342	PRIME AE GROUP, INC. 651 Perimeter Dr. Suite 300 Lexington, Kentucky 40517 Phone: (859) 977-9629 ENGINEER OF RECORD: Stephen Garland, PE L SIT E-MAIL: sgarland@primeeng.com	BROWN + KUBICAN - Structural Engineers 546 E. Main Street Lexington, Kentucky 40508 Phone: (859) 285-3252 ENGINEER OF RECORD: Jeff Alexy PE SE E-MAIL: jalexy@bkse.net	N3D GROUP - Consulting Engineers 1204 Winchester Rd. Suite 200 Lexington, Kentucky 40505 Phone: (859) 303-5708 ENGINEER OF RECORD: David Daukas E-MAIL: ddaukas@n3dgroup.com		

OWNER:

COMMONWEALTH OF KENTUCKY
403 WAPPING STREET
THE BUSH BUILDING
FRANKFORT, KY 40601

USING AGENCY:

DEPARTMENT OF MILITARY AFFAIRS

SPECIAL INSPECTIONS:

SPECIAL INSPECTIONS ARE REQUIRED PER SECTION 1704 OF THE JURISDICTIONAL BUILDING CODE. A STATEMENT OF SPECIAL INSPECTIONS MUST BE PREPARED AND SUBMITTED BY THE REGISTERED DESIGN PROFESSIONAL IN CHARGE IN ACCORDANCE WITH SECTION 106.1 AS A CONDITION FOR PERMIT ISSUANCE. THIS STATEMENT SHALL INCLUDE A COMPLETE LIST OF MATERIALS AND WORK REQUIRING SPECIAL INSPECTIONS BY THIS SECTION, AND THE INSPECTIONS TO BE PERFORMED. UPON COMPLETION OF THE PROJECT THE DESIGN PROFESSIONAL SHALL SUBMIT A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING THE COMPLETION OF THE REQUIRED SPECIAL INSPECTIONS AND CORRECTIONS OF ANY DISCREPANCIES FOUND AS A CONDITION FOR ISSUANCE OF THE CERTIFICATE OF OCCUPANCY. SECTION 1704.1, 1704.1.1 AND 1704.1.2, JURISDICTIONAL BUILDING CODE.

VICINITY MAP

NON-HEATED STORAGE FACILITY

DRAWING INFORMATION	
A&E FILE NO.	202223
DRAWING DATE	03/24/2023
DRAWN BY	KLS
CHECKED BY	AK
RTA DATE	
ASBUILT DATE	--/--/----

ANDREW W. KESLER — REGISTERED — No. 6843 — COMMONWEALTH OF KENTUCKY — ARCHITECT

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

COVER SHEET

DRAWING NO. **COV**

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING
FRANKFORT, KENTUCKY

KESLER SIMPSON KSA ARCHITECTS

KESLER SIMPSON ARCHITECTS, LLC
3728 WILLOW RIDGE RD
LEXINGTON, KY 40514

DECA REVIEWED CK FOR INTENT ONLY

DECA LOG # ?

AGENCY AUTHORIZED AGENT — APPROVED FOR PROGRAM CONCEPT ONLY — DATE 4 APR 2023

DIVISION OF ENGINEERING — APPROVED FOR PROGRAM CONCEPT ONLY — DATE 4/6/2023

ARCHITECTURAL DIMENSIONS

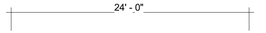
INTERIOR DIMENSIONS

- INTERIOR DIMENSIONS ARE TAKEN FROM FACE OF STUD TO FACE OF STUD
- REFER TO PARTITION TYPES FOR TOTAL WALL THICKNESS
- C.M.U. MEASURED TO FACE OF C.M.U.
- CONCRETE MEASURED TO FACE OF CONCRETE

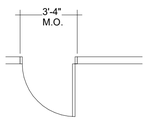
EXTERIOR DIMENSIONS

- EXTERIOR DIMENSIONS ARE TAKEN FROM FACE OF FOUNDATION WALL OR GIRT LINE PER STRUCTURAL DRAWINGS. FACE OF FOUNDATION OR GIRT LINE IS IN THE EQUIVALENT PLANE AS BACK OF SIDING MATERIAL.
- REFER TO WALL SECTIONS FOR TOTAL WALL THICKNESS,PARTITION TYPES DO NOT REFER TO EXTERIOR WALLS
- C.M.U. MEASURED TO FACE OF C.M.U.
- CONCRETE MEASURED TO FACE OF CONCRETE

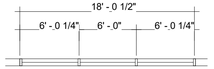
GRAPHIC DIMENSIONS



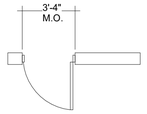
USED TO DIMENSION ARCHITECTURAL ELEMENTS



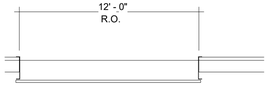
USED TO DIMENSION INTERIOR DOORS IN GYP. PARTITIONS WITH H.M. FRAMES



USED TO DIMENSION WINDOWS EITHER IN STRIP OR UNIT CONFIGURATION. 1/4" SEALANT SPACE WILL BE ADDED TO EACH END PANEL. OVERALL DIMENSIONS IS PROVIDED AS A ROUGH OPENING.



USED TO DIMENSION DOORS IN MASONRY PARTITIONS WITH ALL FRAMES



USED TO DIMENSION DOORS IN METAL SIDING AND GIRT EXTERIOR
WALL CONFIGURATIONS. OPENINGS IS DIMENSIONED TO STEEL
FRAME.

ARCHITECTURAL SYMBOL LEGEND

SYMBOLS	DESCRIPTION
	STRIP LIGHT FIXTURE
	1x4 FLUORESCENT LIGHT FIXTURE
	2x4 FLUORESCENT LIGHT FIXTURE
	2x2 FLUORESCENT LIGHT FIXTURE
	RECESSED DOWNLIGHT
	WALL MOUNTED EXIT LIGHT FIXTURE
	CEILING MOUNTED EXIT LIGHT FIXTURE
	HIGH-BAY LIGHT
	2' X 2' RETURN AIR GRILLE
	2' X 2' SUPPLY AIR DIFFUSER
	SUPPLY AIR LINEAR DIFFUSER
	SPRINKLER HEAD
	SUSPENDED ACOUSTICAL CEILING (2x2 & 2x4)
	SUSPENDED GYPSUM BOARD CEILING
	CONCRETE
	STONE BASE
	EARTH FILL
	INSULATION (BATT)
	INSULATION (RIGID)
	MASONRY
	PLYWOOD
	ROOF BALLAST
	STEEL

# / #	SECTION CUT
# / #	DETAIL BUBBLE
# #	ELEVATION/ DETAIL INDICATOR
NORTH	NORTH ARROW
#	DOOR SYMBOL
#	WINDOW ELEVATION/ PLAN SYMBOLS
ROOM NAME 100	ROOM NUMBER AND NAMES
#	WALL TYPES
	ELEVATION MARK
#	COLUMN BUBBLE
#	STEEL LINE
# TITLE SCALE	DRAWING TAG
	LESSONS LEARNED

ABBREVIATION

A.B.	ANCHOR BOLT
ACC.	ACCESSIBLE
ACT.	ACOUSTIC TILE
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISHED FLOOR
ALT.	ALTERNATE
ALUM.	ALUMINUM
ANCH.	ANCHOR
APPROX.	APPROXIMATE
BD.	BOARD
BLDG.	BUILDING
BLK.	BLOCK
B.M.	BENCH MARK
B.O.D.	BOTTOM OF DECK
B.O.J.	BOTTOM OF JOIST
B.O.S.	BOTTOM OF STEEL
BOT.	BOTTOM
BRG.	BEARING
B.U.	BUILT UP
C/C	CENTER TO CENTER
CAB.	CABINET
C.B.	CATCH BASIN
C.C.	CENTER TO CENTER
C.F.M.	CUBIC FOOT/MINUTE
C.I.P.	CAST IRON PIPE
C.J.	CONTROL JOINT
C.L.	CENTER LINE
CLG.	CEILING
CLOS.	CLOSET
CLR.	CLEAR
CMU	CONC. MASONRY UNIT
C.O.	CLEANOUT
COL.	COLUMN
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CPT.	CARPET
C.T.	CERAMIC TILE
CU.	CUBIC
CW	COLD WATER
C.T.P.	CLEAR TEMPERED PLATE
DEG.	DEGREE
DEPT.	DEPARTMENT
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DISP.	DISPENSER
DIST.	DISTRIBUTION
DN.	DOWN
DR.	DOOR
DS.	DOWNSPOUT
D.W.	DOMESTIC WATER
DWG.	DRAWING
DGA	DENSE GRADE AGGREGATE
EA.	EACH
EF	EXHAUST FAN
E.I.F.S.	EXTERIOR INSULATION FINISH SYSTEM
E.J.	EXPANSION JOINT
ELEC.	ELECTRIC
ELEV.	ELEVATION
ENT.	ENTRANCE
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXH.	EXHAUST
EXIST.	EXISTING
EXP.	EXPOSED
E.W.	EACH WAY
E.W.C.	ELECTRIC WATER COOLER
F.A.	FRESH AIR
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.F.E.	FINISHED FLOOR ELEVATION
F.H.	FULL HEIGHT
FIN.	FINISH
FIX.	FIXTURE
FL.	FLOOR
F.R.	FIRE RESISTANT
F.S.	FULL SIZE
FT.	FOOT or FEET
G.	GAS
GA.	GAUGE
GALV.	GALVANIZED
G.B.	GRAB BAR
GL.	GLASS OR GLAZING
GR.	GRADE
GYP. BD.	GYPSUM BOARD
H.B.	HOSE BIBB
HDW.	HARDWARE
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
HR.	HOUR
HT.	HEIGHT
HW	HOT WATER
HYD.	FIRE HYDRANT
I.D.	INSIDE DIAMETER
IN.	INCH
INSUL.	INSULATION
INT.	INTERIOR
INV.	INVERT
J.B.	JOIST BEARING ELEVATION
J.C.	JANITOR'S CLOSET
JT.	JOINT
KIP	1 KIP EQUALS 1000 POUNDS
K.O.	KNOCK OUT
KSF	KIPS PER SQUARE FOOT
L.	LENGTH, LONG
LAB.	LABORATORY
LAM.	LAMINATED
LAV.	LAVATORY
LF.	LINEAR FEET
LG.	LENGTH
M.	METER
MATL.	MATERIAL
MAX.	MAXIMUM
MECH.	MECHANICAL
MEMB.	MEMBRANE
MEZZ.	MEZZANINE
MFR.	MANUFACTURE
MH.	MANHOLE
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
M.P.	MOVABLE PARTITION
MPH	MILES PER HOUR
MTL.	METAL
MULL.	MULLION
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.S.	NON-SLIP
N.T.S.	NOT TO SCALE
O.A.	OVERALL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.	OVERFLOW DRAIN
O.H.	OVERHEAD
OPG.	OPENING
OPP.	OPPOSITE
OZ.	OUNCE
PART.	PARTITION
P.	PLATE
PERF.	PERFORATED
P.I.V.	POST INDICATOR VALVE
P. LAM.	PLASTIC LAMINATE
PLBG.	PLUMBING
PLYW'D	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PTD.	PAINTED
PVC.	POLYVINYL CHLORIDE
PVMT.	PAVEMENT
P.B.	PIPE BOLLARD
Q.T.	QUARRY TILE
R.A.	RETURN AIR
RAD.	REINFORCED CONC.
RCP	PIPE
R.D.	ROOF DRAIN
REC.	RECESSED
REFRIG.	REFRIGERATOR
REINF.	REINFORCING
REQD.	REQUIRED
R.H.	RIGHT HAND
R.L.	ROOF LEADER
RM.	ROOM
RTU	ROOF TOP UNIT
R.O.	ROUGH OPENING
SAN.	SANITARY
SECT.	SECTION
SCH.	SCHEDULE
SHT.	SHEET
SIM.	SIMILAR
S.O.G.	SLAB ON GRADE
SQ.	SQUARE
SPEC.	SPECIFICATION
S. S.	STAINLESS STEEL
ST.	STORM SEWER
STL.	STEEL
STD.	STANDARD
STOR.	STORAGE
STRUCT.	STRUCTURAL
SF	SUPPLY FAN
SUSP.	SUSPENDED
TEMP.	TEMPERATURE
TEL.	TELEPHONE
THRES.	THRESHOLD
T.O.C.	TOP of CONCRETE
T.O.J.	TOP of JOIST
T.O.M.	TOP OF MASONRY
T.O.S.	TOP OF STEEL
TYP.	TYPICAL
U.G.	UNDERGROUND
U.H.	UNIT HEATER
U.N.O.	UNLESS NOTED OTHERWISE
UR.	URINAL
VAC.	VACUUM
V.C.T.	VINYL COMPOSITE TILE
VEST.	VESTIBULE
VERT.	VERTICAL
V.I.F.	VERIFY IN FIELD
VTR	VENT THRU ROOF
W/	WITH
WAINS.	WAINSCOT
W.C.	WATER CLOSET
WD.	WOOD
WDW.	WINDOW
W.F.	WIDE FLANGE
W.H.	WATER HEATER
W/O	WITHOUT
WP.	WATERPROOF
WT.	WEIGHT
WWF	WELDED WIRE FABRIC
YD.	YARD
@	AT
Ø	DIAMETER
PL.	PLATE
℄	CENTER LINE

GENERAL NOTES:

THE PURPOSE OF THE CONTRACT DOCUMENTS IS TO PROVIDE DESIGN INTENT. IN SOME INSTANCES THE DOCUMENTS REQUIRE PROPRIETARY COMPONENTS TO MEET THE OWNER'S NEED BUT IN MOST CASES THIS IS ACCOMPLISHED IN A NON-PROPRIETARY MANNER, AND AS SUCH, IS NOT TIED TO ANY MANUFACTURER'S SPECIFIC PRODUCTS OR INSTALLATION METHODS. EACH SUBCONTRACTOR OR TRADE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR UPON AWARD OF CONTRACT OF ANY SYSTEM REQUIREMENTS THAT WILL ALTER DIMENSIONS AS SHOWN ON DRAWINGS AS A RESULT OF ACTUAL APPROVED PRODUCTS. ALL CONTRACTOR'S ADJACENT WORK SHALL PROVIDE NECESSARY QUANTITY REVISIONS WITHOUT ADDITIONAL COST. IT IS THE RESPONSIBILITY OF THE VENDOR TO PROVIDE ADDITIONAL COMPONENTS REQUIRED FOR COMPLETE SYSTEMS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL CONDITIONS IN THE FIELD AND THE MEANS AND METHODS OF CONSTRUCTION. THIS MAY NECESSITATE MINOR DEVIATIONS FROM DRAWN DETAILS. IF THE DRAWINGS AND/OR THE SPECIFICATIONS CONFLICT WITH A SPECIFIC MANUFACTURER'S MATERIALS, INSTALLATION DETAILS, RECOMMENDATIONS, OR INDUSTRY STANDARDS, THE GENERAL CONTRACTOR AND RESPECTIVE SUB CONTRACTORS ARE RESPONSIBLE FOR COORDINATING ANY AND ALL SPECIFIC CHANGES RELATED TO THE MATERIALS OR PRODUCTS SELECTED WITHOUT ADDITIONAL COST TO THE OWNER. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR MEETING THE DESIGN INTENT. CHANGE ORDERS FOR REVISIONS COVERED BY THESE PROVISIONS WILL NOT BE CONSIDERED.

THE CONTRACT DOCUMENTS ARE COMPLIMENTARY, WHAT IS REQUIRED BY ONE SHALL BE AS IF REQUIRED BY ALL. THE SPECIFICATIONS ARE NOT INTENDED TO BE A COMPREHENSIVE LIST OF WORK INTENDED. THE GENERAL CONTRACTOR AND SUB CONTRACTORS SHALL CAREFULLY EXAMINE ALL OF THE CONTRACT DOCUMENTS, AND BIDDING THE WORK GIVE A REPRESENTATION THEY HAVE FOUND THEM IN ALL RESPECTS TO BE COMPLETE, ACCURATE, CONSISTENT, COORDINATED, AND SUFFICIENT FOR CONSTRUCTION. CONTRACTORS ARE REQUIRED TO BID COMPLETE SET OF DRAWINGS. NO COMPENSATION WILL BE MADE FOR MATERIAL OR LABOR THAT WAS MISSED DUE TO AN INCOMPLETE BID. EACH DISCIPLINES DRAWINGS MAY NOT BE CONCLUSIVE. VERIFY ALL DRAWINGS FOR TOTAL CONSTRUCTION.

IF THERE IS A CONFLICT BETWEEN DRAWINGS, OR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE GENERAL CONTRACTOR IS TO BRING IT TO THE ATTENTION OF THE ARCHITECT PRIOR TO BID. IF THE GENERAL CONTRACTOR DOES NOT BRING IT TO THE ATTENTION OF THE ARCHITECT, THEN HE IS ASSUMED TO HAVE BID THE WORST CASE (MOST EXPENSIVE) SCENARIO. CHANGE ORDERS FOR REVISIONS COVERED BY THESE PROVISIONS WILL NOT BE CONSIDERED.

APPLICABLE CONSTRUCTION INDUSTRY STANDARDS AND BUILDING CODES HAVE THE SAME FORCE AND EFFECT ON PERFORMANCE OF THE WORK AS IF COPIED DIRECTLY INTO THESE CONSTRUCTION DOCUMENTS. GOVERNING REGULATIONS HAVE PRECEDENCE OVER NON-REFERENCED STANDARDS, IN SO FAR AS DIFFERENT STANDARDS MAY HAVE OVERLAPPING OR CONFLICTING REQUIREMENTS. COMPLY WITH FEDERAL, STATE, AND LOCAL BUILDING CODES. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THESE STANDARDS AND REGULATIONS. WHERE DISCREPANCIES EXIST BETWEEN THE DOCUMENTS FROM THE DESIGN PROFESSIONAL AND THE CODE, THE MOST RESTRICTIVE SHALL APPLY.

EACH CONTRACTOR AND SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE AND REPORT ANY DISCREPANCY TO THE ARCHITECT BEFORE PROCEEDING WITH CONSTRUCTION OR MATERIAL ORDERING. USE OF ESTABLISHED DIMENSIONS IS NOT PERMITTED UNLESS NOTED IN THE SPECIFICATION SECTIONS. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING.

ALL WORK INCLUDED ON THESE DRAWINGS IS NEW AND BY CONTRACTOR UNLESS NOTED OTHERWISE. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDED INSTRUCTIONS.

ALL SECTIONS, DETAILS, MATERIALS, AND METHODS SHOWN AND OR NOTED ON ANY SHEET SHALL APPLY TO ALL OTHER SIMILAR LOCATIONS UNLESS NOTED OTHERWISE.

NO CONTRACTOR HAS THE AUTHORITY TO PERMIT THE USE OF ANY PORTION OF THE SITE OR BUILDING TO ANYONE, EXCEPT FOR BUSINESS CONNECTED TO THE CONSTRUCTION WITH WHICH THIS CONTRACT IS CONCERNED.

REMOVE AND LEGALLY DISPOSE OF DEBRIS, RUBBISH AND OTHER DEMOLITION WASTE MATERIALS FROM THE SITE.

THE CONTRACTOR SHALL STABILIZE AND SECURE BUILDING COMPONENTS AS REQUIRED.

THE CONTRACTOR SHALL FOLLOW ASTM STANDARDS FOR INSTALLATION REQUIREMENTS.

IN THE EVENT THE CONTRACTOR UNEXPECTEDLY ENCOUNTERS ON THE SITE REASONABLY BELIEVED TO BE ASBESTOS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER CLASSIFIED HAZARDOUS MATERIAL, NOTIFY ARCHITECT OF THE DISCOVERY OF ANY HAZARDOUS MATERIALS AND IMMEDIATELY STOP WORK. REPORT FINDINGS TO ARCHITECT AND OWNER IN WRITING AND DO NOT RESUME WORK UNTIL APPROACH IS IDENTIFIED.

CONTRACTOR SHALL ASSUME THAT DIGITAL DRAWING FILES ARE NOT AVAILABLE UNLESS NOTED OTHERWISE.

CONTRACTOR SHALL NOT SCALE DRAWINGS FOR DIMENSIONS. REFER TO ENLARGED PLANS FOR ADDITIONAL DIMENSIONS. ALL DIMENSIONS SHOWN ON PLANS ARE TO CENTERLINE OF COLUMN, FACE OF MASONRY/ CONCRETE/ METAL FRAMING AND DO NOT INCLUDE THICKNESS OF FINISHED DIMENSIONS.

ALL WOOD BLOCKING / NAILERS SHALL BE PRESSURE TREATED WHEN IN CONTACT WITH CONCRETE OR MASONRY. PROVIDE PRESSURE TREATED BLOCKING AT EXTERIOR LOCATIONS AS SHOWN OR AS REQUIRED FOR WARRANTY SYSTEMS.

PROVIDE SHIMS BETWEEN BUILDING SYSTEMS AND COMPONENTS AS REQUIRED FOR PROPER ALIGNMENT.

SEPARATE NON-COMPATIBLE METALS AND DISSIMILAR MATERIALS TO PREVENT GALVANIC REACTIONS.

INSTALL SEALANTS BETWEEN BUILDING SYSTEMS AT BOTH INTERIOR AND EXTERIOR LOCATIONS TO ENSURE A WATERTIGHT ENCLOSURE. UTILIZE SHIMS, JOINT MATERIALS, AND BACKER RODS IN ORDER TO CONTAIN SEALANTS. REFER TO SPECIFICATION SECTIONS FOR ADDITIONAL REQUIREMENTS.

GENERAL CONTRACTOR IS TO BE RESPONSIBLE FOR COORDINATING ALL HVAC / EQUIPMENT PENETRATIONS THROUGH WALLS, FLOORS, AND ROOFS. THIS MAY NECESSITATE ADDITIONAL SUPPORT AS UNIT SIZES AND LOCATIONS CHANGE FROM WHAT IS SHOWN FOR WHATEVER REASON.

CONTRACTOR IS TO COORDINATE DUST CONTROL MEASURE WITH HVAC SYSTEMS WITH BUILDING OPERATOR.

CONTRACTOR TO ENSURE THAT NO PLASTIC FOAM INSULATION TO REMAIN EXPOSED AFTER COMPLETION. ANY MATERIAL TO COVERED WITH DRYWALL, METAL, OR DC315 SPRAY APPLIED THERMAL AND IGNITION BARRIER.

DRAWING INFORMATION	
A&E FILE NO.	202223
DRAWING DATE	03/24/2023
DRAWN BY	KLS
CHECKED BY	AK
PHASE	RTA
RTA DATE	03/24/2023

ANDREW W. KESLER REGISTERED No. 6803 COMMONWEALTH OF KENTUCKY ARCHITECT

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

SYMBOLS AND ABBREVIATIONS

DRAWING NO. **G-002**

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING
FRANKFORT, KENTUCKY

KESLER SIMPSON KSA ARCHITECTS

KESLER SIMPSON ARCHITECTS, LLC
3728 WILLOW RIDGE RD
LEXINGTON, KY 40514

AS BUILT DATE --/--/----

DECA LOG # ?

REVISION HISTORY OF DRAWINGS

	DESCRIPTION OF REVISION	DATE		DESCRIPTION OF REVISION	DATE
1			4		
2			5		
3			6		

GENERAL NOTES

1. THIS DRAWING IS INTENDED TO BE USED AS A GUIDE FOR CONSTRUCTABILITY PURPOSES ONLY. THE AMERICANS WITH DISABILITIES ACT OF 2010, THE ADA, IS FEDERAL LAW AND MAY NOT BE ABLE TO BE CIRCUMVENTED UNDER ANY CIRCUMSTANCES BY THE ARCHITECT, CONTRACTOR OR THE OWNER. ALL PARTIES SHALL BE KNOWLEDGEABLE OF THE REQUIREMENTS AND THE LIABILITIES ASSOCIATED WITH THOSE REQUIREMENTS.
2. THESE DRAWINGS AND DETAILS IDENTIFY SOME BUT NOT ALL OF THE REQUIREMENTS OF THE ADAAG. EACH DETAIL MAY BE USED FOR THE GENERAL LAYOUT OF THE STRUCTURE AND ARCHITECTURAL ENTITIES OF THE
DESIGN BUT THE ACTUAL ARCHITECTURAL DIMENSIONS,
LAYOUT, MECHANICAL, AND ACCESSORIES LAYOUT IN THIS SET OF DOCUMENTS TAKE PRECEDENCE. IF THERE
IS A CONFLICT BETWEEN THE DRAWING SET AND THIS DRAWING, NOTIFY THE ARCHITECT IMMEDIATELY.
3. THE CONTRACTOR AND/OR SUBCONTRACTOR SHALL VERIFY THE REQUIREMENTS OF THE PROJECT AND BE RESPONSIBLE FOR THE IMPLEMENTATION OF ADA PROCEDURES FOR THE PROJECT. PROCEEDING WITH
CONSTRUCTION SHALL CONSTITUTE ACCEPTANCE OF
CONDITIONS AND ACCEPTANCE OF THE CURRENT STATUS AS APPROVEABLE UNDER THE ADAAG.
4. THE CONTRACTOR AND/OR SUBCONTRACTOR SHALL VERIFY THE MOST RESTRICTIVE GUIDELINES FOR A SPECIFIC PROJECT. IF LOCAL RULES ARE MORE RESTRICTIVE, THE MOST RESTRICTIVE RULES SHALL APPLY.

5. REFER TO THE CIVIL DRAWINGS FOR ADAAG STANDARDS THAT TAKE PLACE OUTSIDE THE BUILDING ENVELOPE.

6. BUILDING SIGNAGE IS BY OWNER. HOWEVER, WHERE REQUIRED BY LAW, SUCH AS PARKING, ACCESSIBLE ROUTES, MEANS OF EGRESS, ELEVATORS AND RESTROOMS BECOME A PART OF THE BASE CONTRACT. ROOM OR SPACE IDENTIFIER SIGNAGE IS BY OWNER. ALL SIGNAGE SHALL MEET THE MINIMUM REQUIREMENTS OF THE ADAAG. SEE 216

7. FIRE ALARM SYSTEMS SHALL COMPLY WITH 215.

8. ACCESSIBLE MEANS OF EGRESS SHALL COMPLY WITH
GOVERNING BUILDING OR LIFE SAFETY CODE.
9. 206 ACCESSIBLE ROUTES

   AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED WITHIN THE SITE FROM ACCESSIBLE PARKING SPACES AND ACCESSIBLE PASSENGER LOADING ZONES. PUBLIC STREETS AND SIDEWALKS; AND PUBLIC TRANSPORTATION STOPS TO THE ACCESSIBLE BUILDING OR FACILITY ENTRANCE THEY SERVE. EXCEPTION: AN ACCESSIBLE ROUTE SHALL NOT BE REQUIRED IF THE ONLY MEANS OF ACCESS BETWEEN THEM IS A VEHICULAR WAY NOT PROVIDING PEDESTRIAN ACCESS.

   AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, ACCESSIBLE FACILITIES, ACCESSIBLE ELEMENTS, AND ACCESSIBLE SPACES THAT ARE ON THE SAME SITE. EXCEPTION: AN ACCESSIBLE ROUTE SHALL NOT BE REQUIRED IF THE ONLY MEANS OF ACCESS BETWEEN IS A VEHICULAR WAY NOT PROVIDING PEDESTRIAN ACCESS.

   AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT EACH STORY AND MEZZANINE IN MULTI-STORY BUILDINGS AND FACILITIES. EXCEPTION: AN ACCESSIBLE ROUTE SHALL NOT BE REQUIRED IF THE ONLY MEANS OF ACCESS BETWEEN IS A VEHICULAR WAY NOT PROVIDING PEDESTRIAN ACCESS.

   403 AN ACCESSIBLE ROUTE WITH A RUNNING SLOPE GREATER THAN 1:20 IS A RAMP AND SHALL COMPLY WITH 405 OR 406. THE CROSS SLOPE SHALL NOT BE STEEPER THAN 1:48.

   303 CHANGES IN LEVELS ALONG AN ACCESSIBLE ROUTE SHALL COMPLY WITH 303. A CHANGE IN LEVEL GREATER THAN 1/2" REQUIRES A: CURB RAMP, RAMP, ELEVATOR OR PLATFORM LIFT COMPLYING WITH 405, 406, 407, AND 410.

   302 FLOOR OR GROUND SURFACES SHALL BE STABLE, FIRM, AND SLIP RESISTANT. IF USED, CARPET OR CARPET TILE SHALL BE SECURELY ATTACHED AND SHALL HAVE A FIRM CUSHION OR PAD. CARPET OR CARPET TILE SHALL HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL CUT PILE, OR LEVEL CUT / UNCUT PILE TEXTURE. PILE HEIGHT SHALL BE 1/2" MAX. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND SHALL HAVE TRIM ON THE ENTIRE LENGTH OF THE EXPOSED EDGE. CARPET EDGE TRIM SHALL COMPLY WITH 303.

   NOTE: AN ACCESSIBLE ROUTE DOES NOT INCLUDE STAIRS, STEPS, OR ESCALATORS.

10. 206.4 DOORS, DOORWAYS, AND GATES. AT LEAST 60% OF ALL PUBLIC ENTRANCES SHALL COMPLY WITH 404. 206.5 WITHIN A BUILDING OR FACILITY, AT LEAST ONE DOOR, DOORWAY, OR GATE SERVING EACH ROOM OR SPACE SHALL COMPLY WITH 404.

11. 210 STAIRWAYS. INTERIOR AND EXTERIOR STAIRS THAT ARE PART OF A MEANS OF EGRESS SHALL COMPLY WITH
    504 (STAIRWAYS) AND 505 (HANDRAILS).
12. 211 DRINKING FOUNTAINS. NO FEWER THAN TWO DRINKING FOUNTAINS SHALL BE PROVIDED. ONE THAT IS ACCESSIBLE AND MEETS 602.1 - 602.6, AND ONE THAT IS FOR STANDING PERSONS THAT MEETS 602.7. EXCEPTION: WHEN A HI-LO UNIT MEETS BOTH OF THESE CRITERIA IT MAY BE SUBSTITUTED FOR TWO SEPARATE DRINKING FOUNTAINS.

    WHEN MORE THAN TWO ARE PROVIDED OR REQUIRED BY CODE 50% SHALL COMPLY WITH 602.1 - 603.6, AND 50% SHALL COMPLY WITH 602.7

13. 212 KITCHENS, KITCHENETTES, AND SINKS. WHERE SINKS ARE PROVIDED, AT LEAST 5%, BUT NO FEWER THAN ONE, OF EACH TYPE PROVIDED IN EACH ACCESSIBLE ROOM OR SPACE SHALL COMPLY WITH 606.

14. 213.2 TOILET ROOMS AND BATHING ROOMS. WHERE TOILET OR BATHING ROOMS ARE PROVIDED, EACH ROOM SHALL COMPLY WITH 603.

    213.3.1 WHERE TOILET COMPARTMENTS ARE PROVIDED AT LEAST ONE TOILET COMPARTMENT SHALL COMPLY WITH 604.8.1. WHERE THE COMBINATION OF URINALS AND WATER CLOSETS TOTALS SIX OR MORE FIXTURES, AT LEAST ONE COMPARTMENT SHALL COMPLY WITH 604.8.2 (AMBULATORY COMPARTMENT)

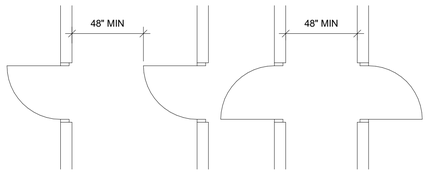
    213.3.3 URINALS. WHERE MORE THAN ONE URINAL IS PROVIDED, AT LEAST ONE SHALL COMPLY WITH 605.

    213.3.4 LAVATORIES. WHERE LAVATORIES ARE PROVIDED, AT LEAST ONE SHALL COMPLY WITH 606 AND SHALL NOT BE LOCATED IN TOILET COMPARTMENT.

    213.3.6 BATHING FACILITIES. WHERE BATHTUBS OR SHOWERS ARE PROVIDED, AT LEAST ONE BATHTUB COMPLYING WITH 607 OR AT LEAST ONE SHOWER COMPLYING WITH 608 SHALL BE PROVIDED.

    213.3.7 COAT HOOKS AND SHELVES. WHERE COAT HOOKS ARE PROVIDED IN TOILET ROOMS WITHOUT TOILET COMPARTMENTS, AT LEAST ONE OF EACH TYPE SHALL COMPLY WITH 603.4. WHERE COAT HOOKS OR SHELVES ARE PROVIDED IN TOILET COMPARTMENTS, AT LEAST ONE OF EACH TYPE COMPLYING WITH 604.8.3 SHALL BE PROVIDED IN TOILET COMPARTMENTS REQUIRED TO COMPLY WITH 213.3.1. WHERE COAT HOOKS OR SHELVES ARE PROVIDED IN BATHING FACILITIES, AT LEAST ONE OF EACH TYPE COMPLYING WITH 603.4 SHALL SERVE FIXTURES REQUIRED TO COMPLY WITH 213.3.6.

15. 222 DRESSING, FITTING, AND LOCKER ROOMS. A BENCH COMPLYING WITH 903 SHALL BE PROVIDED WITHIN THE ROOM. WHERE COAT HOOKS ARE PROVIDED AT LEAST ONE
    OF EACH TYPE SHALL BE WITHIN ONE OF THE REACH RANGES SPECIFIED IN 308. WHERE SHELVES ARE PROVIDED AT LEAST ONE OF EACH TYPE SHALL BE 40" MINIMUM AND 48" MAXIMUM A.F.F.
16. 225 STORAGE. WHERE STORAGE IS PROVIDED IN ACCESSIBLE
    SPACES, AT LEAST ONE OF EACH TYPE SHALL COMPLY WITH 811.
17. 226 DINING SURFACES AND WORK SURFACES. WHERE DINING SURFACES ARE PROVIDED AT LEAST 5% SHALL BE BETWEEN 28" AND 34" MAX A.F.F. WITH A FORWARD APPROACH COMPLYING WITH 305 AND KNEE & TOE CLEARANCE COMPLYING WITH 306. WHERE WORK SURFACES ARE PROVIDED FOR USE BY OTHER THAN EMPLOYEES, THEN 5% SHALL MEET THE SAME CRITERIA.
    904.5.2 TRAY SLIDES. THE TOPS OF TRAY SLIDES SHALL BE 28" TO 34" A.F.F.
18. 904.4 SALES AND SERVICE COUNTERS (RECEPTIONIST). A PORTION OF THE COUNTER SURFACE THAT IS 36" LONG MIN. AND 36" MAX A.F.F. SHALL BE PROVIDED. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 SHALL BE POSITIONED FOR A PARALLEL APPROACH. A FORWARD APPROACH CAN ALSO BE PROVIDED THAT COMPLIES WITH 904.4.2



TWO HINGED DOORS IN SERIES
FIGURE 26

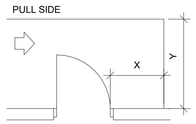


FIGURE 404.2.3.1(c&d)

NOTE: X = 36 in MINIMUM IF Y = 60
in, X = 42 in MINIMUM IF Y = 54 in.

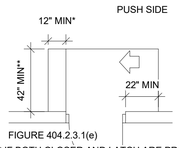


FIGURE 404.2.3.1(e)

* IF BOTH CLOSER AND LATCH ARE PROVIDED

**48" MINIMUM IF DOOR HAS BOTH A
LATCH AND A CLOSER.

HINGE SIDE APPROACHES

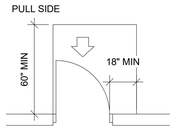


FIGURE 404.2.3.1(a)

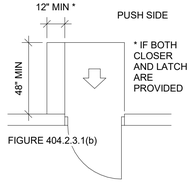


FIGURE 404.2.3.1(b)

FRONT APPROACHES

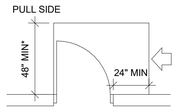


FIGURE 404.2.3.1(f)

*54" MIN IF DOOR HAS CLOSER.

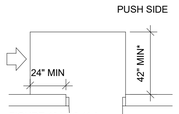


FIGURE 404.2.3.1(g)

*48" MIN. IF DOOR HAS CLOSER.

LATCH SIDE APPROACHES

SEE 404.2.3

MANEUVERING CLEARANCES AT DOORS

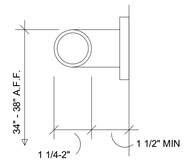
SCALE = 1/4"=1'-0"

NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH
THE CLEARANCES FOR FRONT APPROACHES.

505.7.1 HANDRAILS WITH CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF 1 1/4" MIN AND 2" MAX.

505.7.2 HANDRAILS WITH A NONCIRCULAR CROSS SECTION SHALL HAVE A PERIMETER DIMENSION OF 4" MIN AND 6 1/2" MAX AND A CROSS-SECTION DIMENSION OF 2 1/4" MAX.

THE ENDS OF HANDRAILS SHALL BE EITHER ROUNDED OR RETURNED SMOOTHLY TO FLOOR, WALL OR POST.



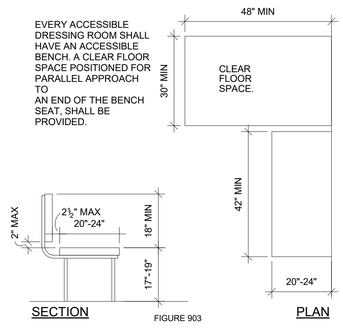
SEE 505

HANDRAILS

NOTE: FOR GRAB BARS SEE 609

SCALE : N.T.S.

EVERY ACCESSIBLE DRESSING ROOM SHALL HAVE AN ACCESSIBLE BENCH. A CLEAR FLOOR SPACE POSITIONED FOR PARALLEL APPROACH TO
AN END OF THE BENCH SEAT, SHALL BE PROVIDED.



SECTION PLAN

FIGURE 903

SEE 803 & 903

LOCKER ROOM BENCH

SCALE : 1/2" = 1'-0"

NOTE: CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.

CHANGES IN LEVEL GREATER THAN 1/2" SHALL BE ACCOMPLISHED BY MEANS OF A RAMP THAT COMPLIES WITH 405 OR 406

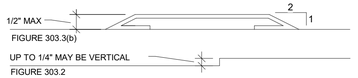


FIGURE 303.3(b)

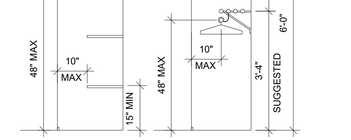
UP TO 1/4" MAY BE VERTICAL

FIGURE 303.2

SEE 303 AND 404.2.4

CHANGES IN LEVEL

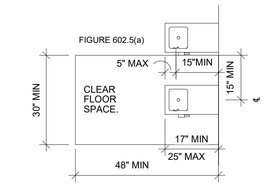
SCALE : N.T.S.



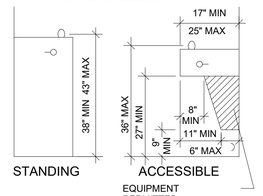
SEE 811

STORAGE

SCALE : 1/2" = 1'-0"



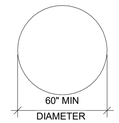
NOTE: USE HI-LO FOUNTAIN TO GIVE ACCESS TO THOSE THAT USE WHEELCHAIRS AND THOSE THAT HAVE TROUBLE BENDING. ENSURE THEY COMPLY WITH PROTRUDING OBJECTS 307



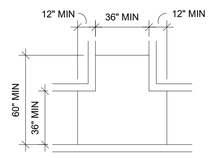
SEE 602

DRINKING FOUNTAIN

SCALE : 1/2" = 1'-0"



DIAMETER SPACE
FIGURE 304.3(a)



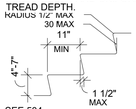
T-SHAPED SPACE

SEE 304 FIGURE 304.3(b)

TURNING SPACE

SCALE = 1/4"=1'-0"

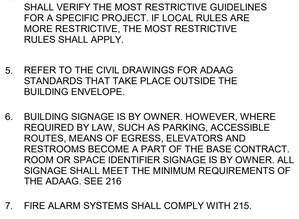
504.2 ALL STEPS ON A FLIGHT OF
STAIRS SHALL HAVE UNIFORM RISER HEIGHT AND UNIFORM TREAD DEPTH.



SEE 504

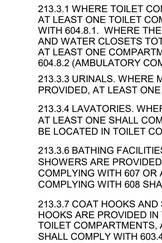
STAIRWAYS

SCALE : 1/2" = 1'-0"

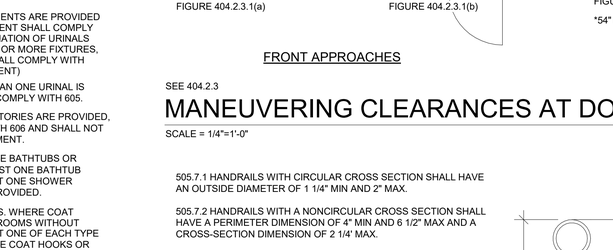


NOTE: WHERE PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL
BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR WHERE THERE IS NO WALL SPACE TO THE LATCH SIDE OF THE DOOR, INCLUDING DOUBLE LEAF DOORS, SIGNS SHALL BE
PLACED ON THE NEAREST ADJACENT WALL. PICTOGRAMS ARE REQUIRED AT ALL RESTROOMS.

SIGNS SEE 703



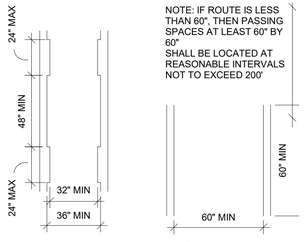
MIRRORS SEE 603.3



REACH RANGE AND OPERABLE PARTS SEE 308 & 309

ACCESSORY MOUNTING HEIGHT FOR HC

SCALE : 1/2" = 1'-0"



ONE WHEELCHAIR
FIGURE 403.5

TWO WHEELCHAIRS

SEE 403.5

CLEAR WIDTH

SCALE = 1/4"=1'-0"

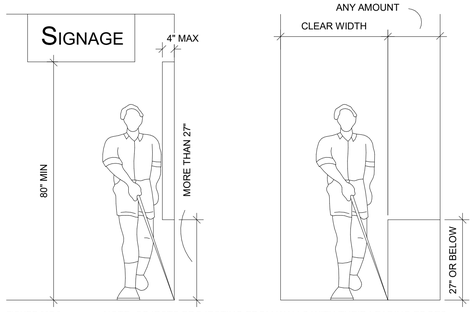


FIGURE 307.2

NOTE: OBJECTS PROJECTING FROM WALLS WITH THEIR LEADING EDGES BETWEEN 27" AND 80" ABOVE THE FINISHED FLOOR SHALL PROTRUDE NO MORE
THAN 4" INTO WALKS, HALLS, CORRIDORS, PASSAGEWAYS, OR AISLES.

SEE 307

PROTRUDING OBJECTS

SCALE : 1/2" = 1'-0"

AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES 2010 (ADAAG)

FOR APPROPRIATE SCOPING REQUIREMENTS SEE THE ADMINISTRATIVE AUTHORITY

HANDICAPPED FIXTURES ARE DESIGNATED THUS: ON FLOOR PLANS & ENLARGED FLOOR PLANS.

CLEARANCES SHOWN ARE CODE MINIMUMS, SEE FLOOR PLANS AND DETAILS FOR SPECIFIC CONDITIONS OF THIS PROJECT ALL HEIGHTS ARE SHOWN A.F.F

DRAWING INFORMATION	
A&E FILE NO.	202223
DRAWING DATE	03/24/2023
DRAWN BY	KLS
CHECKED BY	AK
PHASE	RTA
RTA DATE	03/24/2023

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

ACCESSIBILITY GUIDELINES

DRAWING NO. **G-003**

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING
FRANKFORT, KENTUCKY

AS BUILT DATE --/--/----

DECA LOG # ?

ANDREW W. KESLER — REGISTERED — No. 6842 — COMMONWEALTH OF KENTUCKY — ARCHITECT

KESLER SIMPSON ARCHITECTS, LLC
3728 WILLOW RIDGE RD
LEXINGTON, KY 40514

REVISION HISTORY OF DRAWINGS

	DESCRIPTION OF REVISION	DATE		DESCRIPTION OF REVISION	DATE
1			4		
2			5		
3			6		

GENERAL CONSTRUCTION NOTES

1. All work shall conform to the City of Springfield Design Standards, Manuals, and Contract Specifications. In the event an item is not covered in the plans, the City/County Design Standards, Manuals, and Contract Specifications, the most current Division of Military Affairs (DMA) Design Standards, Kentucky Transportation Cabinet (KYTC) Design Standards, Manuals, and Contract Specifications for Construction shall apply. The governing City/County shall have the final decision on all construction materials, methods, and procedures. If work is performed in State Right of Way, all work must be performed to KYTC Standards & Specifications. The Contractor shall adhere to all of the guidelines above, regardless of the content of construction plans/documents. In the event of a conflict between the construction plans/documents, the Contractor shall immediately stop all related work and contact Prime AE Group, Inc.

2. Prior to any construction, the Contractor shall be familiar with the Contract Documents and Specifications (if applicable), the Plans (including all notes). Failure on the part of the Contractor to be familiar with ALL documents pertaining to this work shall in no way relieve the Contractor of responsibility for performing the work in accordance with all such applicable Standards and Specifications.

3. Prior to construction, the Contractor shall have in their possession all necessary permits, plans, licenses, etc. The Contractor shall be responsible for all fees. The Contractor shall supply Prime AE and the Owner with a copy of all permits and applications for permits. The Contractor shall have at least one set of approved Engineering Plans and Specifications on-site at all times. The Contractor shall have at least one copy of all applicable City, County, or State standard drawings on-site at all times. The Contractor is also responsible for installation of erosion control measures, and obtaining a grading permit prior to any work being performed on the site. It is the contractor's responsibility to provide all erosion control measures required by governing authorities, at no additional cost to the Owner/Prime AE, whether they appear on the plans or NOT.

4. Construction inspection will/may be performed by representatives of the Owner, Engineer, City/County, Geotechnical Engineer, and reviewing authorities and agencies. Unrestricted access shall be provided to them at all times. The Contractor is responsible for understanding and scheduling required inspections. Testing samples shall be collected and processed by certified technicians (if necessary).

5. Work shall not begin until an onsite meeting is held with the Owner, Prime AE, Site Inspector, Contractor, City/County, and all Utility Companies.

6. The Contractor shall notify all applicable City, County and State offices a minimum of 5 working days prior to any grading on public streets and 24 hours prior to any traffic restrictions on public streets. The contractor shall provide reasonable access to residential, commercial and public properties in the project area.

7. The Contractor shall implement all City, County, State and Federal job site health and safety requirements. The Contractor shall be responsible for initiating, maintaining, supervising all safety precautions and programs at the job site during all phases of construction. The contractor shall be responsible for public safety and convenience during all phases of construction. Anyone using the information from these plans/documents acknowledges and warrants that Prime AE, is not responsible for job site safety in any way and will not be liable under any circumstances. The Contractor shall be responsible for job site safety of all persons and property will be held liable for any and all claims. The Contractor shall defend, indemnify and hold the Owner/Prime AE, harmless from any and all liability, real or alleged, in the connection with the performance of work on this project.

8. The Contractor shall verify locations (horizontal and vertical), slopes, distances, and features that may affect the work. Should existing conditions differ from those shown or indicated, or if it appears that these plans, standard specifications, and special provisions do not adequately detail the work to be done, contractor shall notify Prime AE prior to continuing with any related work. No allowance will be made on the Contractor's behalf for any extra expense resulting from failure or neglect in determining the conditions under which work is to be performed. Noted dimensions take precedence over scale.

9. All work performed in the public right of way requires a separate Permit [Street Cut Permit, Street Improvement Permit, Encroachment Permit, etc.] issued by the City, County, State and/or Utility Companies.

10. The Contractor shall provide, install, and maintain a project sign according to the governing authority's standards.

11. All storm sewer and sanitary sewer structures, pipes, inlets, headwalls, etc. shall meet or exceed the City/County and State specifications and standard drawings.

12. The Contractor shall provide protective measures to prevent unauthorized access to the site. Adequate signage shall be provided to all pedestrian and vehicular traffic. The Contractor is responsible for all protective measures, whether it is depicted on the plans or NOT.

13. The Contractor shall protect existing buildings and retaining walls including footers and foundations during demolition and construction. The general Contractor is responsible for any and all damages caused to the adjoining structures by the construction activity on the site.

14. No blasting or explosives shall be permitted on the project site.

15. All excavation, trenching, bedding, backfill, & final dressing necessary to construct/install each item on the plans shall be included in the bid and be considered incidental.

16. The Contractor shall be required to take pictures/videos of the construction area prior to any mobilization. These must be produced to the Owner and Prime AE upon request.

17. All disturbed areas not identified with a specific seed mix or sod shall be seeded with a fescue mix appropriate for the area (no more than 10% bluegrass seed in mix), the Contractor shall submit seed mix for approval.

18. Temporary seeding/straw, mulch cover, (or equivalent control measures) etc. shall be placed on areas that have been inactive of construction activities for more than 14 days. After 21 days of construction inactivity or notice that construction activity of the site has ceased (permanently), permanent ground cover shall be placed. During the winter months wheat or other cold temperature ground cover is recommended.

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

1. Erosion control measures indicated in the Storm Water Pollution Prevention Plan (SWPPP), the Best Management Plan (BMP), the Erosion Prevention and Sediment Control Plan (EPSC), and the Erosion Prevention and Sediment Control Notes are considered the minimum requirements and do not relieve the contractor from responsibility and liability from compliance with the EPA (Environmental Protection Agency) and the Kentucky Division of Water.

2. The latest requirements for erosion control can be found at these web address:
   EPA - www.epa.gov <http://www.epa.gov>
   Kentucky Division of Water - <http://www.water.ky.gov>

3. No clearing and grubbing or disturbance the natural ground cover shall occur until all the necessary permits are obtained and the SWPPP, BMP, and EPSC plan are approved by all of the governing authorities and implemented by the Contractor. Modifications to these plans should be brought to the attention of the Engineer and the local government having jurisdiction. Erosion and sediment control measures shall be maintained by the Contractor throughout all phases of construction.

4. Detention and Retention Basins, if applicable shall be constructed first and shall perform as sediment basins during construction. Once permanent ground cover has been established for all of the contributing drainage areas the Contractor shall clean the basins of all sediment and debris.

5. The Contractor shall provide, install, and maintain all erosion prevention and sediment control measures necessary to meet the requirements. Once permanent ground cover is established for all of the contributing drainage areas, the Contractor shall remove all of the erosion prevention and sediment control measures.

6. The Contractor shall limit the access to the site through the construction entrance(s) shown on the plans. The Contractor shall install and maintain a construction entrance, dimensions are shown on the EPSC plan.

7. At all times the Contractor shall maintain adjacent streets to be free from mud, dust, dirt, debris and other nuisance in a neat, safe, clean and sanitary condition at all times and to the satisfaction of the City/County inspector.

8. The Contractor shall provide approved protective measures and drainage provisions to protect adjoining properties from deposition of material or flows resulting from construction of this project during all phases of construction. The contractor shall be responsible for cleanup of any silt or debris on adjoining properties resulting from this project.

9. All existing natural drainage, flow lines, sheet flow runoff, drainage in pipes, swales and conduits onto this property from adjacent land shall not be blocked, redirected, concentrated or accelerated.

10. Prior to any clearing, grading or construction, protective barriers shall be placed around all trees to be retained on the site to prevent damage to the trees. The tree protection fences should be placed on the drip line of the tree. No equipment shall be parked and no material shall be stockpiled in this protective area to avoid soil compacting. Heavy equipment operations will be cautioned to avoid damage to existing tree trunks, branches, and roots during grading operations.

11. The Contractor is responsible for preventing silt from getting into storm and sanitary sewer systems. In the event, sediments are found in the systems, the Contractor is responsible for cleaning silt, and debris.

UTILITY NOTES

1. It will be the responsibility of each Contractor to protect all existing public and private utilities throughout the construction of this project. The Contractor shall contact the appropriate utility companies for line locations prior to commencement of construction and shall assume kill liability to those companies for any damages caused to their facilities.

2. These plans do not guarantee the existence, nonexistence, size, type, location alignment or depth of any or all underground utilities or other facilities. Where surface features (manholes, catch basins, valves, etc.) are unavailable or inconclusive, information shown may be from utility owner's records and/or electronic line tracing, the reliability of which is uncertain.

3. The Contractor shall perform whatever test excavation or other investigation as necessary to verify tie-in inverts, locations and clearances. In the event of a conflict or discrepancies the Contractor shall immediately stop all related work and contact Prime AE.

4. The Contractor is responsible for documenting and coordinating any utility work with the appropriate utility company. The Contractor shall meet or exceed the guidelines set forth by the utility company.

5. Existing utilities shall not be shut off or capped without prior notice to the Utility owner. Coordinate work with all applicable utility companies.

6. Removal of existing utilities shall be done only after critical new systems are in place and operational.

7. The following utility contacts are for informational purposes only and shall not be considered to be a complete list of utilities, pipelines, and transmission lines on or in close proximity to the site:

COMMUNICATIONS
AT&T DISTRIBUTION
201-299 E Ballard St.
Springfield, KY, 40069
1-800-288-2020
Contact: Michaela Flewallen
eMail: michaela.flewallen@att.com

SEWER
SPRINGFIELD SEWER COMMISSION
603 West Main Street P.O. Box 307
Springfield, KY, 40069
859-336-5457
Contact: John Hale
eMail:john.hale@springfieldwater.org

ELECTRIC
SALT RIVER ELECTRIC
805 Bardstown Rd #4
Springfield, KY, 40069
(859) 336-5080
Contact: Darrell Tingle
eMail: cservice@srelectric.com

WATER
SPRINGFIELD WATER COMMISSION
603 West Main Street P.O. Box 307
Springfield, KY, 40069
859-336-5454
Contact: David Bartley eMail: davidabartley@springfieldwater.org

PIPELINE
ATMOS ENERGY
766 Industrial Drive
Lebanon, KY, 40033
1-866-322-8667
Contact: Brannon Taylor eMail: brannon.taylor@atmosenergy.com

DEMOLITION NOTES

1. Contractors shall be responsible for reviewing all documents and visiting the site to become familiar with and verify the existing conditions. These demolition drawings shall serve to aid the Contractor in evaluation of the extent of demolition, but shall not be held to be all inclusive.

2. Contractors shall be responsible for all demolition required for the installation of new construction and as necessary to fulfill the purpose and intent of the finished work, whether or not it is specifically shown or noted in these documents. Demolition shall include, but is not limited to, removal of all buildings, pavements, curbs, light poles (including footings), vegetation (including stumps), utilities not otherwise reused, etc., as required for new construction.

3. Any areas disturbed and/or damaged outside of the demolition area shall be replaced and/or repaired to the pre-construction state (match existing) by the Contractor.

4. Unless noted otherwise all demolition materials shall become the property of the Contractors and shall be removed from the property. All demolition material removed from the site shall be disposed of according to State and Federal Law. The Owner reserves the right and shall be given the opportunity to claim items whether or not those items were specifically noted for removal, relocation, or as returned to Owner.

5. The Contractors shall field inspect all demolition to insure such removal does not impair structural integrity of the existing buildings and retaining walls. If the inspection indicates that the structural integrity may be impaired, the Contractor shall immediately stop all related work and notify Prime AE.

6. The refuse resulting from clearing and grubbing shall be disposed of by the Contractor in a manner consistent with all government regulations. In no case shall refuse material be left on the project site, placed onto abutting private properties, or be buried in embankments or trenches on the project site. Debris shall not be deposited in any stream or body of water, wetland, or in any street or alley, or upon any private property except by written consent of the private property Owner. Hauling routes shall remain clean and free of any debris resulting from demolition work on this project.

7. The Contractor shall completely remove all growth including complete root systems of trees, shrubs, herbaceous weeds and grasses, within the limits of clearing and grubbing area.

8. Care shall be taken during demolition to ensure that damage does not occur to existing pavement, curbs, and sidewalks which is to remain in place and that all removals are accomplished by making a neat vertical saw cut at the boundaries of the area to be removed.

9. The contractor shall mill existing asphalt surfaces at edge of demolition limits to provide a clean and smooth surface transition when proposed asphalt is tying into existing asphalt. Unless otherwise noted the milling width shall be a minimum of 1'-0" wide and the milling depth shall be equal to the thickness of the proposed surface course.

10. The Contractor shall verify that all utility services to be demolished and/or abandoned have been disconnected.

GRADING NOTES

1. It is the Contractor's responsibility to perform any additional geotechnical explorations to determine the topsoil, unsuitable material, rock limits, or any information pertinent to perform the construction. All the necessary earth work should be included as part of the bid. Various geological situations encountered natural or man made shall be the responsibility of the contractor and the remedial measures would be the Contractor's responsibility and any unclassified excavation is considered incidental to construction.

2. When materials which are unsuitable for subgrade, or other roadway purposes, occur within the limits of street construction, the Contractor shall be required to excavate such material below the grade shown on plans, and the areas so excavated shall be backfilled with approved suitable materials. The extent of undercutting and backfilling shall be determined by the Geotechnical Engineer.

3. Topsoil should be stock piled within the site with appropriate erosion control measure taken unless it is in excess or stated otherwise, in which case is shall be removed by the Contractor.

4. The Contractor shall remove all unsuitable materials from the site, burying of unsuitable material on site shall not be permitted. All excavated materials shall become property of the Contractor and shall be removed from the site unless instructed in writing to do otherwise by the Owner or Prime AE. All unsuitable materials removed from the site shall be disposed of according to State and Federal laws. Unsuitable materials include frozen soil, soft unstable material and miscellaneous fill or any material classified as unsuitable by the Geotechnical Engineer.

5. During wet and rainy periods, aeration is necessary for fill materials to achieve the required moisture content. During dry periods, water may need to be added to achieve the proper moisture content for compaction. When clay soils are encountered it may be necessary for aeration during the summer periods as well. Borrow material shall not be placed over frozen/saturated materials or unsuitable material. Dust shall be controlled by watering.

6. The Contractor is required to furnish a minimum 6" of topsoil. It is the Contractor's responsibility to determine the amount of topsoil required an include it in the bid, topsoil shall be incidental to contract.

7. Trench and mass excavation shall be unclassified and to the depths shown on the plans.

8. Compaction tests shall be performed by a qualified Geotechnical Engineer, at the request of the City, County, State or Prime AE. The cost for same shall be borne exclusively by the contractor. The Geotechnical Engineer shall be on-site during filling operations and the Contractor shall follow all recommendations regarding fill placement.

9. Cut Slopes (excavation) shall be constructed as shown on the plans not exceeding a maximum of 3:1 (horizontal / vertical).

10. Fill Slopes (embankment) shall be constructed as shown on the plans not exceeding a maximum of 3:1 (horizontal / vertical).

11. The Geotechnical Engineer may require additional work based on actual field conditions. The Contractor shall follow all guidelines set forth by the Geotechnical Engineer.

12. All areas that are to be seeded or sodden shall be box graded removing rock, clodded dirt, stumps, roots and and all objects larger than 2 inches.

TRAFFIC CONTROL NOTES

1. When the normal function of the roadway is suspended through closure of any portion of the right-of-way, temporary construction work zone traffic control devices shall be installed to effectively guide the motoring public through the area. Consideration for road user safety, worker safety, and the efficiency of road user flow shall be an integral element of every traffic control zone. All traffic control devices shall be in accordance with the latest Manual on Uniform Traffic Control Devices (MUTCD).

2. Any traffic control plans not included in the engineering plan set must be submitted for review a minimum of seven (7) working days prior to the anticipated lane closure. Construction activity shall not begin until the traffic control plan is approved by the governing authority. Traffic control plans may be required on other roadways as determined by the governing authority or the designer. All traffic control plans must be prepared by an individual that is certified in their preparation. Any deviation from an approved traffic control plan must be reviewed by the governing authority or their designated representative.

3. The Contractor shall be responsible for maintaining all traffic control devices on an around-the-clock basis, whether or not work is active. Any deficiencies shall be corrected by the Contractor immediately, regardless of time of day.

4. All temporary traffic control devices shall be removed as soon as practical when they are no longer needed. When work is suspended for short periods of time at the end of the workday, temporary traffic control devices that are no longer appropriate shall be removed or covered.

5. Existing permanent signs removed by the contractor for construction purposes shall be reset according to the governing authority's standards immediately after construction. All stop, yield and street name signs removed shall be temporarily erected in the appropriate locations (no less than 7 feet vertical from grade) until permanent signing can be installed. Any temporary stop or yield sign locations to be left in place overnight will require prior approval from the governing authority.

6. Access must be maintained to all drives and side streets or as indicated in the traffic control plan.

7. The contractor shall be responsible for furnishing all labor, material, equipment and incidental items needed to provide adequate construction signing, barricades, traffic control devices and other related items for the project, during all phases of construction.

LANDSCAPE GENERAL NOTES

1. The Contractor shall be responsible for estimating all Quantities on landscaping plans.

2. Prior to installation of any plant material the Contractor shall coordinate an on-site meeting with the Owner and the Landscape Architect.

3. The Contractor shall verify all conditions in the field and report any discrepancies to the Landscape Architect.

4. All plant material shall be nursery grown stock from the same climate zone as the project. All plant material shall meet the minimum standards of the American Nurserymen Association as specified in the American Standard for Nursery Stock.

5. All plant material shall be guaranteed for a period of one year from the date of acceptance by the Owner. All plantings deemed unacceptable by the Landscape Architect shall be repaired or replaced by the Contractor at no additional cost to the owner.

6. No trees or shrubs shall be planted under or over a utility. If any tree or shrub shown on the Landscape Plan falls under or over any utility the Contractor shall contact the Landscape Architect.

7. All plant material shall be reviewed and approved by the Landscape Architect prior to installation.

8. All planting areas shall be covered with 3" shredded bark mulch as approved by owner.

9. All planting bed areas shall be pretreated with weed pre-emergent preventer type weed preventer, per manufacturer specifications.

10. All required tree trimming shall be done under the direction of a certified arborist.

11. Watering bags shall be placed on each tree and filled with water at the time of planting.

12. Unless otherwise noted, maintenance (watering, mowing, overseeding, weeding) of all planting areas shall begin immediately after installation and shall continue for a minimum of 30 days. After 30 days the Landscape Architect will review plants to confirm if they are established or if maintenance shall continue.

13. All trees and shrubs shall be uniform in branching structure. Trees and shrubs with missing branches and not uniform in shape will be rejected.

14. The planting soil shall be a uniform mix, free of stones, stumps roots or other similar objects larger than 2 inches. See the Landscape Plans and Details for topsoil mix and depths/widths for planting balls.

15. All trees planted within 8' of a concrete or paved surface shall have root barriers installed per the manufactures instructions.

16. The Contractor shall be responsible for staking and layout of the plantings on this project.

17. The Contractor shall be responsible for the complete removal of all binding cords and ropes from the trunks of all shade and ornamental tress immediately after planting. Identification tags and ribbons shall be removed from all plant material at the time of planting. Tree baskets shall be cut from the top 1/4 of the root ball prior to planting.

18. Unless otherwise noted, medium shrubs shall be planted no closer than 30" to any adjoining wall or paved area. Large spreading shrubs shall be planted no closer than 36" to any adjoining wall or paved area.

19. The Contractor shall furnish soil analysis and a written report by a qualified testing laboratory to the Landscape Architect.

20. Contractor shall provide all materials and labor including excavation and soil mix.

21. Refer to the Mass Grading Plan and Spot Elevation Plan for finished grade elevations.

Kentucky 811
811now.com
* CALL BEFORE YOU DIG "B.U.D." *
1 (800) 752-6007
KRS 367.4901 thru 367.4917

B.U.D. (KENTUCKY 811) NOTES

1. The location of utilities shown hereon are from observed evidence of above ground appurtenances only, or utility markings performed by third parties (Before You Dig services and/or location services).

2. Whether they appear on these plans or NOT, the Contractor shall expose and field verify the location (horizontal and vertical) of all underground utilities, including but not limited to gas, water, electric, sanitary sewer, storm sewer, cable, telephone and traffic control. Any conflicts shall be reported immediately to the Engineer and the appropriate authorities.

3. The Contractor shall contact the Kentucky Underground Protection, Inc. a minimum of two working days and a maximum of 10 working days prior to excavation at telephone number 1 (800) 752-6007.

4. The Contractor shall comply with KRS 307.4901 thru 367.4917.

CONCRETE WORK NOTES

1. All concrete shall be a minimum of Class A, 3,500 psi unless otherwise specified.

2. The Contractor shall install a continuous 1/2" thick expansion joint where newly placed concrete abuts existing concrete or any fixed object.

3. Sidewalks shall be 4 1/2" thick unless otherwise noted. Sidewalks at driveways and entrances shall be 6" thick unless otherwise noted.

4. All Driveways and entrance pans shall be 6" thick unless otherwise noted.

5. Sidewalk cross slope shall be 2% maximum slope, 1% minimum slope.

6. All sidewalks shall have 1/2" expansion joints at a maximum of 30' spacing at all breaks in alignment and at the beginning and ending points of curves. Sidewalks shall have a tooled control joint, the spacing shall be equal to the width of the sidewalk.

7. Curbs shall have 1/2" expansion joints at a maximum of 30' spacing at all breaks in alignment and at the beginning points and the ending points of curves.

8. Minimum curb radius shall be 5'-0" unless otherwise noted.

9. All sidewalk ramps and ingress/egress paths shall conform to the current American Disabilities ADA standards guidelines and requirements and any other governing authorities requirements.

HAZARDOUS MATERIAL NOTES

1. If any construction personnel encounter any material which they suspect to be hazardous or toxic, they shall stop work immediately and advise the owner. The Contractor shall take immediate and appropriate action to protect the public and workers in accordance with all federal, state, and local laws, codes and regulations.

2. The contractor is hereby advised that Prime AE is not a design professional in the determination of the presence of hazardous materials, or in making recommendations regarding the testing, removal, encapsulation or their corrective measures pertaining to hazardous materials.

STEPHEN E. GARLAND 23980 PROFESSIONAL ENGINEER

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RTA DATE	03/24/2023

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

CONSTRUCTION NOTES

DRAWING NO. **CN1**

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
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FRANKFORT, KENTUCKY

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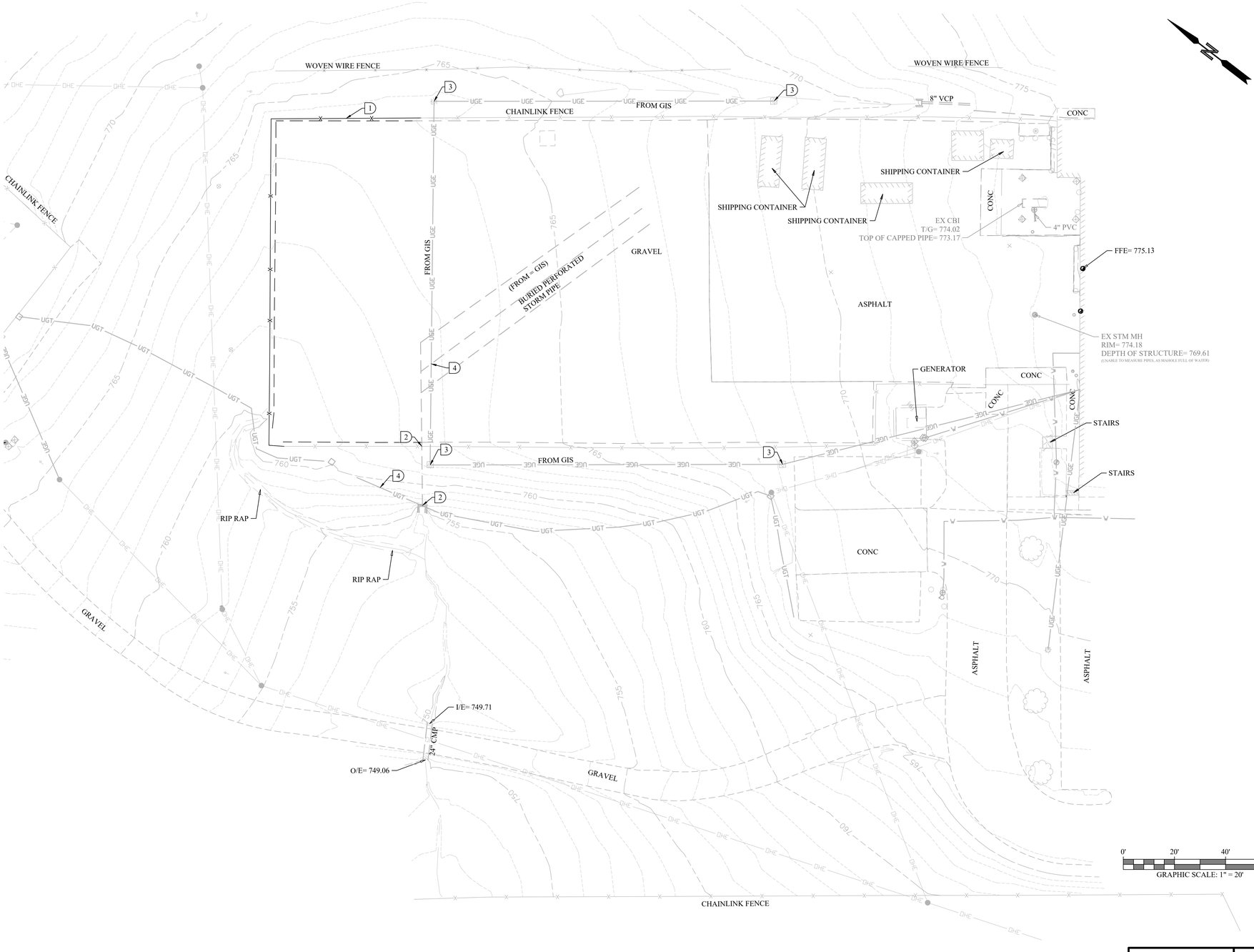

DEMOLITION KEYNOTES

*All keynotes may not be used on this sheet.
**See sheet CN-1 for additional notes.

1. Demolish and remove existing fence.
2. Demolish and remove existing pipe, remove existing headwall and grade to match surrounding area.
3. Utility information is GIS based.
4. Contractor is responsible for relocation of existing utilities to avoid new work.

LEGEND

These standard symbols will be found in the drawing.

- EXISTING DITCH CENTERLINE
- EXISTING GUTTER LINE
- EXISTING ELECTRIC OVERHEAD LINE
- EXISTING BUILDING OVERHANG
- EXISTING ROAD EDGE OF PAVEMENT
- EXISTING RIP RAP
- EXISTING UNDERGROUND TELEPHONE
- EXISTING WATER PIPE
- EXISTING CHAIN LINK FENCE
- EXISTING WOVEN WIRE FENCE
- EXISTING RETAINING WALL
- EXISTING PARKING EOP
- EXISTING SIDEWALK
- EXISTING ELECTRIC
- EXISTING BUILDING
- EXISTING ELECTRIC UNDERGROUND LINE
- EXISTING STORM PIPE
- EXISTING LIGHT POLE
- EXISTING AIR CONDITIONER
- EXISTING SURVEY BENCHMARK
- EXISTING BOLLARD
- EXISTING SANITARY CLEANOUT
- EXISTING ELECTRIC BOX
- EXISTING JUNCTION BOX
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC OUTLET
- EXISTING FIRE HYDRANT
- EXISTING GUY WIRE
- EXISTING POST
- EXISTING STORM MANHOLE
- EXISTING TELEPHONE PEDESTAL
- EXISTING TREE
- EXISTING UTILITY POLE
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING WATER
- EXISTING BORE HOLE

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RTA DATE	03/24/2023

STEPHEN E. GARLAND 23990 PROFESSIONAL ENGINEER

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

EXISTING CONDITIONS & DEMOLITION PLAN

DRAWING NO. **EC1**

ACCOUNT NO. 095-CAR7-SP07-00

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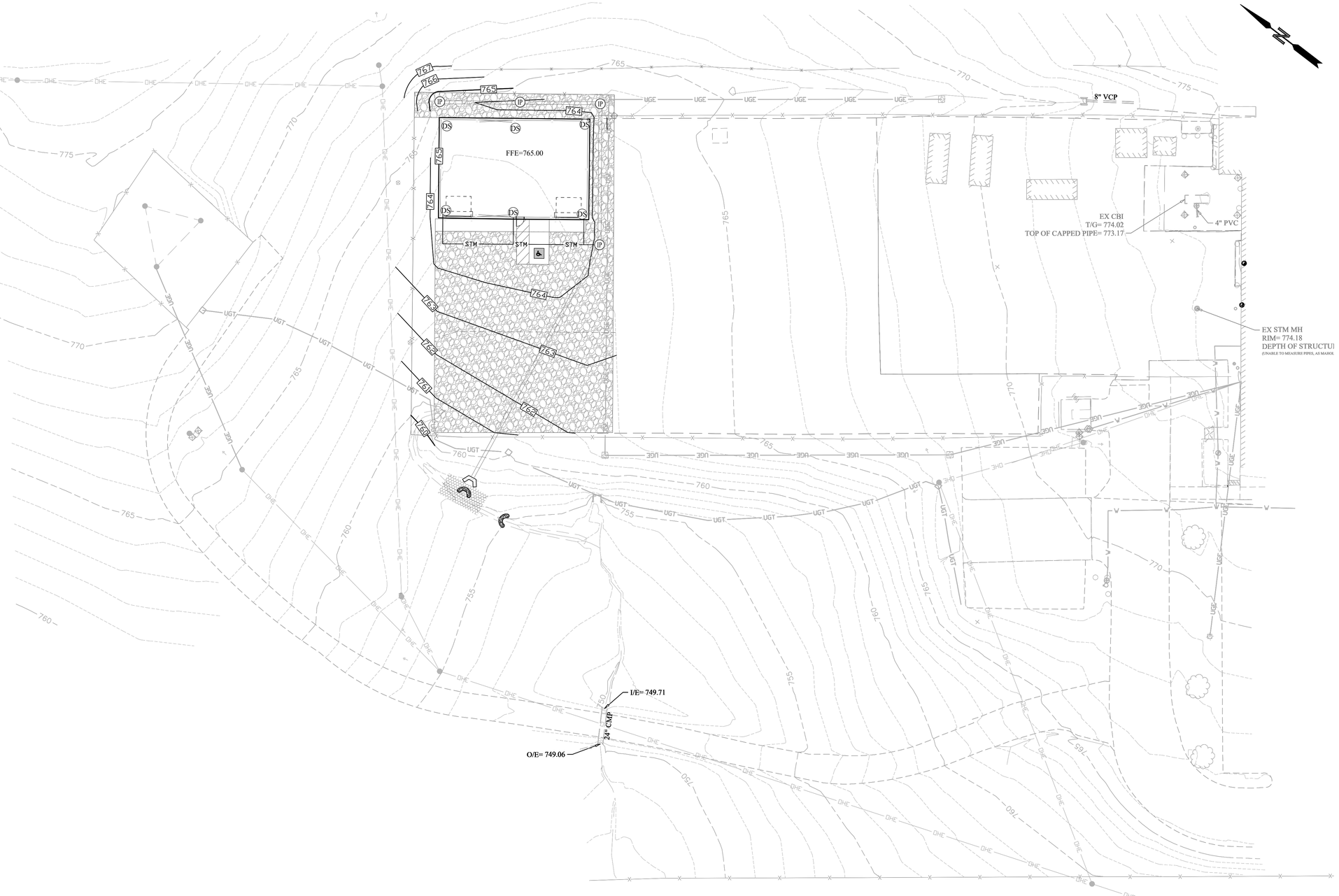

EROSION PROTECTION AND SEDIMENT CONTROL LEGEND

GRAPHIC	DESCRIPTION	SYMBOL
	EROSION CONTROL MATTING (6 MONTH LONGEVITY)	EM
SF	SILT FENCE	SF
	SILT CHECK DAM	CD
	INLET PROTECTION	IP
	CONSTRUCTION ENTRANCE	CE
	CHANNEL LINING	CL
	CONCRETE WASHOUT PIT	CW

SITE BMP PLAN

The phases listed below and controls shown on plans are a general overview and may be adjusted in the field due to Construction Activities and Construction Means and Methods.

PHASE I - BMP PLAN (Clearing & Grubbing; Mass Grading). Erect erosion control fence along the property and the neighboring lots. Maintain construction entrance as shown in the plan. Construct construction entrance.

PHASE II - BMP PLAN (Rough grading, rough-in of roadway, underground utilities and sewers work). During this phase of construction activities, silt fences shall be removed, relocated, and or added as construction progresses. Maintain the silt fence along the property perimeter. Install underground utilities and sewers using correct linear BMP measures. Rough in roadway grade. Install silt fence along roadway and toe of slope of cut.

PHASE III - BMP PLAN (Site Preparation). Maintain the silt fences along the perimeter; construct flumes and install the silt check dams at end of flumes. Seed and straw site that will not be covered by buildings, parking lot, or roadway. Where normal seed and straw methods are ineffective, or on slopes 3:1 or steeper, install erosion control matting, 6 month longevity. Install channel lining in inlet and outlet flumes if needed.

PHASE IV - BMP PLAN (Final Construction). Remove silt fence and other controls that are inhibiting final construction and is no longer needed. Relocate silt fence as needed. Install Concrete Wash out pit, final location may vary based on trades. Finish construction of the sidewalks, entrances, parking lots, and buildings. Finally, remove any remaining erosion control measures and protect any remaining disturbed areas with seed and straw.

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DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

EROSION PREVENTION & SEDIMENT CONTROL PLAN

DRAWING NO. **EP1**

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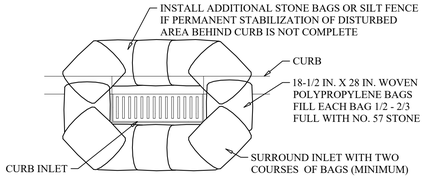
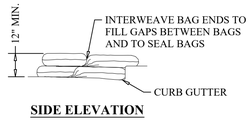


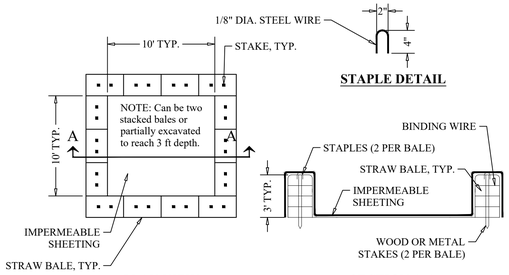
PLAN VIEW



SIDE ELEVATION

STORM INLET PROTECTION DETAIL

SCALE: NOT TO SCALE



STAPLE DETAIL

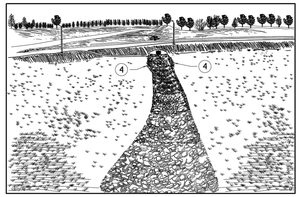
PLAN VIEW

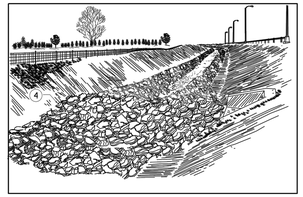
SECTION A-A

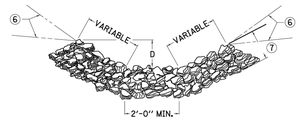
1. Locate washout structure a minimum of 50 feet away from open channels, storm drain inlets, sensitive areas, wetlands, buffers and water courses and away from construction traffic.
2. Size washout structure for volume necessary to contain wash water and solids and maintain at least 4 inches of freeboard. typical dimensions are 10 feet x 10 feet x 3 feet deep.
3. Prepare soil base free of rocks or other debris that may cause tears or holes in the liner. for liner, use 10 mil or thicker uv resistant, impermeable sheeting, free of holes and tears or other defects that compromise impermeability of the material.
4. Provide a sign for the washout in close proximity to the facility.
5. Keep concrete washout structure water tight. Replace impermeable liner if damaged (e.g., ripped or punctured). Empty or replace washout structure that is 75 percent full, and dispose of accumulated material properly. do not reuse plastic liner. Wet-vacuum stored liquids that have not evaporated and dispose of in an approved manner. Prior to forecasted rainstorms, remove liquids or cover structure to prevent overflows. Remove hardened solids, whole or broken up, for disposal or recycling. maintain runoff diversion around excavated washout structure until structure is removed.

CONCRETE WASH PIT WITH STRAW BALES DETAIL

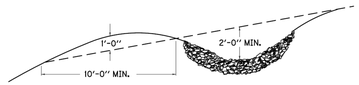
SCALE: NOT TO SCALE



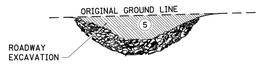




TYPICAL SECTION



TYPICAL INTERCEPTOR DITCH

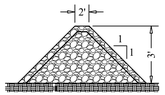


~ NOTES ~

BID ITEMS AND UNIT TO BID
CHANNEL LINING CLASS II TON
CHANNEL LINING CLASS III TON

1. CHANNEL LINING WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR EACH CLASS.
2. CHANNEL LINING WILL NOT BE REQUIRED IN THE BOTTOM OF THE DITCH WHERE SOLID ROCK IS ENCOUNTERED.
3. CHANNEL LINING ESTIMATED ON THE BASIS OF 0.50 TON PER SQ. YD. PER FT. OF DEPTH.
4. WIDEN CHANNEL LINING NEAR OUTLET END OF STRUCTURE AS DIRECTED BY THE ENGINEER.
5. FROM THE TOP OF THE LINING TO THE ORIGINAL GROUNDLINE.
6. ALTERNATE LOCATION OF GROUNDLINE.
7. 15" MIN. CLASS II, OR 24" MIN. CLASS III.
8. D = DEPTH TO PROTECT, T = THICKNESS, (SEE PLAN NOTES FOR THESE VALUES)

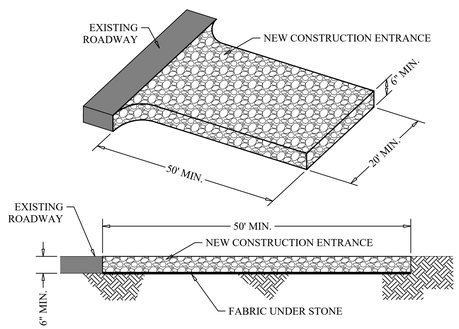
KENTUCKY DEPARTMENT OF HIGHWAYS	
CHANNEL LINING CLASS II AND III	
STANDARD DRAWING NO. RDD-040-05	
SUBMITTED	12-01-15
APPROVED	12-01-15



Temporary silt check dam (KYTC class II channel lining) for overflow conditions. A trapezoidal notch (2ft wide & 1 ft high) to be provided at the center of the check dam from the top.

TEMPORARY SILT CHECK DAM DETAIL

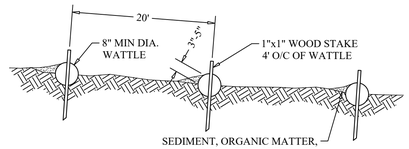
SCALE: NOT TO SCALE



1. Place the silt fence or tree protection fence around the project site to ensure construction entrance is used.
2. If construction on the site is such that the mud is not removed by the vehicle traveling over the stone, then the tires of the vehicles must be washed before entering the public road.
3. The construction entrance shall to be maintained by the contractor. When the gravel in the entrance is saturated with mud/debris, the contractor shall dress the entrance. Once the project is completed the construction entrance shall be removed completely and the site finished according to the plans.

CONSTRUCTION ENTRANCE DETAIL

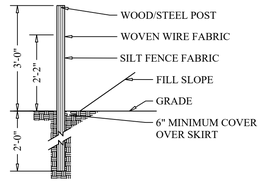
SCALE: NOT TO SCALE



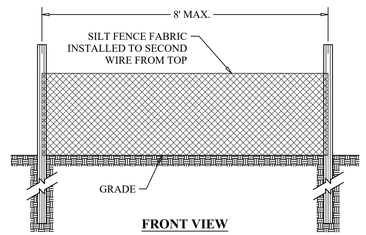
1. Installation to be completed in accordance with manufacturer's specifications.
2. Straw roll installation requires the placement and secure staking of the roll in a trench, 3" - 5" deep, dug on contour. Runoff must not be allowed to run under or around roll.
3. Adjacent rolls in a row shall tightly abut. Install additional stakes as needed to ensure a tight fit.

STRAW WATTLES DETAIL

SCALE: NOT TO SCALE



SIDE VIEW



FRONT VIEW

1. Silt Fence shall be installed around the perimeter of the project, where the ground is sloping away from the project area on to adjacent properties or R/W.
2. Use Silt Fence only when drainage area (NOT project area) does not exceed 1/4 Acre and never in areas of concentrated flow.
3. The Silt Fence should be placed on the downstream side of a slope.
4. A minimum of six (6") inches of the silt fence should be buried on the upstream end of the slope to ensure the runoff will be filtered and the sediments are detained.

SILT FENCE DETAIL

SCALE: NOT TO SCALE

STEPHEN E. GARLAND 23980 PROFESSIONAL ENGINEER

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DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

EROSION PREVENTION & SEDIMENT CONTROL DETAILS

DRAWING NO. **EP2**

ACCOUNT NO. 095-CAR7-SP07-00

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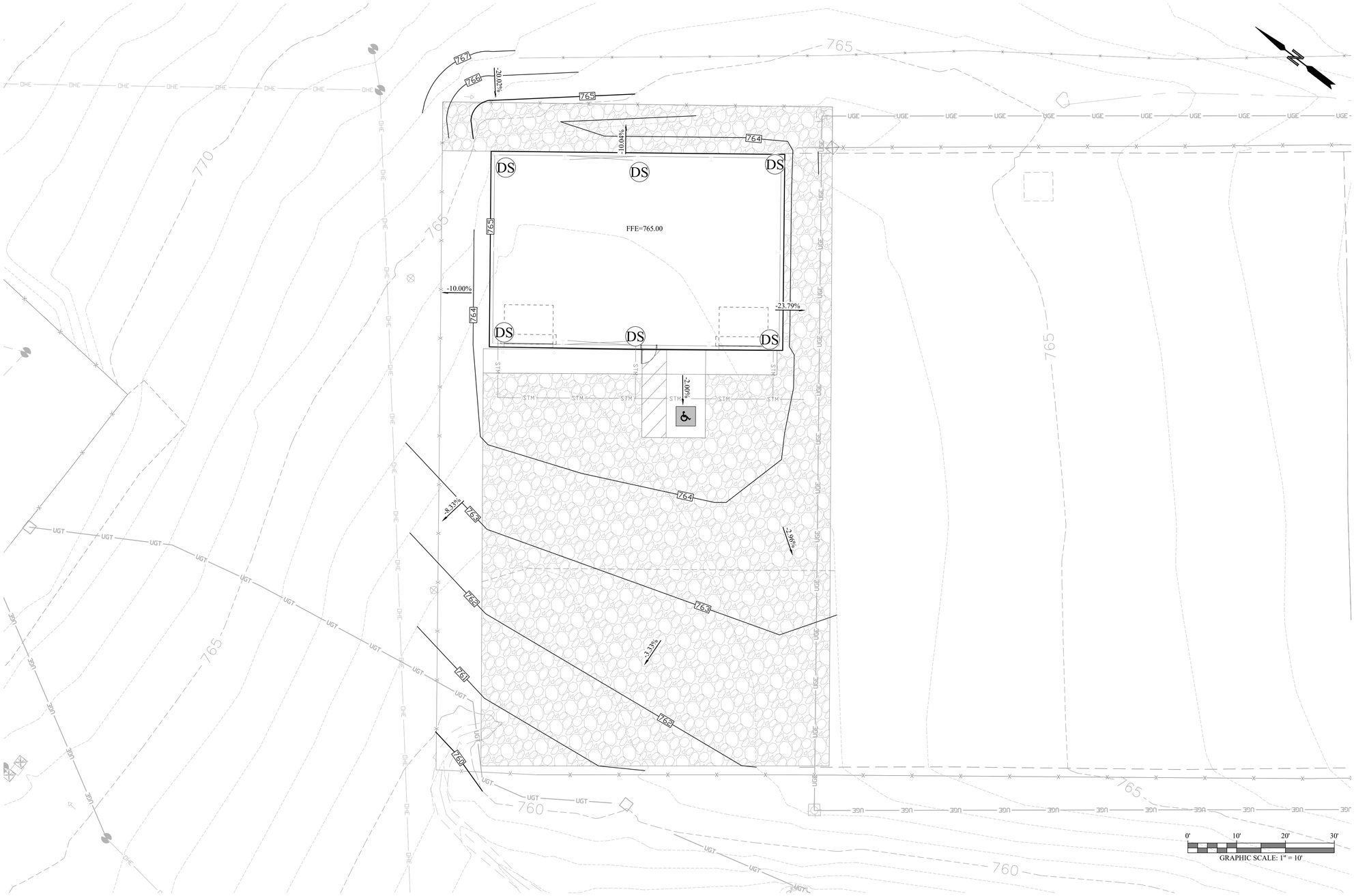

MASS GRADING LEGEND

725 — PROPOSED MAJOR CONTOUR

PROPOSED MINOR CONTOUR

GEOTECHNICAL NOTE:

Contractor shall remove the soils under the limits of the proposed building footprint and extending 5 feet outside of the building footprint as stated per the Geotechnical Engineer's recommendations. Refer to Geotechnical Engineer's specifications for underpinning the existing foundations. All old fill is to be undercut to residual soils within the building footprint and extending 5 feet outside of the building footprint (measured from the outside face of the exterior walls).

Contractor shall refer to the Report of Geotechnical Exploration prepared by Consulting Services Incorporated, dated December 8, 2022.

SOFT SATURATED SOIL NOTE:

During Construction the area as approximately shown was found to be saturated with groundwater. Construction of a parking lot was found to be cost prohibitive. Should this area be considered for construction in the future, dewatering techniques and soil stabilization shall be recommended by the Design Professionals at that time.

STATE OF KENTUCKY
STEPHEN E. GARLAND
23960
PROFESSIONAL ENGINEER

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DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

MASS GRADING PLAN

DRAWING NO. **CE1**

ACCOUNT NO. 095-CAR7-SP07-00

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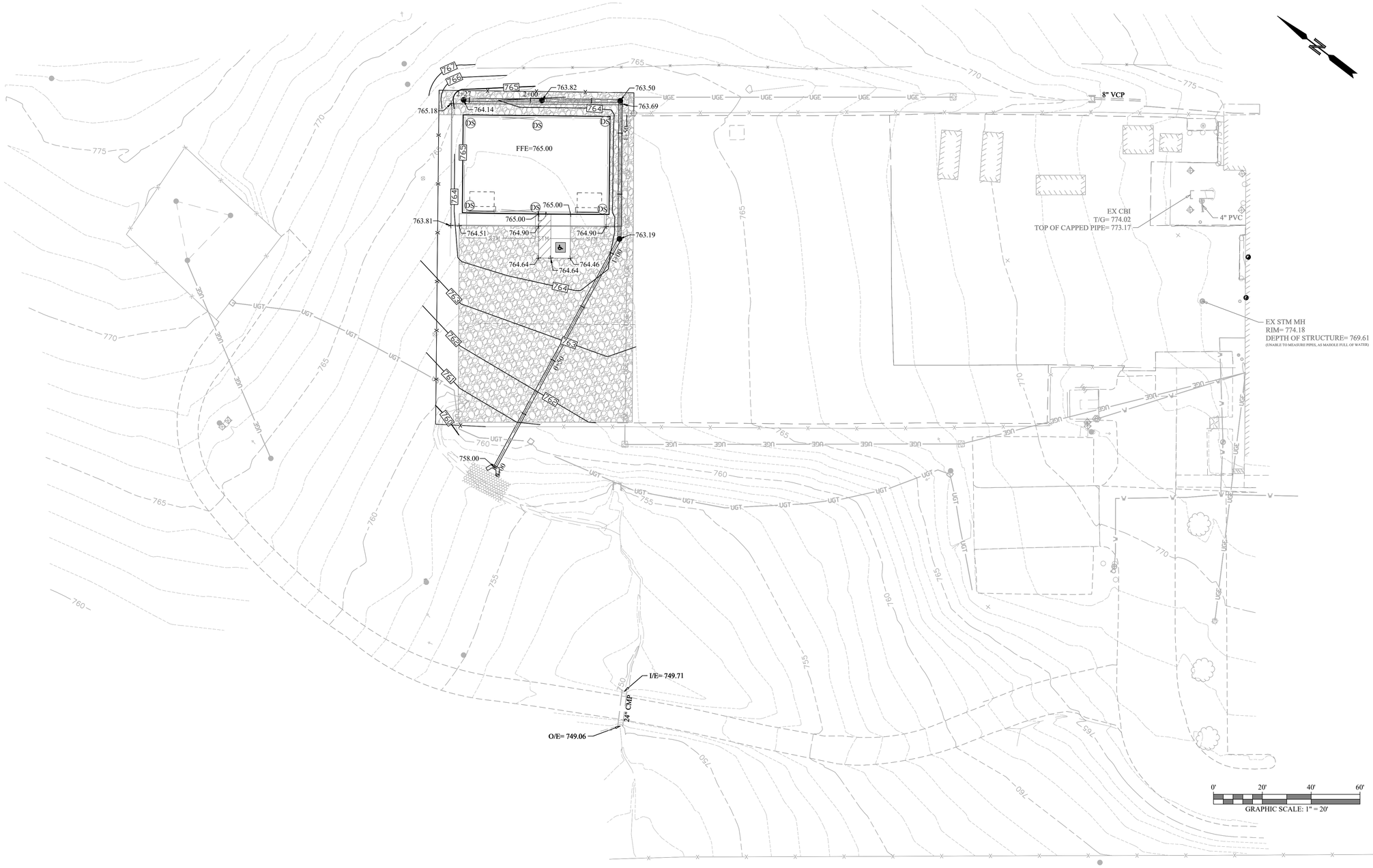

SPOT ELEVATION ABBREVIATIONS

F.F.E = Finish floor elevation

F/L = Centerline of flow in ditch or stream

E.G. = Existing grade

F.G. = Proposed grade

M.E. = Match existing grade

SPOT ELEVATION LEGEND

725 Proposed spot elevation

SOFT SATURATED SOIL NOTE:

During Construction the area as approximately shown was found to be saturated with groundwater. Should this area be considered for construction in the future, dewatering techniques and soil stabilization shall be recommended by the Design Professionals at that time.

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SPOT ELEVATION PLAN

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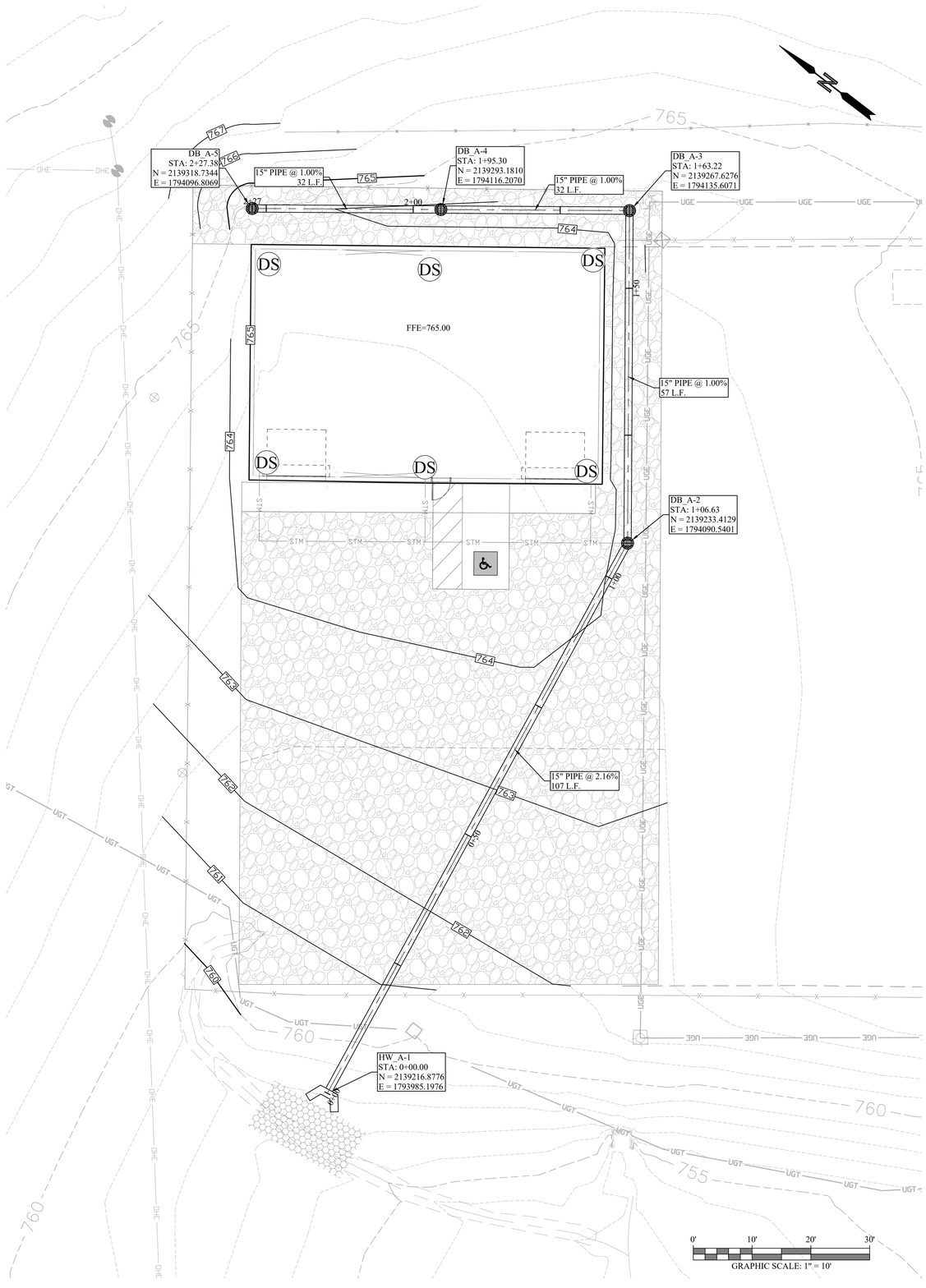

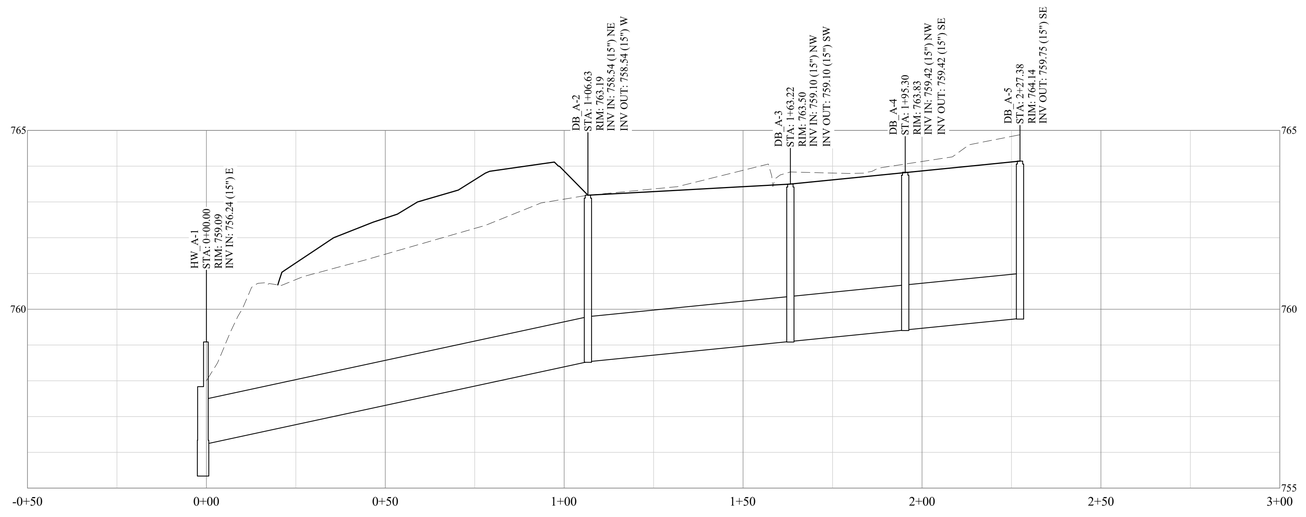

STORM SEWER LINE A PROFILE

SCALE H:1"=20'; V:1"=2'

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DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

PROPOSED STORM SEWER PLAN & PROFILE

DRAWING NO. **CE3**

ACCOUNT NO. 095-CAR7-SP07-00

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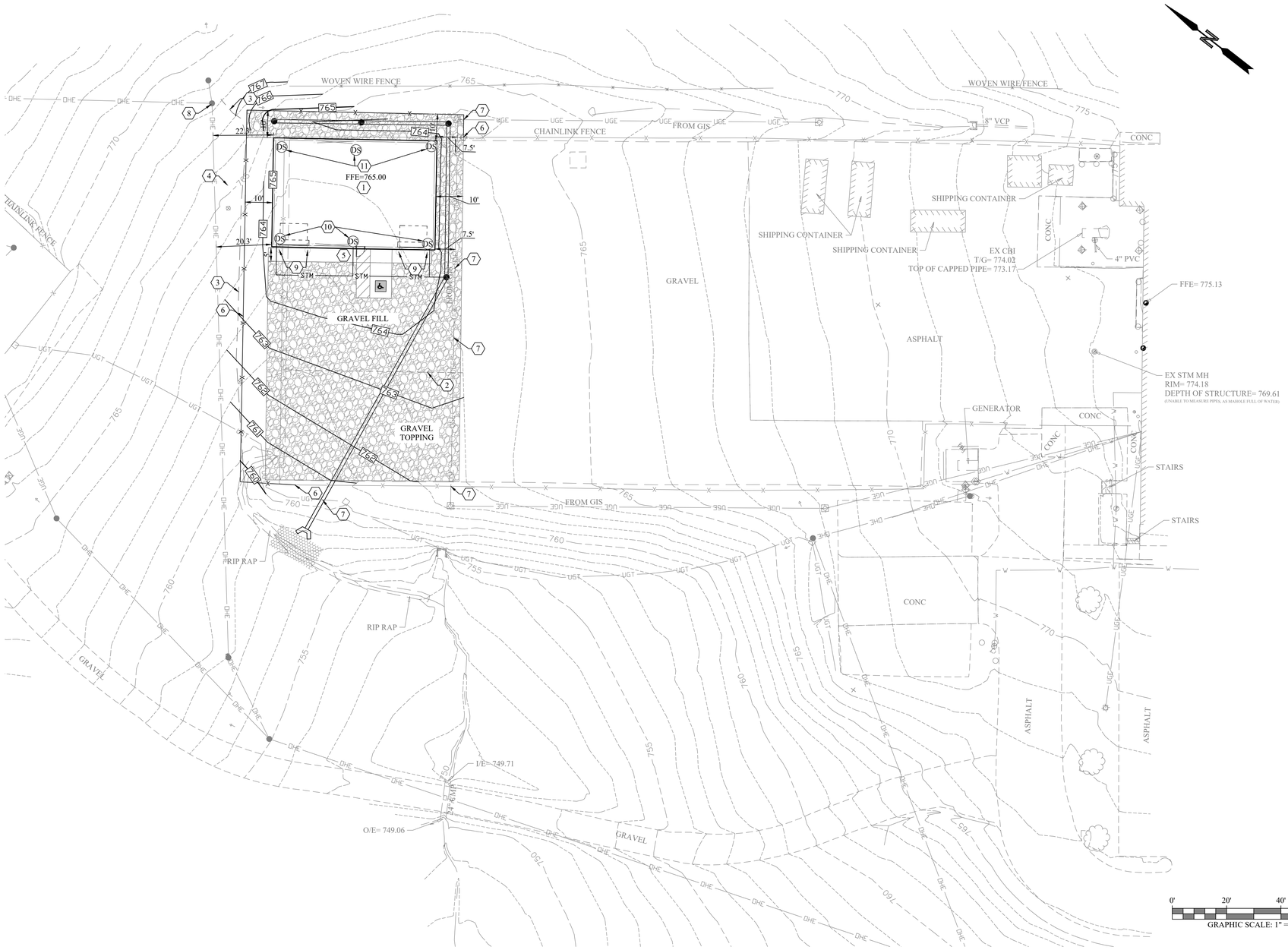

SITE PLAN KEYNOTES

*All keynotes may not be used on this sheet.
**See sheet CN-1 for additional notes.

1. Building see architectural for more information and detail.
2. Place gravel parking lot topping layer over existing land.
3. Provide drainage ditch.
4. Provide 4" Topsoil, seed and straw all disturbed grass areas.
5. Provide concrete apron, see details.
6. Replace chain link fence, tie into existing chain link fence, see details.
7. Contractor is responsible for relocation of existing utilities to avoid new work.
8. Existing power poles not to be disturbed.
9. Provide exterior bollard, see details.
10. Provide downspout collector/boot, see details.
11. Provide splash pad at downspout, see details,

STEPHEN E. GARLAND 23980 PROFESSIONAL ENGINEER

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DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

SITE KEY NOTES

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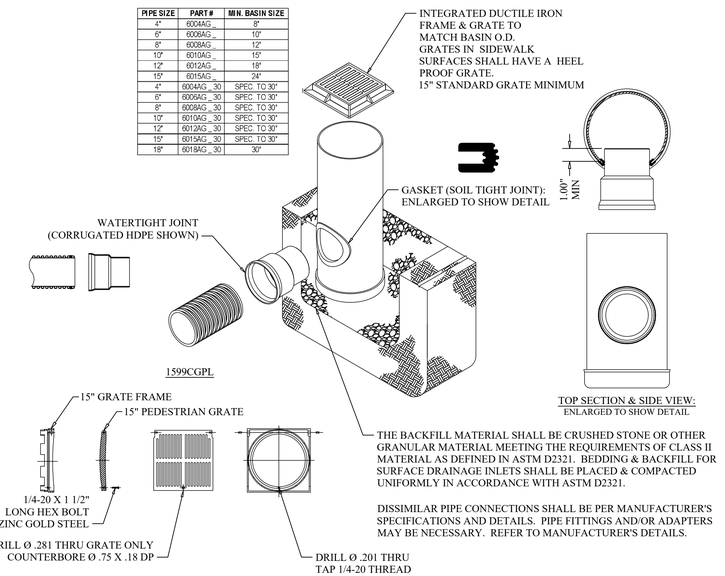
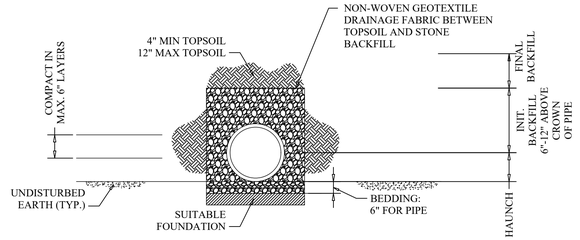
REVISION HISTORY OF DRAWINGS

	DESCRIPTION OF REVISION	DATE		DESCRIPTION OF REVISION	DATE
1			4		
2			5		
3			6		

PIPE SIZE	PART #	MIN. BASIN SIZE
4"	6004AG_	8"
6"	6006AG_	10"
8"	6008AG_	12"
10"	6010AG_	15"
12"	6012AG_	18"
15"	6015AG_	24"
4"	6004AG_ 30	SPEC. TO 30"
6"	6006AG_ 30	SPEC. TO 30"
8"	6008AG_ 30	SPEC. TO 30"
10"	6010AG_ 30	SPEC. TO 30"
12"	6012AG_ 30	SPEC. TO 30"
15"	6015AG_ 30	SPEC. TO 30"
18"	6018AG_ 30	30"



NYLOPLAST DRAIN BASIN WITH ADD-A-BRANCH
SCALE: NOT TO SCALE



NOTES:

All pipe systems shall be installed in accordance with ASTMD2321, "Standard practice for underground installation of thermoplastic pipe for sewers and other gravity flow applications", latest edition.

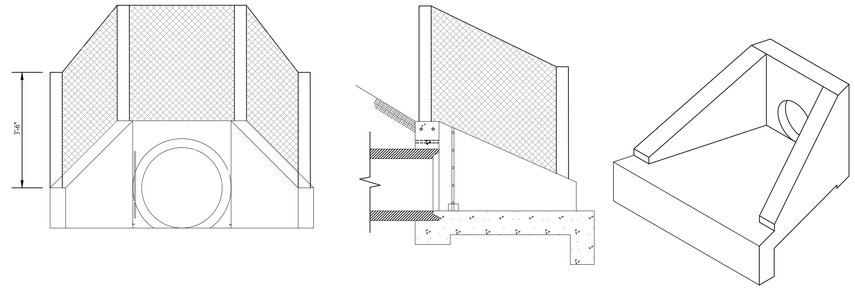
1. Measures should be taken to prevent migration of native fines into backfill material.
3. FOUNDATION: Where the trench bottom is unstable, the contractor shall excavate to a depth required by the engineer and replace with suitable material as specified by the engineer. As an alternative and at the discretion of the design engineer, the trench bottom may be stabilized using a geotextile material.
4. BEDDING: Suitable material shall be Class I, II or III. The contractor shall provide documentation for material specification to engineer. Unless otherwise noted by the engineer, minimum bedding thickness shall be 6".
5. INITIAL BACKFILL: Suitable material shall be Class I, II or III. The contractor shall provide documentation for material specification to engineer. Material shall be installed as required in ASTMD2321, latest edition.
6. MINIMUM COVER: Minimum cover, H, in non-traffic applications (grass or landscape areas) is 12" from the top of pipe to ground surface. Additional cover may be required to prevent floation. For traffic applications, minimum cover, H, is 12" up to 48" diameter pipe to bottom of flexible pavement or to toop of rigid pavement.

TRENCH DETAIL
SCALE: NOT TO SCALE

MINIMUM RECOMMENDED COVER BASED ON LOADING CONDITIONS

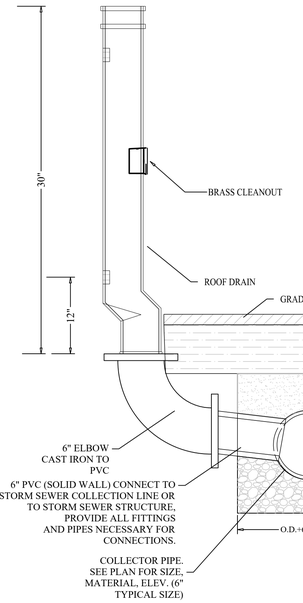
	SURFACE LIVE LOADING CONDITION	
PIPE DIAM.	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER



STANDARD HEADWALL WITH FENCE
SCALE: NOT TO SCALE

DIMENSIONS AND REINFORCEMENT DESIGN BY PRECAST MANUFACTURER

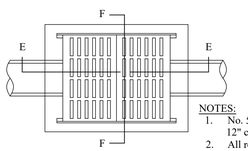


DOWNSPOUT BOOT NOTE:

A. BASIS OF DESIGN FOR MANUFACTURED DOWNSPOUT CONNECTION WITH BRASS CLEANOUT IS NEENAH MODEL R-4929.
B. DOWNSPOUT SHALL BE PAINTED PRIMER BLACK BY THE MANUFACTURER PRIOR TO SHIPPING TO JOBSITE.
C. CONTRACTOR SHALL PAINT BOOT TO MATCH ARCHITECTURAL COLOR AS DIRECTED BY OWNER OR ARCHITECT.
D. EXTEND EXISTING AND NEW DOWNSPOUTS (REFER TO ARCH. FOR SIZE) INTO CI DOWNSPOUT SHOE.
E. COORDINATE SIZE AND CONFIGURATION WITH DOWNSPOUT SIZE AND SHAPE.
F. MANUFACTURERS CONNECTIONS SHALL BE UTILIZED FOR FIT AND SNUGNESS. NO GAP GREATER THAN 1/8" AT CONNECTION VERTICALLY OR HORIZONTALLY SHALL BE ACCEPTED.
G. DOWNSPOUT LENGTH SHALL BE 30" MINIMUM.

DOWNSPOUT COLLECTOR/BOOT
N.T.S.

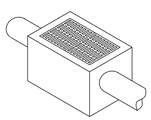
B



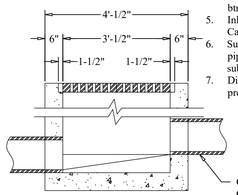
PLAN VIEW

NOTES:

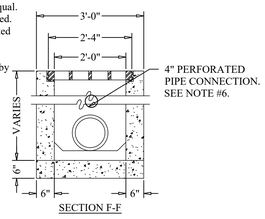
1. No. 5 reinf. stl. shall be used throughout on 12" centers.
2. All reinf. stl. shall have a min. 2" clearance to conc. face
3. No reinf. steel is req'd. in the bottom slab
4. All vertical reinf. stl. shall extend 4" into btm. slab
5. Inlet top shall be Neenah R-4980, or equal. Cast iron top shall be primed and painted.
6. Surface inlets shall have 50' of perforated pipe extending in each direction for subgrade drainage.
7. Dimensions and reinforcement design by precast manufacturer.



ISOMETRIC VIEW

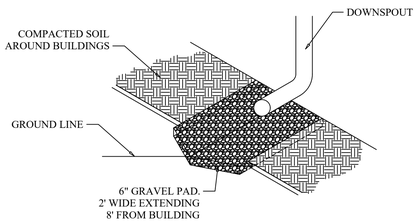


SECTION E-E

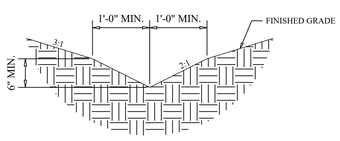


SECTION F-F

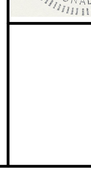
SURFACE INLET DETAIL
SCALE: NOT TO SCALE



SPLASH PAD AT DOWNSPOUT DETAIL
SCALE: NOT TO SCALE



EARTH "V" DITCH
SCALE: NOT TO SCALE



DRAWING INFORMATION	
A&E FILE NO.	202223
DRAWING DATE	03/15/2023
DRAWN BY	PWA
CHECKED BY	JA/SG
PHASE	RTA
RTA DATE	03/24/2023

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

SITE DETAILS

DRAWING NO. **SD1**

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING
FRANKFORT, KENTUCKY

AS BUILT DATE --/--/----

DECA LOG #

PRIME AE GROUP
Lexington Office
651 Perimeter Drive | Suite 300 | Lexington, KY 40517
P: 859.368.0145

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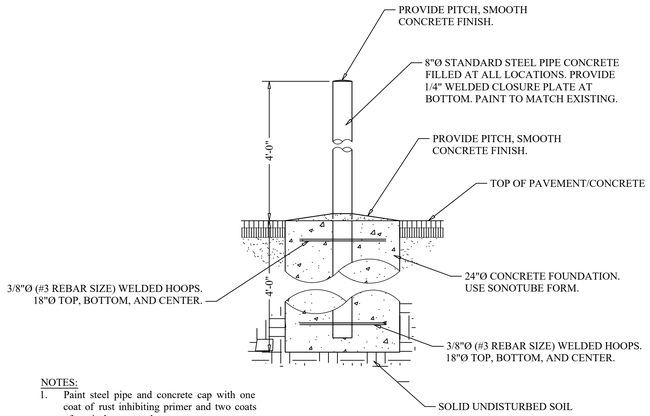
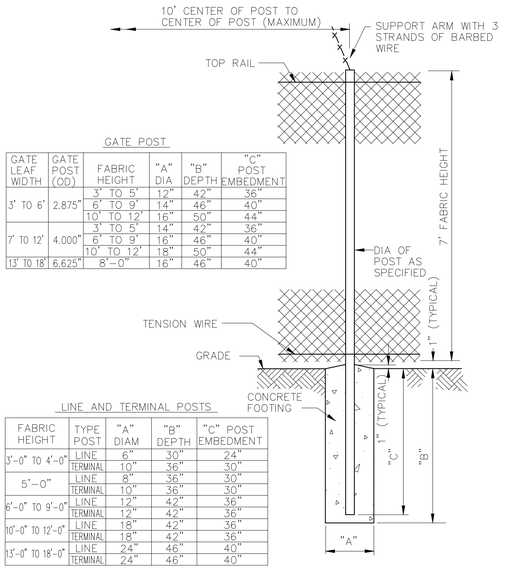


NOTES:
1. Paint steel pipe and concrete cap with one coat of rust inhibiting primer and two coats of semi-gloss enamel.
2. Color to be per owner/engineer selection. Submit shop drawing.
3. See specs. for additional requirements.

EXTERIOR BOLLARD DETAIL
SCALE: NOT TO SCALE



GATE POST

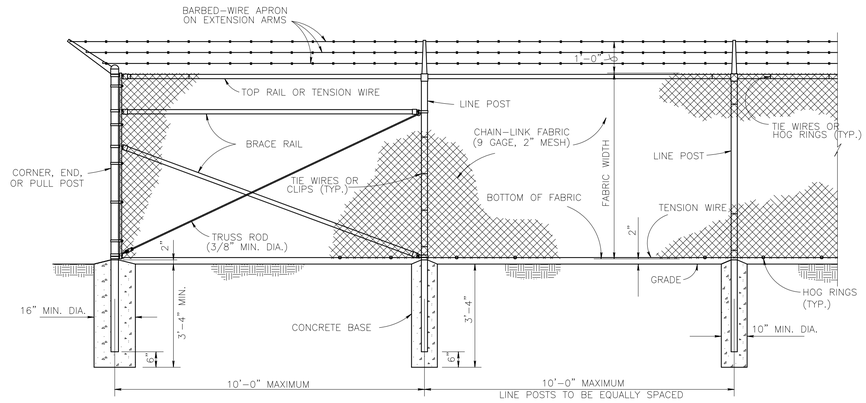
GATE LEAF WIDTH	GATE POST (OD)	FABRIC HEIGHT	"A" DIA	"B" DEPTH	"C" POST EMBEDMENT
3' TO 6'	2.875"	3' TO 5'	12"	42"	36"
		6' TO 9'	14"	48"	40"
		10' TO 12'	16"	50"	44"
7' TO 12'	4.000"	3' TO 5'	14"	42"	36"
		6' TO 9'	16"	46"	40"
		10' TO 12'	18"	50"	44"
13' TO 18'	6.625"	8'-0"	16"	46"	40"

LINE AND TERMINAL POSTS

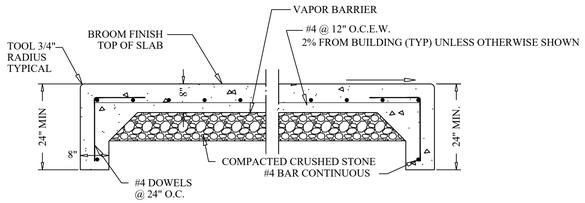
FABRIC HEIGHT	TYPE POST	"A" DIAM	"B" DEPTH	"C" POST EMBEDMENT
3'-0" TO 4'-0"	LINE	6"	30"	24"
	TERMINAL	10"	36"	30"
5'-0"	LINE	8"	36"	30"
	TERMINAL	10"	36"	30"
6'-0" TO 9'-0"	LINE	12"	42"	36"
	TERMINAL	12"	42"	36"
10'-0" TO 12'-0"	LINE	18"	42"	36"
	TERMINAL	18"	42"	36"
13'-0" TO 18'-0"	LINE	24"	46"	40"
	TERMINAL	24"	46"	40"

NOTE: TERMINAL POSTS INCLUDE END, CORNER, AND PULL POSTS

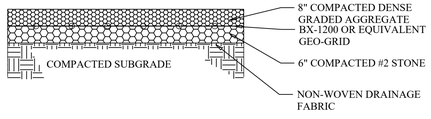
C1 / C503 CHAIN LINK FENCE POSTS
NTS



A4 / C503 CHAIN LINK SECURITY FENCE
NTS



CONCRETE APRON DETAIL
NOT TO SCALE



HEAVY DUTY GRAVEL PAVEMENT DETAIL
SCALE: NOT TO SCALE

STEPHEN E. GARLAND 23980 LICENSED PROFESSIONAL ENGINEER

DRAWING INFORMATION	
A&E FILE NO.	202223
DRAWING DATE	03/15/2023
DRAWN BY	PWA
CHECKED BY	JA/SG
PHASE	RTA
RTA DATE	03/24/2023

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

SITE DETAILS

DRAWING NO. **SD2**

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING
FRANKFORT, KENTUCKY

AS BUILT DATE --/--/----

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GENERAL NOTES

DESIGN LOADS

STRUCTURAL RISK CATEGORY ..... CATEGORY II

FLOOR LIVE LOAD

SLAB ON GRADE ..... 150 PSF

ROOF LIVE LOAD ..... 20 PSF MIN

ROOF SNOW LOAD (PER ASCE 7-10)

GROUND SNOW LOAD ..... P_g = 15 PSF
IMPORTANCE FACTOR ..... Is = 1.0
SNOW EXPOSURE FACTOR ..... Ce = 1.0
THERMAL FACTOR
(BUILDING/CANOPIES) ..... Ct = 1.2
FLAT-ROOF SNOW LOAD* (Pf = 0.7CeCtIsPg)
(BUILDING/CANOPIES) ..... Pf = 12.6 PSF
MINIMUM-ROOF SNOW LOAD (IsPg) ..... Pm = 15 PSF
SLOPED-ROOF SNOW LOAD* (P_s = Cs Pf)
(BUILDING/CANOPIES) ..... Ps = 12.6 PSF
*(INCREASE FOR DRIFTING PER ASCE 7-10, SECTIONS 7.7 & 7.8)

WIND LOAD (PER ASCE 7-10)

ULTIMATE DESIGN WIND SPEED ..... V_{ULT}= 115 MPH
NOMINAL DESIGN WIND SPEED ..... V_{ASD}= 89 MPH
WIND EXPOSURE ..... EXPOSURE C
ENCLOSURE ..... PARTIALLY ENCLOSED
SEE PEMB DRAWINGS FOR INTERNAL PRESSURE COEFFICIENT, END ZONE WIDTH, AND COMPONENTS AND CLADDING WIND LOADS.

EARTHQUAKE DESIGN DATA

COUNTY / STATE ..... WASHINGTON / KENTUCKY
IMPORTANCE FACTOR ..... Ie = 1.0
MAPPED SHORT PERIOD RESPONSE ACCELERATION ..... Ss = 0.185
MAPPED 1 SECOND PERIOD RESPONSE ACCELERATION ..... S1 = 0.101
SITE CLASS ..... CLASS B
DESIGN SHORT PERIOD SPECTRAL RESPONSE COEFFICIENT ..... Sds = 0.123
DESIGN 1 SECOND PERIOD SPECTRAL RESPONSE COEFFICIENT ..... Sd1 = 0.067
SEE PEMB DRAWINGS FOR SEISMIC DESIGN CATEGORY, BASIC STRUCTURAL SYSTEM, SEISMIC RESISTING SYSTEM, RESPONSE MODIFICATION FACTOR, SEISMIC RESPONSE COEFFICIENT, METHOD OF ANALYSIS, AND SEISMIC BASE SHEAR.

DESIGN STRESSES

CONCRETE (STRENGTH DESIGN) MINIMUM COMPRESSIVE STRENGTH IN 28 DAYS:

FOOTINGS ..... f'c = 3,000 PSI
INTERIOR SLABS ON GRADE, PIERS ..... f'c = 4,000 PSI
WALLS ..... f'c = 4,500 PSI

REINFORCING BARS (ASTM A615 GRADE 60) ..... fy = 60,000 PSI
SOIL BEARING PRESSURE FOR FOUNDATIONS (EXISTING OR NEW FILL) ..... 1,500 PSF

DESIGN CRITERIA

1. STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE 2018 KENTUCKY BUILDING CODE, 2ND EDITION (2015 IBC).
2. NO PROVISION HAS BEEN MADE FOR FUTURE HORIZONTAL OR VERTICAL EXPANSION.

GENERAL

1. THE REQUIREMENTS OF THESE GENERAL NOTES APPLY UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONTRACT DOCUMENTS, ADDENDA, AND SUPPLEMENTARY INFORMATION AND DISTRIBUTING SUCH TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE PREPARATION AND SUBMITTAL OF SHOP DRAWINGS, FABRICATION, AND INSTALLATION OF ANY STRUCTURAL MEMBERS.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO COMMENCING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES THAT MAY EXIST.
4. ANY DISCREPANCIES BETWEEN STRUCTURAL AND ARCHITECTURAL DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER.
5. DO NOT SCALE DRAWINGS.
6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEANS AND METHODS TO CONSTRUCT THE STRUCTURE, INCLUDING VERIFICATION OF LOAD CAPACITY OF THE STRUCTURE, NEW OR EXISTING, TO SUPPORT CONSTRUCTION ACTIVITIES, EQUIPMENT, ETC. AND FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON THE STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED. DAMAGE TO THE STRUCTURE CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE CORRECTED BY THE RESPONSIBLE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
7. SHOP DRAWINGS MUST BE CHECKED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION.
8. NON-STRUCTURAL ELEMENTS OF THE BUILDING (ARCHITECTURAL FINISHES, MASONRY VENEER AND ASSOCIATED TIES, INSULATION, SHEATHING, DUCTWORK, PIPING, FOUNDATION/FLOOR/ROOF DRAINS, ETC.) ARE TYPICALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. WHERE NON-STRUCTURAL ELEMENTS ARE SHOWN ON THE STRUCTURAL DRAWINGS, THEY ARE SHOWN FOR REFERENCE AND DESIGN INTENT ONLY. NON-STRUCTURAL ELEMENTS SHALL BE CONSTRUCTED AS SHOWN ON THE ARCHITECTURAL, ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS.
9. WALL OPENINGS AND TERMINATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE DIAGRAMMATIC ONLY. WALL TERMINATIONS AND OPENING JAMBS, HEADS, AND SILLS SHALL BE CONSTRUCTED AS SHOWN ON THE ARCHITECTURAL DRAWINGS. WHERE VENEERS WRAP JAMBS, DETAIL AND FABRICATE LINTELS TO BEAR ON SOLID STRUCTURE. DO NOT BEAR LINTELS OR BEAMS ON VENEERS (BRICKS, SIDING, ETC.). IF THE ARCHITECTURAL DRAWINGS DO NOT INCLUDE DETAILS FOR ANY OF THESE CONDITIONS, CONSULT WITH ARCHITECT FOR DIRECTION.
10. DETAILS LABELED TYPICAL ON THESE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR AND SHALL APPLY REGARDLESS OF WHETHER THEY ARE KEYED ON THE PLANS. CONSTRUCTION NOT SPECIFICALLY INDICATED BY DETAIL OR SECTION SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.

FOUNDATION CONSTRUCTION

1. FOUNDATIONS ON THIS PROJECT ARE DESIGNED IN ACCORDANCE WITH RECOMMENDATIONS MADE BY CSI GEOTECHNICAL ENGINEERS, IN THEIR REPORT DATED DECEMBER 8, 2022. THE GEOTECHNICAL REPORT IS PROVIDED AS REFERENCE INFORMATION AVAILABLE TO BIDDERS, BUT IS NOT PART OF THE CONTRACT DOCUMENTS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL REPORT.
2. ELEVATIONS GIVEN ARE TO THE TOP OF FOOTINGS.
3. ALL FOOTINGS MUST BE SUPPORTED ON UNDISTURBED SOIL CAPABLE OF SUPPORTING DESIGN LOADS WITHOUT APPRECIABLE SETTLEMENT. CONTRACTOR SHALL PROBE BEARING STRATA WITH DRIVEN RODS, REMOVE SHALLOW BEDROCK (AND OVERLYING SOIL) WITHIN TWO FEET BELOW BOTTOM OF FOOTING AND REPLACE WITH ENGINEERED SOIL BACKFILL.
4. IN GRANULAR SOILS (SANDS AND GRAVEL) THE SOIL SHALL BE MECHANICALLY TAMPED TO A HARD SURFACE IMMEDIATELY PRIOR TO PLACING FOOTING.
5. LOCATE EXISTING UNDERGROUND UTILITIES IN AREAS OF CONSTRUCTION. COORDINATE WITH UTILITY COMPANIES FOR ANY SHUT-OFF REQUIREMENTS OF STILL-ACTIVE LINES.
6. WHEN EXCAVATIONS APPROACH THE GROUND WATER LEVEL, THE WATER LEVEL SHALL BE LOWERED BY AN ACCEPTABLE DEWATERING SYSTEM SO THAT THE WATER LEVEL IS MAINTAINED CONTINUOUSLY A MINIMUM OF 2'-0" BELOW THE EXCAVATION.
7. FOR PLACEMENT AND COMPACTION OF FILL UNDER SLABS ON GRADE, SEE SPECIFICATIONS. IF NOT OTHERWISE NOTED, COMPACT ALL FILL TO 98% OF OPTIMUM LABORATORY DENSITY IN ACCORDANCE WITH ASTM D698 STANDARD PROCTOR METHOD. PLACE FILL IN 6" TO 8" LAYERS AND COMPACT WITH VIBRATORY TAMPING EQUIPMENT.
8. SEE ARCHITECTURAL AND SITE DRAWINGS FOR CONTOUR AND LAYOUT OF SITE WALKS AND BREEZEWAYS. SLOPE EXTERIOR CONCRETE 1/8"/ FT AWAY FROM BUILDING, UNLESS NOTED OTHERWISE.
9. FOUNDATION CONCRETE SHALL BE PLACED IMMEDIATELY FOLLOWING EXCAVATION. A LEAN CONCRETE (1,500 PSI) MUD MAT SHALL BE PLACED OVER THE PREPARED BEARING MATERIALS IF EXCAVATION MUST REMAIN OPEN DURING INCLEMENT WEATHER OR FOR MORE THAN 72 HOURS.
10. SURFACE RUNOFF SHALL BE DIRECTED AWAY FROM FOUNDATION EXCAVATIONS AND NOT BE PERMITTED TO POND WITHIN THE BUILDING FOOTPRINT. PROVIDE DRAINAGE TRENCHES FROM FOUNDATION EXCAVATIONS TO DIRECT RAINWATER OUT OF EXCAVATIONS.

CONCRETE CONSTRUCTION

1. ALL CONCRETE CONSTRUCTION TO BE IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI 301, ACI 318 AND ACI DETAILING MANUAL.
2. FURNISH BAR SUPPORTS WHERE NECESSARY DURING CONSTRUCTION.
3. PROVIDE PLASTIC, PLASTIC-COATED (NOT PLASTIC-TIPPED) OR STAINLESS STEEL CHAIRS IN ALL CONCRETE EXPOSED TO VIEW IN COMPLETED STRUCTURE.
4. PROVIDE PIPE SLEEVES AND INSERTS IN CONCRETE WORK WHERE REQUIRED. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
5. WELDING OF REINFORCING BARS (INCLUDING TACK WELDING) IS NOT PERMITTED.
6. PROVIDE HORIZONTAL KEYWAYS IN CONSTRUCTION JOINTS IN WALLS AND WALL FOOTINGS; MINIMUM 1 1/2" DEPTH WITH HEIGHT EQUAL TO ONE-THIRD OF MEMBER DEPTH, UNLESS OTHERWISE SHOWN OR NOTED.
7. REINFORCING FOR SLABS ON GROUND SHALL BE IN THE MIDDLE OF THE SLAB EXCEPT AS OTHERWISE NOTED AND SHALL BE POSITIVELY SUPPORTED AND MAINTAINED IN THIS POSITION DURING PLACEMENT OF CONCRETE.
8. BEND ALL HORIZONTAL WALL AND FOOTING BARS 1'-0" AROUND CORNERS OR PROVIDE CORNER BARS WITH 2'-0" LAP.
9. PROVIDE FOUNDATION DOWELS FOR ALL WALLS AND PIERS SAME SIZE AND SPACING AS VERTICAL STEEL.
10. SPLICES: ALL REINFORCING SPLICES SHALL BE AS TENSION LAP IN ACCORDANCE WITH THE FOLLOWING TABLE. MODIFY LENGTHS AS NOTED:

BAR SIZE	CONCRETE COMPRESSIVE STRENGTH		
	3,000 PSI	4,000 PSI	5,000 PSI
#3	21"	19"	17"
#4	29"	25"	22"
#5	36"	31"	28"
#6	43"	37"	33"
#7	62"	54"	48"

1. INCREASE SPLICE LENGTH BY THE FOLLOWING:
2. NOTE: INCREASED LENGTHS ARE ACCUMULATIVE

1. HORIZONTAL TOP BARS WITH GREATER THAN 12" OF CONCRETE BELOW +30 %
2. BAR SPACING LESS THAN 2 BAR DIAMETERS +50 %

11. CONCRETE PROTECTION FOR REINFORCEMENT: COVER
    A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ..... 3"
    B. CONCRETE EXPOSED TO EARTH OR WEATHER
        NO. 6 THROUGH NO. 18 BARS ..... 2"
        NO. 5 BAR, W31 OR D31 WIRE AND SMALLER ..... 1 ½"
    C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND
        SLABS AND WALLS
            NO. 11 BAR AND SMALLER ..... ¾"
        PIERS
            PRIMARY REINFORCEMENT, TIES ..... 1 ½"

PRE-ENGINEERED STEEL BUILDING CONSTRUCTION

1. PRE-ENGINEERED BUILDING CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF THE BUILDING STRUCTURE. THIS INCLUDES ALL STRUCTURAL STEEL ELEMENTS REQUIRED FOR A COMPLETE BUILDING STRUCTURE.
2. CONTRACTOR SHALL SUBMIT DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF KENTUCKY FOR REVIEW BY THE ARCHITECT AND ENGINEER.
3. STRUCTURE SHALL BE DESIGNED FOR:
    A. STRUCTURE SELFWEIGHT (INCLUDING ROOF SYSTEM).
    B. COLLATERAL DEAD LOAD OF 5 PSF.
    C. SNOW, WIND, EARTHQUAKE AND ROOF LIVE LOAD AS SHOWN IN "DESIGN LOADS" SECTION.
    D. ROOF TOP MECHANICAL UNITS (COORDINATE WITH MECHANICAL CONTRACTOR).
4. LIMIT BUILDING DRIFT TO H/100 UNDER LOAD COMBINATIONS THAT INCLUDE WIND. DRIFT LIMITATIONS FOR SEISMIC LOADING ARE DEFINED IN THE KENTUCKY BUILDING CODE.
5. IN ADDITION TO THE BUILDING FRAME, THE PRE-ENGINEERED BUILDING CONTRACTOR SHALL DESIGN, PROVIDE, AND INSTALL:
    A. ANCHOR BOLTS (DIAMETER SELECTION FOR SHEAR AND TENSION)
    B. FRAMING FOR WALL OPENINGS
    C. FRAMING FOR ROOF OPENINGS
6. COLUMN PIERS AND FOOTINGS ARE DESIGNED ASSUMING PINNED COLUMN BASES. FIXED COLUMN BASES ARE NOT PERMITTED.
7. COLUMN FOOTINGS SHALL BE CENTERED ON THE STEEL COLUMN CENTERLINES. UNLESS NOTED OTHERWISE, STEEL COLUMN CENTERLINES SHALL BE DETERMINED BY THE PRE-ENGINEERED BUILDING CONTRACTOR, BASED ON BUILDING LINES SHOWN IN DRAWINGS. FOUNDATION CONTRACTOR SHALL COORDINATE POSITION WITH THE APPROVED PRE-ENGINEERED BUILDING SHOP DRAWINGS PRIOR TO FOUNDATION INSTALLATION.
8. **DO NOT INSTALL FOUNDATIONS OR FABRICATE REBAR UNTIL PRE-ENGINEERED BUILDING SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED AND THE FOUNDATION SIZES HAVE BEEN CONFIRMED TO BE ADEQUATE IN WRITING.** UNLESS NOTED OTHERWISE, FOUNDATIONS SHOWN ON PLAN SHALL BE USED FOR BID. HOWEVER, THE BID FOUNDATIONS ARE BASED ON ESTIMATED PRE-ENGINEERED BUILDING REACTIONS. FOUNDATION SIZES WILL BE CONFIRMED AND ADJUSTED, WHERE NECESSARY, AFTER FINAL PROJECT SPECIFIC PRE-ENGINEERED BUILDING REACTIONS ARE SUBMITTED.
9. METAL ROOFING SHALL BE ASSUMED TO HAVE ZERO CAPACITY FOR DIAPHRAGM ACTION.
10. DEFLECTION OF FRAME BEAM SHALL NOT EXCEED L/120, WHERE L IS THE DISTANCE FROM EAVE TO EAVE.

SITE OBSERVATION BY THE STRUCTURAL ENGINEER

1. THE ENGINEER HAS NO CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES; FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK; FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK; OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY ACTS OR OMISSIONS OF THE CONTRACTOR, ANY SUBCONTRACTOR, MATERIAL SUPPLIER, OR AGENTS THEREOF. THE ENGINEER DOES NOT GUARANTEE THE PERFORMANCE OF THE CONTRACTOR AND SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO PERFORM ITS WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR APPLICABLE LAWS, CODES, RULES, OR REGULATIONS. THE CONTRACTOR SHALL MAINTAIN SOLE RESPONSIBILITY FOR DEFECTS AND DEFICIENCIES, INCLUDING PROVIDING TESTING AND INSPECTION ONCE SUCH ARE DISCOVERED, AND FOR PROVIDING ENGINEERED CORRECTIVE ACTION FOR DESIGN TEAM REVIEW.
3. PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF BROWN+KUBICAN, PSC IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN GENERAL ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHALL NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY, QUANTITY, OR ACCURACY OF THE CONSTRUCTION WORK, BUT RATHER PERIODIC IN EFFORT TO INFORM THE CLIENT ABOUT GENERAL PROGRESS AND TO ADVISE THE CLIENT ABOUT OBSERVED DEFECTS AND DEFICIENCIES IN THE WORK OF THE CONTRACTOR.

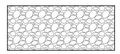
MAINTENANCE STATEMENT AND STRUCTURE LIFESPAN

1. THE ENGINEER MAKES NO CLAIM OR AGREEMENT AS TO THE LIFESPAN OF THE BUILDING STRUCTURE. THE CLIENT AND OWNER SHALL UNDERSTAND THAT STRUCTURAL TYPES DO HAVE LIFESPAN RELATIVE TO INITIAL COST AND MAINTENANCE AND THAT BY REQUESTING OR ACCEPTING A STRUCTURAL SYSTEM OF LOWER INITIAL COST THAT THE USEABLE LIFESPAN WILL DECREASE AND MAINTENANCE INCREASE.
2. ALL STRUCTURES REQUIRE PERIODIC MAINTENANCE TO EXTEND LIFESPAN AND TO ENSURE STRUCTURAL INTEGRITY FROM EXPOSURE TO THE ENVIRONMENT. THE ENGINEER SHALL NOT BE HELD LIABLE FOR MAINTENANCE REQUIREMENTS OR DETERIORATION RESULTING FROM LACK OF BUILDING MAINTENANCE.
3. A PLANNED PROGRAM OF MAINTENANCE SHALL INCLUDE ITEMS SUCH AS, BUT NOT LIMITED TO: PAINTING OF STRUCTURAL STEEL AND LINTELS, PROTECTIVE COATING FOR CONCRETE AND TIMBER, SEALANTS, CAULKED JOINTS, EXPANSION JOINTS, CONTROL JOINTS, TIMELY REPAIR OF SPALLS AND CRACKS IN CONCRETE, AND PRESSURE WASHING OF STRUCTURAL ELEMENTS EXPOSED TO A SALT ENVIRONMENT OR OTHER HARSH CHEMICALS.

STRUCTURAL ABBREVIATIONS

APA	AMERICAN PLYWOOD ASSOCIATION
ARCH	ARCHITECTURAL
B.L.E.	BRICK LEDGE ELEVATION
BOT	BOTTOM
BTWN	BETWEEN
CANT	CANTILEVER BEAM
C.F.S.	COLD-FORMED STEEL
C.I.P.	CAST-IN-PLACE
CJP	COMPLETE JOINT PENETRATION
CLR	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
D	DEEP
DET	DETAIL
D.G.A.	DENSE GRADED AGGREGATE
DWGS	DRAWINGS
EA	EACH
E.F.	EACH FACE
ELEV	ELEVATION
EMBED	MINIMUM EMBEDMENT DEPTH INTO SUBSTRATE
E.O.S.	EDGE OF SLAB
E.W.	EACH WAY
EX	EXISTING
EXP	EXPANSION
F.F.E.	FINISHED FLOOR ELEVATION
F.R.C.	FIBER REINFORCED CONCRETE
F.R.P.	FIBER REINFORCED POLYMER
F.R.T.	FIRE RESISTANCE TREATED
F.S.	FAR SIDE
FTG	FOOTING
F.V.	FIELD VERIFY
GA	GAUGE
GALV	GALVANIZED
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
I.C.F.	INSULATED CONCRETE FORM
LBS	POUNDS
L.D.H.	LONG DIMENSION HORIZONTAL
L.D.V.	LONG DIMENSION VERTICAL
LVL	LAMINATED VENEER LUMBER
MANUF	MANUFACTURER
MAX	MAXIMUM
MECH	MECHANICAL
M.E.P.	MECHANICAL/ELECTRICAL/PLUMBING
MIN	MINIMUM
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.P.H.	OPPOSITE HAND
P.A.F.	POWDER ACTUATED FASTENER
P.E.M.B.	PRE-ENGINEERED METAL BUILDING
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
R	RADIUS
REINF	REINFORCEMENT
R.T.U.	ROOF TOP UNIT (MECHANICAL)
S.C.	SLIP CRITICAL
SIM	SIMILAR
S.O.G.	SLAB ON GRADE
SP	COLUMN SPLICE
S.S.	STAINLESS STEEL
STD	STANDARD
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W	WIDE
W.W.F.	WELDED WIRE FABRIC

MATERIAL LEGEND


CRUSHED STONE


NATIVE EARTH / ENGINEERED FILL


CONCRETE

NOTE:
IT IS UNDERSTOOD THAT THE OWNER HAS ACCEPTED SOLE RISK AND RESPONSIBILITY FOR SETTLEMENT, CRACKING, DAMAGE, AND EXCESSIVE MAINTENANCE ASSOCIATED WITH BEARING THE FOUNDATIONS ON THE EXISTING IN-SITU FILL ON SITE. NO SPECIAL CONSIDERATION OR DESIGN HAS BEEN IMPLEMENTED BY THE FOUNDATION ENGINEER TO ADDRESS THE IN-SITU FILL. REFER TO THE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

DRAWING INFORMATION	
A&E FILE NO.	22329
DRAWING DATE	3/24/2023
DRAWN BY	BF
CHECKED BY	JKA
PHASE	RTA
RTA DATE	3/24/2023

STATE OF KENTUCKY
JEFFREY K. ALEXY
30698
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BROWN + KUBICAN, PSC

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STRUCTURAL ENGINEERS
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DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

GENERAL NOTES

DRAWING NO. **S1.1**

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING
FRANKFORT, KENTUCKY

KESLER SIMPSON KSA ARCHITECTS
KESLER SIMPSON ARCHITECTS, LLC
3728 WILLOW RIDGE RD
LEXINGTON, KY 40514

AS BUILT DATE

DECA LOG #

REVISION HISTORY OF DRAWINGS

	DESCRIPTION OF REVISION	DATE		DESCRIPTION OF REVISION	DATE
1			4		
2			5		
3			6		

STRUCTURAL SPECIAL INSPECTIONS CHART

COMPONENT	TEST OR SPECIAL INSPECTION	PERIODIC OR CONTINUOUS	ACCEPTABLE QUALIFICATIONS
FABRICATORS (IBC 1704.2.5)	INSPECT THE FABRICATION OF STRUCTURAL LOAD-BEARING MEMBERS WHERE SUCH WORK IS BEING PERFORMED ON THE PREMISES OF THE FABRICATOR'S SHOP. 1. FABRICATORS SHALL BE EXEMPT FROM SPECIAL INSPECTION WHEN A QUALIFIED CERTIFICATION AUTHORITY HAS PERIODICALLY REVIEWED AND APPROVED FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND FABRICATION PRACTICES. SUBJECT TO COMPLIANCE WITH KENTUCKY BUILDING CODE REQUIREMENTS, QUALIFIED CERTIFICATION AUTHORITIES PROVIDING CERTIFICATION WHICH MAY BE APPLICABLE TO PROJECT INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: a. PRE-ENGINEERED METAL BUILDING SYSTEM FABRICATORS - IAS INSPECTION PROGRAMS FOR MANUFACTURERS OF METAL BUILDING SYSTEMS, AC472.	PERIODIC	COMPLY WITH SECTIONS BELOW WHEN REQUIRED
	VERIFY THAT THE FABRICATOR MAINTAINS AND REVIEW FOR COMPLETENESS FABRICATOR'S DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES, WHICH PROVIDE A BASIS FOR CONTROL OF THE WORKMANSHIP AND ABILITY TO CONFORM TO THE APPROVED CONSTRUCTION DOCUMENTS AND REFERENCE STANDARDS. REVIEW THE PROCEDURES FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS FOR THE FABRICATOR'S SCOPE OF WORK.	PERIODIC	QUALIFIED CERTIFICATION AUTHORITY
	PERFORM SPECIAL INSPECTIONS AT FABRICATOR'S SHOP AS OUTLINED IN THIS CHART FOR EACH TYPE OF CONSTRUCTION.	----	
STEEL (AND OTHER METAL) CONSTRUCTION (IBC 1705.2)	PROVIDE SPECIAL INSPECTION OF THE FABRICATION OF STEEL STRUCTURAL ELEMENTS AND ASSEMBLIES IN ACCORDANCE WITH THE FABRICATORS SECTION IN THIS CHART.	----	
	VERIFY THAT CERTIFICATION NUMBERS ON BOLT, NUT, AND WASHER CONTAINERS CORRESPOND TO THE IDENTIFICATION NUMBERS ON MILL TEST REPORTS AND THAT MANUFACTURER'S SYMBOL AND GRADE MARKINGS APPEAR ON ALL BOLTS AND NUTS. ALSO VERIFY THAT BOLTS, NUTS, AND WASHERS ARE BEING PROPERLY CARED FOR AT THE SITE.	PERIODIC	CWI, SSSI, SWSI
	VERIFY THAT IDENTIFICATION MARKINGS ON STRUCTURAL STEEL MEMBERS CONFORM TO ASTM STANDARDS SPECIFIED ON THE APPROVED CONSTRUCTION DOCUMENTS.	PERIODIC	CWI, SSSI, SWSI
	VERIFY THAT IDENTIFICATION MARKINGS ON WELD FILLER MATERIALS CONFORM TO ASTM STANDARDS SPECIFIED ON THE APPROVED CONSTRUCTION DOCUMENTS. ALSO VERIFY THAT WELD FILLER MATERIAL IS BEING PROPERLY CARED FOR.	PERIODIC	CWI, SSSI, SWSI
	VERIFY THAT ANCHOR RODS AND OTHER EMBEDMENTS THAT ARE TO SUPPORT STRUCTURAL STEEL ARE OF PROPER DIAMETER, GRADE, TYPE, LENGTH, AND EXTENT OF EMBEDMENT PRIOR TO PLACEMENT OF CONCRETE.	PERIODIC	CWI, SSSI, SWSI
	TEST AND INSPECT HIGH-STRENGTH BOLTED CONNECTIONS ACCORDING TO RCSC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS." 1. VERIFY THAT FASTENERS ARE OF CORRECT GRADE, TYPE, DIAMETER, LENGTH, AND SHEAR PLANE LOCATIONS FOR THE JOINT DETAIL. 2. VERIFY THAT CONNECTING ELEMENTS MEET REQUIREMENTS FOR FAYING SURFACE AND HOLE PREPARATION. 3. PROVIDE PRE-INSTALLATION VERIFICATION TESTING OF FASTENER ASSEMBLIES AND METHODS. a. UTILIZE A TENSION CALIBRATOR TO CONFIRM THE SUITABILITY OF THE COMPLETE FASTENER ASSEMBLY FOR PRETENSIONED INSTALLATION AND CONFIRM THE PROCEDURE AND PROPER USE BY THE BOLTING CREW OF THE PRETENSIONING METHOD TO BE USED. b. ENSURE THAT JOINT PLIES ARE BROUGHT TO SNUG-TIGHT CONDITION PRIOR TO PRETENSIONING OPERATION. c. CONFIRM FASTENER COMPONENT IS NOT TURNED BY THE WRENCH PREVENTING ROTATION. d. CONFIRM THAT FASTENERS ARE PRETENSIONED PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID PART TOWARDS THE FREE EDGES. 4. VERIFY THAT FASTENER ASSEMBLIES WITH REQUIRED WASHERS ARE PLACED IN ALL HOLES AND ARE POSITIONED AS REQUIRED. a. VERIFY THAT DIRECT-TENSION INDICATOR GAPS COMPLY WITH ASTM F 959, TABLE 2 b. VERIFY THAT TWIST-OFF-TYPE TENSION-CONTROL ASSEMBLIES HAVE BEEN PROPERLY TIGHTENED. 5. PERFORM PERIODIC INSPECTION OF BEARING TYPE CONNECTIONS. 6. PERFORM CONTINUOUS INSPECTION OF SLIP-CRITICAL TYPE CONNECTIONS.	PERIODIC, U.N.O.	CWI, SSSI, SWSI
	INSPECT AND TEST WELDS DURING FABRICATION (WHERE APPLICABLE) AND ERECTION OF STRUCTURAL STEEL, STEEL DECK, AND STUDS/ANCHORS AS FOLLOWS:		
	1. CERTIFY WELDERS AND CONDUCT INSPECTIONS AND TESTS AS REQUIRED. RECORD TYPES AND LOCATIONS OF DEFECTS FOUND IN WORK. RECORD WORK REQUIRED AND PERFORMED TO CORRECT DEFICIENCIES. a. CONFIRM THAT WELDING PROCEDURE SPECIFICATIONS ARE AVAILABLE. b. CONFIRM THAT CONTRACTOR HAS INSTITUTED A *WELDER IDENTIFICATION SYSTEM*.	PERIODIC	CWI, SWSI
	2. INSPECT WELD PROCEDURES AND WELDERS ACCORDING TO THE REQUIREMENTS OF AWS D1.1 AND AISC 360. a. CONFIRM THAT THERE IS NO WELDING OVER CRACKED TACK WELDS. b. CONFIRM THAT ENVIRONMENTAL CONDITIONS ARE BEING PROPERLY CONSIDERED (WIND SPEED, PRECIPITATION, AND TEMPERATURE). c. CONFIRM THAT WELDING PROCEDURE SPECIFICATIONS ARE BEING FOLLOWED (EQUIPMENT SETTINGS, TRAVEL SPEED, MATERIAL USAGE, SHIELDING TYPE AND FLOW RATE, PREHEATING REQUIREMENTS, MAINTENANCE OF INTERPASS TEMPERATURE, AND PROPER WELDER POSITIONING). d. CONFIRM WELDING TECHNIQUES (INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATIONS, AND THAT EACH PASS MEETS QUALITY REQUIREMENTS).	PERIODIC	CWI, SWSI
	3. USE NON-DESTRUCTIVE TESTING ACCORDING TO AWS D1.1 ON ALL WELDS THAT APPEAR TO HAVE EXCESSIVE INCLUSIONS, POROSITIES, CRACKS, AND INCOMPLETE PENETRATIONS AS DESCRIBED BY AWS D1.1 OR HAVE THE QUESTIONABLE WELD REMOVED AND REWELDED.	PERIODIC	AWS-UT-2
	4. PERFORM OBSERVATION ON THE FIRST TWO WELDS INSTALLED BY EACH WELDER AND SUBSEQUENT NON-DESTRUCTIVE TESTING ACCORDING TO AWS D1.1 ON ALL (100%) COMPLETE PENETRATION AND/OR PARTIAL PENETRATION GROOVE WELDS AND ON ALL SPLICES OF MAIN MEMBERS WHERE THOSE SPLICES ARE REQUIRED. a. CONFIRM JOINT PREPARATION. b. CONFIRM DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, AND BEVEL). c. CONFIRM CLEANLINESS OF WELDS AND BASE MATERIAL (CONDITION OF STEEL SURFACES). d. CONFIRM TACKING (TACK WELD QUALITY AND LOCATION). e. CONFIRM BACKING TYPE AND FIT (AS APPLICABLE) AND REMOVAL SUBSEQUENT TO WELD PLACEMENT. f. PERFORM ULTRASONIC TESTING IN ACCORDANCE WITH AWS D.1.1 FOR STEEL MATERIAL 5/16" THICK AND GREATER. FOR THINNER MATERIAL, PERFORM VISUAL OBSERVATIONS IN ACCORDANCE WITH AWS D1.1.	CONTINUOUS	CWI, SWSI
	5. PERFORM INSPECTION ACCORDING TO AWS D1.1 (VISUAL INSPECTION) ON ALL MULTI-PASS FILLET WELDS AND ON ALL SINGLE-PASS FILLET WELDS LARGER THAN 5/16". a. CONFIRM DIMENSIONS (ALIGNMENT, GAPS AT ROOT, ROOT SIZE, LENGTH), SPACING, ORIENTATION, AND LOCATIONS. b. CONFIRM CLEANLINESS OF WELDS AND BASE MATERIAL (CONDITION OF STEEL SURFACES). c. CONFIRM TACKING (TACK WELD QUALITY AND LOCATION). d. CONFIRM VISUAL ACCEPTANCE CRITERIA (CRACK PROHIBITION, WELD/BASE FUSION, CRATER CROSS SECTION, WELD PROFILES, WELD SIZE, UNDERCUT, AND POROSITY).	CONTINUOUS	CWI, SWSI
	6. PERFORM INSPECTION ACCORDING TO AWS D1.1 (VISUAL INSPECTION) ON ALL SINGLE-PASS FILLET WELDS 5/16" AND SMALLER. a. CONFIRM DIMENSIONS (ALIGNMENT, GAPS AT ROOT, ROOT SIZE, LENGTH), SPACING, ORIENTATION, AND LOCATIONS. b. CONFIRM CLEANLINESS OF WELDS AND BASE MATERIAL (CONDITION OF STEEL SURFACES). c. CONFIRM TACKING (TACK WELD QUALITY AND LOCATION). d. CONFIRM VISUAL ACCEPTANCE CRITERIA (CRACK PROHIBITION, WELD/BASE FUSION, CRATER CROSS SECTION, WELD PROFILES, WELD SIZE, UNDERCUT, AND POROSITY).	PERIODIC	CWI, SWSI
	7. OBSERVE AND DOCUMENT REPAIR ACTIVITIES.	PERIODIC	CWI, SWSI
	INSPECT ALL STEEL FRAME CONNECTION DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS AND APPROVED STEEL ERECTION SHOP DRAWINGS. 1. VERIFY COMPLETENESS AND CONSTRUCTION OF ALL BRACING, STIFFENING, AND CONNECTIONS. 2. VERIFY LOCATION, COMPLETENESS, ACCURACY, AND JOINT DETAILS OF ALL MEMBERS.	PERIODIC	PE

COMPONENT	TEST OR SPECIAL INSPECTION	PERIODIC OR CONTINUOUS	ACCEPTABLE QUALIFICATIONS
CONCRETE CONSTRUCTION (IBC 1705.3)	INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	PERIODIC	RCSI, ACI-2, NICET-2C
	VERIFY THE USE OF THE PROPER DESIGN MIX.	PERIODIC	RCSI, ACI-2, NICET-2C
	VERIFY USE OF PROPER GRADE AND ASTM DESIGNATION OF REINFORCING STEEL.	PERIODIC	RCSI, ACI-2, NICET-2C
	PERFORM INSPECTION ON PLACEMENT, SPACING, CLEAR COVER, NUMBER, AND SPLICE LAP LENGTHS OF REINFORCING STEEL.	PERIODIC	RCSI, NICET-2C
	MONITOR CONCRETE QUALITY BY MEANS OF SITE AND LABORATORY TESTS. THE INSPECTION AGENCY IS AUTHORIZED TO REJECT PLASTIC CONCRETE NOT CONFORMING TO SPECIFICATIONS. IMMEDIATELY INFORM THE CONTRACTOR, THE ARCHITECT AND THE STRUCTURAL ENGINEER OF INADEQUACIES IN CONCRETE QUALITY. SAMPLING AND TESTING FOR QUALITY CONTROL DURING CONCRETE PLACEMENT SHALL INCLUDE THE FOLLOWING: 1. TESTING OF COMPOSITE SAMPLES OF FRESH CONCRETE OBTAINED ACCORDING TO ASTM C 172 SHALL BE PERFORMED ACCORDING TO THE FOLLOWING REQUIREMENTS: a. TESTING FREQUENCY: OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. b. SLUMP: ASTM C 143; ONE TEST AT POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE. PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE. c. AIR CONTENT: ASTM C 231, PRESSURE METHOD, FOR NORMAL-WEIGHT CONCRETE; ONE TEST FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE. d. CONCRETE TEMPERATURE: ASTM C 1064; ONE TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEG F AND BELOW OR 80 DEG F AND ABOVE, AND ONE TEST FOR EACH SET OF COMPOSITE SAMPLE. e. COMPRESSION TEST SPECIMEN: ASTM C 31; ONE SET OF FOUR STANDARD 6" DIAMETER BY 12" OR FIVE STANDARD 4" DIAMETER BY 8" CYLINDERS FOR EACH COMPRESSIVE-STRENGTH TEST, UNLESS OTHERWISE DIRECTED. MOLD AND STORE CYLINDERS FOR LABORATORY-CURED TEST SPECIMENS EXCEPT WHEN FIELD-CURED TEST SPECIMENS ARE REQUIRED. f. COMPRESSIVE-STRENGTH TESTS: ASTM C 39; TEST ONE SPECIMEN AT 7 DAYS, TWO 6"x12" OR THREE 4"x8" SPECIMENS TESTED AT 28 DAYS, AND ONE SPECIMEN RETAINED IN RESERVE FOR LATER TESTING IF REQUIRED. ADDITIONAL CYLINDER TESTS (SUCH AS AT 14 DAYS) FOR CONTRACTOR CONVENIENCE AND SCHEDULING SHALL BE PAID FOR BY THE CONTRACTOR. A COMPRESSIVE-STRENGTH TEST SHALL BE THE AVERAGE COMPRESSIVE STRENGTH FROM A SET OF SPECIFIED NUMBER SPECIMENS OBTAINED FROM SAME COMPOSITE SAMPLE AND TESTED AT AGE INDICATED. g. WHEN STRENGTH OF FIELD-CURED CYLINDERS IS LESS THAN 85 PERCENT OF COMPANION LABORATORY-CURED CYLINDERS, CONTRACTOR SHALL EVALUATE OPERATIONS AND PROVIDE CORRECTIVE PROCEDURES FOR PROTECTING AND CURING THE IN-PLACE CONCRETE. h. STRENGTH OF EACH CONCRETE MIXTURE WILL BE SATISFACTORY IF EVERY AVERAGE OF ANY THREE CONSECUTIVE COMPRESSIVE-STRENGTH TESTS EQUALS OR EXCEEDS SPECIFIED COMPRESSIVE STRENGTH AND NO COMPRESSIVE-STRENGTH TEST VALUE FALLS BELOW SPECIFIED COMPRESSIVE STRENGTH BY MORE THAN 500 PSI. 2. TEST RESULTS SHALL BE REPORTED IN WRITING TO ARCHITECT, STRUCTURAL ENGINEER, READY-MIX PRODUCER, AND CONTRACTOR WITHIN 48 HOURS OF TESTING. REPORTS OF COMPRESSIVE-STRENGTH TESTS SHALL CONTAIN THE PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING AND INSPECTING AGENCY, CONCRETE TYPE AND CLASS, LOCATION OF CONCRETE BATCH IN STRUCTURE, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIXTURE PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND TYPE OF BREAK FOR BOTH 7- AND 28-DAY TESTS.	CONTINUOUS	RCSI, ACI-2, NICET-1
	NONDESTRUCTIVE TESTING: IMPACT HAMMER, SONOSCOPE, OR OTHER NONDESTRUCTIVE DEVICE MAY BE PERMITTED BUT SHALL NOT BE USED AS THE SOLE BASIS FOR ACCEPTANCE OR REJECTION.	----	
	ADDITIONAL TESTS: TESTING AND INSPECTING AGENCY SHALL MAKE ADDITIONAL TESTS OF CONCRETE WHEN TEST RESULTS INDICATE THAT SLUMP, AIR ENTRAINMENT, COMPRESSIVE STRENGTHS, OR OTHER REQUIREMENTS HAVE NOT BEEN MET, AS DIRECTED BY ARCHITECT. TESTING AND INSPECTING AGENCY MAY CONDUCT TESTS TO DETERMINE ADEQUACY OF CONCRETE BY CORED CYLINDERS COMPLYING WITH ASTM C 42 OR BY OTHER METHODS AS DIRECTED BY ARCHITECT. 1. ADDITIONAL TESTING AND INSPECTING, AT CONTRACTOR'S EXPENSE, WILL BE PERFORMED TO DETERMINE COMPLIANCE OF REPLACED OR ADDITIONAL WORK WITH SPECIFIED REQUIREMENTS.	----	
SOILS (IBC 1705.6)	INSPECT THE EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT, AND LOAD-BEARING REQUIREMENTS FOR COMPLIANCE WITH THE RECOMMENDATIONS OF THE APPROVED GEOTECHNICAL INVESTIGATION REPORT.	PERIODIC	SSI, NICET-2S
	WHERE THE SITE IS SPECIFIED TO BE UNDERCUT BY THE GEOTECHNICAL INVESTIGATION REPORT, VERIFY ALL UNSUITABLE SOILS, DEBRIS, ROCK AND OTHER MATERIALS HAVE BEEN REMOVED FROM BELOW BUILDING FOOTPRINT. 1. VERIFY THAT TOPSOIL HAS BEEN STRIPPED AND REMOVED FROM BUILDING FOOTPRINT. 2. VERIFY ALL EXISTING UNCONTROLLED FILLS, SOFT AND UNSUITABLE SOILS HAVE BEEN REMOVED FROM BELOW APPLICABLE FOUNDATION ELEMENTS. TEST NATIVE MATERIAL AT BASE OF CUT TO ENSURE THAT UNSUITABLE MATERIAL HAS BEEN COMPLETELY REMOVED; NOTIFY ARCHITECT IF UNACCEPTABLE MATERIAL REMAINS AFTER COMPLETION OF SPECIFIED UNDERCUT. 3. FOR SOIL BEARING FOUNDATIONS, VERIFY THAT EXPANSIVE CLAYS AND BEDROCK HAVE BEEN COMPLETELY REMOVED TO ALLOW SUFFICIENT SOIL CUSHION DEPTH AS SPECIFIED. 4. AT FOUNDATIONS BEARING ON EXISTING FILL OR SHALE SOILS, PERFORM DYNAMIC CONE PENETROMETER TESTING AT EACH SPREAD FOOTING WHEN FOUNDATION EXCAVATION IS COMPLETE TO ENSURE BEARING CAPACITY IS WITHIN THE RECOMMENDED NET ALLOWABLE.	PERIODIC	SSI, NICET-2S
	OBSERVE PROOFROLLING OF THE BUILDING PAD AREAS PRIOR TO COMMENCEMENT OF FILL/SUBBASE PLACEMENT, AND DURING FILL PLACEMENT (IF REQUIRED).	PERIODIC	SSI, NICET-2S
	PRIOR TO PLACEMENT OF ANY ENGINEERED FILL, DETERMINE THAT THE SITE HAS BEEN PREPARED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE APPROVED GEOTECHNICAL INVESTIGATION REPORT. 1. TEST SAMPLES FROM PROPOSED BORROW ON- AND OFF- SITE SOURCES OF FILL FOR COMPLIANCE WITH THE APPROVED MATERIALS LISTING AND OTHER REQUIREMENTS OF THE GEOTECHNICAL REPORT AND THE SPECIFICATIONS. CLAY SOILS SHALL BE CHECKED FOR ACCEPTABLE PLASTICITY INDEX PRIOR TO MOVING ON SITE. MAXIMUM ORGANIC CONTENT SHALL BE VERIFIED BY INSPECTION OR TEST TO BE BELOW ACCEPTABLE LIMITS.	PERIODIC	SSI, NICET-2S
	DURING PLACEMENT AND COMPACTION OF THE ENGINEERED FILL MATERIAL, VERIFY THAT THE MATERIAL BEING USED, MAXIMUM LIFT THICKNESS, AND IN-PLACE DRY DENSITY COMPLY WITH THE RECOMMENDATIONS OF THE APPROVED GEOTECHNICAL REPORT. 1. SOIL FILLS SHALL BE EXEMPT FROM SPECIAL INSPECTION WHEN TOTAL FILL PLACEMENT IS LESS THAN 12 INCHES DEEP. 2. TESTING AGENCY TO INSPECT AND TEST SUBGRADES AND EACH FILL OR BACKFILL LAYER.	CONTINUOUS	SSI, NICET-2S
	FOOTING SUBGRADE: AT FOOTING SUBGRADES, AT LEAST ONE TEST OF EACH SOIL STRATUM SHALL BE PERFORMED TO VERIFY DESIGN BEARING CAPACITIES. SUBSEQUENT VERIFICATION AND APPROVAL OF OTHER FOOTING SUBGRADES MAY BE BASED ON A VISUAL COMPARISON OF SUBGRADE WITH TESTED SUBGRADE WHEN APPROVED BY ARCHITECT.	PERIODIC	SSI, NICET-2S
	TESTING AGENCY WILL TEST COMPACTION OF SOILS IN PLACE ACCORDING TO ASTM D 1556, ASTM D 2167, ASTM D 6938, AND ASTM D 2937, AS APPLICABLE. TESTS SHALL BE PERFORMED AT THE FOLLOWING LOCATIONS AND FREQUENCIES: 1. BUILDING SLAB AREAS: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST 1 TEST FOR EVERY 2000 SQ. FT, OR LESS OF BUILDING SLAB, BUT IN NO CASE FEWER THAN 3 TESTS. 2. FOUNDATION WALL BACKFILL: AT EACH COMPACTED BACKFILL LAYER, AT LEAST 1 TEST FOR EACH 100 FEET OR LESS OF WALL LENGTH, BUT NO FEWER THAN 2 TESTS.	PERIODIC	SSI, NICET-2S

DESIGNATION	REQUIRED CERTIFICATION
ACI-2	ACI CERTIFIED CONCRETE FIELD TESTING TECHNICIAN LEVEL 2, PLUS 2-YEARS' RELATED EXPERIENCE
AWS-UT-2	AWS ULTRAGRAPHIC TESTING LEVEL II IN ACCORDANCE WITH CURRENT ASNT-TC-1A STANDARDS
CWI	AWS CERTIFIED WELD INSPECTOR
NICET-1	NICET LEVEL 1, MINIMUM 2-YEARS' RELATED EXPERIENCE
NICET-2C	CURRENT NICET CONCRETE LEVEL II CERTIFICATION PLUS 4-YEARS' RELATED EXPERIENCE
NICET-2S	CURRENT NICET SOILS LEVEL II CERTIFICATION PLUS 4-YEARS' RELATED EXPERIENCE
PE	PROFESSIONAL ENGINEER WITH MINIMUM OF 8-YEARS' EXPERIENCE, LICENSED IN THE PROJECT STATE, WHOSE PRINCIPAL WORK EXPERIENCE HAS BEEN IN THE DESIGN OF BUILDING STRUCTURES
RCSI	ICC CERTIFIED REINFORCED CONCRETE SPECIAL INSPECTOR
SSI	ICC CERTIFIED SOILS SPECIAL INSPECTOR
SSSI	ICC CERTIFIED STRUCTURAL STEEL & BOLTING SPECIAL INSPECTOR
SWSI	ICC CERTIFIED STRUCTURAL WELDING SPECIAL INSPECTOR

NOTES ON SPECIAL INSPECTIONS CHART:

1. REFER TO 014110 SPECIFICATION FOR ADDITIONAL REQUIREMENTS AND RESPONSIBILITIES.
2. SPECIAL INSPECTIONS AS DEFINED IN SECTIONS 1704 AND 1705 OF THE KENTUCKY BUILDING CODE ARE REQUIRED. ALL REFERENCES SHOWN ARE TO THE KBC 2018 / IBC 2015.
3. SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED TESTING AGENCY APPROVED BY THE ARCHITECT AND THE STRUCTURAL ENGINEER AND PAID FOR BY THE OWNER.
4. THE INSPECTOR SHALL OBSERVE WORK FOR CONFORMANCE WITH THE APPROVED STRUCTURAL DRAWINGS AND SPECIFICATIONS AND PREPARE INSPECTION REPORTS STATING HIS/HER OBSERVATIONS. COPIES OF THE INSPECTION REPORTS SHALL BE SUBMITTED TO THE CONTRACTOR, THE ARCHITECT AND THE STRUCTURAL ENGINEER.
5. ALL DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE WORK BEING PERFORMED SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT AND THE STRUCTURAL ENGINEER PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK.
6. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT OF INSPECTIONS DOCUMENTING COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS.
7. NON-STRUCTURAL SPECIAL INSPECTIONS MAY BE REQUIRED AND ARE SPECIFIED ELSEWHERE IF APPLICABLE.

STATE OF KENTUCKY
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RTA DATE	3/24/2023

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

SPECIAL INSPECTIONS

DRAWING NO. **S1.2**

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
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REVISION HISTORY OF DRAWINGS

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1			4		
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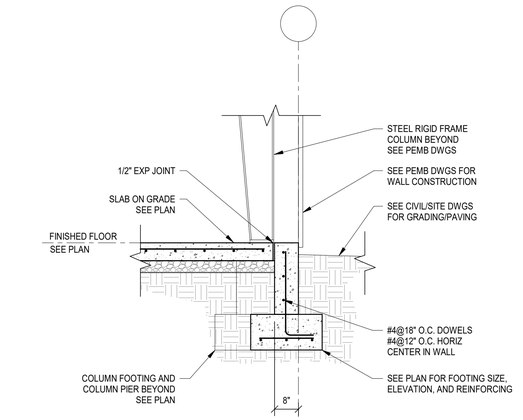
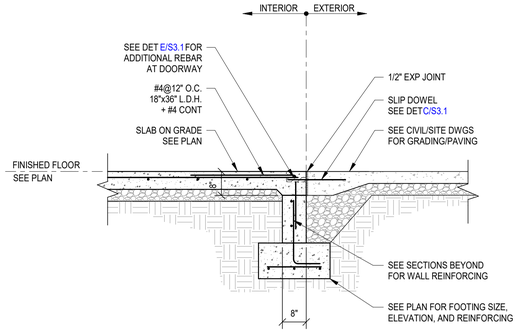


B S2.1 SECTION

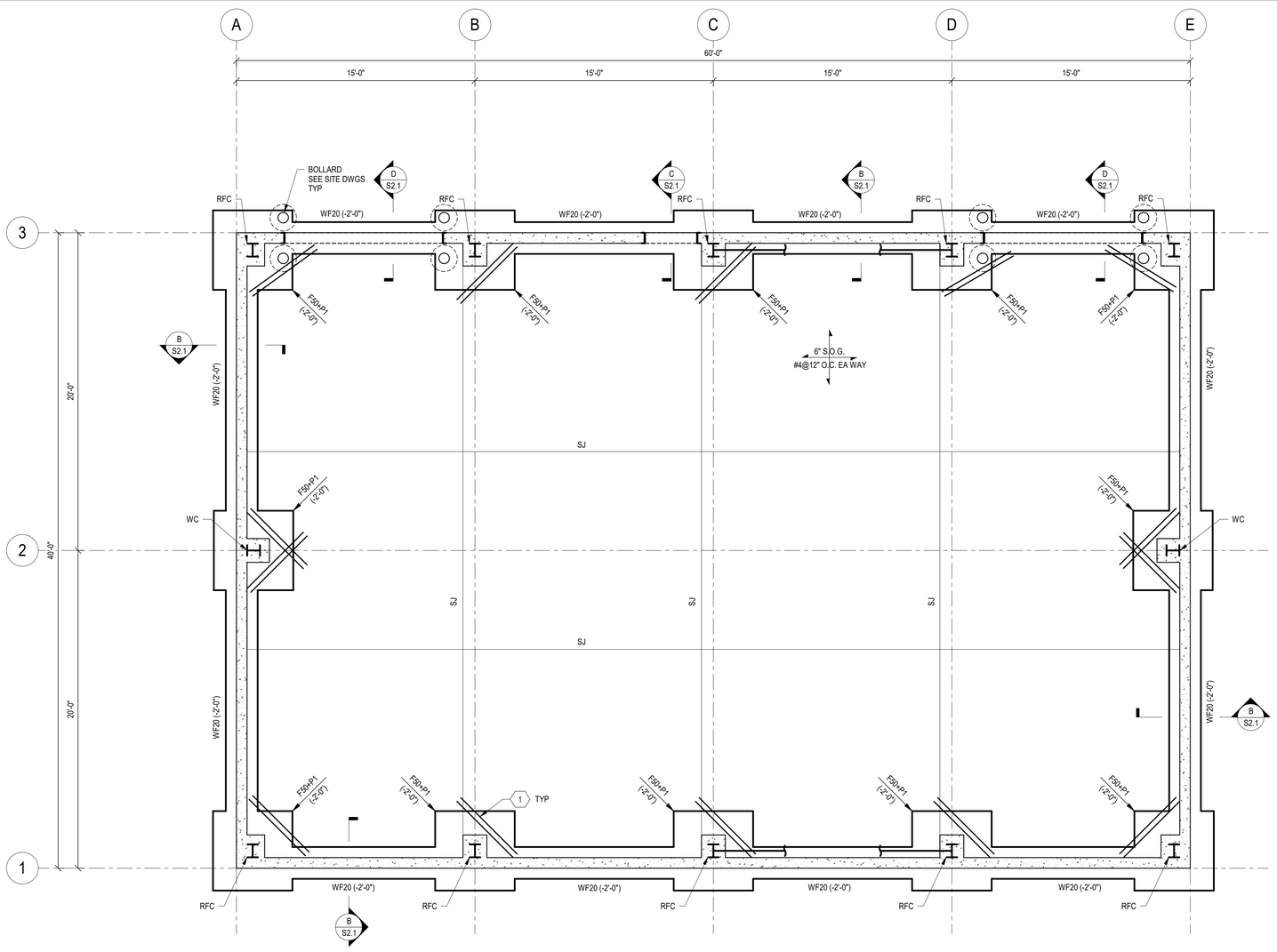
1/2" = 1'-0"



SECTION @ SINGLE DOOR

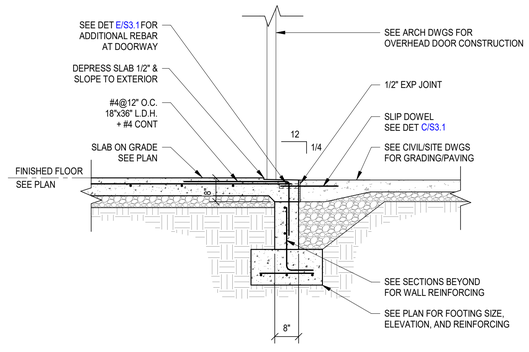
C S2.1 SECTION

1/2" = 1'-0"



A S2.1 FOUNDATION PLAN

1/4" = 1'-0"



SECTION @ OVERHEAD DOOR

D S2.1 SECTION

1/2" = 1'-0"

FOUNDATION PLAN NOTES

1. ELEVATIONS SHOWN ARE TO THE TOP OF THE FOUNDATION AND ARE REFERENCED FROM FINISHED FIRST FLOOR REFERENCE ELEVATION (0'-0").
2. CENTER ALL SPREAD FOOTINGS ON COLUMN CENTERLINES U.N.O.
3. SEE DWG S1.1 FOR GENERAL NOTES.
4. SEE DWG S1.2 FOR SPECIAL INSPECTION NOTES.
5. SEE DWG S3.1 FOR TYPICAL FOUNDATION DETAILS.
6. SLAB ON GRADE SHALL BE PLACED ON VAPOR RETARDER (SEE SPECIFICATIONS) OVER 4" MINIMUM COMPACTED CRUSHED STONE.
7. ALL FOOTINGS MUST BE SUPPORTED ON UNDISTURBED SOIL CAPABLE OF SUPPORTING DESIGN LOADS WITHOUT APPRECIABLE SETTLEMENT. CONTRACTOR SHALL PROBE BEARING STRATA WITH DRIVEN RODS. REMOVE SHALLOW BEDROCK (AND OVERLYING SOIL) WITHIN TWO FEET BELOW BOTTOM OF FOOTING, AND REPLACE WITH ENGINEERED SOIL BACKFILL.
8. THICKEN WALL FOOTINGS AND COLUMN FOOTINGS AS REQUIRED TO ENSURE FOOTINGS BEAR 3'-0" BELOW ADJACENT GRADE.

FOUNDATION LEGEND

F30	= SPREAD FOOTING. SEE SCHEDULE.
WF20	= WALL FOOTING. SEE SCHEDULE.
P1	= COLUMN PIER. SEE DETAIL K/S3.1.
(-2'-0")	= TOP OF FOOTING ELEVATION.
SJ	= SAWN CONTRACTION JOINT. SEE DETAIL C/S3.1.
	= DIAGONAL BRACING. SEE PEMB DWGS.
RFC	= RIGID FRAME COLUMN (TAPERED).
WC	= WIND COLUMN (STRAIGHT).

IMPORTANT PEMB NOTES:

1. UNLESS SPECIFICALLY NOTED OTHERWISE, ALL STRUCTURAL STEEL ELEMENTS REQUIRED FOR A COMPLETE BUILDING STRUCTURE SHALL BE DESIGNED, SUPPLIED, AND INSTALLED BY THE PEMB CONTRACTOR.
2. COLUMN FOOTINGS SHALL BE CENTERED ON STEEL COLUMN CENTERLINES. STEEL COLUMN CENTERLINES SHALL BE DETERMINED BY PEMB CONTRACTOR UNLESS OTHERWISE NOTED. FOUNDATION CONTRACTOR SHALL COORDINATE.
3. CONCRETE CONTRACTOR SHALL SUPPLY ANCHOR BOLTS AND HARDWARE FOR PEMB ATTACHMENT TO THE FOUNDATION. CONCRETE FOUNDATION INSTALLER SHALL INSTALL ANCHOR BOLTS FOR PEMB ATTACHMENT TO THE FOUNDATION. ANCHOR BOLT DIAMETER AND LAYOUT SHALL BE DESIGNED BY THE PEMB MANUFACTURER AND COORDINATED BY THE GENERAL CONTRACTOR. SEE DET F/S3.1 FOR TYPICAL ANCHOR BOLT DETAIL.
4. SEE ARCH DWGS FOR PEMB ELEMENT ELEVATIONS AND LOCATIONS THAT ARE NOT SHOWN ON STRUCTURAL DWGS.
5. SEE ARCH DWGS AND SPECIFICATIONS FOR INFORMATION ABOUT ROOF DECK AND METAL WALL PANELS.
6. PURLINS AND WIND GIRT SPACING AND QUANTITY ARE NOT SHOWN ON STRUCTURAL DWG AND SHALL BE PER PEMB DESIGN.
7. ROOFING SHALL BE DESIGNED AND SUPPLIED BY PEMB MANUFACTURER. ROOFING SHALL BE INSTALLED BY PEMB INSTALLER.
8. ROOF DIAPHRAGM BRACING IS REQUIRED AS DESIGNED BY PEMB SUPPLIER.

FOUNDATION TAG NOTES

1. RE-ENTRANT CORNER BARS. SEE DET D/S3.1.

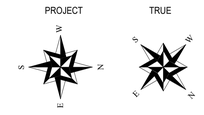
WALL FOOTING SCHEDULE

MARK	WIDTH	THICKNESS	REINFORCING CONT BOTTOM	TRANSVERSE REINFORCING BOTTOM
WF20	2'-0"	1'-2"	(3) #4	#4@96" O.C.

SPREAD FOOTING SCHEDULE

MARK	LENGTH	WIDTH	THICKNESS	REINFORCING E.W. BOTTOM
F50	5'-0"	5'-0"	1'-2"	(7) #5

PROJECT TRUE



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DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

FOUNDATION PLAN & SECTIONS

DRAWING NO. **S2.1**

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
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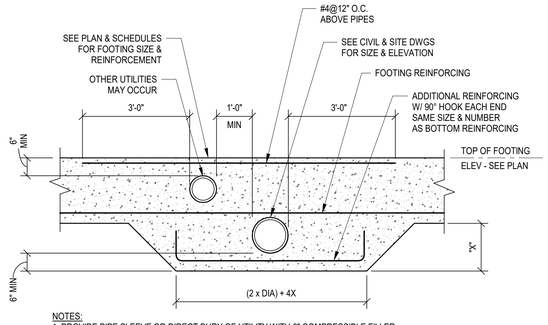
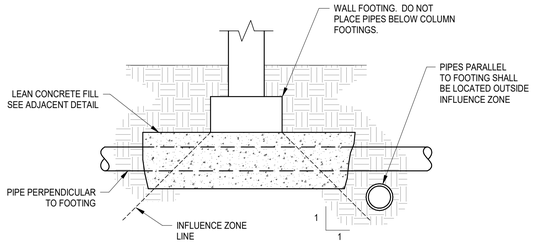


NOTES:
1. PROVIDE PIPE SLEEVE OR DIRECT BURY OF UTILITY WITH 2" COMPRESSIBLE FILLER (SUCH AS FIBERGLASS INSULATION) CONTINUOUSLY PLACED ALL AROUND.
2. DETAIL APPLIES AT TRENCH FOOTINGS ONLY. DO NOT USE THIS DETAIL FOR GRADE BEAMS.

A S3.1 TYPICAL FOOTING PENETRATION/SLEEVE DETAIL

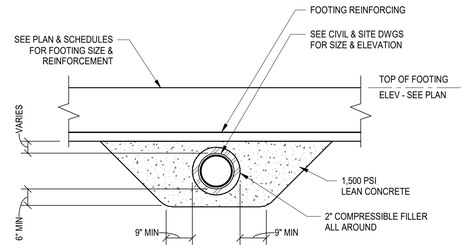
NOT TO SCALE



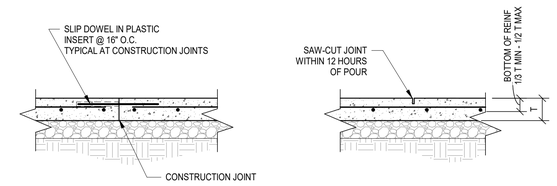
INFLUENCE ZONE

B S3.1 TYPICAL UTILITY LINE BELOW FOOTING DETAIL

NOT TO SCALE



NOTES:
1. PROVIDE CONCRETE PROTECTION AROUND UTILITY LINE WHEN LINE IS WITHIN FOOTING INFLUENCE ZONE. SEE ADJACENT DETAIL FOR INFLUENCE ZONE DEFINITION.
2. DETAIL APPLIES WHEREVER TOP OF PIPE IS WITHIN 4 PIPE DIAMETERS TO BOTTOM OF FOOTING OR IF UTILITY IS INSTALLED AFTER FOOTING PLACEMENT (REGARDLESS OF DEPTH).
3. PROVIDE PIPE SLEEVE OR DIRECT BURY OF UTILITY WITH 2" COMPRESSIBLE FILLER (SUCH AS FIBERGLASS INSULATION) CONTINUOUSLY PLACED ALL AROUND.

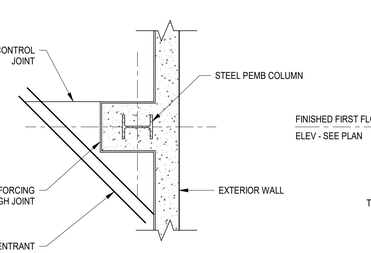


CONSTRUCTION JOINT SAWN CONTRACTION JOINT

NOTES:
1. JOINTS SHALL BE INSTALLED IN SLABS ON GROUND AT A MAXIMUM SPACING IN FEET OF 3 TIMES THE SLAB THICKNESS IN INCHES IN EACH DIRECTION BY EITHER OF THE ABOVE METHODS. MAXIMUM LENGTH OF ANY SLAB ON GROUND POUR TO BE 100'-0" BETWEEN CONSTRUCTION JOINTS. RATIO OF LENGTH TO WIDTH SHALL NOT EXCEED 2. THIS SPACING OF JOINTS SHALL APPLY UNLESS SPECIFICALLY SHOWN OTHERWISE.
2. SLAB REINFORCING SHALL BE DISCONTINUOUS THROUGH CONSTRUCTION JOINTS.

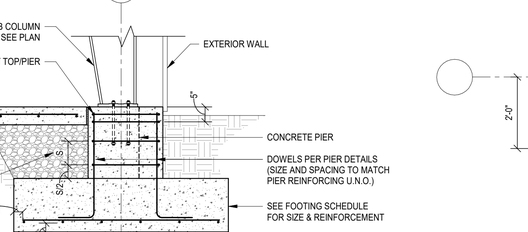
C S3.1 TYPICAL SLAB ON GROUND JOINT DETAIL

NOT TO SCALE



D S3.1 TYPICAL SLAB ON GRADE JOINT AT RE-ENTRANT CORNER

NOT TO SCALE

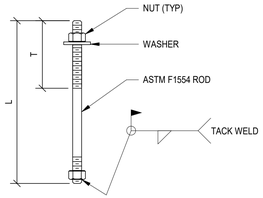


E S3.1 TYPICAL SLAB-ON-GRADE REINFORCING AT EXTERIOR DOOR DETAIL

NOT TO SCALE

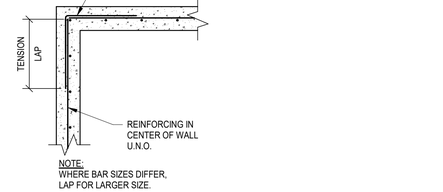
DIAMETER	L	T	PROJECTION	GRADE	MIN WASHER DIM
1/2" **	6 1/2"	3"	2"	36	STD ROUND
5/8"	10"	3"	2"	36	3/16" x 1 3/4" x 1 3/4"
3/4"	1'-7"	5"	3"	36	1/4" x 2" x 2"

NOTE:
** 1/2"ø BOLT MAY BE ASTM A307 MACHINE BOLT WITH NUT AND WASHER.



F S3.1 TYPICAL ANCHOR ROD DETAIL

NOT TO SCALE

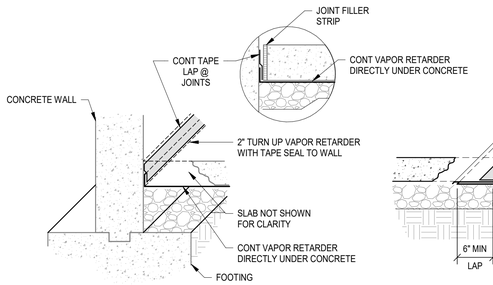


NOTE:
WHERE BAR SIZES DIFFER, LAP FOR LARGER SIZE.

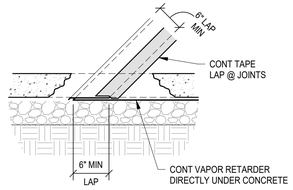
G S3.1 TYPICAL CONCRETE WALL REINFORCING DETAIL

NOT TO SCALE

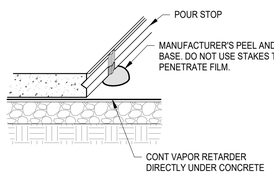
NOTES:
1. PROVIDE VAPOR RETARDER THAT IS RESISTANT TO DETERIORATION WHEN TESTED ACCORDING TO ASTM E 154. SEE SPECIFICATION SECTION 033000.
2. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.
3. SEAL ALL PENETRATIONS AND REPAIR ALL DAMAGED SURFACES WITH APPROVED JOINT TAPE OR MASTIC.
4. PREPARE ALL SURFACES FOR PROPER ADHESION WITH APPROVED TAPE. ALL SURFACES SHALL BE CLEAN, DRY, AND FROST FREE.
5. TURN UP BARRIER AT ALL EXTERIOR OR INTERIOR WALL SURFACES AND SEAL WITH APPROVED TAPE.



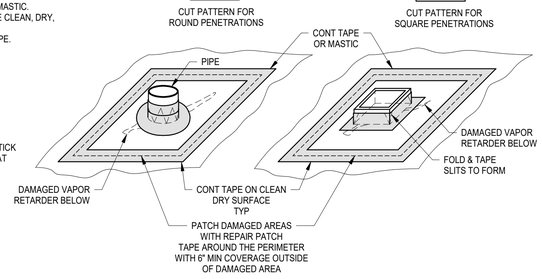
TYPICAL @ WALL



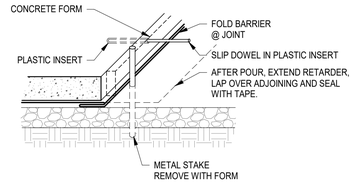
TYPICAL @ SEAM



OPTIONAL SIMULTANEOUS POUR @ CONSTRUCTION JOINT



TYPICAL PIPE REPAIR TYPICAL RECTANGULAR REPAIR



TYPICAL DIVIDED POUR @ CONSTRUCTION JOINT

H S3.1 TYPICAL VAPOR RETARDER DETAILS

NOT TO SCALE

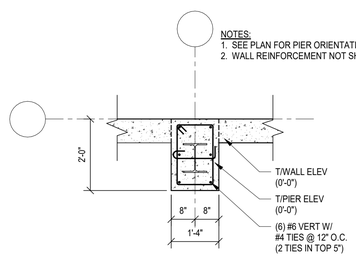
PLAN

SECTION

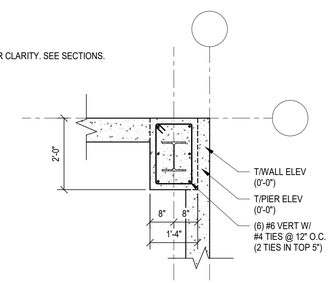
J S3.1 TYPICAL PEMB COLUMN AND FOOTING DETAIL

NOT TO SCALE

NOTES:
1. SEE PLAN FOR PIER ORIENTATION.
2. WALL REINFORCEMENT NOT SHOWN FOR CLARITY. SEE SECTIONS.



P1 (EDGE)



P1 (CORNER)

K S3.1 TYPICAL CONCRETE PIER DETAILS

NOT TO SCALE

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DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

TYPICAL FOUNDATION DETAILS

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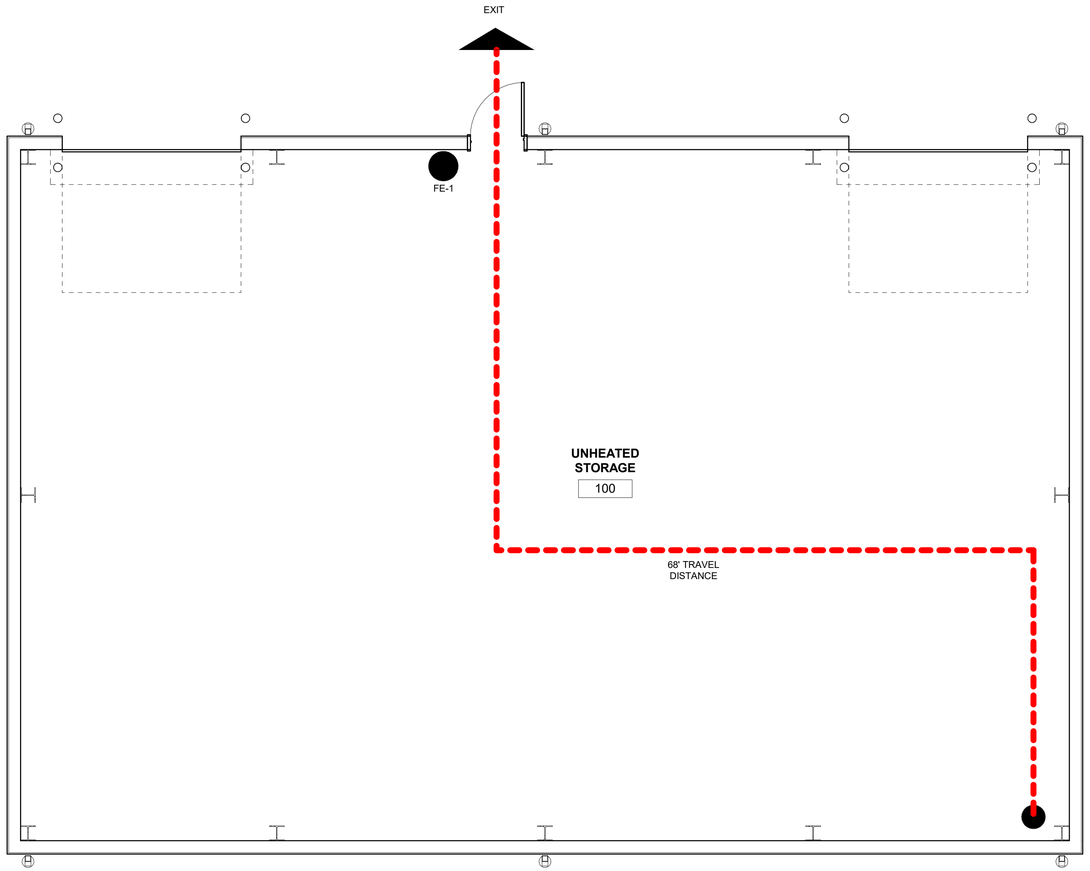


1 LIFE SAFETY PLAN - UNHEATED STORAGE

1/4" = 1'-0"

LEGEND

TD — TRAVEL DISTANCE

EXIT — EMERGENCY EXIT

INGRESS

DIRECTION OF TRAVEL

EXISTING CMU WALL SHALL BE A TWO HOUR RATED FIRE BARRIER. EXISTING NON-RATED DOORS SHALL BE REMOVED AND TWO HOUR DOORS INSTALLED.

FIRE EXTINGUISHER NOTES

ALL PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED & INSTALLED BY OWNER BASED ON THE FOLLOWING CRITERIA:

1. THE DESIGN CRITERIA SHALL BE USED (MANUFACTURING AREAS) (FE-1)

   CLASSIFICATION OF HAZARDS.....ORDINARY (MODERATE) HAZARD

   MAXIMUM AREA TO BE PROTECTED PER EXTINGUISHER.....6,000 SQ. FT.

   MAXIMUM DISTANCE TRAVELED..... 75 FEET

2. THE DESIGN CRITERIA SHALL BE USED: (OFFICE AREAS) (FE-2)

   CLASSIFICATION OF HAZARDS.....LIGHT (LOW) HAZARD

   MAXIMUM AREA TO BE PROTECTED PER EXTINGUISHER.....6,000 SQ. FT.

   MAXIMUM DISTANCE TRAVELED..... 75 FEET

3. FIRE EXTINGUISHED MOUNTED IN UNHEATED AREAS SHALL BE RATED FOR ANTICIPATED TEMPERATURES

4. G.C. TO PROVIDE CABINET FOR FIRE EXTINGUISHERS IN OFFICE AREA ALL OTHER MOUNTED PER OWNER.

FIRE EXTINGUISHER LEGEND

FE-1 — UL RATED 4-A, 80-B : C FIRE EXTINGUISHER MULTIPURPOSE, DRY CHEMICAL MONOAMMONIUM PHOSPHATE, BRACKET MOUNTED. QUANTITY: -

FE-2 — UL RATED 2-A,10-B : C FIRE EXTINGUISHER MULTIPURPOSE, DRY CHEMICAL MONOAMMONIUM PHOSPHATE, IN CABINET. QUANTITY: -

CODE INFORMATION

UNHEATED STORAGE

CONSTRUCTION WILL BE PRE-ENGINEERED METAL BUILDING.

APPLICABLE CODES

BUILDING:	KBC 2018 (IBC 2015)
FIRE:	2012 INT'L. FIRE CODE
PLUMBING:	2013 KY PLUMBING CODE
MECHANICAL:	2012 INTERNATIONAL MECH. CODE
ELECTRICAL:	2014 NFPA 70
ACCESSIBILITY:	2009 ICC/Ansi A117.1
ENERGY CODE:	2012 IECC

USE GROUPS AND AREA

USE GROUPS:
S1 - NEW STORAGE BUILDING

BUILDING HEIGHT:
ALLOWED:
S1 - 55 FEET
AS DESIGNED:
S1 - 17'-4"

BUILDING AREA:
ALLOWED:
S1 - 17,500sf
AS DESIGNED:
S1 = 2,417SF

CONSTRUCTION TYPE: IIB NONSUPPRESSED UNHEATED

OCCUPANCY LOAD

S1 - 1 PER 300 Sq.Ft. GROSS = 16 OCCUPANTS

EXIT DISTANCE: 250 FEET

NUMBER OF EXITS: S1 = 1 REQUIRED; 1 PROVIDED

MATERIAL TO BE STORED IS INDIVIDUAL SOLDIER GEAR AND EQUIPMENT - TENTS, UNIFORMS, COTS, ETC...

SITE CLASS
B

SEISMIC DESIGN CATEGORY
VERIFY WITH PEMB

FROST DEPTH
24 INCHES

ROOF LIVE LOAD LBS/SF
20 PSF

WIND SPEED
115 MPH

DRAWING INFORMATION	
A&E FILE NO.	202223
DRAWING DATE	03/24/2023
DRAWN BY	KLS
CHECKED BY	AK
PHASE	RTA
RTA DATE	03/24/2023

ANDREW W. KESLER — REGISTERED — No. 6842 — COMMONWEALTH OF KENTUCKY — ARCHITECT

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

LIFE SAFETY PLAN & CODE NOTES

DRAWING NO. A-001

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING
FRANKFORT, KENTUCKY

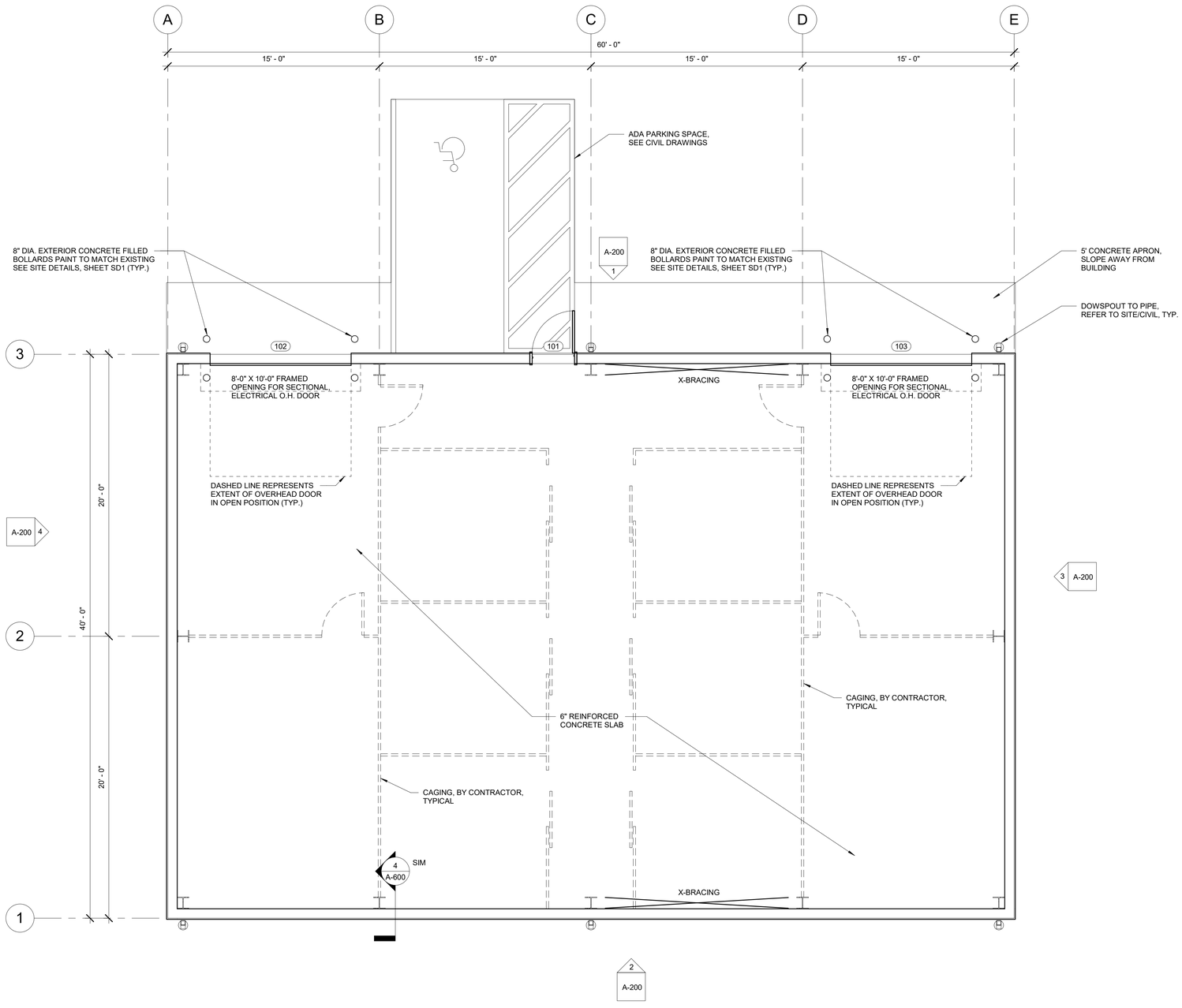
KESLER SIMPSON ARCHITECTS, LLC
3728 WILLOW RIDGE RD
LEXINGTON, KY 40514

AS BUILT DATE --/--/----

DECA LOG # ?

REVISION HISTORY OF DRAWINGS

	DESCRIPTION OF REVISION	DATE		DESCRIPTION OF REVISION	DATE
1			4		
2			5		
3			6		



1 OVERALL FLOOR PLAN

1/4" = 1'-0"

DRAWING INFORMATION	
A&E FILE NO.	202223
DRAWING DATE	03/24/2023
DRAWN BY	KLS
CHECKED BY	AK
PHASE	RTA
RTA DATE	03/24/2023

ANDREW W. KESLER
REGISTERED
No. 6803
COMMONWEALTH OF KENTUCKY
ARCHITECT

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

OVERALL FLOOR PLAN

DRAWING NO. **A-100**

ACCOUNT NO.
095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING
FRANKFORT, KENTUCKY

KESLER SIMPSON
KSA ARCHITECTS

KESLER SIMPSON ARCHITECTS, LLC
3728 WILLOW RIDGE RD
LEXINGTON, KY 40514

AS BUILT DATE
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DECA LOG #
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REVISION HISTORY OF DRAWINGS

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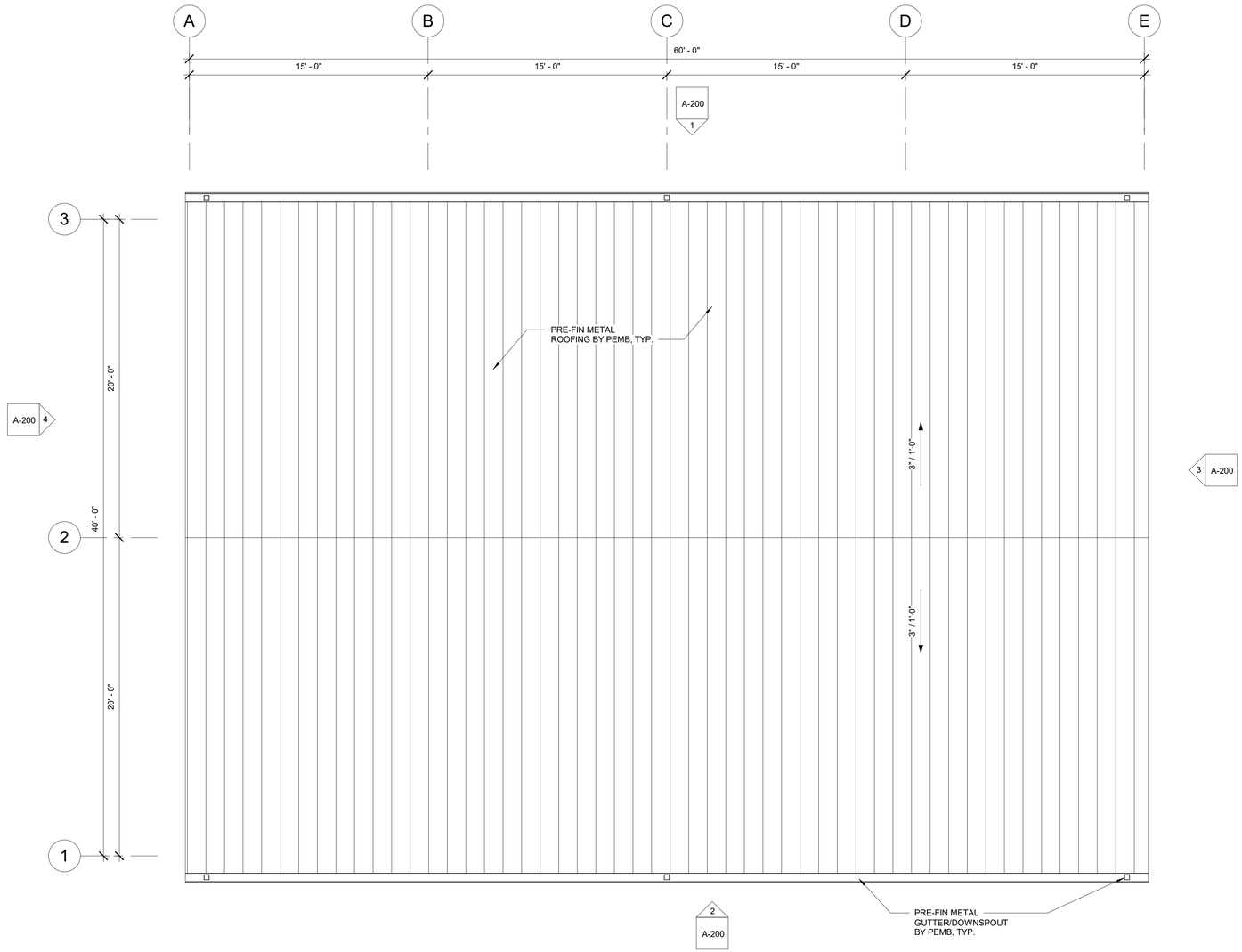

1 OVERALL ROOF PLAN

1/4" = 1'-0"

DRAWING INFORMATION	
A&E FILE NO.	202223
DRAWING DATE	03/24/2023
DRAWN BY	KLS
CHECKED BY	AK
PHASE	RTA
RTA DATE	03/24/2023

ANDREW W. KESLER REGISTERED No. 6842 COMMONWEALTH OF KENTUCKY ARCHITECT

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

OVERALL ROOF PLAN

DRAWING NO. **A-130**

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING
FRANKFORT, KENTUCKY

KESLER SIMPSON KSA ARCHITECTS

KESLER SIMPSON ARCHITECTS, LLC
3728 WILLOW RIDGE RD
LEXINGTON, KY 40514

AS BUILT DATE --/--/----

DECA LOG # ?

REVISION HISTORY OF DRAWINGS

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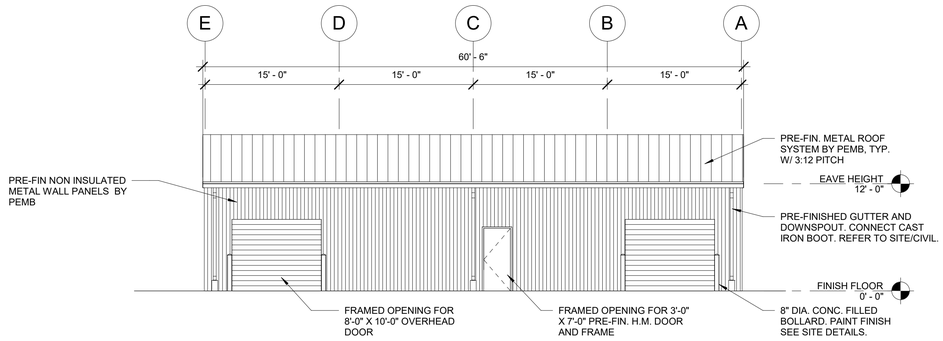
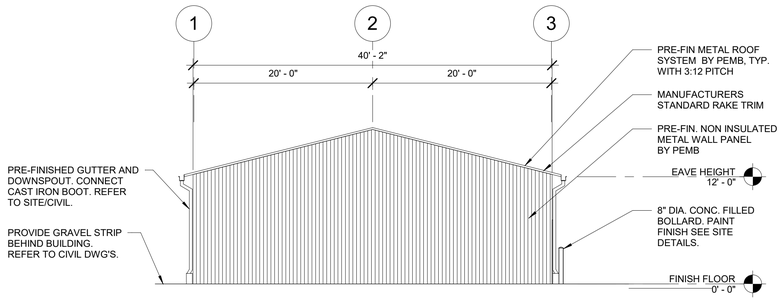
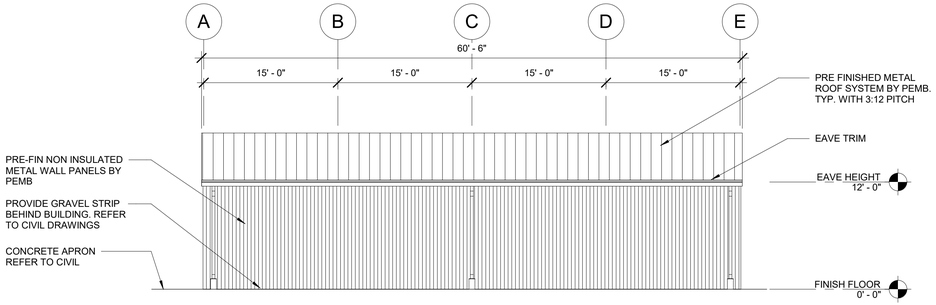


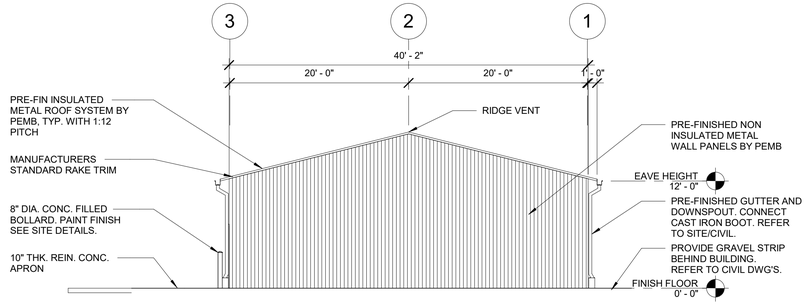
1 NORTH ELEVATION
1/8" = 1'-0"



3 EAST ELEVATION
1/8" = 1'-0"



2 SOUTH ELEVATION
1/8" = 1'-0"



4 WEST ELEVATION
1/8" = 1'-0"

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A&E FILE NO.	202223
DRAWING DATE	03/24/2023
DRAWN BY	KLS
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PHASE	RTA
RTA DATE	03/24/2023

ANDREW W. KESLER — REGISTERED — No. 6842 — COMMONWEALTH OF KENTUCKY — ARCHITECT

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

EXTERIOR ELEVATIONS

DRAWING NO. **A-200**

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING
FRANKFORT, KENTUCKY

KESLER SIMPSON KSA ARCHITECTS

KESLER SIMPSON ARCHITECTS, LLC
3728 WILLOW RIDGE RD
LEXINGTON, KY 40514

AS BUILT DATE --/--/----

DECA LOG # ?

REVISION HISTORY OF DRAWINGS

	DESCRIPTION OF REVISION	DATE		DESCRIPTION OF REVISION	DATE
1			4		
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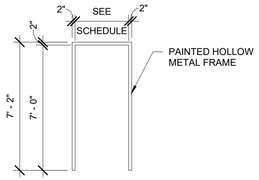
DOOR SCHEDULE

MARK	DOOR							FRAME					REMARKS
	SIZE			TYPE	MAT'L	FINISH	GLASS TYPE	TYPE	MAT'L	FINISH	JAMB DETAIL	HEAD DETAIL	
	Width	HGT.	THK.										
101	3' - 0"	7' - 0"	0' - 1 3/4"	F	HM	PAINT	-	1	HM	PAINT	2/A-600	2/A-600	PANIC HARDWARE
102	10' - 0"	8' - 0"	0' - 2"	OS	STL	PRE-FIN	N/A	-	STL	PAINT	1/A-600	1/A-600	
103	10' - 0"	8' - 0"	0' - 2"	OS	STL	PRE-FIN	N/A	-	STL	PAINT	1/A-600	1/A-600	
Grand total: 3													



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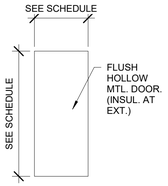
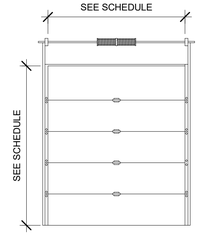


F

HOLLOW METAL, INSULATED HOLLOW METAL



OS

INSULATED SECTIONAL OVERHEAD

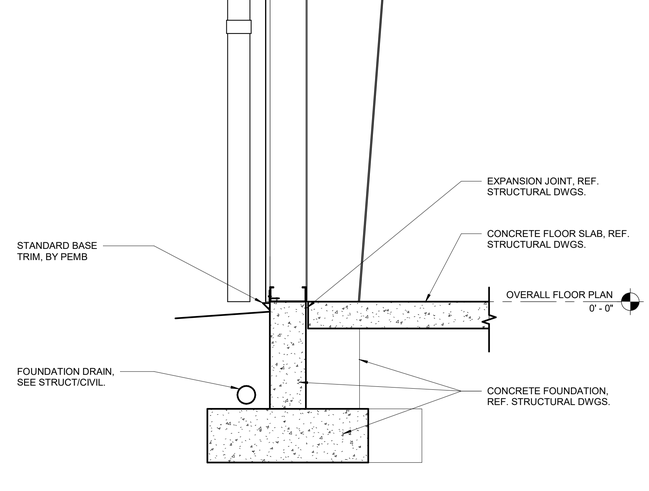
FRAME TYPES

DOOR TYPES

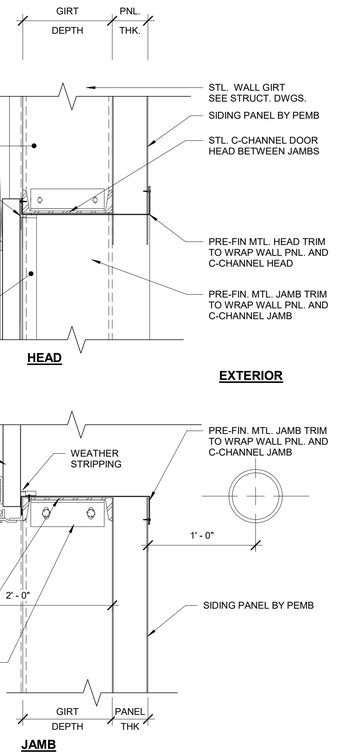
LEGEND:

WD = WOOD	STL = STEEL	PVC = POLYVINYL CHLORIDE
HM = HOLLOW METAL	ALUM = ALUMINUM	V.F.P. = VINYL FACED PANEL
T.G. = TEMPERED GLASS	N/A = NOT APPLICABLE	
W.G. = WIRE GLASS	PRE-FIN = PRE-FINISHED	

GENERAL NOTES:
1) ALL DOORS & FRAMES SHALL BE REINFORCED FOR HARDWARE.
2) ALL DOORS SHALL FIT TIGHT TO THRESHOLDS.
3) ALL FRAMES SHALL BE SECURED IN WALL TO PREVENT MOVEMENT IN FRAME OR PANEL.
4) PROVIDE INTERCHANGEABLE KEYED CYLINDER CORES FOR ALL DOORS.
5) REFER TO SPECIFICATIONS FOR ALL HARDWARE SET INFORMATION.
6) COORDINATE FIRE RATED HARWARE REQUIREMENTS W/ ALL DOORS IDENTIFIED HEREIN W/ FIRE RATING.
7) UNLESS NOTED OTHERWISE GLAZING FOR DOOR LIGHTS SHALL BE 1/4" U.L. LABELED WIRE GLASS IN FIRE RATED DOORS AND 1/4" TEMPERED GLASS IN ALL OTHER DOORS.
8) ALL EXISTING DOORS & FRAMES SCHEDULED TO REMAIN SHALL RECEIVE NEW PAINT FINISH.
9) PROVIDE VINYL STRIP CURTAINS AT ALL DOCK DOOR POSITIONS.

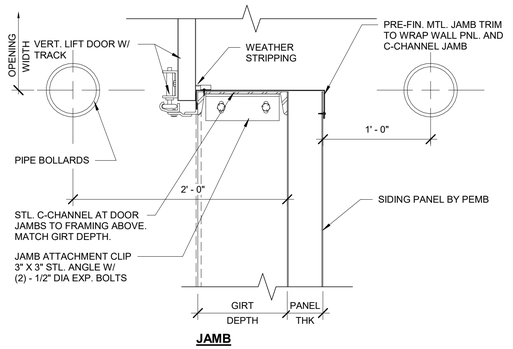


4 TYP. WALL SECTION
3/4" = 1'-0"



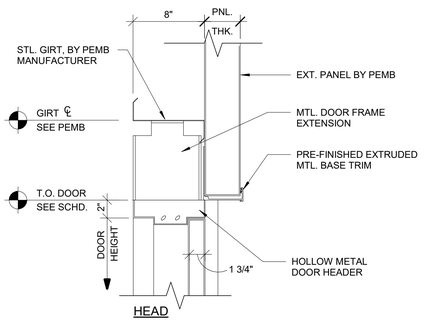
HEAD

INTERIOR EXTERIOR



JAMB

1 DOOR - SECTIONAL
1 1/2" = 1'-0"



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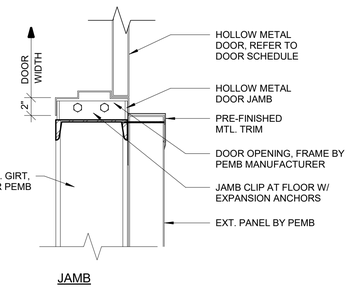
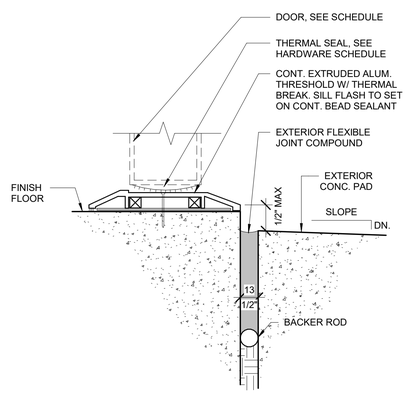


JAMB

2 DOOR DETAIL
1 1/2" = 1'-0"



3 SILL DTL - EXT GRADE
6" = 1'-0"

DRAWING INFORMATION	
A&E FILE NO.	202223
DRAWING DATE	03/24/2023
DRAWN BY	KLS
CHECKED BY	AK
PHASE	RTA
RTA DATE	03/24/2023

ANDREW W. KESLER REGISTERED No. 6842 COMMONWEALTH OF KENTUCKY ARCHITECT

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

DOOR SCHEDULE, DETAILS, & WALL SECTION

DRAWING NO. **A-600**

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING
FRANKFORT, KENTUCKY

KESLER SIMPSON KSA ARCHITECTS

KESLER SIMPSON ARCHITECTS, LLC
3728 WILLOW RIDGE RD
LEXINGTON, KY 40514

AS BUILT DATE --/--/----

DECA LOG # ?

REVISION HISTORY OF DRAWINGS

	DESCRIPTION OF REVISION	DATE		DESCRIPTION OF REVISION	DATE
1			4		
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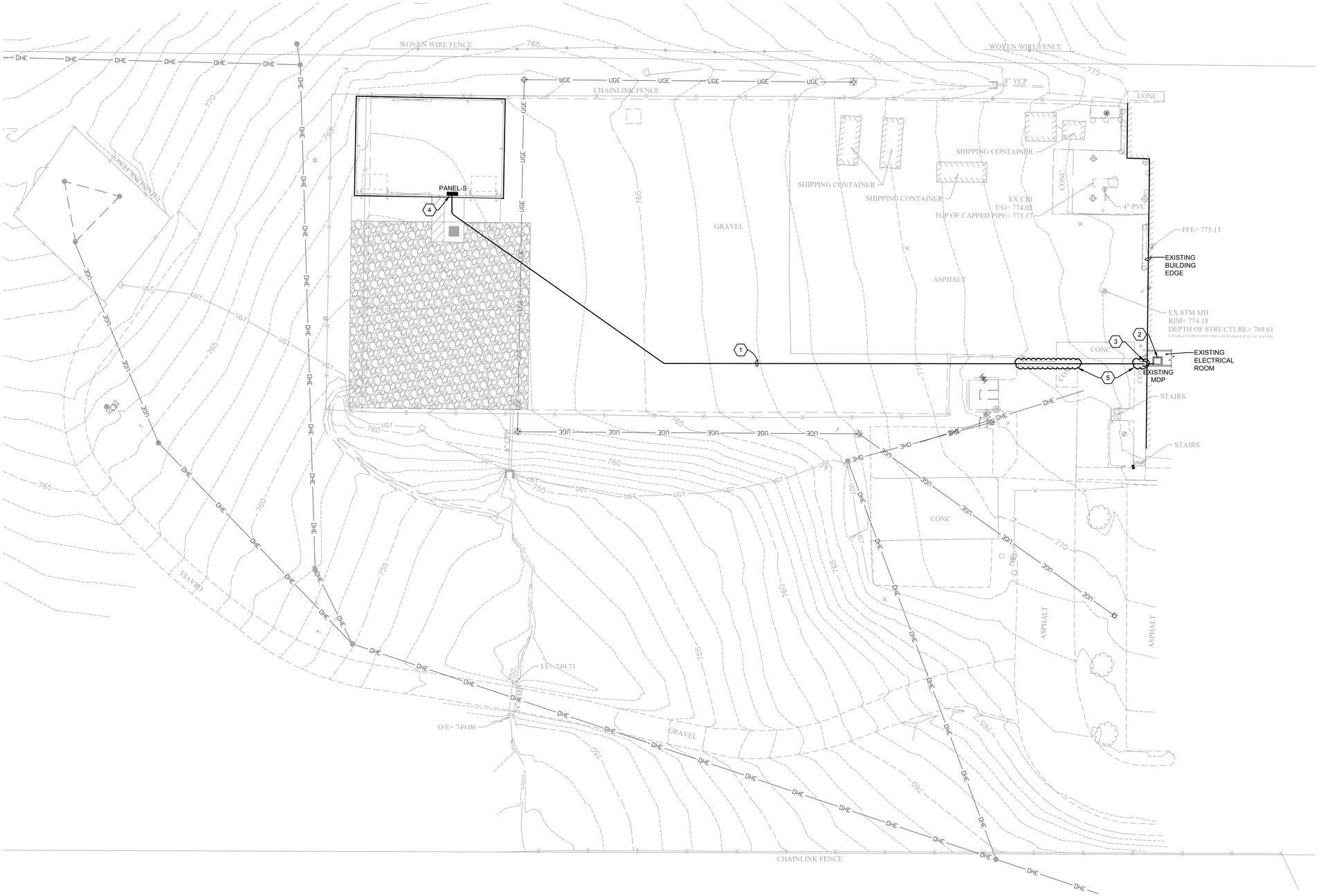
3			6		



ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

GENERAL NOTES

- THE CONTRACTOR SHALL LOCATE AND MARK EXISTING UTILITIES PRIOR TO BEGINNING GRADING OR EXCAVATION. THE LOCATIONS SHALL BE FLAGGED AND THE FLAGS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. ALL COSTS RESULTING FROM DAMAGE TO UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- UNLESS NOTED OTHERWISE, UNDERGROUND CONDUITS SHALL BE BURIED A MINIMUM OF 30 INCHES BELOW FINISHED GRADE.

SHEET NOTES:

1. PROVIDE NEW UNDERGROUND FEEDER FROM EXISTING PANEL-MDP INSIDE EXISTING BUILDING TO NEW PANEL-S INSIDE NEW STORAGE BUILDING. ROUTE NEW UNDERGROUND CONDUIT IN GRAVEL AND GRASS AREAS. WHERE THE CONDUIT MUST CROSS SIDEWALKS AND CONCRETE AREAS USE EXISTING CUT SECTION IF POSSIBLE.
2. EXISTING PANEL-MDP. EXISTING PANEL IS CUTLER-HAMMER, TYPE MP200, SERIAL NO. 5CF8738288-A, 120/208 VOLT, 3 PHASE, 4 WIRE. PROVIDE NEW 60 AMP THREE POLE CIRCUIT BREAKER IN EXISTING SPACE. PROVIDE LABEL ON FACE ON EXISTING MDP AT NEW BREAKER LOCATION. LABEL SHALL BE ENGRAVED BLACK PLASTIC WITH WHITE LETTER AND SELF ADHESIVE BACKING.
3. PROVIDE COATED METAL CONDUIT FOR TURN UP ELBOW OF UNDERGROUND CONDUIT. PROVIDE METAL CONDUIT UP WALL TO HEIGHT REQUIRED TO ENTER EXISTING MDP. PROVIDE METAL PULLING ELBOW TO TURN CONDUIT THROUGH WALL AND CONTINUE OVER TO EXISTING MDP. NO PVC CONDUIT SHALL BE USE ABOVE GRADE. SEAL PENETRATIONS IN EXISTING WALL BOTH SIDES AND SEAL AROUND CONDUIT AFTER SIDEWALK REPAIR.
4. CONDUIT SHALL TURN UP INSIDE NEW BUILDING. NO CONDUIT SHALL BE INSTALLED ON EXTERIOR OF THE BUILDING. EXPOSED CONDUIT SHALL BE METAL.
5. EXISTING CONCRETE PATCHES IN THIS LOCATION. CONTRACTOR SHALL ROUTE NEW UNDERGROUND CONDUIT THROUGH THESE AREAS. REMOVE EXISTING PATCH AS NEEDED TO INSTALL NEW CONDUIT. REPAIR CONCRETE TO MATCH EXISTING CONDITIONS.

0 20' 40'

Mar 21, 2023 - 4:49pm By: David

STATE OF KENTUCKY
JOHN A. NEWMAN
16925
LICENSED
PROFESSIONAL ENGINEER

DRAWING INFORMATION	
A & E FILE NO.	2258
DRAWING DATE	03/22/2023
DRAWN BY	STAFF
CHECKED BY	JAN
PHASE	RTA
RTA DATE	03/24/2023

DMA SPRINGFIELD RC NON-HEATED STORAGE FACILITY

ELECTRICAL SITE PLAN

DRAWING NO. EU101

ACCOUNT NO. 095-CAR7-SP07-00

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING AND CONTRACT ADMINISTRATION
FRANKFORT, KENTUCKY

AS BUILT DATE

DECA LOG #

N3D Newman • Nyman • Daurer GROUP
1204 Winchester Rd
Suite 200
Lexington, KY 40505
T: 859.303.5708
www.n3dgroup.com

REVISION HISTORY OF THIS DRAWING

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1			5		
2			6		
3			7		
4			8		