

**CHAMPAIGN COUNTY BOARD  
FACILITIES COMMITTEE AGENDA  
County of Champaign, Urbana, Illinois**

Wednesday, April 7, 2021 at 6:30  
Lyle Shields Meeting Room  
Brookens Administrative Center  
1776 E. Washington St., Urbana, IL 61802

**Committee Members:**

Steve Summers – Chair	Jenny Lokshin
Stan Harper – Vice Chair	Emily Rodriguez
Jim Goss	Leah Taylor
Jordan Humphrey	Jodi Wolken

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<a href="https://us02web.zoom.us/j/87603922493?pwd=WVBGeThlZ3h0cWRRQ2R3b1o2YjcvQT09">https://us02web.zoom.us/j/87603922493?pwd=WVBGeThlZ3h0cWRRQ2R3b1o2YjcvQT09</a>	
V. Communications	
VI. New Business	
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B. Discussion and Approval of County Highway Maintenance Metal Roof Replacement and ILEAS Asphalt Shingle Replacement Bid Documents (Attached)	5-90
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VIII. Presiding Officer's Report

A. Future Meeting – **Tuesday, May 4, 2021 @**

6:30pm

IX. Designation of Items to be Placed on the Consent

Agenda

X. Adjournment

All meetings are at Brookens Administrative Center – 1776 E Washington Street in Urbana – unless otherwise noted. To enter Brookens after 4:30 p.m., enter at the north (rear) entrance located off Lierman Avenue.

Champaign County will generally, upon request, provide appropriate aids and services leading to effective communication for qualified persons with disabilities. Please contact Administrative Services, 217-384-3776, as soon as possible but no later than 48 hours before the scheduled meeting.

You are invited to a Zoom webinar.

When: Apr 7, 2021 06:30 PM Central Time (US and Canada)

Topic: Facilities

Please click the link below to join the webinar:

<https://us02web.zoom.us/j/89579474112?pwd=Mkl2ajZsaG02dS82ejQxSGRyM3BUUT09>

Passcode: 999999

Or One tap mobile :

US: +13126266799,,89579474112# or +13017158592,,89579474112#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 312 626 6799 or +1 301 715 8592 or +1 646 876 9923 or +1 253 215 8782 or +1 346 248  
7799 or +1 408 638 0968 or +1 669 900 6833

Webinar ID: 895 7947 4112

International numbers available: <https://us02web.zoom.us/j/89579474112?pwd=Mkl2ajZsaG02dS82ejQxSGRyM3BUUT09>

**CHAMPAIGN COUNTY BOARD  
FACILITIES COMMITTEE  
County of Champaign, Urbana, Illinois**

**MINUTES – Pending Approval**

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**DATE:** Tuesday March 2, 2021  
**TIME:** 6:30 p.m.  
**PLACE:** Lyle Shields Meeting Room  
Brookens Administrative Center, 1776 E. Washington St., Urbana IL 61802  
(ZOOM Meeting)

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**Committee Members**

**Present:** Steve Summers, Stan Harper, Jodi Wolken, Jordan Humphrey, Emily Rodriguez, Leah Taylor, Jim Goss, (All Committee Members participated via Zoom)

**Absent:** None.

**County Staff:** Dana Brenner (Facilities Director), Dan Busey (Recording Clerk), (County Staff physically present)

**Others Present:** None

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**Agenda**

**I. Call to Order and Roll Call**

Committee Chair Summers called the meeting to order at 6:31 P.M.

**II. Approval of Agenda/Addenda**

**Moved** by Mr. Harper to approve the agenda; seconded by Mr. Goss. Upon Roll Call Vote, the **Motion Carried Unanimously.**

**III. Approval of Minutes – February 10, 2021**

**Moved** by Ms. Taylor to approve the Minutes from February 10, 2021; seconded by Mr. Goss. **Upon Roll Call Vote, the Motion Carried Unanimously.**

**IV. Public Participation**

There was no participation by the public.

**V. Communications**

There were no communications brought before the committee.

**VI. New Business**

A. Discussion of proposed HVAC Repair/Replacement Schedule (Hail Damage).

Mr. Brenner mentioned that he met today with the architects and engineers to go over the proposed schedule of the project. Normally there is a 12 to 16-week window once the equipment is ordered to when it is produced. Mr. Brenner also noted that HVAC Equipment should not be replaced in the middle of the summer, so the timeline is important. The major damage is to JDC, Brookens, METCAD, and the Courthouse. JDC and Brookens need a number of rooftop air handlers replaced. While smaller components at the Courthouse need to be replaced. At the Tuesday May 4<sup>th</sup> Facilities Committee requests will be made to move forward with the advertisement of Bid

Documents. They will be advertised for roughly one month, while trying to contact as many vendors as possible. This project will encapsulate many facilities at one time as well as many different types of vendors supplying various types of equipment. Bids will be accepted with an opening on June 4<sup>th</sup>, will then go back to approval from the Facilities Committee on the 8<sup>th</sup>, and then move to the County Board Meeting on June 24<sup>th</sup>. Then if approved an agreement will be made with the low bidder in a timely fashion. The low bidder will then need to get submittals of equipment into the architectural and engineering firm assuring that the County will receive said equipment to the specifications required by the County. While it will most likely be a Fall installation, the contractor will be able to do some of the smaller things any time after July. With substantial completion of the project by November 12<sup>th</sup> and final completion by November 30<sup>th</sup>. Mr. Brenner went on to explain that this is primarily covered by insurance with the Engineering fees being covered by Capital Asset.

B. Discussion of proposed Satellite Jail HVAC Replacement Project Schedule.

The Satellite Jail was included in the Capital Asset plan and is slated for around 1.6 million dollars. The equipment is outdated and inefficient and this project will replace all current equipment. Large chillers will be added for significant savings, just with the AMEREN payback or bond that is available alone, around 120,000 dollars will be recouped. Which will in turn cover the fees from the engineer and a lot for savings on year-to-year basis. The proposed schedule falls in line with item VI. A. Mr. Brenner the went on to speak more about the bid process. Mr. Goss questioned if these jobs were so large that it would be tough for the same company to bid on and receive all of them. Mr. Brenner responded that it would depend on the size of the vendors and that thorough vetting will be done to the companies bidding.

C. Discussion of proposed Roof Replacement Project Schedules.

The biggest roofs being ILEAS and Highway buildings are being handled through Riefsteck and Ried Architecture. The Facilities Director would like to post bid on April 8<sup>th</sup> due to the time sensitivity of getting on the contractors' schedules. This is due to the significant damage to the County overall from hail damage that happened on July 11<sup>th</sup>, 2020 thus creating demand. ILEAS is an asphalt shingle roof while County Highway is a metal roof, that creates some nuances that make it more complicated. Mr. Brenner stated that he feels confident about the schedule laid out. Jeff Blue, County Highway Engineer, has already been involved in conversation regarding the replacement. Mr. Brenner explained that the proposed schedule for the Courthouse will follow a similar schedule. However, it is more complicated as it is a slanted six story roof. Due to the historic nature of the roof Bailey Edward design was selected as the architect, as they specialize in historical buildings. Mr. Brenner also believes that the contractor selected will be one that specializes in historic buildings as well as much taller buildings. Mr. Summers clarified that the hopes would be for an October completion date.

D. Discussion of air quality issue in Brookens POD #100 (RPC).

Mr. Brenner spoke to a complaint from the Regional Planning Commission about possible air quality issues in their office. Occupational Environmental Health Solutions (OEHS) has been hired to take air samples to look into the issue. The test is scheduled to be completed on March 8<sup>th</sup>. A full lab report will be provided of the findings. If anything is found OEHS will provide the County with a plan to remedy the issue.

E. Discussion of Downtown Jail Indoor Recreation.

The indoor recreation area of the Jail is not being used due to safety as it has vinyl tile, which can be sharpened and used as a weapon. In an effort to remove the tile testing was done on the mastic (glue) below the tile which was found to contain asbestos. The Sherriff has been sent the results. The Illinois Environmental Protection Agency and a specialized contractor would need to be involved to remove the contaminants. Discussion followed about the overall poor condition of the Downtown Jail.

**VII. Other Business**

There was no other business brought before the committee.

**VIII. Presiding Officer's Report**

A. Future Meeting – **Wednesday, April 7, 2021 @ 6:30pm**

**IX. Designation of Items to be Placed on the Consent Agenda**

None.

**X. Adjournment**

The meeting adjourned at 7:06 P.M.

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# PROJECT MANUAL

## CHAMPAIGN COUNTY ROOF REPLACEMENT – HIGHWAY DEPARTMENT + ILEAS

HIGHWAY DEPARTMENT  
1605 E. Main Street  
Urbana, IL 61802

ILEAS TRAINING CENTER  
1701 E. Main Street  
Urbana, IL 61802

95% REVIEW



DATE: April 1, 2021  
RRCo PROJECT #202106



PROJECT MANUAL FOR

**CHAMPAIGN COUNTY  
ROOF REPLACEMENT – HIGHWAY DEPARTMENT + ILEAS**

DATE: APRIL 1, 2021

**95% REVIEW**

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**END TOC**



**SECTION 00 0115  
LIST OF DRAWING SHEETS**

**G001 COVER SHEET, SHEET LIST ABBREVIATIONS**

**A100 ROOF PLAN (HIGHWAY DEPARTMENT)**

**A101 ROOF DETAILS (HIGHWAY DEPARTMENT)**

**A200 ROOF PLAN (ILEAS TRAINING CENTER)**

**A201 ROOF DETAILS (ILEAS TRAINING CENTER)**

**END OF SECTION**



**SECTION 00 1113**  
**ADVERTISEMENT FOR BIDS**

**FROM:**

**1.01 THE OWNER (HEREINAFTER REFERRED TO AS OWNER ):**

- A. Champaign County
- B. Address:
  - Brookens Administration Building
  - 1776 E. Washington Street
  - Urbana, IL, 61802

**1.02 AND THE ARCHITECT (HEREINAFTER REFERRED TO AS ARCHITECT ):**

- A. Reifsteck Reid & Company Architects
- B. Address:
  - 909 Arrow Road
  - Champaign, IL 61821

**1.03 DATE: APRIL 8, 2021**

**1.04 TO: POTENTIAL BIDDERS**

- A. Your firm is invited to submit an offer under seal to Owner for construction of a building located at:
  - 1. Champaign County Highway Department  
1605 E. Main St., Urbana, IL 61802
  - 2. LEAS Training Facility  
1701E. Main St., Urbana, IL 61802

Before 2:00 pm local standard time on the 30 day of April, 2021, for:

- B. Project: Champaign County Roof Replacement - Highway Department + ILEAS Traing Center
- C. Bids are to be received at Champaign County Regional Planning Commission office located in the Brookens Administration Building. **Bids will be open in the Lyle Shields Meeting Room.**
- D. Bids received after the stated time will not be accepted, and will be returned unopened.
- E. Project Description:
  - 1. Highway Building - Removal and installation of an architectural standing seammetal roof assembly.
  - 2. ILEAS - Removal and installation of an asphalt shingle roof assembly.
- F. Bid Documents for a Stipulated Sum contract may be obtained from the office of the Architect upon receipt of a refundable deposit, by cash, check or CIB card in the amount of \$50.00 for one set. Contractors may be mailed sets for a separate non-refundable \$15.00 fee. No partial sets will be distributed. Deposit checks will be returned to Bidders show return the contractor documents to the Architect in good condition, within ten (10) days after the opening of bids. Electronic copies may be obtained free of charge through Reifsteck Reid's Sharefile website, located at the following website:
  - 1. Project Sharefile Site:  
<https://rr-arch.sharefile.com/d-s3b0e1745bb384ee2ace33c73bffd6a1>
- G. Refer to other bidding requirements described in Document 00 2113 - Instructions to Bidders.
- H. A Prebid meeting will be held at Brookens Administrative Center - Lyle Shields Meeting Room, 1176 E. Washington Street, Urbana, IL at 2:00 p.m. on April 15, 2021.
- I. **PREVAILING WAGES:** Contractors will be required to comply with all laws, including those relating to prevailing rate of wages of the various classes of work to be performed under the proposed contract as determined by the Illinois Department of Labor, in accordance with Federal Labor Standards provisions, US Department of Labor.

- J. Submit your offer on the Bid Form provided.
- K. Your offer will be required to be submitted under a condition of irrevocability for a period of 30 days after submission.
- L. The Owner reserves the right to accept or reject any or all offers.

**1.05 SIGNATURE**

**END OF SECTION**

**SECTION 00 2113**  
**INSTRUCTIONS TO BIDDERS**

**SUMMARY**

**1.01 DOCUMENT INCLUDES**

- A. Invitation
  - 1. Bid Submission
  - 2. Intent
  - 3. Work Identified in Contract Documents
  - 4. Contract Time
- B. Bid Documents and Contract Documents
  - 1. Definitions
  - 2. Contract Documents Identification
  - 3. Availability
  - 4. Examination
  - 5. Inquiries/Addenda
  - 6. Product/Assembly/System Substitutions
- C. Site Assessment
  - 1. Site Examination
  - 2. Prebid Conference
- D. Qualifications
  - 1. Qualifications
  - 2. Prequalification
  - 3. Subcontractors/Suppliers/Others
- E. Bid Submission
  - 1. Submission Procedure
  - 2. Bid Ineligibility
- F. Bid Enclosures/Requirements
  - 1. Security Deposit
  - 2. Bid Form Requirements
  - 3. Bid Form Signature
- G. Offer Acceptance/Rejection
  - 1. Duration of Offer
  - 2. Acceptance of Offer

**1.02 RELATED DOCUMENTS**

- A. Document 00 7300 - Supplementary Conditions:

**INVITATION**

**2.01 BID SUBMISSION**

- A. Bids signed and under seal, executed, and dated will be received at the office of the Owner at Brookens Administration Building at 1776 E. Washington Street, Urbana, IL before 2:00 p.m. local standard time on the 30th day of April.
- B. Offers submitted after the above time shall be returned to the bidder unopened.
- C. Offers will be opened publicly immediately after the time for receipt of bids.

**2.02 INTENT**

- A. The intent of this Bid request is to obtain an offer to perform work to complete a roof replacement located at Champaign Co. Highway Department - 1605 E. Main Street, Urbana, IL & ILEAS Training Center - 1701 E. Main Street, Urbana, IL for a Stipulated Sum contract, in accordance with Contract Documents.

### **2.03 WORK IDENTIFIED IN THE CONTRACT DOCUMENTS**

- A. Work of this proposed Contract comprises building construction, including general construction Work.

### **2.04 CONTRACT TIME**

- A. As identified on the Bid Form.

## **BID DOCUMENTS AND CONTRACT DOCUMENTS**

### **3.01 DEFINITIONS**

- A. Bid Documents: Contract Documents supplemented with Invitation To Bid, Instructions to Bidders, Bid Form Bid securities identified.
- B. Bid, Offer, or Bidding: Act of submitting an offer under seal.
- C. Bid Amount: Monetary sum identified by the Bidder in the Bid Form.

### **3.02 CONTRACT DOCUMENTS IDENTIFICATION**

- A. Contract Documents are identified as Project Number 202106, as prepared by Architect, and with contents as identified in the Table of Contents.

### **3.03 AVAILABILITY**

- A. Bid Documents may be obtained at the office of Architect which is located at 909 Arrow Road, Champaign, IL 61821.
- B. Bid Documents may be obtained electronically free of charge at the following website:
  - 1. <https://rr-arch.sharefile.com/d-s3b0e1745bb384ee2ace33c73bffd6a1>
- C. Deposit will be refunded if Bid Documents are returned complete, undamaged, unmarked and reusable, within 7 days of bid submission. Failure to comply will result in forfeiture of deposit.
- D. Bid Documents are made available only for the purpose of obtaining offers for this project. Their use does not grant a license for other purposes.

### **3.04 EXAMINATION**

- A. Bid Documents may be viewed at the office of Architect.
- B. Upon receipt of Bid Documents verify that documents are complete. Notify Architect should the documents be incomplete.
- C. Immediately notify Architect upon finding discrepancies or omissions in the Bid Documents.

### **3.05 INQUIRIES/ADDENDA**

- A. Direct questions to Dan Wakefield, email; [dwakefield@rr-arch.com](mailto:dwakefield@rr-arch.com).
- B. Addenda may be issued during the bidding period. All Addenda become part of Contract Documents. Include resultant costs in the Bid Amount.
- C. Verbal answers are not binding on any party.
- D. Clarifications requested by bidders must be in writing not less than 7 days before date set for receipt of bids. The reply will be in the form of an Addendum, a copy of which will be forwarded to known recipients.

### **3.06 PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS**

- A. General Requirements for Substitution Requests:
  - 1. Provide sufficient information to determine acceptability of proposed substitutions.
  - 2. Provide complete information on required revisions to other work to accommodate each proposed substitution.
- B. Substitution Request Time Restrictions:
  - 1. Where the Bid Documents stipulate a particular product, substitutions will be considered up to 10 days before receipt of bids.
- C. Substitution Request Form:

1. Submit substitution requests by completing the form in Section 00 4325; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- D. Review and Acceptance of Request:
  1. Architect may approve the proposed substitution and will issue an Addendum to known bidders.
- E. See Section 01 2500 - Substitution Procedures for additional requirements.

## **SITE ASSESSMENT**

### **4.01 SITE EXAMINATION**

- A. Examine the project site before submitting a bid.
- B. A visit to the project site has been arranged for bidders as follows: Following the pre-bid conference

### **4.02 PREBID CONFERENCE**

- A. A bidders conference has been scheduled for 2:00 p.m. on the 15 day of April at the Brookens Administrative Center, 1776 E. Washington Street, Urbana, IL 61802 - Lyle Shields Meeting Room.
- B. All general contract bidders and suppliers are invited.
- C. Representatives of Architect will be in attendance.
- D. Summarized minutes of this meeting will be circulated to attendees. These minutes will not form part of Contract Documents.
- E. Information relevant to the Bid Documents will be recorded in an Addendum, issued to Bid Document recipients.

## **QUALIFICATIONS**

### **5.01 SUBCONTRACTORS/SUPPLIERS/OTHERS**

- A. Owner reserves the right to reject a proposed subcontractor for reasonable cause.
- B. Refer to General Conditions.
- C. The Bidder is a properly licensed Contractor according to the laws and regulations of the State of Illinois and meets qualifications indicated in the Procurement and Contracting Documents.

## **BID SUBMISSION**

### **6.01 SUBMISSION PROCEDURE**

- A. Bidders shall be solely responsible for the delivery of their bids in the manner and time prescribed.
- B. Submit one copy of the executed offer on the Bid Forms provided, signed and sealed with the required security in a closed opaque envelope, clearly identified with bidder's name, project name and Owner's name on the outside.
- C. Double Envelope: Insert the closed and sealed Bid Form envelope plus requested security deposit, qualification forms in a large opaque envelope and label this envelope as noted above.
- D. Improperly completed information, irregularities in security deposit, may be cause not to open the Bid Form envelope and declare the bid invalid or informal.
- E. An abstract summary of submitted bids will be made available to all bidders following bid opening.

### **6.02 BID INELIGIBILITY**

- A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may at the discretion of the Owner, be declared unacceptable.

- B. Bid Forms, Appendices, and enclosures that are improperly prepared may, at the discretion of Owner, be declared unacceptable.
- C. Failure to provide security deposit, bonding or insurance requirements may, at the discretion of Owner, be waived.

**BID ENCLOSURES/REQUIREMENTS**

**7.01 SECURITY DEPOSIT**

- A. Bids shall be accompanied by a security deposit as follows:
  - 1. Bid Bond of a sum no less than 5 percent of the Bid Amount on AIA A310 Bid Bond Form.
- B. Endorse the Bid Bond in the name of the Owner as obligee, signed and sealed by the principal (Contractor) and surety.
- C. The security deposit will be returned after delivery to the Owner of the required Performance and Payment Bond(s) by the accepted bidder.
- D. Include the cost of bid security in the Bid Amount.
- E. After a bid has been accepted, all securities will be returned to the respective bidders and other requested enclosures.
- F. If no contract is awarded, all security deposits will be returned.

**7.02 PERFORMANCE ASSURANCE**

- A. Accepted Bidder: Provide a Performance bond as described in 00 7300 - Supplementary Conditions.
- B. Include the cost of performance assurance bonds in the Bid Amount.

**7.03 BID FORM REQUIREMENTS**

- A. Complete all requested information in the Bid Form and Appendices.
- B. Taxes: Refer to Document 00 7300 - Supplementary Conditions for products that are tax exempt.

**7.04 SALES AND USE TAXES**

- A. Not to be included in the bid amount.

**7.05 FEES FOR CHANGES IN THE WORK**

- A. Include the fees for overhead and profit on own Work and Work by subcontractors, identified in Document 00 7300 - Supplementary Conditions .

**7.06 BID FORM SIGNATURE**

- A. The Bid Form shall be signed by the bidder, as follows:
  - 1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature. Affix seal.
  - 2. Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the word "Partner" under each signature. Affix seal to each signature.
  - 3. Corporation: Signature of a duly authorized signing officer(s) in their normal signatures. Insert the officer's capacity in which the signing officer acts, under each signature. Affix the corporate seal. If the bid is signed by officials other than the president and secretary of the company, or the president/secretary/treasurer of the company, a copy of the by-law resolution of their board of directors authorizing them to do so, must also be submitted with the Bid Form in the bid envelope.
  - 4. Joint Venture: Each party of the joint venture shall execute the Bid Form under their respective seals in a manner appropriate to such party as described above, similar to the requirements of a Partnership.

## OFFER ACCEPTANCE/REJECTION

### 8.01 DURATION OF OFFER

- A. Bids shall remain open to acceptance and shall be irrevocable for a period of sixty (60) days after the bid closing date.

### 8.02 ACCEPTANCE OF OFFER

- A. Owner reserves the right to accept or reject any or all offers.
- B. Owner may elect to disqualify a bid due to failure to submit a bid the form requested, failure to bid requested alternatives or unit prices, failure to complete entries in all blanks in the Bid Form, or inclusion by the Bidder of any alternates, conditions, limitations or provisions not called for.
- C. Champaign County reserves the right, without prejudice, to accept or reject any or all bids/proposals, to waive any technicality in any bid/proposal submitted and to accept any part of a bid/proposal as deemed to be in the best interested of the Agency and State of Illinois. Such rejection must be based on sound, documented reason.
- D. Bids/ proposals must be date and time stamped by the soliciting purchasing office on or before the date and time that the bid/proposal is due. Bids/proposals date and time stamped in another office will be rejected. Receipt of a bid/proposal by the mail system does not constitute receipt of a bid/proposal by the purchasing office.
- E. Any unsuccessful bidder has the right to Appeal/Protect a contract award. Unsuccessful bidders will be given five (5) working days after receipt of the notification letter from Champaign County to protect the contract award decision in writing. The Agency may continue the terms and conditions of the contract award with the selected bidder(s) pending the outcome of the dispute.
- F. After acceptance by Owner, Architect on behalf of Owner, will issue to the successful bidder, a written Bid Acceptance.

### 8.03 GENERAL INFORMATION

- A. There is no expressed or implied obligation for Champaign County to reimburse responding bidders for any expenses incurred in preparing bids in response to this request.
- B. During the evaluation process, Champaign County reserves the right, where it may serve the County's best interest, to request additional information or clarification from bidders, or to allow corrections of errors or omissions.
- C. It is anticipated the selection of successful bidder(s) will be completed by **June 2, 2021**. Following the selection of the successful bidder(s), certified letters will be sent to all bidders notifying them of the selection. Bidders will have five (5) working days from the date of receipt of the notification letter to protest the selection. If no written protest is received within the five (5) days, the selection will be considered final and the award made. The award may be made even if a protest is submitted within the time specified, if Champaign County believes the protest is without merit.
- D. Any contract arising out of this bid may be cancelled by Champaign County if the contractor/vendor fails to perform any of the times specified. Should the bidder post a performance bond, it will be forfeited to Champaign County in the event of failure to perform any provisions of the agreement. The contractor may cancel the agreement with 30 days written notice. Such cancellation will be construed as failure to perform.
- E. Owner is not responsible for any cost incurred by a Contractor in the preparation or delivery of bids. The Contractor shall be responsible for the actual delivery of bids during business hours to the address indicated. Any bid received after the delivery deadline will be disqualified.
- F. Provide list of major subcontractors, suppliers, and manufacturers furnishing or installing products no later than ten (10) business days following Notice to Proceed. Do not change subcontractors, suppliers, and manufacturers from those submitted without approval of Owner.
- G. By submitting a bid the Contractor certifies that the Contractor is not barred from bidding on this contract as a result of a violation of either the bid-rigging or bid-rotating provisions of Article 33E

of the Criminal Code of 1961, as amended. By submitting a bid, the Contractor, having 25 or more employees, does hereby certify pursuant to Section 3 of the Illinois Drug-Free Workplace Act (30 ILCS 580/3) that it shall provide a drug-free workplace for all employees engaged in the performance of work under the contract by complying with the requirements of the Illinois Drug-Free Workplace Act and, further certifies, that is not ineligible for award of this contract by reason of debarment for a violation of the Illinois Drug-Free Workplace Act.

- H. By submitting a bid, the Contractor does hereby certify pursuant to Section 2-105 of the Illinois Human Rights Act (775 ILCS 5/2-105) that it has a written sexual harassment policy that includes, at a minimum, the following information: (i) the illegality of sexual harassment; (ii) the definition of sexual harassment under State Law; (iii) a description of sexual harassment, utilizing examples; (iv) an internal complaint process including penalties; (v) the legal recourse, investigative and complaint process available through the Department of Human Rights and Human Rights Commission; (vi) direction on how to contact the Department of Human Rights and Human Rights Commission; and (vii) protection against retaliation.
- I. At the time of submission of the bid, Champaign County must be provided the name, address, and phone number of the insurance company through which the minimum insurance coverage has been obtained.

#### **8.04 EXECUTION OF THE CONTRACT**

- A. Subsequent to the Notice of Intent to Award, and within ten (10) business days after the prescribed Form of Agreement is presented to the Awardee for signature, the Awardee shall execute and deliver the Agreement to Owner through Architect, in such number of counterparts as Owner may require.
- B. Owner may deem as a default the failure of the Awardee to execute the Contract and to supply the required bonds and insurance when the Agreement is presented for signature within the period of time allowed.
- C. Unless otherwise indicated in the Procurement and Contracting Documents of the executed Agreement, the date of commencement of the Work shall be the date of the executed Agreement. In the event of a default, Owner may declare the amount of the Bid security forfeited and elect to either award the Contract to the next responsible bidder or re-advertise for bids.

**END OF SECTION**

**SECTION 00 4102  
BID FORM**

**THE PROJECT AND THE PARTIES**

**1.01 TO:**

- A. Owner  
Brookens Administration Building  
1776 E. Washington Street  
Urbana, IL 61802

**1.02 FOR:**

- A. Project: Champaign County Roof Replacement - Highway Department + ILEAS Training Center

**1.03 DATE: \_\_\_\_\_ (BIDDER TO ENTER DATE)**

**1.04 SUBMITTED BY: (BIDDER TO ENTER NAME AND ADDRESS)**

- A. Bidder's Full Name \_\_\_\_\_
  - 1. Address \_\_\_\_\_
  - 2. City, State, Zip \_\_\_\_\_
  - 3. Email \_\_\_\_\_

**1.05 OFFER**

- A. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Bid Documents prepared by Reifsteck Reid & Company Architects. for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:

- B. **Bid Package 1: CHAMPAIGN COUNTY HIGHWAY DEPARTMENT ROOF REPLACEMENT**  
\_\_\_\_\_dollars  
(\$ \_\_\_\_\_), in lawful money of the United States of America.

- C. **Bid Package 2: ILEAS TRAINING CENTER ROOF REPLACEMENT**  
\_\_\_\_\_dollars  
(\$ \_\_\_\_\_), in lawful money of the United States of America.

- D. **COMBINED BID OF BID PACKAGE 1 and BID PACKAGE 2 (Optional)**  
\_\_\_\_\_dollars  
(\$ \_\_\_\_\_), in lawful money of the United States of America.

- E. We have included the required security deposit as required by the Instruction to Bidders.
- F. All applicable federal taxes are excluded and State of Illinois taxes are excluded from the Bid Sum.

**1.06 ACCEPTANCE**

- A. This offer shall be open to acceptance and is irrevocable for sixty days from the bid closing date.
- B. If this bid is accepted by Owner within the time period stated above, we will:
  - 1. Execute the Agreement within seven days of receipt of acceptance of this bid.
  - 2. Furnish the required bonds within seven days of receipt of acceptance of this bid.
  - 3. Commence work within seven days after written Notice to Proceed of this bid.
- C. If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the security deposit shall be forfeited as damages to Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.
- D. In the event our bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

**1.07 CONTRACT TIME**

- A. If this Bid is accepted, we will:
- B. Projects to be Substantially Complete by the 24th day of September 2021.
- C. Project to be completed by the 8th day of October 2021.

**1.08 CHANGES TO THE WORK**

- A. When Architect establishes that the method of valuation for Changes in the Work will be net cost plus a percentage fee in accordance with General Conditions, our percentage fee will be:
  - 1. Fifteen (15) percent overhead and profit on the net cost of our own Work;
  - 2. Five (5) percent on the cost of work done by any Subcontractor.
- B. On work deleted from the Contract, our credit to Owner shall be Architect-approved net cost plus fifty (50) percent of the overhead and profit percentage noted above.

**1.09 ADDENDA**

- A. The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.
  - 1. Addendum # \_\_\_\_\_ Dated \_\_\_\_\_.
  - 2. Addendum # \_\_\_\_\_ Dated \_\_\_\_\_.
  - 3. Addendum # \_\_\_\_\_ Dated \_\_\_\_\_.

**1.10 BID FORM SIGNATURE(S)**

- A. The Corporate Seal of

\_\_\_\_\_  
 (Bidder - print the full name of your firm)  
 was hereunto affixed in the presence of:

\_\_\_\_\_  
 (Authorized signing officer, Title)

(Seal)

\_\_\_\_\_  
 (Authorized signing officer, Title)

**1.11 IF THE BID IS A JOINT VENTURE OR PARTNERSHIP, ADD ADDITIONAL FORMS OF EXECUTION FOR EACH MEMBER OF THE JOINT VENTURE IN THE APPROPRIATE FORM OR FORMS AS ABOVE.**

**END OF SECTION**



**SECTION 00 4325**

**SUBSTITUTION REQUEST FORM - DURING PROCUREMENT**

**PART 1 GENERAL**

**1.01 PROCEDURES**

- A. Make submittals in accordance with Specifications **SECTION 01 2500 Substitution Procedures.**

**1.02 ATTACHMENTS**

- A. Substitution Request Form During Procurement.

**END OF SECTION**



# Substitution Request Form (During Procurement)

---

## IDENTIFICATION:

Owner: Champaign County

Design Professional: Reifsteck Reid & Company Architects

Project Name: Champaign County Roof Replacement – Highway Department + ILEAS

Project Number: 202106 Date: \_\_\_\_\_

---

## REFERENCE:

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

Specification No.: \_\_\_\_\_ Page: \_\_\_\_\_ Article/ Paragraph: \_\_\_\_\_

---

## DESCRIPTION:

Manufacturer's Name: \_\_\_\_\_ Model No: \_\_\_\_\_

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

Proposed Substitution General Description: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

---

## CERTIFICATION:

The Undersigned certifies:

- Proposed substitution has been investigated and determined that it meets or exceeds the quality level of the specified product.
  - Same warranty will be furnished for proposed substitution as for specified product.
  - Same maintenance service and source of replacement parts, as applicable, is available.
  - Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
  - Proposed substitution does not affect dimensions and functional clearances.
  - Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- 

Submitted and Signed by: \_\_\_\_\_  
Name Title

Firm: \_\_\_\_\_

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

Telephone: \_\_\_\_\_

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## ATTACHED SUPPORTING DATA:

Drawings     Product Data     Samples     Tests     Reports     \_\_\_\_\_

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## A/E's REVIEW AND ACTION:

- Substitution Meets Specifications – Incorporation into the Bid Documents is established by Addenda only
- Substitution Not Accepted – Product does not meet specification.
- Substitution Will Not Be Considered
- Substitution Request Not Reviewed – Received after date identified in the Project Manual

Signed by: \_\_\_\_\_  
Name Title Date



**SECTION 00 5000  
CONTRACTING FORMS AND SUPPLEMENTS**

**PART 1 GENERAL**

**1.01 CONTRACTOR IS RESPONSIBLE FOR OBTAINING A VALID LICENSE TO USE ALL  
COPYRIGHTED DOCUMENTS SPECIFIED BUT NOT INCLUDED IN THE PROJECT MANUAL.**

**1.02 AGREEMENT AND CONDITIONS OF THE CONTRACT**

- A. See Section 00 5200 - Agreement Form for the Agreement form to be executed.
- B. See Section 00 7200 - General Conditions for the General Conditions.
- C. See Section 00 7300 - Supplementary Conditions for the Supplementary Conditions.
- D. The Agreement and General Conditions are based on AIA A105.

**1.03 FORMS**

- A. Use the following forms for the specified purposes unless otherwise indicated elsewhere in Contract Documents.
- B. Bond Forms:
  - 1. Bid Bond Form: AIA A310.
  - 2. Performance and Payment Bond Form: AIA A312.
- C. Post-Award Certificates and Other Forms:
  - 1. Schedule of Values Form: AIA G703.
  - 2. Application for Payment Forms: AIA G702 with AIA G703 (for Contractors).
- D. Clarification and Modification Forms:
  - 1. Architect's Supplemental Instructions Form: AIA G710.
  - 2. Construction Change Directive Form: AIA G714.
  - 3. Work Changes Proposal Request Form: AIA G709-2001.
  - 4. Change Order Form: AIA G701.
- E. Closeout Forms:
  - 1. Certificate of Substantial Completion Form: AIA G704-2000.

**1.04 REFERENCE STANDARDS**

- A. AIA A105 - Standard Short Form of Agreement Between Owner and Contractor; 2017.
- B. AIA A310 - Bid Bond; 2010.
- C. AIA A312 - Performance Bond and Payment Bond; 2010.
- D. AIA G701 - Change Order; 2017.
- E. AIA G702 - Application and Certificate for Payment; 1992.
- F. AIA G703 - Continuation Sheet; 1992.
- G. AIA G704-2000 - Certificate of Substantial Completion; 2000.
- H. AIA G709-2001 - Proposal Request; 2001.
- I. AIA G710 - Architect's Supplemental Instructions; 2017.
- J. AIA G714 - Construction Change Directive; 2017.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**



**SECTION 00 7300  
SUPPLEMENTARY CONDITIONS**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. These Supplementary Conditions amend and supplement the General Conditions and other provisions of Contract Documents as indicated below. Provisions that are not so amended or supplemented remain in full force and effect.
- B. The terms used in these Supplementary Conditions that are defined in the General Conditions have the meanings assigned to them in the General Conditions.

**1.02 RELATED SECTIONS**

- A. Section 00 5000 - Contracting Forms and Supplements.
- B. Section 01 4216 - Definitions.

**1.03 MODIFICATIONS TO AIA DOCUMENT A105**

- A. GENERAL STATEMENT: The following supplements modify, change, delete from or add to the AIA Document A105. Where any article of the General Conditions is modified or any paragraph, subparagraph or clause thereof is modified or deleted by these supplements, the unaltered provisions of the article, paragraph, subparagraph or clause shall remain in effect.
- B. ARTICLE 5 - INSURANCE AND BONDS
  - 1. 5.1 Contractor's Liability Insurance - Add the following clause to 5.1.1 Liability insurance shall include all major divisions of coverage and be on a comprehensive basis including:
    - a. Premises Operation (including X-C/U as applicable) and products and completed operations.
    - b. Independent Contractor's Protective.
    - c. Personal Injury Liability with Employment Exclusion.
    - d. Owned, non-owned and hired motor vehicles.
    - e. Board from Property Damage.
    - f. Umbrella Excess Liability.
    - g. Project Owner and Architect/Engineer named as Additional Insured.
    - h. Contractors' policies will be primary and noncontributory.
  - 2. 5.1.2 Add the following clause to 5.1.2 The insurance required by subparagraph 5.1.1 shall be written for not less than the following, or greater if required by law:
    - a. Worker's Compensation:
      - 1) State: Statutory
      - 2) Applicable Federal Statutory
      - 3) Employer's Liability: Bodily Injury by Accident \$500,000 each Accident
      - 4) Bodily Injury by Disease \$500,000 Policy Limit
      - 5) Bodily Injury by Disease \$500,000 Each Employee
    - b. Commercial General Liability:
      - 1) General Aggregate \$2,000,000
      - 2) Product/Completed Operations Aggregate \$2,000,000
      - 3) Personal & Advertising Injury \$1,000,000
      - 4) Each Occurrence \$1,000,000
      - 5) Designated Construction Project General Aggregate Limit C6 25 03
    - c. Comprehensive Automobile Liability: Liability \$1,000,000
    - d. Umbrella: Liability \$3,000,000
  - 3. 5.1.3 - Add the following clause 5.1.3.1 The Contractor shall furnish one copy of each of Certificates of Insurance herein required for each copy of agreement which shall be specifically set forth evidence of all coverage required by subparagraphs 5.1.1, 5.1.2, and 5.1.3. The form of the Certificate shall be Acord From 25-S or insurer's standard form. The Contractor shall furnish to the Owner copies of any endorsements that are subsequently issued amending coverage of limits.

4. 5.6 PERFORMANCE BOND AND PAYMENT BOND - Add the following subparagraph 5.6: The Owner will require a Performance Bond and a Payment Bond. Refer to Section 00 2113 - Instructions to Bidders for specific instruction regarding Performance Bond and Labor and Material Payment Bond.
- C. ARTICLE 8 -CONTRACTOR
1. 8.6 TAXES - Delete subparagraph 8.6 in its entirety and substitute the following: "8.6 The Owner is exempt from states tax on products permanently incorporated in work."
  2. 8.7 PERMITS, FEES AND NOTIECES - Add the following sentence to this subparagraph: "The Owner shall be responsible for securing and paying for the building permit."
  3. 8.9 USE OF SITE - Add the following subparagraph: 8.9.1 "Refer to Section 01 1000 Summary for further provision on this subject."
- D. ARTICLE 12 - PAYMENTS
1. 12.2 APPLICATIONS FOR PAYMENT - Add the following clauses 12.2.3 and 12.2.4 to subparagraph 12.3.1:
    - a. 12.2.3 - Until final payment, the Owner will pay 90 percent of the amount due the Contractors on account of progress payments. If the manner of completion of the Work and its progress are and remain satisfactory to the Architect/Engineer, and in the absence of other good and sufficient reasons, for each Work category shown to be 50 percent (50%) or more complete in the Application for Payment, the Architect/Engineer will, without reduction certify any remaining progress payments for each Work category to be paid in full.
    - b. 12.2.1 - The full contract retainage may be instated if the manner of the completions of work and its progress do not remain satisfactory to the Architect/Engineer, or if the Surety withholds its consent, or for other good and sufficient reasons.
    - c. 12.2.1 - Add the following to subparagraph 12.2.1.1: Contractor shall submit to Owner through the Architect/Engineer with each payment request, waivers of lien from each subcontractor.

**1.04 BUILDERS RISK INSURANCE**

- A. Contractor's responsibility: The Contractor shall provide a builder's risk insurance policy which shall insure against all risks of direct physical loss or damage to the completed work, subject to the exclusion contained in the policy. The policy shall be issued under a Completed Value form with 100% of the insurable value of the work to be done and incorporated in the building under this contract and upon all materials in or adjacent thereto and intended for use thereon. The policy shall be subject to a \$1,000,000 deductible and shall be issued for the benefit of the Owner, Contractor or Subcontractor, as their interest may appear. Any loss or cost of repair not covered by such insurance shall be borne by the Contractor without additional cost to the Owner.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

**SECTION 00 8250  
PREVAILING WAGE ACT**

**PART 1**

**1.01 GENERAL**

- A. Pursuant to Illinois Compiled Statutes 820 ILCS 130/0.01 ET SEQ., These specifications list on the following pages, the Illinois Department of Labor Prevailing Rate of Wages for the County where the contract is being performed and for each craft or type of worker needed to execute the contract. Wage rates follow this section.
- B. This contract calls for the construction of a "Public Work" within the meaning of the Illinois Prevailing Wage Act 920 ILCS 130/.01. The Act requires contractors and subcontractors to pay all laborers, workers and mechanics performing services on public works projects no less than the "Prevailing Rate of Wages" (hourly cash wages plus fringe benefits) in the county where the work is performed. Each contractor and subcontractor rendering services under this contract must comply with all requirements of this act. Each contractor and subcontractor shall keep records of the prevailing wages paid to their employees, submit a monthly certified payroll to Champaign County, and make such records available to Champaign County for inspection upon (7) seven business days' notice.
- C. For information regarding the current Prevailing Wage Rates for Champaign County, Illinois can be found at: <https://www2.illinois.gov/idol/laws-rules/conmed/pages/rates.aspx>.
- D. Prevailing Wage Rates change periodically. Contractor shall verify and revise the Prevailing Wages on a regular basis.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**



## Champaign County Prevailing Wage Rates posted on 3/15/2021

Trade Title	Rg	Type	C	Base	Foreman	Overtime				H/W	Pension	Vac	Trng	Other Ins
						M-F	Sa	Su	Hol					
ASBESTOS ABT-GEN	All	BLD		32.49	33.74	1.5	1.5	2.0	2.0	7.25	17.72	0.00	0.90	
ASBESTOS ABT-MEC	All	BLD		24.25	25.25	1.5	1.5	2.0	2.0	9.00	7.40	0.00	0.50	
BOILERMAKER	All	BLD		41.00	44.00	1.5	1.5	2.0	2.0	7.07	20.57	0.00	1.24	
BRICK MASON	All	BLD		33.14	34.80	1.5	1.5	2.0	2.0	8.60	15.80	0.00	0.88	
CARPENTER	All	BLD		37.11	39.36	1.5	1.5	2.0	1.5	8.90	15.25	0.00	0.70	
CARPENTER	All	HWY		37.85	39.60	1.5	1.5	2.0	2.0	8.90	16.20	0.00	0.67	
CEMENT MASON	All	BLD		34.16	36.66	1.5	1.5	2.0	2.0	9.85	11.05	0.00	0.50	
CEMENT MASON	All	HWY		35.20	37.20	1.5	1.5	2.0	2.0	9.85	11.55	0.00	0.50	
CERAMIC TILE FINISHER	All	BLD		32.13		1.5	1.5	2.0	2.0	8.60	11.80	0.00	0.30	
ELECTRIC PWR EQMT OP	All	ALL		47.70	56.60	1.5	1.5	2.0	2.0	7.93	13.36	0.00	0.72	
ELECTRIC PWR GRNDMAN	All	ALL		32.41	56.60	1.5	1.5	2.0	2.0	7.47	9.07	0.00	0.48	
ELECTRIC PWR LINEMAN	All	ALL		53.09	56.60	1.5	1.5	2.0	2.0	8.09	14.86	0.00	0.80	
ELECTRIC PWR TRK DRV	All	ALL		34.02	56.60	1.5	1.5	2.0	2.0	7.52	9.53	0.00	0.51	
ELECTRICIAN	All	BLD		43.83	48.21	1.5	1.5	2.0	2.0	7.25	10.92	0.00	0.66	
ELECTRONIC SYSTEM TECH	All	BLD		32.28	34.28	1.5	1.5	2.0	2.0	7.25	10.32	0.00	0.40	
ELEVATOR CONSTRUCTOR	All	BLD		49.32	55.49	2.0	2.0	2.0	2.0	15.87	19.31	3.95	0.64	
FENCE ERECTOR	All	ALL		34.34	36.24	1.5	1.5	2.0	2.0	11.59	13.02	0.00	1.11	
GLAZIER	All	BLD		36.51	38.51	1.5	1.5	2.0	2.0	6.45	11.45	0.00	0.68	
HEAT/FROST INSULATOR	All	BLD		32.85		1.5	1.5	2.0	2.0	7.99	13.24	0.00	0.35	0.50
IRON WORKER	All	ALL		34.34	36.24	1.5	1.5	2.0	2.0	11.59	13.02	0.00	1.11	
LABORER	All	BLD		29.99	31.24	1.5	1.5	2.0	2.0	7.25	17.72	0.00	0.80	
LABORER	All	HWY		32.59	33.59	1.5	1.5	2.0	2.0	7.25	17.80	0.00	0.80	
LATHER	All	BLD		37.11	39.36	1.5	1.5	2.0	2.0	8.90	15.25	0.00	0.70	
MACHINIST	All	BLD		49.68	52.18	1.5	1.5	2.0	2.0	7.93	8.95	1.85	1.47	
MARBLE FINISHER	All	BLD		32.13		1.5	1.5	2.0	2.0	8.60	11.80	0.00	0.30	
MARBLE MASON	All	BLD		33.65		1.5	1.5	2.0	2.0	8.60	11.80	0.00	0.30	
MILLWRIGHT	All	BLD		33.06	35.31	1.5	1.5	2.0	2.0	8.90	19.76	0.00	0.70	
MILLWRIGHT	All	HWY		36.40	38.15	1.5	1.5	2.0	2.0	8.90	20.52	0.00	0.67	
OPERATING ENGINEER	All	ALL	1	42.25	43.25	1.5	1.5	2.0	2.0	10.35	11.45	0.00	1.20	
OPERATING ENGINEER	All	ALL	2	27.15	43.25	1.5	1.5	2.0	2.0	10.35	11.45	0.00	1.20	
OPERATING ENGINEER	All	ALL	3	43.25	44.25	1.5	1.5	2.0	2.0	10.35	11.45	0.00	1.20	

PAINTER	All	ALL		36.11	37.61	1.5	1.5	2.0	2.0	9.85	6.38	0.00	0.60	
PAINTER - SIGNS	All	ALL		36.11	37.61	1.5	1.5	2.0	2.0	9.85	6.38	0.00	0.60	
PILEDRIIVER	All	BLD		38.11	40.36	1.5	1.5	2.0	2.0	8.90	15.25	0.00	0.70	
PILEDRIIVER	All	HWY		37.85	39.60	1.5	1.5	2.0	2.0	8.90	16.20	0.00	0.67	
PIPEFITTER	All	BLD		46.12	48.98	1.5	1.5	2.0	2.0	7.75	10.25	0.00	2.06	
PLASTERER	All	BLD		34.05	36.05	1.5	1.5	2.0	2.0	9.85	12.85	0.00	0.50	
PLUMBER	All	BLD		46.12	48.98	1.5	1.5	2.0	2.0	7.75	10.25	0.00	2.06	
ROOFER	All	BLD		34.18	37.18	1.5	1.5	2.0	2.0	9.64	8.65	0.00	0.36	
SHEETMETAL WORKER	All	BLD		38.63	40.88	1.5	1.5	2.0	2.0	9.45	15.75	0.00	0.52	1.92
SPRINKLER FITTER	All	BLD		41.97	44.72	1.5	1.5	2.0	2.0	10.23	14.02	0.00	0.52	
STONE MASON	All	BLD		33.14	34.80	1.5	1.5	2.0	2.0	8.60	15.80	0.00	0.88	
TERRAZZO FINISHER	All	BLD		32.13		1.5	1.5	2.0	2.0	8.60	11.80	0.00	0.30	
TERRAZZO MASON	All	BLD		33.65		1.5	1.5	2.0	2.0	8.60	11.80	0.00	0.30	
TILE MASON	All	BLD		33.65		1.5	1.5	2.0	2.0	8.60	11.80	0.00	0.30	
TRUCK DRIVER	All	ALL	1	38.93	43.17	1.5	1.5	2.0	2.0	13.52	6.62	0.00	0.25	
TRUCK DRIVER	All	ALL	2	39.50	43.17	1.5	1.5	2.0	2.0	13.52	6.62	0.00	0.25	
TRUCK DRIVER	All	ALL	3	39.77	43.17	1.5	1.5	2.0	2.0	13.52	6.62	0.00	0.25	
TRUCK DRIVER	All	ALL	4	40.14	43.17	1.5	1.5	2.0	2.0	13.52	6.62	0.00	0.25	
TRUCK DRIVER	All	ALL	5	41.21	43.17	1.5	1.5	2.0	2.0	13.52	6.62	0.00	0.25	
TRUCK DRIVER	All	O&C	1	31.14	34.54	1.5	1.5	2.0	2.0	13.52	6.62	0.00	0.25	
TRUCK DRIVER	All	O&C	2	31.60	34.54	1.5	1.5	2.0	2.0	13.52	6.62	0.00	0.25	
TRUCK DRIVER	All	O&C	3	31.82	34.54	1.5	1.5	2.0	2.0	13.52	6.62	0.00	0.25	
TRUCK DRIVER	All	O&C	4	32.11	34.54	1.5	1.5	2.0	2.0	13.52	6.62	0.00	0.25	
TRUCK DRIVER	All	O&C	5	32.97	34.54	1.5	1.5	2.0	2.0	13.52	6.62	0.00	0.25	
TUCKPOINTER	All	BLD		33.14	34.80	1.5	1.5	2.0	2.0	8.60	15.80	0.00	0.88	

**Legend**

**Rg** Region

**Type** Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers

**C** Class

**Base** Base Wage Rate

**OT M-F** Unless otherwise noted, OT pay is required for any hour greater than 8 worked each day, Mon through Fri. The number listed is the multiple of the base wage.

**OT Sa** Overtime pay required for every hour worked on Saturdays

**OT Su** Overtime pay required for every hour worked on Sundays

**OT Hol** Overtime pay required for every hour worked on Holidays

**H/W** Health/Welfare benefit

**Vac** Vacation

## **Trng Training**

**Other Ins** Employer hourly cost for any other type(s) of insurance provided for benefit of worker.

### Explanations CHAMPAIGN COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

Oil and chip resealing (O&C) means the application of road oils and liquid asphalt to coat an existing road surface, followed by application of aggregate chips or gravel to coated surface, and subsequent rolling of material to seal the surface.

### EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

### CERAMIC TILE FINISHER, MARBLE FINISHER, TERRAZZO FINISHER

Assisting, helping or supporting the tile, marble and terrazzo mechanic by performing their historic and traditional work assignments required to complete the proper installation of the work covered by said crafts. The term "Ceramic" is used for naming the classification only and is in no way a limitation of the product handled. Ceramic takes into consideration most hard tiles.

### ELECTRONIC SYSTEMS TECHNICIAN

Installation, service and maintenance of low-voltage systems which utilizes the transmission and/or transference of voice, sound, vision, or digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background/foreground music, intercom and telephone interconnect, field programming, inventory control systems, microwave transmission, multi-media, multiplex, radio page, school, intercom and sound burglar alarms and low voltage master clock systems.

Excluded from this classification are energy management systems, life safety systems, supervisory controls and data acquisition systems not intrinsic with the above listed systems, fire alarm systems, nurse call systems and raceways exceeding fifteen feet in length.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION Class 1. Drivers on 2 axle trucks hauling less than 9 ton. Air compressor and welding machines and brooms, including those pulled by separate units, truck driver helpers, warehouse employees, mechanic helpers, greasers and tiremen, pickup trucks when hauling materials, tools, or workers to and from and on-the-job site, and fork lifts up to 6,000 lb. capacity.

Class 2. Two or three axle trucks hauling more than 9 ton but hauling less than 16 ton. A-frame winch trucks, hydrolift trucks, vactor trucks or similar equipment when used for transportation purposes. Fork lifts over 6,000 lb. capacity, winch trucks, four

axle combination units, and ticket writers.

Class 3. Two, three or four axle trucks hauling 16 ton or more. Drivers on water pulls, articulated dump trucks, mechanics and working forepersons, and dispatchers. Five axle or more combination units.

Class 4. Low Boy and Oil Distributors.

Class 5. Drivers who require special protective clothing while employed on hazardous waste work.

#### TRUCK DRIVER - OIL AND CHIP RESEALING ONLY.

This shall encompass laborers, workers and mechanics who drive contractor or subcontractor owned, leased, or hired pickup, dump, service, or oil distributor trucks. The work includes transporting materials and equipment (including but not limited to, oils, aggregate supplies, parts, machinery and tools) to or from the job site; distributing oil or liquid asphalt and aggregate; stock piling material when in connection with the actual oil and chip contract. The Truck Driver (Oil & Chip Resealing) wage classification does not include supplier delivered materials.

OPERATING ENGINEERS - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION Class 1. Draglines, Derricks, Shovels, Gradalls, Mechanics, Tractor Highlift, Tournadozer, Concrete Mixers with Skip, Tournamixer, Two Drum Machine, One Drum Hoist with Tower or Boom, Cableways, Tower Machines, Motor Patrol, Boom Tractor, Boom or Winch Truck, Winch or Hydraulic Boom Truck, Tournapull, Tractor Operating Scoops, Bulldozer, Push Tractor, Asphalt Planer, Finishing Machine on Asphalt, Large Rollers on Earth, Rollers on Asphalt Mix, Ross Carrier or similar Machine, Gravel Processing Machine, Asphalt Plant Engineer, Paver Operator, Dredging Equipment, or Dredge Engineer, or Dredge Operator, Central Mix Plant Engineer, CMI or similar type machine, Concrete Pump, Truck or Skid Mounted, Engineer or Rock Crusher Plant, Concrete Plant Engineer, Ditching Machine with dual attachment, Tractor Mounted Loaders, Hydro Crane, Standard or Dinkey Locomotives, Scoopmobiles, Euclid Loader, Soil Cement Machine, Back Filler, Elevating Machine, Power Blade, Drilling Machine, including Well Testing, Caissons, Shaft or any similar type drilling machines, Motor Driven Paint Machine, Pipe Cleaning Machine, Pipe Wrapping Machine, Pipe Bending Machine, Apsco Paver, Boring Machine, (Head Equipment Greaser), Barber-Greene Loaders, Formless Paver, (Well Point System), Concrete Spreader, Hydra Ax, Span Saw, Marine Scoops, Brush Mulcher, Brush Burner, Mesh Placer, Tree Mover, Helicopter Crew (3), Piledriver-Skid or Crawler, Stump Remover, Root Rake, Tug Boat Operator, Refrigerating Machine, Freezing Operator, Chair Cart- Self-Propelled, Hydra Seeder, Straw Blower, Power Sub Grader, Bull Float, Finishing Machine, Self-Propelled Pavement Breaker, Lull (or similar type Machine), Two Air Compressors, Compressors hooked in Manifold, Chip Spreader, Mud Cat, Sull-Air, Fork Lifts (except when used for landscaping work), Soil Stabilizer (Seaman Tiller, Bo Mag, Rago Gator, and similar types of equipment), Tube Float, Spray Machine, Curing Machine, Concrete or Asphalt Milling Machine, Snooper Truck-Operator, Backhoe, Farm Tractors (with attachments), 4 Point Lift System (Power Lift or similar type), Skid-Steer (Bob Cat or similar type), Wrecking Shears, Water Blaster.

Class 2. Concrete Mixers without Skips, Rock Crusher, Ditching Machine under 6', Curbing Machine, One Drum Machines without Tower or Boom, Air Tugger, Self-Propelled Concrete Saw, Machine Mounted Post Hole Digger, two to four Generators, Water Pumps or Welding Machines, within 400 feet, Air Compressor 600 cu. ft. and under, Rollers on Aggregate and Seal Coat Surfaces, Fork Lift (when used for landscaping work), Concrete and Blacktop Curb Machine, One Water Pump, Oilers, Air Valves or Steam Valves, One Welding Machine, Truck Jack, Mud Jack, Gunnite Machine, House Elevators when used for hoisting material, Engine Tenders, Fireman, Wagon Drill, Flex Plane, Conveyor, Siphons and Pulsometer, Switchman, Fireman on Paint Pots, Fireman on Asphalt Plants, Distributor Operator on Trucks, Tampers, Self-Propelled Power Broom, Striping Machine (motor driven), Form Tamper, Bulk Cement Plant, Equipment Greaser, Deck Hands, Truck Crane Oiler-Driver, Cement Blimps, Form Grader, Temporary Heat, Throttle Valve, Super Sucker (and similar type of equipment).

Class 3. Power Cranes, Truck or Crawler Crane, Rough Terrain Crane (Cherry Picker), Tower Crane, Overhead Crane.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If

a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

#### LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.



**SECTION 01 1000  
SUMMARY**

**PART 1 GENERAL**

**1.01 PROJECT**

- A. Project Name: Champaign County Roof Replacement - Highway Department + ILEAS Traing Facility
- B. Owner's Name: Champaign County.
- C. Architect's Name: Reifsteck Reid & Company Architects.
- D. The Project consists of the replacement of the roofing system on the Highway Department and ILEAS Training Center for Champaign County.

**1.02 CONTRACT DESCRIPTION**

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Document 00 5200 - Agreement Form.

**1.03 OWNER OCCUPANCY**

- A. Owner intends to continue to occupy adjacent portions of the existing building during the entire construction period.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

**1.04 CONTRACTOR USE OF SITE**

- A. Provide access to and from site as required by law and by Owner:
  - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
  - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**



**SECTION 01 2000**  
**PRICE AND PAYMENT PROCEDURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Procedures for preparation and submittal of application for final payment.

**1.02 SCHEDULE OF VALUES**

- A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section. Identify site mobilization.
- E. Schedule of values to be broken down by each building and further divided as directed based on Owner's funding source.
- F. Revise schedule to list approved Change Orders, with each Application For Payment.

**1.03 APPLICATIONS FOR PROGRESS PAYMENTS**

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.
- C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- D. Forms filled out by hand will not be accepted.
- E. For each item, provide a column for listing each of the following:
  - 1. Item Number.
  - 2. Description of work.
  - 3. Scheduled Values.
  - 4. Previous Applications.
  - 5. Work in Place and Stored Materials under this Application.
  - 6. Authorized Change Orders.
  - 7. Total Completed and Stored to Date of Application.
  - 8. Balance to Finish.
  - 9. Retainage.
- F. Execute certification by signature of authorized officer.
- G. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- H. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- I. Submit one electronic and three hard-copies of each Application for Payment.
- J. Include the following with the application:
  - 1. Transmittal letter as specified for submittals in Section 01 3000.
  - 2. Affidavits attesting to off-site stored products.
- K. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

#### **1.04 MODIFICATION PROCEDURES**

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
  - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
  - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within \_\_\_\_ days.
- D. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation. Document any requested substitutions in accordance with Section 01 6000.
- E. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
  - 1. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
  - 2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
- F. Substantiation of Costs: Provide full information required for evaluation.
  - 1. On request, provide the following data:
    - a. Quantities of products, labor, and equipment.
    - b. Overhead and profit.
    - c. Justification for any change in Contract Time.
    - d. Credit for deletions from Contract, similarly documented.
  - 2. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- G. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

#### **1.05 APPLICATION FOR FINAL PAYMENT**

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:

#### **PART 2 PRODUCTS - NOT USED**

#### **PART 3 EXECUTION - NOT USED**

**END OF SECTION**

**SECTION 01 2500  
SUBSTITUTION PROCEDURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Procedural requirements for proposed substitutions.

**1.02 DEFINITIONS**

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 GENERAL REQUIREMENTS**

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
  - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
  - 2. Agrees to provide the same warranty for the substitution as for the specified product.
  - 3. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
  - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
- D. Limit each request to a single proposed substitution item.

**3.02 RESOLUTION**

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect will notify Contractor in writing of decision to accept or reject request.
  - 1. Architect's decision following review of proposed substitution will be noted on the submitted form.

**END OF SECTION**



**SECTION 01 3000**  
**ADMINISTRATIVE REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. General administrative requirements.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Construction progress schedule.
- E. Submittals for review, information, and project closeout.
- F. Number of copies of submittals.
- G. Requests for Interpretation (RFI) procedures.
- H. Submittal procedures.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 6000 - Product Requirements: General product requirements.

**1.03 REFERENCE STANDARDS**

- A. AIA G716 - Request for Information; 2004.

**1.04 GENERAL ADMINISTRATIVE REQUIREMENTS**

- A. Comply with requirements of Section 01 7000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
- B. Make the following types of submittals to Architect:
  - 1. Requests for Interpretation (RFI).
  - 2. Requests for substitution.
  - 3. Shop drawings, product data, and samples.
  - 4. Test and inspection reports.
  - 5. Design data.
  - 6. Manufacturer's instructions and field reports.
  - 7. Applications for payment and change order requests.
  - 8. Progress schedules.
  - 9. Coordination drawings.
  - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
  - 11. Closeout submittals.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 PRECONSTRUCTION MEETING**

- A. Attendance Required:
  - 1. Owner.
  - 2. Architect.
  - 3. Contractor.
- B. Agenda:
  - 1. Execution of Owner-Contractor Agreement.
  - 2. Submission of executed bonds and insurance certificates.
  - 3. Distribution of Contract Documents.
  - 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
  - 5. Designation of personnel representing the parties to Contract and Architect.
  - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.

7. Scheduling.
- C. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### **3.02 PROGRESS MEETINGS**

- A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required:
  1. Contractor.
  2. Owner.
  3. Architect.
  4. Contractor's superintendent.
  5. Major subcontractors.
- D. Agenda:
  1. Review minutes of previous meetings.
  2. Review of work progress.
  3. Field observations, problems, and decisions.
  4. Identification of problems that impede, or will impede, planned progress.
  5. Review of submittals schedule and status of submittals.
  6. Review of RFIs log and status of responses.
  7. Maintenance of progress schedule.
  8. Corrective measures to regain projected schedules.
  9. Planned progress during succeeding work period.
  10. Maintenance of quality and work standards.
  11. Effect of proposed changes on progress schedule and coordination.
  12. Other business relating to work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### **3.03 CONSTRUCTION PROGRESS SCHEDULE**

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
  1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

### **3.04 REQUESTS FOR INTERPRETATION (RFI)**

- A. Definition: A request seeking one of the following:
  1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
  2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.

- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
  - 1. Prepare a separate RFI for each specific item.
    - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
    - b. Do not forward requests which solely require internal coordination between subcontractors.
  - 2. Prepare in a format and with content acceptable to Owner.
    - a. Use AIA G716 - Request for Information .
  - 3. Prepare using an electronic version of the form appended to this section.
  - 4. Prepare using software provided by the Electronic Document Submittal Service.
  - 5. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
  - 1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
  - 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following::
    - a. Approval of submittals (use procedures specified elsewhere in this section).
    - b. Approval of substitutions (see Section - 01 6000 - Product Requirements)
    - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
    - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
  - 3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
  - 4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
  - 1. Official Project name and number, and any additional required identifiers established in Contract Documents.
  - 2. Owner's, Architect's, and Contractor's names.
  - 3. Discrete and consecutive RFI number, and descriptive subject/title.
  - 4. Issue date, and requested reply date.
  - 5. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
  - 6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
  - 7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
  - 1. Indicate current status of every RFI. Update log promptly and on a regular basis.
  - 2. Note dates of when each request is made, and when a response is received.
  - 3. Highlight items requiring priority or expedited response.

4. Highlight items for which a timely response has not been received to date.
- H. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
  1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
  1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.

### **3.05 SUBMITTAL SCHEDULE**

- A. Submit to Architect for review a schedule for submittals in tabular format.
  1. Submit at the same time as the preliminary schedule specified in Section - 01 3216 - Construction Progress Schedule.
  2. Coordinate with Contractor's construction schedule and schedule of values.
  3. Format schedule to allow tracking of status of submittals throughout duration of construction.
  4. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
  5. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.

### **3.06 SUBMITTALS FOR REVIEW**

- A. When the following are specified in individual sections, submit them for review:
  1. Product data.
  2. Shop drawings.
  3. Samples for selection.
  4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

### **3.07 SUBMITTALS FOR INFORMATION**

- A. When the following are specified in individual sections, submit them for information:
  1. Design data.
  2. Certificates.
  3. Test reports.
  4. Inspection reports.
  5. Manufacturer's instructions.
  6. Manufacturer's field reports.
  7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner.

### **3.08 SUBMITTALS FOR PROJECT CLOSEOUT**

- A. Submit Correction Punch List for Substantial Completion.

- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:
  - 1. Project record documents.
  - 2. Operation and maintenance data.
  - 3. Warranties.
  - 4. Bonds.
  - 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

### **3.09 NUMBER OF COPIES OF SUBMITTALS**

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
  - 1. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.

### **3.10 SUBMITTAL PROCEDURES**

- A. General Requirements:
  - 1. Use a separate transmittal for each item.
  - 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
  - 3. Transmit using approved form.
    - a. Use Contractor's form, subject to prior approval by Architect.
  - 4. All submittals must have a letter of transmittal attached to the first page of the submittal, including electronic submittals. Letters of transmittal shall include:
    - a. Project Name.
    - b. Project Number.
    - c. Submittal Division Number, as referenced in the Project Manual.
    - d. Submittal Revision Number. Original Document labeled as "R0" with each revision consecutively number "R1", "R2", etc.
    - e. Description of what is included. For example: Product Data, Samples, Shop Drawings, Manufacturers Qualifications, Field Reports, Warranty, Manufacturer's Installation Instructions, etc.
  - 5. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
  - 6. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
  - 7. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
  - 8. Schedule submittals to expedite the Project, and coordinate submission of related items.
    - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
    - b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
    - c. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
- B. Product Data Procedures:
  - 1. Submit only information required by individual specification sections.
  - 2. Collect required information into a single submittal.
  - 3. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:

1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
  2. Do not reproduce Contract Documents to create shop drawings.
  3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
- D. Contractor's responsibility for errors, omissions, or deviation from Contract Documents in submittals is **NOT** relieved by Architect/Engineer's review of submittals.
  - E. Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
  - F. Use for Construction: Use only final submittals with marking indicated "Reviewed", "Furnish as Corrected" and initialed by Architect
  - G. Deliver submittals to Architect at business address for physical samples or hard copies and to submissions@rr-arch.com for electronic submittals.
  - H. Schedule submittals to expedite the Project, and coordinate submission of related items.
  - I. For each submittal for review, allow 15 working days excluding delivery time to and from the Contractor.
  - J. Provide space for Contractor and Architect review stamps.
  - K. When revised for resubmission, identify all changes made since previous submission.
  - L. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
  - M. Submittals not requested will not be recognized or processed.
  - N. Submittals are encouraged to be submitted electronically via email.
  - O. Samples Procedures:
    1. Transmit related items together as single package.
    2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.
    3. Include with transmittal high-resolution image files of samples to facilitate electronic review and approval. Provide separate submittal page for each item image.

### **3.11 ARCHITECT/ENGINEER'S ACTIONS**

- A. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
- B. Except for Informational Submittals where no action and return of submittals is required, the architect will review each submittal, mark to indicate the action taken, and return.
- C. Submittals for Review: The architect will electronically stamp each submittal with a uniform action stamp. The architect will mark the stamp appropriately to indicate the action taken as follows:
  1. Not requiring resubmittal:
    - a. Reviewed: Indicates the submittals have been reviewed for general conformance with the design concept.
    - b. Furnish as Corrected: Indicates contractor shall make corrections as noted on submittal.
  2. Requiring resubmittal:
    - a. Incomplete: Resubmittal: Indicates that an items(s) are missing from the submittal which was required by specifications. The entire submittal must be resubmitted.
    - b. Revise and Resubmit: Indicates the submittals to be revised and resubmitted for review prior to proceeding with the work or that submittal does not require with contract documents.

- c. (Re)Submit Specific Item: Indicates that an item is missing from the submittal which was required by the specifications. The submittal cannot be properly reviewed until all parts requested are submitted. Upon review and return of specific item(s) indicated, the remaining portions of the submittal will bear the action indicated on the stamp.
  - d. Rejected: Indicates the submittals do not comply with the contract documents and are rejected.
3. Submittals for Information: The architect will electronically stamp each submittal indicating the following:
- a. Received: Indicates the submittal has been received. Any actions necessary will be handled through other appropriate project communication channels.

**END OF SECTION**



**SECTION 01 3500  
SPECIAL PROCEDURES**

**PART 1 GENERAL**

**1.01 COVID-19 RESPONSE PLAN**

- A. RRCo does not intend this section to be a definitive statement of the protocols and procedures that are applicable to this project. Nor are we endeavoring to provide legal or other professional advice. This section should NOT be construed as legal advice or any other expression of the scope or nature of a construction contractor's legal obligation to provide employment and a safe place of employment to its employees, particularly under the unprecedented circumstances that the COVID-19 outbreak has created. In addition, new and better information could well supersede the information included in this document. As the situation evolves, construction contractors shall continue to monitor the environment in which they are working and to related developments and react accordingly. All executive orders, laws and guidelines from the federal, state and/or local government shall be followed.
- B. This section is based on information available from the CDC and OSHA at the time of its development and is subject to change based on further information provided by the CDC, OSHA, and other public officials. The contractor is responsible for amending their COVID Response Plan as new guidance and regulations emerge throughout the project. The initial plan must be submitted within 3 days of the contract award. Revised plans must be submitted to all interested parties including but not limited to the owner and architect as they become effective.
- C. The COVID Response Plan must be site specific and must include guidance on the following minimum topics:
1. Preventative guidance
  2. COVID-19 symptoms
  3. Worker self-screening
  4. Stay home guidance
  5. Worker training procedures
  6. Job site protective measures
    - a. Meeting guidelines
    - b. Social distancing guidelines
    - c. PPE: Use of mandatory PPE such as glasses, gloves, .....etc
    - d. Gatherings
    - e. Hand sanitation
    - f. Routine job site cleaning and disinfecting - Procedures to
    - g. Sharing tools guidelines
  7. Job site visitor procedures
  8. Reporting protocols to team members, Owner and Architect
  9. Plan if job site exposure to COVID-19
  10. Protocols to track, screen, and report on the health of workers, with procedures for how to remove suspected infected individuals
- D. All guidance must comply with OSHA and CDC recommendations including but not limited to:
1. CDC Coronavirus:
    - a. <https://www.cdc.gov/coronavirus/2019-ncov>
    - b. <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/summary.html>
    - c. <https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html>
    - d. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-at-higher-risk.html>
    - e. OSHA Coronavirus: <https://www.osha.gov/SLTC/covid-19/>
    - f. Executive Orders

- E. Control and Prevention: <https://www.osha.gov/SLTC/covid-19/controlprevention.html>
  - 1. Training:
    - a. <https://www.osha.gov/SLTC/personalprotectiveequipment/>
    - b. [https://www.osha.gov/SLTC/respiratoryprotection/training\\_videos.html](https://www.osha.gov/SLTC/respiratoryprotection/training_videos.html)
  - 2. PPE: <https://www.osha.gov/SLTC/personalprotectiveequipment/>
- F. PPE General requirements: <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.132>
  - 1. Respiratory Protection: <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134>
  - 2. Hand Protection: <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.138>
  - 3. Eye and Face Protection: <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.133>
  - 4. Disinfectants for Use Against SARS-CoV-2: <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>
  - 5. Cleaning and Disinfecting Your Facility: <https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html>
  - 6. Hazard Recognition: <https://www.osha.gov/SLTC/covid-19/hazardrecognition.html>
  - 7. Telework Guidance and Resources: <https://www.cisa.gov/telework>

**END OF SECTION**

**SECTION 01 4000  
QUALITY REQUIREMENTS**

**PART 1 GENERAL - NOT USED**

**1.01 RELATED REQUIREMENTS**

- A. Section 01 4216 - Definitions.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 CONTROL OF INSTALLATION**

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

**3.02 DEFECT ASSESSMENT**

- A. Replace Work or portions of the Work not complying with specified requirements.

**END OF SECTION**



**SECTION 01 4100  
REGULATORY REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SUMMARY OF REFERENCE STANDARDS**

- A. Regulatory requirements applicable to this project are the following:
- B. 29 CFR 1910 - Occupational Safety and Health Standards; current edition.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**



**SECTION 01 4216**  
**DEFINITIONS**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Other definitions are included in individual specification sections.

**1.02 DEFINITIONS**

- A. Furnish: To supply, deliver, unload, and inspect for damage.
- B. Install: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, start up, and make ready for use.
- C. Product: Material, machinery, components, equipment, fixtures, and systems forming the work result. Not materials or equipment used for preparation, fabrication, conveying, or erection and not incorporated into the work result. Products may be new, never before used, or re-used materials or equipment.
- D. Project Manual: The book-sized volume that includes the procurement requirements (if any), the contracting requirements, and the specifications.
- E. Provide: To furnish and install.
- F. Supply: Same as Furnish.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**



**SECTION 01 5000**  
**TEMPORARY FACILITIES AND CONTROLS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Temporary sanitary facilities.
- B. Temporary Controls: Barriers, enclosures, and fencing.
- C. Vehicular access and parking.
- D. Waste removal facilities and services.

**1.02 TEMPORARY SANITARY FACILITIES**

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.

**1.03 BARRIERS**

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Provide protection for plants designated to remain. Replace damaged plants.
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

**1.04 VEHICULAR ACCESS AND PARKING - SEE SECTION 01 5500**

- A. Coordinate access and haul routes with governing authorities and Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.
- D. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

**1.05 WASTE REMOVAL**

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**



**SECTION 01 6000  
PRODUCT REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Re-use of existing products.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations.

**1.02 SUBMITTALS**

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
  - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

**PART 2 PRODUCTS**

**2.01 EXISTING PRODUCTS**

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by Contract Documents.

**2.02 NEW PRODUCTS**

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. **DO NOT USE** products having any of the following characteristics:
  - 1. Containing lead, cadmium, or asbestos.
- C. Where other criteria are met, Contractor shall give preference to products that:
  - 1. If used on interior, have lower emissions, as defined in Section 01 6116.
  - 2. If wet-applied, have lower VOC content, as defined in Section 01 6116.
  - 3. Have longer documented life span under normal use.

**2.03 PRODUCT OPTIONS**

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

**PART 3 EXECUTION**

**3.01 SUBSTITUTION LIMITATIONS**

- A. See Section 01 2500 - Substitution Procedures.

**3.02 TRANSPORTATION AND HANDLING**

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

### **3.03 STORAGE AND PROTECTION**

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 01 7419.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturer's warranty conditions, if any.
- H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

**END OF SECTION**

**SECTION 01 7000**  
**EXECUTION AND CLOSEOUT REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition.
- C. Cutting and patching.
- D. Cleaning and protection.
- E. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

**1.02 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
  - 1. Structural integrity of any element of Project.
  - 2. Integrity of weather exposed or moisture resistant element.
  - 3. Efficiency, maintenance, or safety of any operational element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of Owner or separate Contractor.

**PART 2 PRODUCTS**

**2.01 PATCHING MATERIALS**

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

**3.02 PREPARATION**

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

### **3.03 GENERAL INSTALLATION REQUIREMENTS**

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

### **3.04 ALTERATIONS**

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
  - 1. Report discrepancies to Architect before disturbing existing installation.
  - 2. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
  - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000 in locations indicated on drawings.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
  - 1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
- D. Remove existing work as indicated and as required to accomplish new work.
  - 1. Remove items indicated on drawings.
  - 2. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
  - 3. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- E. Protect existing work to remain.
  - 1. Prevent movement of structure; provide shoring and bracing if necessary.
  - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  - 3. Repair adjacent construction and finishes damaged during removal work.
- F. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- G. Refinish existing surfaces as indicated:
  - 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
  - 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- H. Clean existing systems and equipment.
- I. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- J. Do not begin new construction in alterations areas before demolition is complete.
- K. Comply with all other applicable requirements of this section.

### **3.05 CUTTING AND PATCHING**

- A. Whenever possible, execute the work by methods that avoid cutting or patching.

- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
  1. Complete the work.
  2. Fit products together to integrate with other work.
  3. Repair new work damaged by subsequent work.
  4. Remove and replace defective and non-complying work.
- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing.
- E. Restore work with new products in accordance with requirements of Contract Documents.

### **3.06 PROGRESS CLEANING**

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

### **3.07 PROTECTION OF INSTALLED WORK**

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.

### **3.08 ADJUSTING**

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

### **3.09 FINAL CLEANING**

- A. Use cleaning materials that are nonhazardous.
- B. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- C. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- D. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, and drainage systems.
- E. Clean site; sweep paved areas, rake clean landscaped surfaces.
- F. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

### **3.10 CLOSEOUT PROCEDURES**

- A. Make submittals that are required by governing or other authorities.
  1. Provide copies to Architect.
- B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.
- C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.
- D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.
- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.
- F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

- G. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
- H. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

**END OF SECTION**

**SECTION 01 7800  
CLOSEOUT SUBMITTALS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Project record documents.
- B. Operation and maintenance data.
- C. Warranties and bonds.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Individual Product Sections: Specific requirements for operation and maintenance data.
- C. Individual Product Sections: Warranties required for specific products or Work.

**1.03 SUBMITTALS**

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. Operation and Maintenance Data:
  - 1. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
  - 2. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
  - 3. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Warranties and Bonds:
  - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
  - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
  - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 PROJECT RECORD DOCUMENTS**

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
  - 1. Drawings.
  - 2. Addenda.
  - 3. Change Orders and other modifications to the Contract.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Record Drawings: Legibly mark each item to record actual construction including:
  - 1. Field changes of dimension and detail.
  - 2. Details not on original Contract drawings.

**3.02 OPERATION AND MAINTENANCE DATA**

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

### **3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES**

- A. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- B. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- C. Additional information as specified in individual product specification sections.
- D. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

### **3.04 WARRANTIES AND BONDS**

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Include originals of each in operation and maintenance manuals, indexed separately on Table of Contents.

**END OF SECTION**

**SECTION 07 0150.19  
PREPARATION FOR RE-ROOFING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Replacement of existing roofing system in preparation for entire new roofing system.
- B. Removal of existing flashing and counterflashings.
- C. Temporary roofing protection.

**1.02 RELATED REQUIREMENTS**

- A. Section 07 3113 - Asphalt shingle: Roof system.
- B. Section 07 4113 - Metal Roof Panels: Roof System
- C. Section 07 6200 - Sheet Metal Flashing and Trim: Replacement of flashing and counterflashings.

**1.03 REFERENCE STANDARDS**

- A. ASTM C177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus; 2019.
- B. ASTM D312/D312M - Standard Specification for Asphalt Used in Roofing; 2016a.
- C. PS 1 - Structural Plywood; 2009 (Revised 2019).

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Coordinate with affected mechanical and electrical work associated with roof penetrations.
- B. Preinstallation Meeting: Convene one week before starting work of this section.
  - 1. Attendees:
    - a. Architect.
    - b. Contractor.
    - c. Owner.
    - d. Installer.
  - 2. Meeting Agenda: Provide agenda to participants prior to meeting in preparation for discussions on the following:
    - a. Removal and installation schedule.
    - b. Necessary preparatory work.
    - c. Protection before, during, and after roofing system installation.
    - d. Removal of existing roofing system.
    - e. Installation of new roofing system.
    - f. Temporary roofing and daily terminations.
    - g. Transitions and connection to and with other work.

**1.05 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Ensure storage and staging of materials does not exceed static and dynamic load-bearing capacities of roof decking.

**1.07 FIELD CONDITIONS**

- A. Existing Roofing System: Highway Department - Metal Panel; ILEAS - Asphalt Shingle roofing.
- B. Do not remove existing roofing system when weather conditions threaten the integrity of building contents or intended continued occupancy.
- C. Maintain continuous temporary protection prior to and during installation of new roofing system.
- D. Provide notice at least three days before starting activities that will affect normal building operations.

- E. Owner will occupy building areas directly below re-roofing area.
  - 1. Provide Owner with at least 48 hours written notice of roofing activities that may affect their operations and to allow them to prepare for upcoming activities as necessary.
  - 2. Do not disrupt Owner's operations or activities.
  - 3. Maintain access of Owner's personnel to corridors, existing walkways, and adjacent buildings.

#### **1.08 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

### **PART 2 PRODUCTS**

#### **2.01 MATERIALS**

- A. Patching Materials: Provide necessary materials in accordance with requirements of existing roofing system.
- B. Temporary Roofing Protection Materials:
  - 1. Contractor's responsibility to select appropriate materials for temporary protection of roofing areas as determined necessary for this work.

#### **2.02 ACCESSORIES**

- A. Fasteners: Type and size as required and compatible with existing and new roofing system to resist local wind uplift.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that existing roof surface has been cleared of materials being removed from existing roofing system and ready for next phase of work as required.

#### **3.02 PREPARATION**

- A. Sweep roof surface clean of loose matter.
- B. Remove loose refuse and dispose of properly off-site.

#### **3.03 MATERIAL REMOVAL**

- A. Remove only existing roofing materials that can be replaced with new materials the same day.
- B. Remove metal counter flashings.
- C. Remove sheathing paper and underlay.
- D. Repair existing wood deck surface to provide smooth working surface for new roof system.

#### **3.04 INSTALLATION**

- A. Coordinate scope of this work with requirements for installation of new roofing system, see Section 07 3113 and 07 4113 for additional requirements.

#### **3.05 PROTECTION**

- A. Provide protection of existing roofing system that is not having work performed on it.
- B. Provide temporary protective sheeting over uncovered deck surfaces.
- C. Turn sheeting up and over parapets and curbing. Retain sheeting in position with weights.
- D. Do not permit traffic over unprotected or repaired deck surface.

**END OF SECTION**

**SECTION 07 3113**  
**ASPHALT SHINGLES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Asphalt shingle roofing.
- B. Flexible sheet membranes for eave protection, underlayment, and valley protection.
- C. Associated metal flashings and accessories.

**1.02 RELATED REQUIREMENTS**

- A. Section 07 6200 - Sheet Metal Flashing and Trim: Edge and cap flashings.

**1.03 REFERENCE STANDARDS**

- A. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2020.
- B. ASTM D3462/D3462M - Standard Specification for Asphalt Shingles Made From Glass Felt and Surfaced with Mineral Granules; 2019.
- C. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2018).
- D. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings; 2020a.
- E. ASTM F1667 - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples; 2018a.
- F. NRCA (RM) - The NRCA Roofing Manual; 2019.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating material characteristics and performance criteria.
- C. Shop Drawings: For metal flashings, indicate specially configured metal flashings, jointing methods and locations, fastening methods and locations, and installation details.
- D. Samples: Submit two samples of each shingle color indicating color range and finish texture/pattern; for color selection.
- E. Manufacturer's Installation Instructions: Indicate installation criteria and procedures.
- F. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- G. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

**1.05 FIELD CONDITIONS**

- A. Do not install shingles or eave protection membrane when surface temperatures are below 45 degrees F.

**1.06 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
- C. Provide five year manufacturer's warranty for wind damage.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Asphalt Shingles:
  - 1. Atlas Roofing Corporation; Glass Master: [www.atlasroofing.com](http://www.atlasroofing.com).
  - 2. GAF; Royal Sovereign: [www.gaf.com](http://www.gaf.com).
  - 3. Owens Corning Corp; Supreme: [www.owenscorning.com](http://www.owenscorning.com).
  - 4. Substitutions: See Section 01 6000 - Product Requirements.

## 2.02 ASPHALT SHINGLES

- A. Asphalt Shingles: Asphalt-coated glass felt, mineral granule surfaced, complying with ASTM D3462/D3462M.
  - 1. Fire Resistance: Class A, complying with ASTM E108.
  - 2. Warranted Wind Speed: Not greater than 115 mph.
  - 3. Self-sealing type.
  - 4. Style: Square.
  - 5. Color: As selected by Architect.

## 2.03 SHEET MATERIALS

- A. Eave Protection Membrane:
  - 1. Eave Protection Membrane: Self-adhering polymer-modified asphalt sheet complying with ASTM D1970/D1970M; 40 mil total thickness; with strippable treated release paper and polyethylene sheet top surface.
- B. Underlayment: Synthetic non-asphaltic sheet, intended by manufacturer for mechanically fastened roofing underlayment without sealed seams.
  - 1. Self Sealability: Passing nail sealability test specified in ASTM D1970/D1970M.
  - 2. Low Temperature Flexibility: Passing test specified in ASTM D1970/D1970M.
  - 3. Fasteners: As recommended by manufacturer or building code qualification report or approval.

## 2.04 ACCESSORIES

- A. Roofing Nails: Standard round wire shingle type, galvanized steel, stainless steel, or aluminum roofing nails, minimum 3/8 inch head diameter, 12 gauge, 0.109 inch nail shank diameter, 1-1/2 inch long and complying with ASTM F1667.
- B. Plastic Cement: ASTM D4586/D4586M, asphalt roof cement.
- C. Lap Cement: Fibrated cutback asphalt type, recommended for use in application of underlayment, free of toxic solvents.
- D. Plastic Ridge Vents: Formed plastic with vent openings that do not permit direct water or weather entry; flanged to receive shingles.

## 2.05 METAL FLASHINGS

- A. Metal Flashings: Provide sheet metal eave edge, gable edge, ridge, ridge vents, open valley flashing, and other flashing indicated.
  - 1. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.
  - 2. Hem exposed edges of flashings minimum 1/4 inch on underside.
  - 3. Coat concealed surfaces of flashings with bituminous paint.
- B. Steel Sheet Metal: Prefinished and galvanized steel sheet, 26 gauge, 0.0179 inch minimum thickness, G90/Z275 hot-dipped galvanized; PVC coated, color as selected.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify existing conditions prior to beginning work.
- B. Verify that roof deck is of sufficient thickness to accept fasteners.
- C. Verify that roof penetrations and plumbing stacks are in place and flashed to deck surface.
- D. Verify roof openings are correctly framed.
- E. Verify deck surfaces are dry, free of ridges, warps, or voids.

### 3.02 PREPARATION

- A. Seal roof deck joints wider than 1/16 inch as recommended by shingle manufacturer.
- B. Broom clean deck surfaces before installing underlayment or eave protection.

- C. Install eave edge flashings tight with fascia boards, weather lap joints 2 inches and seal with plastic cement, and secure flange with nails spaced \_\_\_\_ inches on center.

### **3.03 INSTALLATION - EAVE PROTECTION MEMBRANE**

- A. Install eave protection membrane from eave edge to minimum 2 ft up-slope beyond interior face of exterior wall.
- B. Apply 4 inch wide band of plastic cement over deck flange of eave edge flashings, and embed an 18 inch wide strip of eave protection membrane, place starter strip with eave edge flush with face of flashings, secure in place, and lap ends minimum 6 inches.
- C. Apply lap cement at rate of approximately 1.25 gal/100 sq ft over starter strip.
- D. Starting from lower edge of starter strip, lay additional 36 inch wide strips in lap cement, to produce a two ply membrane, weather lap plies minimum 19 inches and nail in place, lap ends minimum 6 inches, and stagger end joints of each consecutive ply.

### **3.04 INSTALLATION - UNDERLAYMENT**

- A. Underlayment At Roof Slopes Up to 4:12: Install two layers of underlayment over area not protected by eave protection, with ends and edges weather lapped minimum 4 inches, stagger end laps of each consecutive layer, and nail in place.
- B. Underlayment At Roof Slopes Greater Than 4:12: Install underlayment perpendicular to slope of roof, with ends and edges weather lapped minimum 4 inches, stagger end laps of each consecutive layer, nail in place, and weather lap minimum 4 inches over eave protection.
- C. Weather lap and seal watertight with plastic cement any items projecting through or mounted on roof.

### **3.05 INSTALLATION - METAL FLASHING AND ACCESSORIES**

- A. Install flashings in accordance with manufacturer's instructions and SMACNA Architectural Sheet Metal Manual requirements.
- B. Weather lap joints minimum 2 inches and seal weather tight with plastic cement.
- C. Items Projecting Through or Mounted on Roofing: Flash and seal weather tight with plastic cement.

### **3.06 INSTALLATION - SHINGLES**

- A. Install shingles in accordance with manufacturer's instructions manufacturer's instructions and NRCA (RM) applicable requirements.
  - 1. Fasten individual shingles using two nails per shingle, or as required by manufacturer and local building code, whichever is greater.
  - 2. Fasten strip shingles using four nails per strip, or as required by manufacturer and local building code, whichever is greater.
- B. Place shingles in straight coursing pattern with 5 inch weather exposure to produce double thickness over full roof area, and provide double course of shingles at eaves.
- C. Project first course of shingles 3/4 inch beyond fascia boards.
- D. Extend shingles 1/2 inch beyond face of gable edge fascia boards.
- E. Extend shingles on one slope across valley and fasten, trim shingles from other slope 2 inches from valley center line to achieve closed cut valley, and concealing valley protection.
- F. Cap hips with individual shingles, maintaining 5-inch weather exposure, and place to avoid exposed nails.
- G. Coordinate installation of roof mounted components or work projecting through roof with weather tight placement of counterflashings.
- H. Complete installation to provide weather tight service.

**3.07 PROTECTION**

- A. Do not permit traffic over finished roof surface.

**END OF SECTION**

**SECTION 07 4113  
METAL ROOF PANELS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Architectural roofing system of preformed steel panels.

**1.02 REFERENCE STANDARDS**

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.
- B. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2010 (Reapproved 2015).
- C. ASTM E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference; 2005 (Reapproved 2017).
- D. ASTM E1646 - Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference; 2011 (Reapproved 2018).
- E. ASTM E1680 - Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel Systems; 2016.
- F. UL 580 - Standard for Tests for Uplift Resistance of Roof Assemblies; Current Edition, Including All Revisions.

**1.03 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Storage and handling requirements and recommendations.
  - 2. Installation methods.
  - 3. Specimen warranty.
- C. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
  - 1. Show work to be field-fabricated or field-assembled.
- D. Verification Samples: For each roofing system specified, submit samples of minimum size 12 inches square, representing actual roofing metal, thickness, profile, color, and texture.
- E. Installer's qualification statement.
- F. Test Reports: Indicate compliance of metal roofing system to specified requirements.
- G. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

**1.04 QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Store roofing panels on project site as recommended by manufacturer to minimize damage to panels prior to installation.

**1.06 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Finish Warranty: Provide manufacturer's special warranty covering failure of factory-applied exterior finish on metal roof panels and agreeing to repair or replace panels that show evidence of finish degradation, including significant fading, chalking, cracking, or peeling within specified warranty period of twenty years from Date of Substantial Completion.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Basis of Design:
  - 1. Architectural Metal Roof Panels: Maxima manufactured by McElroy Metal .
- B. Other Acceptable Manufacturers; Architectural Metal Roof Panels:
  - 1. Berridge Manufacturing Company; Double-Lock Zee-Lock Panel: [www.berridge.com](http://www.berridge.com).
  - 2. Englert, Inc; S2500: [www.englertinc.com](http://www.englertinc.com).
  - 3. Petersen Aluminum Corporation; Tite-Loc Panel: [www.pac-clad.com](http://www.pac-clad.com).
  - 4. Substitutions: See Section 01 6000 - Product Requirements.

### **2.02 PERFORMANCE REQUIREMENTS**

- A. Metal Roof Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
  - 1. Structural Design Criteria: Provide panel assemblies designed to safely support design loads at support spacing indicated, with deflection not to exceed L/180 of span length(L) when tested in accordance with ASTM E1592.
  - 2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
  - 3. Wind Uplift: Class 90 wind uplift resistance of UL 580.
  - 4. Air Infiltration: Maximum 0.06 cfm/sq ft at air pressure differential of 6.24 lbf/sq ft, when tested according to ASTM E1680.
  - 5. Water Penetration: No water penetration when tested according to procedures and recommended test pressures of ASTM E1646. Perform test immediately following air infiltration test.
  - 6. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees F.

### **2.03 ARCHITECTURAL METAL ROOF PANELS**

- A. Architectural Metal Roof Panels: Provide complete engineered system complying with specified requirements and capable of remaining weathertight while withstanding anticipated movement of substrate and thermally induced movement of roofing system.
- B. Architectural Metal Panels: Factory-formed panels with factory-applied finish.
  - 1. Steel Panels:
    - a. Aluminum-zinc alloy-coated steel complying with ASTM A792/A792M; minimum AZ50 coating.
    - b. Steel Thickness: Minimum 24 gauge, 0.024 inch.
  - 2. Profile: Standing seam, with minimum 2.0 inch seam height; concealed fastener system for field seaming with special tool.
  - 3. Texture: Smooth w/ 2 pencil ribs.
  - 4. Length: Maximum possible length to minimize lapped joints. Where lapped joints are unavoidable, space laps so that each sheet spans over three or more supports.
  - 5. Width: Panel coverage of 16 inches.

### **2.04 ATTACHMENT SYSTEM**

- A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

### **2.05 FINISHES**

- A. Fluoropolymer Coil Coating System: Manufacturer's standard multi-coat aluminum coil coating system complying with AAMA 2605, including at least 70 percent polyvinylidene fluoride (PVDF) resin, and at least 80 percent of coil coated aluminum surfaces having minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch; color and gloss Custom color to match Sherwin Williams "Mangrove Shade" SW1180.

## 2.06 ACCESSORIES

- A. Miscellaneous Sheet Metal Items: Provide flashings, trim, closure strips, caps, equipment curbs, and similar sheet metal items of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.
- B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.
- C. Sealants:
  - 1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
  - 2. Concealed Sealant: Non-curing butyl sealant or tape sealant.
- D. Underlaments
  - 1. Basis of Design:
    - a. Ice water shield – WIP 300 HT by Carlisle
    - b. Ice Guard – Colorgard by LM Curbs
    - c. Vapor barrier – Durra Skrim by RVEN Industries
    - d. Felt underlayment – Sharkskin Ultra by Kirsch Bldg Products

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Do not begin installation of preformed metal roof panels until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.02 PREPARATION

- A. Broom clean wood sheathing prior to installation of roofing system.
- B. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to assure that the completed roof will be free of leaks.
- C. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by roof panel manufacturer.
- D. Where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

### 3.03 INSTALLATION

- A. Overall: Install roofing system in accordance with approved shop drawings and panel manufacturer's instructions and recommendations, as applicable to specific project conditions. Anchor all components of roofing system securely in place while allowing for thermal and structural movement.
  - 1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.
  - 2. Minimize field cutting of panels. Where field cutting is absolutely required, use methods that will not distort panel profiles. Use of torches for field cutting is absolutely prohibited.
- B. Accessories: Install all components required for a complete roofing assembly, including flashings, trim, closure strips, rib closures, ridge closures, and similar roof accessory items.
- C. Install roofing felt and building paper slip sheet on roof deck before installing preformed metal roof panels. Secure by methods acceptable to roof panel manufacturer, minimizing use of metal fasteners. Apply from eaves to ridge in shingle fashion, overlapping horizontal joints a minimum of 2 inches and side and end laps a minimum of 3 inches. Offset seams in building paper and seams in roofing felt.
- D. Roof Panels: Install panels in strict accordance with manufacturer's instructions, minimizing transverse joints except at junction with penetrations.

1. Form weathertight standing seams incorporating concealed clips, using an automatic mechanical seaming device approved by the panel manufacturer.
2. Install sealant or sealant tape, as recommended by panel manufacturer, at end laps and side joints.

#### **3.04 CLEANING**

- A. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

#### **3.05 PROTECTION**

- A. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.
- B. Touch-up, repair, or replace damaged roof panels or accessories before Date of Substantial Completion.

**END OF SECTION**

**SECTION 07 6200**  
**SHEET METAL FLASHING AND TRIM**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Fabricated sheet metal items, including flashings and counterflashings
- B. This section applicable for asphalt shingle application only.
- C. Sealants for joints within sheet metal fabrications.

**1.02 RELATED REQUIREMENTS**

- A. Section 07 3113 - Asphalt Shingles: Non-metallic flashings associated with shingle roofing.

**1.03 REFERENCE STANDARDS**

- A. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.
- B. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2014.
- C. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric); 2014.
- D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- E. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2017.
- F. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2018).
- G. CDA A4050 - Copper in Architecture - Handbook; current edition.
- H. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

**1.05 QUALITY ASSURANCE**

- A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials that could cause discoloration or staining.

**PART 2 PRODUCTS**

**2.01 SHEET MATERIALS**

- A. Pre-Finished Aluminum: ASTM B209 (ASTM B209M); 20 gauge, 0.032 inch thick; plain finish shop pre-coated with modified silicone coating.
  - 1. Modified Silicone Polyester Coating: Pigmented Organic Coating System, AAMA 2603; baked enamel finish system.
  - 2. Color: As selected by Architect from manufacturer's full colors.

**2.02 FABRICATION**

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.
- C. Hem exposed edges on underside 1/2 inch; miter and seam corners.

- D. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- E. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal with sealant.
- F. Fabricate flashings to allow toe to extend 2 inches over roofing gravel. Return and brake edges.

### **2.03 EXTERIOR PENETRATION FLASHING PANELS**

- A. Flashing Panels for Exterior Wall Penetrations: Premanufactured components and accessories as required to preserve integrity of building envelope; suitable for conduits and facade materials to be installed.

### **2.04 ACCESSORIES**

- A. Fasteners: Aluminum, with soft neoprene washers.
- B. Underlayment: ASTM D226/D226M, organic roofing felt, Type II (No. 30).
- C. Primer: Zinc chromate type.
- D. Concealed Sealants: Non-curing butyl sealant.
- E. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.
- F. Plastic Cement: ASTM D4586/D4586M, Type I.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.
- B. Verify roofing termination and base flashings are in place, sealed, and secure.

### **3.02 PREPARATION**

- A. Install starter and edge strips, and cleats before starting installation.
- B. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil.

### **3.03 INSTALLATION**

- A. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted..
- B. Apply plastic cement compound between metal flashings and felt flashings.
- C. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- D. Seal metal joints watertight.

**END OF SECTION**

**SECTION 07 7100  
ROOF SPECIALTIES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Manufactured roof specialties, including copings.

**1.02 REFERENCE STANDARDS**

- A. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).
- B. ANSI/SPRI/FM 4435/ES-1 - Test Standard for Edge Systems Used with Low Slope Roofing Systems; 2017.
- C. NRCA (RM) - The NRCA Roofing Manual; 2019.

**1.03 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on shape of components, materials and finishes, anchor types and locations.
- C. Shop Drawings: Indicate configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected work.
- D. Samples: Submit two appropriately sized samples of coping.
- E. Manufacturer's Installation Instructions: Indicate special procedures, fasteners, supporting members, and perimeter conditions requiring special attention.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Roof Edge Flashings and Copings:
  - 1. ATAS International, Inc; Rapid-Lok Coping: [www.atas.com](http://www.atas.com).
  - 2. Metal-Era Inc; Perma-Tite Gold Coping: [www.metalera.com](http://www.metalera.com).
  - 3. OMG Roofing Products; QuickSnap Coping: [www.omgroofing.com](http://www.omgroofing.com).

**2.02 COMPONENTS**

- A. Copings: Factory fabricated to sizes required; corners mitered; concealed fasteners.
  - 1. Configuration: Concealed continuous hold down cleat at both legs; internal splice piece at joints of same material, thickness, and finish as cap; concealed stainless steel fasteners.
  - 2. Pull-Off Resistance: Tested in accordance with ANSI/SPRI/FM 4435/ES-1 using test method RE-3 to positive and negative design wind pressure as defined by applicable local building code.
  - 3. Wall Width: As indicated on drawings.
  - 4. Outside Face Height: 6 inches.
  - 5. Inside Face Height: 6 inches.
  - 6. Material: Formed aluminum sheet, 0.040 inch thick, minimum.
  - 7. Finish: Anodized natural (clear).

**2.03 FINISHES**

- A. Clear Anodized Finish: AAMA 611 AA-M12C22A41 Class I clear anodic coating not less than 0.7 mils thick.

**2.04 ACCESSORIES**

- A. Sealant for Joints in Linear Components: As recommended by component manufacturer.

**PART 3 EXECUTION**

**3.01 INSTALLATION**

- A. Install components in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.

B. Seal joints within components when required by component manufacturer.

**END OF SECTION**

# CHAMPAIGN COUNTY ROOF REPLACEMENTS

## HIGHWAY DEPARTMENT

1605 E Main St.  
 Urbana, IL 61802

## ILEAS TRAINING CENTER

1701 E Main St.  
 Urbana, IL 61802

### SHEET LIST

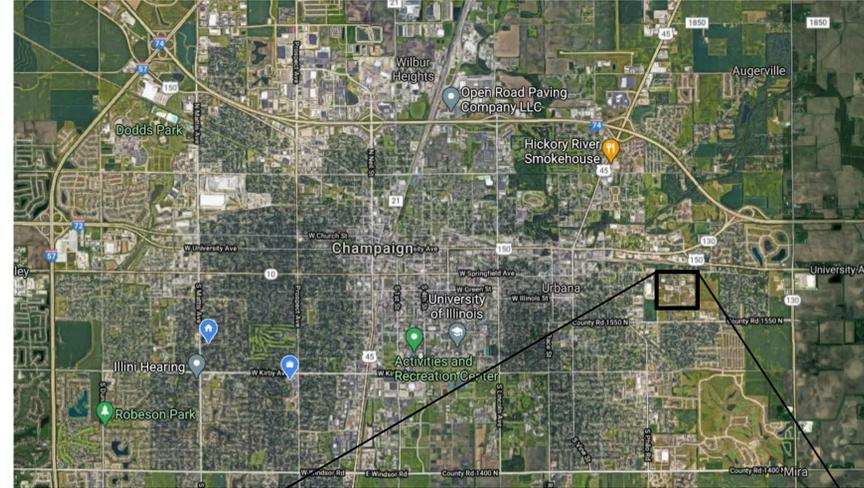
G001 COVER SHEET, SHEET LIST, ABBREVIATIONS

### BID PACKAGE 1: HIGHWAY DEPARTMENT

A100 ROOF PLAN  
 A101 ROOF DETAILS

### BID PACKAGE 2: ILEAS TRAINING CENTER

A200 ROOF PLAN  
 A201 ROOF DETAILS



**ARCHITECT:**  
**REIFSTECK REID & COMPANY ARCHITECTS**  
 909 ARROW ROAD  
 CHAMPAIGN, IL 61821  
 PHONE: 217.351.4100

### ABBREVIATIONS

AB ANCHOR BOLT	BTW BETWEEN	DIM DIMENSION	FL FLOOR	LAM LAMINATE	NTS NOT TO SCALE	RCP REFLECTED CEILING PLAN	SVT SOLID VINYL TILE
A/C AIR CONDITIONING	CJ CONTROL JOINT	DN DOWN	FT FEET	LAV LAVATORY	OC ON CENTER	RD ROOF DRAIN	SYST SYSTEM
ACCESS ACCESSIBLE	CL CENTERLINE	DTL DETAIL	FTG FOOTING	LB POUND	OH OVER HEAD	REF REFRIGERATOR	TEMP TEMPERED, TEMPORARY
ACOUST ACOUSTICAL	CLG CEILING	DS DOWNSPOUT	FURN FURNITURE	LIN LINOLEUM	PART PARTITION	REINF REINFORCED	TF TRANSPARENT FINISH
ADD ADDENDUM	CLR CLEAR	DWG DRAWING	GA GAUGE	LLH LONG LEG HORIZONTAL	PERIM PERIMETER	RM ROOM	T&G TONGUE AND GROOVE
AFF ABOVE FINISH FLOOR	CMU CONCRETE MASONRY UNIT	EA EACH	GALV GALVANIZED	LLV LONG LEG VERTICAL	PL PLATE, PROPERTY LINE	RO ROUGH OPENING	T/O TOP OF
AHU AIR HANDLING UNIT	COL COLUMN	EIFS EXT INSUL & FINISH SYSTEM	GC GENERAL CONTRACTOR	MAS MASONRY	PLAM PLASTIC LAMINATE	REQ REQUIRED	TR TREAD
ALT ALTERNATE	CONC CONCRETE	EJ EXPANSION JOINT	GLAZ GLAZING	MATL MATERIAL	PLBG PLUMBING	RUB RUBBER	TYP TYPICAL
ALUM ALUMINUM	CONF CONFERENCE	ELEC ELECTRICAL	GEN GENERAL	MAX MAXIMUM	PLF POUNDS PER LINEAR FOOT	SAT SUSPENDED ACOUSTICAL TILE	UNON UNLESS OTHERWISE NOTED
APPROX APPROXIMATE	CONST CONSTRUCTION	EL ELEVATION	GWB GYPSUM BOARD	MECH MECHANICAL	PLWD PLYWOOD	SCHED SCHEDULE	VEST VESTIBULE
@ AT	CONT CONTINUOUS	AT AT	H HIGH	MFR MANUFACTURER	PNT PAINT	SECT SECTION	VERT VERTICAL
BB BOTTOM OF BEAM	CORR CORRIDOR	ENG ENGINEER	HDWR HARDWARE	MIN MINIMUM	POLY POLYETHYLENE	SFT SQUARE FOOT	VIF VERIFY IN FIELD
BF BOTTOM OF FOOTING	CPT CARPET	EQ EQUAL	HM HOLLOW METAL	MIR MIRROR	POLYISO POLYISOCYANURATE	SHT SHEET	VCT VINYL COMPOSITION TILE
BD BOARD	CT CERAMIC TILE	EQUIP EQUIPMENT	HORIZ HORIZONTAL	MISC MISCELLANEOUS	PR PAIR	SIM SIMILAR	VS VINYL STRIP FLOORING
BKT BRACKET	CYL CYLINDER	EXIST EXISTING	HT HEIGHT	MJ MOVEMENT JOINT	PSF POUNDS PER SQUARE FOOT	SOG SLAB ON GRADE	W WIDE
BLDG BUILDING	D DEPTH, DEEP	EXT EXTERIOR	HVAC HEATING, VENTILATING, A/C	MO MASONRY OPENING	PSI POUNDS PER SQUARE INCH	SPEC SPECIFICATION	W/ WITH
BLKG BLOCKING	DBL DOUBLE	FBO FURNISHED BY OTHERS	IN INCH	MTL METAL	PT PRESSURE TREATED	STD STANDARD	WD WOOD
BM BENCH MARK	DEG DEGREE	FD FLOOR DRAIN	INSUL INSULATION	N/A NOT APPLICABLE	PVC POLYVINYL CHLORIDE	STL STEEL	WDW WINDOW
B/O BOTTOM OF	DEMO DEMOLITION	FE FIRE EXTINGUISHER	INT INTERIOR	NO NOT IN CONTRACT	QT QUARRY TILE	STOR STORAGE	WH WATER HEATER
BOT BOTTOM	DF DRINKING FOUNTAIN	FF FINISH FLOOR	JAN JANITOR	NO NUMBER	R RADIUS, RISER	STRUCT STRUCTURE (STRUCTURAL)	W/O WITHOUT
BRG BEARING	DIA DIAMETER	FIN FINISH	L ANGLE	NOM NOMINAL	RB RESILIENT BASE	SUSP SUSPENDED	WWF WELDED WIRE FABRIC

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REVISIONS  
 No. Date Description

## CHAMPAIGN COUNTY ROOF REPLACEMENTS

ISSUED FOR BID

COVER SHEET, SHEET LIST, ABBREVIATIONS

DATE 04.01.21  
 PROJECT 202106  
 SHEET  
**G001**

**GENERAL NOTES**

- DIMENSIONS ARE TO EDGE OF ROOF PARAPET. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS & DIMENSIONS SHOWN ON PLANS PRIOR TO START OF WORK. NOTIFY ARCHITECT OF DISCREPANCIES.
- DO NOT SCALE DIMENSIONS OFF DRAWINGS. USE WRITTEN OR CALCULATED DIMENSIONS. MISSING DIMENSIONS, OR DIMENSIONS NOT APPARENT, SHALL BE VERIFIED WITH ARCHITECT.
- MAINTAIN A SECURE AND WATERTIGHT ENCLOSURE.
- COORDINATE DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT + OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATION AND TO PROVIDE BUILDING USER'S SAFETY.
- REMOVE EXISTING ROOFING, PLUMBING, ELECTRICAL, AND MECHANICAL ELEMENTS, ETC. AS REQUIRED TO EXECUTE DEMOLITION & CONSTRUCTION WORK DESCRIBED ON DRAWINGS.
- THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
- PROVIDE RUBBERIZED PIPE SUPPORTS UNDER ALL GAS PIPING.
- ROOF LADDER - REMOVE RUST FROM SURFACE. PRIME AND PAINT.

**ROOF NOTES**

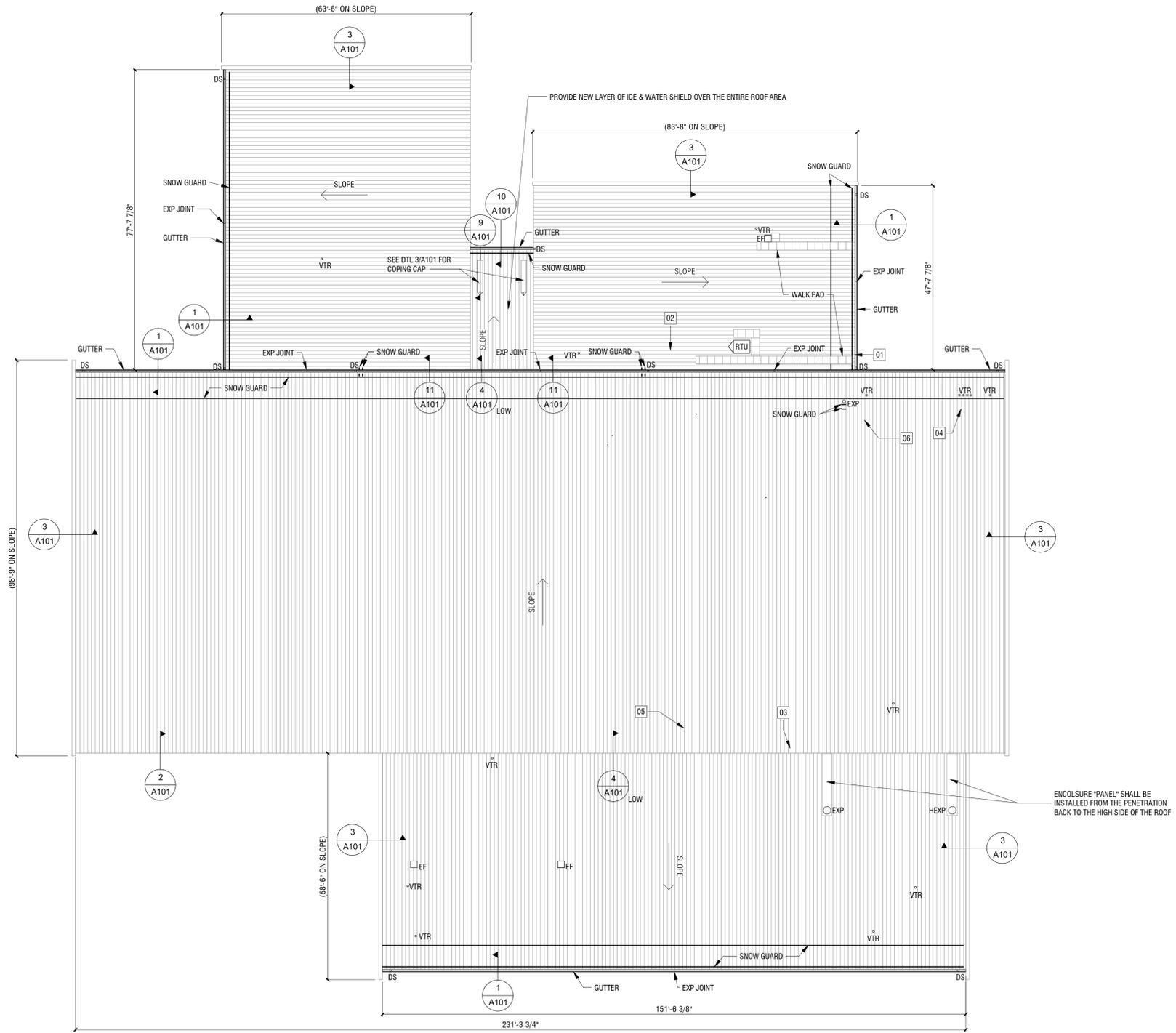
- REMOVE ENTIRE ROOF SYSTEM - METAL ROOF PANELS, COUPLING CAP, FLASHING, COUNTER FLASHING, FASCIA - IN THEIR ENTIRETY UNLESS OTHERWISE NOTED. PROVIDE AND INSTALL NEW ROOF SYSTEM TO MATCH EXISTING.
- PROVIDE PROTECTION FOR EXISTING BUILDING MATERIALS & EQUIPMENT FROM DAMAGE DUE TO DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
- ALL GUTTERS AND DOWNSPOUTS ARE TO BE REMOVED + REINSTALLED AS REQUIRED TO PERFORM WORK.
- DOWNSPOUTS THAT EXTEND TO ROOF BELOW THE DISCHARGE TO OCCUR TOWARDS THE LOW SIDE OF THE ROOF SLOPE.
- AT PENETRATIONS THAT OCCUR AT A STANDING SEAM AN ENCLOSURE "PANEL" SHALL BE INSTALLED FROM THE PENETRATION BACK TO THE HIGH SIDE OF THE ROOF. SEE IMAGES 3 AND 5 AS EXAMPLE. DEPENDING ON INSTALLED PANEL LAYOUT THE PENETRATIONS COULD OCCUR AT MORE OR DIFFERENT LOCATIONS THAN THOSE EXISTING.
- ROOFWALK PLANKS SHALL BE REMOVED AND REINSTALLED AT SAME LOCATION. SEE IMAGE 1 AS AN EXAMPLE OF EXISTING WALK PLANK.
- SNOW GUARDS SHALL BE REMOVED AND REINSTALLED AT THE SAME LOCATION AND AS SHOWN ON ROOF PLAN. SEE IMAGE 4 AND 6 AS AN EXAMPLE OF SNOW GUARD.
- CONTRACTOR TO VERIFY LOCATION, SIZES AND QUANTITIES OF ROOF PENETRATIONS AND EQUIPMENT PRIOR TO BIDDING.
- CONTRACTOR TO DISCONNECT PLUMBING + ELECTRICAL CONNECTIONS FOR SUPPLY FANS, EXHAUST FANS, AND OTHER MECHANICAL EQUIPMENT. REMOVE FANS AND EQUIPMENT, AND RETAIN FOR REINSTALLATION AFTER NEW ROOF IS INSTALLED.
- RESET ALL MECHANICAL UNITS AND FANS IN THE SAME PLACE ONCE ROOFING INSTALLATION IS COMPLETED. RE-CONNECT PLUMBING + ELECTRICAL CONNECTIONS FOR SUPPLY FANS, EXHAUST FANS AND MECHANICAL EQUIPMENT.
- PROVIDE NEW SEALANT AT PRECAST WALL PANEL JOINTS THAT ARE DISTURBED BY FLASHING WORK.

**SYMBOL LEGEND**

# IMAGE NUMBER REFERENCE

**Roof Penetration Schedule**

MARK	TYPE	DETAIL
VTR	VENT STACK	8/A101
EF	EXHAUST FAN	7/A101
RTU	ROOF TOP UNIT	5/A101
EXP	EXHAUST STACK	7/A101
HEXP	HOT EXHAUST STACK	7/A101



**1**  
A100  
**ROOF PLAN**  
ROOF PLAN  
1/16" = 1'-0"

**EXISTING IMAGES FOR REFERENCE**



**REIFSTECK REID**  
ARCHITECTURE,  
CONSTRUCTION MANAGEMENT,  
INTERIORS.  
217.351.4100  
Lincolnshire Center, Suite #4  
909 Arrow Road  
Champaign, IL 61821  
www.r-r-arch.com

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**REVISIONS**

No.	Date	Description

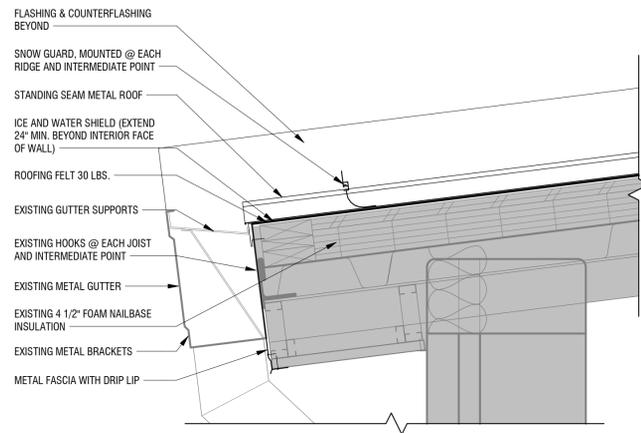
**CHAMPAIGN COUNTY ROOF REPLACEMENTS**

**HIGHWAY DEPARTMENT**  
1605 E Main St.  
Urbana, IL 61802

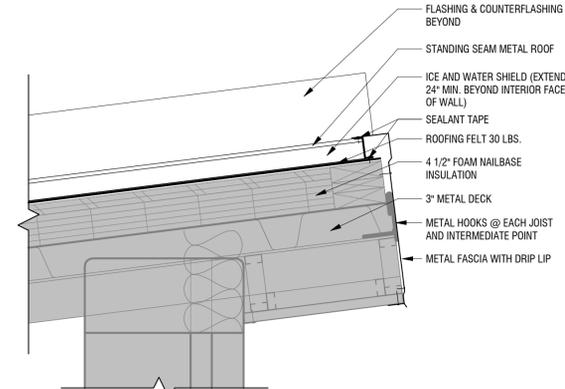
ISSUED FOR BID

**ROOF PLAN**

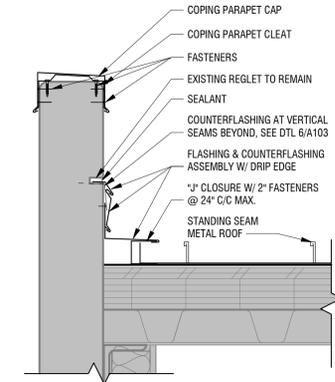
DATE	04.01.21	SHEET	<b>A100</b>
PROJECT	202106		



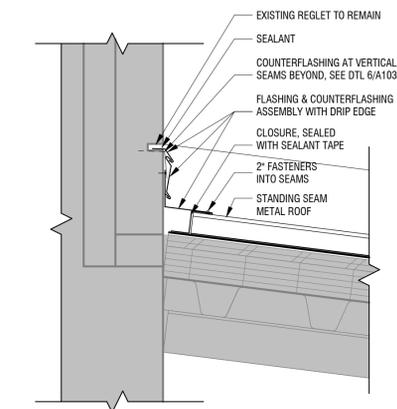
**1 EAVE DETAIL TYP.**  
 A101 1 1/2" = 1'-0"



**2 PEAK DETAIL TYP.**  
 A101 1 1/2" = 1'-0"



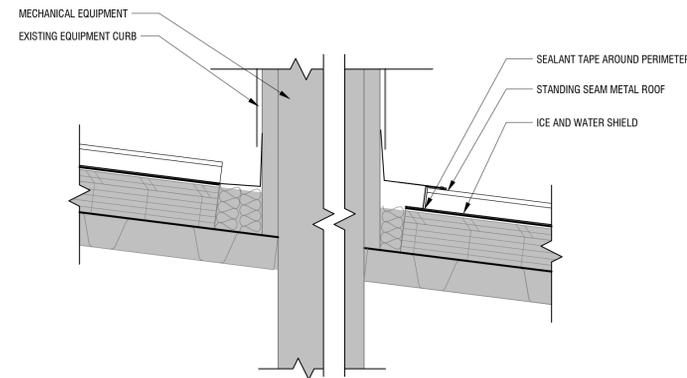
**3 PARAPET DETAIL TYP.**  
 SIM. TO SIDEWALL  
 A101 1 1/2" = 1'-0"



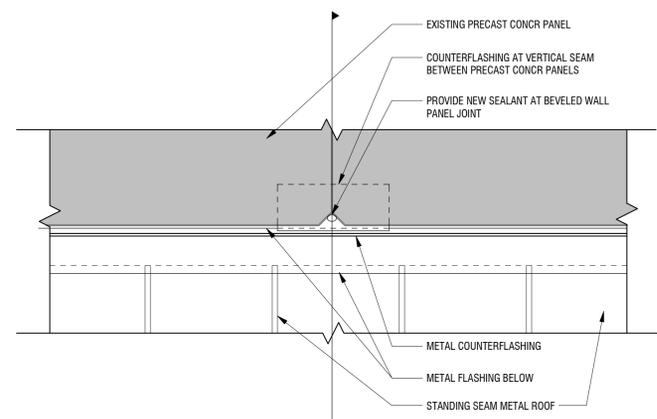
**4 ENDWALL DETAIL TYP.**  
 A101 1 1/2" = 1'-0"

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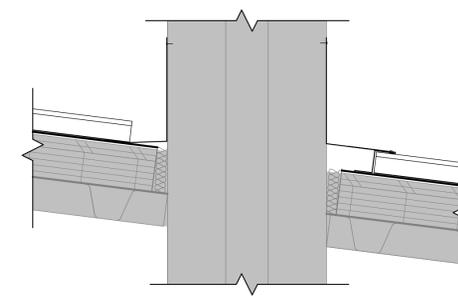
REVISIONS  
 No. Date Description



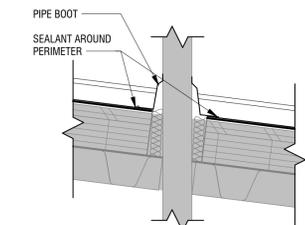
**5 ROOFTOP UNIT PEN. DETAIL**  
 A101 1 1/2" = 1'-0"



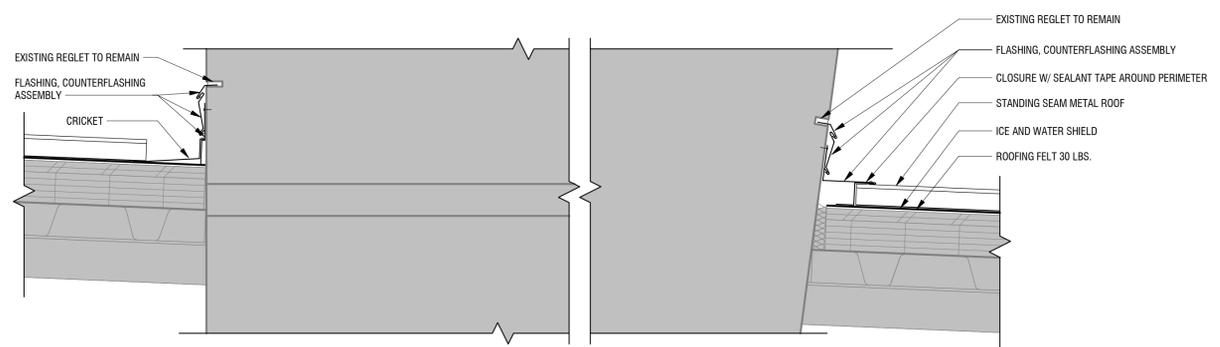
**6 COUNTERFLASHING AT SEAM**  
 PLAN DETAIL  
 A101 1 1/2" = 1'-0"



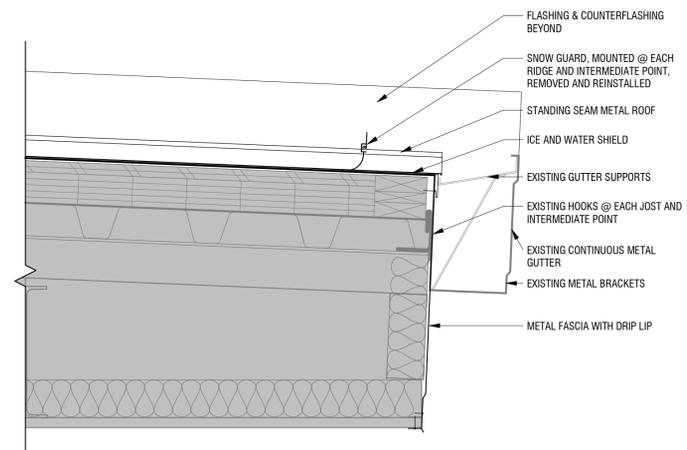
**7 EXHAUST PEN. DETAIL TYP.**  
 A101 1 1/2" = 1'-0"



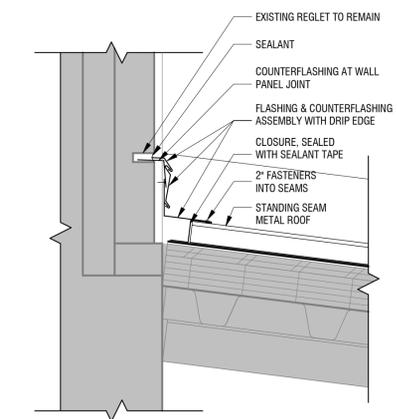
**8 VENT STACK DETAIL**  
 NOT AT ROOF SEAM TYP.  
 A101 1 1/2" = 1'-0"



**9 PIER PEN. DETAIL TYP.**  
 A101 1 1/2" = 1'-0"



**10 OVERHANG DETAIL**  
 A101 1 1/2" = 1'-0"



**11 ENDWALL DETAIL AT WALL PANEL JOINT**  
 A101 1 1/2" = 1'-0"

**CHAMPAIGN COUNTY ROOF REPLACEMENTS**

HIGHWAY DEPARTMENT  
 1605 E Main St.  
 Urbana, IL 61802

ISSUED FOR BID

ROOF DETAILS

DATE 04.01.21 SHEET  
 PROJECT 202106 **A101**

- DEMOLITION NOTES**
- DIMENSIONS ARE TO EDGE OF ROOF. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS & DIMENSIONS SHOWN ON PLANS PRIOR TO THE START OF WORK. NOTIFY ARCHITECT OF DISCREPANCIES.
  - DO NOT SCALE DIMENSIONS OFF DRAWINGS. USE WRITTEN OR CALCULATED DIMENSIONS. MISSING DIMENSIONS, OR DIMENSIONS NOT APPARENT, SHALL BE VERIFIED WITH ARCHITECT.
  - MAINTAIN A SECURE AND WATERTIGHT ENCLOSURE.
  - COORDINATE DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT + OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATION AND TO PROVIDE BUILDING USER'S SAFETY.
  - THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - PROVIDE PROTECTION FOR EXISTING BUILDING MATERIALS & EQUIPMENT FROM DAMAGE DUE TO DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
  - PROVIDE RUBBERIZED PIPE SUPPORTS UNDER ALL GAS PIPING.
  - CONTRACTOR TO VERIFY LOCATION, SIZES, AND QUANTITIES OF ROOF PENETRATIONS AND EQUIPMENT PRIOR TO BIDDING.
  - REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
  - EXISTING MATERIALS SHALL NOT BE REUSED UNLESS OTHERWISE NOTED, OR AS AUTHORIZED BY ARCHITECT.
  - OWNER WILL TRIM TREES OVERHANGING ROOF PRIOR TO CONSTRUCTION.

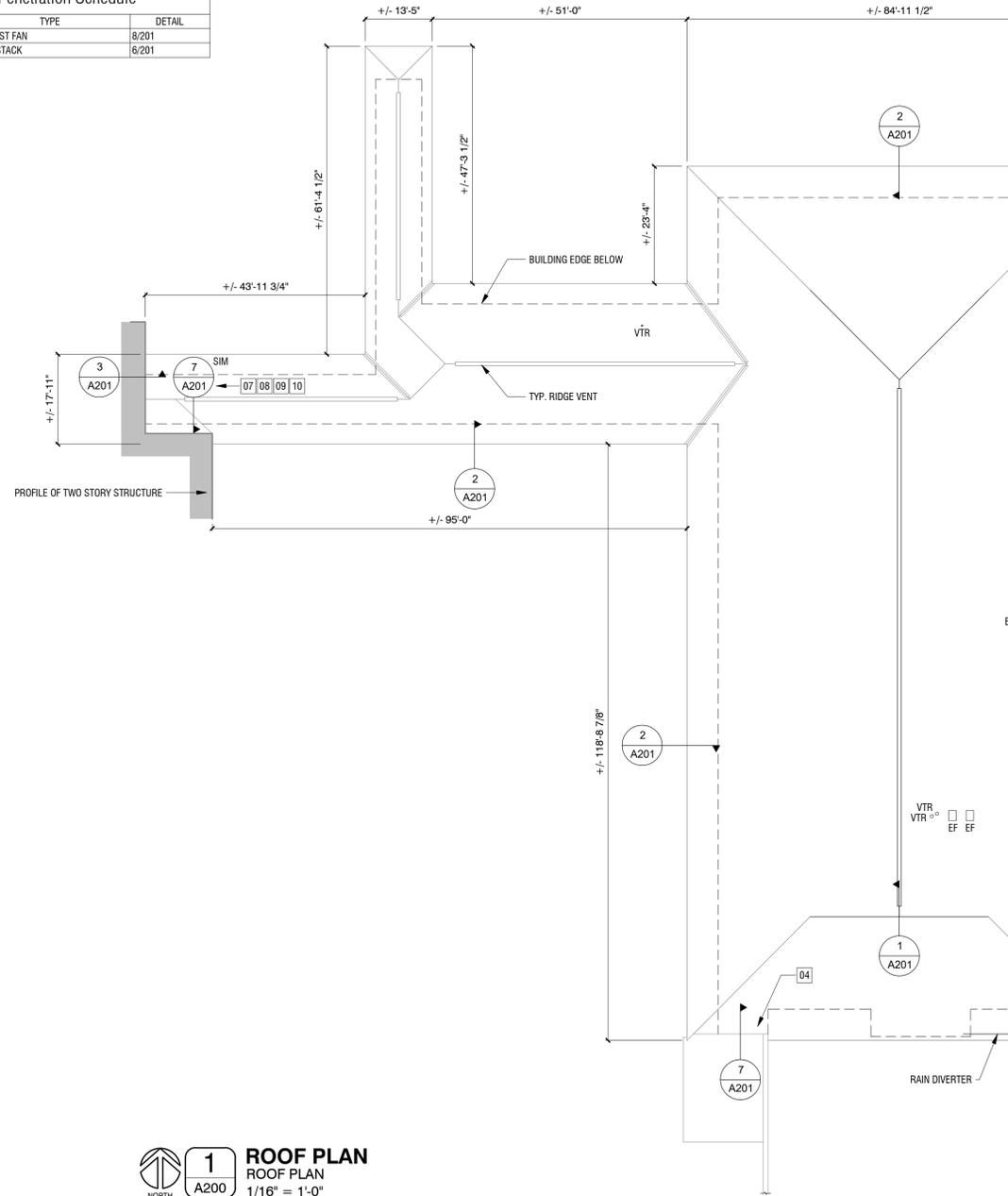
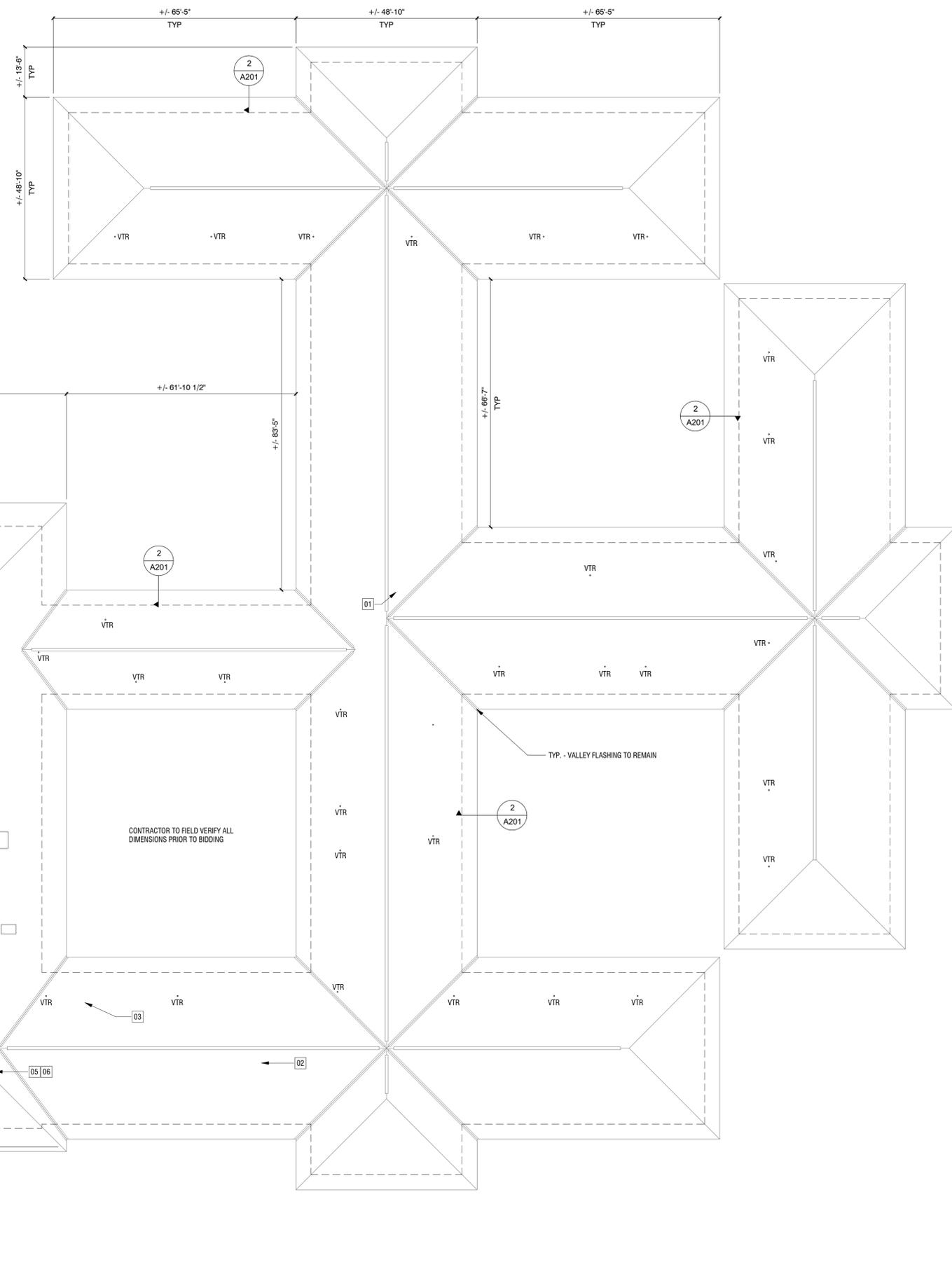
- ROOF NOTES**
- REMOVE AND DISPOSE OF EXISTING ROOF SHINGLES.
  - REMOVE AND DISPOSE OF EXISTING UNDERLAYMENT.
  - REMOVE AND DISPOSE OF EXISTING DRIP EDGE.
  - CONTRACTOR TO DISCONNECT PLUMBING + ELECTRICAL CONNECTIONS FOR SUPPLY FANS, EXHAUST FANS, AND OTHER MECHANICAL EQUIPMENT. REMOVE FANS AND EQUIPMENT, AND RETAIN FOR REINSTALLATION AFTER NEW ROOF IS INSTALLED.
  - RESET ALL MECHANICAL UNITS AND FANS IN THE SAME PLACE ONCE ROOFING INSTALLATION IS COMPLETED. RE-CONNECT PLUMBING + ELECTRICAL CONNECTIONS FOR SUPPLY FANS, EXHAUST FANS, AND MECHANICAL EQUIPMENT.
  - IF DETERIORATED WOOD DECK OR NAILERS ARE DISCOVERED, NOTIFY ARCHITECT.
  - AT ALL ROOF OVERHANGS PROVIDE ICE + WATER SHIELD. EXTEND EDGE 2' PAST EDGE OF BUILDING WALL.
  - PROVIDE (2) LAYERS OF #15 FELT (UNDERLAYMENT).
  - PROVIDE NEW DRIP EDGE.

**SYMBOL LEGEND**

#	IMAGE NUMBER REFERENCE
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**Roof Penetration Schedule**

MARK	TYPE	DETAIL
EF	EXHAUST FAN	8/201
VTR	VENT STACK	6/201



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**REVISIONS**

No.	Date	Description

**CHAMPAIGN COUNTY ROOF REPLACEMENTS**

**ILEAS TRAINING CENTER**  
 1701 E Main St  
 Urbana, IL 61802

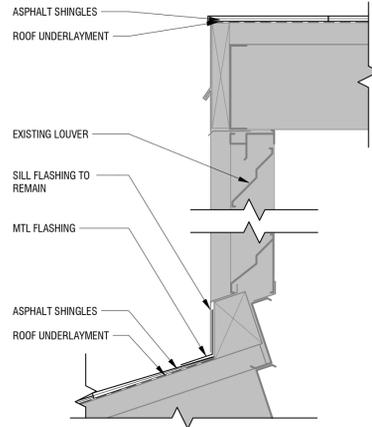
ISSUED FOR BID

ROOF PLAN

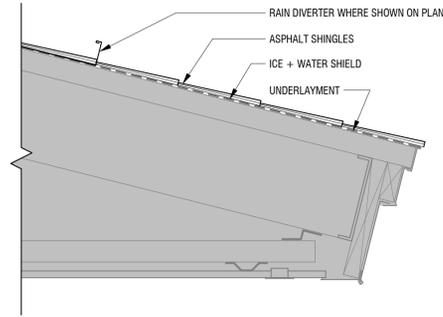
**1 ROOF PLAN**  
 ROOF PLAN  
 1/16" = 1'-0"

DATE 04.01.21  
 PROJECT 202106  
**A200**

SEE IMAGES 5 AND 6 FOR EXISTING CONDITION

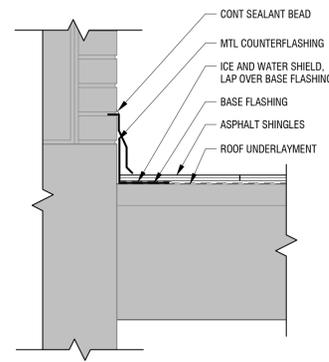


**1 DETAIL AT ROOF GRILLE**  
A201 1 1/2" = 1'-0"

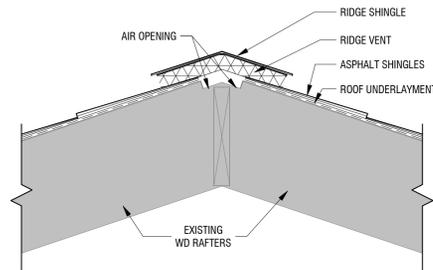


**2 EAVE DETAIL**  
TYP.  
A201 1 1/2" = 1'-0"

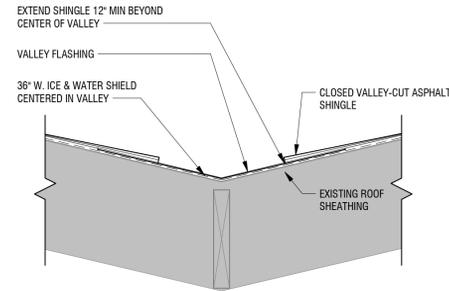
SEE IMAGES 8 AND 10 FOR EXISTING CONDITION



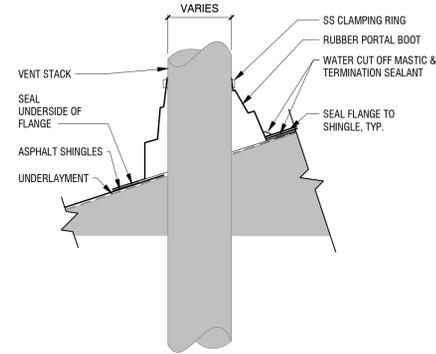
**3 SHINGLE FLASHING AT SIDEWALL**  
SIM.  
A201 1 1/2" = 1'-0"



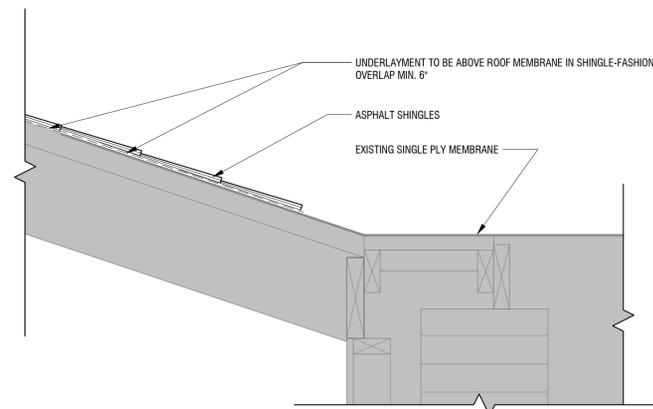
**4 RIDGE VENT DETAIL**  
TYP.  
A201 1 1/2" = 1'-0"



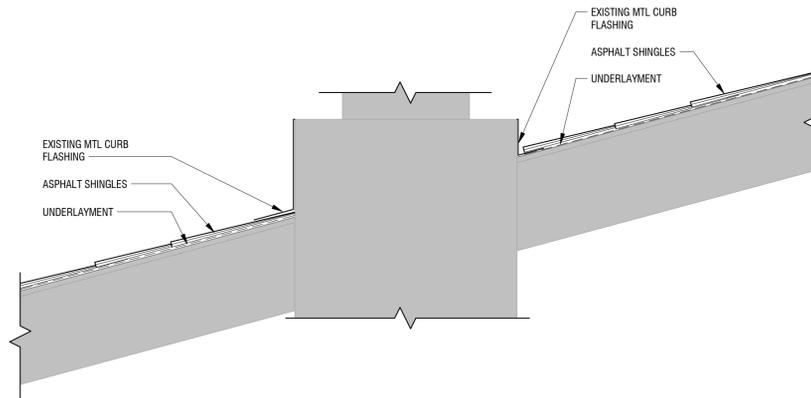
**5 VALLEY FLASHING DETAIL**  
TYP.  
A201 1 1/2" = 1'-0"



**6 VENT STACK DETAIL**  
TYP.  
A201 1 1/2" = 1'-0"

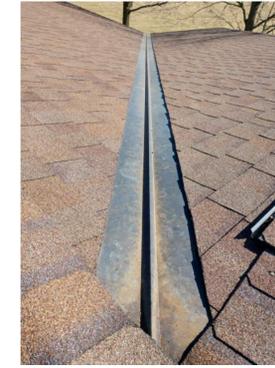


**7 SHINGLE TO MEMBRANE ROOF DTL**  
A201 1 1/2" = 1'-0"



**8 PENETRATION AT MECHANICAL CURB**  
SIM.  
A201 1 1/2" = 1'-0"

EXISTING IMAGES FOR REFERENCE



01



02



03



04



05



06



07



08



09



10

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REVISIONS  
No. Date Description

**CHAMPAIGN COUNTY ROOF REPLACEMENTS**

ILEAS TRAINING CENTER

1701 E Main St  
Urbana, IL 61802

ISSUED FOR BID

ROOF DETAILS

**Champaign County  
Capital Asset Project**

**County Highway & ILEAS Roof Replacement Project  
ITB #2021-001**

**Proposed Project Schedule  
Updated 04/01/2021**

<u>Date</u>	<u>Action</u>
March 1, 2021 thru March 30, 2021	Reifsteck Reid Architecture to Design County Highway and ILEAS Roof Replacement Projects and Create Bid Documents
Wednesday, April 7, 2021	Present draft bid documents to Facilities Committee for approval
<b>Thursday, April 8, 2021</b>	<b>Advertise and Post Bid</b>
<b>Thursday, April 15, 2021, @ 2:00pm</b>	<b>Vendor Pre-Bid Meeting – County Highway Maintenance Facility, 1604 E. Main Street, Urbana, Illinois 61802 – Conference Room</b>
Friday, April 23, 2021, 12:00noon	Deadline for submission of questions and clarifications
<b>Tuesday, April 27, 2021</b>	<b>Reifsteck Reid responds to submitted questions or clarifications.</b>
<b>Friday, April 30, 2021, @ 2:00pm</b>	<b>Bid Opening – Brookens Administrative Center, 1776 E. Washington St., Urbana, Illinois 61802 – Lyle Shields Meeting Room</b>
Tuesday, May 4, 2021	Present to the Facilities Committee for bid award approval
Thursday, May 20, 2021	Present to County Board for bid award approval
Friday, May 28, 2021	Finalize and sign agreement with successful low bidder. Successful low bidder submits “A & E Shop Drawings” to Reifsteck Reid for approval.
<b>Wednesday, June 2, 2021</b>	<b>Reifsteck Reid will notify low bidder about A &amp; E Submittals by Wednesday, June 2, 2021. Upon approval, low bidder shall order all materials necessary for this project.</b>
July 2021 thru September 24, 2021	Contractor to mobilize/stage equipment and begin project – all materials for project must be on-site or available daily as needed during this project.
<b>Friday, September 24, 2021</b>	<b>Substantial Completion of Project</b>
Tuesday, September 28, 2021	Publish Punch List
<b>Friday, October 8, 2021</b>	<b>Complete Punch List and Submit Final Pay Application</b>

# Proposed Updated Champaign County Facilities 10-Year Capital Plan

Wednesday, November 4, 2020

## Assumptions

- 1 Funding continues through FY2030
- 2 All county facilities are included in this updated plan
- 3 Sheriff's Office/Downtown Jail and Old Nursing Home inclusion for for demolition costs only.
- 4 Interiors (paint and carpet) are included in updated plan
- 5 Priorities for scheduling deferred maintenance are as follows:
  - 1st priority - building envelope - roofs and exterior skins
  - 2nd priority - building mechanicals
  - 3rd priority - building mechanical controls (pneumatic to digital)
  - 4th priority - business emergency/continuation
  - 5th priority - parking lots, roads and sidewalks
  - 6th priority - interiors - paint and carpet

<u>CAPITAL ASSET FUND</u>	<u>Proposed Capital Fund Plan</u>	<u>Insurance or Other Capital Account</u>	<u>Total Amount</u>
<u>FY2020</u>	\$ 1,163,622.00	\$ 516,710.00	\$ 1,680,332.00
<u>FY2021</u>	\$ 2,074,500.00	\$ 3,403,935.18	\$ 5,478,435.18
<u>FY2022</u>	\$ 1,950,000.00	\$ -	\$ 1,950,000.00
<u>FY2023</u>	\$ 2,010,000.00	\$ -	\$ 2,010,000.00
<u>FY2024</u>	\$ 2,015,000.00	\$ -	\$ 2,015,000.00
<u>FY2025</u>	\$ 2,170,000.00	\$ -	\$ 2,170,000.00
<u>FY2026</u>	\$ 1,910,000.00	\$ 335,000.00	\$ 2,245,000.00
<u>FY2027</u>	\$ 2,140,000.00	\$ -	\$ 2,140,000.00
<u>FY2028</u>	\$ 2,035,000.00	\$ -	\$ 2,035,000.00
<u>FY2029</u>	\$ 2,100,000.00	\$ 100,000.00	\$ 2,200,000.00
<u>FY2030</u>	\$ 2,025,000.00	\$ -	\$ 2,025,000.00
<u>10-Year Total</u>	<u>\$ 21,593,122.00</u>	<u>\$ 4,355,645.18</u>	<u>\$ 25,948,767.18</u>

		<u>Capital Fund Amount</u>	<u>Insurance or Other Capital Amount</u>	<u>Total Amount</u>
<u>FY2020</u>				
<b>Courthouse</b>	Install new video security system and master control	\$ 318,183.00	\$ 231,817.00	\$ 550,000.00
<b>JDC</b>	Install new video security system and master control	\$ -	\$ 268,073.00	\$ 268,073.00
<b>METCAD</b>	Replace 4 AHU and install digital controls	\$ 845,439.00	\$ -	\$ 845,439.00
<b>Satellite Jail</b>	Replace two overhead garage doors and openers at sally-port	\$ -	\$ 16,820.00	\$ 16,820.00
	<b><u>TOTAL FY2020</u></b>	<b><u>\$ 1,163,622.00</u></b>	<b><u>\$ 516,710.00</u></b>	<b><u>\$ 1,680,332.00</u></b>

		Capital Fund	Insurance or Other	Total
<b><u>FY2021</u></b>		<b><u>Amount</u></b>	<b><u>Capital Amount</u></b>	<b><u>Amount</u></b>
<b>Animal Control</b>	Epoxy coat concrete floors	\$ 42,500.00	\$ -	\$ 42,500.00
<b>Animal Control</b>	Replace Metal Roof (Hail Damage)	\$ -	\$ 52,097.60	\$ 52,097.60
<b>Brookens</b>	Replace POD 300 & 400 roofs (Hail Damage)	\$ -	\$ 596,019.78	\$ 596,019.78
<b>Brookens</b>	HVAC Replacement (Hail Damage)	\$ -	\$ 260,518.00	\$ 260,518.00
<b>Courthouse</b>	Replace 2-existing boilers	\$ 400,000.00		\$ 400,000.00
<b>Courthouse</b>	HVAC Replacement (Hail Damage)	\$ -	\$ 76,077.00	\$ 76,077.00
<b>Courthouse</b>	Replace Asphalt Shingle Roofs (Hail Damage)	\$ -	\$ 334,879.51	\$ 334,879.51
<b>Highway Maint.</b>	Replace Metal Roof (Hail Damage)	\$ -	\$ 661,999.04	\$ 661,999.04
<b>Highway Salt Brine</b>	Replace Asphalt Shingle Roofs (Hail Damage)	\$ -	\$ 1,967.02	\$ 1,967.02
<b>Highway Salt Dome</b>	Replace Metal Roof (Hail Damage)	\$ -	\$ 75,976.56	\$ 75,976.56
<b>HVAC Hail Guards</b>		\$ 75,000.00		\$ 75,000.00
<b>ILEAS</b>	Replace Asphalt Shingle Roofs (Hail Damage)	\$ -	\$ 268,324.57	\$ 268,324.57
<b>JDC</b>	Replace water heaters (2)	\$ 35,000.00	\$ -	\$ 35,000.00
<b>JDC</b>	HVAC Replacement (Hail Damage)	\$ -	\$ 74,104.00	\$ 74,104.00
<b>JDC</b>	Replace and upgrade existing exterior lights	\$ 20,000.00	\$ -	\$ 20,000.00
<b>JDC</b>	Replace metal coping on parapet wall (Hail Damage)		\$ 20,519.30	\$ 20,519.30
<b>JDC</b>	Replace backflow preventer	\$ 5,000.00	\$ -	\$ 5,000.00
<b>METCAD</b>	HVAC Replacement (Hail Damage)	\$ -	\$ 11,465.00	\$ 11,465.00
<b>METCAD</b>	Replace Roof (Hail Damage)	\$ -	\$ 129,463.45	\$ 129,463.45
<b>METCAD</b>		\$ 70,107.00	\$ -	\$ 70,107.00
	Repoint exterior masonry and replace all sealants			
<b>Physical Plant</b>	Replace Metal Roof (Hail Damage)	\$ -	\$ 311,484.56	\$ 311,484.56
<b>Satellite Jail</b>	Replace metal coping on parapet wall (Hail Damage)		\$ 62,451.74	\$ 62,451.74
<b>Satellite Jail</b>	HVAC Replacement - replace 4-condensing units with chillers; replace 4-AHU; replace 2-boilers, replace pneumatic controls with digital	\$ 1,426,893.00	\$ 373,107.00	\$ 1,800,000.00
<b>Sheriff's Garage</b>	Replace Metal Roof (Hail Damage)	\$ -	\$ 93,481.05	\$ 93,481.05
<b><u>TOTAL FY2021</u></b>		<b><u>\$ 2,074,500.00</u></b>	<b><u>\$ 3,403,935.18</u></b>	<b><u>\$ 5,478,435.18</u></b>

<b><u>FY2022</u></b>		<b><u>Amount</u></b>	<b><u>Amount</u></b>	<b><u>Amount</u></b>
<b>Animal Control</b>	Install an emergency generator	\$ 100,000.00	\$ -	\$ 100,000.00
<b>Animal Control</b>	Revise main electric panel distribution (remove crazy leg 270)		\$ 225,000.00	\$ 225,000.00
<b>Animal Control</b>	Install whole building AC	\$ 150,000.00	\$ -	\$ 150,000.00
<b>Courthouse</b>	Replace 9-courtrooms carpet	\$ 200,000.00	\$ -	\$ 200,000.00
<b>ILEAS</b>				
	Tear down abandoned Nursing Home Buildings	\$ 900,000.00	\$ -	\$ 900,000.00
<b>Satellite Jail</b>	Replace voice/door/data security system with updated system	\$ 600,000.00	\$ -	\$ 600,000.00
<b><u>TOTAL FY2022</u></b>		<b><u>\$ 1,950,000.00</u></b>	<b><u>\$ 225,000.00</u></b>	<b><u>\$ 2,175,000.00</u></b>

<b><u>FY2023</u></b>		<b><u>Capital Fund</u></b>	<b><u>Insurance or Other</u></b>	<b><u>Total</u></b>
		<b><u>Amount</u></b>	<b><u>Capital Amount</u></b>	<b><u>Amount</u></b>
<b>Brookens</b>	Paint Metal Roof	\$ 100,000.00	\$ -	\$ 100,000.00
<b>Courthouse Addition</b>	Paint steel roof structure	\$ 60,000.00	\$ -	\$ 60,000.00
<b>JDC</b>	Replace window sealant and paint exterior windows	\$ 85,000.00		\$ 85,000.00
<b>JDC</b>		\$ 200,000.00		\$ 200,000.00
<b>JDC</b>	Foundation joint repair, includes drainage tile			
<b>JDC</b>	Pour new parking curb and resurface parking lot and drive	\$ 95,000.00		\$ 95,000.00
<b>METCAD</b>	Replace parking lot and drive; remove and replace damage curb areas	\$ 120,000.00	\$ -	\$ 120,000.00
<b>Satellite Jail</b>	Replace generator	\$ 250,000.00	\$ -	\$ 250,000.00
<b>Satellite Jail</b>	Replace ballasted roof with white EPDM rubber roof	\$ 850,000.00	\$ -	\$ 850,000.00
<b>Satellite Jail</b>		\$ 250,000.00		\$ 250,000.00
	Foundation joint repair, includes drainage tile			
<b><u>TOTAL FY2023</u></b>		<b><u>\$ 2,010,000.00</u></b>	<b><u>\$ -</u></b>	<b><u>\$ 2,010,000.00</u></b>

<b><u>FY2024</u></b>		<b><u>Amount</u></b>	<b><u>Amount</u></b>	<b><u>Amount</u></b>
<b>Courthouse</b>	Replace sealant on all windows	\$ 85,000.00	\$ -	\$ 85,000.00
<b>Courthouse Addition</b>	Update wood finishes and paint walls in 9 remaining courtrooms	\$ 630,000.00	\$ -	\$ 630,000.00
<b>ILEAS</b>	Replace three AHU's	\$ 350,000.00	\$ -	\$ 350,000.00
<b>JDC</b>	Replace generator	\$ 250,000.00	\$ -	\$ 250,000.00
<b>Sheriff/D-Jail</b>	Tear down abandoned building	\$ 700,000.00		\$ 700,000.00
<b><u>TOTAL 2024</u></b>		<b><u>\$ 2,015,000.00</u></b>	<b><u>\$ -</u></b>	<b><u>\$ 2,015,000.00</u></b>

<b><u>FY2025</u></b>		<b><u>Amount</u></b>	<b><u>Amount</u></b>	<b><u>Amount</u></b>
<b>Brookens</b>	Repoint exterior masonry and replace all sealants	\$ 450,000.00	\$ -	\$ 450,000.00
<b>Courthouse</b>	Update all HVAC digital controls	\$ 900,000.00	\$ -	\$ 900,000.00
<b>Courthouse &amp; Additio</b>	Tuck point entire building	\$ 500,000.00	\$ -	\$ 500,000.00
<b>Garages</b>	Replace metal skins on five garages	\$ 320,000.00	\$ -	\$ 320,000.00
<b><u>TOTAL FY2025</u></b>		<b><u>\$ 2,170,000.00</u></b>	<b><u>\$ -</u></b>	<b><u>\$ 2,170,000.00</u></b>

<b><u>FY2026</u></b>		<b><u>Amount</u></b>	<b><u>Insurance or Other Capital Amount</u></b>	<b><u>Amount</u></b>
<b>Animal Control/Coror</b>	Replace parking lot	\$ 40,000.00	\$ -	\$ 40,000.00
<b>Animal Control/Coror</b>	Replace existing metal siding with new siding. Check and replace insulation.	\$ 95,000.00	\$ -	\$ 95,000.00
<b>Brookens</b>	Replace all carpet	\$ 500,000.00	\$ -	\$ 500,000.00
<b>Highway</b>	Remove old poly urethane concrete joint sealant and replace w/new	\$ -	\$ 100,000.00	\$ 100,000.00
<b>Highway Salt Dome</b>	Replace damaged wood and metal cornerers		\$ 25,000.00	\$ 25,000.00
<b>Highway Salt Dome</b>	Replace existing asphalt around Salt Dome		\$ 210,000.00	\$ 210,000.00
<b>ILEAS</b>	Repoint exterior masonry and replace all sealants	\$ 950,000.00	\$ -	\$ 950,000.00
<b>Physical Plant</b>	Replace parking lot	\$ 25,000.00	\$ -	\$ 25,000.00
<b>Satellite Jail</b>	Replace air returns and supply grills	\$ 100,000.00	\$ -	\$ 100,000.00
<b>Sat. Jail &amp; JDC</b>	Remove old poly urethane concrete joint sealant and replace w/new	\$ 200,000.00	\$ -	\$ 200,000.00
<b><u>TOTAL FY2026</u></b>		<b><u>\$ 1,910,000.00</u></b>	<b><u>\$ 335,000.00</u></b>	<b><u>\$ 2,245,000.00</u></b>

<b><u>FY2027</u></b>		<b><u>Amount</u></b>	<b><u>Amount</u></b>	<b><u>Amount</u></b>
<b>Brookens</b>	Replace asphalt parking lots (3)	\$ 680,000.00	\$ -	\$ 680,000.00
<b>Brookens</b>	Replace POD #300 2-MZU	\$ 300,000.00	\$ -	\$ 300,000.00
<b>Courthouse</b>	Replace and relocate chillers	\$ 500,000.00	\$ -	\$ 500,000.00
<b>ILEAS</b>	Replace four boilers	\$ 250,000.00	\$ -	\$ 250,000.00
<b>JDC</b>	Replace seven Aeon (RTU) units	\$ 410,000.00	\$ -	\$ 410,000.00
<b><u>TOTAL FY2027</u></b>		<b><u>\$ 2,140,000.00</u></b>	<b><u>\$ -</u></b>	<b><u>\$ 2,140,000.00</u></b>

<b>FY2028</b>		<b>Amount</b>	<b>Amount</b>	<b>Amount</b>
Brookens	Replace POD #400 2-MZU	\$ 300,000.00	\$ -	\$ 300,000.00
Brookens	Paint interior walls	\$ 100,000.00	\$ -	\$ 100,000.00
Brookens	Replace existing T12/T8 fluorescents with new LED's	\$ 100,000.00	\$ -	\$ 100,000.00
Courthouse	Replace carpet in original side	\$ 650,000.00	\$ -	\$ 650,000.00
Courthouse & Additio	Replace existing T12/T8 fluorescents with new LED's	\$ 200,000.00	\$ -	\$ 200,000.00
Courthouse	Parking lot replacement	\$ 285,000.00	\$ -	\$ 285,000.00
JDC	Replace parking lot and drive	\$ 100,000.00	\$ -	\$ 100,000.00
JDC	Upgrade remaining BAS digital controls	\$ 100,000.00	\$ -	\$ 100,000.00
METCAD	Replace generator	\$ 200,000.00	\$ -	\$ 200,000.00
<b>TOTAL FY2028</b>		<b>\$ 2,035,000.00</b>	<b>\$ -</b>	<b>\$ 2,035,000.00</b>

<b>FY2029</b>		<b>Amount</b>	<b>Insurance or Other Capital Amount</b>	<b>Amount</b>
Art Bartell Road	Add concrete curbing and gutters	\$ 650,000.00	\$ -	\$ 650,000.00
County Highway	Paint interior walls		\$ 100,000.00	\$ 100,000.00
Courthouse	Replace ballasted roof with white EPDM rubber	\$ 750,000.00	\$ -	\$ 750,000.00
ILEAS	Replace existing T12/T8 fluorescents with new LED's	\$ 100,000.00	\$ -	\$ 100,000.00
JDC	Replace existing T12/T8 fluorescents with new LED's	\$ 100,000.00	\$ -	\$ 100,000.00
METCAD	Replace existing T12/T8 fluorescents with new LED's	\$ 50,000.00	\$ -	\$ 50,000.00
Satellite Jail	Replace existing T12/T8 fluorescents with new LED's	\$ 100,000.00	\$ -	\$ 100,000.00
Satellite Jail	Paint interior	\$ 350,000.00	\$ -	\$ 350,000.00
<b>TOTAL FY2029</b>		<b>\$ 2,100,000.00</b>	<b>\$ 100,000.00</b>	<b>\$ 2,200,000.00</b>

<b>FY2030</b>		<b>Amount</b>	<b>Amount</b>	<b>Amount</b>
Brookens	Paint interior walls	\$ 200,000.00	\$ -	\$ 200,000.00
Courthouse	Replace carpet in original side	\$ 650,000.00	\$ -	\$ 650,000.00
Courthouse	Replace existing T12/T8 fluorescents with new LED's	\$ 300,000.00	\$ -	\$ 300,000.00
Garages	Install (5) oil interceptors	\$ 250,000.00	\$ -	\$ 250,000.00
JDC	Install 10' Perimeter chain link fence /w razor wire at perimeter for emergency egress	\$ 125,000.00	\$ -	\$ 125,000.00
ILEAS	Paint interior walls	\$ 500,000.00	\$ -	\$ 500,000.00
<b>TOTAL FY2030</b>		<b>\$ 2,025,000.00</b>	<b>\$ -</b>	<b>\$ 2,025,000.00</b>

March 31, 2021

Dana Brenner  
Executive Director  
Champaign County Physical Plant  
1776 E. Washington Street  
Urbana, Illinois 61802

Re: Indoor Air Quality Evaluation  
Champaign County Brookens Administration Center Pod 100  
1776 E. Washington Street, Urbana, Illinois

Dear Mr. Brenner:

Occupational Environmental Health Solutions, Inc. (OEHS, Inc) was retained to conduct an Indoor Environmental Quality Investigation at the above-referenced location. Aspects of the investigation included the collection of culturable fungal swab, non-culturable fungal spore air samples and volatile organic compound (VOC) from locations within the facility and inspection of the property. The purpose of the investigation was to evaluate the Indoor Air Quality within the facility to determine if fungal contamination is present in the building.

### **Background**

The building, located at 1776 E. Washington Street in Urbana, Illinois consists of a single-story building office facility. The building was originally constructed in about 1960's.

The purpose of this evaluation was to assess the facility for suspect fungi odors and to determine if fungal amplification is present in the building.

### **SUMMARY OF DATA COLLECTION ACTIVITIES**

On March 9, 2021, OEHS, Inc. conducted an inspection assessment of the building, examined the property for the presence of microbiological growth, and collected air, swab and Volatile organic compound samples from areas on the ground floor.

OEHS, Inc. collected four (4) non-culturable fungal spore air samples in the property, one (1) ambient outdoor sample to serve as a control and one (1) blank sample for quality assurance purposes for a total of six (6) samples. In addition, two (2) culturable swab samples were collected and three (3) volatile organic compound air samples were collected.

### **Sampling Methodology**

#### **Invasive Sampling**

Due to the potential for the distribution of fungal spores and subsequent contamination of the contents of the occupied space, invasive sampling techniques (i.e., penetration of wall & ceiling interstitial spaces) were not conducted during this investigation.

Breaching of interstitial spaces should be conducted only with full containment under negative pressure. This will eliminate potential contamination of the structure's contents and occupied zone.

### **Assessment Observations**

The interior and exterior of the facility were inspected for the presence of microbiological growth and related issues which could precipitate amplification of fungi.

### **Environmental Parameters**

An Environmental Parameters survey (i.e., temperature, relative humidity, dew point, absolute humidity) was conducted with a Delmhorst Model HT-3000 Thermo-Hygrometer. The purpose of the survey was to determine if environmental parameter levels of the facility were of sufficient quantity to promote fungal growth. Environmental parameter readings were also collected from the ambient atmosphere to serve as a control.

### **Microbiological Fungal Spore Air, and Swab Sampling**

Microbiological non-culturable fungal spore air and culturable fungal swab sampling was conducted in the property on March 9, 2021.

#### **Non-Culturable Fungal Spore Air Sampling Procedure**

Air-O-Cell air quality particle-sampling cassettes were used to collect the non-culturable fungal spore air samples. The Air-O-Cell cassette operates on the principle of inertial impaction. The principle of operation consists of a pump that pulls air at a fixed flow rate of 15 L/min. through the tapered slit. The pump is pre- and post-calibrated with a rotameter. The rotameter is calibrated quarterly utilizing a primary standard. The air is deflected 90 degrees by an optically clear sampling media surface below the slit. Smaller particles will follow the gas streamlines; however, larger particles with sufficient inertia will deviate from the streamlines and impact onto the adhesive gel strip surface while the remainder of the particles exit the back of the cassette.

Immediately after impactor sampling, the cassettes were stored with the sticky media side up in an insulated container. The insulated container maintained the impactor cassettes at room temperature during storage and shipment. The cassettes were shipped next day air under chain-of-custody to an American Industrial Hygiene Association (AIHA) Environmental Microbiology (EMLAP) accredited analytical laboratory.

Non-culturable fungal spore air samples were collected from the following locations on March 9, 2021:

1. Blank
2. Ambient
3. Ground Floor – Krueger's Office
4. Ground Floor – Mann's Cubical  
Ground Floor – Cubical Adjacent to Krueger's Office
5. Cubical adjacent to Belknap's Office
6. Ground Floor – Above the Ceiling Grid adjacent to Belknap's Office

## Culturable Fungal Swab Sample Procedure

The surface of the suspect fungal amplification was collected using a sterile swab and sterile techniques. The collection media was wetted with sterile water to enhance particle collection; the sample was collected aseptically through the use of gloves and touching only the bare end of the swab stick to the sample surface. The collected swab sample was placed in a sterile container and stored at about 41°F for shipment under chain-of-custody to an American Industrial Hygiene Association (AIHA) Environmental Microbiology (EMLAP) accredited analytical laboratory.

The culturable fungal swab sample was collected from the following location on March 9, 2021:

1. Ground Floor – Krueger’s Office
2. Ground Floor – Mann’s Cubical
3. Cubical Adjacent to Krueger’s Office

The sampling protocol followed the guidelines established by the American Industrial Hygiene Association (AIHA) Biosafety Committee. The swab samples collected on March 9, 2021 were to be analyzed for fungi. The three most predominant of each type of microorganism were to be identified.

## Volatile Organic Compound (VOC’s) Air Sampling

The area monitoring was collected using EPA Method TO-15. The sampling train for this method utilizes a 6000 milliliter (ml) Summa Canister with a sub-atmospheric pressure to collect the air sample over a twenty-four-hour period.

Air is pulled at a controlled rate into the collection device. Sub-atmospheric pressure sampling uses an initially evacuated canister. The canister has a valve and fixed orifice to regulate flow. The canisters are placed at the approximate breathing height of the employees. The grab sample of ambient air is drawn into the pre-evacuated Summa Canister over the course of twenty-four hours.

Subsequent to the air sampling episode, the canister valve is closed, the cap is replaced, and the canister is then transported under chain-of-custody via next day air to an American Industrial Hygiene Association (AIHA) Industrial Hygiene accredited analytical laboratory to be analyzed for VOC’s.

The VOC air samples were collected on March 9, 2021 from the following locations:

1. Ground Floor – Krueger Office
2. Ground Floor – Mann Cubical
3. Ground Floor – Cubical Adjacent to Krueger’s Office

## **DISCUSSION**

### **Indoor Air Quality Complaints**

Indoor Air Quality complaints result in symptoms, which are the direct consequences of an inadequate indoor climate. Typically, building occupants complain of headaches and irritation of

eyes, nose and throat. Indoor Air Quality concerns can be due to several types of building problems, which include sick building syndrome (SBS), building-related illnesses (BRI), and mass psychogenic illness (MPI).

### **Sick Building Syndrome (SBS)**

Sick Building Syndrome is a condition associated with complaints of discomfort that include headache, nausea, dermatitis, eye, nose, throat, and respiratory irritation, coughing, difficulty concentrating, sensitivity to odors, muscle pain and fatigue. The specific causes of these symptoms are often not known but are sometimes attributed to the consequence of a combination of substances or individual susceptibility to low concentrations of contaminant. The symptoms are associated with periods of occupancy, and often disappear after the resident leaves the building site.

### **Building-Related Illnesses (BRI)**

Building-Related Illnesses are those for which there is a clinically defined illness of known etiology and includes infections such as Legionellosis and allergic reactions such as hypersensitivity diseases. Physical symptoms and laboratory findings often document these illnesses.

### **Mass Psychogenic Illness (MPI)**

Mass Psychogenic Illness refers to an apparent epidemic of complaints for which the probable source is social/psychological rather than toxicological. Symptoms might include headaches, fatigue, nausea, hyperventilation, and fainting. MPI is characterized by a sudden onset of symptoms, frequently coinciding with an unusual odor, and spreading by contact like a contagious disease.

### **Microbiological Contamination**

In recent years, bioaerosols (the term given to airborne microorganisms and their products) have become an important health issue in the areas of agriculture, biotechnology, non-industrial and residential indoor environments. Much of the concern regarding exposure to bioaerosols has focused on the ability of certain microorganisms to illicit inappropriate immunological responses in susceptible individuals. Adverse health effects to microorganisms are ultimately determined by the immunological state of the exposed individual, the affecting agent (i.e., fungi, bacteria, viruses, cell wall constituents, protozoas, and metabolic products such as mycotoxins), the airborne concentration, and the associated disease outcome (infection versus a sensitization reaction).

Microorganisms (including fungi and bacteria) are normal inhabitants of the environment. The saprophytic varieties (those utilizing non-living organic material as a food source) inhabit soil, vegetation, water, or any reservoir that can provide an ample supply of nutrients. Under the appropriate conditions (optimum temperature, and pH, sufficient moisture, and available nutrients) saprophytic microorganisms' populations can be amplified. Through various mechanisms, these microorganisms can then be disseminated as individual cells or in association with soil, dust, or water particles. In the outdoor environment, the level of bioaerosols will vary according to the geographic location, climatic conditions, and surrounding activity. In a well-maintained indoor environment, where there is no unusual source of microorganisms, their level

may vary somewhat as a function of HVAC system filtration, the overall cleanliness of the HVAC system, and the number and activity level of occupants. Typically, the indoor levels of fungal bioaerosols are expected to be below the outdoor levels with a consistently similar ranking among the individual microorganisms. Acceptable levels of bioaerosols have not been established. This is primarily because allergic reactions can occur even with relatively low airborne concentrations of allergens, and because individuals differ with respect to immunogenic susceptibilities, and the diversity of the microorganisms to which we may be exposed is immense. It is unlikely that evaluation criteria for bioaerosols will be established in the near future given the lack of scientifically valid epidemiological and toxicological data to establish dose-response relationships. Because of this, the current strategy for the evaluation of environmental microbiological contamination involves an inspection to identify sources (reservoirs) of microbial growth and potential routes of dissemination (pathways). In those locations where contamination is either visible or suspect, bulk/surface samples and/or air samples may be collected to identify the predominant microorganisms (fungi, bacteria, and thermoactinomycetes).

Dose-response data are not available for most microorganism exposures. In addition, health organizations have established no exposure limit for bioaerosols. Because of this, indoor bioaerosol levels must be compared to outdoor levels and/or to an asymptomatic control area. In general, indoor levels are lower than outdoor levels, and the taxa are similar. Until guidelines on acceptable concentrations of biological agents are developed for particular environments and human populations, it is imperative that knowledge, experience, and good industrial hygiene practice be used to interpret biological data information and to design remediation strategies.

### **Indicator Species**

Fungi whose presence indicates excessive moisture, or a health hazard are described as indicator species (i.e., those recognized toxigenic fungi that are uncommon in outdoor air) and require the ability to identify fungi to the species level and knowledge of the prevalence of various fungal species in indoor and outdoor environments. The mere presence of a few colony forming units (CFUs) or spores of an indicator species should be interpreted with caution. Identification of the presence of a particular fungus in an indoor environment does not allow investigators to conclude that building occupants are exposed to antigenic or toxic agents. It is also important to note that fungi which are named as indicator species are not the only fungi of significance. Many fungi other than those specifically listed by various groups may cause problems for building occupants exposed through inhalation of fungal aerosols or via other contact.

The following are the recommendations from Europe and North America for fungi that should be considered indicator organisms.

### **Netherlands**

1. *Aspergillus fumigatus*
2. *Aspergillus versicolor*
3. *Eurotium*
4. *Exophiala*
5. *Penicillium*
6. *Rhodotorula*
7. *Trichoderma*

## 8. *Wallemia*

### Canada

#### Health Canada

1. *Aspergillus*
2. *Aspergillus fumigatus*
3. *Cryptococcus neoformans*
4. *Fusarium*
5. *Histoplasma*
6. *Penicillium*
7. *Stachybotrys chartarum*

### United States

#### American Industrial Hygiene Association (AIHA)

1. *Stachybotrys chartarum*
2. *Aspergillus versicolor*
3. *Aspergillus flavus*
4. *Aspergillus fumigatus*
5. *Fusarium moniliforme*
6. *Histoplasma capsulatum*
7. *Cryptococcus neoformans*

#### American Conference of Governmental Industrial Hygienists (ACGIH)

The ACGIH has taken the position that active fungal growth in indoor environments is inappropriate and may lead to unacceptable exposure and adverse health effects, rather than focusing on specific kinds of fungi or on quantitative measures of fungal prevalence. The following is a summary of ACGIH guidelines for assessing fungal issues in non-industrial indoor environments:

1. The presence of visible fungal growth confirmed by source sampling in occupied indoor environments is strong evidence that exposure may occur. The conditions leading to such growth should be corrected and the growth removed, using appropriate precautions.
2. The presence of moldy odors in occupied indoor environments is strong evidence that fungal growth is occurring. Such growth should be located and confirmed by source sampling. The conditions leading to the growth should be corrected and the growth removed, using appropriate precautions.
3. The persistent presence of water in indoor environments (except in places designed for the carriage or storage of water) is likely to lead to fungal growth. The conditions allowing such water to accumulate should be corrected.
4. Interpretation of source or air sampling data in the absence of any of the above conditions requires a sufficient number of samples (including controls) to ensure

that results are not due to random chance. If these data requirements are met, an investigator may consider sampling results in light of the following:

Indoor/outdoor relationships are assessed both by comparing concentrations and species composition of comparably collected samples. In non-problem environments, the concentration of fungi in indoor air typically is similar to or lower than the concentration seen outdoors, except when outdoor air concentrations are near zero (i.e., during periods of snow cover). If fungal concentrations indoors are consistently higher than those outdoors, the indoor sources are indicated. However, indoor fungal growth may also be present in situations where indoor concentrations of airborne fungi are equal to or lower than those outdoors, and interpretation of data depends on knowledge of the kinds of fungi present in the two environments.

## **FINDINGS**

### **Building Interior**

Microbiological samples were collected from the interior and exterior of the building. The purpose of the sample collection was to determine if suspect fungal growth that is the result of fungal microorganisms are inhabiting the space.

### **Environmental Parameters Survey**

The environmental parameters survey for relative humidity was negative for moisture concentrations which can precipitate fungal amplification in the building. Relative humidity levels which exceed 60% are known to provide moisture conditions suitable to precipitate fungal amplification (i.e., growth) of fungal organisms. The dew point temperature is the temperature at which moisture will begin to condense from the air. When the temperature of the air cools to the same value as the dew point temperature, the air is said to be “saturated”, it has reached 100% relative humidity. In this survey, the following levels were observed in the facility (See Table 1).

**Table 1**  
**Environmental Parameters**  
**Indoor Environmental Air Quality Evaluation**  
**Champaign County Physical Plant**  
**Brookins Center Pod 100**  
**1776 E. Washington Street**  
**Urbana, Illinois**  
**March 9, 2021**

<b>Sample Location</b>	<b>Relative Humidity (%)*</b>	<b>Temperature (°F)</b>	<b>Absolute Humidity (gpp)**</b>	<b>Dew Point (°F)</b>
Ambient	33.8	68.5	34.9	39
Krueger's Office	34.3	66.4	32.9	37
Mann's Cubical	31.4	70.5	34.9	39
Cubical Adjacent Krueger's	30.7	72.1	36.0	40
Above the Grid Corridor Adjacent Belknap's Office	30.2	72.1	35.4	39

\*- Relative humidity also measures water vapor but relative to the temperature of the air. It is expressed as the amount of water vapor in the air as a percentage of the total amount that could be held at its current temperature.

\*\*-Absolute humidity is the measure of water vapor (moisture) in the air, regardless of temperature. It is expressed as grams of moisture per pound of air (gpp).

## **Culturable Microbiological Swab Sampling**

Microbiological swab sampling was conducted in the facility to determine the potential source of suspect fungal amplification in the structure. The sample was collected in the above-captioned location.

Based on the sampling and analytical results, Tables 2 & 2a were used to interpret the data. Table 2 may be used to evaluate fungi and bacteria, while table 2a is used only for the evaluation of fungi.

Row five of Table 2 (i.e., samples with greater than 100,000 colony-forming units (CFU) per gram/square inch of fungi) is considered a high level of biological contamination. This Table was used to evaluate the culturable fungi swab sample. These criteria have been developed by PathCon Laboratory and are based on thousands of sample analyses.

Row five column two of Table 2a (i.e., samples with greater than 10,000 CFU/in<sup>2</sup>) represents guidelines published by the American Industrial Hygiene Association (AIHA). These guidelines have been established by practicing industrial hygienists from across the United States. It should be noted that these guidelines were developed for addressing concerns regarding fungal and fungi assessment and abatement and would not necessarily apply to health effects. In addition, they should not be used as the only means of decision-making in the remediation of fungal contamination.

### **Swab Samples**

The analytical results for the culturable swab samples collected from the roof mounted air handler's condensate pans and coils # 6 and 9 were considered to be at a moderate level of fungal contamination respectively as described in Table 2. Also, Table 2a describes the result of these sample location as the probable source of contamination of fungi. See Table 3 for the analytical results and Appendices A & B for the chain-of-custody form and the laboratory analytical report, respectively.

**Table 2**  
**Path Con Laboratories**  
**Interpretation of Findings with Bulk and Swab Samples**  
**Colony-Forming Units (CFU) per gram or Square Inch**

CFU	Fungi
<1,000	Low
1,000<10,000	Moderate
10,000<100,000	Moderate
100,000<1,000,000	High
1,000,000 or greater	High

**Table 2a**  
**American Industrial Hygiene Association**  
**Guidelines for Fungal/Fungi Contamination**

Type	Normal Background*	Possible Contamination Source	Probable Contamination Source
Air Samples from Residential Building	<5,000 spores/m <sup>3</sup> <500 cfu/m <sup>3</sup>	5,000-10,000 spores/m <sup>3</sup> 500-1,000 cfu/m <sup>3</sup>	>10,000 spores/m <sup>3</sup> >1,000 cfu.m <sup>3</sup>
Air Samples from Commercial Building	<2,500 spores.m <sup>3</sup> <250 cfu/m <sup>3</sup>	2,500-10,000 spores/m <sup>3</sup> 250-1,000 cfu/m <sup>3</sup>	>10,000 spores/m <sup>3</sup> >1,000 cfu/m <sup>3</sup>
Dust Samples	<100,000 spores/g <10,000 cfu/g <50,000 mycelial frags/g	100,000-1,000,000 sporesm <sup>3</sup> >10,000-100,000 cfu/g 50,000-100,000 mycelial frags/g	1,000,000 spores/g >100,000 cfu/g >100,000 mycelial frags/g
Bulk Samples	<100,000 spores/g <10,000 cfu/g <50,000 mycelial frags/g	100,000-1,000,000 spores/g 10,000-100,000 cfu/g 50,000-100,000 mycelial frags/g	>1,000,000 spores/g >100,000 cfu/g >100,000 mycelial frags/g
Swab Samples	<10,000 cfu/in <sup>2</sup> <1,500 cfu/cm <sup>2</sup>	---	>10,000 cfu/in <sup>2</sup> >1,500 cfu/cm <sup>2</sup>
Tape Samples	NSFM or NSFB ** 1-5%	5-25%	25-100%

- \*Types and relative proportions of fungal spores should be similar to outdoors.
- \*\*NSFM = no significant fungal material; NSFB = no significant fungal biomass

These guidelines were developed for the purpose of addressing concerns regarding fungal assessments and abatement and would not necessarily apply to health effects. In addition, they should not be used as the only means of decision-making in the remediation of fungal contamination.

**Table 3**  
**Culturable Swab Sample Analytical Results**  
**Champaign County Physical Plant**  
**Brookins Center Pod 100**  
**1776 E. Washington Street**  
**Urbana, Illinois**  
**Samples Collected March 9, 2021**

Sample Number	Sample Location	Sample Description	Fungi Analytical Results (CFU) <sup>1</sup> Interpretation <sup>2</sup> Taxa <sup>3</sup>
1	Return Air Unit #6 Coil/Pan	Swab	Total 29,900 <i>Cladosporium</i> species (1,800) Non-sporulating colonies (100) Yeast (28,000)
2	Return Air Unit #9 Coil/Pan	Swab	Total 30,700 <i>Aspergillus</i> species (100) <i>Cladosporium</i> species (1,600) Yeast (29,000)

1 - Colony forming units of fungi on Malt Extract Agar per swab. Limits of the test were approximately 10 cfu/swab.

2 - Genera listed in descending order of occurrence. For fungal identifications, at least the 6 most predominant taxa present are listed.

3 - ( ) = Taxon Count/Total Count.

## **Non-Culturable Spore Air Sampling**

Dose-response data are not available for most microorganism exposures. In addition, health organizations have established no exposure limit for bioaerosols. Because of this, indoor bioaerosol levels must be compared to outdoor levels and/or to an asymptomatic control area. In general, indoor levels are lower than outdoor levels, and the taxa are similar. By comparing the microbiological profiles at the contaminated sites with those at uncontaminated sites, it is possible to determine if amplification of microorganisms has occurred in the contaminated areas of the building. If interior fungal spore counts are about 3 times the ambient it is considered to be a statistically significant amplification issue.

It is significant to note that the ambient levels of *Aspergillus/Penicillium* were 20 spores per cubic meter (S/m<sup>3</sup>) while the facility had the following concentrations of *Aspergillus/Penicillium*.

The analytical results for the non-culturable fungal spore air samples collected in the ground four sample locations indicated low levels of *Aspergillus/Penicillium* which were less than three times ambient concentrations when compared to the ambient sample and as such does not represent a contamination issue. See Table 4 for analytical results.

Spores are identified by direct microscopic examination. The size and shape of the spores are used for this purpose. When viewed under the microscope *Aspergillus* and *Penicillium* spores are of similar size and shape. Because of this, laboratories cannot differentiate between the two genera of fungi and they are reported as *Aspergillus/Penicillium*. In this investigation *Aspergillus* was identified during the culturable swab sampling.

**Table 4**  
**Non-Culturable Fungal Spore Air Sample Analytical Results**  
**Indoor Environmental Air Quality Evaluation**  
**Champaign County Physical Plant**  
**Brookens Administration Center - Pod 100**  
**1776 East Washington Street**  
**Urbana, Illinois**  
**Samples Collected March 9, 2021**

Sample Number	Sample Location	Sample Time (Minutes)	Sample Description	Fungi Analytical Results <sup>1</sup> Taxa Number <sup>2</sup>
1	Blank	N/A	N/A	No Spores Detected < 7*
2	Ambient	10	Air Sample	300 basidiospores (180) <i>Cladosporium</i> (47) <i>Alternaria</i> (20) Hyphal elements (20) <i>Penicillium/Aspergillus</i> group (20) ascospores (7) Smuts/ <i>Periconia</i> /Myxomycetes (7)
3	Krueger Office	10	Air Sample	40 Hyphal elements (20) basidiospores (7) <i>Cladosporium</i> (7) <i>Penicillium/Aspergillus</i> group (7)
4	Mann Cubical	10	Air Sample	47 basidiospores (13) Hyphal elements (13) <i>Drechslera/Bipolaris</i> group (7) <i>Penicillium/Aspergillus</i> group (7) Smuts/ <i>Periconia</i> /Myxomycetes (7)
5	Cubical Adjacent Belknap Office	11	Air Sample	55 <i>Cladosporium</i> (12) Hyphal elements (12) Smuts/ <i>Periconia</i> /Myxomycetes (12) ascospores (6) basidiospores (6) Unknown (6)
6	Above the Grid Hall Adjacent Belknap Office	10		27 <i>Penicillium/Aspergillus</i> group (20) basidiospores (7)

1 - Estimated fungal spore concentration per Cubic Meter of Air. Counts may include other fungal fragments if present.

2 - Number of spores identified for the individual taxa.

\* - No visible trace.

## **Volatile Organic Compounds (VOC's)**

Volatile organic compounds (VOC's) can be released from building materials, paint, carpet, and furniture. These compounds can cause hypersensitivity reactions at low concentrations. Volatile organic compounds (VOC's) concentrations for the three sample locations were less than the limit of detection of the analytical method (<LOD) for sixty-nine (69) for Krueger's Office, Mann's Office and the Cubical adjacent Krueger's Office respectively of the seventy-four (74) analyzed compounds. The compounds that were identified above the detection limit were at concentrations far below the OEHS Permissible Exposure Level. Tables 5, 6 and 7 summarize the air monitoring results by contaminant of interest. The Tables indicate sample number, sample location, analyte, sample time and analytical results. The OSHA PEL's are listed for reference. The sampling data sheet, chain-of-custody and analytical laboratory results are located in Appendices A and B respectively.

**Table 5**  
**Volatile Organic Compounds (VOC) Analytical Results**  
**Champaign County Physical Plant**  
**Brookens Administration Center - Pod 100**  
**1776 East Washington Street**  
**Urbana, Illinois**  
**Samples Collected March 9, 2021**

Sample Number	VOC Compound	Sample Time (Hours)	Results (ppb) <sup>1</sup>	OSHA PEL (ppm) <sup>2</sup>	Odor Threshold (ppm) <sup>2</sup>
<b>Krueger Office</b>					
1	Dichlorodifluoromethane (Freon 12)	24:03	3.4	1,000	-
	Dichlorotetrafluoroethane (Freon 114)		ND	1,000	-
	Chloromethane		ND	100 C-200	10
	Vinyl Chloride		ND	1 C-5	10-20
	1,3-Butadiene		ND	1	0.09-76
	Bromomethane		ND	C-20	70-1,000
	Chloroethane		ND	1,000	4.2
	Trichlorofluoromethane (Freon 11)		5.5	1,000	200,000
	Ethanol		NT	1,000	49-716
	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		ND	1,000	45-70
	1,1-Dichloroethene		ND	NA	-
	Acetone		60	1,000	3.6-653
	2-Propanol		410	400	1-610
	Carbon Disulfide		ND	20	0.01-0.42
	3-Chloropropene		ND	1	0.48-5.9
	Methylene Chloride		ND	25	102-440
	Methyl tert-Butyl Ether		ND	NA	0.05-0.13
	trans-1,2-Dichloroethene		ND	200	0.08-1,975
	Hexane		ND	500	65-248
	1,1-Dichloroethane		ND	100	49-1,359
	2-Butanone (Methyl Ethyl Ketone)		ND	200	2-85
	cis-1,2- Dichloroethene		ND	200	0.08
	Tetrahydrofuran		ND	200	0.09-61
	Chloroform		ND	C-50	133-276
	1,1,1- Trichloroethane		ND	350	16-714
	Cyclohexane		ND	300	0.52-784
	Carbon Tetrachloride		ND	10 C-25	140-584
	2,2,4-Trimethylpentane		ND	NA	-
	Benzene		ND	1	34-119
	1,2-Dichloroethane		ND	50 C-100	6-111
	Heptane		ND	500	40-547
	Trichloroethene		ND	100 C-200	0.05-167
	1,2-Dichloropropane		ND	75	0.26-0.52
1,4-Dioxane	ND	100	0.8-172		
Bromodichloromethane	ND	NA	-		
cis-1,3-Dichloropropene	ND	NA	1-3		
4-Methyl-2-Pentanone	ND	100	0.1-7.8		
Toluene	7.3	200 C-300	0.16-37		
trans-1,3-Dichloropropene	ND	NA	1-3		
1,1,2-Trichloroethane	ND	10	0.5-167		

**Table 5 Continued**  
**Volatile Organic Compounds (VOC) Analytical Results**  
**Champaign County Physical Plant**  
**Brookens Administration Center - Pod 100**  
**1776 East Washington Street**  
**Urbana, Illinois**  
**Samples Collected March 9, 2021**

Sample Number	VOC Compound	Sample Time (Hours)	Results (ppb) <sup>1</sup>	OSHA PEL (ppm) <sup>2</sup>	Odor Threshold (ppm) <sup>2</sup>
<b>Kruger Office</b>					
1	Tetrachloroethene	24:03	ND	100 C-200	2-71
	2-Hexanone		ND	100	0.06-0.08
	Dibromochloromethane		ND	NA	-
	1,2-Dibromoethane (EDB)		ND	20 C-30	-
	Chlorobenzene		ND	75	0.08-5.9
	Ethyl Benzene		ND	100	0.09-0.6
	m,p-Xylene		ND	100	0.08-40
	o-Xylene		ND	100	0.08-40
	Styrene		ND	100 C-200	0.01-1.9
	Bromoform		ND	0.5	0.19-15
	Cumene		ND	50	0.008-0.13
	1,1,2,2- Tetrachloroethane		ND	5	0.23-7.9
	Propylbenzene		ND	NA	-
	4-Ethyltoluene		ND	NA	-
	1,3,5-Trimethylbenzene		ND	NA	0.006-2.4
	1,2,4-Trimethylbenzene		ND	NA	-
	1,3-Dichlorobenzene		ND	C-50	0.02-50
	1,4-Dichlorobenzene		ND	75	0.12-15
	alpha-Chlorotoluene		ND	1	0.04
	1,2-Dichlorobenzene		ND	C-50	0.02-50
	1,2,4- Trichlorobenzene		ND	NA	2.96-
	Hexachlorobutadiene		ND	NA	1.1
	Vinyl Acetate		ND	C-4	-
	Vinyl Bromide		ND	NA	-
	Octane		ND	500	-
	Naphthalene		ND	10	-
	Propylene		ND	NA	-
	sec-Butylbenzene		ND	NA	-
	tert-Butylbenzene		ND	NA	-
	Butylbenzene		ND	NA	-
Ethyl Acetate	ND	400	50		
Nonane	ND <sup>UJ</sup>	NA	-		
p-Cymene	ND	NA	-		
Methylcyclohexane	ND	500	-		

1 - Parts per Billion  
2 - Parts Per Million  
3 - Data taken 11/06/19 from Haz-Map (<https://hazmap.nlm.nih.gov/>)  
C - OSHA Ceiling Value  
NA - Not Applicable  
ND - Not Detected. Results are less than the detection limit analytical method.  
NT - Not Tested.  
PEL - OSHA Permissible Exposure Limit  
UJ - Analyte associated with low bias in the CCV.

**Table 6**  
**Volatile Organic Compounds (VOC) Analytical Results**  
**Champaign County Physical Plant**  
**Brookens Administration Center - Pod 100**  
**1776 East Washington Street**  
**Urbana, Illinois**  
**Samples Collected March 9, 2021**

Sample Number	VOC Compound	Sample Time (Hours)	Results (ppb) <sup>1</sup>	OSHA PEL (ppm) <sup>2</sup>	Odor Threshold (ppm) <sup>2</sup>
<b>Mann Cubical</b>					
2	Dichlorodifluoromethane (Freon 12)	24:01	3.4	1,000	-
	Dichlorotetrafluoroethane (Freon 114)		ND	1,000	-
	Chloromethane		ND	100 C-200	10
	Vinyl Chloride		ND	1 C-5	10-20
	1,3-Butadiene		ND	1	0.09-76
	Bromomethane		ND	C-20	70-1,000
	Chloroethane		ND	1,000	4.2
	Trichlorofluoromethane (Freon 11)		6.7	1,000	200,000
	Ethanol		NT	1,000	49-716
	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		ND	1,000	45-70
	1,1-Dichloroethene		ND	NA	-
	Acetone		49	1,000	3.6-653
	2-Propanol		380	400	1-610
	Carbon Disulfide		ND	20	0.01-0.42
	3-Chloropropene		ND	1	0.48-5.9
	Methylene Chloride		ND	25	102-440
	Methyl tert-Butyl Ether		ND	NA	0.05-0.13
	trans-1,2-Dichloroethene		ND	200	0.08-1,975
	Hexane		ND	500	65-248
	1,1-Dichloroethane		ND	100	49-1,359
	2-Butanone (Methyl Ethyl Ketone)		ND	200	2-85
	cis-1,2- Dichloroethene		ND	200	0.08
	Tetrahydrofuran		ND	200	0.09-61
	Chloroform		ND	C-50	133-276
	1,1,1- Trichloroethane		ND	350	16-714
	Cyclohexane		ND	300	0.52-784
	Carbon Tetrachloride		ND	10 C-25	140-584
	2,2,4-Trimethylpentane		ND	NA	-
	Benzene		ND	1	34-119
	1,2-Dichloroethane		ND	50 C-100	6-111
	Heptane		ND	500	40-547
	Trichloroethene		ND	100 C-200	0.05-167
	1,2-Dichloropropane		ND	75	0.26-0.52
1,4-Dioxane	ND	100	0.8-172		
Bromodichloromethane	ND	NA	-		
cis-1,3-Dichloropropene	ND	NA	1-3		
4-Methyl-2-Pentanone	ND	100	0.1-7.8		
Toluene	6.3	200 C-300	0.16-37		
trans-1,3-Dichloropropene	ND	NA	1-3		
1,1,2-Trichloroethane	ND	10	0.5-167		

**Table 6 Continued**  
**Volatile Organic Compounds (VOC) Analytical Results**  
**Champaign County Physical Plant**  
**Brookens Administration Center - Pod 100**  
**1776 East Washington Street**  
**Urbana, Illinois**  
**Samples Collected March 9, 2021**

Sample Number	VOC Compound	Sample Time (Hours)	Results (ppb) <sup>1</sup>	OSHA PEL (ppm) <sup>2</sup>	Odor Threshold (ppm) <sup>2</sup>
<b>Mann Cubical</b>					
2	Tetrachloroethene	24:01	ND	100 C-200	2-71
	2-Hexanone		ND	100	0.06-0.08
	Dibromochloromethane		ND	NA	-
	1,2-Dibromoethane (EDB)		ND	20 C-30	-
	Chlorobenzene		ND	75	0.08-5.9
	Ethyl Benzene		ND	100	0.09-0.6
	m,p-Xylene		ND	100	0.08-40
	o-Xylene		ND	100	0.08-40
	Styrene		ND	100 C-200	0.01-1.9
	Bromoform		ND	0.5	0.19-15
	Cumene		ND	50	0.008-0.13
	1,1,2,2- Tetrachloroethane		ND	5	0.23-7.9
	Propylbenzene		ND	NA	-
	4-Ethyltoluene		ND	NA	-
	1,3,5-Trimethylbenzene		ND	NA	0.006-2.4
	1,2,4-Trimethylbenzene		ND	NA	-
	1,3-Dichlorobenzene		ND	C-50	0.02-50
	1,4-Dichlorobenzene		ND	75	0.12-15
	alpha-Chlorotoluene		ND	1	0.04
	1,2-Dichlorobenzene		ND	C-50	0.02-50
	1,2,4- Trichlorobenzene		ND	NA	2.96-
	Hexachlorobutadiene		ND	NA	1.1
	Vinyl Acetate		ND	C-4	-
	Vinyl Bromide		ND	NA	-
	Octane		ND	500	-
	Naphthalene		ND	10	-
	Propylene		ND	NA	-
	sec-Butylbenzene		ND	NA	-
	tert-Butylbenzene		ND	NA	-
	Butylbenzene		ND	NA	-
Ethyl Acetate	ND	400	50		
Nonane	ND <sup>UJ</sup>	NA	-		
p-Cymene	ND	NA	-		
Methylcyclohexane	ND	500	-		

1 - Parts per Billion  
2 - Parts Per Million  
3 - Data taken 11/06/19 from Haz-Map (<https://hazmap.nlm.nih.gov/>)  
C - OSHA Ceiling Value  
NA - Not Applicable  
ND - Not Detected. Results are less than the detection limit analytical method.  
NT - Not Testd.  
PEL - OSHA Permissible Exposure Limit  
UJ - Analyte associated with low bias in the CCV.

**Table 7**  
**Volatile Organic Compounds (VOC) Analytical Results**  
**Champaign County Physical Plant**  
**Brookens Administration Center - Pod 100**  
**1776 East Washington Street**  
**Urbana, Illinois**  
**Samples Collected March 9, 2021**

Sample Number	VOC Compound	Sample Time (Hours)	Results (ppb) <sup>1</sup>	OSHA PEL (ppm) <sup>2</sup>	Odor Threshold (ppm) <sup>2</sup>
<b>Cube Adjacent Belnap</b>					
3	Dichlorodifluoromethane (Freon 12)	24:02	3.1	1,000	-
	Dichlorotetrafluoroethane (Freon 114)		ND	1,000	-
	Chloromethane		ND	100 C-200	10
	Vinyl Chloride		ND	1 C-5	10-20
	1,3-Butadiene		ND	1	0.09-76
	Bromomethane		ND	C-20	70-1,000
	Chloroethane		ND	1,000	4.2
	Trichlorofluoromethane (Freon 11)		6.3	1,000	200,000
	Ethanol		NT	1,000	49-716
	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		ND	1,000	45-70
	1,1-Dichloroethene		ND	NA	-
	Acetone		39	1,000	3.6-653
	2-Propanol		320	400	1-610
	Carbon Disulfide		ND	20	0.01-0.42
	3-Chloropropene		ND	1	0.48-5.9
	Methylene Chloride		ND	25	102-440
	Methyl tert-Butyl Ether		ND	NA	0.05-0.13
	trans-1,2-Dichloroethene		ND	200	0.08-1,975
	Hexane		ND	500	65-248
	1,1-Dichloroethane		ND	100	49-1,359
	2-Butanone (Methyl Ethyl Ketone)		ND	200	2-85
	cis-1,2- Dichloroethene		ND	200	0.08
	Tetrahydrofuran		ND	200	0.09-61
	Chloroform		ND	C-50	133-276
	1,1,1- Trichloroethane		ND	350	16-714
	Cyclohexane		ND	300	0.52-784
	Carbon Tetrachloride		ND	10 C-25	140-584
	2,2,4-Trimethylpentane		ND	NA	-
	Benzene		ND	1	34-119
	1,2-Dichloroethane		ND	50 C-100	6-111
	Heptane		ND	500	40-547
	Trichloroethene		ND	100 C-200	0.05-167
	1,2-Dichloropropane		ND	75	0.26-0.52
1,4-Dioxane	ND	100	0.8-172		
Bromodichloromethane	ND	NA	-		
cis-1,3-Dichloropropene	ND	NA	1-3		
4-Methyl-2-Pentanone	ND	100	0.1-7.8		
Toluene	6.4	200 C-300	0.16-37		
trans-1,3-Dichloropropene	ND	NA	1-3		
1,1,2-Trichloroethane	ND	10	0.5-167		

**Table 7 Continued**  
**Volatile Organic Compounds (VOC) Analytical Results**  
**Champaign County Physical Plant**  
**Brookens Administration Center - Pod 100**  
**1776 East Washington Street**  
**Urbana, Illinois**  
**Samples Collected March 9, 2021**

Sample Number	VOC Compound	Sample Time (Hours)	Results (ppb) <sup>1</sup>	OSHA PEL (ppm) <sup>2</sup>	Odor Threshold (ppm) <sup>2</sup>
<b>Cube Adjacent Belknap</b>					
3	Tetrachloroethene	24:02	ND	100 C-200	2-71
	2-Hexanone		ND	100	0.06-0.08
	Dibromochloromethane		ND	NA	-
	1,2-Dibromoethane (EDB)		ND	20 C-30	-
	Chlorobenzene		ND	75	0.08-5.9
	Ethyl Benzene		ND	100	0.09-0.6
	m,p-Xylene		ND	100	0.08-40
	o-Xylene		ND	100	0.08-40
	Styrene		ND	100 C-200	0.01-1.9
	Bromoform		ND	0.5	0.19-15
	Cumene		ND	50	0.008-0.13
	1,1,2,2- Tetrachloroethane		ND	5	0.23-7.9
	Propylbenzene		ND	NA	-
	4-Ethyltoluene		ND	NA	-
	1,3,5-Trimethylbenzene		ND	NA	0.006-2.4
	1,2,4-Trimethylbenzene		ND	NA	-
	1,3-Dichlorobenzene		ND	C-50	0.02-50
	1,4-Dichlorobenzene		ND	75	0.12-15
	alpha-Chlorotoluene		ND	1	0.04
	1,2-Dichlorobenzene		ND	C-50	0.02-50
	1,2,4- Trichlorobenzene		ND	NA	2.96-
	Hexachlorobutadiene		ND	NA	1.1
	Vinyl Acetate		ND	C-4	-
	Vinyl Bromide		ND	NA	-
	Octane		ND	500	-
	Naphthalene		ND	10	-
	Propylene		ND	NA	-
	sec-Butylbenzene		ND	NA	-
	tert-Butylbenzene		ND	NA	-
	Butylbenzene		ND	NA	-
Ethyl Acetate	ND	400	50		
Nonane	ND <sup>UJ</sup>	NA	-		
p-Cymene	ND	NA	-		
Methylcyclohexane	ND	500	-		

1 - Parts per Billion  
2 - Parts Per Million  
3 - Data taken 11/06/19 from Haz-Map (<https://hazmap.nlm.nih.gov/>)  
C - OSHA Ceiling Value  
NA - Not applicable  
ND - Not Detected. Results are less than the detection limit analytical method.  
NT - Not Tested.  
PEL - OSHA Permissible Exposure Limit  
UJ - Analyte associated with low bias in the CCV.

## **Fungi**

The most predominate or significant fungal organisms that were identified were:

### **1. *Penicillium***

Members of the genus *Penicillium* are the common blue-green moulds that exist ubiquitously in nature and are among the most common of all laboratory contaminants. They colonize relatively dry materials (i.e., house dust at high RH). *Penicillium* species are generally cold temperature molds and predominate in temperate and colder regions. Many species produce antibiotics of value as chemotherapeutic agents in human medicine, while other species produce mycotoxins, which have serious deleterious effects on humans and animals.

In general, *Penicillium* species are regarded as low temperature molds. Because of this physiological limitation, they are not regarded as important clinical pathogens of humans and animals. However, there are exceptions to any biological rule. Some strains of *Penicillium* are rare opportunistic pathogens in humans, causing infections of the eyes, ears, lungs, urinary tract, and membrane lining of the heart.

Many species, such as *P. notatum* (penicillin) and *P. griseofulvum* (griseofulvin), produce antibiotics of value as chemotherapeutic agents in human medicine. Many other species produce mycotoxins, which have serious deleterious effects on humans and animals throughout the world, e.g., ochratoxins, citrinin, and patulin. *Penicillium brevicompactum* can produce the mycotoxins brevianamide A and mycophenolic acid.

### **2. *Aspergillus***

*Aspergillus* is a genus of fungi containing over 100 species, approximately 15 of which are commonly encountered in dwellings. All naturally occurring *aspergilli* are toxigenic. Aspergillosis is now considered the second most common fungal infection requiring hospitalization in the U.S. *Aspergillus* is routinely isolated from respiratory secretions, and skin scrapings. These opportunistic molds grow in most body tissues and fluids.

However, colonization or invasion is common, but not solely, associated with subcutaneous soft tissue and mucous membranes.

Indoor growth occurs in water-damaged building materials and may occur in damp linings of heating systems in fall and winter. They are commonly recorded in indoor and outdoor air sampling.

Most fungi require free water for growth. There are some species of *Aspergillus*, however, that can absorb water molecules directly from humid air. These xerophilic *Aspergillus* species can grow when the relative humidity of the air exceeds 60%. This humidity is commonly exceeded in the lower level of many buildings and, in these cases; *Aspergillus* then becomes a domestic hazard as an allergen. Species of the same genus can also grow in high substrate (low moisture) concentrations and are said to be osmotolerant. Several *Aspergillus* species are found as some of the most predominant fungi in indoor and outdoor air.

### **3. *Basidiomycetes (Basidiospores)***

Basidiomycota is a Division of fungi which include mushrooms, shelf fungi, puffballs, and rusts. Basidiomycetes are important decomposers of wood and other plant material.

The division also includes mycorrhiza-forming mutualists and plant parasites. Of all fungi, the saprobic basidiomycetes are best at decomposing the complex polymer lignin, an abundant component of wood. Two of the groups of basidiomycetes, the rusts and smuts, include particularly obnoxious plant parasites. Basidiospores are asexual spores from mushrooms. They are found worldwide in soil and decaying vegetation. Many are plant pathogens. Some species are an agent of dry rot.

#### **4. *Cladosporium***

In most parts of the world *Cladosporium* is the most abundant genus identified from atmospheric sampling. *Cladosporium* is known as the dry air spora. During crop harvesting or mowing, incredible levels of *Cladosporium* spores ( $10^9$  spores/m<sup>3</sup>) may be dispersed into the atmosphere. *Cladosporium* is routinely the most prevalent spore found during indoor air monitoring.

Allergic rhinitis, bronchitis and asthma typically occur in atopic individuals and are characteristic of an immediate upper-airway response within minutes of exposure to the relevant allergen. This is predominantly a type 1 IgE-mediated immune response. *Cladosporium* is one of the commonest genera causing seasonal mold allergies of this type.

#### **5. Yeasts**

Yeasts are ubiquitous in our environment, being found on fruits, vegetables, and other plant materials (exogenous). Some live as normal inhabitants in and on our bodies (endogenous). Yeasts are considered opportunistic pathogens and as such may be cultured from specimens of patients debilitated in some fashion. Yeast is vernacular for unicellular fungal organisms that reproduce mostly by budding. This term is of no taxonomic significance and is useful only to describe a certain morphological form of a fungus.

### **Fungi**

A kingdom of organisms defined technically as a parasitic or saprobic, filamentous or single-celled eucaryotic organism devoid of chlorophyll and characterized by heterotrophic growth, production of extracellular enzymes, and a distinctive L-lysine biosynthesis pathway. Fungi (i.e., mold, yeasts, and mushrooms) may cause indoor environmental quality problems through the dissemination of conidia, spores, toxins or cell wall constituents.

Over 60 species of fungi are known to produce allergens that cause allergic rhinitis (hay fever) and asthma.

Fungi digest their food outside of the fungal cell. To accomplish this, they excrete enzymes into the environment. Many of these enzymes are unique to the fungi and allow degradation of extremely resistant substances (i.e., lignin, cellulose, and polyethylene).

In addition to enzymes, the fungi produce secondary metabolites that either accumulate in the environment or are stored within the fungus. These metabolites may be involved in the pathogenesis of fungal invasive disease. On the negative side, the most carcinogenic natural substance known is aflatoxin B1, a fungal metabolite. Fungi also produce many volatile compounds during active growth that can be odoriferous, and cause irritation.

The fungi have evolved primarily as decay organisms and are responsible for most aerobic decay in nature. There are fungi that will utilize almost any non-living organic substrate, and a few that will invade plant and animal (including human) tissue.

The majority of fungi are found on dead plant materials. All fungal spores found in indoor environments are ultimately derived from outdoor sources.

There are three classifications of infection caused by fungi:

1. **Systemic Infection:** The systemic fungal infections include *Histoplasmosis*, *Coccidioidomycosis*, *Blastomycosis* and *Paracoccidioidomycosis*. In most cases, infection is initiated when spores of the fungi that cause these diseases are inhaled. A large majority of these infections are self-limiting and produce minimal or no symptoms. Immune suppressed individuals may develop a chronic localized infection, or the disease may disseminate throughout the body, which generally proves to be fatal.
2. **Opportunistic Infection:** Opportunistic infections are generally limited to individuals with impaired immunological defenses, where infection is secondary to a primary disease or condition. The opportunistic fungi are facultative parasites, meaning they can use both living and dead substrates for nutrients. Common opportunistic fungi include species of *Aspergillus*, *Cladosporium*, *Mucor*, *Rhizopus* and *Cryptococcus*.
3. **Dermatophytes:** Dermatophytes are a group of fungi that infect the hair, skin and nails. Infection usually occurs through direct contact with an infected individual or indirectly by sharing clothes, grooming utensils, towels, etc. Transmission to humans from an environmental source is extremely rare, although outbreaks from soil have been reported.

Conditions in the indoor environment that are especially conducive to the growth of fungi are high relative humidity (which allows condensation and absorption of water by hygroscopic materials), moisture that accumulates in appliances, and leaks and floods. In general, fungi prefer dampness rather than standing water, although some (i.e., *fusarium*, *phialophora*, and yeasts) will grow in standing water and have been recovered from humidifier reservoirs.

## **Mycotoxins**

The fungi produce many agents that can be toxic with sufficient exposure. In general, these agents fall into two classes: (a) secondary products of metabolism (i.e., mycotoxins, antibiotics, and VOC's), and (b) structural components [i.e.,  $\beta$ - (1 $\rightarrow$ 3)-D-glucans]. Mycotoxins are nonvolatile; relatively low-molecular-weight secondary metabolic products that may affect exposed persons in a variety of ways, the best known of, which are deleterious.  $\beta$ -1, 3-glucan is a constituent of fungal cell walls suggested as one of the possible causative agents of adverse effects in buildings with a history of water damage. Glucans comprise the bulk of the cell walls of most fungi. Glucans have anti-tumor activity and modulate the endotoxin-stimulated release of cytokines in Gram-negative bacterial infections. Glucans have irritant effects similar to, although less potent than, those of endotoxin. Exposure to glucans in dust has been associated

with BRIs. Whether the glucans, some other fungal agent, or other factors associated with conditions leading to fungal growth actually mediated the effect remains to be investigated.

Mycotoxins are  $\gamma$ -products of fungal metabolic processes. These compounds are considered secondary metabolites because they are natural products not necessary for fungal growth and are derived from a few precursors formed during primary metabolism. The function of fungal toxins has not been clearly established. However, they are considered to play a role in regulating competition with other microorganisms, and mycotoxins probably help parasitic fungi invade host tissues.

Fungi that have been shown to produce mycotoxins are:

*Aspergillus*

*Alternaria*

*Fusarium*

*Penicillium*

*Stachybotrys*

*Mrothecium*

### **Trichothecene**

A class of toxins produced by certain fungal species such as *Fusarium sporotrichoides* and *Stachybotrys chartarum*. These mycotoxins cause severe health effects in humans and other animals (i.e., T-2; HT-t; diacetoxyscirpenol, or DAS).

### **Mycotoxigenic**

The production of mycotoxins, which are known as specialized fungal toxins. Many different types of toxins are included in this broad category. Most are small, non-volatile molecules such as polyketides, amino acid derivatives, alkaloids, and trichothecenes.

### **Antigens/Allergens**

Fungi produce a variety of antigen and allergen compounds. In most cases, sensitization to antigens and allergens occurs via the airborne route. Two types of diseases that are caused by airborne fungal antigens are allergic diseases (asthma and rhinitis/hypersensitivity pneumonitis). In addition, some fungi can grow in the thick secretions that can build up in the lungs of some asthmatic patients. These fungi do not actually invade the human tissue but grow in the mucus and produce antigens (and possibly toxins) that cause disease. The most common fungus causing this disease is *Aspergillus fumigatus*, a ubiquitous environmental fungus that is also an opportunistic infectious agent.

### **Irritants**

The fungi produce volatile organic compounds during degradation of substrates that cause the typical “moldy” odor associated with fungal growth, as well as a wide variety of other odors. These substances can be irritating to the mucous membranes and some evidence is accumulating that they may cause headaches and possibly other kinds of acute toxic symptoms.

Only a few fungi (i.e., *Histoplasma*, *Blastomyces*, and *Cryptococcus*) are considered primary, systemic, human pathogens that can infect healthy persons. A large number of fungal species are

known to cause infection in immunocompromised persons, such as those with AIDS or those receiving chemotherapy. These infections are known as opportunistic infections, and frequently involve fungi from the genera *Aspergillus* and *Fusarium*. Exposure to *Aspergillus* in this population may lead to respiratory or systemic forms of aspergillosis. *Fusarium* infections are rare, and normally cause local skin infections, although lethal invasive cases have been documented.

Allergic respiratory diseases resulting from exposure to fungi have been documented in agricultural and industrial biotechnology settings, offices, and building environments. These include allergic rhinitis (nasal allergy), allergic asthma, allergic bronchopulmonary aspergillosis, and hypersensitivity pneumonitis (HP). Allergic rhinitis is characterized by sneezing, itching of the mucous membranes, and nasal congestion.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Non-Culturable Fungal Spore Air Sampling**

#### **Conclusions**

Dose-response data are not available for most microorganism exposures. In addition, health organizations have established no exposure limit for bioaerosols. Because of this, indoor bioaerosol levels must be compared to outdoor levels and/or to an asymptomatic control area. Comparison of the diversity of indoor fungi to that of outdoors is of primary importance to the interpretation of an indoor air quality study. If no reservoirs or amplification sites of fungi are located indoors, then it is anticipated that the same biodiversity will be found as outdoors. In general, indoor levels are lower than outdoor levels, and the taxa are similar. By comparing the microbiological profiles at the contaminated sites with those at uncontaminated sites, it is possible to determine if amplification of microorganisms has occurred in the contaminated areas of the building. It is important to note the differences in taxa between the building interior and ambient levels.

The sampling and analytical results indicate that there is currently no fungal amplification present in the sampled areas of the Pod 100.

#### **Recommendations**

No recommendations are required at this time.

### **Environmental Parameters**

#### **Conclusions**

The American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE) Standard 55-2017 recommends a typical temperature range of 68° F to 79° F and relative humidity levels between 30 and 60 percent. These ranges are based on thermal conditions acceptable to 80 percent of the building occupants. Both temperature and relative humidity need to be considered when determining thermal comfort. Table 8 shows the range of temperatures and relative humidity that fall within the comfort zone for most individuals dressed in “typical” clothing and involved in light, mostly sedentary activity during the winter and summer months.

Temperature and relative humidity levels were measured in the building. The average temperature measured in the area was 70.2° F. In general, the temperatures in the area were within the recommended range. See Table 1 for the measured temperatures.

Lower humidity dehydrates the skin and dries the mucous membranes of the upper respiratory tract causing irritation. Occupants who wear contact lenses often have problems with low relative humidity due to lenses irritating the eyes from a lack of moisture. Low humidity has also been found to cause lethargy and headaches. No one environment will be acceptable to everyone since people differ in age, activity level, and physiology. The goal is to maintain a thermal comfort level that will be acceptable to a majority of the building’s occupants.

The average relative humidity in the evaluated space was 31.6 percent during the survey. In general, the relative humidity in the area during occupied hours was at or below the recommended range of 30 percent to 60 percent (see Table 1).

**Table 8**  
**Acceptable Ranges of Temperature and Relative Humidity**  
**During Winter and Summer Months**  
**Indoor Environmental Quality Investigation**  
**Frances Nelson Health Center**  
**819 Bloomington Road**  
**Champaign, Illinois**  
**November 30, 2017**

Relative Humidity	Winter Temperature	Summer Temperature
30%	68.5°F – 76.0°F	74.0°F – 80.0°F
40%	68.5°F- 75.5°F	73.5°F – 79.5°F
50%	68.5°F – 74.5°F	73.0°F – 79.0°F
60%	68.0°F – 74.0°F	72.5° - 78.0°F

**Recommendations**

Based on the sampling and analytical data, the relative humidity should be raised to about 45 percent to eliminate dehydrated skin and dry mucous membranes of the upper respiratory tract. In addition, the mean temperature should rise to between 68.5°F and 76.0°F.

**Volatile Organic Compounds (VOC’s)**

**Conclusions**

Volatile organic compounds (VOC’s) concentrations for the three sample locations (i.e., Krueger’s Office, Mann’s Office, and the Cubical adjacent to Krueger Office) were less than the limit of detection of the analytical method (<LOD) for sixty-nine (69) respectively of the

seventy-four (74) analyzed compounds. The five (5) compounds respectively that were identified were at concentrations far below the OSHA Permissible Exposure Level and published odor thresholds. The one compound that was identified at a concentration greater than the odor threshold was Isopropyl Alcohol. This is not considered an issue because this chemical is a common item in the clinical offices. It is important to note that several of the compounds identified are not normally found in the office/clinic environment. It should be noted that Propanol is an alcohol and is probably utilized in hand sanitizers being used currently due to the Coronavirus outbreak.

### **Recommendations**

Based on the sampling and analytical data, recommendations are not necessary because the chemical exposure concentrations are below levels which are considered a health issue by regulatory and consensus authorities.

### **Swab Samples**

### **Conclusions**

The analytical result for the culturable swab samples collected from the building HVAC units 6 and 9 on March 9, 2021 were considered to be contaminated with yeast as described in Table 2. In addition, Table 2a describes the result of this sample location as being less than the normal background levels of fungi.

### **Air Handling Units**

1. The HVAC systems should be cleaned as outlined in the National Air Duct Cleaning Association (NADCA) Document.
2. The coil and condensate pan of the main unit should be cleaned utilizing the procedures described in the most current National Air Duct Cleaning Association (NADCA) Assessment, Cleaning and Restoration (ACR) of HVAC Systems, or an equivalent industry standard.

Accumulated fungal growth is difficult to clean from coil fin surfaces. Often cleaning agents are required due to the difficulty of removing impacted particulate within the coil's air stream surfaces. These HVAC coil cleaners can potentially cause damage to heat-transfer surfaces. The residues from such cleaners can add contamination to air flowing over the coil surfaces, if not completely rinsed off. Be aware that odors from these cleaning agents will be transferred to the occupied space and cause employee complaints. Because of the odor issues, consideration should be given to the use of steam as a cleaning agent.

HVAC components should be isolated from portions of the building where remediation is taking place. Air handlers that are located in an equipment room, which is also part of the conditioned space, should have a containment constructed.

3. HVAC coils and pan components should be isolated from portions of the building where remediation is taking place.
4. During the period that the negative air machines are operating, the HVAC air conditioning systems and gas fired appliances should not be operated. This is because of the potential of back-drafting (pulling carbon monoxide) from gas fired equipment into the occupied space of

the building. In addition, this will reduce the potential for the formation of condensation on the chilled supply and return air ductwork during the summer months.

5. If consideration is given to the use of coating and/or sealants in the HVAC systems, which claim antimicrobial performance, they shall be registered by the EPA or other applicable regulatory agency specifically for use in HVAC systems. These antimicrobial agents should have undergone a risk assessment for such use and contain specific and detailed label directions for use in an HVAC system. The use of these materials should be considered only after mechanical surface cleaning has been performed.
7. Subsequent to abatement and cleaning activities, a HEPA filtered negative air machine should be allowed to operate in the basement for forty-eight hours to eliminate any contamination. During the period that the negative air machines are operating, the HVAC air conditioning systems should not be operated. This is because of the potential of back-drafting (pulling carbon monoxide) from gas fired equipment into the occupied space of the building.
8. Subsequent to cleaning of the coils and condensate pans consideration should be given to utilizing biocide tablets in the pans on a recurring basis.

It is important to note that these are recommendations for your consideration. These are not mandatory; therefore, the work practices outlined above can be performed by your staff.

Data regarding site conditions may vary depending upon when and where obtained, resulting in possible uncertainty with respect to the interpretation of actual conditions at the site. Non-invasive sampling was conducted on the date, and at the time and place, of the inspection assessment. Occupational Environmental Health Solutions, Inc. OEHS offers no assurances and assumes no liability for site conditions or activities which are outside the scope of the inspection assessment requested by client. This inspection assessment report presents data collected on the date, and at the time and place, of the inspection assessment. OEHS MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE INSPECTION ASSESSMENT. Any alteration, editing or characterization of this inspection assessment report without the express written permission of OEHS is strictly prohibited.

If you have any questions, please contact me at (217) 483-9296.

Sincerely

Occupational Environmental Health Solutions, Inc.

James Barnes, MS, CIH  
President

**Julia R. Rietz**  
State's Attorney



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**Office of  
State's Attorney  
Champaign County, Illinois**

March 29, 2021

Mr. Steve Summers  
Facilities  
Via email: [mrobison@co.champaign.il.us](mailto:mrobison@co.champaign.il.us)

Re: Closed Sessions Minutes Review for Facilities

Dear Mr. Summers:

Pursuant to the Open Meetings Act, a public body such as the Facilities Committee must review its closed session minutes at least semi-annually. The Committee must then determine whether the need for confidentiality exists as to all or part of those minutes, or that the minutes or portions thereof no longer require confidential treatment, if so, the records would be available for public inspection. Therefore, the question is whether there is no longer a need to keep minutes closed in order to protect either the public interest or the privacy of an individual. Whichever conclusion that the Committee draws must be then be reported in open session.

Please note that the Committee may enter into closed session for the purpose of review of closed session minutes pursuant to 5 ILCS 120/2(c)(21): Discussion of minutes of meetings lawfully closed under the Act. Just as in open session, if the matter requires action by the Committee, the matter must have been noticed on the posted agenda.

The County Board passed Resolution No. 7969, "Resolution Establishing Procedures for Semi-Annual Review of Closed Session Minutes by the Champaign County Board" on November 17th, 2011. Please see attached Facilities Closed Meeting Minutes Review for the status of your committee's closed meeting minutes to determine if/when they can be reopened pursuant to the above resolution.

Sincerely,

A handwritten signature in blue ink, appearing to read "M. Sullard".

Matthew L. Sullard

MLS/jlt  
enclosure

## Closed Meeting Minutes Review

Is it necessary to protect the public interest or privacy of an individual?

Date of Minutes	Yes, Keep Confidential	No, Place in Open Files
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### County Facilities Committee

May 10, 2005	X	
October 12, 2005	X	
February 7, 2006	X	
May 2, 2006	X	
June 13, 2006	X	
August 22, 2006	X	
October 3, 2006	X	
November 21, 2006	X	
May 6, 2008	X	
November 12, 2008	X	
August 11, 2009 – 7:17 p.m.	X	
August 3, 2010 – 8:03 p.m. <i>Employee Parking at Niemann Foods</i>	X	
October 5, 2010 – 7:05 p.m. <i>Lease with Humane Society</i>	X	
June 2, 2015 – 7:15 p.m. <i>Humane Society Lease</i>	X	
February 8, 2018 <i>Rosecrance lease of NH wing</i>	X	

**\*Minutes not previously approved in semi-annual review**