



City of West Allis

Meeting Agenda

Plan Commission

7525 W. Greenfield Ave.
West Allis, WI 53214

Wednesday, August 27, 2025

6:00 PM

City Hall, Room 128
7525 W. Greenfield Ave.

REGULAR MEETING

A. CALL TO ORDER

B. ROLL CALL

C. APPROVAL OF MINUTES

1. [25-0299](#) July 23, 2025

Attachments: [July 23, 2025 \(draft minutes\)](#)

D. NEW AND PREVIOUS MATTERS

2. [25-0301](#) Site, Landscaping, and Architectural Design Review for exterior alterations to Aurora West Allis Hospital, an existing hospital use, at 8901 W. Lincoln Ave. & 2349 & 2400 S. 90 St. (Tax Key: 487-9001-000).

Attachments: [2 \(SLA\) WA Aurora Hospital](#)

3. [25-0302](#) Sign Plan Appeal for Spirit Halloween, a proposed General Retail use, at 6731 W. Greenfield Ave. (Tax Key No. 453-9018-001)

Attachments: [3. \(SIGN\) Spirit Halloween](#)

4. [25-0303](#) Sign Plan Appeal for Tsunami Express Car Wash, an existing Car Wash Service use, at 10928 W. Oklahoma Ave. (Tax Key No. 520-0151-001)

Attachments: [4 \(SIGN\) Tsunami](#)

5. [25-0304](#) Ordinance to amend Code Section 19.42 residential accessory buildings .

Attachments: [5 \(ORD\) Residential Accessory buildings](#)

6. [25-0305](#) Ordinance to amend Code Section 19.32 Principal uses to incorporate Recovery Residence use.

Attachments: [6 \(ORD\) Recovery Residences](#)

7. [25-0306](#) Sign Plan Appeal for Slingshot Bar, a proposed Recreation (indoor) use, at 6325 W National Ave. (Tax Key No. 454-0122-001)

Attachments: [7 \(SIGN\) Slingshot Bar](#)

8. [25-0307](#) Project Tracking

E. ADJOURNMENT



All meetings of the Plan Commission are public meetings. In order for the general public to make comments at the committee meetings, the individual(s) must be scheduled (as an appearance) with the chair of the committee or the appropriate staff contact; otherwise, the meeting of the committee is a working session for the committee itself, and discussion by those in attendance is limited to committee members, the mayor, other alderpersons, staff and others that may be a party to the matter being discussed.

NOTICE OF POSSIBLE QUORUM

It is possible that members of, and possibly a quorum of, members of other governmental bodies of the municipality may be in attendance at the above-stated meeting to gather information. No action will be taken by any governmental body at the above-stated meeting other than the governmental body specifically referred to above in this notice.

NON-DISCRIMINATION STATEMENT

The City of West Allis does not discriminate against individuals on the basis of race, color, religion, age, marital or veterans' status, sex, national origin, disability or any other legally protected status in the admission or access to, or treatment or employment in, its services, programs or activities.

AMERICANS WITH DISABILITIES ACT NOTICE

Upon reasonable notice the City will furnish appropriate auxiliary aids and services when necessary to afford individuals with disabilities an equal opportunity to participate in and to enjoy the benefits of a service, program or activity provided by the City.

LIMITED ENGLISH PROFICIENCY STATEMENT

It is the policy of the City of West Allis to provide language access services to populations of persons with Limited English Proficiency (LEP) who are eligible to be served or likely to be directly affected by our programs. Such services will be focused on providing meaningful access to our programs, services and/or benefits.



City of West Allis

Meeting Minutes

Plan Commission

7525 W. Greenfield Ave.
West Allis, WI 53214

Wednesday, July 23, 2025

6:00 PM

City Hall, Room 128
7525 W. Greenfield Ave.

REGULAR MEETING (draft minutes)

A. CALL TO ORDER

B. ROLL CALL

Present 5 - Wayne Clark, Brian Frank, Jessica Katzenmeyer, Brandon Reinke, Kathleen Dagenhardt

Excused 4 - Eric Torkelson, Dan Devine, Lisa Coons, David Raschka

Others Attending

Ald. Grisham, City of West Allis
Robert Blau, Fairview Partners, LLC
Erin Wurtzbacher, Betsy Peckenpaugh, John Peine Architects, Kristy Casey; Optimist's Bazaar
Jeff Hutt, Jason McClure; Beloit Rd. Baptist
David Kircher, Phoenix Financial
William Byers, The Butcher's Word
Evan Crossman, Isaiah Minning, Ryan Neidringer, Katie Monachos; Rinka Architecture

Staff

Steve Schaer, AICP, Director of Planning and Zoning
Jack Kovnesky, Planner
Emily Wagner, Planner

C. APPROVAL OF MINUTES

1. [25-0264](#) June 25, 2025

Attachments: [June 25, 2025 \(draft minutes\)](#)

Katzenmeyer moved to approve this matter, Frank seconded, motion carried.

D. NEW AND PREVIOUS MATTERS

2. [25-0265](#) Site, Landscaping, and Architectural Design Review for F Street 92, LLC, a proposed 5+ Unit Dwelling use, at 1405 S. 92nd St. (Tax Key No. 450-0502-000)

Attachments: [2-3 \(SLA-CSM\) St Al's Redevelopment at 1405 S 92 St](#)

Items 2 & 3 were taken together.

Emily Wagner presented.

Wayne Clark inquired if the developer agreed to the items presented, for example the EV charging port and so forth. Ald. Grisham expressed some concerns and questions,

stating that both herself along with Ald. Kuehn have been working very closely with our community on this development and has some feedback to address. Concerns with the color and the roof line design and character of the development. Visitor parking was addressed along with the traffic concerns with increased congestion in the residential area. Emily Wagner confirmed that staff has brought these concerns to the Engineering Department and we typically defer to their judgment on these issues.

The applicant addressed the concerns presented and offered feedback on the quality of material at the baseline and to flip the terrace on NW to NE. The white paneling actually has a variation of design and texture type of fiber in the panel and won't be as stark as displayed on the rendering.

Additional discussion ensued regarding the amenities, traffic load and parking concerns.

Recommendation: Approve the Site, Landscaping, and Architectural Design Review for F Street 92, LLC, a proposed 5+ Unit Dwelling use, at 1405 S. 92nd St. (Tax Key No. 450-0502-000) and Certified Survey Map to split the existing parcel at 1405 S. 92nd St. into two parcels. (Tax Key No. 450-0502-000) subject to the following conditions:

1. Common Council approval of the Certified Survey Map subject to technical corrections.
2. Revised Site, Landscaping, and Architectural plans submitted to show the following:
(a) For all buildings submit updated elevations and a material board to reflect the updated elevations color selections and textures; (b) On the mid-rise building submit updated elevations. Reconsideration of building massing along the frontage with W. Greenfield Ave., and at the NE and NW corners facing intersections. Some Plan Commissioners expressed a need for a 4th level terrace on the NE corner, stronger rooflines, and questioned the (white) exterior material color selection; (c) The first floor base material being reconsidered to reflect an higher quality alternate material; (d) Visitor parking being indicated on the site plan; (e) Twenty-eight indoor bicycle parking spaces and show location of outdoor bicycle parking to comply with Sec. 19.44 Vehicle Parking; (f) One EV charging station in the parking plan; (g) Increase landscaping screening for the southern parking lot and overall plan subject to City Forester review approval; (h) Coordination with City Forestry on adding and/or replacement of street trees around the site; (i) Fence details for the overall site, ~~and replacement of chain-link fencing with a more decorative variety of fencing;~~ (j) Submission of refuse enclosure plan details; (k) Submission of retaining wall type, height, and grading details; (l) Grading plan with respect to the slope of the driveway entrance to the underbuilding parking.
3. Documentation and approval showing compliance with the City of West Allis Stormwater Management Ordinance, to be submitted to the Building Inspections and Neighborhood Services Department by a registered Civil Engineer. A stormwater permit must be obtained from the City Building Inspector. Contact Mike Romens, Building Inspector, at 414-302-8413.
4. Planned work or modifications within City right-of-way shall be coordinated with City Engineering:
 - a. traffic impact memo being prepared for City Engineering to indicate vehicle trips given change in use.
 - b. driveway permits being applied for and obtained through City Engineering for proposed modifications, and;
 - c. The northern entrance on S. 92 St. should be a right in/right out situation and the

island extended to prevent left turns from the driveway nearest the intersection with W. Greenfield Ave.

5. *Signage and site lighting plan being submitted for design review.*

Katzenmeyer moved to approve this matter, Dagenhardt seconded, motion carried by the following vote:

Aye: 4 - Clark, Frank, Katzenmeyer, Dagenhardt

No: 1 - Reinke

3. [25-0266](#) Certified Survey Map to split the existing parcel at 1405 S. 92nd St. into two parcels. (Tax Key No. 450-0502-000)

Items 2 & 3 were taken together.

Katzenmeyer moved to approve this matter, Dagenhardt seconded, motion carried by the following vote:

Aye: 4 - Clark, Frank, Katzenmeyer, Dagenhardt

No: 1 - Reinke

- 4A. [25-0267](#) Conditional Use Permit for The Butcher's Word, a proposed Food Production Use, at 1320 S. 108th St.

Frank moved to approve the items #4A & #4B, Katzenmeyer seconded, motion carried.

- 4B. [25-0268](#) Site, Landscaping, and Architectural Design Review for The Butcher's Word, a proposed Food Production Use, at 1320 S. 108th St. (Tax Key No. 444-0485-001)

Attachments: [4 \(CUP-SLA\) The Butchers Word 1320 S 108th St](#)

Items #4A & #4B were taken together.

Jack Kovnesky presented.

Wayne Clark inquired on who controls the signage, and was advised that it's the owner of the property with further details outline by Mr. Kovnesky.

Staff was requested to report back to Plan Commission with sign updates.

Recommendation: Common Council approval of the conditional use and approval of the Site, Landscaping, and Architectural Design Review for The Butcher's Word, a proposed Food Production Use, at 1320 S. 108th St. (Tax Key No. 444-0485-001) subject to the following conditions:

(Item 1-4 are required to be satisfied prior to the issuance of building permits associated with the proposed work reviewed by Plan Commission. Contractors applying for permits should be advised accordingly.)

1. *Common Council approval of the Conditional Use Permit (Scheduled for August 12, 2025)*

2. A revised site and landscaping plan being submitted to show the following: (a) front entry site improvements (landscaping elements such as planter boxes, trellis', a small patio/seating option, or other features on the site to contribute some natural features to the already built-out site); (b) refuse location and screening plan; (c) confirmation of exterior maintenance improvements specifically on the rear of the building; (d) location of an outdoor bicycle rack.
3. Building permits being applied for with the Code Enforcement Department for review.
4. Scope of work being indicated on signage and lighting. Will the property be keeping pole sign and repaneling existing sign faces or removing the pole sign? Removal and replacement will require a signage permit and design review application with the Planning & Zoning Department.

Frank moved to approve the items #4A & #4B, Katzenmeyer seconded, motion carried.

Passed The Block Vote

Frank moved to approve the items #4A & #4B, Katzenmeyer seconded, motion carried.

5. [25-0269](#) Site, Landscaping, & Architectural Design Review for a proposed ramp at Beloit Road Baptist Church, an existing Religious Institution use, at 8337 W. Beloit Rd. (Tax Key No. 516-0271-000)

Attachments: [5 \(SLA\) Beloit Baptist Church Ramp](#)

Jack Kovnesky presented.

Recommendation: Approve the Site, Landscaping, & Architectural Design Review for a proposed ramp at Beloit Road Baptist Church, an existing Religious Institution use, at 8337 W. Beloit Rd. (Tax Key No. 516-0271-000)

1. Site plan being updated to show a replacement landscaping area along the north side of the new ramp.
2. A building permit being submitted with the Code Enforcement Department.
3. If a replacement sign is planned, a signage permit application and plans being submitted for design review and permit with the Planning & Zoning Department.

Frank moved to approve this matter, Dagenhardt seconded, motion carried.

6. [25-0270](#) Site, Landscaping, and Architectural Design Review for Tri-City Bank, an existing General Service use, at 10909 W. Greenfield Ave. (Tax Key No. 448-9996-002)

Attachments: [6 \(SLA\) Tri City Bank](#)

Jack Kovnesky presented.

Recommendation: Approve the Site, Landscaping, and Architectural Design Review for Tri-City Bank, an existing General Service use, at 10909 W. Greenfield Ave. (Tax Key No. 448-9996-002) subject to the following conditions:

1. A revised site & landscaping plan being submitted to the Planning & Zoning office to show a) a total of 11 parking stalls removed to conform with [Sec. 19.44](#) <https://westallis.municipalcodeonline.com/book?type=ordinances> of the Zoning Code b) additional landscaping areas created through the removal of existing pavement with species and locations indicated c) modification of the northeast access driveway to a right out configuration along W. Greenfield Ave. d) an outdoor bicycle rack added e) internal pedestrian accommodations.
2. Street Excavation and Driveway Approach Permits being applied for with the Engineering Department for review.

Katzenmeyer moved to approve this matter, Frank seconded, motion carried.

7. [25-0271](#) Sign Plan Appeal for All Goods, a proposed Neighborhood Retail use, at 8436 W. Greenfield Ave. (Tax Key No. 442-0632-000)

Attachments: [7 \(SIGN\) All Goods](#)

Jack Kovnesky presented.

Recommendation: Recommend approval of the Sign Plan Appeal for All Goods, a proposed Neighborhood Retail use, at 8436 W. Greenfield Ave. (Tax Key No. 442-0632-000), based on the sign's satisfaction of the requirements of the City's Sign Code Creative Sign Subsection.

Katzenmeyer moved to approve this matter, Dagenhardt seconded, motion carried.

8. [25-0272](#) Sign Plan Appeal for Fairview Partners, LLC, at 12221 W. Fairview Ave. (Tax Key No. 413-9996-009)

Attachments: [8 \(SIGN\) Blau Plumbing 12221 W Fairview Ave](#)

Steve Schaer presented.

Brian Frank inquired why this needs to be so large, is this for advertising? It's becoming a billboard advertising just for your content or others? Robert Blau replied the vision to expand from single business to multiple tenant center, requests the larger sign to accommodate visibility at speed, height with adjacent grades. Will provide "in kind" advertising to the City.

Staff noted that on or off premise signage is immaterial. The area, height, percentage of messaging over sign ordinance limits is at issue. Staff shared past precedent (Iron Workers sign) approval in 2018.

Recommendation: Recommend denial of the Sign Plan Appeal for Fairview Partners, LLC, at 12221 W. Fairview Ave. (Tax Key No. 413-9996-009). The basis for rejecting the proposal as follows:

1. The proposed sign significantly exceeds the area, height, digital display allowances and doesn't meet the design or landscaping requirements within sec 13.21(13)(g)(i)(v) (vii)(ix)(xii) more specifically referenced below.
2. The proposed features fully digital sign faces (100% of each sign face) and sign

exceeds the 35% limit described in sec. 13.21(19): The changeable copy portion of the sign must occupy a secondary position to the name of tenant. The area of changeable copy and electronic message centers shall not exceed thirty-five percent (35%) of the sign face.

3. Approval of the proposal would set an exceptional precedent to allow other properties along the interstate corridors of the city to construct similar signs.
4. Adhering to the existing sign ordinance is reasonable and has the purpose as listed in sec. 13.21(1)(c)(d)(i) regulation of signs within the City is necessary and in the public interest: (c) to promote a healthy and properly designed business environment, (d) to provide for the expression of both commercial and noncommercial speech, and (i) does not regulation sign content.

Freestanding signage 13.21(13)(g) Master Sign Program.

- i. **Multi-tenant commercial buildings, or buildings/centers greater than twenty-five thousand (25,000) and less than fifty thousand (50,000) square feet of building area may be permitted one (1) freestanding sign of no more than seventy-five (75) square feet in area, ten (10) feet in height, and subject to Plan Commission approval.**
- ii. Buildings/centers greater than fifty thousand (50,000) and less than one hundred thousand (100,000) square feet of building area may be permitted one (1) sign per building/center of one hundred fifty (150) square feet in area, not to exceed twelve (12) feet in height, subject to Plan Commission approval.
- iii. Buildings/centers greater than one hundred thousand (100,000) and less than three hundred thousand (300,000) square feet of building area may be permitted one (1) freestanding sign per arterial street of one hundred fifty (150) square feet in area each, or one (1) sign per building/center of two hundred twenty-five (225) square feet in area, neither to exceed fifteen (15) feet in height, subject to Plan Commission approval.
- iv. Determination of signage area for buildings or centers greater than three hundred thousand (300,000) square feet of building area shall be determined by the Plan Commission.
- v. **Where changeable copy or electronic message center signage is permitted pursuant to Section 13.21(19), the area of the changeable copy sign must be included in the total computation of allowable signage and subject to Plan Commission review.**
- vi. The Planning and Zoning Program Staff and the Plan Commission shall not approve any Master Sign Plan greater than fifteen (15) feet in height, except for centers over three hundred thousand (300,000) square feet in building area, which height shall be subject to Plan Commission discretion.
- vii. **Freestanding signs must be architecturally integrated with the principal building on the property. The base, sides, and top of the sign shall be constructed of masonry or other approved durable materials. The tone and texture of the base, sides, and top shall reflect the principal building construction as close as possible or shall enhance the exterior architecture of the principal building. The base of the sign shall be a minimum of two (2) feet in height.**
- viii. The color scheme of the sign shall complement the color scheme of the principal building.
- ix. **Architectural features (such as sills, piers, reveals, capstones, medallions, etc.) which are part of the architectural makeup of the principal building shall be incorporated into the sign.**
- x. The sign face shall be constructed of aluminum, masonry, or similar product or polycarbonate with an opaque background or other approved durable materials. If internally illuminated, the sign face must be constructed of an opaque

background.

xi. The sign structure or post of a freestanding sign must be wrapped in or constructed of a material compatible with the materials utilized in the construction of the building to which the sign refers. The width of the base of the sign must be equal to or greater than the width of the sign face.

xii. **Landscaping requirements. Landscaping shall be provided at the base of the supporting structure equal to twice the area of one face of the sign.** For example, twenty (20) square feet of sign area equals forty (40) square feet of landscaped area. The Plan Commission may reduce or waive this requirement if it is determined the additional landscaping would not contribute significantly to the overall aesthetic character of the project.

Frank moved to deny this matter, Reinke seconded, motion carried.

9. [25-0273](#)

Sign Plan Appeal for The Armory Hockey, at 11111 W. Greenfield Ave.
(Tax Key No. 448-9993-006)

Attachments: [9 \(SIGN\) The Armory 11111 W Greenfield Ave](#)

Jack Kovnesky presented.

Recommendation: Recommend approval of the Sign Plan Appeal for The Armory Hockey, at 11111 W. Greenfield Ave. (Tax Key No. 448-9993-006).

Frank moved to approve this matter, Katzenmeyer seconded, motion carried.

10. [25-0274](#)

Project Tracking

This matter was Discussed.

E. ADJOURNMENT

There being no other business, a motion was made by Katzenmeyer, seconded by Frank to adjourn at 7:43 p.m.



All meetings of the Plan Commission are public meetings. In order for the general public to make comments at the committee meetings, the individual(s) must be scheduled (as an appearance) with the chair of the committee or the appropriate staff contact; otherwise, the meeting of the committee is a working session for the committee itself, and discussion by those in attendance is limited to committee members, the mayor, other alderpersons, staff and others that may be a party to the matter being discussed.

NON-DISCRIMINATION STATEMENT

The City of West Allis does not discriminate against individuals on the basis of race, color, religion, age, marital or veterans' status, sex, national origin, disability or any other legally protected status in the admission or access to, or treatment or employment in, its services, programs or activities.

AMERICANS WITH DISABILITIES ACT NOTICE

Upon reasonable notice the City will furnish appropriate auxiliary aids and services when necessary to afford individuals with disabilities an equal opportunity to participate in and to enjoy the benefits of a service, program or activity provided by the City.

LIMITED ENGLISH PROFICIENCY STATEMENT

It is the policy of the City of West Allis to provide language access services to populations of persons with Limited English Proficiency (LEP) who are eligible to be served or likely to be directly affected by our programs. Such services will be focused on providing meaningful access to our programs, services and/or benefits.



**STAFF REPORT
WEST ALLIS PLAN COMMISSION
Wednesday, August 27, 2025
6:00 PM**

2. Site, Landscaping, and Architectural Design Review for exterior alterations to Aurora West Allis Hospital, an existing hospital use, at 8901 W. Lincoln Ave. & 2349 & 2400 S. 90 St. (Tax Key: 487-9001-000).

Overview

The project consists of relocating the existing ICU from the 7th floor to the 4th floor, approximately half of the 4th floor will be renovated (11,414 sf) creating a new ICU Suite with 12 rooms, team stations and all required support areas. The project requires a new Air Handling Unit to serve the new ICU Unit; it will be in the first-floor mechanical room. All existing shafts in the building housing the ICU Unit are serving other floors and need to remain operational during this renovation. The new ductwork feeding the 4th floor ICU project will run on the 2nd floor roof above the mechanical and up the Northeast elevation and enter at the 4th floor. The ductwork will match existing exposed ductwork located on campus (White - Thermaduct)



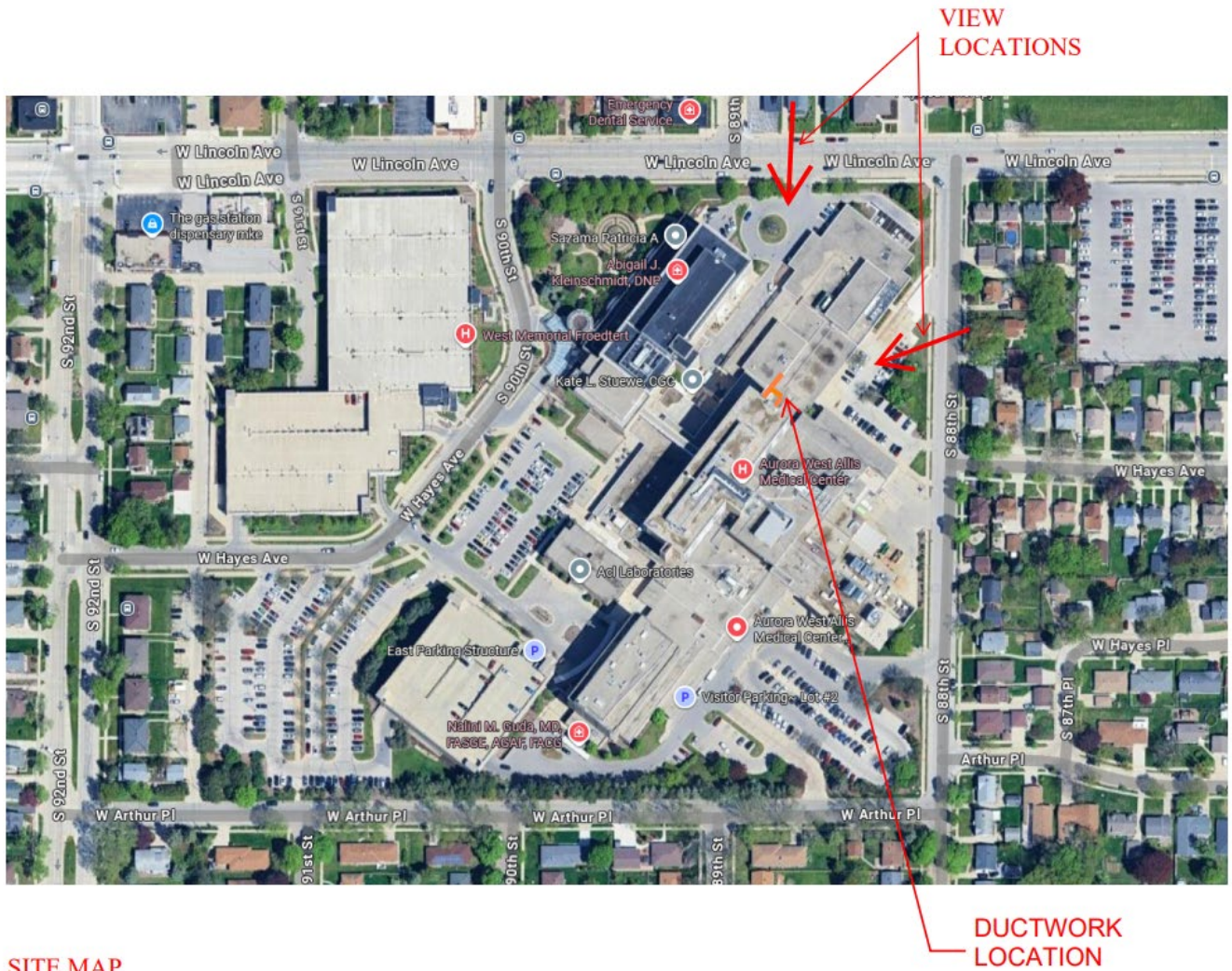
The applicant is requesting a review of the exterior ductwork proposal.

Staff notes that the hospital already has a significant amount of roof top units, throughout the various buildings on site. The proposed additional ductwork would not substantially change the look of the building or be a departure from what's been done in adjacent areas. Refer to the photo

exhibits indicating the location of proposed work and sight lines from S. 88 St. and W. Lincoln Ave.

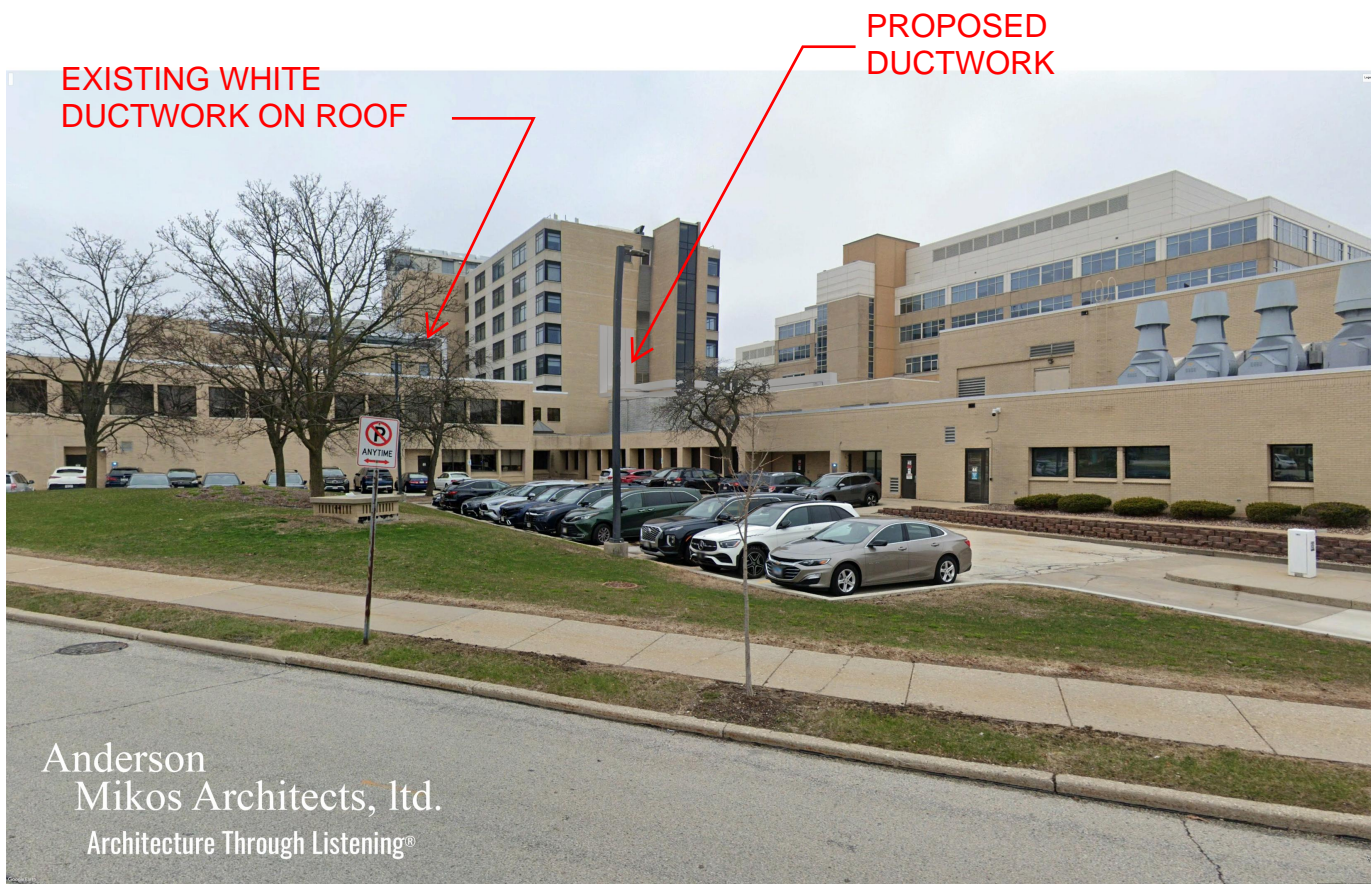
The project is scheduled to start November 2025 and be completed by July 2026. The completed project will be submitted to DHS on 8-20-25 for review and approval.

Recommendation: Approval of the Site, Landscaping, and Architectural Design Review for exterior alterations to Aurora West Allis Hospital, an existing hospital use, at 8901 W. Lincoln Ave. & 2349 & 2400 S. 90 St. (Tax Key: A487-9001-000).



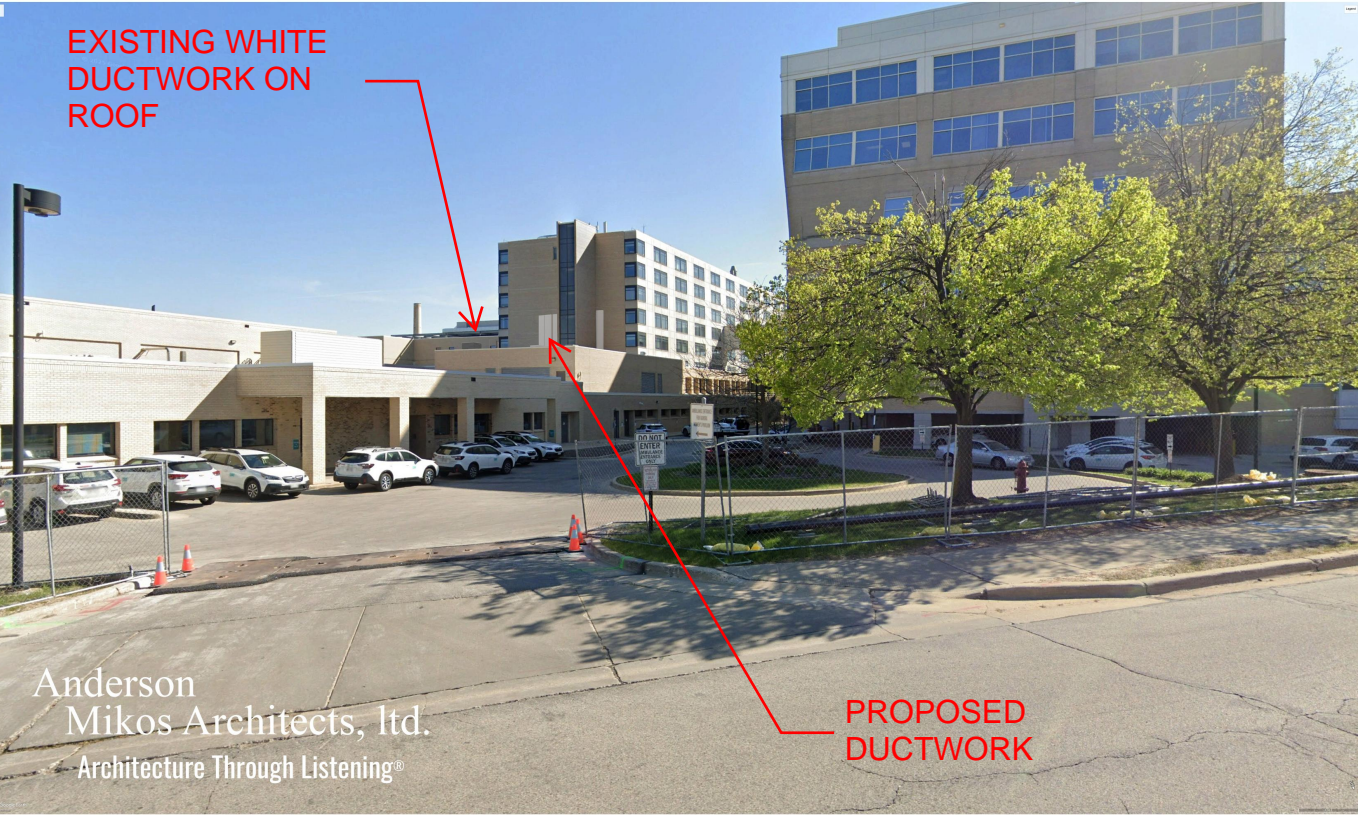


EXISTING VIEW FROM 81st ST.





EXISTING VIEW FROM LINCOLN



Anderson
Mikos Architects Ltd.

"Architecture through Listening"

OAK BROOK GATEWAY
1111 W. 22ND ST. SUITE 315
OAK BROOK, ILLINOIS 60523
TEL. (630) 573- 5149
FAX. (630) 573- 5176



AURORA WEST ALLIS
MEDICAL CENTER

8901 W Lincoln Ave
West Allis, WI 53227

ICU 4th FLOOR
RENOVATION

BOLDT
BUILD BOLDLY
262.446.7114 | Office
N21W23340 Ridgeview Parkway
Waukesha, WI 53188

HGA
333 East Erie Street
Milwaukee, Wisconsin 53202
414.278.8200

NAYYAR & NAYYAR
INTERNATIONAL, INC.
STRUCTURAL ENGINEERS
223 W JACKSON BLVD, SUITE 802
CHICAGO, IL 60606
312.728.1010

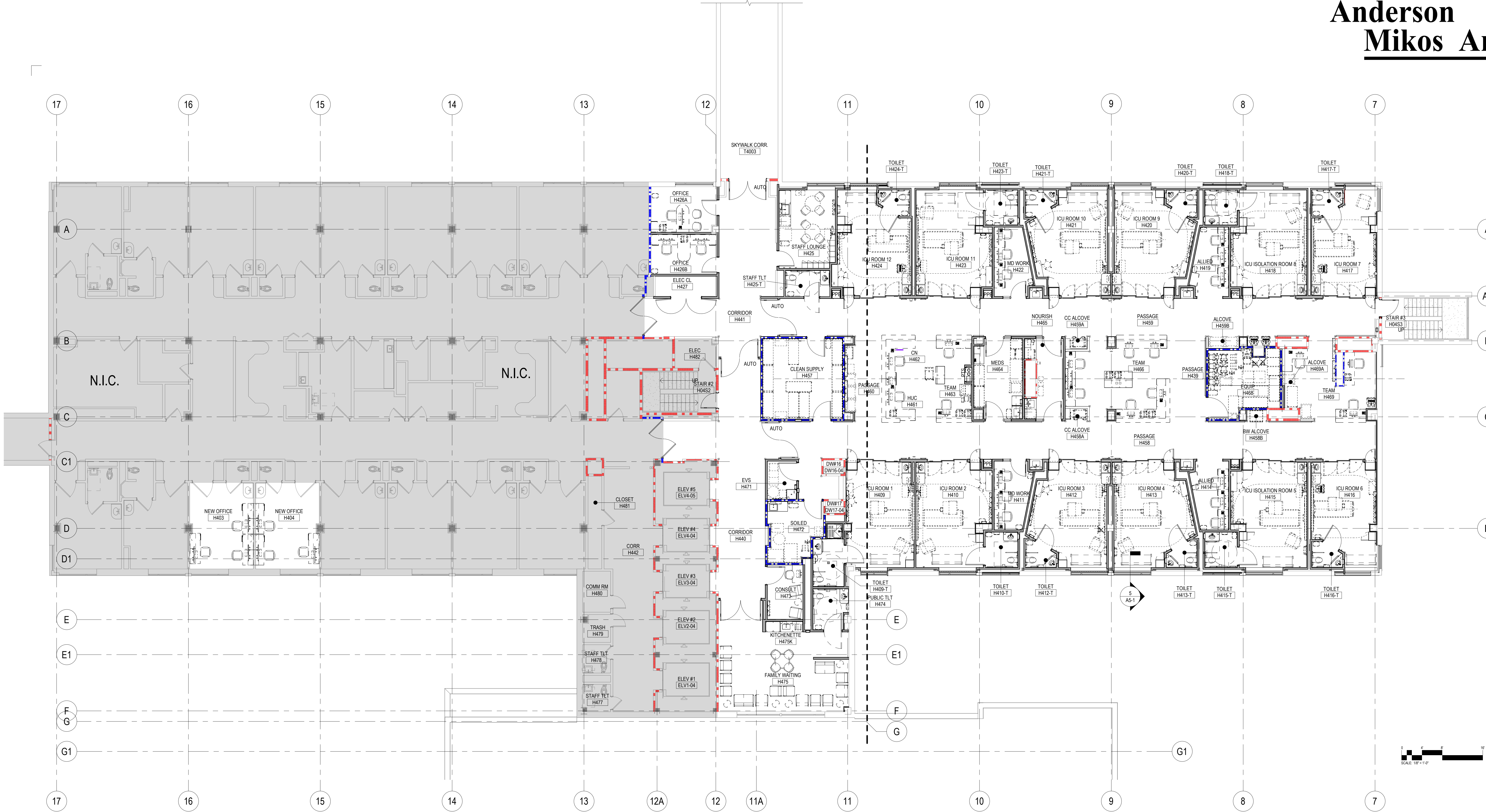
KEYPLAN
© AMA 2025

DATE	NO.	DESC.
8-8-25	1	CD PAGE TURN 95% REVIEW
6-18-25	2	ISSUED FOR DD PRICING
4-4-25	3	ISSUED FOR SD PRICING
3-17-25	4	OWNER PLAN REVIEW

JOB NO: 24461.00
PROJECT DATE: 01/24/25
DRAWN: CCC/IQ
CHECKED: GF
APPROVED: DEM

OVERALL LEVEL 4 FLOOR
PLAN AND GENERAL
PROJECT NOTES

A1-4



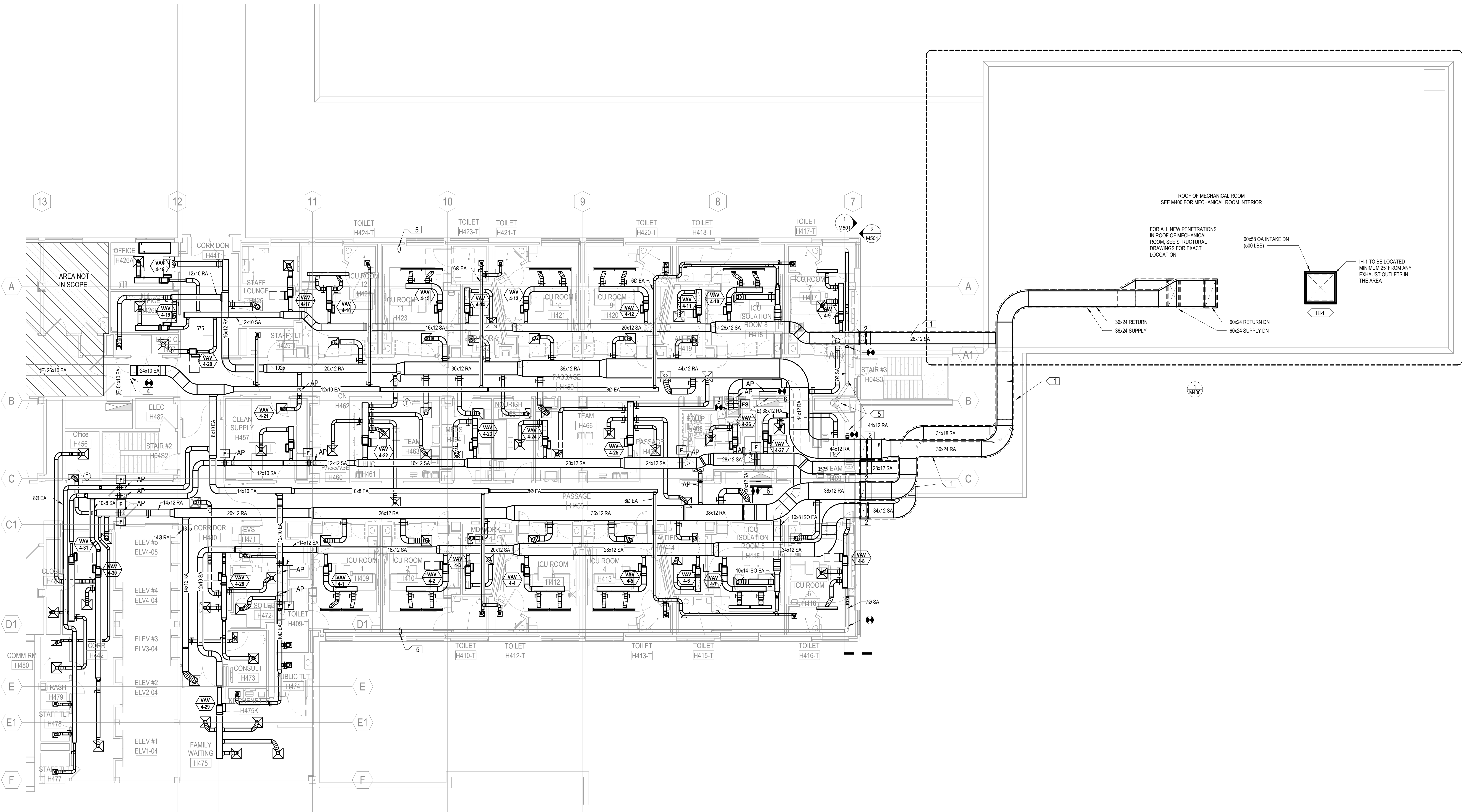
1 OVERALL LEVEL 4
1/8" = 1'-0"

GENERAL PROJECT NOTES

- THESE NOTES SHALL APPLY TO ALL SHEETS OF THE CONTRACT DOCUMENTS. REFER TO ADDITIONAL NOTES ON OTHER SHEETS (DEMOLITION, REFLECTED CEILING PLAN, FINISHES, ETC.).
- THE INTENT OF THE CONTRACT DOCUMENTS IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK BY THE CONTRACTOR. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. SHOULD ANY CONFLICTING INFORMATION OCCUR, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING. OTHERWISE, THE INFORMATION WHICH IS MORE STRINGENT SHALL GOVERN.
- IF AT ANY TIME, PRIOR TO AND DURING CONSTRUCTION, A DISCREPANCY, OMISSION, AND/OR CONFLICT IS DISCOVERED, NOTIFY ANDERSON MIKOS ARCHITECTS LTD. AT (630) 573-5149 FOR CLARIFICATION AND/OR RESOLUTION.
- ALL WORK SHOWN HAS BEEN DOCUMENTED TO THE BEST OF THE ARCHITECT'S KNOWLEDGE TO CONFORM TO ALL APPLICABLE STATE AND LOCAL BUILDING CODES, REGULATIONS AND ORDINANCES. THE CONTRACTOR IS TO NOTIFY THE ARCHITECT AND OWNER IN WRITING IF THEY BELIEVE ANY EXISTING, MODIFIED OR NEW CONDITION DOES NOT COMPLY WITH CODES, ORDINANCES OR REGULATIONS.
- ALL CHANGES OR EXISTING CONDITIONS IMPACTING AESTHETIC EFFECT ARE TO BE VERIFIED AND APPROVED BY THE ARCHITECT.
- THE CONTRACT DOCUMENTS DO NOT INDICATE OR INTEND TO SHOW ANY SPECIFIED CONSTRUCTION OR INSTALLATION PROCEDURE (INCLUDING THOSE RECOMMENDED BY ANY PRODUCT MANUFACTURER). THE CONTRACTOR WILL ADVISE IN WRITING THE ARCHITECT:
 - IF THE CONSTRUCTION PROCEDURE DEVIATES FROM NORMALLY ACCEPTED PRACTICES, OR
 - IF FOLLOWING THE PROCEDURE WILL AFFECT ANY WARRANTIES, OR
 - IF ANY OBJECTIONS WHICH THE CONTRACTOR MAY HAVE TO THE PROCEDURE.
- THE GENERAL CONTRACTOR AND THE SUBCONTRACTORS SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN THE FIELD BEFORE COMMENCING WITH NEW WORK, INCLUDING SHOP FABRICATION AND ORDERING OF BUILDING MATERIALS AND EQUIPMENT. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND EXISTING CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND OWNER VERBALLY AND IN WRITING. NO EXTRA WILL BE ALLOWED FOR SCOPE OF WORK THAT COULD HAVE BEEN DETERMINED BY EXAMINATION OF THE SITE OR DOCUMENTS.
- ALL CONTRACTORS SHALL REVIEW ALL DRAWINGS TO ENSURE THE PROPER COORDINATION OF THEIR WORK WITH ALL OTHER TRADES. NO EXTRAS SHALL BE ALLOWED DUE TO THE LACK OF PROJECT COORDINATION. WORK SHALL BE PROPERLY SEQUENCED TO COINCIDE WITH THE PROJECT CONSTRUCTION SCHEDULE TO AVOID DELAY OF THE PROJECT COMPLETION OR THE WORK OF THE OTHERS. MECHANICAL AND ELECTRICAL CONTRACTORS SHALL REVIEW ARCHITECTURAL DRAWINGS TO PROPERLY LOCATE EQUIPMENT AND DEVICES TO BE INSTALLED. IF LOCATION CONFLICTS OCCUR, THE ARCHITECTURAL DRAWINGS SHALL GOVERN.
- THE GENERAL CONTRACTOR IS TO COORDINATE WITH THE OWNER AND ARCHITECT ALL PHASING OF WORK REQUIRED WITHIN ADJACENT OCCUPIED AREAS, SO AS TO MAINTAIN THE USE OF ALL CRITICAL FUNCTIONS AND UTILITY SERVICES.
- ALL DETAILS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL, AND SHALL APPLY TO SIMILAR SITUATIONS ON THE PROJECT UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY UNFORESEEN JOB CONDITIONS THAT MAY AFFECT PROJECT COSTS. EXTRA WORK AND/OR COSTS MUST BE APPROVED IN WRITING PRIOR TO CONSTRUCTION OF SUCH WORK.
- DO NOT SCALE DRAWINGS. IN ALL CASES, WRITTEN PLAN DIMENSIONS SHALL GOVERN. LARGE-SCALE PLANS AND DETAILS SHALL GOVERN OVER SMALL-SCALE PLANS AND DETAILS. WHERE EXISTING CONDITIONS CREATE CONFLICTS IN NOTED DIMENSIONS, THE CONTRACTOR IS TO NOTIFY THE ARCHITECT PRIOR TO WALL FRAMING, EQUIPMENT PLACEMENT, ETC.
- ALL HOLD DIMENSIONS ARE REQUIRED TO BE EXACT WITHIN 1/8" TOLERANCE ALONG FULL HEIGHT AND FULL WIDTH OF WALL.
- ALL FLOOR ELEVATIONS SHOWN INDICATE TOP OF FINISHED CONCRETE SLABS, EXCEPT AS NOTED.
- THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES TO VERIFY EXACT LOCATION AND SIZE OF ALL OPENINGS IN WALLS, FLOORS AND STRUCTURE (ELECTRICAL, MECHANICAL, STRUCTURAL, ETC.).
- COORDINATE ALL WORK IN THESE DOCUMENTS WITH OTHER SEPARATELY CONTRACTED WORK BY THE OWNER, INCLUDING, BUT NOT LIMITED TO, MEDICAL EQUIPMENT AND SYSTEMS FURNITURE.
- UNLESS OTHERWISE SPECIFIED BY THE OWNER, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST AND ACQUISITION OF ALL NECESSARY BUILDING PERMITS. THE GENERAL CONTRACTOR IS TO SECURE AND MAINTAIN THE PERMIT AND PERMIT DRAWINGS ON THE JOB SITE.
- THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE OWNER AND THE THEIR PLANT OPERATIONS DEPARTMENT ON ALL PHASING AND CONSTRUCTION OPERATIONS AND SHUTDOWNS IN ORDER TO MAINTAIN ALL CRITICAL FUNCTIONS AND UTILITIES.
- MAINTAIN ALL LIFE SAFETY COMPONENTS AND SYSTEMS IN ACCORDANCE WITH STATE AND LOCAL JURISDICTIONS. PROVIDE, MAINTAIN AND DOCUMENT ALL INTERIM LIFE SAFETY MEASURES ESTABLISHED WITH THE OWNER.
- AT THE COMPLETION OF DEMOLITION, THE CONTRACTOR SHALL VERIFY THE INTEGRITY OF EXISTING SMOKE BARRIERS, FIRE-RATED WALLS AND FLOOR SLABS. PATCH VOIDS AND OPENINGS AS REQUIRED TO MAINTAIN THE REQUIRED FIRE-RESISTANCE RATING IN ACCORDANCE WITH U.L. DETAILS. SUBMIT DOCUMENTATION ON THE LOCATION AND MANNER OF REPAIR TO OWNER AND ARCHITECT.
- WHERE NEW CONSTRUCTION NECESSITATES MODIFICATIONS TO EXISTING DUCTWORK, PROVIDE NEW OR RELOCATED FIRE AND/OR SMOKE DAMPERS IN DUCTWORK PENETRATING ALL SMOKE BARRIERS OR FIRE-RATED WALLS EXCEEDING 2 HOURS RATING. DOCUMENT LOCATIONS FOR SUBMISSION TO ARCHITECT AND OWNER.
- THE CONTRACTOR SHALL REPAIR ANY HOLES OR OTHER DAMAGE TO EXISTING FLOOR SLABS ENCOUNTERED DURING DEMOLITION WITH CONCRETE OR LATEX ADMIXTURE.
- THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL CONTINUOUS, CONCEALED BLOCKING TO BE SECURED TO METAL STUDS OR FURRING STRIPS WHERE APPLICABLE FOR ALL WALL, HUNG OR SECURED MILLWORK, CASEWORK, FURNITURE, HAND RAILS, GRAB BARS AND ANY OTHER WALL-MOUNTED ITEMS INDICATED ON THE DRAWINGS WHETHER PROVIDED BY THE CONTRACTOR OR OWNER.
- WHERE EXISTING ITEMS ARE TO BE RELOCATED OR REINSTALLED, THE GENERAL CONTRACTOR SHALL INSTALL ITEMS EQUALING OR EXCEEDING THE STRUCTURAL AND AESTHETIC QUALITY OF EXISTING INSTALLATIONS.
- THE CONTRACTOR IS TO REPLACE OR CORRECT ANY EXISTING OR COMPLETED WORK DAMAGED BY CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO THE OWNER.
- ALL WOOD BLOCKING AND FRAMING IS TO BE FIRE-RETARDANT TREATED.
- ALL FINISHES ARE TO BE CLASS I, FLAME SPREAD 0-25, SMOKE DEVELOPED <200, UNLESS OTHERWISE NOTED.

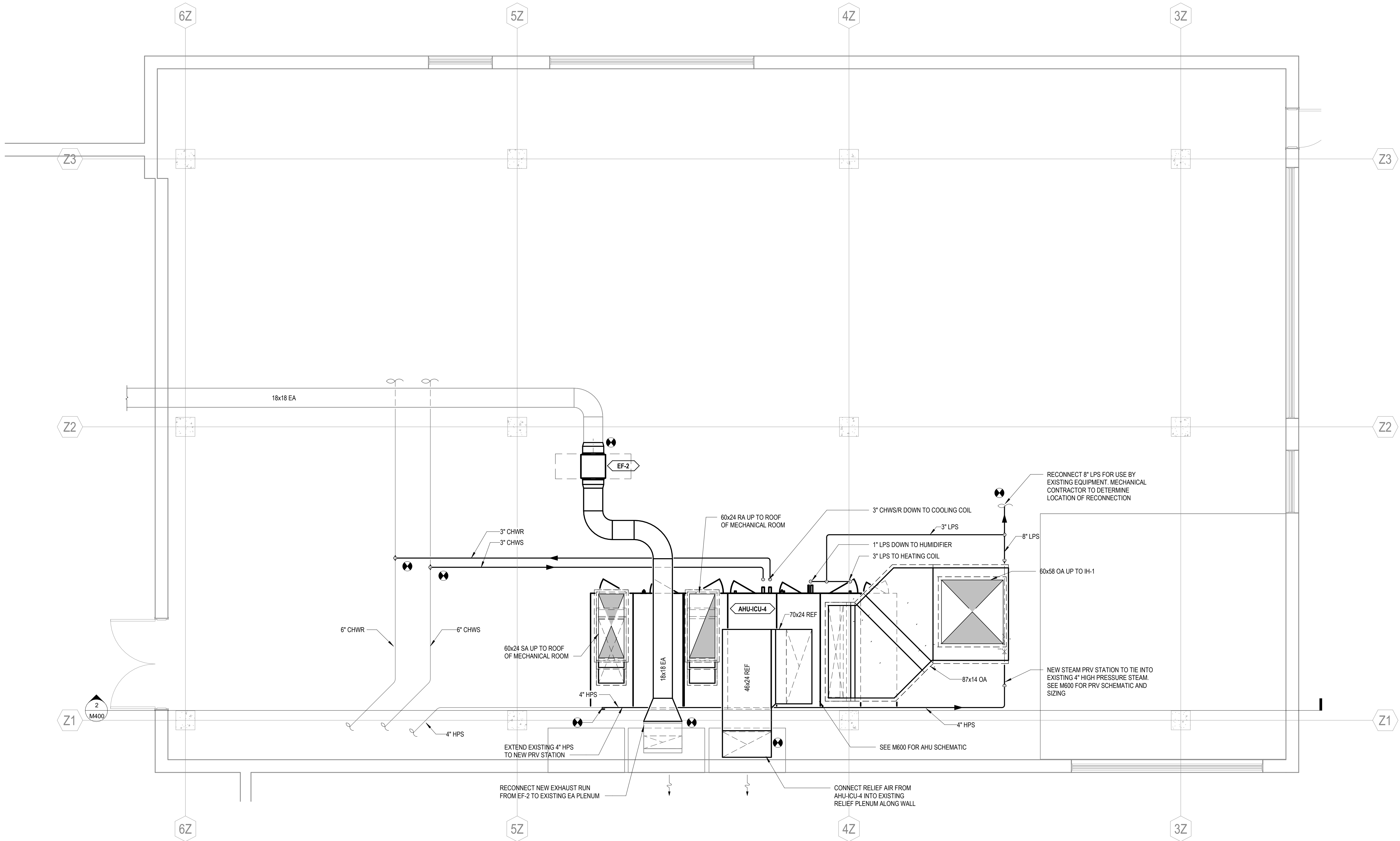
HVAC KEYNOTES

1. NEW SUPPLY AND RETURN DUCT ROUTED ON ROOF. REFER TO DETAILS FOR INSTALLATION REQUIREMENTS. REFER TO SPECIFICATIONS FOR ADDITIONAL DUCTWORK REQUIREMENTS.
2. NEW SUPPLY OR RETURN DUCTWORK WALL PENETRATION. REFER TO STRUCTURAL WALL PENETRATION DETAILS. REFER TO ARCHITECTURAL FOR ANY SCREENING REQUIREMENTS FOR NEW DUCTWORK ROUTED VERTICALLY ON EXTERIOR OF BUILDING. REFER TO DETAILS FOR WALL FLASHING AND SEALING REQUIREMENTS OF DUCT PENETRATIONS.
3. CONNECT 2206 ISOLATION EXHAUST TO EXISTING RISER. INCLUDE A NEW FIRE SMOKE DAMPER AT SHAFT PENETRATION. REFER TO ELECTRICAL AND FIRE ALARM DRAWINGS FOR NEW DUCT MOUNTED SMOKE DETECTOR REQUIREMENTS. REFER TO ROOF PLANS FOR ADDITIONAL WORK ASSOCIATED WITH RELOCATING THE EXISTING ISOLATION EXHAUST FAN. ALL ISOLATION ROOMS THROUGHOUT THE BUILDING THAT ARE SERVED BY THE EXISTING NORTH ISOLATION EXHAUST RISER SHALL BE RE-BALANCED WITH FAN RELOCATION AND REVISED FOURTH FLOOR SPACES (10 ROOMS TOTAL).
4. CONNECT TO EXISTING GENERAL EXHAUST DUCT NEAR EXISTING SHAFT. ROUTE NEW AS INDICATED, BALANCE ACCORDINGLY.
5. EXISTING INDUCTION UNIT SUPPLY DUCT RISER TO REMAIN. EXISTING SUPPLY DUCTWORK IN LEVEL FOUR CEILING SERVING UP TO LEVEL FIVE INDUCTION UNITS TO REMAIN.
6. CAP EXISTING SUPPLY AND RETURN DUCTWORK AT FIRE/SMOKE DAMPERS AT RISERS. DAMPERS AND RISERS TO REMAIN. REFER TO ELECTRICAL AND FIRE ALARM DRAWINGS FOR REQUIREMENT TO ABANDON DAMPERS.

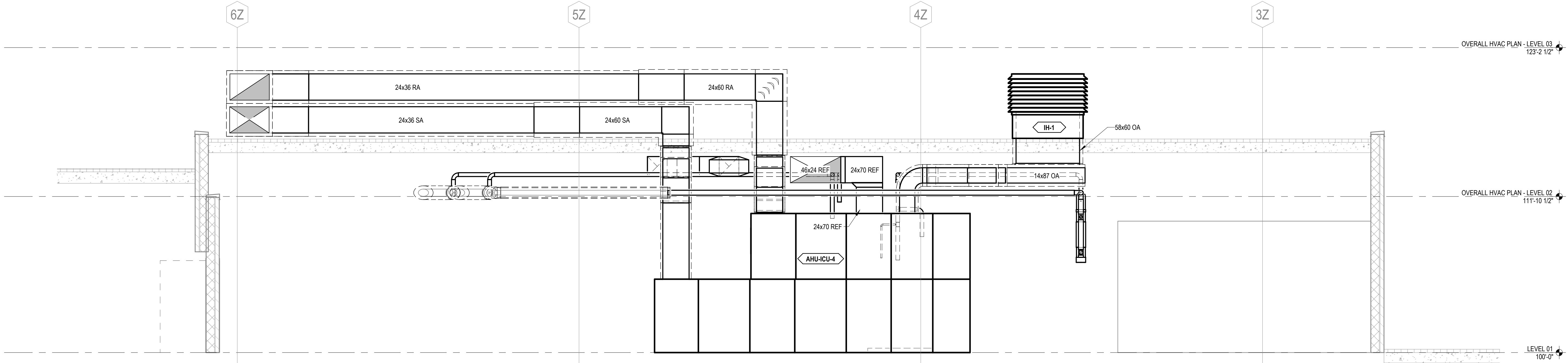


1 HVAC PLAN - LEVEL 04
1/8" = 1'-0"

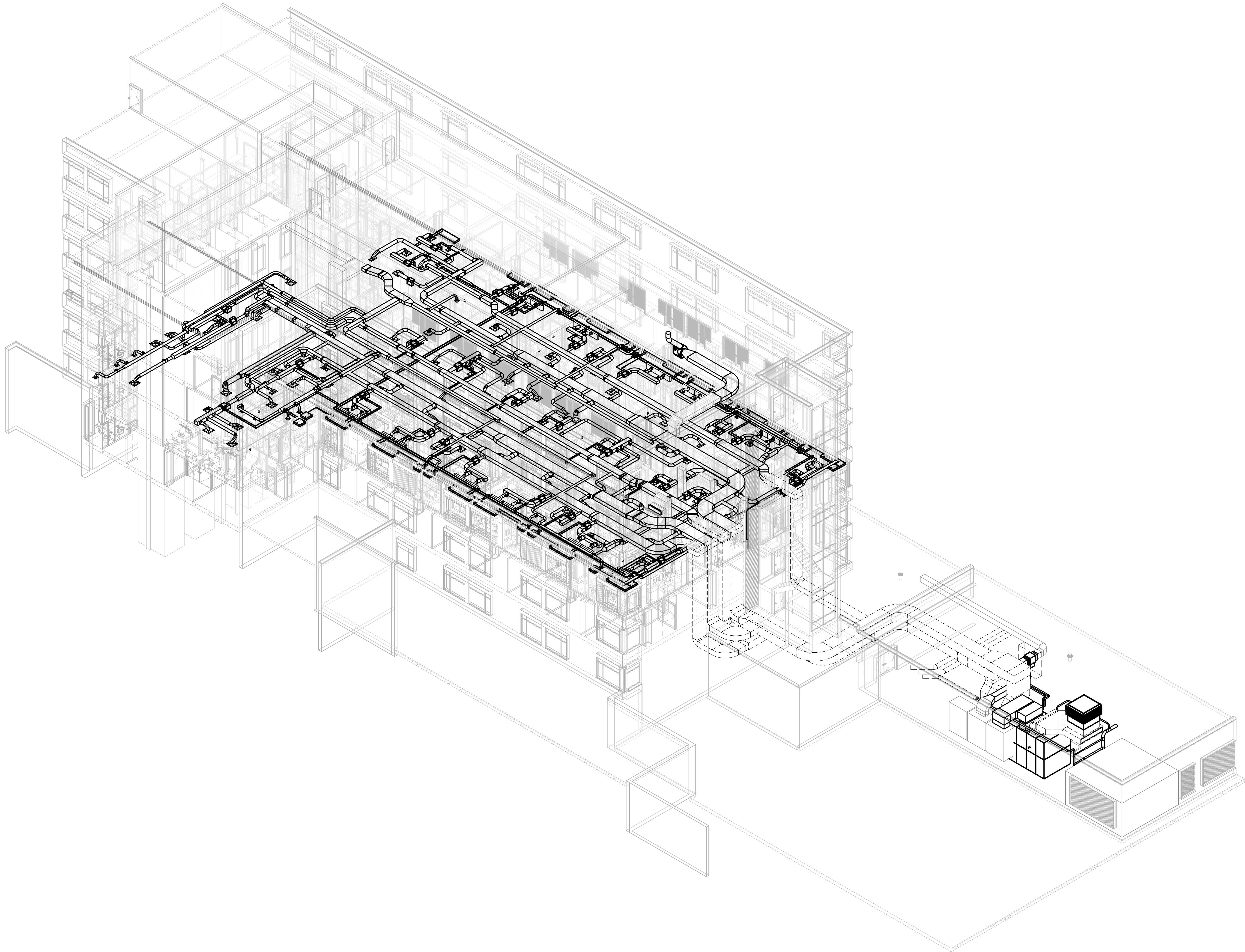
NOT FOR CONSTRUCTION



1 HVAC PLAN - MECHANICAL ROOM
1/4" = 1'-0"



2 SECTION VIEW - MECH ROOM AHU
1/4" = 1'-0"



1 BUILDING EXTERIOR

OAK BROOK GATEWAY
1111 W. 22ND ST. SUITE 315
OAK BROOK, ILLINOIS 60523
TEL. (630) 573 - 5149
FAX. (630) 573 - 5176

Aurora Health Care
Now part of ADVOCATEHEALTH

AURORA WEST ALLIS
MEDICAL CENTER
8901 W Lincoln Ave
West Allis, WI 53227

ICU 4th FLOOR
RENOVATION

BOLDT
BUILD BOLDLY
262.446.7114 | Office
N21W23340 Ridgview Parkway
Waukesha, WI 53188

HGA
333 East Erie Street
Milwaukee, Wisconsin 53202
414.278.8200

NAYYAR & NAYYAR
INTERNATIONAL, INC.
STRUCTURAL ENGINEERS
223 W JACKSON BLVD, SUITE 802
CHICAGO, IL 60606
312.728.1010

KEYPLAN
© AMA 2025

8-8-25 2 CD PAGE TURN 95% REVIEW
6-18-25 1 ISSUED FOR DD PRICING

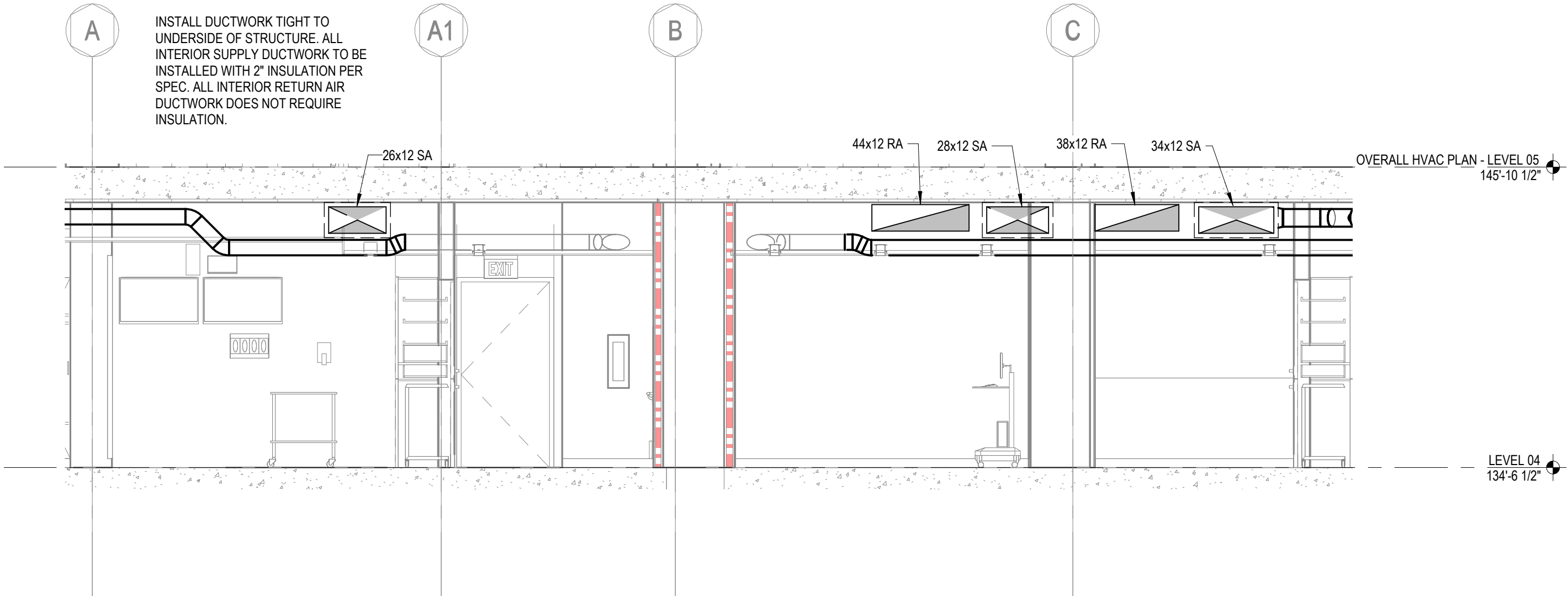
DATE NO. DESC.

JOB NO: 24461.00
PROJECT DATE: 01/24/25

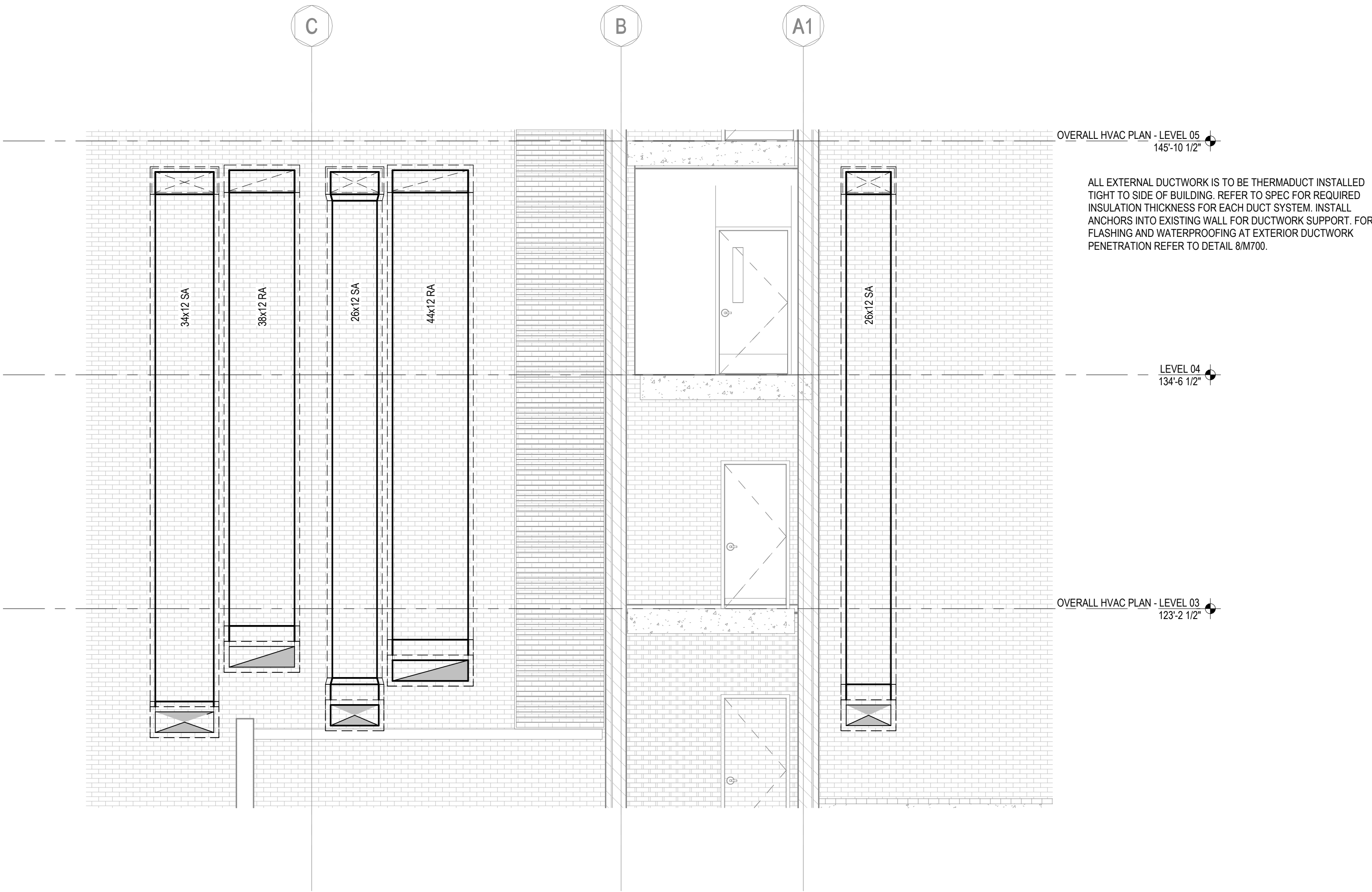
MECHANICAL BUILDING
PENETRATIONS

M501

NOT FOR CONSTRUCTION



1 DUCTWORK PENETRATIONS - INTERIOR VIEW
1/4" = 1'-0"



2 DUCTWORK PENETRATIONS - EXTERIOR VIEW
1/4" = 1'-0"

thermaduct thermaround

HIGH EFFICIENCY AIR DISTRIBUTION



CONTRACTOR INSTALLATION MANUAL



GET ONLINE TRAINING AND
LIMITED WARRANTY REGISTRATION

www.thermaduct.com

TABLE OF CONTENTS

PAGE	GETTING STARTED
3	Introduction to Thermaduct
5	Required Online Training Course
6	Thermaduct Accessories and Installation Tools
7	Receiving a Shipment
7	Storage and Handling
THERMADUCT INSTALLATION	
8	Rigging Duct Segments
10	Roof Supports and Hangers
14	Vertical Supports
16	Flange Connections
17	4-Bolt Cover System
19	Caulks and Sealants
20	Equipment Connections
21	Curb Connections
22	Connection Through Exterior Wall
23	Field Modifications
THERMAROUND INSTALLATION	
26	Connections
27	Caulks and Sealants
28	Roof Supports and Hangers
30	Vertical Supports
32	Equipment and Curbs
33	Field Modification
MAINTENANCE AND WARRANTY	
34	Care and Maintenance
35	Warranty - Pre-Installation Check Sheet
36	Warranty - Post Installation Check Sheet
37	Warranty Conditions



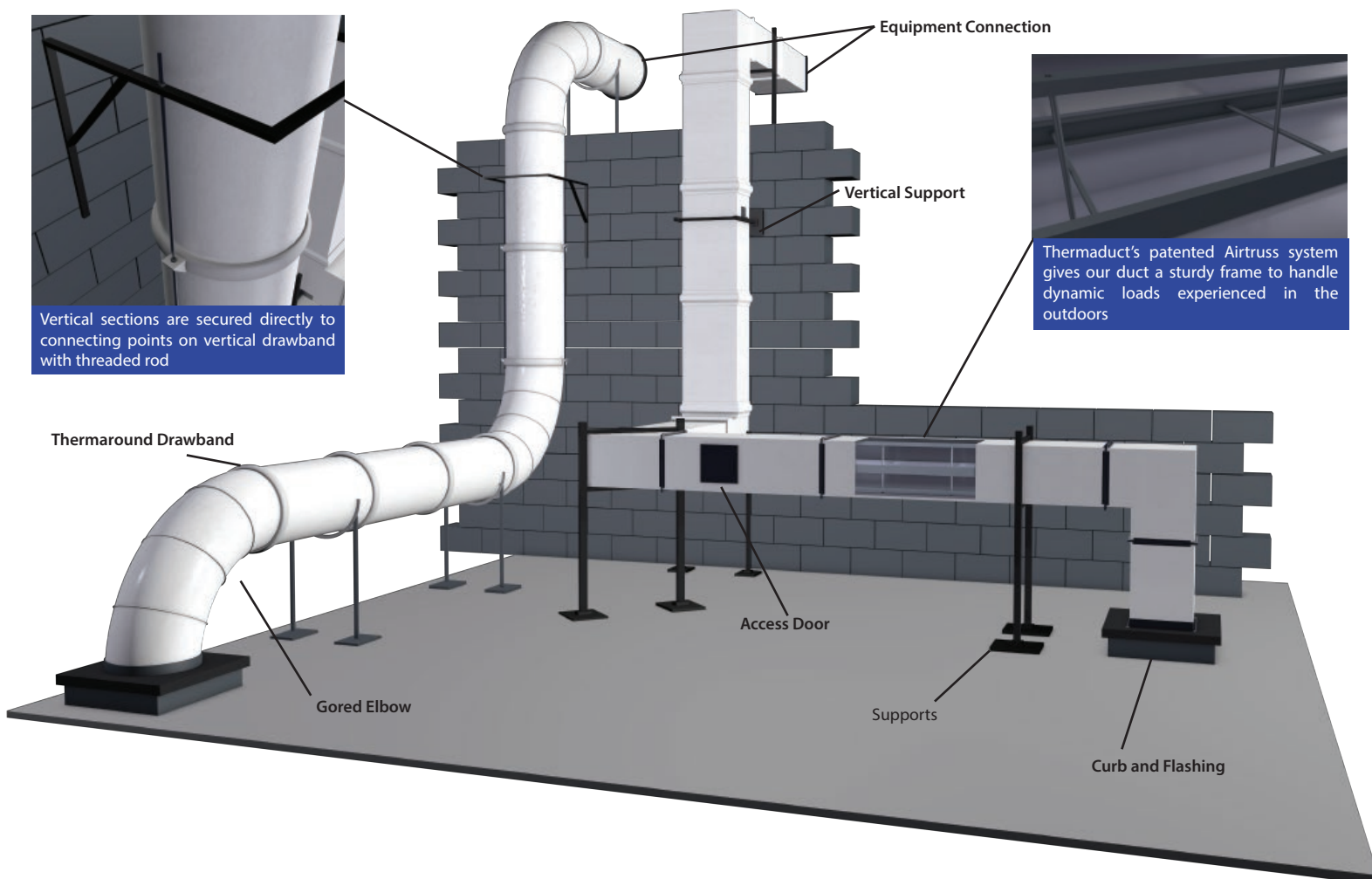
thermaduct™

Thermaduct is our rectangular outdoor ducting solution that offers high R-values and low air leakage. It provides the duct, the insulation and cladding all in one high performance product. Thermaduct is available in insulated values between R-8 and R-24 and offers extremely low air leakage. All these benefits are protected by a strong, UV stable 1000 micron vinyl cladding.



thermaround™

Therमारound is our round solution for outdoor applications. This high R-value system offers an R-12 solution with extremely low air leakage. Therमारound uses the same UV stable 1000 micron vinyl cladding for a durable solution that will naturally shed water. In the interior, air passes over a smooth aluminum surface free from loose fibers to give your building better IAQ performance.



APPLICATIONS

All of Thermaduct's pre-insulated systems are designed, detailed and manufactured to provide quality control and assurance measures to meet customer specifications. Thermaduct is shipped in labeled and fully fabricated duct segments for ease of field rigging and assembly.

Thermaduct and Thermaround are specifically engineered for outdoor ducting applications that include high humidity, rain, snow, hail (less than golf ball size), salt/sea spray and other challenging applications.

Thermaduct should not be used in the following scenarios:

- Grease or Kitchen exhaust ductwork
- Air temperatures exceed 185 degrees Fahrenheit continuous
- Air velocity exceeds 6000 fpm continuous
- Static pressure may exceed 10" positive
- Rectangular Air static pressure exceeds 10" negative (**Thermaduct**)
- Round Air static pressure exceeds 8" negative (**Thermaround**)
- Indoor applications (See Below)
- Where you are conveying solids
- In application without maximum temperature control
- For chemical, fume or smoke exhaust (consult Thermaduct)
- Not for use as conduit for sprinkler lines or conduit

INDOOR APPLICATIONS



Give your round and flat oval ductwork the increased performance with Thermaduct's Inspiral R and Floval Duct Systems. These patented systems provide the increased air distribution efficiency of round or flat oval ductwork packaged in a light weight and high quality closed cell phenolic insulation. There's no need to insulate separately as all ductwork reaches an R-6 insulated value.

Talk to your local Thermaduct representative today to see how these UL 181 listed duct systems can benefit your indoor application!



ONLINE INSTALLATION TRAINING

ALL INSTALLERS MUST WATCH ONLINE TRAINING FOR EACH PRODUCT THEY INSTALL

TRAINING OVERVIEW

Online courses can be accessed by visiting training.thermaduct.com or by scanning the QR Code below.



Online courses can be accessed by visiting training.thermaduct.com or by scanning the QR Code below. Request access through the site and you will be able to access the courses usually within one business day. We know time on the jobsite is valuable and we are committed to respecting your time. Courses will be short summaries that highlight sections of this manual in an easy to understand way. Digital copies of our installation manual and warranty registration forms are also available to download during these courses.

WARRANTY REGISTRATION

In order for a Warranty Certificate to be issued, Thermaduct, LLC requires installers to complete both **Pre-Installation** and **Post Installation Check Sheets**. Because Thermaduct is an engineered product, the information collected will aid in making sure the duct fabrication process meets all requirements of the specified design and that installation is a smooth process.

Please fill out these forms to the best of your ability. If you have any questions pertaining to your project please contact our warranty team warranty@thermaduct.com for more information on your project. We appreciate your time in providing us your project's data.

PRE-INSTALLATION

- Confirmation of detailed system drawings for sizing
- Required insulated value for project
- Temperature range for conditioned air (inside air)
- LEED details on Project (If applicable)
- Supply air static pressure
- Return air static pressure
- External static pressure

POST INSTALLATION

- Knowledge of installation
- Proper installation process from this manual
- Support/Hanger schedule
- Air leakage testing (if applicable)
- 3 or more photographs of completed Installation
- Air Balance Report

INSTALLATION ACCESSORIES

Thermaduct requires field assembly of engineered duct segments. Factory specific accessories are provided to insure proper assembly of the completed system.

Thermaduct accessories shipped for field installation include:

- Gasketing materials for Thermaduct
EPDM/Foam
- Sealant for Thermaduct vinyl seams and covers
Cosmofen vinyl to vinyl sealant (1 tube per 4 joints)
Dymonic Vinyl to Metal sealant (1 tube per Equipment Conn.)
Kingspan KoolDuct silicone (1 tube per job)
- Flange connector insulating foam tape
4" wide roll of foam insulation tape for full perimeter
- Flange Covers
Rigid vinyl covers for all duct connections

Thermaround accessories shipped for field installation include:

- Sealant for Thermaround Connections
Kingspan KoolDuct silicone (1 tube per job)
- Flange Rings
Draw Band Rings that go over Thermaround Flange

The following are field supplied:

- Nuts and bolts
- Screws and fasteners
- Roof support frames, strut and channels
- Tie-downs or top frame members
- Installation tools
- Flashing materials
- Additional caulk and sealants

INSTALLATION TOOLS

Thermaduct's ultimate performance of the installation is shared between materials, manufacturing and the quality of the installation. We suggest the following tools be used for field assembly.

The following are field supplied:

- Angle Grinder or Circular Saw
- Power Drill/Driver
- Cleaning Cloth/Towel
- Caulk Gun
- Tape Squeegee

Suggested

- 45 Degree Blade Handle with Holder
- 90 Degree Blade Handle with Holder



RECEIVING A SHIPMENT



Installers are required to inspect all Thermaduct products received at time of delivery to verify if any of the pieces have been damaged during shipment. **Recipient of damaged goods must notate damage on transportation company shipping documentation with delivery driver's signature.** Installer will be deemed to have accepted the Systems unless it notifies Thermaduct, LLC in writing within 24 hours of delivery with written evidence of damage including photographs. If Thermaduct, determines that the Systems have been damaged, replacement plans will be communicated between Thermaduct, LLC, our Sales Representative and Installer in writing.

STORAGE AND HANDLING

Thermaduct and Thermaround segments are shipped in their finished state and require care to be exercised in the handling of all pieces to prevent damage.

While the finished system is designed for superior outdoor performance, unconnected Thermaduct segments should be stored inside or under cover wherever possible. Duct segments must also be kept clear from the ground to stay free from standing water. The open ends of Thermaduct segments shall be covered with a weatherproof tarp or sheet to prevent the intrusion of water or foreign materials.

If indoor storage is not possible, Thermaduct segments should be stored clear of the ground and covered with a weatherproof tarp or sheets at all times. Duct segments must be secured to prevent damage that may be caused by wind, rain, snow and hail to the interior of the duct.

Handling

- Lift - Do not slide
- Do not score, dent or de-face mating surface of flange connections
- Do not drop
- Use straps, not chains or cables, to cradle circumference

RIGGING DUCT SEGMENTS

Not unlike other ductwork, lifting Thermaduct and Thermaround should be done with care. All safety precautions should be taken to assure a safe and successful installation. A few precautions must be observed.



Flange is not a lifting point. Cradle ductwork with appropriate lifting straps.

- Adhere to OSHA guidelines to insure a safe working environment
- Wear protective gear; hard hat & safety glasses as a minimum
- Do not aerial lift ductwork by its connecting flange
- Use approved lifting straps that are not outdated
- Provide necessary manpower to carry duct segments into place*
- Use cart or carry ductwork segments to installation location*
- Wear protective gloves
- Provide security to ensure items on the roof are secure (wind)
- Provide roof protection when setting duct segments on the roof
- Thermaduct may incorporate lift points into duct of large size and weight.

** Or utilize a crane to rig into the proper location*



Transporting Thermaduct across rooftop should utilize adequate methods to lift and not slide ductwork. Use necessary manpower to carry duct segments into place.



Thermaduct was designed to install in a similar fashion to traditional HVAC ductwork, with slight differences that need to be observed. The following pages will describe in detail proper support and connection methods for the Thermaduct rectangular duct system. Please contact Thermaduct or your local Thermaduct Representative should you have any questions regarding installation.

These Guidelines Will Cover:

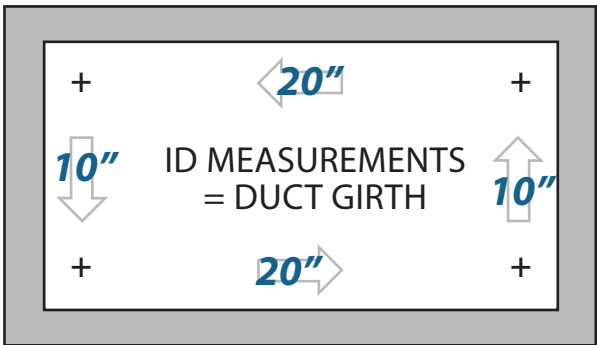
- Horizontal Supports
- Vertical Supports
- Thermaduct Connections
- Equipment Connections
- Field Modification

SUPPORTING THERMADUCT

Historically, sheet metal duct installations had very poor insulation and calculation for snow load was not a concern (the snow simply melted). With the high thermal value of Thermaduct, weight from snow load itself must be considered, not only in the duct construction, but the support framework being utilized. Snow load is observed during initial design and engineering of Thermaduct and Airtruss reinforcements.

CALCULATING DUCT GIRTH

Duct girth is calculated as the sum of the ID measurements of your ductwork. Use the ID measurements from your Thermaduct for support frequency and surface width.



ID MEASUREMENTS:

$$20'' + 20'' + 10'' + 10''$$

60" Duct Girth

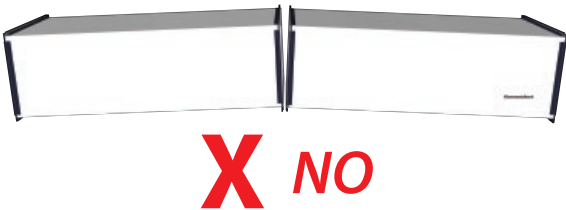
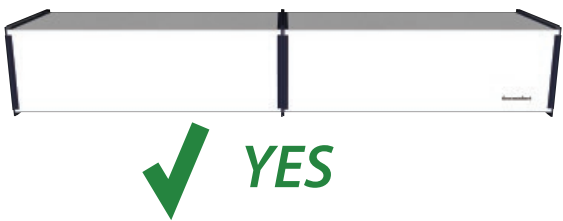
ID MEASUREMENTS = DUCT GIRTH

Duct girth ID < 84"	Spacing 13' maximum
Duct girth ID > 85"	Spacing 8' maximum
Duct girth ID > 232"	Spacing 6' maximum
Duct girth ID > 300"	Consult Factory

On buildings over 20 stories, 8' maximum spacing

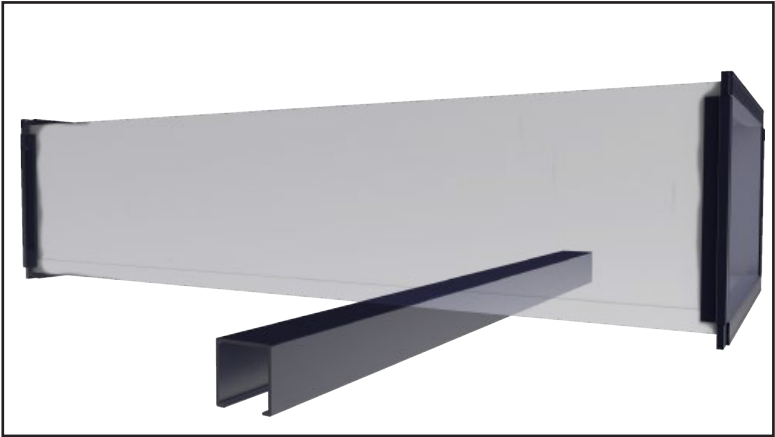
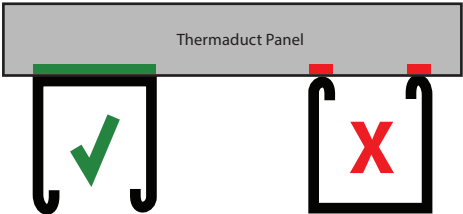
LEVEL INSTALLATION

Connected pieces of Thermaduct should be level and plumb with support surfaces placed on a solid surface, such as a concrete slab or footer. Flanges should not have open gaps, which indicate an un-level or out of square connection.



SUPPORTING SMALL DUCT

For small ductwork with girth below 36", strut supports may be used in a way that the flat side shall contact the Thermaduct. Installing strut upside down will damage the duct cladding due to point loading and inadequate support surface.

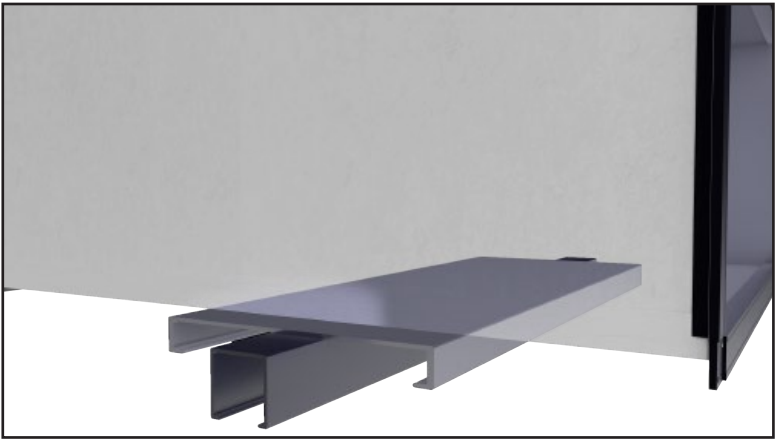


SUPPORTING LARGER DUCT

For larger duct, metal corner angles or C Channels are to be used to distribute the weight across a larger surface. These are to be made of 18 gauge galvanized or aluminum. For appropriate sizing, please refer to the graph below.

C Channel Supports

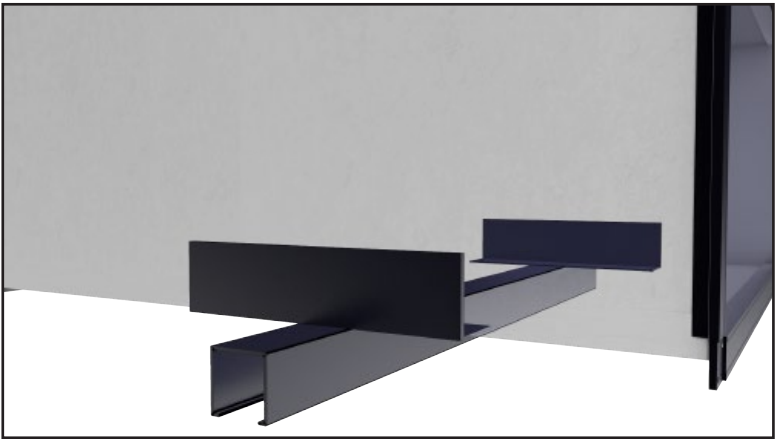
Duct Girth	Channel Width
<36	Strut Support
>36/<84	3"
>84/<120	4"
>120/<200	5"
>200	6"
>300	Consult Factory



C Channel With Strut Support

Corner Angle

Duct Girth	Angle Side
<36	Strut Support
>36/<84	2 x 2 x 10"
>84/<120	3 x 3 x 10"
>120/<200	3 x 3 x 12"
>200	4 x 4 x 12"
>300	Consult Factory

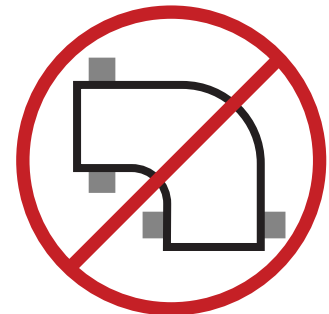
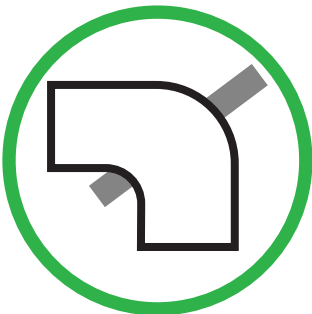
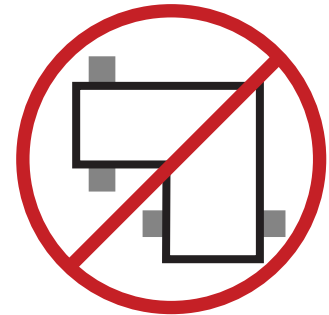
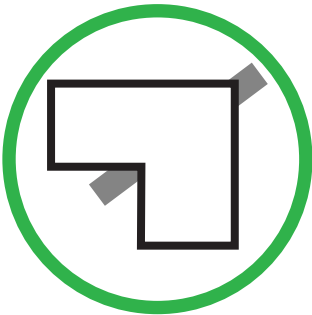
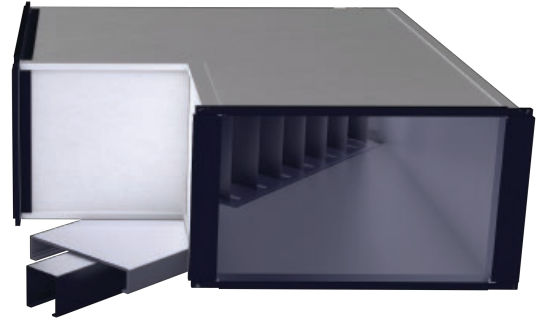


Corner Angles With Strut Support

C Channel supports may require you to adjust placement to not interfere with application of the 4-bolt flange covers. It is best to leave at least 7-8 inches from the flange and the center of the strut support when using C Channels or Corner Angles.

ELBOW SUPPORTS

Whether square or radius, proper support is required on all elbows. Because these are some of the heaviest points of a Thermaduct Installation, support rails or strut supports must be located directly beneath the turning vane following C Channel or Corner Angle guidelines.

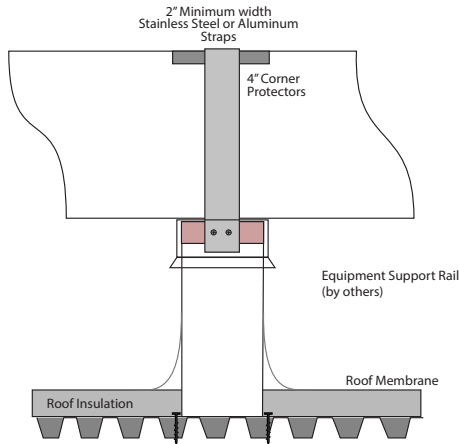


SUPPORTING DUCT TAPS

Changes in direction shall be supported within 2 feet of duct tap. Guidelines for installing a Thermaduct tap are located on Page 23.



TIE DOWN STRAPS - SMALL DUCT

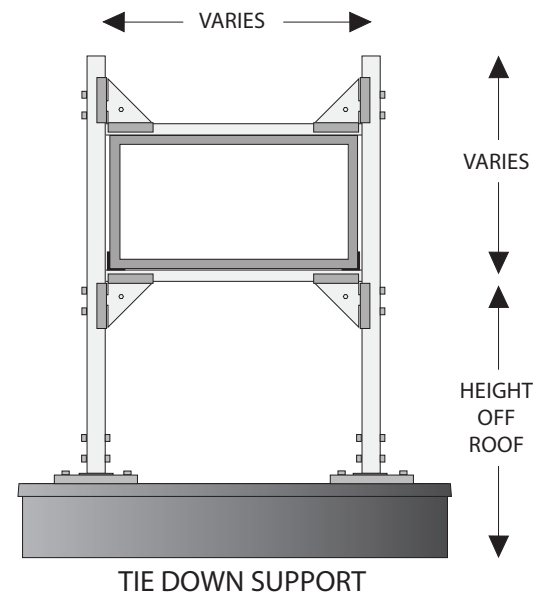
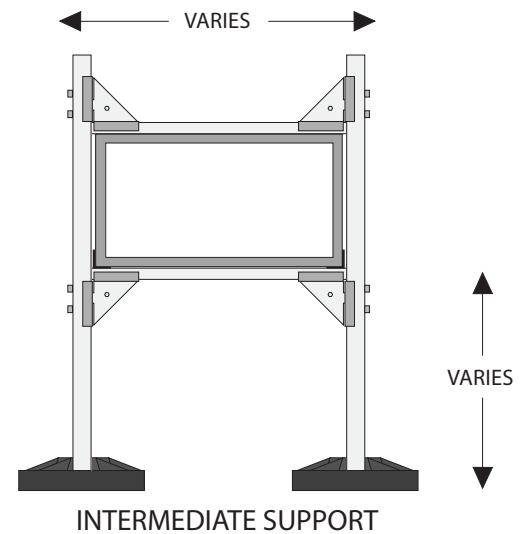


FOR <84" DUCT GIRTH

For duct segments with duct girth less than 84", Thermaduct segments can be installed with rails, metal corner protectors and straps.

ADDITIONAL SUPPORT GUIDELINES

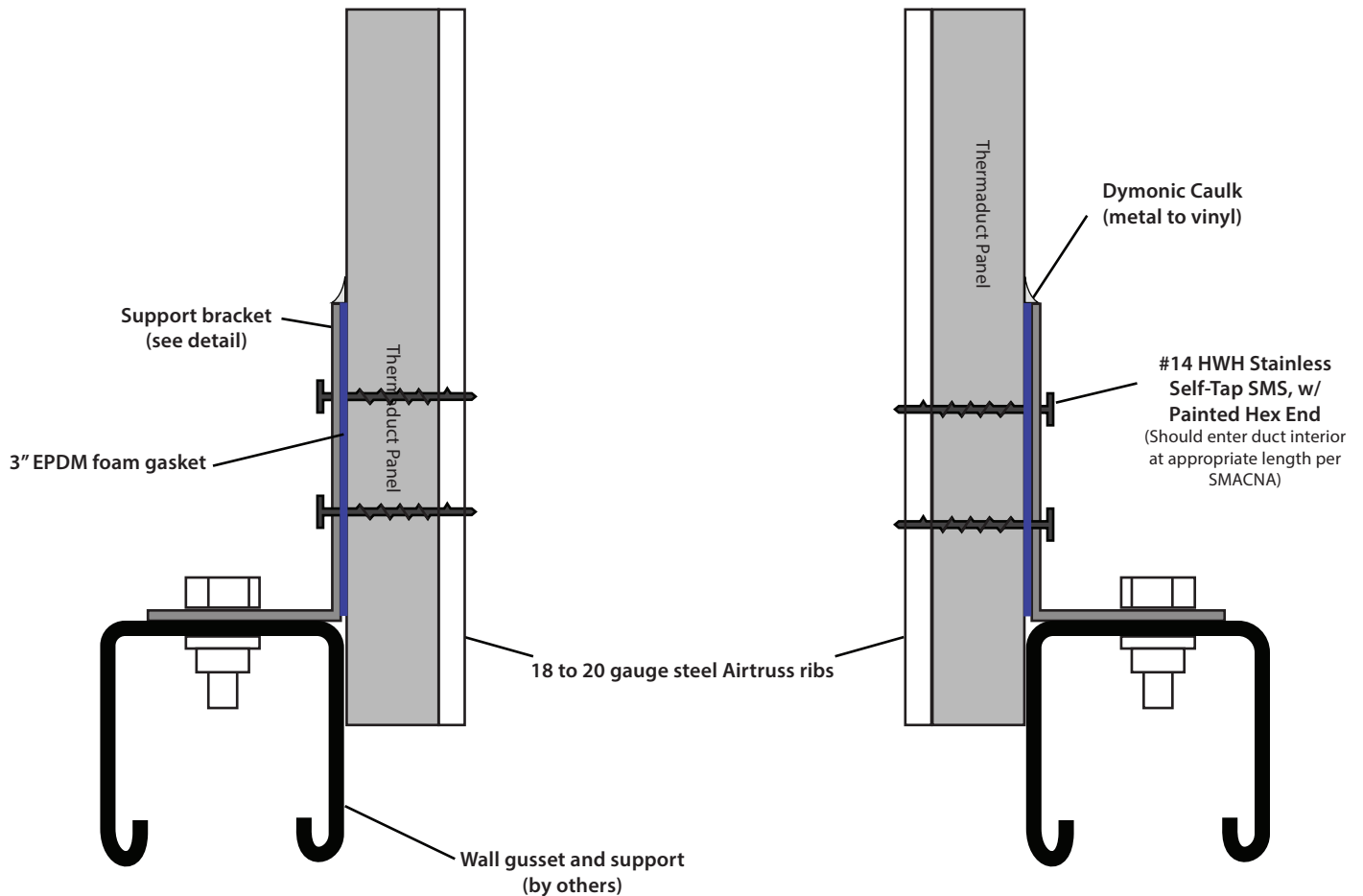
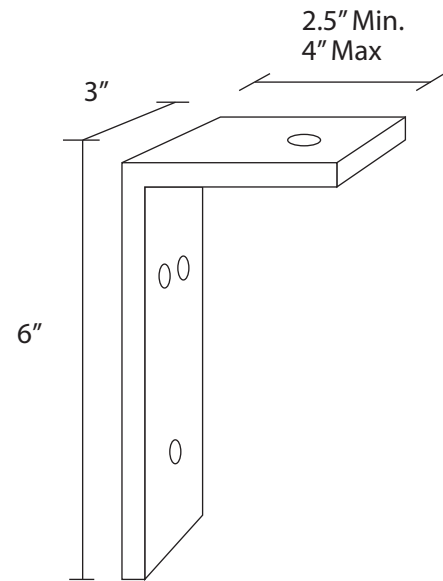
- Duct support stand-offs should be adequately designed to handle windloads. Threaded rod stand-offs are not permitted.
- Always adhere to Support Manufacturer's Guidelines.
- We recommend every other roof support should be tied down to the roof deck unless wind loading requires added tie-down support.
- Recommended spacing is not to exceed designated table on page 9.
- Ductwork connected to flex connectors shall be supported at the point of connection.
- We recommend heavier accessories connected to the ductwork, such as power exhaust fans, be supported separately with strut supports.



VERTICAL SUPPORTS

Thermaduct may be supported using strut mounted to the exterior wall of a building. Custom brackets are still to be used every 8 feet and tied into the Airtruss Ribs using 3 screws each.

- Secure strut frame to wall
- Install Thermaduct segment vertically and align between strut segments.
- Attach third strut piece, ensuring a secure hold on ductwork.
- Install brackets to strut using a bolt once aligned with Airtruss ribs in duct's interior.
- Secure bracket to Airtruss rib using 3 screws

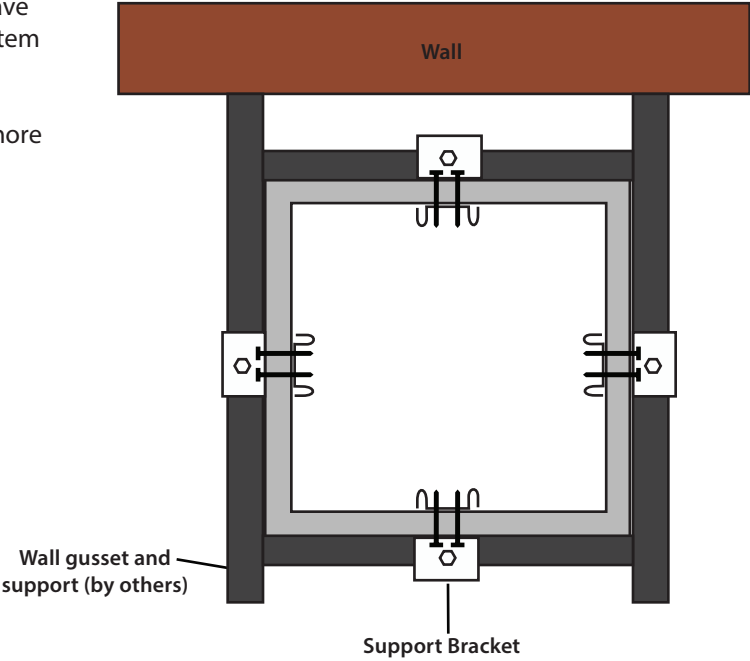


VERTICAL SUPPORT INSTALLATION

VIDEO AVAILABLE AT: training.thermaduct.com

When mounting supports to the wall, it is important to leave room for the proper application of the 4-bolt covering system and sealant. Depending on the size of ductwork you are installing, a minimum of 8" must be observed. If you are installing larger ductwork, you may be required to leave more space between the building and duct for proper sealant application.

Minimum amounts of brackets must be installed per the following guidelines:



Duct Girth	Brackets
<46"	2
>46" - 160"	4
>160" - 240"	6
>240 - 360"	8

Supports for vertical applications should be spaced in the same frequency as the duct's horizontal sections.

The lowest vertical elbow should always be supported underneath and employ C Channels or Corner Angles where applicable. Support frequency shall continue from this point.

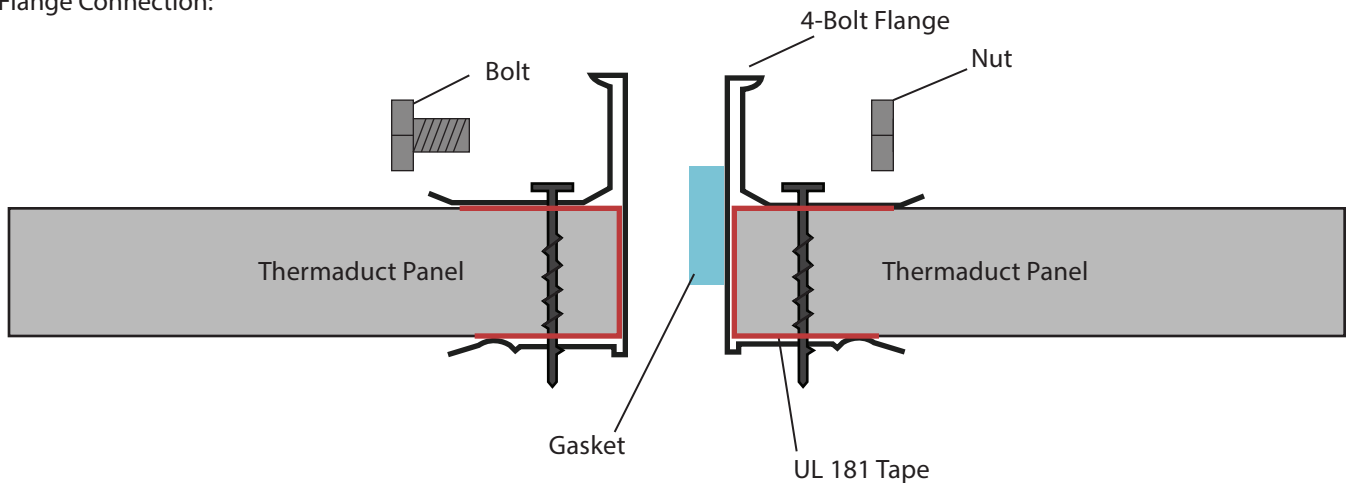
FLANGE CONNECTIONS

Thermaduct uses a 4-bolt flange system to connect duct segments together. The interior of the flange is gasketed before connection is made and secured with bolts and 4-bolt flange clips. To provide the best long term performance, a robust cover system is then applied to ensure each connection is as weather resistant as possible.

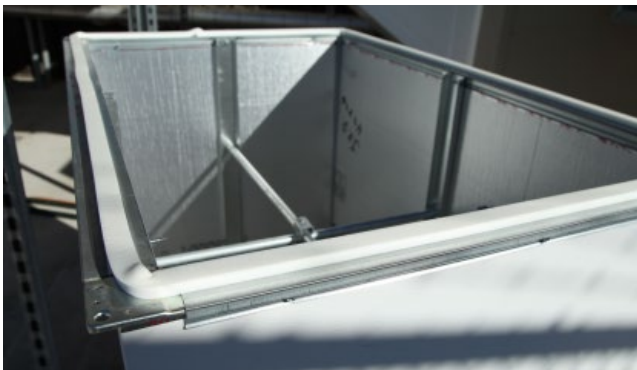
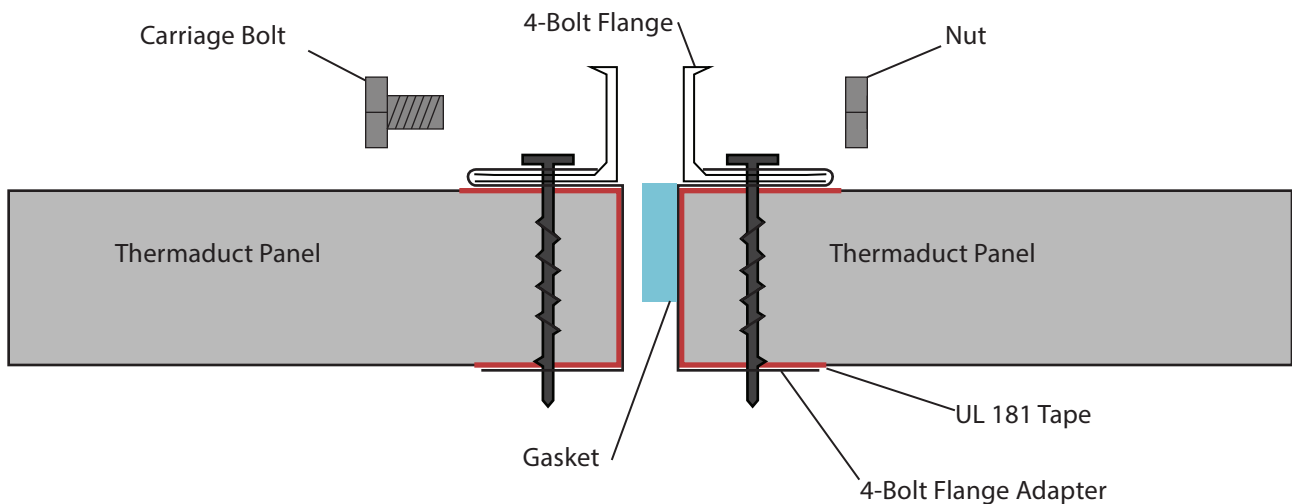
NOTE:

IT IS ADVISED THAT ANY LEAKAGE TESTING IS DONE BEFORE BLACK FOAM TAPE AND OUTER VINYL COVERS ARE APPLIED.

R8 Flange Connection:

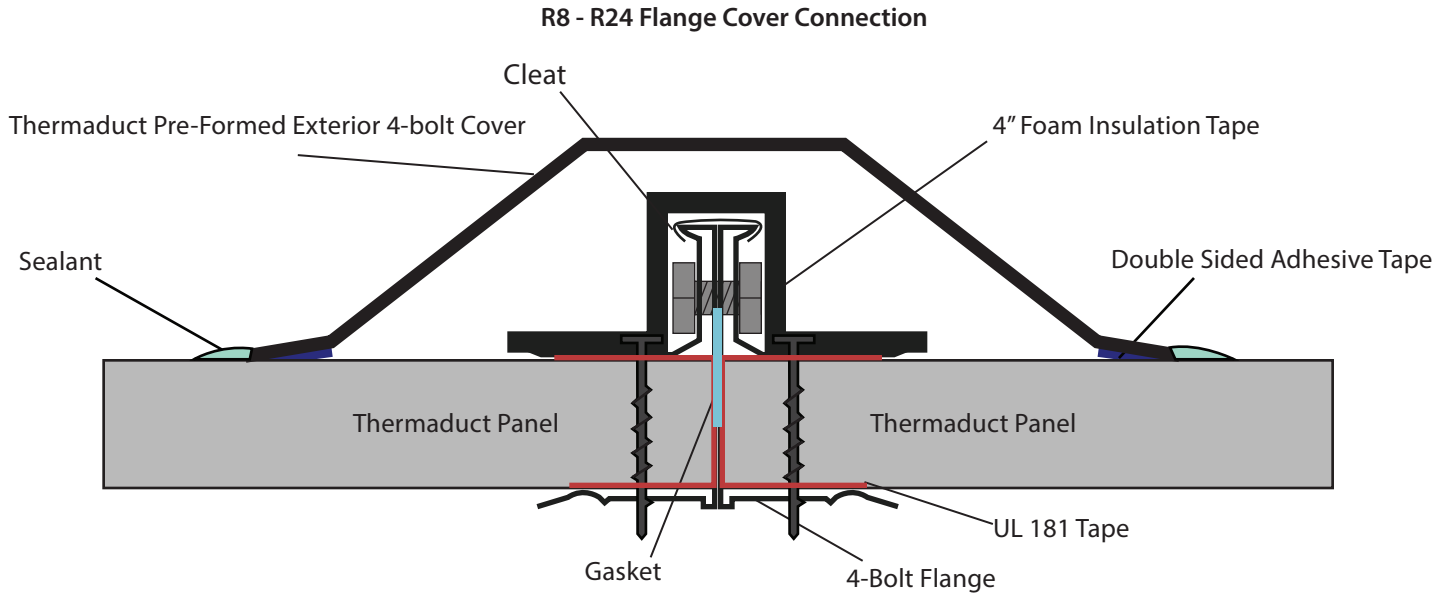


R12 and Above Flange Connection:



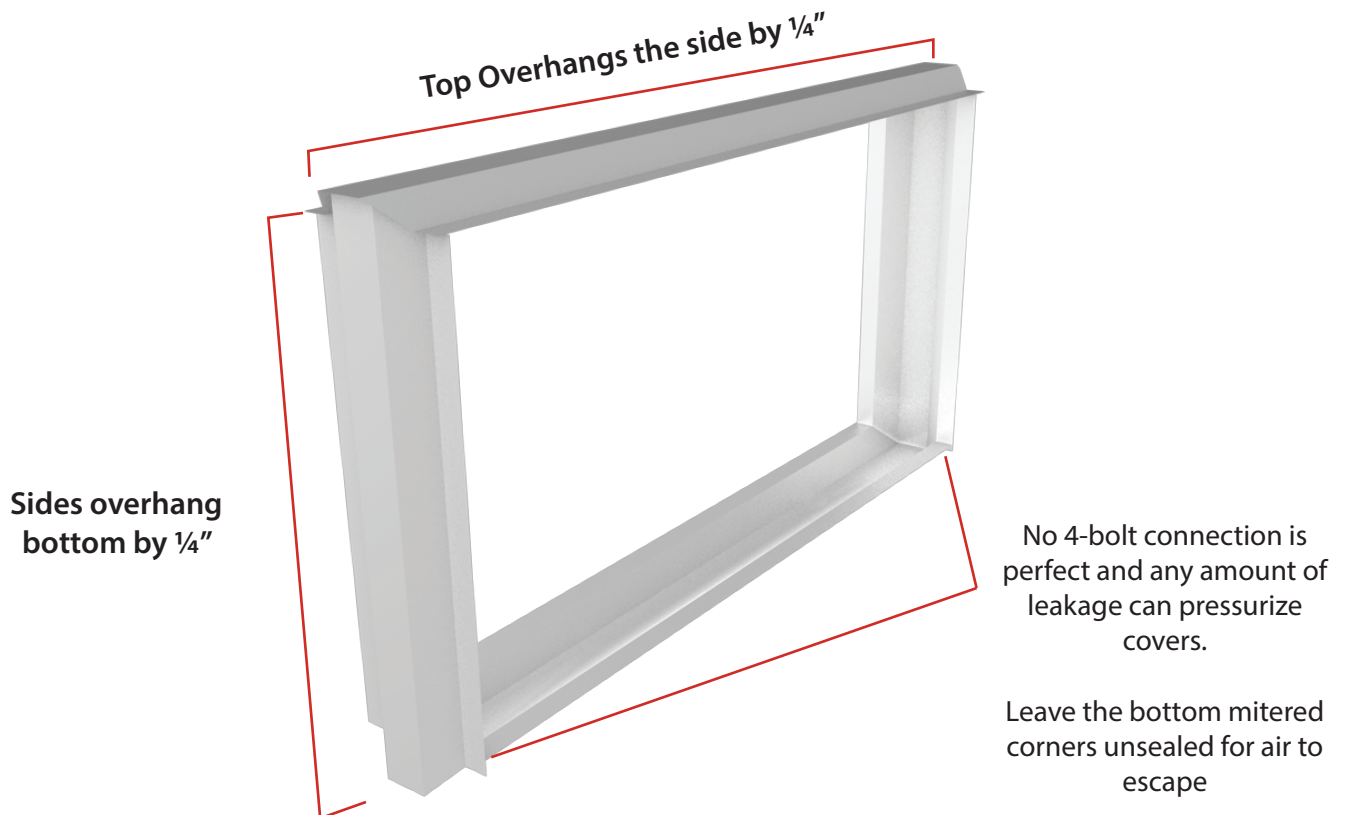
To ensure a low leakage seal, gasketing is a must between duct segments with Thermaduct. Keep the conditioned air in and the outdoor elements out!

4-BOLT FLANGE COVER SYSTEM



Installation steps:

- Clean 4-Bolt Flange location of any dust or residue.
- Apply outer gasketing over all 4 bolt flange.
- Measure length of each vinyl cover pieces to be cut with mitered edges, for a clean fit. The top piece will require an extra 1/4" on each end. The sides will require an extra 1/4" to overhang the bottom.
- Once cut, apply Double Sided Adhesive Tape to the inner edges of the Vinyl cover and apply.
- Confirm a solid connection by pressing the edges firmly. Apply the remaining sides.
- Caulk along the upper mitered edges as well as the edges applied to the duct with Cosmofen 345 for a weather resistant seal.
- Leave bottom corners mitered for any air leakage to escape.





1) PREP

Apply factory supplied gasketing to one side of connecting duct 4-bolt flange by placement in previous page.



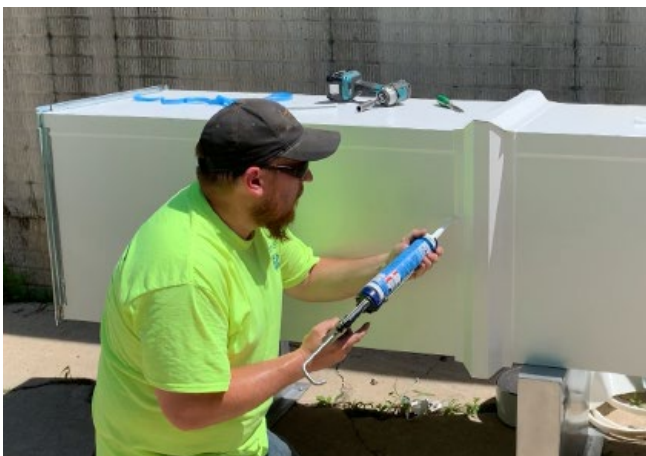
2) CONNECT

After gasketing the inner portion of flange, use nuts, bolts and clips to connect all factory installed 4-bolt flanges.



3) PROTECT

Factory supplied 4" foam tape is to be installed around all 4-bolt connectors. The foam tape provides both a thermal value and added air leakage integrity.



4) FINISH

Factory supplied beveled connector caps are furnished to be installed around all 4-bolt connectors, providing UV protection and additional water integrity.

Leave bottom mitered corners unsealed.

AVAILABLE FROM THERMADUCT

Kingspan Safire Sealant or Manus Bond 75 AM (Gray) - Phenolic Interior Sealing

Kingspan & Manus Bond sealants are used on the inside of the phenolic duct itself or when making a “cut” to the Thermaduct. Apply this sealant when working with sealing KoolDuct to flange on cut joints or KoolDuct to KoolDuct if needed. This sealant will not adhere to the Thermaduct cladding surfaces and is not UV rated.

Dymonic FC - Metal to Vinyl Sealing

Dymonic FC sealant is used to make metal to Thermaduct connections such as when making connections from Thermaduct to flange materials. Dymonic is UV stable and can be used in direct sunlight and is intended for outdoor applications. It is best when applied to vinyl to metal and not vinyl to vinyl connections.

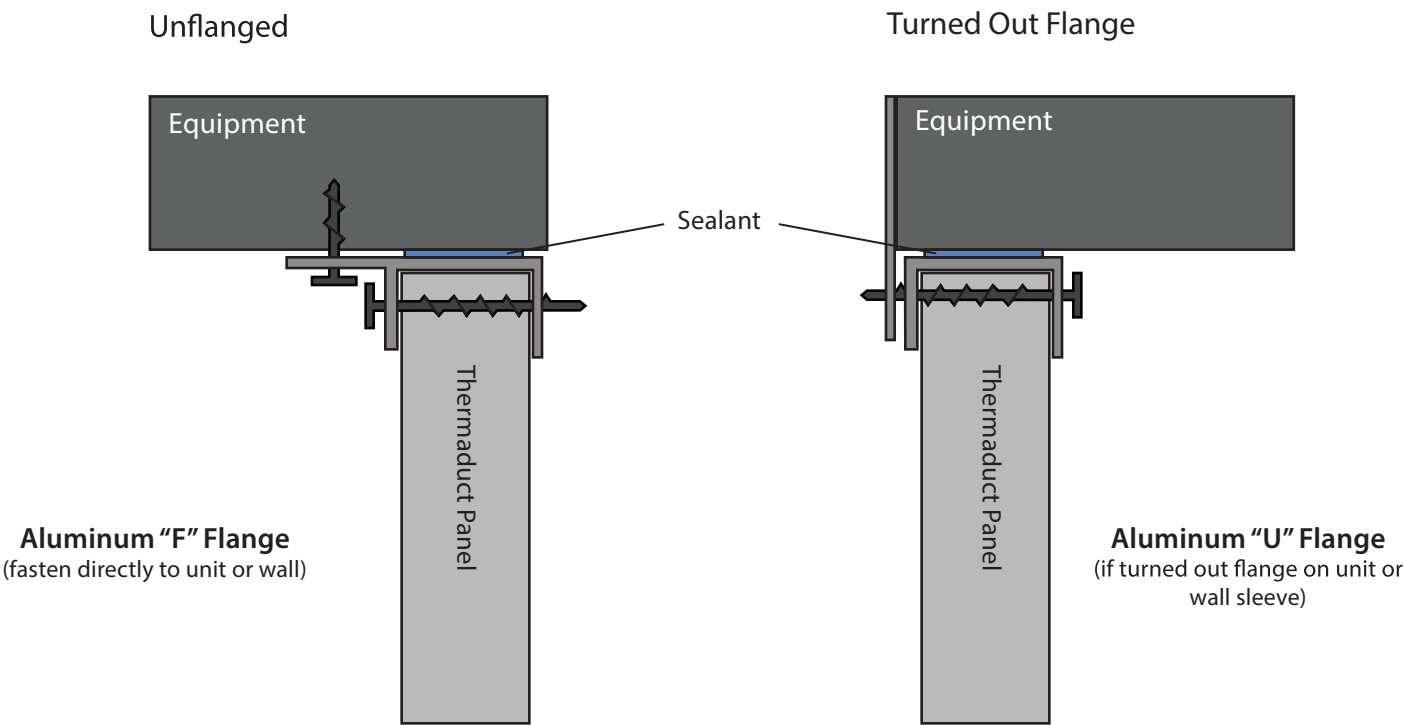
Cosmofen Sealant - Vinyl to Vinyl Sealing

Cosmofen sealant is used to make vinyl to vinyl connections such as when making connections from Thermaduct to 4-bolt flange covers and associated materials. Cosmofen sealant is UV stable and can be used in direct sunlight and outdoor applications. It is best when applied to vinyl to vinyl connections. Cosmofen does not stick to metal surfaces.

This sealant should provide 36 linear feet per tube using the manufacturer’s pre-cut applicator opening. Don’t cut the applicator, as common with sealant tubes, as that can risk over application.

EQUIPMENT CONNECTIONS

EQUIPMENT CONNECTION:



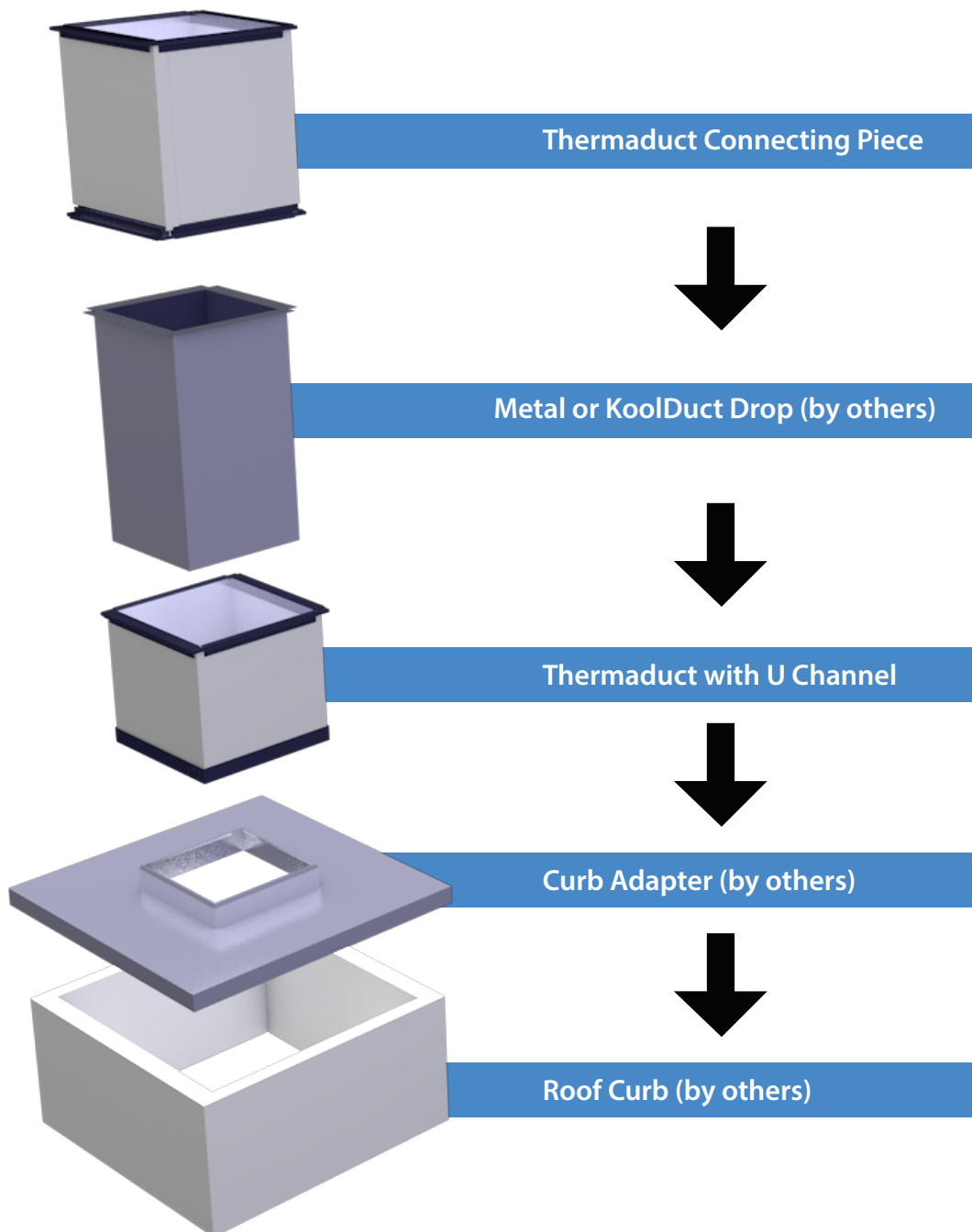
If flashing is required, utilize over flanges



SUGGESTED CURB CONNECTIONS:

Connect Thermaduct segment to roof curb with the following steps:

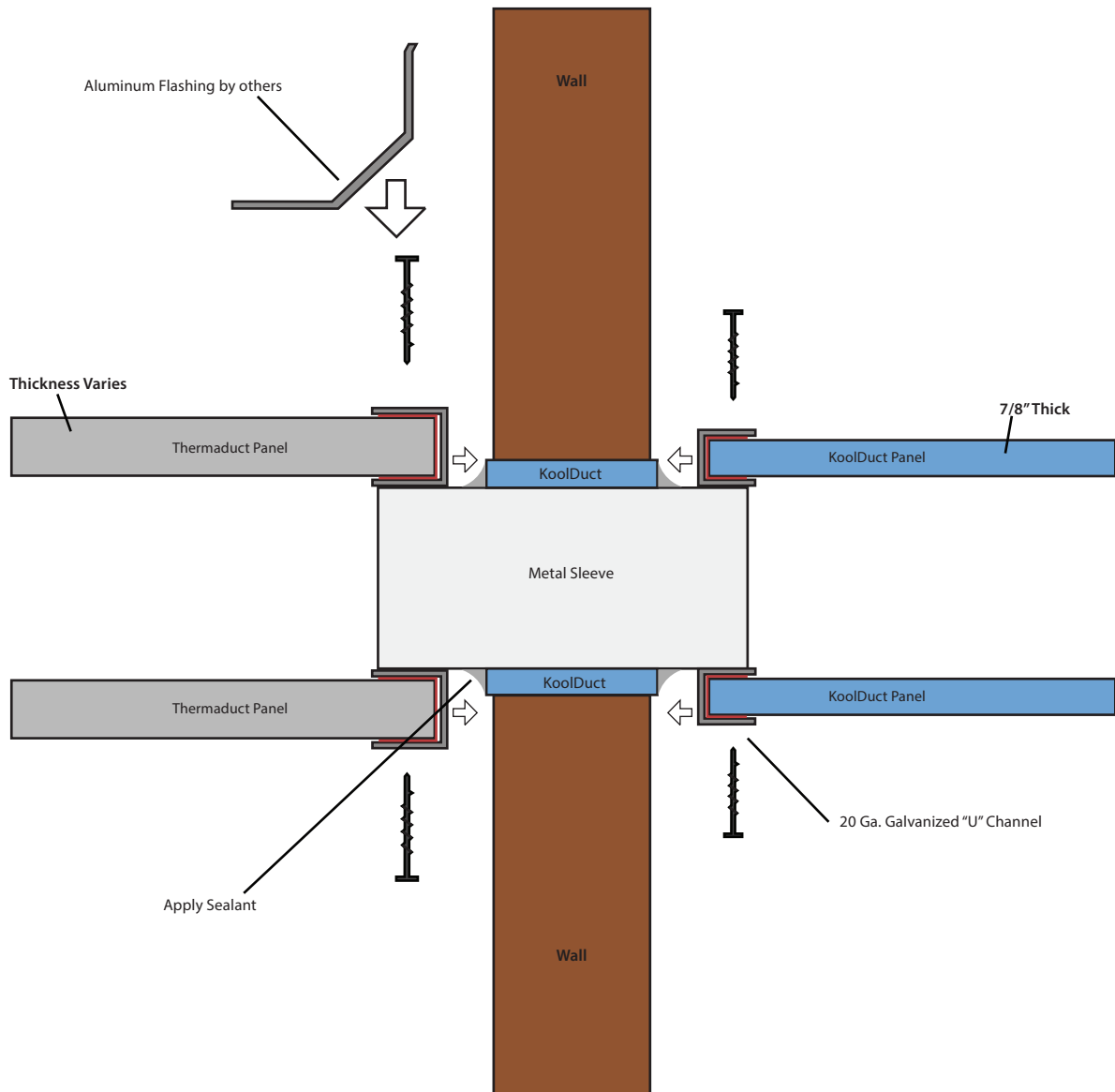
- Properly seal curb adapter
- Set Thermaduct duct piece over curb to ensure correct fit
- Secure fitting into place with screws through flange
- Drop metal or KoolDuct duct drop into curb.
- Connect next section of Thermaduct over and finish as a normal flange connection.



SUGGESTED CONNECTION THROUGH EXTERIOR WALL:

We suggest connections through exterior walls use a metal sleeve to bridge the interior and exterior ductwork, entering the interior of the Thermaduct. This is an added point of protection from water entering the building should flashing fail.

Because of general code requirements on interior applications, Vinyl Cladded Thermaduct cannot enter the interior of the building without approval from your engineer.



FIELD MODIFICATIONS

Typically, Thermaduct is manufactured to detailed measurements. From time-to-time, a field cut may be necessary for adjusting the length of the duct segment or to add taps for equipment or duct connections that are field assessed. When this occurs, the segments can be field cut and the flanges can be reassembled for connection.

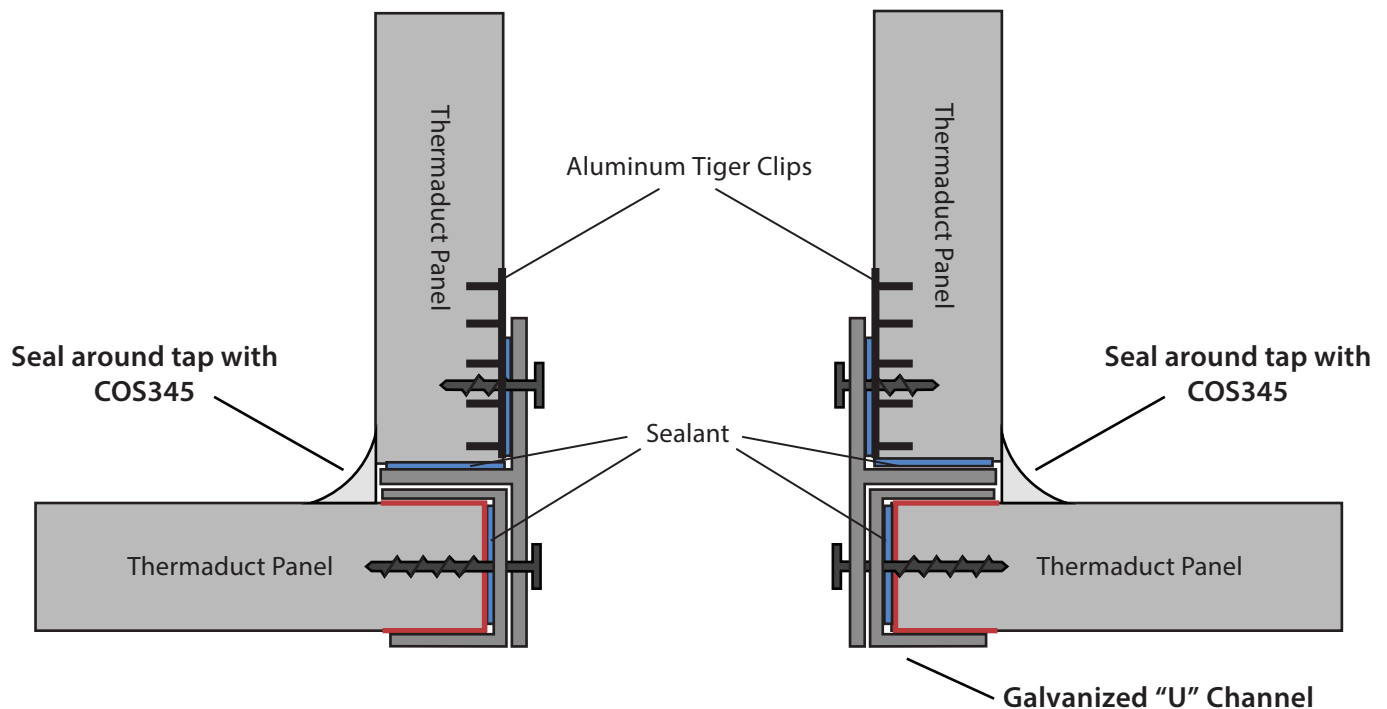
CUTTING A TAP - 46" MAX WIDTH

For taps larger than 46" please consult factory.

- Field cut using circular saw
- Clean the cutting area of dust and debris
- Use a knife to ensure all cuts are completely through the interior FSK
- Ensure cut is accurate with new duct piece
- Tape exposed edges with UL 181 aluminum tape
- Caulk and place 18 gauge "U" Channel over taped edges
- Hammer "U" Channel into place
- Caulk the edges of new fitting and place into prepared cut
- Screw into "F" Channel to secure into place
- Caulk all edges with approved caulk to ensure a waterproof seal

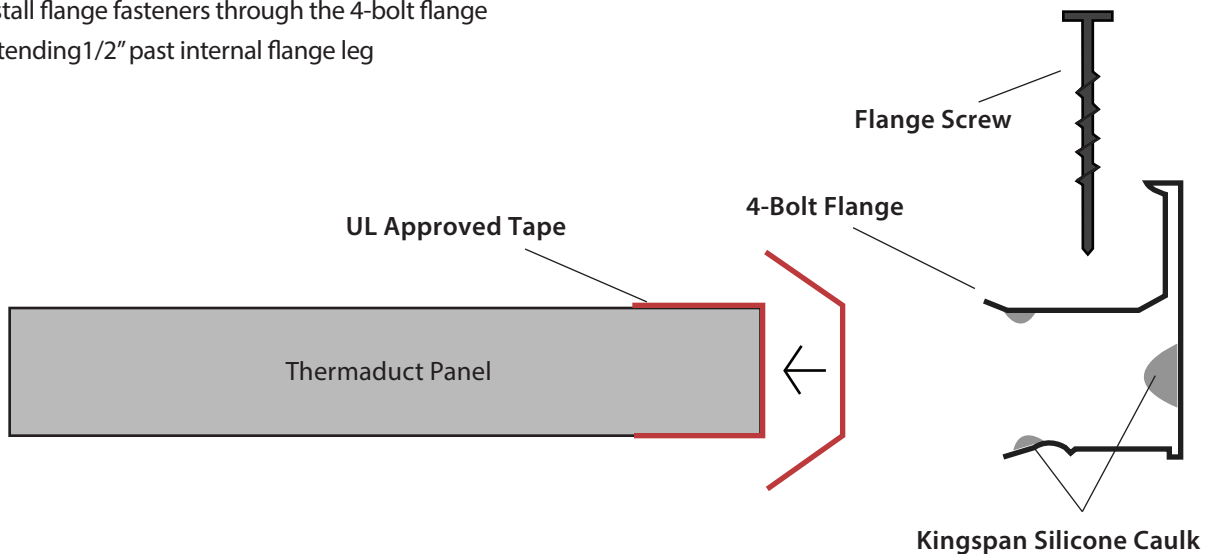


SHOE TAP:



FIELD CUTTING

- Measure proper distance from last flange connection to desired location
- Mark the vinyl clad with a line the full outer girth to ensure lines meet squarely
- Use a Metabo or Circular Saw and cut only through the vinyl clad layer
- Use a 90 degree cutting block to make the final cut through the foam panel
- Use 3" aluminum tape (field supplied) to cover foam end
- Use Kingspan Silicone Sealant and create a bead of flange interior surfaces
- Re-install 4-bolt flange and secure it firmly to the face of the foam panel
- Install flange fasteners through the 4-bolt flange extending 1/2" past internal flange leg



ACCESS DOORS

Thermaduct now provides durable low leakage access doors for use in Thermaduct products. For more information on using these in your application, contact your Thermaduct representative.

TEST PORTS, DUCT DETECTORS & OTHER DUCT ATTACHMENTS

Accessories and test ports may be installed on Thermaduct and must be properly sealed and protected from the elements. For Thermaduct recommended practices, please see our Duct Accessory Bulletin.



The following pages will guide you in your installation of Thermaround. This system uses an offset coupling system to provide unrestricted airflow and high thermal values. Handling and Care of Thermaround should be consistent with Thermaduct sections. Please contact Thermaduct or your local Thermaduct Representative should you have any questions regarding installation.

These Guidelines Will Cover:

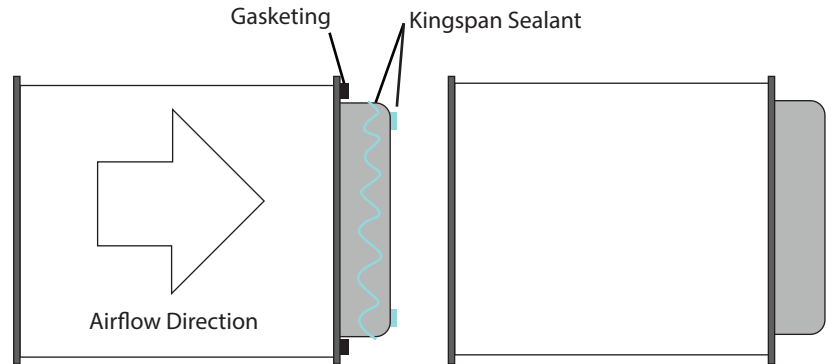
- Thermaround Connections
- Horizontal Supports
- Vertical Supports
- Field Modification

THERMAROUND CONNECTIONS

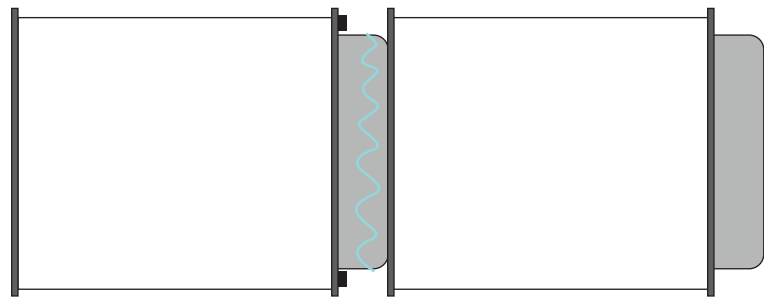
Thermaround uses a 4 stage connection system to connect duct segments together. The interior of the flange is caulked before connection is made and secured with the drawband ring. All seams should face the ground where applicable.

1. **Align duct segments and apply factory supplied gasketing.**

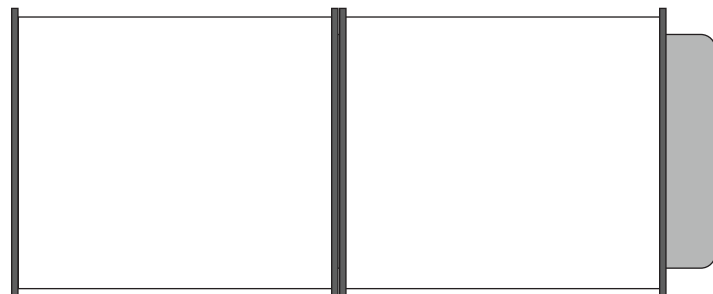
Apply factory supplied sealant to offset coupling



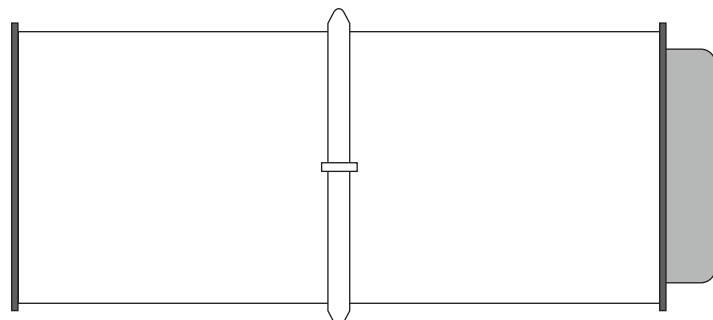
2. **Connect duct segments via offset coupling**



3. **Ensure tight fit**



4. **Secure segments with two piece barrel connection drawband**



AVAILABLE FROM THERMADUCT

Manus Bond 75 AM (Gray) or Kingspan Safire Sealant - Phenolic Interior Sealing

Manus Bond 75 AM (Gray) sealant or Kingspan Safire Sealant are used on for sealing the offset coupling, inside of the phenolic duct itself when making a “cut” to the Thermaround, and for sealing a new flange that has been installed at a cut joint. View our online training course or read page 15 of this manual for use with cut joints.

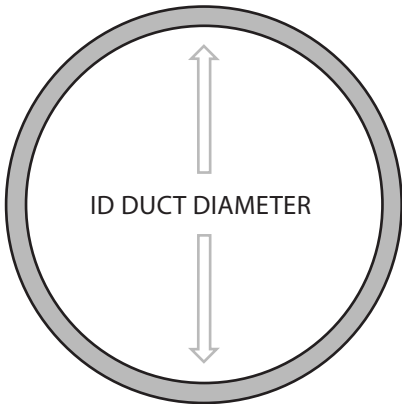
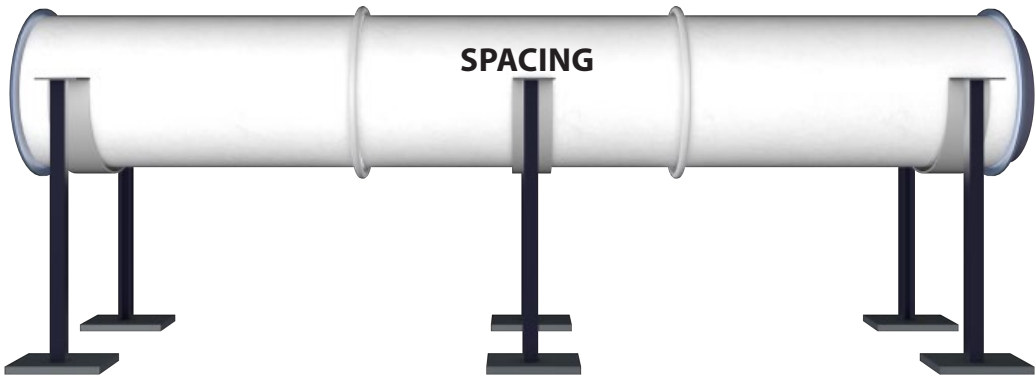
OSI Quad (White) - Exterior Flange Sealing & Vertical Connection Seal

OSI Quade (White) is used to seal the the top of any vertical connection or the exterior of a new flange at Thermaround cut joints. View our online training course or read page 15 of this manual for use with cut joints.

ROUND SUPPORTS AND HANGERS

Thermaround shall be installed with adequate support to insure the life of the system. Roof supports and hangers are the foundation that ensure Systems are firmly adhered to the structure and capable of providing mechanical support of the Thermaround system. **Also refer to roof support manufacturers guidelines for their specifications as these instructions do not supersede their published data. Consult rail or support bracket manufacturer for their data relating to structural capacity & application.**

This Chapter does not deal with seismic requirements; consult a seismic engineer for requirements when applicable.



ID MEASUREMENTS = DUCT GIRTH

Duct ID Diameter < 48"	Spacing 8' maximum
Duct ID Diameter > 48"	Spacing 6' maximum
Duct ID Diameter >80"	Spacing 4' maximum

On buildings over 20 stories, 4' maximum spacing

SUPPORT SIZE

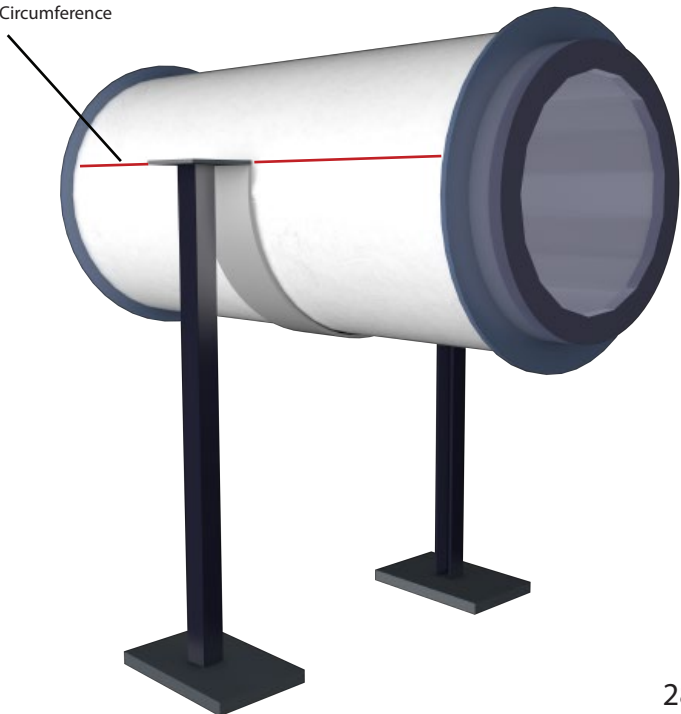
Supports must be properly sized for the outer circumference of the Thermaround segments.

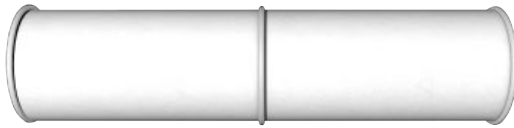
Depending on the size of your Thermaround, a wider support surface may be required to distribute weight across a larger area.

Just like rectangular, we suggest every other support be tied down. For questions, consult your engineer on your application.

Duct Diameter	Channel Width
<24"	1 1/2"
>25"/<38"	3"
>39"/<60"	4"
>60"	5"

Supports Should Cradle At Least Half The Thermaround Circumference

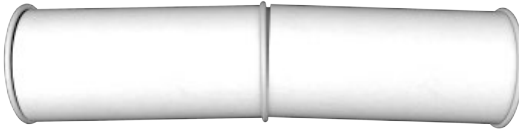




YES

LEVEL INSTALLATION

Connected pieces of Thermaround should be level and plumb. Seams should not have open gaps, which indicate an un-level or out of square connection.



NO

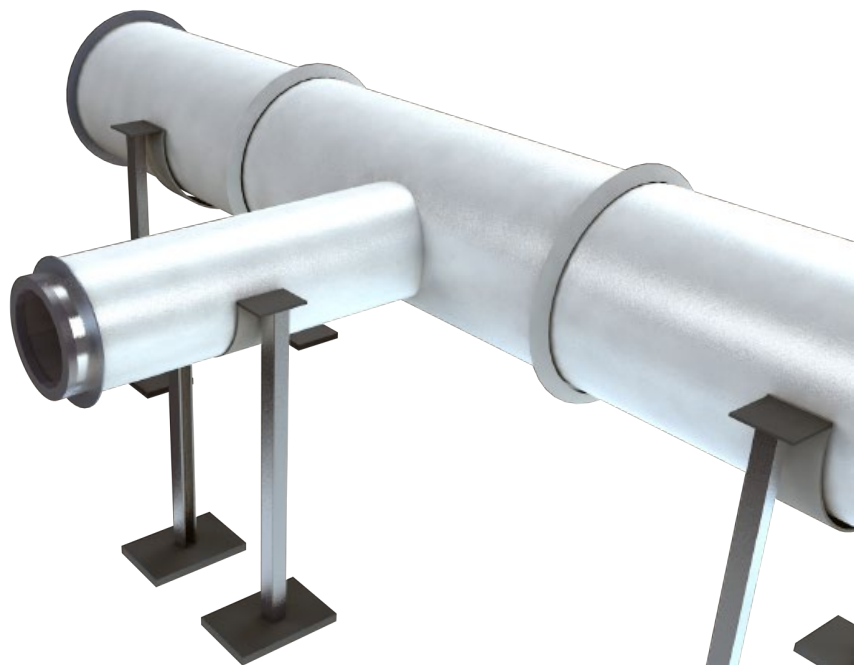
ELBOW SUPPORT

Elbow supports should follow support schedule determined by the duct diameter on the previous page.



TAP SUPPORT

Changes in direction should have a support within 2 feet of the duct tap.



Vertical Wall Mount Bracket
(Compression)

NOTE:

Top edge of connection must be sealed on all vertical connection bands with OSI Quad (White) sealant.

Max distances between structural vertical supports should not exceed 8 feet. Larger diameter ductwork will require supports every 4 feet by the schedule below. Should your application require duct installed beyond at a greater distance from a wall than gussets can support, consult Thermaduct.

ID MEASUREMENTS = DUCT GIRTH

Duct ID Diameter < 48"	Spacing 8' maximum
Duct ID Diameter > 48"	Spacing 6' maximum
Duct ID Diameter >80"	Spacing 4' maximum

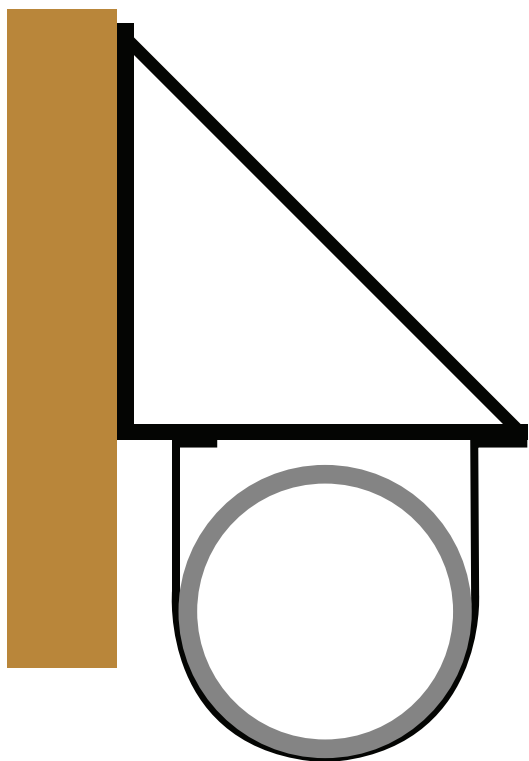
On buildings over 20 stories, 4' maximum spacing

Sealant

Transitions to horizontal will require supports to be added within 8" of connection draw band.

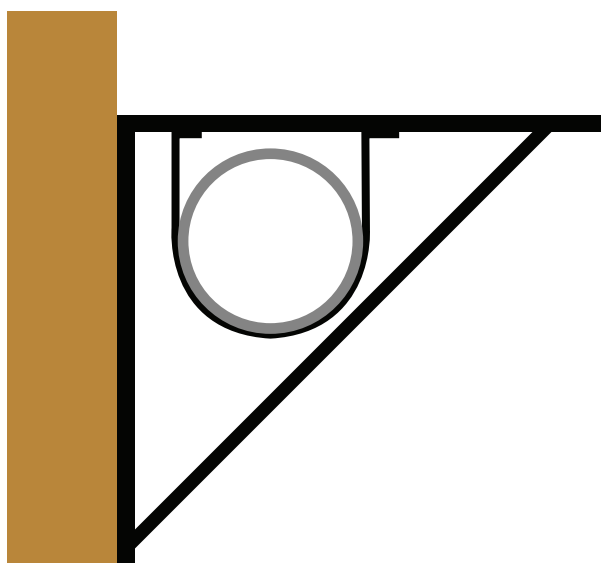
Alternate Supports in Elevated Locations

Therमारound sections may be suspended from wall mounted gussets using support bands. Support width should follow the same schedule as noted in the previous pages.



Preferred Method

Ductwork shall hang beneath wall mounted gusset from support bands.



Alternate Method - Smaller Duct Segments

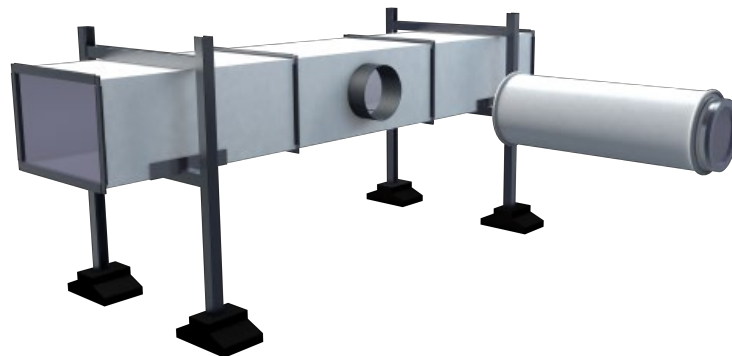
Ductwork shall hang within wall mounted gusset from support bands.

CONNECTING TO EQUIPMENT, CURBS AND RECTANGULAR DUCT

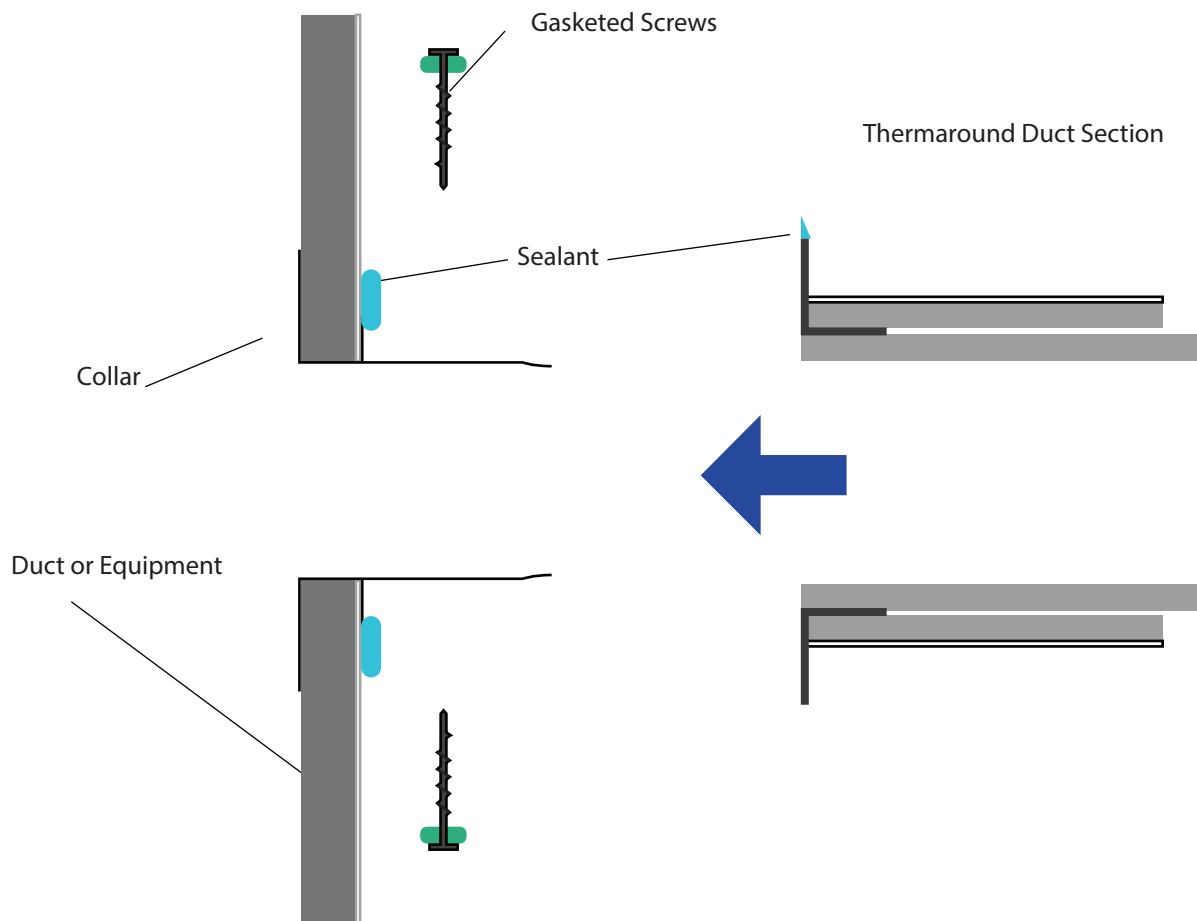
PROPER CONNECTIONS

While most equipment and curb connections use square to round fittings, there are occasions where you will be required to connect with Thermaround without converting to rectangular. In these instances, properly sealed ductboard collars or curb adapters can be used to connect to your Thermaround ductwork.

Collar or curb should enter the interior of the Thermaround connection. Proper sealing methods and gasketed screws are used to secure into place and ensure water and air integrity. Use proper flashing if required.



Example:



FIELD MODIFICATION OF THERMAROUND

CUT JOINTS

Thermaround can be modified in the field in cases where measurements require some room for error. These decisions should involve Thermaduct prior to any cuts, as installers will apply a new flange to the new connection point.

Required Materials for Cut Joint:

- Flange Ring
- 1/4" Drill Bit with Drill
- Panel Fasteners
- Manus Bond Sealant
- Deadblow Hammer
- OSI Sealant
- Circular Saw
- Knife with at least 3" Blade
- UL 181 Approved Tape
- Rigid Spatula

Steps:

1. Measure and mark your intended cut location and add two additional inches for the offset coupling. Secure Thermaround section on a clean cutting surface. Confirm cut line is straight to ensure no gaps.
2. With your circular saw set to 1 3/4", cut both layers of insulation at the offset coupling line. Clean with knife if necessary and remove cut section. Return to the intended cut location and set circular saw to 7/8". Cut through the top layer of vinyl and insulation at intended cut location.
3. Apply UL 181 Approved tape to exposed phenolic areas, limiting tape touching the vinyl cladding. Squeegee tape into place to ensure a firm hold.
4. To prepare the area for new flange ring, split the tape between the inner and outer layers of phenolic with a rigid spatula.
5. Seal along underside of flange with Manus Bond sealant and carefully slide ring over the inner layer of phenolic. Use deadblow hammer to move flange ring into position.
6. Install panel fasteners around the interior circumference of the ductwork in line with the flange. These should be placed every 6-8 inch centers. Apply UL 181 tape over fastener. Screw through panel fastener into the flange ring to secure in place.
7. Seal exterior of ring with OSI sealant along vinyl cladding. Seal interior of ring with Manus Bond near the inner coupling.

VIDEO AVAILABLE AT: training.thermaduct.com



CARE AND MAINTENANCE

CLEANING THERMADUCT

To remove residue the exterior surface of Thermaduct can be cleaned with a soft rag and water. Should residue be unable to be taken off, add a small amount of soap to the water. Too high of soap concentration can damage the UV stability of the vinyl.

If you observe excessive environmental buildup contact warranty@thermaduct.com to determine a proper cleaning option.

The interior of the ductwork can be cleaned using established non-abrasive dry cleaning methods such as air whips, electric vacuums, air lances or air nozzles.

THERMADUCT IS NOT A SUPPORT SURFACE

Thermaduct is designed to handle loads associated with induced pressure (for the air handling appliance) and from weather related stressed (wind, snow, rain, etc.). The duct itself is not designed for human traffic unless designated. Use caution when applying weight to ductwork to allow it to maintain full structural integrity to take on its intended application. Plank off duct area with 3/4" plywood should you need to move across ductwork.

Unless otherwise specified, Thermaduct segments are not intended for added surface loading.

DO NOT PAINT THERMADUCT

Do not paint Thermaduct with paint or other surface treatments. Thermaduct's white color is not only a cosmetic choice, but to help the outdoor ductwork maintain the best performance possible in all climates. Applying paint to Thermaduct can damage the UV stability and long term performance.



Complete the following check sheet and return to info@thermaduct.com prior to installation. This is a precautionary step that will guarantee a smooth fabrication and installation process.

Job Name	Installing Contractor
Job Address	Expected Start Date
Site Contact	Contact E-mail
Thermaduct Rep	Rep Salesperson

1. Application is outdoors?	Yes	No
2. Have you confirmed duct girth of your application?	Yes	No
3. Do you understand support surface requirements outlined in this manual?	Yes	No
4. Duct supports are going to be level?	Yes	No
5. What is the maximum span between any 2 roof / hanger supports on your application?	_____ feet	
6. Is this a LEED project?	Yes	No
7. Air temperature range between -15 and 185 degrees F?	Yes	No
8. What is the design external static pressure (Supply Air)	_____ " w.c.	
9. What is the design external static pressure (Return)	_____ " w.c.	
10. What is the design external static pressure (Exhaust)	_____ " w.c.	
11. Do you have a Metabo or Circular Saw for cutting vinyl clad?	Yes	No
12. Do you have an angle cut block knife to cut take-off's?	Yes	No
13. Have you gone through our online training course?	Yes	No
14. Are you just selecting yes without reading this?	Yes	No
15. Is this duct installed in an area where wind lift might occur?	Yes	No
16. Do you have materials / hangers to hold duct into position?	Yes	No
17. Do you have rigging (crane, hoist, lift) to get material onto roof?	Yes	No
18. Have you looked at the weather forecast to insure dry conditions?	Yes	No
19. Have you studied / measured to verify detailed drawings of system?	Yes	No
20. Have you signed off on the manufacturing submittal?	Yes	No
21. Are you aware Thermaduct is not a support surface?	Yes	No
22. Does your application require protective film over duct openings?	Yes	No
23. Expected snow accumulation per year	_____ "	

Read, fill out and return this form to warranty@thermaduct.com prior to installation.

POST INSTALLATION CHECK SHEET

- | | | |
|--|-----|----|
| 1. Did you utilize the installation guidelines outlined in this manual to install the completed duct system? | Yes | No |
| 2. Is the duct installation free from visual damage? | Yes | No |
| 3. Are ducts free from sagging or visible misalignment? | Yes | No |
| 4. Is the static pressure operating within designed pressure class? | Yes | No |
| 5. Is the maximum spacing of supports and hangers in conformance with this manual? | Yes | No |
| 6. Are fittings supported in conformance with this manual? | Yes | No |
| 7. If required, did you utilize C Channels or Corner Angle with supports? | Yes | No |
| 8. Do all elbows have a support underneath the Turning Vanes? | Yes | No |
| 9. Were you required to modify any of the duct segments? | Yes | No |
| 10. If yes above; Were you able to utilize designated "cut joints"? | Yes | No |
| 11. Did you utilize 4" foam insulation tape at all joints? | Yes | No |
| 12. Did you install 4-bolt flange covers over foam insulation at all joints? | Yes | No |
| 13. Did you caulk 4-bolt flange covers with Cosmofen Sealant? | Yes | No |
| 14. Is the system served by this ductwork supplying a VAV system? | Yes | No |
| 15. If above is "yes"; Does the system contain a limiting device for air pressure in the system? (Note with low air leakage, air pressure builds quickly). | Yes | No |
| 16. Has the property management been given a copy of this manual? | Yes | No |
| 17. Are there any other comments regarding this installation? | | |

Job Name	Installing Contractor
Job Address	Contractor Mailing Address
City / State / Zip	City / State / Zip
Site Contact	Installer's Name
Installation Date	Date
Comments	Signature

Please submit this form and at least 3 photos of the installation to the following e-mail to obtain warranty certificate: warranty@thermaduct.com.

thermaduct®

HIGH EFFICIENCY AIR DISTRIBUTION

WARRANTY CONDITIONS:

1. To obtain the warranty, the Company must receive from a certified Thermaduct installer the Pre-Installation Checksheet and Post Installation Checksheet within 60 days following installation, and all conditions on the Pre-Installation Checksheet and Post Installation Checksheet must be satisfied in full, at the Company's discretion. This Install Verification is not a registration, but rather a method for the Company to verify that the Thermaduct system is appropriate for the location where installed and that such installation was properly completed. In addition, the product must be properly registered by sending this form to the Company within ninety (90) days of original installation. In jurisdictions where warranty benefits conditioned on registration are prohibited by law, registration is not required.
2. The Thermaduct system and any Thermaduct product must be installed properly and by a licensed HVAC technician, with the HVAC technician completing the Install Verification.
3. The warranty applies only to products remaining in their original installation location and designated use.
4. Installation, use, care, and maintenance must be normal and in accordance with instructions contained in the Installation Instructions, Owner's Manual and Company's service information.
5. Defective parts must be returned to the Thermaduct distributor through a registered servicing dealer for credit.
6. This Limited Warranty may not be modified, changed or expanded by anyone, including without being limited to any distributor, dealer or contractor. Representations or statements relating to Thermaduct products made by Thermaduct, its representatives or any other person, whether made in writing or orally, whether made in any sales literature, catalog, advertisement, electronic media, or agreement are (A) opinions only, (B) not express warranties and (C) not a part of the terms of sale of the product.

Failure to adhere to the foregoing conditions will void the warranty.

LIMITATIONS OF WARRANTIES: ALL IMPLIED WARRANTIES AND/OR CONDITIONS (INCLUDING IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE OR PURPOSE) ARE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY. SOME STATES OR PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESS WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER. ALL CLAIMS UNDER THE WARRANTY MUST BE BROUGHT WITHIN ONE YEAR AFTER THEY ARISE OR THEY ARE WAIVED. THE MAXIMUM LIABILITY UNDER THE WARRANTY IS THE COST OF THE REPLACEMENT OF THE DAMAGED PRODUCT.

THIS WARRANTY DOES NOT COVER:

1. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts, or replacement parts, or new parts other than those Thermaduct parts covered under this Warranty.
2. Any product not installed pursuant to the Company's standards and instructions.
3. Any product not purchased from an authorized Thermaduct representative.
4. Normal maintenance.
5. Failure, damage or repairs due to faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
6. Damages due to usage conditions.
7. Failure or damage due to floods, winds, fires, lightning, accidents, corrosive environments (rust, etc) or other conditions beyond the control of Company.
8. Parts not supplied or designated by Company, or damages resulting from their use.
9. Products installed outside the U.S.A. or Canada.
10. Except as provided herein, the Company shall not be liable in either tort or contract for ANY SPECIAL, INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states or provinces do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state or province to province.

¹ Except in California and Quebec and other jurisdictions that prohibit warranty benefits conditioned on registration.

SUPERIOR OUTDOOR AIR DISTRIBUTION

There is simply no duct like it in the world. Thermaduct and Thermaround combine the best of air distribution technology with a choice outdoor weather barrier to create a duct that offers the highest R value and lowest air leakage rates in the industry. Unsurpassed performance was the goal to create a duct that can not only deliver every cubic foot of air it is fed, but to treat the air with the utmost respect by not exposing it to fibrous or volatile organic chemical latent liners.

Indoor, the air passes a smooth aluminum surface that is clad to Kingspan's Kooltherm closed cell phenolic core. The outer layers include factory autohesively bonded FSK aluminum with a UV stable, 1000 micron titanium infused vinyl that is vacuum pressed and laminated permanently to Kingspan KoolDuct. Our rectangular duct segments are connected together with a gasketed 4-bolt flange system. For round applications, a sealed offset coupling and external drawband are all that is needed for an airtight connection. Once installed your application will have uncompromising water and air integrity and one of the best outdoor duct limited warranties in the industry.



PRODUCT FEATURES

- High R-Value
- Virtually Zero Air Leakage
- Weather Resistant
- Closed Cell
- Fiber Free Insulation Core
- 10 Year Limited Warranty*



thermaduct[®]
HIGH EFFICIENCY AIR DISTRIBUTION

Thermaduct LLC
26610 Eckel Rd.
Perrysburg, Ohio 43551
toll free (855) 809-6903
www.thermaduct.com

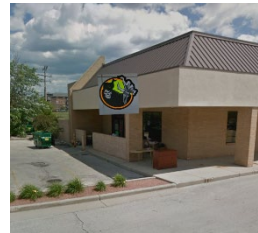
Copyright by Thermaduct, LLC

* Warranty Registration is Required for Full Installation Warranty

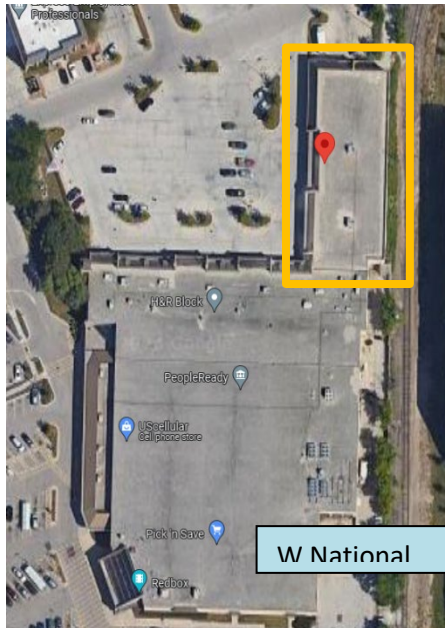


STAFF REPORT
WEST ALLIS PLAN COMMISSION
Wednesday, August 27th, 2025
6:00 PM
West Allis City Hall – Room 128

3. Sign appeal for Spirit Halloween, a proposed General Retail use, located at 6731 W Greenfield Ave. (Tax Key No. 453-9018-001)



The applicant is proposing to install two temporary wall signs at the western and northern walls of the building at 6731 W Greenfield Ave. New signage requires a signage permit,



and while one has been submitted for review, planning has noted that the larger of the two signs exceeds the 32 sq ft maximum for temporary signs. The larger proposed sign will be 112 sq ft in area and the smaller sign will be 16 sq ft. Despite exceeding the maximum area for a temporary sign, staff finds that the building's overall size at roughly 17,700 sq ft would be large enough to accommodate the proposed signage. The signage characteristics otherwise appear to conform to the sign ordinance as proposed. The purpose of this sign appeal is to evaluate the previously approved larger sign within the given context of the new building it will occupy. There is precedent for Plan Commission granting a sign variance for the larger of the two signs. In 2024 Plan Commission granted approval of the same Spirit Halloween sign at the same location. This sign was approved previously by the Plan Commission without

conditions.

Staff shared the signage concept with City Code Enforcement to seek their feedback prior to the Plan Commission meeting. Code Enforcement has mentioned that the signage is appropriate considering the context of the building, the previous approval by Plan Commission of the sign, and the temporary nature of the signage and proposed business.

Recommendation: Approve the signage plan appeal for Spirit Halloween, a proposed General Retail use, located at 6731 W Greenfield Ave. (Tax Key No. 453-9018-001) without conditions.



STAFF REPORT
WEST ALLIS PLAN COMMISSION
Wednesday, August 27th, 2025
6:00 PM

4. Sign Plan Appeal for Tsunami Express Car Wash, an existing Car Wash Service use, at 10928 W. Oklahoma Ave. (Tax Key No. 520-0151-001)

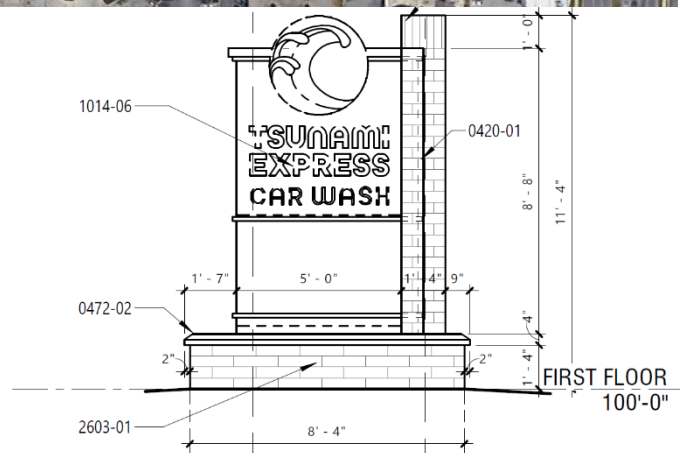
Overview

[Tsunami Car Wash](#) at 10928 W. Oklahoma Ave. is currently under construction. As the project climbs closer to completion, signage has been submitted for the new business.

Proposed for the building is a total of 4 wall signs. Sign 1 on the east elevation above the vehicle entrance to the car wash consists of the Tsunami Express logo and channel lettering totaling 21.8 sq. ft. Sign 2 is directly below sign 1 and consists of the raised text “Car Wash” and totals 23 sq. ft. Moving to the south elevation of the building is Sign 3, a 16.4 sq. ft. channel letter sign with the text “Memberships.” On this same façade is Sign 4, another channel letter sign totaling 17.6 sq. ft. with the text “Wash. Chill. Repeat.” Additionally, a freestanding sign has been proposed on-site that totals 43.75 sq. ft. The total signage area proposed across all signs is 122.55 sq. ft. The maximum signage area allowed is 125 sq. ft. for this property.

The total number of signs on the building exceeds the allowable signs per façade. Per code, two (2) wall signs shall be permitted, or one (1) wall sign per street frontage, whichever is greater. The total number of signs exceeds what is permitted per code. The applicant justifies this decision to provide enhanced visibility along Oklahoma Ave. while maintaining a square footage under the maximum total allowed.

All wall signs conform to the design requirements per Code. The freestanding sign proposal aligns with our aesthetic goals of the sign code; however, it exceeds the allowable height of



10 ft. Additionally, the freestanding sign does not conform to the 2 ft minimum masonry base requirement.



Recommendation: Approval of the sign plan appeal for Tsunami Express Car Wash, an existing Car Wash Service use, at 10928 W. Oklahoma Ave. (Tax Key No. 520-0151-001) subject to the monument sign conforming to the height and area design requirements of the signage ordinance.



STAFF REPORT
WEST ALLIS PLAN COMMISSION
Wednesday, August 27, 2025
6:00 PM

5. Ordinance to amend Code Section 19.42 residential accessory buildings

Overview



What is the current regulation in West Allis? Section [19.42](#) of the zoning code allows the following:

- Detached accessory buildings are limited to a single 150 sq ft structure per lot, regardless of parcel size.
- Past Board of Appeals cases and inquiries from residents prompted staff to analyze accessory building standards against other municipalities.

19.42 Residential Accessory Buildings

No residential accessory building may exceed the minimum and maximum standards set forth in the table below. If any cell is blank, no limit is imposed.

	Accessory Dwelling Unit	Detached Garage	Other Accessory Building
Exterior Wall Height (maximum)	20'	10'	10'
Height (maximum)	Height of principal building, not to exceed 20'	Height of principal building, not to exceed 18'	15'
Building Coverage (maximum)	50% of principal building, not to exceed 800 sq. ft.	1,000 sq. ft.	150 sq. ft.
Setback from Principal Building (minimum)	10'	10'	10'
Front Setback (minimum)	60'	60'	60'
Rear Setback - abutting alley (minimum)	5'	5'	5'
Rear Setback - not abutting alley (minimum)	3'	3'	3'
Side Setback (minimum)	3'	3'	3'

HISTORY

Adopted by Ord. [O-2022-0024](#) on 5/3/2022

Comparison with other Codes

Staff has prepared a table comparing zoning codes from the communities of Greenfield, Wauwatosa, and Oak Creek with West Allis. West Allis lot sizes follow a pattern like Wauwatosa and Greenfield.

- West Allis Lot Size Statistics
 - Largest: 162,347 sq. ft. (3.727 acres)
 - Smallest: 1,297.58 sq. ft. (0.0298 acre)
 - Median lot size: 5510.8 sq. ft. (0.127 acre)
- West Allis Residential Lot Coverage Maximums by Zoning District:
 - RA-1 & RA-2: 40%
 - RA-3: 50%
 - RB: 60%

- Accessory buildings should not exceed the size of garages
 - Data from 2024 – Present
 - Median garage size is 516 sq. ft.
 - Min garage size built: 304 sq. ft.
 - Max garage size built: 990 sq. ft.

Best practices: flexibility with neighborhood context & compatibility in mind. This permits homeowners more flexibility while preventing outsized sheds and keeping total development within City’s existing lot coverage standards

Accessory Building Analysis

- Accessory building square footage maximums vary by municipality

Municipality	Regulation	Maximum Size Allowed	Pros	Cons
Greenfield	Area of Accessory Building (except garages). That this shall not prohibit the erection of two (2) accessory buildings (except garage) not exceeding two hundred fifty (250) square feet in area each to be no closer than two (2) feet to the side and rear lot lines and 10 feet to any principal structure.	250 sq ft	Clear maximum, easy to apply	Fixed cap is low and doesn't scale with lot size
Wauwatosa	Generally, total square footage of lot coverage for all buildings cannot exceed 37% and of that total percentage, detached garages, storage sheds, and outbuildings cannot exceed 12% of the lot area	Varies	Scales to parcel size. Ties into overall lot coverage	Calculations can be confusing to applicants. No hard upper limit on very large lots
Oak Creek	Two Accessory structures shall be permitted per lot, and shall only be permitted after a principal structure has been constructed on the same lot. An accessory structure shall not exceed 400 cumulative square feet.	400 sq ft	Clear maximum, easy to apply	No scaling for lot sizes. Smaller lots may
West Allis	Building Coverage Maximum: 150 sq ft	150 sq ft	Clear maximum, easy to apply	Restrictive and does not scale with lot sizes

This item was before the Economic Development Committee on August 12, and the committee favored a percentage of lot size (for example 10%) but also agreed that a floor area maximum limit (around 300-sf) was needed.

Recommendation: Discuss the item at Plan Commission meeting and some possible zoning ordinance options that will be directed to Common Council for consideration.

19.42 Residential Accessory Buildings

No residential accessory building may exceed the minimum and maximum standards set forth in the table below. If any cell is blank, no limit is imposed.

	Accessory Dwelling Unit	Detached Garage	Other Accessory Building
Exterior Wall Height (maximum)	20'	10'	10'
Height (maximum)	Height of principal building, not to exceed 20'	Height of principal building, not to exceed 18'	15'
Building Coverage (maximum)	50% of principal building, not to exceed 800 sq. ft.	1,000 sq. ft.	300-sf
Setback from Principal Building (minimum)	10'	10'	10'
Front Setback (minimum)	60'	60'	60'
Rear Setback - abutting alley (minimum)	5'	5'	5'
Rear Setback - not abutting alley (minimum)	3'	3'	3'
Side Setback (minimum)	3'	3'	3'

HISTORY

Adopted by Ord. [O-2022-0024](#) on 5/3/2022



STAFF REPORT
WEST ALLIS PLAN COMMISSION
Wednesday, August 27, 2025
6:00 PM

6. Ordinance to amend Code Section 19.32 Principal uses to incorporate Recovery Residence use

Overview

The City was getting some calls and also some Facebook chatter about a residential property location at 3239 S. 121st St. Callers reported an alleged “Sober Living House.” The [property owner](#) is a Florida Company. The property owner of this site leases it as a recovery residence under the brand/model [oxford house](#).

The Recovery Residences also known as Sober Living homes are democratically run, self-supporting, and drug free homes serving men, women, and women with children. According to the Oxford website, The houses represent a remarkably effective and low-cost method of preventing relapse.

Services the program provides:

- Sober living
- Short-term housing
- Services for adults, young adults, teens, seniors, families with children, substance dependency, opioid dependency, alcohol dependency.
- Rent averages between \$125 - \$250 a week. Lengths of stay average about a year, but there is no pressure on residents in good standing to leave.
- Occupancy typically between 6-15 residents.

Staff Comment

In consult with our City Attorney’s Office we could try to use zoning to limit ["recovery residences,"](#) which is what the state statutes call them. That would only impact any new locations though; existing locations like the one in Orchard Hills would become legal nonconforming uses and allowed to continue operating.

At the last Common Council meeting Economic Development Committee requested staff to prepare a zoning ordinance amendment for Common Council consideration.

The ordinance concept being drafted will include:

- A definition of [Recovery residences](#)
- Considerations to limit future locations to certain zoning districts within the city. For example, to allow only within higher density residential or commercial districts.

There are currently two known locations in West Allis: <https://www.oxfordvacancies.com/>. Both West Allis locations in the listing indicate a capacity of up to 9 people.

oxfordVacancies Home How-To House Login [Apply Online](#)

Enter a location or click on a house name for directions.

State: WI County: Milwaukee Gender: All Show Only Vacancies: ☐ Show Map: ☐

west allis Search Milwaukee, WI 53227, USA Search by Zip

House Name	Gender	City	House #	County	Contact	Contact #	Interviews	Capacity	Vacancies	Distance	Last Updated
Burleigh	M	West Allis	(414) 488-2095	Milwaukee	John	(262) 364-6911	Sun 8:00am	9	3	1.3 miles	08/18/2025 4:32PM
Bienvenidas	WC	West Allis	(414) 210-4043	Milwaukee	Kim	(414) 208-5510	Sun 8:00am	9	2W 0WC	1.4 miles	08/18/2025 3:15PM

Existing State law – 46.234 Recovery residences; registration

The state statutes basically recommend recovery residences agree to a list of pleasant to contemplate but unlikely to be realized (pie in the sky) ideas, and then they can be registered with the state. It seems like almost more of a quality control/ advertising item than something that has any teeth. There is also no real enforcement mechanism within state statutes.

Furthermore, [Wis. Stat. 66.0104\(2\)\(e\)4](#). prohibits the City from creating a permit function for this type of housing because the state does not allow a municipality to require a license or occupancy permit for a rental property. However, that provision allows us to apply our property registration program. Unregistered properties like this may be issued a citation for failure to register under [WAMC 6.13](#).

Enforcement & Legislation

WAPD calls for service – will be discussed at the meeting.

If the city continues to receive qualifying calls for police services, the city can try enforcing as a nuisance property. The calls need to be for behavior that impacts the neighborhood, not simply inquiring about why squad cars were on location.

Due to state law, the city's proactive measures are limited. We only have the option to be reactive to behavior at the property. The state could amend Wis. Stat. 46.234 to make that a more robust law with greater regulation. That's really the best path moving forward if there is an interest in proactive regulation. Otherwise, the city cannot do much unless there is more frequent nuisance behavior at the property.

Existing Principal Use table by zoning district ([Sec 19.32](#))

7323 W Greenfield Ave, West Allis, WI 53214 / 414-362-02

Municipal Code														
<p>19.32 Principal Uses</p> <p>The following table identifies the principal uses allowed in each zoning district. Each use is given one of the following designations: P (Permitted Use), L (Limited Use), or C (Conditional Use). Uses without a designation are not permitted.</p> <p>Light Motor Vehicle Sales</p>														
Residential & Lodging	RA-1	RA-2	RA-3	RB	RC	C-1	C-2	C-3	C-4	I-1	I-2	P	SF	
1-Unit Dwelling	P	P	P	P	P	L	L	L	L					
2-Unit Dwelling	L	L	P	P	P	L	L	L	L					
3- to 4-Unit Dwelling				P	P	P	P	P	P					
Dwelling with 5+ Units				C	P	C	C	C	C					
Bed and Breakfast	C	C	C	C	C									
Community Living Arrangement (8 or fewer persons)	P	P	P	P	P		P	P	P					
Community Living Arrangement (9 or more persons)				C	C		C	C	C					
Hotel						C	C	C	C	C	C			
Lodging House					C									
Residential Care Service	C	C	C	C	C		C	C	C	C	C			
Short-Term Rental	P	P	P	L	L	L	L	L	L	L				

[Community living arrangements](#) are defined and regulated differently from the states definition of Recovery Residence, and therefore should not be misinterpreted as the same type of use.

Recommendation: Discuss the item at Plan Commission meeting and some possible zoning ordinance options that will be directed to Common Council for consideration.



**STAFF REPORT
WEST ALLIS PLAN COMMISSION
Wednesday, August 27th, 2025
6:00 PM**

7. Sign Plan Appeal for Slingshot Bar, a proposed Recreation (indoor) use, at 6325 W National Ave. (Tax Key No. 454-0122-001)

Overview

[Bars and Recreation](#) is a group of activity bars offering immersive experiences with cutting-edge activities, creative drinks, and customer service. Bars and Rec has been actively working on the proposed Slingshot Bar at 6325 W National Ave in the past few months. The business anticipates a fall opening date. A conditional use permit for the property was approved in January 2024. Additionally, a mural promoting the Milwaukee Brewers rather than the business itself has been approved on the west façade in October 2024.

An image of the proposed signage has been provided by the applicant. Shown on the proposed sign plan is the business name placed on an overhang that takes shape similar to a marquee, consisting of two signs. Additionally, a third sign is shown on the west façade.

The two signs forming the marquee are each 3' x 11.25' (33.75 sq. ft.). The proposed wall sign on the west façade is 4' x 8' (32 sq. ft.). The total signage area proposed is 99.5 sq. ft. The area of signage is below the maximum square footage allowed per Code. The maximum square footage for signage for the building is 111 sq. ft. based on the Sign Code.

Per code, Two (2) wall signs shall be permitted, or one (1) wall sign per street frontage, whichever is greater. The number of signs for the building exceeds what is allowed per code. The applicant requests an appeal to this section of the code to provide more visibility to the business. In place of a monument sign, the additional wall signs provide enhanced visibility along National Ave. while maintaining a square footage under the maximum total allowed.

The twin signs forming the marquee conform with the Signage guidelines for design. However, the west facing wall sign does not conform with the design requirements per Sec. 13.21(15)(a)(2) as *exclusively flat wall signs shall not be acceptable*. Staff has discussed this with the applicant who has since indicated modification to this signage to conform with the sign code. Staff will continue to work with the applicant on submitting a conforming wall sign.



Recommendation: Recommend approval of the Sign Plan Appeal for Slingshot Bar, a proposed Recreation (indoor) use, at 6325 W National Ave. (Tax key No. 454-0122-001)

