

SAUNA GUARD

LARAWAY AVENUE WEST OF WOLF ROAD

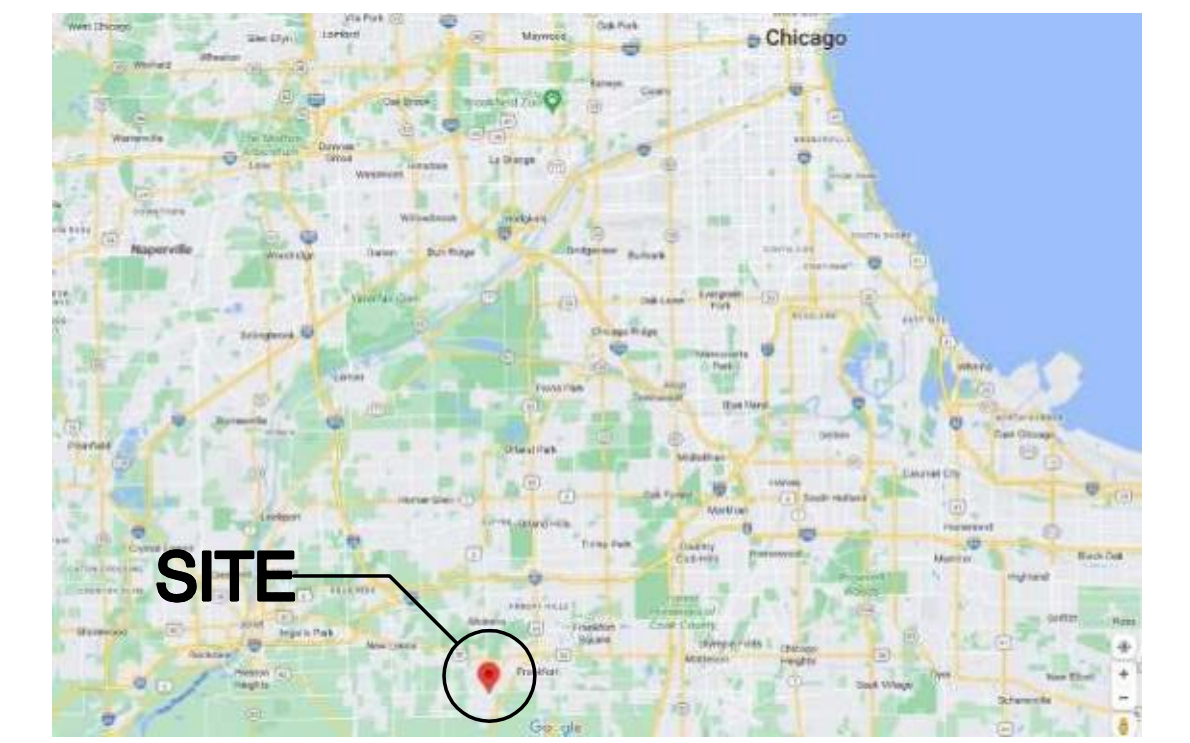
FOR:

UNLIMITED MASONRY & CONSTRUCTION, INC.

9233 GULFSTREAM ROAD

FRANKFORT, IL

FRANKFORT, IL 60606



LOCATION MAP

NO SCALE



INDEX TO DRAWINGS

CURRENT REVISIONS		DESCRIPTION	
NO.	DATE	SHEET	
T1			PROJECT DATA, DRAWING INDEX, NOTES & SPECIFICATIONS
C1			COVER SHEET
C2			EXISTING TOPOGRAPHY
C3			SITE LAYOUT PLAN
C4			SITE GRADING PLAN
C5			SITE UTILITY PLAN
C6			SITE EROSION CONTROL PLAN
C7			STORM WATER POLLUTION PREVENTION PLAN
C8			CONSTRUCTION SPECIFICATIONS
C9			CONSTRUCTION DETAILS
C10			CONSTRUCTION DETAILS
A1			SITE PLAN, DETAILS & NOTES
A1.1			SITE DETAILS & TRASH ENCLOSURE DETAILS
A2			FLOOR PLAN, WALL TYPES, DETAILS & NOTES
A2.1			WALL DETAILS, NOTES
A2.2			INTERIOR ELEVATIONS, ENLARGED FLOOR PLAN, TOILET ACCESSORIES SCHEDULE
A3			REFLECTED CEILING PLAN, DETAILS & NOTES
A4			EXTERIOR ELEVATIONS, EXTERIOR FINISH LIST & DETAILS
A5			WALL SECTIONS
A5.1			WALL SECTIONS, MASONRY NOTES
A5.2			DETAILS
A6			ROOF PLAN, ROOFING SPECS, DOOR SCHEDULE, FINISH SCHEDULE
S1			FOUNDATION PLAN, DETAILS & NOTES
S2			ROOF FRAMING PLAN, DETAILS, NOTES
S2.1			WALL SECTIONS, JOIST DIAGRAMS
M1			HVAC PLAN
M2			ROOF AND GAS PIPING PLAN
M3			HVAC SCHEDULES AND NOTES
M4			HVAC VENT SCHEDULES
P1			PLUMBING PLAN, SCHEMATIC DIAGRAMS, DETAILS
P2			PLUMBING DETAILS, NOTES, SCHEDULES
E0.1			ELECTRICAL SITE PLAN, SITE PLAN DETAILS
E0.2			PHOTOMETRIC PLAN, PHOTOMETRIC DETAILS
E1			ELECTRICAL RISER DIAGRAM, NOTES, SCHEDULES
E2			ELECTRICAL POWER PLAN, SHEET NOTES, SCHEDULES
E3			ELECTRICAL LIGHTING PLAN, SHEET NOTES, ELEVATIONS
E4			ELECTRICAL ROOF PLAN, DETAILS, SCHEDULES
E5			ELECTRICAL CONTROL PLAN, DETAILS
E6			ELECTRICAL SPECIFICATIONS

CIVIL & LANDSCAPE SHEETS ALWAYS CONFORM LATEST DRAWINGS WITH CIVIL ENGINEER AND LANDSCAPE ARCHITECT.

SPECIFICATIONS

THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO ILLUSTRATE AND DESCRIBE A COMPLETE JOB IN EVERY RESPECT. CONTRACTORS ARE CAUTIONED TO FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS ON THE PREMISES AS, AFTER CONTRACTS ARE SIGNED, NO EXTRAS WILL BE ALLOWED FOR ANY LABOR AND/OR MATERIALS NECESSARY TO COMPLETE THE WORK.

CONDITIONS

- THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A-201, LATEST EDITION, ARE ADOPTED AS PART OF THE CONTRACT DOCUMENTS AND SHALL GOVERN ALL DIVISIONS AND SECTIONS OF THE SPECIFICATIONS AND THE WORK.
- THE WORK, INCLUDING LABOR AND MATERIALS, SHALL COMPLY WITH THE FOLLOWING:
 - THESE DRAWINGS & SPECIFICATIONS
 - ALL APPLICABLE CODES, ORDINANCE AND REGULATIONS, STATE AND LOCAL.
 - MANUFACTURER'S SPECS, AND TRADE ASSOCIATION RECOMMENDATIONS.
 - INDUSTRY ACCEPTED ENGINEERING AND CONSTRUCTION PRACTICES.
- DRAWINGS & SPECIFICATIONS ARE, AND SHALL BE, CONSIDERED AS COOPERATIVE AND CONSISTENT. WORK MENTIONED OR INDICATED ON ONE AND NOT THE OTHER SHALL BE INCLUDED AND SUPPLIED AS THOUGH FULLY COVERED BY BOTH. IN CASE OF OVERLAPPING OR CONFLICTING REQUIREMENTS, THE MOST STRINGENT (GENERALLY MOST COSTLY) APPLIES AND WILL BE ENFORCED. ONLY ITEMS DEFINITELY NOTED "NOT IN CONTRACT," "N.I.C.," "BY OTHERS," OR "BY OWNER," ARE NOT INCLUDED IN THE CONTRACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPERINTENDENCE OF THE JOB AT ALL TIMES DURING CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK ALL THE WORK OF ALL TRADES TO SEE THAT IT IS BEING PROVIDED IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IF ANY DISCREPANCIES OCCUR IN ANY OF THE WORK.
- THE CONTRACTOR SHALL SUBMIT A SWORN CONTRACTOR'S AFFIDAVIT INCLUDING THE NAMES OF ALL PARTIES FURNISHING MATERIALS AND LABOR, AND SHALL ALSO SUBMIT PARTIAL AND FINAL WAIVERS. SUB-CONTRACTORS SHALL SUBMIT PARTIAL WAIVERS OF LIEN, OR FINAL WAIVERS, IN AMOUNT AT LEAST EQUAL TO THE NET PAYOUT REQUEST.
- THE CONTRACTOR SHALL PURCHASE INSURANCE PRODUCTS IN THE FOLLOWING MANNER AND AMOUNTS:
 - INCLUDING COMPREHENSIVE GENERAL, CONTRACTUAL & AUTO LIABILITY INSURANCE, BODILY INJURY, PROPERTY DAMAGE AND UMBRELLA LIABILITY COVERAGE PER PARAGRAPHS BELOW.
 - SUBMIT THREE COPIES OF CERTIFICATION OF EACH INSURANCE.
 - HOLD HARMLESS THE OWNER & ARCHITECT FOR DAMAGE TO PROPERTY AND/OR PERSONNEL INJURIES ARISING FROM THE WORK, FROM ALL CLAIMS OR LOSS.
 - IMMEDIATELY PROVIDE US WITH A CERTIFICATE OF INSURANCE INCLUDING WORKER'S COMPENSATION INSURANCE IN THE REQUIRED STATUTORY AMOUNT AND FURTHER EVIDENCING LIABILITY INSURANCE THAT NAMES UNLIMITED MASONRY AND CONSTRUCTION AND OWNER OF RECORD AS ADDITIONAL INSUREDS, ON A PRIMARY, NON-CONTRIBUTORY BASIS, UNDER AN OCCURRENCE BASED POLICY IN AN AMOUNT OF NOT LESS THAN \$2,000,000 EACH OCCURRENCE WITH AN AGGREGATE LIMIT OF \$4,000,000 AND AN EXCESS OCCURRENCE BASED POLICY PROVIDING NOT LESS THAN \$3,000,000 OF UMBRELLA LIABILITY COVERAGE, AND WITH EACH OF SUCH LIABILITY INSURANCE POLICIES INCLUDING WAIVER OF SUBROGATION ENDORSEMENT IN FAVOR OF SUCH ADDITIONAL INSUREDS, ALONG WITH DESIGNATING THE LOCATION AND NAME OF THE PROJECT UNDER DESCRIPTION ON THIS CERTIFICATE. PAYMENT FOR YOUR FIRST BILLING WILL NOT BE RELEASED UNTIL A CORRECT AND COMPLETE CERTIFICATE IS RECEIVED. ALSO, YOU ARE REQUIRED TO DEFEND, INDEMNIFY AND HOLD HARMLESS & HOLD DEVELOPERS CORPORATION FROM ANY LOSS, DAMAGE, COST OR EXPENSE (INCLUDING REASONABLE ATTORNEYS' FEES) DUE TO ANY BREACH OF YOUR SUBCONTRACT, OR NEGLIGENCE, BY YOU OR YOUR AGENTS, EMPLOYEES OR SUB-SUBCONTRACTORS.
- ON SITE VERIFICATION OF ALL DIMENSION & CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE DRAWINGS ARE REASONABLY ACCURATE FOR FIGURING PURPOSES ONLY. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR QUESTIONS ARISING FROM JOB CONDITIONS OR THESE DRAWINGS.
- DO NOT SCALE DRAWINGS.
- COST OF WORK SHALL INCLUDE ALL SALES TAXES. CONTRACTOR SHALL PAY FOR PERMIT.
- SUBSTITUTIONS AND EXTRAS ONLY FOR WORK APPROVED IN WRITING BY OWNER AND ARCHITECT.
- THE OWNER WILL MAINTAIN A BUILDER'S RISK FIRE INSURANCE POLICY WITH EXTENDED COVERAGE PLUS VANDALISM AND MALICIOUS MISCHIEF COVERAGE.
- CONTRACTOR SHALL REMOVE ALL DEBRIS AND LEAVE THE JOB BROOM CLEAN.
- THE WORK SHALL BE GUARANTEED FOR ONE YEAR FROM COMPLETION AND APPROVAL DATE UNLESS NOTED OTHERWISE HEREIN.

GENERAL NOTES

- THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A-201, LATEST EDITION, ARE ADOPTED AS PART OF THE CONTRACT DOCUMENTS AND SHALL GOVERN ALL DIVISIONS AND SECTIONS OF THE SPECIFICATIONS AND THE WORK.
- THE CONTRACTOR SHALL INSPECT AND VERIFY ALL DIMENSIONS AND CONDITIONS OF THE SITE AND REPORT ANY DISCREPANCIES FROM THESE DRAWINGS TO THE ARCHITECT.
- THE MEASUREMENTS ON THESE DRAWINGS ARE REASONABLY ACCURATE FOR THE PURPOSE OF FIGURING. HOWEVER, IN THE EXECUTION OF WORK ON THE JOB, EACH CONTRACTOR IS TO VERIFY ALL DIMENSIONS WITH ACTUAL CONDITIONS.
- DO NOT SCALE DRAWINGS.
- INTERIOR PARTITIONS SHALL BE CONSTRUCTED OF METAL STUDS SIZE AND SPACING NOTED ON DRAWINGS WITH 5/8" FIRE CODE "G" GYPSUM BOARD BOTH FACES OR CONCRETE BLOCK AS NOTED ON THE DRAWINGS.
- ALL WALL DIMENSIONS SHOWN ON PLANS ARE NOMINAL DIMENSIONS UNLESS OTHERWISE NOTED.
- PROVIDE HEADERS, BLOCKING AND/OR FRAMING AS REQUIRED FOR SUPPORT OF ALL ELECTRICAL FIXTURES, SHELVS, DUCT REGISTERS AND MILLWORK.
- ALL INTERIOR FINISHES SHALL COMPLY WITH CLASS 2 FLAME SPREAD OF 26-75.
- N/A
- ALL EXIT DOOR HARDWARE TO BE KEYLESS IN THE DIRECTION OF EGRESS.
- PROVIDE CONTROL JOINTS IN DRYWALL FURRING SYSTEMS WHERE CONTROL JOINTS OCCUR IN THE EXTERIOR WALL, AND AT MAXIMUM 30 FEET ON CENTER IN BOTH DRYWALL PARTITIONS AND FURRING SYSTEMS.

FIRE DEPARTMENT NOTES:

- MINIMUM BA-40BC FIRE EXTINGUISHERS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 10, PROPERLY TAGGED AND MOUNTED, PER IFC 906. FINAL LOCATIONS TO BE VERIFIED WITH FIRE DEPT.
- THE BUILDING OWNER SHALL PROVIDE A KNOX KEY LOCK BOX FOR FIRE DEPT. ACCESS. FINAL LOCATION AS DIRECTED BY FRANKFORT FIRE PROTECTION DISTRICT. THE OWNER SHALL ALSO PROVIDE A NEW KEY AND NOTIFY THE FIRE DEPT. WHEN A LOCK IS CHANGED OR RE-KEYED.

GENERAL SCOPE OF WORK:

- SITING, BUILDING SHELL AND INTERIOR TENANT BUILDOUT TO TURNKEY CONDITIONS U.N.O.

ENERGY CODE COMPLIANCE

THE PROJECT IS TO CONFORM WITH THE REQUIREMENTS OF THE ABOVE-LISTED ENERGY CODE. CONTRACTOR IS TO REVIEW THE STANDARDS AND SPECIFICATIONS WITHIN THE APPROVED COMCHECK AND COMPLY WITH ALL REQUIREMENTS.

ACCESSIBILITY NOTES

THE PROJECT SITE, BUILDING ELEMENTS (ACCESSIBLE PATH, ENTRANCE, DOOR SWINGS, TOILET ROOMS ETC.) SHALL BE ACCESSIBLE TO PERSONS WITH DISABILITIES IN ACCORDANCE WITH THE 2018 ILLINOIS ACCESSIBILITY CODE.

ARCHITECT / PLUMBING DESIGN KMA & ASSOCIATES, ARCHITECTS 2205 LAKESIDE DRIVE BANNOCKBURN, ILLINOIS 60015 (847) 945-8869 PRINCIPAL DESIGN PROFESSIONAL - ERIC L. SMITH IL PROFESSIONAL DESIGN FIRM #184-008865-0001
STRUCTURAL ENGINEER DMA GROUP 2205 LAKESIDE DRIVE BANNOCKBURN, ILLINOIS 60015 (847) 945-8869 PRINCIPAL DESIGN PROFESSIONAL - DAVID I. MANGURTEN ILLINOIS LICENSED STRUCTURAL ENGINEER #81-3675
CIVIL ENGINEER / LANDSCAPE ARCHITECT JOSEPH A. SCHUDT & ASSOCIATES 9455 ENTERPRISE DRIVE MOKENA, ILLINOIS 60448 (708) 720-1000 PRINCIPAL DESIGN PROFESSIONAL - KEVIN GOHACKI
MECHANICAL ENGINEER UNITED ENGINEERING, INC. 1006 GENEVA STREET SHOREWOOD, ILLINOIS 60431 (815) 744-1010 PRINCIPAL DESIGN PROFESSIONAL - GARY G. POWERS ILLINOIS LICENSED PROFESSIONAL ENGINEER #062-049185 ILLINOIS PROFESSIONAL DESIGN FIRM #184.002255
ELECTRICAL DESIGN CONSULTANT WOLF CONSULTING 505 ELM AVENUE ELMHURST, ILLINOIS (630) 833-8939 PRINCIPAL ELECTRICAL DESIGNER - MARK R. WIEGEL
LANDSCAPE ARCHITECT PAMELA SELF LANDSCAPE ARCHITECTURE 202 SOUTH COOK STREET, SUITE 214 BARRINGTON, ILLINOIS 60010 (847) 438-4922 PROJECT MANAGER - KIM SEEBACH KSEEBACH@PAMELASELF.COM

ILLINOIS (IAC) & ICC/ANSI A117.1 ACCESSIBILITY CODE NOTES

THIS PROJECT WILL COMPLY WITH ALL 2018 IAC REQUIREMENTS FOR NEW CONSTRUCTION.

THIS PROJECT WILL ALSO COMPLY WITH ALL FEDERAL REQUIREMENTS UNDER ADAAG 4.16 - NEW CONSTRUCTION.

ALL NEW DOORS LEADING TO REQUIRED ACCESSIBLE ROOMS AND SPACES SHALL BE A MIN. OF 3'-0" WIDE, HAVE LEVER OPERATED HARDWARE (OR EQUAL), HAVE A MIN. OPENING FORCE OF 5 LBS, AND FULLY COMPLY WITH IAC SECTION 404.

ALL NEW ENVIRONMENTAL CONTROLS AND OPERATING MECHANISMS WILL COMPLY WITH IAC SECTION 309 & ICC/ANSI A117.1 SECTIONS 308 & 309 (FRONT REACH BETWEEN 15' AND 48" A.F.F.).

ANY EMERGENCY WARNINGS ALARMS, WHERE PROVIDED, SHALL BE BOTH AUDIBLE AND VISUAL AND COMPLY WITH IAC SECTION 702. THE VISUAL ALARMS WILL BE FLASHING TYPE WHERE THE FLASHING IS SYNCHRONIZED AND IN COMPLIANCE FOR INTENSITY AND FREQUENCY.

ANY REQUIRED SIGNAGE IN CONTRACT SHALL BE INSTALLED AS REQUIRED PER IAC SECTION 703 & ICC/ANSI A117.1.

ONE TOILET ROOM SHALL BE FULLY ACCESSIBLE AND COMPLY WITH IAC CHAPTER 6.

THERE IS AN ACCESSIBLE ENTRANCE PER IAC SECTION 206.

PROJECT DATA

ZONING INFORMATION

ZONED: B-2

SITE INFORMATION

TOTAL SITE AREA: 35,764 S.F. (0.82 ACRES)
 PARKING REQUIRED: 32 SPACES PARKING
 ONE SPACE/200 S.F. + (8) EMPLOYEES
 AVAILABLE: 24 SPACES

BUILDING CODE INFORMATION

2012 International Building Code*
 2014 Illinois State Plumbing Codes
 2012 International Mechanical Code
 2018 International Energy Conservation Code
 2012 International Fire Code
 2012 International Property Maintenance Code
 2011 National Electrical Code
 2012 Fuel Gas Code
 2018 Illinois Accessibility Code
 *** WITH AMENDMENTS

BUILDING INFORMATION

USE GROUP: B-BUSINESS

CONSTRUCTION TYPE: 5B

ALLOWABLE AREA: 15,750 S.F.
 PER SECTIONS 503 & 506 AND TABLE 503 = 1.75 x 9,000 S.F.
 ACTUAL AREA: 4,790 S.F.

ALLOWABLE HEIGHT: 40'
 PER SECTION 503 AND TABLE 503

ACTUAL HEIGHT: ±17'-8" (28'-10" @ PEAK)

BUILDING VOLUME: 84,700 C.F.

OCCUPANCY LOAD: 48 PEOPLE
 PER TABLE 1004.1.2 100 S.F. (GROSS) PER PERSON

CERTIFICATION STATEMENT

THIS IS TO CERTIFY THAT I AM A LICENSED ARCHITECT IN THE STATE OF ILLINOIS AND THAT THESE DRAWINGS WERE PREPARED UNDER MY PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE CONFORM TO ALL FRANKFORT BUILDING AND ZONING REGULATIONS.

Signed: *Eric L. Smith* Date: 5/18/2023

KMA & ASSOCIATES ARCHITECTS

Illinois Registration Number: 001-018154



THIS DRAWING FOR REVIEW 5/18/2023 NOT FOR BIDDING 5/19/2023 NOT FOR PERMIT 5/19/2023 NOT FOR CONSTRUCTION 5/19/2023

SHEET TITLE PROJECT DATA DRAWING INDEX, NOTES & SPECIFICATIONS

2238

SAUNA GUARD FOR UNLIMITED MASONRY LARAWAY AVENUE WEST OF WOLF ROAD FRANKFORT, IL

GENERAL NOTES

- The Village of Frankfort, Department of Public Works, and Department of Engineering, (Telephone 1-815-469-2177), and Joseph A. Schudt & Associates (Telephone 1-708-720-1000) must be notified 2 working days prior to commencement of work.
- Elevation is U.S.G.S. Datum. (NAVD 88)
- All floor drains shall discharge to the sanitary sewer.
- All downspouts and footing drains shall discharge to the storm sewer.
- All sanitary sewer construction requires stone bedding 1/4 inch to 1 inch in size, with a minimum thickness equal to 1/4 the outside diameter of the sewer pipe, but not less than 4 inches, nor greater than eight inches. Bedding material shall be CA-11 and shall be extended at least 12 inches above top of pipe when using non-rigid (PVC) pipe.
- "Band Seal" or similar flexible-type couplings shall be used for the connection of sewer pipes of dissimilar materials.
- When connecting to an existing sewer main by means other than an existing wye, tee, or an existing manhole, one of the following methods shall be used:
 - Circular saw-cut of sewer main by proper tools ("Sever Tap" machine or similar) and proper installation of hub-wye saddle or hub-tee saddle.
 - Remove an entire section of pipe (breaking only the top of the bell) and replace with a wye or tee branch section.
 - With pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting, using "Band-Seal" or similar couplings to hold it firmly in place.
- Wherever a sewer crosses under a watermain, the minimum vertical distance from the top of the sewer to the watermain shall be 18 inches. Furthermore, a minimum horizontal distance of 10 feet between storm and/or sanitary and watermain shall be maintained unless: the sewer is laid in a separate trench, keeping a minimum 18 inch vertical separation; or the sewer is laid in the same trench with the watermain located at the opposite side on a bench of undisturbed earth, keeping a minimum 18 inch vertical separation. If either the vertical or horizontal distances described above cannot be maintained, or the sewer crosses above the watermain, then, for a distance of 10 feet on either side of the watermain, the sewer pipe shall be PVC pressure pipe material or the watermain shall be constructed in a watertight casing.
- Contractor shall bend watermain pipe uniformly under sewers without using fittings providing that joint deflection does not exceed 5 degrees per joint for pipe under 12 inches in size and 3 degrees per joint for pipe 14 inches and over in size. All crossing (including services) shall have a minimum of 18 inches of clearance and should extend 10 feet each side of the center of the crossing.
- All sanitary manholes shall have a minimum inside diameter of 48 inches. Manhole steps shall be 16" min. wide plastic w/continuous 1/2 steel reinforcement, M.A. Industries or equal.
- All sanitary sewer, storm sewer, and water system construction shall conform to the "Standard Specifications for Water and Sewer Main Construction in Illinois", current edition.
- All paving and related improvements shall be constructed in accordance with the Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction in Illinois", current edition. As noted on plans.
- All trenches caused by the construction of sewers, watermain, water service pipes, and in excavation around catch basins, manholes, inlets, and other appurtenances which occur within the limits of, or within 3 feet of existing or proposed pavements, sidewalks, and curb and gutters shall be backfilled with trench backfill. Trench backfill shall be CA-9 Grade 8 material to subgrade and shall be mechanically compacted in 12" lifts.
- 12", 10" & 8" diameter sanitary sewer pipe and fittings shall be PVC pipe, SDR 26 (ASTM D-3034) with flexible elastomeric (O-ring) gaskets (ASTM D-3212), unless otherwise noted. Where 6" diameter sanitary service crosses below watermain with less than 18 inches of separation, or where indicated elsewhere on plans, 6" service shall be DIP pipe (ANSI 2151) with gasket joints (ANSI 21.11). Sanitary sewers shall be air tested, mandrel tested, and televised. Sanitary sewer manholes shall be provided with internal chimney seals (Cretex or equal). All Sanitary Manholes shall be provided with mac wrap at barrel section joints. Sanitary sewer manholes shall be air tested in accordance with ASTM C-1244-93, Standard Test Method for Concrete Sewer Manholes by Negative Air Pressure (Vacuum) Test.
- All new watermain shall be C900 PVC pipe. All watermain fittings, valves, and hydrants shall have stainless steel bolts and shall be secured using Meg-A-Lug restrained joints. Thrust blocking shall also be provided, with precast blocking permitted. Watermain shall be pressure tested at 150psi for two hours. A leakage test will be performed in accordance with "Standard Specifications for Water and Sewer Construction in Illinois", current edition. A disinfection test shall be completed using an initial chlorine concentration of 50 mg/l and a minimum residual concentration of 25 mg/l after 24 hours. All work shall comply with Village of Frankfort standards.
- Watermain and lot services shall be a minimum of 5.0 feet below finished ground surface. A 5 foot patch on both sides of the trench. Full depth Class D patch within the trench area. The 5 foot areas on both sides of the trench are required to be patched with 2-1/2" binder and 1-1/2" of surface. Public Works inspections are required during the restoration process.

- All storm sewer must be reinforced concrete pipe in paved areas.
 - All reinforced concrete pipe shall be ASTM C76 CL IV.
 - Sump pump discharge piping shall be PVC Schedule 40.
- Joints shall conform to ASTM C443.
- Where storm sewers cross over the tops of watermain and are designated as "LHP" type, they shall be reinforced concrete low head pressure pipe (ASTM C-361-76). Alternately, proper watermain protection per note (8.) shall be provided.
- All bends in the watermain of 10 degrees or greater shall be installed with restrained joints (Meg-A-Lug or equal). Restrained joints (Meg-A-Lug or equal) shall be used within three pipe lengths of a fitting. No thrust blocking is allowed.
- All rims and inverts of existing sanitary and storm sewer shall be field verified prior to the start of construction, and any discrepancies between the plan and existing elevations shall be reported to the Engineer immediately.
- All coordinates refer to back of curb, centerline of manhole, pipe, or structure, or as shown.
- All curb radii refer to back of curb. Lane dimensions refer to face of curb or edge of pavement.
- The Contractor shall subscribe to all governing regulations and shall obtain all necessary public agency permits.
- Field check all dimensions, coordinates, and elevations before proceeding with new work. Notify the Engineer of any discrepancies immediately.
- The Contractor shall provide for the safe and orderly passage of traffic and pedestrians where his operations affect public thoroughfares and adjacent property.
- Construction access points to the site shall be protected in such a way as to prevent tracking of mud or soil onto public thoroughfares. At the end of each day, the Contractor shall clean up all mud or soil which has been tracked onto public streets or as required by the Village of Frankfort.
- Street paving and curbs to remain shall be protected from damage and, if damaged, shall be replaced promptly to meet Village of Frankfort Standard Specifications in materials and workmanship.
- Prior to new work, the Contractor shall verify the location and elevation of existing utility lines and structures to be connected to proposed work. Discrepancies shall be reported to the Engineer immediately.
- All sediment will be prevented from entering any existing storm drainage systems by the use of hay bales, interceptor dikes or other approved functional methods. The Contractor shall be responsible for removing sediment resulting from this project from storm sewers and drainage structures.
- All utility connections to existing lines shall be constructed in accordance with the regulations of the utility owner and to the satisfaction of the utility owner.
- All work shall be in accordance with the specifications for the Village of Frankfort.
- New watermain valves, including pressure tap valves, adjacent to an existing watermain, and existing watermain valves shall only be operated by the Village of Frankfort, Department of Public Works personnel with a 48-hour notice (Monday-Friday).
- Any existing utility structures requiring adjustment are to be adjusted (up to 6" total adjustment allowed with a maximum of 2 precast concrete rings) or reconstructed by the contractor to the utility owner's satisfaction. Adjustments or reconstructions not called for on the plans shall be considered incidental to the contract. A total of no more than 6" and no less than 4 inches of adjusting rings shall be provided at all utility structures. Adjusting rings shall be set in a bed of preformed non-hardening mastic (RUB-R-NEK or approved equal). The upper adjusting ring shall be made of recycled rubber (Infra-Riser brand or equal).
- All connections to existing manholes shall be made by coring the existing manhole using a diamond or carbide tip cutter and installing a press seal PSX or CORE-NEAL boot in the cored opening.
- All storm sewer fared end sections for pipes greater than 12 inch diameter shall be provided with grates per I.D.O.T. standards.
- Reproducible "Record" drawings shall be provided by the contractor to the Village of Frankfort and Owner following completion of improvements.
- Structure lids shall be stamped "VILLAGE OF FRANKFORT" and "SANITARY", "STORM", or "WATER" for appropriate utilities.
- Sanitary and Water stubs shall be marked with 4" x 4" wood posts.
- One lane in each direction shall be open to traffic at all times except between the hours of 9 A.M. to 3 P.M. During this period all work must be performed in accordance with standards 701201, 701206, and 701401.
- Traffic control standards which shall be included for use during construction are: 702001, 701201, 701206, 701301, 701401, 701501, 701606, and 701701.
- The owner and/or contractor shall be responsible for verifying soil conditions and subgrade conditions.

INDEMNIFICATION LANGUAGE

INDEMNIFICATION AND INSURANCE REQUIREMENTS - The Applicant and the Contractor shall indemnify the Municipality and the Municipal Engineer, their officials, officers, employees, and agents acting in the scope and course of their employment and shall protect them from claims arising out of or in connection with any operation of the Applicant or Contractor including personal injury, death, or for destruction of or damage to property.

The Applicant and Contractor shall also protect the Municipality and the Municipal Engineer by including them as additional insured on their Comprehensive General Liability Insurance Policy. The minimum level of insurance shall be as specified in Section 107.27 GENERAL REQUIREMENTS AND COVENANTS of the Standard Specifications for Road and Bridge Construction by the Illinois Department of Transportation. "Claims Made" type policies are unacceptable. Certificates of Insurance shall be filed and approved by the Municipality and Robinson Engineering, Ltd., the Municipal Engineer, a minimum of 5 days before starting construction.

PERSONAL LIABILITY - In carrying out any of their duties or in exercising any power or authority granted to the Municipal Engineer by the Municipality, there shall be no personal liability upon the Municipal Engineer or their authorized representative, it being understood that in such matters they act as agents and representatives of the Municipality. By beginning work, the Applicant and Contractor covenants and agrees that it shall neither commence nor prosecute any action or suit whatsoever against the Municipal Engineer or Municipality, their officials, officers, employees or agents in any action or omission done or not done in the course of their duties. Further, by beginning work, the Applicant and Contractor agrees to pay all attorney fees and all costs incurred by the Municipality or Municipal Engineer, its officials, officers, employees or agents because of any action or suit in violation of this Article.

HOLD HARMLESS - The Applicant and Contractor doing work, shall hereby defend, indemnify, keep, and save harmless the Municipality and the Municipal Engineer, and their respective legislative and board members, representatives, agents, and employees in both individual and official capacities against all suits, claims, damages, losses, and expenses, including attorney's fees, caused by or growing out of, or incidental to, the performance of the work by the Applicant or the Contractor to the full extent allowed by the laws of the State of Illinois and not beyond any extent which would render these provisions void or unenforceable.

CONSTRUCTION OBSERVATION - All materials and each part of detail of the work portrayed on these Plans may be subject at any time to observation by the Municipal Engineer. Observation may be made at the site, or at the source of material supply, whether that is at a mill, plant, ship, etc. The Municipal Engineer shall be allowed access to all parts of the Work and shall be furnished with such information and assistance by the Applicant and Contractor as needed to perform these observations. The Contractor shall be held strictly to the true intent of the Plans in regard to quality of materials and workmanship.

The Municipal Engineer is not responsible for safety on the work site nor does the Municipal Engineer have any duty to review in any manner the adequacy of the Contractor's safety measures incident to the work portrayed on these Plans.

The Municipal Engineer is not responsible for any construction means, methods, techniques, sequences or procedures for the work portrayed on these Plans.

The Municipal Engineer has no charge of the construction and has no right, duty, or responsibility to stop work because of any Contractor's failure to follow proper safety precautions. The Municipal Engineer is not responsible for the acts, errors or omissions of any Applicant, Engineer or Contractor, or any of their agents or employees or any other person performing any of the Work portrayed on these Plans.

The Contractor shall, upon written notice from the Municipality, remove or uncover such portions of the finished Work, as it may direct, before the final acceptance of the same. After examination, the Contractor shall restore said portion of the Work to the standard required by these Plans. The expense of uncovering, removing and replacement shall be borne by the Applicant and/or the Contractor; and, not the Municipality nor the Municipal Engineer.

Any reference to "supervision" by the Engineer in the Illinois Department of Transportation, Standard Specifications for Road and Bridge Construction, or any other referenced documents shall be changed to "observation".

RETAIL BUILDING

LOT 3 LARAWAY & WOLF ROAD

FRANKFORT, IL 60423

SITE IMPROVEMENT PLANS

KMA & ASSOCIATES, ARCHITECTS

CONTACT:
ERIC SMITH
2205 LAKESIDE DRIVE
BANNOKBURN, IL 60015
PHONE: 847.945.6869
esmith@kmaarch.com

SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS }
COUNTY OF WILL } SS

To the best of our knowledge and belief the drainage of surface waters will not be changed by the construction of such subdivision or any part thereof, or that if such surface water drainage will be changed, reasonable provisions have been made for the collection and discharge of surface waters into public or private areas and/or drains which the subdivider has the right to use, and that such surface waters will be planned for in accordance with generally accepted engineering practices so as to reduce the likelihood of substantive damage to adjoining property because of the construction of the subdivision.

Dated this 15 day of APRIL 2021

[Signature]
Engineer



Joseph A. Schudt & Associates

9455 ENTERPRISE DRIVE MOKENA, IL 60448
PHONE: 708-720-1000 FAX: 708-720-1065
e-mail: jas@jaseng.com http://www.jaseng.com

CIVIL ENGINEERING LAND SURVEYING ENVIRONMENTAL LAND PLANNING GPS SERVICES

ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-001172

Prepared at or under the direction of:

[Signature]
Illinois Professional Engineer No. 062-043406



SIGNED: _____

LIC. EXP: 11-30-23

CONTACT JULIE AT 811 OR 800-892-0123

WITH THE FOLLOWING INFORMATION

COUNTY-NAME WILL

CITY / TOWNSHIP FRANKFORT

SEC & 1/4 SEC No. SW 1/4 SEC 30, TWN 35 N, R 12 E

48 HOURS (2 working days) BEFORE YOU DIG



LEGEND

⊙	EXISTING SANITARY MANHOLE	★	PROPOSED LIGHT
●	PROPOSED SANITARY MANHOLE	- - -	EXISTING CONTOUR LINE
-SAN-	EXISTING SANITARY SEWER	~ ~ ~	PROPOSED CONTOUR LINE
-	PROPOSED SANITARY SEWER	==	EXISTING CURB
⊗	EXISTING VALVE IN VAULT	==	PROPOSED CURB
⊗	PROPOSED VALVE IN VAULT	#####	EXISTING CURB TO BE REMOVED
⊗	EXISTING VALVE	—	PROPOSED HUNG CURB
⊗	PROPOSED VALVE	⊕	EXISTING POWER POLE
△	EXISTING REDUCER	⊗	EXISTING TRANSFORMER
▲	PROPOSED REDUCER	⊕	EXISTING ELECTRIC MANHOLE
⊕	EXISTING HYDRANT	-E-	EXISTING ELECTRIC CABLE
⊕	PROPOSED HYDRANT	△	EXISTING TELEPHONE PEDESTAL
-W-	EXISTING WATERMAIN	⊕	EXISTING TELEPHONE MANHOLE
-PW-	PROPOSED WATERMAIN	-T-	EXISTING TELEPHONE CABLE
⊕	EXISTING STORM MANHOLE	⊕	EXISTING TRAFFIC SIGNAL
⊕	PROPOSED STORM MANHOLE	⊕	EXISTING HAND HOLE
⊕	EXISTING CATCH BASIN	⊕	EXISTING GAS VALVE
⊕	PROPOSED CATCH BASIN	-G-	EXISTING GAS MAIN
⊕	EXISTING INLET	-C-	EXISTING CABLE T.V.
⊕	PROPOSED CIRCULAR INLET	⊕	EXISTING BORING LOCATION
■	PROPOSED INLET	⊕	EXISTING SIGN
-ST-	EXISTING STORM SEWER	-x-x-	EXISTING FENCE LINE
-	PROPOSED STORM SEWER	⊕	EXISTING DECIDUOUS TREE
-ST-	EXISTING CULVERT	⊕	EXISTING EVERGREEN
-	PROPOSED CULVERT	⊕	EXISTING BUSH/HEDGE
☆	EXISTING LIGHT	⊕	EXISTING WETLAND

INDEX

Sheet Number	Sheet Title
1	COVER SHEET
2	EXISTING TOPOGRAPHY
3	SITE LAYOUT PLAN
4	SITE GRADING PLAN
5	SITE UTILITY PLAN
6	SITE EROSION CONTROL PLAN
7	STORM WATER POLLUTION PREVENTION PLAN
8	CONSTRUCTION SPECIFICATIONS
9	CONSTRUCTION DETAILS
10	CONSTRUCTION DETAILS

LEGAL DESCRIPTION

LOT 3 IN THE WOLF AND LARAWAY LLC SUBDIVISION, BEING A SUBDIVISION OF PART OF THE SOUTHWEST QUARTER OF SECTION 30, TOWNSHIP 35 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN WILL COUNTY, ILLINOIS.

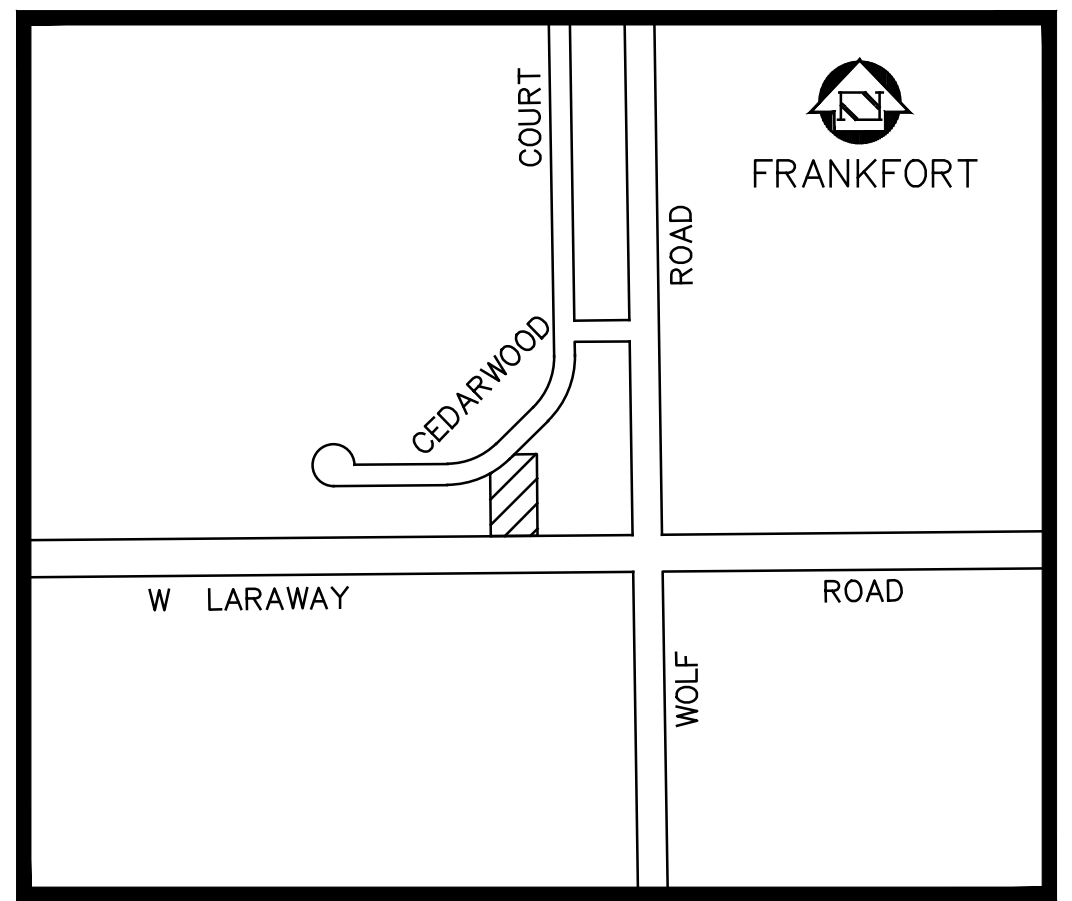
P.I.N. 19-09-30-401-063-0000

PROPERTY CONTAINS: 35,764 SQ. FT. (0.821 ACRES), MORE OR LESS.

BENCH MARK:

TOP OF THE NORTHWEST FLANGE BOLT OF HYDRANT, LOCATED WEST OF WOLF ROAD, THE FIRST HYDRANT ON THE NORTH SIDE OF LARAWAY ROAD. ELEVATION: 739.38

Village of Frankfort Standard Specifications shall govern all utility matters and shall supercede general conditions and specifications when and where in conflict.



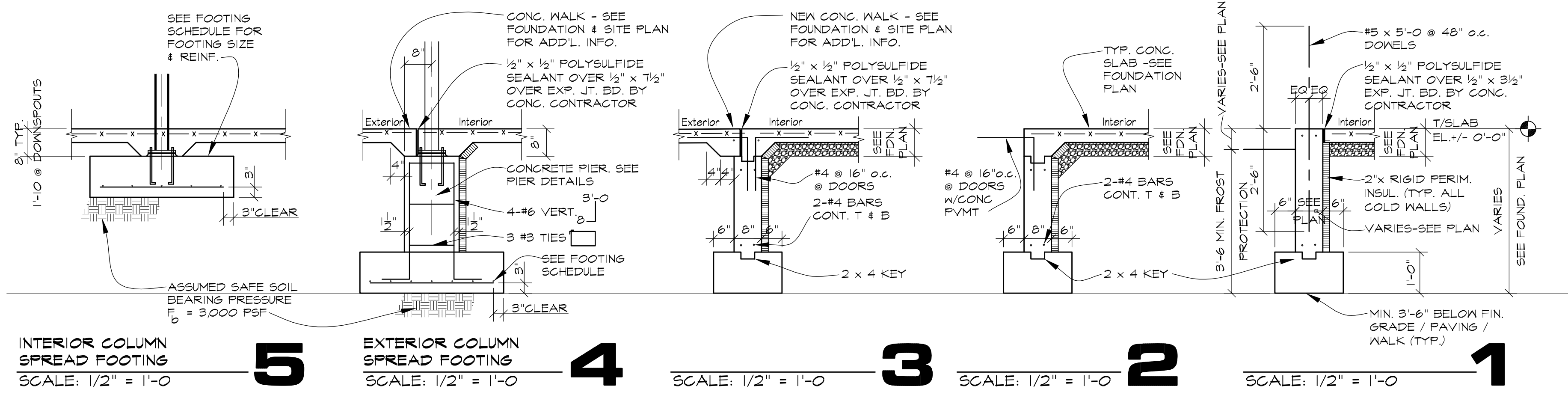
VICINITY MAP
(NOT TO SCALE)

INDICATES SITE LOCATION

FOR PERMIT

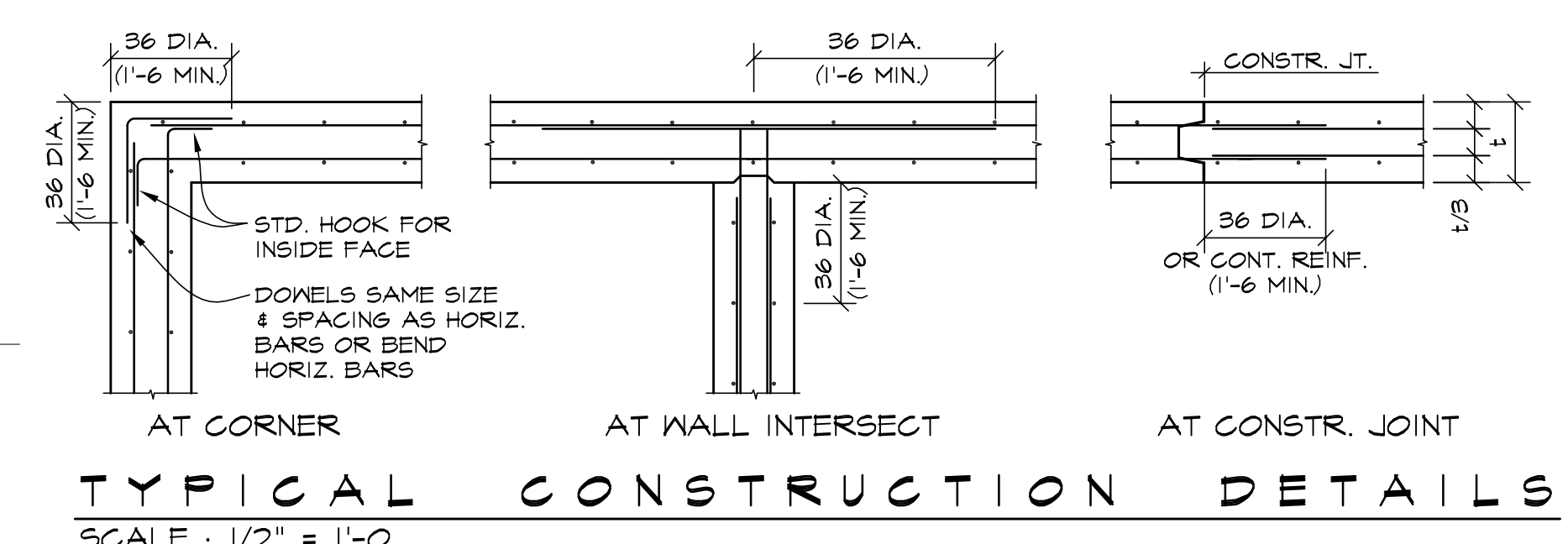
No.	Date	By	Description
REVISIONS			
Date:	5-15-23	Drawn:	TMF
Design:	KG	Approved:	DWO
SHEET 1 OF 10			Project No. 23-020

M:\2023\23-020\Unimproved Masonry Retail Bldg\Drawings\Construction Drawings\23-020-ENG_COV1_Planet_5/17/2023 1:28 PM By: K.Gabarak, COPYRIGHT 2021, JOSEPH A. SCHUDT & ASSOCIATES



INTERIOR COLUMN SPREAD FOOTING SCALE: 1/2" = 1'-0" **5**
 EXTERIOR COLUMN SPREAD FOOTING SCALE: 1/2" = 1'-0" **4**
 NEW CONG. WALK - SEE FOUNDATION & SITE PLAN FOR ADD'L. INFO. SCALE: 1/2" = 1'-0" **3**
 TYP. CONG. SLAB - SEE FOUNDATION PLAN SCALE: 1/2" = 1'-0" **2**
 TYP. CONG. SLAB - SEE FOUNDATION PLAN SCALE: 1/2" = 1'-0" **1**

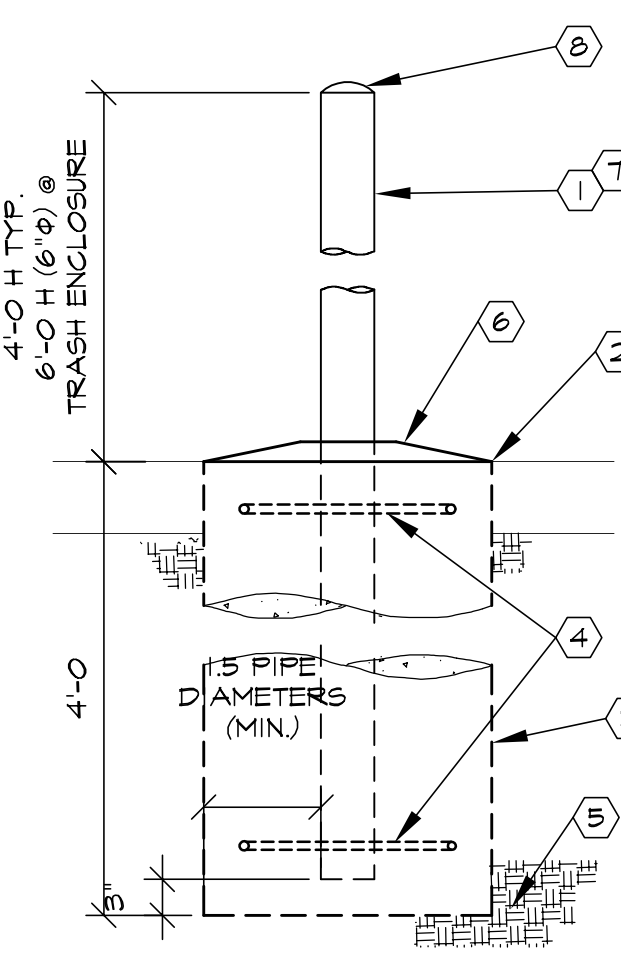
FOOTING SCHEDULE					
P A D					
MARK	SIZE	REINF. EA. MAY	BOTTOM ELEV.	REMARKS	
F1	3'-6" X 3'-6" X 1'-4"	# 5 EX	SEE PLAN		
F2	3'-6" X 3'-6" X 1'-0"	# 4 EX	SEE PLAN		



AT CORNER AT WALL INTERSECT AT CONSTR. JOINT
 TYPICAL CONSTRUCTION DETAILS SCALE: 1/2" = 1'-0"

CONCRETE NOTES

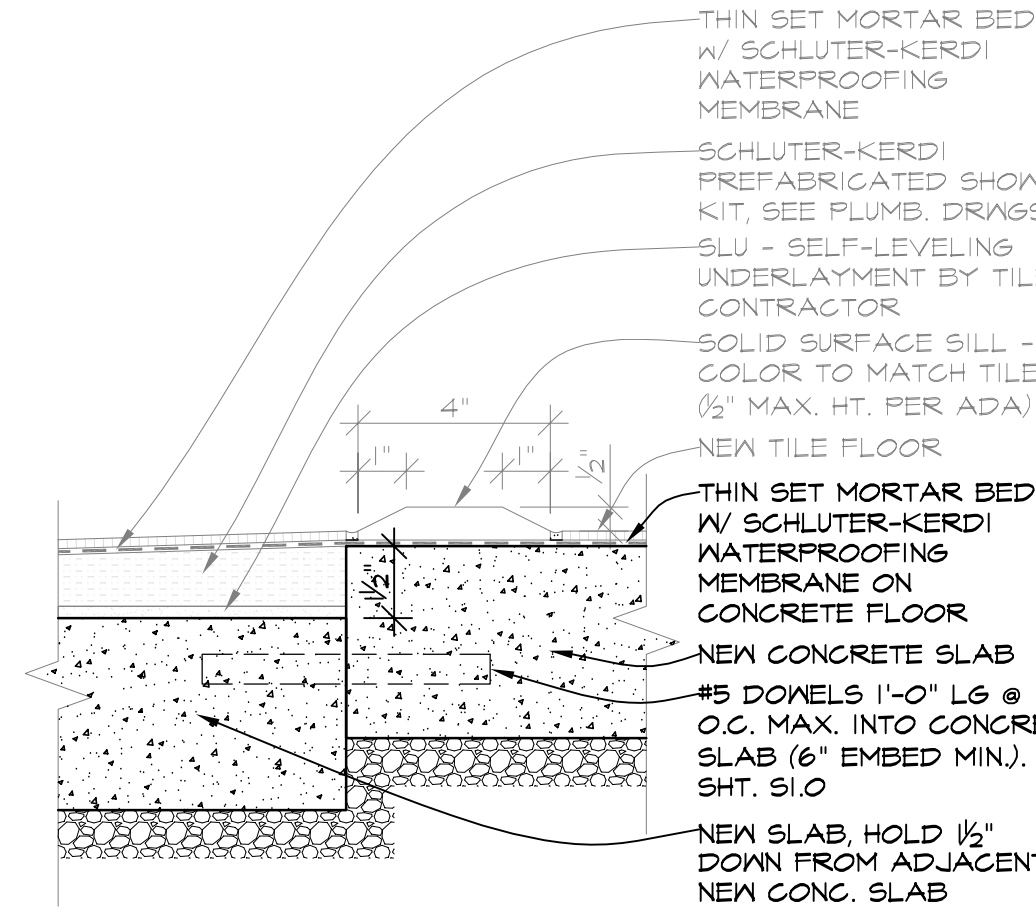
- All concrete shall be normal weight and have a 28 day compressive strength of 3000 psi. Driveways and sidewalks shall be 4000 psi compressive strength.
- All reinforcing bars shall be ASTM A615-60 and shall have deformations in accordance to ASTM Specifications A-305 and A-408 latest editions.
- All welded wire fabric shall be ASTM A185. All flatwork shall be reinforced with 6 x 6 W1.4 x W1.4 welded wire fabric unless noted otherwise. All WWF shall be set 1" down from top of slab.
- All reinforcing bars shall be detailed, fabricated, labeled, supported and spaced in forms, and secured in place in accordance with procedures and requirements outlined in the "Manual of Standard Practice for Detailing Reinforced Concrete Structures" ACI-315, latest editions and the "Building Code Requirements for Reinforced Concrete ACI 318-04".
- Mechanical equipment pads, openings, etc. shown on the structural drawings are for configuration only. Their final location, size, etc. shall be as per approved shop drawings for the equipment or as required by the Architect.
- See architectural, mechanical, and electrical drawings for additional openings, sleeves, equipment pads, depression, curbs, floor finishes, inserts, other embedded items and details.
- Fabricators shall submit checked shop drawings for reinforcing steel and other details to the Architect-Engineer and obtain approval prior to fabrication.
- All details and sections shown on the drawings are intended to be construed to apply to any similar situation elsewhere on the project except where a different detail is shown.
- Concrete floor shall have hardener and sealer.
- Saw cut control joints as shown on the foundation plan.
- All interior concrete slabs shall have hard trowel finish. All exterior sidewalks shall be broom finished with control joints at a minimum of five (5) feet on center in each direction unless noted otherwise.
- During hot weather, attention shall be given to ingredients, production methods, handling, placing, protection and curing to prevent excessive concrete temperatures or water evaporation that would impair required strength or serviceability of the member or structure.



- KEYED NOTES
- STD. STL. PIPE COL. - CONG. FILLED - SIZES AS NOTED. PROVIDE 1/2" WELDED CLOSURE @ BOTTOM.
 - TOP TO BE FLUSH WITH ADJACENT CONG. PAD OR ASPHALT PAVING AS REQUIRED.
 - CONCRETE FOUNDATION - USE SONOTUBE FORM SIZED AS FOLLOWS:
 24" Ø FOR 4" Ø BOLLARD
 30" Ø FOR 6" Ø BOLLARD
 30" Ø FOR 8" Ø BOLLARD
 - 3/8" Ø WELDED HOOPS @ TOP, BOTTOM AND CENTER. SIZED FOR 3" CONG. COVER ALL AROUND.
 - SOLID UNDISTURBED SOIL.
 - PROVIDE PITCHED, SMOOTH CONCRETE FINISH @ PAVING AND SIDEWALKS.
 - PAINT EXPOSED PIPE YELLOW WHERE FREESTANDING OR TO MATCH TRASH ENCLOSURE MATERIAL.
 - CONCRETE WASH

TYPICAL PIPE BOLLARD

SCALE: 3/4" = 1'-0"

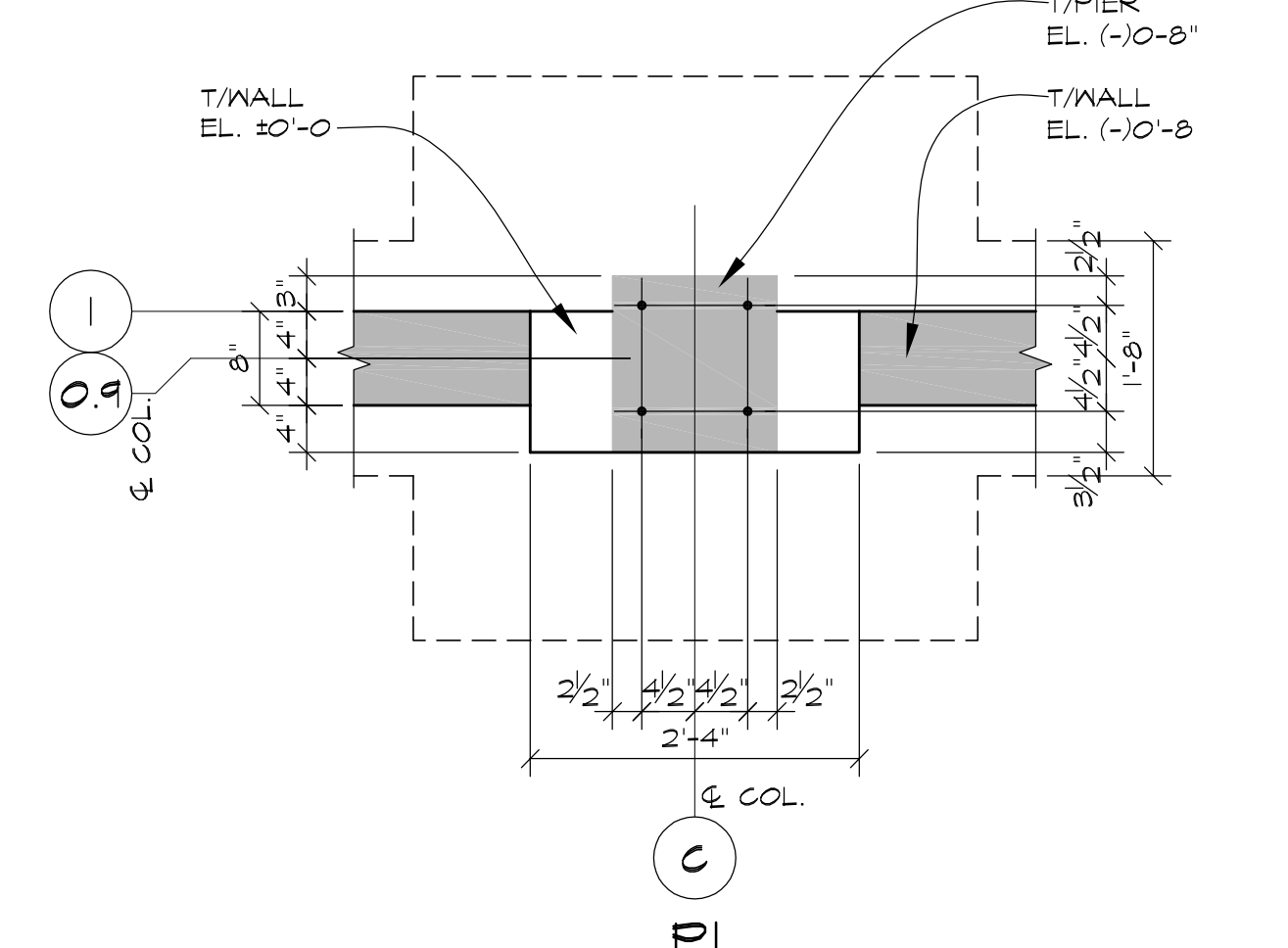


FLOOR TRANSITION DETAIL

SCALE: 3" = 1'-0"

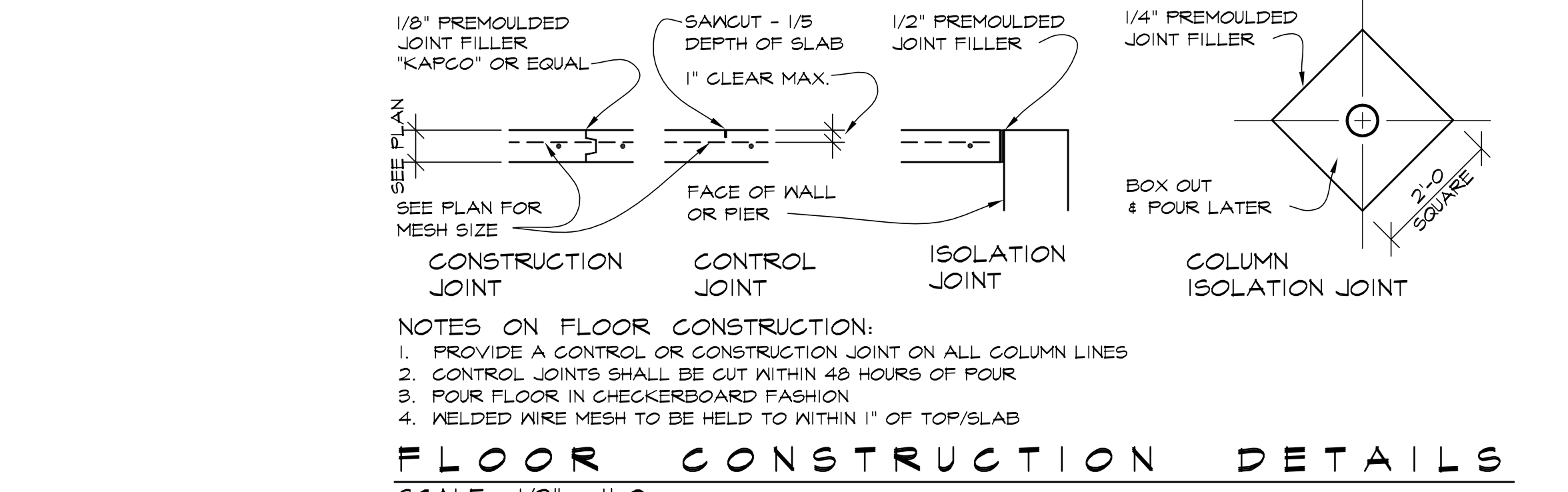
GENERAL SUBSTRUCTURE NOTES

- Footings are designed to bear on firm undisturbed soil capable of supporting a load of 3000 P.S.F., if soil is not capable of supporting this load at elevations shown, drop footings to required strata.
- All floor and pavement slabs shall rest on well compacted fill.
- Top and bottom bars shown are to be continuous in all walls. Provide corner bars at all outside corners.
- Lap wire mesh one full mesh at sides and ends.
- Foundation wall pour shall be a maximum of 150' between construction joints. Provide control joints at same location as masonry control joints.
- Fill all column packets when floor slab is poured.
- Footings are to project a minimum of 6" beyond face of wall or pier unless noted.
- Wall footings which step down on elevation shall do so at a maximum slope of one down to two horizontal.
- No concrete shall be poured in excavation containing water or on frozen ground.
- See other drawings for curbs, pavement and sidewalks.
- See "CONCRETE NOTES" for additional information.
- General machine excavations for footings shall stop at least 6" above scheduled elevation of bottom of footing. The final excavations shall be done by hand not more than 24 hours before the concrete is placed.



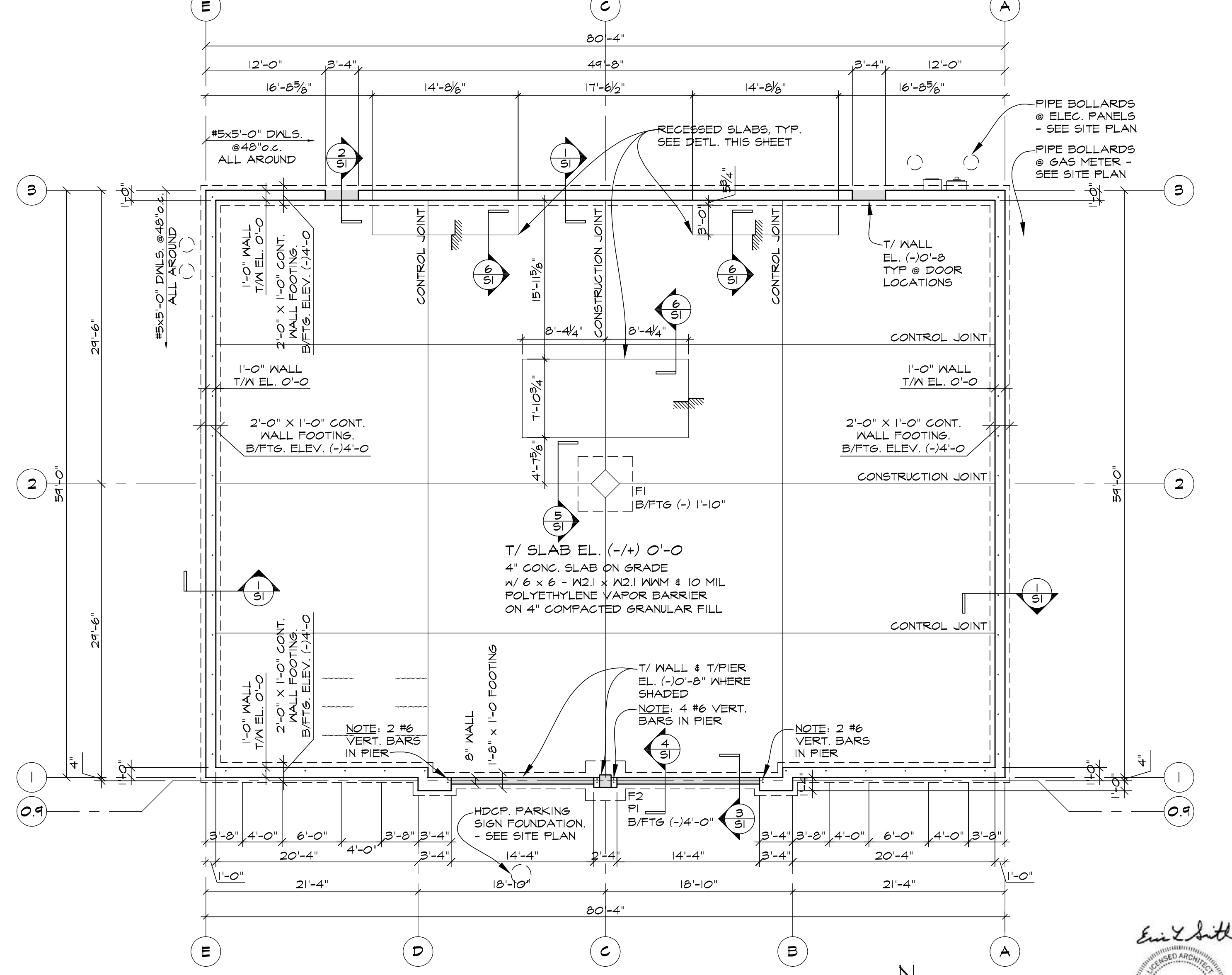
PIER DETAIL

SCALE: 3/4" = 1'-0"



NOTES ON FLOOR CONSTRUCTION:
 1. PROVIDE A CONTROL OR CONSTRUCTION JOINT ON ALL COLUMN LINES
 2. CONTROL JOINTS SHALL BE CUT WITHIN 48 HOURS OF POUR
 3. FOUR FLOOR IN CHECKERBOARD FASHION
 4. WELDED WIRE MESH TO BE HELD TO WITHIN 1" OF TOP/SLAB

FLOOR CONSTRUCTION DETAILS
 SCALE: 1/2" = 1'-0"



FOUNDATION PLAN

SCALE: 1/8" = 1'-0"

REVISIONS

THIS DRAWING	FOR REVIEW	FOR BIDDING	FOR PERMIT	FOR CONSTRUCTION
	5/19/2023		5/19/2023	

KMA & ASSOCIATES, ARCHITECTS
 2205 LAKESIDE DRIVE
 BANNOCKBURN, ILLINOIS 60015
 (847)945-6869

SAUNA GUARD FOR UNLIMITED MASONRY
 LARAWAY AVENUE WEST OF WOLF ROAD
 FRANKFORD, IL

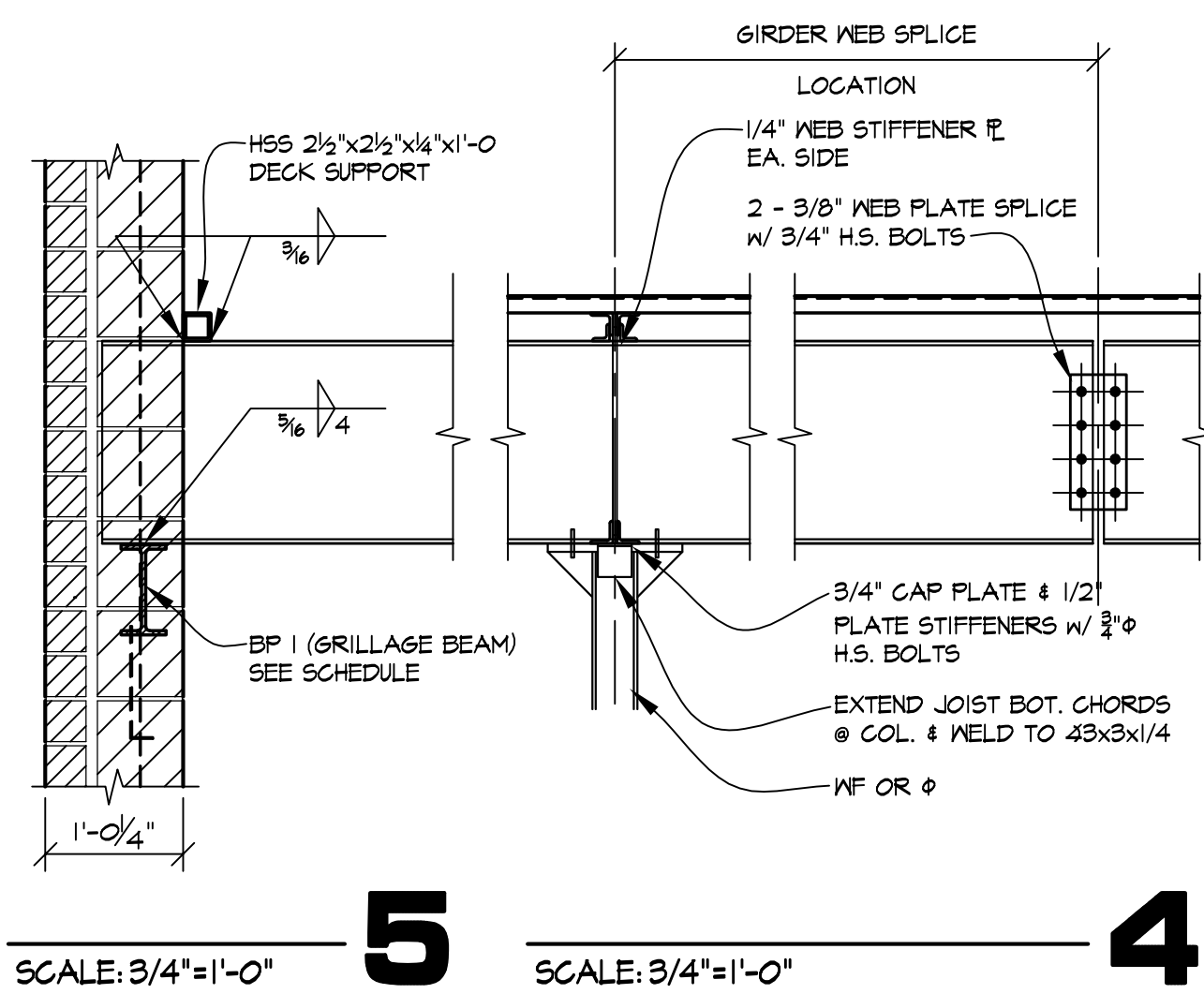
SHEET TITLE
 FOUNDATION PLAN DETAILS
 NOTES

2238

Eric L. Smith
 ERIC L. SMITH
 001-016834
 STATE OF ILLINOIS
 ARCHITECT
 EXP/RES 11-30-24

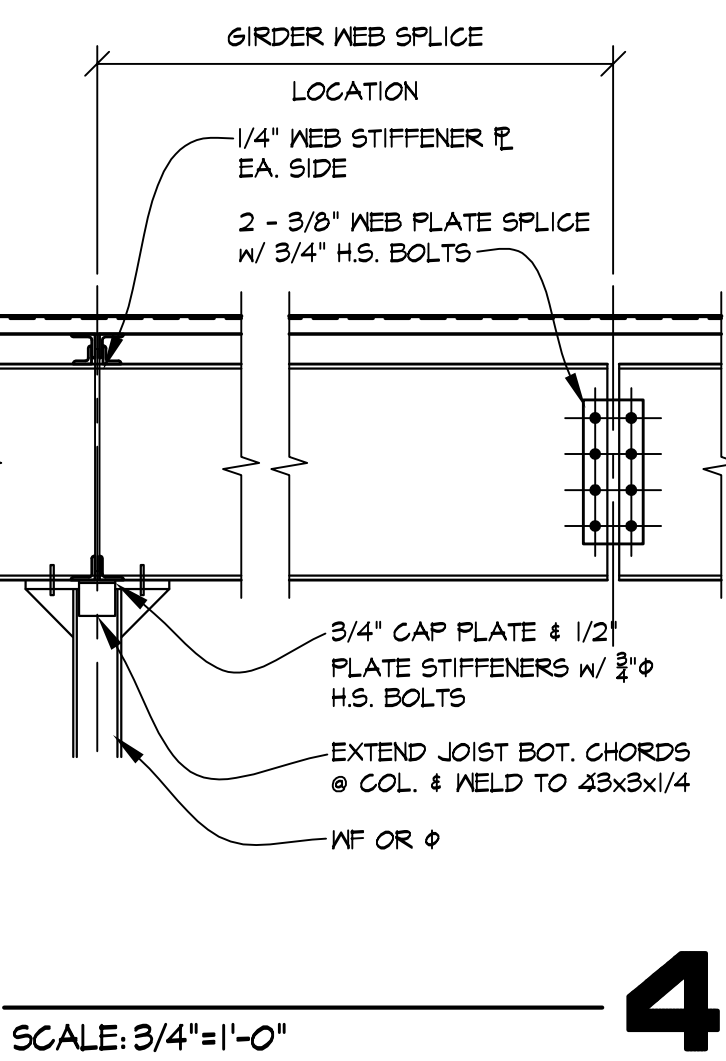
GENERAL STEEL NOTES

- All steel shall be new and shall be ASTM A992 (Fy=50 KSI) except tube columns shall be ASTM A500 Grade B with Fy=46KSI.
- Steel detailing, fabrication and erection shall be in accordance with codes and specifications of the A.I.S.C. Manual of Steel Construction.
- Unless otherwise noted on the structural drawings, all connections shall be standard framed beam connections with 3/4" diameter high strength bolts as shown in Table 11 of the current A.I.S.C. Manual of Steel Construction. The connection shall be designed for a reaction equal to the value "R" tabulated at the bottom of the uniform load beam tables.
- No connection shall consist of less than 2-3/4" diameter high strength bolts or welds developing not less than 10,000 pounds.
- All welding shall be ETOXX electrodes and in accordance with A.M.S. Specifications.
- Field weld bar joists to beams & anchor plates.
- In addition to web connection, provide 4x4x3/8" angle seat for all girders framing into columns.
- All steel joists shall conform to Steel Joist Institute Standard Specifications.
- Extend bottom chord of bar joists and connect to columns at all column lines and where shown by "X".
- Provide standard masonry anchors for beams bearing on masonry except as noted.
- All elevations are to tops of steel beams unless noted. Slope beams uniformly between elevations shown.
- See other drawings for miscellaneous angles, holes etc.
- See foundation plan for anchor bolts & setting plates.
- All structural steel including bar joists shall have one shop coat of rust-inhibitive paint.
- Provide a 1/4" stiffener plate in web of girders where they frame over columns, one side only.
- Size of structural steel cannot be varied from those shown on the drawings without the consent of the Architect/Engineer.
- Provide all loose angle lintels for masonry openings where required. Lintels shall be as follows: (unless noted otherwise). For openings in 4" walls provide WT4 X 7.5 with 6" bearing each end. For openings in 6" walls provide WT4 X 8.5 with 6" bearing each end. For walls 8" or greater, provide one angle for each 4" of wall thickness. These angles shall be 4 x 3 1/2 x 5/16 with 6" bearings each end for openings less than 5'-0" wide, for openings 5'-0" or wider, 5 x 3 1/2 x 3/8 angles with 6" bearing each end.
- Provide mechanical, rooftop equipment support angle framing. Coordinate exact location and size of openings with HVAC Contractor.



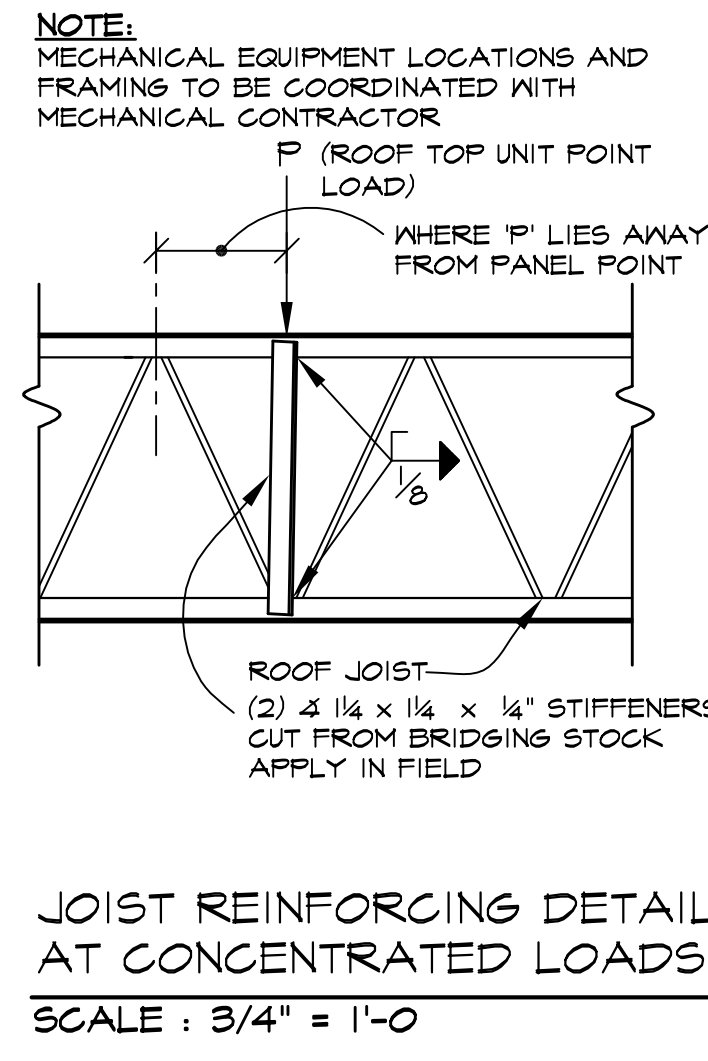
SCALE: 3/4" = 1'-0"

5



SCALE: 3/4" = 1'-0"

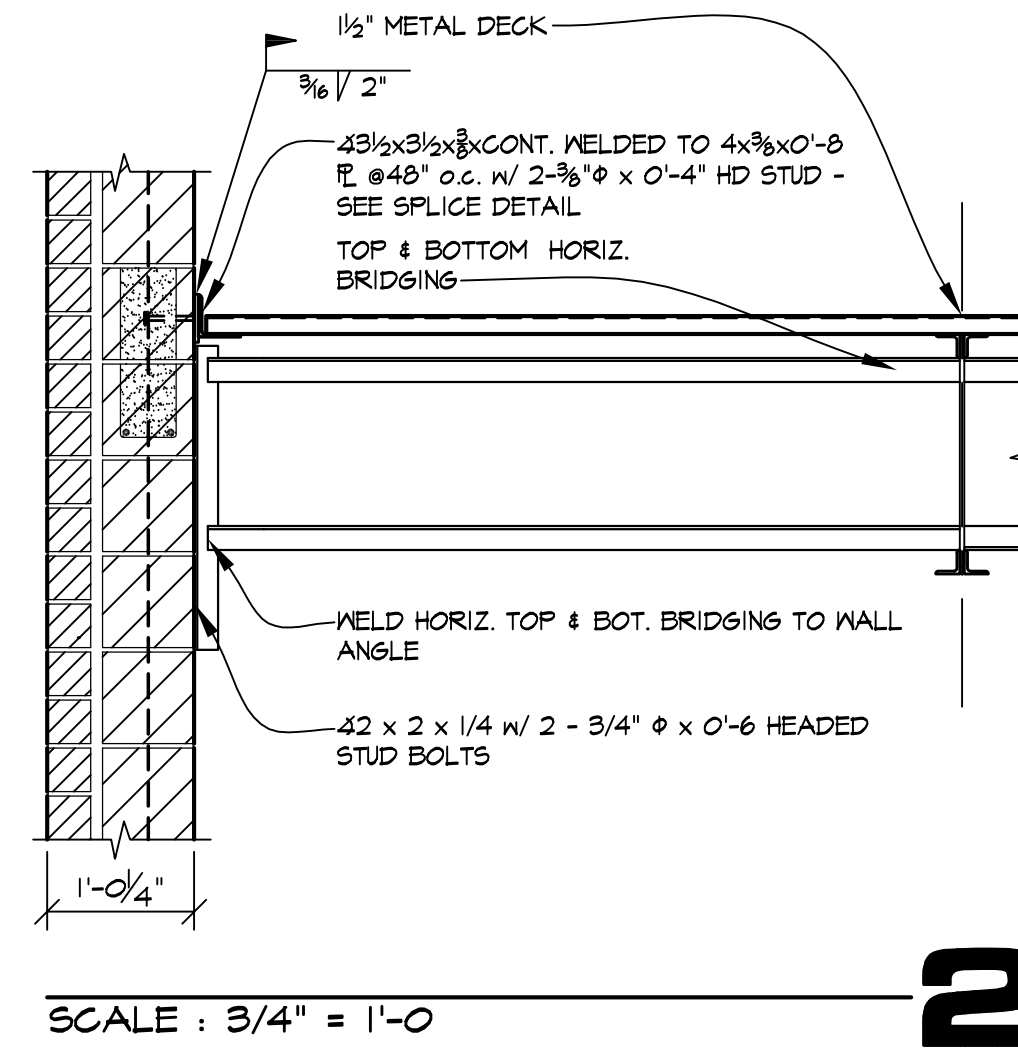
4



JOIST REINFORCING DETAIL AT CONCENTRATED LOADS

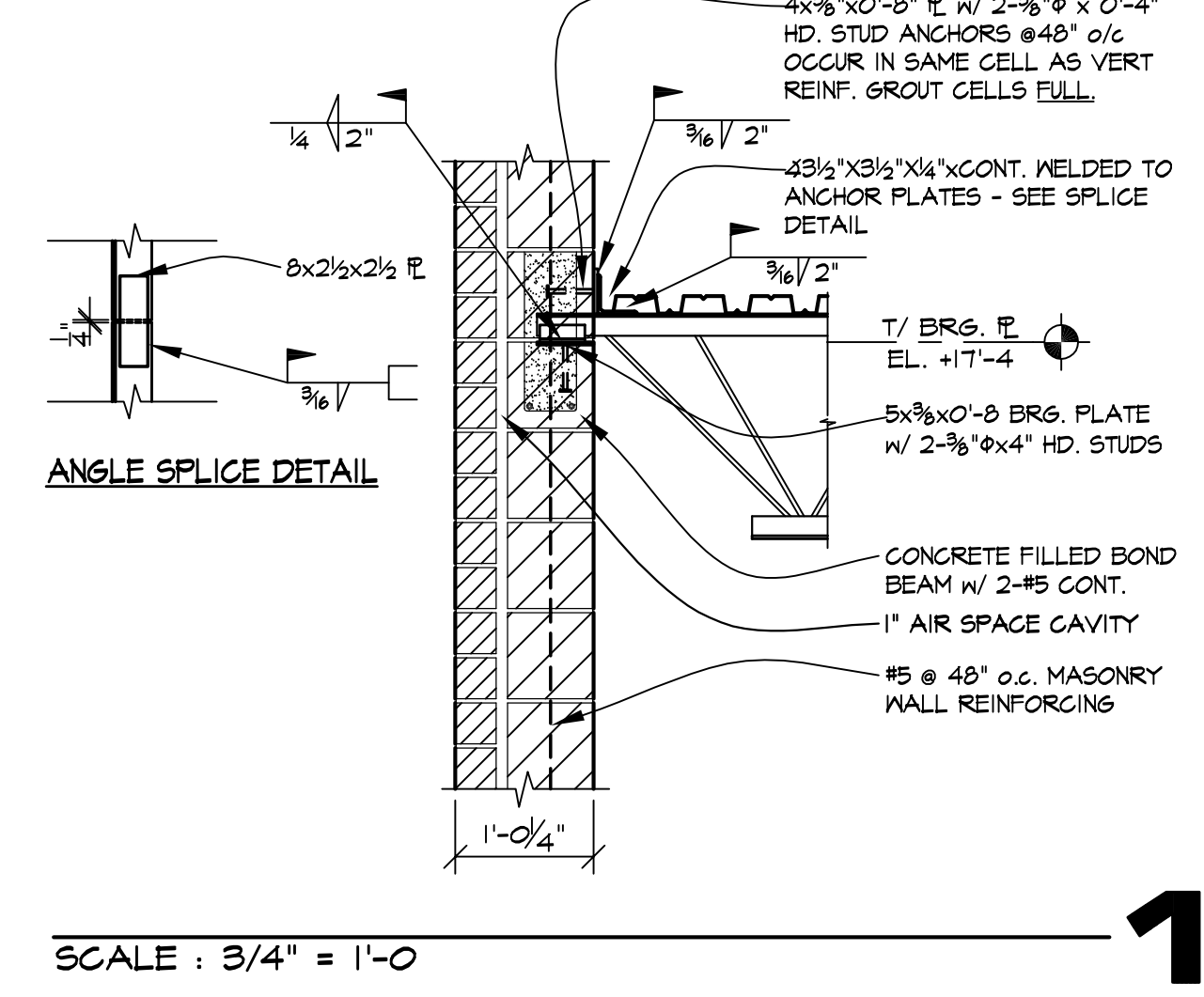
SCALE: 3/4" = 1'-0"

3



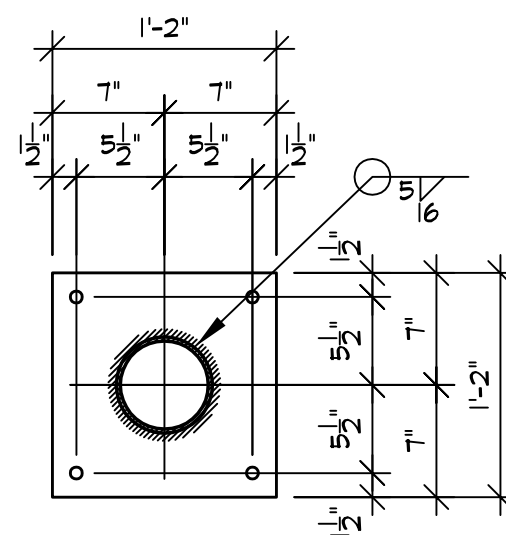
SCALE: 3/4" = 1'-0"

2

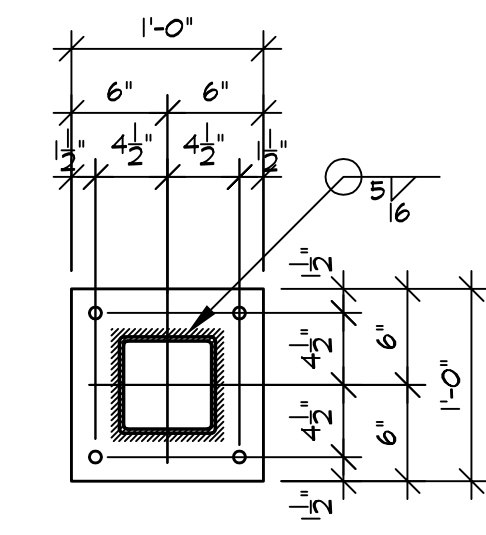


SCALE: 3/4" = 1'-0"

1



C1
6" Ø XS PIPE COL.
14" x 1/4" x 1'-2" SET PL.
14" x 1" x 1'-2" BASE PL.
ON 3/4" GROUT BED
W/ 4 - 3/8" Ø x 1'-6" A.B.



C2
HSS 5 x 5 x 3/8" COL.
W/ 12 x 1/4" x 1'-0" SET PL.
12 x 3/4" x 1'-0" BASE PL.
ON 3/4" GROUT BED
W/ 4 - 3/8" Ø x 1'-4" A.B.

COLUMN BASE PLATE DETAILS
SCALE: 1" = 1'-0"

ROOF DECK NOTES

- Roof deck shall be type "B" wide rib, 22 gauge, painted metal deck.
- The deck shall be welded to the supports by 5/8" diameter welds with a frequency of 4 welds per 3 feet.
- Provide two intermediate sidelap connection with #12 tek fastener at the center of each deck span.

DESIGN LOADS

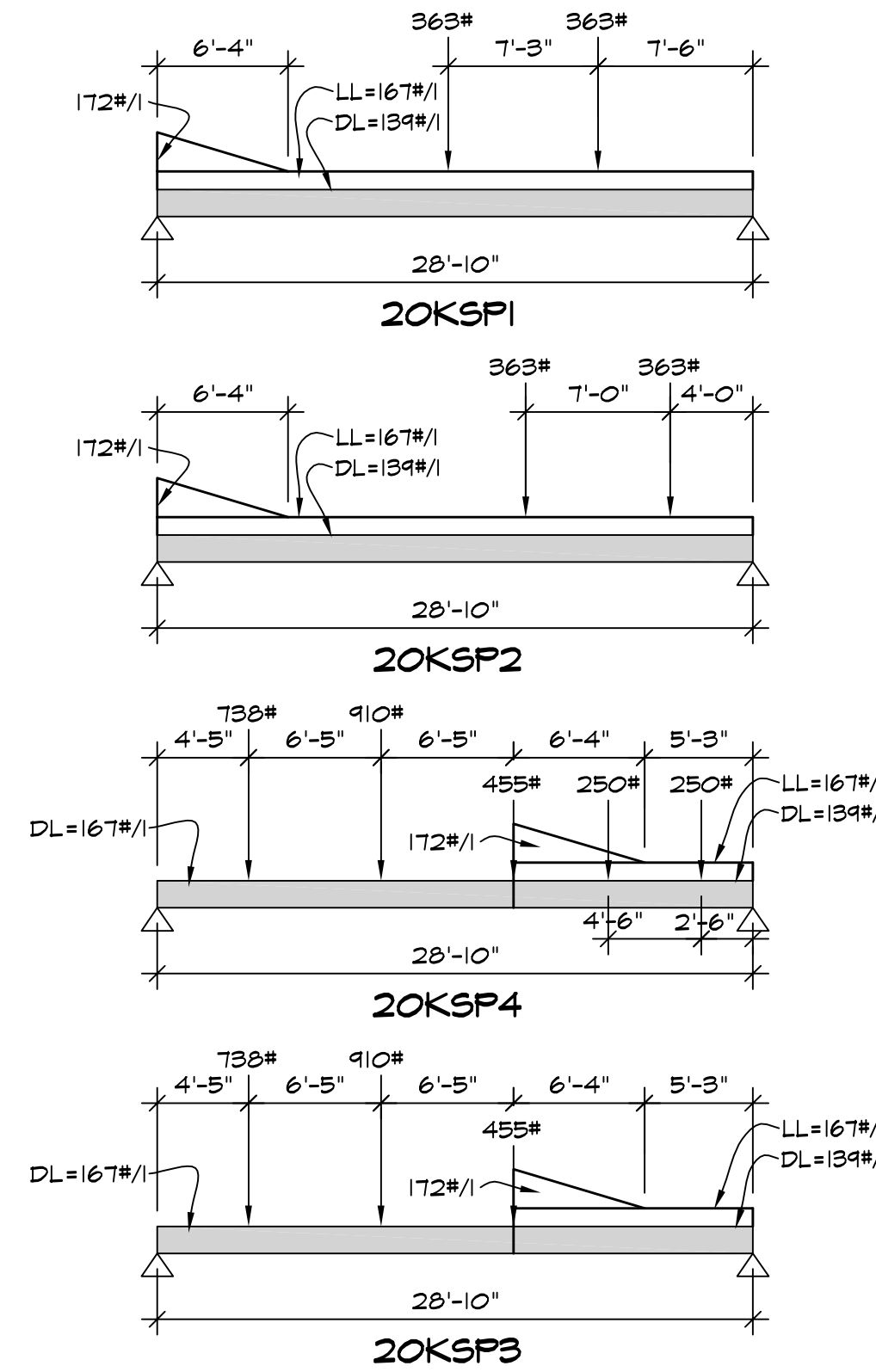
2012 INTERNATIONAL BUILDING CODE

A. FLOOR (RETAIL FIRST FLOOR)	100 PSF
B. ROOF SNOW LOADS	
GROUND SNOW LOAD	25 PSF
EXPOSURE FACTOR (Ce)	1.0
IMPORTANCE FACTOR (I)	1.0
THERMAL FACTOR (Ct)	1.0
C. DEAD LOADS	ACTUAL MATERIAL WEIGHTS
D. WIND LOADS	
3 SECOND GUST	90 MPH
IMPORTANCE FACTOR	1.0
EXPOSURE CATEGORY (MINFRS)	B
EXPOSURE CATEGORY (C/C/C)	
MAIN WIND FORCE PRESSURE	
WIND PRESSURE (MAFFWP)	16 PSF
COMPONENTS & CLADDING VARIES	
WALL	16/20 PSF
E. SEISMIC LOADS	
SEISMIC USE GROUP	I
SITE CLASS	D
SPECTRAL RESPONSE COEFF.	
SHORT PERIODS (SPS)	.161
1 SECOND PERIODS (SD1)	.109
BASIC STRUCTURAL SYSTEM	
ORDINARY REINFORCED MASONRY SHEAR WALLS	
RESPONSE MOD FACTOR (R)	5.5
DESIGN BASE SHEAR (V)	.0321W
ANALYSIS BY EQUIV. LATERAL FORCE PROCEDURE	
SEISMIC DESIGN CATEGORY	B
F. HANDRAILS & GUARDS	
UNIFORM LOAD IN ANY DIRECTION	50 LB/FT
CONCENTRATED LOAD IN ANY DIRECTION	200 LB/FT

DESIGN LOADS

ROOF LOAD

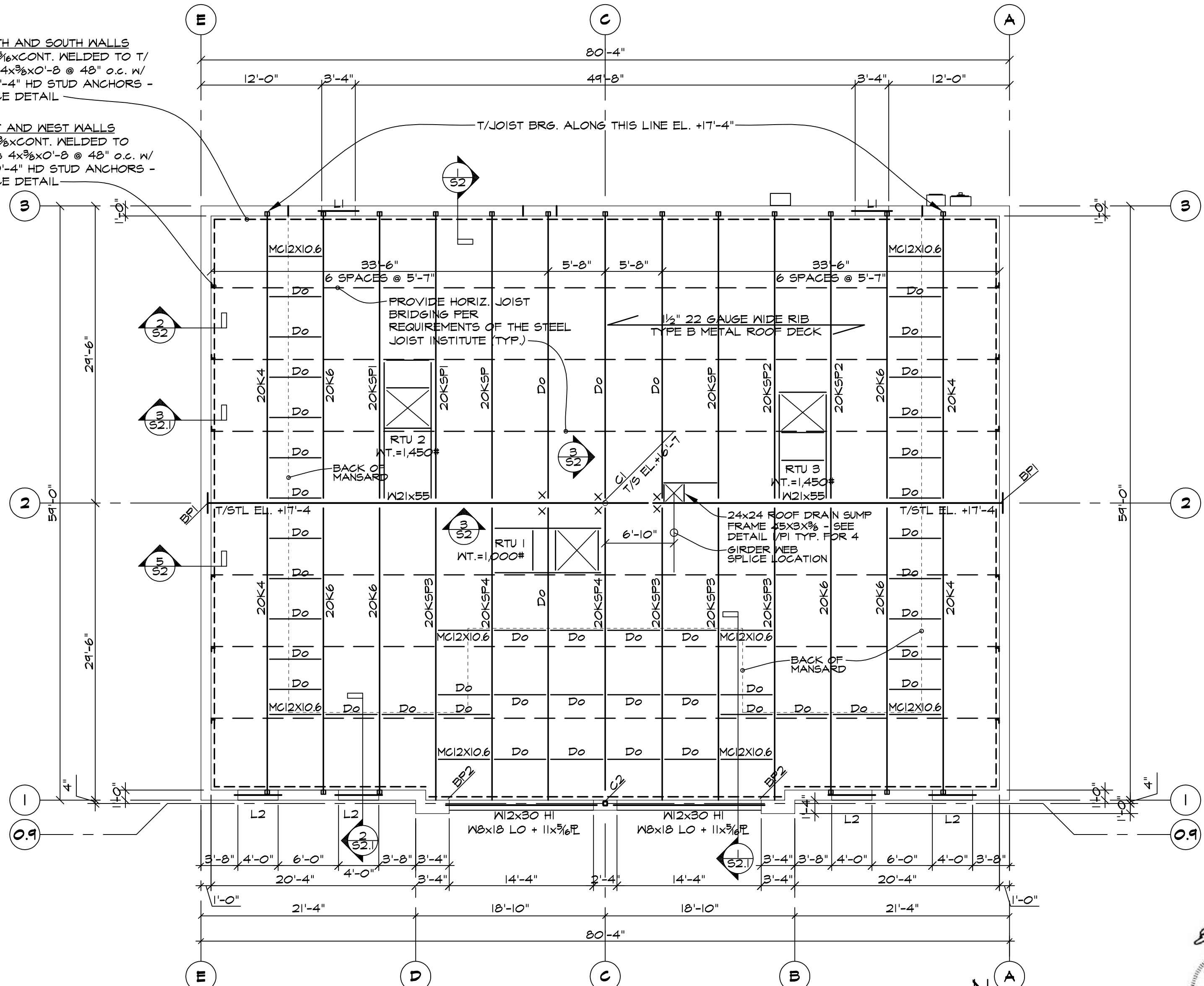
ROOFING	6 PSF
INSULATION	2
METAL DECK	2
JOISTS	3
CEILING	5
MECHANICAL	7
TOTAL DEAD LOAD	25
LIVE LOAD	30
TOTAL LOAD	55 PSF



JOIST DIAGRAMS
NO SCALE
NOTE: JOIST MANUFACTURER SHALL DESIGN FOR THE LOADING SHOWN IN THE DIAGRAMS SHOWN HEREIN AND FOR ADDITIONAL LOADS SHOWN ON PLAN.

FOR NORTH AND SOUTH WALLS
43/2x31/2x3/8"CONT. WELDED TO T/ JOISTS & 4x3/8x0'-8 @ 48" O.C. W/ (2) 1/2" Ø x 0'-4" HD STUD ANCHORS - SEE SPLICE DETAIL

FOR EAST AND WEST WALLS
43/2x31/2x3/8"CONT. WELDED TO T/ JOISTS & 4x3/8x0'-8 @ 48" O.C. W/ (2) 1/2" Ø x 0'-4" HD STUD ANCHORS - SEE SPLICE DETAIL



ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0"

LINTEL SCHEDULE

MK	LINTEL OFNG.	LINTEL	
L1	3'-4"	43/2 x 31/2 x 3/8 + SLV 43/2 x 5 x 3/8	4" BRG.
L2	4'-0"	(3) 43/2 x 31/2 x 3/8	4" BRG.

NOTE: INSTALL W/ LINTEL FLASHING COMPLETE W/ END DAMS. TYP.

BEARING PLATES

- BP1 W8 x 24 x 2'-0 W/ (3) 1/2" Ø x 4" HEADED STUDS
BP2 T x 5/8 x 0'-7 PL + (2) 1/2" Ø x 4" HEADED STUDS

REVISIONS

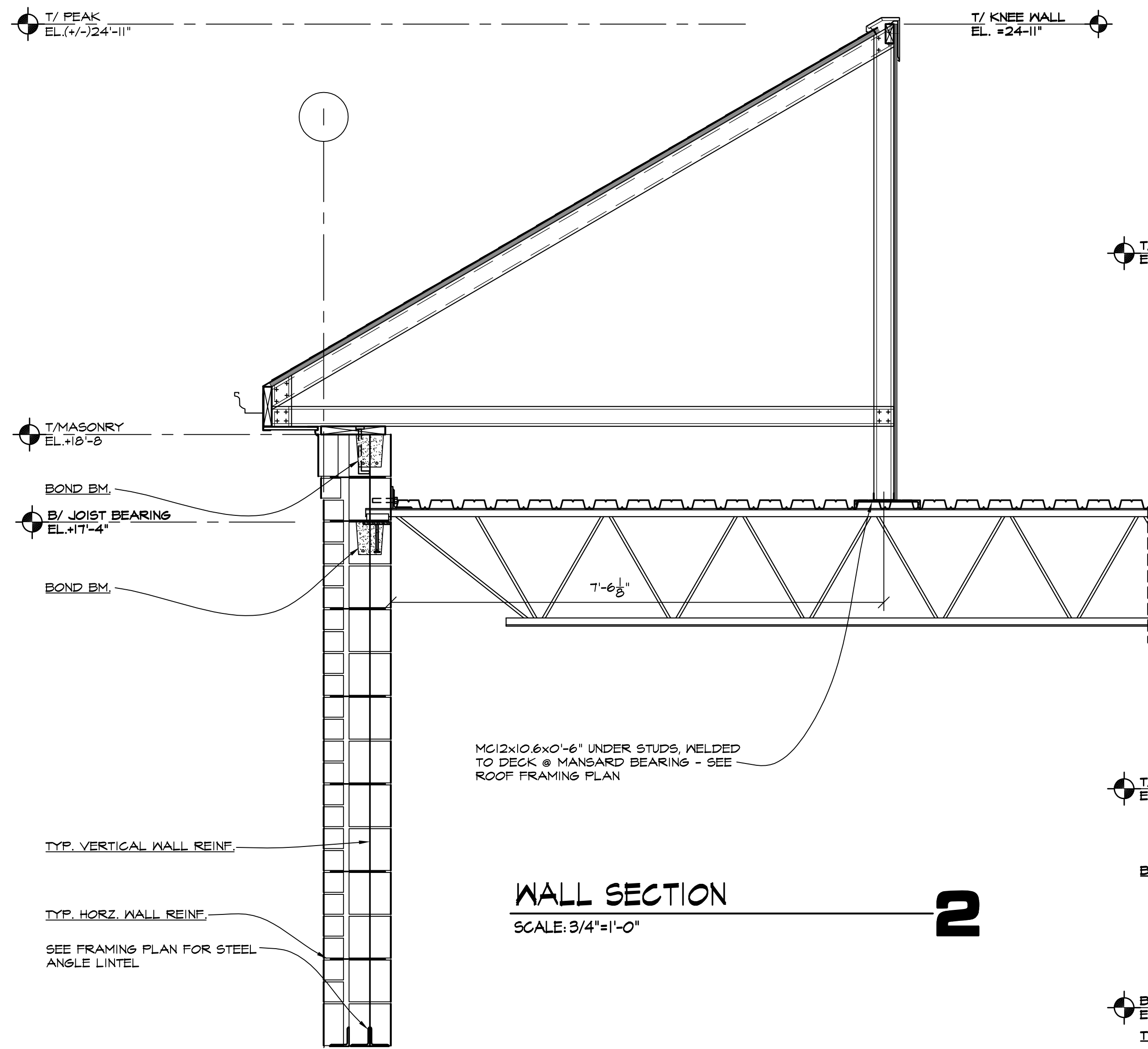
NO.	DATE	BY	DESCRIPTION
1	5/19/2023	FOR BIDDING	
2	5/19/2023	FOR PERMIT	
3		FOR CONSTRUCTION	

KMA & ASSOCIATES, ARCHITECTS
2205 LAKESIDE DRIVE
BANNOCKBURN, ILLINOIS 60015
(847)945-8869

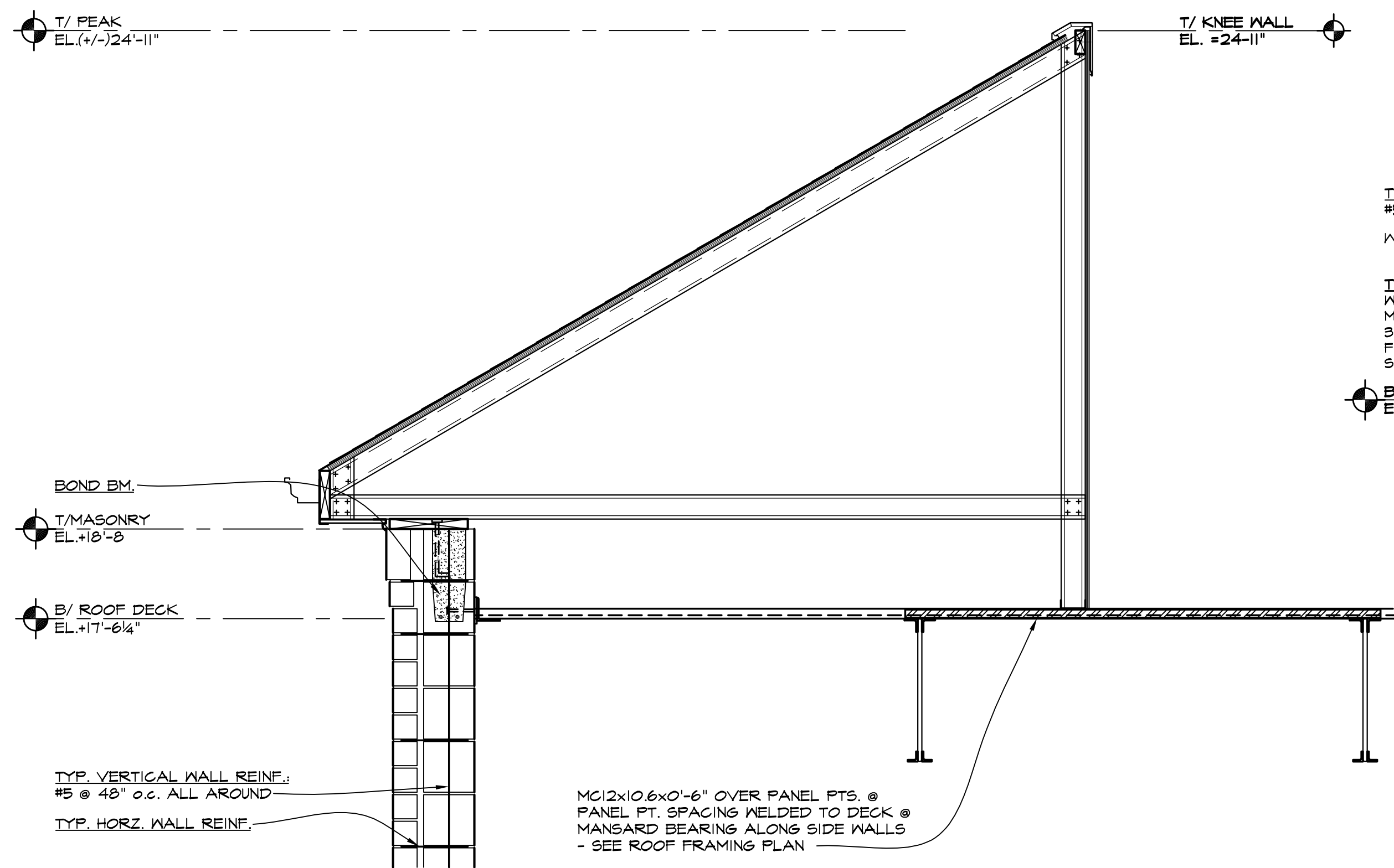
SAUNA GUARD FOR UNLIMITED MASONRY
LARAWAY AVENUE WEST OF WOLF ROAD
FRANKFORD, IL

SHEET TITLE
ROOF FRAMING PLAN DETAILS
NOTES
2238

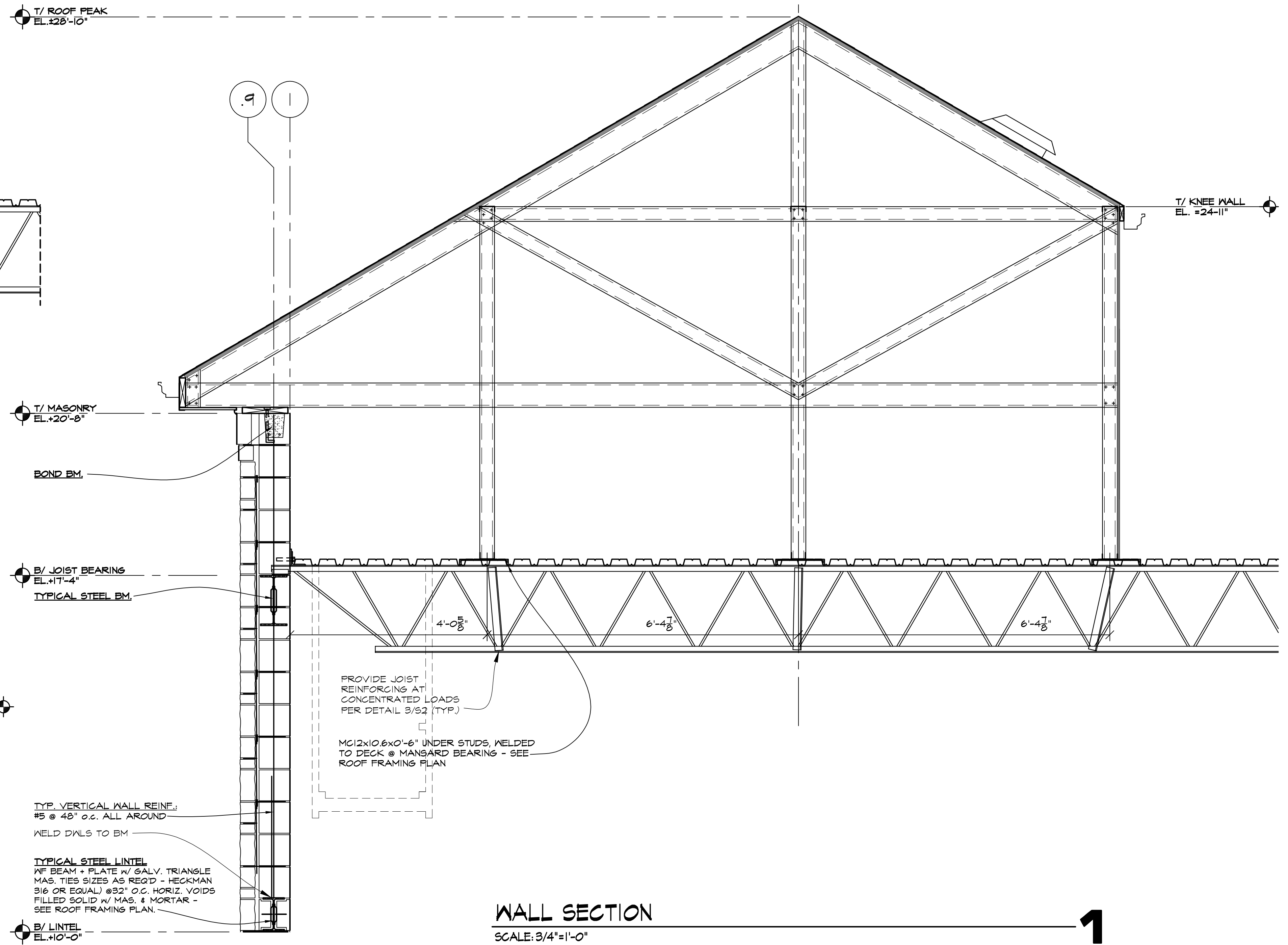




WALL SECTION 2
SCALE: 3/4"=1'-0"



WALL SECTION 3
SCALE: 3/4"=1'-0"



WALL SECTION 1
SCALE: 3/4"=1'-0"

REVISIONS	
FOR REVIEW	5/19/2023
FOR BIDDING	5/19/2023
FOR PERMIT	
FOR CONSTRUCTION	

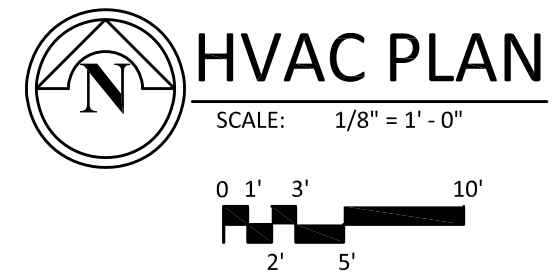
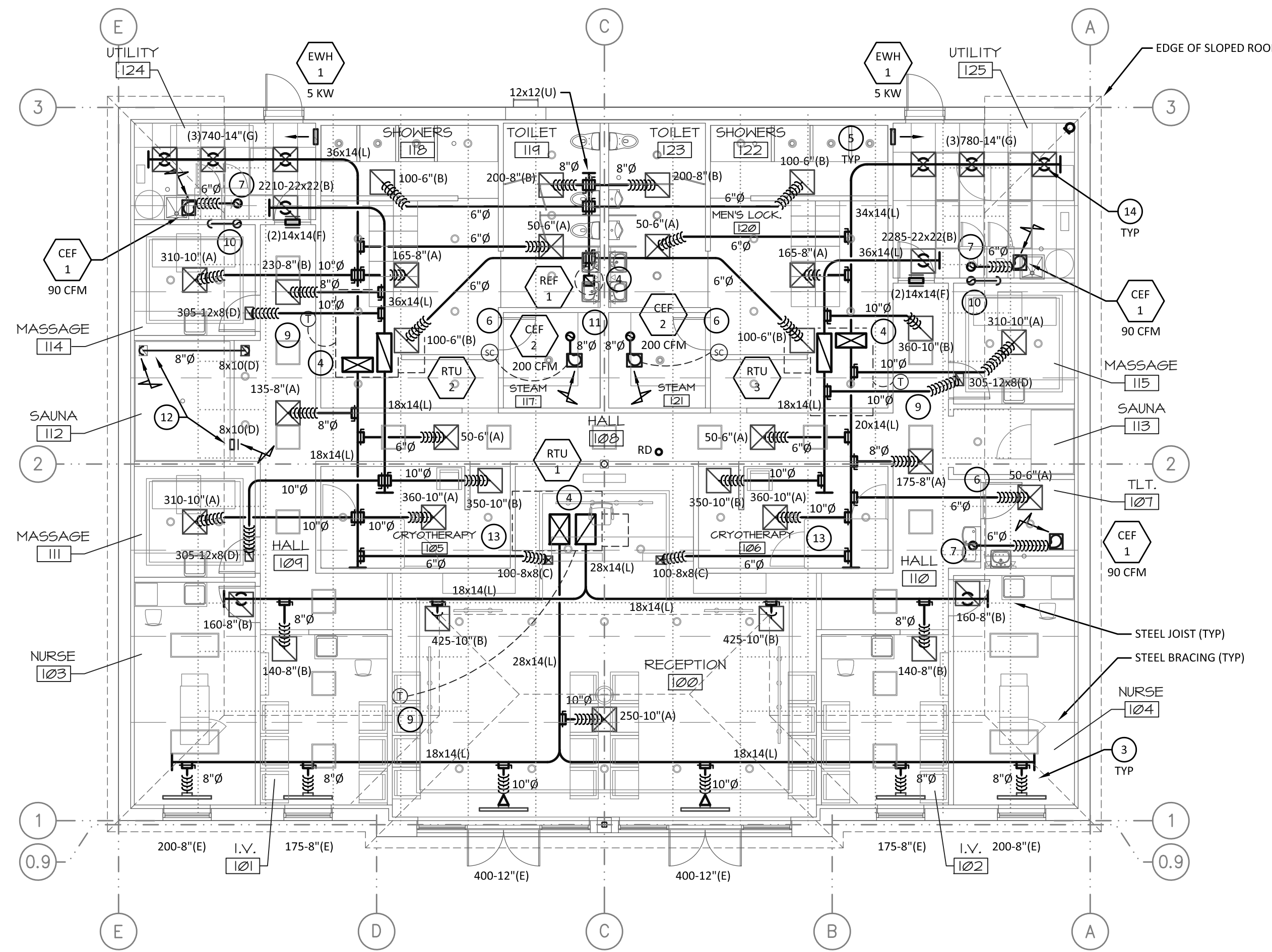
KMA & ASSOCIATES, ARCHITECTS
2205 LAKESIDE DRIVE
BANNOCKBURN, ILLINOIS 60015
(847)945-8869

SAUNA GUARD FOR
UNLIMITED MASONRY
LARAWAY AVENUE WEST OF WOLF ROAD
FRANKFORD, IL

SHEET TITLE
ROOF FRAMING DETAILS
2238

Eric L. Smith
ERIC L. SMITH
001-018434
STATE OF ILLINOIS
EXPIRES 11-30-24

2.1



- ### PLAN NOTES
- 1 SEE DETAILS ON THIS SHEET FOR ADDITIONAL INFORMATION.
 - 2 VERIFY ACCESS TO ALL EQUIPMENT.
 - 3 ALL TERMINATIONS TO CEILING MOUNTED DIFFUSERS TO BE MADE WITH A MAXIMUM OF 5' OF FLEXIBLE DUCTWORK. PROVIDE SPIN COLLAR AND/OR LOCKING TYPE DAMPER AT ALL FINAL BRANCH TAPS FOR ALL GRILLES AND DIFFUSERS. SEE DIVISION 23 (HVAC) NOTES.

ALL LAY-IN DIFFUSERS MOUNTED IN GYPSUM CEILINGS TO HAVE PLASTER FRAMES.

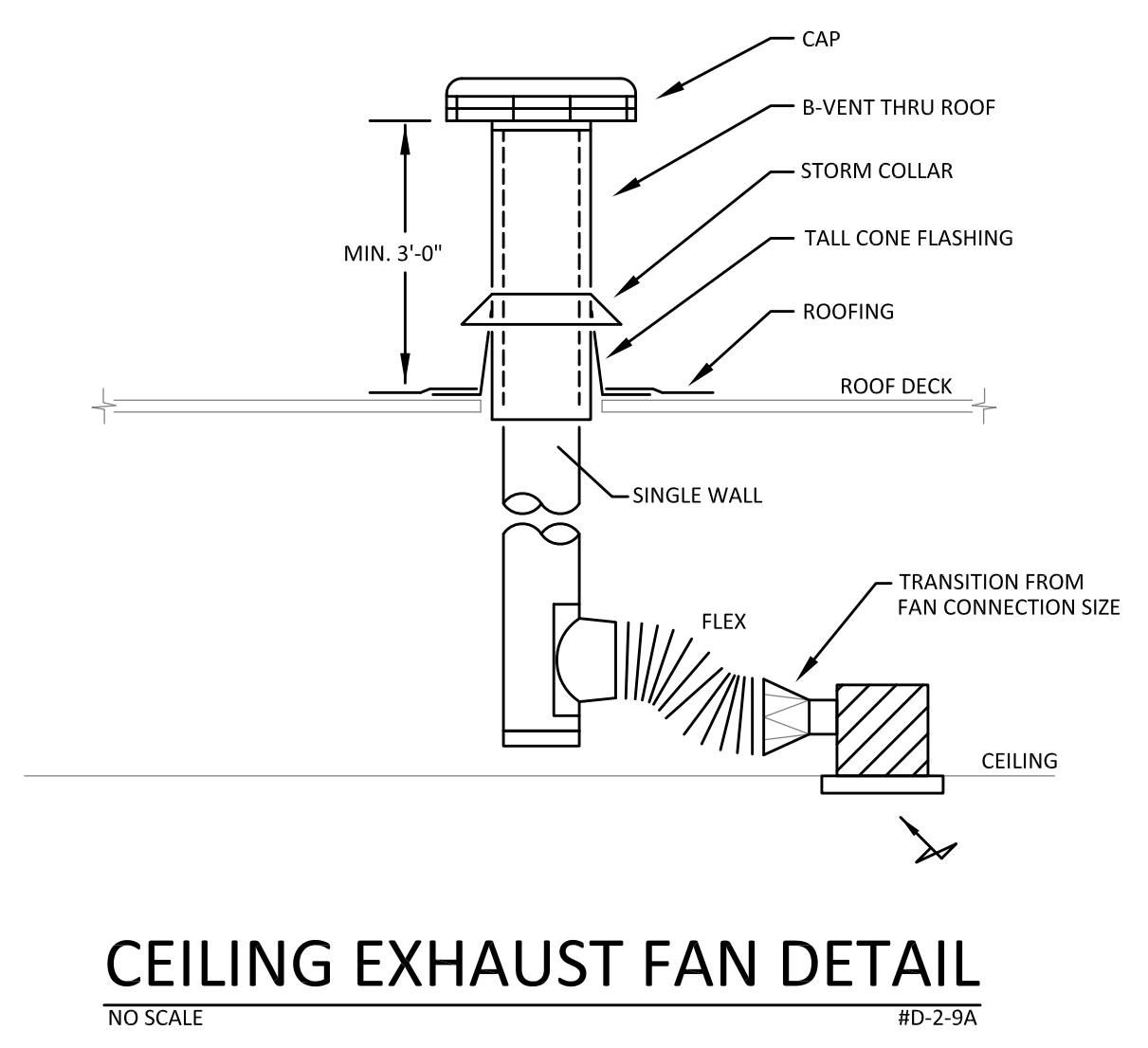
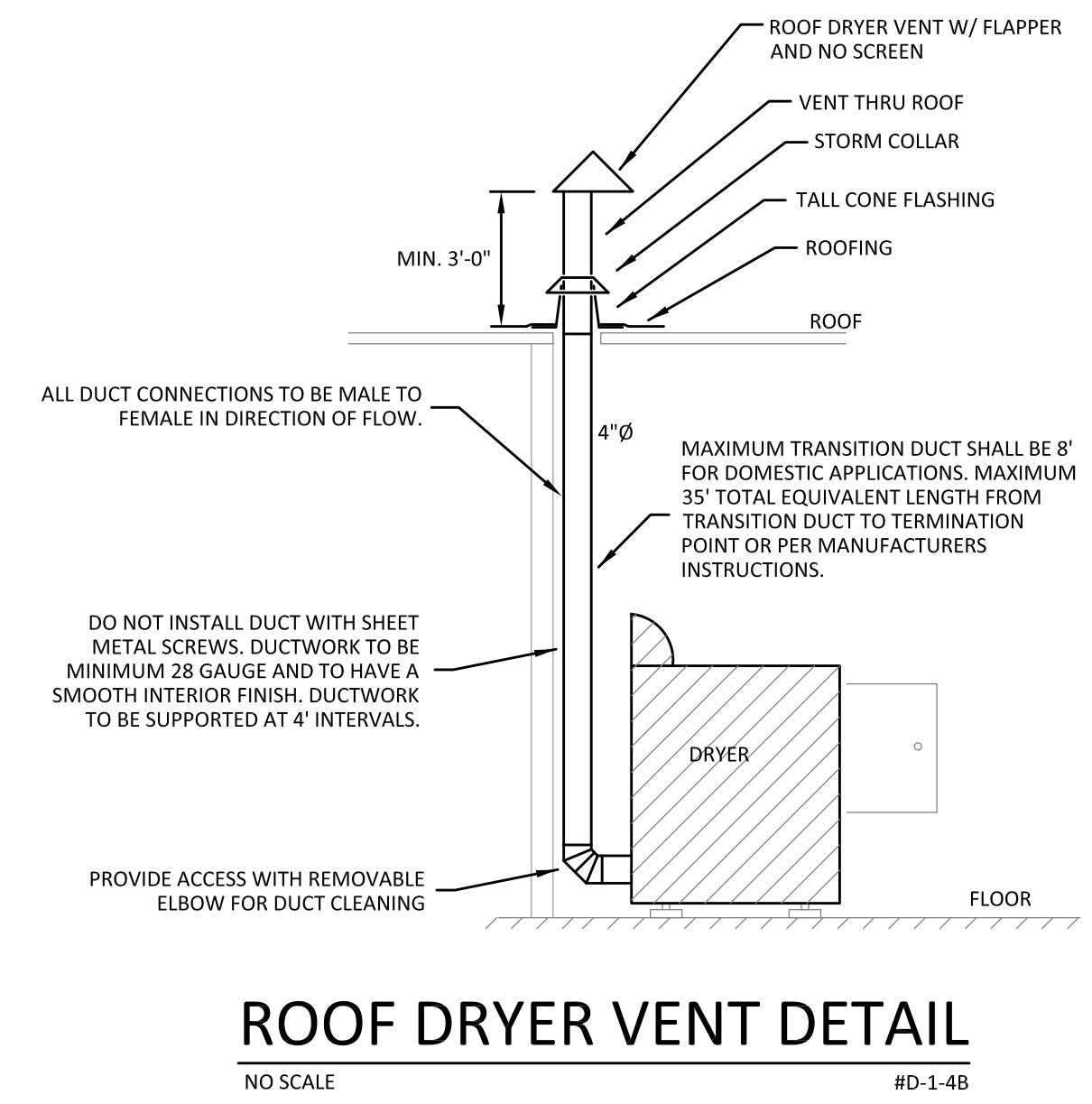
SEPARATE NEW BRANCH DUCT TAP LOCATIONS. MINIMUM CENTERLINE SEPARATION DISTANCE TO BE (2) EQUIVALENT DUCT MAIN DIAMETERS.
 - 4 TRANSITION FROM UNIT CONNECTION SIZE(S) TO PLAN SIZE AND TURN HORIZONTAL WITH RADIUS ELBOW(S) (TAPS ARE NOT ACCEPTABLE). (SEE DUCTWORK SYMBOLS LEGEND)
 - 5 ALL ELBOWS TO BE RADIUS TYPE - UNLESS NOTED OTHERWISE (SQUARE THROAT ELBOWS ARE NOT ACCEPTABLE). (SEE DUCTWORK SYMBOLS LEGEND)
 - 6 UNDERCUT DOOR 3/4".
 - 7 TYPICAL EXHAUST B-VENT THRU ROOF (SEE DETAIL #D-2-9A).
 - 8 COORDINATE LOCATION WITH LIGHT FIXTURE(S).
 - 9 LOCATION OF ROOFTOP UNIT THERMOSTAT, SMOKE DETECTOR MONITORING DEVICE (IF APPLICABLE) AND REMOTE TEST STATION (IF APPLICABLE). SEE SCHEDULES FOR ITEMS REQUIRED. ALL ITEMS TO BE TAGGED WITH THE ROOFTOP UNIT THAT THEY SERVE.
 - 10 INSTALL 4" DRYER EXHAUST VENT AND ACCESSORIES UP TO ROOF TERMINATION PER MANUFACTURERS INSTALLATION INSTRUCTIONS. DRYER VENT TO BE LESS THAN 200 CFM. SEE ROOF DRYER VENT DETAIL #D-1-4B.
 - 11 ALL EXHAUST DUCTWORK AND DIFFUSERS FOR REF-1 AND CEF-2 TO BE ALUMINUM.
 - 12 INSTALL INTAKE AND VENT PER SAUNA MANUFACTURERS INSTALLATION INSTRUCTIONS. VERIFY REQUIREMENTS OF ACTUAL SAUNA PROVIDED BEFORE INSTALLATION.
 - 13 INSTALL CRYO CHAMBER AND ADDITIONAL ITEMS PER MANUFACTURERS INSTALLATION INSTRUCTIONS. ROOM TO MAINTAIN LESS THAN 40% HUMIDITY. SEE ARCHITECTURAL PLANS FOR DEHUMIDIFIER REQUIREMENTS.
 - 14 TAP OFF BOTTOM OF DUCT MAIN. (TYP)

REVISIONS	
THIS DRAWING	NOT FOR CONSTRUCTION
NOT FOR COORDINATION	FOR BIDDING
5/19/23	5/19/23
FOR PERMIT	NOT FOR CONTRACTING
5/19/23	NOT FOR CONSTRUCTION

KMA & ASSOCIATES, ARCHITECTS
 2205 LAKESIDE DRIVE
 BANNOCKBURN, ILLINOIS 60015
 (647)945-6869

SAUNA GUARD FOR UNLIMITED MASONRY
 LARAWAY AVENUE WEST OF WOLF ROAD
 FRANKFORD, IL

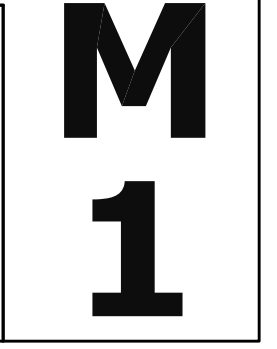
SHEET TITLE
 HVAC PLAN
2238

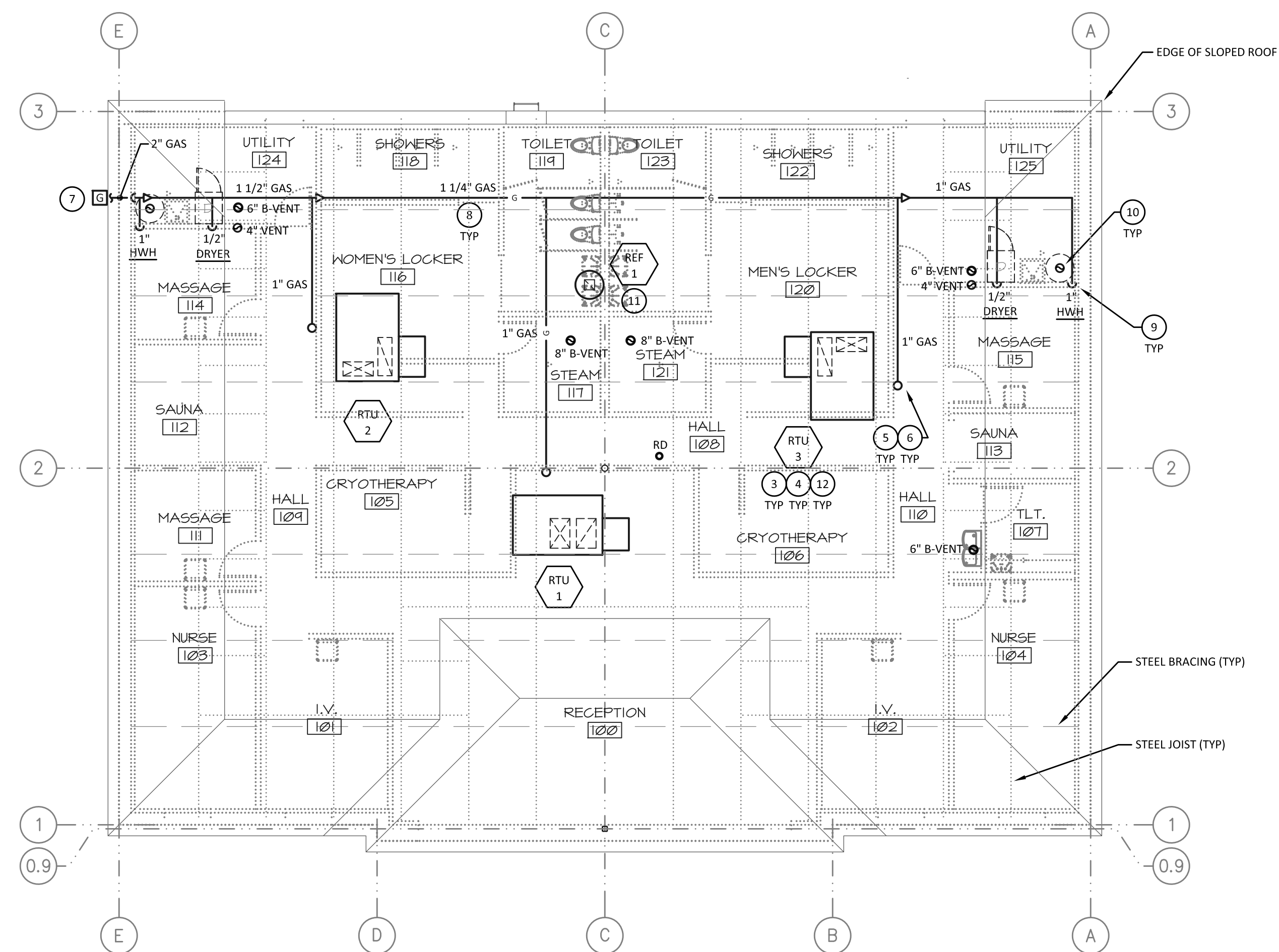


PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

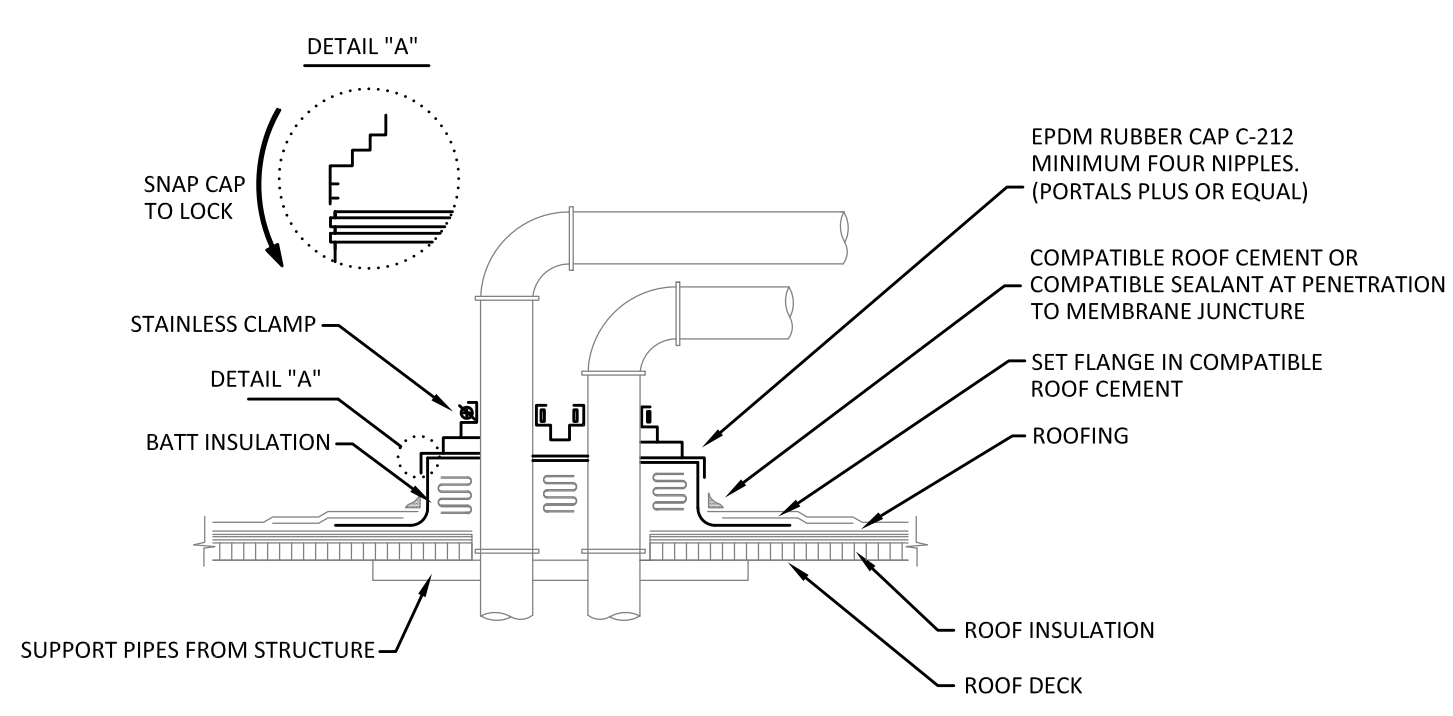
All rights reserved. This document is fully protected by copyright and nothing that appears in it may be reproduced, either wholly or in part, without special permission. United Engineering, Inc. specifically excludes warranties, expressed or implied, as to the accuracy of the data and other information set forth in this document and does not assume liability for any losses or damage resulting from the use of the materials or application of the data discussed in this document.

United Engineering, Inc.
 PROJECT ENGINEERING AND LAYOUT SERVICES
 1006 GENEVA ST. * SHOREWOOD, IL 60404
 PHONE: (815)744-1010 * FAX: (815)744-1516
 www.unitedmep.com

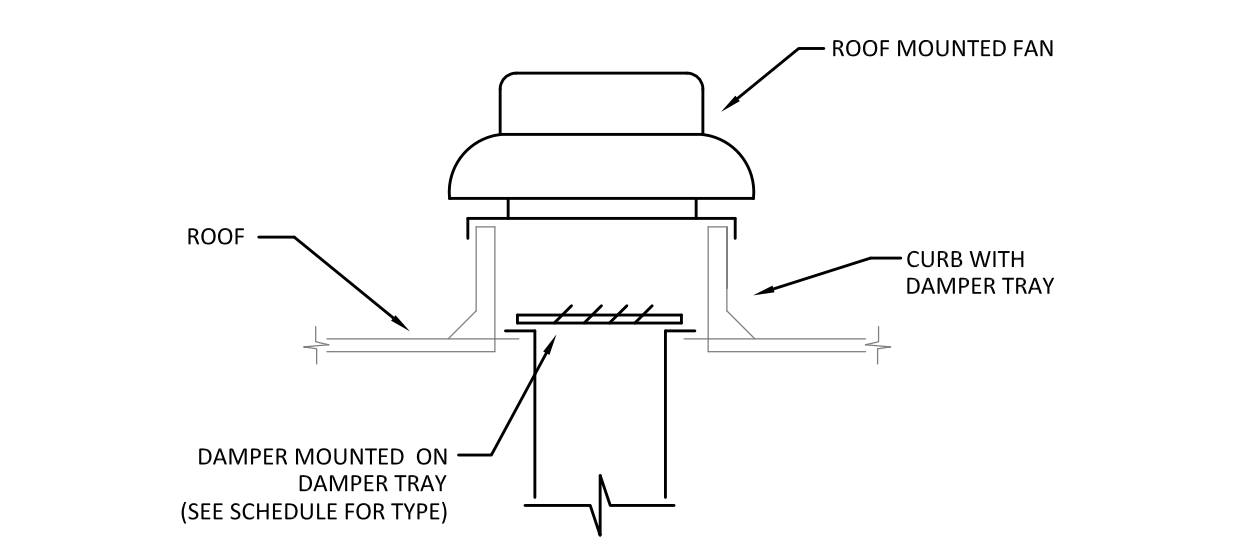




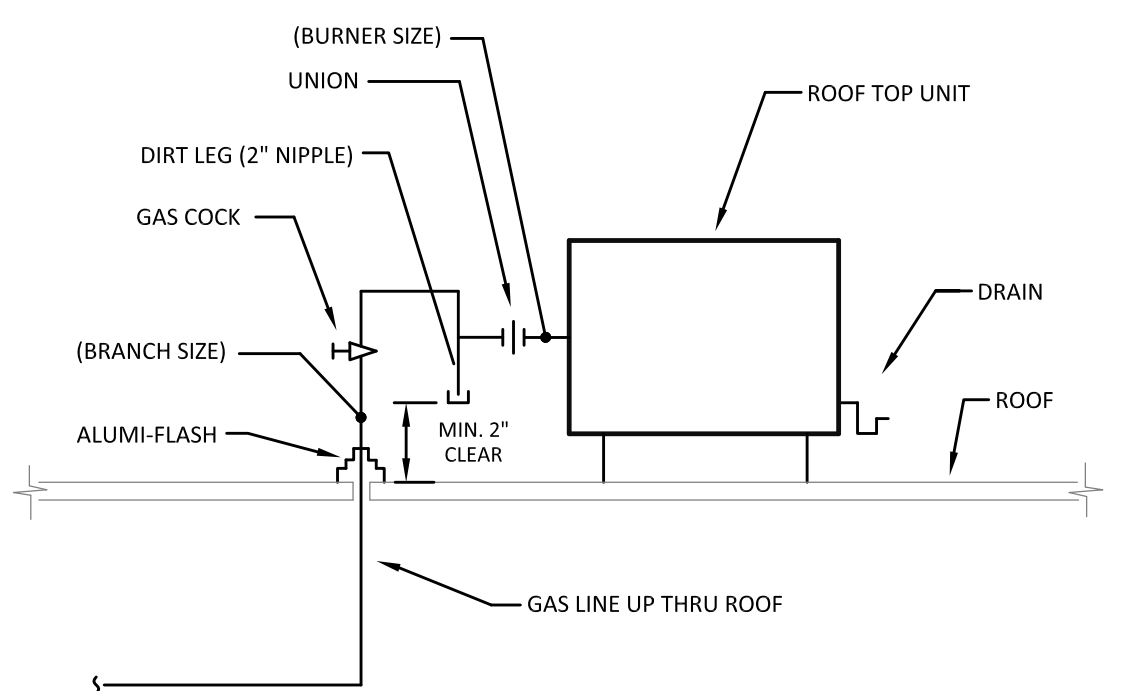
ROOF & GAS PIPING PLAN
 SCALE: 1/8" = 1' - 0"
 0 1' 3' 10'
 2' 5'



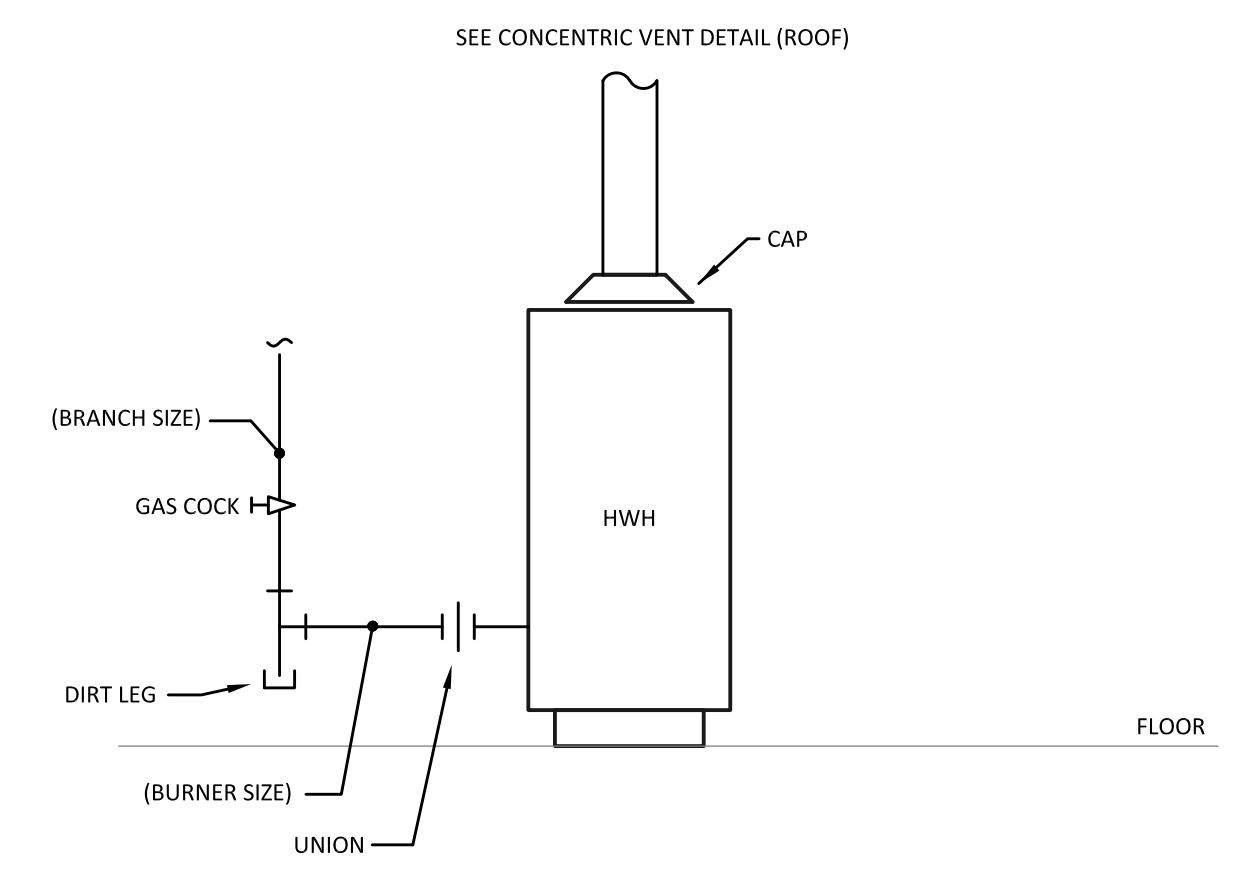
ALUMI-FLASH PIPE PORTAL DETAIL
 NO SCALE #G-1



ROOF MOUNTED EXHAUST FAN DETAIL
 NO SCALE #D-2-1

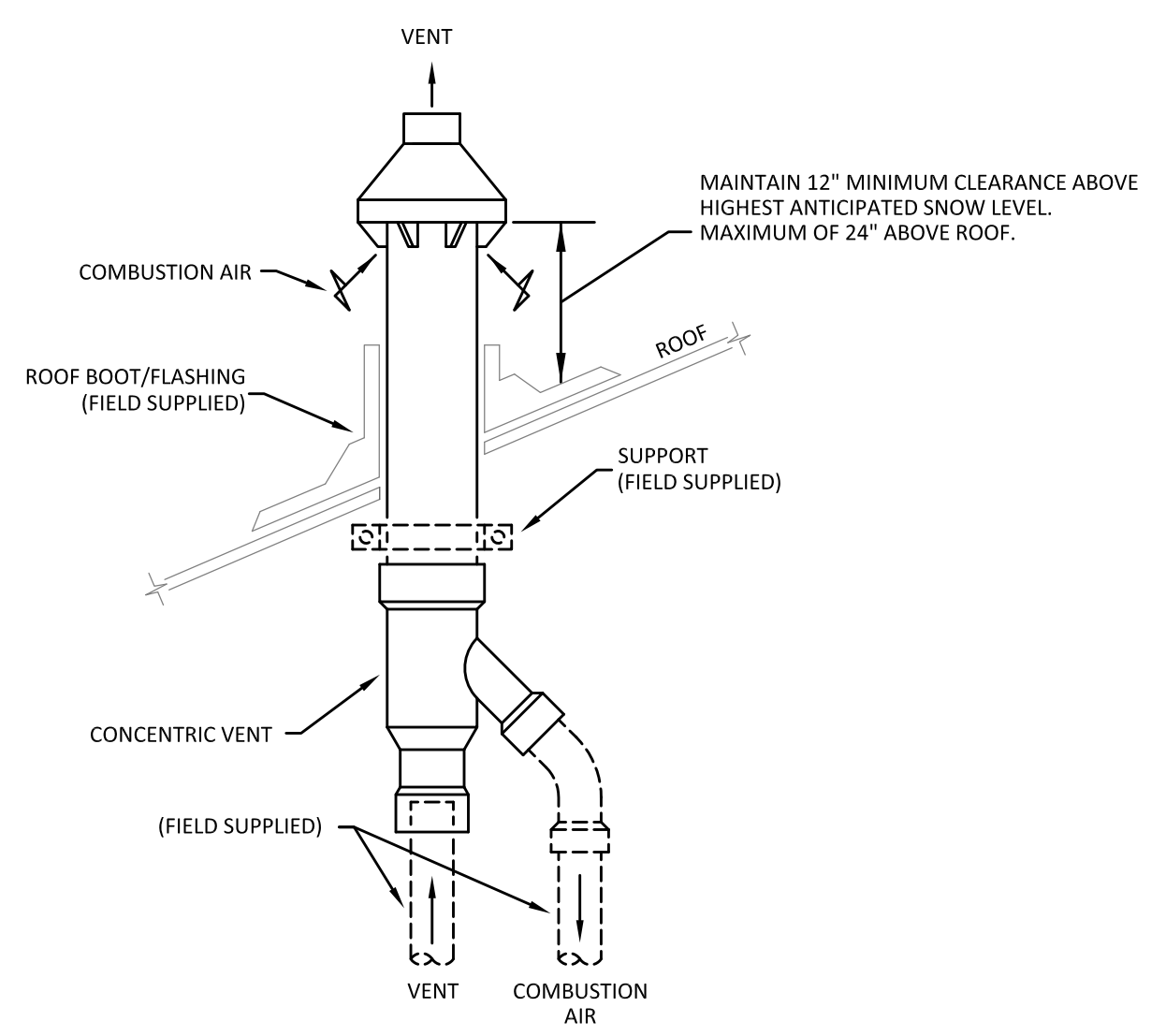


ROOF TOP GAS PIPING TRIM DETAIL
 (LOW PRESSURE) GAS PIPE INSIDE #G-5

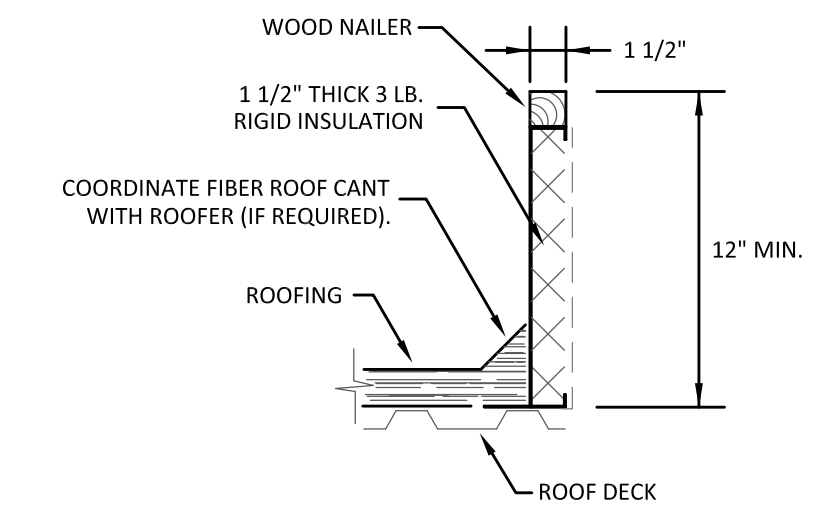


HOT WATER HEATER PIPING DETAIL
 (LOW PRESSURE) (SIMILAR FOR GAS DRYER) #G-13

GAS METER LOAD SCHEDULE		
TENANT	CFH	PRESSURE
SAUNA GUARD	705	6" W.C.



CONCENTRIC VENT DETAIL (ROOF)
 NO SCALE #D-4-3A



ROOF CURB DETAIL
 NO SCALE #D-1-11A

- PLAN NOTES**
- SEE DETAILS ON THIS SHEET FOR ADDITIONAL INFORMATION.
 - VERIFY ACCESS TO ALL EQUIPMENT.
 - TYPICAL EQUIPMENT MOUNTED ON CURB. SEE ROOF CURB DETAIL #D-1-11A.
 - REPLACE ALL ROOFTOP FILTERS PRIOR TO JOB COMPLETION.
 - TYPICAL NEW PIPE UP THRU ROOF TO EQUIPMENT. SEE ALUMI-FLASH PIPE PORTAL DETAIL #G-1.
 - SEE ROOFTOP GAS PIPING TRIM DETAIL #G-5.
 - GAS METER(S) LOCATION. COORDINATE REQUIRED METER SIZE(S) AND LOCATION WITH GAS COMPANY FOR NEW LOAD. SEE GAS METER LOAD SCHEDULE.
 - RUN GAS PIPING BELOW ROOF. GAS PIPING TO BE INSTALLED ABOVE BOTTOM OF JOISTS WHEN POSSIBLE.
 - SEE HOT WATER HEATER GAS PIPING TRIM DETAIL #G-13.
 - PROVIDE 4" CONCENTRIC VENT KIT FOR HOT WATER HEATER. INSTALL PER MANUFACTURERS INSTALLATION RECOMMENDATIONS. SEE DETAIL D-4-3A.
 - ROOF MOUNTED EXHAUST FAN. SEE DETAIL #D-2-1.
 - PROVIDE LARGE LETTERING UNIT TAG ON ROOFTOP. TAG TO BE VISIBLE FROM ROOF ACCESS LADDER.

REVISIONS

THIS DRAWING	FOR COORDINATION	FOR BIDDING	FOR PERMIT	FOR CONTRACTING	FOR CONSTRUCTION
NOT	5/19/23		5/19/23	NOT	NOT

KMA & ASSOCIATES, ARCHITECTS
 2205 LAKESIDE DRIVE
 BANNOCKBURN, ILLINOIS 60015
 (847)945-6869

SAUNA GUARD FOR UNLIMITED MASONRY
 LARAWAY AVENUE WEST OF WOLF ROAD
 FRANKFORD, IL

SHEET TITLE
 ROOF & GAS PIPING PLAN

2238

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILING, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

All rights reserved. This document is fully protected by copyright and nothing that appears in it may be reproduced, either wholly or in part, without special permission. United Engineering, Inc. specifically excludes warranties, expressed or implied, as to the accuracy of the data and other information set forth in this document and does not assume liability for any losses or damage resulting from the use of the materials or application of the data discussed in this document.

United Engineering, Inc.
 PROJECT ENGINEERING AND LAYOUT SERVICES
 1006 GENEVA ST. * SHOREWOOD, IL 60404
 PHONE: (815)744-1010 * FAX: (815)744-1516
 www.unitedmep.com

M 2

STANDARD SYMBOLS LEGEND

	EQUIPMENT TAG		POINT OF NEW CONNECTION
	REVISION TAG		PHOTO VIEW POINT
	COLUMN LINE TAG		SECTION/DETAIL IDENTIFIER
	N.I.C. NOT IN CONTRACT		SECTION CUT
			SHEET LOCATION
			U.N.O. UNLESS NOTED OTHERWISE

DUCTWORK SYMBOLS LEGEND

	S/A DIFFUSER	(EX) - EXISTING
	BV - B-VENT	MOD - MOTOR OPERATED DAMPER
	R/A DIFFUSER	MVD - MANUAL VOLUME DAMPER
	RD - ROOF DRAIN	FD - FIRE DAMPER
	SLOT DIFFUSER	OBD - OPPOSED BLADE DAMPER
	FLEXIBLE DUCT	PBD - PARALLEL BLADE DAMPER
	SPIN COLLAR	BDD - BACK DRAFT DAMPER
	THERMOSTAT	(SP) STATIC PRESSURE SENSOR
	REMOTE SENSOR	(SD) SMOKE DETECTOR
	VEHICLE EXHAUST SENSOR	(SC) SPEED CONTROLLER
	HUMIDISTAT	
	CONTROL CABINET	

	QUANTITY CFM NECK SIZE GRD MODEL TAG (2)400-10"(A)
	OUTSIDE DUCT DIMENSION AaxB(C) "X-X"
	ELEVATION BOTTOM OF DUCT BOTTOM OF PIPE BOTTOM OF EQUIPMENT
	L-LINER W - WRAPPED U - UNINSULATED
	RADIUS=1/2xW
	NOTE: WHERE THIS RADIUS IS NOT POSSIBLE PROVIDE A FULL RADIUS VANE OR A SQUARE ELBOW WITH VANES (BELOW)
	DO NOT INSTALL SQUARE THROAT ELBOWS UNDER ANY CONDITIONS
	S = 1.5 INCHES R = 2.0 INCHES
	NO TRAILING EDGE SINGLE THICKNESS VANE
	DO NOT INSTALL SQUARE THROAT ELBOWS W/O VANES UNDER ANY CONDITIONS (U.N.O.)

ROOFTOP UNIT SCHEDULE

TAG	RTU-1	RTU-2	RTU-3
MANUFACTURER	YORK	YORK	YORK
MODEL	ZQG06E2	ZYG09D2	ZYG09D2
CAPACITY TONS (NOMINAL)	5	8.5	8.5
COOLING ENERGY EFFICIENCY	14.1 SEER	12 EER	12 EER
REFRIGERANT TYPE	R-410A	R-410A	R-410A
CFM	1,800	3,700	3,600
ESP (DUCT ONLY)	1	1	1
RPM	1401	1032	1023
BHP	1.57	2.69	2.59
MBH	62	116	115
EAT (DB/WB)	79.5/65.5	78/63.5	78.5/64
COIL LAT (DB/WB)	55/53.5	54.5/52.5	54.5/52.5
STAGES	1	2	2
INPUT (MBH) (MAX)	112	125	125
OUTPUT (MBH) (MAX)	90	100	100
STAGES	1	2	2
MCA / MOCF	30/45	45/50	45/50
VOLT	208	208	208
PHASE	3	3	3
OUTDOOR AIR (CFM)	350	300	300
UNIT WEIGHT (LBS)	1,000	1,450	1,450
REMARKS / ACCESSORIES	1-8,11	1-10,11	1-10,11

- NEW
- CURB
- DRIVE (BELT)
- DRY BULB ECONOMIZER W/BAROMETRIC RELIEF
- FDD ('ECONOMIZER' FAULT DETECTION & DIAGNOSTICS)
- OEM PROGRAMMABLE THERMOSTAT (VENSTAR T4900 OR EQUAL)
- THROWAWAY FILTERS (2")
- ALL INLET, ECONOMIZER AND CONTROLS TO MEET 2018 INTERNATIONAL ENERGY CONSERVATION CODE REQUIREMENTS
- STAGED AIR VOLUME (INTELLISPEED)
- RETURN AIR SMOKE DETECTOR W/ MONITORING DEVICE AND REMOTE TEST STATION

FAN SCHEDULE

TAG	REF-1	CEF-1	CEF-2
MANUFACTURER	COOK	COOK	COOK
MODEL	ACED-120-EC	GC-148	GC-542
TYPE	ROOF EXH.	CEILING EXH.	CEILING EXH.
CFM	800	90	200
ESP (DUCT ONLY)	0.625	0.375	0.375
FAN RPM	1248	1075	1195
DRIVE TYPE	DIRECT	DIRECT	DIRECT
HP	.25	45 WATTS	74 WATTS
VOLT	120	120	120
PHASE	1	1	1
UNIT WEIGHT (LBS)	115	15	30
REMARKS / ACCESSORIES	1-6	1-3	1,2,7,8,9

- NEW
- DAMPER (GRAVITY BACKDRAFT)
- SPEED CONTROLLER (FAN MOUNTED)
- CURB (SEE DETAIL)
- DISCONNECT (PRE-WIRED)
- ALUMINUM BIRDSCREEN
- ALUMINUM GRILLE
- SPEED CONTROLLER (WALL MOUNTED)
- TOTALLY ENCLOSED NON-VENTILATED MOTOR

ELECTRIC HEAT EQUIPMENT SCHEDULE

TAG	EW1-1
LOCATION SERVING	UTILITY
MANUFACTURER	QMARK
MODEL	CWH 3000 SERIES
TYPE	WALL HEATER
CFM	100
SIZE	-
KW	5
VOLT	208
PHASE	3
(OPERATING) UNIT WEIGHT (LBS)	25
REMARKS / ACCESSORIES	1,2

GRILLE, REGISTER AND DIFFUSER SCHEDULE

TAG	A	B	C	D	E	F	G
MANUFACTURER	TITUS	TITUS	TITUS	TITUS	TITUS	TITUS	TITUS
MODEL	TMS	PAR	300RS	350RL	TBD1-80	T700L (STEEL)	PSS
TYPE	S/A DIFFUSER	R/A, E/A DIFFUSER	REGISTER	GRILLE	S/A SLOT DIFFUSER	DOOR GRILLE	S/A DIFFUSER
NECK SIZE	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN
MOUNTING TYPE	LAY IN	LAY IN	SURFACE	SURFACE	LAY IN	SURFACE	LAY IN
DAMPER	-	-	OBD	-	-	-	-
REMARKS / ACCESSORIES	1	1	1	1	1,2,3	1,4	1

- VERIFY COLOR WITH ARCHITECT
- ADJUST DIFFUSER BLADES TO WASH WINDOW/WALL
- (2) 1" SLOT, 4" LONG
- GRILLE WITH BORDER ON BOTH SIDES OF DOOR

DIVISION 23 (HVAC)

- 1) GENERAL:**
- JOB SPECIFICATIONS ARE AS FOLLOWS:
 - CODE - CONTRACTOR TO LOCATE, REVIEW AND COMPLY WITH ALL LOCAL, STATE AND/OR NATIONAL CODES. CONTRACTOR TO SPECIFICALLY LOCATE, REVIEW AND COMPLY WITH ALL LOCAL CODE AMENDMENTS.
 - WORKMANSHIP/WARRANTY - CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, MATERIALS, METHODS, TECHNIQUES, SEQUENCES AND DETAILS TO PERFORM ITS WORK. ALL MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE THE EQUIPMENT/SYSTEMS ARE PLACED INTO OPERATION AND ACCEPTED BY THE OWNER. WARRANTY TO INCLUDE LABOR & MATERIALS REQUIRED FOR WARRANTY ISSUES.
 - EQUIPMENT MANUFACTURER INSTRUCTIONS - CONTRACTOR TO FOLLOW EQUIPMENT MANUFACTURER'S INSTALLATION, OPERATION AND MAINTENANCE (IOM) MANUALS FOR ALL NEW EQUIPMENT. EQUIPMENT MANUFACTURER'S IOM INSTRUCTIONS SUPERSEDE ANY CONFLICTS WITH THESE DRAWINGS.
 - SCHEDULED EQUIPMENT - CONTRACTOR PRICING TO BE BASED ON THE SCHEDULED EQUIPMENT. SUBSTITUTIONS TO BE SUBMITTED AS DEDUCTS (OR ADDS) TO THE BASE CONTRACT ALONG WITH A DESCRIPTION OF THE DIFFERENCES. ALL SUBSTITUTIONS WILL REQUIRE THE CONTRACTOR TO SUBMIT REVISED DIGITAL SHOP DRAWINGS (IN AUTOCAD FORMAT) FOR REVIEW PRIOR TO INSTALLATION. THE REVISED DRAWINGS TO INCLUDE (BUT ARE NOT LIMITED TO) THE REVISED EQUIPMENT SPECIFICATION SCHEDULES, LOCATIONS, WEIGHTS, DUCTWORK, PIPING, WIRING, BREAKERS (ETC.). THE REVISED DRAWINGS TO SHOW THE ENTIRE SYSTEM AS THE SYSTEM WILL BE INSTALLED BY THE CONTRACTOR.
 - SUBMITTALS - CONTRACTOR TO COORDINATE SUBMITTAL SCHEDULE WITH OWNER IMMEDIATELY AFTER ACCEPTANCE OF CONTRACT. AS SOON AS POSSIBLE BEFORE CONSTRUCTION, CONTRACTOR TO EMAIL NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING SUBMITTALS (INCLUDING ALL ACCESSORIES). NO NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING ITEMS ARE TO BE INSTALLED UNTIL SUBMITTED INFORMATION IS APPROVED.
 - SHOP DRAWINGS - BEFORE INSTALLATION, PROVIDE 1/4" SCALE 'SHOP DRAWINGS' FOR COORDINATION AND APPROVAL. 'SHOP DRAWINGS' TO SHOW DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT. INSTALLATION TO START ONLY AFTER WRITTEN APPROVAL FROM ENGINEER. ALL CONTRACTOR PROVIDED DRAWINGS TO BE MADE WITH 'AUTO CAD' DRAFTING SOFTWARE AND SUBMITTED IN BOTH AUTOCAD AND ADOBE DIGITAL FORMAT. [NOTE - DESIGN DRAWINGS, NOTES AND/OR ADDENDUMS ARE NOT TO BE COPIED OR REPRODUCED IN ANY WAY FOR USE AS CONTRACTOR SUBMITTED DRAWINGS.] PROVIDE (4) PAPER HARD COPIES OF SHOP DRAWINGS.
 - AS BUILT DRAWINGS - UPON COMPLETION OF THE INSTALLATION WORK, PROVIDE 'AS BUILT' CHANGES CLEARLY SHOWING THE FINAL DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT. ALL 'AS BUILT' DRAWING CHANGES TO BE MADE WITH 'AUTO CAD' DRAFTING SOFTWARE AND SUBMITTED IN BOTH AUTOCAD AND ADOBE DIGITAL FORMAT. [NOTE - DESIGN DRAWINGS, NOTES AND/OR ADDENDUMS ARE NOT TO BE COPIED OR REPRODUCED IN ANY WAY FOR USE AS CONTRACTOR SUBMITTED DRAWINGS.]
 - POST CONSTRUCTION DOCUMENTS - CONTRACTOR TO EMAIL A MICROSOFT WINDOWS FORMAT FOLDER INCLUDING ALL REQUIRED PROJECT CLOSE OUT DOCUMENTS. THE WINDOWS FORMAT FOLDER TO INCLUDE SUB-FOLDERS AND TO BE LABELLED AS PER BELOW. [ALSO PROVIDE (3) EXACT PRINTED COPIES IN SEPARATE HARD BINDERS.]
 - TRADE NAME
 - WARRANTY - WARRANTY LETTER INCLUDING THE AGREED UPON START DATE
 - EQUIPMENT - COMPLETE LIST OF MODEL NUMBERS AND SERIAL NUMBERS FOR EACH PIECE OF EQUIPMENT
 - IOM - INSTALLATION, OPERATION AND/OR MAINTENANCE (IOM) MANUALS. INCLUDE PARTS LIST FOR EACH PIECE OF EQUIPMENT
 - VENDERS LIST - LIST OF CONTACT INFORMATION INCLUDING CONTACT NAME, PHONE NUMBER AND EMAIL ADDRESS FOR EQUIPMENT
 - AS BUILT DRAWING - AS BUILT DRAWING INCLUDING FINAL LOCATION FOR EACH PIECE OF EQUIPMENT
 - TEST & BALANCE REPORT - REPORT OF ALL FINAL TESTED AND BALANCED AIR AND WATER SYSTEMS INFORMATION.
 - ACCESS DOORS - CONTRACTOR TO FURNISH AND INSTALL ACCESS DOORS AS REQUIRED. EACH TRADE TO COORDINATE WITH CARPENTRY CONTRACTOR THE LOCATION OF ACCESS DOORS IN ALL CEILINGS, SOFFITS AND WALLS FOR ACCESS TO EQUIPMENT, VALVES, DAMPERS, FIRE DAMPERS, CLEAN OUTS, SWITCHES, CONTROLS, ETC.
 - STRUCTURE PROTECTION - THE BUILDING OR STRUCTURE SHALL NOT BE WEAKENED BY THE INSTALLATION OF ANY NEW SYSTEMS. WHERE FLOORS, WALLS, CEILINGS OR ANY OTHER PORTION OF THE BUILDING OR STRUCTURE ARE REQUIRED TO BE ALTERED OR REPLACED IN THE PROCESS OF INSTALLING OR REPAIRING ANY SYSTEM, THE BUILDING OR STRUCTURE SHALL BE LEFT IN A SAFE STRUCTURAL CONDITION IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR NATIONAL CODES.
 - FIRE RESISTANT ASSEMBLIES - PENETRATIONS OF WALL/FLOOR/CEILING ASSEMBLIES AND ASSEMBLIES REQUIRED TO HAVE A FIRE-RESISTANCE RATING SHALL BE PROTECTED IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR NATIONAL CODES.
 - ACCESSIBILITY - MANUAL ACCESSIBLE ITEMS IN OCCUPIED SPACES (SUCH AS CONTROLS, THERMOSTATS, SWITCHES AND ELECTRICAL OUTLETS) TO BE LOCATED NO HIGHER THAN 48" AND NO LOWER THAN 15" PER THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. VERIFY LOCAL ACCESSIBILITY CODE REQUIREMENTS OVER AND ABOVE THE ADA REQUIREMENTS. COORDINATE FINAL MOUNTING HEIGHTS WITH OWNER.

- 2) GENERAL HVAC CONDITIONS:**
- KEEP OUTSIDE AIR INTAKES A MINIMUM OF 10'-0" AWAY FROM CONTAMINANT SOURCES.
 - KEEP B-VENTS A MINIMUM OF 3'-0" ABOVE ROOF PENETRATION AND/OR 2'-0" ABOVE ANY PART OF THE BUILDING WITHIN 10'-0". B-VENTS TO CLEAR COMBUSTIBLES BY 2" MIN.
 - THERMOSTATS, SENSORS AND CONTROL PANELS FOR HVAC EQUIPMENT SHALL BE LOCATED IN ACCORDANCE WITH THE MECHANICAL PLANS. FURNISH AND INSTALL CLEAR LOCKING COVERS FOR ALL T-STATS. ALL COVERS TO BE KEYPED THE SAME.
 - PROVIDE ENGRAVED TAGS FOR ALL HVAC EQUIPMENT.
 - PROVIDE FACTORY START UP FOR ALL EQUIPMENT.
- 3) DUCTWORK:**
- ALL DUCTWORK SHALL MEET S.M.A.C.N.A. STANDARDS AS LISTED IN THE INTERNATIONAL MECHANICAL CODE. DUCTWORK TO BE GALVANIZED SHEET METAL UNLESS NOTED OTHERWISE.
 - ALL RECTANGULAR BRANCH DUCTS TO HAVE OPPOSED BLADE DAMPERS.
 - ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK, SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC-PLUS-EMBEDDED-FABRIC SYSTEMS, OR TAPES. TAPE AND MASTICS USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS.

WORK ITEM SCHEDULE

ITEM	PROVIDED BY	INSTALLED BY	WIRED BY	COMMENT
ELECTRICAL DISCONNECTS	NOTE (1)	EC	EC	RTU'S
HVAC EQUIPMENT SERVICE OUTLETS	NOTE (1)	EC	EC	RTU'S
TIME CLOCK (FOR EQUIPMENT)	EC	EC	EC	REF-1
OCCUPANCY SENSORS (SINGLE TOILET)	EC	EC	EC	CEF-1
WALL SWITCH (MOP SINKS)	EC	EC	EC	CEF-1
WALL MOUNTED SPEED CONTROLLERS	NOTE (2)	MC	MC	CEF-2
THERMOSTATS	NOTE (2)	MC	MC	RTU'S
SMOKE DETECTORS (& SAMPLING TUBES)	NOTE (1)	MC	EC	RTU-2,3
REMOTE TEST STATION	NOTE (1)	EC	EC	RTU-2,3
EC - ELECTRICAL CONTRACTOR				
MC - MECHANICAL CONTRACTOR				
NOTES:				
(1) PROVIDED BY EC UNLESS PROVIDED WITH EQUIPMENT. CHECK SCHEDULES ON BOTH M & E SHEETS.				
(2) PROVIDED BY MC UNLESS PROVIDED WITH EQUIPMENT. CHECK SCHEDULES ON BOTH M & E SHEETS.				

- LOW PRESSURE:**
- RTU S/A & R/A DROPS - 1 1/2" LINER
 - RECTANGULAR S/A - 1 1/2" LINER
 - RECTANGULAR R/A - 1 1/2" LINER
 - RECTANGULAR E/A - UNINSULATED
 - ROUND S/A - 2" FIBERGLASS WRAP
 - ROUND R/A - 2" FIBERGLASS WRAP
 - ROUND E/A - UNINSULATED
 - FLEX S/A - INSULATED (5'-0" MAXIMUM LENGTH)
 - FLEX R/A - INSULATED (5'-0" MAXIMUM LENGTH)
 - FLEX E/A - UNINSULATED (5'-0" MAXIMUM LENGTH)
 - RECT. DUCT LENGTHS - 59" WITH S&D JOINTS
 - DIMENSIONS - OUTSIDE DIMENSIONS SHOWN ON PLANS
 - ELBOW RADIUS - ONE HALF THE DUCT WIDTH (SEE DUCTWORK SYMBOLS LEGEND)
 - SHOE-TAPS - 6" LONG
 - BALANCING DAMPERS - AT ALL FINAL DIFFUSER & GRILLE TAP LOCATIONS (LOCKING TYPE)
 - RECT. BALANCING - OPPOSED FLAT BLADE, LOCKABLE (RUSKIN CD355-0BD)
 - RECT. MIXING - PARALLEL FLAT BLADE, LOCKABLE (RUSKIN CD355-PBD)
 - RECT. E/A AND O/A (MOD) - OPPOSED AIRFOIL BLADE, LOW LEAK, CLASS 1 (RUSKIN CD60)
 - RND. E/A AND O/A (MOD) - LOW LEAK, CLASS 1 (RUSKIN CD355)
 - BACKDRAFT DAMPER - ALUMINUM MEDIUM DUTY TYPE (RUSKIN B06)
 - BACKDRAFT DAMPER W/CB - ALUMINUM MEDIUM DUTY TYPE WITH COUNTER BALANCE. LOW LEAK BLADE EDGE SEALS (RUSKIN CB04)
 - DUCT PRESSURE CLASS - 1" W.C. (LOW PRESSURE)
 - DUCT SEAL CLASS - CLASS A
- INSULATION & LINER:**
- MINIMUM R-6 FOR INTERIOR DUCTWORK. MINIMUM R-12 FOR EXTERIOR DUCTWORK.
 - ADD INSULATION TO LINED DUCTWORK IF NEEDED.
 - INSIDE DUCT LINER TO BE KNAUF SONIX XP DUCT LINER (1.5 PCF) OR OWENS CORNING EQUIVALENT.
 - DUCT WRAP FOR INTERIOR DUCTWORK TO BE KNAUF FRIENDLY FEEL DUCT WRAP (1.5 PCF) OR OWENS CORNING EQUIVALENT.
- 4) CURBS:**
- CURBS TO BE INSULATED AND A MINIMUM 12" HIGH. CURBS TO BE PITCHED TO MATCH SLOPE OF ROOF.
- 5) PIPING:**
- ALL HVAC PIPING AND PIPE MATERIALS TO MEET ASTM AND ASME STANDARDS AS LISTED IN THE INTERNATIONAL MECHANICAL CODE AND LOCAL CODES. CONTACT THE CITY/TOWNSHIP FOR THE PROPER EDITIONS AND AMENDMENTS OF THE ALL RELATIVE CODE PUBLICATIONS. ALL GAS PIPING AND MATERIALS TO MEET ASTM STANDARDS AS LISTED IN THE INTERNATIONAL FUEL GAS CODE.
 - PRESSURE RATINGS - PIPE, FITTING AND VALVE PRESSURE RATINGS TO EXCEED MAXIMUM SYSTEM OPERATING PRESSURE BY A MINIMUM OF 20%. VERIFY EACH PIPE SYSTEM OPERATING PRESSURE BEFORE INSTALLATION.
 - GAS PIPING
 - ALL GAS PIPING TO BE SCH. 40 BLACK STEEL WITH SCREWED MALLEABLE FITTINGS FOR 2" AND SMALLER PIPING. 2 1/2" AND LARGER PIPING TO HAVE WELDED FITTINGS (WITH LONG RADIUS ELBOWS).
 - DRAIN PIPING:
 - ALL DWV PIPING TO BE PLAIN END SCH. 40 DWV PVC WITH SOCKET TYPE DWV PVC FITTINGS.
- 6) ANCHORING, SUPPORT & ISOLATION (EQUIPMENT, PIPING & DUCTWORK):**
- ANCHORING & SUPPORT:
 - ANCHOR ALL EQUIPMENT, DUCTWORK AND PIPING TO APPROVED STRUCTURES WITH UL LISTED AND FACTORY MUTUAL APPROVED ANCHORING AND SUPPORT PRODUCTS. APPROVED ANCHORING SYSTEMS INCLUDE CONCRETE DROP-IN ANCHORS, TOP CHORD MOUNTED C-CLAMPS AND TOP CHORD MOUNTED BEAM CLIP DUCTWORK STRAP HANGERS. APPROVED SUPPORT SYSTEMS INCLUDE MINIMUM 3/8" THREADED ROD, MINIMUM 1" 20 GAUGE SHEET METAL DUCT STRAPS, U-CHANNEL, ANGLE IRON AND/OR PIPE CLEVIS HANGERS. FOLLOW THE ABOVE REQUIREMENTS UNLESS NOTED OTHERWISE BY EQUIPMENT MANUFACTURER OR STAMPED STRUCTURAL SUPPORT DRAWINGS.
 - EQUIPMENT VIBRATION ISOLATION:
 - FURNISH AND INSTALL VIBRATION ISOLATION TO PREVENT TRANSMISSION OF SOUND AND VIBRATION FROM MOTORIZED AND ROTATING EQUIPMENT TO THE BUILDING STRUCTURE. TYPICAL APPROVED VIBRATION ISOLATION PRODUCTS INCLUDE ISOLATION HANGERS, ISOLATION SPRINGS, ISOLATION PADS AND ISOLATION CURBS. PROVIDE THE ABOVE ISOLATION FOR ALL EQUIPMENT 1/2 HORSEPOWER OR GREATER OR AS PER THE MANUFACTURER'S RECOMMENDATIONS. FURNISH AND INSTALL ISOLATION CURBS AND FLEXIBLE PIPING CONNECTIONS ONLY AS SPECIFICALLY NOTED ON PLANS.
 - PIPING SUPPORT:
 - PIPING TO BE SUPPORTED WITH CLEVIS HANGERS AND INSULATION PROTECTORS WHERE INSULATED. ALLOW FOR EXPANSION AND DO NOT DIRECTLY ATTACH PIPE BETWEEN ANY TWO FIXED STRUCTURES.
 - ROOF MOUNTED PIPING SUPPORT TO BE CLOSED CELL MEDIUM DENSITY POLYETHYLENE FOAM BLOCK PIPE PIER (TOLCO BY NIBCO OR EQUAL).
 - MAXIMUM PIPE SUPPORT SPACING SHALL BE AS FOLLOWS:
 - STEEL PIPE - 12' HORIZONTAL, 15' VERTICAL
 - COPPER PIPE - 12' HORIZONTAL, 15' VERTICAL
 - PVC PIPE - 4' HORIZONTAL, 10' VERTICAL (MID-STORY GUIDE)
- 7) SMOKE DETECTORS AND REMOTE TEST STATIONS:**
- SMOKE DETECTORS TO BE PROVIDED AS PER NFPA AND LOCAL CODES. SMOKE DETECTORS SHALL BE INSTALLED IN RETURN AIR SYSTEMS, WITH A DESIGN CAPACITY GREATER THAN 2000 CFM, IN THE RETURN AIR DUCT OR PLENUM UPSTREAM OF ANY FILTERS, EXHAUST AIR CONNECTIONS, OUTDOOR AIR CONNECTIONS OR DECONTAMINATION EQUIPMENT AND APPLIANCES. SAMPLING TUBES TO MATCH LONG DIMENSION OF DUCT PLENUM. DUCT SMOKE DETECTOR TO SHUT UNIT(S) DOWN UPON ALARM. SMOKE DETECTORS TO BE 4-WIRE PHOTOELECTRIC TYPE (SYSTEM SENSOR INNOVAIRFLEX SERIES OR EQUAL). REMOTE TEST STATION(S) TO BE EQUAL TO EDWARDS SIGNALING PRODUCTS MODEL SD-TRK4. FINAL MAKE AND MODEL TO BE COORDINATED WITH SMOKE DETECTORS FOR ALL UNITS.
- 8) FIRE DAMPERS:**
- FIRE DAMPERS TO BE PROVIDED AS PER NFPA AND LOCAL CODES. MINIMUM 18x18 ACCESS DOOR TO BE PROVIDED AT EVERY FIRE DAMPER NOT LOCATED DIRECTLY BEHIND A REMOVABLE GRILLE, REGISTER OR DIFFUSER. FIRE DAMPERS TO BE "B STYLE", U.L. 555 LISTED, 1.5 HOUR DAMPERS (SAFE AIR DOWCO 150 SERIES OR EQUAL) UNLESS NOTED OTHERWISE.
- 9) TESTING & BALANCING:**
- TEST AND BALANCE CONTRACTOR TO BE COMPLETELY INDEPENDENT OF THE MECHANICAL CONTRACTOR AND NOT TO BE A SUB TO THE MECHANICAL CONTRACTOR. BALANCE ALL EQUIPMENT, GRILLES, REGISTERS AND DIFFUSERS TO FLOW RATES SHOWN ON THE PLANS. FURNISH AND INSTALL ALL NECESSARY DRIVES, SHAFTS & BELTS AS REQUIRED TO PROVIDE COMPLETE AND OPERABLE SYSTEMS. VARIABLE FREQUENCY DRIVES NOT TO BE RAISED ABOVE 60 HZ FOR ANY REASON UNLESS APPROVED IN WRITING BY THE ENGINEER. FINAL TEST AND BALANCE REPORT TO INCLUDE FLOWRATES (CFM/GPM/LBS PER HOUR), PRESSURES (FAN STATIC/PUMP HEAD), RPM (FAN/PUMP), MOTOR (RPM/VOLTS/PHASE/AMPS/POWER FACTOR). ALL TESTING AND BALANCING TO BE PERFORMED BY N.E.B. AND/OR A.B.C. CERTIFIED TECHNICIANS. PROVIDE 'PDF' FORMAT AND (3) PAPER COPIES OF FINAL REPORT.

DIVISION 23 (HVAC-CONTROLS)

- 1) GENERAL:**
- THE FOLLOWING ARE CONTROL SEQUENCES ONLY. CONTROLS DESIGN AND INSTALLATION TO BE BY LICENSED DESIGN/BUILD CONTROLS CONTRACTOR. CONTROL ACCESSORIES TO BE INSTALLED AND WIRED AS PER THE ORIGINAL EQUIPMENT MANUFACTURER'S (OEM) REQUIREMENTS. NON-OEM BUILT UP CONTROL EQUIPMENT TO BE HONEYWELL OR JOHNSON. CONTRACTOR TO PROVIDE (4) SETS OF CONTROL DIAGRAMS AND EQUIPMENT SUBMITTALS FOR APPROVAL PRIOR TO INSTALLATION FOR ALL BUILT UP CONTROL SYSTEMS. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR AND TO COORDINATE INSTALLATION OF CONTROLS, CONTROL WIRING AND CONTROLS EQUIPMENT REQUIRED FOR ALL MECHANICAL EQUIPMENT. COORDINATE LOCATION OF ALL NEW CONTROL PANELS AND CONTROLLERS WITH OWNER PRIOR TO INSTALLATION.
 - ALL CONTROLS MOUNTED IN A ROOM TO BE MADE TO WITHSTAND THE ENVIRONMENT IN THE ROOM.
- 2) COMMERCIAL VENTILATION**
- PACKAGED ROOFTOP AIR HANDLING UNITS - TO BE CONTROLLED WITH OEM PROGRAMMABLE THERMOSTATS. ALL CONTROLS TO MEET 2018 INTERNATIONAL ENERGY CONSERVATION CODE REQUIREMENTS FOR THE UNIT, THERMOSTAT AND ECONOMIZER.
 - ROOF MOUNTED TOILET EXHAUSTERS - TO BE ENERGIZED BY INDIVIDUAL TIME CLOCKS. COORDINATE LOCATION OF TIME CLOCKS WITH ELECTRICAL CONTRACTOR.
 - CEILING MOUNTED TOILET FANS - TO BE ENERGIZED BY OCCUPANCY SENSOR.
 - CEILING MOUNTED MOP SINK FANS - TO BE ENERGIZED BY WALL SWITCH.
 - CEILING MOUNTED SAUNA FANS - TO BE ENERGIZED BY WALL MOUNTED SPEED CONTROLLER.

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

All rights reserved. This document is fully protected by copyright and nothing that appears in it may be reproduced, either wholly or in part, without special permission. United Engineering, Inc. specifically excludes warranties, expressed or implied, as to the accuracy of the data and other information set forth in this document and does not assume liability for any losses or damage resulting from the use of the materials or application of the data discussed in this document.

United Engineering, Inc.

PROJECT ENGINEERING AND LAYOUT SERVICES
1006 GENEVA ST., SHOREWOOD, IL 60404
PHONE: (815)744-1010 * FAX: (815)744-1516
www.unitedmep.com

REVISIONS

THIS DRAWING	FOR COORDINATION	FOR BIDDING	FOR PERMIT	FOR CONTRACTING	FOR CONSTRUCTION
	5/19/23	5/19/23			

KMA & ASSOCIATES, ARCHITECTS
2205 LAKESIDE DRIVE
BANNOCKBURN, ILLINOIS 60015
(647)945-6869

SAUNA GUARD FOR UNLIMITED MASONRY
LAPARAW AVENUE WEST OF WOLF ROAD
FRANKFORT, IL

SHEET TITLE
HVAC SCHEDULES & NOTES

2238

M 3

