

ADDRESS: 5416-26 LENA ST

Proposal: Convert three-story garage building for residential use

Review Requested: Final Approval

Owner: Daniel and Elmer Kingkiner

Applicant: Hsing-Yuan Chen, HYC Architect PC

History: c. 1914-30

Individual Designation: None

District Designation: Germantown Urban Village Historic District, Contributing, 2/9/2024

Staff Contact: Alex Till, alexander.till@phila.gov

BACKGROUND:

This application proposes to convert a currently unused industrial building in the Germantown Urban Village Historic District into apartments. The building was constructed between 1914 and 1930 and is three stories tall with a fieldstone façade and faces Lena Street. To accomplish the conversion, the application proposes to install new windows and storefronts in existing openings on the front façade of the building and insert a series of new window openings in a side façade that faces the adjacent Earham Street. The application also proposes to re-stucco the side façade and install a lightwell on the roof. In addition, an existing paved storage area surrounded by a CMU wall will be repurposed into a parking lot with an added egress door. The new windows and window openings will be visible from the adjacent Lena and Earham Streets.

SCOPE OF WORK:

- Install new windows and storefronts
- Insert new window openings
- Install new stucco
- Install a lightwell

STANDARDS FOR REVIEW:

The Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines include:

- *Standard 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.*
 - The proposed new windows, storefronts, window openings, and lightwell satisfy Standard 9 provided that the materials used are compatible. They will be differentiated from old features and are compatible with the massing, size, scale and architectural features of the property.
 - The proposed new stucco will satisfy Standard 9 provided that it is toned down to better blend with the historic character of the building.

STAFF RECOMMENDATION: Approval, provided that the new windows and storefronts are made with compatible materials and the new stucco is revised to a darker color that is more compatible with the historic materials of the building, with the staff to review details, pursuant to Standard 9.

IMAGES:

Figure 1: 1924 Sanborn Fire Insurance Map. Property outlined in red.

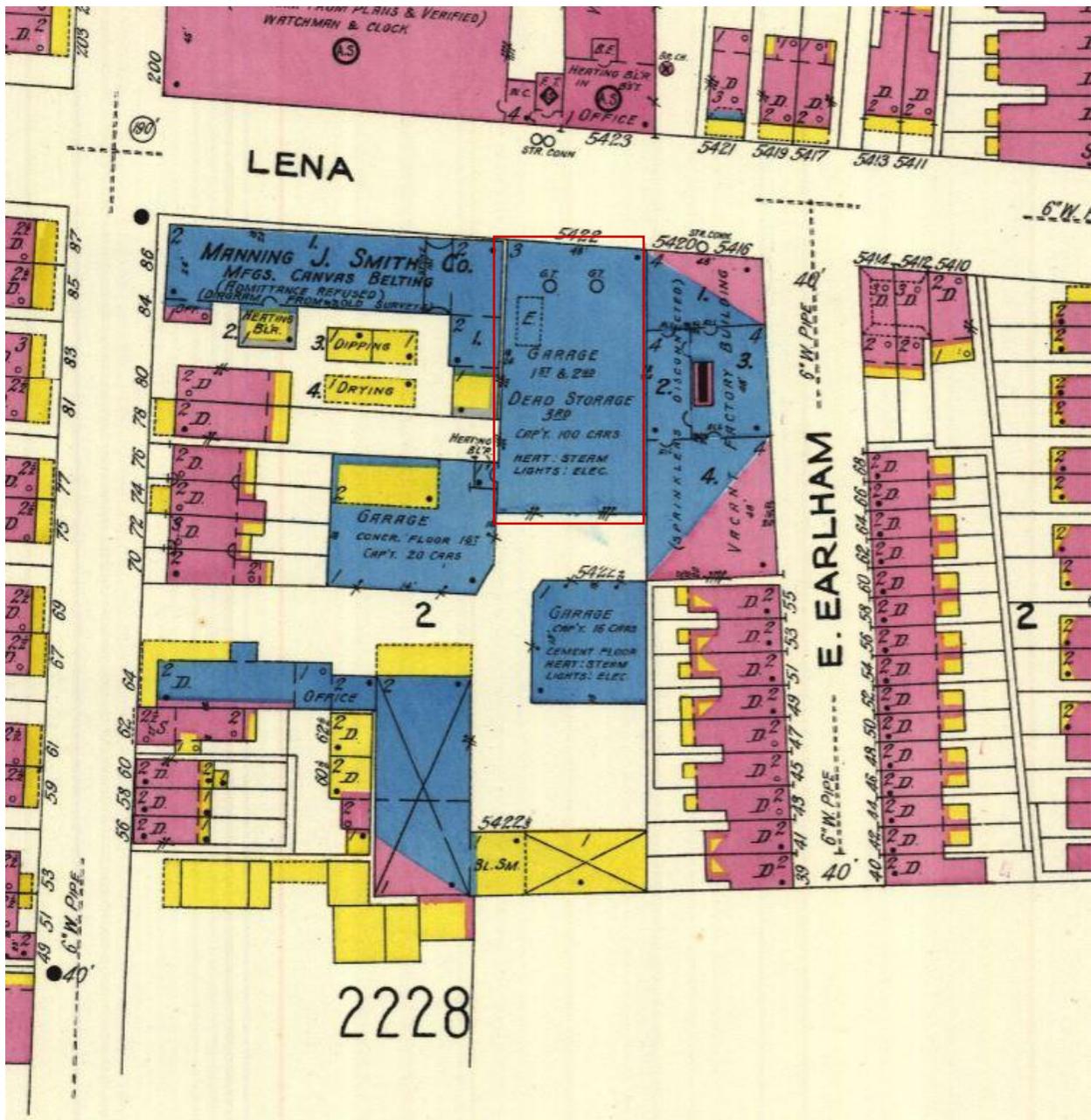


Figure 2: View of front façade of 5416-26 Lena St from Lena St:

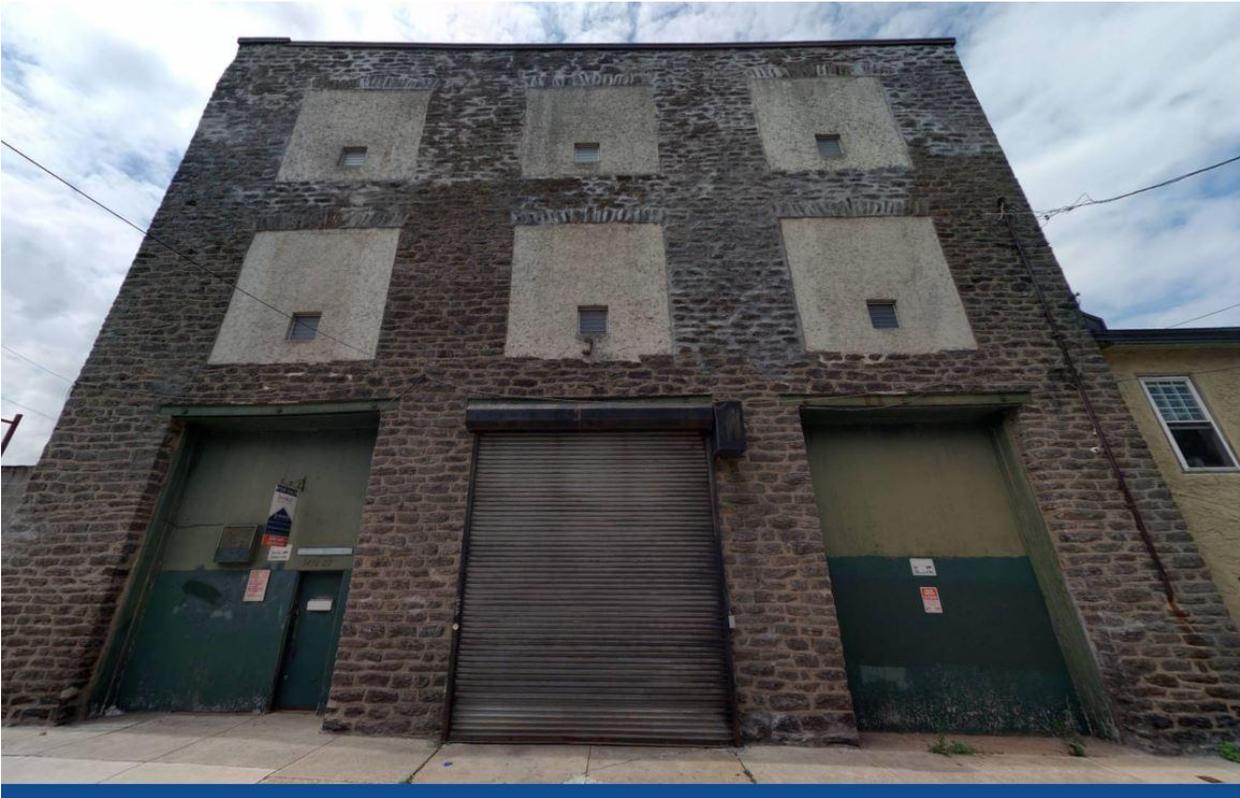


Figure 3: View looking southwest from corner of Lena St and Earlham St:



Figure 4: Aerial view of 5416-26 Lena St, looking southwest:





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HSING-YUAN CHEN, RA, LEED AP

Date: February 09, 2026

Applicant:

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Principal
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hsing@hyc-arch.com

Client:

John Cunningham
john@birdnestgroup.com

Project Address:

5416-26 LENA STREET, PHILADELPHIA, PA 19144

To the Philadelphia Historical Commission:

The property located at 5416-26 Lena Street consists of an existing three-story building and a storage yard on a corner lot between Lena Street and Earlham Street. The total building footprint is 7,507.5 square feet.

The proposed scope of work includes a change of use to multi-family housing with extensive interior alterations to create a total of 19 units. Additionally, the existing storage yard along Earlham Street will be converted into an accessory parking lot accommodating 16 vehicles.

Regarding the exterior envelope, we propose the following interventions:

1. Lena Street Façade: We propose modifying the façade to install a new storefront system and new windows within the existing masonry openings.
2. Earlham Street Façade: On the secondary elevation facing the parking lot, we propose installing new windows to match the rhythm and consistency of the front façade. The exterior finish material for this elevation will be new stucco in two different color tones.

For all fenestration on both elevations, new black-framed windows will be installed with a minimum 4-inch setback from the exterior wall face to maintain the building's historic depth and character.

Should you require more information or detailed drawings regarding this project, please do not hesitate to contact us.

Respectfully submitted,

Hsing-Yuan Chen, RA, LEED AP
Principal
HYC ARCHITECT PC

BUILDING ADDRESS : 5416-26 LENA STREET, PHILADELPHIA PA 19144		
SCOPE OF WORK: PROPOSED NEW DEVELOPMENT EXISTING 3 STORY BUILDING; CHANGE OF USE TO MULTI-FAMILY & INTERIOR ALTERATION; TOTAL OF 19 UNITS EXISTING STORAGE LOT AREA: CHANGE TO ACCESSORY PARKING FOR MULTI-FAMILY TOTAL 16 PARKING SPACES		
ZONING DISTRICT I-2 MEDIUM INDUSTRIAL		
OVERLAYS INCA Neighborhood Commercial Area Overlay District - Lower and Central Germantown INIS Narcotics Injection Sites Overlay District EDO Eighth District Overlay District		
LOT AREA	15,025.6 SF (AFTER LOT CONSOLIDATION)	
BUILDING FOOTPRINT	EXISTING +/- 7,507.5 SF (49.96%)	
USE	ALLOWED OR REQUIRED	PROPOSED
	MULTI-FAMILY NOT ALLOWED	MULTI-FAMILY: 23 UNITS APPLYING FOR VARIANCE
14-701-4 DIMENSIONAL STANDARDS		
LOT DIMENSIONS	ALLOWED OR REQUIRED	PROPOSED
MAX. OCCUPIED AREA	100 %	49.96% EXISTING NO CHANGES
MIN. FRONT YARD	0	0 EXISTING NO CHANGES
MIN. SIDE YARD	8 IF USED [3]	0 EXISTING NO CHANGES
MIN. REAR YARD	8 IF USED [3]	0 EXISTING NO CHANGES
MAX. HEIGHT	60' IF ABUTTING A RESIDENTIAL OR SP-PO DISTRICT; OTHERWISE NO LIMIT	+/- 49' HEIGHT EXISTING NO CHANGES
14-802-3 REQUIRED PARKING		
RESIDENTIAL UNIT #	REQUIRED	PROPOSED
23 UNITS	1 PER 2 UNITS 12 PARKING REQUIRED	16 PROVIDED
MIN. PARKING SPACES	1 PER 3 UNITS (CLASS 1A): 8 REQUIRED	8 PROVIDED
LANDSCAPING REQUIREMENTS		
SEE CIVIL DRAWINGS FOR DETAILS		



PROJECT BUILDING:
5416-26 LENA



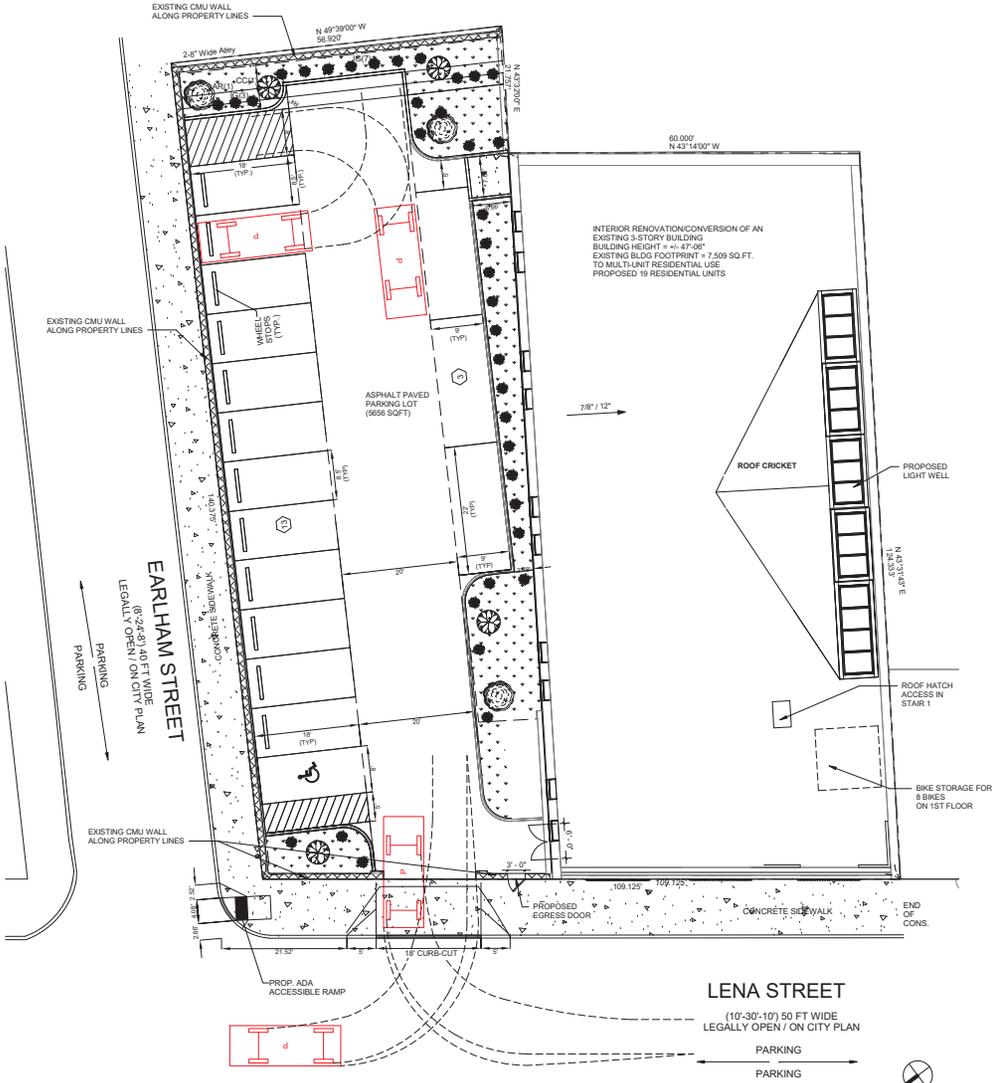
PROJECT BUILDING:
5416-26 LENA



PROJECT LOCATION: 5416-26 LENA STREET

FLOOR	ROOM TYPE	UNIT AREA
LEVEL 3	3-1 THREE-BEDROOM	1246 SF
	3-2 TWO-BEDROOM	899 SF
	3-3 ONE-BEDROOM	584 SF
	3-4 TWO-BEDROOM	830 SF
	3-5 TWO-BEDROOM	796 SF
LEVEL 2	2-1 THREE-BEDROOM	1246 SF
	2-2 TWO-BEDROOM	896 SF
	2-3 ONE-BEDROOM	584 SF
	2-4 TWO-BEDROOM	830 SF
	2-5 TWO-BEDROOM	796 SF
LEVEL 1	1-1 ONE-BEDROOM W/ LOFT	846 SF
	1-2 ONE-BEDROOM W/ LOFT	568 SF
	1-3 ONE-BEDROOM W/ LOFT	568 SF
	1-4 ONE-BEDROOM W/ LOFT	698 SF
	1-5 ONE-BEDROOM W/ LOFT	568 SF
	1-6 ONE-BEDROOM W/ LOFT	492 SF
	1-7 ONE-BEDROOM W/ LOFT	220 SF
TOTAL 19 UNITS	7 ONE-BEDROOM W/ LOFT 8 TWO-BEDROOM 2 THREE-BEDROOM	

	1BD W LOFT	1BD	2BD	3BD	
1ST FLOOR :	7	0	0	0	= 7 UNITS
2ND FLOOR :	0	1	4	1	= 6 UNITS
3RD FLOOR :	0	2	3	1	= 6 UNITS
	7	3	7	2	TOTAL 19 UNITS



1 ZONING SITE
1" = 10'-0"

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OWNER

CONSULTANTS

SUBMISSION
ISSUED
2026.02.06

GENERAL NOTE

GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS, PROFILES & DETAILS. CONTRACTOR, ANY INCORPORATIONS SHALL BE PROVIDED TO THE ARCHITECT BY THE CONTRACTOR. THE ARCHITECT IS RESPONSIBLE FOR NOTING THE PRESENCE OF ANY DISCREPANCIES BETWEEN THESE PLANS AND ANY GOVERNING BUILDING CODES OR ORDINANCES. CONTRACTOR SHALL CHECK WITH THE ARCHITECT TO VERIFY BEFORE THE START OF CONSTRUCTION FOR ACCURACY OF BUILDING.

SEAL

DRAWING TITLE
ZONING

DRAWING NUMBER

H-1

APPROVAL STAMPS

PROJECT ADDRESS

5416-26 LENA STREET
 PHILADELPHIA, PA 19144

OWNER

CONSULTANTS

SUBMISSION

ISSUED
 2026.01.09

GENERAL NOTE

GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS PRIOR TO A PERMIT APPLICATION. ANY INCONSISTENCIES SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY. THE ARCHITECT IS RESPONSIBLE FOR NOTIFYING THE PROJECT'S GENERAL CONTRACTOR OF ANY INCONSISTENCIES BETWEEN THESE PLANS AND ANY GOVERNING BUILDING CODES OR PREVIOUSLY CONTRACTOR ISSUED PERMITS TO THE ARCHITECT. IT IS SOLELY THE DUTY OF THE CONTRACTOR FOR ASSURING OR BUILDING.

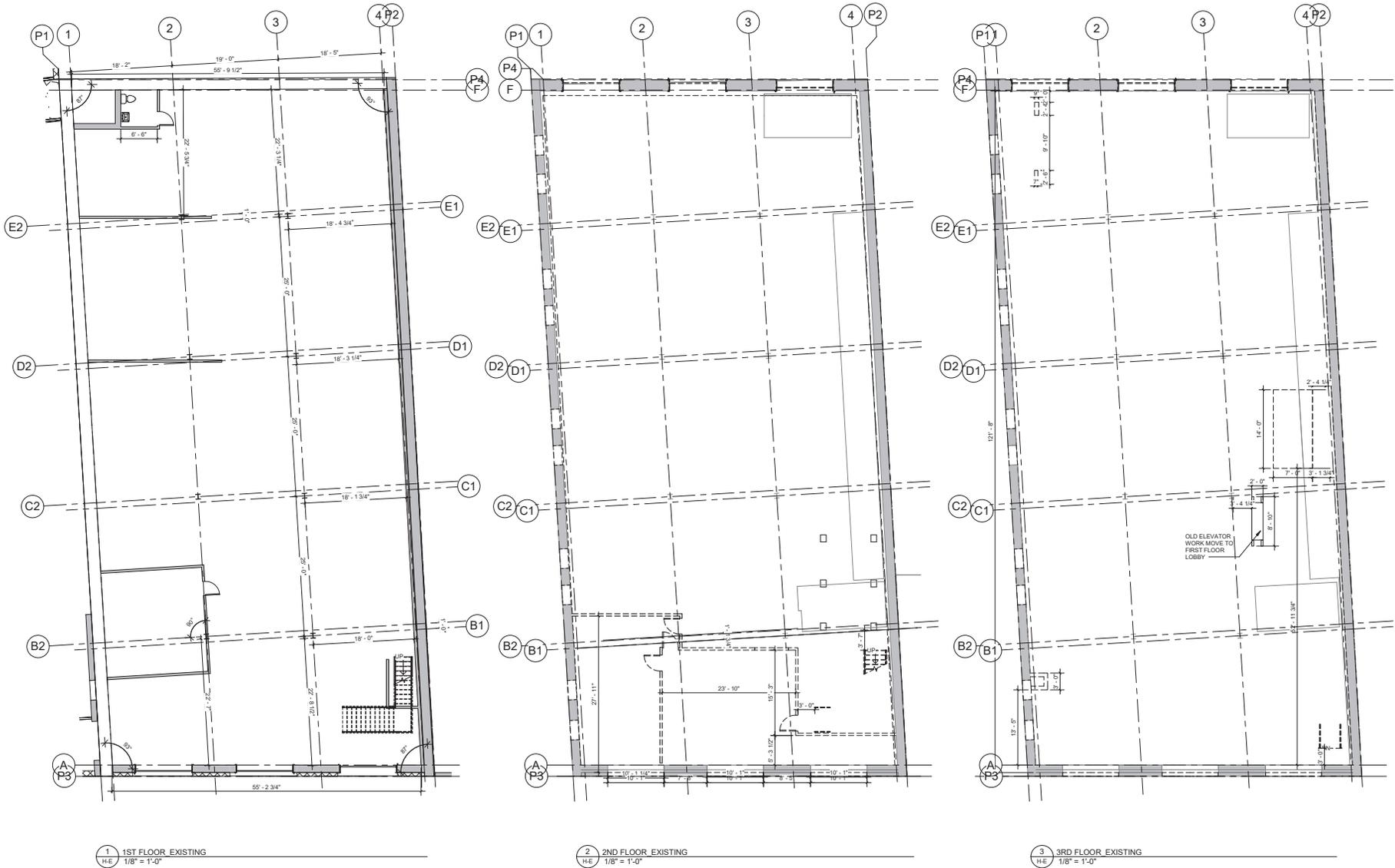
SEAL

DRAWING TITLE

EXISTING FLOOR PLAN

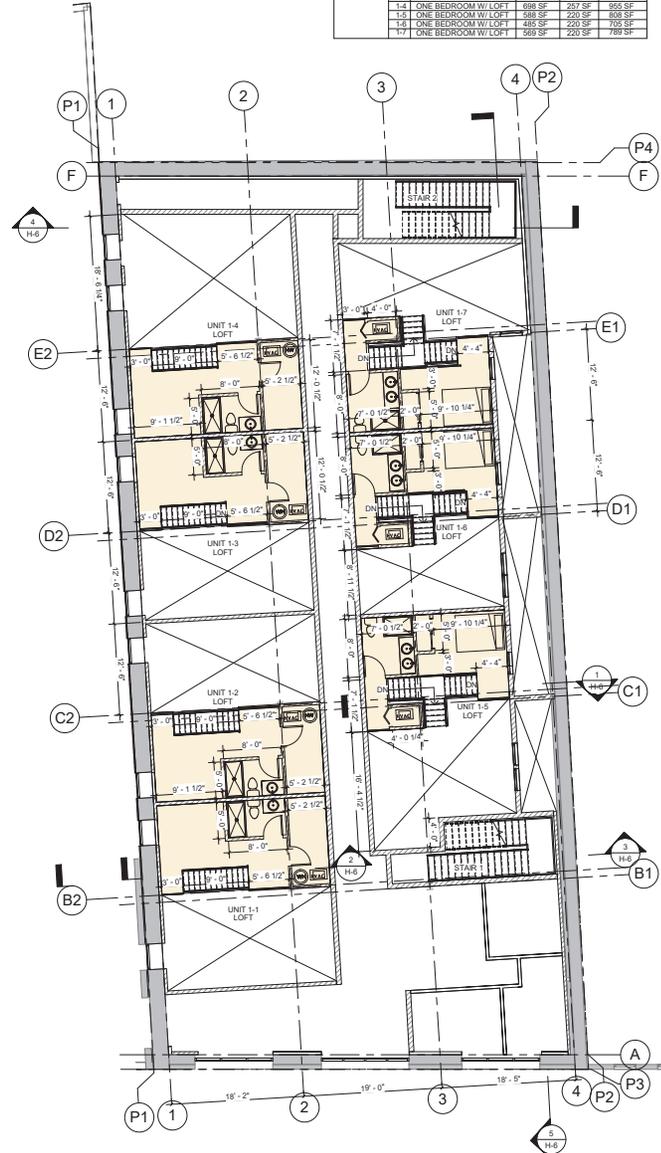
DRAWING NUMBER

H-E





1 1ST FLOOR PROPOSED PLAN
1/8" = 1'-0"



2 LOFT
1/8" = 1'-0"

UNIT COUNT				
FLOOR	ROOM TYPE	1ST FL	LOFT	UNIT AREA
LEVEL 1	1-1 ONE BEDROOM W/ LOFT	688 SF	267 SF	955 SF
	1-2 ONE BEDROOM W/ LOFT	688 SF	267 SF	955 SF
	1-3 ONE BEDROOM W/ LOFT	688 SF	267 SF	955 SF
	1-4 ONE BEDROOM W/ LOFT	688 SF	267 SF	955 SF
	1-5 ONE BEDROOM W/ LOFT	688 SF	267 SF	955 SF
	1-6 ONE BEDROOM W/ LOFT	485 SF	220 SF	705 SF
	1-7 ONE BEDROOM W/ LOFT	688 SF	267 SF	955 SF

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SUBMISSION
ISSUED
2026.01.27

GENERAL NOTE
GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS, PROFILES & DEPTHS. CONTRACTOR, ANY INCONSISTENCIES SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ARCHITECT OF ANY INCONSISTENCIES BETWEEN THESE PLANS AND ANY EXISTING BUILDING CODES OR ORDINANCES. CONTRACTOR SHALL CHECK WITH THE ARCHITECT TO DETERMINE THE DATE OF CONSTRUCTION FOR RECORDING OR BUILDING.

SEAL

DRAWING TITLE
PROPOSED FIRST FLOOR AND LOFT

DRAWING NUMBER

H-2

APPROVAL STAMPS

GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS, PRIOR TO A PERMIT APPLICATION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY. THE ARCHITECT IS RESPONSIBLE FOR NOTIFYING THE PROJECTOR OF ANY DISCREPANCIES BETWEEN THESE PLANS AND ANY GOVERNING BUILDING CODES OR ORDINANCES. CONTRACTOR SHALL CHECK WITH THE PROJECTOR TO BE SURE TO OBTAIN ALL NECESSARY PERMITS FOR FOUNDATIONS OR BUILDINGS.



1 2ND FLOOR PROPOSED PLAN
 1/8" = 1'-0"

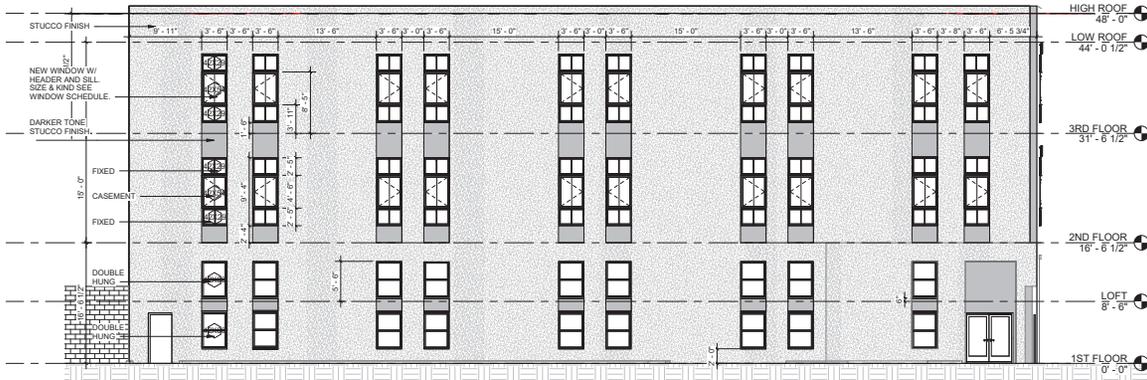
2 3RD FLOOR PROPOSED PLAN
 1/8" = 1'-0"

3 ROOF PLAN
 1/8" = 1'-0"

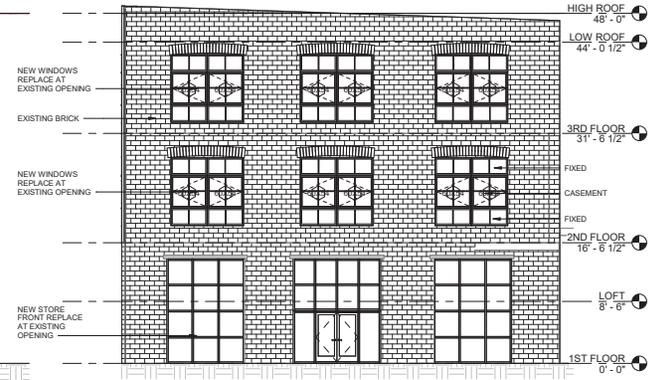
APPROVAL STAMPS

FLOOR	UNIT	ROOM TYPE	UNIT AREA
LEVEL 3	3-1	THREE BEDROOM	1286 SF
	3-2	TWO BEDROOM	896 SF
	3-3	ONE BEDROOM	546 SF
	3-4	TWO BEDROOM	830 SF
	3-5	TWO BEDROOM	796 SF
LEVEL 2	2-1	THREE BEDROOM	1286 SF
	2-2	TWO BEDROOM	896 SF
	2-3	ONE BEDROOM	546 SF
	2-4	TWO BEDROOM	830 SF
	2-5	TWO BEDROOM	815 SF

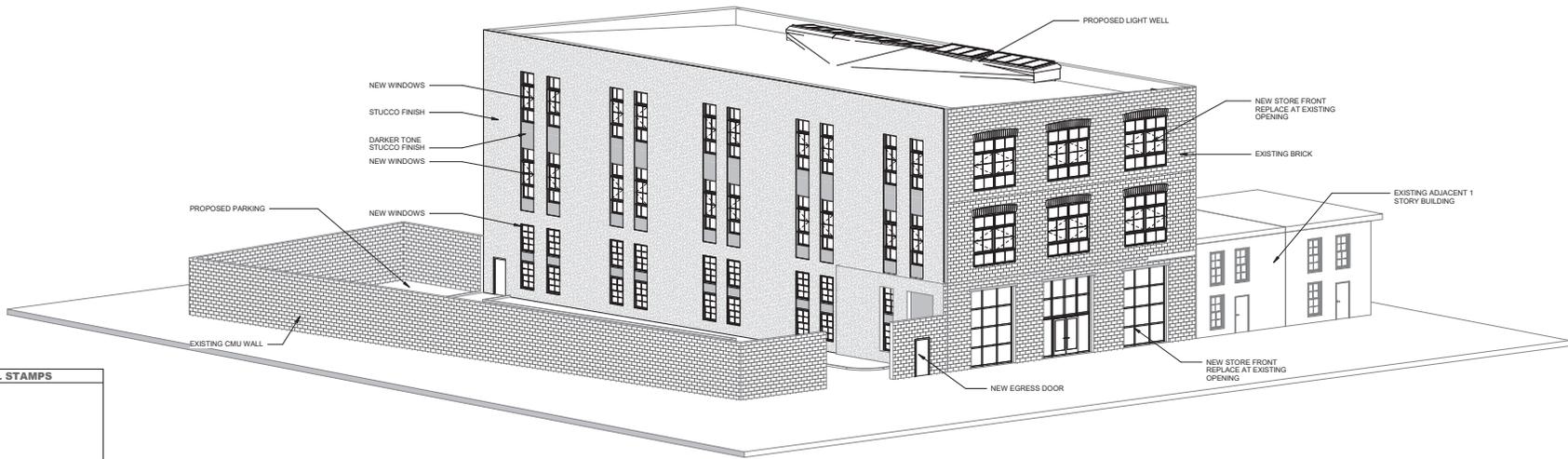
GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS PRIOR TO A PERMIT APPLICATION. ANY INCONSISTENCIES SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION OF THE PROJECT. THE ARCHITECT, GENERAL CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ARCHITECT OF ANY INCONSISTENCIES BETWEEN THESE PLANS AND ANY GOVERNING BUILDING CODES OR ORDINANCES. CONTRACTOR SHALL CHECK WITH THE ARCHITECT TO DETERMINE THE DATE OF CONSTRUCTION FOR APPLICABLE BUILDING



1 SIDE ELEVATION
 1/8" = 1'-0"



2 FRONT ELEVATION
 1/8" = 1'-0"



3 (3D)
 1/4" = 1'-0"

APPROVAL STAMPS



PROPOSED BUILDING PERSPECTIVE



EXISTING BUILDING PERSPECTIVE



EXISTING BUILDING FRONT ELEVATION



PROPOSED BUILDING SIDE ELEVATION



PROPOSED BUILDING FRONT ELEVATION

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SUBMISSION

ISSUED
 2025.02.06

GENERAL NOTE

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SEAL

DRAWING TITLE

ELEVATION-RENDERING

DRAWING NUMBER

H-5

PROJECT ADDRESS

5416-26 LENA STREET
PHILADELPHIA, PA 19144

OWNER

CONSULTANTS

SUBMISSION

ISSUED
2025.02.06

GENERAL NOTE

GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS, PERIODS OF DEFECTS, CONSTRUCTION, AND REQUIREMENTS SHALL BE SUBJECT TO THE GENERAL CONTRACTOR'S RESPONSIBILITY FOR VERIFYING THE ACCURACY OF ALL DIMENSIONS BETWEEN THESE PLANS AND ANY EXISTING BUILDING CODES OR PREVIOUS CONSTRUCTION RECORDS WITH THE ARCHITECT. THE ARCHITECT IS NOT RESPONSIBLE FOR CONSTRUCTION FOR ROOFING OR BUILDING.

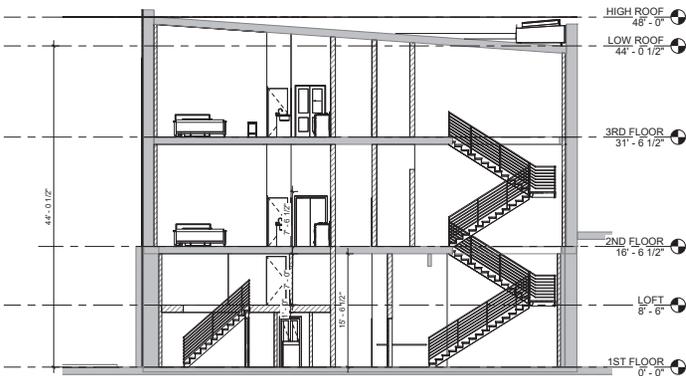
SEAL

DRAWING TITLE

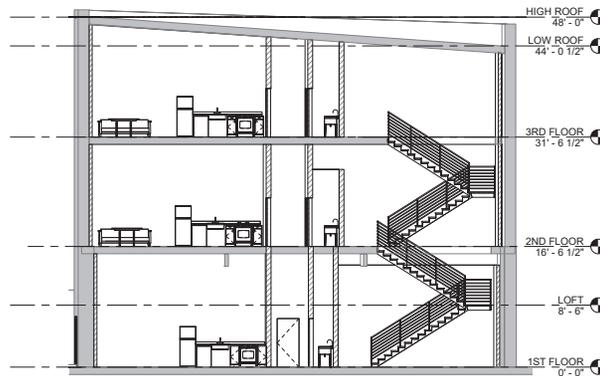
SECTION

DRAWING NUMBER

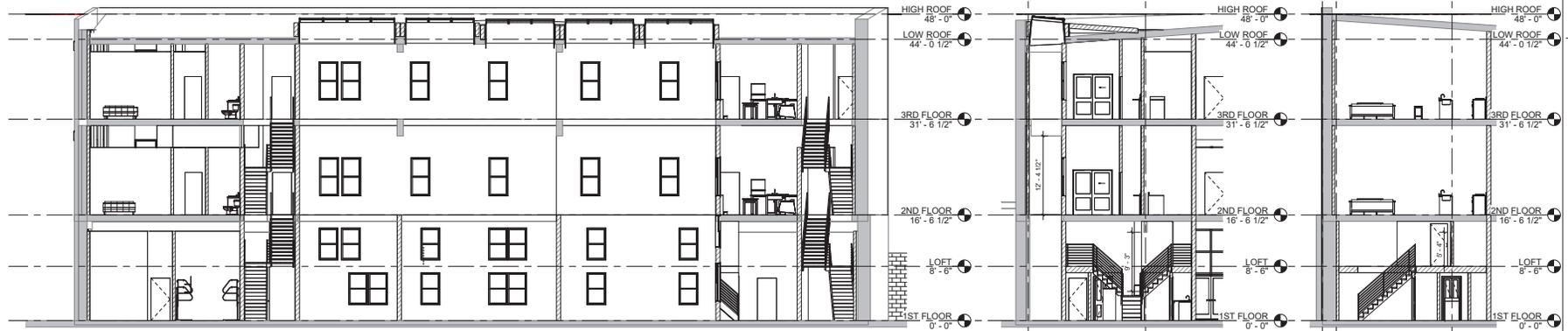
H-6



3 STAIR 1 SECTION
1/8" = 1'-0"



4 STAIR 2 SECTION
1/8" = 1'-0"



5 Long Building Section
1/8" = 1'-0"

1 SKYLIGHT Side Loft
1/8" = 1'-0"

2 Parking side loft
1/8" = 1'-0"

APPROVAL STAMPS

GENERAL

THESE GENERAL NOTES SUPPLEMENT THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS. IN CASE OF CONFLICT WITH THE SPECIFICATIONS, CONTACT THE OWNERS REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE SITE AND LOCAL CONDITIONS. CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL BUILDING CODES, CODES OF APPLICABLE REGULATORY AGENCIES, AND WITH PROJECT SPECIFICATIONS AND DRAWINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRADES' COORDINATION AND CHECKING ALL DIMENSIONS. REPORT DISCREPANCIES TO THE OWNERS REPRESENTATIVE FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL COMPLY WITH LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING UPON THE PERFORMANCE OF THE WORK.

SUBJECT TO THE STRUCTURAL ENGINEER'S ACCEPTANCE, UTILIZE DETAILS FOR SIMILAR CONDITIONS WHEN DETAILS FOR PARTICULAR ARE NOT PROVIDED. DETAILS NOT PROVIDED SHALL BE OBTAINED FROM THE STRUCTURAL ENGINEER. DETAILS ON SHEETS TITLED "TYPICAL DETAILS" APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. TYPICAL DETAILS ARE NOT NOTED AT EACH LOCATION AT WHICH THEY ARE APPLICABLE.

WHERE NOT INDICATED ON THE STRUCTURAL DRAWINGS, SEE THE ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, AND ANY OTHER DRAWINGS FOR:

- ELEVATIONS AND SLOPES.
SIZE, LOCATION, AND EXTENT OF CURBS, FLOOR DEPRESSIONS, AND TOPPING SLABS.
SIZE AND LOCATION OF RAINS, TRENCHES, SLAB OPENINGS, AND WALL OPENINGS.
SIZE, TYPE AND LOCATION OF NON-LOAD BEARING PARTITIONS.
CONCRETE AND STEEL FINISHES.
SIZE AND LOCATION OF SLEEVES AND HANGERS.
ITEMS EMBEDDED IN THE STRUCTURE OR PENETRATING THE STRUCTURE.
CONNECTION OF ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION OF ANY OTHER ITEMS TO THE STRUCTURE AND CONNECTION OF ITEMS NOT TYPICALLY DETAILED ON THE STRUCTURAL DRAWINGS.
WEATHERPROOFING AND DAMP PROOFING.
SITE AND SUBGRADE DRAINAGE SYSTEMS AND DETAILS.

CONNECTIONS OF ALL TRADES TO THE STRUCTURE SHALL BE DESIGNED AND DETAILED BY THE CONTRACTOR. CONNECTIONS TO BE MADE BY MEMBERS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. RESPONSIBILITY FOR THE PERFORMANCE OF THE SUPPLIED SYSTEM AND ADJACENT CONNECTIONS SHALL REMAIN THAT OF THE CONTRACTOR. ALL TRADES SHALL BE DESIGNED AS PERMITTED BY THE CODES IN THE STATE IN WHICH THE PROJECT IS LOCATED. OPENINGS AND PENETRATIONS THROUGH STRUCTURAL ELEMENTS AND ITEMS EMBEDDED IN STRUCTURAL ELEMENTS THAT ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE REVIEWED BY A STRUCTURAL ENGINEER BEFORE IMPLEMENTING WORK.

DO NOT SCALE DRAWINGS TO DETERMINE DIMENSIONAL INFORMATION.

DO NOT PLACE MATERIALS OR EQUIPMENT ON UNFINISHED FLOORS OR ROOFS IN EXCESS OF 20 PSF NOR ON FINISHED FLOORS IN EXCESS OF THE INDICATED DESIGN LOADS. AVOID EXCESSIVE LOADS.

THE STRUCTURE WAS DESIGNED FOR THE INSURANCE CONDITIONS ONLY. THE CONTRACTOR'S RESPONSIBILITY FOR THE METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

DRAWINGS DO NOT INDICATE TEMPORARY REQUIREMENTS. NEED FOR TEMPORARY SHORING AND BRACING, TEMPORARY Dewatering, TEMPORARY EARTH RETENTION, TEMPORARY WATER CUTOFF, OR OTHER TEMPORARY MEASURES MAY BE INDICATED ON DRAWINGS AT SPECIFIC AREAS AS SUGGESTIONS FOR THE CONTRACTOR'S CONVENIENCE. THE DRAWINGS DO NOT IDENTIFY ALL AREAS OR CONDITIONS REQUIRING TEMPORARY MEASURES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE TEMPORARY MEASURES INDICATED ON THE DRAWINGS, IDENTIFY OTHER AREAS OR CONDITIONS REQUIRING TEMPORARY MEASURES, DETERMINE THE MOST EFFICIENT TEMPORARY SYSTEMS, AND DESIGN AND CONSTRUCT THE TEMPORARY MEASURES. ALL TEMPORARY SYSTEMS SHALL BE DESIGNED BY A LICENSED ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED.

INFORMATION RELATED TO EXISTING CONDITIONS REPRESENTS KNOWLEDGE BASED UPON INFORMATION PROVIDED BY THE CONTRACTOR WITHOUT FIELD VERIFICATION. REPORT DESIGN CONDITIONS THAT VARY FROM THOSE SHOWN ON THE CONTRACT DOCUMENTS TO THE OWNER'S REPRESENTATIVE. DO NOT DEVIATE FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE OWNER'S REPRESENTATIVE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING CONSTRUCTION WHILE PERFORMING WORK. THE CONTRACTOR SHALL PROPERLY REINSTATE EXISTING FINISHES, FIREPROOFING, OR ITEMS REMOVED OR DAMAGED WHILE PERFORMING WORK.

UNLESS NOTED OTHERWISE, ELEVATIONS ON THE DRAWINGS ARE RELATIVE TO THE ELEVATION OF THE FIRST FLOOR, WHICH IS PROJECT ELEVATION 100.00.

DESIGN CRITERIA

ALL CONSTRUCTION SHALL CONFORM TO THE MORE RESTRICTIVE OF THE FOLLOWING CODES, THE MOST RECENT EDITIONS OF THE REGULATIONS ADOPTED BY THE AUTHORITY HAVING JURISDICTION AS REFERENCED THROUGHOUT THE STRUCTURAL GENERAL NOTES, AND THE FOLLOWING DESIGN CRITERIA.

BUILDING CODE: PA UCC - BASED ON 2018 INTERNATIONAL BUILDING WITH LOCAL AMENDMENTS

BUILDING OCCUPANCY CATEGORY (IBC TABLE 1004.5) II

DESIGN DEAD LOADS - SELF-WEIGHT OF MATERIALS AND SYSTEMS

DESIGN LIVE LOADS REDUCIBLE WHERE ALLOWED PER BUILDING CODE:
FLOOR: 40 PSF
STAIRS: 40 PSF
ROOF DECK: 20 PSF
ROOF DECK: 40 PSF
ROOF DECK: 40 PSF
ROOF DECK: 40 PSF

DESIGN SNOW LOADS:
GROUND SNOW LOAD, Pg: 35 PSF
SNOW EXPOSURE FACTOR, Ce: 1.0
NO ROOF TOP EQUIPMENT OR PARAPETS: 0.9
ROOF TOP EQUIPMENT AND PARAPETS: 1.0
SNOW LOAD IMPORTANCE FACTOR, I: 1.0
THERMAL FACTOR, Ct: 1.0
FLAT-ROOF SNOW LOAD, Pn: 20PSF
SNOW DROPT, AS CALCULATED AT APPLICABLE AREAS

DESIGN WIND LOADS:
LATERAL LOAD RESISTANCE SYSTEM (BUILDING CODE):
BASIC WIND SPEED: 114 MPH/PER HOUR
WIND IMPORTANCE FACTOR: I: 1.0
WIND EXPOSURE: C
INTERNAL PRESSURE COEFFICIENT: +0.18, -0.18
COMPONENTS AND CLADDING: SEE TYPICAL DETAIL.

DESIGN SEISMIC LOADS:
SITE CLASS: D
SEISMIC IMPORTANCE FACTOR: I: 1.0
MAPPED SPECTRAL RESPONSE ACCELERATION, Sa: 0.183
MAPPED SPECTRAL RESPONSE ACCELERATION, S1: 0.048
SPECTRAL RESPONSE COEFFICIENT Ss: 0.156
SPECTRAL RESPONSE COEFFICIENT S1: 0.076
SEISMIC DESIGN CATEGORY: B
BASIC SEISMIC FORCE RESISTING SYSTEM:
DETAILED FOR SEISMIC RESISTANCE
SEISMIC RESPONSE COEFFICIENT, Cd: 0.7
DESIGN BASE SHEAR: 0.74
RESPONSE MODIFICATION FACTOR, R: 5.3
ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE (ASCE 7 SECTION 12.8)
NON-STRUCTURAL COMPONENTS: PER ASCE, THE SEISMIC DESIGN CATEGORY OF B EXEMPTS SEISMIC DESIGN REQUIREMENTS FOR MECHANICAL AND ELECTRICAL COMPONENTS, AND FOR ARCHITECTURAL COMPONENTS WITH IMPORTANCE FACTORS OF 1.0, REFERS TO RESPECTIVE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

DEFERRED SUBMITTALS

DEFERRED SUBMITTALS ARE DEFINED AS THOSE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED AT THE TIME OF THE PERMIT APPLICATION AND THAT ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL WITHIN A SPECIFIED PERIOD.

DEFERRAL OF ANY SUBMITTAL ITEMS SHALL HAVE THE PRIOR APPROVAL OF THE BUILDING OFFICIAL. THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE SHALL LIST THE DEFERRED SUBMITTALS ON THE CONSTRUCTION DOCUMENTS FOR REVIEW BY THE BUILDING OFFICIAL.

DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING.

THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

ALL DEFERRED SUBMITTAL ITEMS ARE TO BE DESIGNED BY THE VENDOR AND SHALL BE DESIGNED BY AN ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

DEFERRED SUBMITTAL ITEMS INCLUDE:

- WOOD STUDS
METAL STAYS
PIES AND TUBE BUNDLES
HANGERS AND SUPPORTS FOR FIRE SUPPRESSION PIPING AND EQUIPMENT
HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT
HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT
HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
HANGERS AND SUPPORTS FOR PROCESS SYSTEMS

MODIFICATIONS TO EXISTING CONSTRUCTION

THE EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS IS PROVIDED FOR REFERENCE ONLY. EXISTING CONSTRUCTION SHALL BE REMOVED OR MODIFIED AS INDICATED BY THE FABRICATION AND SECTION OF ALL NEW CONSTRUCTION. ANY EXISTING FINISHES REMOVED OR DAMAGED TO ACCOMPLISH ANY STRUCTURAL MODIFICATIONS SHALL BE REINSTATE AFTER MODIFICATION WORK. TYPICALLY UNLESS NOTED OTHERWISE:

ANY STRUCTURAL STEEL OR REINFORCING BARS THAT HAVE BEEN CUT AND GROUND FLUSH WITH A CONCRETE SURFACE SHALL BE FINISHED WITH EPOXY GROUT.

THE FACE OF ALL NEW PERMANENT CONCRETE SURFACES CUT FROM EXISTING CONCRETE SHALL BE CLEANED WITH A HIGH-PRESSURE WATER SPRAY. ALLOW SURFACES TO DRY THOROUGHLY. COAT THE CONCRETE SURFACES WITH A BONDING AGENT AND FINISH WITH AN ACCESSIBLE PATCHING MATERIAL. ALL EXPOSED REINFORCEMENT SHALL BE GROUND FLUSH WITH THE NEW CONCRETE SURFACE.

WHERE EXISTING CONCRETE REINFORCEMENT IS TO BE REMOVED IN-PLACE, THE CONCRETE SHALL BE REMOVED IN A MANNER THAT MINIMIZES DAMAGE TO THE REINFORCEMENT. DAMAGED REINFORCEMENT SHALL BE REPLACED BY A METHOD ACCEPTABLE TO THE STRUCTURAL ENGINEER.

WHERE NEW CONCRETE IS TO BE CAST AGAINST EXISTING CONCRETE, THE CONTACT SURFACE SHALL BE ROUGHENED AND KEPT WET WITH A HIGH-PRESSURE WATER SPRAY. ALLOW TO DRY THOROUGHLY BEFORE APPLICATION OF EPOXY BONDING AGENT.

ANY NEW STRUCTURAL STEEL REINFORCEMENT BEAMS ADJACENT TO NEW SLAB OPENINGS SHALL BE FULLY INSTALLED BEFORE THE OPENINGS ARE CUT.

BEFORE CUTTING OPENINGS IN ENTIRE SLAB SPANS, ALL ADJACENT SPANS SHALL BE SHORED TEMPORARILY OR AS INDICATED. ANY EXISTING WALL OPENINGS TO BE WELDED SHALL BE REINFORCED WITH BARS TO MATCH THOSE IN THE ADJACENT EXISTING CONCRETE. JOULES FOR THOSE BARS SHALL BE PLACED INTO ADJACENT CONCRETE.

BEFORE CUTTING OPENINGS IN EXISTING WALLS, ANY ADJACENT INFILL WORK SHALL BE COMPLETED AND THE INFILL CONCRETE SHALL HAVE REACHED ITS REQUIRED 28-DAY COMPRESSIVE STRENGTH.

SAWCUTS FOR NEW WALL OPENINGS SHALL NOT EXCEED THE REQUIRED DIMENSIONS FOR THE OPENING. CORE DRILL THE CORNERS AND EXTEND SAW CUTS INTO THE CORER AREAS AND NOT BEYOND IT. CURF OUT THE REMAINDERS AT THE CORNERS TO ACHIEVE A CLEAN 90 DEGREE CORNER.

THE CONTRACTOR SHALL SUBMIT COORDINATED SHOP DRAWINGS TO THE STRUCTURAL ENGINEER FOR APPROVAL BEFORE CUTTING OR ERECTION OF ANY NEW STRUCTURAL STEEL.

VERIFY ACCESSIBILITY TO THE BUILDING AND MAXIMUM WORKABLE MEMBER LENGTHS BEFORE COMMENCING WITH FABRICATION. SUPPORT THE NEW STRUCTURAL ELEMENTS CAN NOT BE SHIPPED AND INSTALLED AS CONTINUOUS MEMBERS. IN THAT CASE, ANY SPICES SHALL CONSIST OF COMPLETE PENETRATION WELDING OF THE FLANGES AND PARTIAL PENETRATION WELDING OF THE WEB OF THE NEW BEAM. THE CONTRACTOR SHALL SUBMIT PROPOSED SPICE DETAILS AND LOCATIONS TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL.

REMOVE ALL LOADS FROM THE SLAB DIRECTLY ABOVE THE AREAS WHERE NEW STEEL BEAMS ARE TO BE INSTALLED. PROVIDE SHORING UNDER EXISTING SLABS AND BEAMS BEFORE AND DURING CONSTRUCTION. ALL NEW STRUCTURAL STEEL SHALL BE IN PLACE BEFORE ANY EXISTING SLABS AND/OR SHORING IS REMOVED.

PROVIDE NON-SHRINK GROUT AS REQUIRED FOR FULL BEARING OF THE EXISTING SLAB ON THE NEW BEAMS, UNLESS NOTED OTHERWISE.

REMOVE EXISTING FIREPROOFING LOCALLY AND CLEAN AREAS OF EXISTING STEEL TO BE WELDED. INSTALL NEW U/L APPROVED FIREPROOFING UNDER ALL NEW STEEL AND ALL AREAS WHERE FIREPROOFING WAS REMOVED OR DAMAGED DURING THE INSTALLATION OF THE NEW STEEL. SHALL HAVE A FIRE RATING TO MATCH THE ADJACENT EXISTING STEEL. SHALL HAVE WATER TIGHT.

FOUNDATIONS - GENERAL

FOUNDATION DESIGN IS BASED ON RECOMMENDATIONS INCLUDED IN THE INTERNATIONAL BUILDING CODE SECTION 1808 PRESUMPTIVE LOAD-BEARING VALUES FROM TABLE 1808.2.

ALL SUBGRADES AND EXCAVATIONS SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER BEFORE PLACING REINFORCING AND CONCRETE. NOTIFY THE GEOTECHNICAL ENGINEER WHEN THE SUBGRADES AND EXCAVATIONS ARE READY FOR INSPECTION.

ALL SUBGRADES SHALL BE PREPARED, AND ALL FILL SHALL BE COMPACTED AND MOISTURE-CONTROLLED AS SPECIFIED IN THE GEOTECHNICAL REPORT AND THE PROJECT SPECIFICATIONS.

ALL SLAB-ON-GRADE AREAS SHALL BE INSPECTED BY A TESTING LABORATORY AND BE PROOF-ROLLED. ALL SOFT SPOTS IDENTIFIED SHALL BE REMOVED AND REPLACED TO FINISHED GRADE WITH APPROVED FILL MATERIAL AS SPECIFIED IN THE GEOTECHNICAL REPORT AND THE PROJECT SPECIFICATIONS.

NO FOUNDATIONS SHALL BE PLACED ONTO OR AGAINST SUBGRADES CONTAINING FREE WATER, FROST OR ICE.

PLACE BACKFILL BEHIND RETAINING WALLS AFTER CONCRETE OR MASONRY HAS ATTAINED FULL DESIGN STRENGTH. BRACE RETAINING WALLS UNTIL ATTACHED FLOORS AND SLABS ON GRADE ARE COMPLETE AND HAVE ATTAINED FULL DESIGN STRENGTH. NO HEAVY EQUIPMENT SHALL BE ALLOWED WITHIN A 1H/3.0S OF A MEASURED FROM THE BASE OF THE WALL.

THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY IF THE SOIL CONDITIONS ENCOUNTERED VARY FROM THOSE SHOWN ON THE BORING LOGS OF THE GEOTECHNICAL ENGINEERING REPORT.

THE CONTRACTOR SHALL DESIGN AND COMPLETE ALL TEMPORARY CASC, PROTECTION, SHORING, BRACING, Dewatering, AND UNDERPINNING NECESSARY TO CONSTRUCT THE WORK. ALL TEMPORARY SYSTEMS SHALL BE DESIGNED BY AN ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

LOCATE AND PROTECT EXISTING UTILITIES TO REMAIN DURING AND AFTER CONSTRUCTION.

REMOVE ABANDONED FOUNDATIONS AND UTILITIES THAT INTERFERE WITH NEW CONSTRUCTION UNLESS OTHERWISE INDICATED.

CONCRETE WORK BELOW GRADE SHALL BE DETAILED AS WATERTIGHT CONSTRUCTION. CONSTRUCTION JOINTS BELOW GRADE SHALL BE WATERTIGHT.

SHALL FOUNDATIONS

ALL FOOTINGS SHALL BE ON UNDISTURBED SOIL, HAVING A MINIMUM ALLOWABLE BEARING CAPACITY OF 1500 PSF AT A MINIMUM DEPTH OF 36 INCHES BELOW FINISHED GRADE.

ALL FOUNDATIONS EXPOSED TO FROST SHALL BE AT A MINIMUM DEPTH OF 36 INCHES BELOW FINISHED GRADE.

FINISHED GRADE IS DEFINED AS THE SLAB TOP FOR INTERIOR FOOTINGS AND THE LOWEST ADJACENT GRADE WITHIN 5 FEET OF EXTERIOR FOOTINGS.

CONCRETE

ALL CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND WITH ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.

CONCRETE DETAILING SHALL BE IN ACCORDANCE WITH THE ACI DETAILING MANUAL 08-88 AND ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT". SUBMIT SHOP DRAWINGS FOR REVIEW.

CONCRETE PLACEMENT AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".

PROVIDE NORMAL-WEIGHT CONCRETE WITH 28-DAY COMPRESSIVE STRENGTHS AS INDICATED:

FOOTINGS: 3000 PSI
SLABS ON GRADE: 4000 PSI
CONCRETE WALLS: 3000 PSI

ALL CONCRETE REQUIRING LOW PERMEABILITY SHALL HAVE A MAXIMUM WATER-CEMENTITIOUS MATERIAL RATIO OF 0.45 AND A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI.

ALL CONCRETE SUBJECT TO FREEZING AND THAWING SHALL HAVE A MAXIMUM WATER-CEMENTITIOUS MATERIAL RATIO OF 0.42 AND A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI.

ALL CONCRETE SLABS ON GRADE SHALL HAVE A MAXIMUM WATER-CEMENTITIOUS MATERIAL RATIO OF 0.45.

CONCRETE SHALL HAVE, AT THE POINT OF DELIVERY, A SLUMP OF 4 INCHES AS DETERMINED BY ASTM C143/C143M. SLUMP TOLERANCES SHALL MEET THE REQUIREMENTS OF ACI 117. WHEN A PLASTICIZING ADMIXTURE OR HIGH-RANGE WATER-REDUCING ADMIXTURE CONFORMING TO ASTM C494/M 28 IS PERMITTED TO INCREASE THE SLUMP OF CONCRETE, CONCRETE SLUMP SHALL HAVE BEEN PROPORTIONED TO A SLUMP OF 2 IN. IN BEFORE THE ADMIXTURE IS ADDED AND A MAXIMUM SLUMP OF 8 IN. AT THE POINT OF DELIVERY AFTER THE ADMIXTURE IS ADDED.

ADDITION OF WATER TO A CONCRETE BATCH WITH INSUFFICIENT SLUMP WILL NOT BE PERMITTED, UNLESS THE SUPPLIER HAS SPECIFICALLY WITHHELD WATER FROM THE BATCH AT THE PLANT. IN SUCH CASE, THE MIX DESIGN AND TRUCK TICKET MUST CLEARLY STATE THE MAXIMUM AMOUNT OF WATER THAT CAN BE ADDED TO THE CONCRETE BATCH ON SITE. IN NO CASE SHALL THE MAXIMUM WATER-CEMENTITIOUS MATERIAL RATIO BE EXCEEDED.

ALL EXTERIOR CONCRETE SUBJECT TO FREEZING AND THAWING SHALL BE AIR ENTRAINED TO RESULT IN A TOTAL AIR CONTENT OF 6 +/- 1.0% FOR CONCRETE USING 3/4-INCH AND 1-INCH MAXIMUM AGGREGATE SIZE.

COLD WEATHER CONCRETING SHALL BE DONE IN ACCORDANCE WITH ACI 308 "COLD WEATHER CONCRETING". HOT WEATHER CONCRETING SHALL BE DONE IN ACCORDANCE WITH ACI 305 "HOT WEATHER CONCRETING".

NO CHLORIDES AND/OR ANIONIDES CONTAINING CHLORIDES SHALL BE USED IN ANY CONCRETE.

UNLESS A GREATER CONCRETE COVER IS REQUIRED FOR FIRE RESISTANCE, THE MINIMUM CONCRETE COVER FOR CAST-IN-PLACE CONCRETE REINFORCING STEEL SHALL BE AS INDICATED:

- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3 INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER:
NO. 4 BAR AND LARGER: 2 INCHES
NO. 5 BAR AND SMALLER: 1 1/2 INCHES
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
SLABS, WALLS, JOISTS:
NO. 14 AND NO. 18 BARS: 1 1/2 INCHES
NO. 11 BAR AND SMALLER: 3/4 INCHES
BEAMS, COLUMNS:
PRIMARY REINFORCEMENT: TIE, STIRRUPS, SPIRALS: 1 1/2 INCHES

CHAMFER ALL EXPOSED CORNERS WITH 1/4-INCH, 45 DEGREE CHAMFERS.

PROVIDE FINISHES AS INDICATED IN THE PROJECT SPECIFICATIONS AND IN THE ARCHITECTURAL DRAWINGS.

JOINTS NOT INDICATED SHALL BE MADE AND LOCATED SO AS NOT TO IMPAIR THE STRENGTH AND APPEARANCE OF THE STRUCTURE. HORIZONTAL JOINTS ARE NOT PERMITTED TO CONCRETE EXCEPT WHERE THEY NORMALLY OCCUR OR WHERE INDICATED. VERTICAL JOINTS SHALL OCCUR ONLY AT LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER.

ROUGHEN CONCRETE SURFACES OF CONSTRUCTION JOINTS TO 1/4" INCH AMPLITUDE AND WEADE OF LANTANCE, FOREIGN MATTER, AND LOOSE PARTICLES. LOCATE CONSTRUCTION JOINTS AS SHOWN ON THE DRAWINGS. SUBMIT ALTERNATE JOINT LOCATIONS OR JOINTS NOT SHOWN TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH THE WORK.

AT LOCATIONS WHERE CONCRETE IS CAST AGAINST EXISTING CONCRETE, ROUGHEN CONTACT SURFACES TO 1/4" INCH AMPLITUDE AND WEADE OF LANTANCE AND LOOSE PARTICLES.

AT LOCATIONS WHERE CONCRETE IS CAST AGAINST EXISTING MASONRY, THOROUGHLY ROUGHEN CONTACT SURFACES BY JET SANDBLASTING OR OTHER SUITABLE MEANS AND CLEAN OF LANTANCE, FOREIGN MATTER AND LOOSE PARTICLES.

CONTROL JOINTS FOR SLABS ON GRADE SHALL BE AS NOTED IN PLAN, OR, IF NOT NOTED, IN A SQUARE PATTERN AND BE NOT MORE THAN 18 FEET ON CENTER, UNLESS OTHERWISE NOTED. IF CONTROL JOINTS ARE CUT, THEY SHALL BE CUT WITHIN 12 HOURS AFTER THE CONCRETE IS PLACED.

PITCH CONCRETE SLABS AS REQUIRED TO FLOOR DRAINS. SLAB ON GRADE MINIMUM THICKNESS SHALL BE MAINTAINED AT SLOPED SLABS.

THE CONCRETE CONTRACTOR SHALL REVIEW ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND CONSULT WITH OTHER CONTRACTORS FOR OPENINGS, SLEEVES, ANCHORS, HANGERS, INSERTS, SLAB DEPRESSIONS AND OTHER ITEMS RELATED TO THE CONCRETE WORK AND SHALL ASSUME RESPONSIBILITY FOR THEIR PROPER LOCATION. NO CORING OF CAST-IN-PLACE CONCRETE IS ALLOWED WITHOUT PRIOR APPROVAL BY THE STRUCTURAL ENGINEER.

REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PROCESS AND PLUMBING DRAWINGS FOR MISCELLANEOUS PADS, FURNISH AND INSTALL AS REQUIRED.

NO STRUCTURAL CONCRETE SHALL BE PLACED UNTIL THE CONCRETE DESIGN MIXES, THE CONCRETE PLACEMENT PROCEDURE, THE LOCATION OF CONSTRUCTION JOINTS AND THE SETTING OF REINFORCING STEEL, IS REVIEWED BY THE STRUCTURAL ENGINEER AND APPROVED AS APPLICABLE.

NO ALUMINUM OF ANY TYPE SHALL BE ALLOWED IN THE CONCRETE, UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION. THIS INCLUDES PLYING THROUGH ALUMINUM PIPE.

FORMWORK, SHORING, AND RESHORING SHALL BE IN ACCORDANCE WITH ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 308 "RECOMMENDATIONS FOR CONCRETE FORMWORK". DESIGN AND DETAILING OF FORMWORK, SHORING, AND RESHORING SYSTEMS SHALL BE THE RESPONSIBILITY OF CONTRACTOR. ALL FORMWORK, SHORING, AND RESHORING SYSTEMS SHALL BE DESIGNED BY AN ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

DO NOT REMOVE FORMWORK PRIOR TO CONCRETE BEING SUFFICIENTLY CURED TO PREVENT DAMAGE BY FORMWORK REMOVAL OR PRIOR TO CURING AT AN ANNOYING 75% OF THE SPECIFIED 28-DAY COMPRESSIVE STRENGTH.

CONCRETE FILL THICKNESS SHOWN ON THE DRAWINGS IS THE MINIMUM THICKNESS. NO ALLOWANCES HAVE BEEN SHOWN TO COMPENSATE FOR TOLERANCES, DECK, OR FORMWORK DEFLECTION TO MAINTAIN SURFACE TOLERANCES SPECIFIED.

HEADED CONCRETE ANCHORS SHALL BE MANUFACTURED BY NELSON STUD WELDING CO., LORAIN, OHIO, OR OTHER MANUFACTURER ACCEPTABLE TO THE STRUCTURAL ENGINEER. SEE DRAWINGS FOR DETAILS AND NOMINAL LENGTH. INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. MATERIAL SHALL BE IDENTIFIED BY THE MANUFACTURER'S RECOMMENDATIONS. MATERIAL SHALL CONFORM TO ASTM A88.

DEFORMED BAR ANCHORS SHALL BE MANUFACTURED BY NELSON STUD WELDING CO., LORAIN, OHIO, OR OTHER MANUFACTURER ACCEPTABLE TO THE STRUCTURAL ENGINEER. INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. MATERIAL SHALL CONFORM TO ASTM A88.

MECHANICALLY WIREBATE ALL CONCRETE WHEN PLACED. ENSURE FULL CONSOLIDATION OF CONCRETE AROUND REINFORCING STEEL. POST-TENSIONING STEEL, DOWELS, ANCHOR BOLTS, DEFORMED BAR ANCHORS, HEADED CONCRETE ANCHORS, AND OTHER SMALL ITEMS DURING CONCRETE PLACEMENT.

CONCRETE SLABS ON GRADE AND CONCRETE TOPPING SLABS SHALL BE CONSTRUCTED PER ACI 302.1R "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION" AND ACI 302.2R "GUIDE FOR CONCRETE SLABS THAT RECEIVE MOISTURE-SENSITIVE COVERED MATERIALS". THE SLABS SHALL BE CURED IN STRIP FORMS. CONCRETE AGGREGATE MATERIALS SHALL BE SUFFICIENTLY GRADED, AND CONCRETE SLABS-ON-GRADE SHALL BE CURED AS REQUIRED TO MINIMIZE THE POSSIBILITY OF SLAB CURING.

CONTINUOUSLY MOIST CURE CONCRETE SLABS ON GRADE FOR 7 DAYS MINIMUM. WATER GUN FOG SPRAYS, PONDING SATURATED ABSORPTIVE COVERS, OR MOISTURE RETAINING COVERS MAY BE USED. CURING COMPOUNDS ARE NOT ACCEPTABLE.

TEST CYLINDERS SHALL BE MADE AND TESTED AS OUTLINED IN THE PROJECT SPECIFICATIONS.

CONCRETE REINFORCING STEEL

FABRICATE AND PLACE REINFORCING STEEL IN ACCORDANCE WITH ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".

UNLESS NOTED OTHERWISE, REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. REINFORCING STEEL THAT WILL BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60.

WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A108 AND SHALL BE PLAIN WIRE. SUPPLY IN FLAT SHEETS. ROLLS SHALL NOT BE PERMITTED. UNLESS NOTED OTHERWISE, LAPS OF WELDED WIRE REINFORCEMENT SHALL BE A MINIMUM OF TWO WIRE MESHES.

SMOOTH STEEL DOWELS IN SLABS ON GRADE SHALL CONFORM TO ASTM A36. ALL FIELD BENDING OF REINFORCING SHALL BE PERFORMED COLD. HEATING OF BARS SHALL NOT BE PERMITTED.

UNLESS NOTED OTHERWISE, "CONTINUOUS" REINFORCEMENT SHALL HAVE A MINIMUM TENSION LAP OF CLASS "B" PER ACI 318 AT SPLICES AND SHALL HOOK AT DISCONTINUOUS ENDS. REINFORCEMENT SPECIFIED AS CONTINUOUS SHALL BE CONTINUOUS THROUGH INTERSECTING ELEMENTS. INTERSECTING ELEMENTS SHALL BE WELDED. REINFORCEMENT SPECIFIED AS CONTINUOUS SHALL BE LAP-SPLICED WITH A CLASS "B" LAP-SPLICE TO DOWELS IN THE INTERSECTING ELEMENTS THAT DEVELOP THE FULL YIELD STRENGTH OF THE CONTINUOUS REINFORCEMENT. FOR REQUIRED LAP SPLICE LENGTHS, SEE TYPICAL DETAIL.

REINFORCEMENT SHALL BE CONTINUOUS ACROSS JOINTS AND AROUND CORNERS, OR SPLICE BARS SHALL BE PROVIDED IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315 OR ACI 318R. CORNER BARS SHALL BE PROVIDED AT ALL WALL CORNERS, OTHER THAN TO THE HORIZONTAL WALL REINFORCEMENT.

DO NOT CUT OR WELD REINFORCING STEEL WITHOUT PRIOR APPROVAL OF A STRUCTURAL ENGINEER. WHEN WELDING IS INDICATED ON THE DRAWINGS, PROCEDURES SHALL BE IN WITH AWS D1.4.

PROVIDE REBAR CHAIRS FOR REINFORCING STEEL. PROVIDE ADDITIONAL LONGITUDINAL SUPPORT BARS AS REQUIRED TO ASSURE PROPER SUPPORT FOR REINFORCING STEEL AND WELDED WIRE REINFORCEMENT.

PROVIDE ALL ACCESSORIES TO SUPPORT REINFORCEMENT AT POSITIONS SHOWN ON THE PLANS AND DETAILS. PLASTIC COATED ACCESSORIES SHALL BE USED IN ALL EXPOSED CONCRETE WORK.

NON-SHRINK GROUT

ALL GROUT AT COLUMN BASE PLATES, BEAM BEARING PLATES, AND EQUIPMENT BASE PLATES SHALL BE NONMETALLIC, SHRINKAGE-RESISTANT GROUT CONFORMING TO ASTM C 1090, 1100M.

GROUT SHALL BE FACTORY-PACKAGED WITH NONMETALLIC AGGREGATE, INCORPORATE AND NONSTANNING MIXED WITH WATER TO MANUFACTURE SUITABLE FOR APPLICATION AND A 30-MINUTE WORKING TIME.

COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR SHRINKAGE-RESISTANT GROUTS.

NONMETALLIC, SHRINKAGE-RESISTANT GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF TWO TIMES THE COMPRESSIVE STRENGTH OF THE SUPPORTING CONCRETE FOUNDATIONS, 5000 PSI MINIMUM.

NONMETALLIC, SHRINKAGE-RESISTANT GROUT SHALL BE INSTALLED AT COLUMN BASE PLATES, BEAM BEARING PLATES, AND EQUIPMENT BASE PLATES PRIOR TO LOAD BEING APPLIED.

POST-INSTALLED ANCHORS

CONCRETE MECHANICAL ANCHORS SHALL BE WEDGE EXPANSION TYPE, MADE OF STEEL, HLTI KWIK-BOLT TZ EXPANSION ANCHORS AS MANUFACTURED BY HLTI, INC. (ICC ESR-1381) OR APPROVED EQUIV.

CONCRETE ADHESIVE ANCHORS SHALL BE HLTI HT-900 V ADHESIVE ANCHOR SYSTEMS AS MANUFACTURED BY HLTI, INC. (ICC ESR-1814) OR APPROVED EQUIV. TYPICAL, UNLESS NOTED OTHERWISE. THREADED RODS USED IN ADHESIVE ANCHOR SYSTEMS SHALL MEET THE REQUIREMENTS OF ASTM A193, GRADE 8. REINFORCING BARS USED IN ADHESIVE ANCHOR SYSTEMS SHALL BE ASTM A615, GRADE 60 REINFORCING BARS. REMOVE GREASE, OIL, RUST, AND OTHER CONTAMINANTS FROM SURFACES OF ANCHORS AND ADHESIVE ANCHORS BEFORE INSTALLATION WITH CLEANROOMS SHALL BE HLTI HT-100 200# ADHESIVE ANCHOR SYSTEMS, AS MANUFACTURED BY HLTI, INC. (ICC ESR-1817).

MAJORITY MECHANICAL ANCHORS TO BE INSTALLED IN GROUT-FILLED CONCRETE BLOCK SHALL BE WEDGE EXPANSION TYPE, MADE OF STEEL, HLTI KWIK-BOLT 3 EXPANSION ANCHOR, AS MANUFACTURED BY HLTI, INC. (ICC ESR-1381) OR APPROVED EQUIV.

MAJORITY ADHESIVE ANCHORS TO BE INSTALLED IN GROUT-FILLED CONCRETE BLOCK SHALL BE HLTI HT-100 V ADHESIVE ANCHOR SYSTEMS AS MANUFACTURED BY HLTI, INC. (ICC ESR-1814) OR APPROVED EQUIV. THREADED RODS USED IN ADHESIVE ANCHOR SYSTEMS SHALL MEET THE REQUIREMENTS OF ASTM A193, GRADE 8. REINFORCING BARS USED IN ADHESIVE ANCHOR SYSTEMS SHALL BE ASTM A615, GRADE 60 REINFORCING BARS. REMOVE GREASE, OIL, RUST, AND OTHER CONTAMINANTS FROM SURFACES OF ANCHORS AND ADHESIVE ANCHORS BEFORE INSTALLATION.

PROVIDE STAINLESS STEEL FASTENERS FOR EXTERIOR USE OR WHEN EXPOSED TO WEATHER. PROVIDE GALVANIZED CARBON STEEL ANCHORS AT OTHER LOCATIONS, UNLESS OTHERWISE NOTED.

IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2-INCH DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF STAIN CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. THE ENGINEER WILL DETERMINE A NEW LOCATION, IN THE ANCHOR OR DOWEL, MAY NOT BE SHIFTED AS NOTED.

LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS BEFORE FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.

ALL POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND/OR APPLICABLE ICC EVALUATION SERVICES REPORT.

EMBEDDED ITEMS IN CONCRETE

INSTALL ANCHOR BOLTS, ACCURATELY LOCATED, TO ELEVATIONS REQUIRED AND COMPLYING WITH TOLERANCES IN SECTION 7.5 OF ACI 308 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".

EMBEDMENTS OF CONDUITS, PIPES, SLEEVES, ETC. OF ANY MATERIAL, NOT HARMFUL TO CONCRETE, AND WITHIN LIMITATIONS NOTED BELOW, SHALL BE PERMITTED

ISO 1742.1 SPECIAL INSPECTIONS AND TESTS:

THE OWNER OR THE OWNER'S AUTHORIZED AGENT, OTHER THAN THE CONTRACTOR, SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PROVIDE SPECIAL INSPECTIONS AND TESTS DURING CONSTRUCTION ON THE TYPES OF WORK SPECIFIED IN SECTIONS NOTED BELOW AND IDENTIFY THE APPROVED AGENCIES TO THE BUILDING OFFICIAL.

ISO 1742.2 SPECIAL INSPECTOR QUALIFICATIONS:

BEFORE THE START OF THE CONSTRUCTION, THE APPROVED AGENCIES SHALL PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING THE COMPETENCE AND RELEVANT EXPERIENCE OR TRAINING OF THE SPECIAL INSPECTORS WHO WILL PERFORM THE SPECIAL INSPECTIONS AND TESTS DURING CONSTRUCTION. EXPERIENCE OR TRAINING SHALL BE CONSIDERED RELEVANT WHERE THE DOCUMENTED EXPERIENCE OR TRAINING IS RELATED IN COMPLEXITY TO THE SAME TYPE OF SPECIAL INSPECTION OR TESTING ACTIVITIES FOR PROJECTS OF SIMILAR COMPLEXITY AND MATERIAL QUALITIES. THESE QUALIFICATIONS ARE IN ADDITION TO THE QUALIFICATIONS SPECIFIED IN OTHER SECTIONS OF THIS CODE.

ISO 1742.3 REPORT REQUIREMENT:

APPROVED AGENCIES SHALL KEEP RECORDS OF SPECIAL INSPECTIONS AND TESTS. A APPROVED AGENCY SHALL SUBMIT REPORTS OF SPECIAL INSPECTIONS AND TESTS TO THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED OR TESTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO THE REGISTERED DESIGN PROFESSIONAL'S RESPONSIBLE CHARGE. REPORTS SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND TESTS, AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS OR TESTS, SHALL BE SUBMITTED AT A POINT IN THE AGREED UPON PROGRAM OF CONFORMANCE TO THE START OF WORK BY THE OWNER OR THE OWNER'S AUTHORIZED AGENT TO THE BUILDING OFFICIAL.

ISO 1704.2.3 SPECIAL INSPECTION OF FABRICATED ITEMS:

WHERE FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES IS BEING CONDUCTED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS OF THE FABRICATED ITEMS SHALL BE CONDUCTED DURING FABRICATION.

ISO 1704.2.1 FABRICATOR APPROVAL:

SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED ON REVIEW OF THE FABRICATOR'S WRITTEN FABRICATION PROCEDURES AND QUALITY CONTROL MANUALS THAT PROVIDE A BASIS FOR SELECTION OF MATERIALS AND WORKMANSHIP WITH PROPER ADJUSTS OF FABRICATION AND QUALITY CONTROL PROCEDURES BY AN APPROVED AGENCY OR THE BUILDING OFFICIAL. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE OWNER OR THE OWNER'S AUTHORIZED AGENT FOR SUBMITTAL TO THE BUILDING OFFICIAL AS SPECIFIED IN SECTION 1704.3 STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

SEE SPECIAL SPECIFICATIONS AND REFERENCED STANDARDS FOR FREQUENCY OF TESTING.

AT THE CONCLUSION OF CONSTRUCTION, A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF PREVIOUSLY NOTED DISCREPANCIES SHALL BE SUBMITTED.

THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE TO THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.

THE FOLLOWING TYPES OF WORK SHALL BE INSPECTED BY A SPECIAL INSPECTOR IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE:

- CONCRETE REINFORCEMENT STEEL
- POST INSTALLED ANCHORS

LVL AND PSL PROPERTIES:

MEMBER USE	FB (PSI)	FV (PSI)	EP (PSI)	FC (PSI)	SPECIES & TYPE
JOISTS, BEAMS, POSTS, LEDGERS AND TOP PLATES WITH THICKNESS LESS THAN OR EQUAL TO 1/4"	1150	175	1,600,000	1150	SOUTHERN PINE #2
BEAMS 5 X 5 AND LARGER	1100	165	1,400,000	950	SOUTHERN PINE #2
LAGERS	1100	165	1,400,000	1000	SOUTHERN PINE #2
STUDS	1150	175	1,400,000	1150	SOUTHERN PINE #2

AT WOOD STUD WALLS, WOOD PLATE ANCHOR RODS SHALL BE 1/2" DIAMETER PLACED NOT TO EXCEED 4'-0" O.C. UNLESS NOTED OTHERWISE. ANCHOR RODS SHALL BE PLACED AT ALL JAMBS, CORNERS, INTERSECTIONS, AND WALL ENDS. ALL BOTTOM PLATES SHALL HAVE A MINIMUM OF 2 ANCHOR RODS. ALL FOUNDATION PLATES OR SILL AND SLEEPERS ON A CONCRETE SLAB, WHICH IS IN DIRECT CONTACT WITH EARTH, AND SILL WHICH REST ON CONCRETE OR MASONRY FOUNDATIONS, SHALL BE TREATED WITH WOOD PRESERVATIVE OR BRANDED BY AN APPROVED AGENCY.

JOIST HANGERS AND OTHER MISCELLANEOUS FRAMING ANCHORS SHALL BE AS MANUFACTURED BY SIMPSON COMPANY OR OTHER MANUFACTURER WITH I.C.C. APPROVAL. ALL NAIL HOLES IN JOIST HANGERS AND MISCELLANEOUS FRAMING ANCHORS SHALL BE FILLED WITH NAIL PUTTY PER MANUFACTURER'S PUBLISHED NAIL SIZES.

DO NOT NOTCH OR DRILL JOISTS, BEAMS, OR LOAD-BEARING STUDS WITHOUT PRIOR APPROVAL OF A STRUCTURAL ENGINEER. DOUBLE UP FLOOR JOISTS UNDER PARTITIONS. PROVIDE 1 X 3 OR METAL CROSS BRIDGING AT MIDSPAN AT ALL FLOOR JOISTS. PROVIDE 2" SOLID BLOCKING AT THE SUPPORT OF ALL JOISTS, DOUBLE UP STUDS AT JAMBS AND UNDER BEAMS IN BEARING WALLS. PROVIDE 2" X 4 SOLID BLOCKING AT MID-HEIGHT OF BEARING STUD WALLS. ALL NAILING NOT NOTED SHALL BE ACCORDING TO TABLE 23-1.8-1 (JBC) OR TABLE 23A-1.1 (IBC).

PREFABRICATED WOOD JOISTS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH A CURRENT I.C.C. REPORT. WOOD JOIST SIZES ARE AS INDICATED ON PLANS. TYPICAL CALLOUTS ARE AS FOLLOWS:

- EXAMPLE: 14" WOOD JOIST 704036
- 14" INDICATES JOIST DEPTH
- 70 INDICATES TOTAL LOAD (PLF)
- 40 INDICATES LIVE LOAD (PLF)
- 36 INDICATES NET WIND UPLIFT (PLF) (00 INDICATES NO NET WIND UPLIFT)

ALL WOOD JOISTS WITH SLOPES GREATER THAN 1:12 SHALL BE CAMBERED TO A MAXIMUM RADIIUS OF 2,250 FEET.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SEALED CALCULATIONS FOR ALL WOOD JOISTS FOR REVIEW PRIOR TO MANUFACTURE.

ALL WOOD JOISTS SHALL BE DESIGNED FOR AN ADDITIONAL 200 LB. POINT LOAD ANYWHERE ALONG THE SPAN. ADDITIONAL WOOD JOISTS WILL BE SUPPLIED AS REQUIRED TO SUPPORT MECHANICAL EQUIPMENT.

LIVE LOAD DEFLECTIONS OF WOOD JOISTS SHALL BE LIMITED TO SPAN/360 AT SIMPLE SPAN FLOOR MEMBERS, 2X SPAN/360 AT CANTILEVER FLOOR MEMBERS, SPAN/240 AT SIMPLE SPAN ROOF MEMBERS AND 2X SPAN/240 AT CANTILEVER ROOF MEMBERS.

WOOD JOISTS ARE DEFERRED SUBMITTAL ITEM.

PREFABRICATED OPEN WEB WOODSTEEL JOISTS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH A CURRENT I.C.C. REPORT. CONNECTIONS AND BEARING MATERIAL TO BE SHIP CONNECTED TO JOISTS AND DESIGNED AND FURNISHED BY JOIST FABRICATOR.

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WOODSTEEL JOISTS ARE A DEFERRED SUBMITTAL ITEM.

WOOD

PLYWOOD SHALL BE APA RATED SHEATHING, WITH AN EXTERIOR OR EXPOSURE 1 DURABILITY CLASSIFICATION AND SHALL BEAR THE STAMP OF AN APPROVED TESTING AGENCY. LAY UP FLOOR AND ROOF WITH THE FACE GRAIN PERPENDICULAR TO SUPPORTS. STAGGER JOISTS. PROVIDE PLY CLIPS AT MIDSPAN OF ALL UNSUPPORTED WOOD EDGES. ALL NAILING SHALL BE COMMON NAILS. IF GUN NAILS ARE USED IN LIEU OF COMMON NAILS, REDUCE NAIL SPACING TO 4" AT EDGE NAILING AND 8" AT INTERMEDIATE NAILING.

PLYWOOD PROPERTIES AND ATTACHMENT:

THICKNESS	ROOF	FLOOR	SHEAR WALL
19/32"	3/4" (T AND G)	3/8"	
SPANNING/RATIO	40/20	40/24	24/0
EDGE NAILING	100 (148 DIA)	100 (148 DIA)	80 (131 DIA)
(COMMON NAILS)	AT 6" O.C. AT 12" O.C.	AT 6" O.C. AT 12" O.C.	
INTERMEDIATE NAILING	100 (148 DIA)	100 (148 DIA)	80 (131 DIA)
(COMMON NAILS)	AT 12" O.C. AT 10" O.C.	AT 12" O.C. AT 10" O.C.	
MINIMUM NAIL PENETRATION (IN FRAMING)	1 5/8"	1 5/8"	1 1/2"

THE FIRST SHEET OF PLYWOOD SHEATHING ADJACENT AND PARALLEL TO WALLS, PERIMETER MEMBERS OR MEMBERS IDENTIFIED AS CHORD, COLLECTOR OR BRACED MEMBERS (ON ONE OR BOTH SIDES AS APPLICABLE) SHALL BE FULL-WIDTH SHEETS, ELSEWHERE MINIMUM SHEET WIDTH 2'-0".

SAVN FRAMING LUMBER SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN WOOD PRODUCTS ASSOCIATION OR THE WEST COAST LUMBER INSPECTION BUREAU. ALL SAVN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED GRADING AGENCY.

ENGINEERED WOOD PRODUCTS, INCLUDING LAMINATED VENEER LUMBER (LVL) AND PARALLEL STRAND LUMBER (PSL), SHALL COMPLY WITH THE LATEST EDITION OF APA-THE ENGINEERED WOOD ASSOCIATION OR AN APPROVED EQUIVALENT EVALUATION STANDARD IN ACCORDANCE WITH ASTM D5456. ALL LVL AND PSL MEMBERS SHALL BE IDENTIFIED BY THE MANUFACTURER'S GRADE MARK OR CERTIFICATION LABEL, INDICATING THE MANUFACTURER'S SPECIFICATIONS AND DESIGN REQUIREMENTS.

SAVN LUMBER PROPERTIES:

MEMBER USE	FB (PSI)	FV (PSI)	EP (PSI)	FC (PSI)	SPECIES AND GRADE
JOISTS, BEAMS, POSTS, LEDGERS AND TOP PLATES WITH THICKNESS LESS THAN OR EQUAL TO 1/4"	1150	175	1,600,000	1150	SOUTHERN PINE #2
BEAMS 5 X 5 AND LARGER	1100	165	1,400,000	950	SOUTHERN PINE #2
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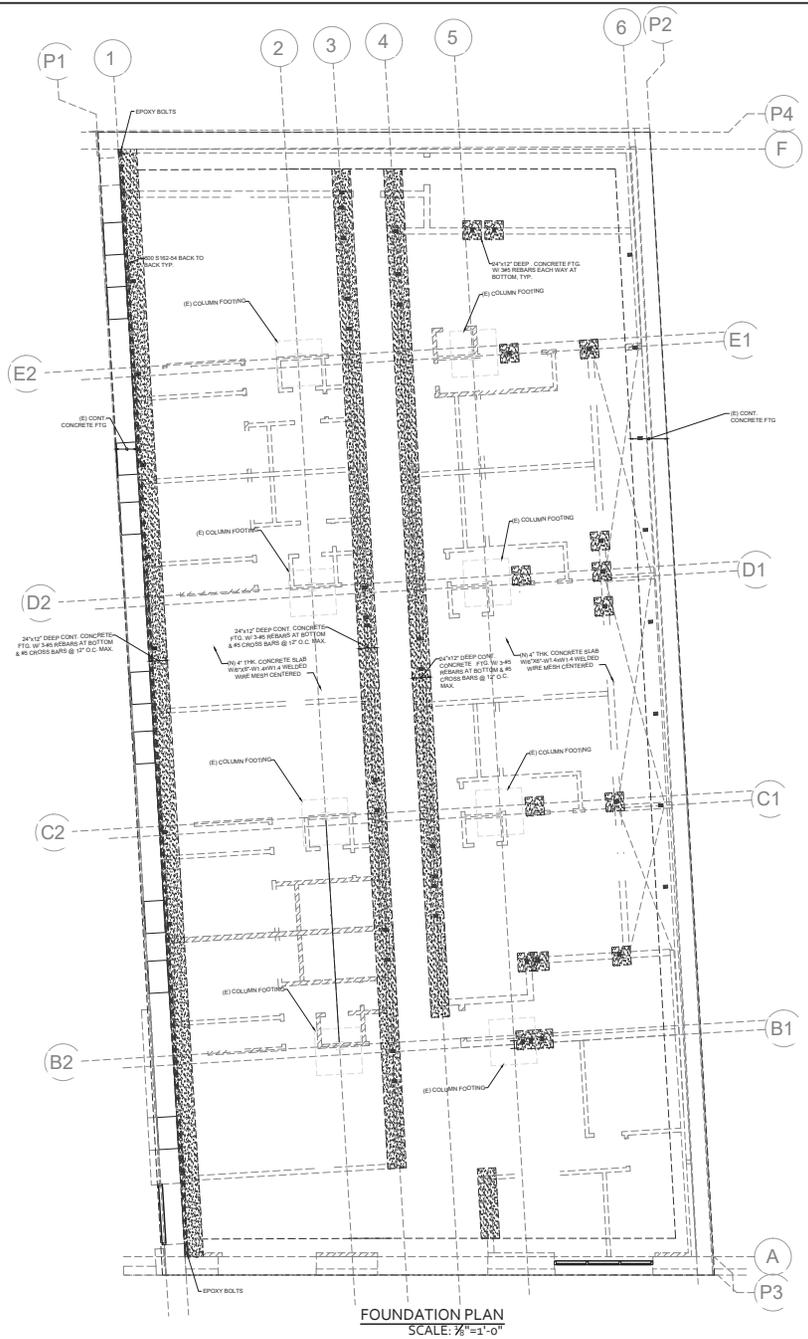
WOODSTEEL JOISTS ARE A DEFERRED SUBMITTAL ITEM.

ABBREVIATIONS

AB	ANCHOR BOLTS	L	LEDGER
AC	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	LB	LEADER
ACSS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	LE	LEADER DEVELOPMENT LENGTH
AD	ADHESIVE FINISH FLOOR	LF	LEADER STRAIGHT EXTENSION
ALT	ALTERNATE	LI	LEADER HOOK LENGTH
ALU	ALUMINUM INSTITUTION OF STEEL CONSTRUCTION	LH	LEADER HOOK LENGTH
ARCH	ARCHITECT	LH1	LONG LEAD HORIZONTAL
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	LH2	LONG LEAD HORIZONTAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LH3	LONG LEAD HORIZONTAL
AVG	AVERAGE	LH4	LONG LEAD HORIZONTAL
B	BALANCE PLATE	LH5	LONG LEAD HORIZONTAL
BC	BOTTOM OF CONCRETE	LH6	LONG LEAD HORIZONTAL
BDC	BOTTOM OF DECK	LH7	LONG LEAD HORIZONTAL
BDD	BOTTOM OF DECK	LH8	LONG LEAD HORIZONTAL
BMAT	BOTTOM OF MAT	LH9	LONG LEAD HORIZONTAL
BS	BOTTOM OF SLAB ELEVATION	LH10	LONG LEAD HORIZONTAL
BS/AB	BOTTOM OF SLAB	LH11	LONG LEAD HORIZONTAL
BSTL	BOTTOM OF STEEL	LH12	LONG LEAD HORIZONTAL
CC	CONCRETE COLUMN	LH13	LONG LEAD HORIZONTAL
CC/CS	CONCRETE COLUMN CALCULATION	LH14	LONG LEAD HORIZONTAL
CCP	CONCRETE JOINT OR CONSTRUCTION JOINT	LH15	LONG LEAD HORIZONTAL
CD	CLEAR	LH16	LONG LEAD HORIZONTAL
CDL	CLEAR	LH17	LONG LEAD HORIZONTAL
CDL	CLEAR	LH18	LONG LEAD HORIZONTAL
CDL	CLEAR	LH19	LONG LEAD HORIZONTAL
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CDL	CLEAR	LH98	LONG LEAD HORIZONTAL
CDL	CLEAR	LH99	LONG LEAD HORIZONTAL
CDL	CLEAR	LH100	LONG LEAD HORIZONTAL

BEAM HANGER SCHEDULE

MEMBER	CONNECTION	TYPE	HANGER
2X8	(FM)	US28	13x46-14 LVL (TF)
2X10	(FM)	US28-2	31x26-14 LVL (TF)
2X12	(FM)	US28-3	51x46-14 LVL (TF)
2X14	(FM)	US28-4	13x26-14 LVL (TF)
2X16	(FM)	US28-5	31x26-14 LVL (TF)
2X18	(FM)	US28-6	51x46-14 LVL (TF)
2X20	(FM)	US	



SHEET NOTES

- A. STRUCTURAL REFERENCE ELEVATION = 0'-0" (100.00') WHICH IS THE TOP OF FINISHED SLAB ELEVATION FOR LEVEL 02. VERIFY WITH CIVIL DRAWINGS. ALL ELEVATION NOTED ON PLANS ARE WITH RESPECT TO REFERENCE DATUM ELEVATION UNLESS NOTED OTHERWISE.
- B. THE ARCHITECT FURNISHES ALL ELEVATIONS AND DIMENSIONS. RESOLVE ANY DISCREPANCY WITH ARCHITECT OF ANY VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN BY THIS DRAWINGS.
- C. ALL OPENINGS THROUGH FLOORS, WALLS OR ROOF ARE NOT SHOWN ON PLANS. COORDINATE ALL OPENING LOCATIONS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. COORDINATE ADDITIONAL FRAMING REQUIREMENTS OR REINFORCING WITH TYPICAL DETAILS.
- D. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ALL FIRE ROOFING AND FIRE RATING REQUIREMENTS.
- E. EXISTING CONDITIONS SHOWN ARE BASED UPON INFORMATION FURNISHED BY THE OWNER, WHERE CONDITIONS DIFFER FROM THOSE SHOWN NOTIFY LEAKE ENGINEERING, LLC THROUGH ARCHITECT. DIMENSIONS AND LOCATIONS OF EXISTING ELEMENTS SHALL BE VERIFIED WHERE NECESSARY FOR CONDITIONS TO NEW CONSTRUCTION.
- F. P.A. DENOTES POST ABOVE.
- G. PROVIDE MIN. (3) 2x4 POST SFF STUD GRADE OR BETTER UNDER EACH END OF ALL HEADERS/BEAMS U.N.O. IN EXTERNAL WALLS.
- H. PROVIDE MIN. (3) 2x4 POST SFF STUD GRADE OR BETTER UNDER EACH END OF ALL HEADERS/BEAMS U.N.O. IN INTERNAL WALLS.
- I. PROVIDE MIN. 3 2x4 POST SFF STUD GRADE OR BETTER UNDER EACH OF ALL HEADERS/BEAMS U.N.O. IN EXTERNAL WALLS.
- K. ALL EXTERIOR PSLs SHOULD BE TREATED RALLAM PLUS PSL.



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215-645-4437

STAMP

ADDRESS

5416-26 Lena St,
Philadelphia, PA 19144, USA

DRAWN BY

Alex Bruno

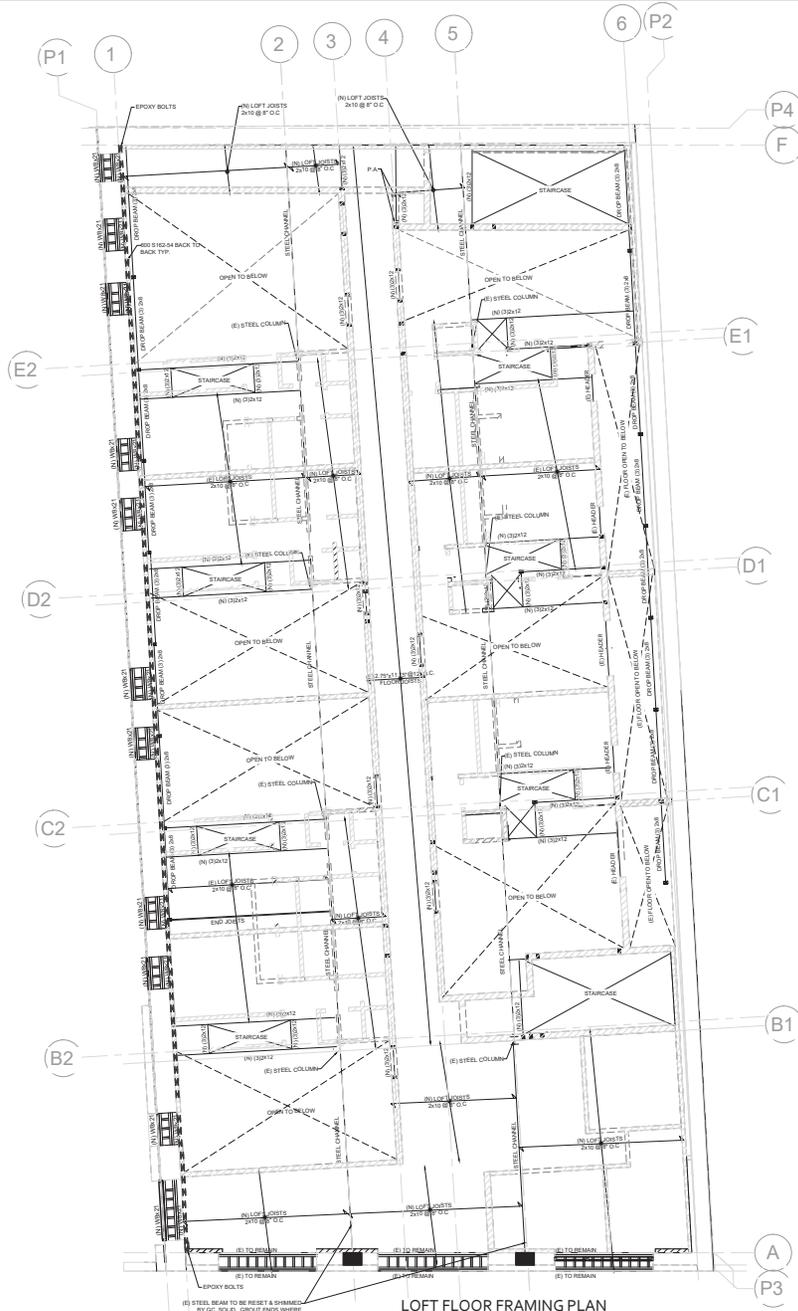
ISSUE DATE

02/06/2026

SHEET NUMBER

S0 1

PRELIMINARY



LOFT FLOOR FRAMING PLAN
SCALE: 1/8"=1'-0"

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DRAWN BY

Alex Bruno

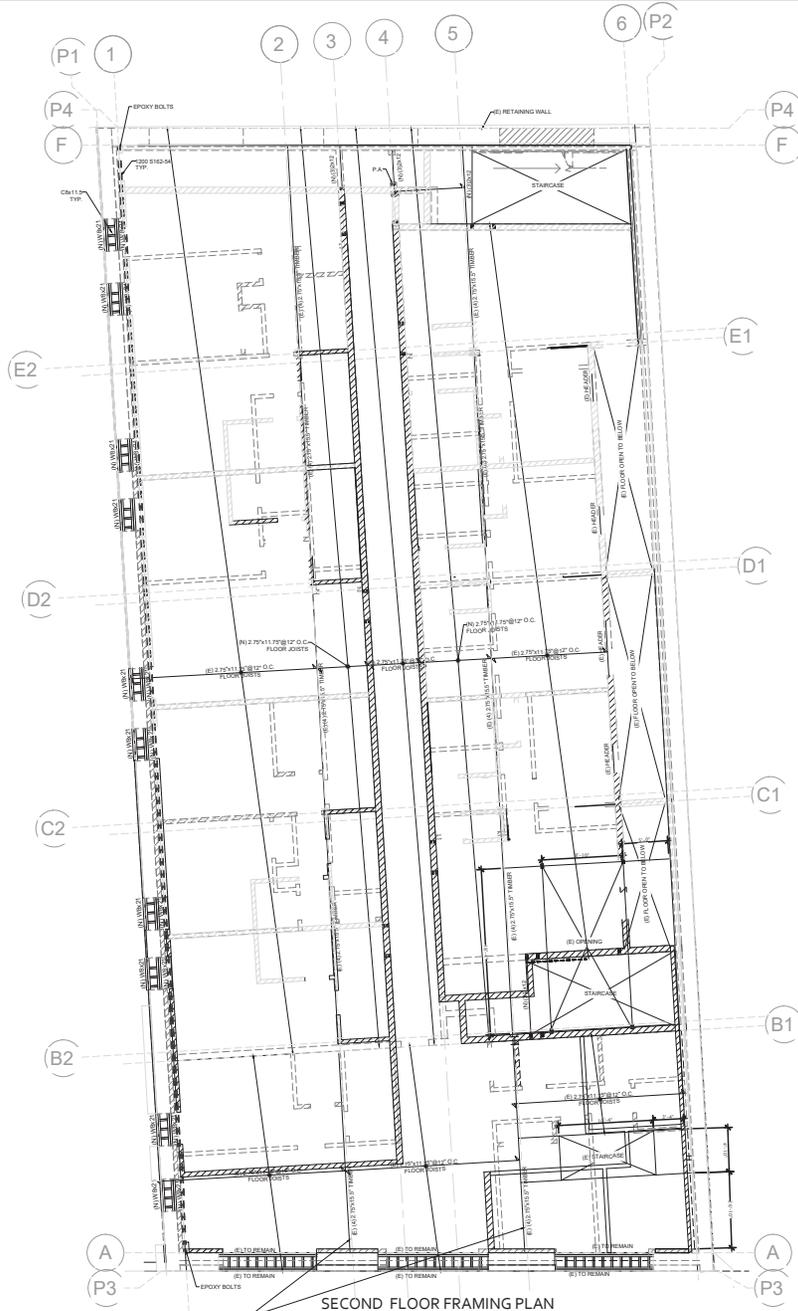
ISSUE DATE

02/06/2026

SHEET NUMBER

S0 2

PRELIMINARY



- SHEET NOTES:**
- A. STRUCTURAL REFERENCE ELEVATION = $+0'$ (100.00') WHICH IS THE TOP OF FINISHED SLAB ELEVATION FOR LEVEL 01. VERIFY WITH CIVIL DRAWINGS. ALL ELEVATION NOTED ON PLANS ARE WITH RESPECT TO REFERENCE DATUM ELEVATION UNLESS NOTED OTHERWISE.
 - B. THE ARCHITECT FURNISHES ALL ELEVATIONS AND DIMENSIONS. RESOLVE ANY DISCREPANCY WITH ARCHITECT OF ANY VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN BY THIS DRAWING.
 - C. ALL OPENINGS THROUGH FLOORS, WALLS OR ROOF ARE NOT SHOWN ON PLANS. COORDINATE ALL OPENING LOCATIONS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. COORDINATE ADDITIONAL FRAMING REQUIREMENTS OR REINFORCING WITH TYPICAL DETAILS.
 - D. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ALL FIRE ROOFING AND FIRE RATING REQUIREMENTS.
 - E. EXISTING CONDITIONS SHOWN ARE BASED UPON INFORMATION FURNISHED BY THE OWNER. WHERE CONDITIONS DIFFER FROM THOSE SHOWN NOTIFY LEAKE ENGINEERING, LLC THROUGH ARCHITECT. DIMENSIONS AND LOCATIONS OF EXISTING ELEMENTS SHALL BE VERIFIED WHERE NECESSARY FOR CONDITIONS FOR NEW CONSTRUCTION.
 - F. P.A. DENOTES POST ABOVE.
 - G. PROVIDE MIN. 1-3/4" POST SFS STUD GRADE OR BETTER UNDER EACH END OF ALL HEADERS/BEAMS U.N.D. IN EXTERNAL WALLS.
 - H. PROVIDE MIN. 1-3/4" POST SFS STUD GRADE OR BETTER UNDER EACH END OF ALL HEADERS/BEAMS U.N.D. IN INTERNAL WALLS.
 - I. PROVIDE MIN. 3-2x4 POST SFS STUD GRADE OR BETTER UNDER EACH OF ALL HEADERS/BEAMS U.N.D. IN EXTERNAL WALLS.
 - K. ALL EXTERIOR PSLs SHOULD BE TREATED RALLAM PLUS/PAL.



Leake Engineering LLC
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 Philadelphia, PA 19103
 215-645-4437

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ADDRESS

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ISSUE DATE

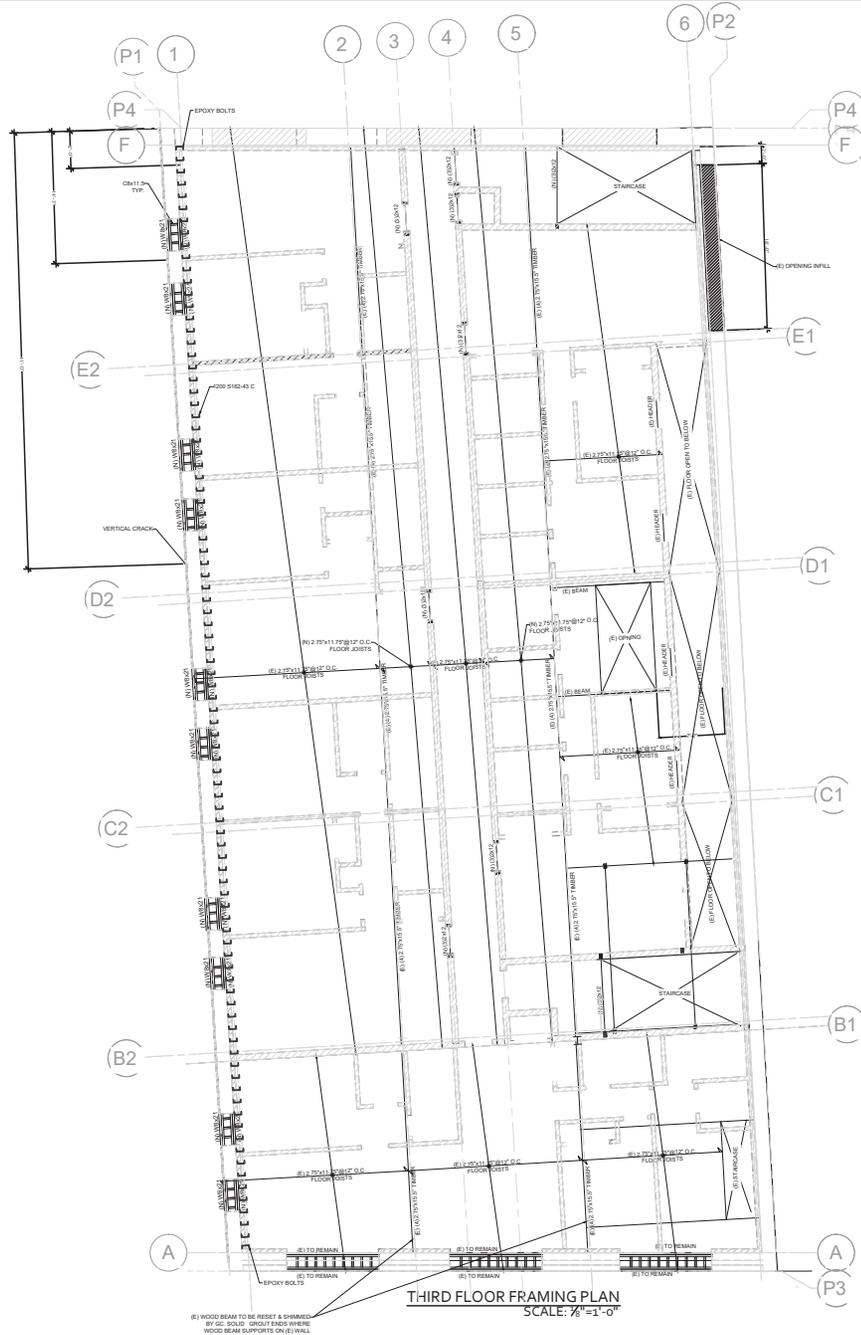
02/06/2026

SHEET NUMBER

S03

PRELIMINARY

SECOND FLOOR FRAMING PLAN
 SCALE: 1/8"=1'-0"



- SHEET NOTES**
- A. STRUCTURAL REFERENCE ELEVATION = +0'-0" (66.00') WHICH IS THE TOP OF FINISHED SLAB ELEVATION FOR LEVEL 00. VERIFY WITH CIVIL DRAWINGS. ALL ELEVATION NOTED ON PLANS ARE WITH RESPECT TO REFERENCE DATUM ELEVATION UNLESS NOTED OTHERWISE.
 - B. THE ARCHITECT FURNISHES ALL ELEVATIONS AND DIMENSIONS. RESOLVE ANY DISCREPANCY WITH ARCHITECT OF ANY VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN BY THIS DRAWINGS.
 - C. ALL OPENINGS THROUGH FLOORS, WALLS OR ROOF ARE NOT SHOWN ON PLANS. COORDINATE ALL OPENING LOCATIONS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. COORDINATE ADDITIONAL FRAMING REQUIREMENTS OR REINFORCING WITH TYPICAL DETAILS.
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 - F. P.A. DENOTES POST ABOVE.
 - G. PROVIDE MIN. (3) 2x6 POST SPF STUD GRADE OR BETTER UNDER EACH END OF ALL HEADERS/BEAMS U.N.O. IN EXTERNAL WALLS.
 - H. PROVIDE MIN. (3) 2x4 POST SPF STUD GRADE OR BETTER UNDER EACH END OF ALL HEADERS/BEAMS U.N.O. IN INTERNAL WALLS.
 - I. PROVIDE MIN. 3/4" x 2x4 POST SPF STUD GRADE OR BETTER UNDER EACH OF ALL HEADERS/BEAMS U.N.O. IN EXTERNAL WALLS.
 - K. ALL EXTERIOR PSLs SHOULD BE TREATED RALLAM PLUS PSL.



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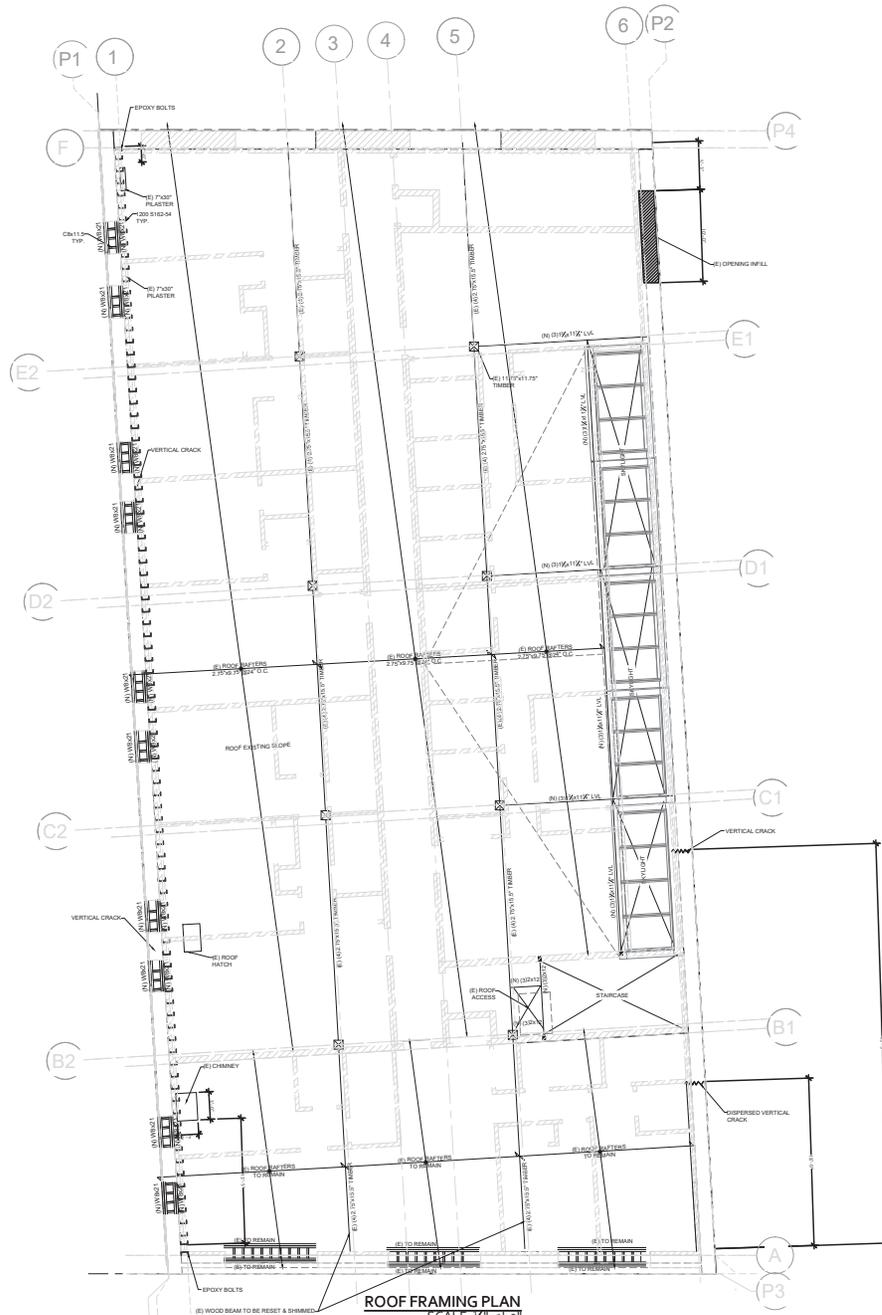
SHEET NUMBER

S0 4

PRELIMINARY

(E) WOOD BEAM TO BE RESET & SHIMMED BY GC. SILENT GROUT FIBER WREATH WOOD BEAM SUPPORTS ON (E) WALL

THIRD FLOOR FRAMING PLAN
 SCALE: 1/8" = 1'-0"



ROOF FRAMING PLAN
SCALE: 1/8"=1'-0"

PRELIMINARY

- SHEET NOTES:**
- STRUCTURAL REFERENCE ELEVATION + 0'-0" (60.00') WHICH IS THE TOP OF FINISHED SLAB ELEVATION FOR LEVEL 0. VERIFY WITH CIVIL DRAWINGS. ALL ELEVATION NOTED ON PLANS ARE WITH RESPECT TO REFERENCE DATUM ELEVATION UNLESS NOTED OTHERWISE.
 - THE ARCHITECT FURNISHES ALL ELEVATIONS AND DIMENSIONS. RESOLVE ANY DISCREPANCY WITH ARCHITECT OF ANY VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN BY THIS DRAWINGS.
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 - P.A. DENOTES POST ABOVE.
 - PROVIDE MIN. 3/24" POST SPF STUD GRADE OR BETTER UNDER EACH END OF ALL HEADERS/BEAMS U.N.O. IN EXTERNAL WALLS.
 - PROVIDE MIN. 3/24" POST SPF STUD GRADE OR BETTER UNDER EACH END OF ALL HEADERS/BEAMS U.N.O. IN INTERNAL WALLS.
 - PROVIDE MIN. 3/24" POST SPF STUD GRADE OR BETTER UNDER EACH OF ALL HEADERS/BEAMS U.N.O. IN EXTERNAL WALLS.
 - ALL EXTERIOR PSLs SHOULD BE TREATED RALLAM PLUS PSL.



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S05



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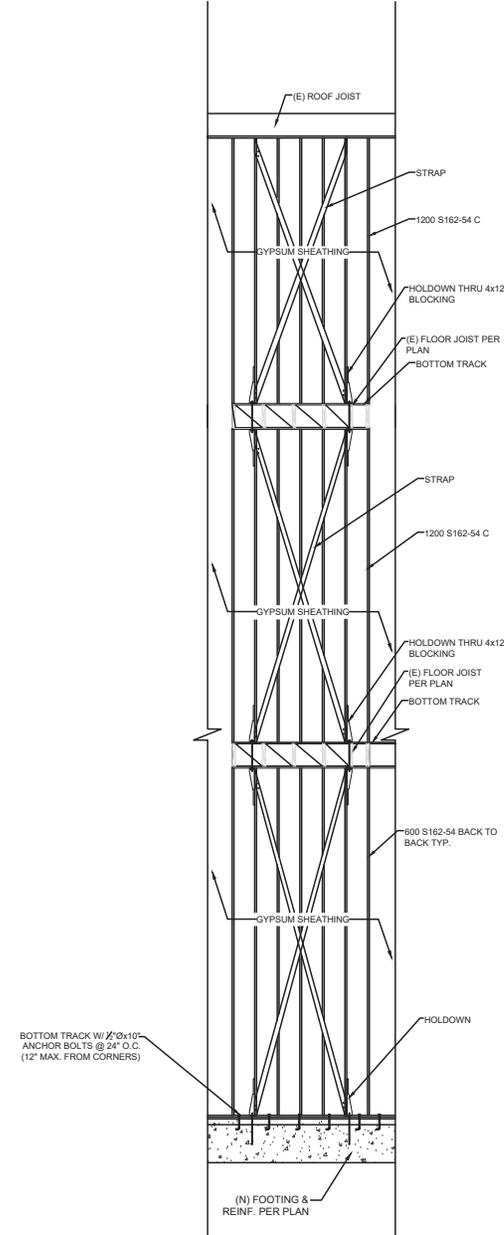
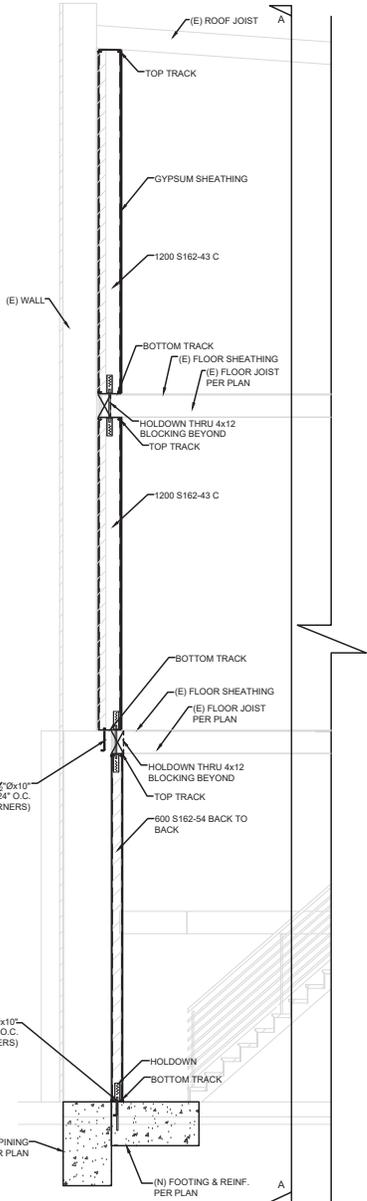
02/06/2026

SHEET NUMBER

S05

PRELIMINARY

SCALE: N.T.S.



ELEVATION 'A-A'

9 TYP. METAL STUD SHEAR WALL DETAIL