BVHARCHITECTURE

ADDENDUM

PROJECT:	La Vista City Centre South MU – Lot 15	**PROJECT NO.:**	F16132
TO:	Prospective Bidders	**DATE:**	05/04/2017
FROM:	BVH Architecture	**ADDENDUM NO.:**	#2

This Addendum is issued by the Architect to all bidders of record prior to receipt of proposals. Bidders shall acknowledge receipt of this addendum by so indicating on the Proposal Form. Failure to do so may subject Bidder to disqualification.

All information and instructions given herein shall become a part of the Contract Documents.

PROJECT MANUAL

1. Section 012300 Alternates:
    a. Add Alternate #6: As Base Bid: Apartment Unit Doors (pre-hung doors within the apartments excluding the entry doors) to be primed flush doors. Solid and Hollow-Core per the Apartment Unit Door Schedule.
        1. As alternate 6A: Provide flush stained Natural Birch doors.
        2. As alternate 6B: Provide 2-Panel primed doors.
2. Section 072100 Thermal Insulation:
    a. Knauf Batt Insulation is an acceptable product.
3. Section 074233 Phenolic Panel:
    a. Delete Section in its entirety. Replace references with 074213 Metal Wall Panels (Type 4).
4. Section 074213 Metal Wall Panels:
    a. Add MP-4: 7/8" height x 2-2/3" centers x 34-2/3" width Corrugated Wall Panel. Material: 22 ga. Copper.
5. Section 074623 Wood Siding
    a. Delete Section in its entirety. Replace with attached Section 074660 Composite Lap Siding.
    b. Replace drawing notes and legends.
6. Section 081416 Wood Doors:
    a. Ref: Section 012300 Alternates #6.
7. Section 088000:
    a. Revise Type IGU to Solarban 70XL.
    VLT = 64%
    Exterior Reflectance = 12%
    Interior Reflectance = 13%
    U-Value Winter = .28
    SHGC = .27
    LSG = 2.37
    b. Substitution Requests shall include IGU Samples prior to bidding.
8. Section 095100 Suspended Acoustic Ceiling Tile:

a. Provide 9/16" suspension Tee in lieu of 15/16".
b. Rockfon Artic SNL 620 is an acceptable product.

9. Section 095426 Grille Suspended Wood Ceiling System
    a. Finish and Color to be Poplar - Stained.
10. Section 102800 Toilet, Bath, and Laundry Accessories:
    a. Basis of Design for Individual Bathrooms with Apartment Units shall be:
       Towel Bar: Kohler Stillness in Vibrant Brushed Nickel
       Towel Ring: Kohler Stillness in Vibrant Brushed Nickel
       Robe Hook: Kohler Stillness in Vibrant Brushed Nickel
       Shower Rod: Kohler Expanse in Brushed Stainless
       Toilet Tissue Dispenser: Kohler Stillness in Vibrant Brushed Nickel
    b. Provide C.R.Laurence or equivalent Brite Anodized Custom Aluminum Mirror Frame at Individual Bathroom Apartment Units.

DRAWINGS

1. General:
    a. Replace 074623 Wood Siding with 074660 Composite Lap Siding. Remove furring back-up strips.
    b. Replace 074233 Phenolic Wall Panels with 074213 Metal Wall Panel Type 4.
2. Sheet A8.3 Reflected Ceiling Plans:
    a. Add Soffits for Dryer and Bathroom Exhaust at Fifth Floor. Ref: Mech. Drawings.
3. Sheet S0.00:
    a. Section 1: Add Fluid Cooler Footing section
4. Sheet S2.03 – Column Schedule:
    a. Revise Column Types 'C3' and 'C7' loadings as clouded
5. Sheet S2.04 – Fourth Floor Framing Plan:
    a. Revise section cut orientations along grids 'S5' and 'SE' as clouded
    b. Revise framing around Trash Chute as clouded
    c. Revise headers adjacent to North-West stair as clouded
    d. Move exterior wall along grid 'SB' between grids 'S3' and 'S6' as clouded
6. Sheet S2.05 – Fifth Floor Framing Plan:
    a. Revise section cut orientations along grids 'S5' and 'SE' as clouded
    b. Revise framing around Trash Chute as clouded
    c. Revise headers adjacent to North-West stair as clouded
    d. Move exterior wall along grid 'SB' between grids 'S3' and 'S6' as clouded
    e. Revise header at unit entries adjacent to grid 'S2' as clouded
    f. Revise exterior wall spacing from 16" to 8" at studs between grids 'SA' and 'SB'
    g. Move grid 'S2' ½" to the North as clouded
7. Sheet S2.06:
    a. Sixth Floor Framing Plan
        1. Revise section cut orientations along grids 'S5' and 'SE' as clouded
        2. Revise framing around Trash Chute as clouded
        3. Revise headers adjacent to North-West stair as clouded
        4. Move exterior wall along grid 'SB' between grids 'S3' and 'S6' as clouded
        5. Revise header at unit entries adjacent to grid 'S2' as clouded
        6. Revise exterior wall spacing from 16" to 8" at studs between grids 'SA' and 'SB'

7. Move grid ‘S2’ ½” to the North as clouded
8. Revise W10 steel beams along grid ‘SB’ to wood beam/header ‘H9’ as clouded
9. Revise floor joists between grids ‘SA’ and ‘SB’ as clouded

b. Sections
1. Section 1: Revise in its entirety as clouded
2. Section 2: Revise/Add notes as clouded
3. Section 6: Add Section

8. Sheet S2.07 – Roof Floor Framing Plan:
   a. Revise framing around Trash Chute as clouded
   b. Revise headers adjacent to North-West stair as clouded
   c. Move exterior wall along grid ‘SB’ between grids ‘S3’ and ‘S6’ as clouded
   d. Revise header and wall framing at unit entries adjacent to grid ‘S2’ as clouded
   e. Move grid ‘S2’ ½” to the North as clouded
9. Sheet S4.01 – Header Schedule:
   a. Add Header type ‘H9’ as clouded
10. Reference Mechanical and Electrical Addendum #2.

END OF ADDENDUM

morrissey engineering inc

mechanical | electrical | lighting | technology | commissioning

addendum

addendum no.	02
date:	5/4/2017
bid date:	n/a
project name:	LaVista City Center Mixed Use - South
project no:	16290

This addendum is hereby made a part of the contract documents to the same extent as if it were originally included therein. Contract documents shall be considered modified or revised as hereinafter described.

mechanical items

1. Mechanical Specifications:
   a. General – The following manufactures have been approved for the listed items. **All items shall meet the requirements of the construction documents, specifications and are subject for review during shop drawing submittal:**

Specification Section	Manufacturer
i. Plans "Gas Detection System"	Armstrong Monitoring
ii. Plans " Gas Detection Systems"	ToxAlert
iii. Section 230960 Variable Frequency Drives	Yaskawa
iv. Section 232113 Hydronic Piping	American Wheatley
v. Section 232113 Hydronic Piping	JL Wingert (glycol tank)
vi. Section 232123 Hydronic Pumps	WILO-USA
vii. Section 233113 Metal Ducts and Accessories	Nailor
viii. Section 235216 Condensing Boilers	RBI (Mestek)
ix. Section 235216 Condensing Boilers	Camus Hydronics
x. Section 237200 Air-to-Air Recovery Units	Greenheck
xi. Section 238146 (hose kits)	Nexus Flow Control

   b. Section 232123 Hydronic Pumps, ADD. See Attached specification section.

2. Sheet M1.03 - THIRD FLOOR – HVAC
   a. Rooms: 331, 335, 339, 343
      i. Provide curved blade registers (**R-4**) on ALL registers located on the west wall. Locate register approximately 7'-6" from west wall. Direct curved blades toward west wall.
   b. Rooms: 331, 335, 339, 343
      i. Route 6" exhaust air duct and 4" dryer vent ductwork in soffit below ceiling. See architectural plans for soffit location.
3. Sheet M1.04 - FOURTH FLOOR – HVAC
   a. Rooms: 427, 431, 435, 439, 443.
      i. Provide curved blade registers (**R-4**) on ALL registers located on the west wall. Locate register approximately 7'-6" from west wall. Direct curved blades toward west wall.
   b. Rooms: 427,431, 435, 439, 443

4940 North 118th Street
Omaha, NE 68164
P: 402.491.4144
www.morrisseyengineering.com

        i. Route 6” exhaust air duct and 4” dryer vent ductwork in soffit below ceiling. See architectural plans for soffit location.
4. Sheet M1.05 - FIFTH FLOOR – HVAC
    a. Rooms: 527, 531, 535, 539, 543.
        i. Provide curved blade registers (**R-4**) on ALL registers located on the west wall. Locate register approximately 7’-6” from west wall. Direct curved blades toward west wall.
    b. Rooms: 527,531, 535, 539, 543
        i. Route 6” exhaust air duct and 4” dryer vent ductwork in soffit below ceiling. See architectural plans for soffit location.
5. Sheet M2.00 – UNDERGROUND PLAN – PLUMBING
    a. See plan revisions.
6. Sheet M2.01 – GROUND FLOOR – Plumbing
    a. See plan revisions.
7. Sheet M2.02 – Second Floor – Plumbing
    a. See plan revisions
8. Sheet M2.03 – Third Floor – Plumbing
    a. See plan revisions
    b. Room 304 (1 BR – ANSI)
        i. Provide ADA plumbing fixtures in this room, WC-2, BT-2, S-2. See Architectural plans detail 9/A11.1 for ADA fixture locations.
    c. Room 305 (1 BR - ANSI)
        i. Provide ADA plumbing fixtures in this room, WC-2, BT-2, S-2. See Architectural plans detail 9/A11.1 for ADA fixture locations.
    d. Room 306 (Studio – ANSI)
        i. Provide ADA plumbing fixtures in this room, WC-2, BT-2, S-2. See Architectural plans detail 10/A11.0 for ADA fixture locations.
    e. Room 309 (2BR – ANSI)
        i. Provide ADA plumbing fixtures in this room, WC-2, BT-2, S-2. See Architectural plans detail 5/A11.2 for ADA fixture locations.
9. Sheet M2.04 – Fourth Floor – Plumbing
    a. See plan revisions
10. Sheet M2.05 – Fifth Floor – Plumbing
    a. See plan revisions
11. Sheet M2.06 – Sixth Floor – Plumbing
    a. See plan revisions
12. Sheet M6.01 - Mechanical Schedules
    a. See plan revisions.

electrical items

1. Electrical Specifications. The following manufactures have been approved for the listed items. **All items shall meet the requirements of the construction documents, specifications and are subject for review during shop drawing submittal:**
    a. Section 263213.2.1A add the following manufacturers: MTU, Generac, Kohler.

2. Sheet E3.01 – Ground Floor – Special Systems
    a. Door B100 – Revise power transfer hinge to electric strike.
    b. Door C100.1 – Revise power transfer hinge to electric strike.
    c. Door 120.1 – Revise power transfer hinge to electric strike.
    d. Door A100.1 – Revise power transfer hinge to electric strike.
    e. Door A100.3 – Remove card access rough-ins.
    f. Door A100.2 – Add card access rough-ins.
    g. Door A100.4 – Add card access rough-ins.

3. Sheet E3.02 – Second Floor – Special Systems
    a. Door A200 – Revise power transfer hinge to electric strike.
    b. Door 220.1 – Add card access rough-ins.
    c. Door B200 – Revise power transfer hinge to electric strike.

4. Sheet E3.03 – Third Floor – Special Systems
    a. Door A300.1 – Revise power transfer hinge to electric strike.
    b. Door A300.2 – Revise power transfer hinge to electric strike.
    c. Door 300.1 – Add card access rough-ins.
    d. Door 300.2 – Add door contact rough-in.
    e. Door E302A.1 – Add card access rough-ins.
    f. Door E302A.3 – Add card access rough-ins.

5. Sheet E3.04 – Fourth Floor – Special Systems
    a. Door A400 – Revise power transfer hinge to electric strike.

6. Sheet E3.05 – Fifth Floor – Special Systems
    a. Door A500 – Revise power transfer hinge to electric strike.

7. Sheet E3.06 – Sixth Floor – Special Systems
    a. Door A600 – Revise power transfer hinge to electric strike.
    b. Door 600 – Add card access rough-ins.
    c. Trash 615 – Remove duplicate smoke detector.

8. Sheet E6.01 –Electric Schedules
    a. The following manufacturers have been approved for the light fixture types listed below. All items are subject for review during shop drawing submittal.

LIGHT FIXTURE TYPE	MANUFACTURER	SERIES
7	Beghelli	BS101LED
10	Juno	JSF
11	Juno	JSF
13/13A	Sure-lites	LPX

end of addendum

SECTION 232123
HYDRONIC PUMPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Closed coupled, in-line centrifugal pumps
   2. Separately coupled, vertically mounted, in-line centrifugal pumps

1.3 DEFINITIONS

A. Buna-N: Nitrile rubber.

B. EPT: Ethylene propylene terpolymer.

1.4 SUBMITTALS

A. Product Data: Include certified performance curves and rated capacities, operating characteristics, furnished specialties, final impeller dimensions, and accessories for each type of product indicated. Indicate pump's operating point on curves.

B. Shop Drawings: Show pump layout and connections. Include setting drawings with templates for installing foundation and anchor bolts and other anchorages.
   1. Wiring Diagrams: Power, signal, and control wiring.

C. Operation and Maintenance Data: For pumps to include in emergency, operation, and maintenance manuals.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Mechanical Seals: One mechanical seal(s) for each pump.

1.6 QUALITY ASSURANCE

A. Source Limitations: Obtain hydronic pumps through one source from a single manufacturer.

B. Product Options: Drawings indicate size, profiles, and dimensional requirements of hydronic pumps and are based on the specific system indicated.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

D. UL Compliance: Comply with UL 778 for motor-operated water pumps.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 CLOSE-COUPLED, IN-LINE CENTRIFUGAL PUMPS

A. Manufacturers:
   1. Armstrong Pumps Inc.
   2. Bell & Gossett; Div. of ITT Industries.
   3. Patterson Pump Co.; a Subsidiary of The Gorman-Rupp Co.
   4. Taco, Inc.

5. FloFab

B. Description: Factory-assembled and -tested, centrifugal, overhung-impeller, close-coupled, in-line pump as defined in HI 1.1-1.2 and HI 1.3; designed for installation with pump and motor shafts mounted horizontally or vertically. Rate pump for 125-psig minimum working pressure and a continuous water temperature of 200 deg F.

C. Pump Construction:
1. Casing: Radially split, cast iron, with threaded gage tappings at inlet and outlet, and threaded companion-flange or union end connections.
2. Impeller: ASTM B 584, cast bronze; statically and dynamically balanced, keyed to shaft, and secured with a locking cap screw. Trim impeller to match specified performance.
3. Pump Shaft: Steel, with copper-alloy shaft sleeve or Stainless steel.
4. Mechanical Seal: Carbon rotating ring against a ceramic seat held by a stainless-steel spring, and Buna-N bellows and gasket. Include water slinger on shaft between motor and seal.
5. Pump Bearings: Lubricated ball bearings.

D. Motor: Single speed, with lubricated ball bearings, unless otherwise indicated; and rigidly mounted to pump casing. Comply with requirements in Division 23 Section "Basic Materials and Methods for HVAC."

2.3 SEPARATELY COUPLED, VERTICALLY MOUNTED, IN-LINE CENTRIFUGAL PUMPS

A. A. Manufacturers:
1. Armstrong Pumps Inc.
2. ITT Corporation; Bell & Gossett.
3. TACO Incorporated.
4. FloFab
5. Patterson

B. Description: Factory-assembled and -tested, centrifugal, overhung-impeller, separately coupled, in-line pump as defined in HI 1.1-1.2 and HI 1.3; designed for installation with pump and motor shafts mounted vertically.

C. Pump Construction:
1. Casing: Radially split, cast iron, with threaded gage tappings at inlet and outlet, replaceable bronze wear rings, and threaded companion-flange union-end connections.
2. Impeller: ASTM B 584, cast bronze; statically and dynamically balanced, keyed to shaft, and secured with a locking cap screw. For pumps not frequency-drive controlled, trim impeller to match specified performance.
3. Pump Shaft: Steel, with copper-alloy shaft sleeve.
4. Seal: Mechanical seal consisting of carbon rotating ring against a ceramic seat held by a stainless-steel spring, and Buna-N bellows and gasket. Include water slinger on shaft between motor and seal.

D. Shaft Coupling: Axially split spacer coupling.
1. Spacer coupling shall be split to allow servicing of seal without disturbing the pump or motor.

E. Motor: Single speed and rigidly mounted to pump casing with lifting eyebolt and supporting lugs in motor enclosure.
1. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
2. Comply with NEMA designation, temperature rating, service factor, and efficiency requirements for motors specified in Section 230513 "Common Motor Requirements for HVAC Equipment."
a. Enclosure: Open, dripproof.
b. Efficiency: Premium efficient.

2.4 PUMP SPECIALTY FITTINGS

A. Suction Diffuser: Angle pattern, 175-psig pressure rating, ductile-iron body and end cap, pump-inlet fitting; with bronze startup and bronze or stainless-steel permanent strainers; bronze or stainless-steel straightening vanes; drain plug; and factory-fabricated support.

PART 3 - EXECUTION

3.1 PUMP INSTALLATION

A. Comply with HI 1.4 and HI 2.4 as applicable.

B. Install pumps with access for periodic maintenance including removal of motors, impellers, couplings, and accessories.

C. Independently support pumps and piping so weight of piping is not supported by pumps and weight of pumps is not supported by piping.

D. Suspend vertically mounted, in-line centrifugal pumps independent of piping. Install pumps with motor and pump shafts vertical. Use continuous-thread hanger rods and spring hangers of sufficient size to support pump weight.

3.2 ALIGNMENT

A. Comply with pump and coupling manufacturers' written instructions.

B. Adjust pump and motor shafts for angular and offset alignment.

3.3 CONNECTIONS

A. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Install piping adjacent to machine to allow service and maintenance.

C. Connect piping to pumps. Install valves that are same size as piping connected to pumps.

D. Install suction and discharge pipe sizes equal to or greater than diameter of pump nozzles.

E. Install shut-off valve, check valve and throttling valve, or triple-duty valve on discharge side of pumps.

F. Install Y-type strainer, suction diffuser and shutoff valve on suction side of pumps.

G. Install flexible connectors on suction and discharge sides of base-mounted pumps between pump casing and valves.

H. Install pressure gages on pump suction and discharge, at integral pressure-gage tapping, or install single gage with multiple input selector valve.

3.4 STARTUP SERVICE

A. Engage a factory-authorized service representative to perform startup service.
   1. Complete installation and startup checks according to manufacturer's written instructions.
   2. Check piping connections for tightness.
   3. Clean strainers on suction piping.
   4. Perform the following startup checks for each pump before starting:
      a. Verify bearing lubrication.
      b. Verify that pump is free to rotate by hand and that pump for handling hot liquid is free to rotate with pump hot and cold. If pump is bound or drags, do not operate until cause of trouble is determined and corrected.
      c. Verify that pump is rotating in the correct direction.
   5. Prime pump by opening suction valves and closing drains, and prepare pump for operation.
   6. Start motor.
   7. Open discharge valve slowly.

END OF SECTION

SECTION 07466

FIBER CEMENT SIDING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Siding Panels
B. Soffit Panels
C. Accessories and Trim

1.02 RELATED REQUIREMENTS

A. Section 061613 – Insulated Sheathing
B. Section 079200 - Joint Sealants: Products and installation for sealants for saw cut joints and isolation joints in slabs.

1.03 REFERENCE STANDARDS

A. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants; 1998.
B. ASTM C 1185 - Standard Test Methods for Sampling and Testing Non Asbestos Fiber-Cement Flat Sheet, Roofing and Siding Shingles, and Clapboards; 1999.
C. ASTM C 1186 - Standard Specification for Flat Non-Asbestos Fiber Cement Sheets; 1999.
D. ASTM E 72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction; 1998.
E. ASTM E 84 -- Standard Test Method for Surface Burning Characteristics of Building Materials; 1999.
F. ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials; 1995.
G. ASTM E 136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 Degrees C; 1999.
H. ASTM E 228 - Standard Test Method for Linear Thermal Expansion of Solid Materials with a Vitreous Silica Dilatometer; 1995.
I. ASTM G 26 - Standard Practice for Operating Light-Exposure Apparatus (Xenon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials; 1996.
J. ASTM E 330-97 – Structural Performance of exterior windows, curtain walls and doors by uniform static air pressure difference.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.
B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
C. Installation Methods, including nailing patterns.
D. 12” Samples of product after architect’s selection.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Provide installer with not less than three years of experience installing similar products.

1.06 WARRANTY

A. Provide 50 year limited siding warranty.
B. Provide 15 year paint/stain warranty.

PART 2 PRODUCTS

2.01 Manufacturer

A. Allura
B. James Hardie
C. Substitutions: See Section 016000 - Product Requirements.

2.02 SIDING

A. Horizontal lap siding:

1. Thickness: 5/16 inch +/- 1mm
2. Length: 12 feet
3. Width: 5-1/4"
3. Style: Cedar lap siding
4. Finish: Factory Stain Finish. Color as selected from standard colors.

B. Soffit Panel:
1. Thickness: 1/4 inch.
2. Length: 12 feet
3. Style: Smooth, Non-Ventilated
4. Width: 5-1/4 inch to match lap siding
5. Finish: Factory Stain Finish

2.03 ACCESSORIES

A. Sheet Metal Flashing: 26 ga min. coated aluminum
B. Nails: Type and length recommended by manufacturer.
C. Touch-Up Paint and Stain.

PART 3 EXECUTION

3.01 EXAMINATION

A. Prior to commencing installation, verify governing dimensions of building and condition of substrate.
B. If substrate preparation is the responsibility of another installer, notify Contractor of unsatisfactory preparation before proceeding.

3.02 PREPARATION

A. Examine, clean, and repair as necessary any substrate conditions that would be detrimental to proper installation.
B. Do not begin installation until unacceptable conditions have been corrected.

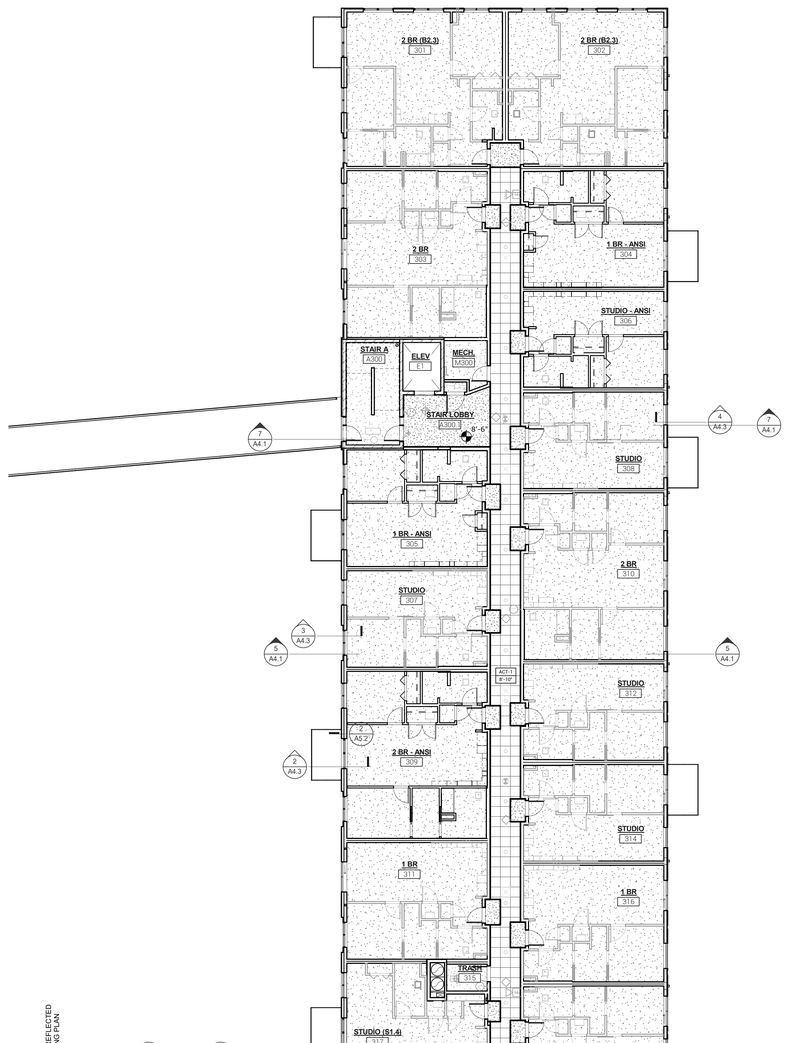
3.03 INSTALLATION

A. Install in accordance with manufacturer's instructions and Drawing details.
1. Read warranty and comply with all terms necessary to maintain warranty coverage.
2. Install in accordance with conditions stated in model code evaluation report applicable to location of project.
3. Use trim details indicated on drawings.
4. Touch up all field cut edges before installing. 5. Pre-drill nail holes if necessary to prevent breakage.
B. Over Wood and Wood-Composite Sheathing: Fasten siding through sheathing into studs.
C. Allow space between both ends of siding panels that butt against trim for thermal movement; seal joint between panel and trim with exterior grade sealant.
D. Joints in Horizontal Siding: Avoid joints in lap siding except at corners; where joints are inevitable stagger joints between successive courses.
E. Install sheet metal flashing above door and window casings and horizontal trim in field of siding.
F. After installation, seal all joints except lap joints of lap siding. Seal around all penetrations. Paint all exposed cut edges.

3.04 CLEANING

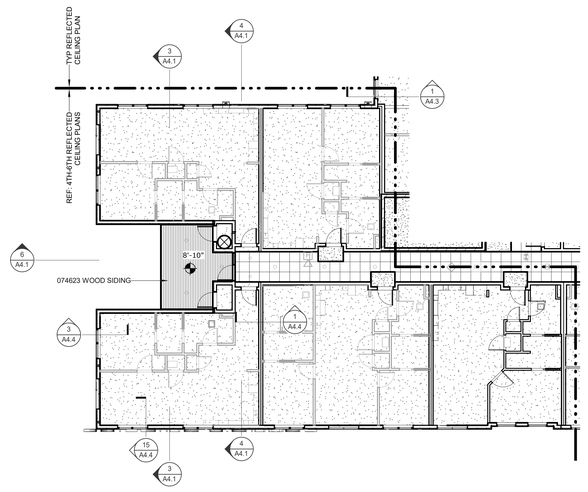
A. At completion of work, remove debris caused by siding installation from project site.
B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION



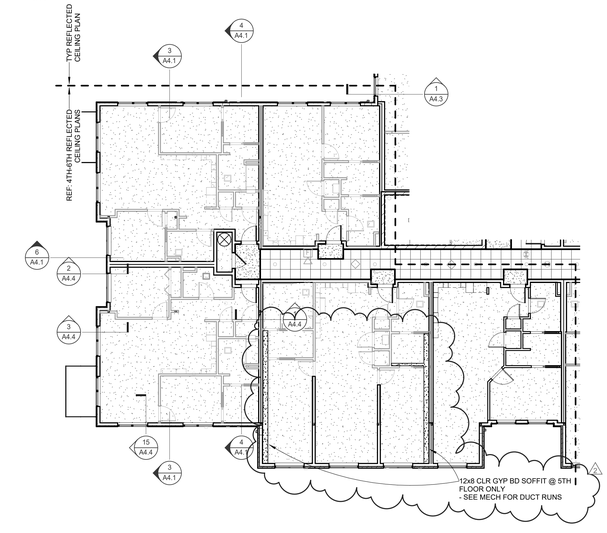
1 THIRD FLOOR REFLECTED CEILING PLAN

3/32" = 1'-0"



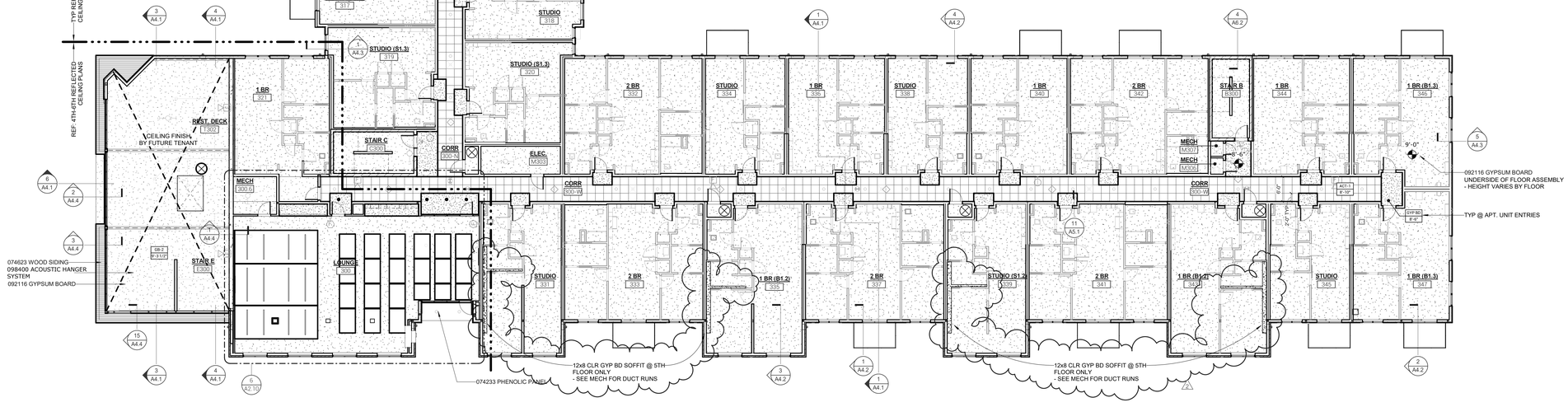
4 SIXTH FLOOR RCP AT NORTH

3/32" = 1'-0"



3 FOURTH & FIFTH FLOOR RCP AT NORTH

3/32" = 1'-0"



RCP FINISHES LEGEND

- **ACT-1:** 2x2 ACOUSTICAL CEILING TILE
- **LWC-1:** LINEAR WOOD CEILING
- **GB-1:** SUSPENDED GYPSUM BOARD ASSEMBLY
- **DEFS-1:** DIRECT APPLIED FINISH SYSTEM
- **SW-1:** 2 HR SHAFT WALL/CEILING ASSEMBLY

RCP FINISHES NOTES

ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE.

ALL EQUIPMENT, DEVICES, AND FIXTURES SHALL BE CENTERED IN THE CEILING TILE UNLESS NOTED OTHERWISE.

IN AREAS WITH AN EXPOSED STRUCTURE, COORDINATE ALL EQUIPMENT, DEVICES, AND FIXTURES FOR A CLEAN AND ORDERED APPEARANCE.

BVH

ARCHITECT
BVH ARCHITECTURE
901 JONES STREET
OMAHA NE 68102
V 402 345 3060
F 402 345 7871
bvh.com

STRUCTURAL ENGINEER
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OMAHA, NE 68154
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F 402 330 5866
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MECHANICAL & ELECTRICAL ENGINEER
MORRISSEY ENGINEERING
4940 N 118TH ST.
OMAHA, NE 68164
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F 402 491 4146
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REVISIONS SCHEDULE		
MARK	DATE	DESCRIPTION
2	5-4-2017	ADD #2

LA VISTA CITY CENTRE
MIXED USE - LOT 15

PROJECT: F16132 **DATE:** 04.17.2017

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REFLECTED CEILING PLANS

NORTH

A8.3

04/20/17 6:12:00 PM

STRUCTURAL NOTES, GENERAL

1. CODE: References to the "Code" in each section shall be as follows:

Building Code:	IBC 2015 with local ammendments
- Occupancy [Risk] Category:	II
Concrete Code:	ACI 318-14, ACI 301-10
Steel Code:	AISC 2010, Specification for Steel Buildings (AISC 360-10), AISC 341-10 Seismic Provisions
Minimum Design Loads for Building:	ASCE 7-10
Masonry Code:	ACI 530-13, 530.01-13
Wood Code:	ANSI/AWC NDS-2015
Cold Formed Steel:	AISI S100-12
Safe Room / Storm Shelter:	ICC 500-14, FEMA 361

2. STRUCTURAL DESIGN LOADS:

FLOOR LIVE LOAD:
- Apartments: 40 PSF
- Mechanical and Electrical Rooms: 100 PSF
- Stairs (including landings) and Elev. Lobbies: 100 PSF
- Public Rooms and Corridors serving them: 100 PSF

ROOF LIVE LOADS:
- Flat and Sloped Roofs: 25 PSF Minimum

SNOW:
- Ground Snow Load: 25 PSF
- Flat-Roof Snow Load (Pf): 17.25 PSF
- Rain on snow surcharge: N/A
- - Drifting Snow Loads: As shown on plans
- Snow Exposure Factor: C_E = 1.0
- Thermal Factor: C_T = 1.0
- Importance Factor: 1.0

WIND:
- Wind Speed (Basic) [(Ultimate)]: 90 MPH
- Exposure Category: B
- Importance Factor: 1.0
- Internal Pressure Coefficient: ± 0.18

SEISMIC:
- Spectral Response Accelerations: S_S = 0.101; S_1 = 0.045
- Site Class: D
- Importance Factor: 1.0
- Seismic Design Category: B

3. FOUNDATION DESIGN CRITERIA:

Foundation design based on the following Geotechnical Documents prepared by Olsson Associates [Olsson Project No.: 016-0546]

- Report of Geotechnical Exploration prepared by Olsson Associates dated May 11, 2016
- Geotechnical Design Memo for City Centre Lot 14 dated January 19, 2017

Allowable Soil Bearing Pressure (with Ground Improvement)
- Continuous Wall Footings: 5,000 PSF
- Isolated Column Footings: 5,000 PSF

Note: All Footing Excavations shall be inspected and approved by the Geotechnical Engineer prior to placing concrete.

4. EXCAVATION AND BACKFILL:

A. All earthwork operations shall be completed in accordance with the Geotechnical Exploration Report.

B. Protect all excavations from damage due to water or freezing temperatures.

C. All Footing excavations shall be inspected and approved by the Geotechnical Engineer prior to placing concrete.

D. See Civil Drawings, Geotechnical Exploration Report, and Specifications for additional requirements.

E. Contractor shall confirm that ALL site preparation has been completed and has been Approved by the Geotechnical Engineer prior to starting excavation for foundation construction.

5. GENERAL NOTES:

A. All work shall comply with requirements of the Building Code, with recommendations of manufacturers, and with recognized workmanship and material standards.

B. Comply with all applicable codes, ordinances, and regulations including those promulgated and enforced by OSHA. The structural design represented by the drawings and specifications is based on interaction of the various components, materials, and systems shown or required by the drawings and specifications. The contractor shall determine the need for and provide all required bracing, shoring, or other means to ensure stability and safety until all work required by the contract documents is complete. When and where necessary to comply with these requirements, the contractor shall provide appropriate additional temporary or permanent connections, shoring, and/or bracing or, in the alternative, shall make appropriate modifications of specified connections and/or members. Where additions to or modifications of specified requirements are proposed, they shall be submitted to the Architect for review and approval. Such review and approval will be only for compliance with the structural and architectural design intent for the work. The adequacy for construction phase stability and safety is the responsibility of the contractor.

C. Adapt requirements of details, sections, plans, and notes at all locations of which conditions are similar.

D. The structural drawings are to be read in view of all other drawings and all specifications. Coordinate all work shown with all other work.

E. Shop drawings for any part of the work shall show the interface with and provisions for related other work including such adaptations of requirements given as may be necessary.

F. Contractor shall cross check dimensions and elevations between architectural, mechanical, and structural plans and notify Architect of any variance before contractor begins work.

G. Lateral shoring of existing utilities and tunnels is the responsibility of the Contractor. See Site and AR plans for locations of existing utilities and tunnels and minimum locations of shoring. Notify Architect immediately if existing conditions conflict with drawings.

6. MECHANICAL, ELECTRICAL, AND PIPING SYSTEMS WORK:

A. See 'Structural Steel Work Notes' for maximum allowable concentrated loads from steel roof deck.

B. Secondary framing, bridging, or other means shall be provided to distribute loads to structural members. Such framing, bridging, or other means shall be shown on the shop drawings for the work of the mechanical, electrical and piping systems.

C. For limitations on excavations, see 'Cast-In-Place Concrete Notes' regarding Footing Work.

D. Location and design weight of Mechanical Units are indicated on the Framing Plans. If the units are heavier or located differently than indicated, notify the Architect/Engineer. Revisions to the framing may be required.

7. SPECIAL INSPECTION:

A. Special Inspection in accordance with the Building Code will be performed per the special inspection schedules.

B. Special Inspections shall be hired and paid for by the owner. Retest expenses for failed inspections will be charged to the contractor.

C. The Contractor shall provide the Special Inspector sufficient notification to allow the required inspections to be made without delaying the construction schedule. The Contractor shall confirm that all inspections

ARCH.	Architect	EA.	Each	STD.	Standard
B.O.	Bottom Of	EOR.	Structural Engineer of Record	STL.	Steel
B.O.L.	Bottom of Lintel	EXIST.	Existing	THK.	Thick
B.O.S.	Bottom of Steel	EXP.	Expansion	S.O.G.	Slab on Grade
BOTT.	Bottom	FND.	Foundation	T.O.	Top Of
BRG.	Bearing	FTG.	Footing	T.O.B.	Top of Beam
BTWN.	Between	F.V.	Field Verify	T.O.F.	Top of Footing
CLR.	Clear	HORIZ.	Horizontal	T.O.S.	Top fo Steel
COL.	Column	H.S.	Headed Studs	T.O.W.	Top of Wall
CONC.	Concrete	JST. BRG.	Joist Bearing	TYP.	Typical
CONT.	Continuous	o.c.	On Center	U.N.O.	Unless Noted Otherwise
COORD.	Coordinate	PL	Plate	VERT.	Vertical
d.b.a.	Deformed Bar Anchor	REINF.	Reinforcing	VMA	Verify with Architect
DBL.	Double	REQ'D	Required	w/	With
DET.	Detail	SIM.	Similar		

CAST-IN-PLACE CONCRETE WORK

1. MATERIALS:

Concrete:

Location:	28-Day Strength	Slump (*)	Max. Aggregate	Air Entrainment	Design Density
Footings and all other concrete not noted below.	3,500 PSI	4"-6"	1"	5%-7%	150 pcf
Foundation Walls.	4,000 PSI	4"-6"	1"	5%-7%	150 pcf
Hollow Core Topping	4,000 PSI	4"-6"	3/4"	N.A.	150 pcf
Slabs-on-Metal Deck	4,000 PSI	4"-6"	3/4"	N.A.	150 pcf
Interior slabs-on-grade	3,500 PSI	4"-6"	3/4"	N.A.	150 pcf
Exterior slabs-on-grade	3,500 PSI	4"-6"	1"	5%-7%	150 pcf

(*) Slump may be increased as needed to make installation easier provided the increased slump is due to the use of proper admixture selection and the W/C ratio does not exceed the maximum per the specifications. All submitted concrete mixes shall indicate the use of such admixtures. Water may not be added in the field.

Other Materials:
- Reinforcing Bars: ASTM A615 Grade 60, deformed.
- Deformed Bar Anchors: ASTM A496, with a minimum tensile strength of 80 ksi.
- Welded Wire Fabric: ASTM A185, flat sheet type.
- Anchor Bolts: ASTM F1554 [GR. 36], Headed Type, U.N.O.
- Weldable Reinforcing Bars: ASTM A706 Grade 60, deformed

2. CONTINUITY:

All reinforcing shall be continuous unless noted otherwise. Continuity at corners and intersections shall be achieved using corner bars and contact lap splices, see typical detail. Continuity at other locations may be achieved using contact lap splices shown on approved shop drawings. Location of lap splices shall be shown on the shop drawings. Unless noted otherwise, the following lap splices shall be used: (All lap splices are class B splices)

Location:	#3	#4	#5	#6	#7	#8	#9	#10	#11
3,000 & 3,500 PSI Concrete:									
- Top Bars (*):	21"	19"	35"	46"	71"	93"	118"	149"	184"
- Other Bars:	16"	22"(**)	27"	35"	55"	71"	91"	115"	142"
4,000 & 4,500 PSI Concrete:									
- Top Bars (*):	16"	19"	25"	36"	61"	80"	102"	129"	159"
- Other Bars:	16"	16"(**)	19"	28"	47"	62"	78"	99"	123"

(*) Top bars are horizontal reinforcing where more than 12" of concrete is cast in the member below the reinforcing.

(**) For #4 epoxy coated rebar, use 27" splice length at 3,000 and 3,500 PSI conc. and 19" at 4,000 and 4,500 PSI.

Mechanical connections may be used in lieu of lap splices provided approval is obtained from the Architect/Engineer. Connections shall develop in tension 125 percent of the specified yield strength of the bar. All mechanical connections shall be shown on the shop drawings and be installed in accordance with the manufacturer's written instructions and the product's ICC-ES report. Submit the product's ICC-ES report for mechanical splice products with shop drawings.

3. GENERAL:

A. All work shall comply with the Building Code and the Concrete Code.

B. Coordinate work with all other work.

C. All reinforcing shall be continous, see notes above. All reinforcing, anchor bolts, and other embedded items shall be secured in place prior to placing concrete.

D. Construction joints shall be keyed joints, unless noted otherwise, with reinforcing continuous through the joint. Construction joints shall be located in a manner not to affect the strength of the concrete. Concrete on one side of construction joints shall not be placed less than 24 hours after placement of concrete on the opposite side of the construction joint.

E. Straight dowels may be 'wet set' in plastic concrete and vibrated if continous special inspection is provided. Dowels with hooks must be secured before pouring concrete.

F. Minimum clear cover from reinforcing to surfaces of concrete shall be as follows, unless noted or detailed otherwise:

LOCATION	Concrete Cover
1. Concrete cast against and permanently exposed to earth:	3"
2. Concrete exposed to earth or weather:	
- #5 bars and Smaller........	1-1/2"
- #6 bars and Larger........	2"
3. Concrete not exposed to weather or in contact with earth:	
a. Slabs, Walls, and Joists:	
- #11 bars and Smaller........	3/4"
- #14 bars and Larger........	1-1/2"
b. Beams and Columns:	
- Primary reinforcement, ties, stirrups, and spirals.......	1-1/12"

G. Clear distance between parallel bars in a layer shall be as shown on the plans with minimum of 1" or the diameter of the reinforcing, whichever is greater. Clear distance between parallel bars in two or more layers shall be as shown on the plans with a minimum of 1" or the diameter of the reinforcing, whichever is greater

4. FOOTING WORK:

A. Pipes and other work which require trenching adjacent to pad footings and parallel to continuous footings shall not be located below lines extending downward from the bottom edges of the footing at a 45-degree angle from the horizontal. Pipes and other work perpendicular to continuous footings may be located beneath the footing. Footing elevations may be lowered if approved on the footing shop drawings.

5. SLAB-ON-GRADE WORK:

A. Coordinate slab-on-grade work with all other work. Provide thickened slabs, depressed slabs, equipment pads, blockouts, etc. as needed. See Arch. plans for elevations and locations.

B. Saw cut control joints in slab to a depth equal to 1/3 the slab thickness.

C. Slabs-on-grade Requirements U.N.O. on the plans:

1. Thickness:
   - At Parking and Recieving Areas...... 5" minimum
   - At other Areas........ 4" minimum
2. Reinforcing:
   - At 5" thick slabs........ 6x6-W2.9xW2.9 w.w.f. at mid-depth of slab
   - At 4" thick slabs........ 6x6-W1.4xW1.4 w.w.f. at mid-depth of slab
3. Control Joints: 10'-0"o.c. maximum each way, unless noted otherwise.

D. Seperate S.O.G. w/ 3/8" expansion joint material from all columns and walls. Differential movement could occur between foundations and slab-on-grade.

E. All slabs-on-grade shall have a 15 mil Class A Vapor Retarder directly beneath the slab.

F. A granular leveling course below the vapor barrier shall be placed with a uniform thickness (4" min.) and be compacted by vibration prior to placing concrete.

G. Granular material beneath the vapor barrier shall Approved by the Geotechnical Engineer.

H. Prior to placing slabs-on-grade granular base, the upper 12" of the subgrade shall be scarified, moisture-conditioned and COMPACTED to a minimum of 98% of the maximum dry density at a moisture content between -2% and +3% of optimum; per ASTM D698, Standard Proctor. Soil lifts shall not exceed 8".

6. CONCRETE SLABS ON METAL DECK:

A. Place concrete slab over metal deck with the minimum thickness described on the plans. The top of the slab shall be placed level to the elevation shown on the plans. Because beams will deflect during erection and concrete placement more concrete will be required than theoretically estimated using a uniform slab thickness.

B. Openings in Slabs:

1. Some, but not necessarily all, openings are shown on the Structural Drawings. Contractor shall coordinate location and size of all openings with other work [Mech., Elec., etc.].

2. Openings in concrete slabs up to 10" in diameter / width may be core drilled or saw cut as long as only one deck flute is interrupted. Openings greater than 10" and not specifically framed or detailed on the drawings must be brought to the attention of the structural engineer.

3. Multiple small openings spaced closer than 12" edge to edge shall be considered one opening and must meet the requirements listed in above.

C. Do not support piping in excess of 250 lb from slab-on-metal deck. Any location where larger loads occur supplemental framing shall be provided to transfer the loading to the steel framing members. All plumbing attachments to slabs and structure shall be designed by the plumbing contractor's engineer.

7. CONCRETE WALLS:

A. Coordinate with architectural and mechanical drawings & specifications for wall locations & locations of openings through walls for doors, windows, louvers, etc. See Architectural plans for the location & type of finish required on any exposed concrete walls.

B. Openings through Walls:

1. All openings through concrete walls shall be formed or sleeved. Sawcutting or core drilling is not permitted. Coordinate openings with all other work.

2. Openings through the concrete for windows, doors, plumbing, etc. are shown on the architectural and mechanical drawings and shall be the rough opening required for installation of the window, door, duct., etc.

3. For openings through concrete walls less than 1'-6" in maximum direction, relocate wall reinforcing to each side of opening and place (2)-#4's on each side of the opening extending 2'-0" past each edge of the opening.

C. Walls shall have dowels into the footing at each vertical bar matching the size and spacing of the vertical bars, unless noted otherwise. Dowels shall have 90° hook 3" clear the bottom of the footing, unless noted otherwise.

POST INSTALLED ANCHORS

1. MATERIALS:

Concrete:

- Adhesive Anchors: Hilti "HY200" Safeset, Hilti HY500 at diamond cored holes, Simpson "AT, ET, or SET", or Red Head "Ceramic 6" adhesives when anchoring into concrete.
- Mechanical Anchors: Hilti "Kwik Bolt TZ" or Simpson "Strong-Bolt"

Masonry:

- Adhesive Anchors: - Hilti "HY70" or Simpson "SET" adhesives with screen tube when anchoring into brick or hollow CMU. - Hilti "HY200" or Simpson "SET" adhesives when anchoring into grouted solid CMU.
- Mechanical Anchors: Hilti "Kwik Bolt 3" anchors U.N.O.

2. Equivalent product may be submitted.

3. Submit ICC report for all post installed anchors.

4. Installation of post installed anchors shall be subject to continous inspection.

STRUCTURAL STEEL WORK

1. MATERIALS:

Wide Flange Beams and Tee Shapes:	ASTM A992, Grade 50
Angles, Channels, Plates, and Bars:	ASTM A36
Steel Tubes:	ASTM A500, Grade C
Steel Pipes:	ASTM A53, Type E or S, Grade B
Headed Studs:	ASTM A108, Grade 1015
Anchor Bolts:	ASTM F1554 [Gr. 36], Headed Type, U.N.O.
Non-High Strength Bolts:	ASTM A307
High Strength Bolts:	ASTM A325 bearing type connections, U.N.O.
Welding Electrodes:	E70
Deformed Bar Anchors:	ASTM A496, with a minimum tensile strength of 80 ksi.

2. STRUCTURAL STEEL:

A. All steel work shall comply with the Building Code and Steel Code.

B. Provide structural steel work as shown on the drawings and submit shop drawings for the same. Where the design of members or connections are not specifically noted, provide such in accordance with the latest AISC specifications and submit the design with the shop drawings for approval.

C. Steel shall be fabricated to achieve the elevations, slopes, and geometry shown on the Architectural and Structural Drawings. Structural steel shall provide a uniform surface for the attachment of metal deck.

D. All structural steel shapes, plates, bolts, etc. exposed to weather shall be galvanized.

1. Touch-up all field welding work of galvanized members w/ ZRC Cold Galvanizing

E. All bolted connections shall be "snug-tight" unless noted otherwise on structural details.

F. Design is based on UL ratings that follow. See architectural code plans for full description and extent of ratings.

1. Floor Deck: UL D902 2 Hours
2. Floor Beams: UL N823 2 Hours
3. Roofs: UL P819 1 Hour
4. Columns: UL X829 2 Hours

3. COMPOSITE STEEL FLOOR DECK:

A. All composite steel floor deck work shall comply with SDI - Steel Deck Institute "Specifications and Commentary for Composite Steel Floor Deck".

B. Composite Steel Floor Deck Properties:

1. Vulcraft "2VLI" with the following minimum section properties:
   - Depth: 3"
   - Thickness: 20 ga
   - Finish: Galvanized, U.N.O.
   - Yield Stress: 50 ksi

2. Vulcraft "2VLPA" with the following minimum section properties:
   - Depth: 2"
   - Thickness: 20 ga / 20 ga
   - Finish: Galvanized, U.N.O.
   - Yield Stress: 50 ksi

C. Composite steel floor deck shown on the drawings shall be used in 3 or more span condition.

D. Composite steel floor deck shall be attached as follows, unless noted otherwise on the drawings:

1. Fasten deck to steel supports with 5/8" diameter puddle welds at 36/4 pattern.

2. Where deck is parallel to steel, attach deck to steel with 5/8" diameter puddle welds at 12"o.c., unless noted otherwise on plans

E. Fasten side laps of individual sheets together with (4)-#10-16 Teks screws per span.

STRUCTURAL COLD-FORMED METAL FRAMING WORK

1. GENERAL:

A. All cold-formed metal framing work shall comply with the Building Code and Cold Formed Steel Code.

B. Structural lightgage framing shall be constructed to achieve the geometry shown on the Architectural and Structural Drawings.

C. Structural lightgage framing member thicknesses and depths shall be as noted here and on the Drawings. Unless noted otherwise, stud and track properties are as follows:

Exterior Walls:

- 6" Studs w/ Unsupported Lengths ≤ 14'-0":	Studs - 600S162-43 [33] at 16"o.c.
	Tracks - 600T125-43 [33]
- 6" Studs w/ Unsupported Lengths > 14'-0" and ≤ 16'-0":	Studs - 600S162-54 [33] at 16"o.c.
	Tracks - 600T125-54 [33]
- 6" Studs w/ Unsupported Lengths > 16'-0" and ≤ 18'-0":	Studs - 600S162-68 [33] at 16"o.c.
	Tracks - 600T125-68 [33]

Note: Locations where studs are attached to concrete stem walls, HSS wind girts, floors and roofs are considered support locations in order to determing unsupported length.

D. Structural lightgage framing member minimum yield strenghts:
- 18 gage and thinner: 33 KSI
- 16 gage and thicker: 50 KSI
- Minimum yield strengths apply to all studs, tracks, flat straps, gussets, and other framing members, unless specifically noted otherwise.

E. Connnection material noted on the plans shall be by 'The Steel Network, Inc.' of Raleigh, North Carolina [www.steelnetwork.com / 1-888-474-4876] or Approved equivalent.

2. WALLS:

A. Attach lightgage framing that is continuous along other Work as follows, unless noted otherwise on the Drawings:

1. Continuous bottom wall track along concrete or masonry: Use (1)-Hilti 0.157 dia. 'X-U' universal knurled shank fastener at 16"o.c. [1 1/2" embedment], unless noted or detailed otherwise.

2. Continuous wall track or soffit track along HSS Steel Tubes or Structural Steel: Use (1)-Hilti 0.157 dia. 'X-U' universal knurled shank fastener at 16"o.c., unless noted or detailed otherwise.

3. Where OSB or Gypsum sheathing is not attached to wall, provide lateral bracing of both flanges using straps.

4. All Exterior Wall Studs shall be laterally braced in their weak axis with Dietrich SPAZZER 5400 bridging (or Approved Equal) at 4'-0"o.c. max. and installed per manufacturer's instructions.

MASONRY WORK

1. MATERIALS:

Reinforcing Bars:	ASTM A615 Grade 60, deformed
Weldable Reinforcing Bars:	ASTM A706 Grade 60, deformed
Concrete Masonry Units:	Grade N, F'm = 1500 psi (Type M or S mortar)
Grout Strength:	2,000 psi at 28 days

2. CONTINUITY:

All wall and foundation reinforcing shall be continuous unless noted otherwise. Continuity at corners and intersections shall be achieved using corner bars and contact lap splices. Continuity at other locations may be achieved using contact lap splices shown on approved shop drawings. Location of lap splices shall be shown on the shop drawings. Unless noted otherwise, the following lap splices shall be used.

Bar Size:	#3	#4	#5	#6	#7
Masonry Lap Splice:	15"	20"	25"	30"	35"

Mechanical connections may be used in lieu of lap splices provided approval is obtained from the Architect/Engineer. Connections shall develop in tension 125 percent of the specified yield strength of the bar. All mechanical connections shall be shown on the shop drawings and be installed in accordance with the manufacturer's written instructions and the product's ICC-ES report. Submit the product's ICC-ES report for mechanical splice products with shop drawings.

3. All masonry work shall comply w/ the Building Code and Masonry Code.

4. Provide horizontal "ladder" or "truss-type" wire joint reinforcing at 16" o.c. U.N.O.

5. Requirements for masonry wall construction are given on the drawings. All reinforcing shown shall be continuous in grout-filled cells.

6. Provide dowels in footings and in concrete walls at each vertical rebar. For footings less than 2'-0" deep, dowels shall have a 90° standard hook unless noted or detailed otherwise. The dowels shall be the same size and spacing, and lap spliced with the vertical reinforcing in the wall.

7. Locate vertical reinforcing at corners, jambs, intersections, each side of control joints, and at spacing noted on the drawings.

8. Unless noted otherwise on the plans, all openings shall have a lintel at the head. For any openings not shown on plan and less than 4'-8" through CMU, the lintel shall be an 8" deep minimum bond beam bearing 8" on each jamb. A 1"ø hole shall be cut in the bottom of the lintel unit at each jamb to place the vertical jamb reinforcing. The bond beam shall be grouted solid, reinforced with (2)-#4's horiz. bottom, and the course above grouted solid. Where a lintel is not shown on the drawings and cannot be made in accordance with these requirements, submit the opening size and location to the Architect/Engineer for determination of the lintel to be used.

9. Submit reinforcing shop drawings for all work. Provide wall elevations showing the location of openings in masonry and the location of reinforcing including lap splices. Vertical reinforcing lengths shall be coordinated with heights of CMU to be placed.

10. Use "fine" grout having a slump of 8 to 11 inches. Place grout in lifts not exceeding 4'-8" unless approved by architect.

11. All interior non-load bearing CMU walls shall be as shown on the Architectural drawings. All openings shall have a lintel at the head of the opening and reinforced jambs. Provide 16" minimum between adjacent openings.

12. Locate control joints where shown on drawings. Bond beam reinforcing shall be continuous through control

EXTERIOR VENEER LINTELS

1. All veneer shall be supported at the head of openings.

2. All openings in brick veneer shall have a lintel at the head of the opening. Unless noted otherwise, use a galvanized steel angle bearing 8" at each end on a 4"x8" 16oz. Copper plate or (2)-layers of roofing felt as follows:

- Openings up to 4'-0": L5x3x5/16" [L.L.V.] angle
- Openings wider than 4'-0" and up to 6'-0": L5x3x3/8" [L.L.V.] angle
- Openings wider than 6'-0": L6x4x3/8" [L.L.V.] angle

Any opening that can not be made in accordance with the requirements above and are not detailed on the Structural Drawings, shall be brought to the attention of the Architect/Engineer for determination of lintel size.

PRECAST CONCRETE

1. PRECAST FRAMING MEMBERS: Hollowcore, Double Tees, Structural Beams

A. GENERAL:

a. All connections of the precast members and their attachments to other work shall be included in the Precast Work. See specifications for additional requirements not given on the drawings.

b. Precast member sizes are shown on the Structural drawings. The member size may be revised for purposes related to manufacture, handling, shipping, or installation if approval of the change is obtained from the Architect/Engineer.

c. Coordinate precast work with all other work. For items to be embedded in other construction, furnish templates if required for accurate placement. See specifications for additional requirements not given on the drawings.

d. All openings in floors whether cast in the plant or permitted to be made in the field shall be taken into consideration in the design and fabrication of the precast beams and hollow-core slabs. All openings shall be shown on the shop drawings. In general, openings shall be formed in the beams and hollow-core slabs. Openings may be made in the field provided the procedures for making such openings are clearly noted on the shop drawings. The Precast Concrete shop drawings shall be reviewed and signed by the Mechanical and Electrical contractors to indicate that they have reviewed the opening sizes and locations.

e. For precast units fabricated in a Plant not certified in the appropriate product groups and categories by the Precast/Prestressed Concrete Institutes (PCI) Plant Certification Program, Special inspections shall be made during placing of reinforcing steel, embedded items, and concrete placement. The Special Inspector need not be present during entire reinforcing steel placing operations, provided he has inspected for conformance with the approved plans, prior to placing concrete.

f. The topping thickness on precast floors will vary due to the natural camber of the precast. All reinforcing in the topping shall be continuous through construction joints. Control joints in the topping are not allowed.

B. PRECAST CONCRETE DESIGN CRITERIA:

The precast concrete supplier is responsible for the design of the precast to resist all loads including, but not limited to, the following:

a. GRAVITY LOADS:

1. Self Weight of the precast members: Hollow-core Slabs, P.C. Beams, and P.C. Columns.
2. Concrete topping.
3. Superimposed Dead Load of 15 psf.
4. Superimposed Live Load.
5. Superimposed loads from bearing walls and columns as shown on sheets. Note: The live loads shown are already fully reduced. Loads are unfactored.

b. Fabrication & Erection Forces

c. FIRE RATING: Precast concrete shall meet requirements under applicable codes for a"3-Hour" rating. UL labels are not required. The hollowcore slabs may use the bonded concrete topping in the fire-rating calculations.

C. MECHANICAL/ELECTRICAL EQUIPMENT SUPPORT:

a. Powder actuated fasteners are NOT permitted for support of suspended Mechanical and Electrical equipment from precast floor members.

b. Contractor shall receive written approval of proposed support installation from the manufacturer of precast members before proceeding with work.

c. Field drilled hole in precast members shall not damage the main reinforcing bars or prestressed cables,unless specifically noted as acceptable by the precast manufacturer.

1. Fabricator shall plan for as many as (1)-strand per plank to be cut for plumbing installation

WOOD FRAMING WORK

1. GENERAL:

A. All members shall be framed, anchored, tied and braced so as to develop the strength and rigidity for the purpose for which they are used. Unless noted otherwise on the drawings, connect members in accordance with the "Fastening Schedule" of the Building Code.

B. Hardware noted on the plans shall be Simpson Strong-Tie as manufactured by Simpson Company of San Leandro, California. An equivalent anchor manufactured by USP is acceptable subject to approval by the Architect/Engineer. The contractor shall submit for approval any proposed substitutions.

C. WOOD MEMBER CONNECTIONS:

1. Connect multiple individual framing members that are parallel and in contact thus:

2 Members:	2 rows of 10d nails at 12"o.c.
3 Members:	2 rows of 16d nails on each face at 12"o.c.
4 or 5 Members:	2 rows of 1/4"dia. Simpson SDS Wood Screws or Equal spaced at 12"o.c. Screw length shall match the total thickness of the built-up members.
> 5 Members:	3/4"Ø A307 Thru-bolts at mid-depth, spaced at 12"o.c.

2. Unless noted otherwise on the Drawings, connect joists and rafters to wood members with Simpson 'LUS' hangers matching the joist depth. Unless noted otherwise, use the LUS (hanger) - 2 where members are doubled. Provide hangers with sloped or skewed seats as required.

D. PRESERVATIVE PRESSURE-TREATMENT:

1. All wood members shall be treated where in contact with concrete, masonry or concrete walls and at all exterior conditions. Treated members shall be Southern-Pine No. 2, unless noted otherwise. Interior sill or rim plates that are protected from weather and in contact with concrete or masonry shall be borate-treated members that are not corrosive to fasteners.

2. All Simpson hardware in contact with a wood member pressure treated with a preservative other than borate shall be hot-dipped galvanized or "Z-Max" galvanized, and all nails, bolts, screws and other fasteners shall be hot-dipped galvanized.

2. COLLATED GUN-DRIVEN NAILING:

A. Collated nails used in nail guns shall meet the requirements of ASTM F1667 and shall be of the following sizes:

Specified Nail Size	Collated Nail Diameter	Collated Nail Length
8d Common	0.131"	2 1/2"
10d Common	0.148"	3"
12d Common	0.148"	3 1/4"
16d Common	0.162"	3 1/2"

B. Nail gun pressures shall be adjusted to install the nail into the substrate and in no case shall the nails be over-driven.

3. STUD WALLS:

A. Wall Stud and Blocking Materials:

1. SPF No.: 2 with the following NDS's minimum "Reference" design values:
   - F_b: 875 PSI
   - F_c: 1,150 PSI (Parallel)
   - E: 1,400,000 PSI

B. Top and Bottom Plate Material:

1. Southern-Pine No. 2 OR Doug-Fir No. 2 with the following NDS's minimum "Reference" design values:
   - F_c: 625 PSI (Perpendicular)
   - E: 1,600,000 PSI

2. Plates in Contact with Concrete or Masonry shall be treated with Borate

C. Wall Stud Grade, Sizes and Spacing; unless noted otherwise:

Wall Location	Size/Spacing	Grade
Exterior Walls and Interior Bearing Walls:	2x6's at 16"o.c. [2x8's at Corridor Plumbing Walls]	SPF No.:2
Load Bearing Transverse Party Walls:	2x6's at 16"o.c.	SPF No.:2
Non-Load Bearing Transverse Party Walls:	2x4's at 16"o.c.	SPF No.:2

D. Provide beams, bearing studs and jamb studs for openings as shown on the drawings.

E. At locations where holes greater than 1" are required through the top plates of stud walls to accommodate items such as roof drains and plumbing, provide studs between the hole and the truss located on each side of the hole.

F. Double top plates shall be installed to provide overlapping at corners and at intersections.

G. Unless noted or detailed otherwise, sill plates for interior non-bearing partition walls shall be anchored to the concrete floor slab per the Building Code using HILTI 'X-CF 72' sill plate fasteners or approved equal. Fasteners shall be installed in accordance with the manufacturer's ICC-ES Evaluation Report.

4. JOISTS, HEADERS, RAFTERS:

A. Use Doug-Fir No.: 2, unless noted otherwise, with the following NDS's minimum "Reference" design values:

F_b:	900 PSI	F_c:	625 PSI (Perpendicular)
F_v:	180 PSI	E:	1,6000,000 PSI

5. LAMINATED VENEER LUMBER (LVL's):

A. 2.0E 1-3/4" Microllam LVL's as manufactured by I-LEVEL Trus Joist, 2.0E 1-3/4" RidgeLam LVL's as manufactured by Roseburg Framing System, or Approved equivalent with the following minimum design stresses:

F_b:	2,600 PSI	F_c:	750 PSI (Perpendicular)
F_v:	285 PSI	E:	2,000,000 PSI

6. TREATED PARALLAM WOOD BEAMS:

A. 2.0E Parallam Plus PSL's with Wolmanized Preservative Protection as manufactured by Trus-Joist MacMillan Corporation or Approved equal with the following minimum design stresses:
Service Level 2

F_b:	1,827 PSI	F_c:	368 PSI (Perpendicular)
F_v:	197 PSI	E:	1,460,000 PSI

7. LVL/LSL RIBBON:

A. 1.3E 1 1/2" Timberstrand LSL's as manufactured by I-LEVEL Trus Joist, 1.5E 1-1/2" RidgeLam LVL's as manufactured by Roseburg Framing System, or Approved equal with the following minimum "base" design stresses:

F_b:	1,700 PSI	F_c:	575 PSI (Perpendicular)
F_v:	220 PSI	E:	1,300,000 PSI

8. WOOD POSTS:

A. Douglas-Fir No.: 2, unless noted otherwise, with the following NDS's minimum "Reference" design values:
6x6's and 4x6's

F_b:	750 PSI	F_t:	475 PSI
F_c:	700 PSI (Parallel)	E:	1,300,000 PSI

B. 1.8E Parallam PSL's as manufactured by I-LEVEL Trus Joist or Approved equal with the following minimum "base" design stresses:

F_b:	2,400 PSI	F_t:	1,755 PSI
F_c:	2,500 PSI (Parallel)	E:	1,800,000 PSI

9. SHEATHING:

A. FLOOR SHEATHING:
1. 3/4" Tongue and Groove plywood or orientated strand board, 48/24 span rating, Exposure I.

B. ROOF SHEATHING:
1. 19/32" plywood or oriented strand board, 40/20 span rating, Exposure I.

C. EXTERIOR WALL SHEATHING:
1. Huber Zip System R-Sheathing System: 1-1/2" nom. thick.

D. PARTY WALL/SHEAR WALL SHEATHING:

10. SHEATHING ATTACHMENT:

A. Sheathing shall be attached per the following, unless noted otherwise on the drawings:

Location	Blocking at Panel Edges	Attachement at Panel Edges	Attachment at Other Members
Roofs	2x4 min. at Hips, Ridges, and Valleys. Plyclips at all other locations	8d nails at 6"o.c.	8d nails at 12"o.c.
Floors	Not Required	10d nails at 6"o.c.	10d nails at 12"o.c.
Exterior Walls	Required	0.131"x3"min. shank nails @ 3"o.c.	80.131"x3"min. shank nails @ 12"o.c.
Shear Walls	See "Shear Wall Schedule"	See "Shear Wall Schedule"	See "Shear Wall Schedule"

Note:
- Roof Sheathing shall be installed with face grain perpendicular to supports and continuous over 2 or more supports. Stagger the 8'-0" panel dimension 4'-0".
- Floor sheathing shall be glued to supports prior to fastening.

11. WOOD FLOOR TRUSS SYSTEMS:

A. Design, fabricate and install wood truss systems where noted on the plans. Comply with all applicable codes, regulations, and written recommendations of the truss designer and fabricator. See Specifications for Truss design and submittal requirements.

B. The wood floor truss system shall be designed for the following minimum loads. Design trusses for other loads as shown on the drawings:

Loading:
- Top Chord Live Load: See "Structural Notes, General" Item No.: 2 and for loads shown on the drawings.
- Top Chord Dead Load: 25 PSF
- Bottom Chord Dead Load: 10 PSF
- Additional Loading: Shown on plans

Deflection:
- Total Load: L/360
- Live Load: L/480

C. Trusses shall be 3-1/2" wide. Trusses shall have a maximum spacing of 24". Truss spacing shall be as shown on the drawings. Coordinate spacing with plumbing, mechanical and all other work. Show truss locations on shop drawings.

D. Provide appropriate bracing and strongback/impact bridging as recommended by the truss manufacturer, but not less than the following:
- 0'-10'-0" Span: None Required
- 10'-0" to 20'-0": One row near midspan
- Over 20'-0": Two rows near 1/3 points

E. Strongbacks shall be a 2x6 oriented vertically and nailed to a vertical web member of the truss with 3-16d nails. Splice strongbacks with a 2x6x4'-0" w/16d nails at 6". Show strongback details on the shop drawings.

F. Coordinate wood-framed floor system work with all other work including MEP work.

12. WOOD ROOF-FRAMED SYSTEM:

A. General Requirements

1. Provide complete wood-framed roof system including prefabricated wood trusses, other prefabricated components, blocking, bracing, bridging, connectors, plywood roof sheathing, and any other materials or members which may be required for all buildings or portions of buildings unless noted otherwise.

2. The arrangement, position, shape, and details of the framing shall accommodate all other work as shown on the drawings. Members shall be spaced as required by design but not more than 24 inches.

3. The shape of the completed systems shall conform to the drawings. The elevation of the bottom chord of the trusses shall be raised at specific locations shown on the drawings to accommodate either higher ceilings or mechanical work.

4. Member Sizes: All truss top chords shall be 2x4 minimum and bottom chords shall be 2x4 minimum, unless noted otherwise.

5. Coordinate wood-framed roof system work with all other work including MEP work.

B. Design Requirements:

1. Design, fabricate, and install all parts of the systems to conform to applicable building codes and regulations and to the requirements of plans and specifications.

2. Design wood trusses for the following loads and for other criteria noted on the drawings:

a. Minimum Top Chord LIVE LOAD: 25 PSF (Load Duration Factor: 1.0)

b. Top Chord SNOW LOAD: See Loads Section
** Calculate snow loads including drifting and unbalanced loading in accordance w/ the Code.

c. Top Chord DEAD LOAD: 10 PSF

d. Bottom Chord DEAD LOAD: 10 PSF

e. ADDITIONAL LOADING: As noted on the Plans and Sections

f. The Chords of All trusses shall be designed for the following concentrated loads acting at any point along the Chord of the truss:
- Top Chord 200 lb. minimum
- Bottom Chord 200 lb. minimum

Note:
Concentrated load does not act concurrently with the top and bottom chord dead and live loads.

g. Wind Load: See Loads Section

Note:
- Maximum roof dead load used to resist wind load uplift shall be as follows:
  6 psf on the top chord.
  3 psf on the bottom chord.

h. Deflection:
- Total Load: L/240
- Live/Snow Load: L/360

3. Compression chord braces, other braces, bridging, or any other members or connectors required to assure proper performance of the systems are to be included in the design, fabrication, and erection of the systems.

4. Where bracing is required to reduce the buckling length of individual truss members, design the bracing and connections. Bracing may be either "T" bracing or continuous lateral bracing. Continuous lateral bracing shall be stabilized by diagonal bracing in the plane of the truss member being braced. All bracing and bracing details shall be shown on the truss shop drawings.

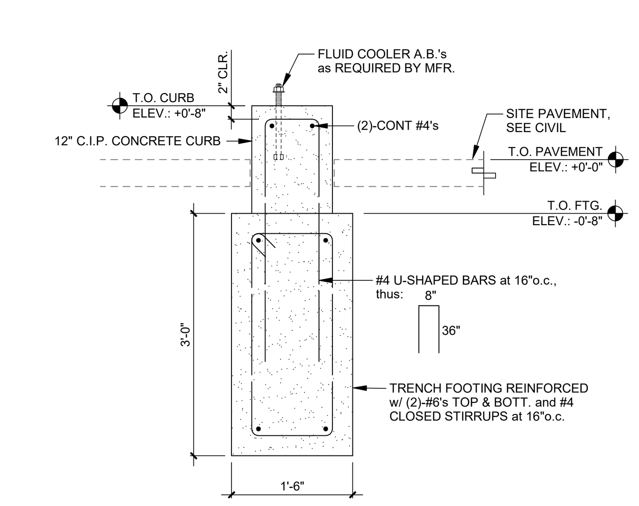
C. Submittals:

1. Truss Placement Drawing: The truss placement drawing shall show the location of all trusses, the identification of each truss,truss to truss connections, connection of trusses to supporting structure, location where lateral bracing of truss members is required, details for the installation of lateral bracing and stabilization of lateral bracing, and all other information needed for installation of the wood framed roof system. Provide handeling and erection instructions.

Individual Truss Drawings: The individual truss drawings shall show the design loads, truss geometry, lumber size and grade, member forces, metal plate manufacture, metal plate size, truss reactions, and locations where compression chord bracing is required. The 'Roof Truss System' shall be designed by a Professional Engineer registered in the State of Nebraska. Submittals shall include Individual Truss Drawings signed and sealed by the same engineer.

D. Connection of Trusses to Supporting Walls: "Toe-nails" will not be allowed. Connect trusses at all bearings with Simpson connectors as shown on the drawings. Where not specifically noted on the drawings connect individual trusses at all bearings as a minimum with Simpson "H1" ties at exterior walls, Simpson "H2.5T" ties at interior walls, and girder trusses to bearing studs with Simpson "LGT" tiedowns.

Note: Attachment of Trusses to bearings noted above and on the Drawings are a minimum. If actual uplift exceeds the capacity of the hanger specified, Truss Manufacturer shall indicate those locations along with the corresponding uplift on the 'Truss Placement Drawing'. Structural Engineer (TD2) will then determine actual hanger to be used at those locations after review of Shop Drawings.



1 FLUID COOLER FOOTING
3/4" = 1'-0"

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REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
1	5/4/17	Addendum #2

LAVISTA CITY CENTRE
MIXED USE - SOUTH

PROJECT: F16132 DATE: 04.17.2017
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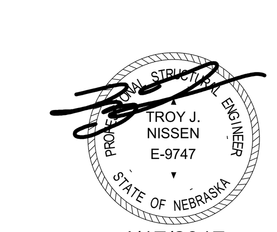

4/17/2017

STRUCTURAL NOTES

NORTH

S0.00

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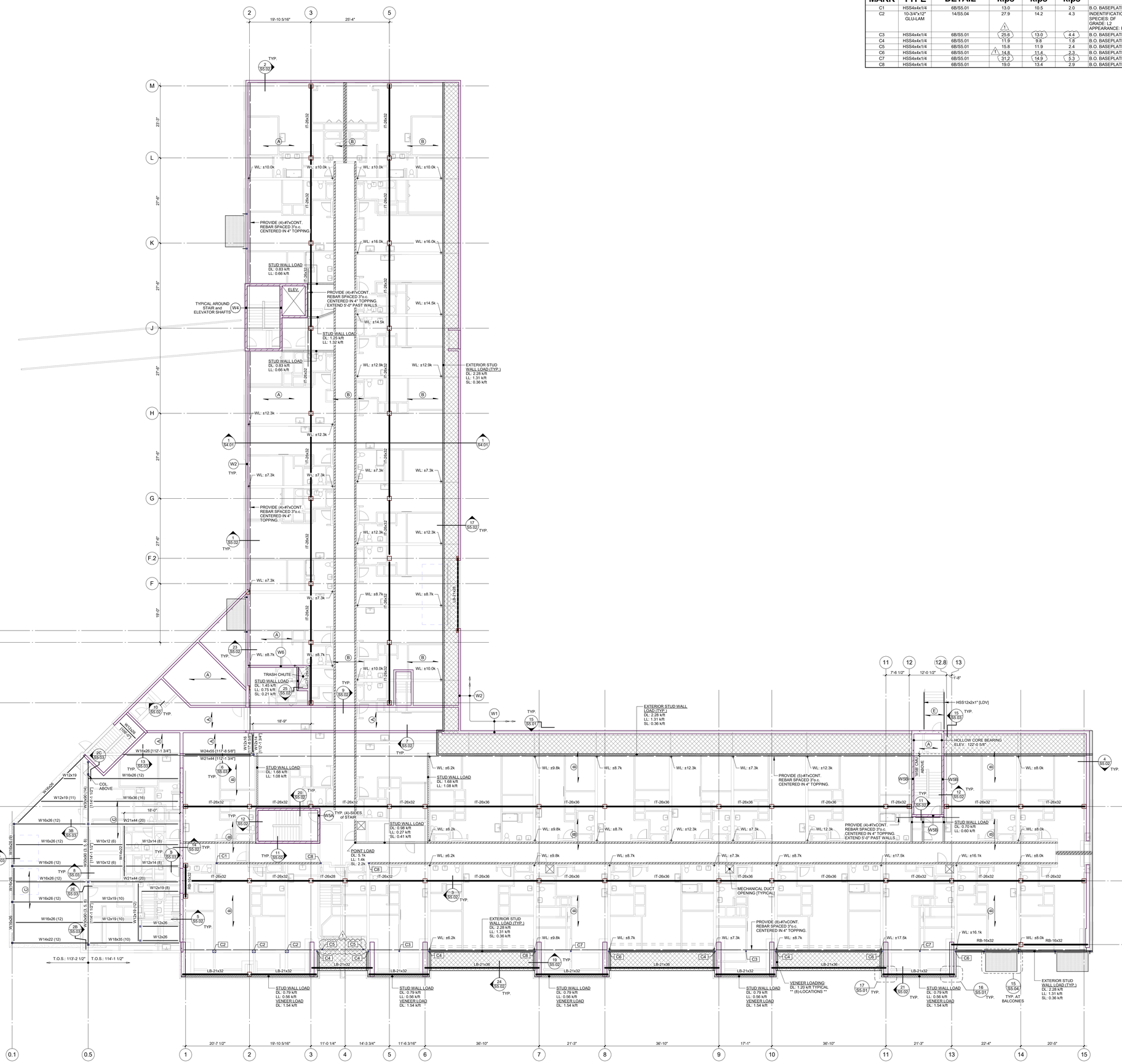
COLUMN SCHEDULE

MARK	TYPE	BASEPLATE DETAIL	DL, kips	LL, kips	SL, kips	REMARKS
C1	HSS4x4x1/4	6B/S5.01	13.0	10.5	2.0	B.O. BASEPLATE: 119'-2 1/8"
C2	10-3/4"x12" GLU-LAM	14/S5.04	27.9	14.2	4.3	INDENTIFICATION No.: 2 SPECIES: DF GRADE: L2 APPEARANCE: PREMIUM
C3	HSS4x4x1/4	6B/S5.01	25.6 (1)	13.0	4.4	B.O. BASEPLATE: 119'-2 1/8"
C4	HSS4x4x1/4	6B/S5.01	11.9	9.8	1.8	B.O. BASEPLATE: 119'-2 1/8"
C5	HSS4x4x1/4	6B/S5.01	15.8	11.9	2.4	B.O. BASEPLATE: 119'-2 1/8"
C6	HSS4x4x1/4	6B/S5.01	14.8 (1)	11.4	2.3	B.O. BASEPLATE: 119'-2 1/8"
C7	HSS4x4x1/4	6B/S5.01	31.2	14.9	5.3	B.O. BASEPLATE: 119'-2 1/8"
C8	HSS4x4x1/4	6B/S5.01	19.0	13.4	2.9	B.O. BASEPLATE: 119'-2 1/8"



THIRD FLOOR FRAMING PLAN

3/32" = 1'-0"

THIRD FLOOR FRAMING PLAN NOTES:

1. SEE STRUCTURAL NOTES ON SHEET S0.00.
2. COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCH. DRAWINGS.
3. FINISHED FLOOR (T.O. CONCRETE) ELEVATION = 119'-0 5/8"
4. (X) : INDICATES SPAN DIRECTION OF HOLLOW-CORE SLABS OR DECK:
   - (A) : 8" THICK HOLLOW-CORE SLABS w/ 4" BONDED STRUCTURAL TOPPING: 3-HOUR FIRE RATING
   - (B) : 12" THICK HOLLOW-CORE SLABS w/ 4" BONDED STRUCTURAL TOPPING: 3-HOUR FIRE RATING
   - (C) : 4 1/2" N.W. CONC. ON 2VLIPA 20/20 ACOUSTICAL CELLULAR DEC (TOTAL THICKNESS: 6 1/2") w/ 6x6-W2.9xW2.9 WWF.
   - (E) : 3" N.W. CONC. ON 2VLI GALV. COMPOSITE DECK w/ 6x6 W1.4xW1.4

   REINFORCE ALL CONCRETE TOPPING w/ #4's @ 18"o.c. EA. WAY or 4x4- W4.0xW4.0 WELDED WIRE MESH [FLAT SHEET TYPE and OVERLAP MESH 8" AT SPLICES]. REINFORCING SHALL BE CHAIRED IN PLACE AT MID-DEPTH OF THE TOPPING. PROVIDE ADD'L. REINFORCING AS NOTED ON THE PLANS and/or SECTIONS.
5. ☐ : INDICATES STEEL COLUMN BEARING ON HOLLOW-CORE TOPPING, SEE COLUMN SCHEDULE FOR LOADS
6. ● : INDICATES SIMPSON HOLDOWN BEARING ON HOLLOW-CORE TOPPING, SEE PLAN FOR LOADS
7. ▨ : INDICATES BEARING WALL ON HOLLOW-CORE TOPPING.
   WALL LOADING: UNLESS NOTED OTHERWISE ON PLAN
   DL: 2.53 k/ft
   LL: 1.56 k/ft
   SL: 0.44 k/ft
8. ALL WALL, COLUMN, AND HOLDOWN LOADS INDICATED ON THE PLAN ARE UN-FACTORED AND HAVE ALREADY BEEN REDUCED.
9. C- : COLUMN MARK, SEE SCHEDULE ON THIS SHEET.
10. OPENINGS IN PRECAS BEAMS (3/S5.02): BEAMS 10'-0" AND LESS: NO OPENINGS, 11'-0"-20'-0" : ONE OPENING CENTERED, 21'-0" AND LONGER: (2) OPENINGS AT 1/3 POINTS.
11. ▨ : INDICATES NON-COMPOSITE CONCRETE TOPPING OVER MEMBRANE OVER HOLLOWCORE.

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REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
1	5/4/17	Addendum #2

LAVISTA CITY CENTRE MIXED USE - SOUTH

PROJECT: F16132 **DATE:** 04.17.2017

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REGISTERED PROFESSIONAL ENGINEER
TROY J. NISSEN
E-9747
STATE OF NEBRASKA
4/17/2017

THIRD FLOOR FRAMING PLAN

NORTH

S2.03

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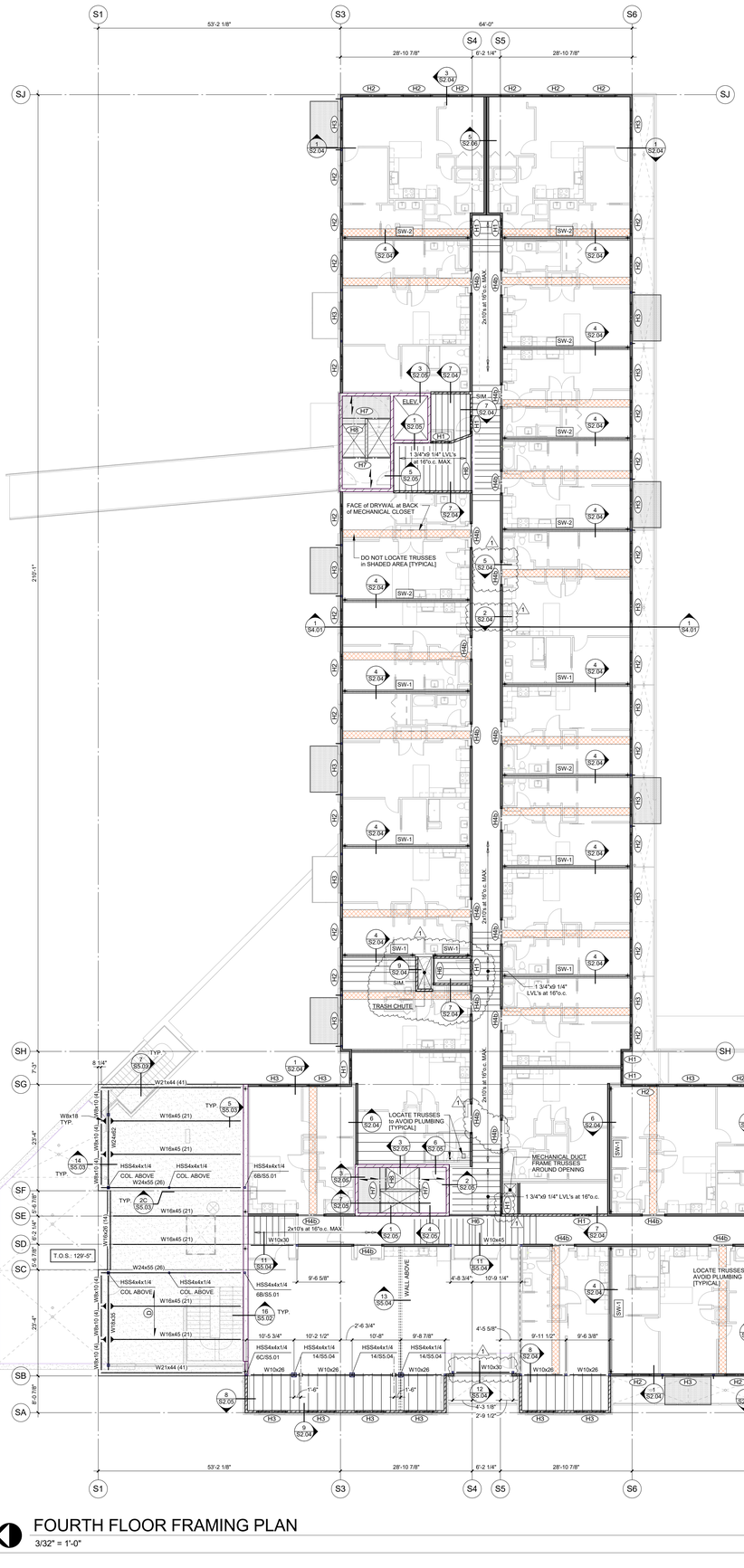
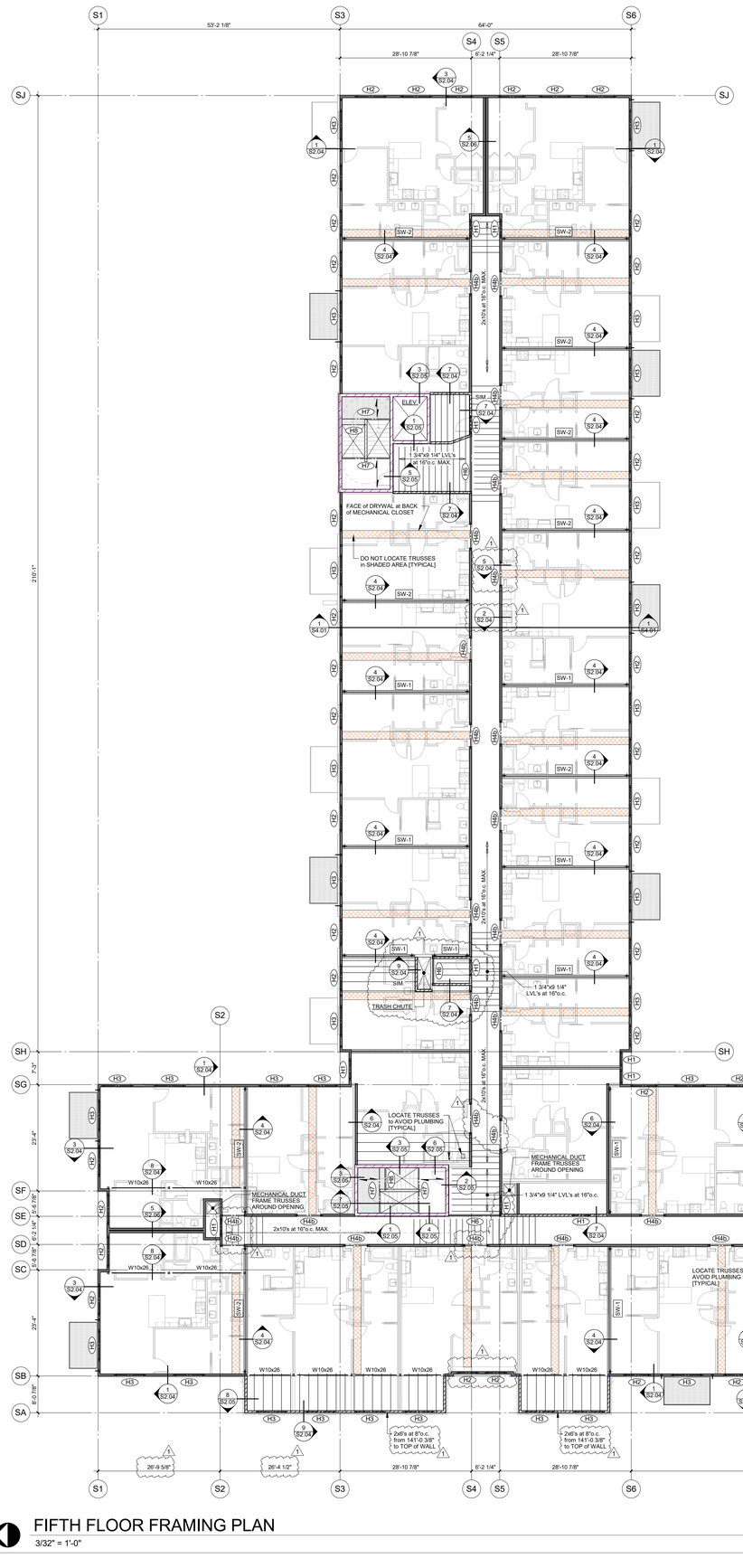
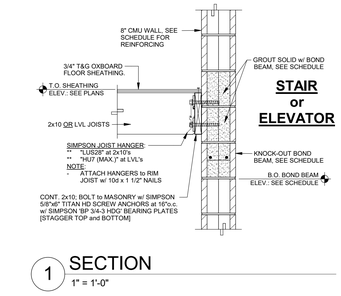

S1
S3
S4
S5
S6
SJ
SH
SG
SF
SE
SD
SC
SB
SA
53'-2 1/8"
64'-0"
28'-10 7/8"
6'-2 1/4"
28'-10 7/8"
21'-5"
2'-10 1/2"
2'-10 1/2"
2'-10 1/2



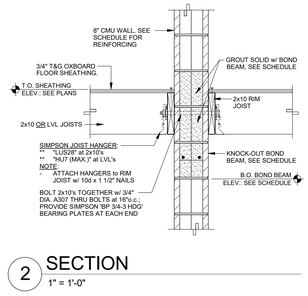
FIFTH FLOOR FRAMING PLAN

3/32" = 1'-0"



1 SECTION

1" = 1'-0"



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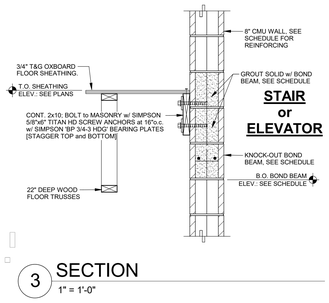

3 SECTION

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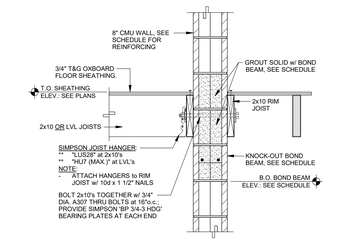

4 SECTION

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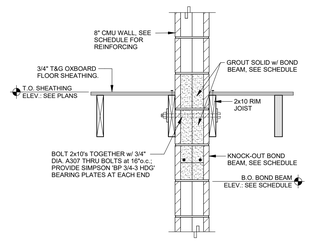
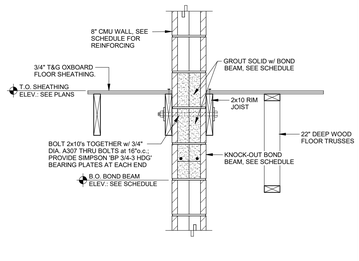


5 SECTION

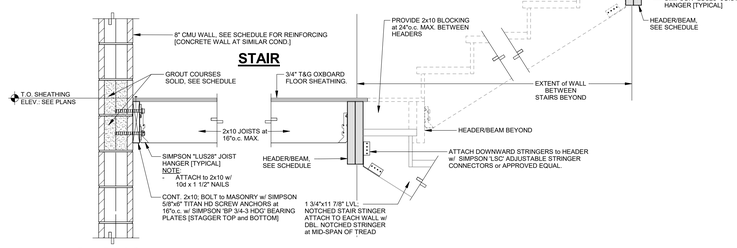
1" = 1'-0"



6 SECTION

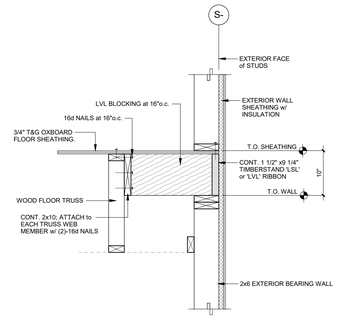
1" = 1'-0"

NOTE:
REFER TO ARCHITECTURAL DRAWINGS for ACTUAL RISE/RUN CONFIGURATION



7 SECTION

1" = 1'-0"



8 SECTION

1" = 1'-0"

FIFTH FLOOR FRAMING PLAN NOTES:

1. SEE STRUCTURAL NOTES ON SHEET S0.00
2. COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. T.O. OSB FLOOR SHEATHING ELEVATION = 141'-0 3/8"
4. TRUSS BEARING ELEVATION = 139'-1 5/8"
5. SW- : SHEAR WALL MARK, SEE SCHEDULE on SHEET S4.01
6. H- : HEADER/BEAM MARK, SEE SCHEDULE on SHEET S4.01
7. MECHANICAL DUCTS CROSSING BEARING WALLS THAT CAN NOT BE LOCATED BETWEEN BEARING STUDS SHALL HAVE A HEADER ABOVE THE DUCT. UNLESS NOTED OTHERWISE FOR OPENINGS LESS THAN 30" WIDE USE HEADER TYPE 'H1' ABOVE DUCT PENETRATION.
8. CONNECT BEAM-to-HSS COLUMNS per 2E/S5.03, UNLESS NOTED OTHERWISE

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REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
1	5/4/17	Addendum #2

LAVISTA CITY CENTRE MIXED USE - SOUTH

PROJECT: F16132 **DATE:** 04.17.2017

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TROY J. NISSEN E-9747 STATE OF NEBRASKA REGISTERED PROFESSIONAL ENGINEER

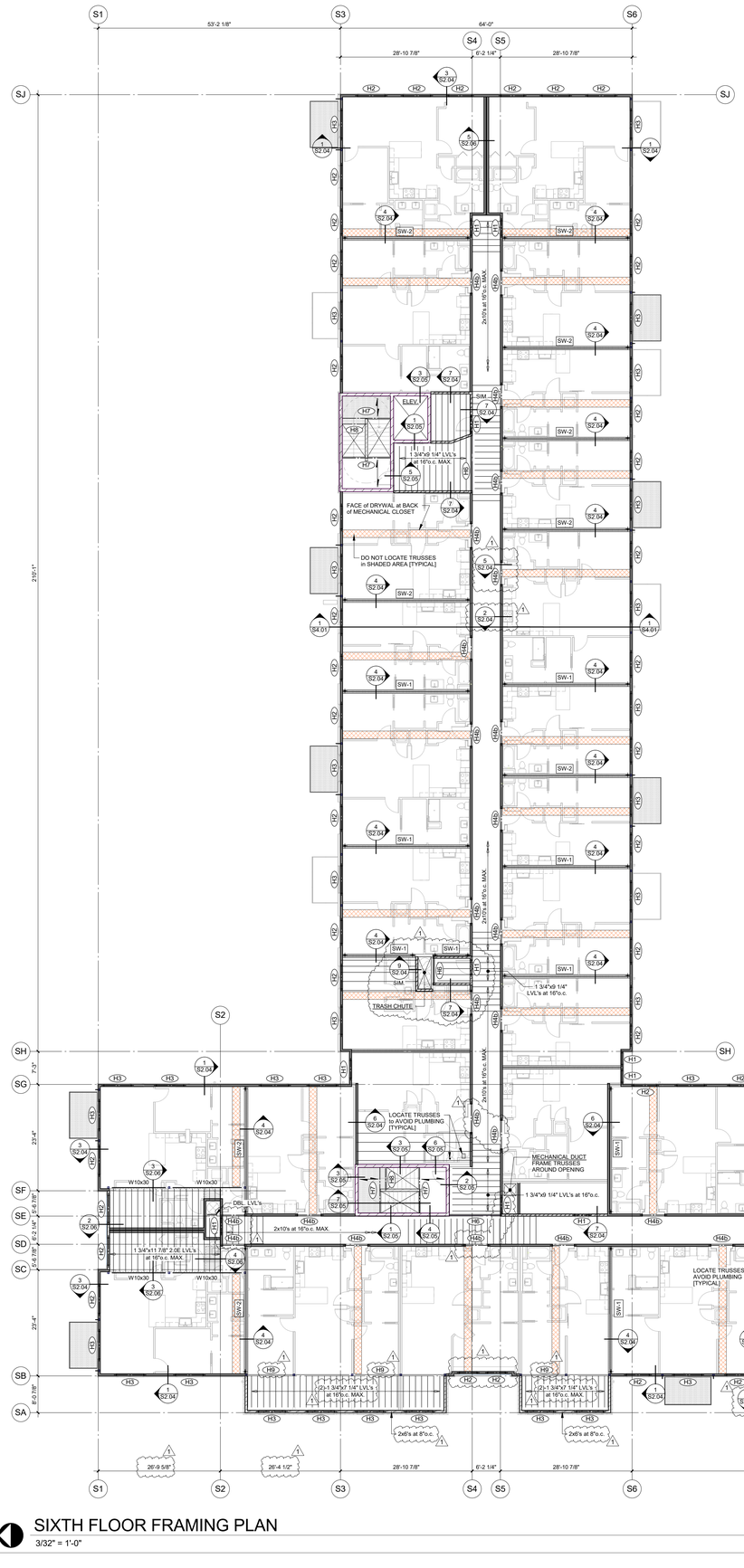
4/17/2017

FIFTH FLOOR FRAMING PLAN

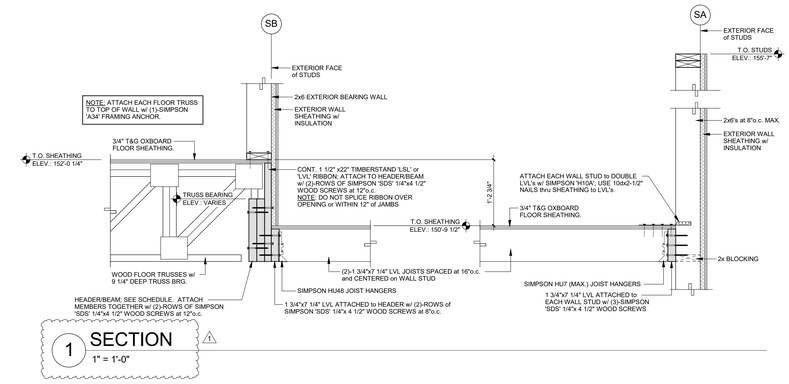
NORTH

S2.05

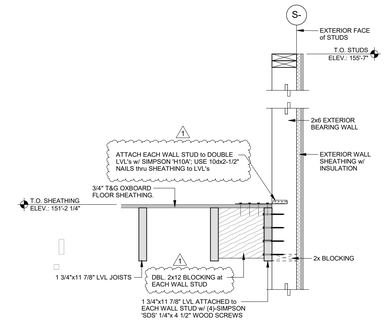
SHEET 72 22:36 PM



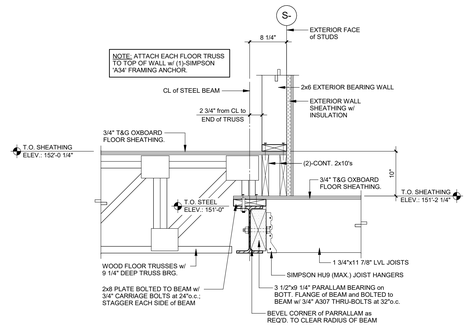
SIXTH FLOOR PLAN
3/32" = 1'-0"



1 SECTION
1" = 1'-0"



2 SECTION
1" = 1'-0"



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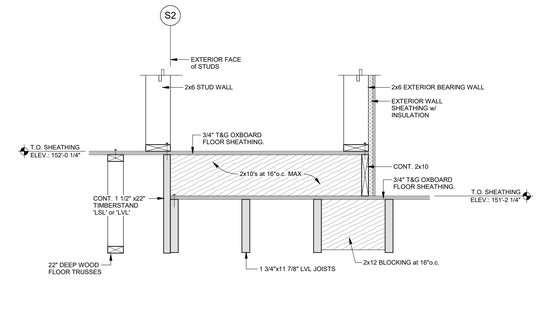

4 SECTION
1" = 1'-0"

5 SECTION
1" = 1'-0"

6 SECTION
1" = 1'-0"

SIXTH FLOOR FRAMING PLAN NOTES:

1. SEE STRUCTURAL NOTES ON SHEET S0.00
2. COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. T.O. OSB FLOOR SHEATHING ELEVATION = 152'-0 1/4"
4. TRUSS BEARING ELEVATION = 150'-1 1/2"
5. SW- : SHEAR WALL MARK, SEE SCHEDULE on SHEET S4.01
6. H- : HEADER/BEAM MARK, SEE SCHEDULE on SHEET S4.01
7. MECHANICAL DUCTS CROSSING BEARING WALLS THAT CAN NOT BE LOCATED BETWEEN BEARING STUDS SHALL HAVE A HEADER ABOVE THE DUCT. UNLESS NOTED OTHERWISE FOR OPENINGS LESS THAN 20" WIDE USE HEADER TYPE 'H1' ABOVE DUCT PENETRATION.
8. CONNECT BEAM-to-HSS COLUMNS per 2E/S5.03, UNLESS NOTED OTHERWISE

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REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
1	5/4/17	Addendum #2

LAVISTA CITY CENTRE MIXED USE - SOUTH

PROJECT: F16132 **DATE:** 04.17.2017

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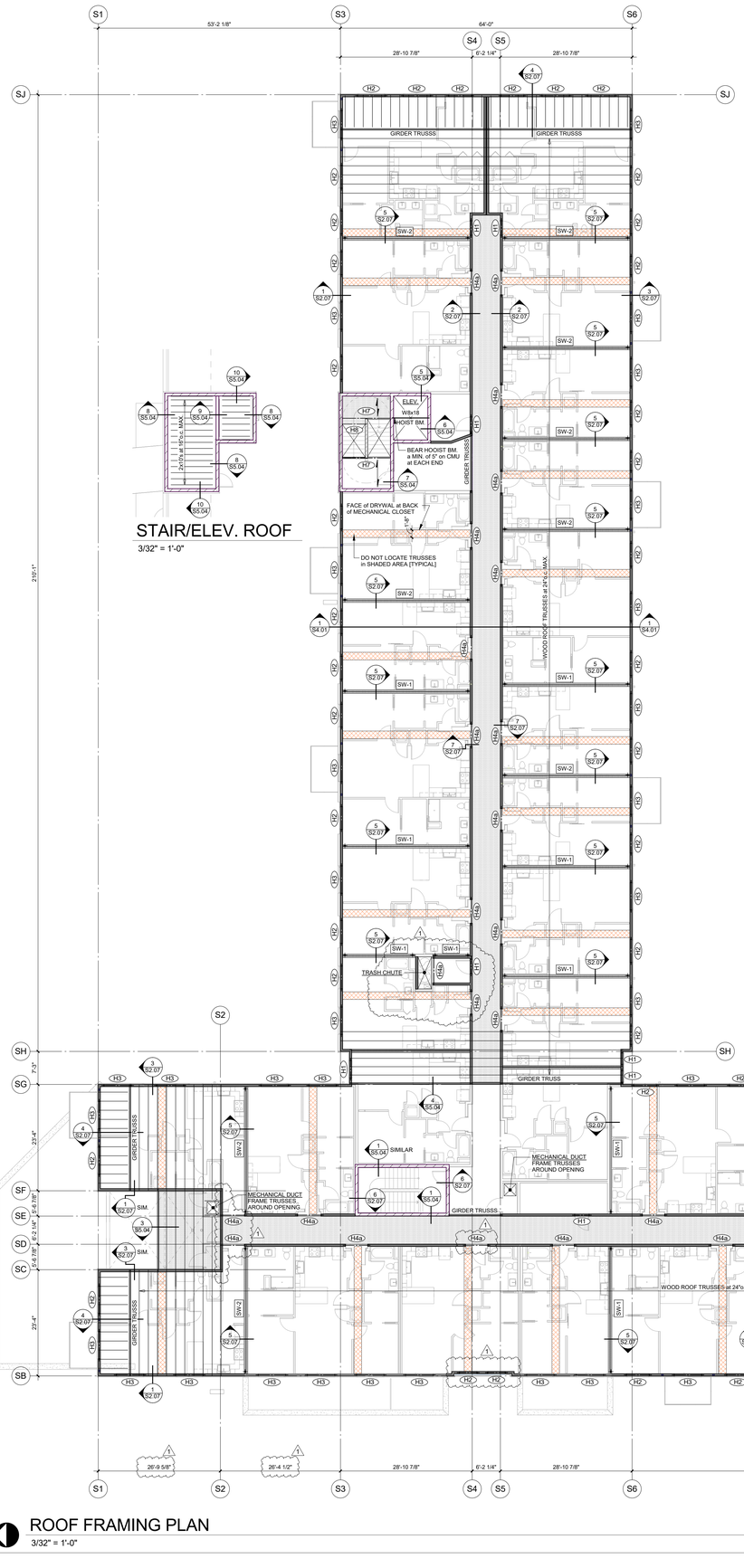
SIXTH FLOOR FRAMING PLAN

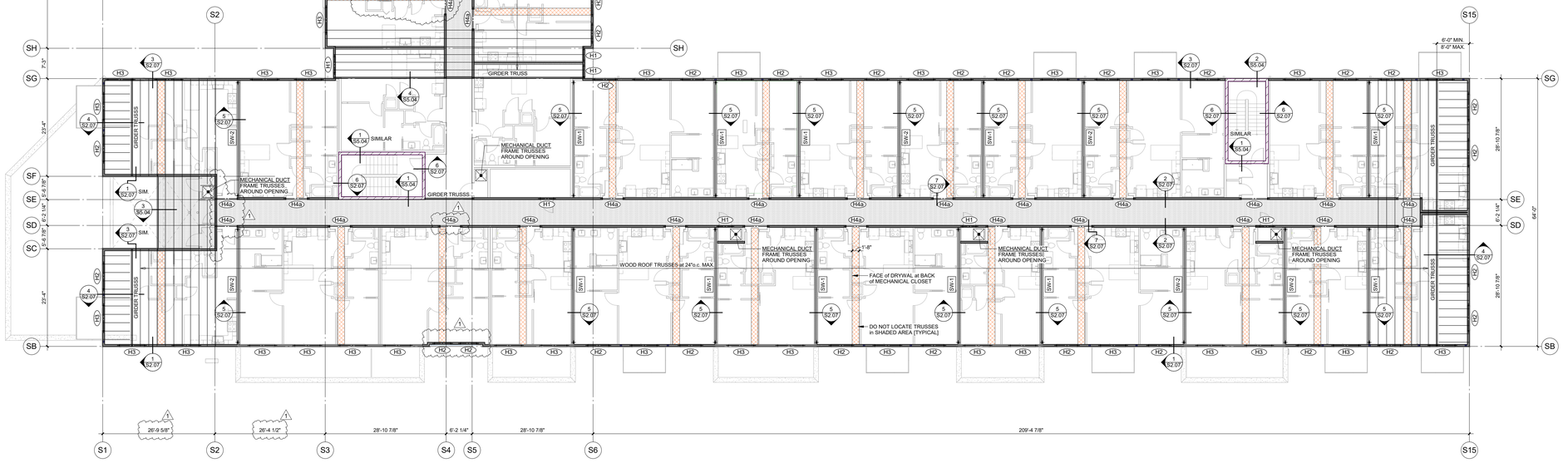
NORTH

S2.06

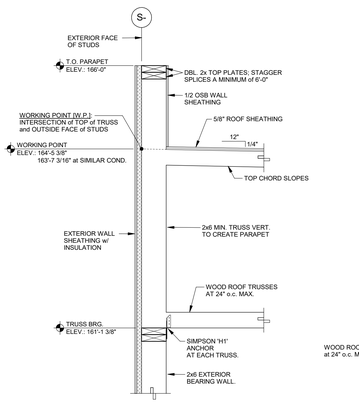
5/4/2017 12:32:44 PM



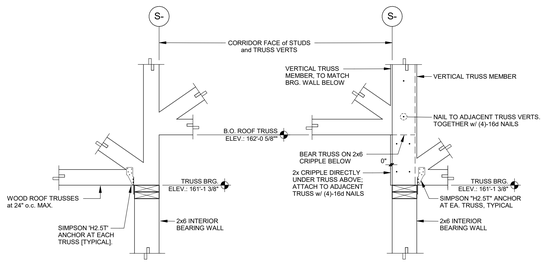
STAIR/ELEV. ROOF
3/32" = 1'-0"



ROOF FRAMING PLAN
3/32" = 1'-0"

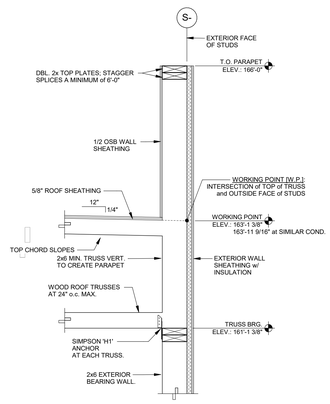


1 SECTION
1" = 1'-0"



TYPICAL ROOF TRUSS BEARING | OPTIONAL ROOF TRUSS SPLICE

2 SECTION
1" = 1'-0"



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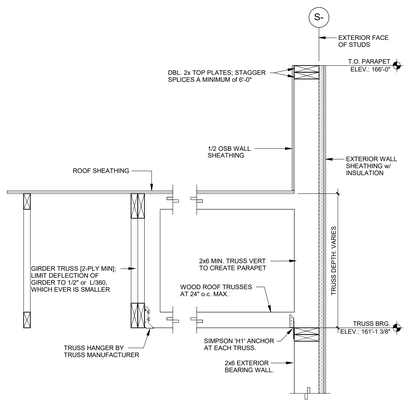
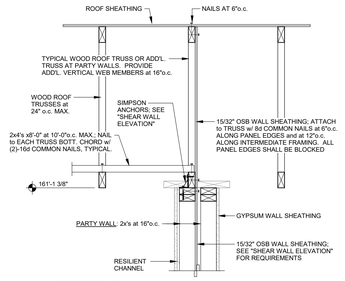
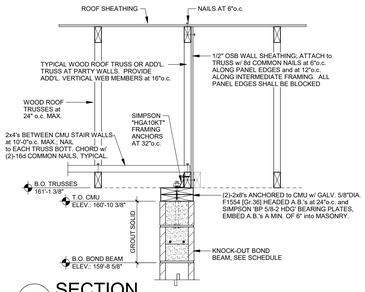
1" = 1'-0"



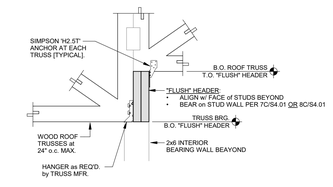
4 SECTION
1" = 1'-0"



5 SECTION
1" = 1'-0"



6 SECTION
1" = 1'-0"



7 SECTION
1" = 1'-0"

ROOF FRAMING PLAN NOTES:

1. SEE STRUCTURAL NOTES ON SHEET S0.00
2. COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. TRUSS BEARING ELEVATION = 161'-1 3/8"
4. INDICATES BOTOM OF TRUSS ELEVATION = 162'-0 5/8"
5. GIRDER TRUSSES:
   - ALL GIRDER TRUSSES SHALL BE (2)-PLY MINIMUM, UNLESS NOTED or DETAILED OTHERWISE
   - PROVIDE (3) - 2x BRG. STUDS AT ALL GIRDER TRUSS BRG. LOCATIONS, U.N.O.
   - CONNECT GIRDER TRUSSES TO BEARING (AS A MINIMUM and UNLESS NOTED OTHERWISE), THUS:

     TYPICAL GIRDER TRUSSES
     - TRUSS PERPENDICULAR TO WALL: (1) - SIMPSON "LGT" TIEDOWN
     - TRUSS PARALLEL TO WALLS: (1) - SIMPSON "MSTA24" STRAP TIE EACH SIDE of TRUSS
     - TRUSS ABOVE OPENING IN WALL: REF.: 6/S4.01
6. SW- : SHEAR WALL MARK, SEE SCHEDULE on SHEET S4.01
7. H- : HEADER/BEAM MARK, SEE SCHEDULE on SHEET S4.01
8. MECHANICAL DUCTS CROSSING BEARING WALLS THAT CAN NOT BE LOCATED BETWEEN BEARING STUDS SHALL HAVE A HEADER ABOVE THE DUCT. UNLESS NOTED OTHERWISE FOR OPENINGS LESS THAN 30" WIDE USE HEADER TYPE "H1" ABOVE DUCT PENETRATION.

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REVISIONS SCHEDULE

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1	5/4/17	Addendum #2

LAVISTA CITY CENTRE MIXED USE - SOUTH

PROJECT: F16132 **DATE:** 04.17.2017
H:\16\F16132\BVH ARCHITECTURE

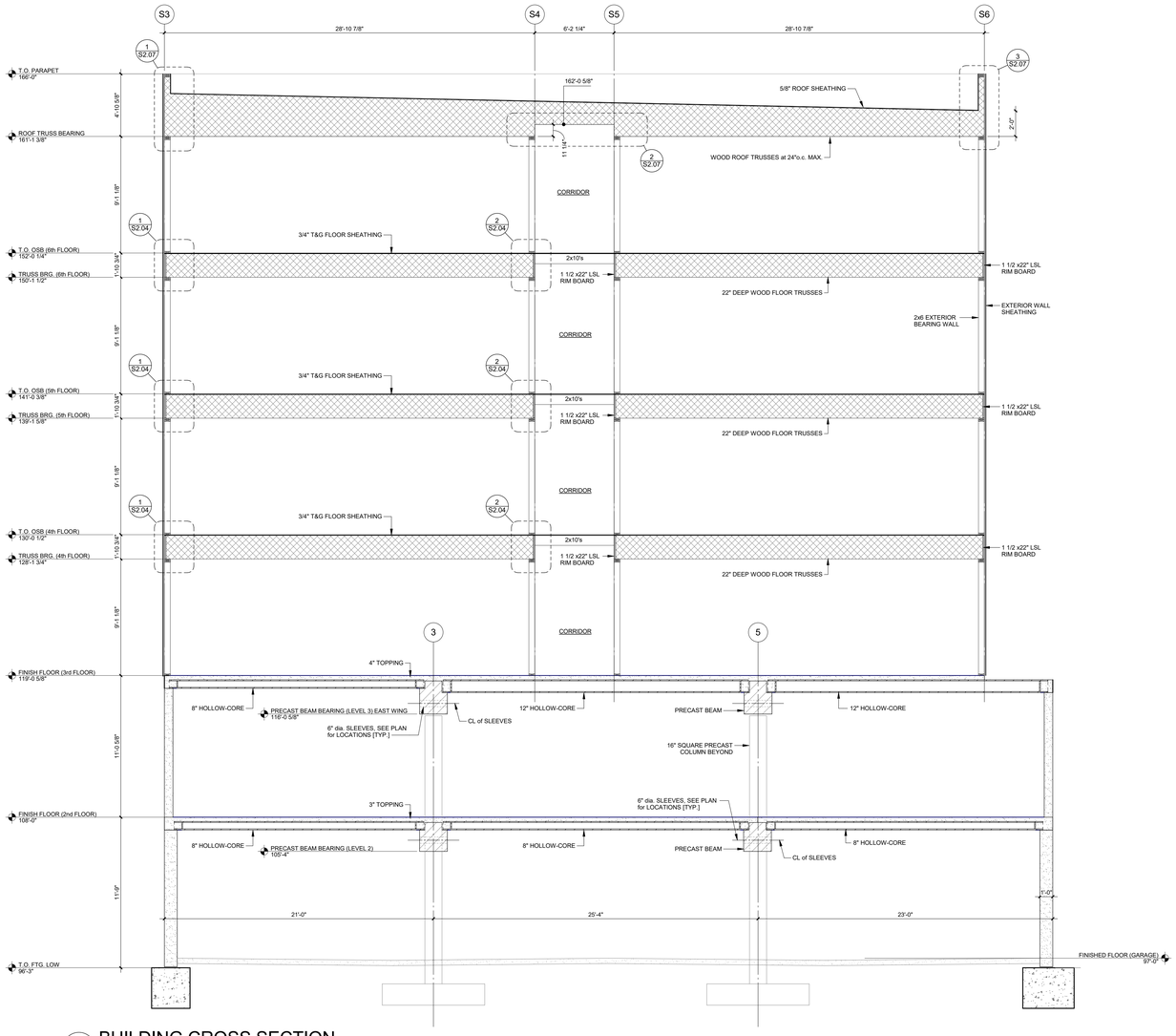
TROY J. NISSEN E-9747 REGISTERED PROFESSIONAL ENGINEER STATE OF NEBRASKA
4/17/2017

ROOF FRAMING PLAN

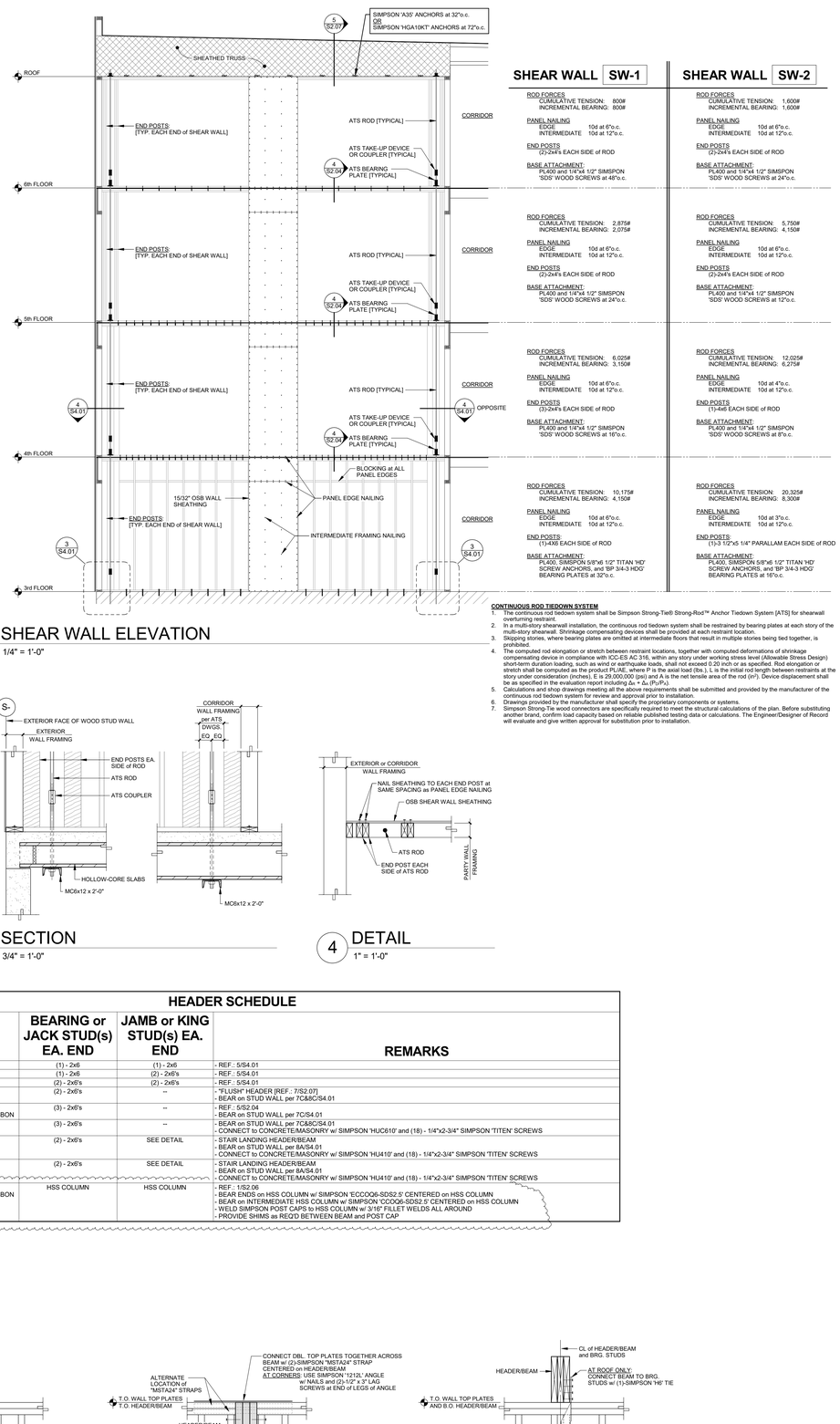
NORTH

S2.07

S4:07/7 12:32:05 PM



1 BUILDING CROSS SECTION
1/4" = 1'-0"



2 SHEAR WALL ELEVATION
1/4" = 1'-0"

SHEAR WALL SW-1

ROD FORCES
CUMULATIVE TENSION: 800#
INCREMENTAL BEARING: 800#

PANEL NAILING
EDGE 10d at 6"o.c.
INTERMEDIATE 10d at 12"o.c.

END POSTS
(2)-2x4's EACH SIDE of ROD

BASE ATTACHMENT:
PL400 and 1/4"x4 1/2" SIMSPON 'SDS' WOOD SCREWS at 48"o.c.

ROD FORCES
CUMULATIVE TENSION: 2,875#
INCREMENTAL BEARING: 2,075#

PANEL NAILING
EDGE 10d at 6"o.c.
INTERMEDIATE 10d at 12"o.c.

END POSTS
(2)-2x4's EACH SIDE of ROD

BASE ATTACHMENT:
PL400 and 1/4"x4 1/2" SIMSPON 'SDS' WOOD SCREWS at 24"o.c.

ROD FORCES
CUMULATIVE TENSION: 6,025#
INCREMENTAL BEARING: 3,150#

PANEL NAILING
EDGE 10d at 6"o.c.
INTERMEDIATE 10d at 12"o.c.

END POSTS
(3)-2x4's EACH SIDE of ROD

BASE ATTACHMENT:
PL400 and 1/4"x4 1/2" SIMSPON 'SDS' WOOD SCREWS at 16"o.c.

ROD FORCES
CUMULATIVE TENSION: 10,175#
INCREMENTAL BEARING: 4,150#

PANEL NAILING
EDGE 10d at 6"o.c.
INTERMEDIATE 10d at 12"o.c.

END POSTS:
(1)-4X6 EACH SIDE of ROD

BASE ATTACHMENT:
PL400, SIMPSON 5/8"x6 1/2" TITAN 'HD' SCREW ANCHORS, and 'BP' 3/4-3 HDG' BEARING PLATES at 32"o.c.

SHEAR WALL SW-2

ROD FORCES
CUMULATIVE TENSION: 1,600#
INCREMENTAL BEARING: 1,600#

PANEL NAILING
EDGE 10d at 6"o.c.
INTERMEDIATE 10d at 12"o.c.

END POSTS
(2)-2x4's EACH SIDE of ROD

BASE ATTACHMENT:
PL400 and 1/4"x4 1/2" SIMSPON 'SDS' WOOD SCREWS at 24"o.c.

ROD FORCES
CUMULATIVE TENSION: 5,750#
INCREMENTAL BEARING: 4,150#

PANEL NAILING
EDGE 10d at 6"o.c.
INTERMEDIATE 10d at 12"o.c.

END POSTS
(2)-2x4's EACH SIDE of ROD

BASE ATTACHMENT:
PL400 and 1/4"x4 1/2" SIMSPON 'SDS' WOOD SCREWS at 12"o.c.

ROD FORCES
CUMULATIVE TENSION: 12,025#
INCREMENTAL BEARING: 6,275#

PANEL NAILING
EDGE 10d at 4"o.c.
INTERMEDIATE 10d at 12"o.c.

END POSTS
(1)-4x6 EACH SIDE of ROD

BASE ATTACHMENT:
PL400 and 1/4"x4 1/2" SIMSPON 'SDS' WOOD SCREWS at 8"o.c.

ROD FORCES
CUMULATIVE TENSION: 20,325#
INCREMENTAL BEARING: 8,300#

PANEL NAILING
EDGE 10d at 3"o.c.
INTERMEDIATE 10d at 12"o.c.

END POSTS:
(1)-3 1/2"x5 1/4" PARALLAM EACH SIDE of ROD

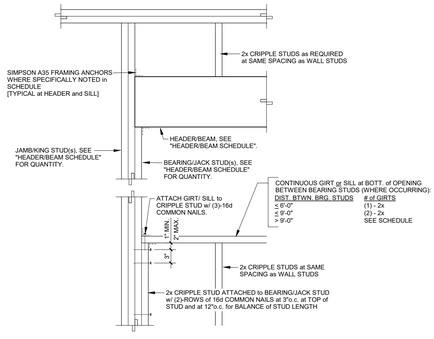
BASE ATTACHMENT:
PL400, SIMPSON 5/8"x6 1/2" TITAN 'HD' SCREW ANCHORS, and 'BP 3/4-3 HDG' BEARING PLATES at 16"o.c.

CONTINUOUS ROD TIEDOWN SYSTEM

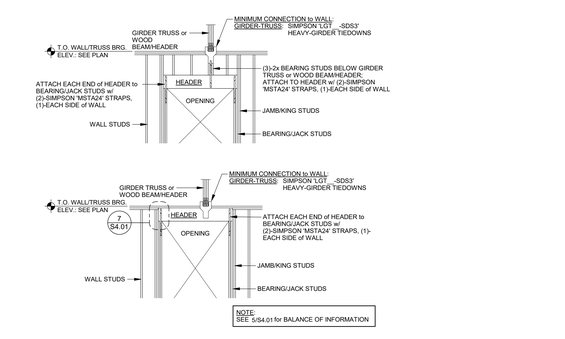
1. The continuous rod tiedown system shall be Simpson Strong-Tie® Strong-Rod™ Anchor Tiedown System [ATS] for shearwall overturning restraint.
2. In a multi-story shearwall installation, the continuous rod tiedown system shall be restrained by bearing plates at each story of the multi-story shearwall. Shrinkage compensating devices shall be provided at each restraint location.
3. Skipping stories, where bearing plates are omitted at intermediate floors that result in multiple stories being tied together, is prohibited.
4. The computed rod elongation or stretch between restraint locations, together with computed deformations of shrinkage compensating device in compliance with ICC-ES AC 316, within any story under working stress level (Allowable Stress Design) short-term duration loading, such as wind or earthquake loads, shall not exceed 0.20 inch or as specified. Rod elongation or stretch shall be computed as the product PL/AE, where P is the axial load (lbs.), L is the initial rod length between restraints at the story under consideration (inches), E is 29,000,000 (psi) and A is the net tensile area of the rod (in²). Device displacement shall be as specified in the evaluation report including $\Delta_a + \Delta_d$ (P_D/P_A).
5. Calculations and shop drawings meeting all the above requirements shall be submitted and provided by the manufacturer of the continuous rod tiedown system for review and approval prior to installation.
6. Drawings provided by the manufacturer shall specify the proprietary components or systems.
7. Simpson Strong-Tie wood connectors are specifically required to meet the structural calculations of the plan. Before substituting another brand, confirm load capacity based on reliable published testing data or calculations. The Engineer/Designer of Record will evaluate and give written approval for substitution prior to installation.

3 SECTION
3/4" = 1'-0"

4 DETAIL
1" = 1'-0"



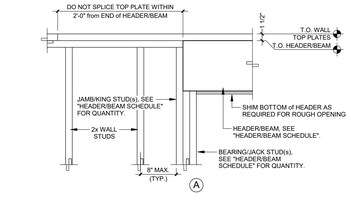
5 DETAIL
1" = 1'-0"



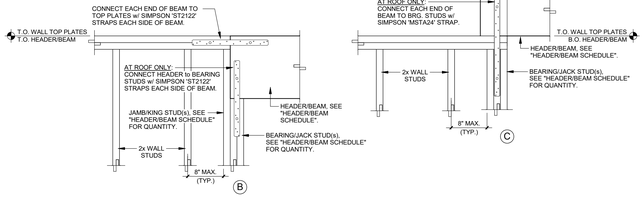
6 DETAIL
1/4" = 1'-0"

HEADER SCHEDULE

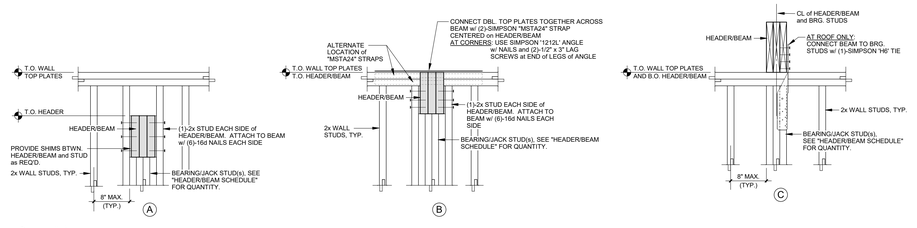
MARK	SIZE	BEARING or JACK STUD(s) EA. END	JAMB or KING STUD(s) EA. END	REMARKS
H1	(3) - 2x6's	(1) - 2x6	(1) - 2x6	- REF.: S/S4.01
H2	(3) - 2x10's	(1) - 2x6	(2) - 2x6's	- REF.: S/S4.01
H3	(3) - 1-3/4"x9-1/4" 2.0E LVL's	(2) - 2x6's	(2) - 2x6's	- REF.: S/S4.01
H4a	(2) - 2x12's	(2) - 2x6's	--	- "FLUSH" HEADER [REF.: 7/S2.07] - BEAR on STUD WALL per 7C&8C/S4.01
H4b	(2) - 1-3/4"x11-1/4" 2.0E LVL's ATTACHED to CONT. LVL/LSL RIBBON	(3) - 2x6's	--	- REF.: S/S2.04 - BEAR on STUD WALL per 7C/S4.01
H6	(3) - 1-3/4"x9-1/4" 2.0E LVL's	(3) - 2x6's	--	- BEAR on STUD WALL per 7C&8C/S4.01 - CONNECT to CONCRETE/MASONRY w/ SIMPSON 'HUC610' and (18) - 1/4"x2-3/4" SIMPSON 'TITEN' SCREWS
H7	(2) - 1-3/4"x14" 2.0E LVL's	(2) - 2x6's	SEE DETAIL	- STAIR LANDING HEADER/BEAM - BEAR on STUD WALL per 8A/S4.01 - CONNECT to CONCRETE/MASONRY w/ SIMPSON 'HU410' and (18) - 1/4"x2-3/4" SIMPSON 'TITEN' SCREWS
H8	(2) - 1-3/4"x9-1/4" 2.0E LVL's	(2) - 2x6's	SEE DETAIL	- STAIR LANDING HEADER/BEAM - BEAR on STUD WALL per 8A/S4.01 - CONNECT to CONCRETE/MASONRY w/ SIMPSON 'HU410' and (18) - 1/4"x2-3/4" SIMPSON 'TITEN' SCREWS
H9	(2) - 1-3/4"x14" 2.0E LVL's ATTACHED to CONT. LVL/LSL RIBBON	HSS COLUMN	HSS COLUMN	- REF.: 1/S2.06 - BEAR ENDS on HSS COLUMN w/ SIMPSON 'ECCOQ6-SDS2.5' CENTERED on HSS COLUMN - BEAR on INTERMEDIATE HSS COLUMN w/ SIMPSON 'CCOQ6-SDS2.5' CENTERED on HSS COLUMN - WELD SIMPSON POST CAPS to HSS COLUMN w/ 3/16" FILLET WELDS ALL AROUND - PROVIDE SHIMS as REQ'D BETWEEN BEAM and POST CAP



7 DETAIL
1" = 1'-0"



8 DETAIL
1" = 1'-0"



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1	5/4/17	Addendum #2

LAVISTA CITY CENTRE MIXED USE - SOUTH

PROJECT: F16132 **DATE:** 04.17.2017

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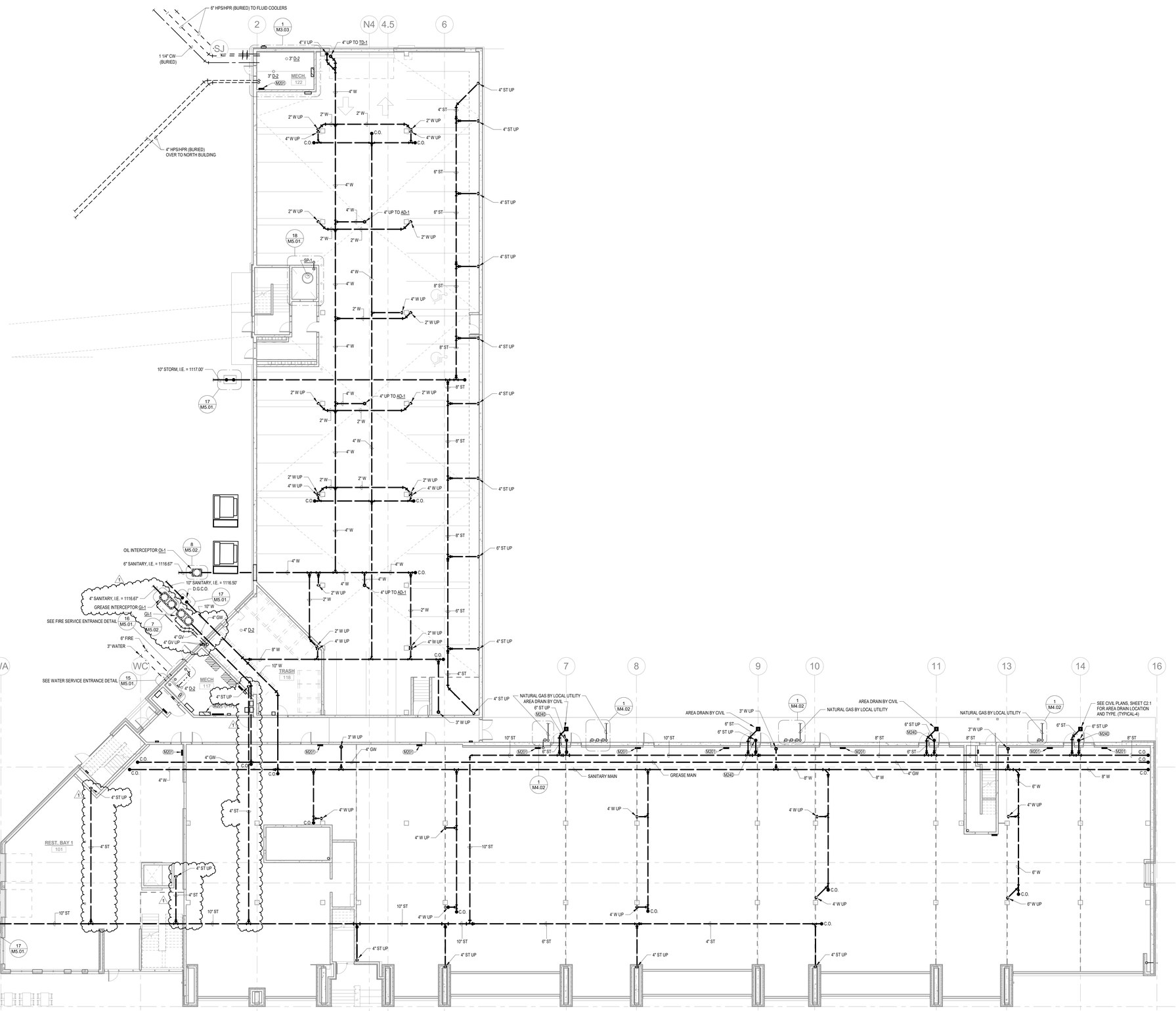
4/17/2017

BUILDING SECTIONS

NORTH

S4.01

5/4/2017 12:32:26 PM



1 00-GROUND FLOOR - UNDERGROUND - PLUMBING

3/32" = 1'-0"

GENERAL NOTES

1. DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.
2. SPACE ABOVE CEILINGS ARE LIMITED. COORDINATE PIPE ROUTING WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AND TRANSITIONS AS REQUIRED TO COMPLETE INSTALLATION.
3. PLANS ARE SCHEMATIC IN NATURE. COORDINATE EXACT ROUTING AND EQUIPMENT LOCATIONS WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AS REQUIRED TO COMPLETE INSTALLATION.
4. INSTALL ALL ISOLATION VALVES AND BALANCING VALVES IN ACCESSIBLE LOCATIONS.
5. ALL PIPING SHOWN FOR CLARITY. ROUTE WASTE, VENT, WATER, AND GAS PIPING CONCEALED IN CHASES, IN WALLS, OR ABOVE CEILINGS AS REQUIRED.
6. DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS UNLESS OTHERWISE NOTED. PIPING ROUTED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION.
7. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE CLEANOUTS PER PLUMBING CODE. EXTEND CLEANOUTS TO WALLS WHERE APPLICABLE. COORDINATE CLEANOUT LOCATIONS WITH GENERAL CONTRACTOR.
8. COORDINATE ALL BELOW GRADE PIPING WITH STRUCTURAL FOOTINGS. SLEEVE PIPING AS REQUIRED. SEE STRUCTURAL DRAWINGS. COORDINATE WITH GENERAL CONTRACTOR.
9. WASTE AND VENT RISERS ARE DESIGNATED BY (X) . SEE WASTE AND VENT RISER DIAGRAMS ON SHEET M4.01 FOR WASTE AND VENT PIPE SIZES.
10. WATER RISERS ARE DESIGNATED BY [X] . SEE WATER RISER DIAGRAMS ON SHEET M4.02 FOR RISER SIZES.
11. SEE PLUMBING FIXTURE SCHEDULE SHEET M4.02 FOR PLUMBING FIXTURE CONNECTION REQUIREMENTS.
12. ALL PENETRATIONS OF FIRE RESISTANT CONSTRUCTION SHALL BE SEALED WITH A LISTED FIRESTOPPING ASSEMBLY BY THE CONTRACTOR RESPONSIBLE FOR THE PENETRATION.
13. DO NOT ROUTE DUCTWORK, PIPING, ELECTRICAL CONDUIT OR FIRE PROTECTION PIPING UNDER HEAT PUMPS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND CODE CLEARANCES AROUND HEAT PUMP UNITS.

FIRE SPRINKLER GENERAL NOTES

1. ENTIRE BUILDING SHALL HAVE A WET PIPE FIRE PROTECTION SPRINKLER SYSTEM TO MEET THE REQUIREMENTS OF NFPA AND AUTHORITY HAVING JURISDICTION INCLUDING ATTIC AND JOIST SPACES BETWEEN FLOORS PER NFPA.
2. PROVIDE FIRE SERVICE ENTRANCE WITH DOUBLE CHECK BACKFLOW PREVENTER,ISOLATION VALVES, CHECK VALVES, FLOW SWITCH, ETC. AS REQUIRED BY NFPA AND AUTHORITY HAVING JURISDICTION.
3. DO NOT ROUTE WET PIPE SPRINKLER PIPING IN AREAS SUBJECT TO FREEZING. COORDINATE LOCATION OF SPRINKLER PIPING AND HEADS WITH LIGHTS, DUCTS, DIFFUSERS, GRILLES, AND CEILING SYSTEMS.
4. ROUTING AND SIZING OF FIRE SPRINKLER PIPING SHALL BE BY FIRE SPRINKLER CONTRACTOR.
5. CONTRACTOR SHALL VERIFY AVAILABLE PRESSURE AND FLOW.
6. SEE SPECIFICATION SECTION 211000 - WATER BASED FIRE SUPPRESSION SYSTEMS FOR ALLOWABLE PIPING MATERIALS.
7. PROVIDE MANUAL WET-PIPE STANDPIPE AT EACH STAIRWELL AND AREAS SHOWN.
8. SPRINKLER HEADS SHALL BE SEMI-RECESSED SPRINKLER HEADS OR SIDEWALL HEADS WITH WHITE ESCUTCHEONS. SEE SPECIFICATION SECTION 211000 - WATER BASED FIRE SUPPRESSION SYSTEMS FOR ADDITIONAL INFORMATION.
9. COORDINATE LOCATION OF ALL SPRINKLER HEADS AND PIPING WITH ALL OTHER TRADES. IF CONFLICTS DO OCCUR SUCH THAT LIGHTS, DUCTWORK, OR CEILING SYSTEMS CANNOT BE INSTALLED DUE TO SPRINKLER PIPING INTERFERENCE, THE PIPING SHALL BE RELOCATED AT NO ADDITIONAL EXPENSE TO THE PROJECT.
10. PROVIDE DRY SPRINKLER AT ALL DECK LOCATIONS PER NFPA.

KEYNOTES

M201 DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN CODE REQUIRED CLEARANCES.

M240 CONNECT BELOW GRADE STORM PIPING INTO BUILDING DOWN SPOUTS. COORDINATE ALL BUILDING DOWNSPOUT LOCATIONS WITH ARCHITECTURAL PLANS.

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REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
1	05/03/2017	ADDENDUM 2

LAVISTA CITY CENTRE MIXED USE - SOUTH

PROJECT: F16132 **DATE:** 04.17.2017

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PROFESSIONAL ENGINEER MECHANICAL JAMES M. IMPACH E-9256 STATE OF NEBRASKA

04.17.2017

UNDERGROUND PLAN - PLUMBING

NORTH

M2.00

MEI PROJECT NO: 16290

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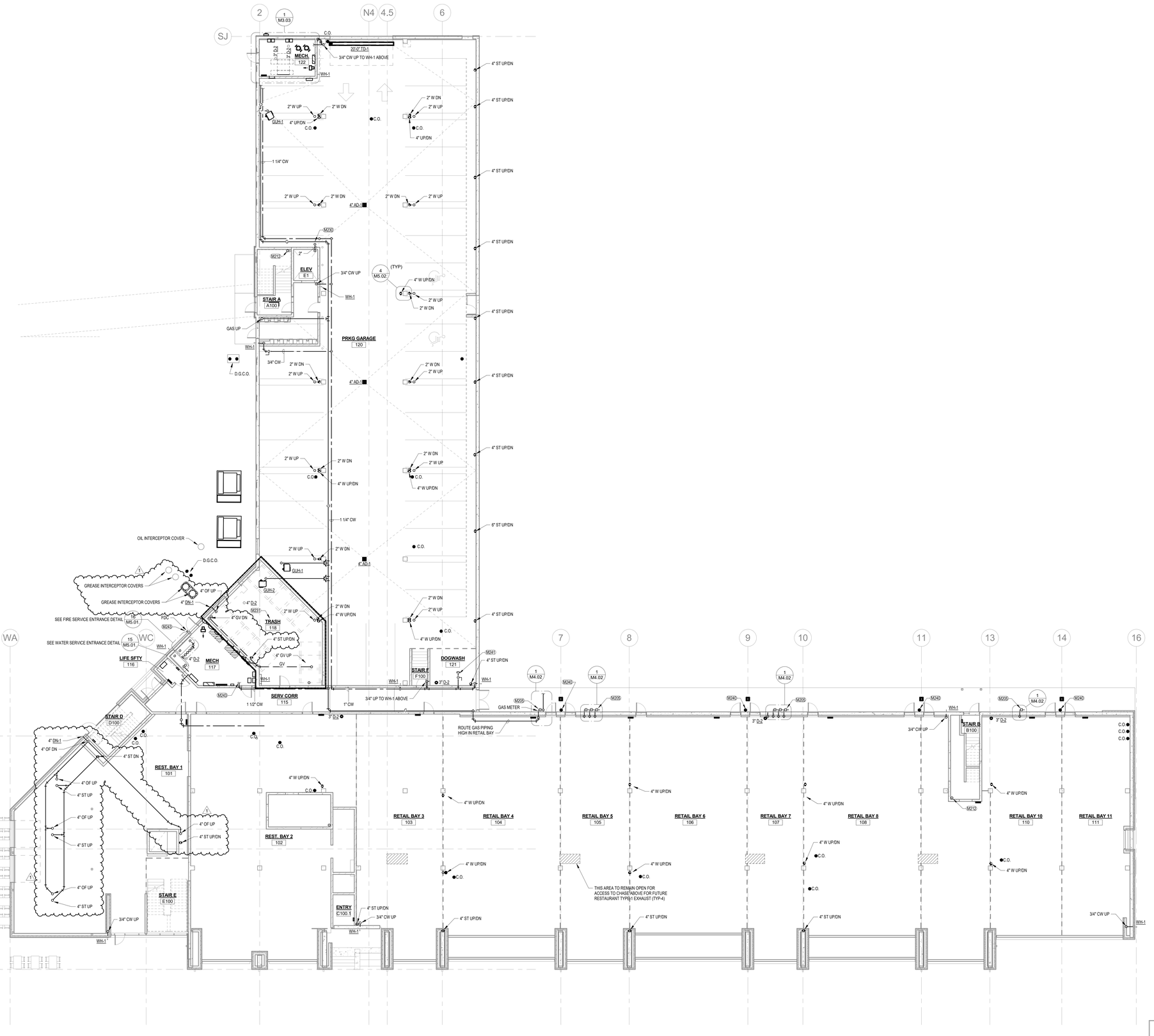

1 01-GROUND FLOOR - RETAIL - PLUMBING

3/32" = 1'-0"

GENERAL NOTES

1. DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.

2. SPACE ABOVE CEILINGS ARE LIMITED. COORDINATE PIPE ROUTING WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AND TRANSITIONS AS REQUIRED TO COMPLETE INSTALLATION.

3. PLANS ARE SCHEMATIC IN NATURE. COORDINATE EXACT ROUTING AND EQUIPMENT LOCATIONS WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AS REQUIRED TO COMPLETE INSTALLATION.

4. INSTALL ALL ISOLATION VALVES AND BALANCING VALVES IN ACCESSIBLE LOCATIONS.

5. ALL PIPING SHOWN FOR CLARITY. ROUTE WASTE, VENT, WATER, AND GAS PIPING CONCEALED IN CHASES, IN WALLS, OR ABOVE CEILINGS AS REQUIRED.

6. DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS UNLESS OTHERWISE NOTED. PIPING ROUTED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION.

7. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE CLEANOUTS PER PLUMBING CODE. EXTEND CLEANOUTS TO WALLS WHERE APPLICABLE. COORDINATE CLEANOUT LOCATIONS WITH GENERAL CONTRACTOR.

8. COORDINATE ALL BELOW GRADE PIPING WITH STRUCTURAL FOOTINGS. SLEEVE PIPING AS REQUIRED. SEE STRUCTURAL DRAWINGS. COORDINATE WITH GENERAL CONTRACTOR.

9. WASTE AND VENT RISERS ARE DESIGNATED BY (X) . SEE WASTE AND VENT RISER DIAGRAMS ON SHEET M4.01 FOR WASTE AND VENT PIPE SIZES.

10. WATER RISERS ARE DESIGNATED BY [X] . SEE WATER RISER DIAGRAMS ON SHEET M4.02 FOR RISER SIZES.

11. SEE PLUMBING FIXTURE SCHEDULE SHEET M4.02 FOR PLUMBING FIXTURE CONNECTION REQUIREMENTS.

12. ALL PENETRATIONS OF FIRE RESISTANT CONSTRUCTION SHALL BE SEALED WITH A LISTED FIRESTOPPING ASSEMBLY BY THE CONTRACTOR RESPONSIBLE FOR THE PENETRATION.

13. DO NOT ROUTE DUCTWORK, PIPING, ELECTRICAL CONDUIT OR FIRE PROTECTION PIPING UNDER HEAT PUMPS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND CODE CLEARANCES AROUND HEAT PUMP UNITS.

FIRE SPRINKLER GENERAL NOTES

1. ENTIRE BUILDING SHALL HAVE A WET PIPE FIRE PROTECTION SPRINKLER SYSTEM TO MEET THE REQUIREMENTS OF NFPA AND AUTHORITY HAVING JURISDICTION INCLUDING ATTIC AND JOIST SPACES BETWEEN FLOORS PER NFPA.

2. PROVIDE FIRE SERVICE ENTRANCE WITH DOUBLE CHECK BACKFLOW PREVENTER,ISOLATION VALVES, CHECK VALVES, FLOW SWITCH, ETC. AS REQUIRED BY NFPA AND AUTHORITY HAVING JURISDICTION.

3. DO NOT ROUTE WET PIPE SPRINKLER PIPING IN AREAS SUBJECT TO FREEZING. COORDINATE LOCATION OF SPRINKLER PIPING AND HEADS WITH LIGHTS, DUCTS, DIFFUSERS, GRILLES, AND CEILING SYSTEMS.

4. ROUTING AND SIZING OF FIRE SPRINKLER PIPING SHALL BE BY FIRE SPRINKLER CONTRACTOR.

5. CONTRACTOR SHALL VERIFY AVAILABLE PRESSURE AND FLOW.

6. SEE SPECIFICATION SECTION 211000 - WATER BASED FIRE SUPPRESSION SYSTEMS FOR ALLOWABLE PIPING MATERIALS.

7. PROVIDE MANUAL WET-PIPE STANDPIPE AT EACH STAIRWELL AND AREAS SHOWN.

8. SPRINKLER HEADS SHALL BE SEMI-RECESSED SPRINKLER HEADS OR SIDEWALL HEADS WITH WHITE ESCUTCHEONS. SEE SPECIFICATION SECTION 211000 - WATER BASED FIRE SUPPRESSION SYSTEMS FOR ADDITIONAL INFORMATION.

9. COORDINATE LOCATION OF ALL SPRINKLER HEADS AND PIPING WITH ALL OTHER TRADES. IF CONFLICTS DO OCCUR SUCH THAT LIGHTS, DUCTWORK, OR CEILING SYSTEMS CANNOT BE INSTALLED DUE TO SPRINKLER PIPING INTERFERENCE, THE PIPING SHALL BE RELOCATED AT NO ADDITIONAL EXPENSE TO THE PROJECT.

10. PROVIDE DRY SPRINKLER AT ALL DECK LOCATIONS PER NFPA.

KEYNOTES

M205	NEW GAS METER.2# SUPPLY IN BUILDING. METER AND SERVICE BY LOCAL GAS COMPANY. COORDINATE REQUIREMENTS WITH M.U.D. SEE NATURAL GAS RISER DETAIL FOR CONNECTED AND FUTURE NATURAL GAS LOADS.
M212	PROVIDE MANUAL WET-PIPE STAND PIPE IN STAIR PER NFPA 14
M230	2" SUMP DISCHARGE. SPILL INTO GARAGE FLOOR. 12" A.F.F.
M231	TRASH ROOM. FIRE PROTECTION: PROVIDE SIDEWALL DRY-TYPE SPRINKLER SERVING THIS AREA. AREA SUBJECT TO FREEZING CONDITIONS.
M240	CONNECT BELOW GRADE STORM PIPING INTO BUILDING DOWN SPOUTS. COORDINATE ALL BUILDING DOWNSPOUT LOCATIONS WITH ARCHITECTURAL PLANS.
M241	VALVE AND CAP 1" CW PIPING FOR FURUTE DOG WASH STATION.
M243	CONNECT 1-1/2" CW INTO GROUND AND SECOND LEVEL 3" CW LINE INSIDE MECHANICAL ROOM. PROVIDE ISOLATION VALVE AT CONNECTION.

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REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
1	05/03/2017	ADDENDUM 2

LAVISTA CITY CENTRE MIXED USE - SOUTH

PROJECT: F16132 **DATE:** 04.17.2017

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04.17.2017

GROUND FLOOR - PLUMBING

NORTH

M2.01

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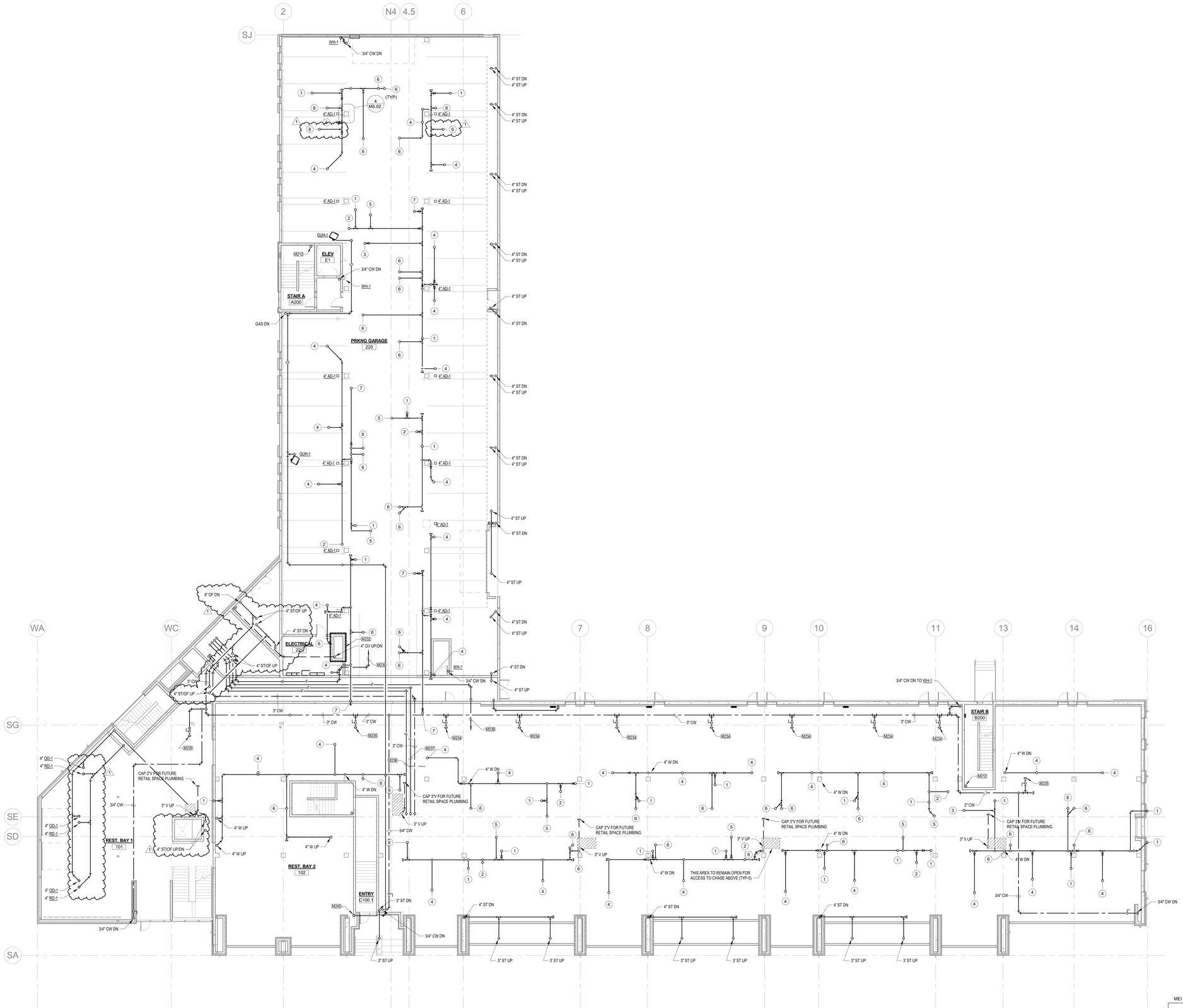

1 02-SECOND FLOOR - GARAGE DECK - PLUMBING

3/32" = 1'-0"

GENERAL NOTES

1. DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.
2. SPACE ABOVE CEILINGS ARE LIMITED. COORDINATE PIPE ROUTING WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AND TRANSITIONS AS REQUIRED TO COMPLETE INSTALLATION.
3. PLANS ARE SCHEMATIC IN NATURE. COORDINATE EXACT ROUTING AND EQUIPMENT LOCATIONS WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AS REQUIRED TO COMPLETE INSTALLATION.
4. INSTALL ALL ISOLATION VALVES AND BALANCING VALVES IN ACCESSIBLE LOCATIONS.
5. ALL PIPING SHOWN FOR CLARITY. ROUTE WASTE, VENT, WATER, AND GAS PIPING CONCEALED IN CHASES, IN WALLS, OR ABOVE CEILINGS AS REQUIRED.
6. DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS UNLESS OTHERWISE NOTED. PIPING ROUTED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION.
7. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE CLEANOUTS PER PLUMBING CODE. EXTEND CLEANOUTS TO WALLS WHERE APPLICABLE. COORDINATE CLEANOUT LOCATIONS WITH GENERAL CONTRACTOR.
8. COORDINATE ALL BELOW GRADE PIPING WITH STRUCTURAL FOOTINGS. SLEEVE PIPING AS REQUIRED. SEE STRUCTURAL DRAWINGS. COORDINATE WITH GENERAL CONTRACTOR.
9. WASTE AND VENT RISERS ARE DESIGNATED BY (X) . SEE WASTE AND VENT RISER DIAGRAMS ON SHEET MA.01 FOR WASTE AND VENT PIPE SIZES.
10. WATER RISERS ARE DESIGNATED BY [X] . SEE WATER RISER DIAGRAMS ON SHEET M4.02 FOR RISER SIZES.
11. SEE PLUMBING FIXTURE SCHEDULE SHEET M4.02 FOR PLUMBING FIXTURE CONNECTION REQUIREMENTS.
12. ALL PENETRATIONS OF FIRE RESISTANT CONSTRUCTION SHALL BE SEALED WITH A LISTED FIRESTOPPING ASSEMBLY BY THE CONTRACTOR RESPONSIBLE FOR THE PENETRATION.
13. DO NOT ROUTE DUCTWORK, PIPING, ELECTRICAL CONDUIT OR FIRE PROTECTION PIPING UNDER HEAT PUMPS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND CODE CLEARANCES AROUND HEAT PUMP UNITS.

FIRE SPRINKLER GENERAL NOTES

1. ENTIRE BUILDING SHALL HAVE A WET PIPE FIRE PROTECTION SPRINKLER SYSTEM TO MEET THE REQUIREMENTS OF NFPA AND AUTHORITY HAVING JURISDICTION INCLUDING ATTIC AND JOIST SPACES BETWEEN FLOORS PER NFPA.
2. PROVIDE FIRE SERVICE ENTRANCE WITH DOUBLE CHECK BACKFLOW PREVENTER,ISOLATION VALVES, CHECK VALVES, FLOW SWITCH, ETC. AS REQUIRED BY NFPA AND AUTHORITY HAVING JURISDICTION.
3. DO NOT ROUTE WET PIPE SPRINKLER PIPING IN AREAS SUBJECT TO FREEZING. COORDINATE LOCATION OF SPRINKLER PIPING AND HEADS WITH LIGHTS, DUCTS, DIFFUSERS, GRILLES, AND CEILING SYSTEMS.
4. ROUTING AND SIZING OF FIRE SPRINKLER PIPING SHALL BE BY FIRE SPRINKLER CONTRACTOR.
5. CONTRACTOR SHALL VERIFY AVAILABLE PRESSURE AND FLOW.
6. SEE SPECIFICATION SECTION 211000 - WATER BASED FIRE SUPPRESSION SYSTEMS FOR ALLOWABLE PIPING MATERIALS.
7. PROVIDE MANUAL WET-PIPE STANDPIPE AT EACH STAIRWELL AND AREAS SHOWN.
8. SPRINKLER HEADS SHALL BE SEMI-RECESSED SPRINKLER HEADS OR SIDEWALL HEADS WITH WHITE ESCUTCHEONS. SEE SPECIFICATION SECTION 211000 - WATER BASED FIRE SUPPRESSION SYSTEMS FOR ADDITIONAL INFORMATION.
9. COORDINATE LOCATION OF ALL SPRINKLER HEADS AND PIPING WITH ALL OTHER TRADES. IF CONFLICTS DO OCCUR SUCH THAT LIGHTS, DUCTWORK, OR CEILING SYSTEMS CANNOT BE INSTALLED DUE TO SPRINKLER PIPING INTERFERENCE, THE PIPING SHALL BE RELOCATED AT NO ADDITIONAL EXPENSE TO THE PROJECT.
10. PROVIDE DRY SPRINKLER AT ALL DECK LOCATIONS PER NFPA.

KEYNOTES

M212 PROVIDE MANUAL WET-PIPE STAND PIPE IN STAIR PER NFPA 14
M232 TRASH CHUTES, FIRE PROTECTION: CONNECT TRASH CHUTE FIRE PROTECTION HEADS IN ACCORDANCE WITH NFPA- 13. COORDINATE LOCATIONS WITH TRASH CHUTE PROVIDER.
M234 VALVE AND CAP 1-1/4" CW FOR FUTURE TENANT
M235 VALVE AND CAP 1-1/2" CW FOR FUTURE TENANT
M236 STAIRWELL STANDPIPE MAIN.
M237 FLOORS 3RD THROUGH 6TH RESIDENT ROOM ZONE.
M238 GROUND FLOOR AND SECOND FLOOR RETAIL SPACE ZONE.
M239 GROUND FLOOR AND SECOND FLOOR GARAGE ZONE.
M245 1/2" GAS UP FOR FIRE PLACE ABOVE. COORDINATE EXACT LOCATION WITH ARCHITECTURAL PLANS.

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MARK	DATE	DESCRIPTION
1	05/03/2017	ADDENDUM 2

LAVISTA CITY CENTRE MIXED USE - SOUTH

PROJECT: F16132 **DATE:** 04.17.2017

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MECHANICAL ENGINEER — MICHAEL J. IMPACH — E-9256 — STATE OF NEBRASKA

04.17.2017

SECOND FLOOR - PLUMBING

NORTH

M2.02

MEI PROJECT NO: 16290

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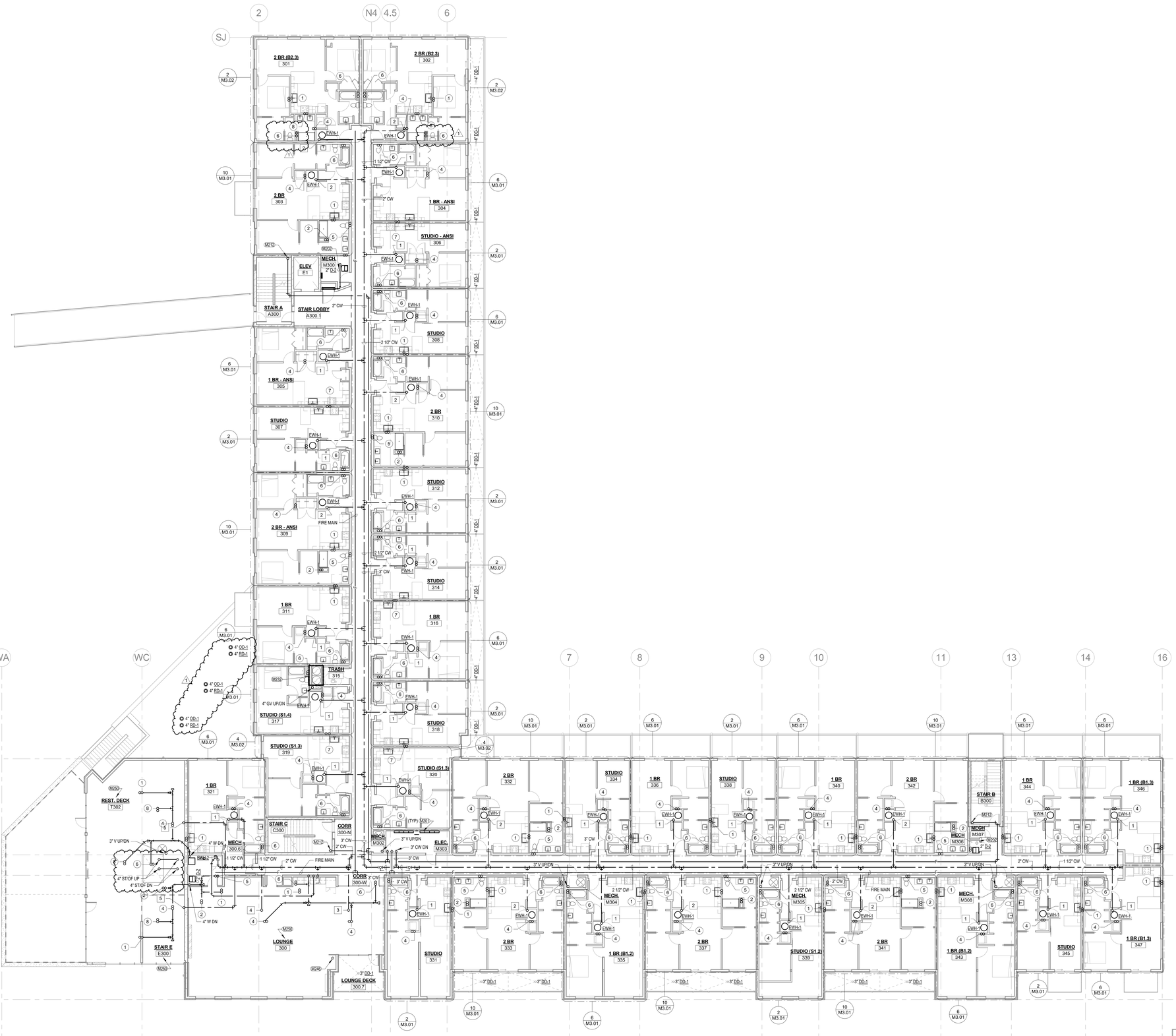

1 THIRD FLOOR THRU SIXTH FLOOR - PLUMBING

3/32" = 1'-0"

GENERAL NOTES

1. DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.
2. SPACE ABOVE CEILINGS ARE LIMITED. COORDINATE PIPE ROUTING WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AND TRANSITIONS AS REQUIRED TO COMPLETE INSTALLATION.
3. PLANS ARE SCHEMATIC IN NATURE. COORDINATE EXACT ROUTING AND EQUIPMENT LOCATIONS WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AS REQUIRED TO COMPLETE INSTALLATION.
4. INSTALL ALL ISOLATION VALVES AND BALANCING VALVES IN ACCESSIBLE LOCATIONS.
5. ALL PIPING SHOWN FOR CLARITY. ROUTE WASTE, VENT, WATER, AND GAS PIPING CONCEALED IN CHASES, IN WALLS, OR ABOVE CEILINGS AS REQUIRED.
6. DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS UNLESS OTHERWISE NOTED. PIPING ROUTED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION.
7. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE CLEANOUTS PER PLUMBING CODE. EXTEND CLEANOUTS TO WALLS WHERE APPLICABLE. COORDINATE CLEANOUT LOCATIONS WITH GENERAL CONTRACTOR.
8. COORDINATE ALL BELOW GRADE PIPING WITH STRUCTURAL FOOTINGS. SLEEVE PIPING AS REQUIRED. SEE STRUCTURAL DRAWINGS. COORDINATE WITH GENERAL CONTRACTOR.
9. WASTE AND VENT RISERS ARE DESIGNATED BY (X). SEE WASTE AND VENT RISER DIAGRAMS ON SHEET M4.01 FOR WASTE AND VENT PIPE SIZES.
10. WATER RISERS ARE DESIGNATED BY [X]. SEE WATER RISER DIAGRAMS ON SHEET M4.02 FOR RISER SIZES.
11. SEE PLUMBING FIXTURE SCHEDULE SHEET M4.02 FOR PLUMBING FIXTURE CONNECTION REQUIREMENTS.
12. ALL PENETRATIONS OF FIRE RESISTANT CONSTRUCTION SHALL BE SEALED WITH A LISTED FIRESTOPPING ASSEMBLY BY THE CONTRACTOR RESPONSIBLE FOR THE PENETRATION.

FIRE SPRINKLER GENERAL NOTES

1. ENTIRE BUILDING SHALL HAVE A WET PIPE FIRE PROTECTION SPRINKLER SYSTEM TO MEET THE REQUIREMENTS OF NFPA AND AUTHORITY HAVING JURISDICTION INCLUDING ATTIC AND JOIST SPACES BETWEEN FLOORS PER NFPA.
2. PROVIDE FIRE SERVICE ENTRANCE WITH DOUBLE CHECK BACKFLOW PREVENTER,ISOLATION VALVES, CHECK VALVES, FLOW SWITCH, ETC. AS REQUIRED BY NFPA AND AUTHORITY HAVING JURISDICTION.
3. DO NOT ROUTE WET PIPE SPRINKLER PIPING IN AREAS SUBJECT TO FREEZING. COORDINATE LOCATION OF SPRINKLER PIPING AND HEADS WITH LIGHTS, DUCTS, DIFFUSERS, GRILLES, AND CEILING SYSTEMS.
4. ROUTING AND SIZING OF FIRE SPRINKLER PIPING SHALL BE BY FIRE SPRINKLER CONTRACTOR.
5. CONTRACTOR SHALL VERIFY AVAILABLE PRESSURE AND FLOW.
6. SEE SPECIFICATION SECTION 211000 - WATER BASED FIRE SUPPRESSION SYSTEMS FOR ALLOWABLE PIPING MATERIALS.
7. PROVIDE MANUAL WET-PIPE STANDPIPE AT EACH STAIRWELL AND AREAS SHOWN.
8. SPRINKLER HEADS SHALL BE SEMI-RECESSED SPRINKLER HEADS OR SIDEWALL HEADS WITH WHITE ESCUTCHEONS. SEE SPECIFICATION SECTION 211000 - WATER BASED FIRE SUPPRESSION SYSTEMS FOR ADDITIONAL INFORMATION.
9. COORDINATE LOCATION OF ALL SPRINKLER HEADS AND PIPING WITH ALL OTHER TRADES. IF CONFLICTS DO OCCUR SUCH THAT LIGHTS, DUCTWORK, OR CEILING SYSTEMS CANNOT BE INSTALLED DUE TO SPRINKLER PIPING INTERFERENCE, THE PIPING SHALL BE RELOCATED AT NO ADDITIONAL EXPENSE TO THE PROJECT.
10. PROVIDE DRY SPRINKLER AT ALL DECK LOCATIONS PER NFPA.

KEYNOTES

M201 DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN CODE REQUIRED CLEARANCES.
M202 1" CONDENSATE LINE RISER, SEE DETAIL 9 ON SHEET M5.02
M212 PROVIDE MANUAL WET-PIPE STAND PIPE IN STAIR PER NFPA 14
M232 TRASH CHUTES, FIRE PROTECTION. CONNECT TRASH CHUTE FIRE PROTECTION HEADS IN ACCORDANCE WITH NFPA- 13. COORDINATE LOCATIONS WITH TRASH CHUTE PROVIDER.
M246 CONNECT GAS PIPING TO FIRE PLACE. COORDINATE EXACT LOCATION WITH ARCHITECTURAL PLANS.
M250 PLUMBING WASTE AND VENT RISER SIMILAR. FLOORS 4, 5, AND 6 ONLY.

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MARK	DATE	DESCRIPTION
1	05/03/2017	ADDENDUM 2

LAVISTA CITY CENTRE MIXED USE - SOUTH

PROJECT: F16132 **DATE:** 04.17.2017
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MECHANICAL ENGINEER
THOMAS J. IMPACH
E-9256
STATE OF NEBRASKA
04.17.2017

THIRD FLOOR - PLUMBING

NORTH

M2.03

MEI PROJECT NO: 16290

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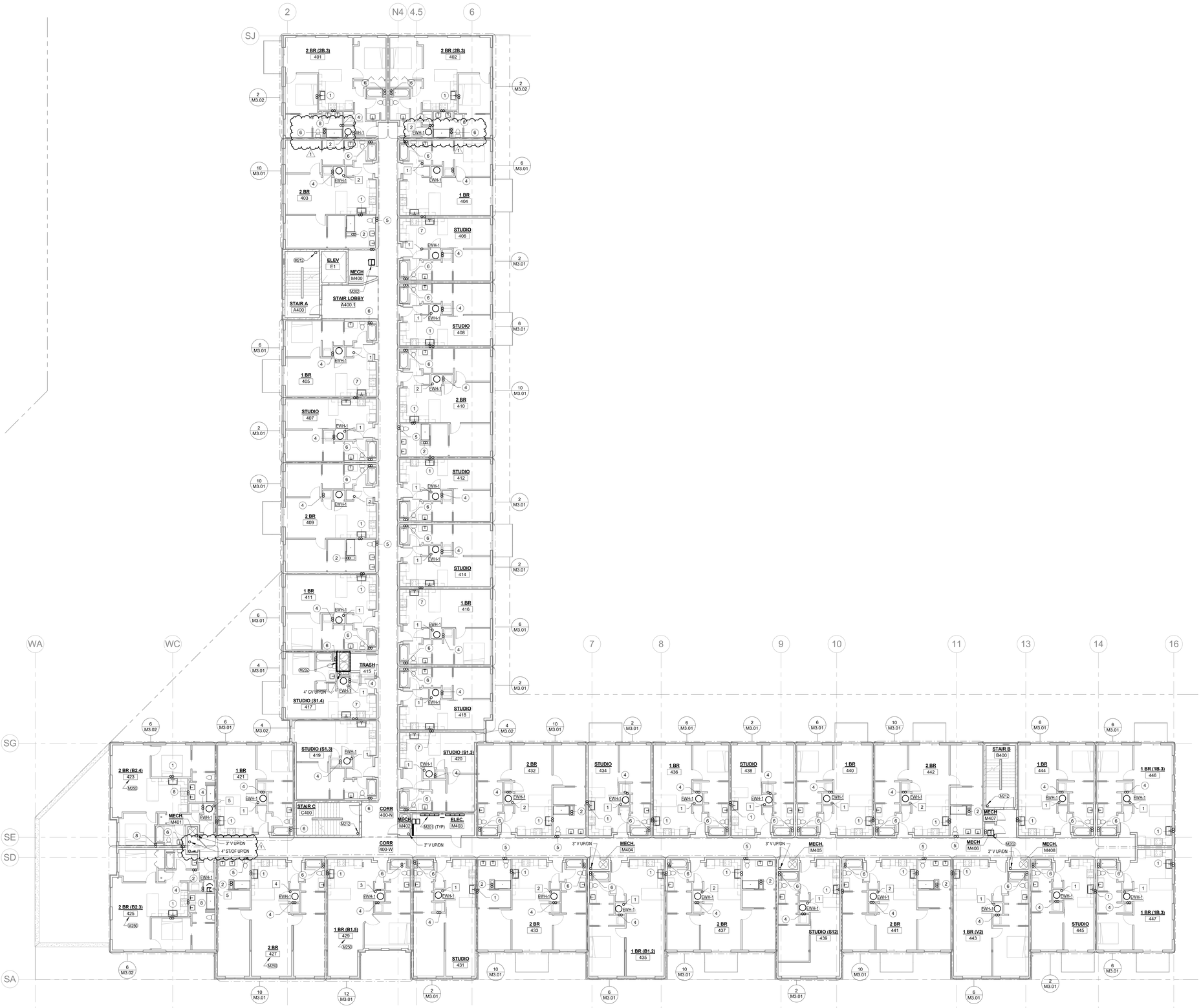

1 04-FOURTH FLOOR - PLUMBING

3/32" = 1'-0"

GENERAL NOTES

1. DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.

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6. DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS UNLESS OTHERWISE NOTED. PIPING ROUTED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION.

7. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE CLEANOUTS PER PLUMBING CODE. EXTEND CLEANOUTS TO WALLS WHERE APPLICABLE. COORDINATE CLEANOUT LOCATIONS WITH GENERAL CONTRACTOR.

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10. WATER RISERS ARE DESIGNATED BY [X] . SEE WATER RISER DIAGRAMS ON SHEET M4.02 FOR RISER SIZES.

11. SEE PLUMBING FIXTURE SCHEDULE SHEET M4.02 FOR PLUMBING FIXTURE CONNECTION REQUIREMENTS.

12. ALL PENETRATIONS OF FIRE RESISTANT CONSTRUCTION SHALL BE SEALED WITH A LISTED FIRESTOPPING ASSEMBLY BY THE CONTRACTOR RESPONSIBLE FOR THE PENETRATION.

FIRE SPRINKLER GENERAL NOTES

1. ENTIRE BUILDING SHALL HAVE A WET PIPE FIRE PROTECTION SPRINKLER SYSTEM TO MEET THE REQUIREMENTS OF NFPA AND AUTHORITY HAVING JURISDICTION INCLUDING ATTIC AND JOIST SPACES BETWEEN FLOORS PER NFPA.

2. PROVIDE FIRE SERVICE ENTRANCE WITH DOUBLE CHECK BACKFLOW PREVENTER,ISOLATION VALVES, CHECK VALVES, FLOW SWITCH, ETC. AS REQUIRED BY NFPA AND AUTHORITY HAVING JURISDICTION.

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5. CONTRACTOR SHALL VERIFY AVAILABLE PRESSURE AND FLOW.

6. SEE SPECIFICATION SECTION 211000 - WATER BASED FIRE SUPPRESSION SYSTEMS FOR ALLOWABLE PIPING MATERIALS.

7. PROVIDE MANUAL WET-PIPE STANDPIPE AT EACH STAIRWELL AND AREAS SHOWN.

8. SPRINKLER HEADS SHALL BE SEMI-RECESSED SPRINKLER HEADS OR SIDEWALL HEADS WITH WHITE ESCUTCHEONS. SEE SPECIFICATION SECTION 211000 - WATER BASED FIRE SUPPRESSION SYSTEMS FOR ADDITIONAL INFORMATION.

9. COORDINATE LOCATION OF ALL SPRINKLER HEADS AND PIPING WITH ALL OTHER TRADES. IF CONFLICTS DO OCCUR SUCH THAT LIGHTS, DUCTWORK, OR CEILING SYSTEMS CANNOT BE INSTALLED DUE TO SPRINKLER PIPING INTERFERENCE, THE PIPING SHALL BE RELOCATED AT NO ADDITIONAL EXPENSE TO THE PROJECT.

10. PROVIDE DRY SPRINKLER AT ALL DECK LOCATIONS PER NFPA.

KEYNOTES

M201	DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN CODE REQUIRED CLEARANCES.
M202	1" CONDENSATE LINE RISER, SEE DETAIL 9 ON SHEET M5.02.
M212	PROVIDE MANUAL WET-PIPE STAND PIPE IN STAIR PER NFPA 14
M232	TRASH CHUTES. FIRE PROTECTION: CONNECT TRASH CHUTE FIRE PROTECTION HEADS IN ACCORDANCE WITH NFPA- 13. COORDINATE LOCATIONS WITH TRASH CHUTE PROVIDER.
M250	PLUMBING WASTE AND VENT RISER SIMILAR. FLOORS 4, 5, AND 6 ONLY.

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REVISIONS SCHEDULE		
MARK	DATE	DESCRIPTION
1	05/03/2017	ADDENDUM 2

LAVISTA CITY CENTRE
MIXED USE - SOUTH

PROJECT: F16132 DATE: 04.17.2017

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MECHANICAL ENGINEER
MICHAEL J. IMPACH
E-9256
STATE OF NEBRASKA
04.17.2017

FOURTH FLOOR - PLUMBING

NORTH

M2.04

MEI PROJECT NO: 16290

morrissey engineering inc
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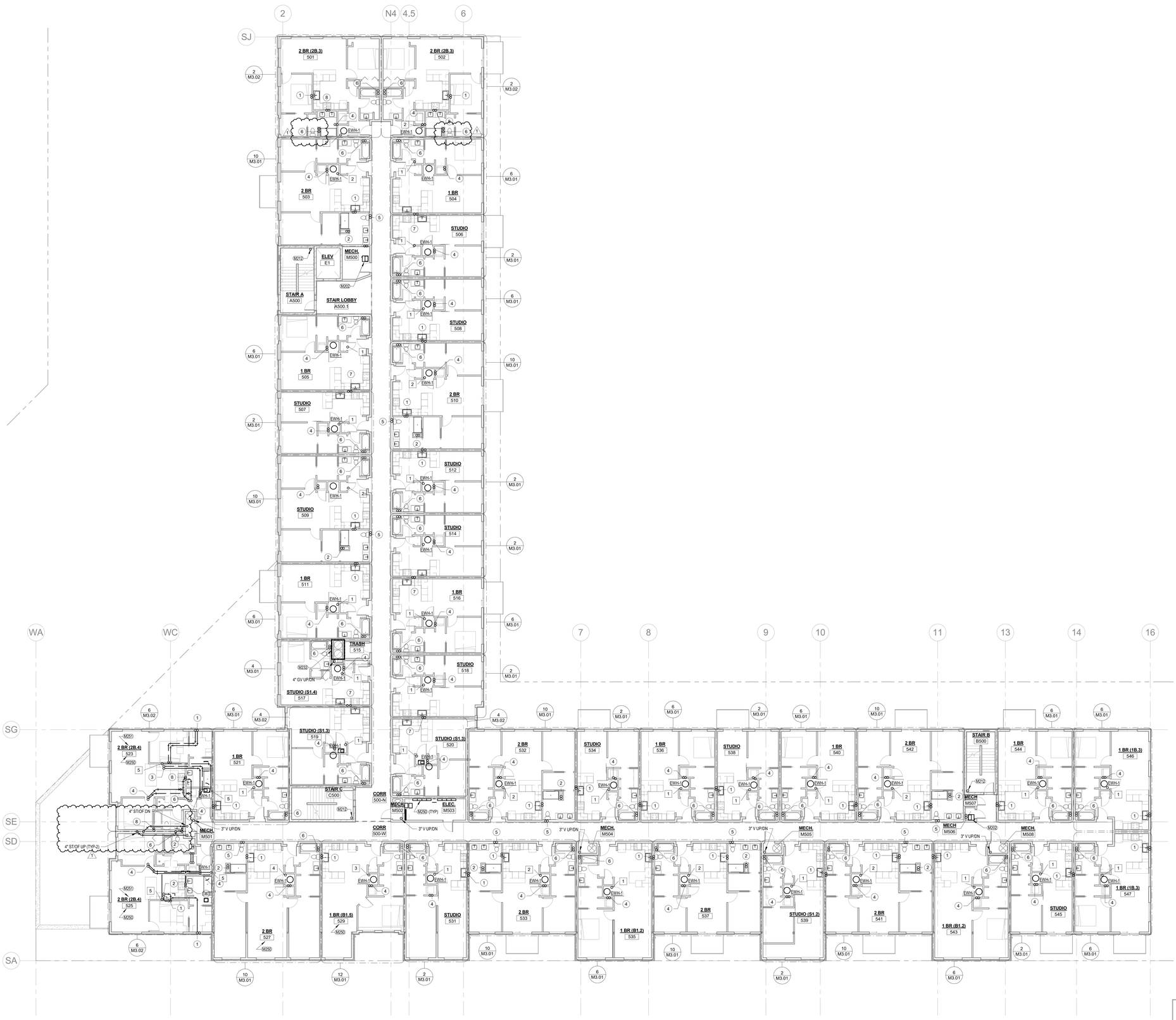

1 05-FIFTH FLOOR - PLUMBING

3/32" = 1'-0"

GENERAL NOTES

1. DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.
2. SPACE ABOVE CEILINGS ARE LIMITED. COORDINATE PIPE ROUTING WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AND TRANSITIONS AS REQUIRED TO COMPLETE INSTALLATION.
3. PLANS ARE SCHEMATIC IN NATURE. COORDINATE EXACT ROUTING AND EQUIPMENT LOCATIONS WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AS REQUIRED TO COMPLETE INSTALLATION.
4. INSTALL ALL ISOLATION VALVES AND BALANCING VALVES IN ACCESSIBLE LOCATIONS.
5. ALL PIPING SHOWN FOR CLARITY. ROUTE WASTE, VENT, WATER, AND GAS PIPING CONCEALED IN CHASES, IN WALLS, OR ABOVE CEILINGS AS REQUIRED.
6. DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS UNLESS OTHERWISE NOTED. PIPING ROUTED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION.
7. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE CLEANOUTS PER PLUMBING CODE. EXTEND CLEANOUTS TO WALLS WHERE APPLICABLE. COORDINATE CLEANOUT LOCATIONS WITH GENERAL CONTRACTOR.
8. COORDINATE ALL BELOW GRADE PIPING WITH STRUCTURAL FOOTINGS. SLEEVE PIPING AS REQUIRED. SEE STRUCTURAL DRAWINGS. COORDINATE WITH GENERAL CONTRACTOR.
9. WASTE AND VENT RISERS ARE DESIGNATED BY (X) . SEE WASTE AND VENT RISER DIAGRAMS ON SHEET M4.01 FOR WASTE AND VENT PIPE SIZES.
10. WATER RISERS ARE DESIGNATED BY [X] . SEE WATER RISER DIAGRAMS ON SHEET M4.02 FOR RISER SIZES.
11. SEE PLUMBING FIXTURE SCHEDULE SHEET M4.02 FOR PLUMBING FIXTURE CONNECTION REQUIREMENTS.
12. ALL PENETRATIONS OF FIRE RESISTANT CONSTRUCTION SHALL BE SEALED WITH A LISTED FIRESTOPPING ASSEMBLY BY THE CONTRACTOR RESPONSIBLE FOR THE PENETRATION.

FIRE SPRINKLER GENERAL NOTES

1. ENTIRE BUILDING SHALL HAVE A WET PIPE FIRE PROTECTION SPRINKLER SYSTEM TO MEET THE REQUIREMENTS OF NFPA AND AUTHORITY HAVING JURISDICTION INCLUDING ATTIC AND JOIST SPACES BETWEEN FLOORS PER NFPA.
2. PROVIDE FIRE SERVICE ENTRANCE WITH DOUBLE CHECK BACKFLOW PREVENTER,ISOLATION VALVES, CHECK VALVES, FLOW SWITCH, ETC. AS REQUIRED BY NFPA AND AUTHORITY HAVING JURISDICTION.
3. DO NOT ROUTE WET PIPE SPRINKLER PIPING IN AREAS SUBJECT TO FREEZING. COORDINATE LOCATION OF SPRINKLER PIPING AND HEADS WITH LIGHTS, DUCTS, DIFFUSERS, GRILLES, AND CEILING SYSTEMS.
4. ROUTING AND SIZING OF FIRE SPRINKLER PIPING SHALL BE BY FIRE SPRINKLER CONTRACTOR.
5. CONTRACTOR SHALL VERIFY AVAILABLE PRESSURE AND FLOW.
6. SEE SPECIFICATION SECTION 211000 - WATER BASED FIRE SUPPRESSION SYSTEMS FOR ALLOWABLE PIPING MATERIALS.
7. PROVIDE MANUAL WET-PIPE STANDPIPE AT EACH STAIRWELL AND AREAS SHOWN.
8. SPRINKLER HEADS SHALL BE SEMI-RECESSED SPRINKLER HEADS OR SIDEWALL HEADS WITH WHITE ESCUTCHEONS. SEE SPECIFICATION SECTION 211000 - WATER BASED FIRE SUPPRESSION SYSTEMS FOR ADDITIONAL INFORMATION.
9. COORDINATE LOCATION OF ALL SPRINKLER HEADS AND PIPING WITH ALL OTHER TRADES. IF CONFLICTS DO OCCUR SUCH THAT LIGHTS, DUCTWORK, OR CEILING SYSTEMS CANNOT BE INSTALLED DUE TO SPRINKLER PIPING INTERFERENCE, THE PIPING SHALL BE RELOCATED AT NO ADDITIONAL EXPENSE TO THE PROJECT.
10. PROVIDE DRY SPRINKLER AT ALL DECK LOCATIONS PER NFPA.

KEYNOTES

M202	1" CONDENSATE LINE RISER. SEE DETAIL 9 ON SHEET M5.02.
M212	PROVIDE MANUAL WET-PIPE STAND PIPE IN STAIR PER NFPA 14
M232	TRASH CHUTES. FIRE PROTECTION: CONNECT TRASH CHUTE FIRE PROTECTION HEADS IN ACCORDANCE WITH NFPA- 13. COORDINATE LOCATIONS WITH TRASH CHUTE PROVIDER.
M250	PLUMBING WASTE AND VENT RISER SIMILAR. FLOORS 4, 5, AND 6 ONLY.
M251	OFFSET PLUMBING WASTE AND VENT PIPING AS REQUIRED IN 5TH FLOOR CEILING TO ACCOMMODATE FIXTURE LOCATIONS ON THE 6TH FLOOR.

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REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
1	05/03/2017	ADDENDUM 2

LAVISTA CITY CENTRE MIXED USE - SOUTH

PROJECT: F16132 **DATE:** 04.17.2017

S:\Comfort Sun-Jan\M2.05.pln

MECHANICAL THOMAS J. MYRICH E-9256 STATE OF NEBRASKA

04.17.2017

FIFTH FLOOR - PLUMBING

NORTH

M2.05

MEI PROJECT NO: 16290

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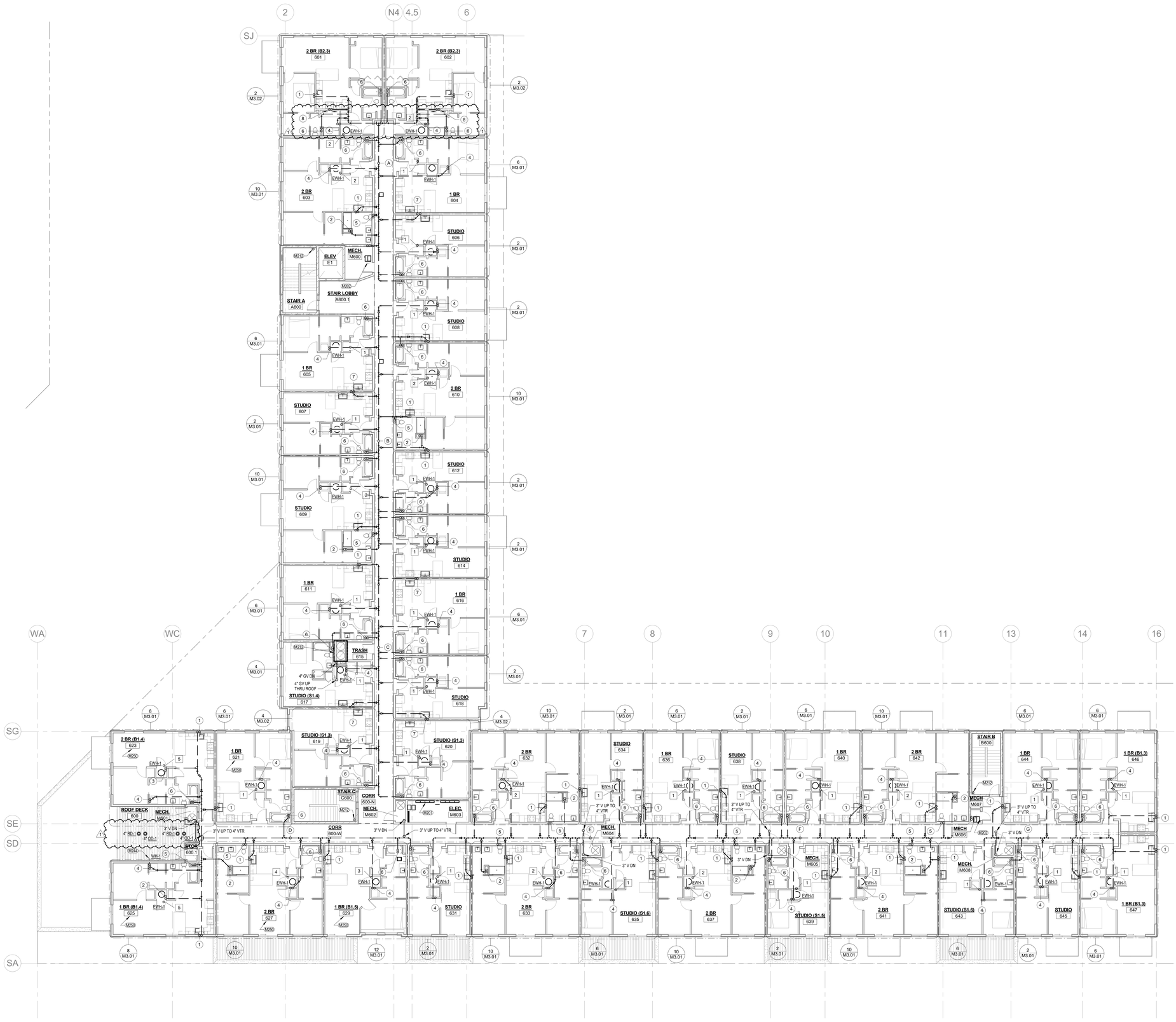

1 **06-SIXTH FLOOR - PLUMBING**

3/32" = 1'-0"

GENERAL NOTES

1. DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.

2. SPACE ABOVE CEILINGS ARE LIMITED. COORDINATE PIPE ROUTING WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AND TRANSITIONS AS REQUIRED TO COMPLETE INSTALLATION.

3. PLANS ARE SCHEMATIC IN NATURE. COORDINATE EXACT ROUTING AND EQUIPMENT LOCATIONS WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AS REQUIRED TO COMPLETE INSTALLATION.

4. INSTALL ALL ISOLATION VALVES AND BALANCING VALVES IN ACCESSIBLE LOCATIONS.

5. ALL PIPING SHOWN FOR CLARITY. ROUTE WASTE, VENT, WATER, AND GAS PIPING CONCEALED IN CHASES, IN WALLS, OR ABOVE CEILINGS AS REQUIRED.

6. DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS UNLESS OTHERWISE NOTED. PIPING ROUTED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION.

7. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE CLEANOUTS PER PLUMBING CODE. EXTEND CLEANOUTS TO WALLS WHERE APPLICABLE. COORDINATE CLEANOUT LOCATIONS WITH GENERAL CONTRACTOR.

8. COORDINATE ALL BELOW GRADE PIPING WITH STRUCTURAL FOOTINGS. SLEEVE PIPING AS REQUIRED. SEE STRUCTURAL DRAWINGS. COORDINATE WITH GENERAL CONTRACTOR.

9. WASTE AND VENT RISERS ARE DESIGNATED BY (X) . SEE WASTE AND VENT RISER DIAGRAMS ON SHEET M4.01 FOR WASTE AND VENT PIPE SIZES.

10. WATER RISERS ARE DESIGNATED BY [X] . SEE WATER RISER DIAGRAMS ON SHEET M4.02 FOR RISER SIZES.

11. SEE PLUMBING FIXTURE SCHEDULE SHEET M4.02 FOR PLUMBING FIXTURE CONNECTION REQUIREMENTS.

12. ALL PENETRATIONS OF FIRE RESISTANT CONSTRUCTION SHALL BE SEALED WITH A LISTED FIRESTOPPING ASSEMBLY BY THE CONTRACTOR RESPONSIBLE FOR THE PENETRATION.

FIRE SPRINKLER GENERAL NOTES

1. ENTIRE BUILDING SHALL HAVE A WET PIPE FIRE PROTECTION SPRINKLER SYSTEM TO MEET THE REQUIREMENTS OF NFPA AND AUTHORITY HAVING JURISDICTION INCLUDING ATTIC AND JOIST SPACES BETWEEN FLOORS PER NFPA.

2. PROVIDE FIRE SERVICE ENTRANCE WITH DOUBLE CHECK BACKFLOW PREVENTER;ISOLATION VALVES, CHECK VALVES, FLOW SWITCH, ETC. AS REQUIRED BY NFPA AND AUTHORITY HAVING JURISDICTION.

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KEYNOTES

M201	DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN CODE REQUIRED CLEARANCES.
M202	1" CONDENSATE LINE RISER, SEE DETAIL 9 ON SHEET M5.02.
M212	PROVIDE MANUAL WET-PIPE STAND PIPE IN STAIR PER NFPA 14
M232	TRASH CHUTES, FIRE PROTECTION: CONNECT TRASH CHUTE FIRE PROTECTION HEADS IN ACCORDANCE WITH NFPA- 13. COORDINATE LOCATIONS WITH TRASH CHUTE PROVIDER.
M244	CONNECT WH-1 INTO NEAREST APARTMENT PEX MANIFOLD. PROVIDE ISOLATION VALVE AT MANIFOLD.
M250	PLUMBING WASTE AND VENT RISER SIMILAR. FLOORS 4, 5, AND 6 ONLY.

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REVISIONS SCHEDULE

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1	05/03/2017	ADDENDUM 2

LAVISTA CITY CENTRE
MIXED USE - SOUTH

PROJECT: F16132 **DATE:** 04.17.2017

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MECHANICAL
JAMES A. IMPACH
E-9256
REGISTERED PROFESSIONAL ENGINEER
STATE OF NEBRASKA

04.17.2017

SIXTH FLOOR - PLUMBING

MEI PROJECT NO: 16290

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NORTH

M2.06

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HORIZONTAL WATER SOURCE HEAT PUMP SCHEDULE

GENERAL	PLAN TAG	HHP-1.0	HHP-2.0	HHP-3.0	HHP-4.0
	MANUFACTURER	McQuay	McQuay	McQuay	McQuay
	MODEL NUMBER	WCCH-012	WCCH-024	WCCH-036	WCCH-048
	SERVES	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS
	CONFIGURATION	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL
	MAXIMUM SIZE (LxWxH)(IN)	40x20x12	42x20x19	46x21x20	52x28x23
	MAXIMUM WEIGHT (LBS.)	200	250	275	350
	REMARKS	(1) (2)	(1) (2)	(1) (2)	(1) (2)
WATER (4)	WATER FLOW (GPM)	2.5	5.0	7.5	10.0
	MAX. WATER PRESS. DROP (FEET)	9.3	7.2	7.0	13.1
	CONDENSER WATER RUNOUT SIZE (IN)	3/4"	1"	1"	1-1/4"
AIRFLOW (3)	TOTAL AIRFLOW (CFM)	340 (H)	700 (L)	1050 (H)	1400 (H)
	MINIMUM OUTSIDE AIRFLOW (CFM)	-	-	-	-
	EXTERNAL STATIC PRESSURE (IN. WC)	0.40	0.70	0.65	0.60
ELECTRICAL	VOLTS	208	208	208	208
	PHASE	1	1	3	3
	MAXIMUM FUSE SIZE (AMPS)	15	15	25	35
	MINIMUM CIRCUIT AMPACITY (MCA)	7.8	12.3	16.8	22.6
	REMARKS	-	-	-	-
COOLING (4)	ENTERING AIR TEMP. (DB/WB)(ºF)	80/67	80/67	80/67	80/67
	MINIMUM NET EER (ARI) (5)	12.4	14.4	15.2	14.1
	TOTAL COOLING (MBH)	11.6	23.6	33.6	44.7
	SENSIBLE COOLING (MBH)	7.9	15.2	23.1	30.3
	ENTERING WATER TEMP. (ºF)	90.0	90.0	90.0	90.0
	LEAVING WATER TEMP. (ºF)	102.6	102.1	101.8	101.9
HEATING (4)	ENTERING AIR TEMP. (ºF)	70.0	70.0	70.0	70.0
	MINIMUM HEATING CAPACITY (MBH)	15.2	27.9	41.6	56.2
	MINIMUM LAT. (ºF)	111.6	107.1	106.8	70.0
	EWT / LWT (ºF)	70.0 / 60.4	70.0 / 61.0	70.0 / 60.9	60.8

REMARKS
(1) HORIZONTAL HEAT PUMP; REFERENCE DRAWINGS FOR CABINET CONFIGURATION (SUPPLY DISCHARGE AND RETURN AIR CONNECTIONS)
(2) PROVIDE UNIT WITH THE FOLLOWING, (REFERENCE SPECIFICATIONS FOR ADDITIONAL REQUIREMENT)
- SOUND PACKAGE
- COMPRESSOR BLANKET
- MASS PLATE BELOW COMPRESSOR
- MOTORIZED 2- WAY ISOLATION VALVE
(3) FAN SPEED: (L) LOW FAN SPEED, (M) MEDIUM FAN SPEED, (H) HIGH FAN SPEED
(4) WATER PRESSURE DROP, COOLING AND HEATING CAPACITIES BASED ON 30% PROPYLENE GLYCOL,
(5) PERFORMANCE BASED IN ACCORDANCE WITH ISO 13256-1

VERTICAL WATER SOURCE HEAT PUMP SCHEDULE

GENERAL	PLAN TAG	VHP-3.0	VHP-4.0	VHP-5.0
	MANUFACTURER	McQUAY	McQUAY	McQUAY
	MODEL NUMBER	WVFC-036	WVFC-048	WVFC-060
	SERVES	SEE PLANS	SEE PLANS	SEE PLANS
	CONFIGURATION	(1)	(1)	(1)
	MAXIMUM SIZE (LxWxH)(IN)	25x23x51	33x23x47	33x25x59
	MAXIMUM WEIGHT (LBS.)	300	375	450
	REMARKS	(1) (2)	(1) (2)	(1) (2)
WATER (4)	WATER FLOW (GPM)	7.5	10.0	12.5
	MAX. WATER PRESS. DROP (FEET)	8.5	13.1	18.3
	CONDENSER WATER RUNOUT SIZE (IN)	1"	1-1/4"	1-1/4"
AIRFLOW (3)	TOTAL AIRFLOW (CFM)	1050 (H)	1400 (M)	1750 (H)
	MINIMUM OUTSIDE AIRFLOW (CFM)	-	-	-
	EXTERNAL STATIC PRESSURE (IN. WC)	0.75	0.60	0.65
ELECTRICAL	VOLTS	208	208	208
	PHASE	3	3	3
	MAXIMUM FUSE SIZE (AMPS)	30	30	35
	MINIMUM CIRCUIT AMPACITY (MCA)	20.0	20.9	23.3
	REMARKS	-	-	-
COOLING (4)	ENTERING AIR TEMP. (DB/WB)(ºF)	80/67	80/67	80/67
	MINIMUM NET EER (ARI) (5)	15.0	16.0	15.7
	TOTAL COOLING (MBH)	35.7	44.7	58.5
	SENSIBLE COOLING (MBH)	24.5	30.4	40.3
	ENTERING WATER TEMP. (ºF)	90.0	90.0	90.0
	LEAVING WATER TEMP. (ºF)	102.6	101.7	102.2
HEATING (4)	ENTERING AIR TEMP. (ºF)	70.0	70.0	70.0
	MINIMUM HEATING CAPACITY (MBH)	43.0	55.3	67.1
	MINIMUM LAT. (ºF)	106.5	106.7	105.6
	EWT / LWT (ºF)	70.0 / 60.8	70.0 / 61.0	70.0 / 61.3

REMARKS
(1) VERTICAL HEAT PUMP; REFERENCE DRAWINGS FOR CABINET CONFIGURATION (SUPPLY DISCHARGE AND RETURN AIR CONNECTIONS)
(2) PROVIDE UNIT WITH THE FOLLOWING, (REFERENCE SPECIFICATIONS FOR ADDITIONAL REQUIREMENT)
- SOUND PACKAGE
- COMPRESSOR BLANKET
- MASS PLATE BELOW COMPRESSOR
- MOTORIZED 2- WAY ISOLATION VALVE
(3) FAN SPEED: (L) LOW FAN SPEED, (M) MEDIUM FAN SPEED, (H) HIGH FAN SPEED
(4) WATER PRESSURE DROP, COOLING AND HEATING CAPACITIES BASED ON 30% PROPYLENE GLYCOL,
(5) PERFORMANCE BASED IN ACCORDANCE WITH ISO 13256-1

DIFFUSER REGISTER AND GRILLE SCHEDULE

1

PLAN TAG	D-1	D-2	R-1	R-2	R-3	G-1	G-2	G-3	R-4
MANUFACTURER	PRICE	PRICE PRODIGY	USAIRE	PRICE	PRICE	USAIRE	PRICE	PRICE	PRICE
MODEL NUMBER	SPD	PPD2	102M	520-L	SDGE	1400	530-L	PDDR	CVD
FUNCTION	SUPPLY AIR	SUPPLY AIR	SUPPLY AIR	SUPPLY AIR	SUPPLY AIR	RETURN	RETURN	RETURN	SUPPLY AIR
DESCRIPTION	FLAT PLATE	FLAT PLATE	(5)	LOUVER	LOUVER	LOUVERS	SINGLE	PERF. GRILLE	CURVED VANE
DEFLECTION	4-WAY	4-WAY	2-WAY	2-WAY	2-WAY	-	45°	-	1-WAY
MAX. STATIC PRESSURE (IN W.G.)	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.10
CONSTRUCTION MATERIAL	STEEL	STEEL	STEEL	STEEL	ALUMINUM	STEEL	STEEL	STEEL	ALUMINUM
FINISH	WHITE	WHITE	WHITE	WHITE	(8)	WHITE	WHITE	WHITE	WHITE
NECK SIZE (IN)	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	28x14	-	10x20	10x8
FACE SIZE (IN)	24x24	24x24	-	-	-	30x16	SEE PLANS	12x24	-
ACCESSORIES	(3)	(4)	-	OBD	OBD	-	-	-	OBD
REMARKS (1) (2)	-	-	(6)	-	(7)	-	-	-	(6)

REMARKS
(1) VERIFY CEILING CONSTRUCTION PRIOR TO FURNISHING MATERIAL.
(2) NOISE CRITERIA (NC) SHALL BE LESS THAN 25 ON DIFFUSERS, REGISTERS AND GRILLES IN LOCATED OCCUPIED SPACES
(3) VCR-7 RADIAL OPPOSED BLADE DAMPER.
(4) VAV COOLING AND VAV HEATING DIFFUSER WITH 35' PLENUM RATED CABLE, 24 VAC MOTOR WITH TRANSFORMER AND WALL MOUNTED SENSOR
(5) PROVIDE WITH MULTI-SHUTTER DAMPER ADJUSTABLE FROM FACE OF REGISTER
(6) PROVIDE CEILING RADIATION DAMPER AND SLEEVE WITH CEILING REGISTER.
(7) SPIRAL DUCT REGISTER, DOUBLE DEFLECTION. COORDINATE ROUND DUCT DIAMETER. PROVIDE WITH "AS" AIR SCOOP
(8) COLOR TO BE SELECTED BY ARCHITECT.

DUCTLESS SPLIT AIR CONDITIONER

GENERAL	PLAN TAG	AC-1 / ACC-1
	MANUFACTURER (8)	CARRIER
	MODEL NUMBER	(1)
	SERVES	SEE PLANS
	CONFIGURATION	WALL (1)
	MAXIMUM SIZE (LxWxH)(IN)	(2)
	ACCESSORIES	(3)
	REMARKS	(4) (5)
AIRFLOW	INSIDE AIRFLOW (CFM)	525 (MED)
	FAN SPEED	3
ELECTRICAL	VOLTS	200
	PHASE	1
	OVERCURRENT PROT. (INDOOR/OUTDOOR)	15/20
	MINIMUM CIRCUIT AMP. (INDOOR/OUTDOOR)	0.48/12.1
	REMARKS	(6)
HEAT	MBH (KW)	-
	STAGES	-
	KW / STAGE	-
	REMARKS	-
COOLING	AMBIENT AIR DB (ºF)	95
	ENTERING AIR DB/WB (ºF)	80/67
	TOTAL CAPACITY (MBH)	18.0
	SENSIBLE CAPACITY (MBH)	-
	REFRIGERANT TYPE	R-410A
	MINIMUM SEER	13.0
	REMARKS	(4)

REMARKS
(1) MODEL NO:
INDOOR UNIT: 40QNC018
OUTDOOR UNIT: 38HDF018
(2) SIZE:
INDOOR UNIT: 42x12x8
OUTDOOR UNIT: 36x25x15
(3) PROVIDE MANUFACTURER'S WIRED WALL MOUNTED DIGITAL CONTROL THERMOSTAT.
(4) PROVIDE LOW AMBIENT ACCESSORIES (COOLING TO -20°F), FACTORY CONDENSATE PUMP AND WITH MANUFACTURER'S WASHABLE FILTERS.
(5) PROVIDE COMPRESSORS WITH 5-YEAR WARRANTY.
(6) POWER FOR INDOOR UNIT SHALL COME OFF OF OUTDOOR CONDENSING UNIT.

HEAT PUMP SCHEDULE

GENERAL	PLAN TAG	HP-1.5	HP-2.0	HP-2.5	HP-3.0
	MANUFACTURER	CARRIER	CARRIER	CARRIER	CARRIER
	MODEL NUMBER	CH14NB-018	CH14NB-024	CH14NB-030	CH14NB-036
	SERVES	FC-1.5	FC-2.0	FC-2.5	FC-3.0
	CONFIGURATION	-	-	-	-
	MAXIMUM SIZE (LxW)(IN)	24"x24"x36"	26"x26"x36"	32"x32"32"	32"x32"32"
	MAXIMUM WEIGHT (LBS.)	175	175	200	225
	REMARKS	(1)	(1)	(1)	(1) (3)
ELECTRICAL	VOLTS	208	208	208	208
	PHASE	1	1	1	1
	MAXIMUM UNIT KW	-	-	-	-
	MAXIMUM FUSE SIZE (AMPS)	20	25	30	30
	MINIMUM CIRCUIT AMPACITY (MCA)	11.8	14.2	18.3	19.5
	REMARKS	-	-	-	-
COOLING	AMBIENT AIR TEMPERATURE (F)	95	95	95	95
	SEER	14	14	14	14
	NOMINAL CAPACITY (TONS)	1.5	2.0	2.5	3.0
	TOTAL COOLING (MBH)	17.9	21.3	28.7	32.9
	SENSIBLE COOLING (MBH)	12.9	15.7	21.6	25.0
REFRIGERANT	TYPE	R-410A	R-410A	R-410A	R-410A
	MIN. NUMBER OF CIRCUITS	1	1	1	1
	REMARKS	(2)	(2)	(2)	(2)
COMPRES-SORS	TYPE	SCROLL	SCROLL	SCROLL	SCROLL
	QUANTITY / SIZE	1 @ 1.5 TON	1 @ 2 TON	1 @ 2.5 TON	1 @ 3.0 TON
	HP	-	-	-	-
	REMARKS	(1)	(1)	(1)	(1)
CONDENSER FANS	TYPE	PROP	PROP	PROP	PROP
	QUANTITY / SIZE	1	1	1	1
	HP	1/12	1/10	1/4	1/4
	REMARKS	-	-	-	-

REMARKS
1. PROVIDE WITH 5-YEAR COMPRESSOR WARRANTY.
2. RESIDENTIAL HEAT PUMPS REQUIRED LONG LINE SETS UP TO 200 TOTAL LINEAL FEET WITH 90 FOOT RISE. COORDINATE LONG LINE SET REQUIREMENTS WITH MANUFACTURER. PROVIDE ALL ACCESSORIES REQUIRED FOR PROPER LONG LINE SET OPERATION.
3. LOW AMBIENT KIT TO PERMIT COOLING OPERATION DOWN TO 0°F.

BOILER SCHEDULE

GENERAL	PLAN TAG	B-1	B-2
	MANUFACTURER	LOCKINVAR	LOCKINVAR
	MODEL NUMBER	KBN 801	KBN 801
	SERVES	HPS/HPR	HPS/HPR
	TYPE	CONDENSING	CONDENSING
	MAXIMUM SIZE (LxWxH)(IN.)	48x16x43	48x16x43
	MAXIMUM OPERATING WEIGHT (LBS)	500	500
	DESIGN PRESSURE (PSIG)	150 (6)	150 (6)
	REMARKS	(1) (4) (5) (7)	(1) (4) (5) (7)
BURNER	FUEL	NAT. GAS	NAT. GAS
	INPUT (MBH)	800	700
	OUTPUT (MBH) @ (80°F EWT)	752 (2)	752 (2)
	EFFICIENCY (AFUE)	(2)	(2)
	VENT CONNECTION / INLET (IN.)	-	-
	BURNER MOTOR HP	-	-
	VOLTAGE/PHASE	120/1 (3)	120/1 (3)

REMARKS
(1) PROVIDE BOILER WITH CIRCULATION PUMP, REFERENCE PUMP SCHEDULE BP-X
(2) THERMAL EFFICIENCY= 94%
(3) XXXXXXX FLA
(4) LISTINGS AND APPROVALS UL, CSD-1, ASME
(5) PROVIDE BOILER WITH:
- 5:1 TURNDOWN RATIO (MINIMUM)
- CONDENSATE NEUTRALIZATION KIT
- STAINLESS STEEL VENT KIT
- SIDE WALL VENT KIT
(6) PROVIDE WITH 125 PSI RELIEF VALVE
(7) 2" WATER CONNECTION

FLUID COOLER SCHEDULE

GENERAL	PLAN TAG	FC-1	FC-2
	MANUFACTURER	EVAPCO	EVAPCO
	MODEL NUMBER	ATWB 9-6J8	ATWB 9-6J8
	SERVES	HPS/HPR	HPS/HPR
	CONFIGURATION	(1)	(1)
	MAXIMUM SIZE (LxWxH) (FT.)	8.6'x7.6'x14.0' H	8.6'x7.6'x14.0' H
	MAXIMUM WEIGHT (LBS.)	15,000	15,000
	ACCESSORIES	(4)	(4)
CAPACITY	CAPACITY (TONS)	-	-
	CAPACITY (MBH)	-	-
	FLUID TYPE (%) PROPYLENE GLYCOL	30%	30%
DESIGN CONDITIONS WET OPERATION (4)	WATER FLOW (GPM)	350	350
	PRESSURE DROP THROUGH COIL (FT HD)	3.5	3.5
	ENTERING WATER TEMP. (ºF)	101.0	101.0
	LEAVING WATER TEMP. (ºF)	90.0	90.0
	ENTERING WET BULB TEMP. (°F)	78.0	78.0
	DRY BULB SWITCHOVER TEMP (°F)	-	-
FAN MOTOR	RPM	1,750	1,750
	HP	15	15
	VOLTS / PHASE	200	200
	PHASE	3	3
	TYPE	(5)	(5)
	CONTROL DEVICE	VFD-FC1	VFD-FC2
	REMARKS	-	-
PUMP MOTOR	HP	2	2
	VOLTS / PHASE	200/3	200/3
	TYPE	-	-
	CONTROL DEVICE	(6)	(6)
	REMARKS	-	-

REMARKS
(1) INDUCTED DRAFT, COUNTERFLOW FLUID COOLER
(2) UNIT OPERATING WEIGHT
(3) CAPACITY BASED ON GLYCOL TYPE AND PERCENTAGE INDICATED
(4) ACCESSORIES:
- DRIFT ELIMINATOR
- BASIN HEATER
- SUPER LOW SOUND FAN
- WATER SILENCERS
- 7.5 KW BASIN HEATER
- VIBRATION SWITCH
(5) INVERTER DUTY MOTOR FOR VARIABLE FREQUENCY DRIVE OPERATION
(6) BUILDING TEMPERATURE CONTROL SYSTEM

(8) MAXIMUM SOUND PRESSURE LEVELS

	END		Mtr. SIDE		END		Opp Mtr. SIDE		TOP		SOUND POWER LEVEL
	5 ft	50 ft	5 ft	50 ft	5 ft	50 ft	5 ft	50 ft	5 ft	50 ft	
dBA	66	54	70	55	66	54	66	54	71	58	87

PUMP SCHEDULE

GENERAL	PLAN TAG	SP-1	P-1	P-2	BP-1	BP-2
	MANUFACTURER	LIBERTY	TACO	TACO	TACO	TACO
	MODEL NUMBER	281	4011	4011	1919	1919
	SERVES	ELEV. PIT	HPS/HPR	HPS/HPR	B-1	B-2
	TYPE	SUBMERSIBLE	(4)	(4)	INLINE	INLINE
	ACCESSORIES	(1)	-	-	-	-
PUMP	FLOW (GPM)	50	350	350	55	55
	TOTAL HEAD (FEET)	13	80	80	30	30
	SHUT-OFF HEAD (FEET)	37	90	90	41	41
	NPSH AVAILABLE (FEET)	-	-	-	-	-
	MIN. EFFICIENCY	-	71	71	48	48
	FLUID	WATER	30% GLYCOL	30% GLYCOL	30% GLYCOL	30% GLYCOL
	SUCTION SIZE (IN)	OPEN	4	4	2	2
	DISCHARGE SIZE (IN)	1-1/2"	4	4	2	2
	MAX. IMPELLER DIA. (IN)	-	11.25 (5)	11.25 (5)	6.4	6.4
MOTOR	RPM	1,750	1,750	1,750	1,750	1,750
	HP	1/2	15 (6)	15 (6)	1	1
	VOLTS	110	200	200	208	208
	PHASE	1	3	3	1	1
	TYPE	HERM. SEALED	(3)	(3)	O.D.P.	O.D.P.
	CONTROL DEVICE	(2)	VFD-P1	VFD-P2	(7)	(7)
	REMARKS	(3)	-	-	-	-

REMARKS
1. STAINLESS STEEL BOTTOM SCREEN
2. FLOAT SWITCH
3. TEN FOOT POWER CORD
4. VERTICAL IN-LINE PUMP SPLIT COUPLED
5. PROVIDE MAXIMUM IMPELLER SIZE FOR NON OVERLOADING FOR MOTOR SIZE INDICATED.
6. INVERTER DUTY MOTOR FOR VARIABLE FREQUENCY DRIVE OPERATION.
7. PUMP OPERATION SHALL BE THROUGH BOILER CONTROL PANEL

FAN SCHEDULE

GENERAL	PLAN TAG	EF-1	EF-2	EF-3	EF-4	GEF-1	GEF-2	TF-1
	MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK
	MODEL NUMBER	SP-B110	SP-B110	VG-99	SQ-80	SE1-12-432	SB-2H30-10	CBF
	SERVES	SEE PLANS	SEE PLANS	TRASH RM	POOL MECH	SEE PLANS	SEE PLANS	SEE PLANS
	TYPE	(1)	(1)	CENT ROOF	INLINE	PROP. DIRECT	PROP. BELT	(12)
	MAXIMUM WEIGHT (LBS)	30	30	75	75	80	-	25
	ROOF/WALL OPENING SIZE	-	-	14.5x14.5	16 x 15 x 15	18x18	38x38	-
	ACCESSORIES	(2)	(2)	(5)	(7)	(8)	(9)	-
FAN	AIRFLOW (CFM)	75	75	700	150	700	7,500	390
	TOTAL SP (IN. W.C.)	0.50	0.50	0.625	0.50	0.5	0.5	0.25
	CLASS	-	-	-	-	-	-	-
	WHEEL TYPE	FC	FC	BI	BI	PROP	PROP	PROP
	MINIMUM WHEEL DIA.	-	-	9.9	8.0	12	30	-
	MAXIMUM SONES	1.5	1.5	9.3	7.6	26	26	7.8
	MAXIMUM FAN RPM	800	800	1435	1550	-	970	-
	MAXIMUM FAN BHP	-	-	0.15	0.06	1,750	-	-
MOTOR	RPM	-	-	1435	1550	1,750	1,750	-
	HP	80 watts	80 watts	1/4 (ECM)	1/4	1/4 (ECM)	1	100 watts
	VOLTS	115	115	115	115	110	208	110
	PHASE	1	1	1	1	1	1	1
	TYPE	ODP	ODP	ECM	ODP	-	-	-
	CONTROL DEVICE	(3)	(4)	(6)	(6)	(8) (11)	(9) (11)	(13)
	REMARKS	-	-	-	-	(10)	-	-

REMARKS
(1) CEILING DIRECT DRIVE (BATHROOM APPLICATIONS)
(2) PROVIDE WITH:
- DECORATIVE GRILLE
- ISOLATION KIT
- SPEED CONTROL
- CEILING RADIATION DAMPER
- HOODED WALL CAP WITH BUILT-IN BIRD SCREEN AND BACKDRAFT DAMPER
(3) WALL SWITCH BY ELECTRICAL
(4) WALL SWITCH BY ELECTRICAL, FAN DESIGNED FOR CONTINUOUS FAN OPERATION
(5) PROVIDE FAN WITH:
- ROOF CURB
- BIRDSCREEN
- FACTORY DISCONNECT SWITCH
- MOTORIZED BACKDRAFT DAMPER
- DIRECT DRIVE (ECM)
(6) "VARI-GREEN" OR EQUAL REMOTE DIAL SPEED CONTROL DESIGNED TO PROVIDE 0-10 VOLT DC SIGNAL TO FAN. PROVIDE WITH REMOTE TRANSSFORMER SEE PLANS FOR SPEED CONTROLLER LOCATION.
(7) PROVIDE INLINE FAN WITH:
- HANGING VIBRATION ISOLATORS
- FACTORY DISCONNECT SWITCH
- MOTORIZED BACKDRAFT DAMPER
- DIRECT DRIVE (ECM)
(8) PROVIDE EXHAUST SIDEWALL PROPELLER FAN WITH:
- FACTORY DISCONNECT SWITCH (NEMA-4, WATER TIGHT)
- ONE-POINT WIRING (MOTOR AND ACTUATOR COMMON VOLTAGE)
- DIRECT DRIVE
- WALL HOUSING
- OSHA MOTOR SIDE GUARD
- BACKDRAFT DAMPER (MOTORIZED)
(9) PROVIDE EXHAUST SIDEWALL PROPELLER FAN WITH:
- FACTORY DISCONNECT SWITCH (NEMA-4, WATER TIGHT)
- ONE-POINT WIRING (MOTOR AND ACTUATOR COMMON VOLTAGE)
- BELT DRIVE
- WALL HOUSING
- OSHA MOTOR SIDE GUARD
- BACKDRAFT DAMPER (MOTORIZED)
(10) CONTINUOUS FAN OPERATION
(11) SEE GARAGE VENTILATION NOTES, SHEET M1.01
(12) CEMENT BLOCK TRANSFER FAN, DIRECT DRIVE, 16x8x12 DEEP
(13) PROVIDE WITH, LINE VOLTAGE THERMOSTAT, SPEED CONTROLLER (WALL MOUNTED)

FAN COIL UNIT SCHEDULE - ELECTRIC FURNACE

GENERAL	PLAN TAG	FC-1.5	FC-2.0	FC-2.5	FC-3.0
	MANUFACTURER	CARRIER	CARRIER	CARRIER	CARRIER
	MODEL NUMBER	FFMA 019	FFMA 025	FFMA 031	FFMA 036
	SERVES	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS
	CONFIGURATION	(1)	(1)	(1)	(8)
	MAXIMUM SIZE (H x W x D)(IN)	37x21x15	37x21x15	40x22x19	50x18x22
	MAXIMUM WEIGHT	100	100	120	125
	OUTSIDE AIRFLOW (CFM)	-	-	-	SEE PLANS
	REMARKS	(1)	(1)	(1)	(8)
FAN	AIRFLOW (CFM) (9)	600	800	1,000	1,200
	EXTERNAL STATIC PRESSURE (IN. W.C.)	0.30	0.30	0.40	0.40
	MAXIMUM FAN BHP	-	-	-	-
MOTOR	RPM	-	-	-	-
	HP	1/3 (ECM)	1/3 (ECM)	1/2 (ECM)	1/2 (ECM)
	VOLTS	208	208	208	208
	PHASE	1	1	1	1
	TYPE	-	-	-	-
	CONTROL DEVICE	-	-	-	-
	REMARKS	-	-	-	-
HEATING (HEAT PUMP)	ENTERING AIR TEMP (ºF)	70	70	70	70
	LEAVING AIR TEMP (ºF)	-	-	-	-
	CAPACITY (MBH)	18.1	22.0	28.7	33.7
	REMARKS	(2)	(2)	(2)	(2)
COOLING	ENTERING DB (ºF)	80.0	80.0	80.0	80.0
	ENTERING WB (ºF)	67.0	67.0	67.0	67.0
	LEAVING DB (ºF)	-	-	-	-
	LEAVING WB (ºF)	-	-	-	-
	TOTAL CAPACITY (MBH)	17.9	21.3	28.7	32.9
	SENSIBLE CAPACITY (MBH)	12.9	15.7	21.6	25.0
	REMARKS	-	-	-	-
ELECTRIC HEAT	VOLTAGE/PHASE	208/1	208/1	208/1	208/1
	SIZE (KW)	7.5	7.5	10.0	10.0
	NUMBER OF STAGES	1	1	1	1
	CAPACITY (MBH) AT 208 VOLTS	22.2	22.2	24.6	24.6
	REMARKS	(3)	(3)	(3)	(3)
DIRECT EXPANSION	REFRIGERANT TYPE	R-410A	R-410A	R-410A	R-410A
	SATURATED SUCTION TEMP (ºF)	-	-	-	-
	REMARKS	(4)	(4)	(4)	(4)
REMARKS	FILTERS				
	HUMIDIFIER				
	THERMOSTAT				
	REMARKS				

REMARKS
(1) BASE SERIES FAN COIL, UP FLOW , WALL HUNG INSTALLATION, ECM MOTOR
(2) HEAT PUMP HEATING CAPACITY AT 47°F
(3) SIZE (KW) INDICATED AT CONNECTED VOLTAGE (208VOLTS). CAPACITY (BTUH) IS DERATED FROM THE STANDARD CAPACITY AT 240 VOLTS
(4) CASED DX COOLING COIL TO MATCH FAN COIL AND UNIT HEAT PUMP
(5) 1" PLEATED DISPOSABLE FILTER.
(6) 7-DAY PROGRAMMABLE SETBACK HEAT PUMP THERMOSTAT WITH HEAT/COOL/AUTO, FAN ON/OFF/AUTO CONTROL.
(7) FIELD INSTALLED ELECTRIC HEAT WITH UNIT MOUNTED CIRCUIT BREAKER
(8) FAN COIL, UP FLOW OR HORIZONTAL CONFIGURATION. REFERENCE PLANS
(9) REFERENCE MECHANICAL PLANS FOR SUPPLY AIRFLOW (CFM). ADJUST FAN COIL BLOWER SPEED TO MATCH PLAN CFM.

UNIT HEATER SCHEDULE

GENERAL	PLAN TAG	GUH-1	GUH-2
	MANUFACTURER	REZNOR	REZNOR
	MODEL NUMBER	UEAS 180	UEAS 130
	SERVES	GARAGE	SEE PLANS
	CONFIGURATION	HORIZONTAL	HORIZONTAL
	MAXIMUM SIZE (LxW)(IN)	40x50x20 high	40x50x20 high
	MAXIMUM WEIGHT (LBS.)	300	275
	MINIMUM OUTSIDE AIRFLOW (CFM)	0	0
	REMARKS	(1)	(1)
FAN	AIRFLOW (CFM)	2,450	2,250
	EXTERNAL STATIC PRESSURE (IN. W.C.)	-	-
	MAXIMUM FAN BHP	-	-
MOTOR	RPM	1,050	1,050
	HP	1/4	1/4
	VOLTS	110	110
	PHASE	1	1
	TYPE	-	-
	CONTROL DEVICE	(1)	(1)
	REMARKS	-	-
GAS FIRED	FUEL	GAS	GAS
	INPUT	175.0	131.0
	OUTPUT	159.5	121.8
	EFFICIENCY	91.0%	91.0%
	VENT CONNECTION (VENT/OUSIDE AIR)	4" / 6"	4" / 6"
	REMARKS	-	-

REMARKS
1. PROVIDE UNIT WITH:
- HORIZONTAL COMBUSTION AIR/VENT KIT
- THERMOSTAT WITH LOCKING COVER
- MANUAL SHUT OFF VALVE
- TOTALLY ENCLOSED MOTOR

VARIABLE FREQUENCY DRIVE SCHEDULE

GENERAL	MARK	VFD-P1	VFD-P2	VFD-FC1	VFD-FC2
	SERVES	P-1	P-2	FC-1	FC-2
	LOCATION	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS
ELECTRICAL	MIN. DRIVE CAPACITY (AMPS)	-	-	-	-
	VOLTAGE	200	200	200	200
	PHASE	3	3	3	3
	CONNECTED MOTOR HP	15	15	20	20
	MOTOR TYPE	-	-	-	-
	REMARKS	(1) (2)	(1) (2)	(1) (2) (3) (4)	(1) (2) (3) (4)

REMARKS
1. DRIVE SHALL BE COMPATIBLE WITH MOTOR AND APPLICATION.
2. COMBINATION VFD/DISCONNECT, FUSES, AND HOA SWITCH.
3. DRIVE BYPASS REQUIRED.
4. SEPARATION BETWEEN MOTOR AND VARIABLE FREQUENCY DRIVE IS APPROXIMATELY 200'. PROVIDE APPROPRIATE OUTPUT FILTERING .

1

TANK SCHEDULE

PLAN TAG	ET-1	GT-1	ASS-1
MANUFACTURER	WESSELS	WESSELS	SPIROTHERM
MODEL NUMBER	NLA -400	GMP-13050	VHN600
SERVES	HPS/HPR	HPS/HPR	HPS/HPR
CONFIGURATION	(1)	(2)	IN-LINE
MAX. WEIGHT (LBS)	450	-	700
SIZE (IN.)	30"□ x 49"	28"□ x 42"	6"
TANK CAPACITY (GALS.)	106	50	-
ACCEPTANCE CAPACITY (GALS.)	132	-	-
REMARKS	-	(3)	(4)

REMARKS
1. REPLACEABLE BLADDER TYPE PRESSURIZED EXPANSION TANK.
2. GLYCOL MAKE-UP PACKAGE. COMPLETE CONTROL SYSTEM INCLUDING PRESSURE CONTROL FOR MAKE-UP. COMPLETE WITH ISOLATION VALVES, STRAINER AND PRESSURE REDUCING VALVE. POLYETHYLENE SOLUTION TANK WITH LID. PUMP WITH 115V, 1□ MOTOR.
3. COORDINATE 115V/1□ ELECTRICAL CONNECTIONS WITH ELECTRICAL CONTRACTOR.
4. COMBINATION AIR DIRT SEPARATOR WITH AUTOMATIC AIR VENT, 6" FLANGED CONNECTIONS, REMOVABLE LOWER HEAD TO FACILITATE REMOVAL OF INTERNAL MEDIA FOR INSPECTION OR CLEANING. MAXIMUM PRESSURE DROP AT 700 GPM / 4.5 FT WC.
5. ASME RATED PRE-CHARGED DIAPHRAGM TANK

WATER HEATER SCHEDULE

GENERAL	PLAN TAG	EWH-1	EWH-2
	MANUFACTURER	A.O. SMITH	A.O. SMITH
	MODEL NUMBER	ECLN 40	DEL-20
	SERVES	UNITS	SEE PLANS
	RECOVERY (GPH@ 90ºF RISE)	21	24
TANK	TYPE	(1)	(1)
	STORAGE CAPACITY (GAL.)	38	20
	DIMENSIONS (LxWxH)(IN.)	23"□x32" TALL	22"Øx23" TALL
	REMARKS	(2) (4)	(2) (4)
ELECTRIC	VOLTAGE/PHASE	208/1	208/1
	CAPACITY (KW)	6.0	6.0
	NUMBER OF STAGES	1	1
	KW PER STAGE	6.0	6.0
	REMARKS	(3)	(5)

REMARKS
1. INTEGRAL GLASS LINED STORAGE TANK
2. SIDE TEMPERATURE PRESSURE RELIEF VALVE
3. DUAL, NON-SIMULTANEOUS ELECTRIC ELEMENTS
4. PROVIDE WITH 28 GAUGE ALUMINUM PAN, PAN DEPTH 2-1/2"

ENERGY RECOVERY VENTILATOR

GENERAL	PLAN TAG	ERV-1
	MANUFACTURER	RenewAire
	MODEL NUMBER	EV300
	SERVES	SEE PLANS
	MAX. WEIGHT (LBS)	150
	DIMENSIONS: (L x W x H) (IN)	32 X 22 X 30
AIRFLOW	UNIT AIRFLOW RANGE (CFM)	300
	DESIGN AIRFLOW (CFM) (OUTSIDE/RELIEF)	275 / 275
	EXTERNAL STATIC PRESSURE (IN. W.C.) (OA / EA)	0.6 / 0.6
	INLET/OUTLES DUCT CONNECTIONS (IN.)	8"Ø / 8"Ø
ELECTRICAL	BLOWER / MOTOR (WATTS):	(1)
	VOLTAGE / PHASE:	110/ 1
	REMARKS:	(1)
EFFICIENCY (2)	COOLING TOTAL EFF. AT DESIGN AIR FLOW:	56%
	HEATING TOTAL EFF. AT DESIGN AIR FLOW:	49%
	REMARKS:	(2)
	CONTROLS:	(3) (6)
	REMARKS:	(4) (5)

REMARKS:
(1) PROVIDE UNIT WITH CORD SET AND UNIT CONNECTION. 3.3 FLA
(2) ENERGY PERFORMANCE BASED ON SUPPLY / EXHAUST FLOW RATIO.
(3) PROVIDE WITH FACTORY SENSOR, DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC) TO DETECT OCCUPANCY. CONNECT TO OPERATE ERV OPERATION. SEE PLANS FOR LOCATION.
(4) PROVIDE WITH CLEANABLE AIR FILTER FOR BOTH THE EXHAUST AND OUTSIDE AIR STREAMS, MERV 8
(5) PROVIDE WITH INTAKE AND RELIEF BACKDRAFT DAMPERS
(6) WALL MOUNTED CO2 SENSOR

MEI PROJECT NO: 16290

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REVISIONS SCHEDULE

MARK	DATE	DESCRIPTION
1	05/03/2017	ADDENDUM 2

LAVISTA CITY CENTRE MIXED USE - SOUTH

PROJECT: F16132 DATE: 04.17.2017
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PROFESSIONAL MECHANICAL ENGINEER NICHOLAS J. LIMPACH E-9256 STATE OF NEBRASKA
04.17.2017

MECHANICAL SCHEDULES

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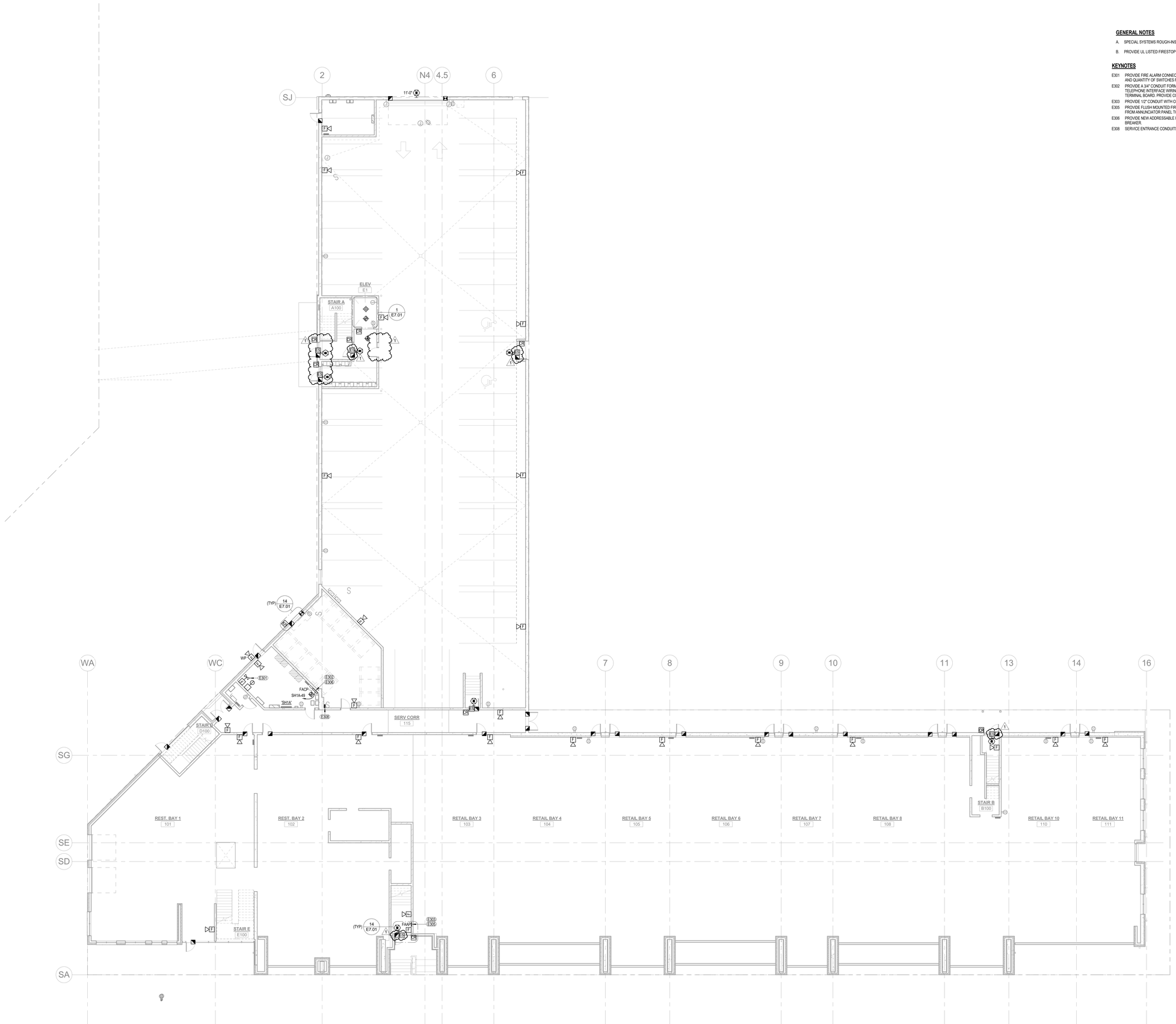

1 **GROUND FLOOR - SPECIAL SYSTEMS**
3/32" = 1'-0"

GENERAL NOTES

A. SPECIAL SYSTEMS ROUGH-INS PROVIDED BY ELECTRICAL CONTRACTOR.

B. PROVIDE UL LISTED FIRESTOP ASSEMBLY FOR ALL RATED PENETRATIONS.

KEYNOTES

E301 PROVIDE FIRE ALARM CONNECTION TO FLOW AND TAMPER SWITCHES AT FIRE ALARM RISER. COORDINATE LOCATION AND QUANTITY OF SWITCHES REQUIRED WITH FIRE SPRINKLER CONTRACTOR PRIOR TO ROUGH IN.

E302 PROVIDE A 3/4" CONDUIT FORM FIRE ALARM CONTROL PANEL TO ABOVE THE NEAREST TELECOMMUNICATION BOARD FOR TELEPHONE INTERFACE WIRING. PROVIDE A 24GA., 4 PAIR, CATEGORY 3 CABLE FROM CONTROL PANEL TO TELEPHONE TERMINAL BOARD. PROVIDE CONDUIT FOR WHERE CABLE IS RUN IN AN AREA WITHOUT A CEILING.

E303 PROVIDE 1/2" CONDUIT WITH CONTROL WIRING FROM FIRE ALARM ANNUCIATOR TO FIRE ALARM CONTROL PANEL.

E305 PROVIDE FLUSH MOUNTED FIRE ALARM REMOTE ANNUNCIATOR - SEE SPECIFICATIONS. PROVIDE 1/2"C. WITH PULL STRING FROM ANNUNCIATOR PANEL TO NEAREST ACCESSIBLE CEILING. TERMINATE END WITH INSULATING BUSHING.

E306 PROVIDE NEW ADDRESSABLE FIRE ALARM CONTROL PANEL - SEE SPECIFICATIONS. PROVIDE LOCKABLE CIRCUIT BREAKER.

E308 SERVICE ENTRANCE CONDUITS, SEE TELECOM RISER DIAGRAM.

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LAVISTA CITY CENTRE
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04.17.2017

GROUND FLOOR - SPECIAL SYSTEMS

NORTH

E3.01

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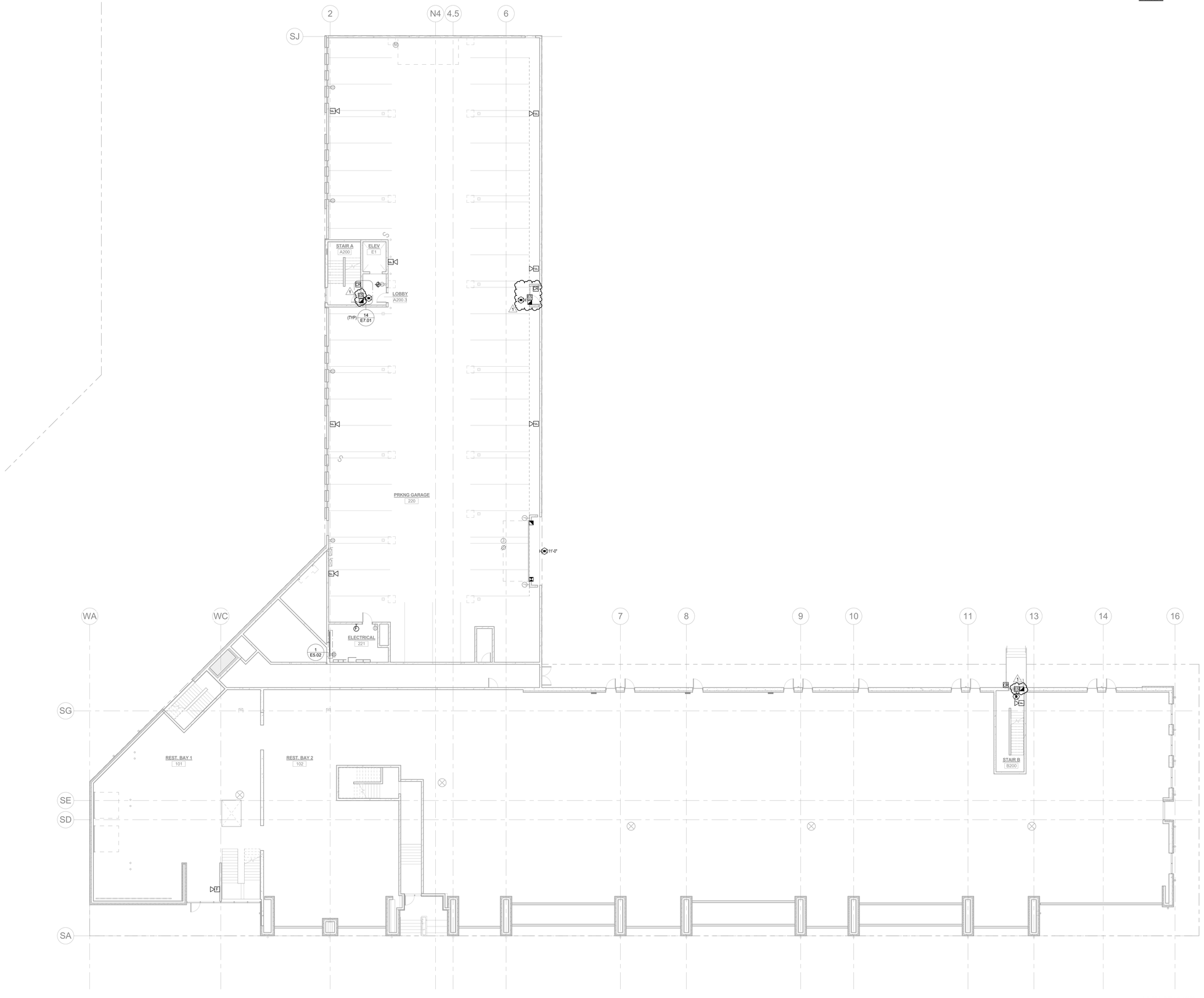

1 SECOND FLOOR - SPECIAL SYSTEMS

3/32" = 1'-0"

GENERAL NOTES

A. SPECIAL SYSTEMS ROUGH-INS PROVIDED BY ELECTRICAL CONTRACTOR.

B. PROVIDE UL LISTED FIRESTOP ASSEMBLY FOR ALL RATED PENETRATIONS.

KEYNOTES

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SECOND FLOOR - SPECIAL SYSTEMS

NORTH

E3.02

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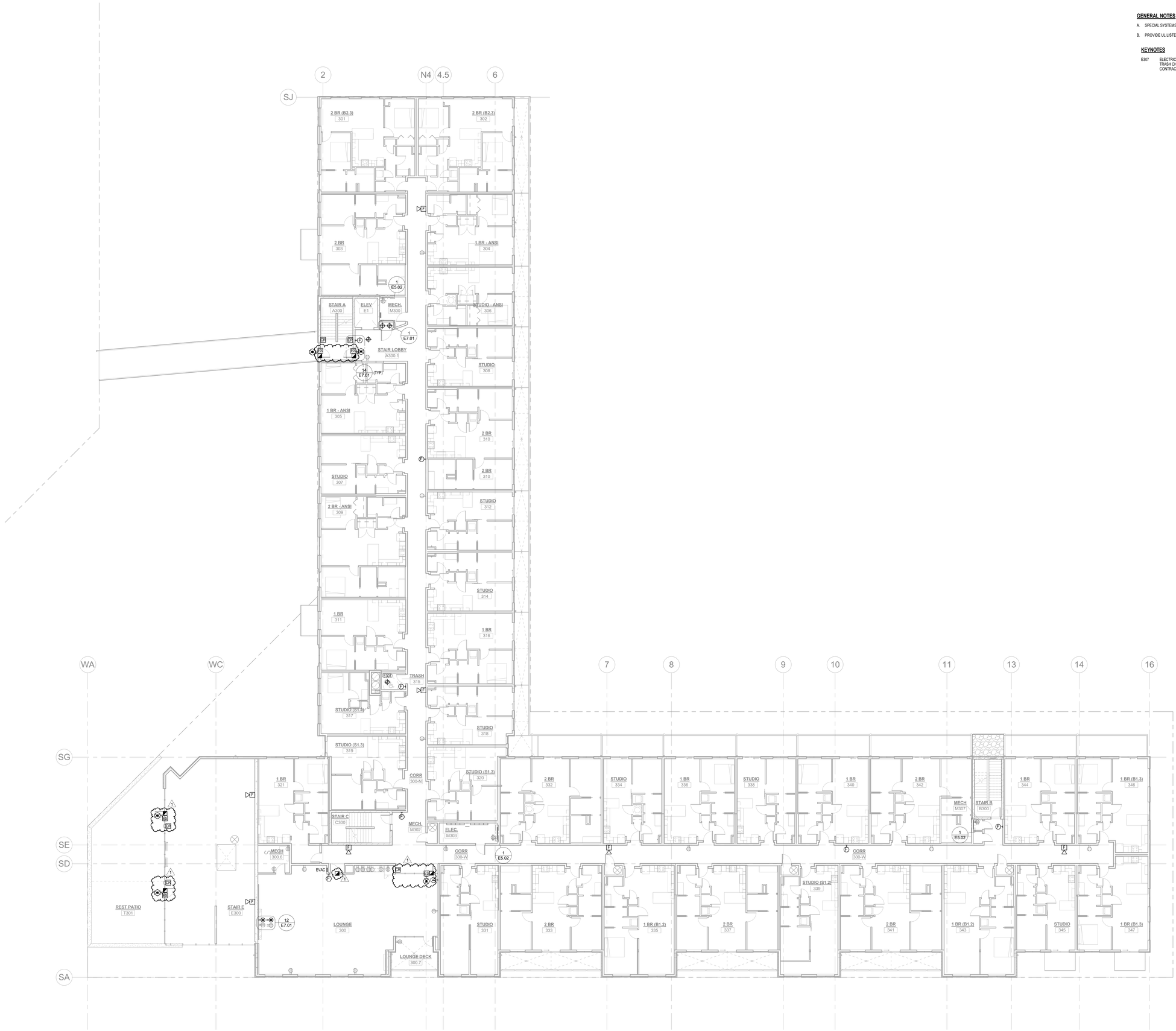

1 THIRD FLOOR - SPECIAL SYSTEMS

3/32" = 1'-0"

GENERAL NOTES

A. SPECIAL SYSTEMS ROUGH-INS PROVIDED BY ELECTRICAL CONTRACTOR.

B. PROVIDE UL LISTED FIRESTOP ASSEMBLY FOR ALL RATED PENETRATIONS.

KEYNOTES

E307 ELECTRICAL CONTRACTOR TO PROVIDE ROUGH-IN AND ELECTRICAL CONNECTIONS TO TRASH CHUTE INTERLOCK CONTROLS. COORDINATE REQUIREMENTS WITH GENERAL CONTRACTOR.

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THIRD FLOOR - SPECIAL SYSTEMS

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NORTH

E3.03

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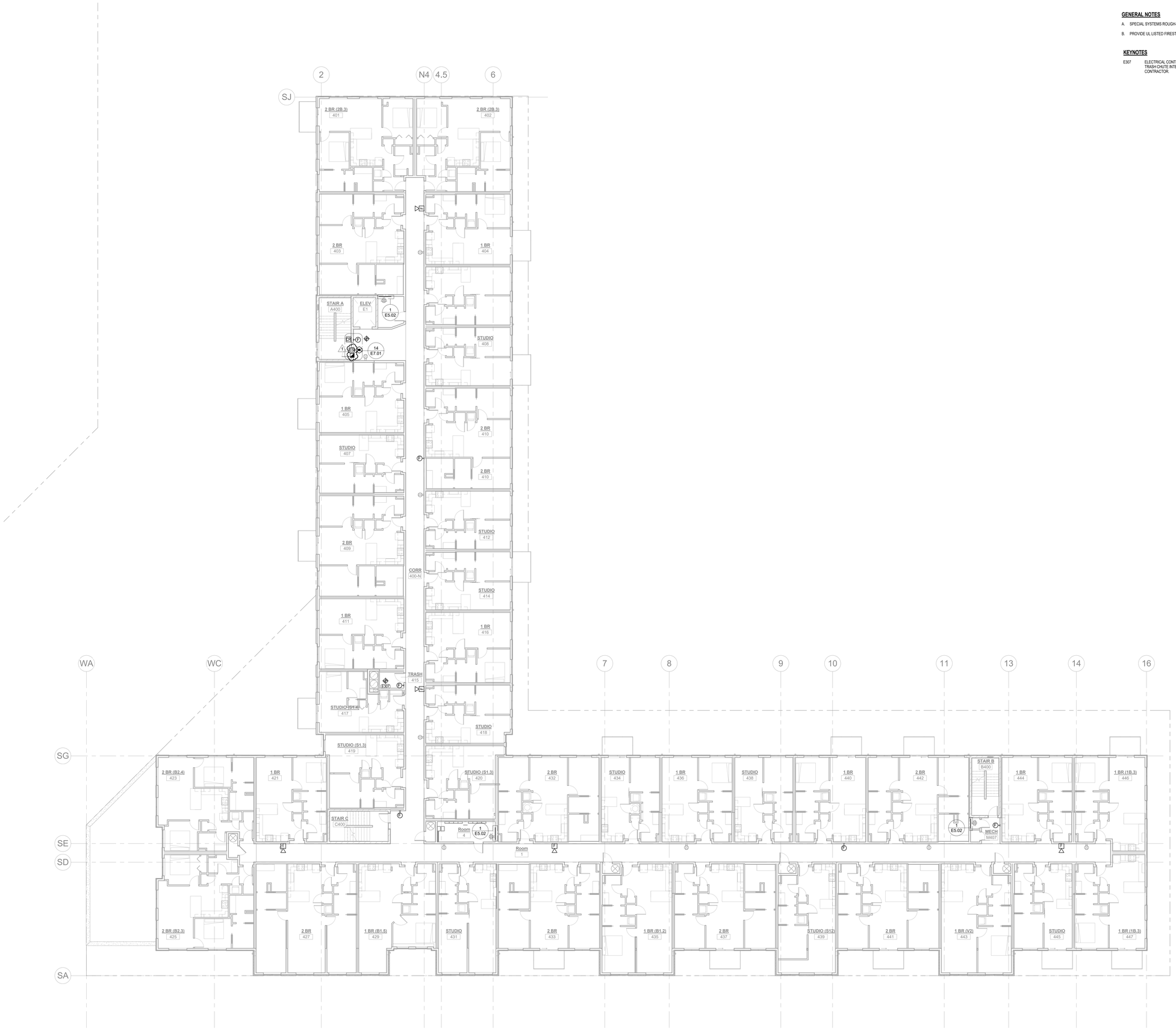

1 FOURTH FLOOR - SPECIAL SYSTEMS

3/32" = 1'-0"

GENERAL NOTES

A. SPECIAL SYSTEMS ROUGH-INS PROVIDED BY ELECTRICAL CONTRACTOR.

B. PROVIDE UL LISTED FIRESTOP ASSEMBLY FOR ALL RATED PENETRATIONS.

KEYNOTES

E307 ELECTRICAL CONTRACTOR TO PROVIDE ROUGH-IN AND ELECTRICAL CONNECTIONS TO TRASH CHUTE INTERLOCK CONTROLS. COORDINATE REQUIREMENTS WITH GENERAL CONTRACTOR.

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FOURTH FLOOR - SPECIAL SYSTEMS

NORTH

E3.04

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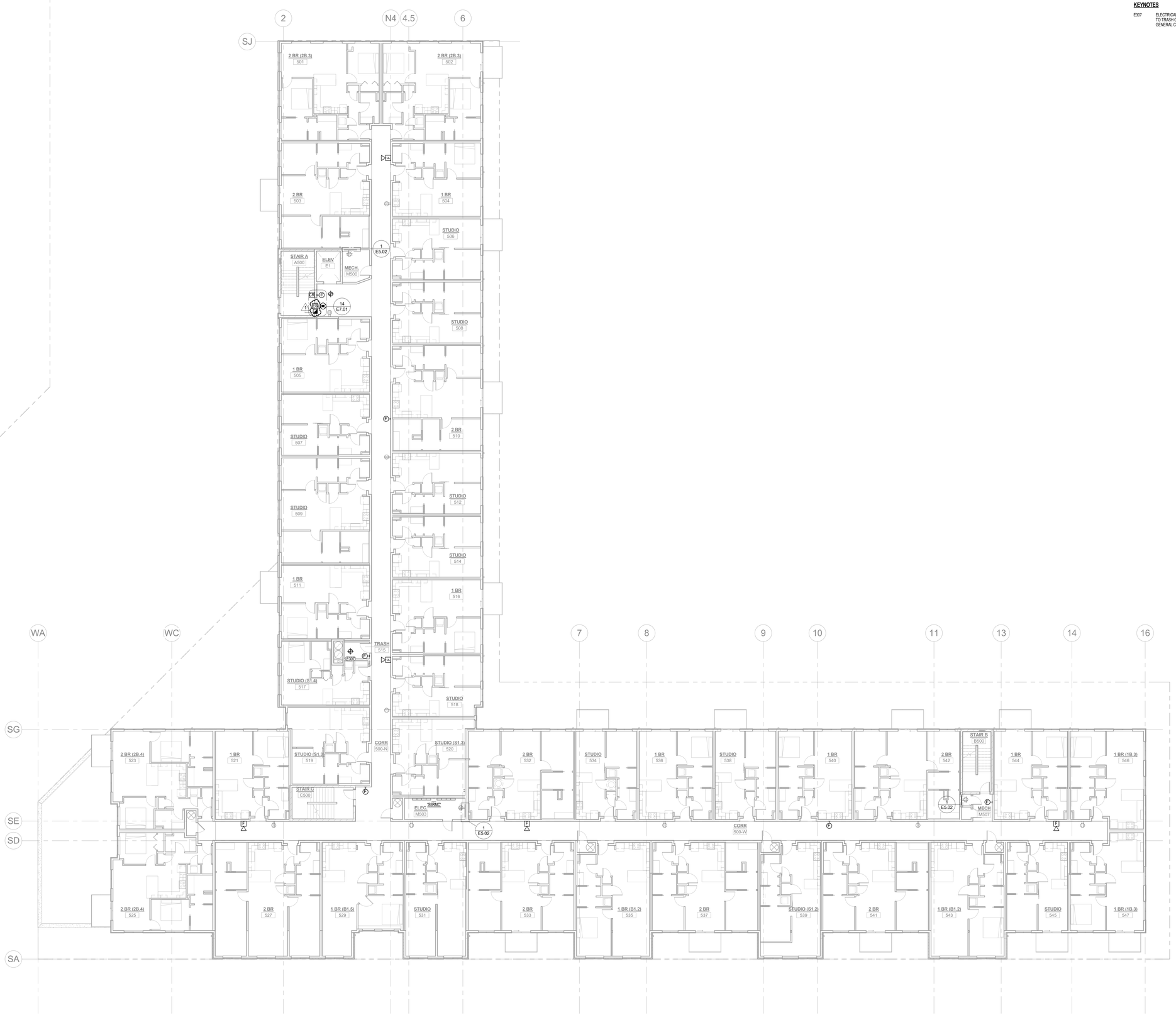

1 FIFTH FLOOR - SPECIAL SYSTEMS

3/32" = 1'-0"

GENERAL NOTES

A. SPECIAL SYSTEMS ROUGH-INS PROVIDED BY ELECTRICAL CONTRACTOR.

B. PROVIDE UL LISTED FIRESTOP ASSEMBLY FOR ALL RATED PENETRATIONS.

KEYNOTES

E307 ELECTRICAL CONTRACTOR TO PROVIDE ROUGH-IN AND ELECTRICAL CONNECTIONS TO TRASH CHUTE INTERLOCK CONTROLS. COORDINATE REQUIREMENTS WITH GENERAL CONTRACTOR.

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FIFTH FLOOR - SPECIAL SYSTEMS

NORTH

E3.05

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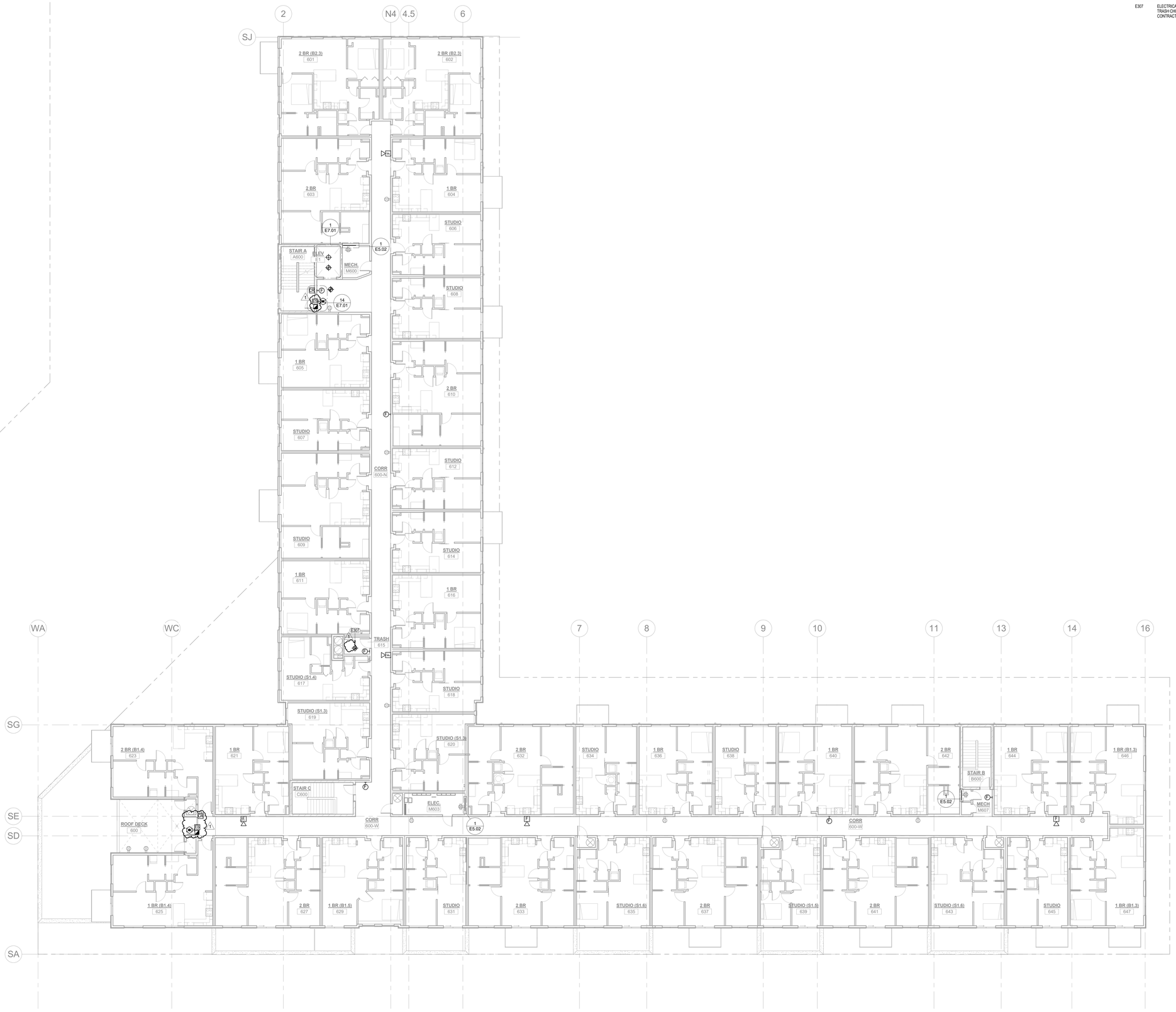

1 SIXTH FLOOR - SPECIAL SYSTEMS

3/32" = 1'-0"

GENERAL NOTES

A. SPECIAL SYSTEMS ROUGH-INS PROVIDED BY ELECTRICAL CONTRACTOR.

B. PROVIDE UL LISTED FIRESTOP ASSEMBLY FOR ALL RATED PENETRATIONS.

KEYNOTES

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SIXTH FLOOR - SPECIAL SYSTEMS

NORTH

E3.06

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