



## Jones Gillam Renz Architects

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## NOTICE TO ALL CONTRACTORS AND SUB-CONTRACTORS

February 21, 2025

The Residence at Veterans Park – JGR Proj 24-3400

### ADDENDUM NO. 2

YOU ARE INSTRUCTED TO READ AND TO NOTE THE FOLLOWING DESCRIBED CHANGES, CORRECTIONS, CLARIFICATIONS, OMISSIONS, DELETIONS, ADDITIONS, APPROVALS, AND STATEMENTS PERTINENT TO THE CONTRACT AND CONSTRUCTION DOCUMENTS. THIS ADDENDUM IS A PART OF THE CONTRACT AND CONSTRUCTION DOCUMENTS AND SHALL GOVERN IN THE PERFORMANCE OF THE WORK.

### GENERAL

1. Substitutions:
  - a. Speedymason lath for thin brick and stone veneer, (brick lath system and or stone lath stacked system) will be accepted for bidding. Installation and use of product must be reviewed and approved by the stone/brick veneer manufacturer and shall not impact warranty, installation methods, etc. of other products. All manufacturer's installation instructions must be followed and weather barrier/moisture resistances barrier must be maintained.
  - b. Masonite 2-panel fire-rated doors shall be accepted for bidding in lieu of 1-panel doors. If 2-panel door style is used/bid on apartment entries, the 2-panel design must be used/bid throughout the building/units as well. All doors should match.
  - c. Redi Frames have been approved by owner for bidding in lieu of welded hollow metal frames.
2. Clarifications:
  - a. Domestic water pipe sizes on drawings are based on Type L Copper. If PEX piping is to be used, it shall be upsized one nominal size for all piping on drawings 1" and larger to ensure equivalent hydraulic diameter.

### CIVIL – Drawings

1. Civil Site Plan Drawings – a new revised full set has been issued, revisions include, but are not limited to:
  - a. Sheet C101 – Note 5 has been edited.
  - b. Sheet C200 – Note 1A has been edited.
  - c. Sheet C400
    - i. RCP pipe called out within ROW until the first private structure
    - ii. Stormwater basin detention adjusted to meet 1' freeboard 100-yr elevation.
  - d. Sheet C500 – Sewer discharge from building has been moved to the Northwest corner to correspond with MEP drawings.
  - e. Public Sewer main extension is shown – all plans.
2. ADDED: Construction Documents of Public Sewer Main – These plans shall be considered separate from the Civil Site plan Drawings and costs associated with this work shall be separated out/bid separately from the rest of the project. Scope of work included in the drawings is work associated with the development agreement that requires a Public Sanitary Sewer Main be installed across the frontage of the lot to the NW corner of the property in order to service the lot to the west.
  - a. Sheet C100 – Title Sheet
  - b. Sheet C101 – Product Information
  - c. Sheet C102 – Demolition Plan
  - d. Sheet C200 – Sanitary Sewer Plan and Profile

### ARCHITECTURAL – Specifications

1. Section 074600 – Siding
  - a. 2.2A.3 – Siding #3 has been changed from Hardie Panel Architectural Reveal Panel to Hardie Panel Siding with EasyTrim Reveal Trim system.
2. Section 085313 – Vinyl Windows
  - a. 1.4A – Correction: U-value of not less than 0.32 and SHGC not less than 0.42

### ARCHITECTURAL – Drawings

3. Sheet A2.3 – Automatic Door operator button has been added to Door 105 (interior Vestibule Door).
4. Sheet A6.2 – Elevation at top of elevator shaft CMU wall has been corrected to 135'-4".
5. Sheet A10.2
  - a. Apartment Door Schedule, Door A (Apartment Entry Doors) have been corrected to show Frame Type 1.
  - b. Clarification: Public Door Schedule – Doors that require egress panic devices: Doors 101, 105, 112, 113, 114, 116, 117, 118, 201, 206, 301, 306

STRUCTURAL – Drawings

1. Sheet S004
  - a. Clarification: Wood Wall Schedule – sheathing can be changed to Zip Panels. Fastener patterns on wall schedules are intended as a general guideline.
  - b. Clarification: Shear Wall 4 (SW4) – OSB may be used in lieu of Zip Structural panel for SW4. Interior walls may use OSB in lieu of Zip panels.

MEP – Specifications

1. Division 21, Fire Suppression – information regarding sprinkler system and standpipes was adjusted.
  - a. Clarification: This project will have an NFPA 13R system and standpipes will not be required.

ELECTRICAL – Drawings

2. Sheets E1.3, E1.4: added power for fire/smoke dampers
3. Sheets E1.5, E1.6: added duct smoke detector and note for fire smoke dampers
4. Sheet E6.1: revised light fixture schedule
5. Sheet E6.3: revised panel schedules
6. Sheets M1.1, M1.2, M4.1: changed fire dampers to fire/smoke dampers at hallway wall penetrations
7. Sheet P1.1: changed 'FD' to 'FD-A' on 1st floor
8. Sheet P1.2: changed floor drain type on 2nd and 3rd floor to accommodate floor construction
9. Sheet P6.1: changed 'FD' to 'FD-A' and added 'FD-B' to schedule; changed ICB to fire-rated type

Receipt of this Addendum shall be noted on the Bid Form.

END OF ADDENDUM NO. 2

Attachments:

Civil Site Plan Drawings – full Reissued Set

Added: Construction Documents of Public Main Sewer (4 sheets)

Revised Architectural Sheets A2.3, A6.2, A10.2

Revised MEP Sheets: E1.3, E1.4, E1.5, E1.6, E6.1, E6.3, M1.1, M1.2, M4.1, P1.1, P2.1, P6.1

Revised Specifications: Section 074600 – Siding, Section 085313 – Vinyl Windows, Division 21 – Fire Suppression

## SECTION 074600

### SIDING

#### 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. Siding.
  2. Soffits.
  3. Trim & decorative accessories.

##### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For siding, soffit, and decorative accessories.

##### 1.4 QUALITY ASSURANCE

- A. Source Limitations for Siding and Soffit: Obtain [each type, color, texture, and pattern of] siding and soffit, including related accessories, through one source from a single manufacturer.

##### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials in a dry, well-ventilated, weathertight place.

##### 1.6 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with siding installation only if substrate is completely dry and if existing and forecasted weather conditions permit siding to be installed according to manufacturer's written instructions.

##### 1.7 SEQUENCING

- A. Coordinate installation with flashings and other adjoining construction to ensure proper sequencing.

##### 1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace siding that does not comply with requirements or that fails within specified warranty period. Failures include, but are not limited to, cracking, deforming, fading, or otherwise deteriorating beyond normal weathering.
  1. Warranty Period: 5 years from date of Substantial Completion.

##### 1.9 EXTRA MATERIALS

- 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. Furnish full lengths of siding and trim in a quantity equal to 2 percent of amount installed.

#### 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. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
  2. James Hardie is the Basis-of-Design Product: The design for each siding and soffit is based on the product named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.

## 2.2 CEMENT SIDING

- A. Fiber-Cement Siding: Submit manufacturer information for approval. Design based on James Hardi Products. **Reference drawings for types, sizes and locations.**
1. Siding #1: Hardie Plank, Lap Siding: Smooth texture, Primed for Paint, 8.25", Vertical Panels, and all associated & coordinating trim and attachments, etc.
  2. Siding #2: Hardie Plank, Lap Siding: Select Cedarmill texture, Primed for Paint, 5.25", Vertical Panels and all associated & coordinating trim and attachments, etc.
  3. Siding #3: Hardie Architectural Panel Siding with EasyTrim Reveal System:
    - a. Hardie Panels: Mounded Sand Texture, Primed for Paint, and all associated & coordinating trim and attachments, etc.
    - b. EasyTrim Reveals, exterior aluminum trim system, including EZ 107, Verticale Reveal 5/16" Trim. All associated & coordinating trim and attachments, etc.
    - c. Panel and reveal design per elevations.
  4. Paint colors for each to be selected by architect/owner.

## 2.3 SOFFIT

1. Fiber-Cement Soffit: Submit manufacturer information for approval

## 2.4 ACCESSORIES

- A. Siding Accessories: Provide starter strips, edge trim, corner cap, and other items as recommended by siding manufacturer for building configuration.
1. Provide accessories made from same material as adjacent siding, unless otherwise indicated.
  2. Provide accessories matching color and texture of adjacent siding, unless otherwise indicated.
- B. Decorative Accessories: Provide the following types of decorative accessories as indicated:
1. Corner posts with fluted faces.
  2. Door and window casings.
  3. Entrance and window head pediments.
  4. Pilasters with fluted faces.
  5. Shutters with louvered faces.
  6. Louvers.
  7. Lattice.
  8. Fasciae.
  9. Moldings and trim.
- C. Flashing: Provide aluminum flashing complying with Division 7 Section "Sheet Metal Flashing and Trim" at window and door heads and where indicated.
- D. Elastomeric Joint Sealant: joint sealant complying with requirements in Division 7 Section "Joint Sealants" for Use NT (nontraffic) and for Uses M, G, A, and, as applicable to joint substrates indicated, O joint substrates.
- E. Fasteners:
1. For fastening to wood, use siding nails of sufficient length to penetrate a minimum of 1 inch (25 mm) into substrate.
  2. For fastening to metal, use ribbed bugle-head screws of sufficient length to penetrate a minimum of 1/4 inch (6 mm) or 3 screw-threads into substrate.
  3. For fastening aluminum, use aluminum fasteners. Where fasteners will be exposed to view, use prefinished aluminum fasteners in color to match item being fastened.
  4. For fastening fiber-cement siding, use hot-dip galvanized fasteners.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of siding. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.

### 3.3 INSTALLATION



- A. General: Comply with siding manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply. Center nails in elongated nailing slots without binding siding to allow for thermal movement. Overlap joints to shed water away from direction of prevailing wind.
  - B. Isolate dissimilar metals by separating with rubber gaskets or elastomeric sealant. Use rubber washers where fasteners made from dissimilar metal penetrate siding. Isolate dissimilar metals behind siding by covering with polyethylene film.
- 3.4 ADJUSTING AND CLEANING
- A. Remove damaged, improperly installed, or otherwise defective siding materials and replace with new materials complying with specified requirements.
  - B. Clean finished surfaces according to siding manufacturer's written instructions and maintain in a clean condition during construction.

END OF SECTION 074600



## SECTION 085313

### VINYL WINDOWS

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. This Section includes fixed and operable vinyl-framed windows.

##### 1.3 PERFORMANCE REQUIREMENTS

- A. General: Provide vinyl windows capable of complying with performance requirements indicated, based on testing manufacturer's windows that are representative of those specified, and that are of test size indicated below:
  - 1. Size required by AAMA/WDMA 101/I.S.2/NAFS
  - 2. Size indicated on Drawings.
- B. Structural Performance: Provide vinyl windows capable of withstanding the effects of the following loads, based on testing units representative of those indicated for Project that pass AAMA/WDMA 101/I.S.2/NAFS, Uniform Load Structural Test:
  - 1. Design Wind Loads: Determine design wind loads applicable to Project from basic wind speed indicated in miles per hour (meters per second) at 33 feet (10 m) above grade, according to ASCE 7, Section 6.5, "Method 2-Analytical Procedure," based on mean roof heights above grade indicated on Drawings.
    - a. Basic Wind Speed: 90 mph (38 m/s).
    - b. Exposure Category: C - (Knoxville, Iowa)

##### 1.4 ENERGY REQUIREMENTS

- A. Windows to follow the prescriptive ERI pathway as described in the Energy Report Document. Window systems and components to follow the R402.1.2 of the **2015 International Energy Conservation Code (IECC)**, with a **U-value of not less than 0.32 and SHGC not less than 0.42.**

##### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An installer acceptable to vinyl window manufacturer for installation of units required for this Project.
  - 1. Installer's responsibilities include providing professional engineering services needed to assume engineering responsibility.
  - 2. Engineering Responsibility: Preparation of data for vinyl windows, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
- B. Manufacturer Qualifications: A manufacturer capable of fabricating vinyl windows that meet or exceed performance requirements indicated and of documenting this performance by inclusion in lists and by labels, test reports, and calculations.
- C. Source Limitations: Obtain vinyl windows through one source from a single manufacturer.  
Product Options: Information on Drawings and in Specifications establishes requirements for vinyl windows' aesthetic effects and performance characteristics. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction. Performance characteristics are indicated by criteria subject to verification by one or more methods including preconstruction testing, field testing, and in-service performance.

##### 1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify vinyl window openings by field measurements before fabrication and indicate measurements on Shop Drawings.

## 1.7 WARRANTY

- A. Coordinate with Division 01 Section "Product Requirements."
- B. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace vinyl windows that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Failure to meet performance requirements.
    - b. Structural failures including excessive deflection, water leakage, air infiltration, or condensation.
    - c. Faulty operation of movable sash and hardware.
    - d. Deterioration of vinyl, other materials, and finishes beyond normal weathering.
    - e. Failure of insulating glass.
  - 2. Warranty Period:
    - a. Window: **Two** years from date of Substantial Completion.
    - b. Glazing: **Five** years from date of Substantial Completion.
    - c. Vinyl Finish: **Five** years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Manufacturer and Product: Marquee, MI or approved equal Subject to compliance with requirements. **Energy Star compliant and Approved or Rated for the 2015 IECC and for the ERI Pathway as specified in the Energy Report Documents. Reference Section 1.04 ENERGY REQUIREMENTS above in this specification for required minimum U-value and SHGC values.**
- B. Window Style: Single-Hung, Double-Hung and Picture (fixed) Style Windows.
- C. Frame Color: **Black**

### 2.2 MATERIALS

- A. Vinyl Extrusions: Rigid (unplasticized) hollow PVC extrusions, formulated and extruded for exterior applications, complying with AAMA/WDMA 101/I.S.2/NAFS.
- B. Vinyl Trim and Glazing Stops: Material and finish to match frame members.
- C. Fasteners: Aluminum, nonmagnetic stainless steel, epoxy adhesive, or other materials warranted by manufacturer to be noncorrosive and compatible with vinyl window members, cladding, trim, hardware, anchors, and other components.
  - 1. Exposed Fasteners: Unless unavoidable for applying hardware, do not use exposed fasteners. For application of hardware, use fasteners that match finish of member or hardware being fastened, as appropriate.
- D. Anchors, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand design pressure indicated.
- E. Reinforcing Members: Aluminum, or nonmagnetic stainless steel, or nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand design pressure indicated.
- F. Compression-Type Weather Stripping: Provide compressible weather stripping designed for permanently resilient sealing under bumper or wiper action, and for complete concealment when vinyl window is closed.
  - 1. Weather-Stripping Material: Elastomeric cellular preformed gaskets complying with ASTM C 509.
  - 2. Weather-Stripping Material: Dense elastomeric gaskets complying with ASTM C 864.
  - 3. Weather-Stripping Material: Manufacturer's standard system and materials complying with AAMA/WDMA 101/I.S.2/NAFS.
- G. Sliding-type weather stripping is primarily for double-hung or horizontal-sliding windows. Delete first paragraph below if these types of units are not included or if full weather stripping is not desired.
- H. Sliding-Type Weather Stripping: Provide woven-pile weather stripping of wool, polypropylene, or nylon pile and resin-impregnated backing fabric. Comply with AAMA 701/702.
  - 1. Weather Seals: Provide weather stripping with integral barrier fin or fins of semirigid, polypropylene sheet or polypropylene-coated material. Comply with AAMA 701/702.
- I. Replaceable Weather Seals: Comply with AAMA 701/702.

- 2.3 WINDOWS
- A. Window Type: Single hung & fixed As indicated on Drawings.
  - B. AAMA/WDMA Performance Requirements: Provide vinyl windows of performance indicated that comply with AAMA/WDMA 101/I.S.2/NAFS.
  - C. Condensation-Resistance Factor (CRF): Provide vinyl windows tested for thermal performance according to AAMA 1503, showing a CRF of [45] .  
Thermal Transmittance: Provide vinyl windows with a whole-window, U-factor maximum indicated at **15-mph (24-km/h)** exterior wind velocity and winter condition temperatures when tested according to [AAMA 1503].
- 2.4 GLAZING
- A. Glass and Glazing Materials: Refer to Division 08 Section "Glazing" for glass units and glazing requirements applicable to glazed vinyl window units.
  - B. Glass: Clear, insulating-glass units.
- 2.5 HARDWARE
- A. General: Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with vinyl; designed to smoothly operate, tightly close, and securely lock vinyl windows, and sized to accommodate sash or ventilator weight and dimensions. Do not use aluminum in frictional contact with other metals.
  - B. Sill Cap/Track: of thickness, dimensions, and profile indicated; designed to comply with performance requirements indicated and to drain to the exterior.
  - C. Locks and Latches: Designed to allow unobstructed movement of the sash across adjacent sash in direction indicated and operated from the inside only.
  - D. Roller Assemblies: Low-friction design.
  - E. Windows at second floor and windows with the sill opening 6'-0" above grade shall be provided with Window Opening Control Device; device shall meet the ASTM F 2090 - Standard specification for window fall prevention devices with emergency escape (egress) release mechanisms.
- 2.6 INSECT SCREENS
- A. Design windows and hardware to accommodate screens in a tight-fitting, removable arrangement, with a minimum of exposed fasteners and latches. Fabricate insect screens to fully integrate with window frame.

## PART 3 - EXECUTION

- 3.1 EXAMINATION
- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate, and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weathertight window installation.
    - 1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
    - 2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure nail heads are driven flush with surfaces in opening and within 3 inches (76 mm) of opening.
    - 3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
    - 4. Proceed with installation only after unsatisfactory conditions have been corrected.
- 3.2 INSTALLATION
- A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing windows, hardware, accessories, and other components.
  - B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.
  - C. Set sill members in bed of sealant or with gaskets, as indicated, for weathertight construction.
  - D. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

### 3.3 ADJUSTING, CLEANING, AND PROTECTION

- A. Adjust operating sashes and ventilators, screens, hardware, and accessories for a tight fit at contact points and weather stripping for smooth operation and weathertight closure. Lubricate hardware and moving parts.
- B. Clean exposed surfaces immediately after installing windows. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.
- C. Clean factory-glazed glass immediately after installing windows. Comply with manufacturer's written recommendations for final cleaning and maintenance. Remove nonpermanent labels, and clean surfaces.
- D. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.
- E. Protect window surfaces from contact with contaminating substances resulting from construction operations. In addition, monitor window surfaces adjacent to and below exterior concrete and masonry surfaces during construction for presence of dirt, scum, alkaline deposits, stains, or other contaminants. If contaminating substances do contact window surfaces, remove contaminants immediately according to manufacturer's written recommendations.

END OF SECTION 085313

SECTION 210500  
COMMON WORK RESULTS FOR FIRE SUPPRESSION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Pipe, fittings, valves, and connections for combination sprinkler and standpipe systems.

1.2 RELATED REQUIREMENTS

- A. Section 078400 - Firestopping.
- B. Section 211200 - Fire-Suppression Standpipes: Standpipe design.
- C. Section 211300 - Fire-Suppression Sprinkler Systems: Sprinkler systems design.

1.3 REFERENCE STANDARDS

- A. ASME A112.18.1 - Plumbing Supply Fittings; 2012.
- B. ASME BPVC-IX - Boiler and Pressure Vessel Code, Section IX - Welding, Brazing, and Fusing Qualifications; 2015.
- C. ASME B16.1 - Gray Iron Pipe Flanges and Flanged Fittings: Classes 25, 125, and 250; 2010.
- D. ASME B16.3 - Malleable Iron Threaded Fittings: Classes 150 and 300; 2011.
- E. ASME B16.4 - Gray Iron Threaded Fittings: Classes 125 and 250; 2011.
- F. ASME B16.9 - Factory-Made Wrought Butt Welding Fittings; 2012.
- G. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2012.
- H. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2015.
- I. ASTM A536 - Standard Specification for Ductile Iron Castings; 1984 (Reapproved 2014).
- J. ASTM A795/A795M - Standard Specification for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use; 2013.
- K. ASTM C592 - Standard Specification for Mineral Fiber Blanket Insulation and Blanket-Type Pipe Insulation (Metal-Mesh Covered) (Industrial Type); 2013.
- L. ASTM E814 - Standard Test Method for Fire Tests of Through-Penetration Fire Stops; 2013a.
- M. ASTM F438 - Standard Specification for Socket-Type Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40; 2015.
- N. ASTM F439 - Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80; 2013.
- O. ASTM F442/F442M - Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR); 2013.
- P. ASTM F493 - Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings; 2014.
- Q. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015.
- R. AWWA C105/A21.5 - Polyethylene Encasement for Ductile-Iron Pipe Systems; 2010.
- S. AWWA C110/A21.10 - Ductile-Iron and Gray-Iron Fittings; 2012.
- T. AWWA C111/A21.11 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings; 2012.
- U. AWWA C151/A21.51 - Ductile-Iron Pipe, Centrifugally Cast; 2009.
- V. AWWA C606 - Grooved and Shouldered Joints; 2011.
- W. NFPA 13R - Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies; 2016.
- X. NFPA 14 - Standard for the Installation of Standpipe and Hose Systems; 2013.

- Y. UL (DIR) - Online Certifications Directory; current listings at database.ul.com.
- Z. UL 262 - Gate Valves for Fire-Protection Service; Underwriters Laboratories Inc.; Current Edition, Including All Revisions.
- AA. UL 312 - Check Valves for Fire-Protection Service; Underwriters Laboratories Inc.; Current Edition, Including All Revisions.

#### 1.4 SUBMITTALS

- A. See Division 1 Section - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturers catalogue information. Indicate valve data and ratings.
- C. Shop Drawings: Indicate pipe materials used, jointing methods, supports, floor and wall penetration seals. Indicate installation, layout, weights, mounting and support details, and piping connections.
- D. Project Record Documents: Record actual locations of components and tag numbering.
- E. Operation and Maintenance Data: Include installation instructions and spare parts lists.

#### 1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- B. Valves: Bear UL label or marking. Provide manufacturer's name and pressure rating marked on valve body.
- C. Products Requiring Electrical Connection: Listed and classified as suitable for the purpose specified and indicated.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store valves in shipping containers, with labeling in place.
- B. Provide temporary protective coating on cast iron and steel valves.
- C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.

### PART 2 PRODUCTS

#### 2.1 FIRE PROTECTION SYSTEMS

- A. Sprinkler Systems: Conform work to NFPA 13R.
- B. Standpipe and Hose Systems: Conform to NFPA 14.
- C. Welding Materials and Procedures: Conform to ASME Code.

#### 2.2 BURIED PIPING

- A. Steel Pipe: ASTM A53/A53M Schedule 40 or ASTM A795 Standard Weight, black, with AWWA C105 polyethylene jacket, or double layer, half-lapped polyethylene tape.
  - 1. Steel Fittings: ASME B16.9, wrought steel, buttwelded; with double layer, half-lapped polyethylene tape.
  - 2. Cast Iron Fittings: ASME B16.1, flanges and flanged fittings.
  - 3. Joints: Welded in accordance with AWS D1.1.
- B. Cast Iron Pipe: AWWA C151/A21.51.
  - 1. Fittings: AWWA C110, standard thickness.
  - 2. Joints: AWWA C111, rubber gasket.
  - 3. Mechanical Couplings: Shaped composition sealing gasket, steel bolts, nuts, and washers.

#### 2.3 ABOVE GROUND PIPING

- A. Steel Pipe: ASTM A795 Schedule 10 or ASTM A53 Schedule 40, black.
  - 1. Steel Fittings: ASME B16.9, wrought steel, buttwelded.
  - 2. Cast Iron Fittings: ASME B16.1, flanges and flanged fittings and ASME B16.4, threaded fittings.
  - 3. Malleable Iron Fittings: ASME B16.3, threaded fittings.



4. Mechanical Grooved Couplings: Malleable iron housing clamps to engage and lock, "C" shaped elastomeric sealing gasket, steel bolts, nuts, and washers; galvanized for galvanized pipe.
  5. Mechanical Formed Fittings: Carbon steel housing with integral pipe stop and O-ring pocked and O-ring, uniformly compressed into permanent mechanical engagement onto pipe.
- B. CPVC Pipe: ASTM F442/F442M, SDR 13.5.
1. Fittings: ASTM F438 Schedule 40, or ASTM F439 schedule 80, CPVC.
  2. Joints: Solvent welded, using ASTM F493 cement.
- 2.4 PIPE SLEEVES
- A. Vertical Piping:
1. Sleeve Length: 1 inch above finished floor.
  2. Provide sealant for watertight joint.
- B. Pipe Passing Through Below Grade Exterior Walls:
1. Zinc coated or cast iron pipe.
  2. Provide watertight space with link rubber or modular seal between sleeve and pipe on both pipe ends.
- C. Not required for wall hydrants for fire department connections or in drywall construction.
- D. Clearances:
1. Wall, Floor, Floor, Partitions, and Beam Flanges: 1 inch greater than external; pipe diameter.
  2. All Rated Openings: Caulked tight with fire stopping material conforming to ASTM E814 in accordance with Firestopping section to prevent the spread of fire, smoke, and gases.
- 2.5 MANUFACTURED SLEEVE-SEAL SYSTEMS
- A. Modular/Mechanical Seal:
1. Synthetic rubber interlocking links continuously fill annular space between pipe and wall/casing opening.
  2. Provide watertight seal between pipe and wall/casing opening.
  3. Elastomer element size and material in accordance with manufacturer's recommendations.
  4. Glass reinforced plastic pressure end plates.
- 2.6 ESCUTCHEONS
- A. Material:
1. Fabricate from nonferrous metal.
  2. Chrome-plated except when 300 series, ASTM A269/A269M stainless steel is provided.
  3. Metals and Finish: Comply with ASME A112.18.
- B. Construction:
1. One-piece for mounting on chrome-plated tubing or pipe and one-piece or split-pattern type elsewhere.
  2. Internal spring tension devices or setscrews to maintain a fixed position against a surface.
- 2.7 PIPE HANGERS AND SUPPORTS
- A. Hangers for Pipe Sizes 1/2 to 1-1/2 inch: Malleable iron, adjustable swivel, split ring.
- B. Hangers for Pipe Sizes 2 inches and Over: Carbon steel, adjustable, clevis.
- C. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.
- D. Wall Support for Pipe Sizes to 3 inches: Cast iron hook.
- E. Wall Support for Pipe Sizes 4 inches and Over: Welded steel bracket and wrought steel clamp.
- F. Vertical Support: Steel riser clamp.
- G. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
- 2.8 MECHANICAL COUPLINGS
- A. Rigid Mechanical Couplings for Grooved Joints:

1. Dimensions and Testing: Comply with AWWA C606.
2. Minimum Working Pressure: 300 psig.
3. Housing Material: Fabricate of ductile iron conforming to ASTM A536.
4. Housing Coating: Factory applied orange enamel.
5. Gasket Material: EPDM suitable for operating temperature range from minus 30 degrees F to 230 degrees F.
6. Bolts and Nuts: Hot dipped galvanized or zinc electroplated steel

## 2.9 GATE VALVES

- A. Up to and including 2 inches:
  1. Bronze body, bronze trim, rising stem, handwheel, solid wedge or disc, threaded ends.
- B. Over 2 inches:
  1. Iron body, bronze trim, rising stem pre-grooved for mounting tamper switch, handwheel, OS&Y, solid rubber covered bronze or cast iron wedge, flanged ends.
- C. Over 4 inches:
  1. Iron body, bronze trim, non-rising stem with bolted bonnet, solid bronze wedge, flanged ends, iron body indicator post assembly.

## 2.10 GLOBE OR ANGLE VALVES

- A. Up to and including 2 inches:
  1. Bronze body, bronze trim, rising stem and handwheel, inside screw, renewable rubber disc, threaded ends, with backseating capacity repackable under pressure.
- B. Over 2 inches:
  1. Iron body, bronze trim, rising stem, handwheel, OS&Y, plug-type disc, flanged ends, renewable seat and disc.

## 2.11 BUTTERFLY VALVES

- A. Bronze Body:
  1. Stainless steel disc, resilient replaceable seat, threaded or grooved ends, extended neck, handwheel and gear drive and integral indicating device, and built-in tamper proof switch rated 10 amp at 115 volt AC.
- B. Cast or Ductile Iron Body
  1. Cast or ductile iron, chrome or nickel plated ductile iron or aluminum bronze disc, resilient replaceable EPDM seat, wafer, lug, or grooved ends, extended neck, handwheel and gear drive and integral indicating device, and internal tamper switch rated 10 amp at 115 volt AC.

## 2.12 CHECK VALVES

- A. Up to and including 2 inches:
  1. Bronze body and swing disc, rubber seat, threaded ends.
- B. Over 2 inches:
  1. Iron body, bronze trim, swing check with rubber disc, renewable disc and seat, flanged ends with automatic ball check.
- C. 4 inches and Over:
  1. Iron body, bronze disc, stainless steel spring, resilient seal, threaded, wafer, or flanged ends.

## 2.13 DRAIN VALVES

- A. Compression Stop:
  1. Bronze with hose thread nipple and cap.
- B. Ball Valve:
  1. Brass with cap and chain, 3/4 inch hose thread.

## PART 3 EXECUTION

### 3.1 PREPARATION

- A. Ream pipe and tube ends. Remove burrs.
- B. Remove scale and foreign material, from inside and outside, before assembly.
- C. Prepare piping connections to equipment with flanges or unions.

### 3.2 INSTALLATION

- A. Install sprinkler system and service main piping, hangers, and supports in accordance with NFPA 13R.
- B. The entire building shall be provided with a fire protection sprinkler system and Class I manual wet standpipe system.
- C. Prepare design documents including shop drawings and hydraulic calculations in accordance with NFPA 13R and 14 and submit to Authority Having Jurisdiction for approval prior to installation. Design shall be performed by a licensed Professional Engineer.
- D. Install standpipe piping, hangers, and supports in accordance with NFPA 14.
- E. Route piping in orderly manner, plumb and parallel to building structure. Maintain gradient.
- F. Install piping to conserve building space, to not interfere with use of space and other work.
- G. Piping shall be concealed where routed in finished spaces.
- H. Group piping whenever practical at common elevations.
- I. Sleeve pipes passing through partitions, walls, and floors.
- J. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
- K. Inserts:
  - 1. Provide inserts for placement in concrete formwork.
  - 2. Provide inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams.
  - 3. Provide hooked rod to concrete reinforcement section for inserts carrying pipe over 4 inches.
  - 4. Where concrete slabs form finished ceiling, locate inserts flush with slab surface.
- L. Pipe Hangers and Supports:
  - 1. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
  - 2. Place hangers within 12 inches of each horizontal elbow.
  - 3. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
  - 4. Support vertical piping at every other floor. Support riser piping independently of connected horizontal piping.
  - 5. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
  - 6. Support piping from top chord of bar joists. Support from deck or bottom chord is not acceptable.
- M. Slope piping and arrange systems to drain at low points. Use eccentric reducers to maintain top of pipe level.
- N. Prepare pipe, fittings, supports, and accessories for finish painting. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welding.
- O. Do not penetrate building structural members unless indicated.
- P. Provide sleeves when penetrating footings, floors, and walls. Seal pipe and sleeve penetrations to achieve fire resistance equivalent to fire separation required.
  - 1. Underground Piping: Caulk pipe sleeve watertight with lead and oakum or mechanically expandable chloroprene inserts with bitumen sealed metal components.
  - 2. Aboveground Piping:

- a. Pack solid using mineral fiber conforming to ASTM C592.
  - b. Fill space with an elastomer caulk to a depth of 0.50 inch where penetrations occur between conditioned and unconditioned spaces.
- 3. All Rated Openings: Caulk tight with fire stopping material conforming to ASTM E814 in accordance with Firestopping section to prevent the spread of fire, smoke, and gases.
- 4. Caulk exterior wall sleeves watertight with lead and oakum or mechanically expandable chloroprene inserts with mastic-sealed components.
- Q. Manufactured Sleeve-Seal Systems:
  - 1. Install manufactured sleeve-seal systems in sleeves located in grade slabs and exterior concrete walls at piping entrances into building.
  - 2. Provide sealing elements of the size, quantity, and type required for the piping and sleeve inner diameter or penetration diameter.
  - 3. Locate piping in center of sleeve or penetration.
  - 4. Install field assembled sleeve-seal system components in annular space between sleeve and piping.
  - 5. Tighten bolting for a water-tight seal.
  - 6. Install in accordance with manufacturer's recommendations.
- R. Escutcheons:
  - 1. Install and firmly attach escutcheons at piping penetrations into finished spaces.
  - 2. Provide escutcheons on both sides of partitions separating finished areas through which piping passes.
  - 3. Use chrome plated escutcheons in occupied spaces and to conceal openings in construction.
- S. When installing more than one piping system material, ensure system components are compatible and joined to ensure the integrity of the system. Provide necessary joining fittings. Ensure flanges, union, and couplings for servicing are consistently provided.
- T. Install valves with stems upright or horizontal, not inverted. Remove protective coatings prior to installation.
- U. Provide gate valves for shut-off or isolating service.
- V. Provide drain valves at main shut-off valves, low points of piping and apparatus.

END OF SECTION

## SECTION 210523

### GENERAL-DUTY VALVES FOR WATER-BASED FIRE-SUPPRESSION PIPING

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Two-piece ball valves with indicators.
- B. Bronze butterfly valves with indicators.
- C. Iron butterfly valves with indicators.
- D. Check valves.
- E. Bronze OS&Y gate valves.
- F. Iron OS&Y gate valves.
- G. NRS gate valves.
- H. Indicator posts.
- I. Trim and drain valves.

##### 1.2 RELATED REQUIREMENTS

- A. Section 210500 - Common Work Results for Fire Suppression: Pipe and fittings.
- B. Section 210553 - Identification for Fire Suppression Piping and Equipment.
- C. Section 211200 - Fire-Suppression Standpipes.
- D. Section 211300 - Fire Suppression Sprinklers.
- E. Section 283100 - Fire Detection and Alarm.

##### 1.3 ABBREVIATIONS AND ACRONYMS

- A. EPDM: Ethylene-propylene diene monomer.
- B. NBR: Acrylonitrile-butadiene, Buna-N, or nitrile rubber.
- C. NRS: Non-rising stem.
- D. OS&Y: Outside screw and yoke.
- E. PTFE: Polytetrafluoroethylene.
- F. SBR: Styrene-butadiene rubber.

##### 1.4 REFERENCE STANDARDS

- A. ASME BPVC-IX - Boiler and Pressure Vessel Code, Section IX - Welding, Brazing, and Fusing Qualifications; 2015.

##### 1.5 SUBMITTALS

- A. Product Data: Provide data on valves including manufacturers catalog information. Submit performance ratings, rough-in details, weights, support requirements, and piping connections.
- B. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
- C. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, maintenance and repair data, and parts listings.

##### 1.6 QUALITY ASSURANCE

- A. Manufacturer:
  - 1. Obtain valves for each valve type from single manufacturer.
  - 2. Company must specialize in manufacturing products specified in this section, with not less than three years of documented experience.

- B. Where listed products are specified, provide products listed, classified, and labeled by Underwriters Laboratories Inc. (UL), FM Global, or testing firm acceptable to authorities having jurisdiction as suitable for the purpose indicated.
- C. Welding Materials and Procedures: Conform to ASME BPVC-IX.
- D. Installer and Maintenance Contractor Qualifications:
  - 1. Company specializing in performing the work of this section with minimum five years documented experience.
  - 2. Trained and approved by manufacturer to design, install, test and maintain the equipment specified herein.
  - 3. Complies with manufacturer's certification requirements.
  - 4. Complies with manufacturer's insurance requirements.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Prepare valves for shipping as follows:
  - 1. Protect internal parts against rust and corrosion.
  - 2. Set valves open to minimize exposure of functional surfaces.
- B. Use the following precautions during storage:
  - 1. Maintain valve end protection and protect flanges and specialties from dirt.
    - a. Provide temporary inlet and outlet caps.
    - b. Maintain caps in place until installation.
  - 2. Store valves in shipping containers and maintain in place until installation.
    - a. Store valves indoors and maintain at higher than ambient dew point temperature.
    - b. If outdoor storage is unavoidable, store valves off the ground in watertight enclosures.
- C. Use the following precautions for handling:
  - 1. Do not use operating handles or stems as lifting or rigging points.

### PART 2 PRODUCTS

#### 2.1 GENERAL REQUIREMENTS

- A. Comply with NFPA 13R and NFPA 14 for valves.
- B. Valve Pressure Ratings: Not less than minimum pressure rating indicated or higher as required.
- C. Valve Sizes: Same as upstream piping unless otherwise indicated.
- D. Valve Actuator Types:
  - 1. Worm-gear actuator with handwheel for quarter-turn valves, except trim and drain valves.
  - 2. Handwheel: For other than quarter-turn trim and drain valves.
  - 3. Hand-lever: For quarter-turn trim and drain valves 2 NPS and smaller.

#### 2.2 TWO-PIECE BALL VALVES WITH INDICATORS

- A. Description:
  - 1. Minimum Pressure Rating: 175 psig.
  - 2. Body Design: Two piece.
  - 3. Body Material: Forged brass or bronze.
  - 4. Port Size: Full or standard.
  - 5. Seat: PTFE.
  - 6. Stem: Bronze or stainless steel.
  - 7. Ball: Chrome-plated brass.
  - 8. Actuator: Worm gear or traveling nut.
  - 9. Supervisory Switch: Internal or external.

#### 2.3 BRONZE BUTTERFLY VALVES WITH INDICATORS

- A. Minimum Pressure Rating: 175 psig.
- B. Body Material: Bronze.

- C. Seat: EPDM.
  - D. Stem: Bronze or stainless steel.
  - E. Disc: Bronze with EPDM coating.
  - F. Actuator: Worm gear or traveling nut.
  - G. Supervisory Switch: Internal or external.
- 2.4 IRON BUTTERFLY VALVES WITH INDICATORS
- A. Minimum Pressure Rating: 175 psig.
  - B. Body Material: Cast or ductile iron with nylon, EPDM, epoxy, or polyamide coating.
  - C. Seat: EPDM.
  - D. Stem: Stainless steel.
  - E. Disc: Ductile iron, nickel plated.
  - F. Actuator: Worm gear or traveling nut.
  - G. Supervisory Switch: Internal or external.
  - H. Body Design: Grooved-end connections.
- 2.5 CHECK VALVES
- A. Minimum Pressure Rating: 175 psig.
  - B. Type: Center guided check valve.
  - C. Body Material: Cast iron, ductile iron.
  - D. Center guided check with elastomeric seal.
  - E. Hinge Spring: Stainless steel.
  - F. End Connections: Flanged, grooved, or threaded.
- 2.6 BRONZE OS&Y GATE VALVES
- A. Minimum Pressure Rating: 175 psig.
  - B. Body and Bonnet Material: Bronze or brass.
  - C. Wedge: One-piece bronze or brass.
  - D. Wedge Seat: Bronze.
  - E. Stem: Bronze or brass.
  - F. Packing: Non-asbestos PTFE.
  - G. Supervisory Switch: External.
  - H. End Connections: Threaded.
- 2.7 IRON OS&Y GATE VALVES
- A. Minimum Pressure Rating: 175 psig.
  - B. Body and Bonnet Material: Cast or ductile iron.
  - C. Wedge: Cast or ductile iron, or bronze with elastomeric coating.
  - D. Wedge Seat: Cast or ductile iron, or bronze with elastomeric coating.
  - E. Stem: Brass or bronze.
  - F. Packing: Non-asbestos PTFE.
  - G. Supervisory Switch: External.
  - H. End Connections: Flanged.
- 2.8 NRS GATE VALVES
- A. Minimum Pressure Rating: 175 psig.

- B. Body and Bonnet Material: Cast or ductile iron.
- C. Wedge: Cast or ductile iron with elastomeric coating.
- D. Stem: Brass or bronze.
- E. Packing: Non-asbestos PTFE.
- F. Supervisory Switch: External.
- G. End Connections: Flanged.

## 2.9 INDICATOR POSTS

- A. Type: Underground.
- B. Base Barrel Material: Cast or ductile iron.
- C. Cap: Cast or ductile iron.
- D. Operation: Wrench.

## 2.10 TRIM AND DRAIN VALVES

- A. Ball Valves:
  - 1. Description:
    - a. Pressure Rating: 175 psig.
    - b. Body Design: Two piece.
    - c. Body Material: Forged brass or bronze.
    - d. Port Size: Full or standard.
    - e. Seat: PTFE.
    - f. Stem: Bronze or stainless steel.
    - g. Ball: Chrome-plated brass.
    - h. Actuator: Hand-lever.
- B. Angle Valves:
  - 1. Description:
    - a. Pressure Rating: 175 psig.
    - b. Body Material: Brass or bronze.
    - c. Ends: Threaded.
    - d. Stem: Bronze.
    - e. Disc: Bronze.
    - f. Packing: Asbestos free.
    - g. Handwheel: Malleable iron, bronze, or aluminum.
- C. Globe Valves:
  - 1. Description:
    - a. Pressure Rating: 175 psig.
    - b. Body Material: Bronze with integral seat and screw-in bonnet.
    - c. Ends: Threaded.
    - d. Stem: Bronze.
    - e. Disc Holder and Nut: Bronze.
    - f. Disc Seat: Nitrile.
    - g. Packing: Asbestos free.
    - h. Handwheel: Malleable iron, bronze, or aluminum.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Confirm valve interior to be free of foreign matter and corrosion.
- B. Remove packing materials.
- C. Examine guides and seats by operating valves from the fully open position to the fully closed position.
- D. Examine valve threads and mating pipe for form and cleanliness.



### 3.2 INSTALLATION

- A. Comply with specific valve installation requirements and application in the following Sections:
- B. Install listed fire protection shutoff valves supervised-open, located to control sources of water supply except from fire department connections.
  - 1. Install permanent identification signs indicating portion of system controlled by each valve.
- C. Install check valve in water supply connections and backflow preventer at potable water supply connections.
- D. Valves in horizontal piping installed with stem at or above the pipe center.
- E. Position valves to allow full stem movement.
- F. Install valve tags. Comply with Section 210553 requirements for valve tags, schedules, and signs on surfaces concealing valves; and the appropriate NFPA standard applying to the piping system in which valves are installed.

END OF SECTION

## SECTION 210553

### IDENTIFICATION FOR FIRE SUPPRESSION PIPING AND EQUIPMENT

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Nameplates.
- B. Tags.
- C. Stencils.
- D. Pipe Markers.

##### 1.2 REFERENCE STANDARDS

##### 1.3 SUBMITTALS

- A. List: Submit list of wording, symbols, letter size, and color coding for mechanical identification.
- B. Chart and Schedule: Submit valve chart and schedule, including valve tag number, location, function, and valve manufacturer's name and model number.
- C. Product Data: Provide manufacturers catalog literature for each product required.

#### PART 2 PRODUCTS

##### 2.1 NAMEPLATES

- A. Description: Laminated three-layer plastic with engraved letters.

##### 2.2 TAGS

- A. Plastic Tags: Laminated three-layer plastic with engraved black letters on light contrasting background color. Tag size minimum 1-1/2 inch diameter.
- B. Metal Tags: Brass with stamped letters; tag size minimum 1-1/2 inch diameter with smooth edges.
- C. Valve Tag Chart: Typewritten letter size list in anodized aluminum frame.

##### 2.3 STENCILS

- A. Stencils: With clean cut symbols and letters of following size:
  - 1. 3/4 to 1-1/4 inch Outside Diameter of Insulation or Pipe: 8 inch long color field, 1/2 inch high letters.
  - 2. 1-1/2 to 2 inch Outside Diameter of Insulation or Pipe: 8 inch long color field, 3/4 inch high letters.
  - 3. 2-1/2 to 6 inch Outside Diameter of Insulation or Pipe: 12 inch long color field, 1-1/4 inch high letters.
  - 4. Equipment: 2-1/2 inch high letters.

##### 2.4 PIPE MARKERS

- A. Plastic Pipe Markers: Factory fabricated, flexible, semi-rigid plastic, preformed to fit around pipe or pipe covering; minimum information indicating flow direction arrow and identification of fluid being conveyed.
- B. Plastic Tape Pipe Markers: Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings.
- C. Underground Plastic Pipe Markers: Bright colored continuously printed plastic ribbon tape, minimum 6 inches wide by 4 mil thick, manufactured for direct burial service.

##### 2.5 CEILING TACKS

- A. Description: Steel with 3/4 inch diameter color coded head.

#### PART 3 EXECUTION

##### 3.1 PREPARATION

- A. Degrease and clean surfaces to receive adhesive for identification materials.

### 3.2 INSTALLATION

- A. Install nameplates with corrosive-resistant mechanical fasteners, or adhesive. Apply with sufficient adhesive to ensure permanent adhesion and seal with clear lacquer.
- B. Install tags with corrosion resistant chain.
- C. Install plastic pipe markers in accordance with manufacturer's instructions.
- D. Install plastic tape pipe markers complete around pipe in accordance with manufacturer's instructions.
- E. Install underground plastic pipe markers 6 to 8 inches below finished grade, directly above buried pipe.
- F. Use tags on piping 3/4 inch diameter and smaller.
- G. Locate ceiling tacks to locate valves above T-bar type panel ceilings. Locate in corner of panel closest to equipment.

END OF SECTION

SECTION 211300  
FIRE SUPPRESSION SPRINKLERS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Wet-pipe sprinkler system.
- B. Dry-pipe sprinkler system.
- C. System design, installation, and certification.
- D. Fire department connections.

1.2 RELATED REQUIREMENTS

- A. Section 210500 - Common Work Results for Fire Suppression: Pipe, fittings, and valves.
- B. Section 220553 - Identification for Plumbing Piping and Equipment.

1.3 REFERENCE STANDARDS

- A. FM P7825 - Approval Guide; Factory Mutual Research Corporation; current edition.
- B. ICC-ES AC01 - Acceptance Criteria for Expansion Anchors in Masonry Elements; 2012.
- C. ICC-ES AC106 - Acceptance Criteria for Predrilled Fasteners (Screw Anchors) in Masonry Elements; 2012.
- D. ICC-ES AC193 - Acceptance Criteria for Mechanical Anchors in Concrete Elements; 2013.
- E. ICC-ES AC308 - Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements; 2013.
- F. NFPA 13R - Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies; 2016.
- G. UL (DIR) - Online Certifications Directory; current listings at [database.ul.com](http://database.ul.com).

1.4 SUBMITTALS

- A. See Division 1 Section - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on sprinklers, valves, and specialties, including manufacturers catalog information. Submit performance ratings, rough-in details, weights, support requirements, and piping connections.
- C. Shop Drawings:
  - 1. Submit preliminary layout of finished ceiling areas indicating only sprinkler locations coordinated with ceiling installation. Additionally, indicate general routing of piping for review by Architect.
  - 2. Indicate hydraulic calculations, detailed pipe layout, hangers and supports, sprinklers, components and accessories. Indicate system controls.
  - 3. Submit shop drawings, product data, and hydraulic calculations to authority having jurisdiction for approval. Drawings and calculations shall be stamped by a licenced professional engineer.
  - 4. Installation shall be fully coordinated with structure and all other trades. Coordination shall be performed with installed conditions, not just the construction drawings. Rework of sprinkler piping due to conflicts with field conditions shall be performed without cost to the Owner or Engineer.
- D. Project Record Documents: Record actual locations of sprinklers and deviations of piping from drawings. Indicate drain and test locations.
- E. Operation and Maintenance Data: Include components of system, servicing requirements, record drawings, inspection data, replacement part numbers and availability, and location and numbers of service depot.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 016000 - Product Requirements, for additional provisions.
  - 2. Extra Sprinklers: Type and size matching those installed, in quantity required by referenced NFPA design and installation standard.
  - 3. Sprinkler Wrenches: For each sprinkler type.

## 1.5 QUALITY ASSURANCE

- A. Maintain one copy of referenced design and installation standard on site.
- B. Conform to UL requirements.
- C. Designer Qualifications: Design system under direct supervision of a Professional Engineer experienced in design of this type of work and licensed in Texas.
- D. Equipment and Components: Provide products that bear UL label or marking.
- E. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in shipping containers and maintain in place until installation. Provide temporary inlet and outlet caps. Maintain caps in place until installation.

## 1.7 EXTRA MATERIALS

- A. Provide extra sprinklers of type and size matching those installed, in quantity required by referenced NFPA design and installation standard.
- B. Provide suitable wrenches for each sprinkler type.
- C. Provide metal storage cabinet located adjacent to alarm valve.

## PART 2 PRODUCTS

### 2.1 SPRINKLER SYSTEM

- A. Sprinkler System: Provide coverage for entire building.
- B. Occupancy: Comply with NFPA 13R.
- C. Water Supply: Determine volume and pressure from water flow test data.
- D. Interface system with building fire and smoke alarm system.
- E. Provide fire department connections at locations coordinated with Fire Department.
- F. Storage Cabinet for Spare Sprinklers and Tools: Steel, located adjacent to alarm valve.
- G. Pipe Hanger Fasteners: Attach hangers to structure using appropriate fasteners, as follows:
  - 1. Concrete Wedge Expansion Anchors: Complying with ICC-ES AC193.
  - 2. Masonry Wedge Expansion Anchors: Complying with ICC-ES AC01.
  - 3. Concrete Screw Type Anchors: Complying with ICC-ES AC193.
  - 4. Masonry Screw Type Anchors: Complying with ICC-ES AC106.
  - 5. Concrete Adhesive Type Anchors: Complying with ICC-ES AC308.
  - 6. Other Types: As required.

### 2.2 SPRINKLERS

- A. Suspended Ceiling Type: Recessed or concealed pendant type with matching push on escutcheon or cover plate.
  - 1. Finish: Enamel, color white.
  - 2. Escutcheon Plate Finish: Enamel, color white.
  - 3. Cover Plate Finish: White enamel.
  - 4. Fusible Link: Fusible solder link type temperature rated for specific area hazard.
- B. Exposed Area Type: Standard upright type with guard.
  - 1. Finish: Brass.
  - 2. Fusible Link: Fusible solder link type temperature rated for specific area hazard.
- C. Sidewall Type: Recessed horizontal sidewall type with matching push on escutcheon plate .
  - 1. Finish: Enamel, color white.
  - 2. Escutcheon Plate Finish: Enamel, color white.
  - 3. Fusible Link: Fusible solder link type temperature rated for specific area hazard.

- D. Guards: Finish to match sprinkler finish.
  - 1. Provide guards at all heads in back of house areas including linen and storage rooms.
  - 2. Provide guards at all heads installed below 8' AFF.

### 2.3 PIPING SPECIALTIES

- A. Dry Pipe Sprinkler Alarm Valve: Check type valve with divided seat ring, rubber faced clapper to automatically actuate water motor alarm, accelerator, and with the following additional capabilities and features:
  - 1. Activate electric alarm.
  - 2. Test and drain valve.
  - 3. Externally resettable.
  - 4. Replaceable internal components without removing valve from installed position.
- B. Wet Pipe Sprinkler Alarm Valve: Check type valve with divided seat ring, rubber faced clapper to automatically actuate water motor alarm and electric alarm, with pressure retard chamber and variable pressure trim; with test and drain valve.
- C. Backflow Preventer: Double check valve assembly backflow preventer with drain and OS & Y gate valve on each end. Coordinate requirements with Authority Having Jurisdiction.
- D. Test Connections:
  - 1. Backflow Preventer Test Connection:
    - a. Provide downstream of the backflow prevention assembly, listed hose valves with 2.5 inch National Standard male hose threads with cap and chain.
- E. Electric Alarm: Electrically operated chrome plated gong with pressure alarm switch.
- F. Water Flow Switch: Vane type switch for mounting horizontal or vertical, with two contacts; rated 10 amp at 125 volt AC and 2.5 amp at 24 volt DC.
- G. Fire Department Connections:
  - 1. Type: Flush mounted wall type with chrome plated finish.
  - 2. Outlets: Two way with thread size to suit fire department hardware; threaded dust cap and chain of matching material and finish.
  - 3. Drain: 3/4 inch automatic drip, outside.
  - 4. Label: "Auto. Sprinkler".

### 2.4 AIR COMPRESSOR

- A. Compressor: Single unit, electric motor driven, motor, motor starter, safety valves, check valves, air maintenance device incorporating electric pressure switch and unloader valve.
- B. Electrical Characteristics:
  - 1. 1/3 hp.
  - 2. 125 volts, single phase, 60 Hz.

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. Install in accordance with referenced NFPA design and installation standard.
- B. Install equipment in accordance with manufacturer's instructions.
- C. Install buried shut-off valves in valve box. Provide post indicator.
- D. Provide approved backflow preventer assembly at sprinkler system water source connection.
- E. Locate fire department connection with sufficient clearance from walls, obstructions, or adjacent siamese connectors to allow full swing of fire department wrench handle. Coordinate with Authority Having Jurisdiction.
- F. Place pipe runs to minimize obstruction to other work.
- G. Place piping in concealed spaces above finished ceilings.
- H. Center sprinklers in two directions in ceiling tile and provide piping offsets as required.

- I. Apply masking tape or paper cover to ensure concealed sprinklers, cover plates, and sprinkler escutcheons do not receive field paint finish. Remove after painting. Replace painted sprinklers.
  - J. Flush entire piping system of foreign matter.
  - K. Hydrostatically test entire system.
  - L. Required tests must be witnessed by authority having jurisdiction.
  - M. Public areas must have concealed or recessed heads. Concealed or recessed ceiling or sidewall heads may be used in apartments.
  - N. Areas subject to freezing shall be provided with dry type heads.
- 3.2 INTERFACE WITH OTHER PRODUCTS
- A. Ensure required devices are installed and connected as required to fire alarm system.

END OF SECTION







LEGEND

FEATURES

- Section Corner
1/2" Rebar, Cap # 11579
(Unless Otherwise Noted)
ROW Marker
ROW Rail
Control Point
Bench Mark
Platted Distance
Measured Bearing & Distance
Recorded As
Deed Distance
Calculated Distance
Minimum Protection Elevation
Centerline
Section Line
1/4 Section Line
1/4 1/4 Section Line
Easement Line

FOUND

- OCF
P
M
R
D
MPE

SET

- OCF
P
M
R
D
MPE

FEATURES

- Spot Elevation
Contour Elevation
Fence (Barbed, Field, Hog)
Fence (Chain Link)
Fence (Wood)
Fence (Silt)
Tree Line
Tree Stump
Deciduous Tree \ Shrub
Coniferous Tree \ Shrub
Communication
Overhead Communication
Fiber Optic
Underground Electric
Overhead Electric
Gas Main with Size
High Pressure Gas Main with Size
Water Main with Size
Sanitary Sewer with Size
Duct Bank
Test Hole Location for SUE w/ID

EXISTING

- C(\*)
OC(\*)
FO(\*)
E(\*)
OE(\*)
G(\*)
HPG
W(\*)
S(\*)
DUCT(\*)

PROPOSED

- C
OC
FO
E
OE
G
HPG
W
S

(\*) Denotes the survey quality service level for utilities

- Sanitary Manhole
Storm Sewer with Size
Storm Manhole
Single Storm Sewer Intake
Double Storm Sewer Intake
Fire Hydrant
Fire Hydrant on Building
Water Main Valve
Water Service Valve
Well
Utility Pole
Guy Anchor
Utility Pole with Light
Utility Pole with Transformer
Street Light
Yard Light
Electric Box
Electric Transformer
Traffic Sign
Communication Pedestal
Communication Manhole
Communication Handhole
Fiber Optic Manhole
Fiber Optic Handhole
Gas Valve
Gas Manhole
Gas Apparatus
Fence Post or Guard Post
Underground Storage Tank
Above Ground Storage Tank
Sign
Satellite Dish
Mailbox
Sprinkler Head
Irrigation Control Valve

UTILITY QUALITY SERVICE LEVELS

QUALITY LEVELS OF UTILITIES ARE SHOWN IN THE PARENTHESES WITH THE UTILITY TYPE AND WHEN APPLICABLE, SIZE. THE QUALITY LEVELS ARE BASED ON THE CI / ASCE 38-02 STANDARD.
QUALITY LEVEL (D) INFORMATION IS DERIVED FROM EXISTING UTILITY RECORDS OR ORAL RECOLLECTIONS.
QUALITY LEVEL (C) INFORMATION IS OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION WITH QUALITY D INFORMATION.
QUALITY LEVEL (B) INFORMATION IS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES.
QUALITY LEVEL (A) IS HORIZONTAL AND VERTICAL POSITION OF UNDERGROUND UTILITIES OBTAINED BY ACTUAL EXPOSURE OR VERIFICATION OF PREVIOUSLY EXPOSED SUBSURFACE UTILITIES, AS WELL AS THE TYPE, SIZE, CONDITION, MATERIAL, AND OTHER CHARACTERISTICS.

UTILITY WARNING

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

SITE PLAN GENERAL NOTES

- 1. NOTIFY UTILITY PROVIDERS PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES AND COORDINATE WITH UTILITY PROVIDERS AS NECESSARY DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTENCE, EXACT LOCATION, AND DEPTH OF ALL UTILITIES. PROTECT ALL UTILITY LINES AND STRUCTURES NOT SHOWN FOR REMOVAL OR MODIFICATION. ANY DAMAGES TO UTILITY ITEMS NOT SHOWN FOR REMOVAL OR MODIFICATION SHALL BE REPAIRED TO THE UTILITY OWNER'S SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.
2. CONSTRUCTION OF ALL STREET AND UTILITY IMPROVEMENTS SHALL CONFORM TO THE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE SOILS REPORTS PREPARED BY OTHERS.
3. LENGTH OF UTILITIES SHOWN ON PLANS ARE DIMENSIONED FROM CENTERLINE OF STRUCTURE TO CENTERLINE OF STRUCTURE.
4. ALL TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). WHEN CONSTRUCTION ACTIVITIES OBSTRUCT PORTIONS OF THE ROADWAY, FLAGGERS SHALL BE PROVIDED. FLAGGERS SHALL CONFORM TO THE MUTCD IN APPEARANCE, EQUIPMENT AND ACTIONS.
5. NOTIFY OWNER, ENGINEER, KNOXVILLE WATER WORKS, AND CITY OF KNOXVILLE AT LEAST 48 HOURS PRIOR TO BEGINNING WORK. ALL CONNECTIONS TO AND INSTALLATIONS OF PUBLIC UTILITIES AND ROADWAY IMPROVEMENTS SHALL BE INSPECTED BY CITY OF KNOXVILLE DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR NOTIFICATIONS.
6. CONSTRUCT MANHOLES AND APPURTENANCES AS WORK PROGRESSES. BACKFILL WITH SUITABLE MATERIAL AND COMPACT TO 95% MAXIMUM DENSITY.
7. IN THE EVENT OF A DISCREPANCY BETWEEN THE QUANTITY ESTIMATES AND THE DETAILED PLANS, THE DETAILED PLANS SHALL GOVERN.
8. ALL FIELD TILES ENCOUNTERED DURING CONSTRUCTION SHALL BE RECONNECTED AND NOTED ACCORDINGLY ON THE AS-BUILT DOCUMENTS.
9. DIMENSIONS, BUILDING LOCATION, UTILITIES AND GRADING OF THIS SITE ARE BASED ON AVAILABLE INFORMATION AT THE TIME OF DESIGN. DEVIATIONS MAY BE NECESSARY IN THE FIELD. ANY SUCH CHANGES OR CONFLICTS BETWEEN THIS PLAN AND FIELD CONDITIONS ARE TO BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT VERIFICATION OF ALL SITE IMPROVEMENTS PRIOR TO CONSTRUCTION.
10. CONTRACTOR TO LOAD AND TRANSPORT ALL MATERIALS CONSIDERED TO BE UNDESIRABLE TO BE INCORPORATED INTO THE PROJECT TO AN APPROVED OFF-SITE WASTE SITE.
11. CONTRACTOR TO STRIP AND STOCKPILE TOPSOIL FROM ALL AREAS TO BE CUT OR FILLED. RESPREAD TO MINIMUM 6" DEPTH TO FINISH GRADES.
12. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN ARE FINISHED GRADES AND/OR TOP OF PAVING SLAB (GUTTER), UNLESS OTHERWISE NOTED.
13. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING DIRT AND DEBRIS FROM NEIGHBORING STREETS, DRIVEWAYS, AND SIDEWALKS CAUSED BY CONSTRUCTION ACTIVITIES IN A TIMELY MANNER.
14. THE ADJUSTMENT OF ANY EXISTING UTILITY APPURTENANCES TO FINAL GRADE IS CONSIDERED INCIDENTAL TO THE SITE WORK.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING EROSION CONTROL MEASURES AS NECESSARY. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING ANY EXISTING EROSION CONTROL MEASURES ON SITE AT THE TIME OF CONSTRUCTION. GRADING AND SOIL EROSION CONTROL CODE REQUIREMENTS SHALL BE MET BY CONTRACTOR. A GRADING PERMIT IS REQUIRED FOR THIS PROJECT.
16. CONTRACTOR TO COORDINATE NATURAL GAS, ELECTRICAL, TELEPHONE AND ANY OTHER FRANCHISE UTILITY SERVICES WITH UTILITY SERVICE PROVIDER, POLK COUNTY, AND THE OWNER PRIOR TO CONSTRUCTION.
17. CONTRACTOR TO VERIFY ALL UTILITY CROSSINGS AND MAINTAIN MINIMUM 18" VERTICAL AND HORIZONTAL CLEARANCE BETWEEN UTILITIES. CONTRACTOR TO COORDINATE UTILITY ROUTING TO BUILDING AND VERIFY CONNECTION LOCATIONS AND INVERTS PRIOR TO CONSTRUCTION.

SURVEY AND UTILITY GENERAL NOTES

- 1. BUILDING LINES AND CORNERS ARE FOR USE IN PREPARING CIVIL SITE PLAN DOCUMENTS. BUILDING CORNERS AND BUILDING LINES SHOULD BE SPECIFICALLY VERIFIED, AS NECESSARY, PRIOR TO DESIGN FOR CONSTRUCTION OF ANY PROPOSED EXPANSION OR CONNECTION OF BUILDING COMPONENTS.
2. FOR CLARITY PURPOSES, SURVEY SPOT ELEVATIONS ARE NOT SHOWN ON THIS SURVEY, BUT ARE CONTAINED WITHIN THE DIGITAL CADD FILES.
3. FOR THE PURPOSE OF THIS SURVEY, STORM SEWER, SANITARY SEWER AND WATER MAIN LINES ARE ASSUMED TO FOLLOW A STRAIGHT LINE FROM STRUCTURE TO STRUCTURE.
4. UTILITY SERVICE LINES TO BUILDINGS ARE APPROXIMATE ONLY. AN INTERNAL BUILDING INVESTIGATION, EXCAVATION AND/OR SUBSURFACE LOCATING/DESIGNATING WOULD NEED TO BE PERFORMED TO DETERMINE THE LOCATION OF SERVICES ENTERING THE BUILDING.
5. UNDERGROUND PIPE MATERIALS AND SIZES ARE BASED UPON VISIBLE EVIDENCE VIEWED FROM ACCESS MANHOLES/STRUCTURES. DUE TO THE CONFIGURATION AND/OR CONSTRUCTION OF THE STRUCTURE, IT MAY BE DIFFICULT TO ACCURATELY DETERMINE THE PIPE MATERIAL AND/OR SIZE. THE SURVEYOR WILL USE THEIR JUDGMENT AND EXPERIENCE TO ATTEMPT TO DETERMINE, BUT COMPLETE ACCURACY CANNOT BE GUARANTEED.
6. BOUNDARY LINES SHOWN ON THE EXISTING SITE SURVEY ARE TO FACILITATE DESIGN OR CONCEPT NEEDS AND ENABLE CREATION OF SAID CONSTRUCTION DOCUMENTS. THESE LINES DO NOT CONSTITUTE A CERTIFIED BOUNDARY SURVEY AND MISSING MONUMENTS WILL NOT BE SET.

CONTROL POINTS

- IOWA REGIONAL COORDINATE SYSTEM ZONE 9 (NEWTON)
NAD83(2011)(EPOCH 2010.00) IARTN DERIVED - US SURVEY FEET
CP203 N=7590301.69 E=19416805.57 Z=903.37
CUT "X", NORTHWEST CORNER OF STORM STRUCTURE IN NORTHWEST QUARTER OF INTERSECTION, NORTH SIDE OF ROAD. (AS SHOWN ON SURVEY)
CP300 N=7590004.24 E=19416873.77 Z=900.04
SET 1/2" REBAR, RED PLASTIC CAP, ALONG PROPERTY LINE, WEST SIDE OF WILLETS DRIVE APPROXIMATELY 10' WEST OF EDGE OF PAVEMENT. (AS SHOWN ON SURVEY)
CP301 N=7590289.02 E=19417510.56 Z=911.61
CUT "X" IN CONCRETE, NORTH SIDE OF SIDEWALK ON NORTH SIDE OF PLEASANT, SOUTH OF KNOXVILLE VET PARK SIGN. (AS SHOWN ON SURVEY)
CP302 N=7590276.22 E=19418056.04 Z=909.27
CUT "X" ON BACK OF CURB, NORTH SIDE OF PLEASANT, SOUTH OF CENTERLINE OF ALLEY. (AS SHOWN ON SURVEY)
CP303 N=7590005.25 E=19418015.10 Z=910.35
SET 1/2" REBAR WITH RED PLASTIC CAP, +/-40' NORTH OF WEST EDGE OF GARAGE, +/-40' WETS OF FENCE, SOUTHEAST CORNER OF SITE. (AS SHOWN ON SURVEY)

BENCHMARKS

- NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88 - GEOID12A)
IARTN DERIVED - US SURVEY FEET
BM500 ELEV=912.82
ARROW ON HYDRANT, NORTHWEST CORNER OF "T" INTERSECTION OF NEW VA ROAD AND W PLEASANT STREET.
BM501 ELEV=905.97
ARROW ON HYDRANT, NORTHEAST CORNER OF INTERSECTION OF W PLEASANT STREET AND WILLETS DRIVE, NORTH SIDE OF ROAD.

DATE OF SURVEY

MARCH 14, 2024

UTILITY CONTACT INFORMATION

UTILITY CONTACT FOR MAPPING INFORMATION SHOWN AS RECEIVED FROM THE IOWA ONE CALL DESIGN REQUEST SYSTEM, TICKET NUMBER 552401638.

Table with utility service names (G1-GAS MAIN, NO RESPONSE, CO3-COMMUNICATION, etc.) and contact information (ALLIANT ENERGY, U.S. CELLULAR, etc.).



PROPERTY DESCRIPTION

THE VETERANS DISTRICT PLAT 2 LOT 1

PROPERTY ADDRESS

1515 W PLEASANT STREET
KNOXVILLE, IA 50138

ZONING

R-3 MULTI-FAMILY RESIDENTIAL DISTRICT

BULK REGULATIONS

FRONT SETBACK - 25'
SIDE SETBACK - 16'
REAR YARD - 35'
MAXIMUM HEIGHT - 45'
MAXIMUM STORIES - 3 STORIES

BUILDING/GENERAL USE

SENIOR LIVING APARTMENT
3 STORIES
48 UNITS

PARKING

2 PARKING SPACES PER DWELLING UNIT. 1 1/2 SPACES PER DWELLING UNIT IF DEVELOPED AS AN ELDERLY HOUSING PROJECT. HERIN AN ELDERLY HOUSING PROJECT IS FOR THOSE RESIDENTS OVER 55 YEARS OF AGE.

48 UNITS
1.5 \* 48 UNITS = 72 PARKING SPACES REQUIRED

78 SPACES PROVIDED (INCLUDING 6 ADA)

BASE SITE CALCULATIONS

TOTAL AREA - 123,348 SF (2.92 AC)

IMPERVIOUS - 54,899 SF (44.5%)
BUILDING - 14,575 SF
PAVEMENTS - 40,324 SF

OPEN SPACE - 72,449 SF (55.5%)

POLLUTION PREVENTION NOTES

- A. POLLUTION PREVENTION AND EROSION PROTECTION
1. CODE COMPLIANCE: THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL POTENTIAL POLLUTION AND SOIL EROSION CONTROL REQUIREMENTS OF THE IOWA CODE, THE IOWA DEPARTMENT OF NATURAL RESOURCES (IDNR) NPDES PERMIT, THE U.S. CLEAN WATER ACT AND ANY LOCAL ORDINANCES. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO PROTECT AGAINST EROSION AND POLLUTION FROM THIS PROJECT SITE AND ALL OFF-SITE BORROW OR DEPOSIT AREAS DURING PERFORMANCE OR AS A RESULT OF PERFORMANCE.
2. DAMAGE CLAIMS: THE CONTRACTOR WILL HOLD THE OWNER AND ARCHITECT / ENGINEER HARMLESS FROM ANY AND ALL CLAIMS OF ANY TYPE WHATSOEVER RESULTING FROM DAMAGES TO ADJOINING PUBLIC OR PRIVATE PROPERTY, INCLUDING REASONABLE ATTORNEY FEES INCURRED TO OWNER. FURTHER, IF THE CONTRACTOR FAILS TO TAKE NECESSARY STEPS TO PROMPTLY REMOVE EARTH SEDIMENTATION OR DEBRIS WHICH COMES ONTO ADJOINING PUBLIC OR PRIVATE PROPERTY, THE OWNER MAY, BUT NEED NOT, REMOVE SUCH ITEMS AND DEDUCT THE COST THEREOF FROM AMOUNTS DUE TO THE CONTRACTOR.
B. STORM WATER DISCHARGE PERMIT
1. THIS PROJECT REQUIRES COVERAGE UNDER THE NPDES GENERAL PERMIT NO. 2 FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDNR, AS REQUIRED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS ARE RESPONSIBLE FOR COMPLIANCE WITH AND FULFILLMENT OF ALL REQUIREMENTS OF THE NPDES GENERAL PERMIT NO. 2 AS SPECIFIED IN THE CONTRACT DOCUMENTS.
2. ALL DOCUMENTS RELATED TO THE STORM WATER DISCHARGE PERMIT, INCLUDING, BUT NOT LIMITED TO, THE NOTICE OF INTENT, PROOF OF PUBLICATIONS, DISCHARGE AUTHORIZATION LETTER, CURRENT SWPPP, SITE INSPECTION LOG, AND OTHER ITEMS, SHALL BE KEPT ON SITE AT ALL TIMES AND MUST BE PRESENTED TO ANY JURISDICTIONAL AGENCIES UPON REQUEST. FAILURE TO COMPLY WITH THE NPDES PERMIT REQUIREMENTS IS A VIOLATION OF THE CLEAN WATER ACT AND THE CODE OF IOWA.
3. A "NOTICE OF DISCONTINUATION" MUST BE FILED WITH THE IDNR UPON FINAL STABILIZATION OF THE DISTURBED SITE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES. ALL PLANS, INSPECTION REPORTS, AND OTHER DOCUMENTS MUST BE RETAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION. THE CONTRACTOR SHALL RETAIN A RECORD COPY AND PROVIDE THE ORIGINAL DOCUMENTS TO THE OWNER UPON PROJECT ACCEPTANCE AND/OR SUBMITTAL OF THE NOTICE OF DISCONTINUATION.
C. POLLUTION PREVENTION PLAN
1. THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS A SEPARATE DOCUMENT IN ADDITION TO THESE PLAN DRAWINGS. THE CONTRACTOR SHOULD REFER TO THE SWPPP FOR ADDITIONAL REQUIREMENTS AND MODIFICATIONS TO THE POLLUTION PREVENTION PLAN MADE DURING CONSTRUCTION.
2. THE SWPPP ILLUSTRATES GENERAL MEASURES AND BEST MANAGEMENT PRACTICES (BMP) FOR COMPLIANCE WITH THE PROJECT'S NPDES PERMIT COVERAGE. ALL BMP'S AND EROSION CONTROL MEASURES REQUIRED AS A RESULT OF CONSTRUCTION ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY, NOTE AND IMPLEMENT. ADDITIONAL BMP'S FROM THOSE SHOWN ON THE PLAN MAY BE REQUIRED.
3. THE SWPPP AND SITE MAP SHOULD BE EXPEDITIOUSLY REVISED TO REFLECT CONSTRUCTION PROGRESS AND CHANGES AT THE PROJECT SITE.
4. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE GENERAL PERMIT AND SWPPP, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING BMP'S UNLESS INFEASIBLE OR NOT APPLICABLE:
a. UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE WHEN DISCHARGING FROM BASINS, PROVIDE AND MAINTAIN NATURAL BUFFERS AROUND SURFACE WATERS, DIRECT STORM WATER TO VEGETATED AREAS TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORM WATER INFILTRATION, AND MINIMIZE SOIL COMPACTION.
b. INSTALL PERIMETER AND FINAL SEDIMENT CONTROL MEASURES SUCH AS SILT BARRIERS, DITCH CHECKS, DIVERSION BERMS, OR SEDIMENTATION BASINS DOWNSTREAM OF SOIL DISTURBING ACTIVITIES PRIOR TO SITE CLEARING AND GRADING OPERATIONS.
c. PRESERVE EXISTING VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION AND LIMIT TO A MINIMUM THE TOTAL AREA DISTURBED BY CONSTRUCTION OPERATIONS AT ANY TIME.
d. MAINTAIN ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES IN WORKING ORDER, INCLUDING CLEANING, REPAIRING, REPLACEMENT, AND SEDIMENT REMOVAL THROUGHOUT THE PERMIT PERIOD. CLEAN OR REPLACE SILT CONTROL DEVICES WHEN THE MEASURES HAVE LOST 50% OF THEIR ORIGINAL CAPACITY.
e. INSPECT THE PROJECT AREA AND CONTROL DEVICES (BY QUALIFIED PERSONNEL ASSIGNED BY THE CONTRACTOR) EVERY SEVEN CALENDAR DAYS. RECORD THE FINDINGS OF THESE INSPECTIONS AND ANY RESULTING ACTIONS IN THE SWPPP WITH A COPY SUBMITTED WEEKLY TO THE OWNER OR ENGINEER DURING CONSTRUCTION. REVISE THE SWPPP AND IMPLEMENT ANY RECOMMENDED MEASURES WITHIN 7 DAYS.
f. PREVENT ACCUMULATION OF EARTH AND DEBRIS FROM CONSTRUCTION ACTIVITIES ON ADJOINING PUBLIC OR PRIVATE PROPERTIES, INCLUDING STREETS, DRIVEWAYS, SIDEWALKS, DRAINAGEWAYS, OR UNDERGROUND SEWERS. REMOVE ANY ACCUMULATION OF EARTH OR DEBRIS IMMEDIATELY AND TAKE REMEDIAL ACTIONS FOR FUTURE PREVENTION.
g. INSTALL NECESSARY CONTROL MEASURES SUCH AS SILT BARRIERS, EROSION CONTROL MATS, MULCH, DITCH CHECKS OR RIPRAP AS SOON AS AREAS REACH THEIR FINAL GRADES AND AS CONSTRUCTION OPERATIONS PROGRESS TO ENSURE CONTINUOUS RUNOFF CONTROL. PROVIDE INLET AND OUTLET CONTROL MEASURES AS SOON AS STORM SEWERS ARE INSTALLED.
h. RESPREAD A MINIMUM OF 6 INCHES OF TOPSOIL (INCLUDING TOPSOIL FOUND IN SOD) ON ALL DISTURBED AREAS, EXCEPT WHERE PAVEMENT, BUILDINGS OR OTHER IMPROVEMENTS ARE LOCATED.
i. STABILIZE UNDEVELOPED, DISTURBED AREAS WITH MULCH, TEMPORARY SEED MIX, PERMANENT SEED MIX, SOD, OR PAVEMENT IMMEDIATELY AS SOON AS POSSIBLE UPON COMPLETION OR DELAY OF GRADING OPERATIONS. INITIATE STABILIZATION MEASURES IMMEDIATELY AFTER CONSTRUCTION ACTIVITY IS FINALLY COMPLETED OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WHICH WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
j. COORDINATE LOCATIONS OF STAGING AREAS WITH THE OWNER AND RECORD IN THE SWPPP. UNLESS NOTED OTHERWISE, STAGING AREAS SHOULD CONTAIN THE FOLLOWING: JOB TRAILERS, FUELING / VEHICLE MAINTENANCE AREA, TEMPORARY SANITARY FACILITIES, MATERIALS STORAGE, AND CONCRETE WASHOUT FACILITY. CONTROL RUNOFF FROM STAGING AREAS WITH DIVERSION BERMS AND/OR SILT BARRIERS AND DIRECT TO A SEDIMENT BASIN OR OTHER CONTROL DEVICE WHERE POSSIBLE. CONCRETE WASHOUT MUST BE CONTAINED ONSITE.
k. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND SITE WASTE PRIOR TO FILING OF THE "NOTICE OF DISCONTINUATION".

THE RESIDENCE AT VETERAN'S PARK

PROJECT INFORMATION

KNOXVILLE, IOWA

SNYDER & ASSOCIATES, INC.



Project No: 124.0983.01

Sheet C101

2727 S.W. SNYDER BLVD
ANKENY, IOWA 50023

515-864-2020 | www.snyder-assocates.com

Sheet C101

MARK: REVISION: DATE: BY:
Checked By: JFS
Date: MM-DD-YYYY
Engineer: KS
Technician: KS

Scale: T=NONE
T-RS: TTN-RRV-SS
Project No: 124.0983.01



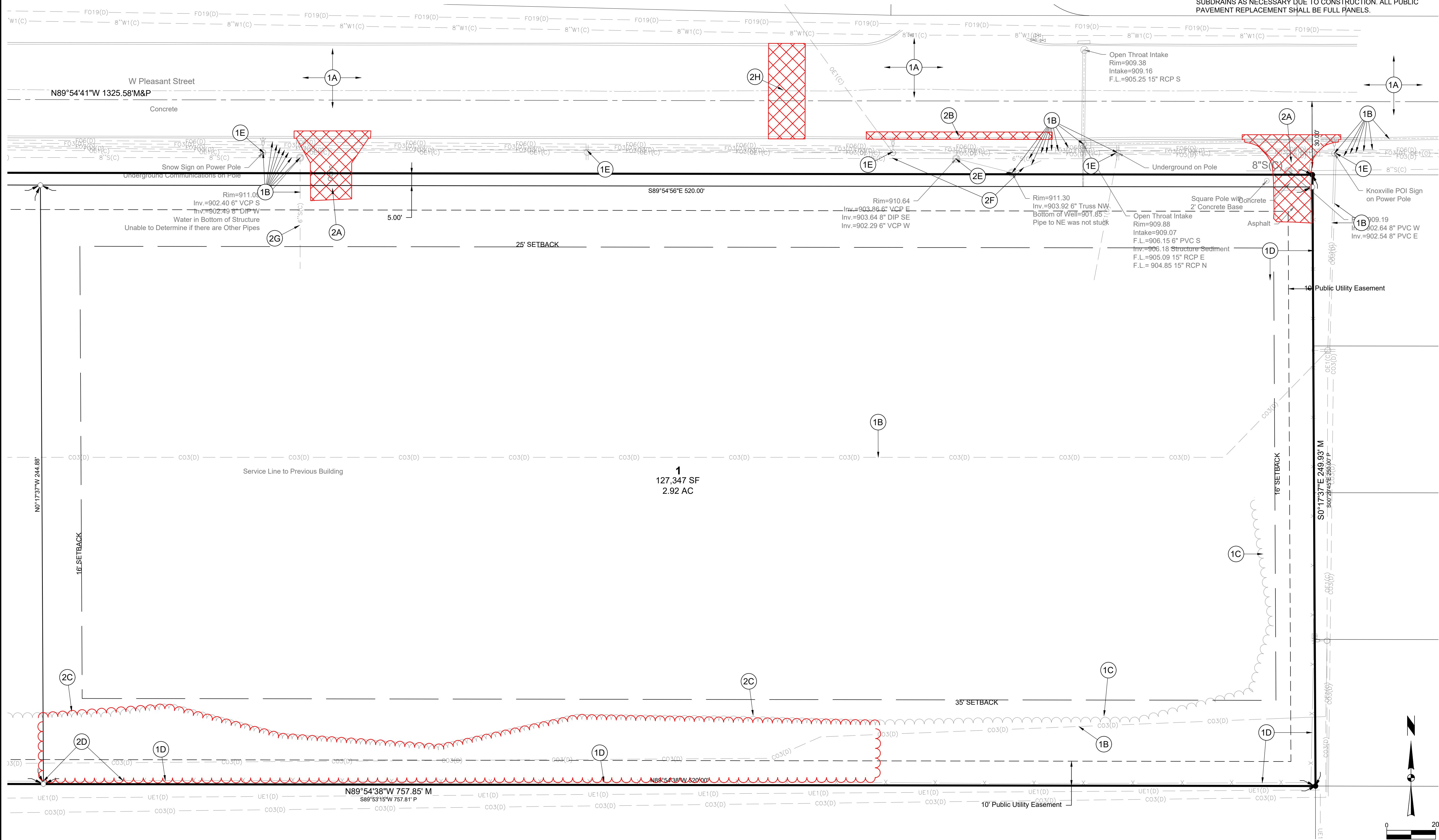
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### DEMOLITION LEGEND

-  PAVEMENT REMOVAL
-  TREE REMOVAL

### DEMOLITION PLAN CONSTRUCTION NOTES

1. EXISTING FEATURES, PROTECT THE FOLLOWING:
  - A. PAVEMENTS TO REMAIN. SAW CUT ALL PAVEMENTS TO FULL DEPTH AT REMOVAL LIMIT TO AVOID DAMAGE TO ADJACENT PAVEMENTS. ANY DAMAGE TO PAVEMENT SHALL BE REPAIRED AT CONTRACTORS EXPENSE. DAMAGE ANY PAVEMENT PANELS SHALL REQUIRE FULL PANEL REPLACEMENT.
  - B. PROTECT EXISTING UTILITIES. VERIFY LOCATION PRIOR TO CONSTRUCTION. ANY DAMAGE TO UTILITIES DUE TO CONSTRUCTION SHALL BE REPAIRED AT CONTRACTORS EXPENSE. ADJUST EXISTING UTILITIES WHEN REQUIRED TO MATCH PROPOSED GRADE.
  - C. TREES.
  - D. FENCE.
  - E. EXISTING UTILITY POLE.
2. DEMOLITION, REMOVE THE FOLLOWING:
  - A. EXISTING PAVEMENT TO CLOSEST JOINT.
  - B. PCC CURB AND GUTTER. REMOVE 3' GUTTER SECTION TO NEAREST JOINT LINE.
  - C. TREES.
  - D. REMOVE AND REPLACE FENCE AS NEEDED TO SECURE DOG PARK AREA.
  - E. REMOVE EXISTING SANITARY SEWER MANHOLE.
  - F. CAP AND ABANDON SERVICES WITHIN 10' OF EDGE OF PROPOSED DRIVE. PROTECT ADJACENT LIGHT POLE.
  - G. REMOVE EXISTING SEWER SERVICE TO SANITARY SEWER STRUCTURE, AND CAP AND PLUG SERVICE AT STRUCTURE.
  - H. REMOVE AND REPLACE EXISTING PAVEMENT IN FULL DEPTH AS NEEDED FOR WATER SERVICE INSTALLATION. PAVEMENT DEPTH ASSUMED TO BE 8" PCC ON 6" SPECIAL BACKFILL ON 12" SUBGRADE PREPARATION. COORDINATE TRAFFIC CONTROL WITH CITY OF KNOXVILLE AS NEEDED. PAVEMENT REMOVAL WILL MATCH EXISTING JOINTING IN FULL PANELS SEGMENTS. CONTRACTOR TO REPAIR ALL SUBDRAINS AS NECESSARY DUE TO CONSTRUCTION. ALL PUBLIC PAVEMENT REPLACEMENT SHALL BE FULL PANELS.



MARK	REVISION	DATE	BY

Engineer: KS  
 Checked By: JFS  
 Technician: KS  
 Date: MM-DD-YYYY  
 Scale: 1" = 20'  
 T-R-S: TTN-RRW-SS  
 Project No: 124.0983.01

**THE RESIDENCE AT VETERAN'S PARK**  
**DEMOLITION PLAN**  
**SNYDER & ASSOCIATES, INC.**  
 2727 S.W. SNYDER BLVD  
 ANKENY, IOWA 50023  
 515-964-2020 | www.snyder-associates.com







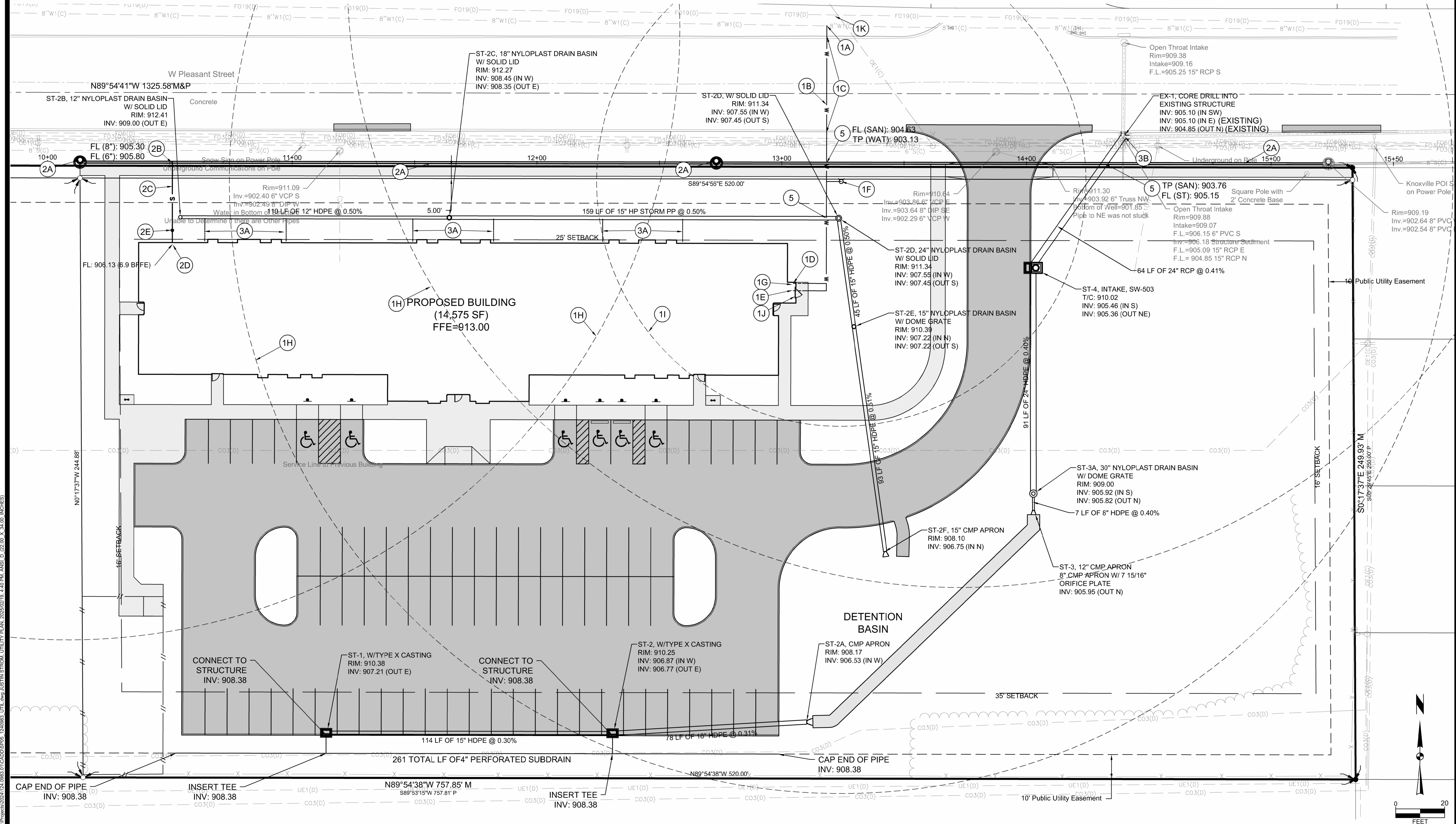


**UTILITY PLAN CONSTRUCTION NOTES**

1. WATER SERVICES, PROVIDE THE FOLLOWING:
  - A. CONNECT TO C900 8" WATER MAIN. VERIFY LOCATION AND ELEVATION PRIOR TO CONSTRUCTION. COORDINATE CONNECTION WITH THE CITY OF KNOXVILLE WATER WORKS (KWW) PRIOR TO CONSTRUCTION. PROVIDE A TAPPING SLEEVE AND VALVE.
  - B. 6" WATER SERVICE. CONFIRM SIZE REQUIRED WITH MECHANICAL PLANS PRIOR TO CONSTRUCTION.
  - C. DIRECTIONAL BORE OR REMOVE AND REPLACE PAVEMENT FOR WATER SERVICE INSTALLATION. COORDINATE TRAFFIC CONTROL NEEDS WITH CITY OF KNOXVILLE PRIOR TO CONSTRUCTION.
  - D. CONNECT WATER SERVICE TO BUILDING. COORDINATE LOCATION AND ELEVATION WITH MECHANICAL PLANS.
  - E. 2-1/2" DOMESTIC WATER SERVICE WITH CURB STOP SPLIT EXTERIOR TO BUILDING. CONFIRM DOMESTIC SIZE, LOCATION AND ELEVATION WITH MECHANICAL PLANS PRIOR TO CONSTRUCTION.
  - F. PROVIDE 6 X 6 TEE WITH HYDRANT ASSEMBLY. HYDRANT ASSEMBLY SHALL HAVE STORZ NOZZLE. COORDINATE WITH KNOXVILLE WATER WORKS.
  - G. FIRE DEPARTMENT CONNECTION
  - H. 250' HYDRANT COVERAGE
  - I. 100' HYDRANT COVERAGE FOR FDC.
  - J. COORDINATE LOCATION OF PIV WITH KNOXVILLE WATER WORKS.
  - K. REMOVE AND REPLACED SIDEWALK AS NEEDED FOR WATER MAIN CONNECTION. COORDINATE PEDESTRIAN TRAFFIC CONTROL WITH CITY OF KNOXVILLE PRIOR TO CONSTRUCTION.

2. SANITARY SEWER SERVICES, PROVIDE THE FOLLOWING:
  - A. PUBLIC SANITARY SEWER MAIN EXTENSION. SEE PUBLIC SEWER CONSTRUCTION PLANS FOR MORE INFORMATION.
  - B. CONNECT 6" SANITARY SERVICE TO EXISTING SANITARY SEWER MAIN. VERIFY LOCATION AND ELEVATION PRIOR TO CONSTRUCTION.
  - C. 6" SANITARY SEWER SERVICE LINE AT 1.0% MINIMUM SLOPE. SEWER SERVICE PIPE SHALL BE A SCHEDULE 40.
  - D. CONNECT TO PROPOSED BUILDING SERVICE. CONFIRM WITH MECHANICAL PLANS FOR SIZE, LOCATION AND ELEVATION.
  - E. PROVIDE DOUBLE CLEANOUT OUTSIDE BUILDING.
3. PROVIDE STORM SEWER IMPROVEMENTS AS SHOWN:
  - A. ROOF DRAIN COLLECTOR LINES. CONNECT DOWNSPOUTS WITH 8" PIPES AT MIN 1.0%. CONNECT PRIMARY STORM SEWER WITH TEES/WYES OR INSERTATEES. COORDINATE EXACT LOCATIONS WITH BUILDING PLANS.
  - B. CORE DRILL AND CONNECT TO EXISTING SW-507 CONCRETE STORMS SEWER STRUCTURE.
  - C. PROVIDE STORM SEWER AS SHOWN PER 2025 SUDAS STANDARDS.

4. SITE LIGHTING, PROVIDE THE FOLLOWING:
  - A. CONTRACTOR TO COORDINATE WITH THE UTILITY OWNER AND PROPERTY OWNER ALL ASPECTS OF ELECTRICAL SERVICE PRIOR TO CONSTRUCTION.
5. CRITICAL CROSSING, CONTRACTOR TO MAINTAIN MINIMUM 18" SEPARATION OF WATER MAIN TO ALL STORM AND SANITARY.
6. SITE AMENITIES, PROVIDE THE FOLLOWING:
  - A. TRANSFORMER PAD. SEE ELECTRICAL PLANS AND COORDINATE WITH MID AMERICAN ENERGY.
  - B. GAS METER. SEE ARCHITECTURAL PLANS.
  - C. ELECTRIC METER. SEE ARCHITECTURAL PLANS.



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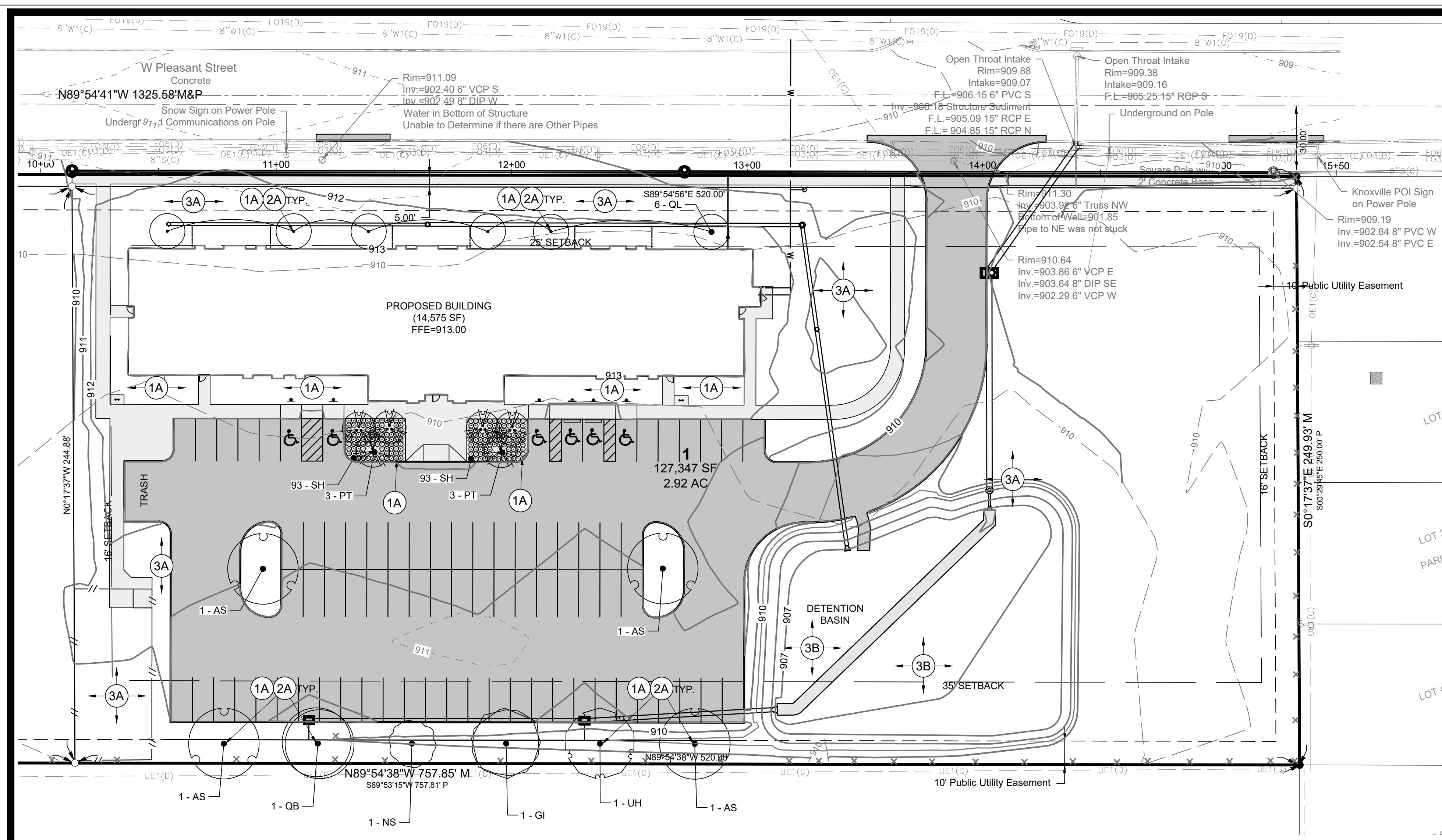
MARK	REVISION	BY
Engineer: KS	Checked By: JFS	Date: 11-20-24
Technician: KS	Date: MM-DD-YYYY	T-R-S: TTN-RRW-SS
Project No: 124.0983.01		Sheet C500

**THE RESIDENCE AT VETERAN'S PARK**  
 UTILITY PLAN  
**SNYDER & ASSOCIATES, INC.**



Project No: 124.0983.01  
Sheet C500





**LANDSCAPE PLAN GENERAL NOTES**

- THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEY FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.
- NOTIFY UTILITY OWNERS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTENCE, EXACT LOCATION AND DEPTH OF ALL UTILITIES. AVOID DAMAGE TO UTILITIES AND SERVICES DURING CONSTRUCTION. ANY DAMAGE DUE TO NEGLIGENCE SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. COORDINATE AND COOPERATE WITH UTILITY COMPANIES DURING CONSTRUCTION.
- ALL PLANT MATERIAL SHALL AT LEAST MEET MINIMUM REQUIREMENTS SHOWN IN THE "AMERICAN STANDARDS FOR NURSERY STOCK" (ANSI Z60.1-LATEST EDITION).
- IF IMPERVIOUS SOILS ARE DISCOVERED, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT. IF TREE DRAINAGE WELLS ARE NEEDED, REFER TO IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS (SUDAS) 9030.103.
- CONTRACTOR SHALL WARRANTY ALL PLANT MATERIAL FOR ONE YEAR AFTER INITIAL ACCEPTANCE, UNLESS SPECIFIED OTHERWISE.
- FOR TREES NOT LOCATED IN DESIGNATED BEDS, MULCH RINGS TO A MINIMUM DIAMETER OF 4-FEET WITH WOOD MULCH WILL BE REQUIRED.
- PRIOR TO PLANTING, CHECK FOR CIRCLING ROOTS IN ROOT BALL. IF THERE'S EVIDENCE OF CIRCLING ROOTS, THE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT FOR REVIEW. PLANTS WITH CIRCLING ROOTS MAY BE REJECTED.
- VERIFY LOCATION OF ROOT COLLAR PRIOR TO PLANTING. NOTIFY LANDSCAPE ARCHITECT IF ROOT COLLAR IS NOT LOCATED AT THE TOP OF THE ROOT BALL. PLANTS THAT SHOW EVIDENCE OF BURIED ROOT COLLARS MAY BE REJECTED.
- CONFIRM LOCATION OF ROOT COLLAR AND FLARE PRIOR TO PLANTING. REMOVE EXCESS SOIL TO EXPOSE ROOT FLARE. THIS WILL DETERMINE PROPER PIT DEPTH. REFER TO DETAILS ON FOR FURTHER INSTRUCTIONS.
- WHEN PLANTING, REMOVE ALL NON-BIODEGRADABLE, SYNTHETIC MATERIAL. EXAMPLES SUCH AS CONTAINERS, SYNTHETIC BURLAP, STRAPPING, PLASTIC, OR OTHER MATERIAL THAT WILL IMPEDE THE GROWTH OF THE PLANT MATERIAL. FOR NATURAL FIBER BURLAP, REMOVE MINIMUM TOP HALF OF BURLAP AND WIRE BASKET.
- UNLESS SPECIFIED OTHERWISE, BACKFILL PITS WITH LOOSE, NATIVE TOPSOIL. WHEN EACH PIT IS TWO THIRDS FULL, WATER ROOT BALL AND ALLOW THE WATER TO COMPLETELY SOAK INTO SOIL BEFORE PLACING REMAINING BACKFILL. DO NOT TAMP OR STEP ON SOIL. ADD REMAINING SOIL AND WATER A SECOND TIME.
- DURING THE WARRANTY PERIOD, COORDINATE WITH OWNER ON A COMPREHENSIVE MAINTENANCE AND WATERING STRATEGY.
- SET ALL PLANTS PLUMB. MAINTAIN THROUGHOUT WARRANTY. THIS SHALL INCLUDE PRUNING BROKEN BRANCHES, DEAD, AND/OR POOR BRANCHING. TREE PRUNING SHALL BE CONDUCTED BY A CERTIFIED ARBORIST AND TO BE IN ACCORDANCE WITH ANSI STANDARDS. IF APPLICABLE TO PROJECT, TREES SHOULD BE TRIMMED TO PROVIDE AT LEAST A 7' HT. CLEARANCE ALONG STREETS AND SIDEWALKS. REMOVE ALL FLAGGING AND LABELS AFTER OWNER APPROVAL.
- UNLESS SPECIFIED OTHERWISE, DRILL-SEED ALL AREAS DISTURBED BY CONSTRUCTION WITH SUDAS TYPE 1 PERMANENT LAWN MIX AND COVER SEED WITH HYDRO-MULCH. CONTRACTOR IS RESPONSIBLE FOR SEEDING ANY ADDITIONAL AREAS THAT ARE NOT INDICATED ON THE PLANS.
- OVERSTORY TREES WITHIN 10' OF PAVED SURFACES SHALL BE PLANTED WITHIN UNCOMPACTED SOIL 2 TO 4 FEET IN DEPTH WITH THE FOLLOWING VOLUMES: 750 CF FOR FIRST TREE +375 CF FOR EACH TREE WITHIN AN INTERCONNECTED PLANTING AREA.
- UNDERSTORY TREES WITHIN 10' OF PAVED SURFACES SHALL BE PLANTED WITHIN UNCOMPACTED SOIL 2 TO 4 FEET IN DEPTH WITH THE FOLLOWING VOLUMES: 450 CF FOR FIRST TREE +225 CF FOR EACH TREE WITHIN AN INTERCONNECTED PLANTING AREA.

**LANDSCAPE PLAN CONSTRUCTION NOTES**

- MULCH BED, PROVIDE THE FOLLOWING:
  - SHREDDED HARDWOOD. 4-INCH DEPTH. DO NOT USE WEED-BARRIER FABRIC AS AN UNDERLAY. TAPER MULCH DEPTH TOWARDS BED EDGING AND/OR PAVEMENT EDGE, EXPOSING 1-INCH HEIGHT OF EDGE.
- LANDSCAPE EDGING, PROVIDE THE FOLLOWING:
  - 6" STEEL EDGER WITH STAKES IN A 3' PERIMETER RING AROUND ALL TREES.
- TURF ESTABLISHMENT, PROVIDE THE FOLLOWING:
  - SEED, PROVIDE TYPE I SUDAS PERMANENT LAWN SEED MIX.
  - DETECTION BASIN SEED MIX AS PROVIDED BY PRAIRIE MOON NURSERY. WWW.PRAIRIEMOON.COM, 32115 PRAIRIE LANE, WINONA, MN 55987, OR APPROVED EQUAL SEEDING RATE: 11.48 LBS/ACRE. INSTALL AS PER SUDAS SPECIFICATIONS 9010 SEEDING.

**LEGEND**

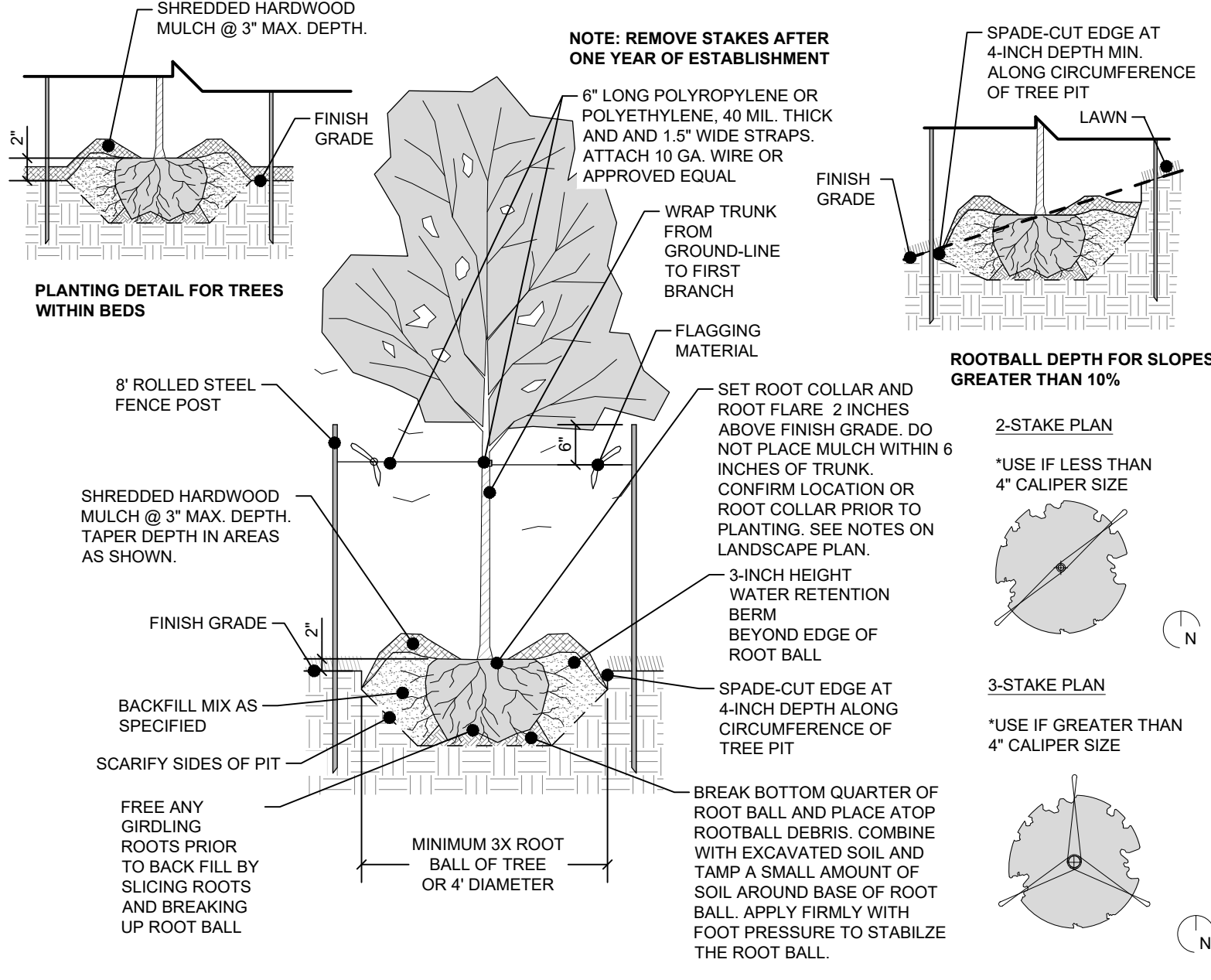
SHREDDED HARDWOOD MULCH

**NOTE:** LANDSCAPE HATCH PATTERNS ARE FOR CONTRACTOR'S CONVENIENCE, SHOULD BUBBLE NOTES CONFLICT WITH HATCH PATTERNS, HATCH PATTERNS SHALL GOVERN. CONTRACTOR IS RESPONSIBLE FOR SEEDING ADDITIONAL DISTURBED AREAS, IF ANY, NOT SHOWN ON PLANS. REFER TO GENERAL NOTE "N" AS THE DEFAULT DIRECTIVE.

**PLANT SCHEDULE**

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	UNIT	MIN. HT.	TRUNK STYLE
<b>OVERSTORY TREES</b>							
AS	4	ACER SACCHARUM	SUGAR MAPLE	2.0-IN. CAL.	B&B	8-FT.	SINGLE
GI	1	GLEDITSIA TRIACANTHOS INERMIS	THORNTLESS HONEY LOCUST	2.0-IN. CAL.	B&B	8-FT.	SINGLE
NS	1	NYSSA SYLVATICA	TUPELO	2.0-IN. CAL.	B&B	8-FT.	SINGLE
QB	1	QUERCUS BICOLOR	SWAMP WHITE OAK	2.0-IN. CAL.	B&B	8-FT.	SINGLE
QL	6	QUERCUS ROBUR X BICOLOR 'LONG'	REGAL PRINCE® OAK	2.0-IN. CAL.	B&B	8-FT.	SINGLE
UH	1	ULMUS X 'PATRIOT'	PATRIOT ELM	2.0-IN. CAL.	B&B	8-FT.	SINGLE
<b>UNDERSTORY TREES</b>							
PT	6	POPULUS TREMULOIDES	QUAKING ASPEN	1.5-IN. CAL.	CONTAINER	6-FT.	MULTI
<b>SHRUBS</b>							
SH	186	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	#1	CONTAINER		

**NOTE:** CONTRACTOR SHALL VERIFY FINAL PLANT QUANTITIES PRIOR TO BIDDING. SHOULD THERE BE ANY DISCREPANCIES REGARDING QUANTITIES AND SPACING WITH COMPARISON TO WHAT'S DRAWN AND LABELED ON PLAN, THE PLAN SHALL GOVERN.



1 DECIDUOUS TREE SINGLE-TRUNK DETAIL  
NO SCALE

2 PERENNIAL PLANTING BED DETAIL  
NO SCALE

MARK	REVISION	DATE	BY
	Checked By: JFS	Scale: 1" = 30'	
	Engineer: KS	Date: MM-DD-YYYY	T-R-S: TTN-RRV-JSS
	Technician: KS		

Project No: 124.0983.01  
Sheet C600

**THE RESIDENCE AT VETERAN'S PARK**

PLANTING PLAN

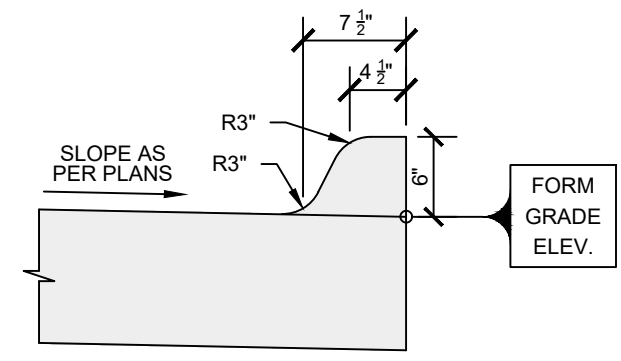
**SNYDER & ASSOCIATES, INC.**

2727 S.W. SNYDER BLVD  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com

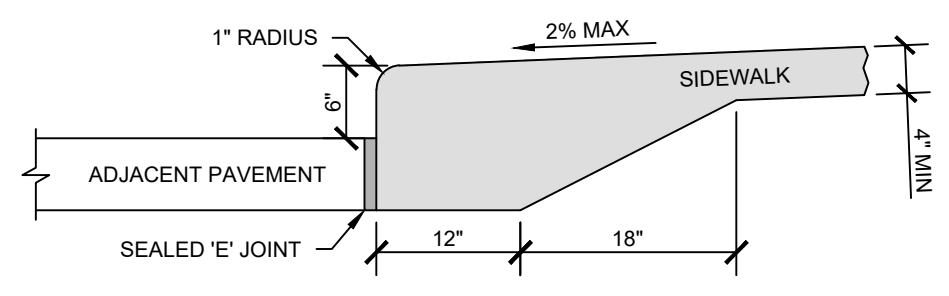
**SNYDER & ASSOCIATES**

Project No: 124.0983.01  
Sheet C600

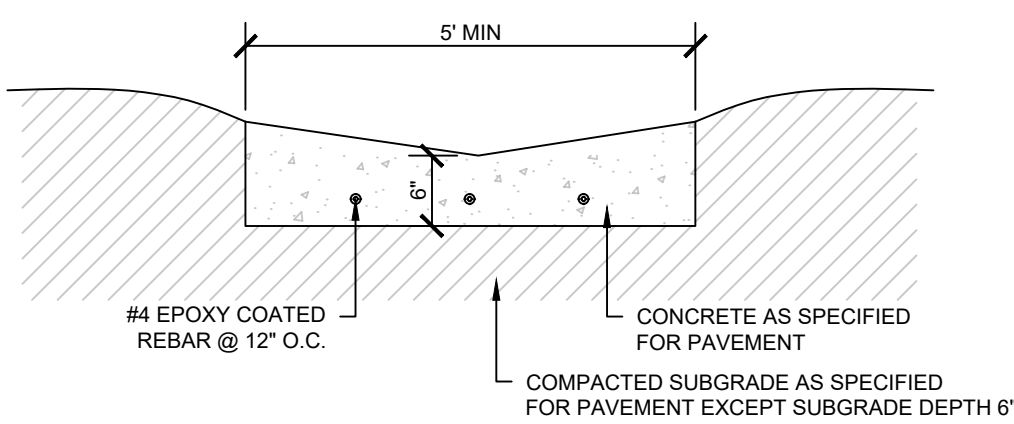
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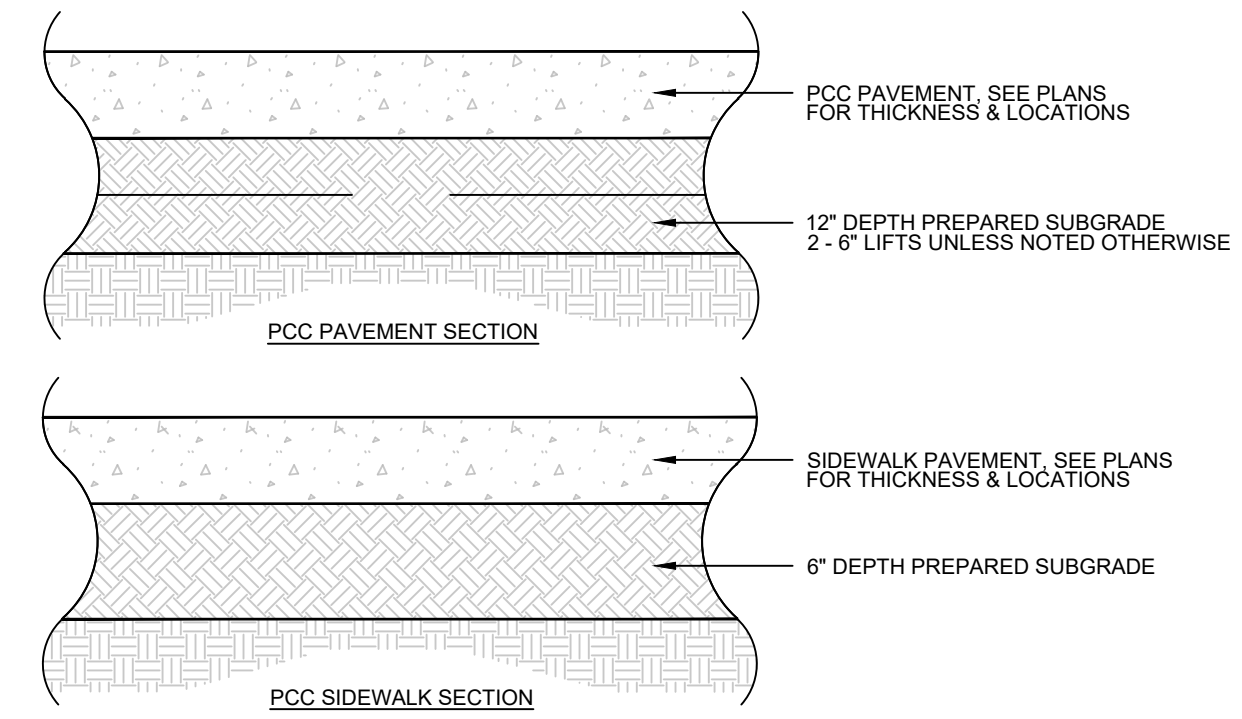
1  
C700  
**6-INCH STANDARD CURB**  
NO SCALE



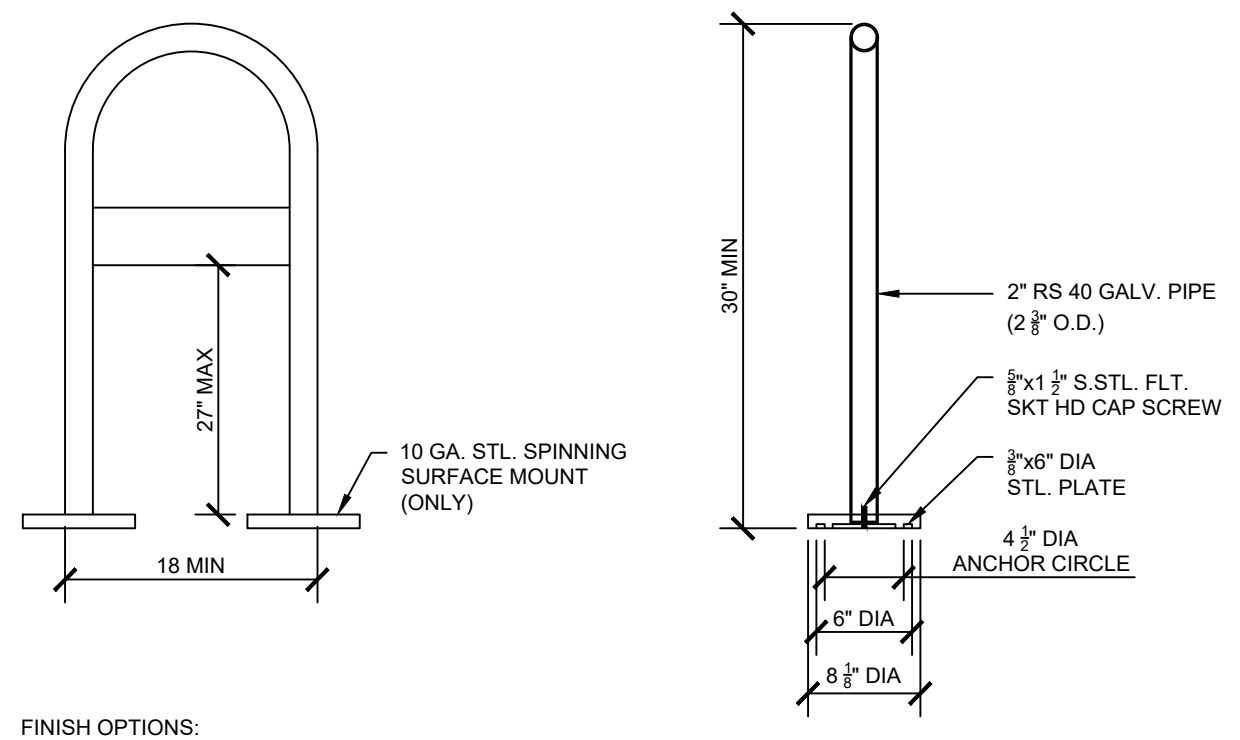
2  
C700  
**INTEGRAL SIDEWALK AND CURB DETAIL**  
NO SCALE



3  
C700  
**CONCRETE FLUME DETAIL**  
NO SCALE



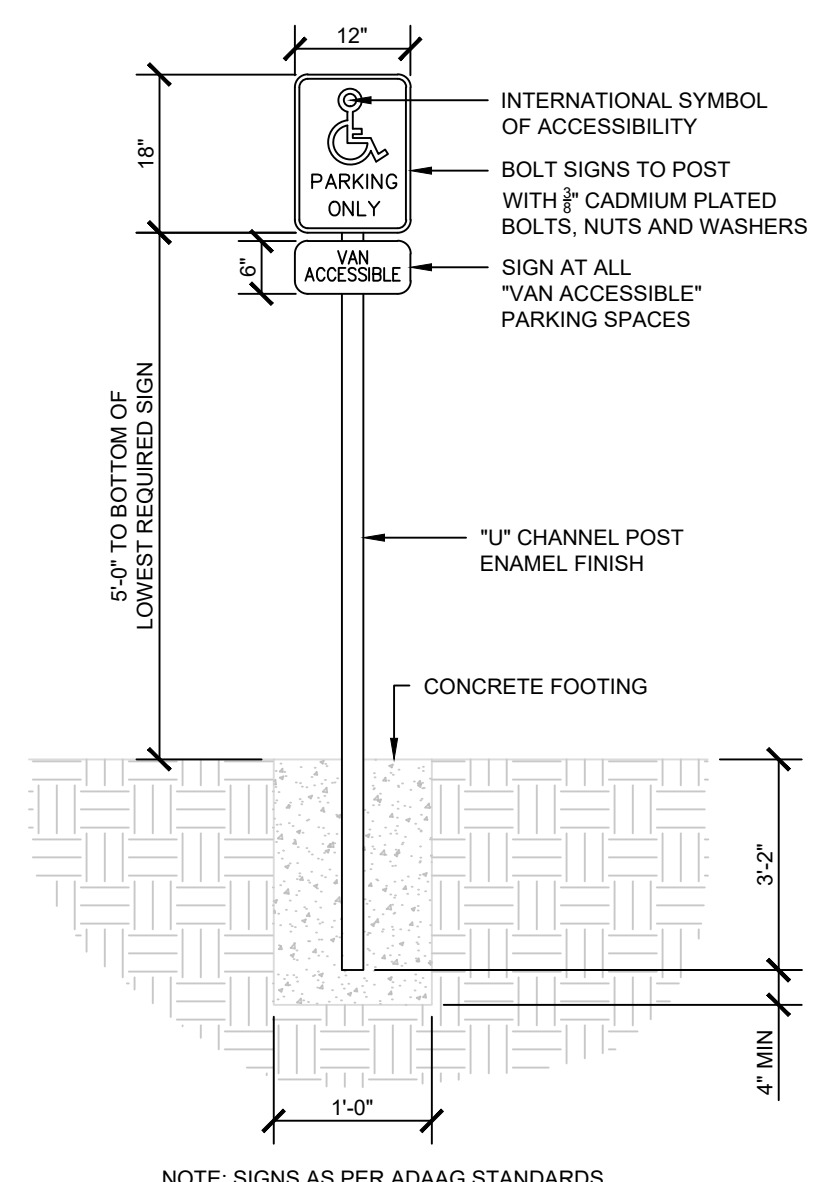
4  
C700  
**TYPICAL PAVEMENT CROSS SECTIONS**  
NO SCALE



FINISH OPTIONS:  
COATED WITH ZINC RICH EPOXY THEN FINISHED WITH POLYESTER COATING. COLOR AS PER OWNER.

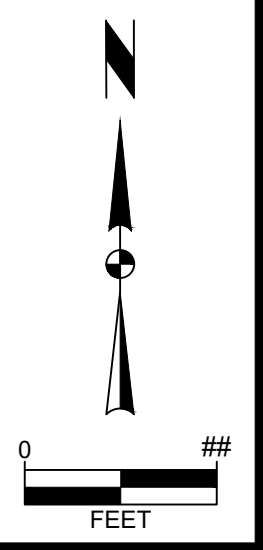
NOTES:  
1. INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.  
2. 3/8"x3 1/2" EXPANSION ANCHOR BOLTS PROVIDED FOR SURFACE MOUNT.

5  
C700  
**LOOP BIKE RACK**  
NO SCALE



6  
C700  
**ACCESSIBLE PARKING SIGN**  
NO SCALE

I:\Projects\2024\124.0983.01\CADD\SP07\_240983.DWG JUSTIN STROM, DETAILS, 2025/02/11, 1:08 PM, ANSI FULL BLEED D (34.00 X 22.00 INCHES)



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Engineer: KS	Checked By: JFS	Scale: 1" = ##'	
Technician: KS	Date: MM-DD-YYYY	T-R-S: TTN-RRW-SS	

**THE RESIDENCE AT VETERAN'S PARK**

**DETAILS**

**KNOXVILLE, IOWA**

**SNYDER & ASSOCIATES, INC.**

2727 S.W. SNYDER BLVD  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com



Project No: 124.0983.01  
Sheet C700

Sheet C700







**LEGEND**

FEATURES	FOUND	SET
Section Corner	▲	△
1/2" Rebar, Cap # 11579 (Unless Otherwise Noted)	●	○
ROW Marker	■	□
ROW Rail	▣	▢
Control Point	○C/P	
Bench Mark	⊕	
Platted Distance	P	
Measured Bearing & Distance	M	
Recorded As	R	
Deed Distance	D	
Calculated Distance	C	
Minimum Protection Elevation	MPE	
Centerline	---	
Section Line	---	
1/4 Section Line	---	
1/4 1/4 Section Line	---	
Easement Line	---	

FEATURES	EXISTING	PROPOSED
Spot Elevation	X 1225.25	X 1225.25
Contour Elevation	X 1225	X 1225
Fence (Barbed, Field, Hog)		
Fence (Chain Link)	□	□
Fence (Wood)	□	□
Fence (Silt)	□	□
Tree Line	○	○
Tree Stump	○	○
Deciduous Tree \ \ Shrub	○	○
Coniferous Tree \ \ Shrub	○	○
Communication	C (*)	C
Overhead Communication	OC (*)	OC
Fiber Optic	FO (*)	FO
Underground Electric	E (*)	E
Overhead Electric	OE (*)	OE
Gas Main with Size	G (*)	G
High Pressure Gas Main with Size	HPG	HPG
Water Main with Size	W (*)	W
Sanitary Sewer with Size	S (*)	S
Duct Bank	DUCT (*)	
Test Hole Location for SUE w/ID	⊙	

(\*) Denotes the survey quality service level for utilities

Sanitary Manhole	⊙	⊙
Storm Sewer with Size	---ST(*)---	---ST(*)---
Storm Manhole	⊙	⊙
Single Storm Sewer Intake	□	□
Double Storm Sewer Intake	□	□
Fire Hydrant	⊕	⊕
Fire Hydrant on Building	⊕	⊕
Water Main Valve	⊕	⊕
Water Service Valve	⊕	⊕
Well	⊕	⊕
Utility Pole	⊕	⊕
Guy Anchor	⊕	⊕
Utility Pole with Light	⊕	⊕
Utility Pole with Transformer	⊕	⊕
Street Light	⊕	⊕
Yard Light	⊕	⊕
Electric Box	⊕	⊕
Electric Transformer	⊕	⊕
Traffic Sign	⊕	⊕
Communication Pedestal	⊕	⊕
Communication Manhole	⊕	⊕
Communication Handhole	⊕	⊕
Fiber Optic Manhole	⊕	⊕
Fiber Optic Handhole	⊕	⊕
Gas Valve	⊕	⊕
Gas Manhole	⊕	⊕
Gas Apparatus	⊕	⊕
Fence Post or Guard Post	⊕	⊕
Underground Storage Tank	⊕	⊕
Above Ground Storage Tank	⊕	⊕
Sign	⊕	⊕
Satellite Dish	⊕	⊕
Mailbox	⊕	⊕
Sprinkler Head	⊕	⊕
Irrigation Control Valve	⊕	⊕

**UTILITY QUALITY SERVICE LEVELS**

QUALITY LEVELS OF UTILITIES ARE SHOWN IN THE PARENTHESES WITH THE UTILITY TYPE AND WHEN APPLICABLE, SIZE. THE QUALITY LEVELS ARE BASED ON THE CI / ASCE 38-02 STANDARD.

**QUALITY LEVEL (D)** INFORMATION IS DERIVED FROM EXISTING UTILITY RECORDS OR ORAL RECOLLECTIONS.

**QUALITY LEVEL (C)** INFORMATION IS OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION WITH QUALITY D INFORMATION.

**QUALITY LEVEL (B)** INFORMATION IS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES.

**QUALITY LEVEL (A)** IS HORIZONTAL AND VERTICAL POSITION OF UNDERGROUND UTILITIES OBTAINED BY ACTUAL EXPOSURE OR VERIFICATION OF PREVIOUSLY EXPOSED SUBSURFACE UTILITIES, AS WELL AS THE TYPE, SIZE, CONDITION, MATERIAL, AND OTHER CHARACTERISTICS.

**UTILITY WARNING**

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

**GENERAL NOTES**

- UTILITY WARNING: THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. VERIFY LOCATION OF ALL UTILITIES BEFORE CONSTRUCTION.
- CONSTRUCTION OF ALL STREET AND UTILITY IMPROVEMENTS SHALL BE CONSTRUCTED UTILIZING THE 2025 SUDAS STANDARD SPECIFICATIONS AND THE CITY OF KNOXVILLE GENERAL SUPPLEMENTAL SPECIFICATIONS TO THE SUDAS STANDARD SPECIFICATION.
- LENGTH OF UTILITIES SHOWN ON PLANS ARE DIMENSIONED FROM CENTERLINE OF STRUCTURE TO CENTERLINE OF STRUCTURE.
- ALL TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) WHEN CONSTRUCTION ACTIVITIES OBSTRUCT PORTIONS OF THE ROADWAY. FLAGGERS SHALL BE PROVIDED. FLAGGERS SHALL CONFORM TO THE MUTCD IN APPEARANCE, EQUIPMENT AND ACTIONS.
- NOTIFY OWNER, ENGINEER, CITY OF KNOXVILLE PUBLIC WORKS AT LEAST 48 HOURS PRIOR TO BEGINNING WORK.
- CONSTRUCT MANHOLES AND APPURTENANCES AS WORK PROGRESSES. BACKFILL WITH SUITABLE MATERIAL AND COMPACT TO 95% MAXIMUM DENSITY.
- IN THE EVENT OF A DISCREPANCY BETWEEN THE QUANTITY ESTIMATES AND THE DETAILED PLANS, THE DETAILED PLANS SHALL GOVERN.
- CONTRACTOR TO OBTAIN ANY AND ALL NECESSARY PERMITS FROM THE CITY OF KNOXVILLE PRIOR TO ANY CONSTRUCTION WITHIN THE PUBLIC RIGHT OF WAY.
- ALL SANITARY SEWER TO BE CLASS "1" PIPE BEDDING.
- DIMENSIONS, BUILDING LOCATION, UTILITIES AND GRADING OF THIS SITE ARE BASED ON AVAILABLE INFORMATION AT THE TIME OF LAYOUT. DEVIATIONS MAY BE NECESSARY IN THE FIELD. ANY SUCH CHANGES OR CONFLICTS BETWEEN THIS PLAN AND FIELD CONDITIONS ARE TO BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO STARTING CONSTRUCTION.
- THE CONTRACTOR SHALL COOPERATE AND INFORM ADJACENT RESIDENTS AND THE NEIGHBORHOOD ASSOCIATION ON CONSTRUCTION ACTIVITIES AS REQUIRED FOR GOOD PUBLIC RELATIONS DURING THE COURSE OF THIS PROJECT.
- ALL CONSTRUCTION ACTIVITIES TO OCCUR WITHIN THE BOUNDARY LIMITS OF THE PROJECT AND ADJACENT PUBLIC STREET RIGHT-OF-WAY UNLESS PRIOR ARRANGEMENTS HAVE BEEN APPROVED.
- WORK SHALL NOT COMMENCE UNTIL A PRIVATE CONSTRUCTION CONTRACT HAS BEEN APPROVED BY COUNCIL.

**CONTROL POINTS**

IOWA REGIONAL COORDINATE SYSTEM ZONE 9 (NEWTON)  
NAD83(2011)(EPOCH 2010.00) IARTN DERIVED - US SURVEY FEET

CP203	N=7590301.69 E=19416805.57 Z=903.37 CUT "X", NORTHWEST CORNER OF STORM STRUCTURE IN NORTHWEST QUARTER OF INTERSECTION, NORTH SIDE OF ROAD. (AS SHOWN ON SURVEY)
CP300	N=7590004.24 E=19416873.77 Z=900.04 SET 1/2" REBAR, RED PLASTIC CAP, ALONG PROPERTY LINE, WEST SIDE OF WILLETS DRIVE APPROXIMATELY 10' WEST OF EDGE OF PAVEMENT. (AS SHOWN ON SURVEY)
CP301	N=7590289.02 E=19417510.56 Z=911.61 CUT "X" IN CONCRETE, NORTH SIDE OF SIDEWALK ON NORTH SIDE OF PLEASANT, SOUTH OF KNOXVILLE VET PARK SIGN. (AS SHOWN ON SURVEY)
CP302	N=7590276.22 E=19418056.04 Z=909.27 CUT "X" ON BACK OF CURB, NORTH SIDE OF PLEASANT, SOUTH OF CENTERLINE OF ALLEY. (AS SHOWN ON SURVEY)
CP303	N=7590005.25 E=19418015.10 Z=910.35 SET 1/2" REBAR WITH RED PLASTIC CAP, +/-40' NORTH OF WEST EDGE OF GARAGE, +/-40' WETS OF FENCE, SOUTHEAST CORNER OF SITE. (AS SHOWN ON SURVEY)

**BENCHMARKS**

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88 - GEOID12A)  
IARTN DERIVED - US SURVEY FEET

BM500	ELEV=912.82 ARROW ON HYDRANT, NORTHWEST CORNER OF "T" INTERSECTION OF NEW VA ROAD AND W PLEASANT STREET.
BM501	ELEV=905.97 ARROW ON HYDRANT, NORTHEAST CORNER OF INTERSECTION OF W PLEASANT STREET AND WILLETS DRIVE, NORTH SIDE OF ROAD.

**DATE OF SURVEY**

MARCH 14, 2024

**UTILITY CONTACT INFORMATION**

UTILITY CONTACT FOR MAPPING INFORMATION SHOWN AS RECEIVED FROM THE IOWA ONE CALL DESIGN REQUEST SYSTEM, TICKET NUMBER 552401638.

G1-GAS MAIN	ALLIANT ENERGY ALLIANT ENERGY FIELD ENGINEER 800-255-4268 LOCATE_IPL@ALLIANTENERGY.COM
NO RESPONSE	U.S. CELLULAR RITA HOMME 360-749-2798 RITA.HOMME@USCELLULAR.COM
CO3-COMMUNICATION FO3-FIBER OPTIC	WINDSTREAM ENTERPRISE CLEC LOCATE DESK 800-941-3430 WCI.CLEC.LOCATE@WINDSTREAM.COM
NO RESPONSE	IOWA HOSPITAL ASSOCIATION DAVE AUGSPURGER 515-725-4894 ICNOUTSIDEPLANTIOWAONECALL@IOWA.GOV
NO RESPONSE	KNOXVILLE COMMUNITY SCHOOLS CRAIG MOBLEY 641-842-6551 CRAIG.MOBLEY@KCSO K12.IA.US
W1-WATER MAIN	KNOXVILLE WATER WORKS BRIAN BAILEY 641-828-0557 BRIAN@KNOXVILLEWATERWORKS.COM
UE-UNDERGROUND ELECTRIC OE-OVERHEAD ELECTRIC	MIDAMERICAN ENERGY ELECTRIC ASHTON WAGNER 515-281-2989 MECDMSDESIGNLOCATES@MIDAMERICAN.COM
FO19-FIBER OPTIC	MNA/BLUEBIRD JAMIE SCOTT 314-270-8738 JAMES.SCOTT@BLUEBIRDBIRDNETWORK.COM
FO6-FIBER OPTIC	PELLA FIBER ROSS HILDEBRAND 641-628-2581 RHILDEBRAND@CITYOFPELLA.COM
NO RESPONSE	MEDIACOM L.L.C. CURT HODGES 515-689-3647 CHODGES@MEDIACOMCC.COM



**PROPERTY DESCRIPTION**

THE VETERANS DISTRICT PLAT 2 LOT 1

**PROPERTY ADDRESS**

1515 W PLEASANT STREET  
KNOXVILLE, IA 50138

MARK	REVISION	DATE	BY
Engineer: KS	Checked By: JFS	Scale: 1" = NONE	
Technician: KS	Date: MM-DD-YYYY	T-R-S: TTN-RRW-SS	
Project No: 124.0983.01			Sheet C101

**VETERAN'S DISTRICT PLAT 2**

**PROJECT INFORMATION**

**KNOXVILLE, IOWA**

**SNYDER & ASSOCIATES, INC.**

2727 S.W. SNYDER BLVD  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com



I:\Projects\2024\12.0983\12.0983.DWG\SUBSASIC\_PROJECT\_INFORMATION\_20240201\_1240983\_TTL.dwg (PENAN) SUBSASIC\_PROJECT\_INFORMATION\_20240201\_1240983\_TTL.dwg (ANSI FULL BLEED) D (24.00 x 22.00 INCHES)

**DEMOLITION LEGEND**

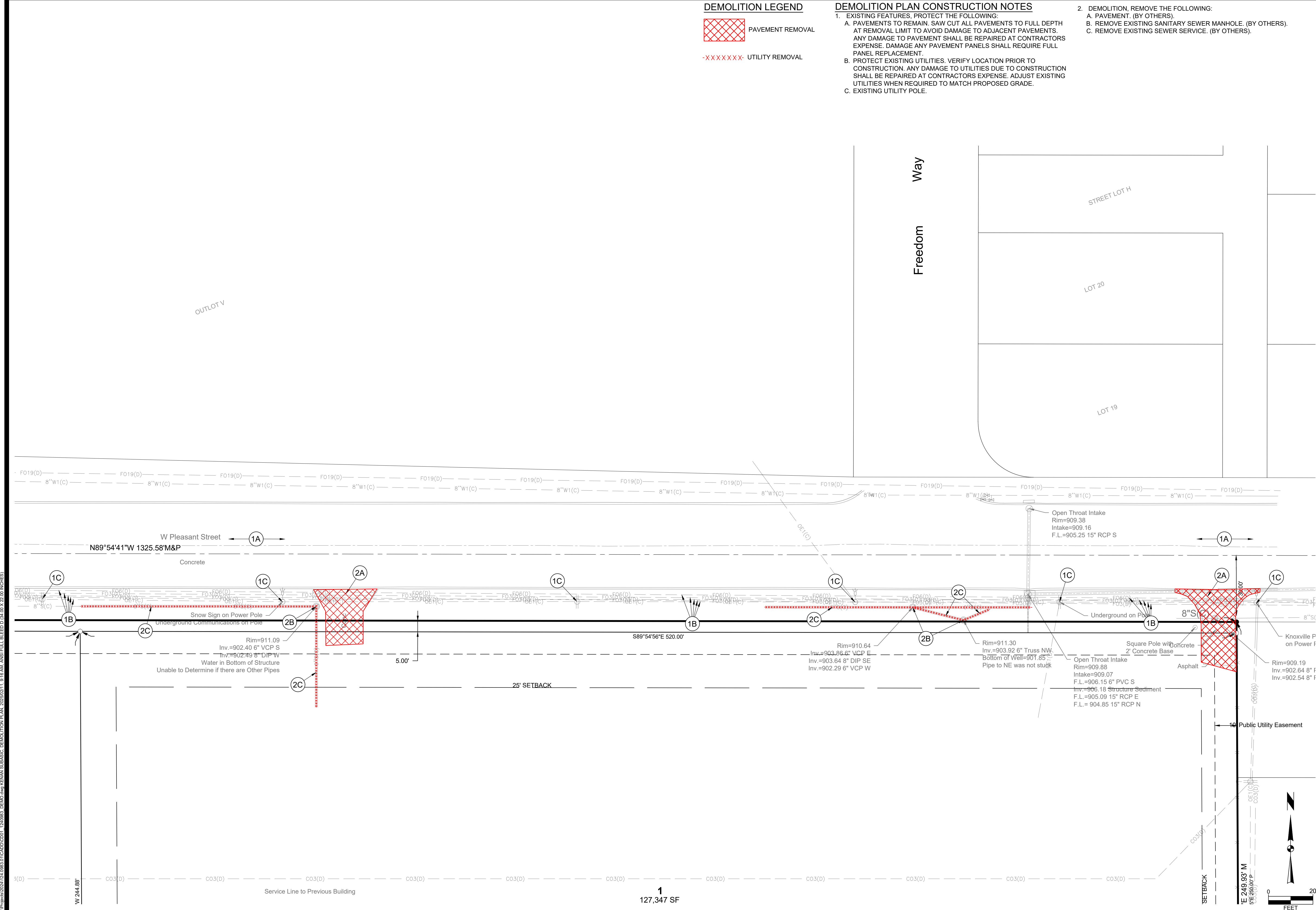
 PAVEMENT REMOVAL

 UTILITY REMOVAL

**DEMOLITION PLAN CONSTRUCTION NOTES**

1. EXISTING FEATURES, PROTECT THE FOLLOWING:
  - A. PAVEMENTS TO REMAIN. SAW CUT ALL PAVEMENTS TO FULL DEPTH AT REMOVAL LIMIT TO AVOID DAMAGE TO ADJACENT PAVEMENTS. ANY DAMAGE TO PAVEMENT SHALL BE REPAIRED AT CONTRACTORS EXPENSE. DAMAGE ANY PAVEMENT PANELS SHALL REQUIRE FULL PANEL REPLACEMENT.
  - B. PROTECT EXISTING UTILITIES. VERIFY LOCATION PRIOR TO CONSTRUCTION. ANY DAMAGE TO UTILITIES DUE TO CONSTRUCTION SHALL BE REPAIRED AT CONTRACTORS EXPENSE. ADJUST EXISTING UTILITIES WHEN REQUIRED TO MATCH PROPOSED GRADE.
  - C. EXISTING UTILITY POLE.

2. DEMOLITION, REMOVE THE FOLLOWING:
  - A. PAVEMENT. (BY OTHERS).
  - B. REMOVE EXISTING SANITARY SEWER MANHOLE. (BY OTHERS).
  - C. REMOVE EXISTING SEWER SERVICE. (BY OTHERS).



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**VETERAN'S DISTRICT PLAT 2**

**DEMOLITION PLAN**

**SNYDER & ASSOCIATES, INC.**



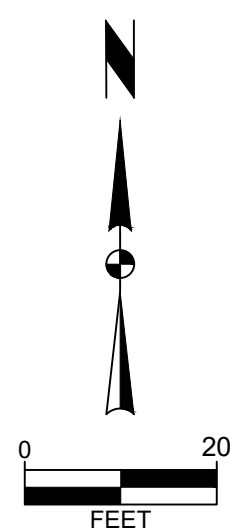
Project No: 124.0983.01  
Sheet C102

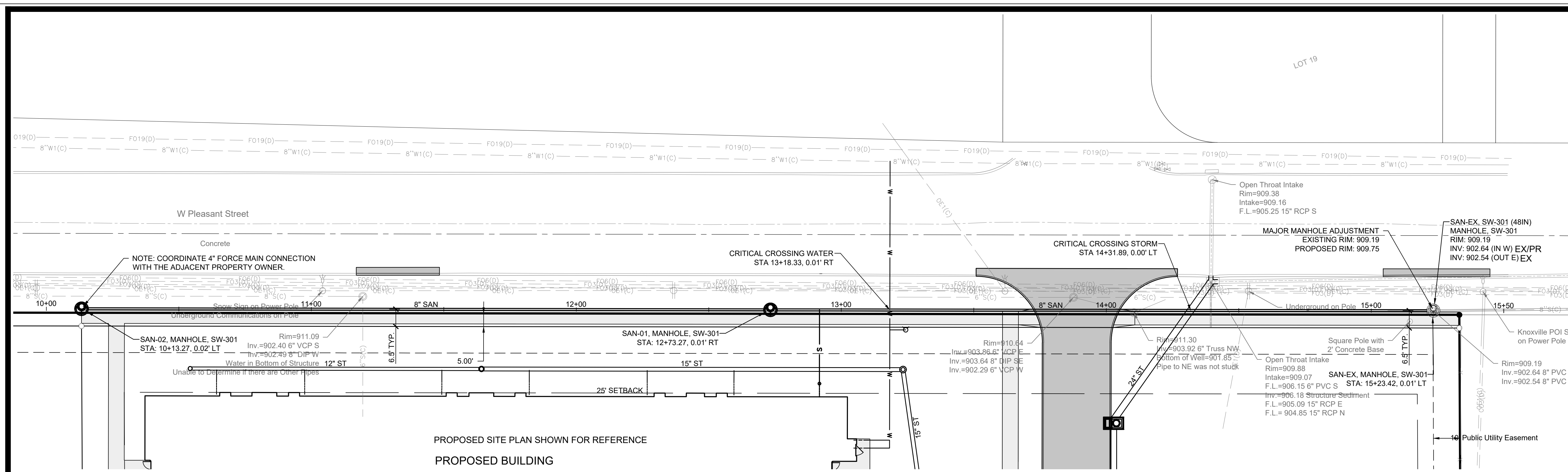
**KNOXVILLE, IOWA**

2727 S.W. SNYDER BLVD  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com

Sheet C102

MARK	REVISION	DATE	BY
Engineer: KS	Checked By: JFS	Scale: 1" = 20'	
Technician: KS	Date: MM-DD-YYYY	T-R-S: TTN-RRW-SS	
Project No: 124.0983.01			

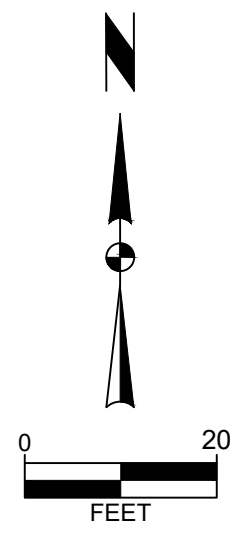
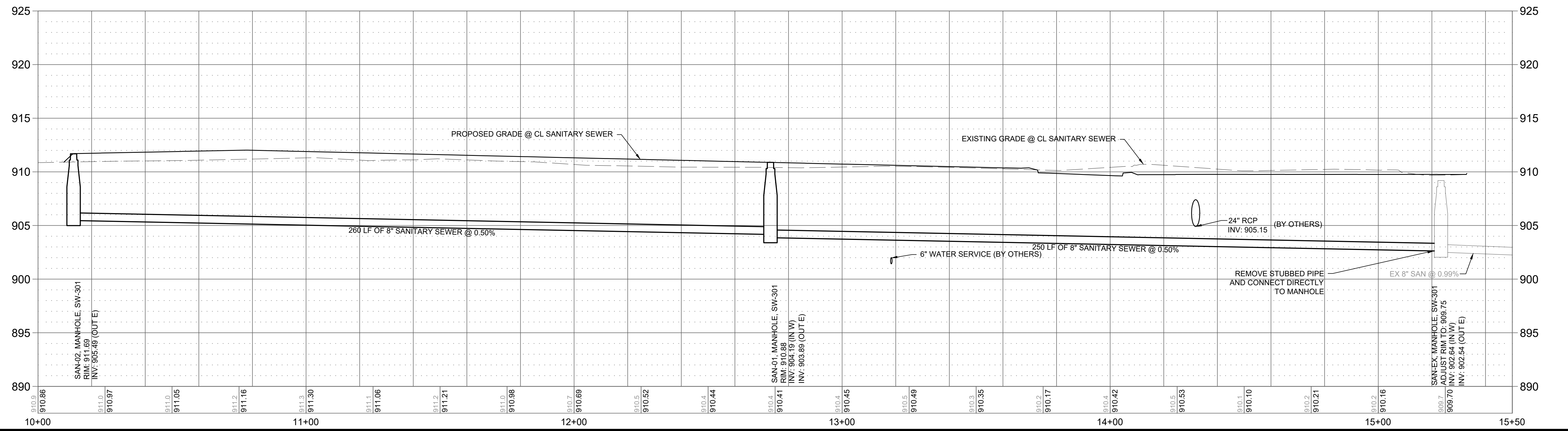




**NOTES**

- UTILITY WARNING: THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. VERIFY LOCATION OF ALL UTILITIES BEFORE CONSTRUCTION.
- CONSTRUCTION OF ALL STREET AND UTILITY IMPROVEMENTS SHALL BE CONSTRUCTED UTILIZING THE SUDAS STANDARD SPECIFICATIONS, 2025 EDITION AND THE CITY OF KNOXVILLE GENERAL SUPPLEMENTAL SPECIFICATIONS.
- ALL BACKFILL AND SUBGRADE SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR AND SHALL BE WITHIN A RANGE OF -1% TO +4% OF THE MATERIALS OPTIMUM MOISTURE CONTENT.
- RIM ELEVATIONS ARE SHOWN FOR REFERENCE PURPOSES ONLY. CONTRACTOR TO ADJUST RIM AS NECESSARY TO MEET SPECIFIC CONSTRUCTION REQUIREMENTS.

- ALL SANITARY MANHOLES SHALL BE TYPE SW-301 UNLESS NOTED OTHERWISE. ALL MANHOLES SHALL HAVE TYPE 'B' CASTING UNLESS NOTED OTHERWISE.
- ALL PIPE ANGLES ARE EITHER 90 OR 180 DEGREES AT MANHOLES UNLESS NOTED OTHERWISE.



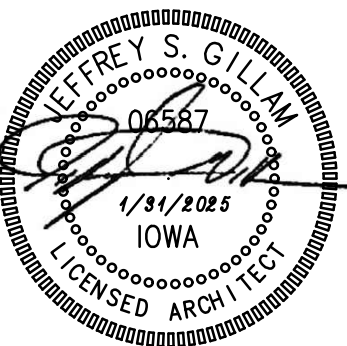
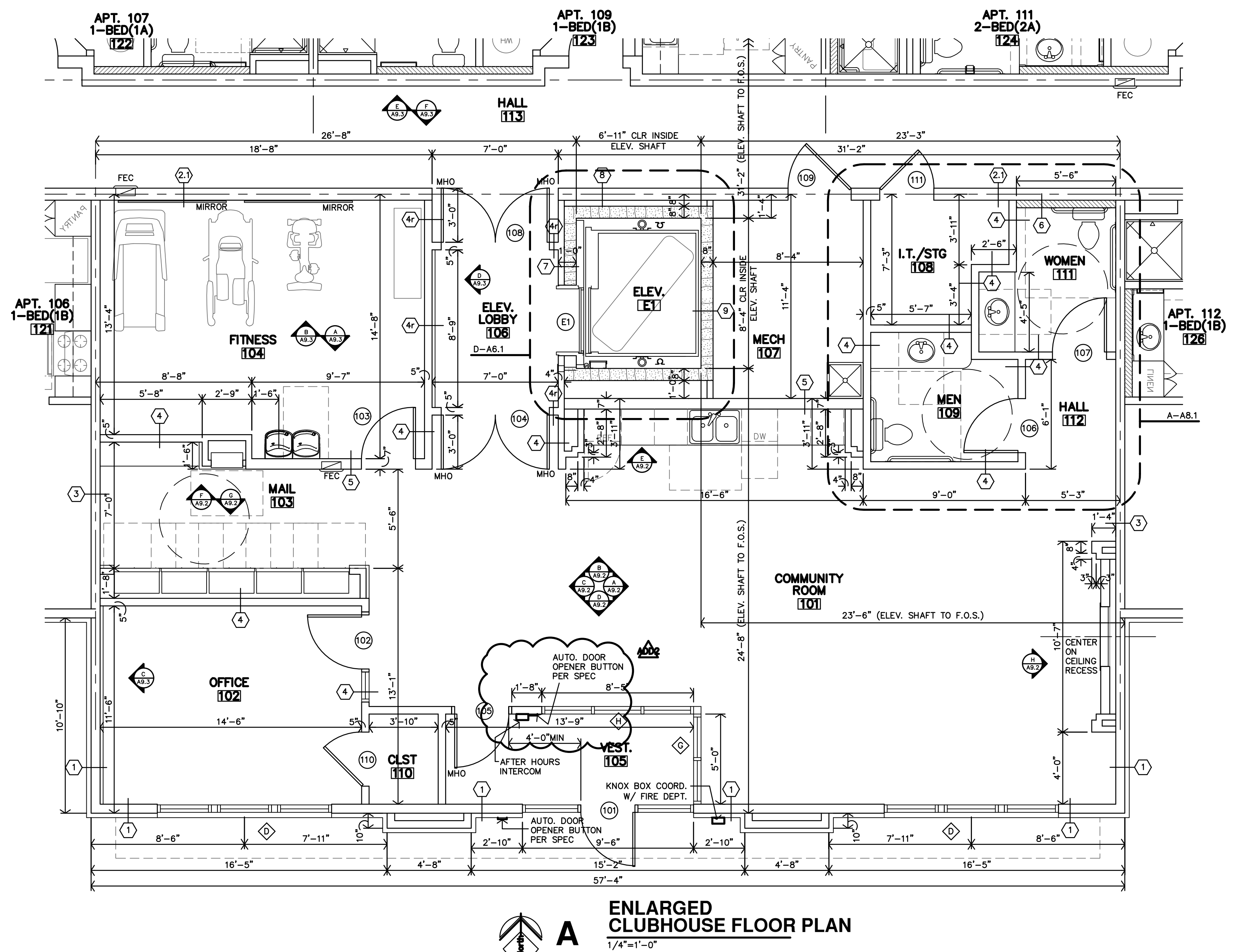
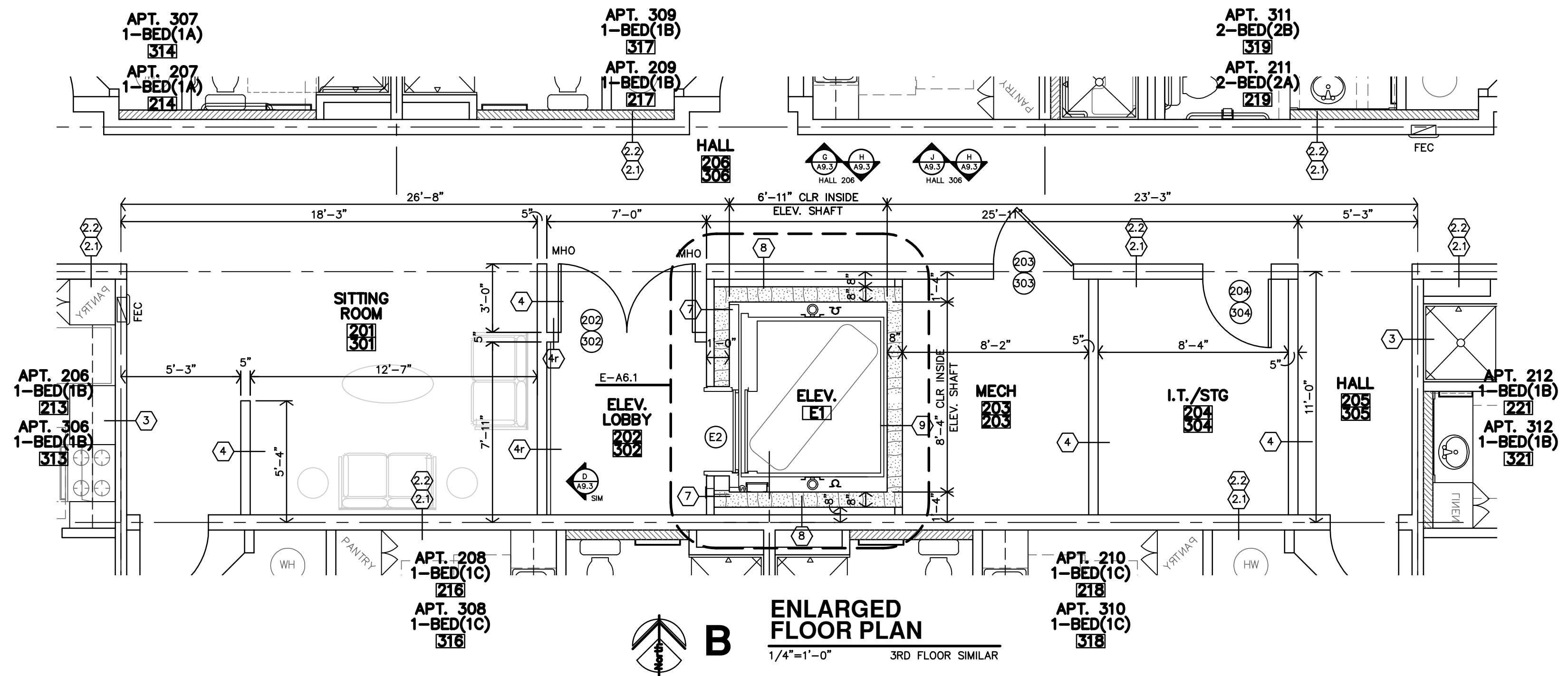
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KS	JFS	MM-DD-YYYY	MM-DD-YYYY
KS	JFS	MM-DD-YYYY	MM-DD-YYYY
KS	JFS	MM-DD-YYYY	MM-DD-YYYY

Checked By: JFS  
Date: MM-DD-YYYY  
Scale: 1" = 20'  
T-R-S: TTN-RRW-SS  
Project No.: 124.0983.01  
Sheet C200

**VETERAN'S DISTRICT PLAT 2**  
**SANITARY SEWER PLAN AND PROFILE**  
**SNYDER & ASSOCIATES, INC.**  
 2727 S.W. SNYDER BLVD  
 ANKENY, IOWA 50023  
 515-964-2020 | www.snyder-associates.com

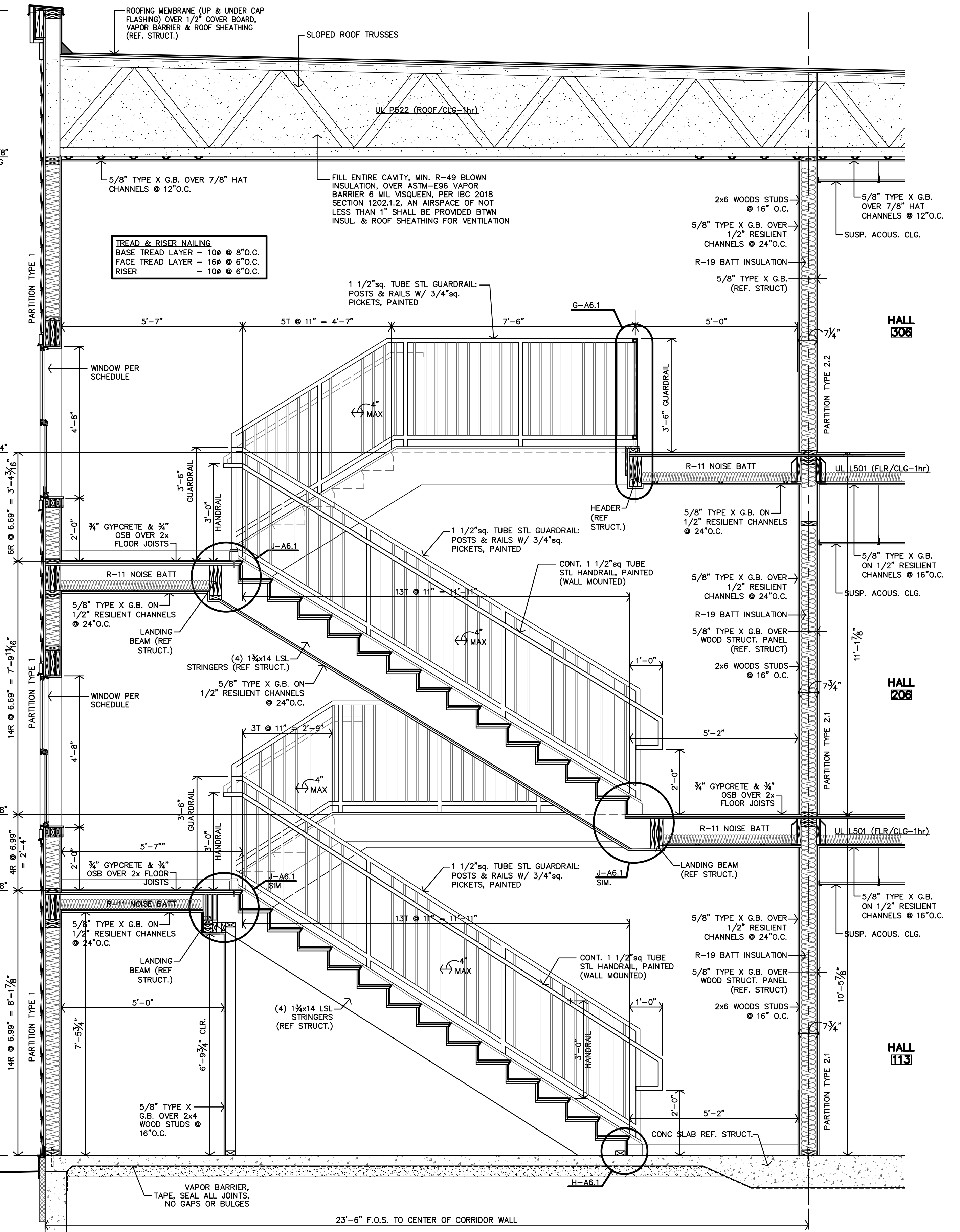
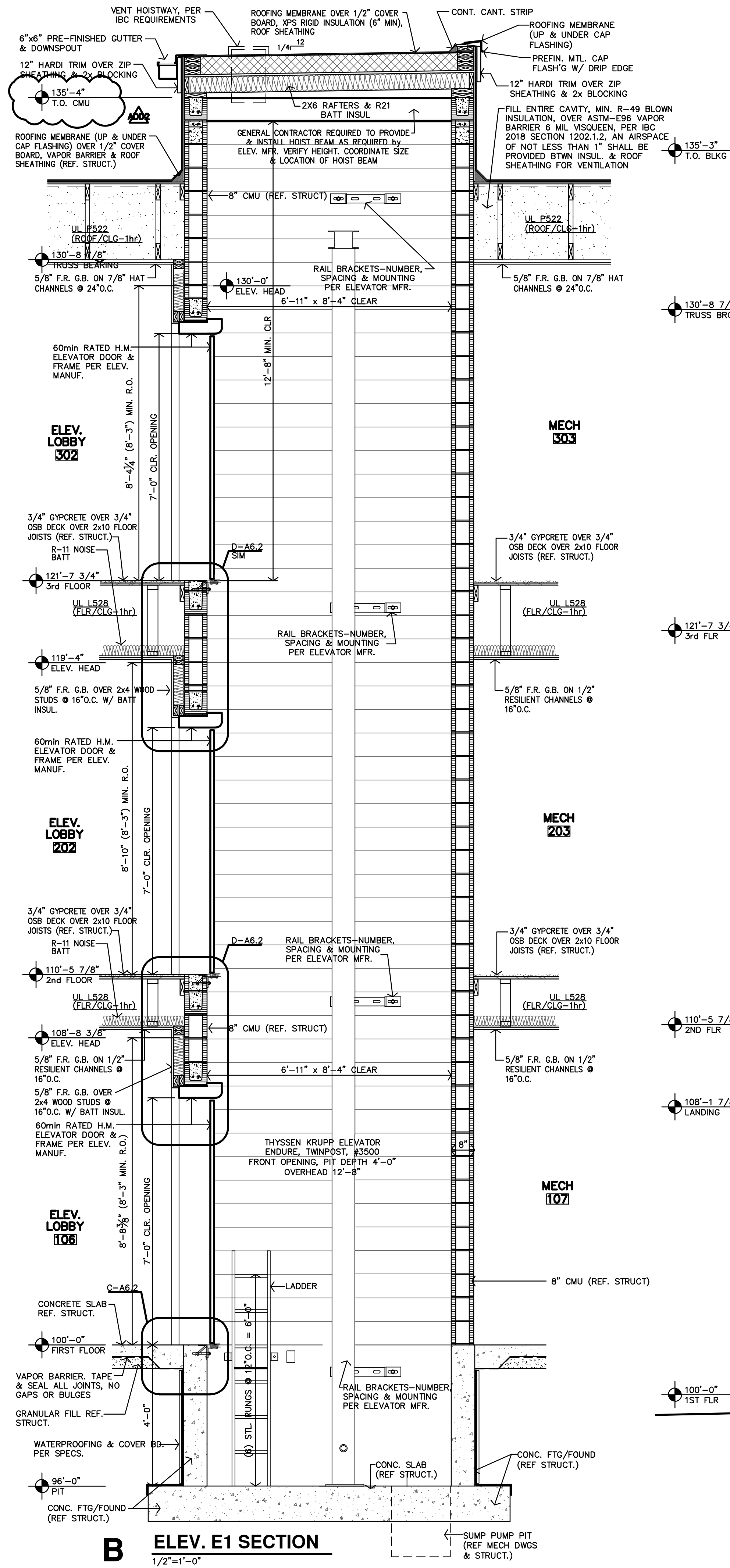
**SNYDER & ASSOCIATES**  
 Project No: 124.0983.01  
 Sheet C200





REVISION:	2-21-2025
DATE:	1-31-2025
JOB:	24-3400
SHEET NO.:	





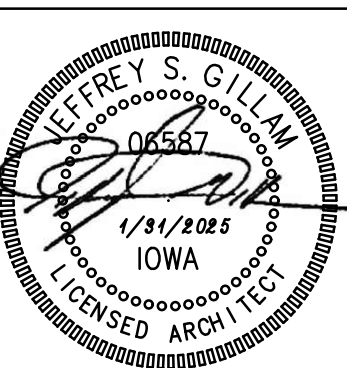
**D ELEVATOR DETAIL**  
1/2"=1'-0"

**C ELEVATOR DETAIL**  
1/2"=1'-0"

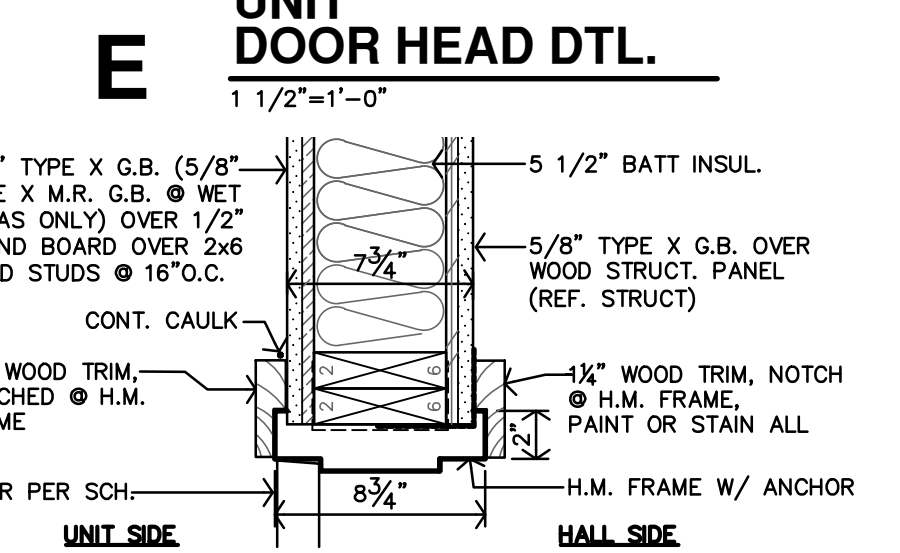
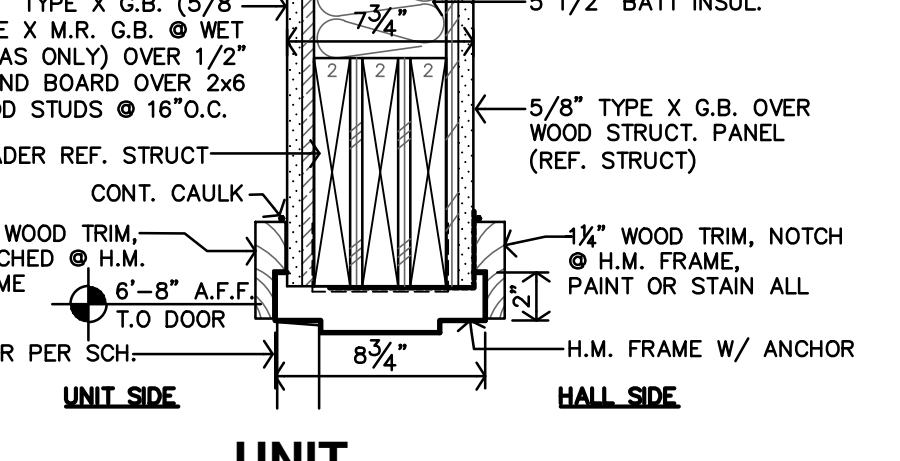
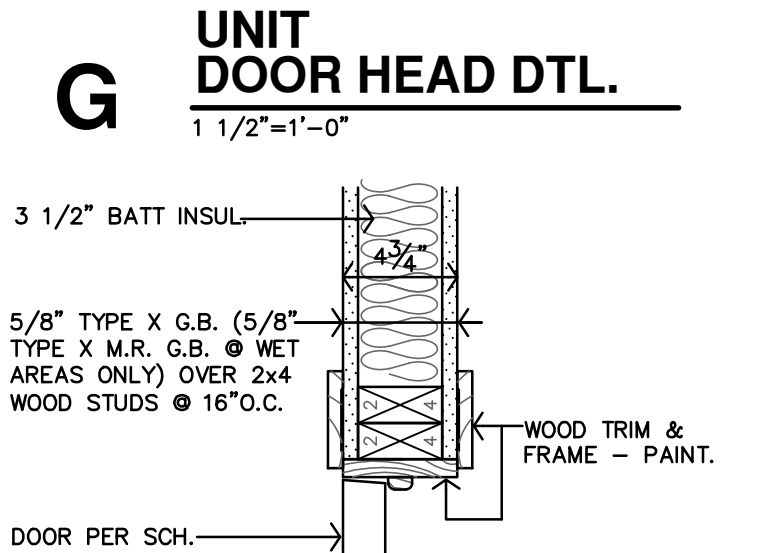
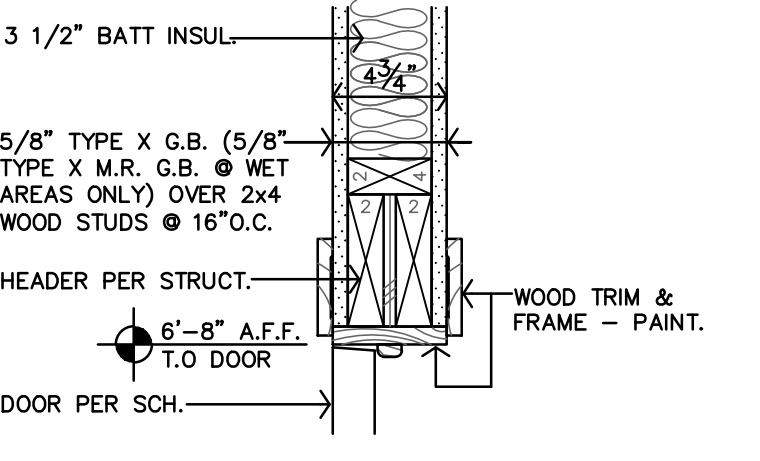
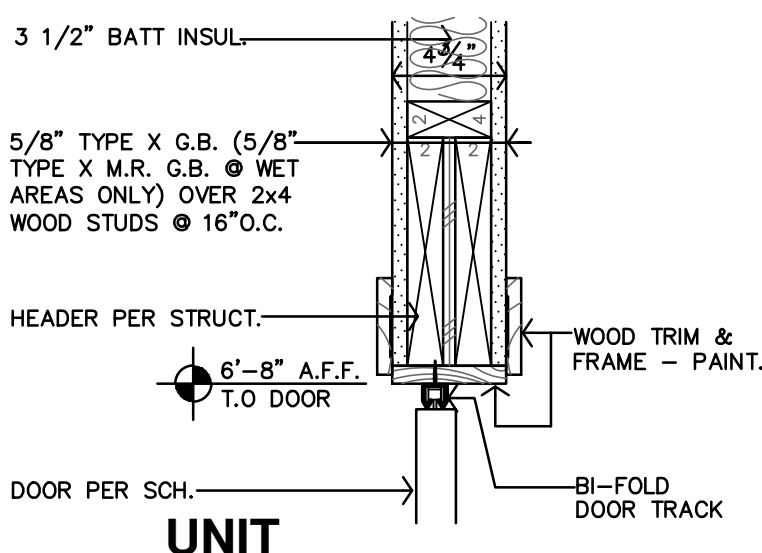
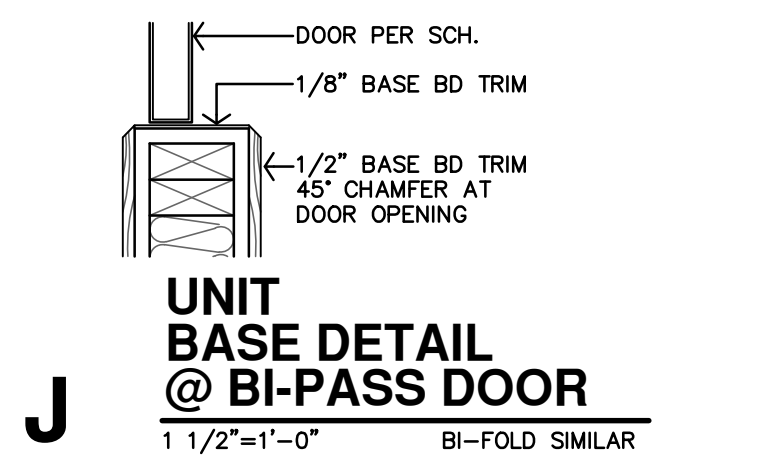
**B ELEV. E1 SECTION**  
1/2"=1'-0"

**A STAIR S1 SECTION**  
1/2"=1'-0"  
STAIR S2 SIMILAR





REVISION:  
 2-21-2025  
 DATE: 1-31-2025  
 JOB: 24-3400  
 SHEET NO.:



MARK	DOOR			FRAME			RATING	DETAILS	NOTES
	W	H	T	MAT'L	FINISH	FINISH			
A	3'-0"	6'-8"	1 3/8"	WOOD S.C.	WOOD H.C.	WOOD LOUVER	45min	D/E-A10.2	NOTES 1,2,3,4,5
B	3'-0"	6'-8"	1 3/8"	WOOD S.C.	WOOD H.C.	WOOD LOUVER	45min	F/G-A10.2	NOTES 6,7
C	3'-6"	6'-8"	1 3/8"	WOOD S.C.	WOOD H.C.	WOOD LOUVER	45min	F/G-A10.2	NOTE 8
D	(4)1'-3"	6'-8"	1 3/8"	WOOD S.C.	WOOD H.C.	WOOD LOUVER	45min	H/J-A10.2	
E	(2)2'-6"	6'-8"	1 3/8"	WOOD S.C.	WOOD H.C.	WOOD LOUVER	45min	H/J-A10.2	
F	(2)3'-0"	6'-8"	1 3/8"	WOOD S.C.	WOOD H.C.	WOOD LOUVER	45min	H/J-A10.2	

**GENERAL NOTES:**  
 A. ALL DOOR HARDWARE TO BE LEVER TYPE LATCH SETS, KEYED OUTSIDE & RELEASE INSIDE LOCKSET & DEADBOLT W/ THUMB TURN INSIDE & NO KEY THROW. COORDINATE W/ MFR. FOR ADA INSTALLATION REQUIREMENTS. COORDINATE KEYING REQUIREMENTS WITH OWNER.  
 B. ALL SIGNAGE TO HAVE BRAILLE/TACTILE SURFACE.

**SPECIFIC NOTES:**  
 1. ENTRY DOOR - HARDWARE TO BE LEVER TYPE LATCH SETS, KEYED OUTSIDE & RELEASE INSIDE LOCKSET & DEADBOLT W/ THUMB TURN INSIDE & NO KEY THROW. COORDINATE W/ MFR. FOR ADA INSTALLATION REQUIREMENTS. COORDINATE KEYING REQUIREMENTS WITH OWNER. WEATHER STRIPPING TO BE INSTALLED.  
 2. ENTRY DOOR - NOSE THRESHOLD TO NOT EXCEED CODE VALUES FOR DWELLING TO CORRIDOR RATING.  
 3. ENTRY DOOR - 180° PEEP HOLES AT STANDARD/ADAPTABLE UNITS. (1) PEEP HOLE TO BE INSTALLED @ 60" AFF.  
 4. ENTRY DOOR - 180° PEEP HOLES AT ACCESSIBLE UNITS: (2) PEEP HOLES TO BE INSTALLED @ 43" AFF & 60" AFF.  
 5. ENTRY DOOR - FIRE/SMOKE SEAL TO BE INSTALLED.  
 6. BEDROOM & BATH DOORS - HARDWARE TO BE PRIVACY LEVER TYPE LATCH SET.  
 7. BEDROOM & BATH DOORS - UNDERCUT DOORS PER MECH DWGS 1" TYP.  
 8. MECH. DOORS - LOUVER SIZE PER MECH.

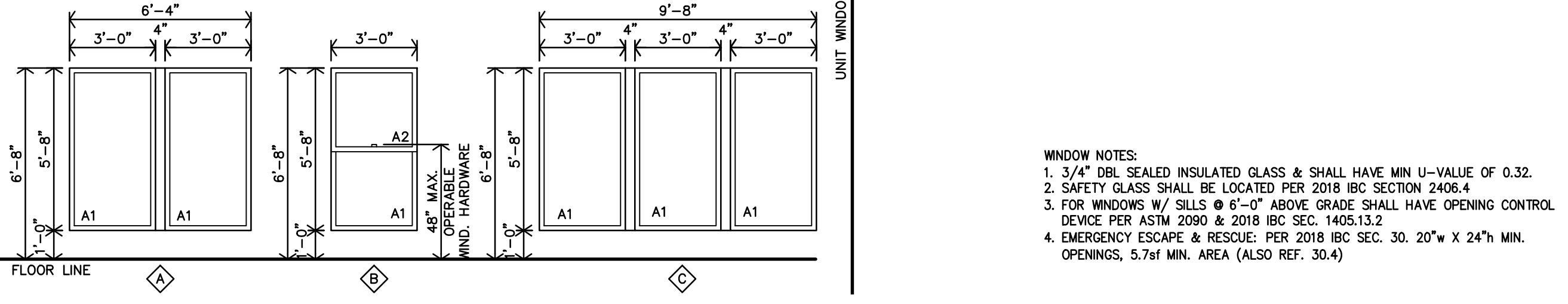
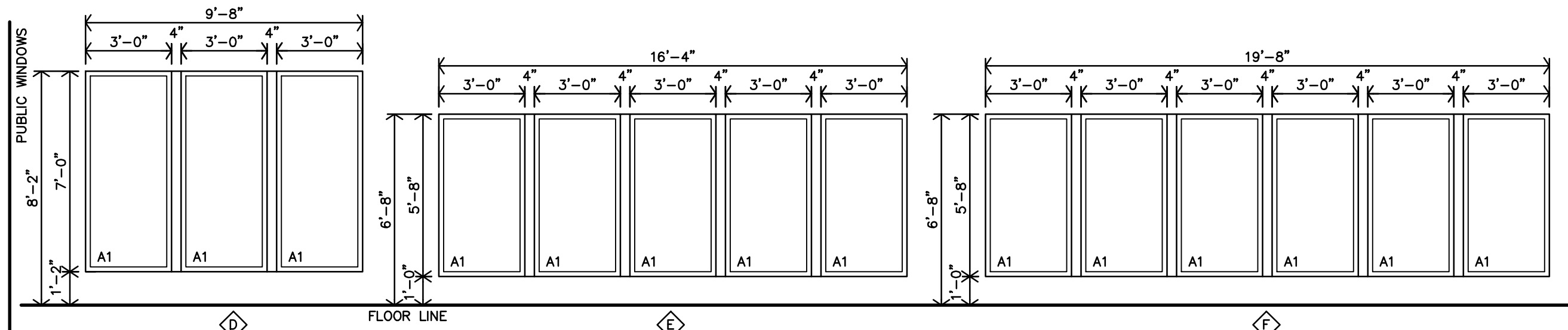
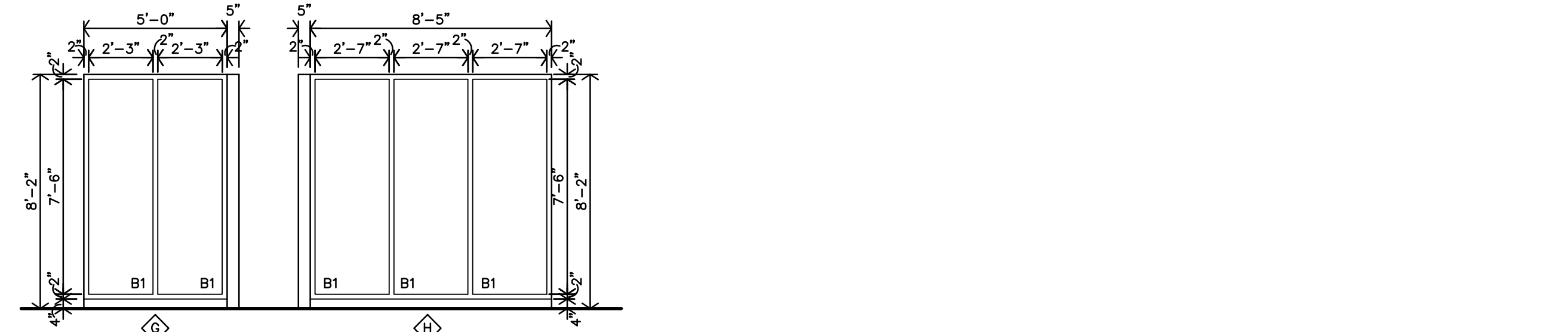
MARK	INTERIOR	EXTERIOR	1/4" FIRE RATED	3/4" INSULATED	TINTED	TEMPERED
A1						
A2						
B1						
B2						
C1						

MARK	WIDTH	HEIGHT	STYLE	INTERIOR		EXTERIOR	DETAILS
				INTERIOR	EXTERIOR		
A	6'-4"	5'-8"	PICTURE/FIXED				N-A10.3
B	3'-0"	5'-8"	SINGLE HUNG				O-A10.3
C	9'-8"	5'-8"	PICTURE/FIXED				N-A10.3
D	9'-8"	5'-8"	PICTURE/FIXED				N-A10.3
E	16'-4"	5'-8"	PICTURE/FIXED				N-A10.3
F	19'-8"	5'-8"	PICTURE/FIXED				N-A10.3
G	8'-2"	5'-0"	ALUM. STOREFRONT SYSTEM				H/J/K-A10.3

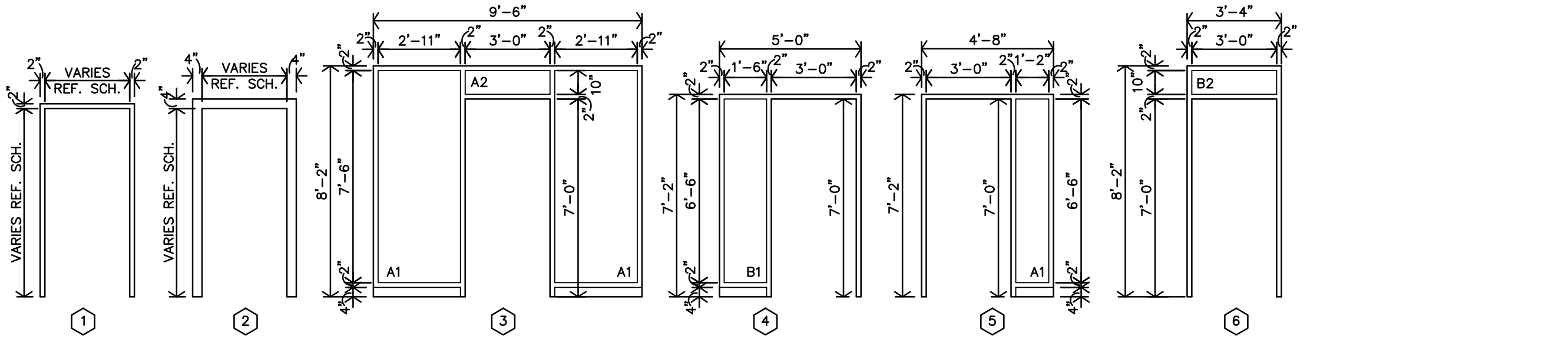
**GENERAL NOTES:**  
 A. CONTRACTOR MUST INSTALL MTL. FLASHINGS & CONT. CAULK FOR A WEATHER & WATERTIGHT CONDITIONS @ ALL EXTERIOR WINDOW UNITS.  
 B. CONTRACTOR MUST INSTALL 1/4" INSUL. OR THERMAL BREAK, CONTINUOUS AROUND WINDOW.  
 C. CONTRACTOR TO PROVIDE & INSTALL MANUFACTURERS COORDINATING PANNING SYSTEM FOR ALUM. WINDOWS.  
 D. WINDOWS A, B & C MUST BE SIZED TO MEET EGRESS REQUIREMENTS.  
 E. ALL OPERABLE WINDOWS W/ THE SILL 6"-0" ABOVE GRADE, SHALL BE PROVIDE W/ WINDOW OPENING CONTROL DEVICE PER ASTM 2090 & 2018 IBC SEC. 1015.8.1.  
 F. PROVIDE & INSTALL SAFETY GLASS AT HAZARDOUS LOCATIONS, PER 2018 IBC CODE 2406. IN DOORS, ADJACENT & WITHIN 24" TO DOORS, LESS THAN 18" ABV FLOOR, IN GUARDS & HANDRAILS, ADJACENT TO STAIRS AND RAMPS, STAIRS AND RAMPS.  
 G. ALL OPERABLE WINDOWS SHALL HAVE INSECT SCREENS.

MARK	DOOR			FRAME			RATING	DETAILS
	W	H	T	MATERIAL	TYPE	FINISH		
<b>FIRST FLOOR</b>								
101	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	3	H/J/K-A10.3
102	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	4	L-A10.3
103	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1	L-A10.3
104	PR3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	6	E/F-A10.3
105	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	6	H/J/K-A10.3
106	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	2	A/B-A10.3
107	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	2	A/B-A10.3
108	PR3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
109	3'-6"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
110	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	2	A/B-A10.3
111	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
112	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	5	H/J/K-A10.3
113	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
114	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	5	H/J/K-A10.3
116	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
117	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	5	H/J/K-A10.3
118	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	5	H/J/K-A10.3
119	4'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1	M/K-A10.3
<b>SECOND FLOOR</b>								
201	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
202	PR3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
203	3'-6"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
204	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
206	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
<b>THIRD FLOOR</b>								
301	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
302	PR3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
303	3'-6"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
304	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
306	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
307	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1/2	E/F-A10.3
308	3'-0"	7'-0"	1 3/4"	ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	1	A/B-A10.3
<b>ELEVATOR</b>								
E1	3'-6"	7'-0"		ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	60min	REF. SHEETS A6.1 & A6.2
E2	3'-6"	7'-0"		ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	60min	REF. SHEETS A6.1 & A6.2
E3	3'-6"	7'-0"		ALUMINUM	INSULATED METAL HOLLOW METAL TYPE	PREFINISHED PAINT	60min	REF. SHEETS A6.1 & A6.2

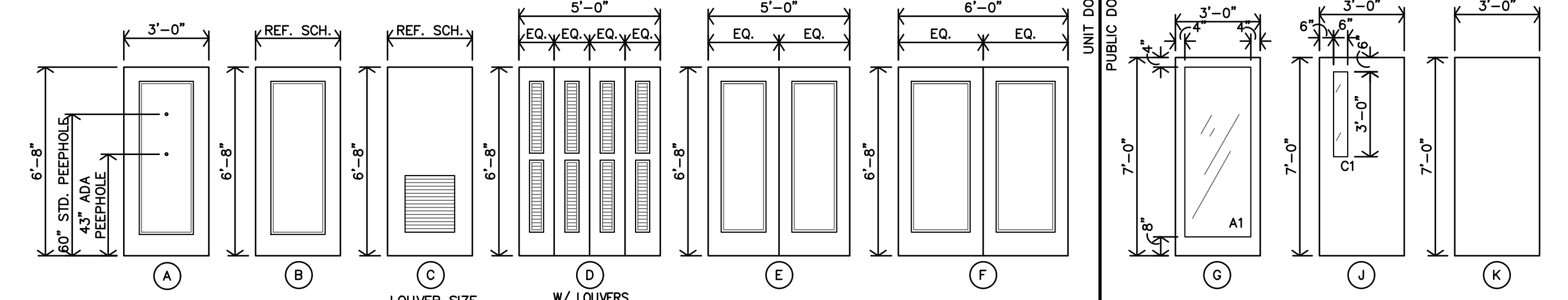
**GENERAL NOTES:**  
 A. ALL EXPOSED UNITS TO BE PAINTED AT INTERIOR AND EXTERIOR.  
 B. CONTRACTOR MUST INSTALL MTL. FLASHINGS & CONT. CAULK FOR A WEATHER & WATERTIGHT CONDITIONS @ ALL EXTERIOR DOORS & DOOR FRAMES/UNITS.  
 C. INSTALL ALUMINUM THRESHOLD/EXPANSION JOINT COVER BETWEEN CONCRETE AND WOOD FLOORS.  
 D. ALL SIGNAGE TO HAVE BRAILLE/TACTILE SURFACE.  
 E. PROVIDE & INSTALL SAFETY GLASS AT HAZARDOUS LOCATIONS, PER 2018 IBC CODE 2406. IN DOORS, ADJACENT & WITHIN 24" TO DOORS, LESS THAN 18" ABV FLOOR, IN GUARDS & HANDRAILS, ADJACENT TO STAIRS AND RAMPS, STAIRS AND RAMPS.



**WINDOW NOTES:**  
 1. 3/4" DBL SEALED INSULATED GLASS & SHALL HAVE MIN U-VALUE OF 0.32.  
 2. SAFETY GLASS SHALL BE LOCATED PER 2018 IBC SECTION 2406.4  
 3. FOR WINDOWS W/ SILLS @ 6'-0" ABOVE GRADE SHALL HAVE OPENING CONTROL DEVICE PER ASTM 2090 & 2018 IBC SEC. 1405.13.2  
 4. EMERGENCY ESCAPE & RESCUE: PER 2018 IBC SEC. 30. 20" x 24" MIN. OPENINGS, 5.7sf MIN. AREA (ALSO REF. 30.4)



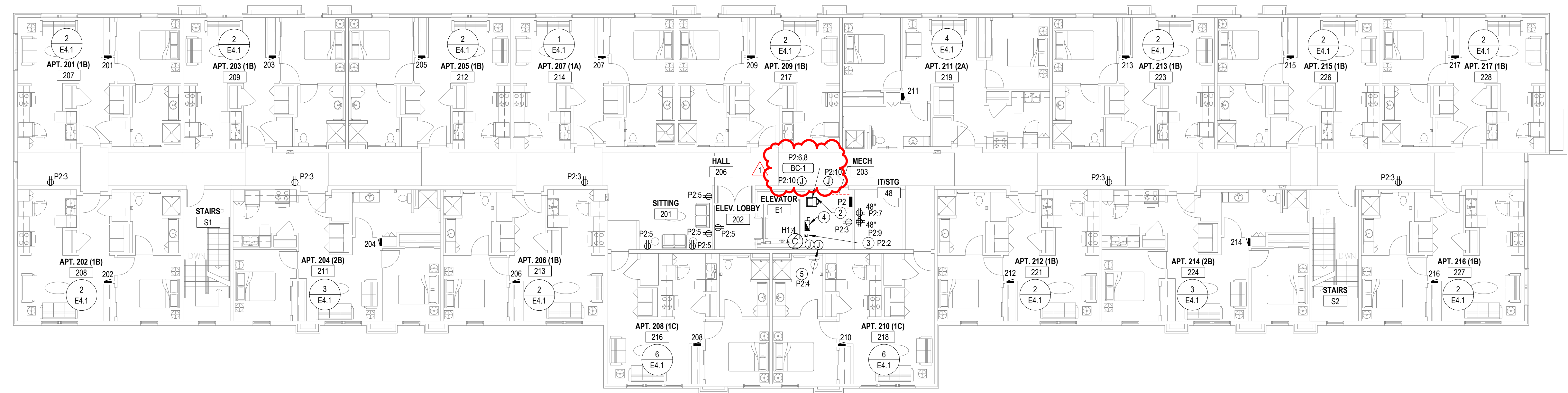
**B DOOR FRAME TYPES**  
 1/4"=1'-0"



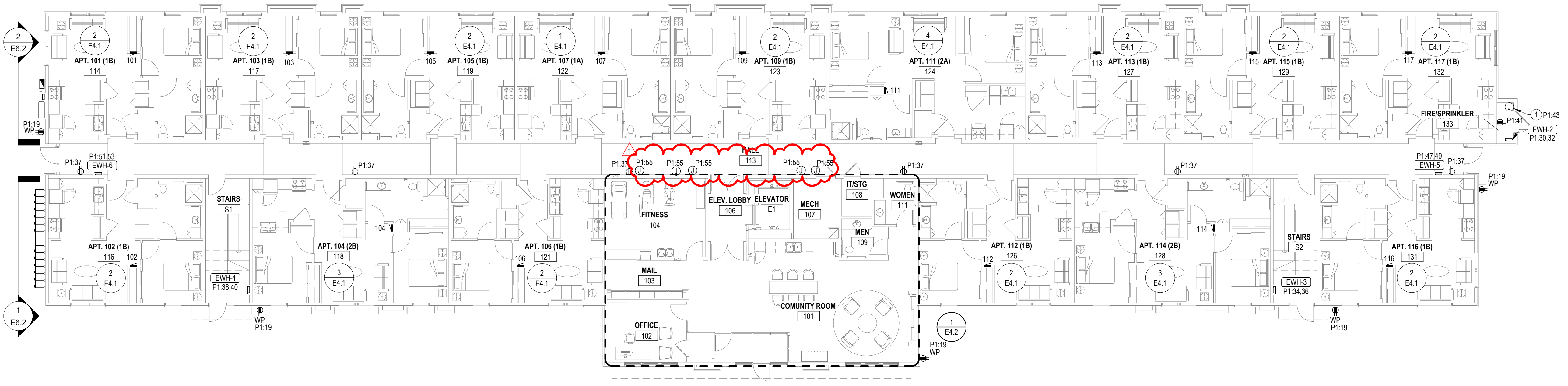
**A DOOR TYPES**  
 1/4"=1'-0"



- NOTES BY SYMBOL**
- 120V POWER FOR FIRE SPRINKLER SYSTEM FLOW SWITCH(ES) AND BELL. PROVIDE #8 CU BONDING JUMPER FROM CIRCUIT EQUIPMENT GROUNDING CONDUCTOR TO METAL SPRINKLER SYSTEM PIPING AT AN ACCESSIBLE LOCATION PER NEC 250.104(B). COORDINATE WORK WITH FIRE SPRINKLER SYSTEM INSTALLER.
  - PROVIDE 40A/2P, SINGLE THROW, MANUAL MOTOR CONTROLLER SNAP SWITCH IN NEMA 1 ENCLOSURE. HUBBELL #HBL7842D OR EQUAL. MAKE FINAL FLEXIBLE CONNECTION TO BLOWER COIL/ELECTRIC HEAT.
  - 30A DISCONNECT SWITCH, LOCKABLE IN "OFF" POSITION, WITH SOLID NEUTRAL AND (1) 20A DUAL-ELEMENT, TIME DELAY FUSE IN NEMA 1 ENCLOSURE FOR ELEVATOR CAB LIGHTS & EXHAUST. MOUNT AT 6'-0" AFF TO TOP AND LABEL WITH CORRESPONDING ELEVATOR CAR NUMBER AND CIRCUIT NUMBER. COORDINATE EXACT MOUNTING LOCATION AND REQUIREMENTS WITH ELEVATOR EQUIPMENT INSTALLER. PROVIDE FINAL ELECTRICAL CONNECTION TO ELEVATOR CONTROLLER.
  - ELEVATOR POWER MODULE SWITCH: 400A/208V/3P SWITCH COMPLETE WITH 225A DUAL ELEMENT, TIME DELAY CLASS 'J' FUSES, 120V CONTROL TRANSFORMER, FIRE ALARM SAFETY INTERFACE RELAY, KEY TEST SWITCH, GREEN PILOT LIGHT, AUXILIARY CONTACTS FOR ELEVATOR RECALL, AND FIRE ALARM VOLTAGE MONITORING RELAY. EATON BUSSMAN #PS-4-T20-R1-K-G-B-F1 OR EQUAL. COORDINATE EXACT MOUNTING LOCATION AND REQUIREMENTS WITH ELEVATOR EQUIPMENT INSTALLER, AND PROVIDE FINAL ELECTRICAL CONNECTION TO ELEVATOR CONTROLLER. SEE DETAIL 1-E6.1.
  - PROVIDE POWER FOR ELEVATOR SHUNT TRIP CONTROL. SEE 1-E6.1 FOR MORE INFORMATION.



2 SECOND FLOOR POWER PLAN  
 E1.3 3/32" = 1'-0"



1 FIRST FLOOR POWER PLAN  
 E1.3 3/32" = 1'-0"



**THE RESIDENCE AT VETERANS PARK**  
**NEW SENIOR LIVING FACILITY**

IOWA



REVISIONS:

1	Addendum #2	2-21-25
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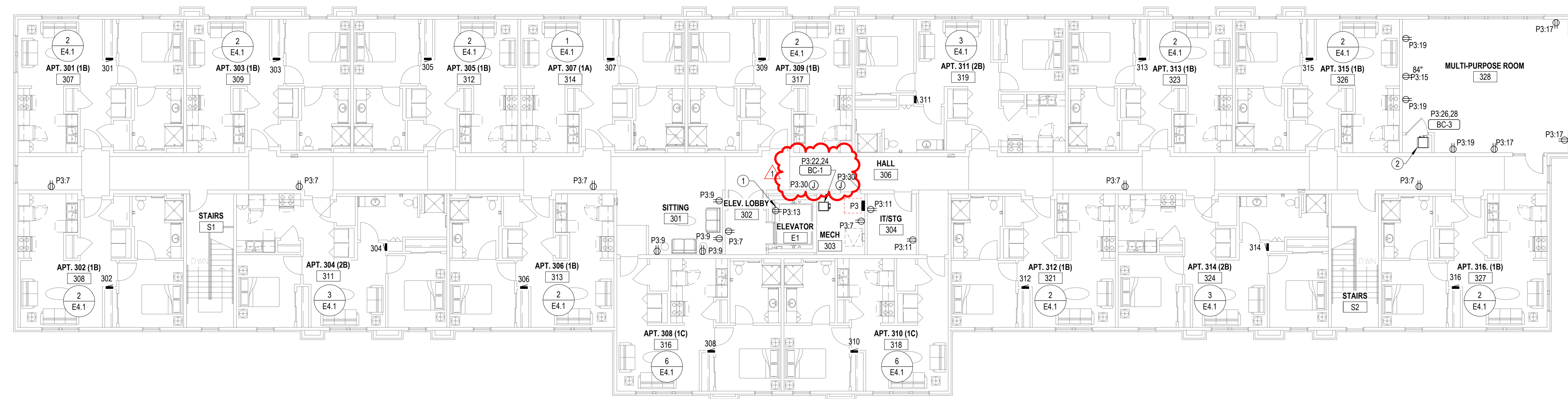
DATE: 01/31/2025  
 JOB: 24-3400  
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**E1.3**

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**NOTES BY SYMBOL**

- 1 INSTALL LIGHT FIXTURE, SWITCH, AND RECEPTACLE AT TOP OF HOISTWAY. VERIFY EXACT MOUNTING LOCATION AND REQUIREMENTS WITH ELEVATOR INSTALLER.
- 2 PROVIDE 50A/2P, SINGLE THROW, MANUAL MOTOR CONTROLLER SNAP SWITCH IN NEMA 1 ENCLOSURE. HUBBELL #HBL785ZD OR EQUAL. MAKE FINAL FLEXIBLE CONNECTION TO BLOWER COIL/ELECTRIC HEAT.



1 THIRD FLOOR POWER PLAN  
 E1.4 3/32" = 1'-0"



THE RESIDENCE AT VETERANS PARK

NEW SENIOR LIVING FACILITY

IOWA

KNOXVILLE,



REVISIONS:

1	Addendum #2	2-21-25
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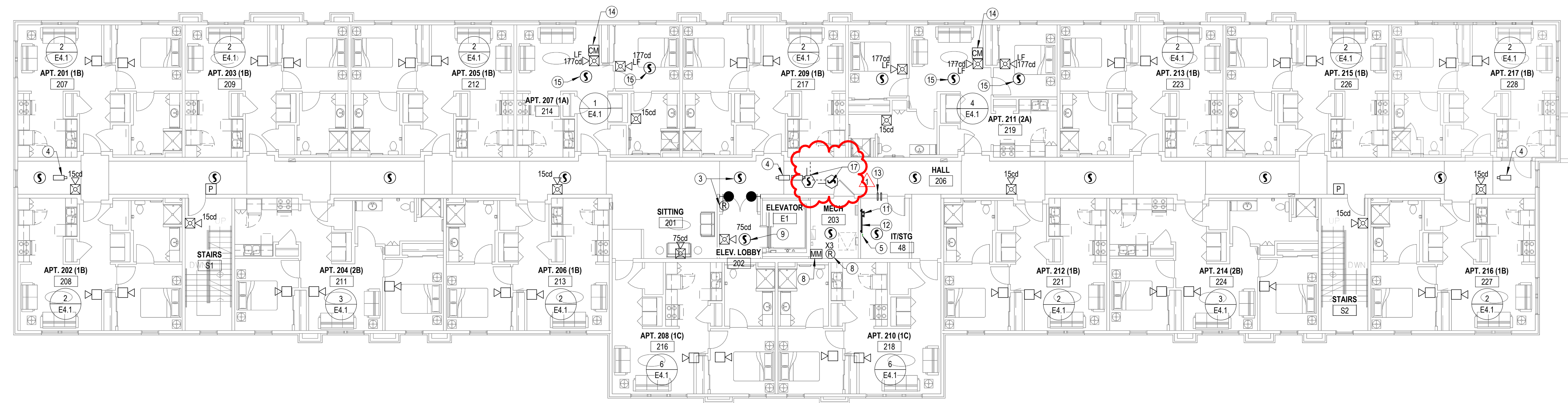
DATE: 01/31/2025  
 JOB: 24-3400  
 SHEET NO.:

E1.4

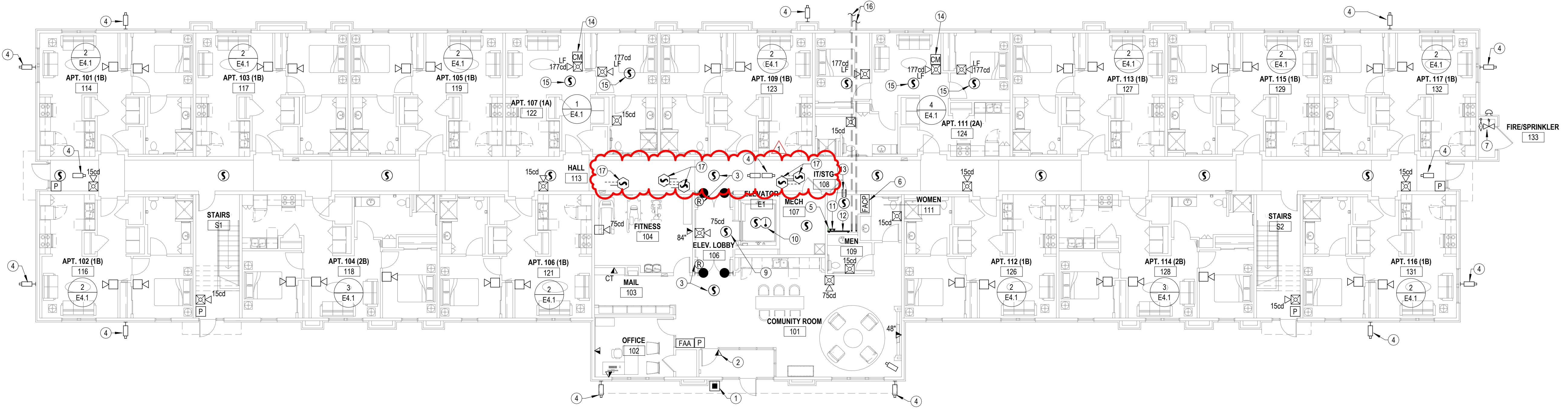
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- NOTES BY SYMBOL**
- 1 PROVIDE PUSH BUTTON ROUGH-IN AND PREP DOOR JAM WITH RACEWAY AS INDICATED IN DETAIL 3.E6.1 FOR AUTOMATIC DOOR OPENER. COORDINATE EXACT REQUIREMENTS WITH OWNER.
  - 2 PROVIDE ROUGH-IN FOR 24 HOUR INTERCOMM SYSTEM. COORDINATE REQUIREMENTS AND LOCATION WITH OWNER AND ARCHITECT.
  - 3 SMOKE DETECTOR AND ADDRESSABLE RELAY FOR CONTROL OF ELECTROMAGNETIC DOOR HOLDERS. DOORS SHALL RELEASE UPON DETECTION OF SMOKE.
  - 4 PROVIDE ROUGH-IN FOR SECURITY CAMERA. COORDINATE REQUIREMENTS WITH OWNER.
  - 5 4" EMT CONDUIT SLEEVES THROUGH 2ND FLOOR FOR COMMUNICATIONS CABLING. PROVIDE WITH FIRESTOPPING FITTINGS (WIREMOLD #FS4R-RED) AT BOTH ENDS.
  - 6 PROVIDE (2) CAT 5e UTP, NEC TYPE "CMP" CABLES (SUPERIOR ESSEX #S1-241-48 OR EQUAL) IN 3/4" CONDUIT FROM FACP TO MAIN TELECOM TERMINAL BOARD FOR CONNECTION TO FA SYSTEM DUCT FOR REMOTE MONITORING.
  - 7 PROVIDE ADDRESSABLE FIRE ALARM RELAYS AND MONITORING MODULES FOR ALL FIRE SPRINKLER FLOW SWITCHES, TAMPER SWITCHES AND BELLGONG. COORDINATE QUANTITIES AND LOCATIONS WITH FIRE SPRINKLER CONTRACTOR.
  - 8 ADDRESSABLE FIRE ALARM RELAYS FOR ELEVATOR RECALL, FIREMAN'S HAT, AND POWER SHUNT-TRIP, AND ADDRESSABLE MONITORING MODULE FOR MONITORING OF SHUNT TRIP VOLTAGE. SEE DETAIL 1, SHEET E6.1.
  - 9 ELEVATOR LOBBY SMOKE DETECTOR FOR ELEVATOR RECALL. SEE DETAIL 1, SHEET E6.1.
  - 10 SMOKE DETECTOR AND HEAT DETECTOR IN ELEVATOR PIT FOR RECALL AND SHUT-DOWN. SEE DETAIL 1, SHEET E6.1.
  - 11 TELECOMMUNICATIONS GROUND BAR SHALL BE 13-1/4" W x 2" H x 1/4" THICK ELECTRO-TIN PLATED COPPER BUS BAR, COMPLETE WITH INSULATED STAND-OFFS AND STAINLESS STEEL BRACKETS, ERICO #TGBA14L06PT OR EQUAL. MOUNT AT 18" AFF. ALL CONNECTIONS TO GROUND BAR SHALL BE MADE USING COMPRESSION TYPE LUGS.
  - 12 PROVIDE 8' LONG SHEET OF 3/4" ACX FIRE RETARDANT PLYWOOD INSTALLED VERTICALLY WITH BOTTOM AT 6" AFF. WIDTH AS REQUIRED. PLYWOOD SHALL BE PERMANENTLY FASTENED TO THE WALL BY MEANS OF WALL ANCHORS UTILIZING GALVANIZED, ZINC PLATED, OR STAINLESS STEEL HARDWARE WITH A FLAT HEAD. FINISHED INSTALLATION SHALL HAVE FLUSH APPEARANCE WITH COUNTERSUNK SCREW HEADS TO PREVENT SPLITTING OF THE PLYWOOD. DRYWALL SCREWS ARE NOT ACCEPTABLE. PAINT WITH TWO COATS OF LIGHT GRAY FIRE RETARDANT SEALER PRIOR TO INSTALLATION OF ANY EQUIPMENT.
  - 13 EMT CONDUIT SLEEVE(S) THROUGH WALL WITH NYLON BUSHINGS FOR COMMUNICATIONS CABLING. QUANTITY AND SIZE AS REQUIRED. INSTALL ABOVE ACCESSIBLE CEILING. WHERE CONDUITS PENETRATE FIRE WALL, PROVIDE WITH FIRESTOPPING FITTINGS (WIREMOLD #FS4R-RED) AT BOTH ENDS.
  - 14 FIRE ALARM ADDRESSABLE CONTROL MODULE FOR CONTROL OF APARTMENT UNITS NOTIFICATION APPLIANCE CIRCUIT. MODULE SHALL BE PROGRAMMED TO ACTIVATE APARTMENT UNIT'S NOTIFICATION APPLIANCES UPON GENERAL BUILDING FIRE ALARM AND UPON ACTIVATION OF ANY SMOKE DETECTOR OR CO DETECTOR WITHIN APARTMENT UNIT. MOUNT FLUSH IN WALL AT 8'-0" AFF.
  - 15 FIRE ALARM SYSTEM SMOKE DETECTOR.
  - 16 SEE SITE PLAN FOR CONTINUATION.
  - 17 PROVIDE DUCT SMOKE DETECTOR WITHIN 5' OF FIRE/SMOKE DAMPER AND WIRE TO FIRE ALARM CONTROL PANEL. PROVIDE FIRE ALARM RELAY FOR CONTROL OF 120V POWER TO DAMPER ACTUATOR. DAMPER SHALL CLOSE UPON DETECTION OF SMOKE.



2 SECOND FLOOR SPECIAL SYSTEMS  
 E1.5 3/32" = 1'-0"



1 FIRST FLOOR SPECIAL SYSTEMS  
 E1.5 3/32" = 1'-0"



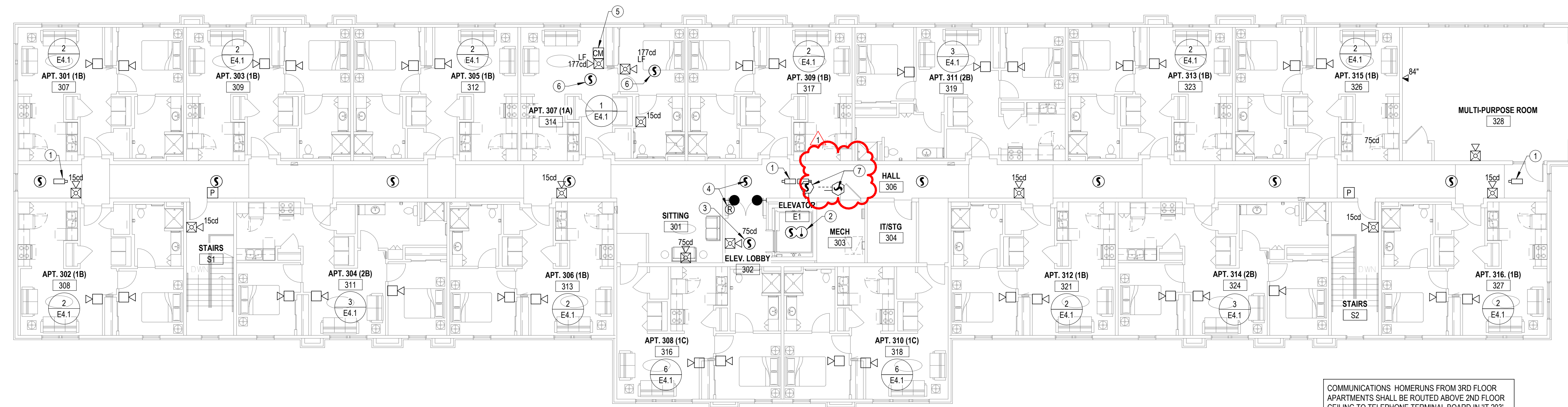
REVISIONS:

1	Addendum #2	2-21-25
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DATE: 01/31/2025  
 JOB: 24-3400  
 SHEET NO.:



- NOTES BY SYMBOL**
- 1 PROVIDE ROUGH-IN FOR SECURITY CAMERA. COORDINATE REQUIREMENTS WITH OWNER.
  - 2 SMOKE DETECTOR AND HEAT DETECTOR AT TOP OF ELEVATOR HOISTWAY FOR RECALL AND SHUT-DOWN. SEE DETAIL 1, SHEET E6.1.
  - 3 ELEVATOR LOBBY SMOKE DETECTOR FOR ELEVATOR RECALL. SEE DETAIL 1, SHEET E6.1.
  - 4 SMOKE DETECTOR AND ADDRESSABLE RELAY FOR CONTROL OF ELECTROMAGNETIC DOOR HOLDERS. DOORS SHALL RELEASE UPON DETECTION OF SMOKE.
  - 5 FIRE ALARM ADDRESSABLE CONTROL MODULE FOR CONTROL OF APARTMENT UNIT'S NOTIFICATION APPLIANCE CIRCUIT. MODULE SHALL BE PROGRAMMED TO ACTIVATE APARTMENT UNIT'S NOTIFICATION APPLIANCES UPON GENERAL BUILDING FIRE ALARM AND UPON ACTIVATION OF ANY SMOKE DETECTOR OR CO DETECTOR WITHIN APARTMENT UNIT. MOUNT FLUSH IN WALL AT 8'-0" AFF. FIRE ALARM SYSTEM SMOKE DETECTOR.
  - 7 PROVIDE DUCT SMOKE DETECTOR WITHIN 5' OF FIRE SMOKE DAMPER AND WIRE TO FIRE ALARM CONTROL PANEL. PROVIDE FIRE ALARM RELAY FOR CONTROL OF 120V POWER TO DAMPER ACTUATOR. DAMPER SHALL CLOSE UPON DETECTION OF SMOKE.



COMMUNICATIONS HOMERUNS FROM 3RD FLOOR APARTMENTS SHALL BE ROUTED ABOVE 2ND FLOOR CEILING TO TELEPHONE TERMINAL BOARD IN IT 203



REVISIONS:

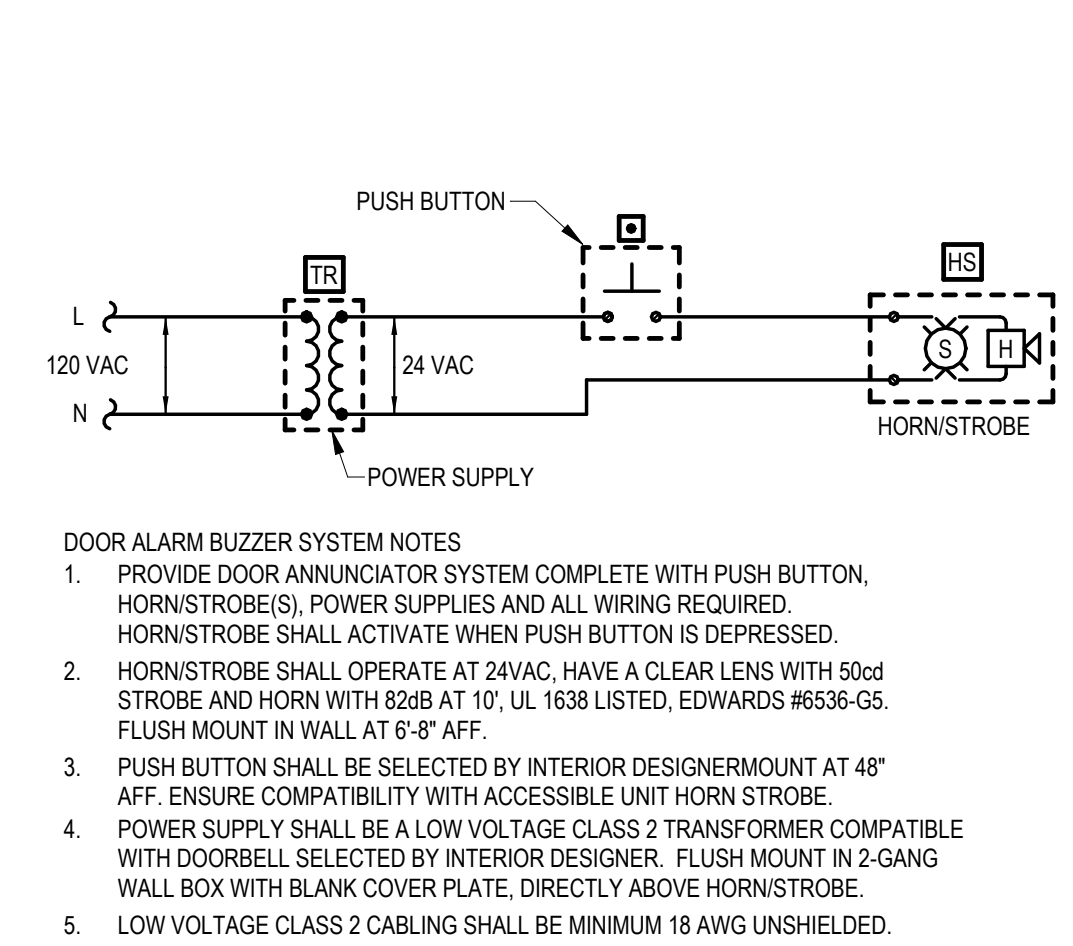
1	Addendum #2	2-21-25
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 JOB: 24-3400  
 SHEET NO.:

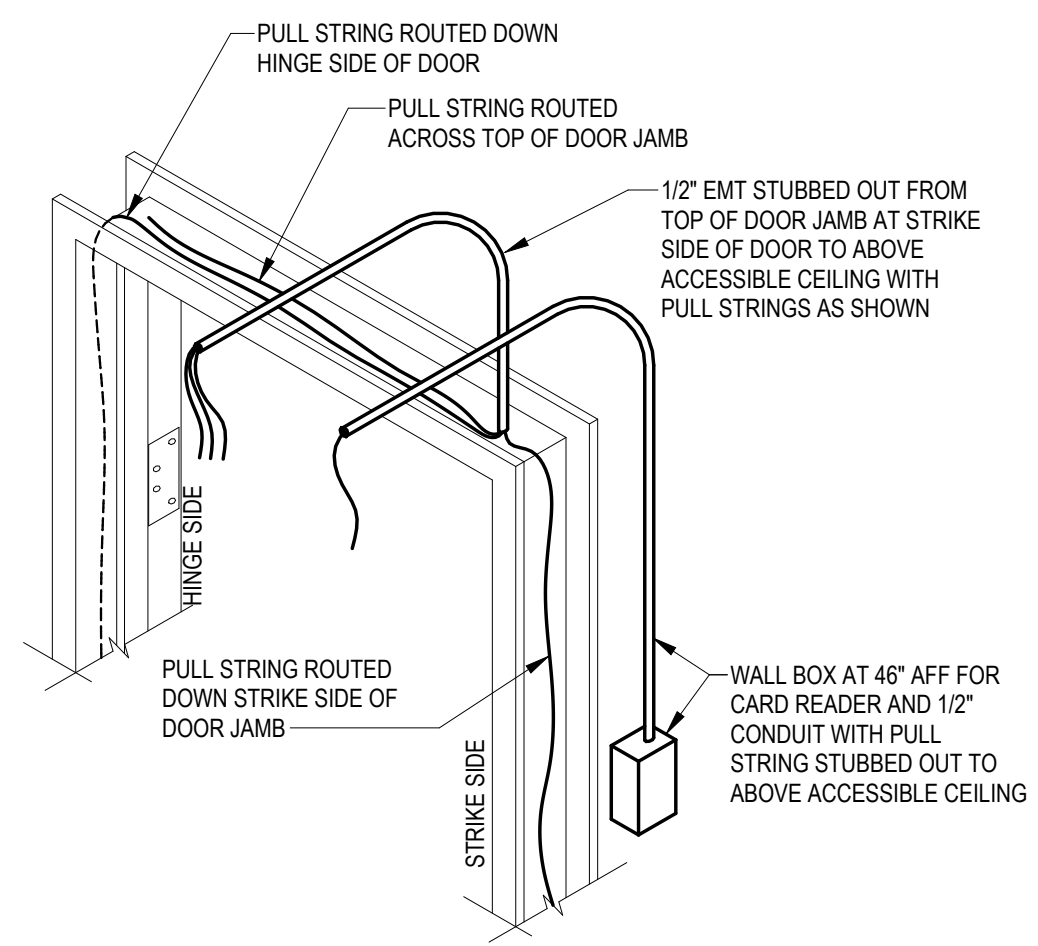


LIGHT FIXTURE SCHEDULE										
MARK	MANUFACTURER	MODEL NUMBER	WATTAGE	LUMEN OUTPUT	DRIVER	MOUNTING	FINISH	DESCRIPTION	NOTES	
A	ARCLUCE	W-DU1123US-16S	21.00 W	1850 lm	LED DRIVER	GROUND	BLACK	GROUND MOUNTED FLOOD LIGHT	3	
B1	---	---	---	---	STANDARD	SURFACE WALL	---	BATHROOM VANITY LIGHT SELECTED BY INTERIOR DESIGNER	5	
C	---	---	---	---	STANDARD	SURFACE WALL	---	EXTERIOR WALL SCONCE SELECTED BY INTERIOR DESIGNER	5	
D1	HALO	SMD6R6930WH	9.60 W	777 lm	0-10V DIMMING TO 10%	CEILING SURFACE	WHITE	6" DIA ROUND SURFACE MOUNT DOWNLIGHT	6	
D2	HALO	SMD6R12930WH	16.00 W	1271 lm	0-10V DIMMING TO 10%	CEILING SURFACE	WHITE	6" DIA ROUND SURFACE MOUNT DOWNLIGHT	-	
E1	LITHONIA	ELM8L UVOLT LTP	2.78 W	---	---	SURFACE WALL	WHITE	LED DUAL-HEAD EMERGENCY LIGHT	1	
E2	LITHONIA	AFB-OEL-DDB17XD-UVOLT-N-WT	3.00 W	---	---	SURFACE WALL	WHITE	DIE-CAST ALUMINUM EMERGENCY LIGHT WITH POLYCARBONATE LENS, INTEGRAL BATTER	1,2,3	
F	DAY-BRITE CFI	FSS440L840-UNV-DIM	30.00 W	4077 lm	0-10V DIMMING TO 10%	CEILING SURFACE	WHITE	4" STANDARD STRIP WITH CURVED FROSTED ACRYLIC LENS	-	
G	REYLINE	FLD120V-120	1.20 W	---	STANDARD	---	---	LED STRIP LIGHT	-	
H	LITHONIA	FM-4W48500LM840TD	35.00 W	2800 lm	TRIAC DIMMING	SURFACE	WHITE	1x4 SURFACE, LED DECORATIVE	-	
K	DAY-BRITE CFI	FLP430L840-R-UNV-DIM	20.00 W	3039 lm	0-10V DIMMING TO 10%	CEILING SURFACE	WHITE	4" LINEAR LED WITH ROUND FROSTED LENS	-	
L1	---	---	---	---	STANDARD	CEILING SURFACE	---	PENDANT LIGHT SELECTED BY INTERIOR DESIGNER	5	
L2	---	---	---	---	STANDARD	CEILING SURFACE	---	PENDANT LIGHT SELECTED BY INTERIOR DESIGNER	5	
M	LITHONIA	P6RD12094VCL-Z10U	10.00 W	1000 lm	0-10V DIMMING TO 10%	SURFACE	WHITE	6" ROUND SURFACE MOUNTED DOWNLIGHT	4	
N1	GARDCO	GCM-805-840-WAW-SPT	36.00 W	3000 lm	STANDARD	SURFACE WALL	BLACK	EXTERIOR LED UP/DOWN WALL SCONCE WITH SPOT UP AND WALL WASH DOWN DISTRIBUTION	-	
N2	GARDCO	GCM-802-840-SPT	18.00 W	1611 lm	STANDARD	SURFACE WALL	BLACK	EXTERIOR LED UP ONLY WALL SCONCE WITH SPOT DISTRIBUTION	-	
O	LITHONIA	WL4-40L-EZ1-LP830-MSD7-DIM50-E10WCLP	39.50 W	3927 lm	STANDARD	SURFACE WALL	WHITE	4 FT. WALL MOUNTED STAIRWELL LIGHT WITH EMERGENCY BATTERY BACKUP	8	
R1	LITHONIA	DSX0-LED-P2-40K-70CRI-T4M-HS-MVOLT	45.00 W	6272 lm	LED DRIVER	ROUND POLE	BLACK	LED AREA LIGHT, SINGLE HEAD FULL CUT-OFF WITH IES TYPE IV DISTRIBUTION AND HOUSE SIDE SHIELD	3,7,9	
R2	LITHONIA	DSX0-LED-P3-40K-70CRI-T2M-MVOLT-HS	69.00 W	8694 lm	LED DRIVER	ROUND POLE	BLACK	LED AREA LIGHT, SINGLE HEAD FULL CUT-OFF WITH IES TYPE II DISTRIBUTION AND HOUSE SIDE SHIELD	3,7,10	
R3	LITHONIA	DSX0-LED-P7-40K-70CRI-T5W-MVOLT	171.00 W	21561 lm	LED DRIVER	ROUND POLE	BLACK	LED AREA LIGHT, SINGLE HEAD FULL CUT-OFF WITH IES TYPE V DISTRIBUTION	3,7,10	
S	ACCLAIM	DFB-111-AKEU	50.00 W	2455 lm	STANDARD	GRADE	BLACK	IP-66 RATED, GRADE MOUNTED LED FLOOR LIGHT	3	
T	LITHONIA	FEM-L48-4000LM-MAFL-WD-MVOLT-GZ10-35K-80CRI	23.80 W	3615 lm	STANDARD	SURFACE WALL	WHITE	4 FT. FULLY ENCLOSED AND GASKETED INDUSTRIAL FIXTURE WITH FROSTED, RIBBED, IMPACT-RESISTANT ACRYLIC LENS	-	
W	LITHONIA	MRWLED-P1-40K-SR4-MVOLT	20.00 W	2189 lm	STANDARD	WALL	BLACK	EXTERIOR LED WALL PACK WITH IES TYPE 4 DISTRIBUTION	3	
X	LIFE SAFETY LIGHTING	LSXS2RWEMSDT	4.50 W	---	---	CEILING	WHITE	UNIVERSAL SINGLE/DOUBLE FACE POLYCARBONATE EXIT SIGN	2	
XE	LITHONIA	LHGM LED R HO	---	---	---	WALL	WHITE	COMBO EXT/EMERGENCY LIGHTING UNIT	1,2	

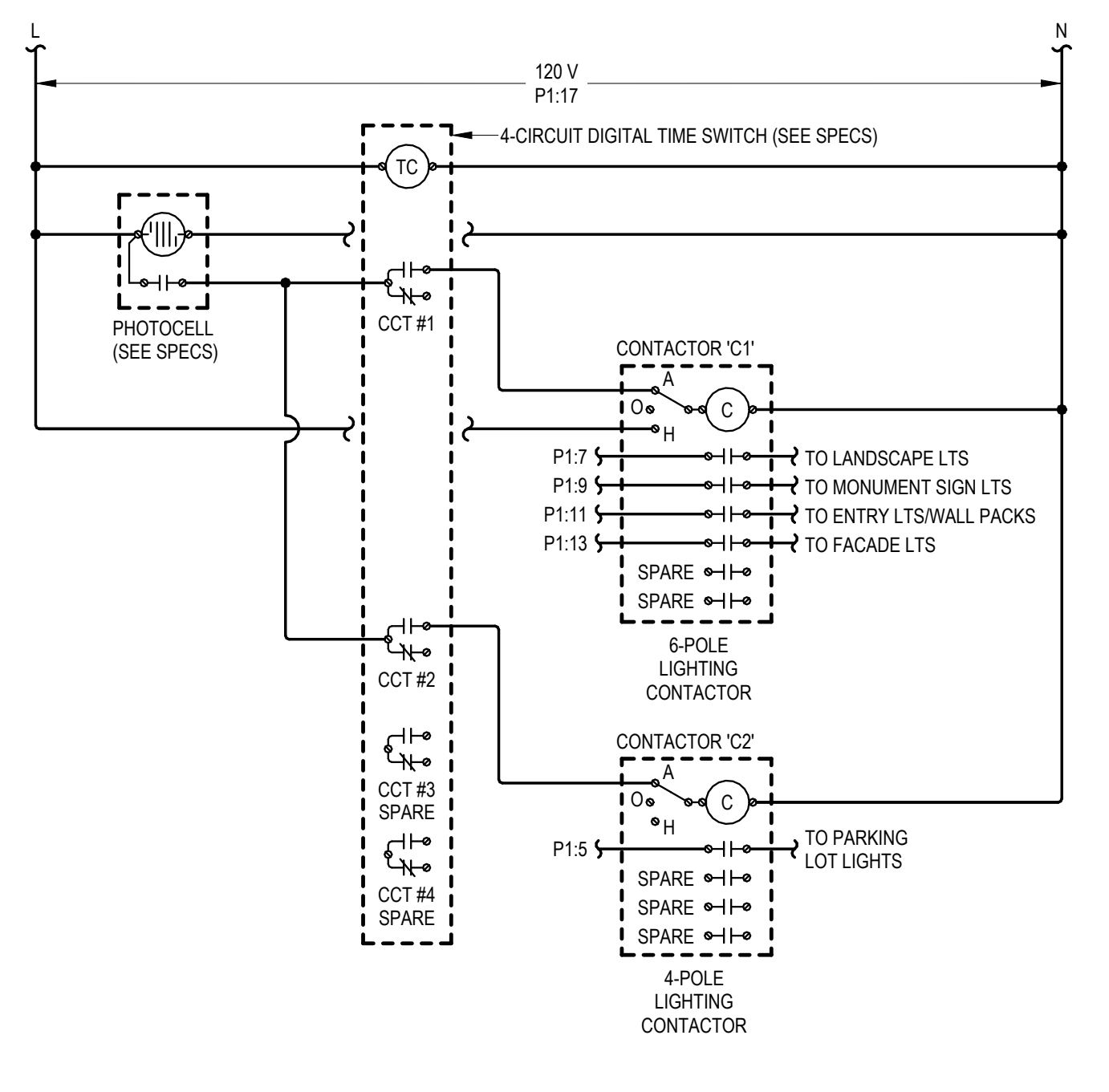
- GENERAL:**
- ALL LED FIXTURES SHALL ADHERE TO LM79 AND LM80 STANDARDS
  - PROVIDE MANUFACTURER'S FLANGE KIT WHERE LAY-IN FIXTURES ARE TO BE INSTALLED IN GYP.
  - ALL APARTMENT LIGHT FIXTURES SHALL BE ENERGY STAR CERTIFIED
- NOTES:**
- PROVIDE FIXTURE WITH EMERGENCY BATTERY INTEGRAL CHARGER WITH SELF-DIAGNOSTIC/SELF-TESTING ELECTRONICS.
  - FIXTURE SHALL BE CAPABLE OF WALL OR CEILING MOUNT APPLICATIONS AND SHALL HAVE BREAK-OUT DIRECTIONAL CHROMES.
  - U.L. LISTED FOR 'WET LOCATION'.
  - U.L. LISTED FOR 'DAMP LOCATION'.
  - FIXTURE TO BE SELECTED BY INTERIOR DESIGNER, COORDINATE ALL REQUIREMENTS WITH INTERIOR DESIGNER
  - WHERE INSTALLED IN BATHROOMS TO BE 'DAMP LOCATION' U.L. LISTED, WHERE ABOVE SHOWERS TO BE 'WET LOCATION' U.L. LISTED.
  - FIXTURE/POLE ASSEMBLY SHALL BE RATED FOR 100 MPH WIND LOADS. PROVIDE WITH VIBRATION DAMPER PER MANUFACTURER'S RECOMMENDATIONS.
  - PROVIDE FIXTURE WITH INTEGRAL OCCUPANCY SENSOR AND CONTROLS TO DIM FIXTURE TO 50% LIGHT OUTPUT WITH UNOCCUPIED.
  - PROVIDE FIXTURE/POLE ASSEMBLY WITH 10' ROUND STRAIGHT STEEL POLE, BLACK TO MATCH FIXTURE. FIXTURE HEIGHT SHALL NOT EXCEED 11'-0".
  - PROVIDE FIXTURE/POLE ASSEMBLY WITH 20' ROUND STRAIGHT STEEL POLE, BLACK TO MATCH FIXTURE. FIXTURE HEIGHT SHALL NOT EXCEED 23'-0".



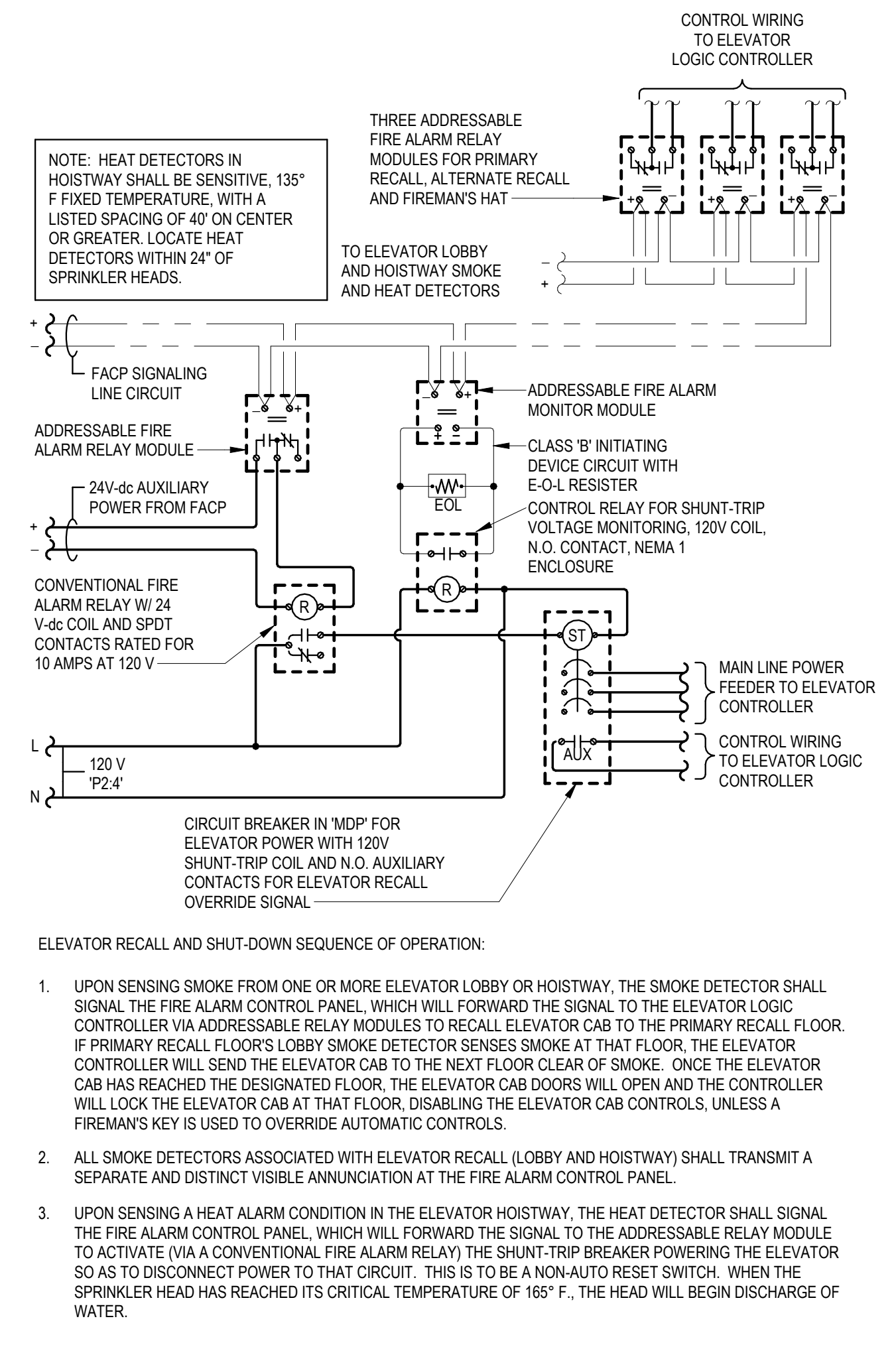
**4 ACCESSIBLE APARTMENT DOORBELL WIRING SCHEMATIC**  
 12" = 1'-0"



**3 DOOR ACCESS CONTROL ROUGH-IN DIAGRAM**  
 12" = 1'-0"



**2 LIGHTING CONTROL DIAGRAM**  
 NO SCALE



**1 ELEVATOR RECALL AND SHUT-DOWN WIRING DIAGRAM (EDIT)**  
 NO SCALE





REVISIONS:  
 1 Addendum #2 2-21-25

DATE: 01/31/2025  
 JOB: 24-3400  
 SHEET NO.:

**Designation: 1C**  
 Installed Location: 1 Bedroom Unit (1C)  
 Voltage: 120/208 1PH 3W-1Ph-3W  
 Mounting: Flush  
 Enclosure: NEMA 1

Bus Amps: 125  
 MCB Amps: MLO  
 Features & Modifications: -

SCCR/AIC: 10.0 kA  
 Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	FN	Trip (A)	Description	Ckt
1C-1	Kitchen Receptacles	1/2"C,1#12,#12N,#12G	20	GA	7.2 A 0.0 A			20	1/2"C,2#12,#12G	1C-2
1C-3	Kitchen Receptacles	1/2"C,1#12,#12N,#12G	20	GA	0.0 A 40...	4.5 A 0.0 A			1/2"C,2#12,#12G	1C-4
1C-5	Spare	1/2"C,1#12,#12N,#12G	20	GA	0.0 A 40...	4.2 A 40...	G	60	1"C,2#4,#4N,#10G	1C-6
1C-7	Dishwasher	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	3/4"C,2#4,#10G	1C-8
1C-9	Refrigerator	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	1/2"C,2#10,#10G	1C-10
1C-11	Living Room Receptacles	1/2"C,1#12,#12N,#12G	20	A	1.7 A 21...	2.1 A 21...		30	1/2"C,2#10,#10G	1C-12
1C-13	Kitchen/Living/Hall Lighting	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	1C-14
1C-15	Hood/Microwave	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	1C-16
1C-17	Clothes Washer Receptacle	1/2"C,1#12,#12N,#12G	20	G	7.9 A --			--	Surge Protection	1C-22
1C-19	Bathroom	1/2"C,1#12,#12N,#12G	20	A	7.9 A --			--	Surge Protection	1C-23
1C-21	Bedroom	1/2"C,1#12,#12N,#12G	20	A	7.9 A --			--	Surge Protection	1C-24
1C-23	Space	--	--	--	--	--	--	--	Surge Protection	1C-24

**Designation: 1A**  
 Installed Location: 1 Bedroom Units (1A)  
 Voltage: 120/208 1PH 3W-1Ph-3W  
 Mounting: Flush  
 Enclosure: NEMA 1

Bus Amps: 125  
 MCB Amps: MLO  
 Features & Modifications: -

SCCR/AIC: 10.0 kA  
 Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	FN	Trip (A)	Description	Ckt
1A-1	Kitchen Receptacles	1/2"C,1#12,#12N,#12G	20	GA	4.5 A 0.0 A	8.7 A 0.0 A		20	1/2"C,2#12,#12G	1A-2
1A-3	Kitchen Receptacles	1/2"C,1#12,#12N,#12G	20	GA	0.0 A 40...	4.2 A 40...	G	60	1"C,2#4,#4N,#10G	1A-4
1A-5	Spare	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	3/4"C,2#4,#10G	1A-6
1A-7	Dishwasher	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	1/2"C,2#10,#10G	1A-8
1A-9	Refrigerator	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	1/2"C,2#10,#10G	1A-10
1A-11	Living Room Receptacles	1/2"C,1#12,#12N,#12G	20	A	1.7 A 21...	2.1 A 21...		30	1/2"C,2#10,#10G	1A-12
1A-13	Kitchen/Living/Hall Lighting	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	1A-14
1A-15	Hood/Microwave	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	1A-16
1A-17	Clothes Washer Receptacle	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	1A-18
1A-19	Bathroom	1/2"C,1#12,#12N,#12G	20	G	7.9 A --			--	Surge Protection	1A-20
1A-21	Bedroom	1/2"C,1#12,#12N,#12G	20	A	7.9 A --			--	Surge Protection	1A-22
1A-23	Space	--	--	--	--	--	--	--	Surge Protection	1A-24

**Breaker Function Schedule**

Letter	Protection Type
A	Arc-Fault Interrupter (AFCI) Protection
G	Ground-Fault Circuit Interrupter, 5mA, (GFCI) Protection
GA	Combination Arc-Fault Interrupter (AFCI) and Ground-Fault Circuit Interrupter, 5mA, (GFCI) Protection
L	Provide breaker with 'lock-on' clip.

**Designation: 2A**  
 Installed Location: 2 Bedroom Units (2A)  
 Voltage: 120/208 1PH 3W-1Ph-3W  
 Mounting: Flush  
 Enclosure: NEMA 1

Bus Amps: 125  
 MCB Amps: MLO  
 Features & Modifications: -

SCCR/AIC: 10.0 kA  
 Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	FN	Trip (A)	Description	Ckt
2A-1	Kitchen Receptacles	1/2"C,1#12,#12N,#12G	20	GA	7.2 A 0.0 A	4.5 A 0.0 A		20	1/2"C,2#12,#12G	2A-2
2A-3	Kitchen Receptacles	1/2"C,1#12,#12N,#12G	20	GA	0.0 A 40...	4.2 A 40...	G	60	1"C,2#4,#4N,#10G	2A-4
2A-5	Spare	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	3/4"C,2#4,#10G	2A-6
2A-7	Dishwasher	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	1/2"C,2#10,#10G	2A-8
2A-9	Refrigerator	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	1/2"C,2#10,#10G	2A-10
2A-11	Living Room Receptacles	1/2"C,1#12,#12N,#12G	20	A	1.7 A 21...	2.1 A 21...		30	1/2"C,2#10,#10G	2A-12
2A-13	Kitchen/Living/Hall Lighting	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	2A-14
2A-15	Hood/Microwave	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	2A-16
2A-17	Clothes Washer Receptacle	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	2A-18
2A-19	Bathroom	1/2"C,1#12,#12N,#12G	20	G	7.9 A --			--	Surge Protection	2A-20
2A-21	Bedroom 1	1/2"C,1#12,#12N,#12G	20	A	7.9 A --			--	Surge Protection	2A-22
2A-23	Bedroom 2	1/2"C,1#12,#12N,#12G	20	A	7.9 A --			--	Surge Protection	2A-24

**Designation: 1B**  
 Installed Location: 1 Bedroom Unit (1B)  
 Voltage: 120/208 1PH 3W-1Ph-3W  
 Mounting: Flush  
 Enclosure: NEMA 1

Bus Amps: 125  
 MCB Amps: MLO  
 Features & Modifications: -

SCCR/AIC: 10.0 kA  
 Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	FN	Trip (A)	Description	Ckt
1B-1	Kitchen Receptacles	1/2"C,1#12,#12N,#12G	20	GA	4.5 A 0.0 A	8.7 A 0.0 A		20	1/2"C,2#12,#12G	1B-2
1B-3	Kitchen Receptacles	1/2"C,1#12,#12N,#12G	20	GA	0.0 A 40...	4.2 A 40...	G	60	1"C,2#4,#4N,#10G	1B-4
1B-5	Spare	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	3/4"C,2#4,#10G	1B-6
1B-7	Dishwasher	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	1/2"C,2#10,#10G	1B-8
1B-9	Refrigerator	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	1/2"C,2#10,#10G	1B-10
1B-11	Living Room Receptacles	1/2"C,1#12,#12N,#12G	20	A	1.7 A 21...	2.1 A 21...		30	1/2"C,2#10,#10G	1B-12
1B-13	Kitchen/Living/Hall Lighting	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	1B-14
1B-15	Hood/Microwave	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	1B-16
1B-17	Clothes Washer Receptacle	1/2"C,1#12,#12N,#12G	20	G	7.9 A --			--	Surge Protection	1B-18
1B-19	Bathroom	1/2"C,1#12,#12N,#12G	20	G	7.9 A --			--	Surge Protection	1B-20
1B-21	Bedroom	1/2"C,1#12,#12N,#12G	20	A	7.9 A --			--	Surge Protection	1B-22
1B-23	Space	--	--	--	--	--	--	--	Surge Protection	1B-24

**Panelboard: H1**  
 Location: Mech 107  
 Supply: SDS  
 Mounting: Surface  
 Enclosure: NEMA 1  
 Features & Modifications: -

Voltage: 208 V, 3 Ø, 4 W  
 Bus Rating: 600 A  
 Neutral: 100%  
 Mains Type: MLO  
 Mains Rating: 600 A  
 Mains FN/Note: -  
 SCCR: 22 kA

Ckt	Description	Frame (A)	Trip (A)	Poles	FN/Note	Load
H1:1	Panel P1	225	225	3		44842
H1:2	Panel P2	100	100	3		10225
H1:3	Panel P3	100	100	3		38713
H1:4	Elevator	300	300	3		81000
H1:5	Space	--	--	1		--
H1:6	Space	--	--	1		--

**Load Summary**

Load Classification	Connected	Factor	Demand	Panel Totals
Motor	387 VA	107.69%	416 VA	Connected Load: 175 kVA
Other	2790 VA	100.00%	2790 VA	Connected Current: 485 A
Lighting - Interior	6122 VA	125.00%	7653 VA	Demand Load: 185 kVA
Receptacle - General	18000 VA	77.78%	14000 VA	Demand Current: 512 A
Electric Water Heating	4500 VA	125.00%	5625 VA	Non-Coincident: 49.1 A
Electric Heat	44300 VA	125.00%	55375 VA	Total Est. Demand: 463.2 A
Elevator	81000 VA	100.00%	81000 VA	
Cooling	17680 VA	100.00%	17680 VA	

Notes:  
 PROVIDE WITH INTEGRAL SURGE PROTECTION DEVICE PER SPECIFICATIONS

**Designation: 2B**  
 Installed Location: 2 Bedroom Unit (2B)  
 Voltage: 120/208 1PH 3W-1Ph-3W  
 Mounting: Flush  
 Enclosure: NEMA 1

Bus Amps: 125  
 MCB Amps: MLO  
 Features & Modifications: -

SCCR/AIC: 10.0 kA  
 Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	FN	Trip (A)	Description	Ckt
2B-1	Kitchen Receptacles	1/2"C,1#12,#12N,#12G	20	GA	8.7 A 0.0 A	3.0 A 0.0 A		20	1/2"C,2#12,#12G	2B-2
2B-3	Kitchen Receptacles	1/2"C,1#12,#12N,#12G	20	GA	0.0 A 40...	4.2 A 40...	G	60	1"C,2#4,#4N,#10G	2B-4
2B-5	Spare	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	3/4"C,2#4,#10G	2B-6
2B-7	Dishwasher	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	1/2"C,2#10,#10G	2B-8
2B-9	Refrigerator	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 40...	10... 40...	G	60	1/2"C,2#10,#10G	2B-10
2B-11	Living Room Receptacles	1/2"C,1#12,#12N,#12G	20	A	1.7 A 21...	2.1 A 21...		30	1/2"C,2#10,#10G	2B-12
2B-13	Kitchen/Living/Hall Lighting	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	2B-14
2B-15	Hood/Microwave	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	2B-16
2B-17	Clothes Washer Receptacle	1/2"C,1#12,#12N,#12G	20	GA	1.5 A 11...	2.4 A 11...		20	1/2"C,2#10,#10G	2B-18
2B-19	Bathroom	1/2"C,1#12,#12N,#12G	20	G	7.9 A --			--	Surge Protection	2B-20
2B-21	Bedroom 1	1/2"C,1#12,#12N,#12G	20	A	7.9 A --			--	Surge Protection	2B-22
2B-23	Bedroom 2	1/2"C,1#12,#12N,#12G	20	A	7.9 A --			--	Surge Protection	2B-24

**Designation: P1**  
 Installed Location: Mech 107  
 Voltage: 208Y120 3PH 4W-3Ph-4W  
 Mounting: Surface  
 Enclosure: NEMA 1

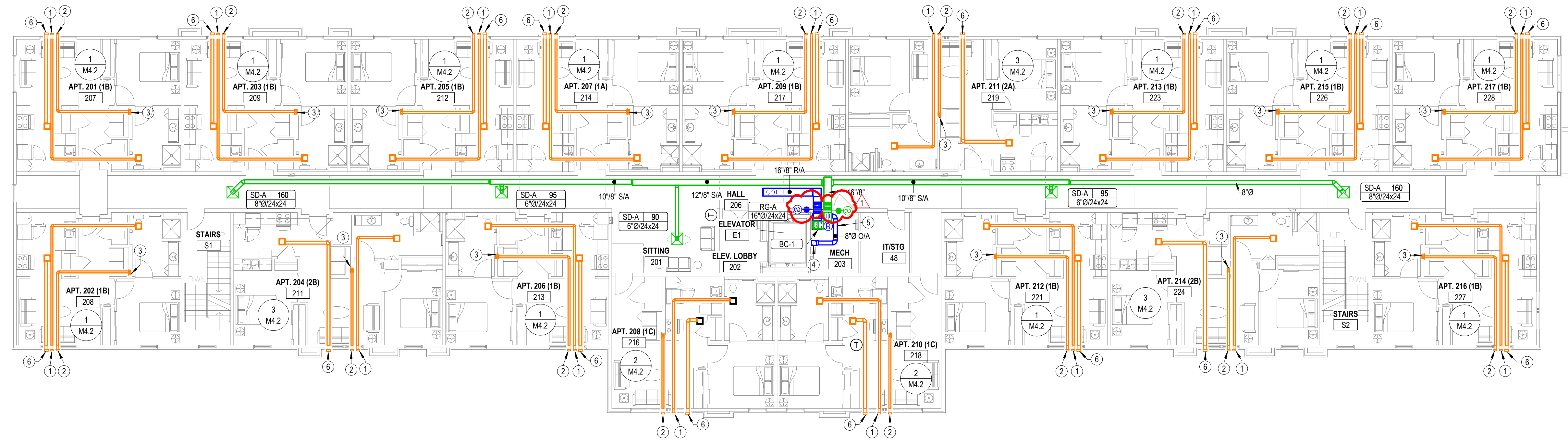
Bus Amps: 225  
 MCB Amps: MLO  
 Features & Modifications: PROVIDE INTEGRAL SURGE PROTECTION

SCCR/AIC: 22.0 kA  
 Mains FN/Note: -

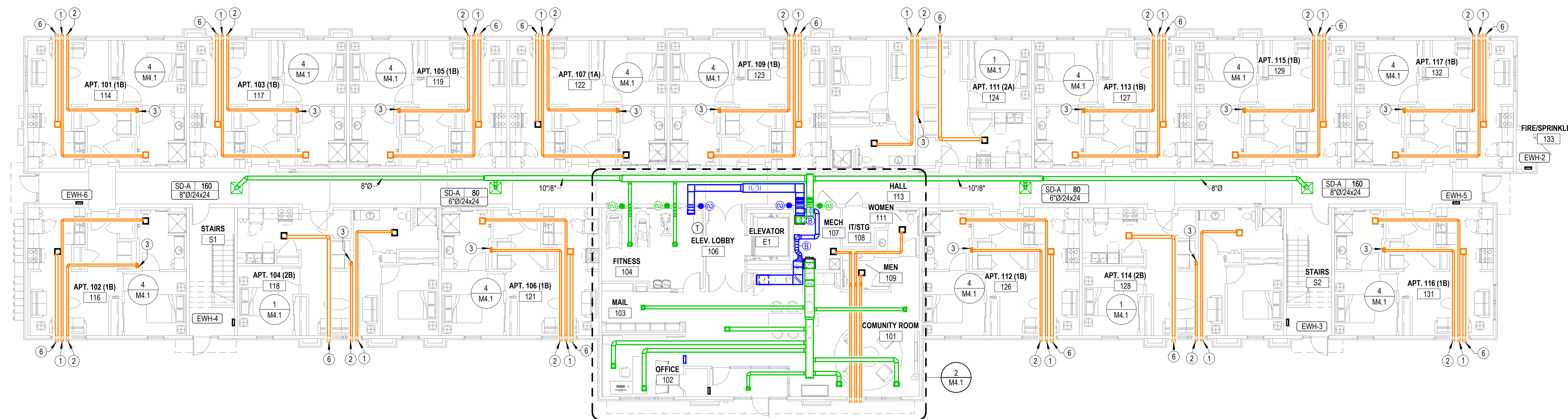
Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Description	Ckt
P1-1	LTG - 101-111	1/2"C,1#12,#12N,#12G	20	12	54...				20	1/2"C,1#12,#12N,#12G	P1-2
P1-3	LTG - Elevator Pit	1/2"C,1#12,#12N,#12G	20		24... 18...				20	1/2"C,1#12,#12N,#12G	P1-4
P1-5	LTG - Parking Lot	3/4"C,1#6,#6N,#6G	20		10... 18...				20	1/2"C,1#12,#12N,#12G	P1-6
P1-7	LTG - Landscape	3/4"C,1#12,#12N,#12G	20	14	18...				20	1/2"C,1#12,#12N,#12G	P1-8
P1-9	LTG - Monument Sign	3/4"C,1#12,#12N,#12G	20		22... 18...				20	1/2"C,1#12,#12N,#12G	P1-10
P1-11	LTG - Exterior Entries	1/2"C,1#12,#12N,#12G	20	18	18... 18...				20	1/2"C,1#12,#12N,#12G	P1-12
P1-13	LTG - Facade	1/2"C,1#12,#12N,#12G	20	48	36...				20	1/2"C,1#12,#12N,#12G	P1-14
P1-15	LTG - 1st Floor Hall	1/2"C,1#12,#12N,#12G	20	72	36...						



- NOTES BY SYMBOL**
- 1 ROUTE 4"Ø EXHAUST DUCT TO MANUFACTURER'S WALL CAP WITH BACKDRAFT DAMPER AND BIRD SCREEN, COORDINATE FINAL LOCATION WITH ARCHITECT.
  - 2 4"Ø DRYER DUCT. SEE ENLARGED PLANS FOR MORE INFORMATION. COORDINATE FINAL LOCATION OF WALL CAP WITH ARCHITECT.
  - 3 PROVIDE UL LISTED DRYER BOX EQUAL TO IN-O-VATE TECHNOLOGIES IN WALL INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND ROUTE 4"Ø DRYER EXHAUST DUCT TO WALL CAP WITH BACKDRAFT DAMPER. SEE OVERALL MECHANICAL PLANS FOR UNIT SPECIFIC ROUTING. MAXIMUM ALLOWABLE EQUIVALENT DUCT LENGTH = 35'. UTILIZE LONG RADIUS SMOOTH ELBOWS WHERE REQUIRED. MAXIMUM EQUIVALENT DUCT LENGTH MAY BE INCREASED WHERE DRYER MANUFACTURER'S INSTALLATION INSTRUCTIONS ALLOW, AND DOCUMENTATION IS PROVIDED TO CODE OFFICIAL PRIOR TO CONCEALMENT INSPECTION. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE PERMANENT LABEL IDENTIFYING EQUIVALENT LENGTH OF DRYER DUCT INSTALLED PER IMC 504.
  - NOTE: ANNULAR SPACE AROUND DUCT IS TO BE SEALED AT ALL PENETRATIONS OF FLOORS AND CEILINGS WITH U.L. LISTED FIRE STOPPING SYSTEM.
  - 4 PROVIDE FIRE DAMPER WHERE O.A. DUCT PENETRATES RATED CEILING.
  - 5 CONNECT O.A. DUCT TO RISER AS HIGH AS POSSIBLE AND ROUTE TO RETURN AIR DUCT WORK AND BALANCE AS FOLLOWS:  
 1ST FLOOR BC-1: 155 CFM  
 1ST FLOOR BC-2: 135 CFM  
 2ND FLOOR BC-1: 135 CFM  
 3RD FLOOR BC-1: 125 CFM
  - 6 ROUTE 6"Ø EXHAUST DUCT TO MANUFACTURER'S WALL CAP WITH BACKDRAFT DAMPER AND BIRD SCREEN, COORDINATE FINAL LOCATION WITH ARCHITECT.



2 SECOND FLOOR HVAC PLAN  
 3/32" = 1'-0"



1 LEVEL 1 HVAC PLAN  
 3/32" = 1'-0"

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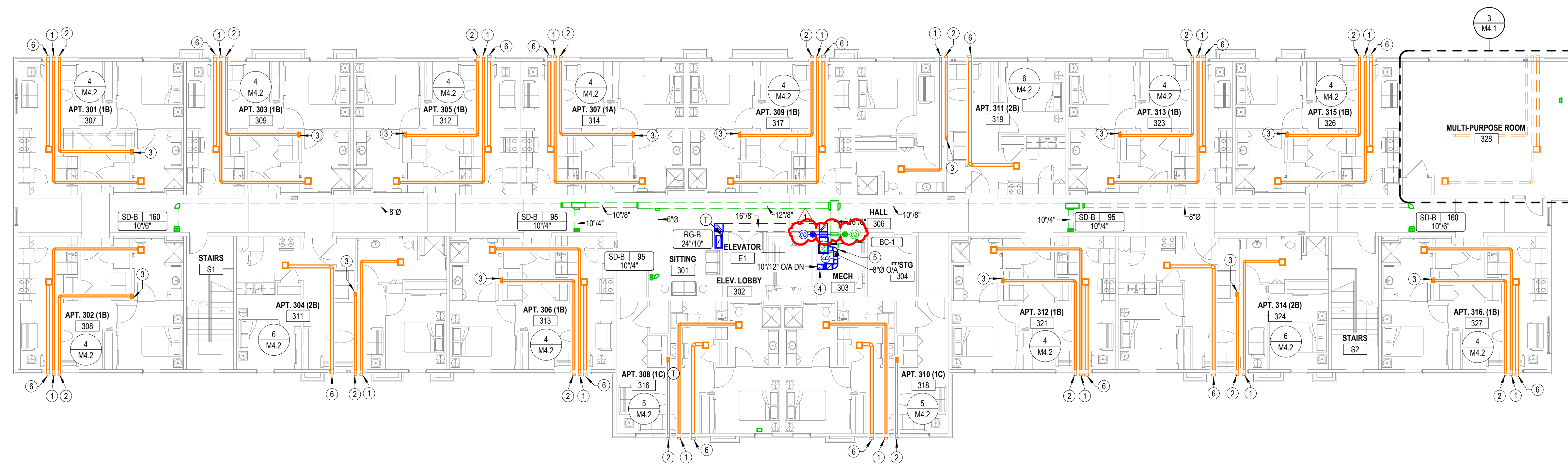
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M1.1

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- NOTES BY SYMBOL**
- 1 ROUTE 4"Ø EXHAUST DUCT TO MANUFACTURER'S WALL CAP WITH BACKDRAFT DAMPER AND BIRD SCREEN, COORDINATE FINAL LOCATION WITH ARCHITECT.
  - 2 4"Ø DRYER DUCT. SEE ENLARGED PLANS FOR MORE INFORMATION. COORDINATE FINAL LOCATION OF WALL CAP WITH ARCHITECT.
  - 3 PROVIDE UL LISTED DRYER BOX EQUAL TO IN-O-VATE TECHNOLOGIES IN WALL INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. AND ROUTE 4"Ø DRYER EXHAUST DUCT TO WALL CAP WITH BACKDRAFT DAMPER. SEE OVERALL MECHANICAL PLANS FOR UNIT SPECIFIC ROUTING. MAXIMUM ALLOWABLE EQUIVALENT DUCT LENGTH = 35'. UTILIZE LONG RADIUS SMOOTH ELBOWS WHERE REQUIRED. MAXIMUM EQUIVALENT DUCT LENGTH MAY BE INCREASED WHERE DRYER MANUFACTURER'S INSTALLATION INSTRUCTIONS ALLOW, AND DOCUMENTATION IS PROVIDED TO CODE OFFICIAL PRIOR TO CONCEALMENT INSPECTION. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE PERMANENT LABEL IDENTIFYING EQUIVALENT LENGTH OF DRYER DUCT INSTALLED PER IMC 504.
- NOTE: ANNULAR SPACE AROUND DUCT IS TO BE SEALED AT ALL PENETRATIONS OF FLOORS AND CEILINGS WITH U.L. LISTED FIRE STOPPING SYSTEM.
- 4 PROVIDE FIRE DAMPER WHERE O.A. DUCT PENETRATES RATED CEILING.
  - 5 CONNECT O.A. DUCT TO RISER AS HIGH AS POSSIBLE AND ROUTE TO RETURN AIR DUCT WORK AND BALANCE AS FOLLOWS:  
 1ST FLOOR BC-1: 155 CFM  
 1ST FLOOR BC-2: 135 CFM  
 2ND FLOOR BC-1: 135 CFM  
 3RD FLOOR BC-1: 125 CFM
  - 6 ROUTE 6"Ø EXHAUST DUCT TO MANUFACTURER'S WALL CAP WITH BACKDRAFT DAMPER AND BIRD SCREEN, COORDINATE FINAL LOCATION WITH ARCHITECT.



1 THIRD FLOOR HVAC PLAN  
 M1.2 3/32" = 1'-0"



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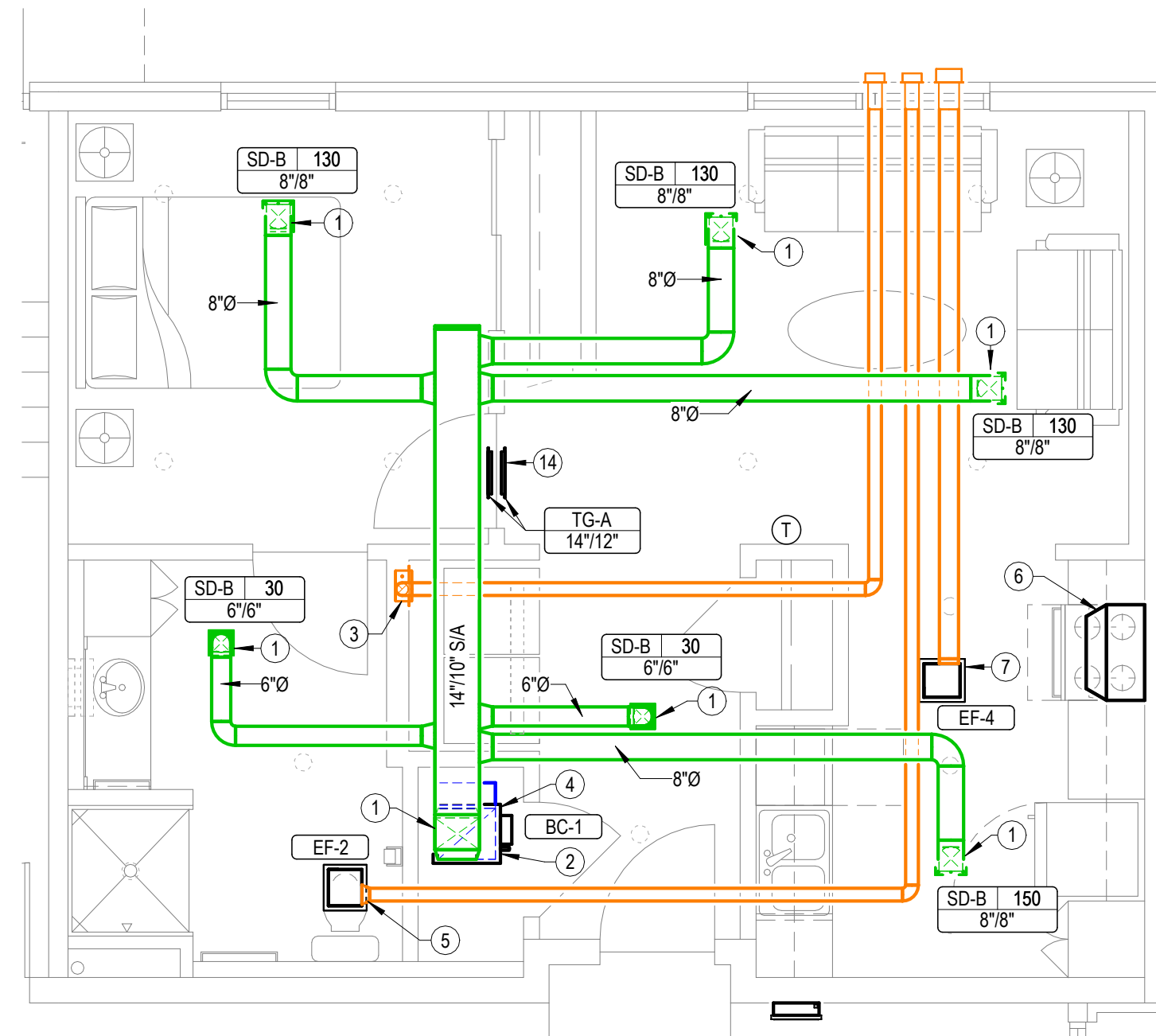
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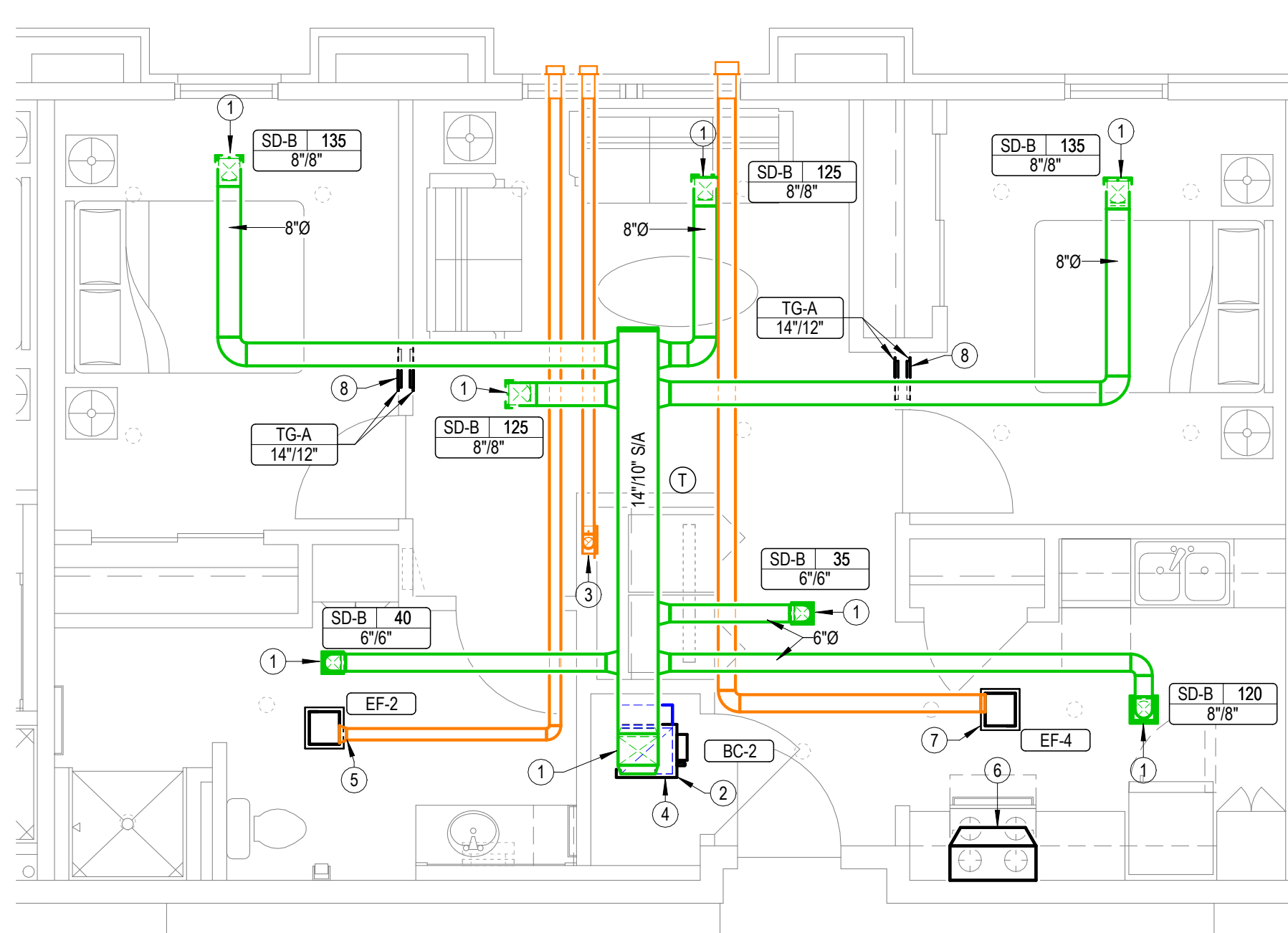
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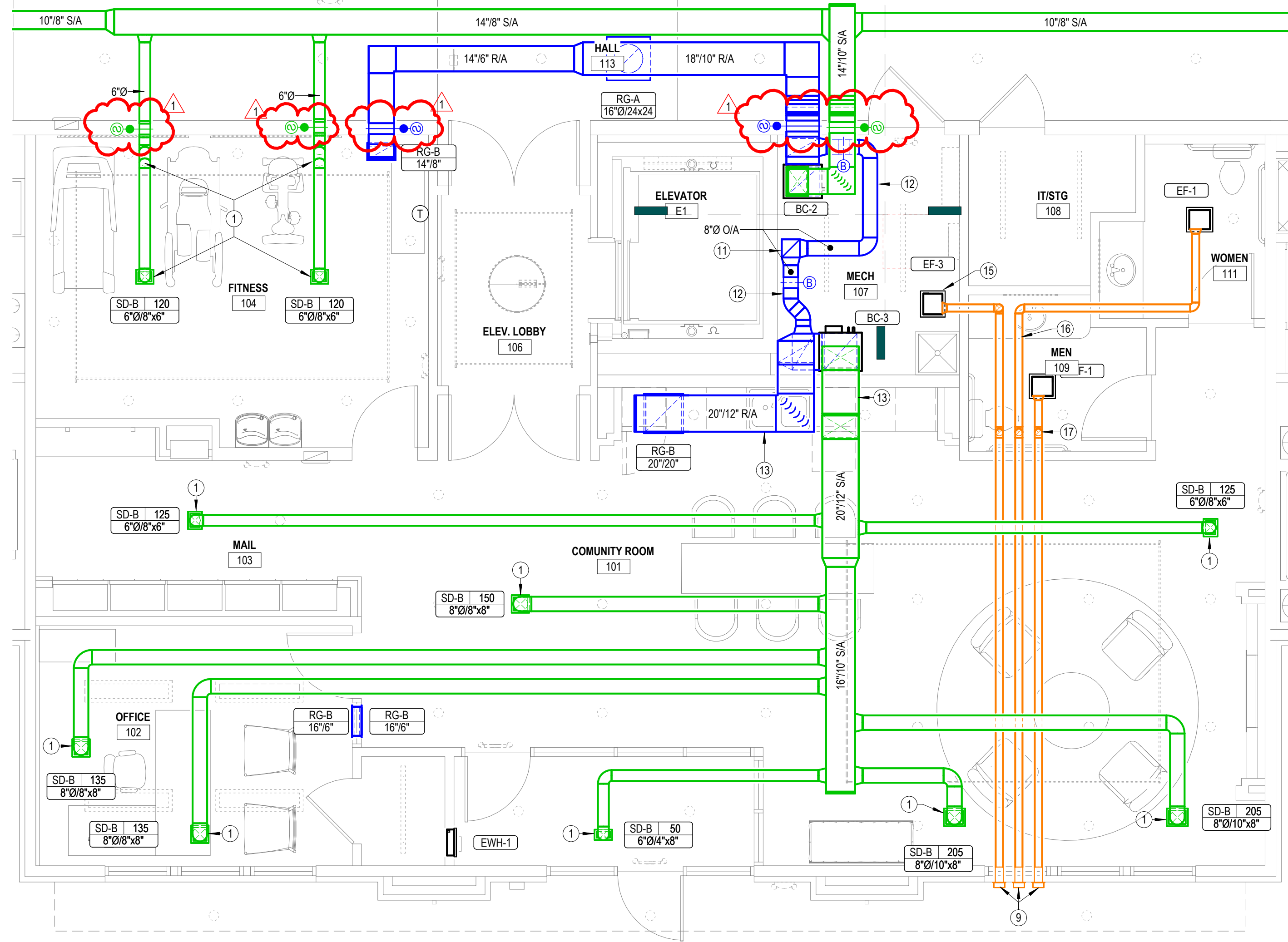
- NOTES BY SYMBOL**
- 1 PROVIDE ALL SUPPLY AIR PENETRATIONS OF RATED CEILING MEMBRANE WITH U.L. LISTED RADIATION DAMPER, GREENHECK CRD OR EQUIVALENT.
  - 2 ROUTE REFRIGERANT PIPING FROM BLOWER COIL TO HEAT PUMP. CONCEAL PIPING IN WALLS AND ABOVE CEILINGS. SEE ME1.2 FOR HEAT PUMP LOCATIONS.
  - 3 SEE M1.1 AND M1.2 FOR DRYER EXHAUST DUCT ROUTING.
  - 4 PROVIDE AUXILIARY DRAIN PAN BELOW BLOWER COIL, AND PIPE OVERFLOW DRAIN TO FLOOR DRAIN.
  - 5 SEE M1.1 AND M1.2 FOR BATHROOM EXHAUST DUCT ROUTING.
  - 6 RECIRCULATING RANGE HOOD BY OTHERS.
  - 7 TWO SPEED KITCHEN EXHAUST FAN UTILIZED AS VENTILATION FAN PER REQUIREMENTS OF IMC AND ENERGY STAR. FAN SHALL OPERATE CONTINUOUSLY AT AIRFLOWS INDICATED BELOW. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE OVERRIDE SWITCH TO ALLOW OCCUPANT TO INCREASE FAN AIRFLOW TO 100 CFM FOR INTERMITTENT OPERATIONS.  
 1 BR UNITS: 35 CFM  
 2 BR UNITS: 50 CFM
  - 8 MOUNT TRANSFER GRILLE IN BEDROOM 6" BELOW CEILING AND MOUNT TRANSFER GRILLE ON OPPOSITE SIDE OF WALL 6" ABOVE FINISHED FLOOR. LINE STUD CAVITY WITH SHEET METAL.
  - 9 ROUTE 4"Ø EXHAUST DUCT TO MANUFACTURER'S WALL CAP WITH BACKDRAFT DAMPER AND BIRD SCREEN, COORDINATE FINAL LOCATION WITH ARCHITECT.
  - 10 ROUTE 8" DIA. O.A. DUCT UP TO ROOF JACK. SEE ME1.2 FOR CONTINUATION. BALANCE O.A. TO 140 CFM.
  - 11 PROVIDE FIRE DAMPER WHERE O.A. DUCT PENETRATES RATED CEILING.
  - 12 CONNECT O.A. DUCT TO RISER AS HIGH AS POSSIBLE AND ROUTE TO RETURN AIR DUCT WORK AND BALANCE AS FOLLOWS:  
 1ST FLOOR 'BC-1': 155 CFM  
 1ST FLOOR 'BC-2': 135 CFM  
 2ND FLOOR 'BC-1': 135 CFM  
 3RD FLOOR 'BC-1': 125 CFM
  - 13 ROUTE DUCTWORK IN SOFFIT ABOVE COUNTERTOP. COORDINATE WITH STRUCTURAL ELEMENTS IN THIS AREA.
  - 14 MOUNT TRANSFER GRILLES CENTERED ABOVE DOOR ON BOTH SIDES OF WALL. CONNECT GRILLES WITH SHEET METAL DUCTWORK.
  - 15 INSTALL EXHAUST FAN BELOW CEILING TO ALLOW DUCTWORK TO BE ROUTED ABOVE RESTROOM CEILING AND BELOW BEAM.
  - 16 ROUTE EXHAUST DUCTWORK BELOW BEAM IN THIS AREA.
  - 17 ELBOW EXHAUST DUCT UP INTO JOIST SPACE. PROVIDE U.L. LISTED FIRE STOPPING SYSTEM EQUAL TO HILTI F-C-7086.



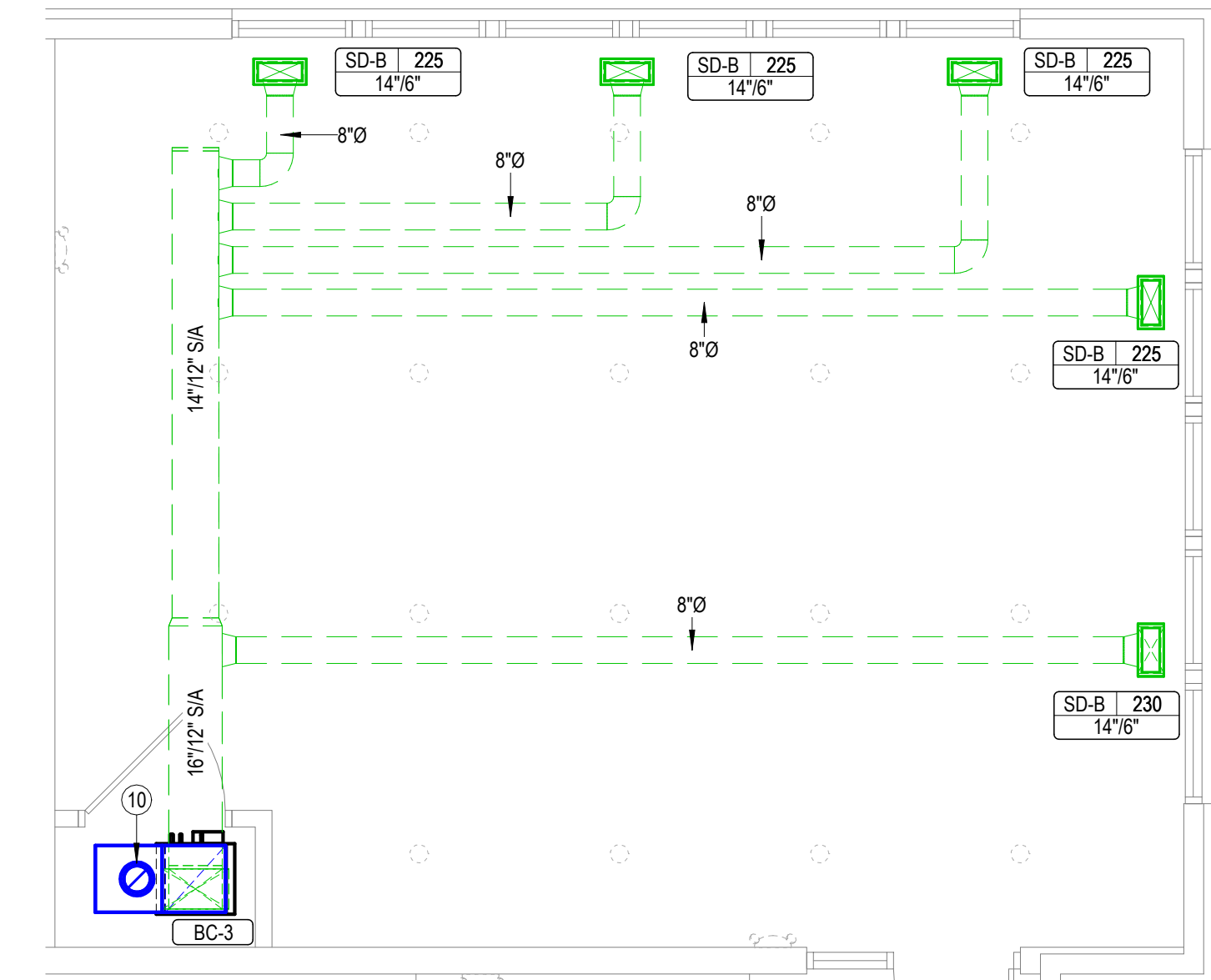
4 FIRST FLOOR 1A AND 1B ENLARGED HVAC PLAN  
 M4.1 1/4" = 1'-0"



1 FIRST FLOOR 2A AND 2B ENLARGED HVAC PLAN  
 M4.1 1/4" = 1'-0"



2 FIRST FLOOR ENLARGED COMMON AREA HVAC PLAN  
 M4.1 1/4" = 1'-0"



3 MULTIPURPOSE ROOM HVAC PLAN  
 M4.1 1/4" = 1'-0"

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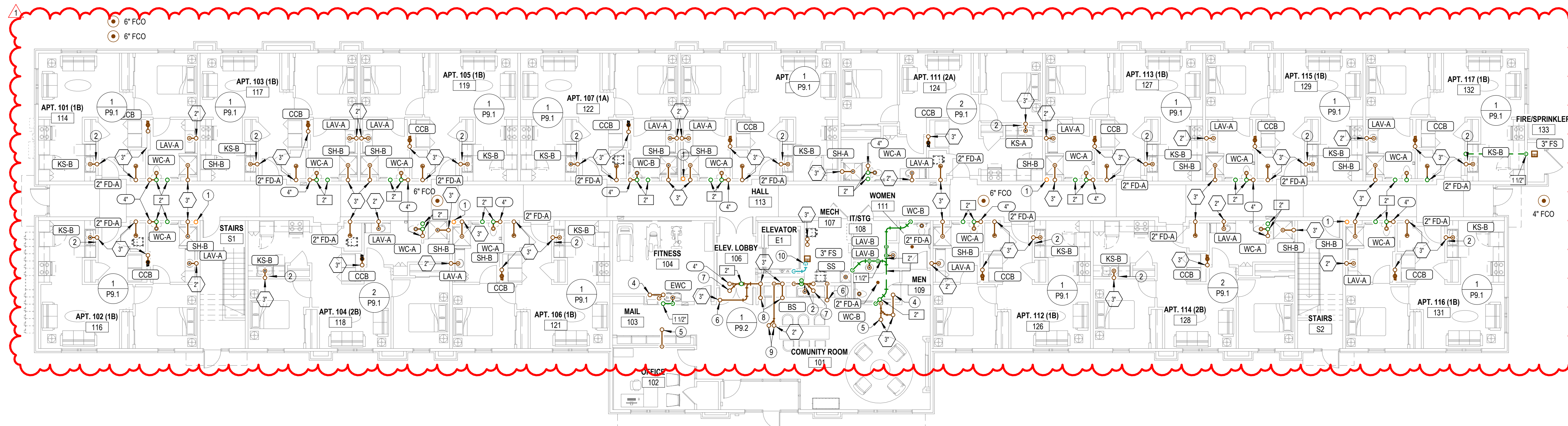
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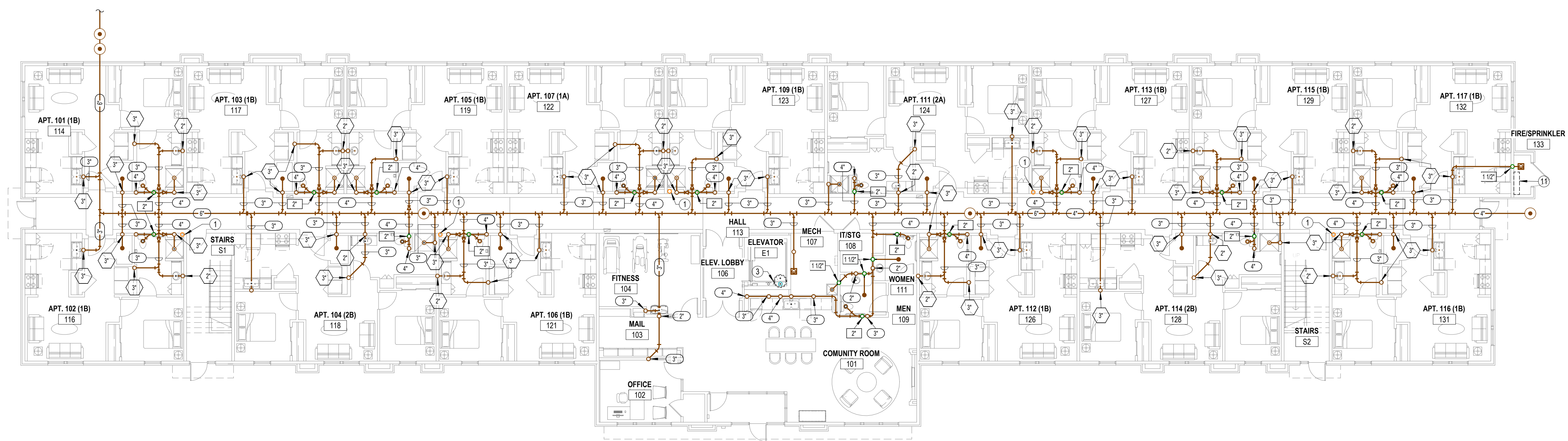


PLUMBING SIZING SYMBOLS	
⊗ <sup>x</sup>	DRAIN (X = SIZE)
⊗ <sup>x</sup>	VENT (X = SIZE)
⊗ <sup>x</sup>	WASTE STACK VENT (X = SIZE)

- NOTES BY SYMBOL**
- 4" PVC PIPE FOR RADON SYSTEM. COORDINATE EXACT REQUIREMENTS WITH ARCHITECT.
  - PROVIDE INDIRECT CONNECTION AT GARBAGE DISPOSER AND CONNECT DISHWASHER. ROUTE DRAIN FROM DISHWASHER AT BACK OF CABINERY. COORDINATE EXACT ROUTING WITH G.C.
  - ELEVATOR PIT SLUMP PUMP. SEE 3.P6.1 FOR MORE INFORMATION.
  - UP TO FLOOR DRAIN.
  - UP TO CLOTHES WASHER CONNECTION BOX.
  - UP TO KITCHEN SINK.
  - UP TO WATER CLOSET.
  - UP TO SHOWER.
  - UP TO LAVATORY.
  - ROUTE 2" DISCHARGE FROM SLUMP PUMP TO FLOOR SINK AS SHOWN ON PLANS. TERMINATE WITH CODE REQUIRED AIR GAP DIRECTLY ABOVE FLOOR SINK.
  - ROUTE DRAIN FROM BACKFLOW PREVENTER TO SPILL DIRECTLY INTO FLOOR SINK.



2 FIRST FLOOR WASTE AND VENT PLAN  
 P1.1 3/32" = 1'-0"



1 UNDERFLOOR WASTE AND VENT PLAN  
 P1.1 3/32" = 1'-0"

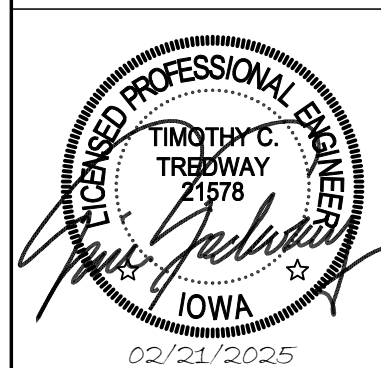


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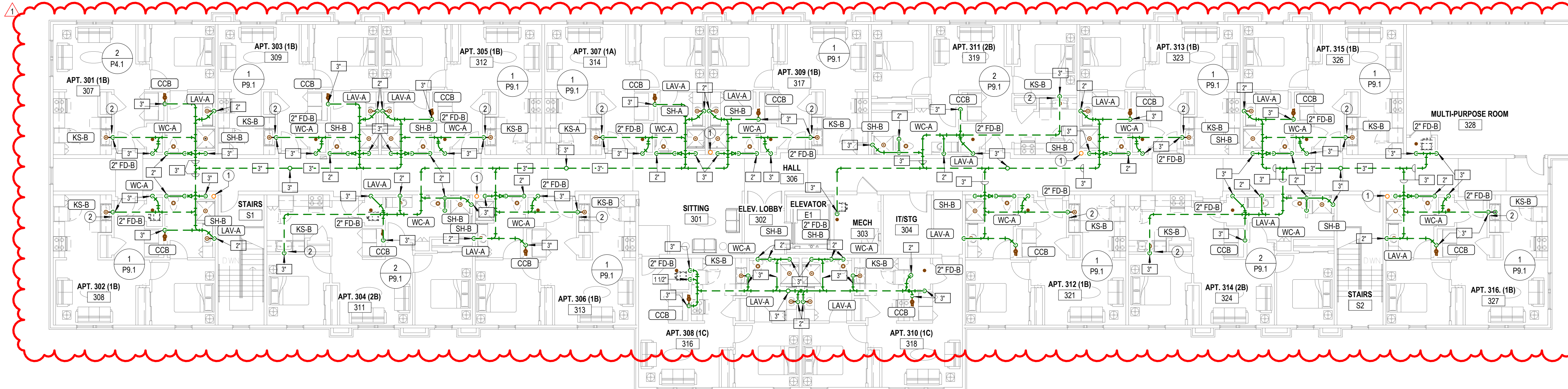
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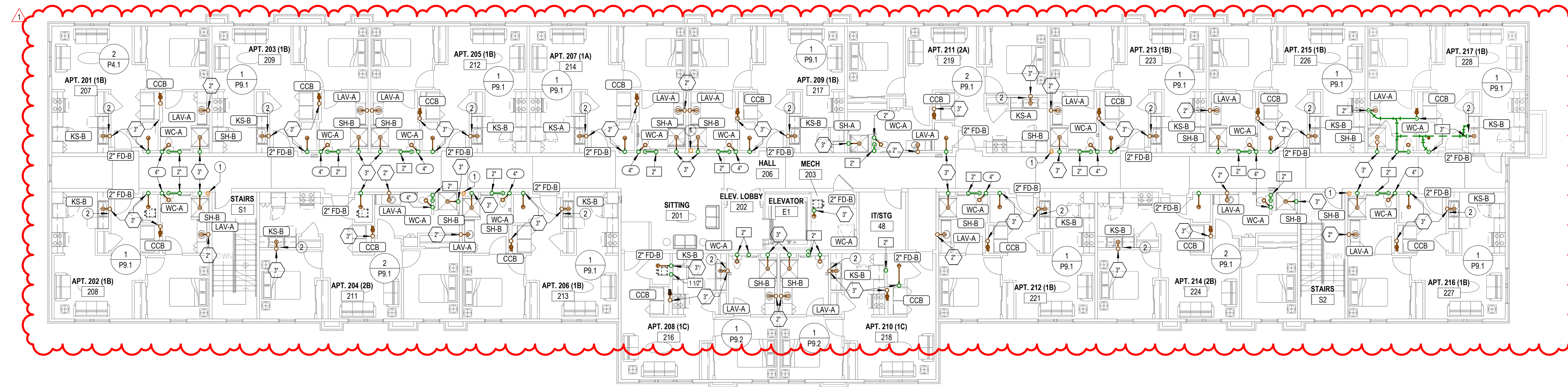
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- NOTES BY SYMBOL**
- 1 4" PVC PIPE FOR RADON SYSTEM. COORDINATE EXACT REQUIREMENTS WITH ARCHITECT.
  - 2 PROVIDE INDIRECT CONNECTION AT GARBAGE DISPOSER AND CONNECT DISHWASHER. ROUTE DRAIN FROM DISHWASHER AT BACK OF CABINTRY. COORDINATE EXACT ROUTING WITH G.C.



2 THIRD FLOOR WASTE AND VENT PLAN  
 3/32" = 1'-0"



1 SECOND FLOOR WASTE AND VENT PLAN  
 3/32" = 1'-0"

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Mark	Manufacturer	Model	Specification	Notes
HWH-A	AO Smith	EETU	40 Gallon electric water heater, 0.93 UEF, 4500 watts, 208v heating element, 21 GPH recovery @ 90°F temp rise. Supplied with temperature and pressure relief valve and brass drain valve. Water heater shall have temperature controls set to limit supply temperature to 120°F or less.	---
HWH-B	AO Smith	EJCS-20	20 Gallon electric water heater, 2500 watts, 120v heating element, 11 GPH recovery @ 90°F temp rise. Supplied with temperature and pressure relief valve and brass drain valve. Water heater shall have temperature controls set to limit supply temperature to 120°F or less.	1
HWP	Bell & Gossett	ECOCIRC e3-4V	Circulation pump, bronze body, 10 GPM @ 10' head, 120 VAC. Provide clamp-on aquastat for pump control.	2

GENERAL:  
 Provide fixtures with all trim necessary for complete installation.  
 NOTES:  
 1. Provide wall hung platform for water heater equal to Holdrite #60SWHP-W. Coordinate exact location and mounting with height with architect.  
 2. Pump shall have controls to prevent startup within 5 minutes from the end of the previous heating cycle. hot water recirculation system shall meet all requirements of 2015 IECC.

MARK	MANUFACTURER	MODEL	PRODUCT DESCRIPTION	Trim Manufacturer MIN	ROUGH-IN SIZES DRAIN VENT WATER	COLD	HOT	ADA COMPLIANT	NOTES
BS	Blanco	443047	Single compartment stainless steel sink, self rimming, 23"x16"x5.5"D inside, faucet hies as required. Single handle pull-down kitchen sink faucet, and basket strainer.	1980ZZ-SP-DST / Spot Shield Stainless	2" 1 1/2" 1/2"	Yes	Yes	No	1,2,3,4,5
CCB	IPS Corp.	W4700	Washing machine box with 2" PVC/ABS drain coupling and knockout test cap. Two, 1/4 turn adaptor ball valves, and sweat connection.		2" 2" 1/2"	Yes	Yes		1
EWC	Elkay	EMABFTLDDWSLK	Dual Height, self-contained water cooler with stainless steel basin, front and side push bar actuator, lead-free, 120v. Provide with E2700 bottle filling station, and model 983130		2" 1 1/2" 1/2"	Yes	No	Yes	1
FD-A	Sioux Chief	833	Adjustable floor drain with nickel bronze strainer. Provide Proset trap protection device.		2" 2"				
FD-B	Sioux Chief	822	Adjustable floor drain with deck flange and nickel bronze strainer. Provide Proset trap protection device.		2" 2"				
FS	Watts	Fs-140	12" Square X 6" Deep Sanitary Floor Sink With White Porcelain Enamel Coated Interior, Loose Set Porcelain Enamel Coated Cast Iron Grate, Aluminum Dome Bottom Strainer, And Nylon Mesh Outlet.		3" 2"				
ICB	IPS Corp.	FRMIB12ABDS	Fire rated ice maker connection box with 1/4 turn ball valve, and 1/2" sweat copper connection.		2" 0" 1/2"	Yes	No		
KS-A	Kohler	DL-2233-A-GR	Two compartment, 20 GA stainless steel sink, self rimming, 14" x 15" x 8"D inside, fully undercoated, faucet holes as required, and drain holes center rear. Single handle kitchen sink faucet with hose spray, and basket strainer. IN-SINK-ERATOR: "Badger 5" garbage disposal, 1/2 hp, 120V cord and plug connected.	Delta / 1980ZZ-SP-DST / Spot Shield Stainless	2" 1 1/2" 1/2"	Yes	Yes	Yes	1,2,3,4,5
KS-B	Kohler	DL-2233-A-GR	Two compartment 20 GA stainless steel sink, self rimming, 14" x 15" x 8"D inside, fully undercoated, faucet hies as required. Single handle kitchen sink faucet with hose spray, and basket strainer. IN-SINK-ERATOR: "Badger 5" garbage disposal, 1/2 hp, 120V cord and plug connected.	Delta / 1980ZZ-SP-DST / Spot Shield Stainless	2" 1 1/2" 1/2"	Yes	Yes	No	1,2,3,4,5
LAV-A	American Standard	0610.000.020	20"Wx16" Under mount, vitreous china lavatory. Single handled 1.2 GPM faucet. Provide with pop-drain, and front overflow drain.	Delta / 559HAR-SS-DST / Brilliance Stainless	2" 1 1/2" 1/2"	Yes	Yes	Yes	1,2,3,5
LAV-B	American Standard	0610.000.020	20"Wx16" Under mount, vitreous china lavatory. Single handled 1.2 GPM faucet. Provide with grid drain, front overflow drain, point of use thermostatic mixing valve, and chrome plated or braided stainless steel domestic water supply lines.	Moen / 84774BL / Matte Black	2" 1 1/2" 1/2"	Yes	Yes	Yes	1,2,3,5
RH	Woodford	RHY2-MS	Non-Freeze Type Roof Hydrant, With Asse 1052 Double Check Backflow Preventer, Valve On The Inside Of The Roof, Hose Connection With Backflow Preventer, And Clocking Handle On The Outside Of The Roof. All Exposed Parts Shall Be Painted. Make Arrangements With The General Contractor To Provide The Necessary Support Of Roof. Provide Shutoff Valve In Accessible Location And Route Drain Pipe To Nearest Floor Drain.			1"	Yes	No	6
SH-A	Aqua Bath CO.	C4136BF-OT-FUS 3/4"	Center drain option, reinforced fiberglass ADA base model shower, 36"Wx36"Dx80"H with integral soap/shelley shelves in accordance with ADA requirements, right or left hand rough-in as required, white finish. Provide with collapsible dam and backing for grab bars and seat to be added at tenant's request. Entire assembly shall have nickel finish. Max 2.0 GPM	Kohler / K-8304-KS pressure balancing valve with integral temperature limits and stops / K-TS10583-4 valve trim / K-22173 wall supply elbow / K-9514 60" hose / K-22163 hand shower / K-8524 and K-349 slide bar.	2" 1 1/2" 1/2"	Yes	Yes	Yes	1
SH-B	Aquatic	13636FHARRF	Cast acrylic shower, 36" square inside, rear molded soap shelf, provide with FHA backing Max 2.0 GPM	Kohler / K-8304-KS pressure balancing valve with integral temperature limits and stops / K-TS10583-4 valve trim	2" 1 1/2" 1/2"	Yes	Yes	No	
SS	Fiat	MSB-2424	One piece molded stone mop basin, 24" square, stainless steel integral drain body with caulk connection, stainless steel wall guards. Faucet with hose thread outlet, vacuum breaker, pail hook, wall brace, and metal lever handles.	Chicago Faucets / 897-Cp	3" 1 1/2" 3/4"	Yes	Yes	No	4
WC-A	Kohler	5296 Highline	Two piece, 12" rough-in, elongated 16-1/2" high bowl, siphon jet flushing action, actuator located on open side of room. Elongated closed front seat and cover. Provide with 1/4" brass ball valve at wall connection.	Kohler / K-5588	4" 2" 1/2"	Yes	No	No	1
WC-B	Kohler	5296 Highline	Two piece, 12" rough-in, elongated 16-1/2" high bowl, siphon jet flushing action, actuator located on open side of room. Elongated closed front seat. Provide with 1/4" brass ball valve at wall connection.	Kohler / K-5588	4" 2" 1/2"	Yes	No	Yes	1
WH	Woodford	67	Non-Freeze Type Wall Hydrant, With Double Check Backflow Preventer, Valve On The Inside Of The Wall, Spout With Backflow Preventer, And Loose Key Socket On The Outside Of The Wall. Make Arrangements With The General Contractor To Provide The Necessary Access In The Wall. Where A Riser To A Wall Hydrant Occurs In An Outside Wall The Contractor Shall Insulate The Chase With 2" Styrofoam Insulation On All Sides Of The Chase, Except The Inside Wall Of The Chase. Provide Shutoff Valve In Accessible Location.						

GENERAL:  
 Provide fixtures with all trim necessary for complete installation.  
 NOTES:  
 1. All toilets, lavatory faucets, showerheads, and kitchen faucets shall have EPA's WaterSense label.  
 2. In areas open to the public, fixture and installation to meet requirements of Americans with Disabilities Act. In apartments, fixture and installation to meet requirements of the Fair Housing Act.  
 3. Provide Dearborn supplies with stops and escutcheon plate, 1-1/4" cast brass p-trap.  
 4. Insulate water and waste piping below sink. Utilize insulation kit equivalent to LavGuard by Trueborn. Provide Plumberex model #3071WD-N waste disposal cover.  
 5. Fixture selected by interior designer. Verify finish and selections with interior designer.  
 6. Transition from 1/8" drain tubing to 1/2" PVC drain and terminate with ar gap at nearest tenant floor drain.

