

# FOOD BANK

## OF NORTHERN NEVADA

# Partial Tenant Improvement

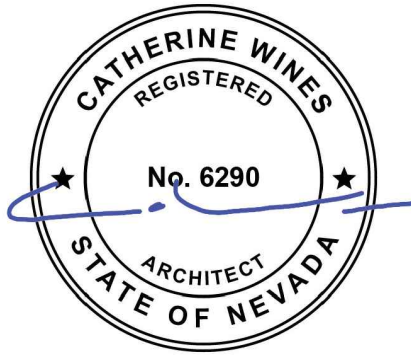
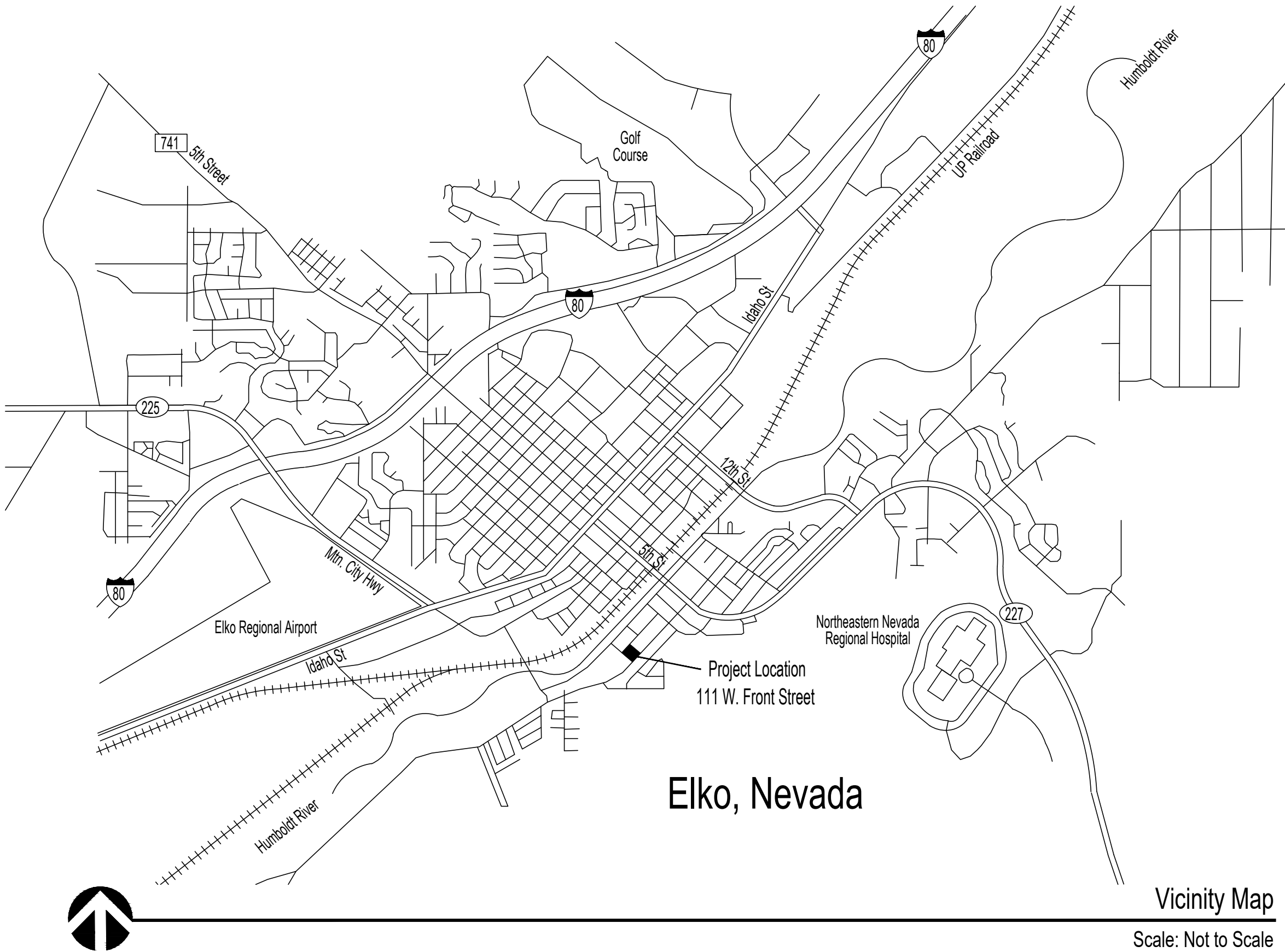
## 111 W. Front Street - Elko, Nevada - APN 001 710 029

Owner	Architect	MP&E Engineer	Civil Engineer	General Contractor
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### PROJECT NAME



Tenant Improvement  
111 W. Front Street  
Elko, Nevada

### SHEET NAME

Cover Sheet  
Vicinity Map  
Sheet index

### REVISIONS

DATE  
11.6.2025

SHEET NUMBER  
a0.1



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PROJECT NAME



SHEET NAME

General Notes  
Project Scope  
Project Parameters

REVISIONS

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a0.2

Drawing Abbreviations

Not to scale	n.t.s.
Not in contract	n.i.c.
Unless noted otherwise	u.n.o.
Above finish floor	a.f.f.
Pounds per square foot	p.s.f.
Pounds per square inch	p.s.i.
Square Feet	s.f.
Gypsum wall board	gyp. bd.
Diameter	dia.
Typical to all locations	typ.
Not Applicable to this project	NA

Applicable Codes

2018	International Building Code
2018	Uniform Mechanical Code
2018	Uniform Plumbing Code
2018	International Fire Code
2017	National Electrical Code
2018	International Energy Conservation Code
2009	ANSI A117.1
	Nevada Administrative Code 477
	Nevada Revised Statute
	Northern Nevada Amendments

Deferred Submittals

To be submitted separately to the governing official

- 1- All exterior signage
- 2- Fire sprinkler system - if owner choses to include
- 3- Warehouse racking and seismic bracing design
- 4- Walk-in cooler and freezer

Drawing Symbols

	North Arrow
	Door Symbol
	Room Name & Number
	Detail
	Elevation (single sided sim.)
	Room signage
	Fire Extinguisher

Project Scope of Work

1- This drawing package represents complete scope of work including architectural, civil, structural, plumbing, mechanical, and electrical construction for the overall project. The project is a remodel of an existing commercial building. The existing building is a pre-manufactured steel frame building that is in good condition based on inspection by the architect and professional engineer. No structural modification to the existing structure will take place under this permit.

2- The finished building will be owned by the Food Bank of Northern Nevada, they are a 501c3 non-profit organization with headquarters in the Reno, Nevada area.

3- The existing building was formerly owned by a public utility company. The building has a current, legal, certificate of occupancy that is legitimate and valid. No time lapse or occupancy change has occurred, with this project remodel, that will trigger a full code update of the existing site or building. A fire sprinkler system is not required to be installed but has been included in this as an alternate bid.

4- The portion of the building that will be altered must comply with the Americans with Disabilities Act of 1990 and the ADA Amendments act of 2010 requirements and laws because a significant portion of the building will be remodeled.

5- The portion of the building that will be altered must comply with 2018 International Building Code and all other laws, codes, regulations, and parameters, governing this jurisdiction set forth by the State of Nevada, the County of Elko, and the City of Elko and any other governing agency with jurisdiction over the project and any state or federal laws and requirements that entity has adopted.

6- Existing site conditions correspond with a good faith assessment by the design team. Any discrepancies of what is represented in this drawing set, at the building site in Elko, Nevada should be brought to the attention of the architect during bidding or prior to commencing work. The building and site are both currently built-out. There will be small modifications and upgrades to the site as represented in the civil drawings in this package.

7- As stated above, there is no structural modification to the existing pre-manufactured metal building, there will be minor additional structural design for a loading dock and exterior walk-in cooler and freezer, that will be added to the east side of the existing building. See structural plans and details in the civil sheets.

- 8- Bids should include all the work under this plan set. Please provide line item, alternative bid for the following items:
- ALTERNATE 1 - ROOF REPLACEMENT - A full roof replacement as specified on a2.3 to include demolition of existing roof.
  - ALTERNATE 2 - FIRE SPRINKLER SYSTEM - Because the building is currently an occupied B and S-2 Occupancy and the occupancy group will not change under this permit, the code upgrade is not required for this project. The owner would like to explore installing a new sprinkler system for cost savings in insurance premiums. Please provide an alternate price for the fire sprinkler system with a fire riser being installed in Water Closet 120 near the new back flow preventor.
  - ALTERNATE 3 - PARKING LOT CHIP SEAL - The front portion of the parking lot is called to be sealed and re-striped, please provide line item bid to also seal and stripe the side parking area and fenced yard.
  - ALTERNATE 4 - REPLACE FRONT WINDOWS - Building elevation sheet shows removing two narrow windows and the wall between and replacing with one larger window at four locations at the front of the building.
  - ALTERNATE 5 - REPLACE SIDE WINDOWS - Please provide cost for an additional bid to replace the remaining windows on the east and west sides of the building with energy efficient replacements.
  - ALTERNATE 6 - EXTERIOR SIGN - Building elevation sheet shows a custom shape interior lit sign for the front mansard of the building that is approximately 30'x3'. Electricity for this signage is included in the electrical drawings. Even if the sign is not purchased at this time the electricity should be provided and stubbed off for future signage.

9- Specific addition of a loading dock, walk-in cooler, and walk-in freezer from a set manufacturer are included in this plan set. The walk-ins will be provided by the owner and installation will be provided by the manufacturer. Installation needs to be coordinated by the contractor. No alternative will be accepted for this equipment.

10- The construction of this project will be partially paid for using ARPA money from the United States Government administered through the State of Nevada Department of Agriculture. Because the grant is administered through the NDA, federal prevailing wage rates are NOT required for this project. Federal Buy American provisions are NOT required for this project. Federal requirements of the National Environmental Policy Act (NEPA) are NOT required for this project.

General Notes

1- Drawings represent the desired result of construction. The methods of construction and the risks involved during the construction are the responsibility of the contractor. The contractor shall maintain the buildings structural integrity at all stages of construction.

2- Contractor responsible for all demolition required to perform work.

3- All construction shall comply with requirements of the 2018 International Building Code along with other listed codes and all city, county, state and federal agencies having jurisdiction with a modified order of understanding with the Building Department of the City of Elko.

4- The contractor shall verify all dimensions and elevations prior to the commencement of work. Discrepancies in the dimensions which may be found shall be brought to the attention of the architect for a decision before proceeding with work. Do not scale drawings.

5- All construction and finish materials proposed by the contractor and/or dictated by construction documents shall be reviewed for general compliance by the architect through a formal submittal process prior to commencing work and shall be approved by the Architect prior to commencing work.

6- As a minimum standard all work performed and materials installed shall be in accordance with all applicable codes, regulations and ordinances having jurisdiction.

7- Install all manufacturers items, materials and equipment in strict accordance with manufacturers recommendations unless otherwise specifically noted by the Architect.

8- Dimensions on plans are to the face of the studs or structural columns unless noted otherwise. Dimensions on large scale drawings govern over dimensions on small drawings or details.

9- Contractor to follow provided dimensions on drawings, if a necessary dimension is missing the contractor shall notify the architect for clarification before proceeding. Do not scale drawings.

10- Size, placement and orientation of structural framing members on structural drawings override members shown on architectural drawings.

11- Sprinkler, Plumbing, Mechanical, Electrical, or any other contractors shall not penetrate or cut any structural members without prior written approval of the Architect and the Structural Engineer.

12- The General Contractor shall maintain a complete current set of drawings at the construction site during all phases of construction for use by all trades.

13- The General Contractor shall coordinate with the owner the locations for construction traffic during the construction phase.

14- The General Contractor is responsible for obtaining all permits required to perform all work included in these documents.

15- A separate permit is required for all exterior sign installation.

16- The General Contractor is responsible for obtaining temporary power and all costs associated with temporary facilities.

17- Contractor to provide all owners manuals and warranties prior to final payment. All equipment and finish materials to be new and of the highest available commercial grade quality. All products are to be approved by the architect prior to installation.

18- 'UL' numbers listed in these documents are based on the most current issue of Underwriters Laboratories Inc. Fire Resistance Directory.

19- The General Contractor is responsible for protecting all existing site features and fixtures that are to remain. Any damage to these areas will be repaired or replaced at the expense of the contractor.

20- All work in these drawings and specifications consists of furnishing all labor, equipment, and materials necessary for and reasonably incidental to the complete construction of the building. These include but are not limited to minor details not specifically mentioned or shown that are necessary to complete the construction, subject to the terms and conditions of the contract.

21- All work in this project shall be done in accordance with the best modern construction practice using high grade new equipment and materials. Workmanship and all construction practices must be a neat appearance and will be inspected at the same level of scrutiny as the performance of the entire building.

22- All applicable portions of Division 1 GENERAL REQUIREMENTS shall be included and strictly adhered to, any conflict noted in the drawings shall be immediately brought to the attention of the Architect for written clarification.

23- The contractor is to notify the Owner, Architect and Engineer of any conflict in the drawings and shall not proceed until they have received written clarification executed by all parties, including the Owner.

24- These drawings are the property of the Architect and to be used solely with respect to this project. These documents shall not be reused or reproduced in any form without the written permission of the Architect.

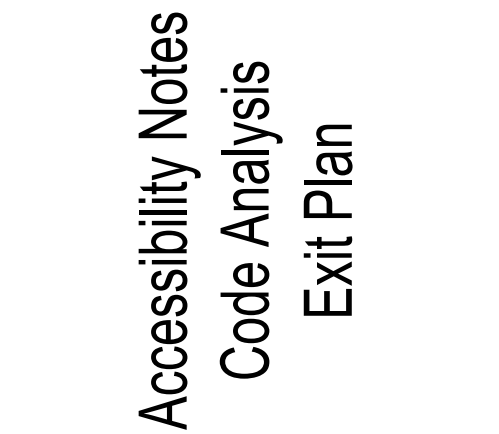


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PROJECT NAME



SHEET NAME



REVISIONS

DATE

11.6.2025

SHEET NUMBER

a0.3

File number 25-006 - FBNN, Elko City

Code Analysis

Governing Design Factors

Earthquake Zone	D0
Wind Speed	90 m.p.h.
Frost Depth	30"
Loads	
Roof dead load	15 p.s.f.
Roof live load or snow load	30 p.s.f.
Floor dead load	20 p.s.f.
Floor live load	50 p.s.f.
Snow load	20 lbs.
Exposure	C
Soil bearing	1,500 psi
Soil report may over ride typical bearing pressure	

Occupancy Classification

Area	Size	Occupant Load
B Office	3,590 s.f.	24 (150)
S-2 Low-hazard Storage	7,850 s.f.	16 (500)
Total	11,440 s.f.	40

Building Classification

Type of construction	Type V - B
Allowable area	9,000 s.f.
with fire sprinkler system throughout (I = 300%)	36,000 s.f.
non applicable to existing, occupied building	
Actual area	11,440 s.f.
including covered exterior areas	
Allowable height (stories)	3
with fire sprinkler system throughout	4
Actual height (stories)	1

Fire Resistance

Fire sprinklers provided through-out?	No
Fire sprinklers may be provided as an alternate bid, see bid documents	
If a fire sprinkler system is accepted it must comply with all current codes	
Fire alarm system with visual sensors, and fire monitoring?	No
Fire alarm system with audio warning system?	No
Fire walls required	No
Install fire extinguishers at all required areas as per IFC 906	
All fire extinguishers are to be placed in recessed, lockable cabinets into the wall.	

Exits

Exits required (.3" per occupant, min of 2) 33.9" total	(2) w/36" door
Exits provided	(4) 36" doors
each exit is with-in 64' of any place in the building	

Plumbing (per IBC Table 29)

Fixtures required	
1 per 25 (women) and per 25 (men) occupants, 1 per 50 after 50	
4 total occupants equals 50 women, 49 men	
1 women, 1 men required	
Fixtures provided	
3 unisex, 1 non-ADA	
Drinking fountain - 1 per 100 - 1 required	
New, portable, electric controlled water cooler to be provided in place of required drinking fountain	
Mop sink - 1 required	
1 provided in janitor closet	

Landscaping

Landscaping required - 15% of open space
Landscap provided - 16% of open space. Landscape is existing and to be considered compliant because the existing building has a current, legal, certificate of occupancy

Parking

Existing parking to remain
See civil drawings

Address & Signage

Building Address numbers to be placed at door 101A in 12" with a min 1" stroke metal letters, in a contrasting color, in Arabic numbers, above the door opening, coordinate location with Elko Fire Marshall.
FIRE RISER ROOM (if applicable) to be painted on door 120 in a contrasting color, coordinate with architect and Elko Fire Marshall.

Accessibility Notes

1- Walks and sidewalks subject to these regulations shall have a continuous common surface, not interrupted by steps or by abrupt changes in level exceeding 1/2" inch and shall be a minimum of 48 inches in width.

2- Surfaces with a slope of less than 6 percent gradient shall be at least as slip resistant as that described as medium salted finish.

3- Surfaces with a slope of 6 percent gradient or greater shall be slip-resistant. Surface cross slopes shall not exceed 1/4" per foot.

4- Walks, sidewalks and pedestrian ways shall be free of gratings whenever possible. For gratings located in the surface of any of these areas, grid openings in gratings shall be limited to 1/2" in the direction of traffic flow.

5- Abrupt changes in level along any accessible route shall not exceed 1/2". When changes in level do occur, they shall be beveled with a slope no greater than 1:2 except that level changes not exceeding 1/2" may be vertical.

6- Floors at landings shall not be more than 1/2" lower than the threshold of the doorway. When changes in levels greater than 1/2" are necessary, they shall comply with the requirements for curb ramps.

7- All accessible entrances shall be identified with at least one standard sign and with additional directional signs, as required, visible from approaching pedestrian ways.

8- Every required entrance or passage doorway shall be of a size as to permit the installation of a door not less than 3 feet in width and not less than 6 feet, 8 inches in height. Doors shall be capable of opening at least 90 degrees and shall be so mounted that the clear width of the doorway is not less than 32 inches.

9- Latching and locking doors that are hand activated and which are in a path of travel shall be operable with a single effort by lever type hardware, panic bars, push-pull activating bars, or other hardware designed to provide passage without requiring the ability to grasp the opening hardware.

10- Hand activated door opening hardware shall be centered between 30 inches and 44 inches above the floor.

11- Door hardware shall be operable from the inside without use of a key or special knowledge or effort.

12- Bathroom accessories, such as grab bars, towel bars, soap dishes, etc., on or within walls shall be sealed against moisture and comply with all height requirements listed in these plans and required by current code.

13- Above floor flush valves shall be mounted on the wide side of toilet area and within 40 inches of the floor. The force required to activate the controls shall not exceed 5 pounds.

14- Hot water and drain pipes under accessible lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under lavatories. Faucet controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate the controls shall not exceed 5 pounds. Lever-operated, push-type and electronically controlled mechanisms are acceptable.

15- All exit doors are to swing in the direction of travel from a space with more than 50 occupants.

16- The portion of the building that will be altered must comply with the Americans with Disabilities Act of 1990 and the ADA Amendments act of 2010 requirements and laws because a significant portion of the building will be remodeled.

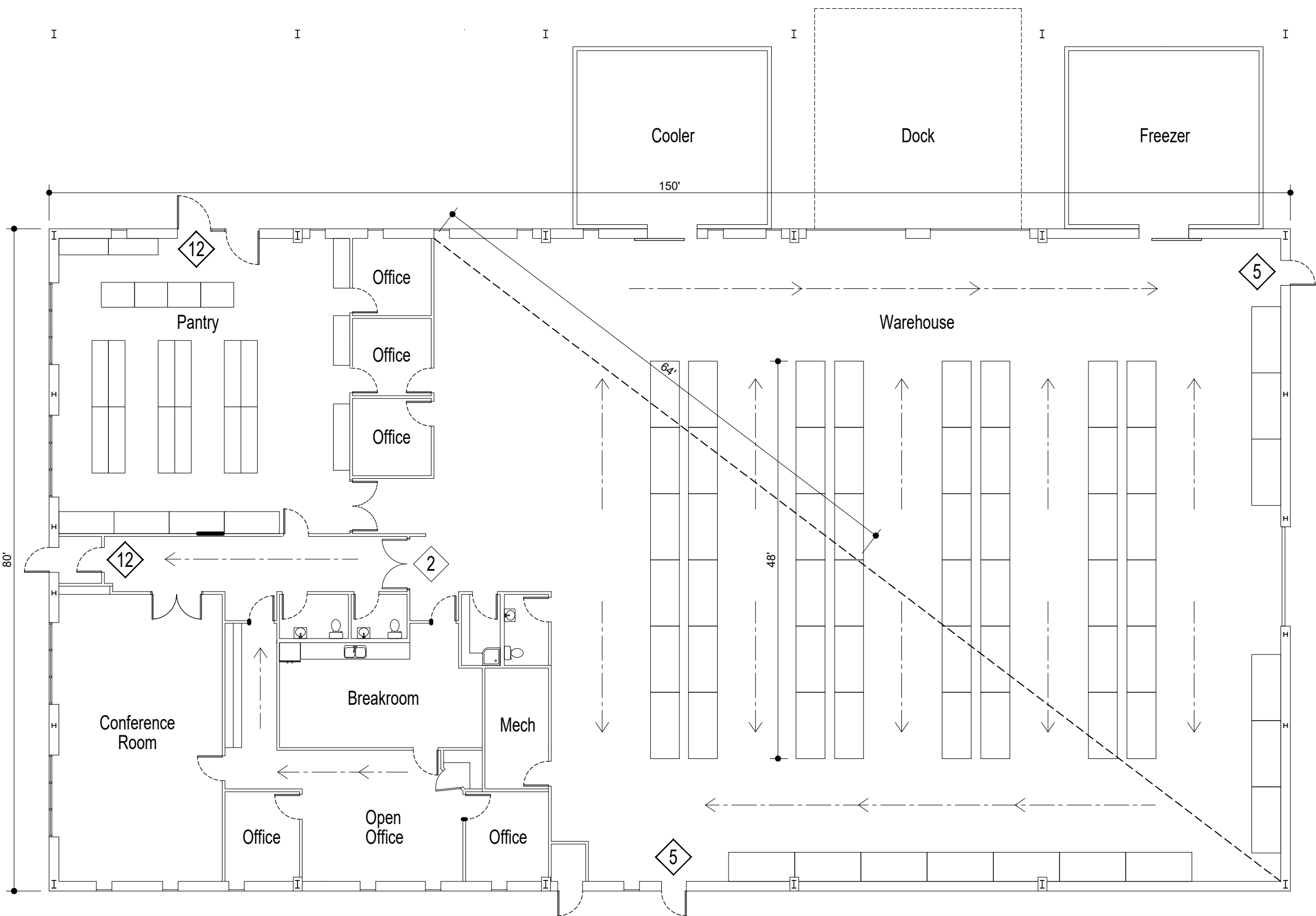
Exit Plan Legend

# Number of occupants to exit at this location

Exit Plan Notes

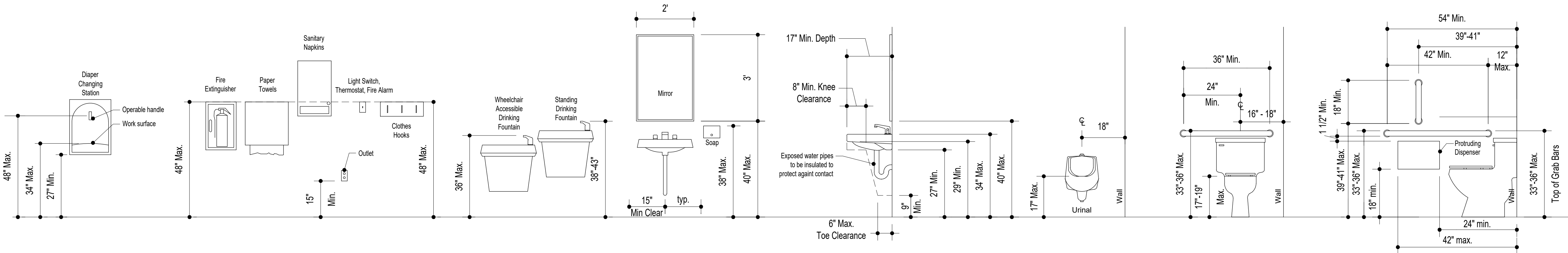
1- There is not a location in the warehouse that is greater than 64' to an exit.

2- Exit discharge to comply with IBC 1104.1



Exit Plan

Scale: NTS



Typical Required Mounting Heights

Scale: NTS

# FOOD BANK OF NORTHERN NEVADA

## CIVIL CONSTRUCTION DRAWINGS

### ELKO , NEVADA

### CONSTRUCTION DRAWINGS

CONSULTANT

Shanks Enterprises

1960 IDAHO ST.  
ELKO, NV, 89801  
shankseng@gmail.com  
775-934-9356(c) 775-389-5769(o)

Engineer: Michael E. Shanks, P.E.



## SHEET INDEX

- C1.0.....TITLE SHEET
- C2.0.....SITE PLAN
- C3.0.....DOCK PLAN AND ELEVATIONS
- C4.0.....DOCK DETAILS
- C5.0.....OVER-HEAD DOOR, WALK IN COOLER & FRAMING DETAILS

## PARCEL INFORMATION

SITE ADDRESS:  
111 W FRONT ST  
ELKO, NEVADA 89801  
OWNER: FOOD BANK OF NORTHERN NEVADA INC.  
LEGAL DESCRIPTION: PARCEL B MAP FILE 839428  
SIZE: 2.12 ACRES  
LAND ZONING = LI - LIGHT INDUSTRIAL  
APN: 001710029

PROJECT NAME

FOOD BANK  
OF NORTHERN NEVADA

Tenant Improvement  
111 W. Front Street  
Elko, Nevada

## NOTES:

1. GENERAL AND CIVIL NOTES
1.

THE COORDINATE SYSTEM AND THE TOPOGRAPHY SHOWN ON THE PLANS ARE SHANKS ENTERPRISES INC, LLC FIELD SURVEY OF JUNE, 2025. THE BASIS OF BEARING IS THE NORTH AMERICAN DATUM OF 1983/94 (2011), NEVADA EAST ZONE (2701) COORDINATES USING THE CITY OF ELKO GIS. THE BASIS OF ELEVATION IS CITY OF ELKO GIS DATUM.
2.

ALL ELEVATIONS AND SLOPES SHOWN ON THE SHANKS ENTERPRISES PLANS ARE TO THE TOP OF FINISHED GRADE (FG,TC, OR AC) AT THE SURFACE COURSE. THE INFORMATION PROVIDED ON THE GRADING AND DRAINAGE PLAN MUST BE SUPPLEMENTED WITH THE SITE PLAN, DETAILS, ALL REVISIONS, AND ALL OTHER DRAWINGS AND DOCUMENTS ISSUED FOR THIS PROJECT. ANY CONFLICTS WITHIN THESE DRAWING AND DOCUMENTS OR ANY QUESTIONS REGARDING FINISHED SUBGRADE ELEVATIONS SHOULD BE RESOLVED WITH THE ENGINEER.
3.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANIES FOR LOCATIONS PRIOR TO CONSTRUCTION. HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICES ALERT AT 811 AT LEAST TWO FULL BUSINESS DAYS PRIOR TO EXCAVATION. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, CITY OF ELKO, AND ALL EFFECTED UTILITY COMPANIES 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
4.

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS OR THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST ADOPTED ("STANDARD SPECIFICATIONS"). FOR INFORMATION ON SPECIFICATIONS OR DETAILS NOT SHOWN ON THE PLANS OR SPECIFICATIONS, REFER TO THE "STANDARD SPECIFICATIONS".
5.

THE CONTRACTOR SHALL MAINTAIN A 24 HOUR DUST CONTROL AND EROSION CONTROL PROGRAM, INCLUDING WATERING OF OPEN AREAS. DUST CONTROL PROGRAM SHALL BE IN COMPLIANCE WITH ALL FEDERAL, STATE, COUNTY AND CITY CODES AND ORDINANCES.
6.

ALL WORK IS SUBJECT TO MODIFICATION, DEPENDING ON FIELD REQUIREMENTS OR CONDITIONS OF THE PROJECT SITE.
7.

THE CONTRACTOR SHALL PROTECT FROM DAMAGE DURING CONSTRUCTION ALL EXISTING STRUCTURES, UTILITIES, PAVING, AND OTHER FACILITIES THAT ARE TO BE LEFT IN PLACE.
8.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AND PROVIDE EROSION CONTROL MEASURES AT THE PROJECT SITE, AT ALL TIMES.
9.

EXCAVATION SHALL BE AS NEARLY VERTICAL AS POSSIBLE (SHEET AND SHORE IF SOIL CONDITIONS REQUIRE) IN EXISTING STREET SECTIONS, ALLEY SECTIONS, AND CONFINED AREAS, SUCH AS LIMITED EASEMENTS OR ADJACENT TO STRUCTURES. NATURAL ANGLE OF REPOSE WILL BE ALLOWED IN ALL OTHER AREAS; CITY OF ELKO - OSHA STANDARDS MINIMUM.
10.

THE CONTRACTOR SHALL MAINTAIN AN ONGOING PROCESS FOR REMOVAL OF SPILLAGE OF EXCAVATED MATERIAL OR TRACK OUT ON ALL PAVED STREETS. CONTRACTORS WILL LIMIT ACCESS AND EGRESS TO TRACK OUT LOCATIONS.
11.

ALL CONTRACTORS ARE RESPONSIBLE FOR MAINTAINING ONSITE SPEED LIMITS OF THEIR PERSONNEL.
12.

CONTRACTOR TO ENSURE ALL APPLICABLE PERMITS HAVE BEEN OBTAINED PRIOR TO EXCAVATING WITHIN ANY RIGHT OF WAY.
13.

THE CONTRACTOR SHALL FIELD VERIFY, ALL ELEVATIONS, DIMENSIONS, FLOW LINES, EXISTING CONDITIONS, AND POINTS OF CONNECTIONS WITH ADJOINING PROPERTY (PUBLIC OR PRIVATE). ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE PROJECT ENGINEER BEFORE PROCEEDING WITH THE WORK.
14.

THE CONTRACTOR SHALL HAVE A STAMPED AGENCY APPROVED SET OF PLANS AT THE WORK SITE DURING CONSTRUCTION. CONSTRUCTION SHALL NOT PROCEED UNTIL THIS SET OF PLANS IS ISSUED WITH INCLUDED REVISIONS AND COMMENTS MADE BY THE AGENCIES.
15.

ALL AREAS DISTURBED AND LEFT UNDEVELOPED FOR A PERIOD OF MORE THAN 30 DAYS SHALL BE STABILIZED BY THE APPLICATION OF A DUST PALLIATIVE.
16.

ACCESS TO THE SITE AND FIRE HYDRANT MEET REQUIREMENTS OF NFPA 1142-SECTION 7.5. THE OWNER SHALL MAINTAIN THE ROAD SURFACE TO THE FIRE HYDRANT AND SURROUNDING STRUCTURES YEAR ROUND AND PROVIDE ACCESS FOR THE DESIGN FIRE TRUCK AS OUTLINED IN IFC SECTION 507 AND NFPA 1142 SECTION 7.5.
17.

GRADING AROUND BUILDINGS TO BE DONE IN A MANNER AS TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING IN ACCORDANCE WITH ELKO COUNTY AND BUILDING CODE REQUIREMENTS.

18.

ALL CONCRETE PLACED ON THIS PROJECT SHALL COMPLY WITH THE LATEST EDITION OF THE ORANGE BOOK AND SHALL BE AN APPROVED MIX DESIGN. ALL PCC CURB, GUTTER, SIDEWALK, SLABS & APRONS, AND MANHOLES SHALL BE CLASS AA OR DA PORTLAND CEMENT CONCRETE WITH 4,000 PSI MINIMUM (AT 28 DAYS), 4% TO 7% AIR ENTRAINMENT, AND USE NO. 67 AGGREGATE, UNLESS OTHERWISE SPECIFIED. THESE STRUCTURES SHALL BE CAST IN PLACE OR APPROVED PRECAST. NO CONCRETE SHALL BE PLACED UNTIL FORMS AND BASE COURSE ARE INSPECTED BY THE OWNER OR HIS ASSIGNED AGENT.
19.

ROAD SURFACING MATERIAL SHALL CONFORM TO THE SPECIFICATIONS FOR TYPE 2 PLANTMIX BITUMINOUS PAVEMENT AND SHALL BE COMPACTED TO 96% MINIMUM DRY DENSITY, BASED ON THE MARSHALL UNIT WEIGHT. ASPHALT CEMENT SHALL BE PG 6422 OR APPROVED EQUAL.
20.

STRUCTURAL FILL SHALL BE COMPACTED TO 90% COMPACTION. THE TOP 6" OF SUBGRADE UNDER TRAFFIC AREAS SHALL BE COMPACTED TO 95% COMPACTION. COMPACTION SHALL BE PER ASTM D1557.
21.

AGGREGATE BASE UNDER ROADWAYS AND CONCRETE SHALL BE TYPE II CLASS B AGGREGATE BASE AND SHALL CONFORM TO SECTION 200.00-2 OF THE STANDARD SPECIFICATIONS. AGGREGATE BASE UNDER PARKING AREAS SHALL BE COMPACTED TO 95% COMPACTION. AGGREGATE BASE UNDER NON TRAFFIC AREAS SHALL BE COMPACTED TO 90% COMPACTION. COMPACTION SHALL BE PER ASTM D1557.
22.

THE DESIGN OF GAS, TELEPHONE, TV, AND ELECTRIC SHALL BE BY THE RESPECTIVE UTILITY COMPANIES. ALL UTILITIES SHOWN ON THESE PLANS ARE FOR GENERAL ARRANGEMENT AND TO SHOW POTENTIAL CONFLICTS ONLY.
23.

ADJUST ALL EXISTING UTILITY STRUCTURES TO FINISHED GRADE.
24.

VERTICAL AND HORIZONTAL SEPARATION OF ALL WATER AND SEWER (SANITARY AND STORM) UTILITIES SHALL BE MAINTAINED PER NAC. ENGINEER AND CONTRACTOR TO REFERENCE SECTION 445A.6715 TO SECTION 445A.6718 OF THE NEVADA ADMINISTRATIVE CODE FOR UTILITY SEPARATION AND CLEARANCES. VERTICAL CLEARANCE BETWEEN WATER LINES AND ALL OTHER EXISTING OR PROPOSED SANITARY OR STORM SEWER, GAS TELEPHONE, TV AND ANY OTHER LINES, SHALL BE A MINIMUM OF 18".
25.

ALL WATER MAINS SHALL BE CLASS 350 C-900 OR DUCTILE IRON PIPE, WITH POLYETHYLENE ENCASEMENT, OR DR18 C900 PVC PIPE, UNLESS OTHERWISE SHOWN OR SPECIFIED BY G.B.W.C.. ALL CONSTRUCTION TO BE AWWA C-600 OR AWWA C-605 COMPLIANT AS APPROPRIATE. MINIMUM COVER OVER THE WATER MAINS SHALL BE NO LESS THEN 42".  
ALL WATER SERVICE LINES SHALL BE AS SHOWN ON PLANS, COPPER TUBE SIZE (CTS) RATED 200 PSI POLYETHYLENE UNLESS OTHERWISE SHOWN.
- II. STRUCTURAL NOTES

1.

DESIGN INFORMATION AND LIVE LOADS USED:  
2018 INTERNATIONAL BUILDING CODE (IBC)  
GROUND SNOW LOAD 50 PSF (SEE CALCS)  
ROOF DEAD LOAD 10 PSF  
FLOOR LIVE LOAD 40 PSF  
WIND ZONE 115 MPH EXPOSURE C  
SEISMIC ZONE 1  
ZONE D

2.

FOUNDATIONS SPREAD FOOTINGS ARE TO BE FOUNDDED ON THE NATURAL SOIL OR COMPACTED STRUCTURAL FILL. SPREAD FOOTINGS ARE DESIGNED FOR A MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 1,500 PSF WITH ALLOWABLE INCREASES.

3.

FOUNDATION CONCRETE:  
COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS:  
3,500 P.S.I.(5 SACK MIN) FOR FOOTINGS, 4,000 PSI FOR (6 SACK MINIMUM) FOR WALLS.

4.

REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 40.  
MINIMUM CLEAR CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:  
3 INCHES FOR CONCRETE PLACED DIRECTLY AGAINST EARTH.  
1-1/2 INCHES FOR FORMED SURFACES EXPOSED TO WEATHER OR EARTH.  
3/8" FOR PRECAST CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND.  
CENTER OF SLAB FOR SLABS ON GRADE.  
REINFORCING SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS LAPPED SPLICES SHALL BE DESIGNED IN CONFORMANCE WITH THE CURRENT IBC. NO TWO ADJACENT BARS ARE TO BE SPLICED IN THE SAME LOCATION UNLESS SHOWN OTHERWISE.
- ## ABBREVIATIONS:
- |             |                         |             |                          |             |                                |
|-------------|-------------------------|-------------|--------------------------|-------------|--------------------------------|
| A.C. ....   | ASPHALTIC CONCRETE      | F.G. ....   | FINISH GRADE             | R.W. ....   | RIGHT OF WAY                   |
| B.C. ....   | BEGIN CURVE             | F.H. ....   | FIRE HYDRANT             | R-O-W ....  | RIGHT OF WAY                   |
| B.V.C. .... | BEGIN VERTICAL CURVE    | F.L. ....   | FLOW LINE                | L.T. ....   | LEFT                           |
| B.S. ....   | BACK OF SIDEWALK        | G. ....     | GAS                      | L.F. ....   | LINEAR FEET                    |
| C.I.P. .... | CAST IRON PIPE          | GEO. ....   | GEO THERMAL              | M.H. ....   | MANHOLE                        |
| C.B. ....   | CATCH BASIN             | G.V. ....   | GATE VALVE               | S.S. ....   | SANITARY SEWER                 |
| CL ....     | CENTERLINE              | G.B. ....   | GRADE BREAK              | S.S.C. .... | SANITARY SEWER CLEANOUT        |
| CH ....     | CHORD                   | HORIZ. .... | HORIZONTAL               | SEC. ....   | SECTION                        |
| C.M.P. .... | CORRUGATED METAL PIPE   | INT. ....   | INTERSECTION             | S.W. ....   | SIDEWALK                       |
| CONC. ....  | CONCRETE                | I.E. ....   | INVERT ELEVATION         | S. ....     | SLOPE                          |
| C.P. ....   | CONCRETE PIPE           | L.T. ....   | LEFT                     | SH.T. ....  | SHEET                          |
| C.R. ....   | CURB RETURN             | L.F. ....   | LINEAR FEET              | STA. ....   | STATION                        |
| D.I. ....   | DROP INLET              | M.H. ....   | MANHOLE                  | S.D. ....   | STORM DRAIN, STORM SEWER       |
| D.I.P. .... | DUCTILE IRON PIPE       | P.E. ....   | PAD ELEVATION            | T. ....     | TANGENT                        |
| DET. ....   | DETAIL                  | P.I. ....   | POINT OF INTERSECTION    | T. ....     | TELEPHONE                      |
| E. ....     | ELECTRICITY, ELECTRICAL | P.R.C. .... | POINT OF REVERSE CURVE   | TEL. ....   | TELEPHONE                      |
| EL. ....    | ELEVATION               | P.O.T. .... | POINT ON TANGENT         | T.B.C. .... | TOP BACK OF CURB               |
| ELEV. ....  | ELEVATION               | P.V.C. .... | POINT OF VERTICAL CURVE  | T.O.C. .... | TOP OF CONCRETE                |
| E.C. ....   | END OF CURVE            | PVC. ....   | POLYVINYL CHLORIDE PIPE  | T.C. ....   | TOP OF CURB                    |
| E.V.C. .... | END OF VERTICAL CURVE   | PL. ....    | PROPERTY LINE            | T.P. ....   | TOP OF PAVEMENT                |
| EXIST. .... | EXISTING                | (R) ....    | RADIAL                   | TYP. ....   | TYPICAL                        |
| E.G. ....   | EXISTING GRADE          | R. ....     | RADIUS                   | T.S.W. .... | TOP OF SIDEWALK                |
| FIN. ....   | FINISH                  | REF. ....   | REFERENCE                | VERT. ....  | VERTICAL                       |
| F.F. ....   | FINISH FLOOR            | R.C.P. .... | REINFORCED CONCRETE PIPE | V.C. ....   | VERTICAL CURVE                 |
| F.F.C. .... | FRONT FACE OF CURB      | RT. ....    | RIGHT                    | V.P.I. .... | VERTICAL POINT OF INTERSECTION |
|             |                         |             |                          | W. ....     | WATER                          |
- TITLE SHEET
- REVISIONS

ISSUE FOR REVIEW

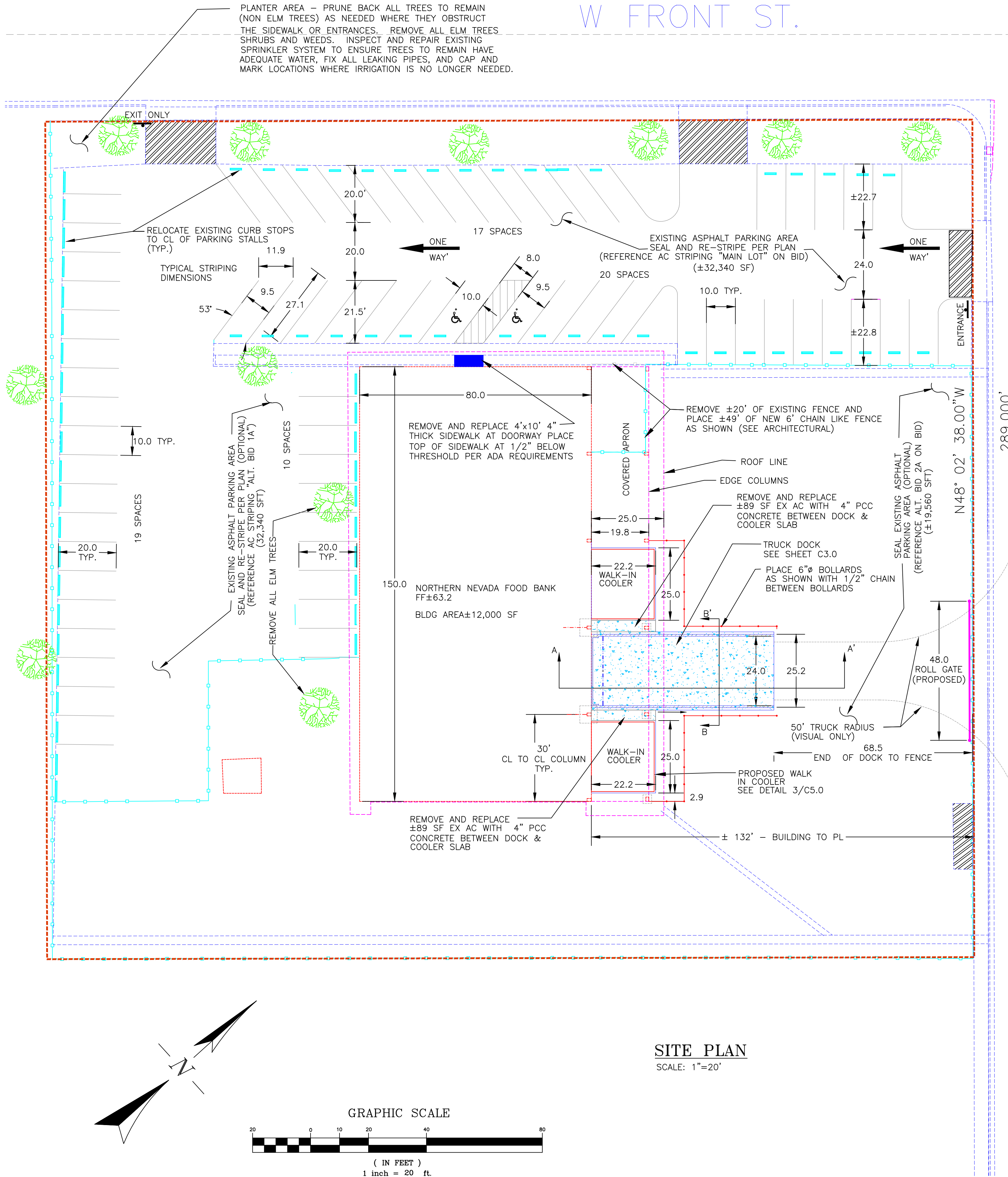
PROFESSIONAL ENGINEER STATE OF NEVADA  
MICHAEL E. SHANKS  
Exp: 6/30/26  
CIVIL  
No.10385

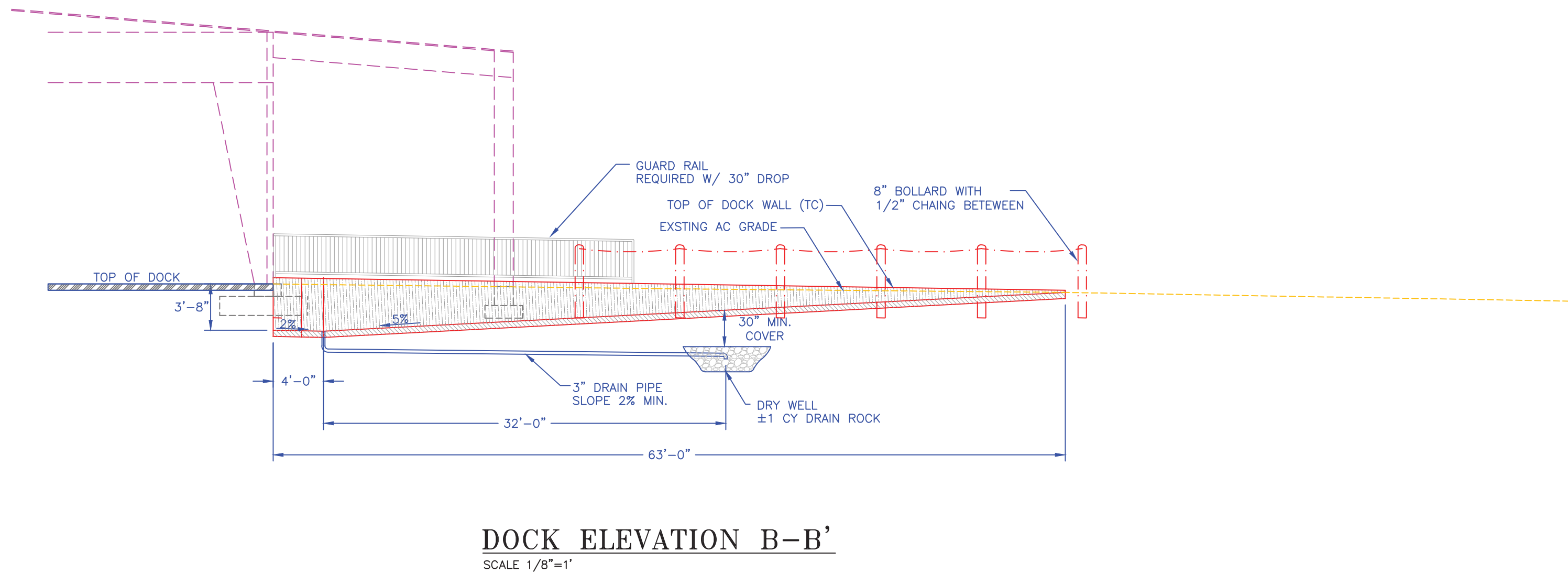
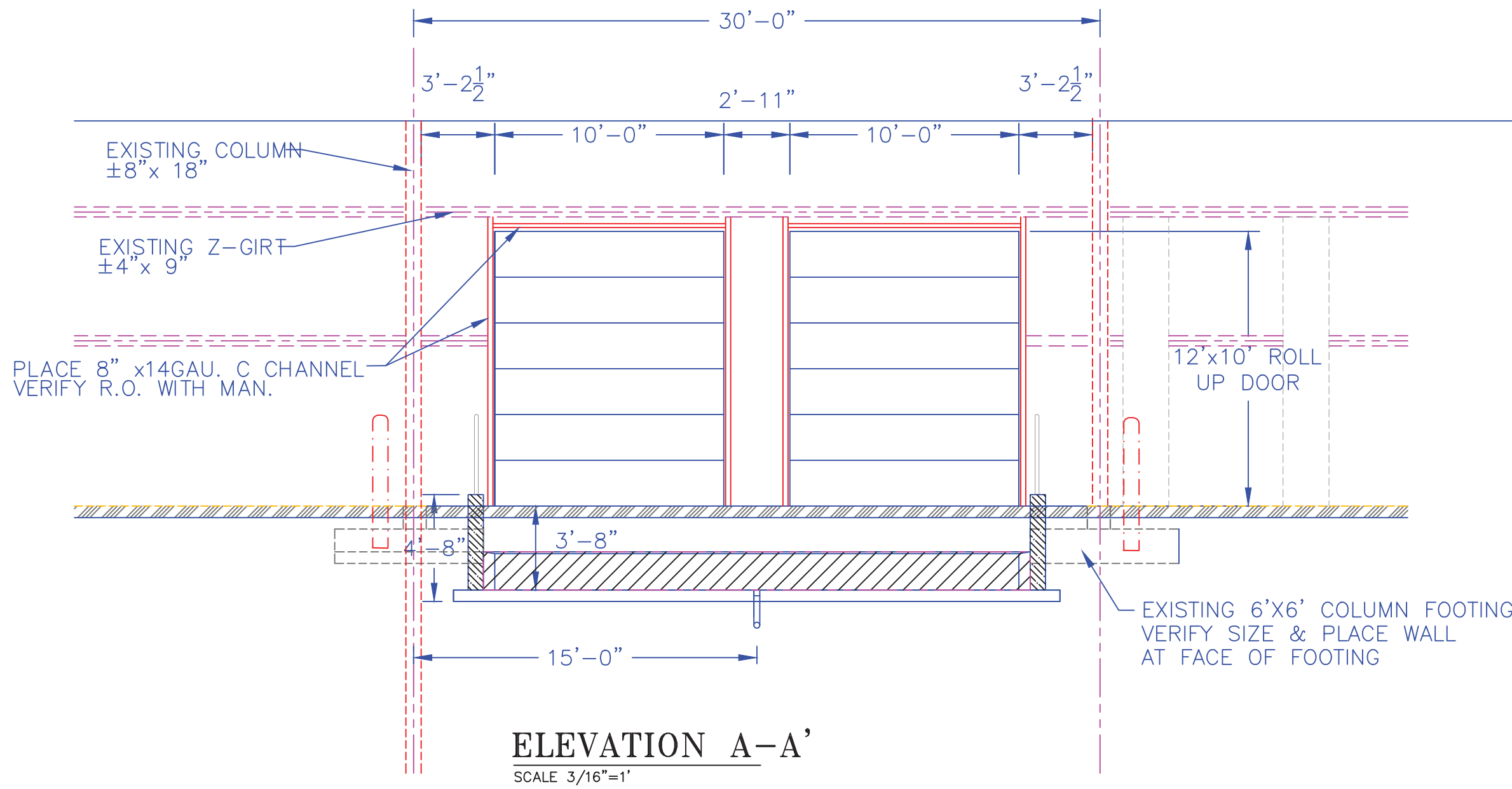
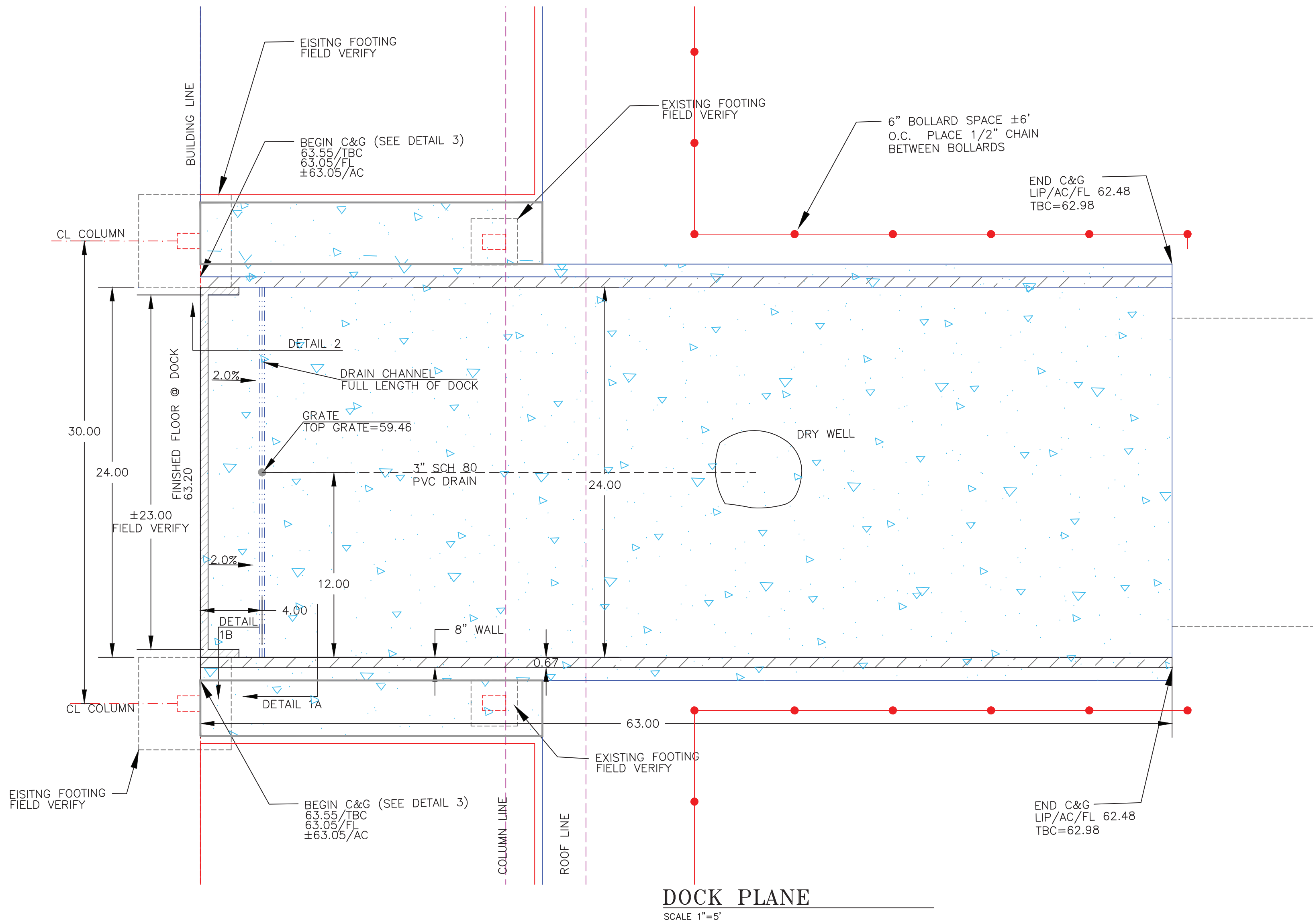
11/6/25
- DATE

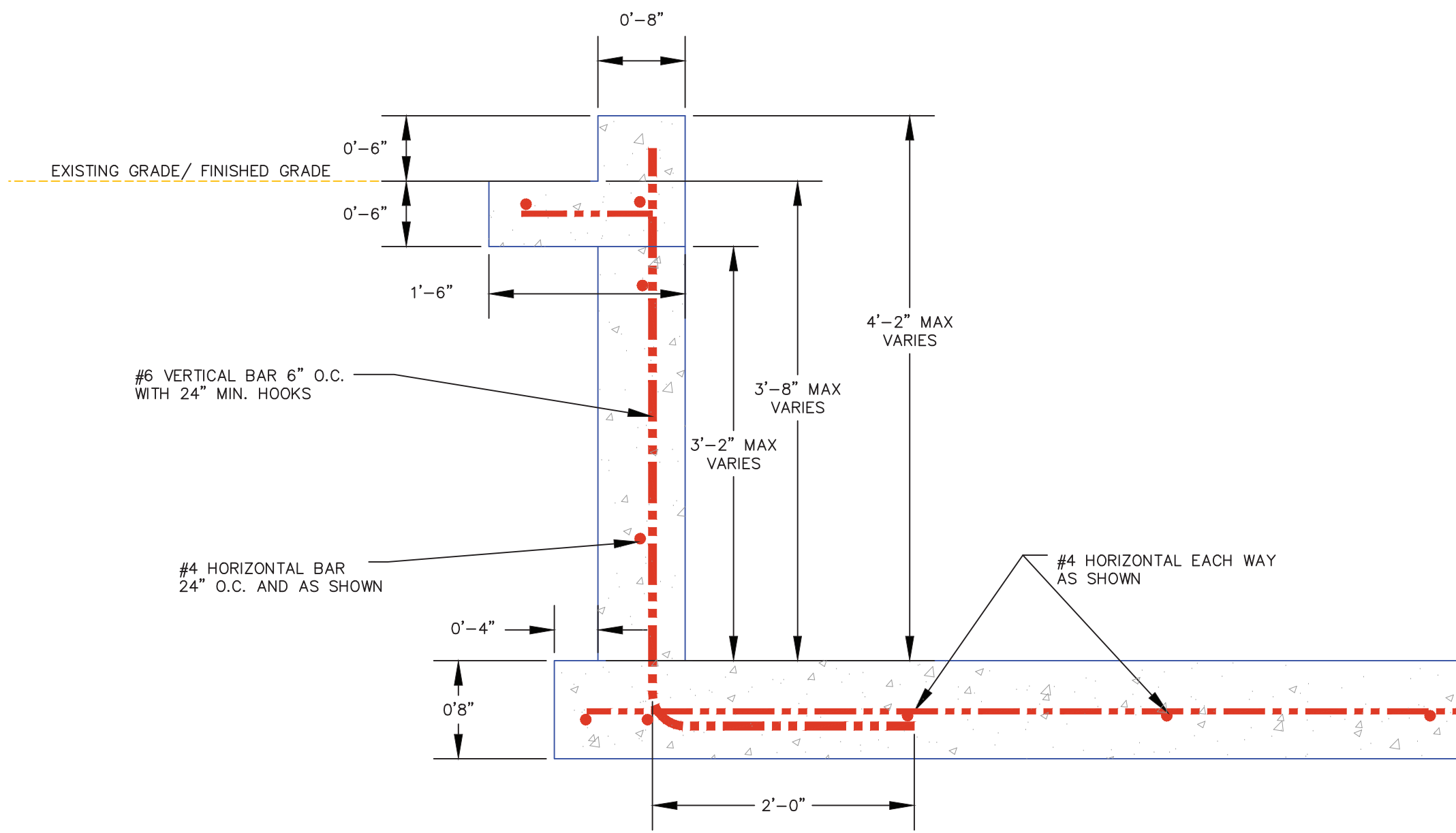
11-06-2025

SHEET NUMBER

c1.0

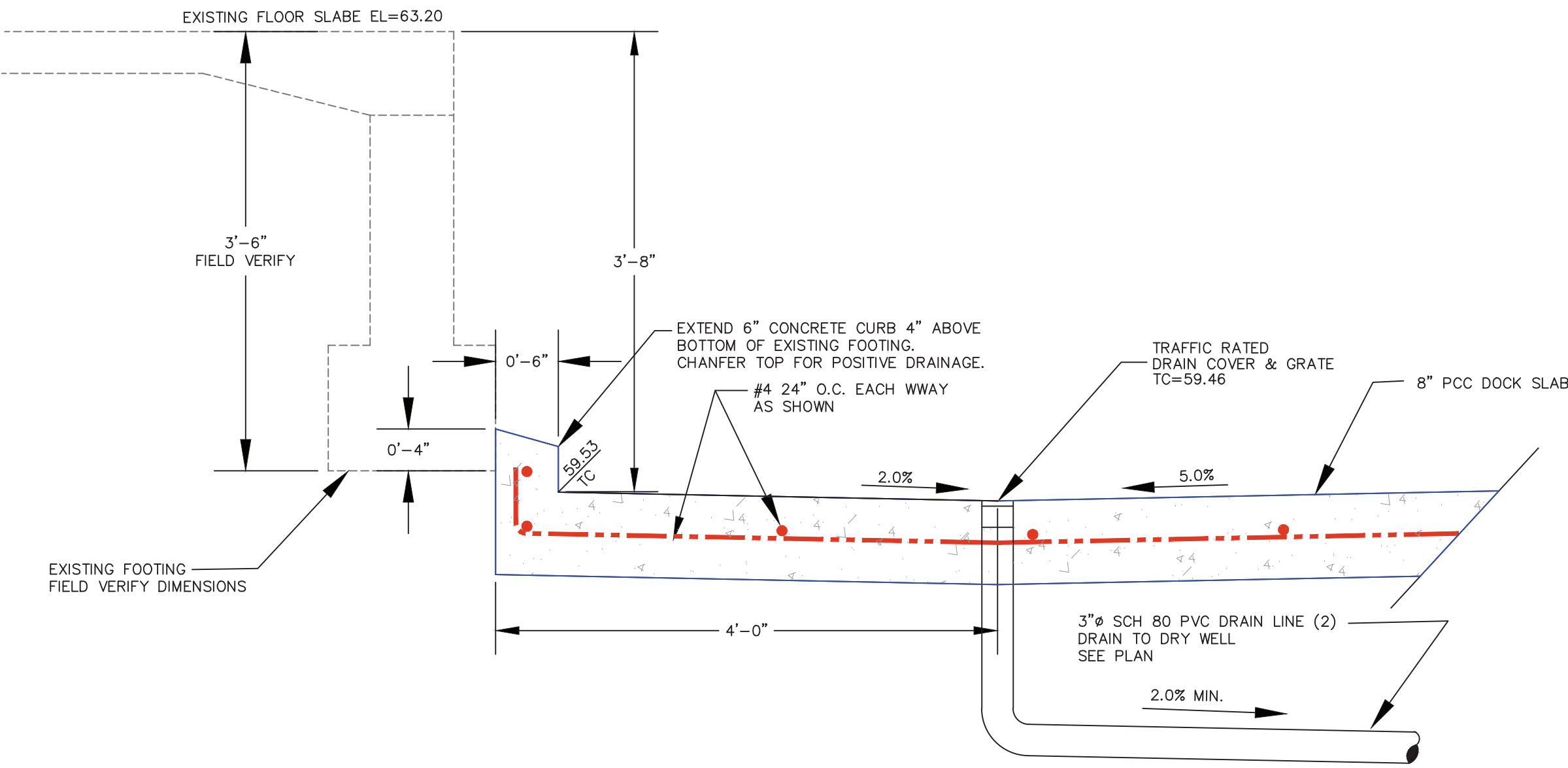






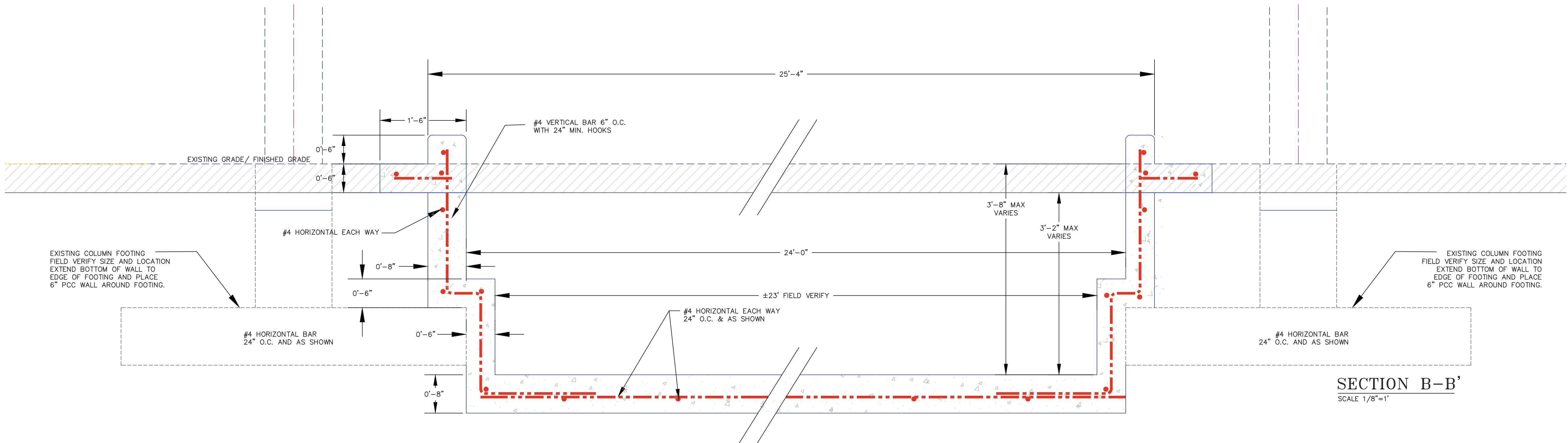
DOCK WALL - DETAIL 1A

SCALE 1"=1'



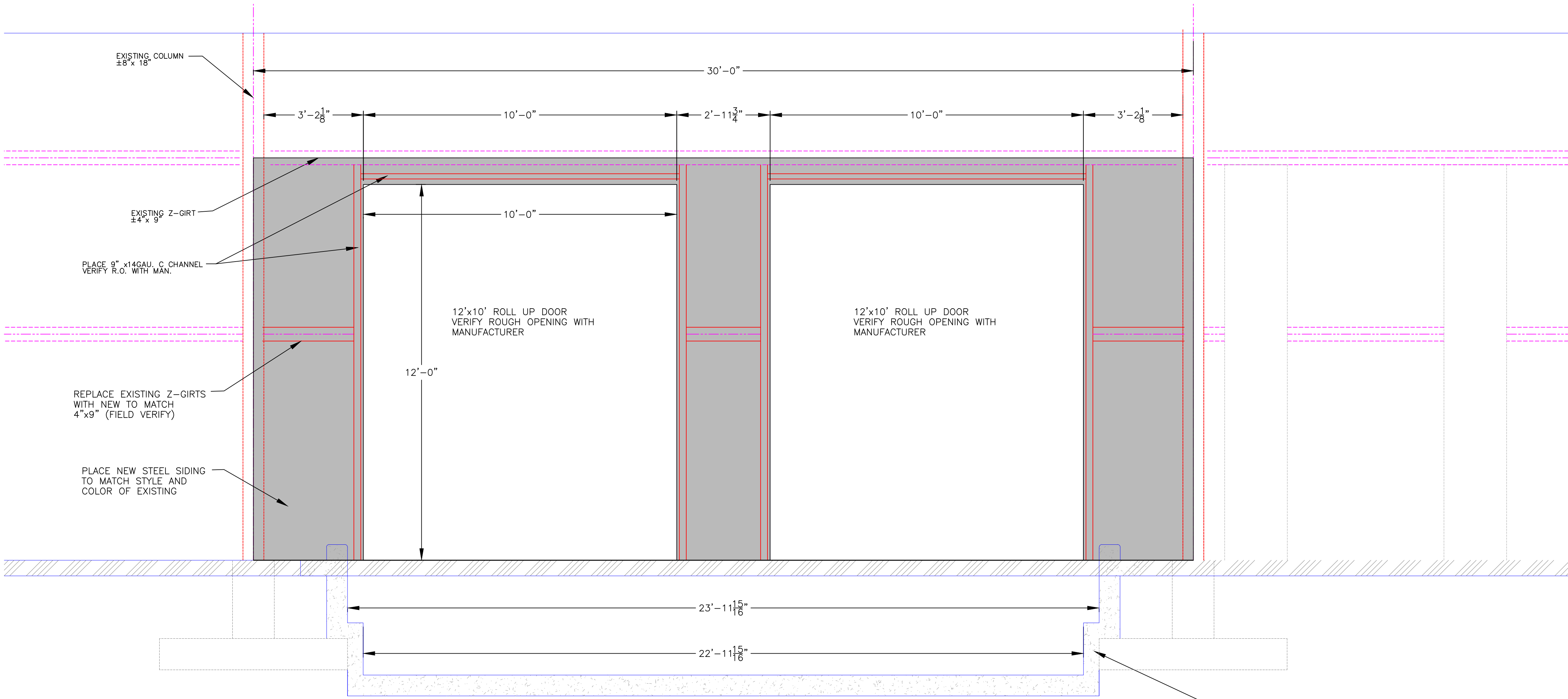
DOCK WALL AT BUILDING - DETAIL 2

SCALE 1"=1'

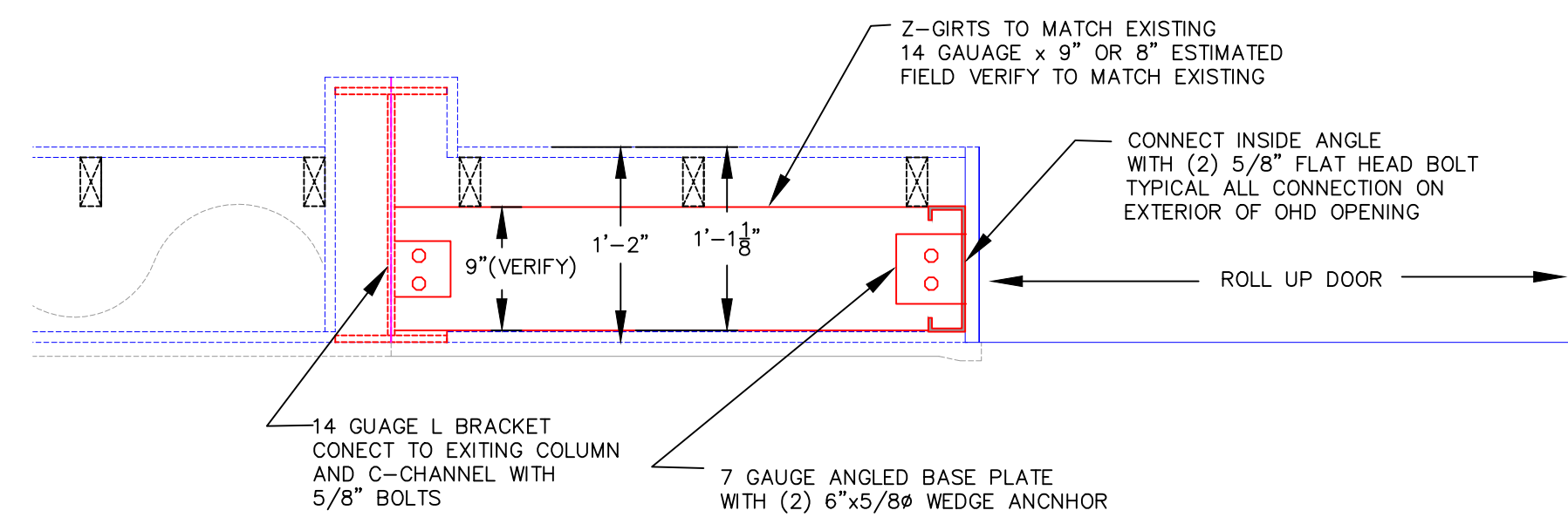


DOCK WALL DETAIL 1B

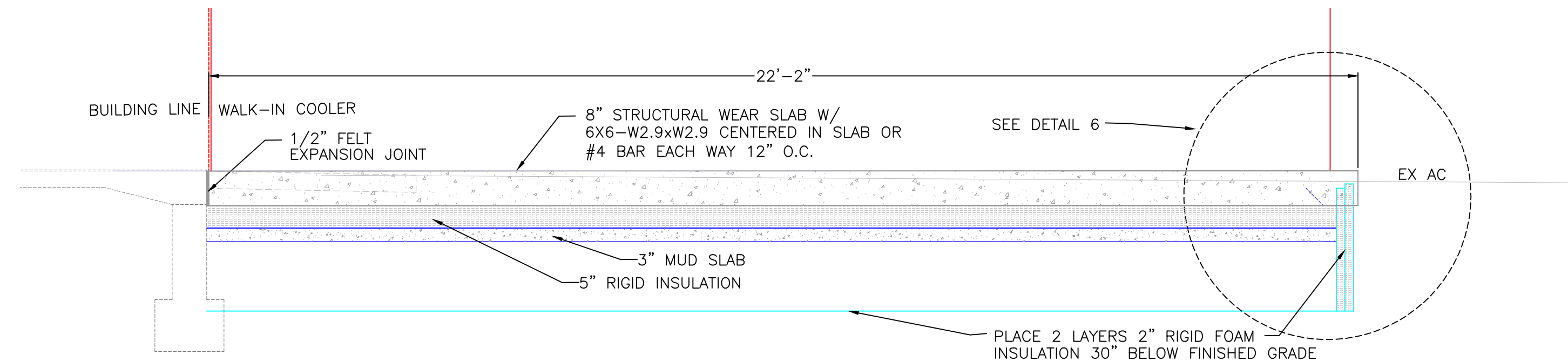
SCALE 1"=1'



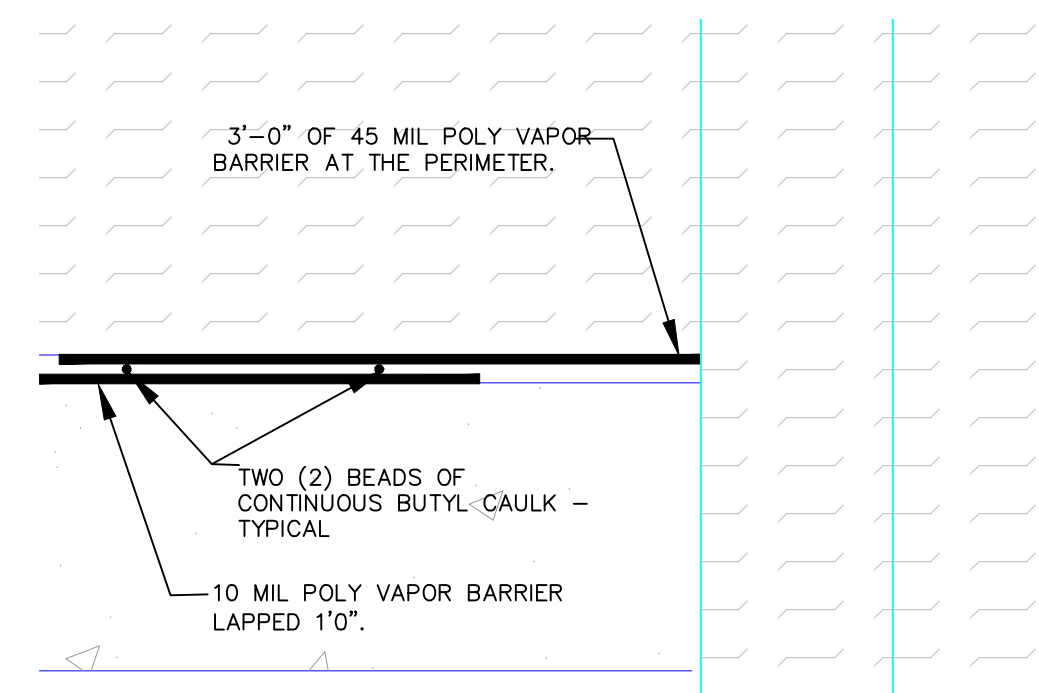
OVERHEAD DOOR WALL ELEVATION - DETAIL 3  
SCALE 1"=1'



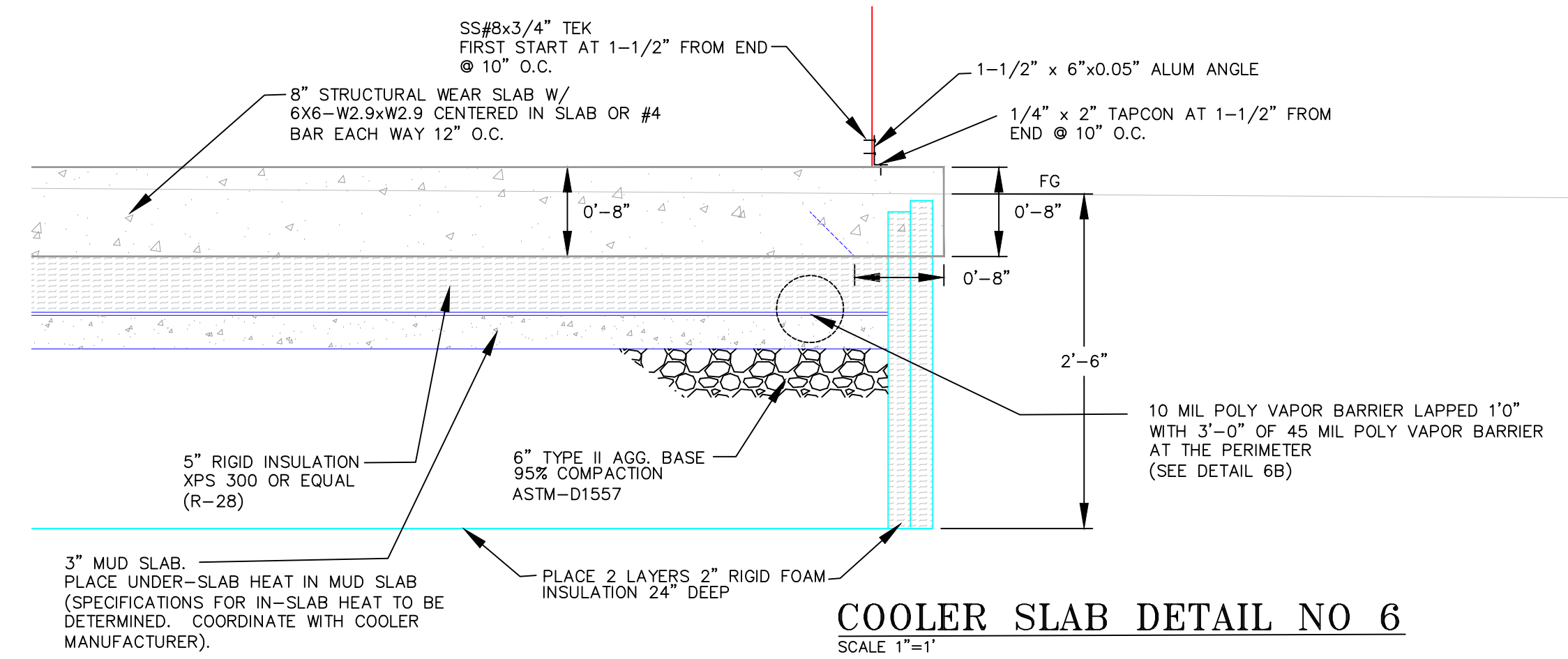
OVERHEAD DOOR WALL FRAMING SECTION - DETAIL 4  
SCALE 1"=1'



WALK IN COOLER CONCRETE SLAB DETAIL 5  
SCALE 1"=1'



VAPOR BARRIER DETAIL 6B  
SCALE 1"=1'



COOLER SLAB DETAIL NO 6  
SCALE 1"=1'

CONSULTANT

**Shanks Enterprises**  
1960 IDAHO ST.  
ELKO, NV, 89801  
shankseng@gmail.com  
775-934-9356(c) 775-389-5769(o)  
Engineer: Michael E. Shanks, P.E.

PROJECT NAME

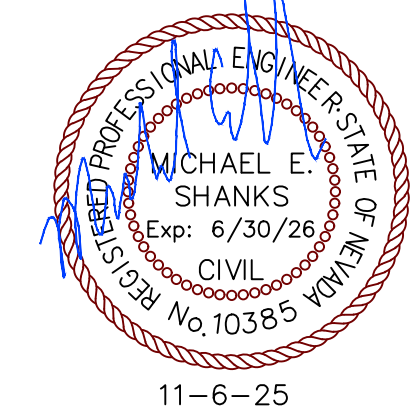
**FOOD BANK OF NORTHERN NEVADA**  
Tenant Improvement  
111 W. Front Street  
Elko, Nevada

SHEET NAME

OVERHEAD DOOR  
WALK-IN COOLER & FRAMING  
DETAILS

REVISIONS

ISSUE FOR REVIEW

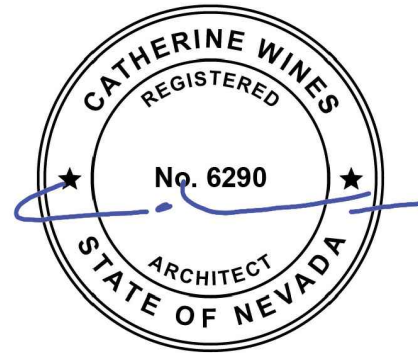


DATE

11-06-2025

SHEET NUMBER

c5.0



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PROJECT NAME



SHEET NAME

Existing Floor Plan  
Demolition Plan

REVISIONS

DATE

11.6.2025

SHEET NUMBER

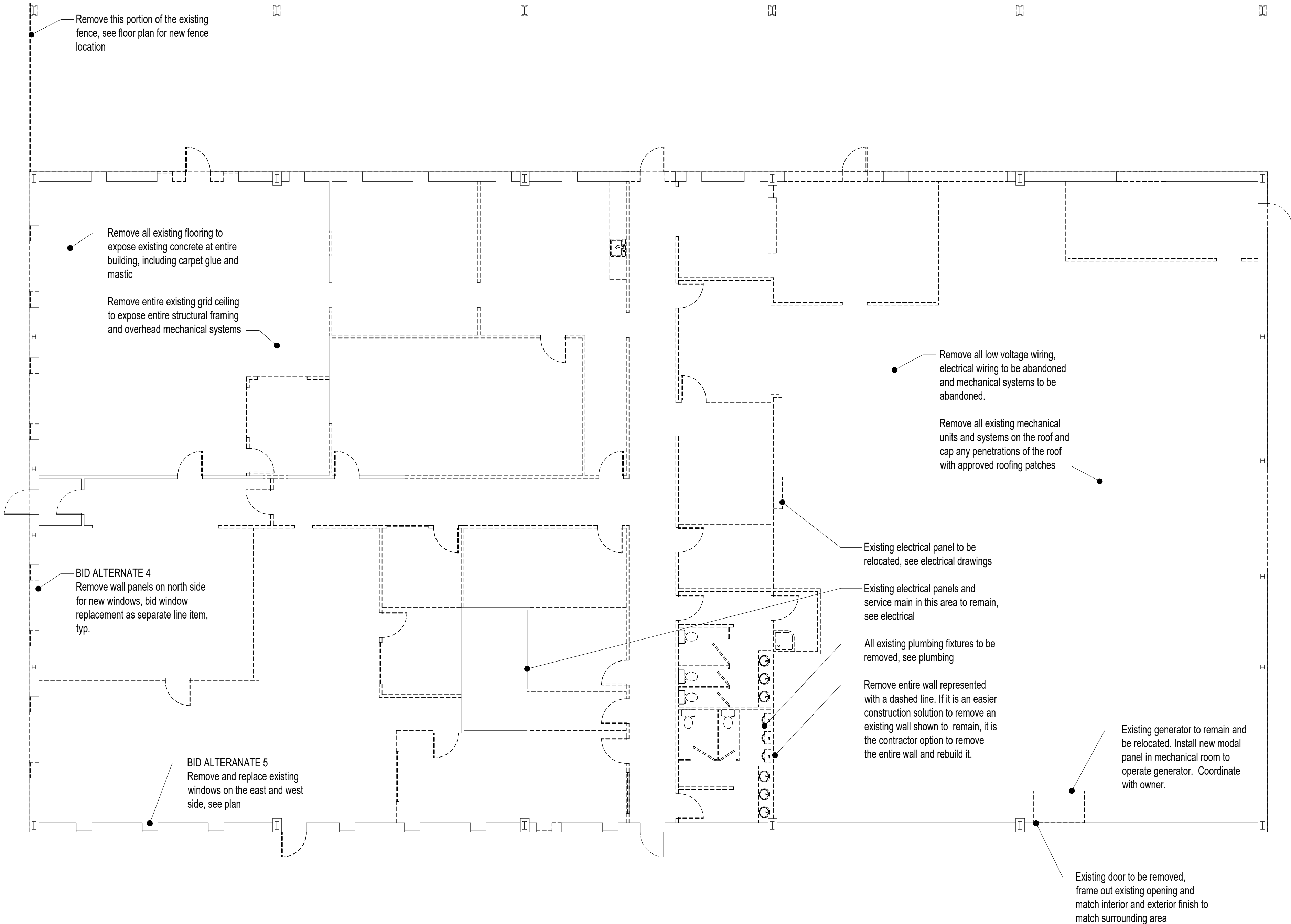
a2.1

Demolition Notes

- 1- The contractor shall field verify all existing conditions prior to the commencement of work. Any discrepancies shall be brought to the attention of the architect. No demolition work shall commence without field verification by the contractor, owner, and the architect.
- 2- It is the contractors responsibility to locate and remove all mechanical, electrical and miscellaneous equipment as required to complete the work. Refer to specific discipline sheets in this drawing set for demolition information.
- 3- The contractor shall provide all temporary structural bracing required during demolition to safely complete the work.
- 4- Any portion of the project to remain which is damaged as a result of construction activity shall be repaired or replaced to match pre-construction existing condition.
- 5- The contractor shall coordinate and arrange for the disconnection of all utilities and equipment with the owner and all applicable utility companies. Contractor shall cap off all unused utilities in a manner satisfactory to the owner, the architect and the utility company.
- 6- The contractor shall remove, disconnect and salvage all mechanical, electrical, plumbing and miscellaneous wall mounted equipment that is slated for reconnect and reinstallation and store them in a secure location for reconnect and reinstallation.
- 7- The contractor shall allow no debris to accumulate on the site or in the building. Immediately remove all debris and dispose of it in a safe acceptable manner. Contractor is responsible for all debris removal.
- 8- The owner has first right to all salvage items. Items not claimed by the owner shall become the contractors responsibility and shall be promptly disposed of from the site.
- 9- It is the contractor's responsibility to provide secure, dry storage with-in the designated contractor lay down area or an area designated by owner for owner retained items.
- 10- Contractor has the option to remove entire wall, when part of the wall is to be demolished.
- 11- Entire grid ceiling, existing lights, and all low voltage systems, including visible wiring, to be removed and demolished, ensure all existing wiring is safe before removal. All wiring to be replaced based on electrical drawings.
- 12- Remove all existing flooring, including carpet, under-layment, glue, mastic and anything else existing to expose the original concrete slab floor.
- 13- All plumbing fixtures will be removed and relocated protect existing plumbing lines that will be reused. Cap off existing plumbing that will not be reused below or at the finish slab level.

Demolition Legend

- Existing wall to remain
- Existing wall, door, window, and / or plumbing fixtures to be removed



Existing and Demo Building Floor Plan

Scale: 1/8" = 1'-0" - Do Not Scale Drawings



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PROJECT NAME

**FOOD BANK**  
OF NORTHERN NEVADA  
Tenant Improvement  
111 W. Front Street  
Elko, Nevada

SHEET NAME

New Floor Plan

REVISIONS

DATE

11.6.2025

SHEET NUMBER

a2.2

File number 25-006 - FBNN, Elko City

Floor Plan Notes

1- All building signage must be highly visible and easily read and comply with all code and ADA requirements. All exterior signage to be a deferred submittal.

2- 2A:10BC portable fire extinguishers for 'ordinary' or 'moderate' Class A fire hazards shall be located within 75 feet of any location in the building. All fire extinguishers are to be located in a recessed, stainless steel or aluminum, lockable cabinet. All portable fire extinguishers to comply with IFC section 906. Exact location to be approved by local fire authority prior to installation.

3- Warehouse, freezer, and cooler are used to store food product. Based on definitions from IBC 307 there are no hazardous materials that will be stored in this location.

4- All plumbing walls to be 6" with sound attenuation batt insulation.

5- All interior finish materials to be Class B or better to comply with the requirements in IBC 404.8.

6- Room names on this plan reflect how the building will be used, room names and numbers for final signage to be coordinated with owner, this plan numbering system does not reflect possible final room numbering.

7- The Pantry is a room that will be used to disperse product to members of our community in need of social assistance. This is not a retail space, there will be no exchange of money. It should be considered an open office environment where business services, including social services are completed. No food service will take place on site. Only packaged food to be carried out will be provided at this location.

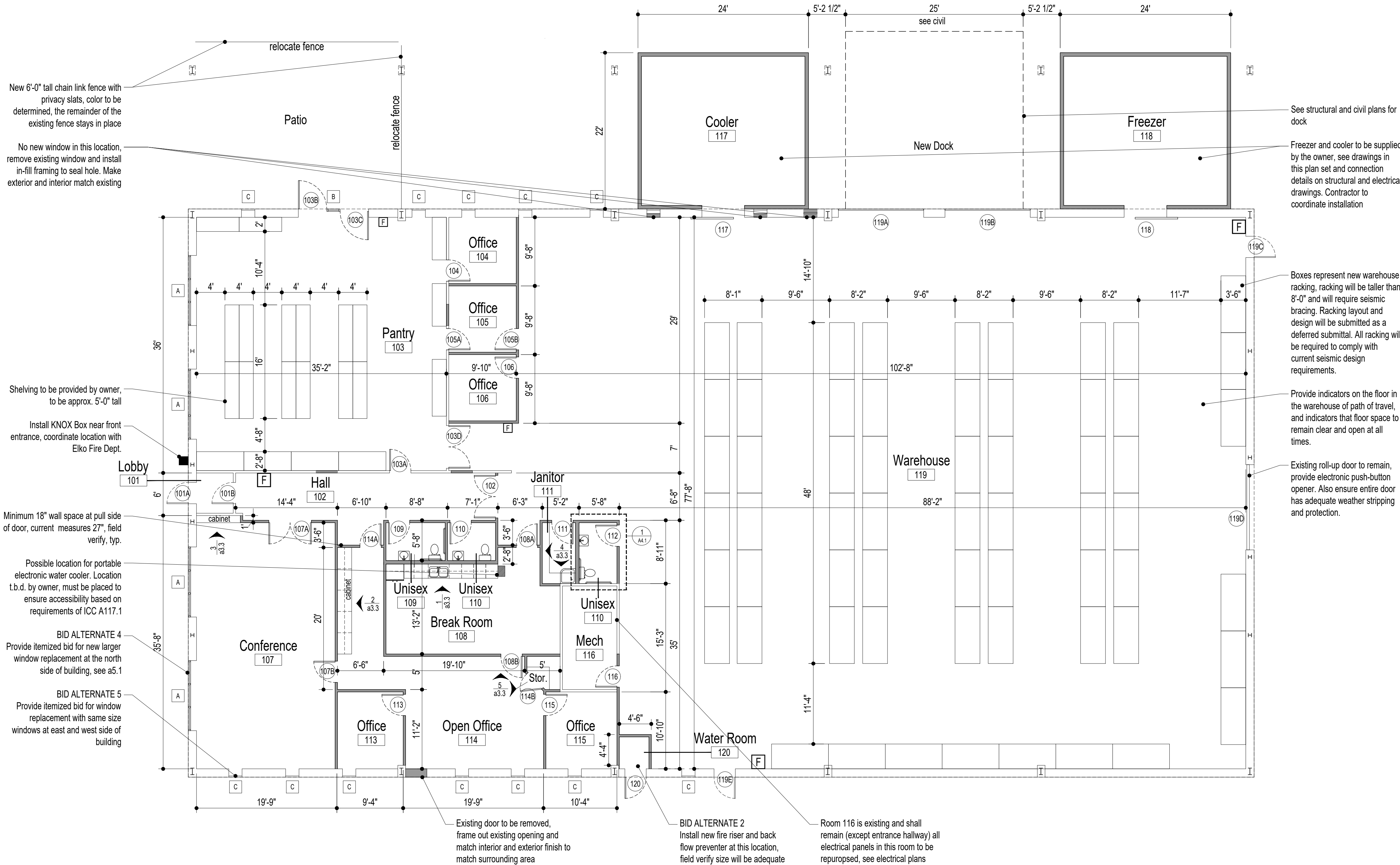
8- All dimensions to be field verified, alert architect of discrepancies prior to construction.

9- Contractor to verify the existing doors and existing hardware that will remain comply with the requirements of IBC 1010.

10- The building address identification is to be plainly visible from the street with contrasting background, with characters that are minimum 4" high and 1/2" stroke width.

Wall Legend

- New 2x cold rolled metal stud wall. Studs to be 16" o.c. with R-21 batt insulation at all exterior locations. All exterior and plumbing walls to be 2x6. All interior, non-plumbing walls to be 2x4. Sound attenuation insulation at all restroom walls and other locations as noted. All walls to be finished with 5/8" gyp bd. Tape, texture, and paint t.b.d.
- Existing wall to remain
- New window, see window schedule for sizes
- Indicates location of type 2A Fire Extinguisher



New Building Floor Plan

Scale: 1/8" = 1'-0" - Do Not Scale Drawings



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PROJECT NAME



SHEET NAME

Roof Plan

REVISIONS

DATE

11.6.2025

SHEET NUMBER

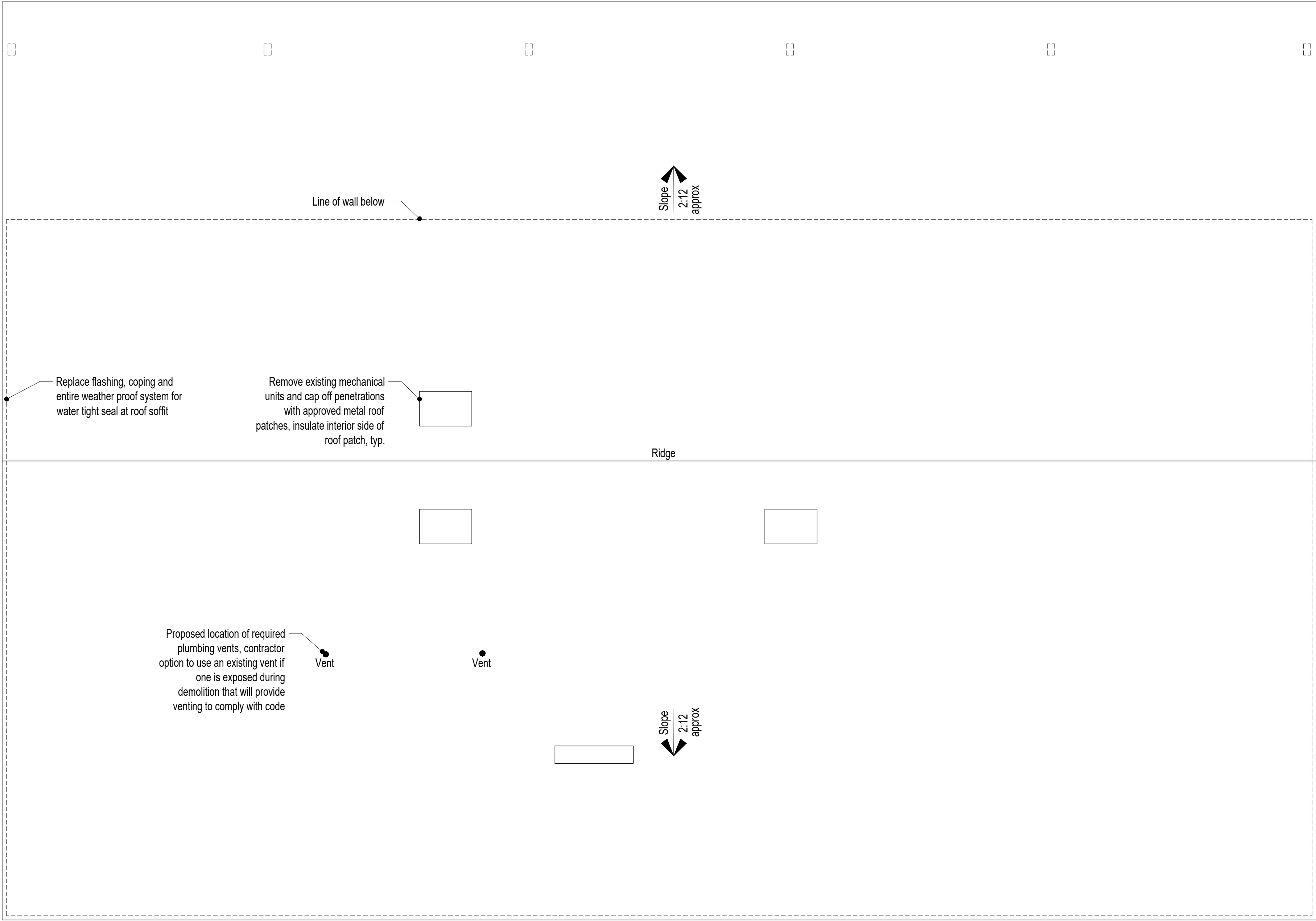
a2.3

File number 25-006 - FBNN, Elko City

ENTIRE SHEET IS BID ALTERNATE 1

Roof Plan Notes

- 1- not used
- 2- Whether the roof is replaced or not, all existing mechanical units to be removed under this permit. If the existing roof remains, patch all existing penetrations. See mechanical plans.
- IF ROOF IS REPLACED FOLLOW THE NOTES BELOW:
- 1- New 24 ga. standing seam metal roof to cover entire building. Install roof and under-layment per manufacturers recommendations, basis of design, and in compliance with warranty details. Under-layment to cover entire roof surface.
- 2- All roof insulation to remain undisturbed and undamaged during roof installation. Any insulation that is damaged must be replaced prior to completion of roof installation.
- 3- All eave locations to have new, seamless, aluminum rain gutters and downspouts. Downspouts to be closed face, go to the ground, and extend 1'-0" away from the building with 1'-0" splash blocks. All downspouts that terminate at a sidewalk location are to have a trench drain embedded in the sidewalk, where side walk is being replaced, the entire width of the sidewalk to daylight at curb location.
- 4- Provide flashing and coping at all roof locations where sloped roof meets vertical wall. Color to match roofing material as closely as possible using a standard color option.
- 5- No roof ventilation is required on the exterior. All ventilation to be done inside through open ceiling, see mechanical drawings for return air locations.
- 6- Roof access to be with portable ladder as needed.
- 7- All gutters, downspouts, vents , decorative roof bracing to be painted to match roof.
- 9- Aluminum soffit to have ventilation holes for added ventilation at all eave and covered patio locations.
- 10- Ice shield under-layment required at all drop off drainage locations. Install ice shield under-layment per manufacturers recommendations.
- 11- All plumbing vents to be installed as required by manufacturers specifications with aluminum, ridge flashing to prevent leaks. All bents to be painted to match existing roof.
- 12- Plumbing contractor to verify all plumbing vent sizes. All vents to be installed to comply with current plumbing code.
- 13- All plumbing vents to be painted to match roof.
- 14- All eave locations and exterior ceilings to be vented aluminum soffit installed horizontally.



Building Roof Plan

Scale: 1/8" = 1'-0" - Do Not Scale Drawings



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PROJECT NAME



SHEET NAME

Reflected Ceiling Plan

REVISIONS

DATE

11.6.2025

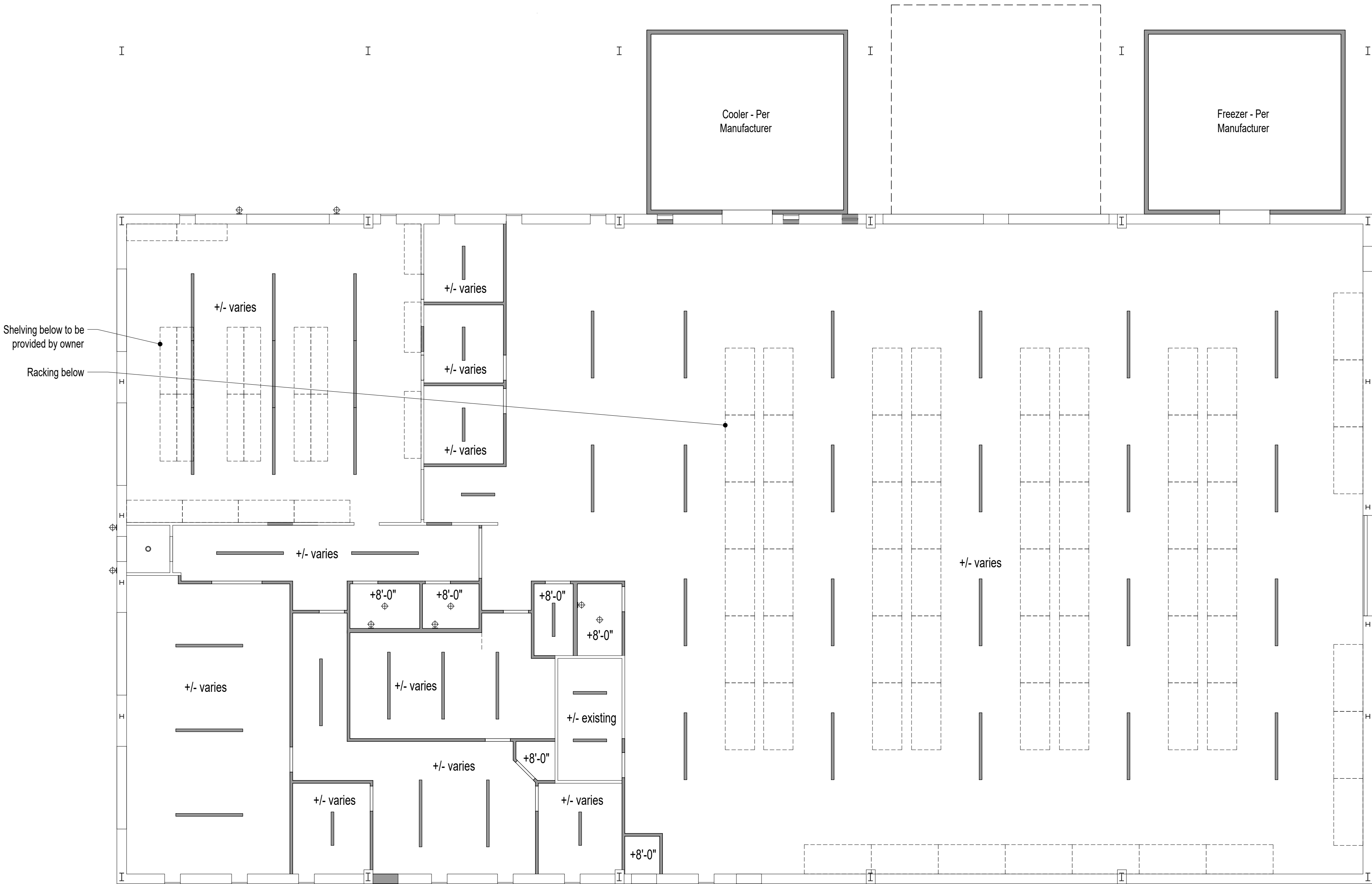
SHEET NUMBER

a2.4

File number 25-006 - FBNN, Elko City

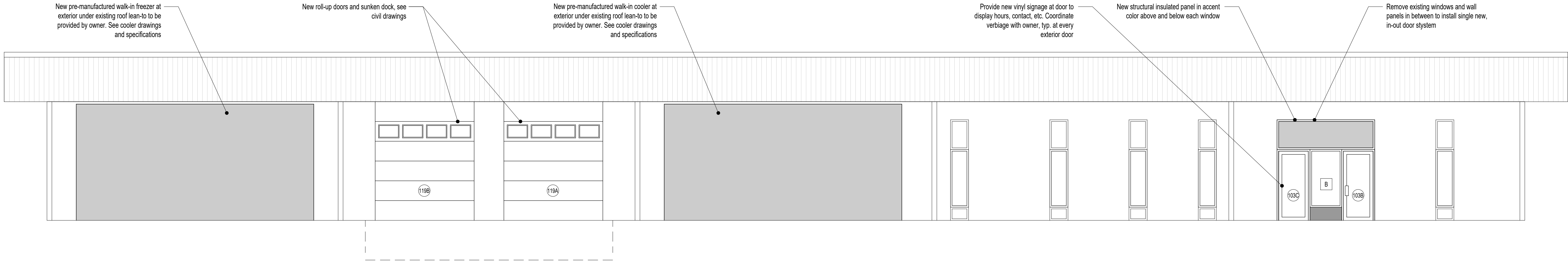
Reflected Ceiling Notes

- 1- Remove entire grid ceiling including all clips, hangers, and any thing else associated with the old grid ceiling. If anything between the existing grid ceiling and the structure above is in question contact architect prior to removal.
- 2- Remove all lights and fixtures including all old wiring. If anything between the existing grid ceiling and the structure above is in question contact architect prior to removal.
- 3- Remove all existing low voltage wiring and any associated systems. If anything between the existing grid ceiling and the structure above is in question contact architect prior to removal.
- 4- Entire ceiling except new restrooms, janitor closet, and existing mechanical room will be an open ceiling with structure exposed.
- 5- All interior finish materials to be Class B or better to comply with the requirements in IBC 404.8.
- 6- Entire ceiling, including existing structure, and insulation to be painted, one base color. All new systems including mechanical, electrical conduit, and low voltage systems, to be painted an accent color.
- 7- All exposed mechanical systems, exposed electrical conduit, exposed fire sprinkler lines, and all other exposed ceiling systems to be painted an accent color. Color t.b.d. Bid two additional accent colors along with base color.
- 7- All dimensions to be field verified, alert architect of discrepancies prior to construction.



Building Reflected Ceiling Plan

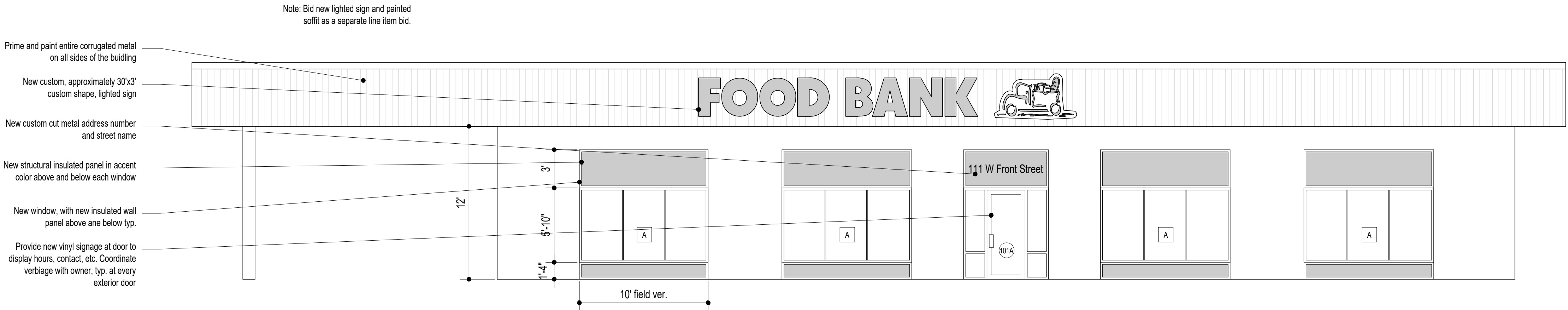
Scale: 1/8" = 1'-0" - Do Not Scale Drawings



3

New Exterior East Elevation

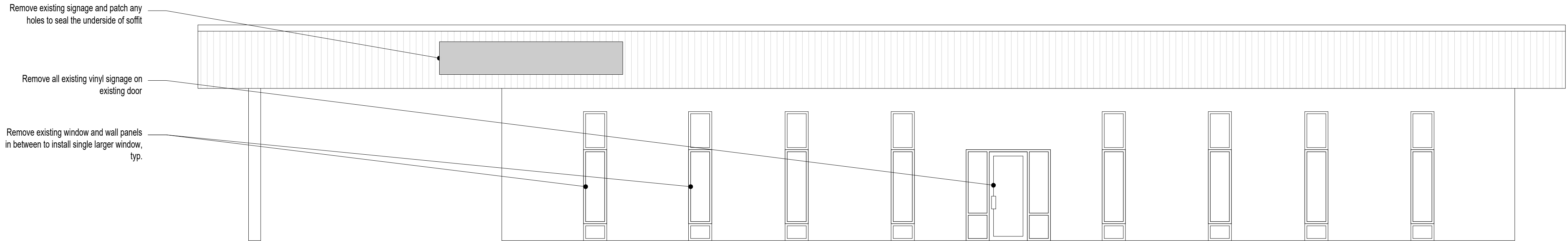
Scale: 3/16" = 1'-0" - Do Not Scale Drawings



2

New Exterior North Elevation

Scale: 3/16" = 1'-0" - Do Not Scale Drawings



1

Existing Exterior North Elevation

Scale: 3/16" = 1'-0" - Do Not Scale Drawings



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PROJECT NAME



SHEET NAME

Building Exterior Elevations

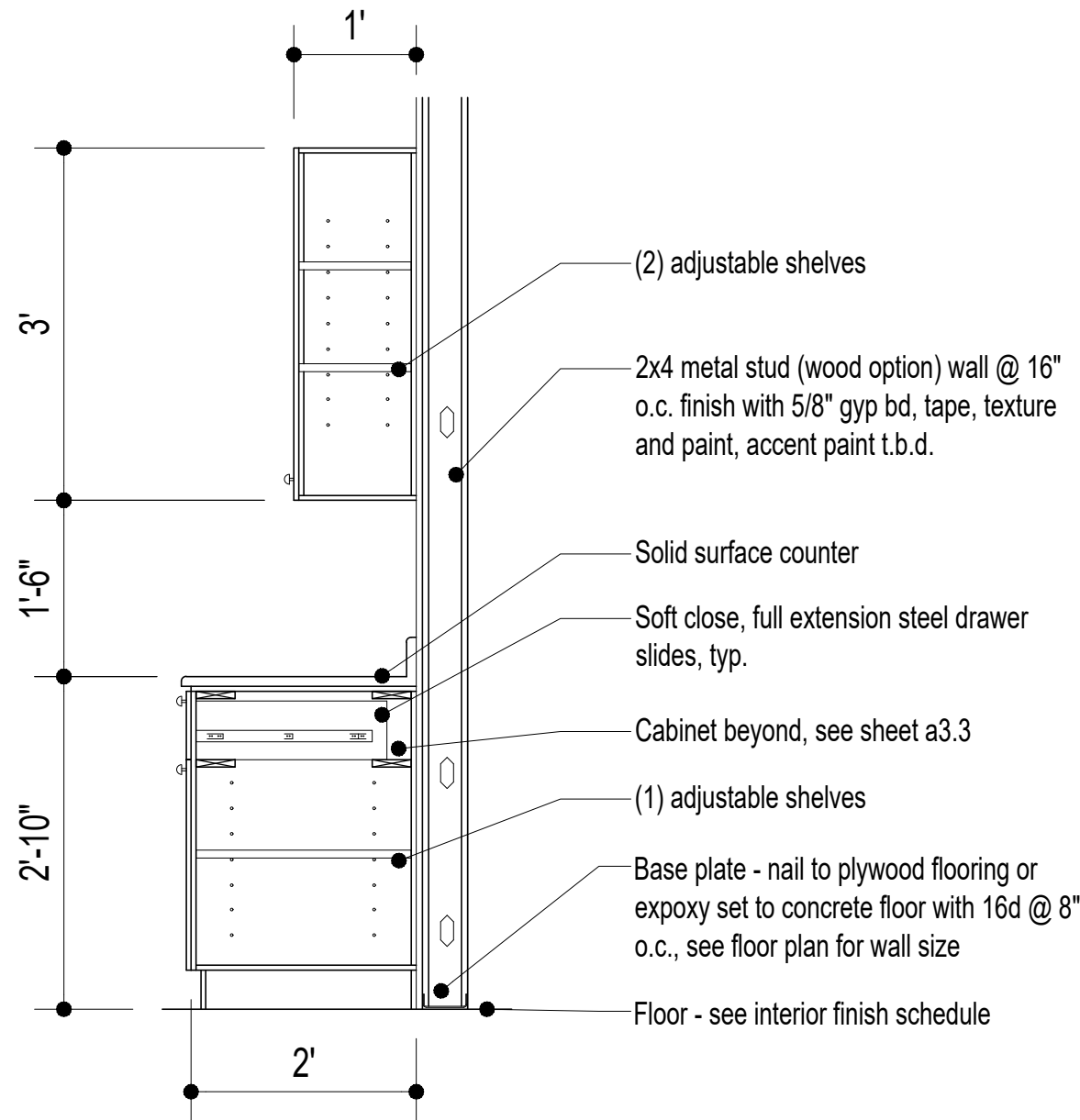
REVISIONS

DATE

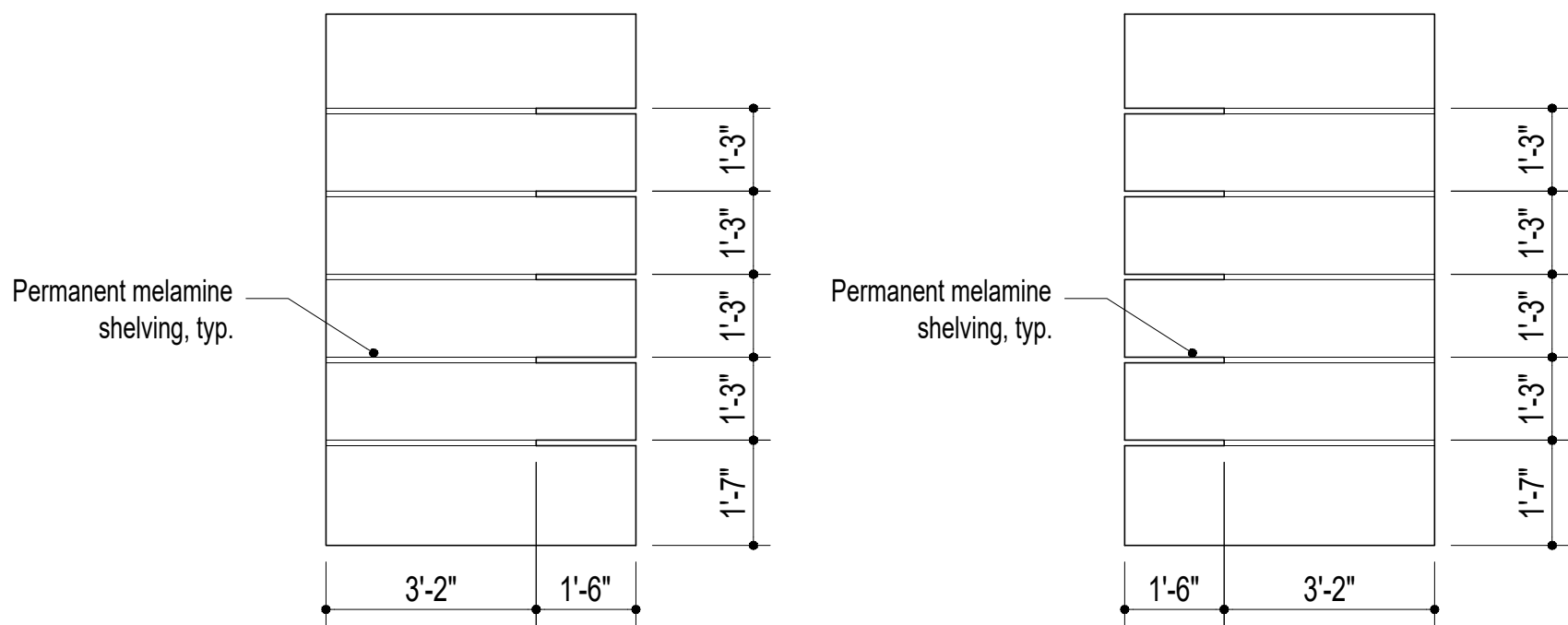
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SHEET NUMBER

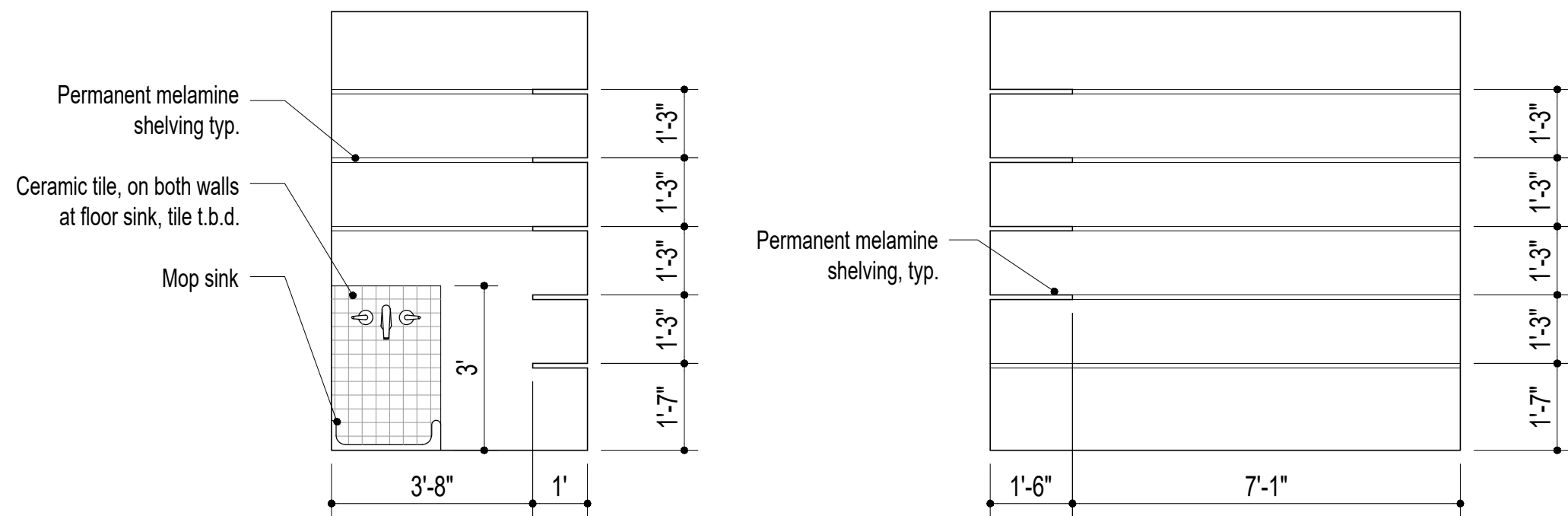
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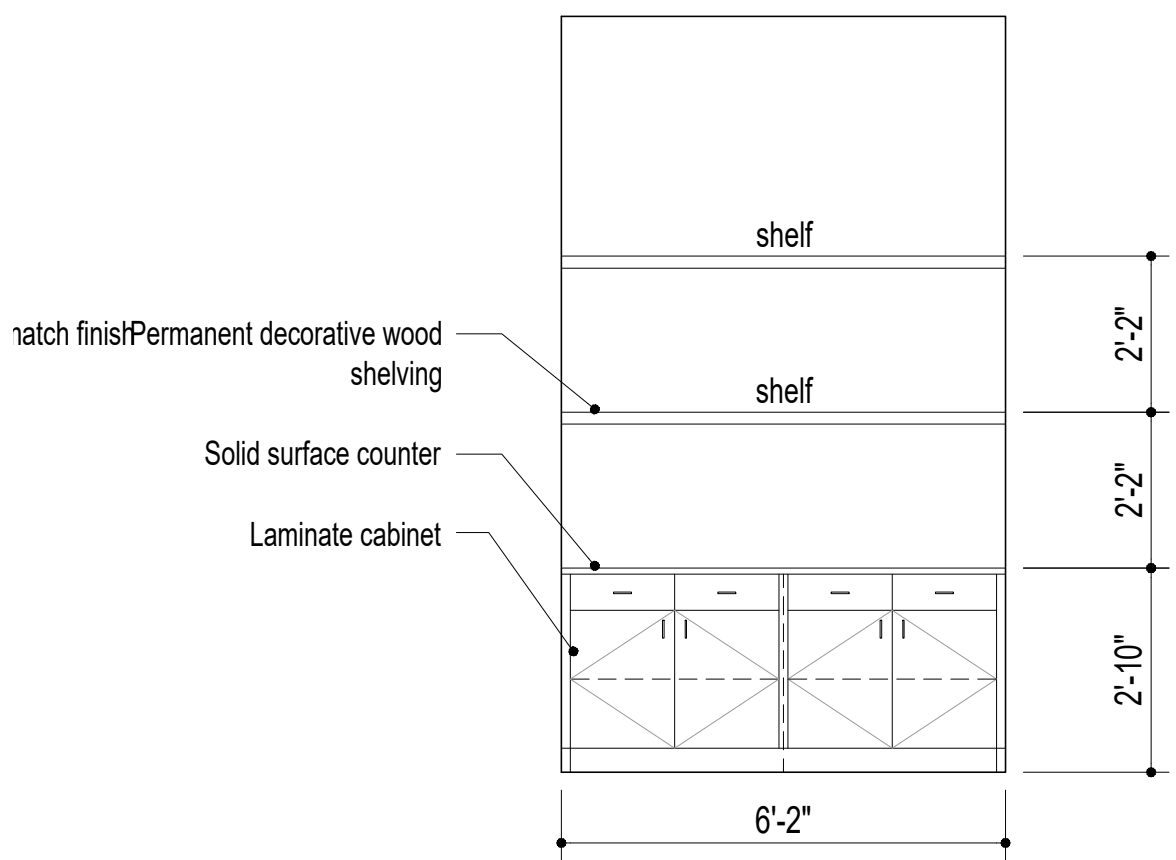
9      **Typ. Cabinet Section**  
Scale: 1/4" = 1'-0"  
Do Not Scale Drawings  
Specific Cabinet Configuration May Vary



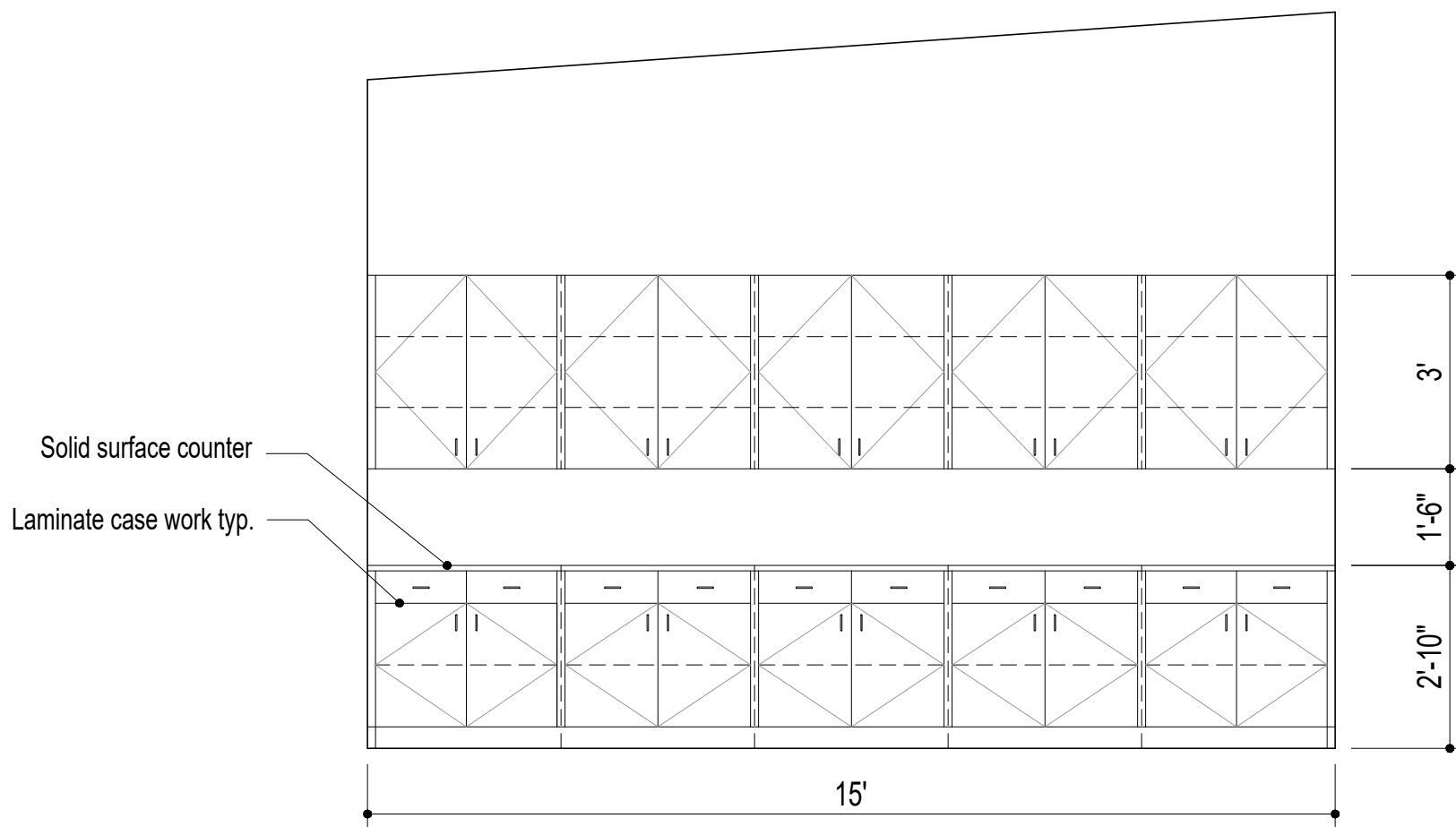
5      **Office Storage Interior Elevation**  
Scale: 3/8" = 1'-0"  
Do Not Scale Drawings



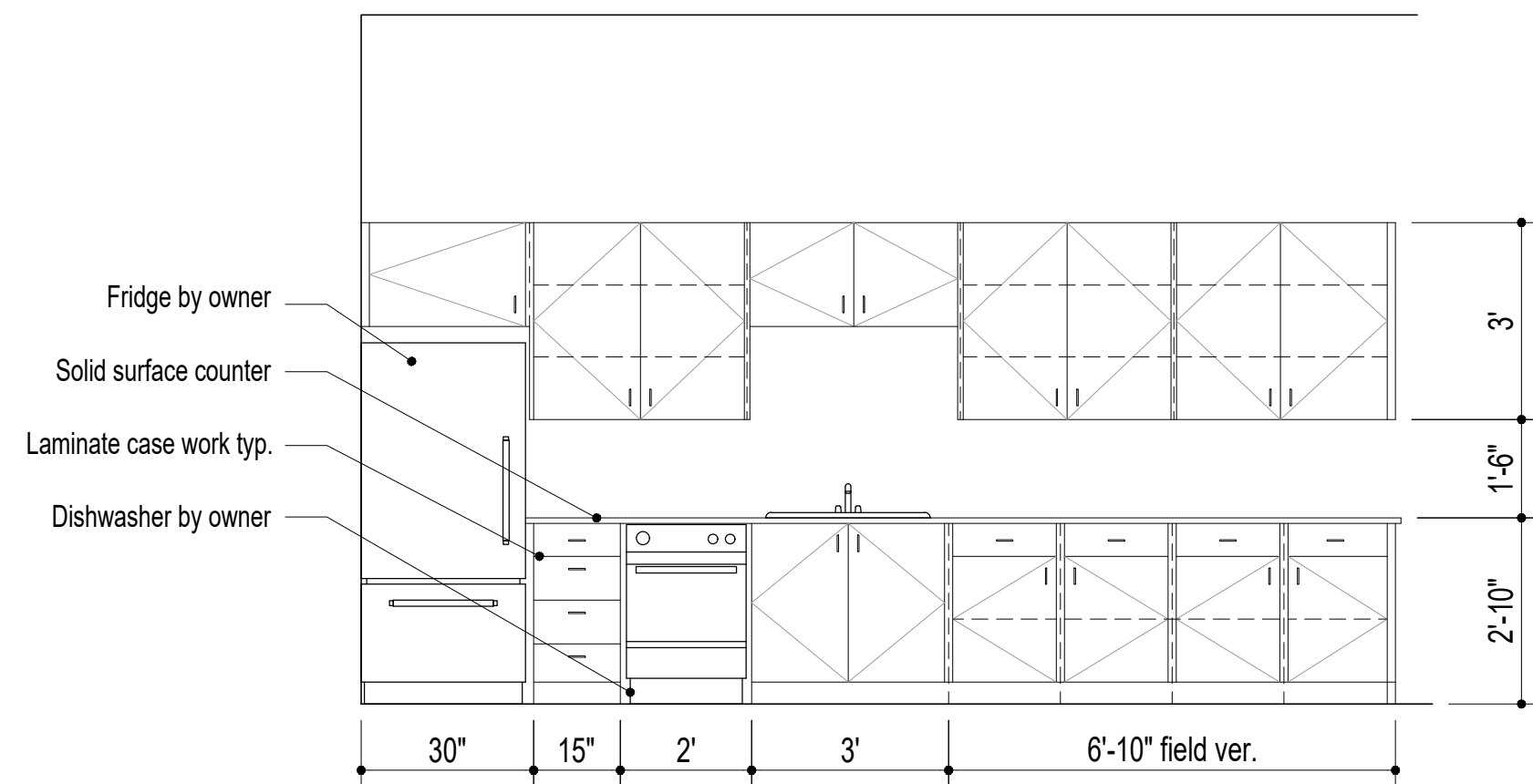
4      **Janitor Closet Interior Elevation**  
Scale: 3/8" = 1'-0"  
Do Not Scale Drawings



3      **Conference Room Interior Elevation**  
Scale: 3/8" = 1'-0"  
Do Not Scale Drawings



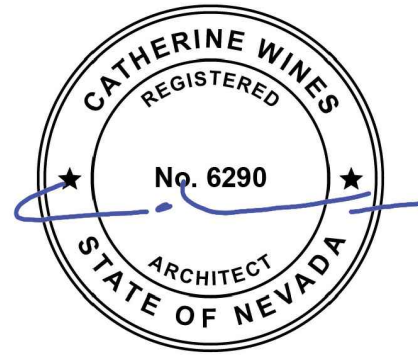
2      **Office Hallway Interior Elevation**  
Scale: 3/8" = 1'-0"  
Do Not Scale Drawings



1      **Breakroom Interior Elevation**  
Scale: 3/8" = 1'-0"  
Do Not Scale Drawings

#### Cabinet Notes

- 1- All cabinets to be constructed in accordance with AWI Premium Grade
- 2- All exposed surfaces shall be plastic laminate. Semi exposed surfaces shall be matching cabinet liner or white melamine. Concealed surfaces shall be manufacturer's standard.
- 3- All countertops shown are separate solid surface, min 3/4" thick with rolled corners and 4" integral back splash. All countertop splashes shall be 4" high unless otherwise noted.
- 4- All cabinet dimensions are nominal and to face of finished material unless otherwise noted. Verify all field conditions prior to fabrication.
- 5- Provide 3/4" thick adjustable shelves in all base, tall, and upper cabinets. Shelves over 36" wide shall have front nosing and be supported by metal shelf standards and clips.
- 6- All drawer boxes shall be 5/8" thick dovetailed hardwood or 3/4" pre-finished plywood with under-mount, full extension, soft-close slides rated for 100lb minimum. Cabinet backs shall have 1/4" min.
- 7- All doors and drawer fronts shall be full overlay unless noted otherwise.
- 8- Hinges shall be concealed, 110°–165° self-closing, 6-way adjustable.
- 9- Provide grommets at all locations indicated for wire pass-through. Color to match adjacent finish.
- 10- All finish hardware to be heavy-duty, steel, pulls and knobs to be selected from cabinet makers standard line or approved equal.
- 11- Coordinate exact appliance sizes, utility locations, and vent requirements with mechanical, electrical, and plumbing trades prior to fabrication.
- 12- Provide blocking in walls for all wall-hung cabinets, open shelving, and heavy accessories (contractor responsibility unless noted otherwise).
- 13- All cabinetry shall be level, plumb, and scribed tight to walls and soffits. Scribe fillers to be maximum 1/2" wide unless approved by architect.



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#### PROJECT NAME



**FOOD BANK**  
OF NORTHERN NEVADA

**Tenant Improvement**  
111 W. Front Street  
Elko, Nevada

#### SHEET NAME

**Interior Elevations**  
**Details**

#### REVISIONS

#### DATE

11.6.2025

#### SHEET NUMBER

**a3.2**



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PROJECT NAME



SHEET NAME

Details  
Wall Sections

REVISIONS

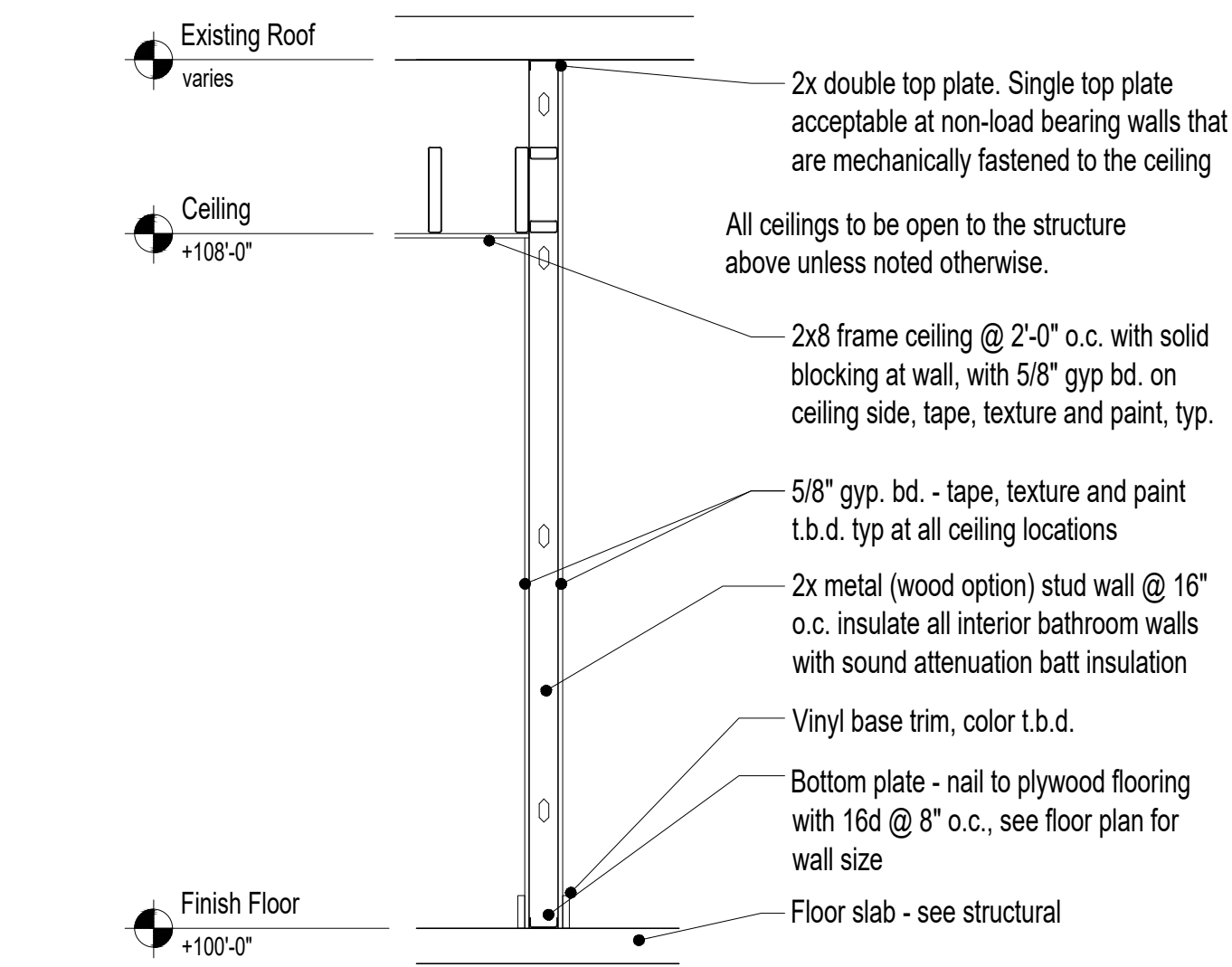
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11.6.2025

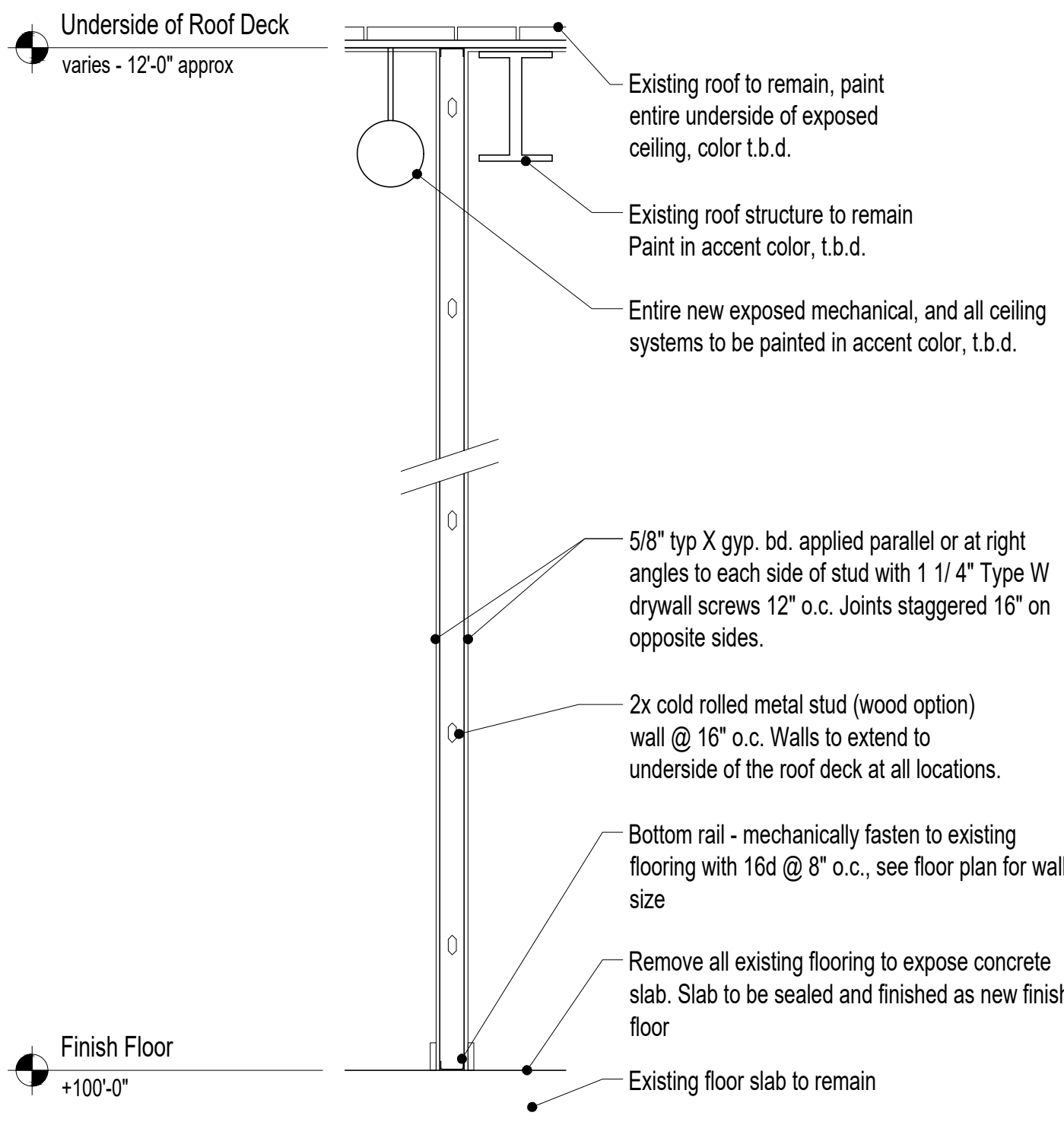
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a4.1

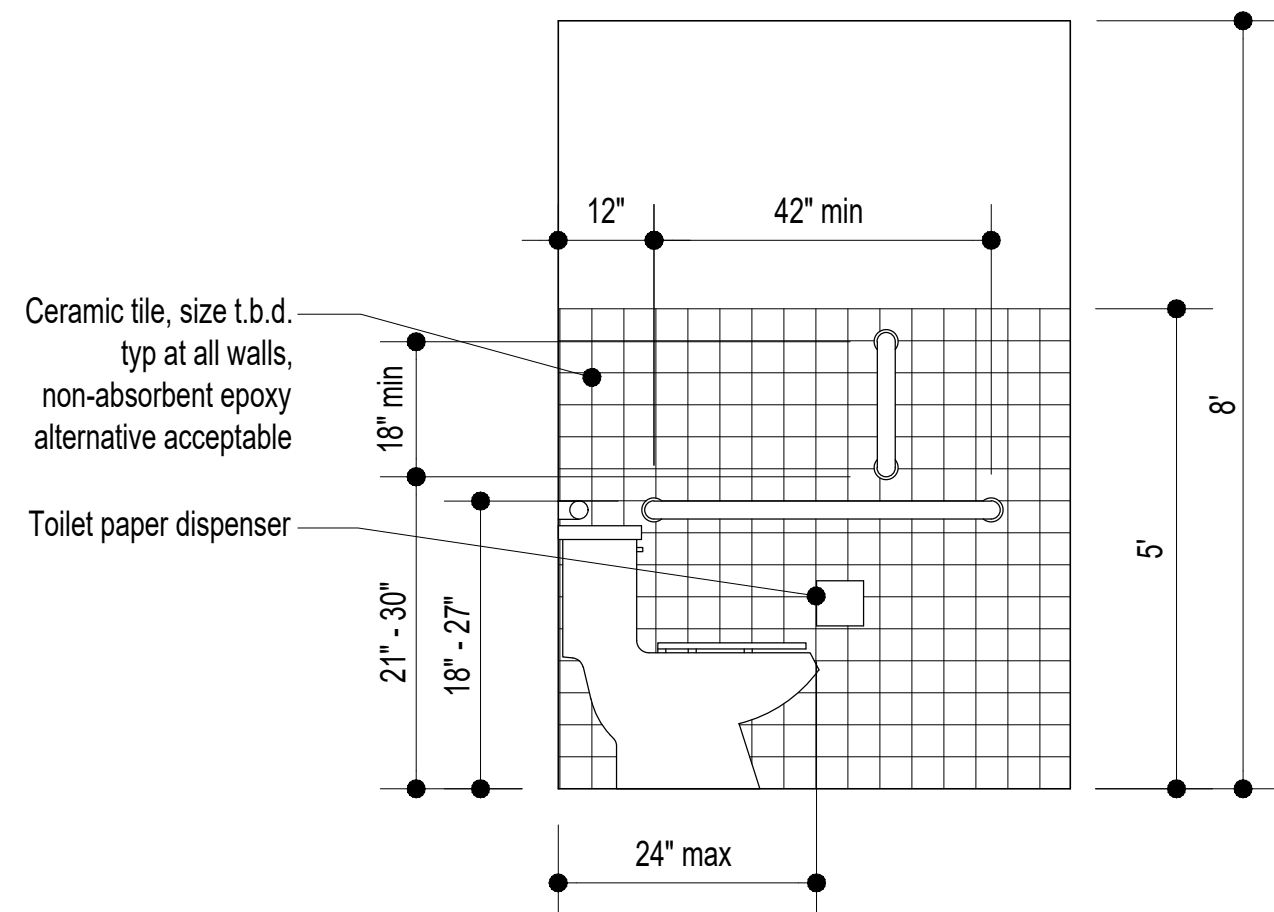
File number 25-006 - FBNN, Elko City



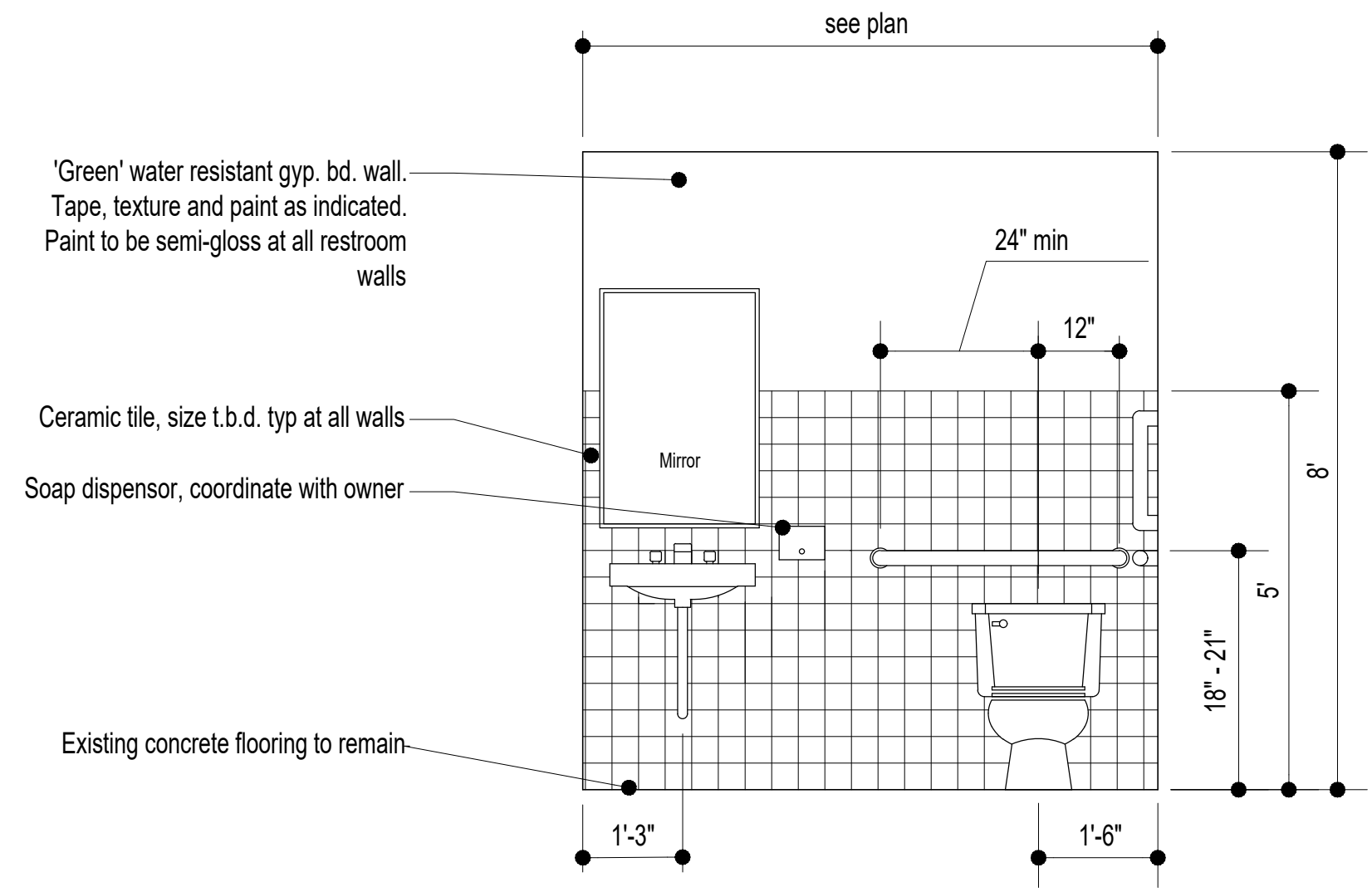
5 Interior Partition Wall Section  
Scale: 1/2" = 1'-0" Do Not Scale Drawings



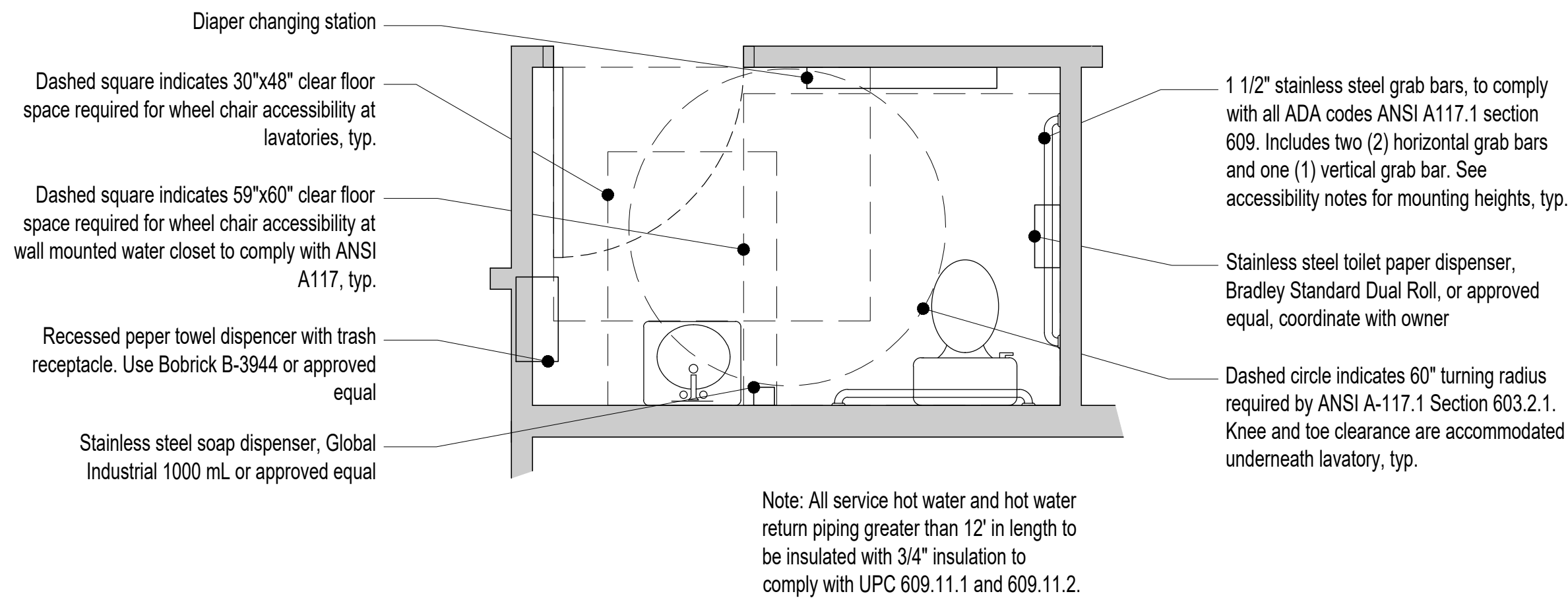
4 Interior Dividing Wall Section  
Scale: 1/2" = 1'-0" Do Not Scale Drawings



3 Restroom Elevations  
Scale: 1/2" = 1'-0" Do Not Scale Drawings  
Drawing shows intent of restroom fixtures, each restroom is unique and may be mirrored



2 Restroom Elevations  
Scale: 1/2" = 1'-0" Do Not Scale Drawings  
Drawing shows intent of restroom fixtures, each restroom is unique and may be different in layout



1 Enlarged Restroom Plan  
Scale: 3/8" = 1'-0" Do Not Scale Drawings



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## PROJECT NAME



Tenant Improvement  
111 W. Front Street  
Elko, Nevada

## SHEET NAME

## Schedules

## REVISIONS

## DATE

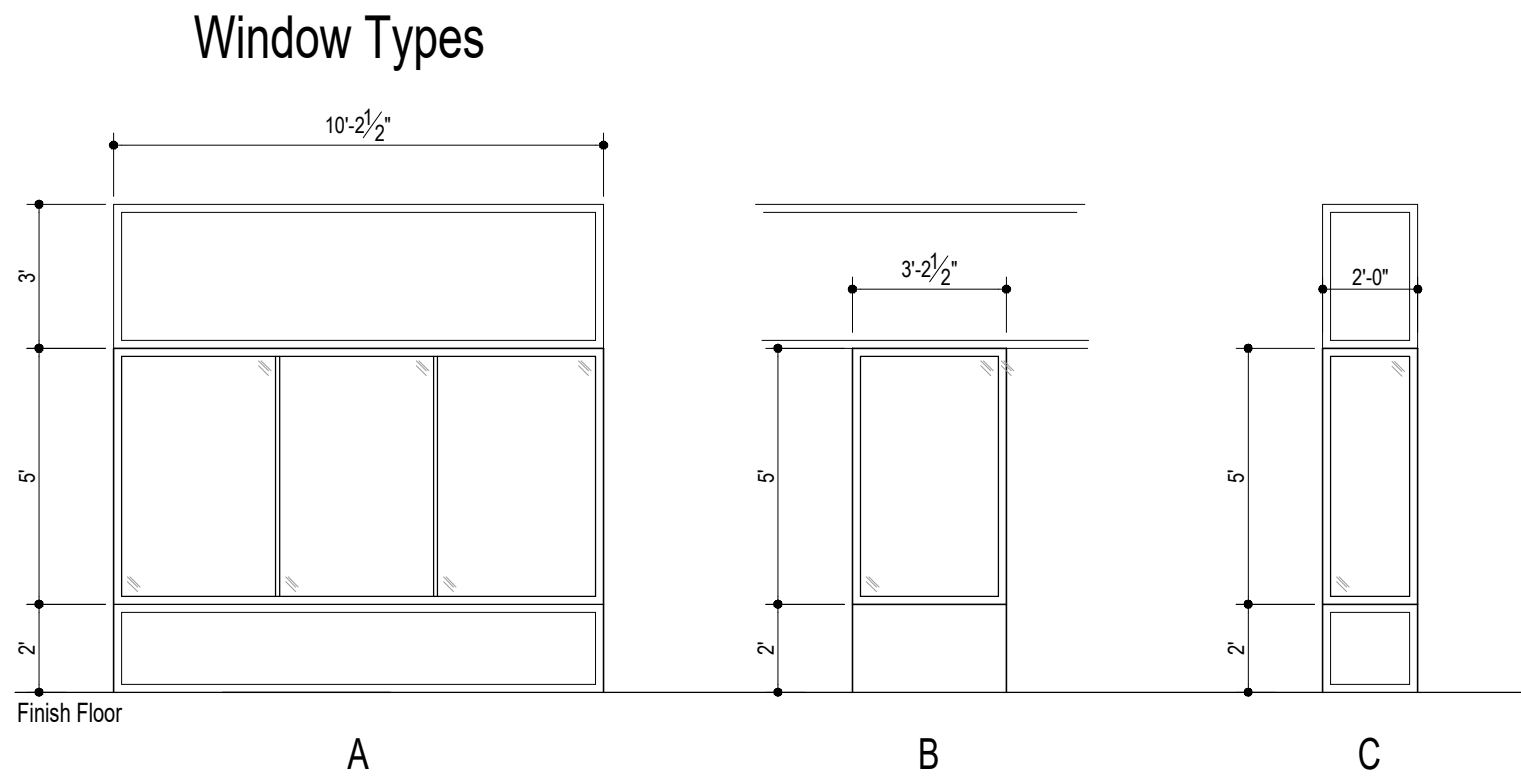
11.6.2025

## SHEET NUMBER

a5.1

File number 25-006 - FBNN, Elko City

Window Schedule								
Symbol	Rooms	Size	Operation	Total # of Windows	Material	Glazing	Mnfr.	Comments
First Floor								
A	Pantry, Conference Room	10'-0" x 5'-0"	fixed	4	aluminum	Low E	T. B. D.	Field Verify
B	Pantry	3'-3" x 5'-0"	fixed	1	aluminum	Low E	T. B. D.	Field Verify
C	Existing Office	2'-0" x 5'-0"	fixed	12	aluminum	Low E	T. B. D.	Field Verify



Interior Finish Schedule											
Room Number	Room Name	Floor	Base	North Wall	East Wall	South Wall	West Wall	Ceiling	Specialty	Comments	Ceiling Height
First Floor											
101	Entrance	F-2	B-2	W-1/W-4	W-1/W-4	W-1/W-4	W-1/W-4	C-1			open
102	Hall	F-2	B-2	W-1	W-1	W-1	W-1	C-1			open
103	Pantry	F-2	B-2	W-1	W-1	W-1	W-1	C-1			open
104	Office	F-2	B-2	W-1	W-1	W-1	W-1	C-2			open
105	Office	F-2	B-2	W-1	W-1	W-1	W-1	C-2			open
106	Office	F-2	B-2	W-1	W-1	W-1	W-1	C-2			open
107	Conference Room	F-3	B-2	W-1	W-1	W-1	W-1	C-1			open
108	Break Room	F-3	B-2	W-1	W-1	W-1	W-1	C-1			open
109	Unisex Restroom	F-2	B-1	W-3	W-3	W-3	W-3	C-2			8'-0"
110	Unisex Restroom	F-2	B-1	W-3	W-3	W-3	W-3	C-2			8'-0"
111	Janitor	F-3	B-1	W-1	W-1	W-1	W-3	C-2		Partial ceramic tile at mop sink	8'-0"
112	Unisex Restroom	F-2	B-1	W-3	W-3	W-3	W-3	C-2			8'-0"
113	Office	F-2	B-2	W-1	W-1	W-1	W-1	C-2			open
114	Open Office	F-2	B-2	W-1	W-1	W-1	W-1	C-1			open
115	Office	F-2	B-2	W-1	W-1	W-1	W-1	C-1			open
116	Mechanical	F-2	B-1	W-4	W-4	W-1	W-4	C-2			open
117	Walk-in Cooler	F-3								Pre-manufactured unit	open
118	Walk-in Freezer	F-3								Pre-manufactured unit	open
119	Warehouse	F-1	B-1	W-1	W-4	W-4	W-4	C-3	S-1	Warehouse racking	open
120	Water Room	F-1	B-1	W-1	W-1	W-1	W-4	C-3			open

### Window Notes

1- Verify all window dimensions in the field.

2- All glass within 18" of finish floor or an operable door must be tempered glass. "T" indicates tempered glass.

3- All operable windows to have locking hardware device.

4- All windows and doors with glass to have low "E" double pain, clear glass.

5- All doors and windows to be installed to meet manufacturers specifications and recommendations and to meet current codes for energy efficiency and security.

6- The maximum U-factor for all windows including glazing and frames to be max NFRC 100 or better.

7- Window A & C are BID ALTERNATES

### Floor

- F-1 Remove all existing flooring, expose and clean existing concrete  
F-2 Remove all existing flooring, polish and seal existing concrete

### Base

- B-1 4" Vinyl cove base - color t.b.d.  
B-2 6" Vinyl cove base

### Ceiling

- C-1 Remove 2x4 acoustic grid ceiling to expose structure. Existing ceiling and all systems hanging from the ceiling to be painted with one base color and two accent colors  
C-2 5 /8" Gyp bd. attached to ceiling framing, screw drywall as required by code, tape, texture and paint t.b.d.  
C-3 Existing to remain

### Walls

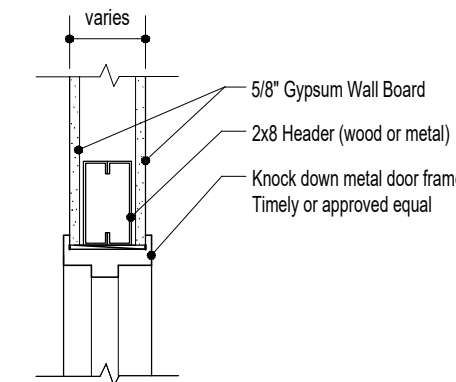
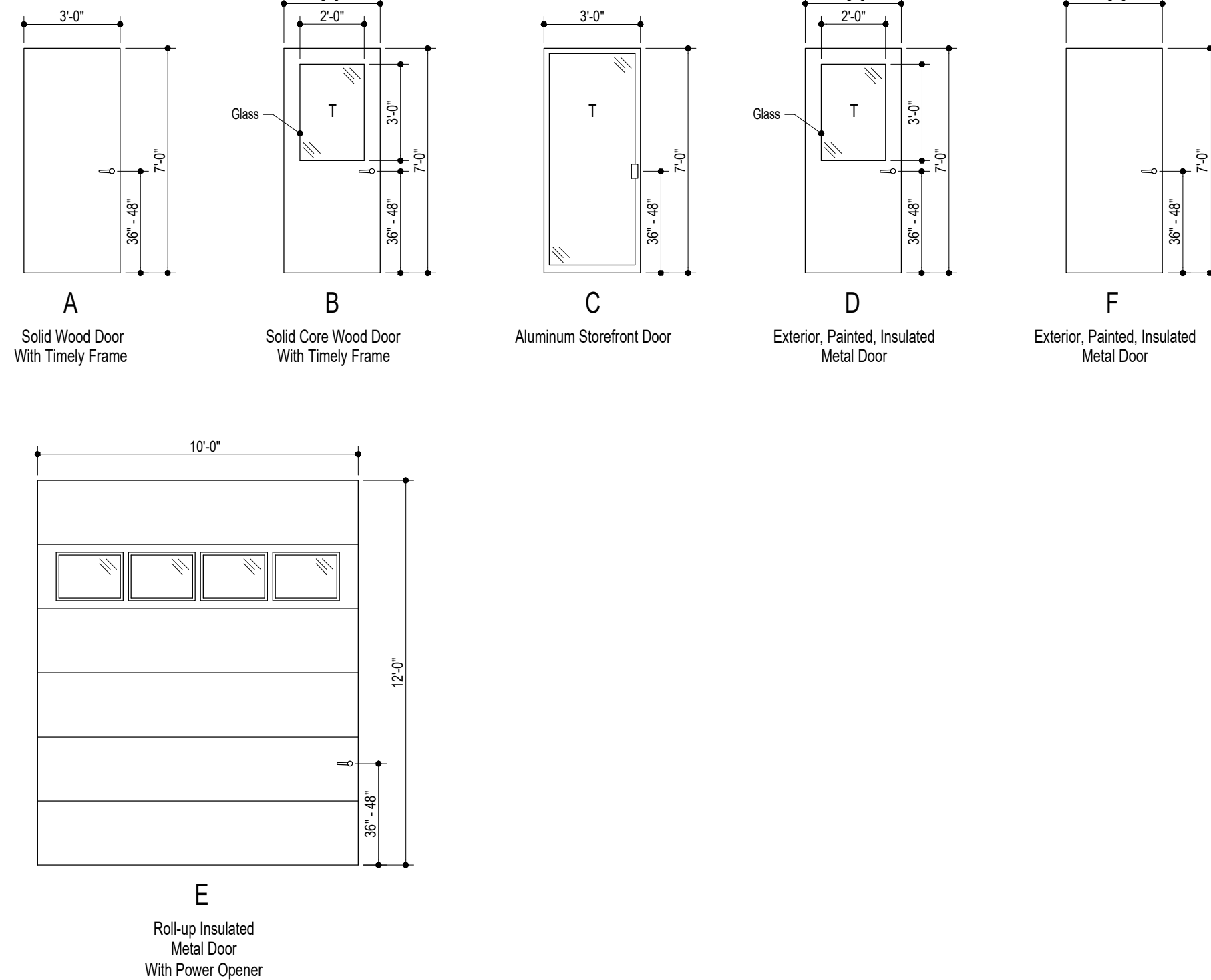
- W-1 5/8" Gyp bd. attached to framing, screw drywall as required by code, tape, texture and paint with base color, t.b.d.  
W-2 not used  
W-3 4x4 ceramic tile up to 5'-0" a.f.f. with finish gyp bd above to ceiling. All wet walls to be 5/8" green board gyp. bd. for water resistance. Tape texture and paint as required. Sound attenuation insulation.  
W-4 Existing to remain, patch and paint as required for new finish look

### Specialty

- S-1 Seismic braced warehouse racking

Door Schedule														
Symbol	Room Name	Size	Door			Frame			Fire Rating	Hardware Group	Automatic Closure		Comments	
			Existing to Remain	Double Door	Type	Glazing	Material	Details						
								Head						Jamb
101A	Entrance	3'-0" x 7'-0"	yes		C	yes	A	c / a5.1	c / a5.1	no	A	yes	Replace existing hardware to be compliant	
101B	Entrance	3'-0" x 7'-0"	yes		C	yes	A	c / a5.1	c / a5.1	no	A	yes	Replace existing hardware to be compliant	
102	Hall	3'-0" x 7'-0"		yes	B	yes	W	a / a5.1	b / a5.1	no	D	yes		
103A	Pantry	3'-0" x 7'-0"			B	yes	W	a / a5.1	b / a5.1	no	D			
103B	Pantry	3'-0" x 7'-0"			C	yes	A	c / a5.1	d / a5.1	no	A		Entrance only door, no interior lever	
103C	Pantry	3'-0" x 7'-0"		yes	C	yes	A	c / a5.1	d / a5.1	no	A		Exit only door, no exterior lever	
103D	Pantry	3'-0" x 7'-0"		yes	B	yes	W	a / a5.1	b / a5.1	no	D			
104	Office	3'-0" x 7'-0"			B	yes	W	a / a5.1	b / a5.1	no	B			
105A	Office	3'-0" x 7'-0"			B	yes	W	a / a5.1	b / a5.1	no	B			
105B	Office	3'-0" x 7'-0"			B	yes	W	a / a5.1	b / a5.1	no	B			
106	Office	3'-0" x 7'-0"			B	yes	W	a / a5.1	b / a5.1	no	B			
107A	Conference Room	3'-0" x 7'-0"		yes	B	yes	W	a / a5.1	b / a5.1	no	B			
107B	Conference Room	3'-0" x 7'-0"			B	yes	W	a / a5.1	b / a5.1	no	B			
108A	Break Room	3'-0" x 7'-0"			B	yes	W	a / a5.1	b / a5.1	no	B			
108B	Break Room	3'-0" x 7'-0"			B	yes	W	a / a5.1	b / a5.1	no	B			
109	Unisex Rest Room	3'-0" x 7'-0"			A		W	a / a5.1	b / a5.1	no	C	yes		
110	Unisex Restroom	3'-0" x 7'-0"			A		W	a / a5.1	b / a5.1	no	C	yes		
111	Janitor Closet	3'-0" x 7'-0"			A		W	a / a5.1	b / a5.1	no	B	yes		
112	Unisex Restroom	3'-0" x 7'-0"			A		W	a / a5.1	b / a5.1	no	C	yes		
113	Office	3'-0" x 7'-0"			B	yes	W	a / a5.1	b / a5.1	no	B			
114A	Open Office	3'-0" x 7'-0"			B	yes	W	a / a5.1	b / a5.1	no	B			
114B	Storage	3'-0" x 7'-0"			A		W	a / a5.1	b / a5.1	no	B			
115	Office	3'-0" x 7'-0"			B	yes	W	a / a5.1	b / a5.1	no	B			
116	Mechanical	3'-0" x 7'-0"			A		W	a / a5.1	b / a5.1	no	B			
117	Walk-in Cooler	5'-0" x 7'-0"					M			no			Walk-in door part of pre-manufactured system	
118	Walk-in Freezer	5'-0" x 7'-0"					M			no			Walk-in door part of pre-manufactured system	
119A	Warehouse	12'-0" x 10'-0"			E	yes	M	see civil	see civil	no			Powered lift control	
119B	Warehouse	12'-0" x 10'-0"			E	yes	M	see civil	see civil	no			Powered lift control	
119C	Warehouse	3'-0" x 7'-0"	yes		D	yes	M	c / a5.1	c / a5.1	no	A			
119D	Warehouse	10'-0" x 12'-0"	yes		E		M	c / a5.1	c / a5.1	no			Powered lift control	
119E	Warehouse	3'-0" x 7'-0"	yes		D	yes	M			no	A			
120	Fire Riser	3'-0" x 7'-0"			F		M	a / a5.1	b / a5.1					

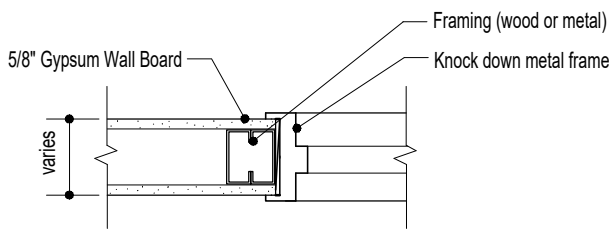
### Door Types



Door Head

Scale: 1 1/2" = 1'-0"

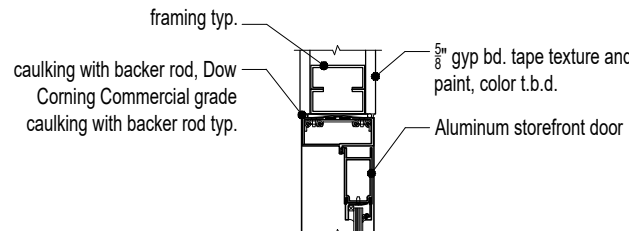
Exterior wall detail similar, includes insulation



Door Jamb

Scale: 1 1/2" = 1'-0"

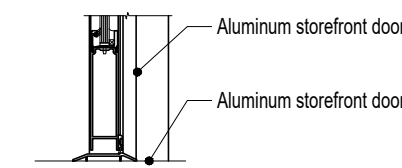
Exterior wall detail similar, includes insulation see metal building manufacturers recommendations



Door Jamb

Scale: 1 1/2" = 1'-0"

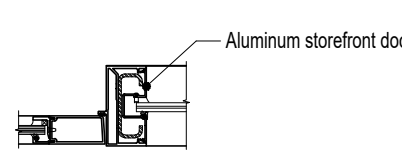
Door Head detail similar



Door Threshold

Scale: 1 1/2" = 1'-0"

Door Head detail similar



Door w/Sidelite

Scale: 1 1/2" = 1'-0"

Door Head detail similar

### Door Notes

1- Due to multiple use some door details are reversed from direction shown.

2- Interior doors to be installed to clear finish floor material by 1/2"

3- All locksets on doors shall be ADA lever type.

4- All openings larger than 1/4" in exterior wall to use backer rod and commercial grade caulk for dust control.

5- Interior doors to have knock down Timely metal frames, color t.b.d.

6- Exterior metal doors to have welded paint grade metal frame.

7- not used

8- All stops to be industrial grade stainless steel, either pedestal or wall stops.

9- All door hardware to be mounted at 36" a.f.f. u.n.o.

10- All doors and entrances are to be accessible based on requirements of the Americans with Disabilities Act.

11- All panic hardware shall be listed in accordance with UL 305, fire exit hardware shall be listed with UL 10C and UL 305.

12- The actuating portion of the releasing device shall extend at least one-half of the door leaf width of any fire rated door.

13- The maximum unlatching force shall not exceed 15 lbs on any door with-in the path of travel of a designated exit.

14- Door 101 must have a visible sign on the interior, that reads "THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED"

15- Door 101 to have access control and unlocking at the reception desk with a push button.

### Door Hardware Sets

- A - Exterior Door (single)  
-1 Interior push bar  
-1 Exterior pull handle ADA compliant  
-1 Deadbolt locking device with keyed pull side and thumb lock on push side  
-1 Threshold  
-1 Set weather stripping  
-3 Hinges  
-1 Pedestal stop (wall substitute as needed)

B - Interior Door (single) - Finish t.b.d.  
Schlage or equal

- 1 Lever style knob to be ADA compliant keyed on push side  
free egress from egress side  
-3 Hinges  
-1 Wall stop

C - Interior Door (single) - Finish t.b.d.  
Schlage or equal

- 1 Lever style knob to be ADA compliant Privacy lock on pull side  
-3 Hinges  
-1 Wall Stop (pedestal substitute as needed)

D - Interior Door (double) - Finish t.b.d.  
Schlage or equal

- 1 Locking leaf with floor lever Keyed lock - side t.b.d.  
-1 Lever style knob to be ADA compliant  
-6 Hinges  
-2 Wall Stop (pedestal substitute as needed)

1 - Materials not specifically described or shown will not be part of this contract unless required for minimum construction standards or code compliance. If more information is necessary to complete work contact the Architect / Owner.

2 - Where manufacturers have been specifically named, any alternate shall be approved in writing by the architect / owner prior to the commencement of work.

Footings - concrete mix	NA	Strength psi	Reinforcing
Foundation wall material	NA	Strength psi	Reinforcing
Interior foundation wall material	NA	Party foundation wall	NA
Columns	NA	Piers	NA
Girders	NA	Sills	NA
Basement entrance	NA	Basement windows	NA
Waterproofing	NA		
Termite protection	NA		
Additional foundation notes	See civil for dock and cooler foundation		

Framing material	NA
Paper or felt	Corner bracing
Sheathing	/ thickness spacing
Exterior finish	NA
Exterior veneer	NA
Door sills	NA
Window sills	NA
Lintels	NA
Flashing	NA
Exterior Finish	NA
Gable walls	same as walls other
Additional exterior wall notes	

Infill framing at existing door and window locations to match existing walls to remain. New window panels to be accent color

First floor	NA	thickness		reinforcing	
Inside foundation insulation	NA		membrane	yes	
Fill under slab	NA	thickness			
Mezzanine floor framing	NA	spacing	NA		anchors NA
Additional floors framing	NA	spacing			anchors NA
Additional floor notes	NA				

Material	Remove all existing flooring, finish and seal concrete	size	NA	type	NA
Material	NA	size	NA	type	NA

Studs 2x4 metal studs \_\_\_\_\_ size & spacing 16" o.c. \_\_\_\_\_ other \_\_\_\_\_  
 Plumbing studs 2x6 metal studs \_\_\_\_\_ size & spacing 16" o.c. \_\_\_\_\_ other \_\_\_\_\_ typ. at all wet walls  
 Additional partition notes interior walls to go to underside of the roof deck \_\_\_\_\_

Material NA size & spacing NA other NA  
Additional ceiling framing notes NA

Rafters	NA	Trusses	NA
Spacing		anchors	see structural
Additional roof framing notes NA			

Sheathing <small>NA</small>		Spacing _____		Style _____		Size _____	
Roofing <small>NA</small>		Thickness _____		Gage or weight _____		Nailing _____	
Fastening <small>NA</small>		Underlay <small>NA</small>		Flashing <small>NA</small>		Gravel stops _____	
Snow guards <small>no</small>		Ice shield <small>yes</small>		Down spouts <small>NA</small>		Additional roofing notes _____	

Wall finish material	5/8" gyp. bd.	weight or thickness	5/8"
Ceiling finish material	gyp. bd	weight or thickness	5/8"
Joint treatment	2 layers drywall tape	Finish	Flat finish
Wet wall locations	Green gyp. bd.	weight or thickness	5/8"
Fire wall locations	NA	weight or thickness	NA
Additional wall finish notes stain grade wainscot to 4' a.f.f. in stairwell and guest lobby, see interior elevations			

	Tread / Size	Riser / Size	Strings / Size	Handrail / Size	Balusters
Location <u>NA</u>					
Location					
Location					
Disappearing Garage Stair <u>NA</u>					
Additional stair notes					

Location	Thickness	Type	R-value	Vapor Barrier
Restroom walls	6"	Sound Attenuation Batt		
Additional insulation notes				

Fixture	Number	Locations	Make	Size	Color
see plumbing plans for fixture schedule					
bid allowance for all plumbing fixtures and accessories					

Bathroom accessories coordinate with owner

Additional plumbing fixture notes

Breakroom lower cabinet material	AWI premium grade, laminate	lineal feet	13'-6"	exposed shelving lineal feet	NA
Breakroom upper cabinet material	AWI premium grade, laminate	lineal feet	15'-6"	exposed shelving lineal feet	NA
Office cabinet material	AWI premium grade, laminate	lineal feet	15'-0"	exposed shelving lineal feet	NA
Conference Station cabinet material	AWI premium grade, laminate	lineal feet	6'-0"	exposed shelving lineal feet	6'-0"
Kitchen counter top material	Solid Surface	Bathroom counter top material	NA		
Backsplash	Solid Surface	Cabinet Finish			
Storage Rooms	Melamine fixed shelving	open shelving lineal feet	See plan		
Additional cabinet notes Office cabinet has upper and lower – see interior elevations					

Weatherproofing requirements called out throughout plans, all exposed exterior surfaces need to be properly weatherproofed according to industry standards

Fire extinguisher in stainless steel recessed, lockable cabinet - see plan for locations

See schedules for roll-up door specs

New covered patio at the front of the building to have 6'-0" chainlink fence with privacy slats on two sides.

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Existing to remain - rehabilitate existing, see civil

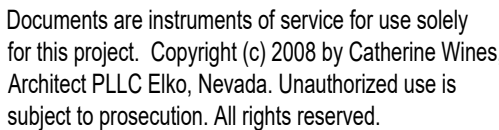
Area to be landscaped	indicted on site plan	by owner — see civil
Topsoil _____ thickness _____ Shade trees, deciduous _____ Evergreen trees _____ High shrubs _____ Medium shrubs _____ Low shrubs _____ Ground cover _____ Automatic sprinkler system _____ Additional landscaping notes _____		

All fixtures, furniture, and equipment by owner
Warehouse racking – see attached specifications
Walk-in cooler and freezer – see attached specifications

Contractor to coordinate installation and set-up of all specialty items

ALTERNATE 1 – ROOF REPLACEMENT
ALTERNATE 2 – FIRE SPRINKLER SYSTEM
ALTERNATE 3 – PARKING LOT CHIP SEAL
ALTERNATE 4 – REPLACE FRONT WINDOWS
ALTERNATE 5 – REPLACE SIDE WINDOWS
ALTERNATE 6 – EXTERIOR SIGN

421 RAILROAD STREET STE 208  
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**FOOD BANK**  
OF NORTHERN NEVADA



**Tenant Improvement**  
111 W. Front Street  
Elko, Nevada

## Specifications

11.6.2025

## a5.2

File number 25-006 - FBNN, Elko City

1. COORDINATE ALL DEMOLITION AND NOTIFY OWNER OF ANY DISCREPANCIES.
2. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BID AND BECOME ACQUAINTED WITH EXISTING CONDITIONS AND EXISTING INSTALLATIONS. NOTIFY ENGINEER, OR OWNER OF CONFLICTS AND DISCREPANCIES.
3. CONDITIONS SHOWN ON PLANS MAY NOT REFLECT "AS-BUILT" CONDITIONS. VERIFY EXISTING CONDITIONS PRIOR TO FINAL BID.
4. OWNER RETAINS RIGHTS TO SALVAGE EQUIPMENT AND FIXTURES REMOVED. COORDINATE WHICH EQUIPMENT TO BE SALVAGED WITH OWNER. COORDINATE LOCATION OF STORAGE WITH OWNER OF SALVAGED ITEMS. AVOID DAMAGE OF EQUIPMENT ON TRANSPORT TO OWNER STORAGE AREA.
5. WHERE SHUT-DOWN OF EXISTING SYSTEMS IS REQUIRED DURING DEMOLITION, COORDINATE SHUT-DOWN TIME AND DURATION WITH OWNER TO MINIMIZE DOWNTIME. NOTIFY OWNER 7 DAYS PRIOR TO INTERRUPTION IN SERVICE.
6. INSPECT EXISTING EQUIPMENT TO REMAIN TO VERIFY THAT EQUIPMENT IS OPERATING PROPERLY. NOTIFY OWNER OF DAMAGED EQUIPMENT.
7. CONTRACTOR SHALL AVOID DAMAGE TO EXISTING SURFACES AND EQUIPMENT NOT TO BE DEMO'ED. DAMAGE SHALL BE REPAIRED AT NO COST TO THE OWNER.
8. SEAL ALL PENETRATIONS THROUGH WALLS, FLOORS, CEILINGS, AND ROOFS WHERE EQUIPMENT OR ACCESSORIES ARE BEING REMOVED. REPAIR SURFACES TO MATCH ADJACENT AREAS.
9. INSTALL PERMANENT CAPS WHERE PIPING IS REMOVED AND THE EXISTING TAPS ARE NOT USED FOR THE NEW INSTALLATIONS. INSTALL TEMPORARY CAPS FOR THOSE PIPES THAT WILL BE UTILIZED TO PROTECT UNTIL NEW CONNECTIONS ARE INSTALLED.
10. ANY EXISTING PIPING THAT NEEDS TO REMAIN BUT INSTALLED IN DEMO'ED WALLS SHALL BE REROUTED AS NECESSARY TO EXISTING OR NEW WALLS.

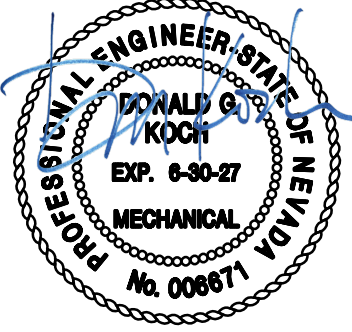
THIS PROJECT INVOLVES CONSTRUCTION INSIDE AN EXISTING STRUCTURE. CONTRACTORS, BY SUBMITTING A BID ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITIONS OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED. NO CLAIMS FOR EXTRA COMPENSATION WILL BE CONSIDERED FOR EXISTING CONDITIONS VISIBLE OR REASONABLY INFERRABLE FROM A CAREFUL EXAMINATION OF THE EXISTING BUILDING CONDITIONS.

CONTRACTOR SHALL INSPECT THE EXISTING FIELD CONDITIONS AT THE SITE (INCLUDING BUT NOT LIMITED TO SIZES, INVERTS, AND POINTS OF CONNECTION) AND THE CONTRACT DOCUMENTS PRIOR TO THE START OF ANY WORK TO DETERMINE WHAT EFFECT THE EXISTING CONDITIONS WILL HAVE ON THE WORK POTENTIAL. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN THEIR BID ALL COSTS REQUIRED TO MAKE THEIR WORK MEET EXISTING CONDITIONS.

ABBR	SYMBOL	DESCRIPTION
		SHEET NOTE
		REVISION NUMBER
S OR W		SOIL, WASTE OR SEWER - ABOVE AND BELOW GRADE/FLOOR
CWV		COMBINATION WASTE AND VENT
GR		GREASE WASTE - ABOVE AND BELOW GRADE/FLOOR
SD		STORM DRAIN - ABOVE AND BELOW GRADE/FLOOR
OSD		OVERFLOW STORM DRAIN - ABOVE AND BELOW GRADE/FLOOR
PDP		PLANTER DRAIN PIPING BELOW GRADE OR FLOOR
		PLANTER DRAIN PIPING ABOVE GRADE OR FLOOR
AW		ACID WASTE BELOW GRADE OR FLOOR
		ACID WASTE ABOVE GRADE OR FLOOR
OD		POOL OVERFLOW DRAIN PIPING
SLD		SLAB DRAIN PIPING
V		VENT
AV		ACID VENT
FOV		FUEL OIL VENT
ERV		EMERGENCY RELIEF VENT
		FUEL OIL - SUPPLY AND RETURN
CW		COLD WATER (UNTREATED WATER)(RAW CITY WATER)
HW		HOT WATER
HWR		HOT WATER RETURN
TW		TEMPERED WATER
TWR		TEMPERED WATER RETURN
SCW		SOFT COLD WATER
PD		PUMPED DRAIN
D		DRAIN
PW		PUMPED WASTE
ICW		INDUSTRIAL COLD WATER
NPW		NON-POTABLE WATER
		PRESSURE GAS - LOW, MEDIUM, AND HIGH
GV		GAS PRESSURE REGULATOR VENT
F		FIRE LINE
CSP		COMBINATION STAND PIPE
		PIPING BELOW GRADE WITH HEAT TRACE
		PIPING ABOVE GRADE WITH HEAT TRACE
		GAS - COCK, PRESSURE REGULATOR, METER, AND SOLENOID
		HOSE BIBB - NORMAL AND RECESSED
		REDUCED PRESSURE BACKFLOW PREVENTER
CO, WCO		CLEANOUT AND WALL CLEANOUT
AD, OAD		AREA DRAIN, OVERFLOW AREA DRAIN
FD		FLOOR DRAIN/ABOVE
FS		FLOOR SINK/ABOVE
PD		PLANTER DRAIN
DD		DECK DRAIN/ABOVE
RD, ORD		ROOF DRAIN, OVERFLOW ROOF DRAIN/ABOVE
VTR		VENT THROUGH ROOF
FSR		FIRE SPRINKLER RISER
SOV		SHUT-OFF VALVE
BVA		BALANCING VALVE ASSEMBLY - SOV, CV AND BV
BV		BALANCING VALVE
CV		CHECK VALVE
PRV		PRESSURE REDUCING VALVE
MX		MIXING VALVE
		RELIEF VALVE
		STRAINER WITH BLOW-DOWN VALVE
		FLEXIBLE PIPE CONNECTION
		UNION
		PIPE TRANSITION
PG		PRESSURE GAUGE
TH		THERMOMETER
WHA		WATER HAMMER ARRESTOR
		PIPE DOWN AND PIPE TEE DOWN
		PIPE UP AND PIPE TEE UP
		PIPE CAP
		ANCHOR
		GUIDE
		FLOW ARROW
POC		POINT OF CONNECTION TO EXISTING
POD		POINT OF DISCONNECTION FROM EXISTING
		ITEM TO BE REMOVED
(RO)		REVERSE OSMOSIS WATER
(SW)		SOFT WATER

[illegible]

(THIS IS A MASTER LEGEND, NOT ALL ABBREVIATIONS MAY APPEAR ON DRAWINGS.)			
ADA	ACCESS DOOR / AREA DRAIN	LBS	POUNDS
AFB	AMERICANS WITH DISABILITIES ACT	MAX	MAXIMUM
AP	ABOVE FINISH FLOOR	MBH	1000 BRITISH THERMAL UNITS PER HOUR
APU	AUTOMATIC	MCA	MINIMUM CIRCUIT AMPS
BHP	BRAKE HORSEPOWER	MCC	MOTOR CONTROL CENTER
BMS	BUILDING MANAGEMENT SYSTEM	MH	MANHOLE
BOH	BACK OF HOUSE	MIN	MINIMUM
BTU	BRITISH THERMAL UNIT	MOCP	MAXIMUM OVER CURRENT PROTECTION
DC	DEGREES CELSIUS	NA	NOT APPLICABLE
CFH	CUBIC FEET PER HOUR	NEC	NATIONAL ELECTRICAL CODE
CFM	CUBIC FEET PER MINUTE	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
		NIC	NOT IN CONTRACT
		NPSHA	NET POSITIVE SUCTION HEAD AVAILABLE
		NPSHR	NET POSITIVE SUCTION HEAD REQUIRED
DDC	DIRECT CURRENT	OFCI	OWNER FURNISHED/CONTRACTOR INSTALLED
DDC	DIRECT DIGITAL CONTROL		
DDCPDF	DIRECT DIGITAL CONTROL FIELD PANEL		
DF	DRINKING FOUNTAIN	P	PUMP
DFU	DRAINAGE FIXTURE UNITS	PD	PRESSURE AVAILABLE
DIA ( )	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PDI	PLUMBING DRAINAGE INSTITUTE
E	EXISTING	PH	PHASE
EFF	EFFICIENCY	PRV	PRESSURE REDUCING VALVE
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM	PSI	POUND PER SQUARE INCH
ET	EXPANSION TANK	PSIA	POUND PER SQUARE INCH ABSOLUTE
EW	ELECTRIC WATER COOLER	PSIG	POUND PER SQUARE INCH GAUGE
		°F	DEGREES FAHRENHEIT
FLA	FULL LOAD AMPS	RP	REVOLUTIONS PER MINUTE
FPM	FEET PER MINUTE	S	SINK, SOIL
FPS	FEET PER SECOND	SH	SHOWER / STATIC HEAD
FT	FEET	SP	STATIC PRESSURE
FU	FIXTURE UNITS	SQ FT	SQUARE FEET
		SS	SERVICE SINK
GAL	GALLONS	TAB	TESTING AND BALANCING
GPH	GALLONS PER HOUR	TDH	TOTAL DEVELOPED HEAD
GPM	GALLONS PER MINUTE	TEL	TOTAL EQUIVALENT LENGTH
H	HEIGHT	TP	TRAP PRIMER
HD	HEAD	TS	TEMPERING STATION
HOA	HAND OFF AUTO	TYP	TYPICAL
HP	HORSEPOWER	U	URINAL
HR	HOUR	UMC	UNIFORM MECHANICAL CODE
HS	HAND SINK	UNO	UNLESS NOTED OTHERWISE
HZ	HERTZ	UPC	UNIFORM PLUMBING CODE
IBC	INTERNATIONAL BUILDING CODE	V	VENT, VOLTS
IE	INVERT ELEVATION	W	WIDTH, WASTE, WATT
IFC	INTERNATIONAL FIRE CODE	WC	WATER CLOSET
IFGC	INTERNATIONAL FUEL GAS CODE	WFO	WATER FIXTURE UNITS
IMC	INTERNATIONAL MECHANICAL CODE	WG	WATER GAUGE
IN	INCH	WH	WATER HEATER
IPC	INTERNATIONAL PLUMBING CODE	WP	WATER PRESSURE
KW	KILOWATT	WPD	WATER PRESSURE DROP
L	LENGTH, LAVATORY		



PROJECT NAME



SHEET NAME

PLUMBING SPECIFICATIONS

REVISIONS

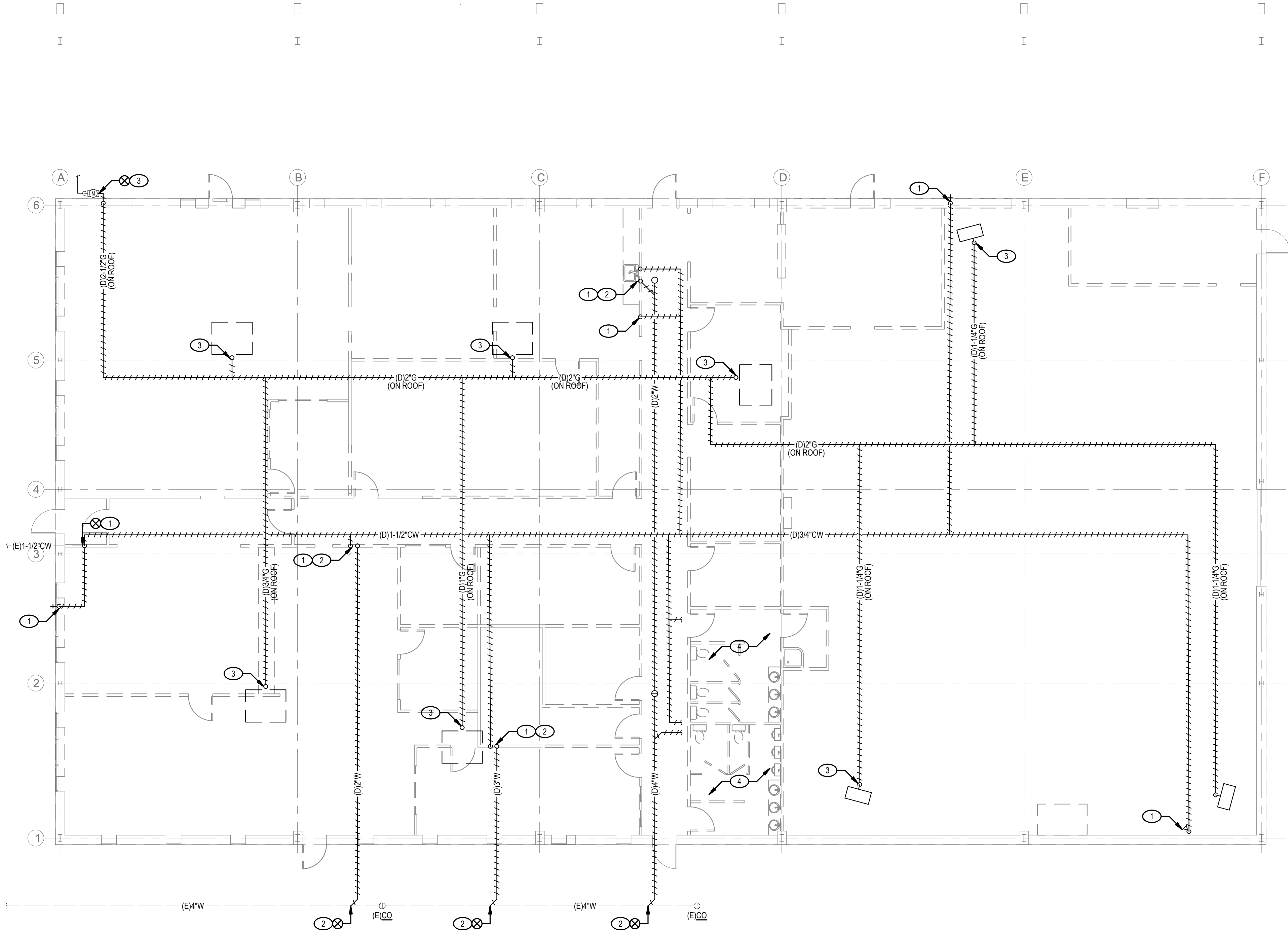
DATE

11.06.2025

SHEET NUMBER

P0.01

PLUMBING SPECIFICATIONS		
PART 1 GENERAL		
1.1 CONDITIONS		
A. GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, SPECIAL CONDITIONS, AND OTHER RELATED PORTIONS OF DIVISION 1, APPLY TO THIS SECTION.		
1.2 SUMMARY OF WORK		
A. THE WORK INCLUDED IN THIS SECTION CONSISTS OF LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE PLUMBING SYSTEM AS INDICATED ON THE DRAWINGS AND AS DESCRIBED HEREIN. INSTALL SYSTEM IN PERFECT WORKING ORDER AND IN FULL ACCORDANCE WITH THE INTENT AND MEANING OF THE DRAWINGS AND SPECIFICATIONS. THE WORK IN GENERAL CONSISTS OF FURNISHING AND INSTALLING NEW PLUMBING FIXTURES AND TRIM INCLUDING CONNECTION OF NEW WASTE, VENT AND WATER PIPING TO EXISTING SERVICES AS REQUIRED TO PUT NEW FIXTURES INTO SERVICE.		
1.3 REGULATIONS, CODES, PERMITS AND INSPECTIONS		
A. COMPLY WITH NATIONAL, STATE, COUNTY, AND CITY CODES, ORDINANCES, ETC., HAVING JURISDICTION, INCLUDING RULES AND REQUIREMENTS OF UTILITY SERVING AGENCIES.		
B. INCORPORATE CODES, ORDINANCES, ETC., INTO THE BASE BID AND INSTALLATION OF WORK. NO ADDITIONAL FUNDS WILL BE ALLOCATED FOR WORK REQUIRED TO CONFORM TO REGULATIONS AND REQUIREMENTS AND/OR TO OBTAIN APPROVAL OF WORK.		
C. OBTAIN AND PAY FOR REQUIRED PERMITS AND LICENSES. WHEN REQUIRED BY CODE, WORK MUST BE INSPECTED AND APPROVED BY LOCAL AUTHORITIES. PRIOR TO FINAL APPROVAL, FURNISH ARCHITECT WITH CERTIFICATES OF INSPECTION AND APPROVALS BY LOCAL AUTHORITIES.		
D. IN ADDITION, THE LATEST EDITION OF THE FOLLOWING PUBLISHED STANDARDS SHALL BE ADHERED TO:		
1. INTERNATIONAL BUILDING CODE WITH AMENDMENTS: CURRENT ADOPTED VERSION.		
2. UNIFORM MECHANICAL CODE WITH AMENDMENTS: CURRENT ADOPTED VERSION.		
3. NFPA STANDARDS.		
4. UNIFORM PLUMBING CODE WITH AMENDMENTS: CURRENT ADOPTED VERSION.		
5. NATIONAL ELECTRIC CODE WITH AMENDMENTS: CURRENT ADOPTED VERSION.		
6. INTERNATIONAL ENERGY CONSERVATION CODE WITH AMENDMENTS: CURRENT ADOPTED VERSION		
1.4 DESIGN DRAWINGS		
A. DESIGN DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED ONLY TO DEFINE THE BASIC FUNCTIONS REQUIRED. PROVIDE LABOR, MATERIAL, ETC., NECESSARY TO ACCOMPLISH THESE REQUIREMENTS. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED A PART OF THE WORK INCLUDED; HOWEVER, NO CHANGES THAT ALTER THE CHARACTER OF THE WORK WILL BE PERMITTED. DO NOT SCALE THE DESIGN DRAWINGS.		
B. IF A CONFLICT OCCURS BETWEEN THE DESIGN DRAWINGS AND SPECIFICATIONS, PROMPTLY NOTIFY THE OWNER AND/OR ENGINEER. AT THAT POINT, AN INTERPRETATION WILL BE MADE BY THE OWNER AND/OR ENGINEER AND SAID DECISION SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS.		
1.5 QUALIFICATIONS OF WORKMEN		
A. USE SUFFICIENT JOURNEYMEN, CRAFTSMEN AND SUPERVISORS TO ENSURE PROMPT, PROPER, AND SAFE EXECUTION OF THE WORK.		
1.6 BASE BID		
A. BASE BID SHALL INCLUDE MATERIALS AND EQUIPMENT SPECIFIED OR SCHEDULED ON THE DRAWINGS. REQUESTS FOR SUBSTITUTION OF MATERIALS AND EQUIPMENT SHALL BE BY ADDITIVE OR DEDUCTIVE ALTERNATE BID ONLY, WITH THE FOLLOWING DATA CLEARLY WRITTEN AT THE BEGINNING OF THE ALTERNATE PROPOSAL:		
1. ADDITIVE OR DEDUCTIVE AMOUNT CLEARLY WRITTEN IN WORDS AND NUMERALS.		
2. INCREASED OR REDUCED CONSTRUCTION TIME IN DAYS.		
3. OTHER DEMONSTRABLE BENEFIT, FOR WHICH THE SUBSTITUTION OF SUCH ITEM WILL BE IN THE OWNER'S INTEREST.		
B. ONLY THOSE MATERIALS AND EQUIPMENT WHICH ARE SUBMITTED AS AN ALTERNATE BID AND WHICH ARE ACCOMPANIED BY THE SUPPORTING DATA INDICATED BELOW WILL BE REVIEWED AND CONSIDERED.		
1.7 SUBSTITUTIONS		
A. SUBSTITUTE MATERIALS AND EQUIPMENT FROM THE MANUFACTURERS LISTED WILL BE CONSIDERED, PRIOR TO PROPOSING ANY SUBSTITUTE ITEM, CONTRACTOR SHALL SATISFY HIMSELF THAT THE ITEM PROPOSED IS, IN FACT, EQUAL TO THAT SPECIFIED, THAT SUCH ITEM WILL FIT INTO THE SPACE ALLOCATED, THAT SUCH ITEM AFFORDS COMPARABLE EASE OF OPERATION, MAINTENANCE AND SERVICE, THAT THE APPEARANCE, LONGEVITY, CAPACITY AND SUITABILITY ARE COMPARABLE, AND THAT BY REASON OF COST SAVINGS, REDUCED CONSTRUCTION TIME, OR SIMILAR DEMONSTRABLE BENEFIT, THE SUBSTITUTION OF SUCH ITEM WILL BE IN THE OWNERS INTEREST.		
B. THE BURDEN OF PROOF OF EQUALITY OF A PROPOSED SUBSTITUTION FOR A SPECIFIED ITEM SHALL BE UPON THE CONTRACTOR. CONTRACTOR SHALL SUPPORT ITS REQUEST WITH SUFFICIENT TEST DATA AND OTHER MEANS TO PERMIT THE ENGINEER TO MAKE A FAIR AND EQUITABLE DECISION ON THE MERITS OF THE PROPOSED SUBSTITUTION. INSUFFICIENT SUBMITTAL DATA WILL RESULT IN REJECTION OF THE PROPOSED SUBSTITUTION. ANY ITEM BY A MANUFACTURER OTHER THAN THOSE SPECIFIED, OR OF BRAND NAME OR MODEL NUMBER, OR OF GENERIC SPECIES OTHER THAN THOSE SPECIFIED, WILL BE CONSIDERED A SUBSTITUTION. ENGINEER WILL BE THE SOLE JUDGE OF WHETHER OR NOT THE SUBSTITUTION IS EQUAL IN QUALITY, UTILITY AND ECONOMY TO THAT SPECIFIED.		
C. APPROVAL OF A SUBSTITUTION SHALL NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE CONTRACT. CONTRACTOR SHALL BEAR THE EXPENSE FOR ANY CHANGES IN OTHER PARTS OF THIS WORK OR OTHER WORK CAUSED BY THE PROPOSED SUBSTITUTION.		
D. IF ENGINEER REJECTS CONTRACTOR'S SUBSTITUTE ITEM ON THE FIRST SUBMITTAL, CONTRACTOR MAY MAKE ONLY ONE ADDITIONAL REQUEST FOR SUBSTITUTION IN THE SAME CATEGORY.		
1.8 SUBMITTALS		
A. SHOP DRAWINGS:		
1. PRIOR TO FABRICATION OR DELIVERY OF ANY MATERIAL AND/OR EQUIPMENT TO THE JOBSITE, SUBMIT ELECTRONIC INDEXED FILE OF A BROCHURE COMPLETELY DESCRIBING EACH MAJOR SYSTEM, MATERIAL AND EQUIPMENT PROPOSED TO BE USED. ANY PIECE OF EQUIPMENT PLACED ON THE JOB WITHOUT PRIOR APPROVAL WILL BE SUBJECT TO REMOVAL.		
2. SUBMITTAL IS FOR INFORMATION AND COORDINATION ONLY. REVIEW OF MATERIAL AND/OR EQUIPMENT SUBMITTALS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO COMPLY WITH PLANS AND SPECIFICATION REQUIREMENTS. POINTS OF NON-COMPLIANCE WHICH ARE NOT NOTED SHALL NOT BE CONSTRUED TO BE AN APPROVAL OF THE NON-COMPLIANCE. SUBMITTALS SHALL CLEARLY STATE WHERE EQUIPMENT DOES NOT AGREE WITH THE CONTRACT DOCUMENTS.		
3. INCLUDE DETAILED DRAWINGS WHERE REQUIRED FOR PROPER COORDINATION WITH OTHER TRADES. INDICATE EQUIPMENT LAYOUTS, ELECTRICAL CHARACTERISTICS, WIRING AND CONTROL DIAGRAMS, SIZES AND LOCATIONS OF PIPING, DUCTS, CONDUTS, AND OTHER ITEMS WHICH EFFECT THE SPACE AVAILABLE.		
4. SUBMIT ITEMS AT ONE TIME IN A NEAT AND ORDERLY MANNER WITHIN 15 DAYS OF AWARD OF CONTRACT. PARTIAL LIST WILL NOT BE ACCEPTABLE. SUBMITTALS SHALL INCLUDE MANUFACTURER'S SPECIFICATIONS, PHYSICAL DIMENSIONS, WEIGHTS AND RATINGS OF EQUIPMENT SUBMITTED. SUBMITTALS SHALL BE INDEXED AND SECURELY BOUND IN A SUITABLE MANNER.		
5. SUBMIT THE FOLLOWING ITEMS FOR APPROVAL:		
a. PLUMBING FIXTURES AND TRIM;		
b. PLUMBING EQUIPMENT;		
c. FLOOR DRAINS;		
d. FLOOR SINKS;		
e. CLEANOUTS;		
f. PIPING AND FITTINGS;		
g. VALVES;		
h. ROOF DRAINS.		
B. RECORD DRAWINGS:		
1. MAINTAIN ACCURATE RECORDS OF ANY CHANGES FROM THE CONTRACT DOCUMENTS AND SHOP DRAWINGS. UPON COMPLETION OF THE PROJECT, DELIVER TO THE OWNER ONE (1) SET OF LEGIBLE AND REPRODUCIBLE COPIES OF THESE RECORD DRAWINGS.		
C. GUARANTEE:		
1. UPON COMPLETION OF THE PROJECT, DELIVER TO THE OWNER A ONE (1) YEAR GUARANTEE OF THE SYSTEMS, MATERIALS AND WORK PERFORMED. GUARANTEE THE ENTIRE COST, INCLUDING MATERIALS AND/OR LABOR, OF CORRECTIVE WORK REQUIRED AND NECESSITATED BY DEFECTS IN MATERIALS AND/OR WORKMANSHIP.		
D. MANUAL AND OPERATING INSTRUCTIONS:		
1. UPON THE COMPLETION OF THE PROJECT, DELIVER TO THE OWNER A HARD BOUND "OWNER'S MANUAL". INCLUDE IN THE MANUAL INSTRUCTIONS PREPARED SPECIFICALLY FOR THE SYSTEMS PROVIDED, ALONG WITH PAPERS, DESCRIPTIONS, PARTS LISTS, INSTRUCTIONS, WARRANTIES, ETC., WHICH WERE DELIVERED WITH THE MATERIALS AND EQUIPMENT UTILIZED IN THE PROJECT. IDENTIFY EACH ITEM BY THE DESIGNATION APPEARING ON THE DRAWINGS.		
2. AT A TIME DESIGNATED, PROVIDE A SUITABLE OPERATOR, MECHANIC OR ENGINEER TO REVIEW THE SYSTEMS WITH OWNER'S REPRESENTATIVE TO THOROUGHLY FAMILIARIZE HIM WITH THE OPERATIONS AND MAINTENANCE OF THE SYSTEMS.		
PART 2 PRODUCTS		
2.1 GENERAL PRODUCTS		
A. FURNISH AND INSTALL NEW PRODUCTS OF ESTABLISHED AND REPUTABLE AMERICAN MANUFACTURERS. ITEMS OF EQUIPMENT USED FOR THE SAME PURPOSE SHALL BE OF THE SAME MANUFACTURER.		
B. SYSTEMS SHALL BE COMPLETE AND OPERABLE. ANY ACCESSORIES REQUIRED FOR OPERATION OF THE SYSTEMS SHALL BE INCLUDED AS THOUGH SPECIFICALLY INDICATED TO BE PROVIDED. PROVIDE SHUT-OFF VALVES FOR SUPPLY LINES TO EACH INDIVIDUAL ITEM OF EQUIPMENT. VALVES SHALL BE CONCEALED WITHIN FIXTURE OR EQUIPMENT WHERE POSSIBLE.		
C. SPECIFIC REFERENCE TO A MANUFACTURER'S PRODUCT IS ONLY TO ESTABLISH TYPE, QUALITY, AND PERFORMANCE REQUIRED. THESE QUALIFICATIONS ARE IN ADDITION TO THE REQUIREMENTS SHOWN ON THE PLANS AND ELSEWHERE IN THESE SPECIFICATIONS. LISTING OF ALTERNATE EQUIPMENT MANUFACTURERS SHALL NOT BE CONSTRUED AS AN UNCONDITIONAL APPROVAL OF THE PRODUCTS OF THOSE MANUFACTURERS.		
2.2 PIPING MATERIALS		
A. SOIL, WASTE, VENT, AND STORM DRAIN PIPE AND FITTINGS SHALL BE:		
1. EPOXY COATED CAST IRON ASTM A74. NO HUB PIPE & FITTINGS: CISPI 301 FITTINGS. CISPI 310 WITH HEAVY DUTY COUPLINGS BY HUSKY PRODUCTS OR EQUAL.		
2. ALL MANUFACTURED ROOF DRAIN AND OVERFLOW FIXTURES SHALL BE IAPMO LISTED.		
B. WATER PIPING BURIED BELOW GRADE:		
1. COPPER TUBING: ASTM B88, TYPE K, HARD DRAWN. FITTINGS: ANSI/ASME B16.29, WROUGHT JOINTS. ANSIS AS 8, BCUP SILVER BRAZE.		
2. COPPER TUBING: ASTM B88, TYPE K ANNEALED, NO JOINTS.		
3. COPPER TUBING BURIED BELOW GRADE SHALL BE ENCLOSED IN POLYETHYLENE PROTECTIVE SLEEVING EQUAL TO WESTFLEX POLY-SLEEVE.		
C. WATER PIPING ABOVE GRADE:		
1. COPPER TUBING: ASTM B88, TYPE L, HARD DRAWN. FITTINGS: ANSI/ASME B16.23, CAST BRASS, OR ANSI/ASME B16.29, WROUGHT COPPER. JOINTS: SOLDER AND FLUXES SHALL HAVE A LEAD CONTENT OF LESS THAN 0.2 OF 1 PERCENT.		
2. COPPER TUBING: ASTM B88, TYPE L, HARD DRAWN. FITTINGS: PROPRESS FITTING, BRONZE OR COPPER ASME B16.22. JOINTS: PROPRESS COPPER COMPRESSION FITTING SYSTEM.		
D. COOLING COIL CONDENSATE DRAIN PIPING:		
1. COPPER TUBING: ASTM B306, DWV, FITTINGS: ASME 16.23, CAST BRONZE, OR ASME B16.29, WROUGHT COPPER. JOINTS: ASTM B32, SOLDER, GRADE 50B. WHERE BRANCH DRAINS ARE SMALLER THAN AVAILABLE SIZES IN DWV, USE ASTM B88, TYPE M COPPER TUBING.		
E. NATURAL GAS PIPING BURIED BELOW GRADE (WITHIN 5 FEET OF BUILDING):		
1. STEEL PIPE: ASTM A53 OR A120, SCHEDULE 40 BLACK. FITTINGS: ASTM A234, FORGED STEEL WELDING TYPE, WITH ANSI/AWWA C105 POLYETHYLENE JACKET OR DOUBLE LAYER, HALF-LAPPED 10 MIL POLYETHYLENE TAPE. JOINTS: ANSIAAWS D1.1, WELDED.		
F. NATURAL GAS PIPING BURIED BELOW GRADE (BEYOND 5 FEET OF BUILDING):		
1. POLYETHYLENE PIPE: ASTM D2513, SDR 11.5. FITTINGS: ASTM D2883 OR ASTM D2513 SOCKET TYPE. JOINTS: FUSION WELDED.		
G. NATURAL GAS PIPING ABOVE GRADE:		
1. SHALL BE BY THE SAME MANUFACTURER WITH MANUFACTURER'S NAME AND PRESSURE RATING CLEARLY MARKED ON OUTSIDE OF BODY. PROVIDE VALVES SUITABLE TO CONNECT TO ADJOINING PIPE AS SPECIFIED FOR PIPE. JOINTS: USE PIPE SIZE GATE VALVES WITH RISING STEM OR BALL VALVES. VALVES SHALL BE 125# CLASS. JOMAR RECOMMENDED.		
I. GAS SHUT-OFF VALVES:		
1. SHALL BE BRONZE BODY, BRONZE TAPERED PLUG, NON-LUBRICATED, TEFLON PACKING, THREADED ENDS.		
J. PLUMBING FIXTURES AND TRIM:		
1. PROVIDE FIXTURES AS SHOWN ON THE DRAWINGS OR SIMILAR FIXTURES AS MANUFACTURED BY ZURN, AMERICAN STANDARD, BRIGGS, ELJER, OR KOHLER.		
2.3 PIPE SUPPORTS		
A. SEISMIC RESTRAINTS:		
1. ATTACHMENTS FOR PIPING AND EQUIPMENT SUPPORTED BY THE BUILDING STRUCTURE SHALL BE DESIGNED TO RESIST SEISMIC FORCES PRESCRIBED IN IBC.		
2. WHERE REQUIRED BY THE BUILDING OFFICIAL, PROVIDE STRUCTURAL CALCULATIONS SIGNED BY A LICENSED STRUCTURAL ENGINEER.		
B. SOIL, WASTE, VENT AND STORM DRAIN:		
1. REFER TO TABLE 313.3 OF THE 2018 UPC FOR REFERENCE DISTANCES BASED ON MATERIAL AND SIZE OF PIPES.		
PROVIDE AS REQUIRED.		
C. WATER PIPING:		
1. HANGERS SHALL BE B-LINE FIG. 3170CT WITH MAXIMUM SPACING OF FIVE FEET UP TO 3/4-INCH SIZE, SIX FEET UP TO 1-1/4-INCH SIZE, AND EIGHT FEET UP TO 2-INCH SIZE. SUPPORT WATER PIPING IN WALLS WITH LSP "WATER FAB" KITS.		
D. GAS PIPING:		
1. HANGERS SHALL BE B-LINE FIG. B3100 WITH MAXIMUM SPACING OF SIX FEET FOR 1/2-INCH SIZE, EIGHT FEET FOR 3/4-INCH OR 1-INCH SIZE, AND 10 FEET FOR 1-1/4-INCH OR LARGER.		
2.4 PIPING INSULATION		
A. INSULATE ALL DOMESTIC HOT WATER PIPING PER 2018 IECC WITH FACTORY JACKET HAVING SELF-SEALING LAPS. AT PIPE SUPPORTS, PROVIDE WOOD DOWEL OR CALCIUM SILICATE INSERTS AND 16 GAUGE GALVANIZED STEEL SADDLES. 12-INCHES LONG. OR B-LIN FIG. B3151 INSULATION PROTECTION SHIELD.		
B. FOR INTERIOR CONDENSATE DRAIN PIPING, INSULATE WITH 1-INCH THICK GLASS FIBER PIPE INSULATION WITH FACTORY APPLIED WHITE JACKET. MANVILLE MICRO-LOK 850 AP OR APPROVED EQUAL.		
C. INSULATION SHALL HAVE A MAX. FIRE SPREAD OF 25 AND A MAX. SMOKE DENSITY RATING OF 50.		
2.5 CLEANOUTS		
A. EXTERIOR SURFACED OR UNSURFACED AREAS (GCO): LINE TYPE WITH PREFABRICATED YARD BOX WITH A REMOVABLE LID MARKED "SEWER" SET FLUSH WITH FINISHED GRADE. (MATERIALS SPECIFIED UNDER PART 2.2. A.)		
B. INTERIOR FINISHED FLOOR AREAS (FCO): TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WEEP HOLES, REVERSIBLE CLAMPING COLLAR, AND ADJUSTABLE NICKEL-BRONZE, ROUND SCORRIATED COVER IN SERVICE AREAS AND ROUND OR SQUARE WITH DEPRESSIONED COVER TO ACCEPT FLOOR FINISH IN CARPETED AND FINISHED FLOOR AREAS. (MATERIALS SPECIFIED UNDER PART 2.2. A.)		
C. INTERIOR FINISHED WALL AREAS (WCO): LINE TYPE WITH PRIME COATED STEEL ACCESS COVER SECURED WITH MACHINE SCREW. (MATERIALS SPECIFIED UNDER PART 2.2. A.)		
D. INTERIOR UNFINISHED ACCESSIBLE AREAS (WCO): CAULKED OR THREADED TYPE. PROVIDE BOLTED STACK CLEANOUTS ON VERTICAL RAINWATER LEADERS. (MATERIALS SPECIFIED UNDER PART 2.2. A.)		
PART 3 EXECUTION		
3.1 GENERAL		
A. INSTALL MATERIALS AND EQUIPMENT IN AN ARRANGEMENT WHICH WILL GIVE THE GREATEST PRACTICAL EASE OF OPERATION AND SERVICE TO THE OWNER.		
B. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.		
C. PERFORM WORK IN ACCORDANCE WITH THE BEST TRADE PRACTICES. INSTALL MATERIALS AND EQUIPMENT SQUARELY WITH THE BUILDING LINES. PROVIDE RIGID PERMANENT BASES AND SUPPORTS FOR WORK. CONSTRUCT AND BRACE EQUIPMENT, PIPING, ETC., SO THAT THERE WILL BE NO VIBRATION AND/OR RATTLING WHEN THE SYSTEM IS IN OPERATION.		
D. COVER AND PROTECT EQUIPMENT AND MATERIALS FROM WEATHER, THEFT, ETC., UNTIL DATE OF COMPLETION. PLUG AND/OR CAP OPEN ENDS OF INSTALLED PIPING.		
3.2 INSTALLATION		
A. CONCEAL PIPING IN WALLS, FURRED SPACES, PIPE SPACES, OR ABOVE SUSPENDED CEILINGS, AS SHOWN ON THE DRAWINGS. GROUP PIPING WHEREVER PRACTICAL AND INSTALL UNIFORMLY IN STRAIGHT PARALLEL LINES, SQUARELY WITH BUILDING LINES.		
B. SUPPORT HORIZONTAL PIPING WITH PIPE HANGERS. DO NOT USE PERFORATED METAL TAPE. ARRANGE PIPING SO THAT THERMAL EXPANSION DOES NOT CAUSE STRESS. INSTALL AND SECURE PIPING SO THAT HOT AND COLD LINES, AND LINES OF DISSIMILAR METALS, ARE NOT IN CONTACT.		
C. VERIFY EQUIPMENT DIMENSIONS AND REQUIREMENTS FOR ROUGH-IN WORK. BENDING OR OFFSETTING OF FINISHED PIPING CONNECTIONS AND "COOKING" OF FITTINGS OR TRIM WILL NOT BE ACCEPTABLE. DO NOT SUPPORT ANY PIPING WEIGHT FROM EQUIPMENT.		
D. SANITARY: LAY PIPING AT A UNIFORM GRADE. MAKE JOINTS CLOSE AND SQUARE. USE FITTINGS FOR TURNS AND OFFSETS. UNIFORMLY GRADE DRAIN AND COMPACT TRENCHES PRIOR TO LAYING PIPING. PROVIDE CONTINUOUS SUPPORT FOR PIPING.		
E. COOLING COIL CONDENSATE DRAIN: AT CONNECTION TO COOLING COIL DRAIN PAN, PROVIDE A RUNNING TRAP. WITH VENT SAME SIZE AS BRANCH DRAIN, DOWNSTREAM FROM TRAP, EXTEND VENT UP TO 6-INCHES ABOVE ROOF DECK. UNIFORMLY GRADE DRAIN PIPING AT 1/8-INCH PER FOOT IN ACCORDANCE WITH UMC SECTION 310. TERMINATE SECONDARY DRAIN AT CEILING WITH A CHROME PLATED ESCUTCHEON AND CUT DRAIN PIPE FLUSH WITH THE ESCUTCHEON OR UNIT SHALL BE PROVIDED WITH AUTOMATIC SHUT-OFF WITH FLOAT SWITCH.		
F. VENTS THROUGH ROOF SHALL BE SEALED WITH WEATHERPROOF FLASHING CONSTRUCTED OF LEAD OR SHEET METAL COMPATIBLE WITH THE ROOFING SYSTEM SPECIFIED BY THE ARCHITECT.		
G. PIPING CONNECTIONS TO PLUMBING FIXTURES, EXPOSED PIPING AND FITTINGS SHALL BE CHROME PLATED.		
H. CUTTING AND PATCHING SHALL BE APPROVED BY THE OWNER PRIOR TO PERFORMING THE WORK.		
I. ALL REQUIRED CLEANOUTS SHALL BE INSTALLED AS PER SECTIONS 707.0 & 719.0 OF THE (UPC) UNIFORM PLUMBING CODE.		
J. EACH VENT SHALL RISE VERTICALLY TO A POINT NOT LESS THAN SIX (6) INCHES IN HEIGHT ABOVE THE FLOOD LEVEL. RIM OF THE FIXTURE IT SERVES BEFORE BEING CONNECTED TO ANY OTHER VENT.		
K. PROVIDE SHUT-OFF VALVES FOR SUPPLY LINES TO EACH INDIVIDUAL ITEM OF EQUIPMENT. VALVES SHALL BE CONCEALED WITHIN FIXTURE OR EQUIPMENT WHERE POSSIBLE. INSTALL CHROME-PLATED ESCUTCHEONS AT WALL PENETRATIONS OF PIPING FOR FIXTURES AND EQUIPMENT.		
L. PRESS CONNECTIONS: COPPER PRESS FITTINGS SHALL BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. JOINTS SHALL BE PRESSED USING THE TOOL APPROVED BY THE MANUFACTURER.		
M. ALL WALL PENETRATION SHALL BE SEALED ABOVE CEILINGS AND BE PROVIDED WITH CHROME ESCUTCHEONS ON ALL EXPOSED PIPING PENETRATIONS.		
3.3 TESTING REQUIREMENTS		
A. TEST SYSTEMS IN ACCORDANCE WITH APPLICABLE CODES, REGULATIONS, ORDINANCES, ETC., IN PARTICULAR THE UNIFORM PLUMBING CODE, AND AS FOLLOWS:		
1. SANITARY: STATIC WATER PRESSURE FOR ONE (1) HOUR.		
2. POTABLE WATER: AVAILABLE PRESSURE FOR ONE (1) HOUR.		
3. GAS PIPING: PRESSURE 14-INCH WATER COLUMN OR LESS; 10 PSI FOR ONE (1) HOUR.		
4. GAS PIPING: OVER 14-INCH WATER COLUMN; 60 PSI FOR ONE (1) HOUR.		
5. ROOF DRAINS, OVERFLOW ROOF DRAINS AND RAINWATER PIPING WITHIN THE INTERIOR OF THE BUILDING: STATIC WATER PRESSURE FOR ONE (1) HOUR.		
B. IF ANY TEST SHOWS THE WORK TO BE DEFECTIVE IN ANY WAY OR AT VARIANCE WITH SPECIFICATION REQUIREMENTS, MAKE NECESSARY CHANGES AND REMEDY DEFECTS.		
C. TEST PIPING SYSTEMS AFTER INSTALLATION AND PRIOR TO BEING PUT INTO USE, COVERED OR CONCEALED BY INSULATION, BACKFILLING OR BUILDING CONSTRUCTION.		
3.4 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM		
A. DISINFECT DOMESTIC WATER PIPING IN STRICT CONFORMANCE WITH THE REQUIREMENTS OF THE 2018 UPC SECTION 609.9.		



Plumbing Demo Plan  
Scale: 1/8" = 1'-0" - Do Not Scale Drawings

SHEET NOTES

1. THE PLUMBING CONTRACTOR SHALL VERIFY IN THE FIELD ALL FLOW LINE ELEVATIONS FROM THE SITE PIPING AND THE FURTHEST UNDER SLAB PIPE WITHIN THE BUILDING. IF THERE ARE ANY CONFLICTS OR ANY INTERFERENCES OF THE SEWER PIPING, IT IS THE CONTRACTORS RESPONSIBILITY TO CALL THE NUMBER SHOWN ON THIS SHEET AND ISSUE A R.F.I. PRIOR TO INSTALLATION OF ANY UNDERGROUND OR UNDER SLAB PIPING.
2. ALL 4" AND SMALLER DRAINAGE PIPING (STORM & SANITARY) SHALL BE SLOPED AT 1/4" PER FOOT, MINIMUM.
3. PLUMBING PLANS ARE DIAGRAMMATIC AND ACTUAL INSTALLATIONS MUST BE FIELD COORDINATED WITH ARCHITECTURAL, STRUCTURAL AND MECHANICAL ELEMENTS. ROUTE ALL PIPING TIGHT TO STRUCTURE TO MAINTAIN CEILING CLEARANCES.
4. EXISTING PLUMBING SHOWN FOR REFERENCE ONLY BASED ON BEST AVAILABLE INFORMATION TO NV5. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS, SIZES AND EXACT LOCATIONS OF ALL PIPES, WASTE, VENT, WATER AND EQUIPMENT PRIOR TO ANY BID, ROUGH-INS, AND/OR ORDERING OF MATERIALS.

KEY NOTES

1. EXISTING COLD WATER PIPING WITHIN BUILDING TO BE REMOVED UP TO MAIN SHUT-OFF AS SHOWN. EXISTING PLUMBING EQUIPMENT (LAVATORIES, WATER CLOSETS, SINKS, SERVICE SINKS, DRINKING FOUNTAINS, ETC.) TO BE REMOVED. CONFIRM EXACT ROUTING AND LOCATIONS PRIOR TO CONSTRUCTION.
2. EXISTING WASTE PIPING WITHIN BUILDING TO BE REMOVED UP TO EXTERIOR WASTE PIPING MAIN. EXISTING VENT PIPING TO BE REMOVED UP THROUGH ROOF. PATCH AND SEAL ROOF AS NEEDED. CONFIRM EXACT ROUTING AND LOCATIONS PRIOR TO CONSTRUCTION.
3. EXISTING GAS PIPING WITHIN BUILDING TO BE REMOVED UP TO GAS METER. SEE MECHANICAL PLANS FOR REMOVAL OF MECHANICAL EQUIPMENT.
4. EXISTING RESTROOM PLUMBING FIXTURES AND PIPING TO BE REMOVED.

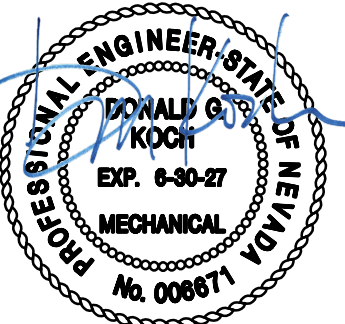
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11/05/2025  
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PROJECT NAME



**FOOD BANK**  
OF NORTHERN NEVADA

Tenant Improvement  
111 W. Front Street  
Elko, Nevada

SHEET NAME

PLUMBING DEMO PLAN

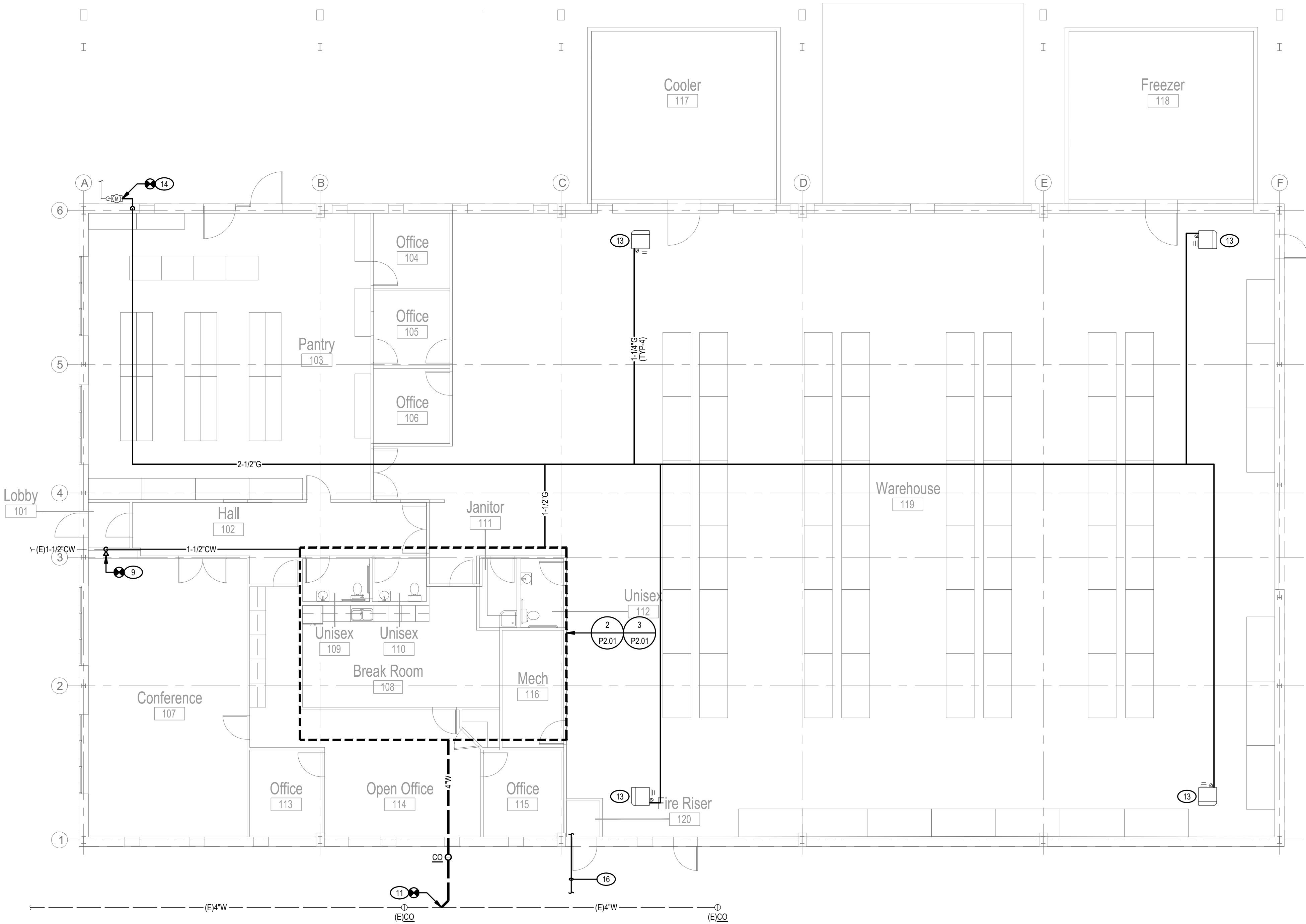
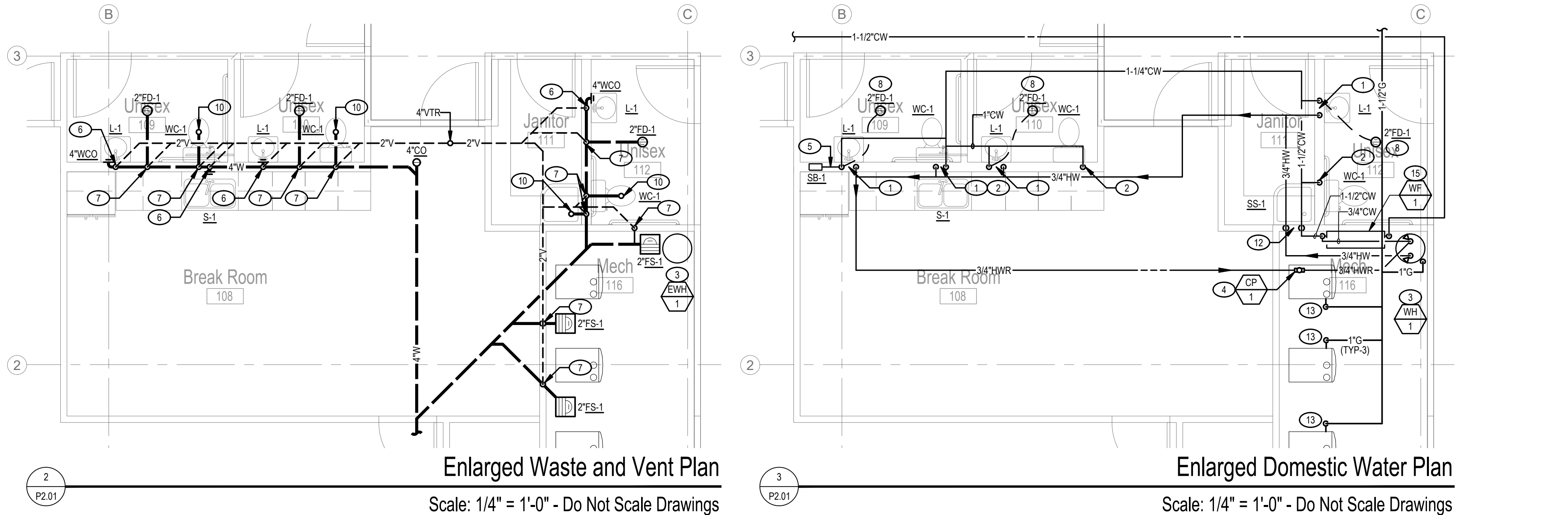
REVISIONS

DATE

11.06.2025

SHEET NUMBER

PD2.01



SHEET NOTES

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2. ALL 4" AND SMALLER DRAINAGE PIPING (STORM & SANITARY) SHALL BE SLOPED AT 1/4" PER FOOT, MINIMUM.
3. PLUMBING PLANS ARE DIAGRAMMATIC AND ACTUAL INSTALLATIONS MUST BE FIELD COORDINATED WITH ARCHITECTURAL, STRUCTURAL AND MECHANICAL ELEMENTS. ROUTE ALL PIPING TIGHT TO STRUCTURE TO MAINTAIN CEILING CLEARANCES.
4. EXISTING PLUMBING SHOWN FOR REFERENCE ONLY BASED ON BEST AVAILABLE INFORMATION TO NV5. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS, SIZES AND EXACT LOCATIONS OF ALL PIPES, WASTE, VENT, WATER AND EQUIPMENT PRIOR TO ANY BID, ROUGH-INS, AND/OR ORDERING OF MATERIALS.

KEY NOTES

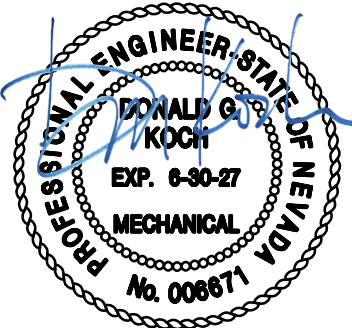
1. 3/4"CW/HH DOWN IN WALL. TEE 1/2"CW/HH TO FAUCET. PROVIDE 1/4" UNDER SINK PRIOR TO FAUCET'S HOT WATER CONNECTION.
2. 3/4"CW DOWN IN WALL. PROVIDE 3/4"CW TO WATER CLOSET.
3. MOUNT ELECTRIC WATER HEATER MOUNTED OVER SERVICE SINK PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE 3/4"CW/HH CONNECTIONS. SEE ELECTRIC WATER HEATER DIAGRAM.
4. MOUNT RECIRCULATION PUMP IN CEILING SPACE PER MANUFACTURER'S RECOMMENDATIONS WITH ACCESS.
5. TEE 1/2"CW TO SUPPLY BOX.
6. 2"W DOWN, 2"V UP.
7. 2"V UP INTO CEILING SPACE.
8. INSTALL TAILPIECE TRAP PRIMER PER MANUFACTURER'S RECOMMENDATIONS. ROUTE 1/2"CW FROM TRAP PRIMER TO FLOOR DRAIN TRAP PRIMER CONNECTION.
9. CONNECT NEW 1-1/2"CW TO EXISTING BUILDING MAIN. REPLACE EXISTING MAIN SHUT-OFF VALVE WITH NEW AND ENSURE ACCESS.
10. 3"W UP TO FIXTURE.
11. CONNECT NEW 4"W TO EXISTING EXTERIOR WASTE MAIN. VERIFY EXACT LOCATION AND INVERT PRIOR TO CONSTRUCTION.
12. 3/4"CW/HH DOWN IN WALL AND PROVIDE 3/4"CW/HH CONNECTIONS TO SERVICE SINK FAUCET.
13. MECHANICAL EQUIPMENT SHOWN FOR REFERENCE ONLY. SEE MECHANICAL PLANS. SEE GAS PIPING ISOMETRIC 9/P5.00 FOR GAS CONNECTION DETAILS.
14. CONNECT NEW 2-1/2"G PIPE TO EXISTING METER FOR NEW HEADER. REPLACE METER WITH NEW IF NECESSARY TO MEET NEW LOAD. SEE GAS PIPING ISOMETRIC 9/P5.00 FOR ALL GAS SIZING DETAILS.
15. INSTALL WATER FILTER WF-1 ON WALL AT 48" AFF.
16. 6" FIRE SERVICE WATER PIPING TO FIRE RISER ROOM. FINAL SIZE SHALL BE DETERMINED BY DESIGN CALCULATIONS. SEE CIVIL ENGINEER'S DRAWINGS FOR EXACT LOCATION AND SIZE.

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OF NORTHERN NEVADA  
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111 W. Front Street  
Elko, Nevada

SHEET NAME

PLUMBING PLANS

REVISIONS

DATE

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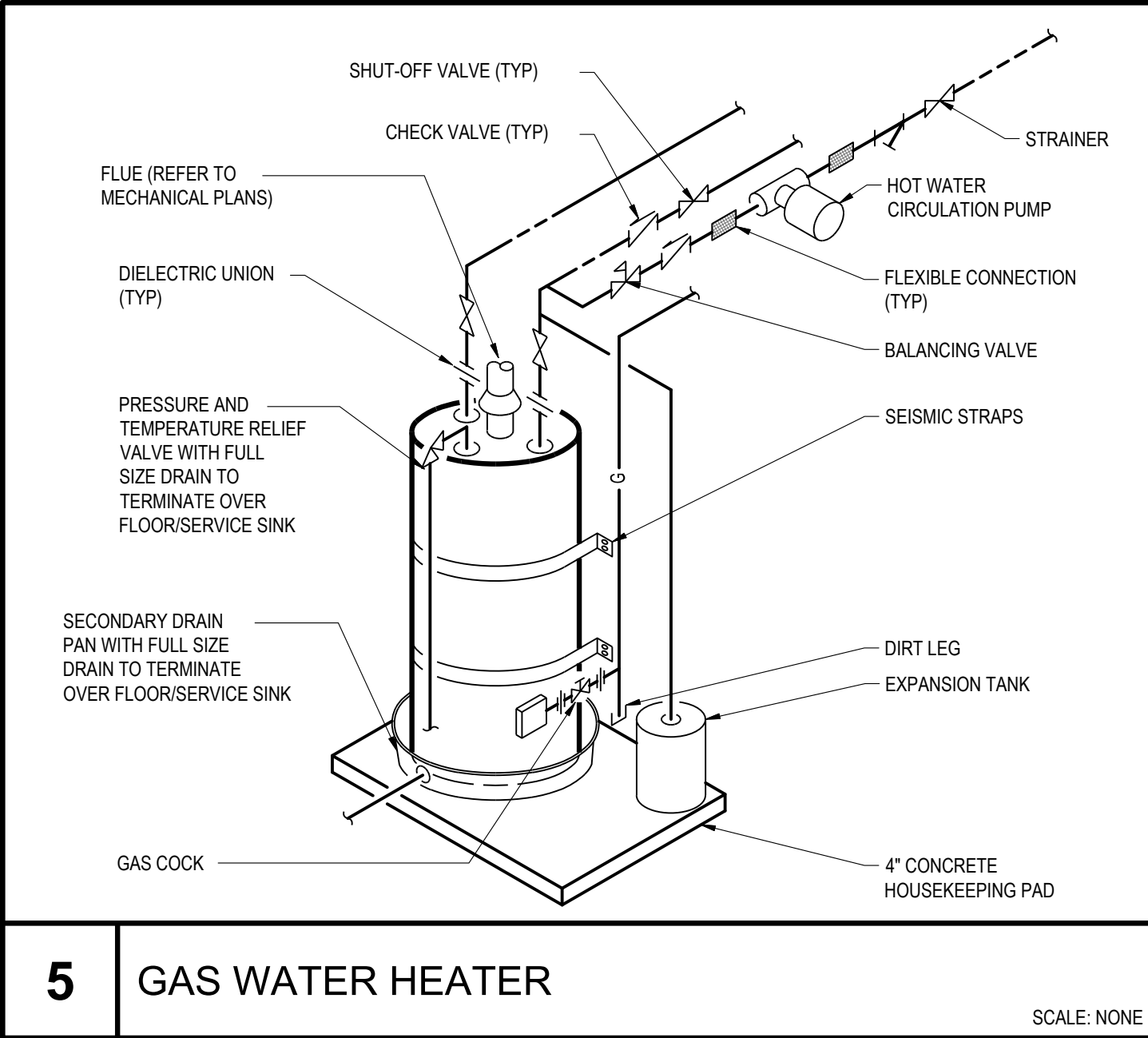
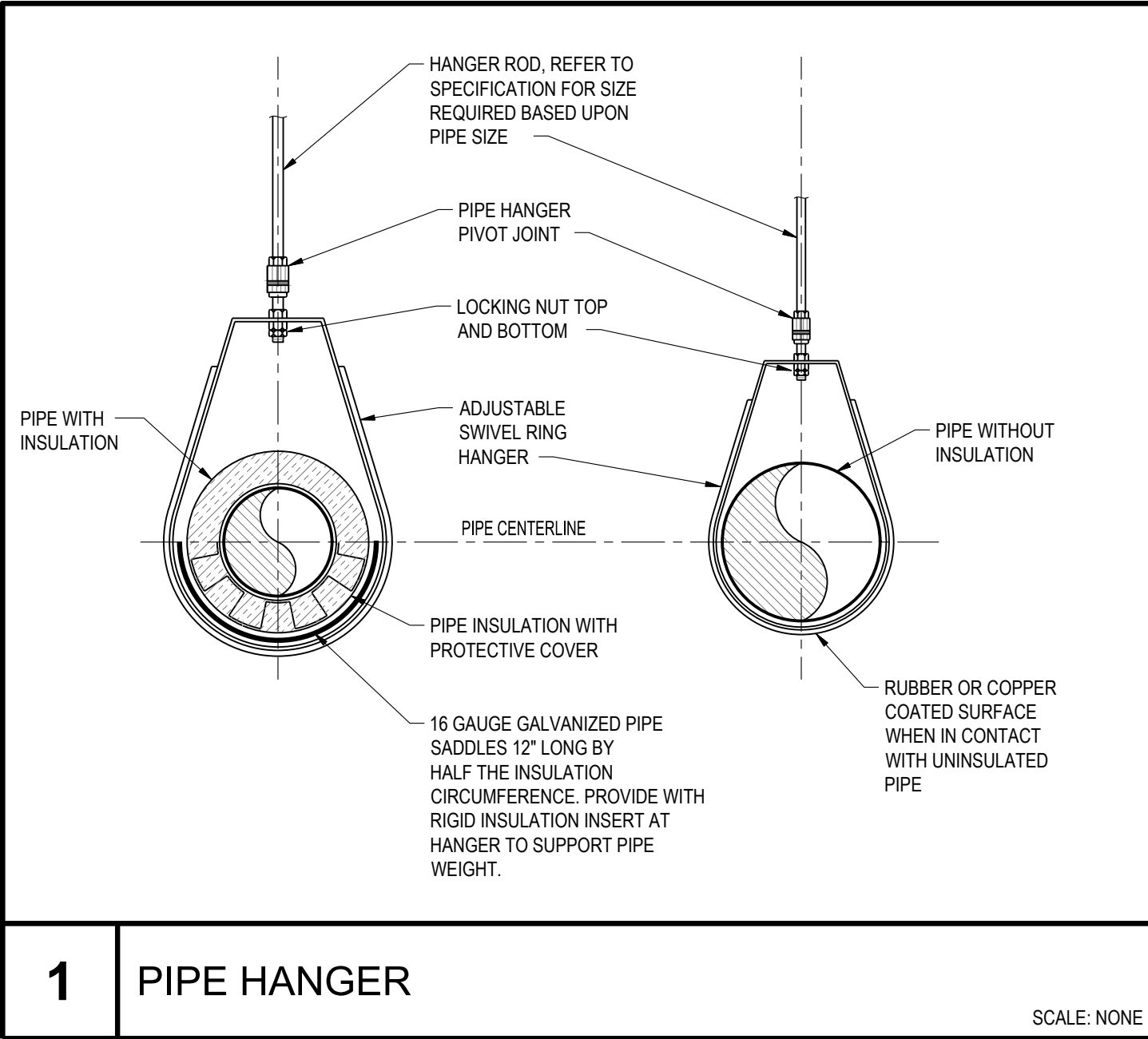
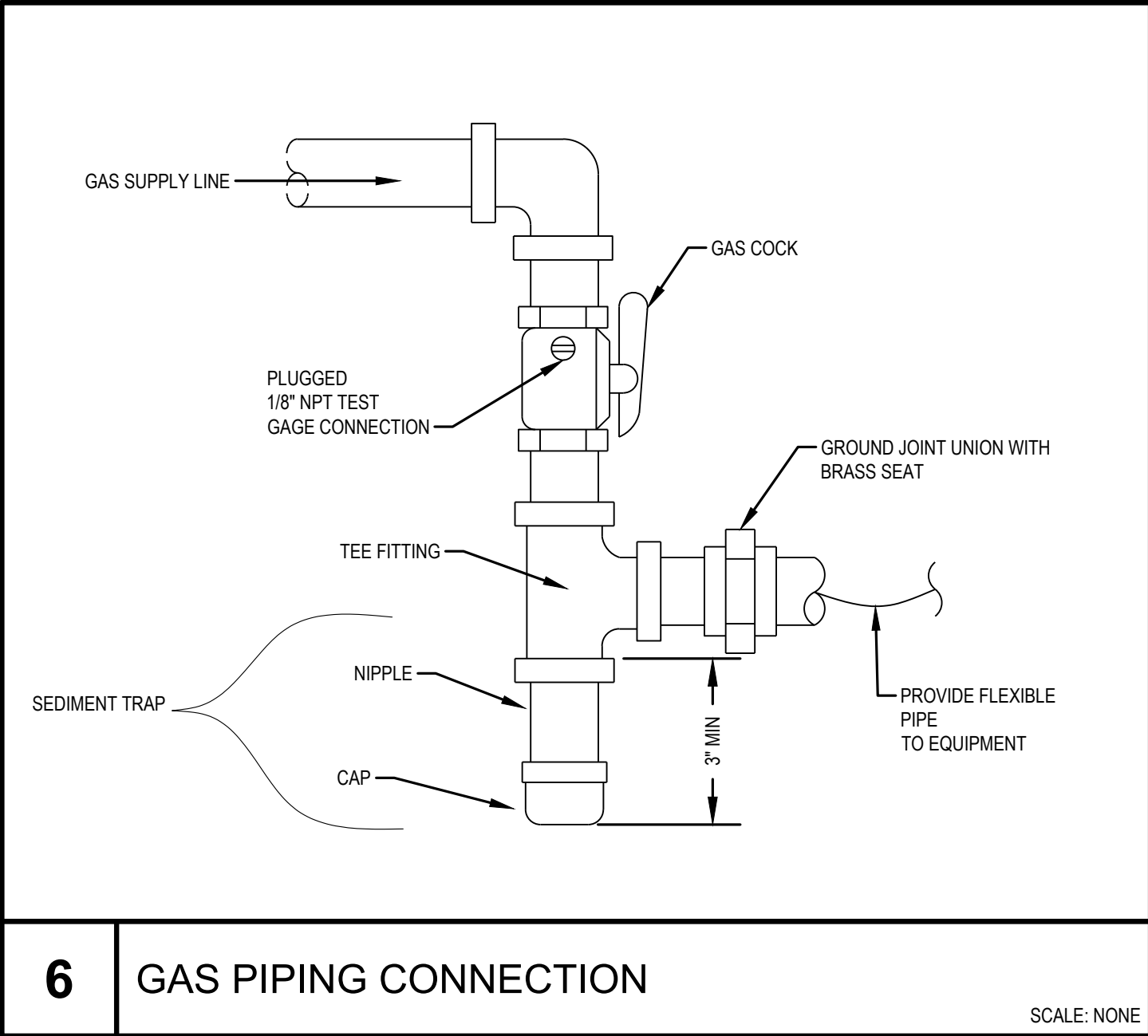
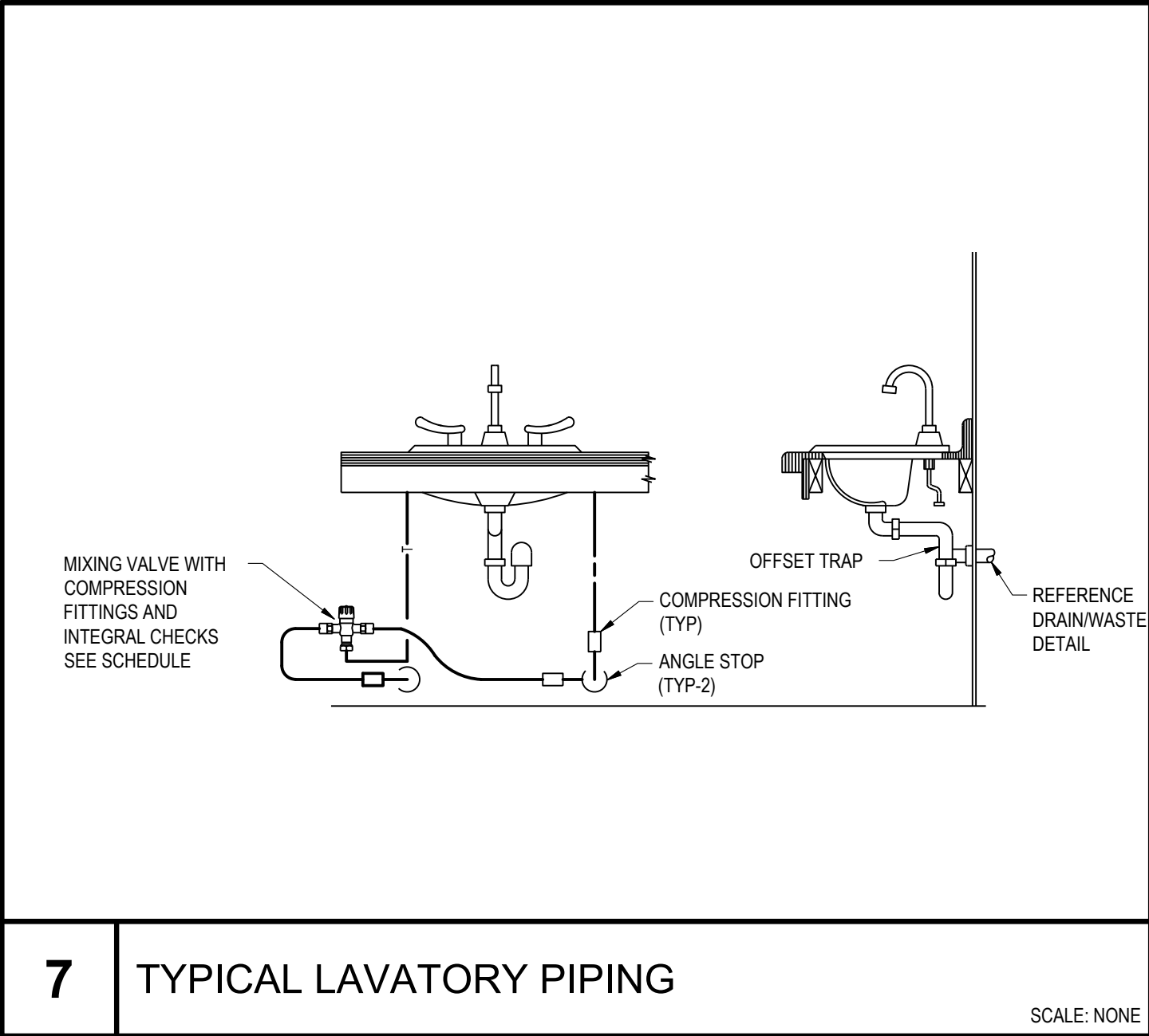
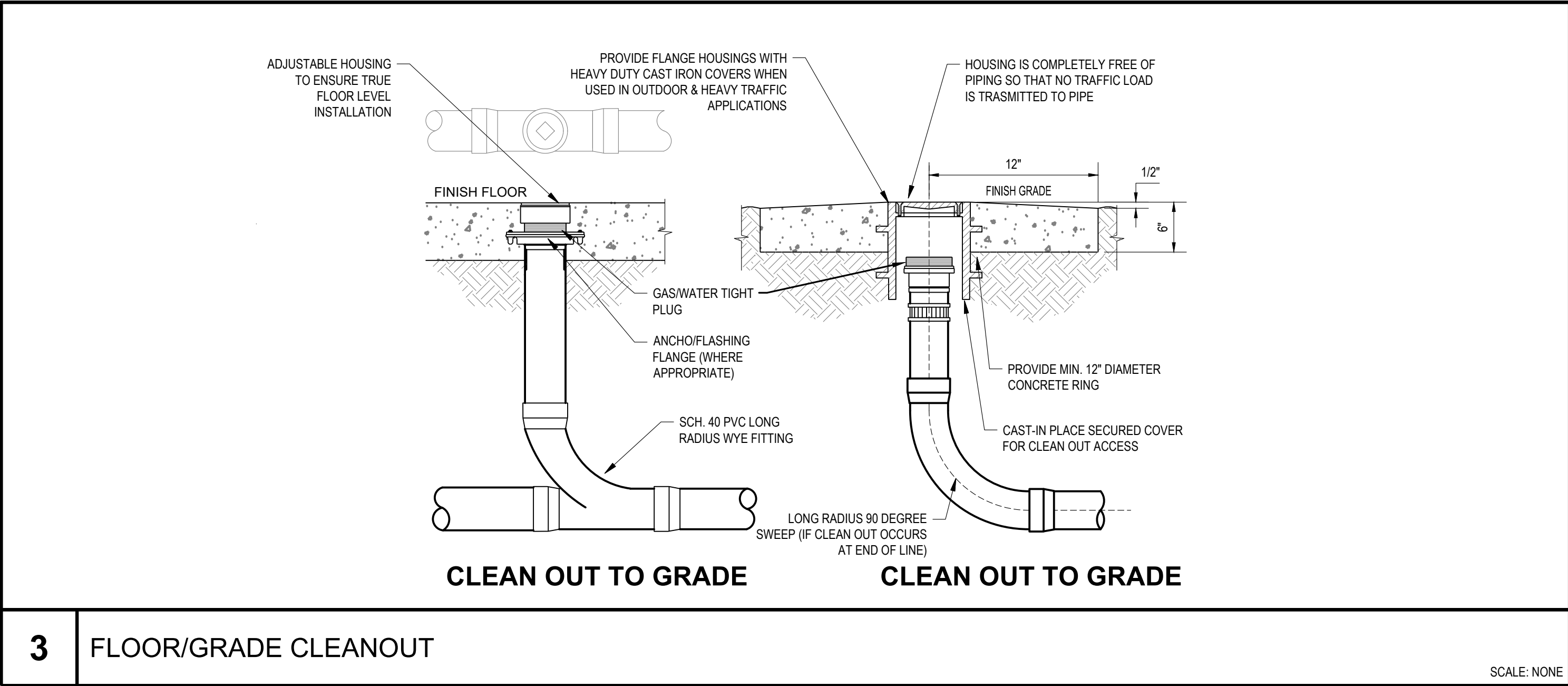
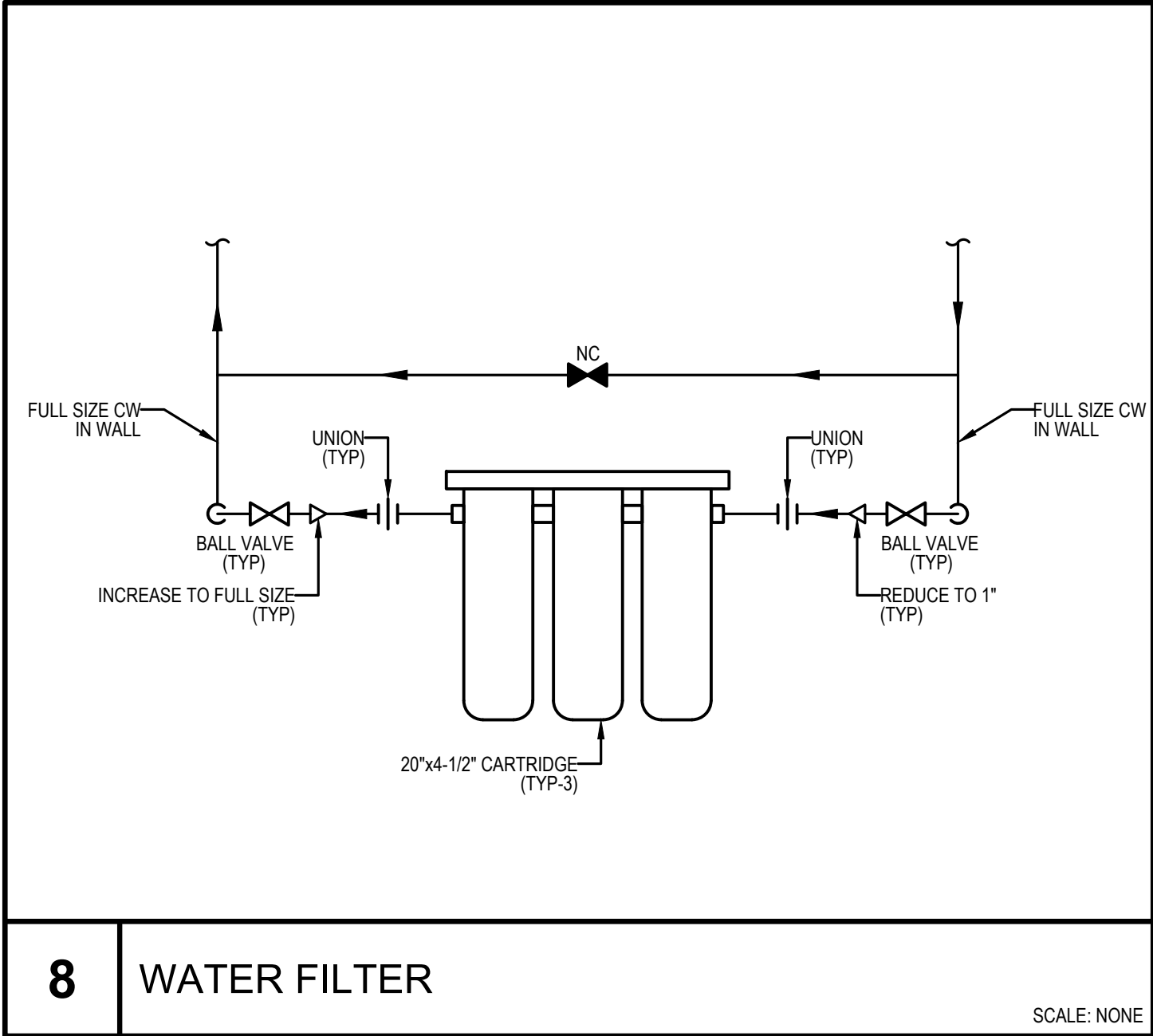
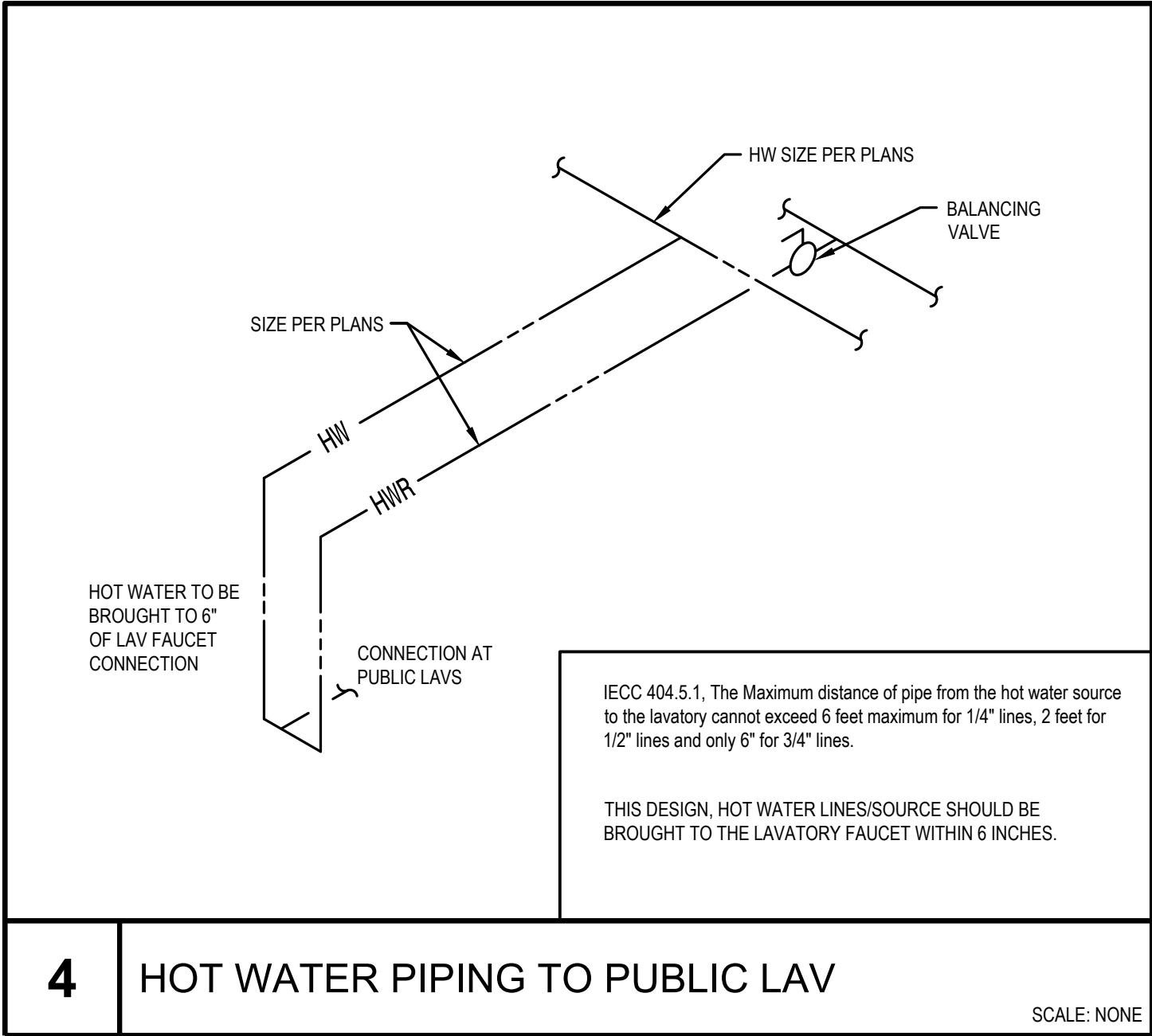
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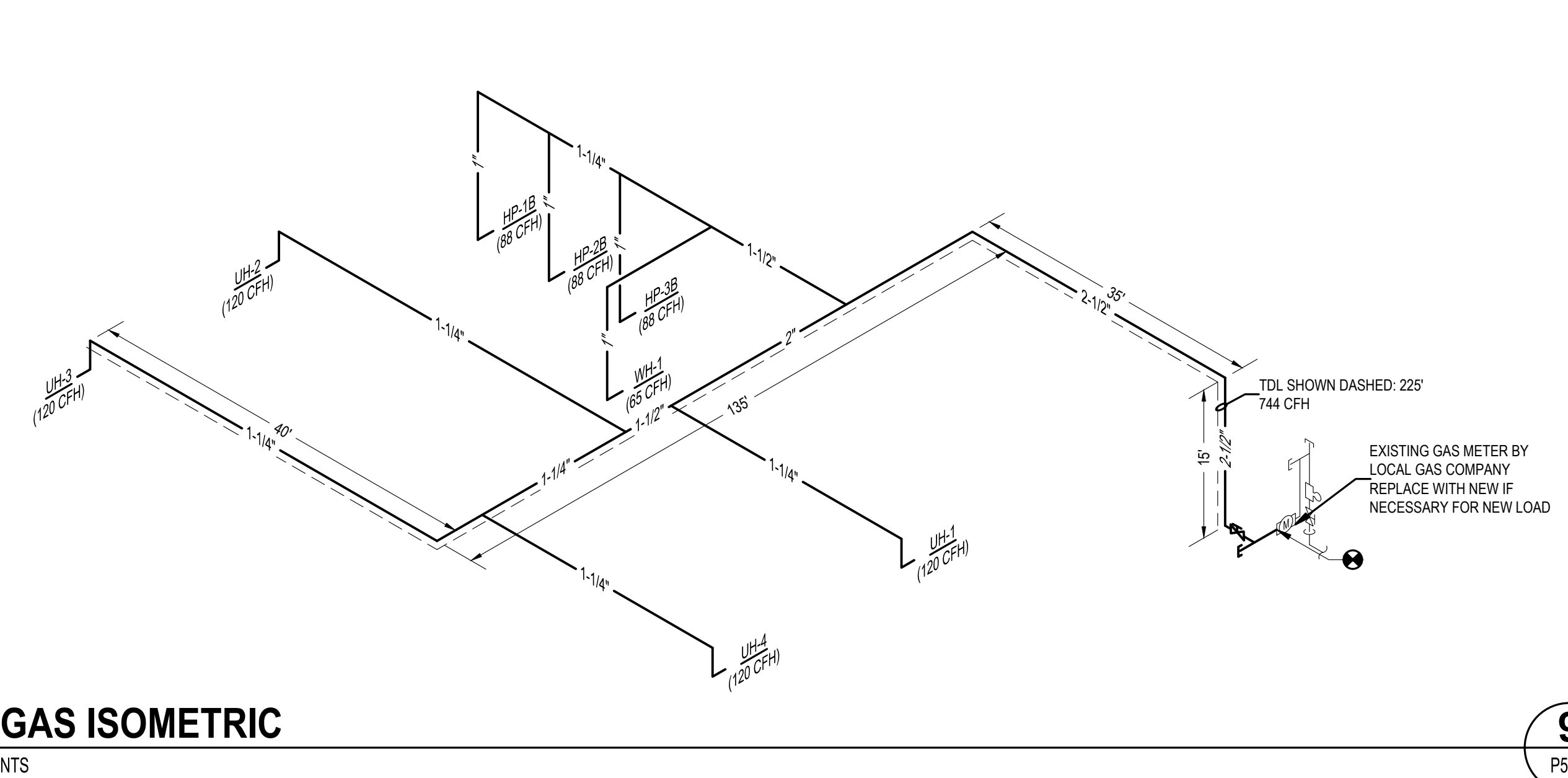


Plumbing Plans

Scale: 1/8" = 1'-0" - Do Not Scale Drawings



LOW PRESSURE NATURAL GAS			
2018 UNIFORM PLUMBING			
BASED ON 2018 TABLE 1215.2(1)			
INLET PRESSURE		LESS THAN 2 PSI	
PRESSURE (SCHEDULE 40 METALLIC PIPE)			
PROJECT PIPE DEVELOP (FEET)		225	
PROJECT MAXIMUM LOAD (CFH)		809	
TABLE PIPE DEVELOP (FEET)		250	
LARGEST PIPE SIZE (INCHES)		2-1/2	
TABLE MAXIMUM LOAD (CFH)		1120	
PIPE SIZE	PIPE ID	MAXIMUM CFH	
1/2"	0.622	30	
3/4"	0.824	63	
1"	1.049	119	
1-1/4"	1.38	244	
1-1/2"	1.61	366	
2"	2.067	704	
2-1/2"	2.469	1120	
3"	3.068	1980	
4"	4.026	4050	
GAS EQUIPMENT	QTY	CFH	TOTAL CFH
<u>UH</u>	4	120	480
<u>HP</u>	3	88	264
<u>WH</u>	1	65	65
OVERALL CFH			809



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PROFESSIONAL ENGINEER-STATE OF NEVADA  
DONALD G. KOCH  
EXP. 8-30-27  
MECHANICAL  
No. 000871

11/05/2025  
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PROJECT NAME

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OF NORTHERN NEVADA

Tenant Improvement  
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SHEET NAME

PLUMBING DIAGRAMS

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DATE

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P5.00

PROJECT NAME

SHEET NAME

PLUMBING SCHEDULES

REVISIONS

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P6.00

REVISED FIXTURE UNIT COUNT							
REMOVED FIXTURES	COLD WATER FIXTURE UNITS	HOT WATER FIXTURE UNITS	DRAINAGE FIXTURE UNITS	QUANTITY	TOTAL CWFU	TOTAL HWFU	TOTAL DFU
WATER CLOSET	2.5	0	4.0	5	12.5	0.0	20.0
URINAL	4.0	0	2.0	3	12.0	0.0	6.0
LAVATORY	0.75	0.75	1.0	6	4.5	4.5	6.0
FLOOR DRAIN	0	0	2.0	2	0.0	0.0	4.0
SERVICE SINK	2.25	2.25	3.0	1	2.3	2.3	3.0
PANTRY SINK	1.5	1.5	2	1	1.5	1.5	2.0
ICE MAKER BOX	0.5	0	0	1	0.5	0.0	
REMOVED FIXTURE UNIT TOTALS					33.3	8.3	41.0
ADDED FIXTURES	COLD WATER FIXTURE UNITS	HOT WATER FIXTURE UNITS	DRAINAGE FIXTURE UNITS	QUANTITY	TOTAL CWFU	TOTAL HWFU	TOTAL DFU
WATER CLOSET (1.6 GPF)	2.5	0	3.0	3	7.5	0.0	9.0
LAVATORY	0.75	0.75	1.0	3	2.3	2.3	3.0
PANTRY SINK	1.2	1.2	2.0	1	1.2	1.2	2.0
FLOOR DRAIN (EMERGENCY)	0	0	0	3	0.0	0.0	0.0
FLOOR SINK	0	0	2.0	4	0.0	0.0	8.0
SERVICE SINK	1.2	1.2	3.0	1	1.2	1.2	3.0
ADDED FIXTURE UNIT TOTALS					12.2	4.7	25.0
NEW TENANT FIXTURE UNIT TOTALS					12.2	4.6	25.0

PLUMBING FIXTURE SCHEDULE							
ITEM	FIXTURE	MANUFACTURER/MODEL	ROUGH-IN SIZE (INCHES)				REMARKS
			TW/HW	CW	V	S/W	
<u>WCO</u>	WALL CLEANOUT	JR SMITH #4472	-	-	-	-	PROVIDE WITH ROUND STAINLESS STEEL COVER PLATE.
<u>CO</u>	FLOOR CLEANOUT	JR SMITH #4043	-	-	-	-	PROVIDE WITH ROUND BRASS FLOOR COVER PLATE.
<u>FD-1</u>	FLOOR DRAIN	ZURN #Z415	-	-	2	2	CAST IRON W/ ANCHOR FLANGE, SST SCREWS INSTALL SURE-SEAL FLOOR DRAIN TRAP SEALER AND TRAP PRIMER CONNECTION.
<u>WC-1</u>	WATER CLOSET ADA	ZURN #Z551-K	-	1/2	2	3	FLOOR-MOUNTED, ELONGATED BOWL, VITREOUS CHINA, 1.6 GPF, TWO-PIECE, SIPHON JET, ADA.
<u>L-1</u>	LAVATORY	ZURN #Z5340-PED	1/2	1/2	1-1/2	2	20"x18" WALL-HUNG VITREOUS CHINA LAVATORY, FAUCET: ZURN #Z812B-XL-3F, MANUAL INDEXED ADA HANDLES, 0.5 GPM LAMINAR FLOW.
<u>SS-1</u>	SERVICE SINK	E.L. MUSTEE #63M	3/4	3/4	1-1/2	3	24"x24" COMPOSITE MODEL WITH 10" HIGH WALLS, FAUCET: MUSTEE #63.600A WALL MOUNTED, CHROME PLATED, WITH INTEGRAL VACUUM BREAKER, INTEGRAL STOPS, WALL BRACE, PAIL HOOK, AND 3/4" HOSE THREAD SPOUT; MOP BRACKET: MUSTEE #65.600CC 24" WIDE, STAINLESS STEEL, W/3 RUBBER GRIPS; VINYL BUMPER GUARD: MUSTEE 63.401; STRAINER: FIAT #145388 STAINLESS STEEL; HOSE AND BRACKET: MUSTEE #65.700 31" LONG HOSE WITH BRASS COUPLING, 5" WIDE, RUBBER GRIP.
<u>S-1</u>	SINK	ELKAY #ECTSRAD33226TBH	1/2	1/2	1-1/2	2	33"x22"x6" DOUBLE BASIN, UNDERMOUNT, ADA COMPLIANT, FAUCET: MOEN #7565 SRS VERSION, PULL-DOWN SPRAY, SINGLE HANDLE 1.5 GPM, PROVIDE GARBAGE DISPOSER IN-SINK AERATOR MODEL BADGER 500 (1/2 HP).
<u>SB-1</u>	SUPPLY BOX	SIOUX CHIEF #696-G1010MF	-	1/2	-	-	OXBOX ICE MAKER SUPPLY BOX WITH MINI WATER ARRESTOR. 1/4" O.D. COMPRESSION OUTLET CONNECTION.
NOTE: 1. FIXTURES RELATED TRIM AND ACCESSORIES TO BE SUBMITTED TO ARCHITECT/TENANT FOR REVIEW, COLOR AND FINISH SELECTIONS PRIOR TO ORDERING, AND/OR ANY ROUGH-IN COORDINATION. 2. EXPOSED P-TRAPS, ARMS AND SUPPLY PIPING SHALL BE COVERED BY PLUMBREX PRODUCTS OR EQUAL PRODUCTS MEETING "E-85" STANDARDS.							

GAS WATER HEATER SCHEDULE											
ITEM	LOCATION	SERVICE	MANUFACTURER MODEL NUMBER	STORAGE CAPACITY (GAL)	RECOVERY RATE (GPH)	TEMPERATURE RISE ("F)	INPUT (MBH)	ELECTRICAL	MAXIMUM OPERATING WEIGHT (LBS)	DIMENSIONS (LxWxH) (IN)	NOTES
								V/PH			
<u>WH-1</u>	MECHANICAL ROOM	RESTROOMS / BREAK ROOM	BRADFORD WHITE LG250H653N	48	63	100	65	120 / 1	54	22x25.5x60.5	1 THRU 6
1. MOUNT PER MANUFACTURER'S RECOMMENDATIONS. 2. SHALL MEET LATEST EDITION OF ASHRAE 90.1 STANDARDS. 3. PROVIDE WITH ASME PRESSURE AND TEMPERATURE RELIEF VALVE.						4. NON-SIMULTANEOUS ELEMENTS. 5. PROVIDE EXPANSION TANK AS SCHEDULED. 6. PROVIDE CONDENSATE NEUTRALIZER KIT BY MANUFACTURER.					

WATER FILTER SCHEDULE								
ITEM	LOCATION	MANUFACTURER MODEL NUMBER	QUANTITY TANKS	PEAK FLOW RATE (GPM)	INLET/ OUTLET SIZE (IN)	DRAIN SIZE (IN)	FILTER SIZE (DIAxH) (IN)	NOTES
<u>WF-1</u>	MECHANICAL ROOM	SPRING #WGB32-B	3	15	1"	1/2	4-1/2x20	1,2,3
1. PROVIDE (1) 5 MICRON SEDIMENT SCALE FILTER AND (2) CTO CARBON BLOCK FILTERS. 2. MOUNT PER MANUFACTURER'S RECOMMENDATIONS.					3. PROVIDE WITH (2) SPARE CARBON CARTRIDGES AND (1) SPARE SEDIMENT CARTRIDGE.			

WATER PIPE SIZING INFORMATION				
PIPE SIZES BASED ON THE 2018 UPC APPENDIX A - FAIRLY ROUGH CHART A105.1(3)				
SERVICE PRESSURE: 40 PSI STATIC HEAD = 7 FT. X 0.43 = 3.0PSI PRESSURE AVAIL = 40(BUILDING PRESS.) - 25 (REQ. PRESS.) - 3.0 (S.H.)= 12.0 PSI LONGEST RUN IN BUILDING = 125 FT 50% FITTING LENGTH = 63 FT. TOTAL LENGTH = 188 FT. ALLOWABLE FRICTION LOSS/100 FT. = $\frac{12.0 (100)}{188}$ = 6.38 PSI NOTE: CONTRACTOR TO VERIFY EXISTING WATER PRESSURE ON SITE, ADVISE ENGINEER IF PRESSURE IS 10 PSIG LESS THAN NOTE.				
PIPE SIZE	MAX FLOW (GPM)	FLUSH TANK FIXTURE UNITS	FLUSH TANK FIXTURE UNITS	VELOCITY (FPS)
1/2"	1.6	1	-	3.0
3/4"	4.3	6	-	3.5
1"	11	15	-	4.0
1 1/4"	17	24	-	4.5
1 1/2"	30	54	13	5.0
2"	60	175	76	6.0

PIPING MATERIALS SCHEDULE	
SERVICE	MATERIALS
DOMESTIC WATER (ABOVE GRADE)	TYPE L COPPER ABOVE GRADE, TYPE K COPPER BELOW GRADE. PRO-PRESS FITTINGS APPROVED AS EQUAL TO WELDED PIPES & FITTINGS, AND VALVES. FOR LARGER SIZES: 3" AND UP SCHEDULE 10 SS, 316L PIPING MAY BE USED WITH FULLY COMPATIBLE STAINLESS STEEL PREFORMED FITTINGS AND VALVES. COUPLINGS BY VICTAULIC FOR DOMESTIC WATER USAGE OR EQUAL PERFORMANCE FITTINGS. INSULATE ALL DOMESTIC HOT AND HOT WATER RETURN PIPING PER THE REQUIREMENTS OF IECC C404.4 AND TABLE C403.12.3.
WASTE AND VENT GREASE WASTE AND VENT (BELOW GRADE)	SCHEDULE 40 PVC WITH SOLVENT WELD FITTINGS BELOW GRADE.
WASTE AND VENT GREASE WASTE AND VENT (ABOVE GRADE)	CAST IRON SOIL PIPE WITH NO-HUB FITTINGS ABOVE GRADE.
CONDENSATE	PVC SCHEDULE 40, FITTINGS: PVC SCHEDULE 40, JOINTS: SOLVENT WELD, INSULATION: FIBERGLASS. FLOWGUARD GOLD CTS WITH SOLVENT WELD FITTINGS FOR ALL PIPING ALL AREAS EXCEPT AS NOTED HEREIN; TYPE "M" COPPER WITH SOLDER JOINTS FOR NON-HUMID AREAS. STAINLESS STEEL FOR ALL CONDENSATE FROM CONDENSING EQUIPMENT. 1.6" HEATERS/HUMIDIFIERS

PIPING INSULATION SCHEDULE	
SYSTEM / LOCATION	MATERIALS
DOMESTIC HOT WATER, HOT WATER RETURN AND TEMPERED WATER PIPING	PROVIDE 1" THICK, NON-COMBUSTIBLE, PRE-FORMED, FIBERGLASS PIPE INSULATION WITH A CONDUCTIVITY K-VALUE 0.27 AT 75 DEGREES FAHRENHEIT ON ALL PIPING 2" OR SMALLER, AND 1-1/2" THICK INSULATION ON ALL PIPING 2-1/2" AND LARGER. ALL INSULATION SHALL HAVE A FACTORY JACKET OR REINFORCED FOIL VAPOR BARRIER WITH SELF-SEALING ADHESIVE JOINTS. ALL VALVES, FITTINGS AND ACCESSORIES TO BE INSULATED AS WELL.
COLD WATER IN UNCONDITIONED SPACES	THE INSULATION REQUIREMENTS FOR COLD WATER PIPING THAT IS LOCATED IN AN UNCONDITIONED SPACE IS THE SAME AS THAT FOR ALL HOT WATER PIPING.
INTERIOR LOCATED CONDENSATE DRAIN PIPING	PROVIDE 1/2" THICK INSULATION ON ALL CONDENSATE PIPING LOCATED INDOORS. THE INSULATION SHALL BE NON-COMBUSTIBLE, PRE-FORMED, FIBERGLASS INSULATION WITH FACTORY APPLIED WHITE JACKET EQUAL TO MANVILLE MICRO-LOK 850.
INSULATED PIPING EXPOSED TO VIEW	ALL INSULATED PIPING EXPOSED TO VIEW SHALL BE COVERED AND FINISHED WITH PVC JACKET EQUAL TO MANVILLE PVC/ PERMA-PIPE JACKETING SYSTEM USING 30 MIL THICK JACKET INSTALLED PER MANUFACTURER'S INSTRUCTIONS WITH SEAM ON TOP SO AS NOT TO BE VISIBLE FROM OCCUPIED SPACES.
DOMESTIC WATER LOCATED OUTDOORS	INSULATION THICKNESS ON ALL PIPING LOCATED OUTDOORS SHALL BE DOUBLE THAT OF INDOOR PIPING, WITH A MAXIMUM THICKNESS OF 3", AND HEAT-TRACED SYSTEM INSTALLED PER MANUFACTURER'S INSTRUCTIONS TO PREVENT FREEZING WHERE NECESSARY, AND SHALL BE PROVIDED WITH A 0.16" THICK ALUMINUM JACKETING.
PIPING LOCATED BELOW HANDICAP SINK/LAV	INSULATE ALL HOT AND COLD WATER PIPING, ANGLE STOPS AND SUPPLIES, WASTE PIPING, OFFSETS AND P-TRAPS LOCATED AT ALL HANDICAP LAVATORIES AND SINKS EXPOSED TO VIEW SHALL BE COVERED AND FINISHED WITH WHITE SKAL-GARD, PRO-WRAP OR APPROVED EQUAL. INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
NOTE: <ul style="list-style-type: none"><li>INSULATION CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH*HOUR x FT² x DEGREES FAHRENHEIT.</li><li>INSULATION SHALL HAVE A MAX FIRE SPREAD OF 25, AND A MAX SMOKE DENSITY RATING OF 50.</li></ul>	

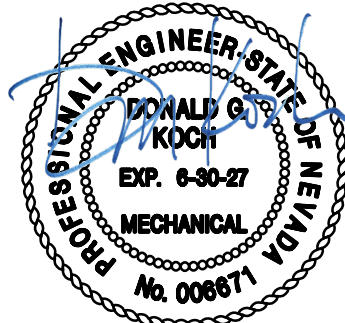
ABBR	SYMBOL	DESCRIPTION
		SHEET NOTE
		REVISION NUMBER
		RECTANGULAR DUCTWORK (IN) - ROUND DUCTWORK (IN)
SA		SUPPLY AIR DUCT UP/DOWN
RA		RETURN AIR DUCT UP/DOWN
EA		EXHAUST AIR DUCT UP/DOWN
OA		OUTSIDE AIR DUCT UP/DOWN
		SUPPLY, RETURN, EXHAUST - DIFFUSER, GRILLE, OR REGISTER
		LINEAR SLOT DIFFUSER, GRILLE OR REGISTER
		SIDEWALL SLOT DIFFUSER, GRILLE OR REGISTER
		AIR FLOW DIRECTION ARROW
		SINGLE LINE RIGID DUCT/WITH ACOUSTICAL LINER
		DOUBLE LINE RIGID DUCT/WITH ACOUSTICAL LINER
		SINGLE/DOUBLE LINE RADIUS DUCT ELBOW
		SINGLE/DOUBLE LINE MITERED DUCT ELBOW
		DOUBLE LINE DUCT TRANSITION
FSD		DAMPERS - FIRE, SMOKE, AND COMBINATION FIRE/SMOKE
MD, BDD		DAMPERS - MOTORIZED AND BACKDRAFT
MVD		DAMPERS - MANUAL AND MANUAL WITH REMOTE OPERATION
DD		DUCT MOUNTED SMOKE DETECTOR
CHS/R		CHILLED WATER - SUPPLY AND RETURN
HS/R		HOT WATER - SUPPLY AND RETURN
D		DRAIN
ICW		INDUSTRIAL COLD WATER
CS/R		CONDENSER WATER - SUPPLY AND RETURN
LPS/R		LOW PRESSURE STEAM - SUPPLY AND RETURN
HPS/R		HIGH PRESSURE STEAM - SUPPLY AND RETURN
RL/S		REFRIGERANT - LIQUID AND SUCTION
PD		PUMPED DRAIN
SR		HYDRONIC LOOP - SUPPLY AND RETURN
CV		CONTROL VALVE (2-WAY, 3-WAY)
PCV		PNEUMATIC CONTROL VALVE (2-WAY, 3-WAY)
GV, SOV		GATE VALVE/SHUT-OFF VALVE
TV		THROTTLING VALVE
BV		BALANCING VALVE
CV		CHECK VALVE
PRV		PRESSURE REDUCING VALVE
RV		RELIEF VALVE
		STRAINER WITH BLOW-DOWN VALVE
FPC		FLEXIBLE PIPE CONNECTION
		UNION
AV		AIR VENT
		DUCT OR PIPE SINGLE LINE TRANSITION
PG		PRESSURE GAUGE
TH		THERMOMETER
		FLOW SWITCH
		PIPE DOWN AND PIPE TEE DOWN
		PIPE UP AND PIPE TEE UP
		PIPE CAP
		ANCHOR
		GUIDE
		FLOW ARROW
		THERMOSTAT
		HUMIDISTAT
		SPACE TEMPERATURE SENSOR WITH PLUG-IN PORT
		OCCUPANCY SENSOR
		CARBON DIOXIDE SENSOR
		CARBON MONOXIDE SENSOR
POC		POINT OF CONNECTION TO EXISTING
POD		POINT OF DISCONNECTION FROM EXISTING
		ITEM TO BE REMOVED

1. COORDINATE ALL DEMOLITION AND NOTIFY OWNER OF ANY DISCREPANCIES.
2. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BID AND BECOME ACQUAINTED WITH EXISTING CONDITIONS AND EXISTING INSTALLATIONS. NOTIFY ENGINEER, OR OWNER OF CONFLICTS AND DISCREPANCIES.
3. CONDITIONS SHOWN ON PLANS MAY NOT REFLECT "AS-BUILT" CONDITIONS. VERIFY EXISTING CONDITIONS PRIOR TO FINAL BID.
4. OWNER RETAINS RIGHTS TO SALVAGE EQUIPMENT AND FIXTURES REMOVED. COORDINATE WHICH EQUIPMENT TO BE SALVAGED WITH OWNER. COORDINATE LOCATION OF STORAGE WITH OWNER OF SALVAGED ITEMS. AVOID DAMAGE OF EQUIPMENT ON TRANSPORT TO OWNER STORAGE AREA.
5. WHERE SHUT-DOWN OF EXISTING SYSTEMS IS REQUIRED DURING DEMOLITION, COORDINATE SHUT-DOWN TIME AND DURATION WITH OWNER TO MINIMIZE DOWNTIME. NOTIFY OWNER 7 DAYS PRIOR TO INTERRUPTION IN SERVICE.
6. INSPECT EXISTING EQUIPMENT TO REMAIN TO VERIFY THAT EQUIPMENT IS OPERATING PROPERLY. NOTIFY OWNER OF DAMAGED EQUIPMENT.
7. CONTRACTOR SHALL AVOID DAMAGE TO EXISTING SURFACES AND EQUIPMENT NOT TO BE DEMOED. DAMAGE SHALL BE REPAIRED AT NO COST TO THE OWNER.
8. SEAL ALL PENETRATIONS THROUGH WALLS, FLOORS, CEILINGS, AND ROOFS WHERE EQUIPMENT OR ACCESSORIES ARE BEING REMOVED. REPAIR SURFACES TO MATCH ADJACENT AREAS.
9. HANGERS AND SUPPORTS FOR DUCTWORK AND EQUIPMENT SHALL BE REMOVED IN INSTANCES WHERE NEW INSTALLATION WILL NOT REQUIRE THEM.
10. INSTALL PERMANENT CAPS WHERE DUCTWORK AND PIPING IS REMOVED AND THE EXISTING TAPS ARE NOT USED FOR THE NEW INSTALLATIONS. INSTALL TEMPORARY CAPS FOR THOSE PIPES AND DUCTS THAT WILL BE UTILIZED TO PROTECT UNTIL NEW CONNECTIONS ARE INSTALLED.
11. ANY EXISTING PIPING THAT NEEDS TO REMAIN BUT INSTALLED IN DEMOED WALLS SHALL BE REROUTED AS NECESSARY TO EXISTING OR NEW WALLS.

[illegible]

(THIS IS A MASTER LEGEND, NOT ALL ABBREVIATIONS MAY APPEAR ON DRAWINGS.)			
AABC	AMERICAN AIR BALANCE COUNCIL	MERV	MINIMUM EFFICIENCY REPORTING VALUE
ADA	ACCESS DOOR	MIN	MINIMUM
ADA	AMERICANS WITH DISABILITIES ACT	MOCOP	MAXIMUM OVER CURRENT PROTECTION
AF	AIR FOIL	NA	NOT APPLICABLE
AF	ABOVE FINISH FLOOR	NC	NORMALLY CLOSED
AFMS	AIR FLOW MEASURING STATION	NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	NEC	NATIONAL ELECTRICAL CODE
AHU	AIR HANDLING UNIT	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
AP	AIR ACCESS PANEL	NIC	NOT IN CONTRACT
APD	AIR PRESSURE DROP	NO	NORMALLY OPEN
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	NPSHA	NET POSITIVE SUCTION HEAD AVAILABLE
AUTO	AUTOMATIC	NPSHR	NET POSITIVE SUCTION HEAD REQUIRED
B	BOILER		
BAS	BUILDING AUTOMATION SYSTEM	OED	OPEN END DUCT
BHP	BRAKE HORSE POWER	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
BMS	BACKWARD INCLINED	OPA	OSHPD PRE-APPROVAL OF ANCHORAGE
BMS	BUILDING MANAGEMENT SYSTEM	OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
BTU	BRITISH THERMAL UNIT	OSP	OSHPD SPECIAL SEISMIC CERTIFICATION PRE-APPROVAL
°C	DEGREES CELSIUS	P	PUMP
CB	CALIFORNIA BUILDING CODE	PCF	POUND PER CUBIC FOOT
CCF	CUBIC FEET PER HOUR	PCU	POLLUTION CONTROL UNIT
CFM	CUBIC FEET PER MINUTE	PD	PRESSURE DROP
CH	CHILLER	PH	PHASE
CHWP	CHILLED WATER PUMP	PPM	PARTS PER MILLION
CMC	CALIFORNIA MECHANICAL CODE	PRV	PRESSURE REDUCING VALVE
CO	CARBON MONOXIDE	PSI	POUND PER SQUARE INCH
CO2	CARBON DIOXIDE	PSIA	POUND PER SQUARE INCH ABSOLUTE
COP	COEFFICIENT OF PERFORMANCE	PSIG	POUND PER SQUARE INCH GAUGE
CPC	CALIFORNIA PLUMBING CODE	PTAC	PACKAGED THROUGH THE WALL AIR CONDITIONER UNIT
CT	COOLING TOWER	PTHP	PACKAGED THROUGH THE WALL HEAT PUMP UNIT
CU	CONDENSING UNIT		
CV	CONSTANT VOLUME	REFR	REFRIGERANT
CWP	CONDENSER WATER PUMP	RH	RELATIVE HUMIDITY
		RPM	REVOLUTIONS PER MINUTE
DB	DRY BULB TEMPERATURE	RTU	ROOFTOP UNIT
dB	DECIBEL		
DC	DIRECT CURRENT	SD	SMOKE DAMPER
DDC	DIRECT DIGITAL CONTROL	SEER	SEASONAL ENERGY EFFICIENCY RATIO
DDCP	DIRECT DIGITAL CONTROL FIELD PANEL	SEF	SMOKE EXHAUST FAN
DIA (-)	DIA	SF	SUPPLY FAN
DN	DOWN	SH	STATIC HEAD
DP	DIFFERENTIAL PRESSURE	SP	STATIC PRESSURE
DS	DUCT SUMP	SQ FT	SQUARE FEET
DX	DIRECT EXPANSION		
E	EXISTING	TAB	TESTING AND BALANCING
EAT	ENTERING AIR TEMPERATURE	TCP	TEMPERATURE CONTROL PANEL
EC	EVAPORATIVE COOLER	TD	TEMPERATURE DIFFERENCE
EER	ENERGY EFFICIENCY RATIO	TDH	TOTAL DEVELOPED HEAD
EF	EXHAUST FAN	TEL	TOTAL EQUIVALENT LENGTH
EFF	EFFICIENCY	TF	TRANSFER FAN
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM	TSP	TOTAL STATIC PRESSURE
ESP	EXTERNAL STATIC PRESSURE	TYP	TYPICAL
ET	EXPANSION TANK		
EWT	ENTERING WATER TEMPERATURE	UH	UNIT HEATER
		UMC	UNIFORM MECHANICAL CODE
°F	DEGREES FAHRENHEIT	UNO	UNLESS NOTED OTHERWISE
FCU	FAN COIL UNIT	UPC	UNIFORM PLUMBING CODE
FLA	FULL LOAD AMPS	UV	ULTRA VIOLET
FM	FLOW METER	V	VOLT
FFM	FEET PER MINUTE	VAV	VARIABLE AIR VOLUME
FPS	FEET PER SECOND	VD	VOLUME DAMPER (MANUAL)
FT	FEET	VEL	VELOCITY
		VFD	VARIABLE FREQUENCY DRIVE
GA	GAUGE		
GAL	GALLONS	W	WATT, WIDTH
GBS	GALVANIZED BIRD SCREEN	WB	WET BULB TEMPERATURE
GPH	GALLONS PER HOUR	WC	WATER COLUMN
GPM	GALLONS PER MINUTE	WG	WATER GAUGE
H	HEIGHT	WMS	WIRE MESH SCREEN
HD	HEAD	WP	WATER PRESSURE
HOA	HAND OFF AUTO	WPD	WATER PRESSURE DROP
HP	HORSE POWER	WSPH	WATER SOURCE HEAT PUMP
HR	HOUR	WT	WEIGHT
HWP	HOT WATER PUMP		
HX	HEAT EXCHANGER		
HZ	HERTZ		
IBC	INTERNATIONAL BUILDING CODE		
IFC	INTERNATIONAL FIRE CODE		
IH	INTAKE HOOD		
IMC	INTERNATIONAL MECHANICAL CODE		
IN	INCH		
IPC	INTERNATIONAL PLUMBING CODE		
KW	KILOWATT		
L	LENGTH		
LAT	LEAVING AIR TEMPERATURE		
LBS	POUNDS		
LWT	LEAVING WATER TEMPERATURE		
MAT	MIXED AIR TEMPERATURE		
MAX	MAXIMUM		
MBH	1000 BRITISH THERMAL UNITS PER HOUR		
MCA	MINIMUM CIRCUIT AMPS		
MCC	MOTOR CONTROL CENTER		

## M0.00



PROJECT NAME



SHEET NAME

REVISIONS

DATE

11.06.2025

SHEET NUMBER

M0.01

MECHANICAL SPECIFICATIONS

PART 1 - GENERAL

1.1 CONDITIONS

- A. GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, SPECIAL CONDITIONS, AND OTHER RELATED PORTIONS OF DIVISION 1, APPLY TO THIS SECTION.

1.2 SUMMARY OF WORK

- A. THE WORK INCLUDED CONSISTS OF FURNISHING LABOR, MATERIALS AND EQUIPMENT FOR THE INSTALLATION AND PLACING INTO OPERATION A COMPLETE AND OPERABLE HEATING, VENTILATING AND AIR CONDITIONING SYSTEM AS SPECIFIED AND SHOWN, INCLUDING, BUT NOT LIMITED TO: HVAC UNITS, FANS, DUCTWORK, AIR DEVICES, PIPING, CONTROLS AND ACCESSORIES, EXCEPT AS OTHERWISE NOTED.

1.3 REGULATIONS, CODES, PERMITS AND INSPECTIONS

- A. COMPLY WITH NATIONAL, STATE, COUNTY, AND CITY CODES, ORDINANCES, ETC., HAVING JURISDICTION, INCLUDING RULES AND REQUIREMENTS OF UTILITY SERVING AGENCIES.
- B. INCORPORATE CODES, ORDINANCES, ETC., INTO THE BASE BID AND INSTALLATION OF WORK. NO ADDITIONAL FUNDS WILL BE ALLOCATED FOR WORK REQUIRED TO CONFORM TO REGULATIONS AND REQUIREMENTS AND/OR TO OBTAIN APPROVAL OF WORK.
- C. OBTAIN AND PAY FOR REQUIRED PERMITS AND LICENSES. WHEN REQUIRED BY CODE, WORK MUST BE INSPECTED AND APPROVED BY LOCAL AUTHORITIES. PRIOR TO FINAL APPROVAL, FURNISH ARCHITECT WITH CERTIFICATES OF INSPECTION AND APPROVALS BY LOCAL AUTHORITIES.
- D. IN ADDITION, THE LATEST EDITION OF THE FOLLOWING PUBLISHED STANDARDS SHALL BE ADHERED TO:
1. INTERNATIONAL BUILDING CODE WITH AMENDMENTS: CURRENT ADOPTED VERSION.
  2. UNIFORM MECHANICAL CODE WITH AMENDMENTS: CURRENT ADOPTED VERSION.
  3. NFPA STANDARDS
  4. ASHRAE GUIDES.
  5. SMACNA DUCT CONSTRUCTION STANDARDS.
  6. UNIFORM PLUMBING CODE WITH AMENDMENTS: CURRENT ADOPTED VERSION.
  7. NATIONAL ELECTRIC CODE WITH AMENDMENTS: CURRENT ADOPTED VERSION.
  8. INTERNATIONAL ENERGY CONSERVATION CODE WITH AMENDMENTS: CURRENT ADOPTED VERSION

1.4 DESIGN DRAWINGS

- A. DESIGN DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED ONLY TO DEFINE THE BASIC FUNCTIONS REQUIRED. PROVIDE LABOR, MATERIAL, ETC., NECESSARY TO ACCOMPLISH THESE REQUIREMENTS. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED A PART OF THE WORK INCLUDED, HOWEVER, NO CHANGES THAT ALTER THE CHARACTER OF THE WORK WILL BE PERMITTED. DO NOT SCALE THE DESIGN DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
- B. IF A CONFLICT OCCURS BETWEEN THE DESIGN DRAWINGS AND SPECIFICATIONS, PROMPTLY NOTIFY THE ARCHITECT AND/OR ENGINEER. AT THAT POINT, AN INTERPRETATION WILL BE MADE BY THE ARCHITECT AND/OR ENGINEER AND SAID DECISION SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS.

1.5 QUALIFICATIONS OF WORKMEN

- A. USE SUFFICIENT JOURNEMEN, CRAFTSMEN AND SUPERVISORS TO ENSURE PROMPT, PROPER, AND SAFE EXECUTION OF THE WORK.

1.6 BASE BID

- A. BASE BID SHALL INCLUDE MATERIALS AND EQUIPMENT SPECIFIED OR SCHEDULED ON THE DRAWINGS. REQUESTS FOR SUBSTITUTION OF MATERIALS AND EQUIPMENT SHALL BE BY ADDITIVE OR DEDUCTIVE ALTERNATE BID ONLY, WITH THE FOLLOWING DATA CLEARLY WRITTEN AT THE BEGINNING OF THE ALTERNATE PROPOSAL:
1. ADDITIVE OR DEDUCTIVE AMOUNT CLEARLY WRITTEN IN WORDS AND NUMERALS.
  2. INCREASED OR REDUCED CONSTRUCTION TIME IN DAYS.
  3. OTHER DEMONSTRABLE BENEFIT, FOR WHICH THE SUBSTITUTION OF SUCH ITEM WILL BE IN THE OWNER'S INTEREST.
- B. ONLY THOSE MATERIALS AND EQUIPMENT WHICH ARE SUBMITTED AS AN ALTERNATE BID AND WHICH ARE ACCOMPANIED BY THE SUPPORTING DATA INDICATED BELOW WILL BE REVIEWED AND CONSIDERED.
- 1.7 SUBSTITUTIONS
- A. SUBSTITUTE MATERIALS AND EQUIPMENT FROM THE MANUFACTURERS LISTED WILL BE CONSIDERED. PRIOR TO PROPOSING ANY SUBSTITUTE ITEM, CONTRACTOR SHALL SATISFY HIMSELF THAT THE ITEM PROPOSED IS, IN FACT, EQUAL TO THAT SPECIFIED, THAT SUCH ITEM WILL FIT INTO THE SPACE ALLOCATED, THAT SUCH ITEM AFFORDS COMPARABLE EASE OF OPERATION, MAINTENANCE AND SERVICE, THAT THE APPEARANCE, LONGEVITY, CAPACITY AND SUITABILITY ARE COMPARABLE, AND THAT BY REASON OF COST SAVINGS, REDUCED CONSTRUCTION TIME, OR SIMILAR DEMONSTRABLE BENEFIT, THE SUBSTITUTION OF SUCH ITEM WILL BE IN THE OWNER'S INTEREST.
- B. THE BURDEN OF PROOF OF EQUALITY OF A PROPOSED SUBSTITUTION FOR A SPECIFIED ITEM SHALL BE UPON THE CONTRACTOR. CONTRACTOR SHALL SUPPORT ITS REQUEST WITH SUFFICIENT TEST DATA AND OTHER MEANS TO PERMIT THE ENGINEER TO MAKE A FAIR AND EQUITABLE DECISION ON THE MERITS OF THE PROPOSED SUBSTITUTION. INSUFFICIENT SUBMITTAL DATA WILL RESULT IN REJECTION OF THE PROPOSED SUBSTITUTION. ANY ITEM BY A MANUFACTURER OTHER THAN THOSE SPECIFIED, OR OF BRAND NAME OR MODEL NUMBER, OR OF GENERIC SPECIES OTHER THAN THOSE SPECIFIED, WILL BE CONSIDERED A SUBSTITUTION. ENGINEER WILL BE THE SOLE JUDGE OF WHETHER OR NOT THE SUBSTITUTION IS EQUAL IN QUALITY, UTILITY AND ECONOMY TO THAT SPECIFIED.
- C. APPROVAL OF A SUBSTITUTION SHALL NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE CONTRACT. CONTRACTOR SHALL BEAR THE EXPENSE FOR ANY CHANGES IN OTHER PARTS OF THIS WORK OR OTHER WORK CAUSED BY THE PROPOSED SUBSTITUTION.

1.8 SUBMITTALS

- A. SHOP DRAWINGS:
1. PRIOR TO FABRICATION OR DELIVERY OF ANY MATERIAL AND/OR EQUIPMENT TO THE JOBSITE, SUBMIT ELECTRONIC INDEXED FILE OF A BROCHURE COMPLETELY DESCRIBING EACH MAJOR SYSTEM, MATERIAL AND EQUIPMENT PROPOSED TO BE USED. ANY PIECE OF EQUIPMENT PLACED ON THE JOB WITHOUT PRIOR APPROVAL WILL BE SUBJECT TO REMOVAL.
  2. SUBMITTAL IS FOR INFORMATION AND COORDINATION ONLY. REVIEW OF MATERIAL AND/OR EQUIPMENT SUBMITTALS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO COMPLY WITH PLANS AND SPECIFICATION REQUIREMENTS. POINTS OF NON-COMPLIANCE WHICH ARE NOT NOTED SHALL NOT BE CONSTRUED TO BE AN APPROVAL OF THE NON-COMPLIANCE. SUBMITTALS SHALL CLEARLY STATE WHERE EQUIPMENT DOES NOT AGREE WITH THE CONTRACT DOCUMENTS.
  3. INCLUDE DETAILED DRAWINGS WHERE REQUIRED FOR PROPER COORDINATION WITH OTHER TRADES. INDICATE EQUIPMENT LAYOUTS, ELECTRICAL CHARACTERISTICS, WIRING AND CONTROL DIAGRAMS, SIZES AND LOCATIONS OF PIPING, DUCTS, CONDUITS, AND OTHER ITEMS WHICH EFFECT THE SPACE AVAILABLE.
  4. SUBMIT ITEMS WITHIN 15 DAYS OF AWARD OF CONTRACT. SUBMITTALS SHALL INCLUDE MANUFACTURER'S SPECIFICATIONS, PHYSICAL DIMENSIONS, WEIGHTS AND RATINGS OF EQUIPMENT SUBMITTED. SUBMITTALS SHALL BE INDEXED AND SECURELY BOUND IN A SUITABLE MANNER.
  5. SUBMIT THE FOLLOWING ITEMS FOR APPROVAL:
    - a. AIR CONDITIONING UNITS WITH ASSOCIATED FAN CURVES;
    - b. FANS WITH ASSOCIATED FAN CURVES;
    - c. CONTROLS;
    - d. AIR DEVICES, LOUVERS, DAMPERS AND ACCESS DOORS;
    - e. INSULATION;
    - f. PIPING, VALVES, FITTINGS, ETC.

6. SUBSTITUTION OF A FACTORY MADE (FLEXIBLE DUCT) DISTRIBUTION SYSTEM WILL NOT BE ACCEPTED.
- B. RECORD DRAWINGS:
1. MAINTAIN ACCURATE RECORDS OF ANY CHANGES FROM THE CONTRACT DOCUMENTS AND SHOP DRAWINGS. UPON COMPLETION OF THE PROJECT, DELIVER TO THE OWNER ONE (1) SET OF LEGIBLE AND REPRODUCIBLE COPIES OF THESE RECORD DRAWINGS.

C. GUARANTEE:

1. UPON COMPLETION OF THE PROJECT, DELIVER TO THE OWNER A THREE (3) YEAR GUARANTEE OF THE SYSTEMS, MATERIALS AND WORK PERFORMED. GUARANTEE THE ENTIRE COST, INCLUDING MATERIALS AND/OR LABOR, OF CORRECTIVE WORK REQUIRED AND NECESSITATED BY DEFECTS IN MATERIALS AND/OR WORKMANSHIP.
- D. MANUAL AND OPERATING INSTRUCTIONS:
1. UPON THE COMPLETION OF THE PROJECT, DELIVER TO THE OWNER A HARD BOUND "OWNER'S MANUAL". INCLUDE IN THE MANUAL INSTRUCTIONS PREPARED SPECIFICALLY FOR THE SYSTEMS PROVIDED, ALONG WITH PAPERS, DESCRIPTIONS, PARTS LISTS, INSTRUCTIONS, WARRANTIES, ETC., WHICH WERE DELIVERED WITH THE MATERIALS AND EQUIPMENT UTILIZED IN THE PROJECT. IDENTIFY EACH ITEM BY THE DESIGNATION APPEARING ON THE DRAWINGS.
  2. AT A TIME DESIGNATED, PROVIDE A SUITABLE OPERATOR, MECHANIC OR ENGINEER TO REVIEW THE SYSTEMS WITH OWNER'S REPRESENTATIVE TO THOROUGHLY FAMILIARIZE HIM WITH THE OPERATIONS AND MAINTENANCE OF THE SYSTEMS.

PART 2 - PRODUCTS

2.1 GENERAL PRODUCTS

- A. SEISMIC RESTRAINTS:
1. ATTACHMENTS FOR DUCTWORK, PIPING, AND EQUIPMENT SUPPORTED BY THE BUILDING STRUCTURE SHALL BE DESIGNED TO RESIST SEISMIC FORCES PRESCRIBED IN THE IBC FOR THE APPROPRIATE SEISMIC ZONE.
  2. WHERE REQUIRED BY THE BUILDING OFFICIAL, PROVIDE STRUCTURAL CALCULATIONS SEALED AND SIGNED BY A LICENSED STRUCTURAL ENGINEER.
- B. FURNISH AND INSTALL NEW PRODUCTS OF ESTABLISHED AND REPUTABLE MANUFACTURERS; SEE LIST OF ACCEPTABLE MANUFACTURERS ELSEWHERE IN THIS SPECIFICATION. ITEMS OF EQUIPMENT USED FOR SIMILAR PURPOSE SHALL BE OF THE SAME MANUFACTURER. MAKE NO EQUIPMENT SUBSTITUTIONS THAT WOULD LEAVE INADEQUATE OPERATING AND/OR SERVING SPACE.
- C. ACCESSORIES REQUIRED FOR PROPER OPERATION OF THE SYSTEMS, EVEN THOUGH NOT SPECIFICALLY INDICATED, SHALL BE INCLUDED AND INSTALLED. SUCH ACCESSORIES MAY INCLUDE, BUT ARE NOT LIMITED TO, FILTERS, CONDENSATE DRAINS, RELIEF VALVES, SERVICE VALVES, THERMOSTATS, VIBRATION ISOLATORS, ETC. MOTOR STARTERS FOR PREWIRED EQUIPMENT AND OTHER PROTECTION AND CONTROL DEVICES ARE INCLUDED IN THIS SPECIFICATION. STARTERS FOR NON-PREWIRED EQUIPMENT, I.E., FANS, PUMPS, ETC., ARE SPECIFIED IN DIVISION 16.
- D. SPECIFIC REFERENCE TO A MANUFACTURER'S PRODUCT IS ONLY TO ESTABLISH TYPE, QUALITY, AND PERFORMANCE REQUIRED. THESE QUALIFICATIONS ARE IN ADDITION TO THE REQUIREMENTS SHOWN ON THE PLANS AND ELSEWHERE IN THESE SPECIFICATIONS. LISTING OF ALTERNATE EQUIPMENT MANUFACTURERS SHALL NOT BE CONSTRUED AS AN UNCONDITIONAL APPROVAL OF THE PRODUCTS OF THOSE MANUFACTURERS.

2.2 PACKAGED ROOF TOP UNIT: ELECTRIC COOL/GAS HEAT

- A. FURNISH AND INSTALL COMBINATION PACKAGED ELECTRIC COOL/GAS HEAT UNITS WITH CAPACITIES AS SCHEDULED. UNIT SHALL BE COMPLETE WITH HERMETICALLY SEALED COMPRESSOR WITH HIGH AND LOW PRESSURE CUT-OFFS, COILS, HEATING SECTION, BLOWERS NECESSARY REFRIGERANT PIPING, INSULATED COMPRESSOR COMPARTMENT, AIR COOLED CONDENSER, CONDENSER BLOWER OR FAN, AUTOMATIC CONTROLS, CONTROL PANEL WITH STARTERS, RELAYS, ETC. FOR SINGLE POINT POWER CONNECTION, WITHIN A WEATHERPROOF, INSULATED DECORATIVE CASING. UNITS SHALL BE FURNISHED WITH FILTERS AS SCHEDULED.
- B. UNITS SHALL BE COMPLETELY FACTORY WIRED FOR TERMINAL CONNECTIONS OF THERMOSTAT WITH A FAN-AUTOMANUAL SWITCH AND A SYSTEM HEAT/OFF/COOL/AUTO SWITCH. UNITS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, COMPLETE WITH MANUAL OUTSIDE AIR DAMPER ROOF CURB AND NECESSARY ACCESSORIES FOR EFFICIENT AND PROPER OPERATION.
- C. SEQUENCE OF OPERATION: OPERATION OF EQUIPMENT SHALL BE BY FACTORY CONTROLS SEQUENCE. THERMOSTAT IN EACH AREA SHALL REGULATE TEMPERATURE OF THE ROOF TOP UNIT IN THAT AREA.

2.3 AIR DISTRIBUTION DEVICES

- A. DEVICES SHALL BE PROVIDED AS SCHEDULED.
1. MOUNTING SHALL BE AS SCHEDULED
    - a. ALL MOUNTING IN GYP-BOARD SHALL BE BY CONCEALED MOUNTING.

2.4 ROOF SUPPORTS

- A. EQUIPMENT FURNISHED WITHOUT A COMPATIBLE ROOF CURB, AND WHICH IS TO BE MOUNTED ON ROOF, SHALL BE SUPPORTED ON EQUIPMENT RAILS EQUAL TO RPS MOUNTING PEDESTAL, THYCURB OR PATE CUSTOM SUPPORT. SUBMIT MANUFACTURER'S METHOD OF ATTACHMENT TO THE BUILDING STRUCTURE TO THE STRUCTURAL ENGINEER FOR APPROVAL. SUBMIT MANUFACTURER'S DATA WITH THE STRUCTURAL ENGINEERS APPROVAL TO THE ARCHITECT BEFORE INSTALLATION.

2.5 DUCTWORK

- A. PROVIDE A COMPLETE SYSTEM OF DUCTWORK FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH THE ASHRAE GUIDES AND WITH THE SMACNA DUCT CONSTRUCTION STANDARDS. DUCT SYSTEM SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS. CHANGES IN DUCT ARRANGEMENT OR IN DUCT SIZES SHALL BE MADE ONLY AFTER WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER.
- B. TRUNK AND BRANCH DUCTS SHALL BE RECTANGULAR OR ROUND AND SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL FREE OF DEFECTS SUCH AS DENTING AND DISCOLORIZATION. DUCT SIZES SHOWN ON THE DRAWINGS ARE NET OPENINGS AND SHALL BE INCREASED TO ACCOMMODATE DUCT LINING WHERE APPLICABLE.
- C. FLEXIBLE DUCT CONNECTORS SHALL BE A FACTORY FABRICATED ASSEMBLY CONSISTING OF AN INNER SLEEVE, 1-INCH THICK FIBERGLASS INSULATION, AND AN OUTER VAPOR BARRIER COVERING EQUAL TO THERMAFLEX M-K.E. FLEXIBLE DUCT CONNECTORS SHALL BE A MAXIMUM OF SIX FEET IN LENGTH.
- D. PROVIDE MANUAL VOLUME DAMPERS IN EACH RUNOUT TO EACH DIFFUSER, AND ALSO AS REQUIRED FOR PROPER SYSTEM BALANCING.
- E. VOLUME DAMPERS SHALL BE CONSTRUCTED OF 16 GAUGE GALVANIZED STEEL, BE OF THE OPPOSED BLADE TYPE AND BE FURNISHED WITH LOCKING AND INDICATING QUADRANTS. DAMPERS FOR ROUND DUCTS SHALL BE SINGLE-BLADE TYPE.
- F. ROUND TAPS FOR FACTORY-MADE AIR DUCTS IN SECTIONS OF ROUND SHEET METAL DUCTS SHALL BE MADE WITH ANY OF THE FITTINGS LISTED BELOW.
1. CONICAL TEE.
  2. CONICAL SADDLE TAP.
  3. ELBOW (IF LAST FITTING).
- G. ROUND TAPS FOR FACTORY-MADE AIR DUCTS IN SECTIONS OF RECTANGULAR SHEET METAL DUCTS SHALL BE MADE WITH ANY OF THE FITTINGS LISTED BELOW.
1. COLLAR (SPIN-IN, FLARED).
  2. COLLAR (SPIN-IN, STRAIGHT).
- H. DOVETAILED CUTOFFS ARE NOT ACCEPTABLE AS TAP FITTINGS UNLESS SECURED WITH SHEET METAL SCREWS AND SEALED WITH FIBROUS GLASS MESH, GAUZE, OR CANVAS AND SEALING COMPOUNDS. DUCT TAPE OR OTHER PRESSURE SENSITIVE TAPES ARE NOT ACCEPTABLE.
- I. TAPS IN SECTIONS OF ROUND FACTORY-MADE AIR DUCTS SHALL BE MADE BY INSERTING, IN THE FLEXIBLE DUCT SECTION, ANY OF THE SHEET METAL FITTINGS LISTED BELOW.
1. 90 DEGREE STRAIGHT TEE.
  2. 45 DEGREE STRAIGHT LATERAL.
  3. 45 DEGREE STRAIGHT LATERAL WITH 45 DEGREE ELBOW.
  4. 45 DEGREE STRAIGHT LATERAL CROSS.
  5. Y BRANCH WITH 45 DEGREE ELBOW.

2.6 DUCT INSULATION

- A. THERMAL INSULATION:
1. CONCEALED SUPPLY DUCTS AND RETURN DUCTS ABOVE CEILING OR IN FURRED SPACES SHALL BE THERMALLY INSULATED.
  2. THERMAL INSULATION SHALL BE FLEXIBLE BLANKET GLASS FIBER INSULATION WITH FACTORY APPLIED, FLAME RETARDANT, FOIL-SCRM-KRAFT VAPOR BARRIER (FSK), MAXIMUM K OF 0.30 AT 75 DEGREES F MEAN TEMPERATURE, MINIMUM .75 POUND DENSITY. INSULATION SHALL BE 2" THICK. THERMAL INSULATION SHALL BE WEATHER-PROOF TYPE WHERE REQUIRED.
    - a. R-6 MINIMUM INTERIOR
    - b. R-8 MINIMUM EXTERIOR
  3. INSULATION SHALL BE APPLIED OVER SURFACES WHICH HAVE BEEN WIPED CLEAN AND DRY AND SHALL HAVE 2-INCH MINIMUM TAPE OVERLAP ON BOTH LONGITUDINAL AND TRANSVERSE SEAMS. EDGES OF INSULATION SHALL BE FIRMLY BUTTED TOGETHER.
  4. 25/50 FLAME AND SMOKE SPREAD COMPLIANT.
- 2.7 LIST OF ACCEPTABLE MANUFACTURERS
- A. FOLLOWING IS A LIST OF MANUFACTURERS WHOSE EQUIPMENT IS ACCEPTABLE AS TO MANUFACTURE, SUBJECT TO CONFORMANCE WITH THE DRAWINGS AND SPECIFICATIONS. CAREFUL CHECKING MUST BE MADE TO VERIFY THAT EQUIPMENT WILL MEET CAPACITIES, REQUIREMENTS, AND SPACE AND WEIGHT ALLOCATIONS.
1. HVAC PACKAGED EQUIPMENT: LENNOX, AMERICAN STANDARD, CARRIER, DAIKIN.
  2. FANS: COOK, PENN, CARNES, BROAN, GREENHECK.
  3. TEMPERATURE CONTROLS: HONEYWELL, JOHNSON, BARBER-COLMAN.
  4. AIR DEVICES: TITUS, METALAIRE, KRUEGER, CARNES.
  5. INSULATION: CERTANTEED, OWENS-CORNING, MANVILLE, KNAUF.
  6. VIBRATION ISOLATION: MASON INDUSTRIES, VIBREX, KORFUND, VIBRATION MOUNTINGS, INC., AMBER-BOOTH.
  7. STARTERS, RELAYS, ETC.: SQUARE D, GENERAL ELECTRIC, WESTINGHOUSE, CUTLER-HAMMER.
  8. DUCT TURNS: TUTTLE & BAILEY, DURO DYNE, BARBER-COLMAN, III.

PART 3 - EXECUTION

3.1 GENERAL

- A. INSTALL MATERIALS AND EQUIPMENT IN AN ARRANGEMENT THAT WILL GIVE THE GREATEST PRACTICAL EASE OF OPERATION AND SERVICE TO THE OWNER.
- B. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDED INSTALLATION PROCEDURES.
- C. PERFORM WORK IN ACCORDANCE WITH THE BEST TRADE PRACTICES. INSTALL MATERIALS AND EQUIPMENT SQUARELY WITH THE BUILDING LINES. PROVIDE RIGID PERMANENT BASES AND SUPPORTS FOR WORK. CONSTRUCT AND BRACE EQUIPMENT, PIPING, ETC., SO THAT THERE WILL BE NO VIBRATION AND/OR RATTLING WHEN THE SYSTEM IS IN OPERATION.
- D. COVER AND PROTECT EQUIPMENT AND MATERIALS FROM WEATHER, THEFT, ETC., UNTIL DATE OF COMPLETION. PLUG AND/OR CAP OPEN ENDS OF INSTALLED PIPING AND/OR DUCTWORK PENDING EXTENSION OR FINAL CONNECTION.

3.2 DUCTWORK

- A. CONSTRUCT DUCTWORK WITH MATERIAL, GAUGES, JOINTS, BRACING AND SUPPORTS IN ACCORDANCE WITH APPLICABLE RECOMMENDATIONS OF ASHRAE AND SMACNA, WITH ADDITIONAL BRACING AS REQUIRED.
- B. DUCTWORK SHALL BE RIGIDLY CONSTRUCTED AND SUBSTANTIALLY AIR-TIGHT. SUBSTANTIALLY AIR-TIGHT SHALL BE CONSTRUED TO MEAN THAT NO AIR LEAKAGE IS NOTICEABLE THROUGH THE SENSES OF FEELING OR HEARING AT DUCT JOINTS. JOINTS SHALL BE TIGHTLY FITTED WITH NO VOIDS. MINOR GAPS SHALL BE CLOSED WITH CANVAS TAPE SET INTO AND SEALED WITH BRUSH APPLIED ADHESIVE, OR WITH SILICONE CAULKING COMPOUND. DO NOT UTILIZE PRESSURE SENSITIVE TAPE.
- C. SHIP-LAP CUT JOINTS IN FIBERGLASS DUCTWORK. USE METAL REINFORCING AT CONNECTIONS. CLOSE WITH HEAT SENSITIVE TAPE, CANVAS TAPE AND ARABOL, OR "HARD-CAST".
- D. MAKE CONNECTIONS BETWEEN FLEXIBLE DUCTS AND RIGID TRUNK DUCTS WITH FACTORY FABRICATED FITTINGS WITH DAMPER AND SCOOP. WHERE "TAP-INS" SERVE SINGLE OUTLETS, AND WHERE TAP-IN DAMPER IS ACCESSIBLE, OUTLET DAMPER MAY BE OMITTED. SECURE FLEX DUCT TO FITTING WITH CLAMPS, INSTALLED TO FACTORY RECOMMENDED TENSION. INSTALL CLAMPS ON LINER AND SECOND CLAMP OVER JACKET. JOB INSPECTION MAY REQUIRE REMOVAL AND REPLACEMENT OF A RANDOM SAMPLING OF JACKET CLAMPS TO EXPOSE LINER CLAMPS.
- E. ELBOWS SHALL HAVE A THROAT RADIUS EQUAL TO DUCT WIDTH. SQUARE ELBOWS SHALL HAVE TURNING VANES. TRANSITIONS SHALL NOT EXCEED 4 TO 1 RATIO.

3.3 AIR DISTRIBUTION DEVICE INSTALLATION

- A. INSTALL DIFFUSERS TO DUCTWORK WITH AIRTIGHT CONNECTION.
- B. INSTALL BALANCING DAMPERS ON DUCT TAKE-OFF TO DIFFUSERS, GRILLES, AND REGISTERS, WHETHER OR NOT DAMPERS ARE FURNISHED AS PART OF DIFFUSER, GRILLE, AND REGISTER ASSEMBLY.

PAINT VISIBLE PORTION OF DUCTWORK BEHIND AIR OUTLETS AND INLETS MATTE BLACK.

3.4 AUTOMATIC TEMPERATURE CONTROLS

- A. THE MECHANICAL CONTRACTOR SHALL PROVIDE A COMPLETE SYSTEM OF AUTOMATIC TEMPERATURE CONTROL, WHICH SHALL INCLUDE, BUT NOT BE LIMITED TO: 24 VOLT HEAT/OFF/COOL/AUTO, FAN-AUTOMANUAL, AND THERMOSTAT HAVING STAGES AS REQUIRED BY CONTROLLED EQUIPMENT, TRANSFORMERS AND REQUIRED RELAYS. THERMOSTATS SHALL HAVE AUTOMATIC CHANGEOVER FROM HEATING TO COOLING AND VICE VERSA.
- B. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE WORK SHOWN ON THE ELECTRICAL DRAWINGS AND IN THE ELECTRICAL SPECIFICATIONS. MECHANICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THE ELECTRICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL PROVIDE ELECTRICAL WIRING AND CONDUIT IN CONNECTION WITH AUTOMATIC TEMPERATURE CONTROLS. WIRING SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE, AND THE ELECTRICAL SECTIONS OF THE SPECIFICATION. MIXING OF AC AND DC CONDUCTORS IN THE SAME CONDUIT IS NOT ACCEPTABLE AND SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE. THE MECHANICAL CONTRACTOR SHALL INSTALL CONDUIT, JUNCTION BOXES, AND THERMOSTAT BACK BOXES AND SHALL PULL CONTROL CIRCUIT CONDUCTORS IN ACCORDANCE WITH THE NEC AND THE ELECTRICAL SECTIONS OF THE SPECIFICATION.
- C. ELECTRICAL WORK SHALL BE DONE BY LICENSED ELECTRICIANS EITHER EMPLOYED BY OR SUB-CONTRACTED TO THE MECHANICAL CONTRACTOR.
- D. SUBMIT SHOP DRAWINGS OF TEMPERATURE CONTROL WIRING, LOCATION, AND INSTALLATION DATA FOR APPROVAL.
- E. GENERAL DIVISION OF RESPONSIBILITY:
1. ANY DEVICE WHICH CARRIES THE FULL LOAD CURRENT OF THE ELECTRICALLY DRIVEN MACHINERY, AS OPPOSED TO THE CONTROL OR INSTRUMENTATION CURRENT IN THE HOLDING COIL, IS A POWER CIRCUIT AND IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. CONTROL OR INSTRUMENTATION CIRCUITS CONNECTING HOLDING COILS TO THE AUTOMATIC TEMPERATURE CONTROL SYSTEM ARE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
  2. THE POWER CIRCUIT IS DEFINED AS ALL DEVICES NECESSARY TO OPERATE, AND AS REQUIRED BY CODE TO PROTECT AND SERVICE THE UNIT, INCLUDING BRANCH CIRCUIT PROTECTIVE DEVICES, DISCONNECTS, EITHER FUSED OR NONFUSED, MAGNETIC MOTOR STARTERS WITH RUNNING OVERLOAD AND SINGLE PHASING PROTECTION, MAGNETIC CONTACTORS, ETC.
  3. THE CONTROL OR INSTRUMENTATION CIRCUIT IS DEFINED AS ALL DEVICES NECESSARY TO INTERFACE THE ELECTRICAL POWER CIRCUIT WITH THE AUTOMATIC TEMPERATURE CONTROL SYSTEM INCLUDING CONDUIT, BOXES, CONDUIT FITTINGS, CONDUCTORS, ELECTRIC-PNEUMATIC SWITCHES, PNEUMATIC-ELECTRIC SWITCHES, ELECTRICAL AND PNEUMATIC RELAYS, PNEUMATIC TUBING, ETC.

- F. EACH SYSTEM, CONSISTING OF ONE OR MORE AIR CONDITIONING UNITS, PROVIDING HEATING AND COOLING AIR SHALL BE EQUIPPED WITH ONE IONIZATION TYPE SHUT-OFF SMOKE DETECTOR, UNLESS INDICATED OTHERWISE.
- G. THE SMOKE DETECTOR SHALL BE LOCATED IN THE MAIN SUPPLY-AIR DUCT AHEAD OF ANY BRANCH TAKE-OFFS.
- H. ACTIVATION OF ANY SMOKE DETECTOR SHALL CAUSE THE AIR-MOVING EQUIPMENT TO AUTOMATICALLY SHUT DOWN. WHERE A SYSTEM CONSISTS OF MORE THAN ONE AIR CONDITIONER, ACTIVATION OF ANY OF THE SMOKE DETECTORS IN ANY OF THE AIR CONDITIONERS SERVING THE COMMON AREA SHALL CAUSE ALL AIR-MOVING EQUIPMENT SERVING THAT COMMON AREA TO SHUT DOWN.
- I. WIRING OF THE SMOKE DETECTORS SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR AND SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC AND ELECTRICAL SECTIONS OF THE SPECIFICATION. ELECTRICAL WORK SHALL BE DONE BY LICENSED ELECTRICIANS EITHER EMPLOYED BY OR SUB-CONTRACTED TO THE MECHANICAL CONTRACTOR.
- J. SUBMIT SHOP DRAWINGS OF SMOKE DETECTOR WIRING, LOCATION AND INSTALLATION DATA FOR APPROVAL.
- K. CONNECT ALL FIRE/SMOKE DAMPERS TO FIRE CONTROL SYSTEM, AS REQUIRED BY LOCAL AUTHORITY.

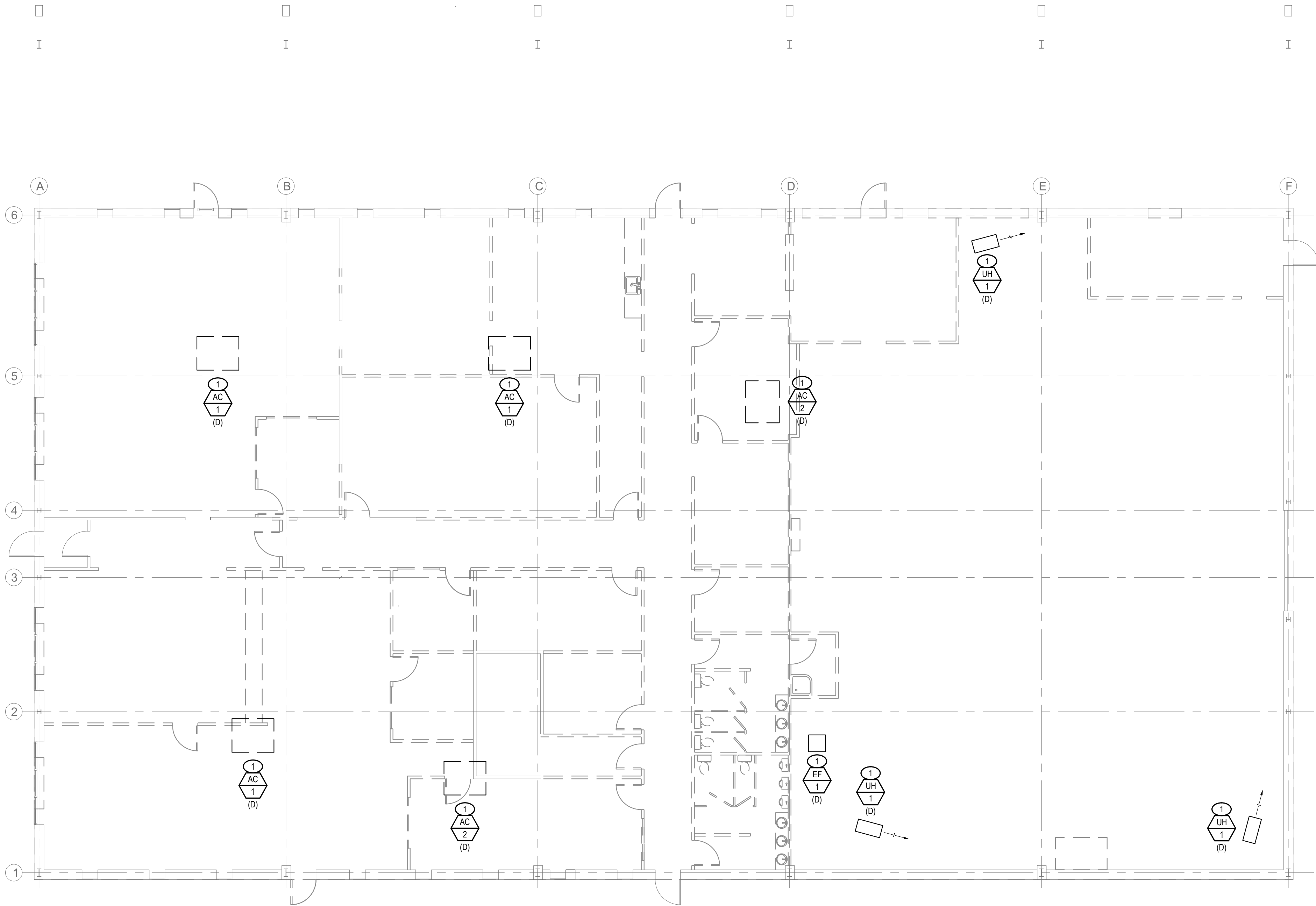
- F. EACH SYSTEM, CONSISTING OF ONE OR MORE AIR CONDITIONING UNITS, PROVIDING HEATING AND COOLING AIR SHALL BE EQUIPPED WITH ONE IONIZATION TYPE SHUT-OFF SMOKE DETECTOR, UNLESS INDICATED OTHERWISE.
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- I. WIRING OF THE SMOKE DETECTORS SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR AND SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC AND ELECTRICAL SECTIONS OF THE SPECIFICATION. ELECTRICAL WORK SHALL BE DONE BY LICENSED ELECTRICIANS EITHER EMPLOYED BY OR SUB-CONTRACTED TO THE MECHANICAL CONTRACTOR.
- J. SUBMIT SHOP DRAWINGS OF SMOKE DETECTOR WIRING, LOCATION AND INSTALLATION DATA FOR APPROVAL.
- K. CONNECT ALL FIRE/SMOKE DAMPERS TO FIRE CONTROL SYSTEM, AS REQUIRED BY LOCAL AUTHORITY.

3.5 TESTING AND BALANCING

- A. THE TESTS SHALL INCLUDE THOSE COMPONENTS NORMALLY INCLUDED AS A PART OF THE AIR DISTRIBUTION AND TRANSMISSION SYSTEM.
- B. A COMPLETE BALANCING REPORT SHALL BE SUBMITTED TO THE ENGINEER UPON COMPLETION. THE BALANCING REPORT SHALL INCLUDE DESIGN QUANTITIES AND ACTUAL QUANTITIES FOLLOWING BALANCING. BALANCING SHALL BE COMPLETED TO THE SATISFACTION OF THE ENGINEER.
- C. INCLUDE IN BID, AS PART OF THE WORK IN THIS CONTRACT ANY ADJUSTMENTS IN OR REPLACEMENT OF PULLEYS, BELTS, MOTORS, DAMPERS, ETC., OR THE ADDITION OF DAMPERS AND ORIFICE PLATES REQUIRED FOR CORRECT BALANCING OF SYSTEMS.
- D. THE FOLLOWING DATA SHALL BE INCLUDED IN THE TESTING AND BALANCING REPORT FOR EACH SYSTEM AND SHALL BE SUBMITTED ON THE SMACNA FORMS INDICATED:
1. LIST TEST AND AIR BALANCE INSTRUMENTS, THE APPLICATION, THE DATE OF USE AND THE INSTRUMENT CALIBRATION TEST DATE, AND SUBMIT REPORT ON SMACNA FORM.
  2. TEST AND RECORD CFM QUANTITIES AND SUBMIT REPORT ON SMACNA FORM FOR AIR OUTLETS/INLETS, ON SMACNA FORM FOR HVAC UNITS, AND ON SMACNA FORM FOR FANS.
  3. TEST AND RECORD ENTERING AIR TEMPERATURES (D.B. HEATING AND COOLING) AND SUBMIT REPORT ON SMACNA FORM.
  4. TEST AND RECORD ENTERING AIR TEMPERATURES (W.B. COOLING) AND SUBMIT REPORT ON SMACNA FORM.
  5. TEST AND RECORD LEAVING AIR TEMPERATURES (D.B. HEATING AND COOLING) AND SUBMIT REPORT ON SMACNA FORM.
  6. TEST AND RECORD LEAVING AIR TEMPERATURES (W.B. COOLING) AND SUBMIT REPORT ON SMACNA FORM.
  7. TEST AND RECORD SYSTEM SUCTION PRESSURE, HEAD PRESSURE, COMPRESSOR AMPS, AND AMBIENT TEMPERATURE DURING COOLING OPERATION, AND SUBMIT REPORT ON SMACNA FORM.
- E. TEST AND ADJUST AIR DEVICES TO WITHIN PLUS OR MINUS 5 PERCENT OF DESIGN REQUIREMENTS.



Mechanical Demo Plan  
Scale: 1/8" = 1'-0" - Do Not Scale Drawings

SHEET NOTES

1. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL COORDINATE LOCATION AND ROUTING OF HVAC EQUIPMENT WITH ALL OTHER TRADES.
2. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL ROOF AND WALL PENETRATIONS WITH ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO BEGINNING WORK.
3. CONTRACTOR SHALL VERIFY SITE CONDITIONS AND STRUCTURAL CONDITIONS PRIOR TO BEGINNING WORK.

KEY NOTES

1. EXISTING MECHANICAL EQUIPMENT TO BE REMOVED. PATCH AND SEAL ROOF AS NEEDED FOR ROOFTOP UNIT REMOVAL.

(XX)

CONSULTANT

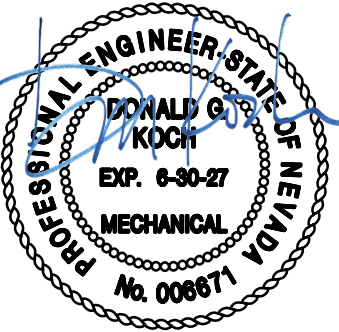
NV5

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NV5 Project # - 25-0004625



11/05/2025  
don.koch@nv5.com

PROJECT NAME



Tenant Improvement  
111 W. Front Street  
Elko, Nevada

SHEET NAME

MECHANICAL DEMO PLAN

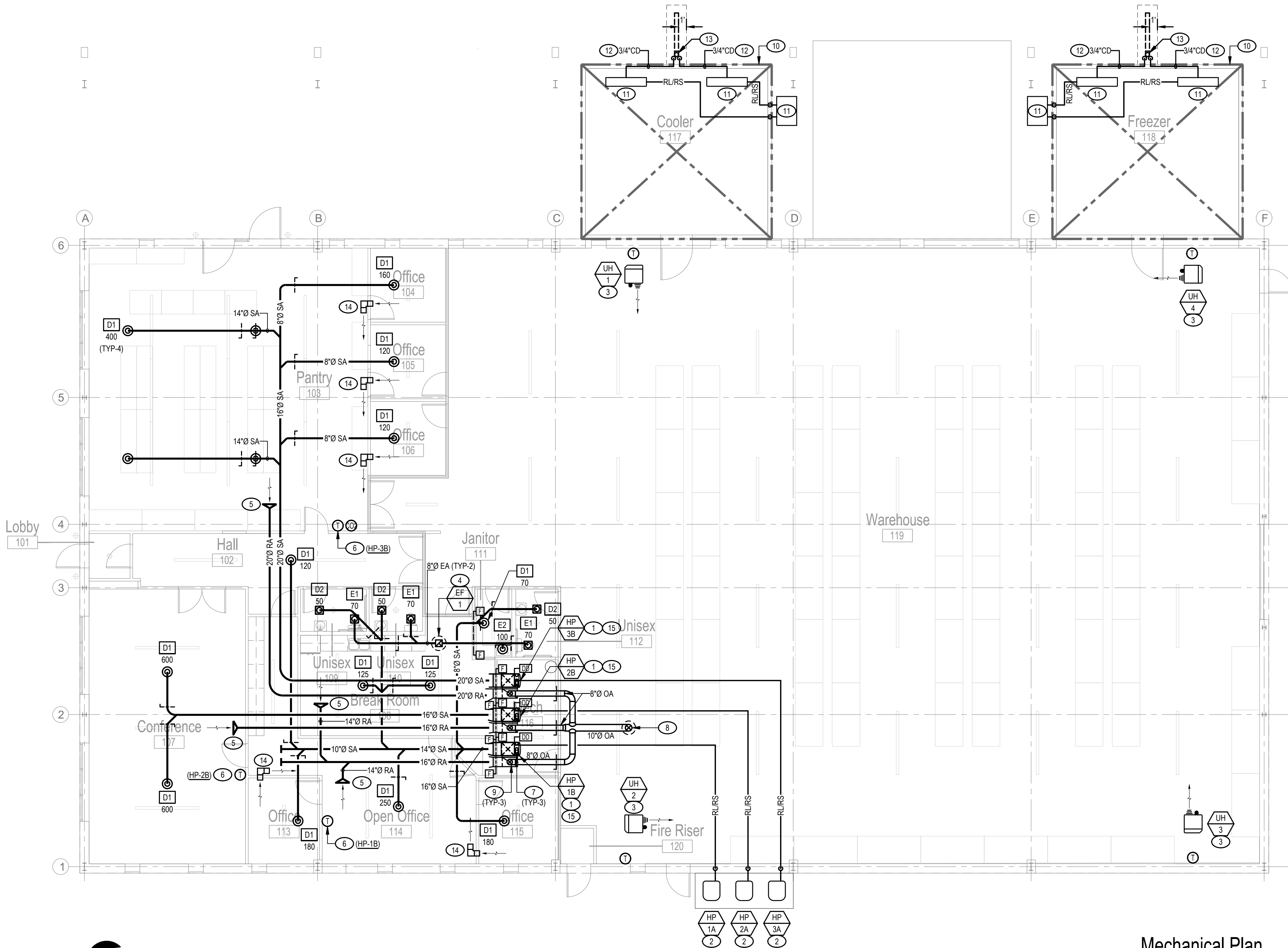
REVISIONS

DATE

11.06.2025

SHEET NUMBER

MD2.01



Mechanical Plan

Scale: 1/8" = 1'-0" - Do Not Scale Drawings

SHEET NOTES

1. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL COORDINATE LOCATION AND ROUTING OF HVAC EQUIPMENT WITH ALL OTHER TRADES.
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3. CONTRACTOR SHALL VERIFY SITE CONDITIONS AND STRUCTURAL CONDITIONS PRIOR TO BEGINNING WORK.

KEY NOTES (xx)

1. INSTALL DIRECT FURNACE VENTS ON EQUIPMENT PAD PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE SUPPLY AIR DUCT COOLING COILS AS SCHEDULED. DUCT SMOKE DETECTOR ON RISE, AND FIRE DAMPER THROUGH RATED WALL.
2. INSTALL HEAT PUMP CONDENSING UNIT ON EQUIPMENT PAD PER MANUFACTURER'S RECOMMENDATIONS. ROUTE REFRIGERANT LINES SIZED PER MANUFACTURER'S RECOMMENDATIONS TO CORRESPONDING COOLING COILS.
3. INSTALL GAS-FIGURED UNIT HEATER PER MANUFACTURER'S RECOMMENDATIONS AT 10' AFF. PROVIDE FLUE THROUGH ROOF. SEE PLUMBING PLANS FOR GAS CONNECTIONS.
4. INSTALL EXHAUST FAN ON ROOF PER MANUFACTURER'S RECOMMENDATIONS. ROUTE 10x10 EA DUCT DOWN THROUGH ROOF.
5. PROVIDE BELL-NOSE FITTINGS WITH BIRD SCREEN TERMINATION ON RETURN DUCT IN CEILING SPACE.
6. MOUNT THERMOSTAT ON WALL AT 48" AFF. CONFIRM FINAL LOCATION WITH ARCHITECT.
7. 4"Ø EXHAUST/INTAKE UP THROUGH ROOF. TERMINATE PER MANUFACTURER'S RECOMMENDATIONS.
8. 10"Ø OUTSIDE AIR DUCT UP THROUGH ROOF TO INTAKE HOOD GREENHECK #GRS-10-QD. PROVIDE 24" TALL ROOF CURB.
9. ROUTE 8"Ø OUTSIDE AIR DUCT TO TOP OF RETURN PLENUM ELBOW. BALANCE ASSOCIATED DAMPER TO CFM SHOWN IN VENTILATION COMPLIANCE TABLE.
10. WALK-IN COOLER/FREEZER BY OTHERS.
11. INSTALL WALK-IN BOX COMPRESSOR AND EVAPORATORS IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES. EXTEND REFRIGERANT TUBING FROM THE CONDENSING UNIT TO EACH FAN COIL UNIT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. USE TYPE ACR SOFT COPPER WITH BRAZED JOINTS. CHARGE THE SYSTEM WITH REFRIGERANT IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
12. ROUTE 3/4" CONDENSATE DRAIN PIPING FROM FAN WALK-IN BOX FAN COIL TO EXTERIOR FRENCH DRAIN. PROVIDE 1" THICK UNICELLULAR INSULATION WITH PROTHERM 2700 SERIES SELF-REGULATING 120V, 5 WATTS PER FOOT SELF-REGULATING HEAT TAPE FOR THE FREEZER DRAIN PIPING FROM THE DRAIN PAN TO THE TERMINATION POINT.
13. FRENCH DRAIN SHALL CONSIST OF 6" PVC PIPE STUBBED UP TO 6" ABOVE FINISHED GRADE. THE DRAIN SHALL EXTEND TO AN ELBOW 24" BELOW GRADE POINTED AWAY FROM BUILDING AND TERMINATING IN 5' LENGTH OF 6" PERFORATED SEWER PIPE IN A MAXIMUM OF 12' OF PEA GRAVEL ENCIRCLING PIPE. PAINT EXPOSED PVC PIPING WITH UV RESISTANT PAINT AS RECOMMENDED FOR PROTECTION OF EXPOSED PVC PIPE.
14. PROVIDE 8x8 RETURN AIR DUCT WITH ELBOW THROUGH FULL HEIGHT WALL. PROVIDE BIRD SCREEN TERMINATIONS ON EITHER SIDE.
15. PROVIDE GAS VENT FLUE + COMBINATION AIR INTAKE UP THRU ROOF PER MANUFACTURER'S RECOMMENDATIONS.

CONSULTANT

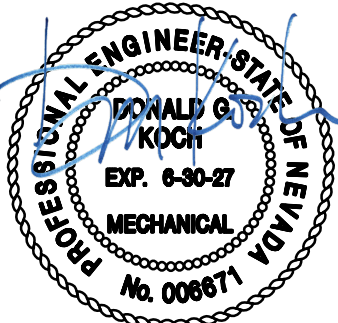
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11/05/2025  
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PROJECT NAME

**FOOD BANK**  
OF NORTHERN NEVADA  
Tenant Improvement  
111 W. Front Street  
Elko, Nevada

SHEET NAME

MECHANICAL PLAN

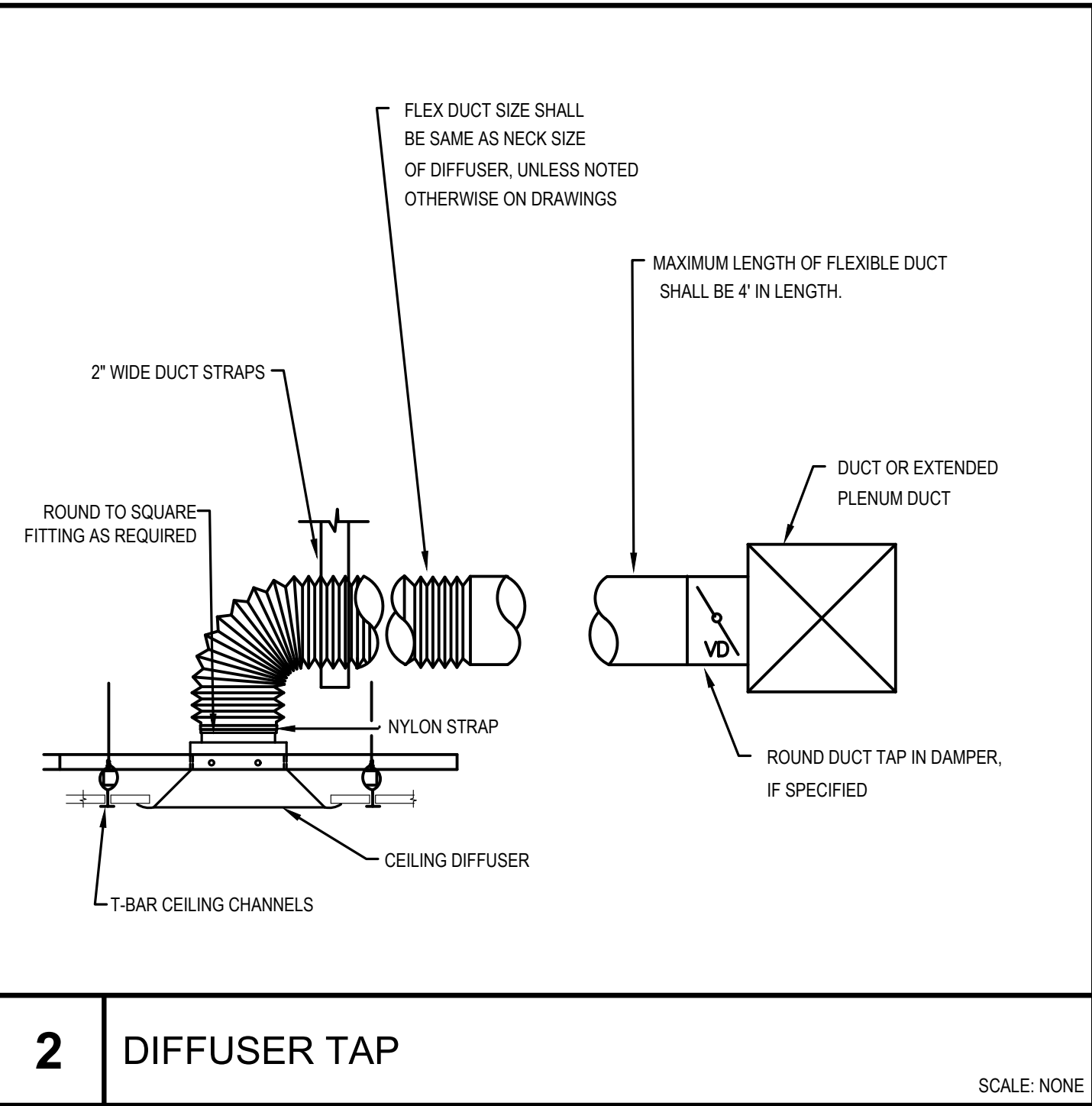
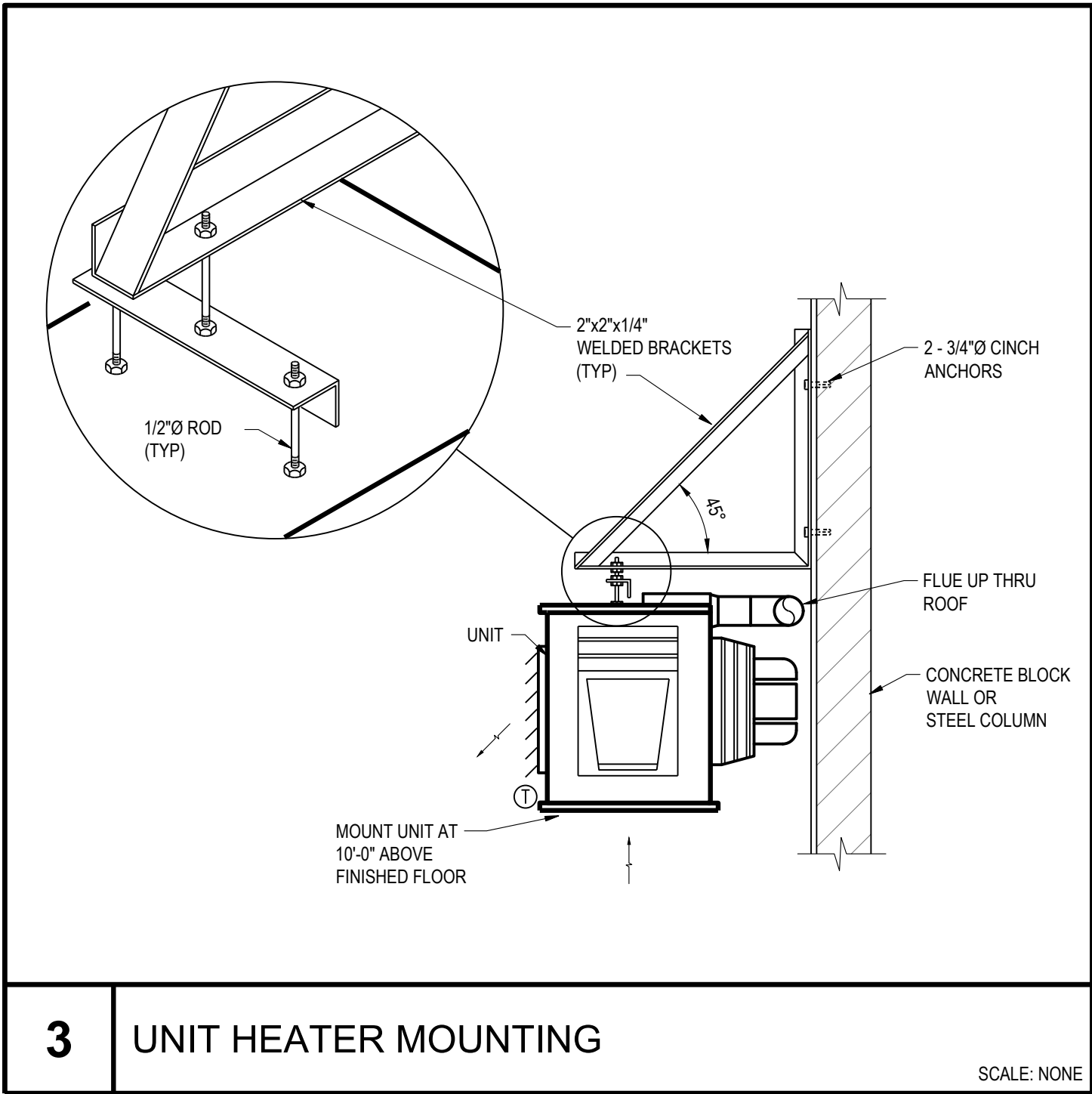
REVISIONS

DATE

11.06.2025

SHEET NUMBER

M2.01



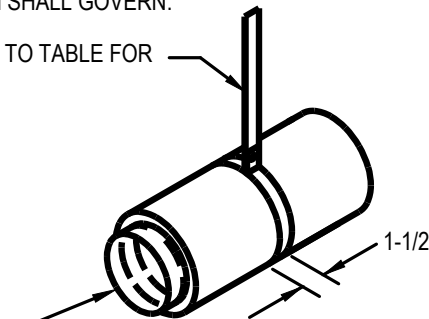
DUCT SUPPORTS - VERTICAL DUCTS			
	METAL STRAP OR ANGLE BRACKET	MAXIMUM DIAMETER OF ROUND DUCTS	WIRE SIZE/STRAPS
24"	1" X 1/8" STRAP (1)	10"	0.047 (NO. 18 GAGE) GALVANIZED STEEL 2" WIDE (1)
36"	1" X 1" X 1/8" ANGLE (1)	20"	0.058 (NO. 16 GAGE) GALVANIZED STEEL 2" WIDE (1)
48"	1 1/8" X 1 1/8" X 1/8" ANGLE (1)	40"	1/8" STEEL X 1 1/2" (1)
DUCT SUPPORTS - HORIZONTAL DUCTS			
MAXIMUM SIDE OF RECTANGULAR DUCT	METAL STRAP OR ANGLE BRACKET	MAXIMUM DIAMETER OF ROUND DUCTS	STRAPS
18"	1" X 18 GAGE (2)	10"	SAME GAGE AS GALV. STEEL DUCT, 1" WIDE OR (NO. 18 GAGE GALV. STEEL WIRE) ON 10' CENTERS
30"	1" X 18 GAGE (2)		
48"	1" X 1/8" (2)	20"	SAME GAGE AS GALV. STEEL DUCT, 1" WIDE OR (NO. 8 GAGE GALV. STEEL WIRE) TIED TO 1" GALV. STEEL BAND AROUND DUCT ON 10' CENTERS
		40"	
DUCT SUPPORTS - HORIZONTAL DUCTS - FLEXIBLE DUCT			
MAXIMUM DIAMETER OF ROUND DUCT	HANGER		
ANY	No. 26 GAUGE X 1-1/2" WIDE GALVANIZED IRON STRAP (3)		

NOTES:

1. REFER TO ARCHITECTURAL AND STRUCTURAL PLAN FOR EXACT CONSTRUCTION LAYOUT.

2. THIS IS A TYPICAL CONSTRUCTION DETAILS BASED ON THE UNIFORM MECHANICAL CODE. ANY LOCAL CITY ADOPTED CODE CONSTRUCTION FOR DUCT SUPPORT, BRACING AND SEISMIC ACHORAGE SYSTEM SHALL GOVERN.

STRAP - REFER TO TABLE FOR SPACING



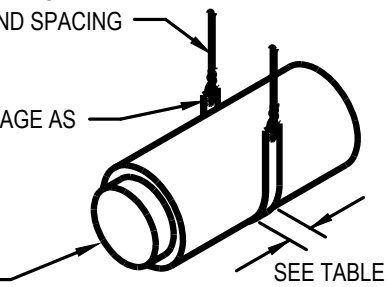
FLEX DUCT

FLEX DUCT (HORIZONTAL)

SCALE: NONE

WIRE - REFER TO TABLE ABOVE FOR CORRECT GAGE AND SPACING

STRAP-SAME GAGE AS DUCTWORK



DUCTWORK

SEE TABLE

ROUND DUCT (HORIZONTAL)

SCALE: NONE

(1) SPACED VERTICALLY NOT MORE THAN 12 FEET ON CENTERS

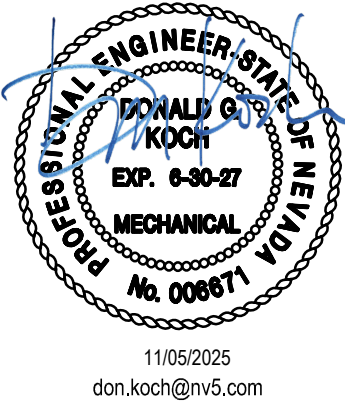
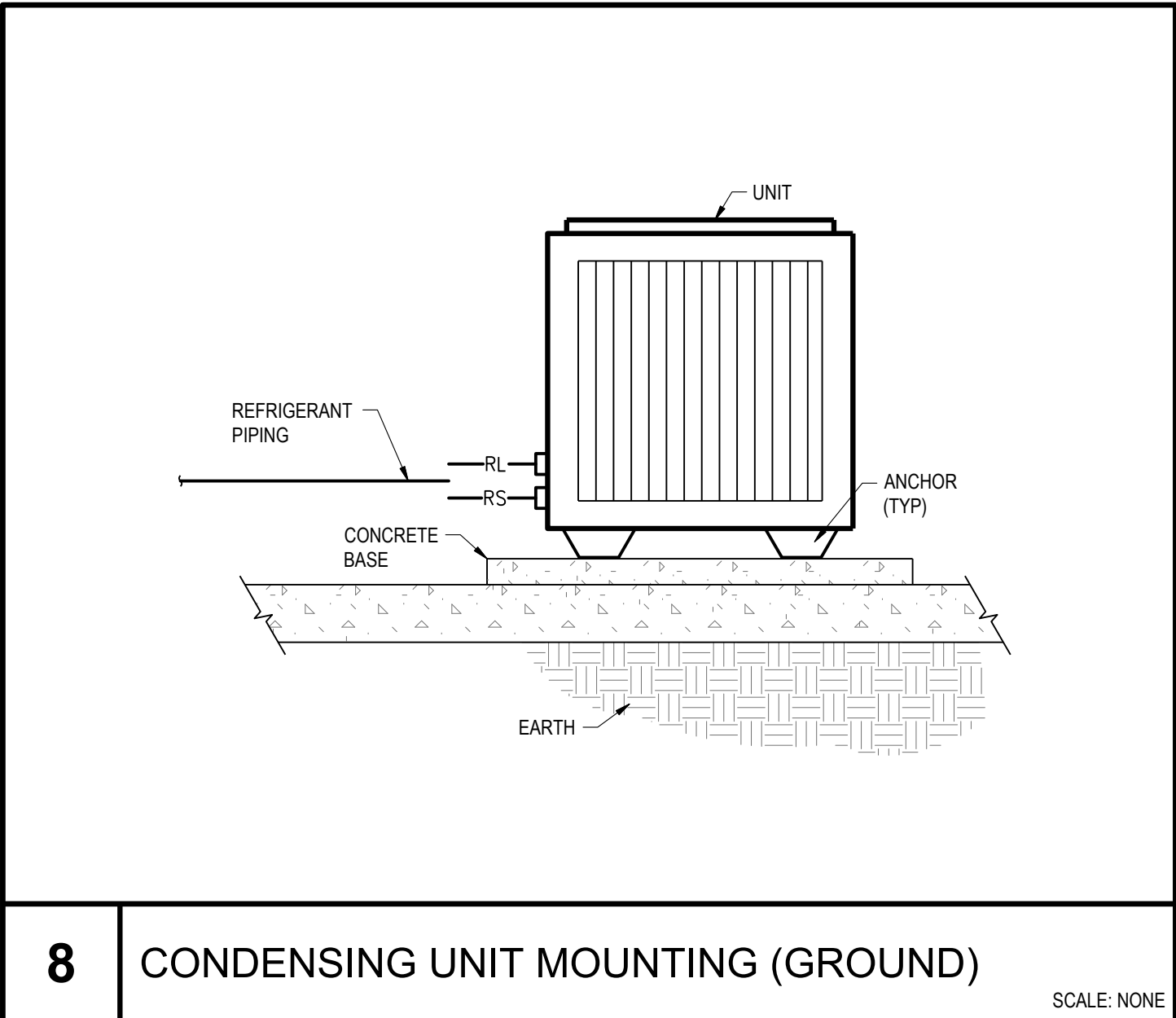
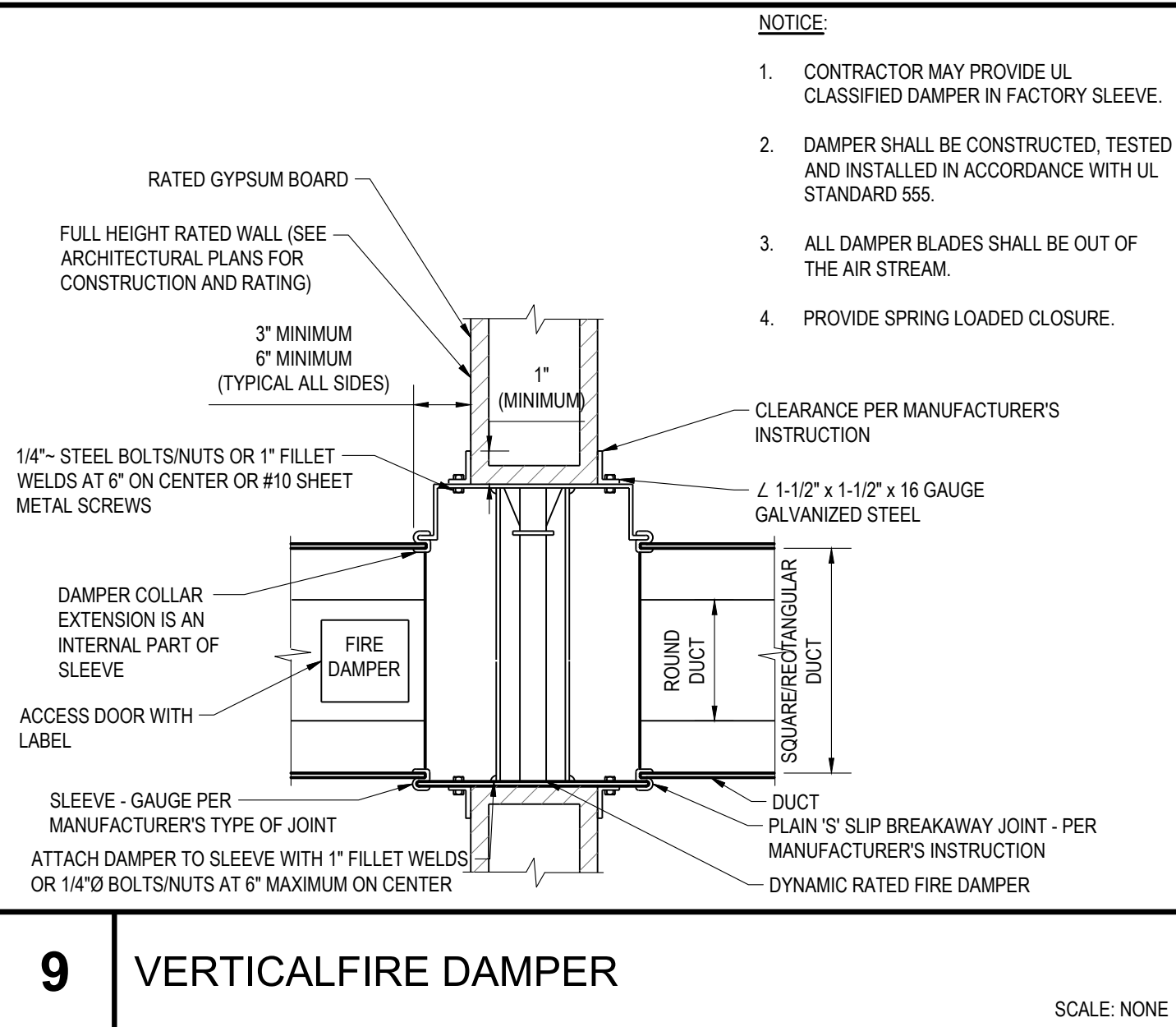
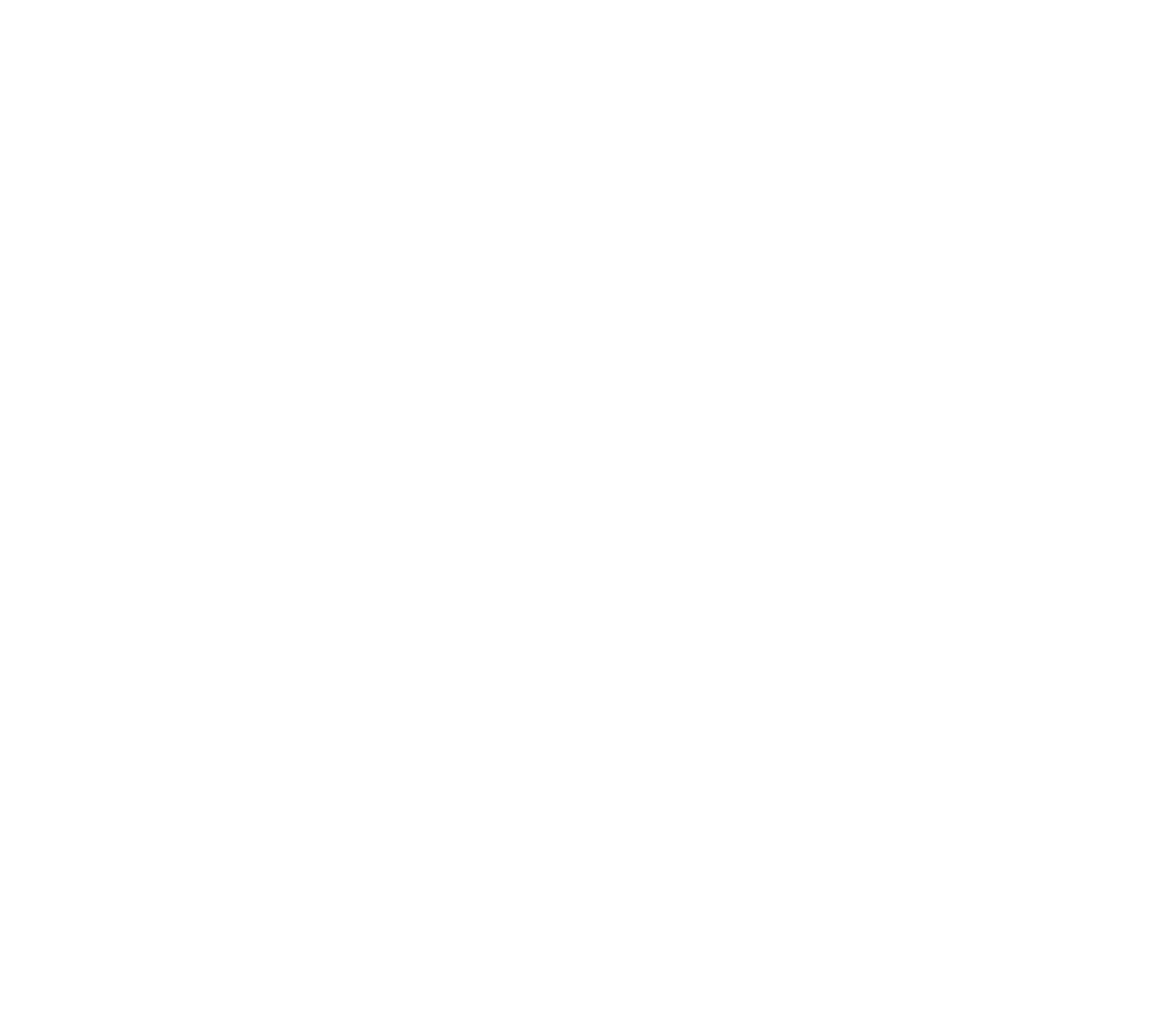
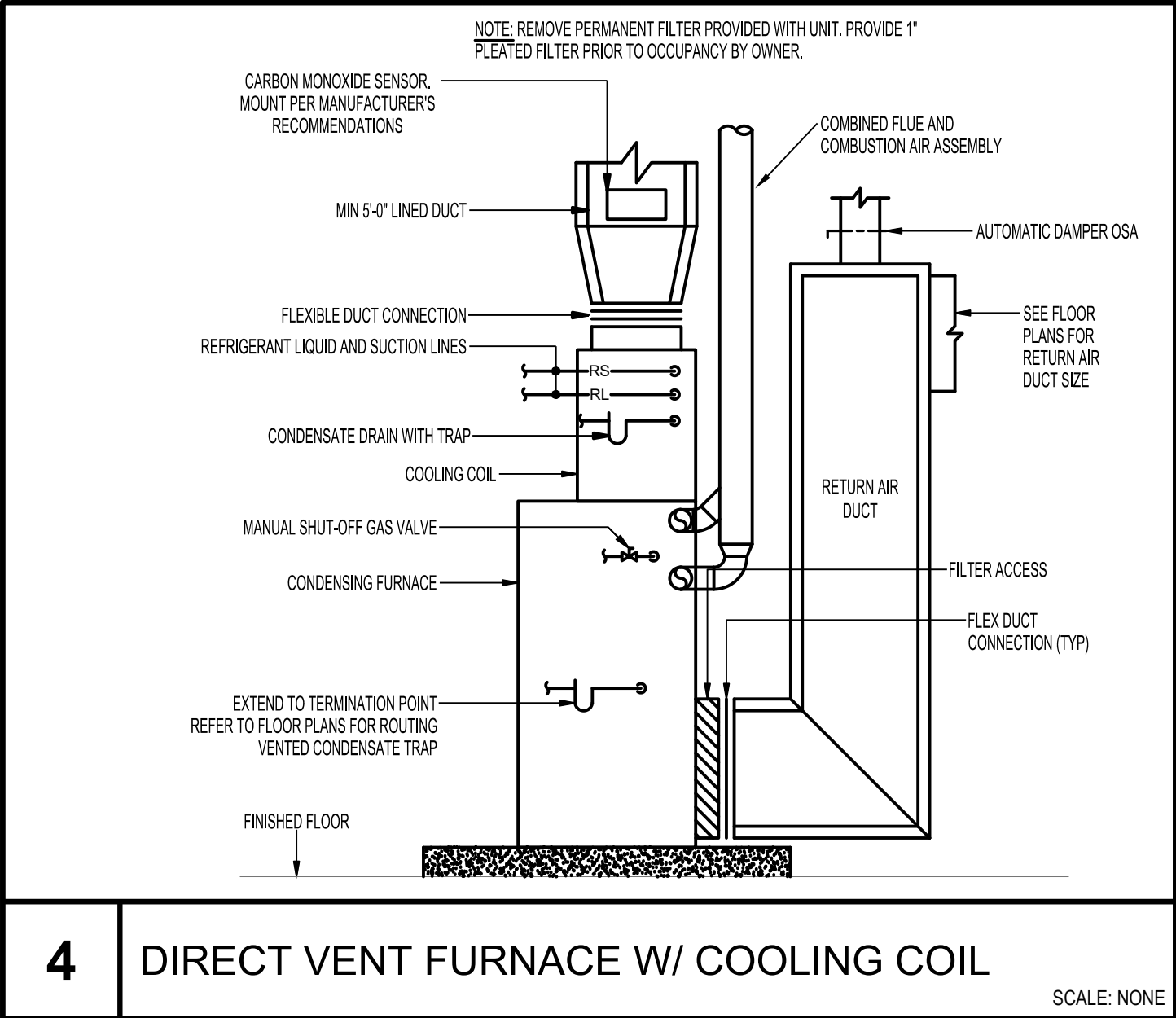
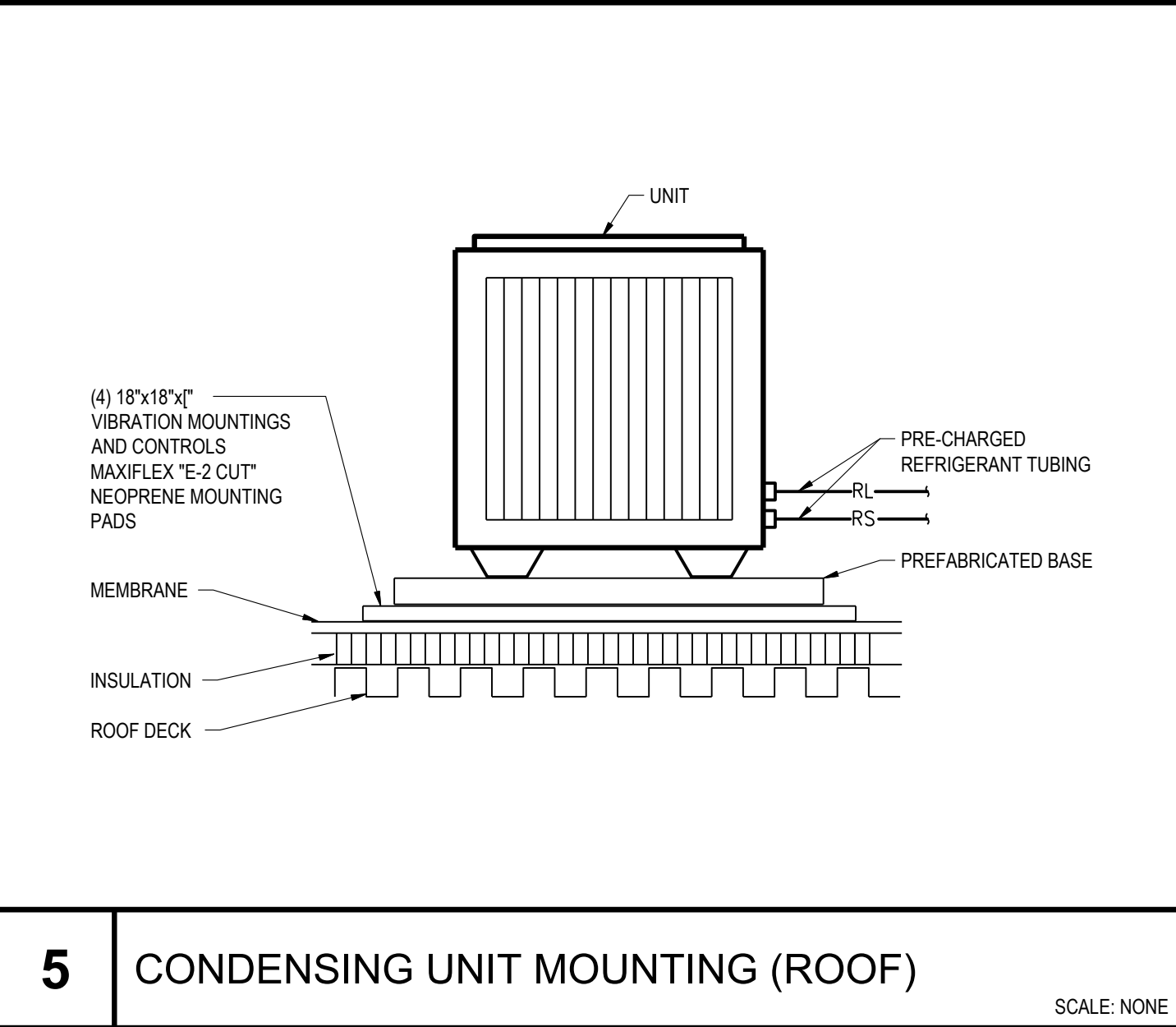
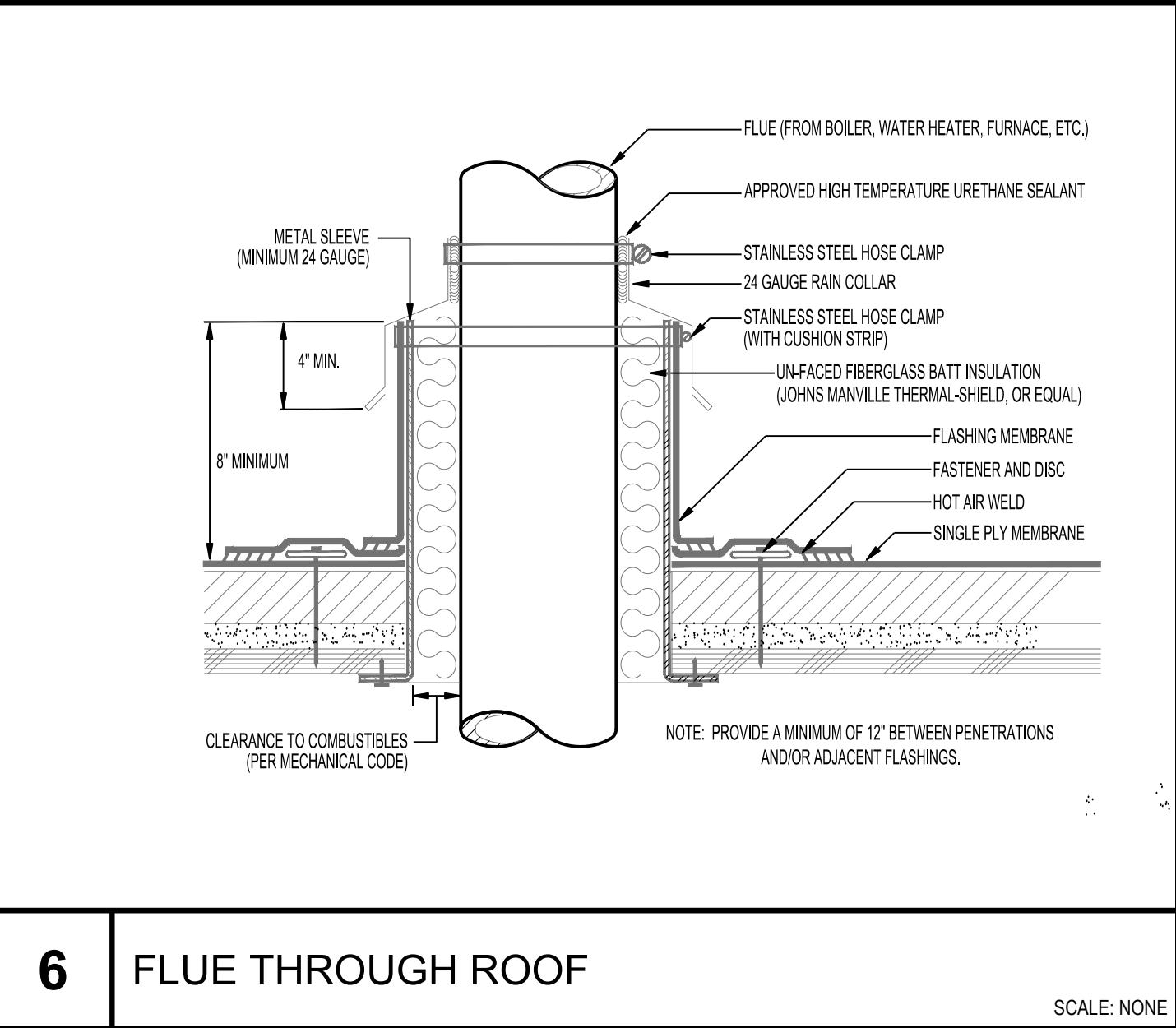
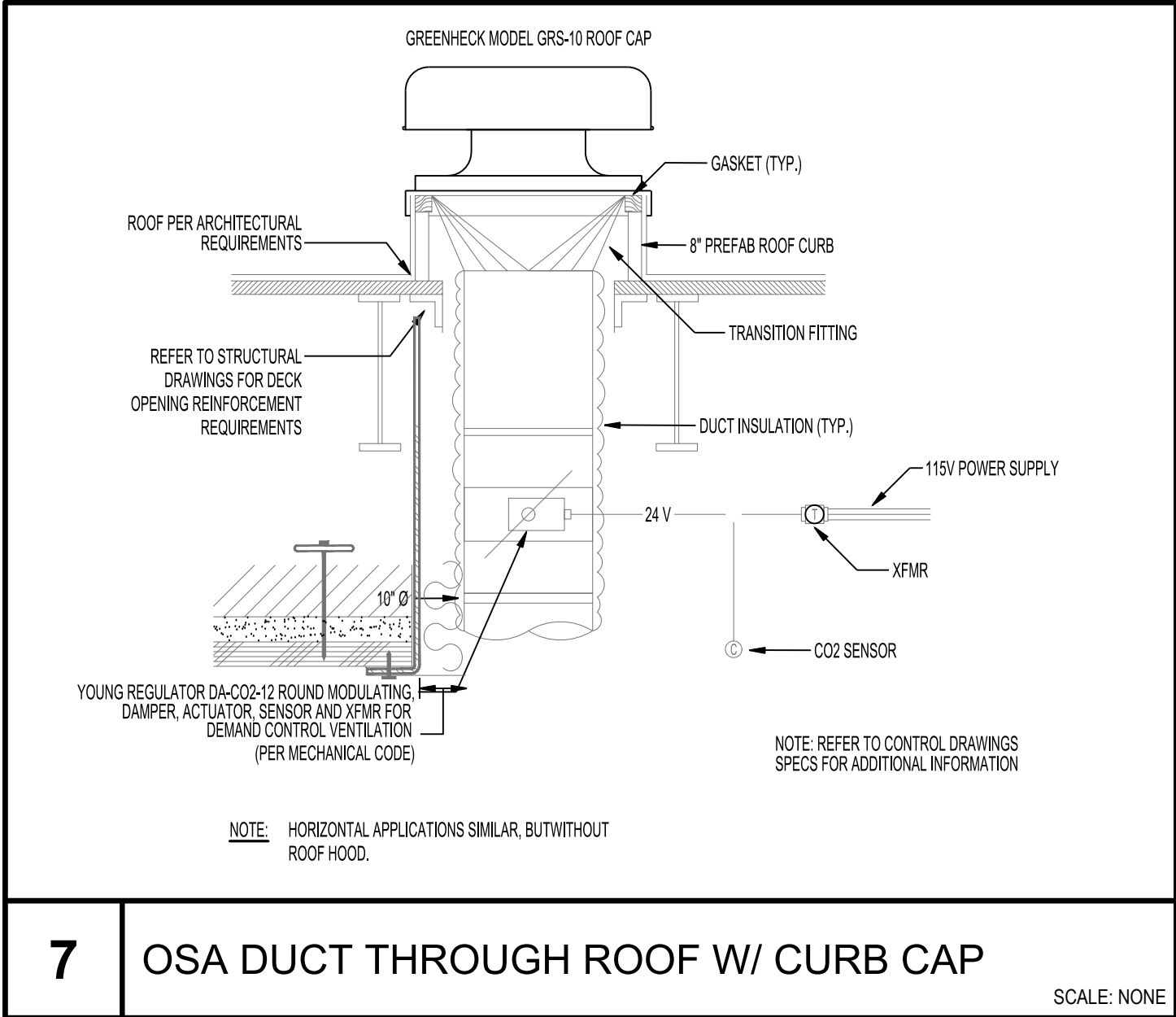
(2) SPACED HORIZONTALLY NOT MORE THAN 10 FEET ON CENTERS

(3) SPACED NOT MORE THAN 4 FEET ON CENTERS

1

DUCT BRACING AND SUPPORT

SCALE: NONE



PROJECT NAME

**FOOD BANK**  
OF NORTHERN NEVADA  
Tenant Improvement  
111 W. Front Street  
Elko, Nevada

SHEET NAME

MECHANICAL DIAGRAMS

REVISIONS

DATE  
11.06.2025

SHEET NUMBER

M5.00

IECC COMPLIANCE NOTES

1. INSTALLATIONS SHALL COMPLY WITH 2018 IECC.
2. DUCTWORK INSULATION TO COMPLY TO LATEST ADOPTED EDITION:
- A. INTERIOR: R-6 MINIMUM
- B. EXTERIOR: R-6 MINIMUM
3. THERMOSTATS
- A. 7-DAY PROGRAMMABLE WITH SETBACK FUNCTIONALITY: 55°-85°.
- B. 5-DEGREE DEADBAND
4. ALL SYSTEMS AND INSTALLATION SHALL COMPLY WITH LATEST ADOPTED EDITION OF IECC AND ADOPTED AMENDMENTS.



COMcheck Software Version COMcheckWeb  
Mechanical Compliance Certificate

Project Information

Energy Code: 2018 IECC  
Project Title: NN Food Bank  
Location: Elko, Nevada  
Climate Zone: 5b  
Project Type: Alteration

Construction Site: Owner/Agent: Designer/Contractor:

Mechanical Systems List

QuantitySystem Type & Description

- 2 3 Ton (Single Zone):  
Heating: 1 each - Central Furnace, Gas, Capacity = 87 kBtu/h  
Proposed Efficiency = 86.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE  
Cooling: 1 each - Split System, Capacity = 36 kBtu/h, Air-Cooled Condenser, Unknown Economizer  
Proposed Efficiency = 17.00 SEER, Required Efficiency = 13.00 SEER  
Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00  
Fan System: 3 Ton -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:  
3 Ton Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Single fan <= 5HP

- 1 5 Ton (Single Zone):  
Heating: 1 each - Central Furnace, Gas, Capacity = 87 kBtu/h  
Proposed Efficiency = 86.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE  
Cooling: 1 each - Split System, Capacity = 60 kBtu/h, Air-Cooled Condenser, Air Economizer  
Proposed Efficiency = 17.00 SEER, Required Efficiency = 13.00 SEER  
Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00  
Fan System: 5 Ton -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:  
5 Ton Supply, Constant Volume, 2000 CFM, 0.8 motor nameplate hp, 0.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Single fan <= 5HP

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Griffin Marcelino  
Name - Title  
Griffin Marcellino  
Signature  
Date

Project Title: NN Food Bank  
Data filename: Report date: 08/14/25  
Page 1 of 10

VENTILATION COMPLIANCE (UMC CHAPTER 4)

UNIT	SPACE	AREA OA REQUIREMENTS			OCCUPANT OA REQUIREMENTS			TOTAL OA REQUIRED (CFM)	TOTAL OA PROVIDED (CFM)
		AREA (SQ FT)	AREA OA RATE (CFM/SQ FT)	AREA OA REQUIRED (CFM)	OCCUPANT QTY	OCCUPANT OA RATE (CFM/PERSON)	OCCUPANT OA REQUIRED (CFM)		
HP-1B	OFFICE/BREAK ROOM	976	0.06	59	5	5	24	83	85
HP-2B	CONFERENCE	690	0.06	41	10	5	50	91	100
HP-3B	PANTRY/OFFICE	1532	0.06	92	3	5	15	107	110
OVERALL TOTALS								281	295

EXHAUST CALCULATIONS

UNIT	SPACE	AREA			FIXTURES			TOTAL EA REQUIRED (CFM)	TOTAL EA PROVIDED (CFM)
		AREA (SQ FT)	CFM PER SQ FT	CFM	# OF WCUR	CFM PER FIXTURE	CFM		
EF-1	RESTROOM	125	0.5	63	3	70	210	210	210
	JANITOR	40	1.0	40	0	70	0	40	100
	TOTALS						250		310

AIR DISTRIBUTION DEVICE SCHEDULE

TAG	DESCRIPTION	NECK SIZE (IN)	OVERALL SIZE (IN)	CFM	REMARKS
D1	KRUEGER #SRM1 - ALUMINUM ROUND DIFFUSER WITH 3-CONES	8"Ø 10"Ø 12"Ø	14-3/4"Ø 18-1/4"Ø 22"Ø	0-210 211-410 411-620	FOR MOUNTING IN OPEN CEILING MOUNT AT FLUSH HEIGHT WITH LIGHTING DEVICES
D2	KRUEGER #PLQ - SQUARE PLAQUE FACE DIFFUSER	6"Ø 8"Ø	12x12	0-80 81-210	PROVIDE FRAME COMPATIBLE WITH CEILING TYPE
E1	KRUEGER #SS580 - ALUMINUM EXHAUST GRILLE	8"Ø	12x12	0-100	PROVIDE FRAME COMPATIBLE WITH CEILING TYPE
E2	KRUEGER #REGCSR - ALUMINUM EXHAUST GRILLE	8"Ø	10-1/4"Ø	0-100	FOR MOUNTING IN OPEN CEILING MOUNT AT FLUSH HEIGHT WITH LIGHTING DEVICES

NOTES:

1. PROVIDE SQUARE TO ROUND TRANSITION, WHERE APPLICABLE.  
2. PAINT INSIDE OF RETURN PLENUM, SUPPLY BOOT FLAT BLACK.  
3. COORDINATE COLOR WITH ARCHITECT PAINT IF NECESSARY, ESPECIALLY FOR WALL-MOUNTED GRILLES.  
4. DUCT RUN TO DEVICE TO BE SAME AS NECK SIZE AS SCHEDULED.  
5. PROVIDE RETURN GRILLES WITH SOUND BOOT PER DIAGRAM.

REMOVED EXISTING GAS PACKAGED ROOFTOP UNIT SCHEDULE  
(FOR REFERENCE ONLY)

EXISTING ITEM	MANUFACTURER MODEL NUMBER	AIRFLOW (CFM)	SP (IN W.G.)	NOMINAL TONS	HEATING COIL		UNIT		
					INPUT (MBH)	OUTPUT (MBH)	ELECTRICAL		MAX OPERATING WEIGHT (LBS)
(E)AC-1	PAYNE 585B036075	1300	0.25	3	60.0	45.0	208 / 3	28.4 A	5.91
(E)AC-2	PAYNE 585B048125	1600	0.25	4	100.0	75.0	208 / 3	28.4 A	5.91

REMOVED EXISTING EXHAUST FAN SCHEDULE  
(FOR REFERENCE ONLY)

ITEM	LOCATION	MANUFACTURER MODEL NUMBER	AIRFLOW (CFM)	SP (IN W.G.)	ELECTRICAL		MAX OPERATING WEIGHT (LBS)
					HP	V / PH	
(E)EF-1	ROOF	GREENHECK CE-10-B	800	0.25	1/12	120 / 1	75

REMOVED EXISTING UNIT HEATER SCHEDULE  
(FOR REFERENCE ONLY)

ITEM	LOCATION	MANUFACTURER MODEL NUMBER	INPUT (MBH)	OUTPUT (MBH)	ELECTRICAL		
					HP	V / PH	KW
(E)UH-1	WAREHOUSE	PAYNE 150-UHE	150.0	120.0	2.84 A	120 / 1	5.91

NEW DIRECT VENT FURNACE W/ COOLING COIL SCHEDULE

ITEM		LENNOX MODEL NUMBER (OUTDOOR UNIT) / (INDOOR UNIT)	LENNOX COOLING COIL MODEL NUMBER	FAN		COOLING		HEATING		NOMINAL TONS	REFR	FURNACE UNIT				OUTDOOR UNIT			NOTES
INDOOR	OUTDOOR			CFM	ESP (IN W.G.)	TOTAL MBH	SEER	INPUT MBH	OUTPUT MBH			V / PH	HP	FLA (A)	MOC P (A)	V / PH	MCA (A)	MOC P (A)	
<u>HP-1B</u>	<u>HP-1A</u>	SL28XCV-036-230A01 / SLP99UH070XV36C	CH33-36A-2F	1200	0.5	36	17	88	76	3	R-410A	120 / 1	1/2	7.7	15	208 / 1	17.8	25	1 THRU 6
<u>HP-2B</u>	<u>HP-2A</u>	SL28XCV-036-230A01 / SLP99UH070XV36C	CH33-36A-2F	1200	0.5	36	17	88	76	3	R-410A	120 / 1	1/2	7.7	15	208 / 1	17.8	25	1 THRU 6
<u>HP-3B</u>	<u>HP-3A</u>	SL28XCV-060-230A01 / SLP99UH090XV60C	CH33-60A-2F	2000	0.5	60	17	88	76	5	R-410A	120 / 1	3/4	10.1	15	208 / 1	29.5	50	1 THRU 6

1. ACTUAL OPERATION AT 5200' ABOVE SEA LEVEL.  
2. CONDENSER SHALL BE RATED AT 100°F AMBIENT AIR TEMPERATURE  
3. PROVIDE DUCT SMOKE DETECTOR IN SUPPLY AIR DUCT.  
4. PROVIDE SUPPLY UNIT WITH ALL ADDITIONAL ACCESSORIES TO ACHIEVE MINIMUM 17 SEER.  
5. INSTALL HONEYWELL ZONE BYPASS SYSTEM PER MANUFACTURER'S RECOMMENDATIONS.  
6. PROVIDE SIDE RETURN AIR OPENING PLENUM KIT.

NEW EXHAUST FAN SCHEDULE

ITEM	LOCATION	MANUFACTURER MODEL NUMBER	AIRFLOW (CFM)	SP (IN WG)	FAN RPM	ELECTRICAL		MAX OPERATING WEIGHT (LBS)	NOTES
						HP	V / PH		
EF-1	ROOF	GREENHECK CUE-090-D	310	0.5	1550	1/15	120 / 1	50	1,2,3

1. ACTUAL OPERATION AT 5200' ABOVE SEA LEVEL.  
2. PROVIDE WITH BACKDRAFT DAMPER. INSTALL FAN UNIT PER MANUFACTURER'S RECOMMENDATIONS.  
3. PROVIDE WITH SWITCH CONTROL. CONFIRM SWITCH LOCATION WITH ARCHITECT.

NEW GAS FIRED UNIT HEATER SCHEDULE

ITEM	LOCATION	REZNOR MODEL NUMBER	INPUT (MBH)	OUTPUT LOW/HI (MBH)	AIR TEMP. RISE (°F)	FLOW RATE (CFM)	ELECTRICAL				NOTES
							V / PH	HP	FLA (A)	MOC P (A)	
UH-1	WAREHOUSE	UDXC-125	125.0	35.0 / 87.6	60	1537	120 / 1	1/4	5.6	15	1 THRU 3
UH-2	WAREHOUSE	UDXC-125	125.0	35.0 / 87.6	60	1537	120 / 1	1/4	5.6	15	1 THRU 3
UH-3	WAREHOUSE	UDXC-125	125.0	35.0 / 87.6	60	1537	120 / 1	1/4	5.6	15	1 THRU 3
UH-4	WAREHOUSE	UDXC-125	125.0	35.0 / 87.6	60	1537	120 / 1	1/4	5.6	15	1 THRU 3

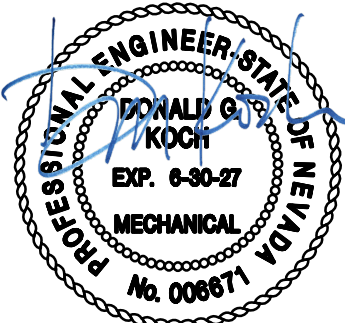
1. ACTUAL OPERATION AT 5200' ABOVE SEA LEVEL.  
2. MOUNT PER MANUFACTURER'S RECOMMENDATIONS.  
3. MOUNTING HEIGHT TO BE AT 10' AFF.

CONSULTANT

NV5

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NV5 Project # - 25-0004625



11/05/2025  
don.koch@nv5.com

PROJECT NAME



Tenant Improvement  
111 W. Front Street  
Elko, Nevada

SHEET NAME

MECHANICAL SCHEDULES

REVISIONS

DATE

11.06.2025

SHEET NUMBER

M6.00

# LIGHTING CONTROL LEGEND

RC	ROOM CONTROLLER (GREENGATE CAT#RC3D-PL). LOWER CASE LETTERS ON FIXTURES IN THIS ROOM INDICATE DIMMER/CONTROL ZONES, NUMBERS INDICATE RELAY ON/OFF CONTROL NUMBER.
WS2	2-ZONE ROOM CONTROLLER WALL STATION: 6-BUTTON, 1) ALL ON, 2) RAISE 1, 3) LOWER 1, 4) RAISE 2, 5) LOWER 2, 6) ALL OFF. GREENGATE CAT #RC-6TSB-621.
WS3	3-ZONE ROOM CONTROLLER WALL STATION IN TWO WALL BOXES: 3-BUTTON SWITCH WITH ON/OFF TOGGLE FOR EACH ZONE - GREENGATE CAT #RC-3TLB-331. 6-BUTTON SWITCH FOR DIMMER RAISE/LOWER CONTROL - GREENGATE CAT #RC-6TSB-ZAD.
PC	ROOM CONTROLLER DAYLIGHT SENSOR (GREENGATE CAT#DSRC-FMOIR).
DM1	LINEAR DIMMING CONTROL MODULE FOR REVERSE PHASE/ELV DIMMING (0-10V DIMMING CONTROLS TO LINE VOLTAGE FIXTURES) (GREENGATE CAT #LDCM-PL-120-277-010V-GR) (450W @120V, 1000W @277V MAX.)
DM2	LINEAR DIMMING CONTROL MODULE FOR FORWARD PHASE DIMMING (0-10V DIMMING CONTROLS TO LINE VOLTAGE FIXTURES) (GREENGATE CAT #PD216-AN10) 1920W @120V, 4500W @277V MAX.)
SV1	WALL SWITCH TYPE DUAL TECHNOLOGY (PIR/ULTRASONIC) VACANCY SENSOR (GREENGATE CAT#VNW-D-1001-MV-W OR EQUAL).
SO1	WALL SWITCH TYPE DUAL TECHNOLOGY (PIR/ULTRASONIC) OCCUPANCY SENSOR (GREENGATE CAT#ONW-D-1001-MV-W OR EQUAL).
SV2	WALL SWITCH TYPE PIR TYPE VACANCY SENSOR (GREENGATE CAT#VNW-P-1001- MV-W OR EQUAL).
SVc	WALL SWITCH MANUAL CONTROL FOR CEILING VACANCY SENSOR (GREENGATE CAT#GMDS-W OR EQUAL).
SOVC	WALL SWITCH MANUAL ON/OFF/DIMMER (0-10V) FOR CEILING VACANCY SENSOR (GREENGATE CAT#WBSD-010M-C1)
V1	CEILING MOUNTED DUAL TECHNOLOGY (PIR/ULTRASONIC) VACANCY SENSOR (GREENGATE CAT#OAC-DT-1000-R). PROVIDE WITH POWER PACK (GREENGATE CAT#SP20-RD4) AND MANUAL CONTROL SWITCH.
V2	CEILING MOUNTED DUAL TECHNOLOGY (PIR/ULTRASONIC) VACANCY SENSOR (GREENGATE CAT#OAC-DT-2000-R). PROVIDE WITH POWER PACK (GREENGATE CAT#SP20-RD4) AND MANUAL CONTROL SWITCH.
V8	CEILING MOUNTED DUAL TECHNOLOGY (PIR/ULTRASONIC) VACANCY SENSOR (GREENGATE CAT#OAC-DT-2000-R). PROVIDE SENSOR TO BE INTERCONNECTED WITH MASTER VACANCY SENSOR AND POWER PACK AS SHOWN ON DRAWINGS AND PER MANUFACTURER'S RECOMMENDATIONS.
O1	CEILING MOUNTED DUAL TECHNOLOGY (PIR/ULTRASONIC) OCCUPANCY SENSOR (GREENGATE CAT#OAC-DT-1000-R). PROVIDE WITH POWER PACK (GREENGATE CAT#SP20).
O2	CEILING MOUNTED DUAL TECHNOLOGY (PIR/ULTRASONIC) OCCUPANCY SENSOR (GREENGATE CAT#OAC-DT-2000-R). PROVIDE WITH POWER PACK (GREENGATE CAT#SP20).
O5	CEILING MOUNTED DUAL TECHNOLOGY (PIR/ULTRASONIC) OCCUPANCY SENSOR (GREENGATE CAT#OAC-DT-2000-R). PROVIDE WITH POWER PACK (GREENGATE CAT#SP20). SENSOR TO BE INTERCONNECTED WITH MASTER SENSOR AS SHOWN BELOW PER MANUFACTURER'S RECOMMENDATIONS.
PD	CEILING MOUNTED PHOTODIODE (GREENGATE CAT#DLC-PD-DIM) FOR CONNECTION TO 0-10V DIMMING BALLAST/DRIVER.
SP	LOW VOLTAGE SENSOR SWITCHPACK (GREENGATE CAT#SP20-RD4) (SHOWN FOR CLARITY ONLY).
S0	WALL DIMMER SWITCH, 0-10V (COOPER CAT#WBSD-010M-C1).
S03	WALL DIMMER SWITCH, 3-WAY CAPABLE (LUTRON MAESTRO, WHITE).
SV3	WALL VACANCY SENSOR/0-10V DIMMER SWITCH (GREENGATE CAT#OSW-P-010)

GENERAL NOTES:

1. PROVIDE ALL CONTROL EQUIPMENT WITH ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION.
2. DEVICES SPECIFIED ARE WHITE. CONFIRM DEVICE AND COVER PLATE COLOR REQUIREMENTS WITH ARCHITECT PRIOR TO CONSTRUCTION.
3. PROVIDE EXTERNAL RELAY (GREENGATE CAT #SPRC-R-20-120) FOR CONTROL OF FIXTURES THAT ARE SHOWN TO BE CONNECTED TO 120V BRANCH CIRCUITS WITH CONTROL CONNECTION TO ROOM CONTROLLER IN THIS ROOM.

ELECTRICAL SYMBOL LEGEND							
(THIS IS A MASTER LEGEND, NOT ALL SYMBOLS MAY APPEAR ON DRAWINGS.)							
SYMBOL		DESCRIPTION		SYMBOL		DESCRIPTION	
		SHEET NOTE				TIMECLOCK RECEPTACLE	
		REVISION NUMBER				SINGLE RECEPTACLE WITH INTEGRAL LOW VOLTAGE TRANSFORMER AND (2) USB PORTS	
		LIGHT FIXTURE. CIRCLE REPRESENTS FIXTURE IN GYPSUM BOARD ONLY				DUPLEX RECEPTACLE WITH INTEGRAL LOW VOLTAGE TRANSFORMER AND (2) USB PORTS	
		LIGHT FIXTURE. CIRCLE REPRESENTS FIXTURE IN GYPSUM BOARD ONLY				RECEPTACLE WITH INTEGRAL LOW VOLTAGE TRANSFORMER AND (4) USB PORTS	
		LIGHT FIXTURE				TELEVISION RECEPTACLE	
		LIGHT FIXTURE. CIRCLE REPRESENTS FIXTURE IN GYPSUM BOARD ONLY				DOOR HARDWARE CONNECTION	
		LIGHT FIXTURE WITH (1) LAMP ON EMERGENCY				DOOR HOLD OPEN	
		LIGHT FIXTURE ON EMERGENCY CIRCUIT OR INTEGRAL BATTERY BACK-UP				NON-FUSED DISCONNECT SWITCH - 30A, 3P UNLESS NOTED OTHERWISE	
		LETTER INDICATES LIGHT FIXTURE TYPE AS INDICATED ON FIXTURE SCHEDULE				FUSED DISCONNECT SWITCH - 30A, 3P WITH 30A FUSES UNLESS NOTED OTHERWISE	
		DOWNLIGHT FIXTURE				MAGNETIC MOTOR STARTER - FVNR, NEMA SIZE #1 (UNLESS NOTED OTHERWISE) WITH HOA, RED RUN PILOT LIGHT, CONTROL XFMR, SOLID STATE OVERLOADS, (2) NO AND (2) NC CONTACTS	
		DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT OR INTEGRAL BATTERY BACK-UP				COMBINATION FUSED SWITCH AND STARTER AS NOTED ABOVE	
		EMERGENCY BATTERY LIGHTING UNIT WITH TWIN HEADS				COMBINATION NON-FUSED SWITCH AND STARTER AS NOTED ABOVE	
		WALL MOUNTED FIXTURE				RELAY	
		POLE MOUNTED FIXTURE				CONTACTOR	
		EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED CEILING MOUNTED				POWER SUPPLY	
		EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED WALL MOUNTED				TIMECLOCK	
		DOUBLE FACE EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED CEILING MOUNTED				PHOTOCELL (INSTALL ON ROOF FACING NORTH)	
		SINGLE POLE SWITCH AT +44" UNLESS NOTED				THERMOSTAT OUTLET AT +44" UNLESS NOTED	
		DUAL SWITCH AT +44" UNLESS NOTED				PUSHBUTTON TYPE CONTROL STATION	
		3-WAY POLE SWITCH AT +44" UNLESS NOTED				DOORBELL - CEILING MOUNTED	
		4-WAY POLE SWITCH AT +44" UNLESS NOTED				CIRCUIT BREAKER	
		SWITCH WITH NEON PILOT LIGHT AT +44" UNLESS NOTED				FOOD SERVICE EQUIPMENT-SEE FOOD SERVICE PLANS	
		BACKLIT SWITCH AT +44" UNLESS NOTED				SURFACE MOUNTED PANELBOARD	
		DIMMER SWITCH COMPATIBLE WITH LOAD TYPE AT +44" UNLESS NOTED				FLUSH MOUNTED PANELBOARD	
		DIMMER SWITCH WITH INTEGRAL MOTION SENSOR -AT +44" UNLESS NOTED				SWITCHBOARD, MOTOR CONTROL CENTER OR DISTRIBUTION BOARD	
		2 POLE SWITCH				CONCRETE PULLBOX WITH HEAVY DUTY STEEL TRAFFIC COVER	
		SWITCH - KEY OPERATED				TRANSFORMER	
		CEILING MOUNTED MOTION SENSOR				MOTOR OUTLET	
		DAYLIGHT OR MOTION SENSOR (INDOORS)				HOMERUN CONDUIT - STROKES INDICATE QUANTITY OF CONDUCTORS	
		THERMAL OVERLOAD SWITCH				CONDUIT AND/OR WIRING METHOD CONCE	

SHEET INDEX					
ISSUE		2025-11-06 PERMIT SET			
		SHEET NUMBER	SHEET DESCRIPTION		
		• E0.00	ELECTRICAL COVER SHEET		
		• E0.01	ELECTRICAL SPECIFICATIONS		
		• E0.02	ELECTRICAL IECC AND SCHEDULES		
		• E1.00	ELECTRICAL SITE PLAN		
		• ED1.01	ELECTRICAL DEMO PLAN		
		• E2.01	ELECTRICAL POWER PLAN		
		• E3.01	ELECTRICAL LIGHTING PLAN		
		• E5.00	ELECTRICAL SINGLE LINE DIAGRAM AND SCHEDULES		

EXISTING CONDITIONS

THIS PROJECT INVOLVES CONSTRUCTION INSIDE AN EXISTING STRUCTURE. CONTRACTORS, BY SUBMITTING A BID ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITIONS OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED. NO CLAIMS FOR EXTRA COMPENSATION WILL BE CONSIDERED FOR EXISTING CONDITIONS VISIBLE OR REASONABLY INFERRABLE FROM A CAREFUL EXAMINATION OF THE EXISTING BUILDING CONDITIONS. CONTRACTOR SHALL INSPECT THE EXISTING FIELD CONDITIONS AT THE SITE (INCLUDING BUT NOT LIMITED TO SIZES, INVERTS AND POINTS OF CONNECTION) AND THE CONTRACT DOCUMENTS PRIOR TO THE START OF ANY WORK TO DETERMINE WHAT EFFECT THE EXISTING CONDITIONS WILL HAVE ON THE WORK POTENTIAL. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN HIS BID ALL COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.

ELECTRICAL ABBREVIATION LIST	
(THIS IS A MASTER LIST. NOT ALL ABBREVIATIONS MAY APPEAR ON DRAWINGS.)	
+18'	MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE ABOVE FINISH FLOOR OR FINISH GRADE
A	AMPERE
AFF	ABOVE FINISH FLOOR
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
C	CONDUIT WITH PULL-LINE ONLY
CEC	CALIFORNIA ELECTRICAL CODE
DB	DISTRIBUTION BOARD
DC	DIRECT CURRENT
DN	DOWN
(E)	EXISTING
EC	EMPTY CONDUIT
FLA	FULL LOAD AMPS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GRND	GROUND
HOA	HAND OFF AUTO
HZ	HERTZ
IBC	INTERNATIONAL BUILDING CODE
KW	KILOWATT
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPS
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MOCPP	MAXIMUM OVER CURRENT PROTECTION
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NRTL	NATIONALLY RECOGNIZED TESTING LABORATORY
NVE	NEVADA ENERGY
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
PH(-)	PHASE
PNL	PANEL
SN	SOLID NEUTRAL
SNEC	SOUTHERN NEVADA ELECTRICAL CODE AMENDMENTS
SQFT	SQUARE FEET
SWBD	SWITCHBOARD
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SYSTEM
V	VOLT
VA	VOLT-AMP
VAV	VARIABLE AIR VOLUME
VD	VOLTAGE DROP
W	WATT
WP	WEATHER-PROOF (NEMA 3R)
XFMR	TRANSFORMER
XP	EXPLOSION PROOF

E0.00

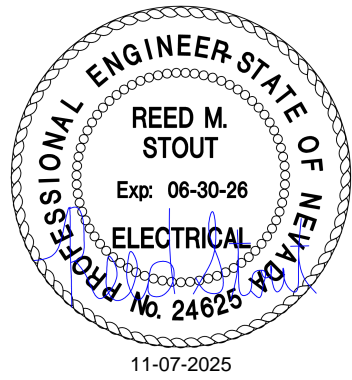
PART 1GENERAL			
1.1 SCOPE OF WORK - Provide all labor, materials, equipment, etc. necessary for a completely wired and operational electrical system as shown on the electrical drawings, utility drawings, fire sprinkler/fire alarm drawings and specified herein, including but not limited to, these major items.			
A. Lighting fixtures as indicated and specified on the plans.			
B. Electrical panels, controls, service, disconnects, conduit, wiring, etc., for all outlets and equipment.			
C. Telephone outlets and conduit as indicated.			
D. Conduit and outlets for alarm, computer, and security systems as indicated.			
E. Control wiring for electrical systems.			
1.2 CODES, REGULATIONS AND STANDARDS			
A. The installation shall comply with applicable local and state codes and ordinances, with the regulations of the latest edition of the National Electric Code and with the requirements of the power and telephone companies furnishing services to this installation.			
B. The following industry standards, specifications and codes are minimum requirements:			
1. The National Electrical Manufacturer's Association Standards.			
2. The National Electrical Code, current adopted version with local amendments by authority having jurisdiction.			
3. Underwriter Laboratories Incorporated Standards.			
4. American National Standards Institute.			
5. International Energy Conservation Code, current adopted version with local amendments by authority having jurisdiction.			
1.3 INSPECTION OF SITE - Prior to submitting a bid for electrical work, the Contractor shall visit the site of the proposed construction and shall thoroughly acquaint himself with existing utilities, and working conditions to be encountered, etc. Allowance will not be made for non-compliance with this condition after bidding.			
1.4 STORAGE AND HANDLING OF MATERIAL			
A. Deliver materials and equipment to the project in the manufacturer's original, unopened, labeled containers. Protect against moisture, tampering, or damage from improper handling or storage. Contractor shall protect and be responsible for any damage to work or materials until final acceptance by the Owner, and shall make good without cost to the Owner, any damage or loss that may occur during this period.			
B. Arrange for timely delivery of materials and equipment to the jobsite in order to minimize the length of time between delivery and installation.			
C. Cover and protect any material which may be affected by the weather while in transit or stored at the project site. Any material found defective or not installed in accordance with the contract documents may be rejected by the Engineer.			
1.5 EXPLANATION AND PRECEDENCE OF DRAWINGS			
A. The drawings indicate the general arrangement and locations of the electrical work. Data presented on these drawings are as accurate as planning can determine, but field verification of all dimensions, locations, levels, etc., to suit field conditions is required. Review all architectural, structural and mechanical drawings and adjust all work to meet the requirements of conditions shown. The architectural drawings shall take precedence over all other drawings. Discrepancies between different plans, or between drawings and specifications, or regulations and codes governing the installation shall be brought to the attention of the engineer in writing before the date of bid opening. If discrepancies are not reported, the contractor shall bid the greater quantity or better quality, and appropriate adjustments will be made after contract award. Contractor shall be responsible to field measure and confirm mounting heights and location of electrical equipment with respect to counters, radiation, etc. Do not scale distances off the electrical drawings. Use actual building dimensions.			
B. In all cases, switches controlling lighting are to be located on the strike side of doors. Where more than one switch is indicated in adjacent locations on the plans the switches shall be ganged together in a single box with a single cover plate. Locations indicated for switches and outlets are approximate. Owner may make minor relocations at no additional charge.			
1.6 COOPERATION WITH OTHER CONTRACTORS			
A. Cooperate with the other trades so that the installation of the electrical outlets and equipment will be properly coordinated. Conduit, fixtures, and other equipment locations shall be checked with the other trades to avoid conflict with the piping, ductwork, steel, beams, or other obstructions.			
B. Carefully check the locations of the outlet boxes and determine that they have not been disturbed during the installation of materials of other trades.			
1.7 MECHANICAL AND ELECTRICAL COORDINATION			
A. Any device which carries the full load current of the electrically driven machinery, as opposed to the control of instrumentation current in the holding coil, is a power circuit and is the responsibility of the electrical contractor. Control or instrumentation circuits connecting holding coils to the automatic temperature control system are the responsibility of the Mechanical Contractor.			
B. The power circuit is defined as all devices necessary to operate, and as required by code to protect and service the unit, including branch circuit protective devices, disconnects, either fused or unfused, magnetic motor starters with running overload and single phasing protection, magnetic contactors, etc.			
C. The control or instrumentation circuit is defined as all devices necessary to interface the electrical power circuit with the automatic temperature control system including conduit, boxes, conduit fittings, conductors, electric-pneumatic switches, pneumatic-electric switches, electrical and pneumatic relays, pneumatic tubing, etc.			
1.8 EQUIPMENT FURNISHED BY OTHERS			
A. Verify exact location and connection requirements of equipment furnished by others prior to rough-in. Final connections to equipment shall be per manufacturer's approved wiring diagrams, details and instructions. It shall be the contractor's responsibility to provide materials and equipment compatible with equipment actually supplied.			
B. Fire Sprinkler System Equipment - Provide connection to all fire sprinkler system equipment as required by the fire sprinkler contractor. Refer to the fire sprinkler drawings for equipment locations and connection requirements.			
1.9 FIRE ALARM SYSTEM			
A. A fire alarm system is required as a part of the Contractor's scope of work. The system requirements are not shown on these drawings. Fire alarm system shall be design/build by Contractor and included in base bid. System shall be designed to all applicable local codes as required by the Authority Having Jurisdiction.			
B. Contractor shall engage the services of a state licensed fire protection contractor for the design and installation of a complete and operable fire alarm system that complies with all IBC, NFPA, NEC and local ordinances and requirements approved by Authority Having Jurisdiction.			
C. System shall include all devices, conduit, wiring/cables and equipment required for a complete and operational system.			
D. System design and installation shall be compatible with existing building system and approved by landlord prior to bid. Fire alarm system shall be the same manufacturer as the existing building fire alarm system unless otherwise approved by the Landlord and Authority Having Jurisdiction. Include all costs in base bid.			
2.10 GUARANTEE			
A. Guarantee all material furnished and all workmanship performed for a period of one year from the date of final acceptance of the work. Any defects developing within this period, traceable to material furnished as a part of this Section or workmanship performed hereunder, shall be made good at no expense to the Owner.			
1.11 SHOP DRAWINGS AND APPROVALS			
A. The items specified herein and on drawings are used as a standard of quality. Any materials of equal quality, performance, dimensions and aesthetic value will be given consideration as a substitute for the materials specified. No approval will be given to a specific catalog number, model or type of equipment, prior to bidding. After bidding, the decision of the Architect and/or Engineer, determining equal materials, will be final.			
B. Submittal Preparation Requirements - The Contractor shall submit manufacturer's data sheets for equipment identified in this section in electronic Adobe Portable Document Format (.pdf). Submittal shall be made within 15 days of award of contract. Each submittal shall be clearly identified with project name, submittal date, contractor's name and the date of the contractor's review and approval. Manufacturer's data sheets shall be highlighted or marked to clearly identify specific part numbers, model numbers, etc. including all options specified in the contract documents. Submittal shall be organized and indexed to properly identify specific groups of items as identified in this section. All items shall be submitted at one time for the engineer's review. Partial submittals are not acceptable.			
C. Submittal Content Requirements			
1. Manufacturer's data sheets for the following categories of equipment shall be submitted for engineer's review:			
a. Lighting fixture cuts and performance data.			
b. Outline drawings and data sheets of each panelboard and switchboard.			
c. Data sheets of all wiring devices and fuses.			
d. Data sheets on all lighting control panels with associated control devices, relays, contactors, override switches and photosensors.			
e. Data sheets on all lighting occupancy/vacancy sensors, daylighting and automatic control devices.			
2. Drawings scaled at 1/2"=1'-0" of all rooms with electrical switchgear and transformers. Drawings shall show locations of equipment drawn to scale with dimensions of equipment and clearances in front and to the sides of equipment. Layout shall be coordinated with mechanical and piping systems.			
3. Contractor shall furnish an arc-flash hazard analysis study as per IEEE1584 equations and NFPA70E and provide equipment labeling as required.			
D. Where materials and equipment are specified or indicated by the name of the manufacturer or by accepted trade designation, substitution will be considered. Where two (2) or more items are furnished under the same specification, they shall be of the same manufacturer and be identical and interchangeable.			
1.12 BASE BID			
A. Base bid shall include materials and equipment specified or scheduled on the drawings. Requests for substitution of materials and equipment shall be by additive or deductive alternate bid only, with the following data clearly written at the beginning of the alternate proposal:			
1. Additive or deductive amount clearly written in words and numerals.			
2. Increased or reduced construction time in days.			
3. Other demonstrable benefit, for which the substitution of such item will be in the Owner's interest.			
B. Only those materials and equipment which are submitted as an alternate bid will be reviewed and considered.			
1.13 SUBSTITUTIONS			
A. Prior to proposing any substitute item, Contractor shall satisfy himself that the item proposed is, in fact, equal to that specified, that such item will fit into the space allocated, that such item affords comparable ease of operation, maintenance and service, that the appearance, longevity, performance, capacity and suitability are comparable, and that by reason of cost savings, reduced construction time, or similar demonstrable benefit, the substitution of such item will be in the Owner's interest.			
B. The burden of proof of equality of a proposed substitution for a specified item shall be upon the Contractor. Contractor shall support its request with sufficient test data and other means to permit the Owner to make a fair and equitable decision on the merits of the proposed substitution. Any item by a manufacturer other than those specified, or of brand name or model number, or of generic species other than those specified will be considered a substitution. Owner will be the sole judge of whether or not the substitution is equal in quality, utility, and economy to that specified.			
C. Approval of a substitution shall not relieve Contractor from responsibility for compliance with all requirements of the Contract. Contractor shall bear the expense for any changes in other parts of this work or other work caused by the proposed substitution.			
D. If Owner rejects Contractor's substitute item on the first submittal, Contractor may make only one additional request for substitution in the same category.			
1.14 SYSTEM COMMISSIONING AND FUNCTIONAL TESTING			
A. Lighting control functional testing			
1. Functional testing of automatic lighting controls shall be performed by a third-party commissioning agent that is approved by the Authority Having Jurisdiction for the commissioning of the specified lighting controls. Functional testing costs shall be included in the contractor's bid.			
2. Automatic lighting control devices and control systems shall be tested to ensure that control hardware and software are calibrated, adjusted, programmed and are in proper working condition in accordance with the contract documents and manufacturer's installation and operation instructions. Testing shall be performed on all occupancy/vacancy sensors, time switches, programmable schedule controls and photosensors. Testing shall comply with IECC requirements, as adopted by local jurisdiction.			
1.15 TEMPORARY POWER			
A. Provide temporary power service and distribution as required. Coordinate requirements with utility power company for temporary service as required.			
B. Provide temporary power and lighting for all trades that require service during the course of construction.			
1.16 PERMITS AND INSPECTIONS - Contractor shall secure all permits and inspections required.			
1.17 RECORD DRAWINGS AND OPERATIONS AND MAINTENANCE MANUALS			
A. Provide record drawings to the Architect at project completion. Drawings shall include all addendum items, change orders, alterations, reroutings, etc.			
B. Provide Operations and Maintenance Manual for electrical and lighting systems to Owner at project completion. Manual shall include manufacturer's equipment data sheets, specifications, installation instructions, programming procedures, operation instructions for systems, warranty information and recommended schedule for testing and maintenance of equipment.			
PART 2PRODUCTS			
2.1 MATERIALS - All materials shall be new and of quality as specified on the plans or specifications and must carry the Underwriter's Laboratories approval covering the purpose for which they are used, in addition to meeting all requirements of the current applicable codes and regulations.			
2.2 CONDUIT			
A. All wiring shall be installed in listed metallic conduit except as permitted below. RGS may be used in all areas. IMC may be used in indoor locations not in contact with earth. EMT may be used in indoor locations not in contact with earth, not in concrete slabs or walls and not subject to damage. PVC may be used in or below concrete and direct buried in earth. Flexible steel conduit shall be used for indoor final connections to mechanical equipment not to exceed 36", and recessed removable fluorescent light fixtures not to exceed 72". Liquid-tight flexible steel conduit shall be for outdoor final connections to equipment not to exceed 36".			
B. Fittings and conduit bodies shall be steel, malleable iron or die cast threaded compression ferrule type.			
C. Conduit sizes shall be as required by code and as indicated or specified.			
D. Schedule 40 PVC conduit shall be permitted underground with proper fittings, all UL approved and with cemented joints. All conduit penetrations through concrete slabs shall be wrapped RGS conduit.			
E. Type MC cable shall be permitted for indoor branch circuit wiring where concealed in walls and ceilings, with the exception of humerous, which shall be in conduit as specified. MC cable installation shall comply with NEC Article 330 and other applicable sections of the code. In 120V or 277V single phase circuits, wire colors shall be permitted to be standard black, white and green. Special care shall be taken to align cables parallel and perpendicular to structural elements and for proper cable management.			
2.3 OUTLET, PULL AND JUNCTION BOXES			
A. Each switch, light, receptacle or other outlet shall be provided with a code gauge, galvanized steel outlet box. Junction and pullboxes shall be code gauge, galvanized steel. Outlet boxes shall be of the one piece, knockout type, in general 4" square with plaster ring. Plaster rings shall be set to provide not more than 1/8" from wall surface to ring. In no case shall plaster ring project beyond surface of wall. Single gang rings similar to Steel City 52050 shall be used for 4" boxes in unfinished brick. Number 180 boxes may be used for unfinished masonry flush wall outlets. Center all outlet boxes in block course. Where more than one switch is indicated in adjacent locations on the plans the switches shall be ganged together in a single box with a single cover plate.			
B. Boxes installed in poured cement floors shall be flush type cast iron with watertight gasketed covers, grey metallic finish. Where boxes are installed in floors with tile or carpet floor covering, covers shall be of the recessed type to accommodate the floor covering.			
C. Boxes installed for the alarm, computer and security system shall be provided with appropriate cover plates.			
D. Boxes for telephone, computer, T.V., fire alarm, security and similar systems shall be minimum 4" square.			
2.4 WIRE			
A. Unless otherwise specified, all wire shall be 600V, 90 degree C Type THWN-2, RHW-2 or XHHW-2 for exterior installations and THHN/THWN, RHW-2 or XHHW-2 for interior installations.			
B. Conductor sizes shown on the drawings are based on copper wire. Conductors shall be solid for #10 AWG and smaller and stranded for #6 AWG and larger.			
C. All branch circuit wiring shall be copper.			
D. Service and panel feeders 2 AWG and larger may be aluminum, provided the conductor sizes are increased for equal or greater ampacity and equal or less equivalent voltage drop. Increase conduit size as required. Where aluminum wire is used, aluminum conductor material shall comply with N.E.C. 310.106(B)4 and all connections and terminations shall be listed and marked for use with aluminum conductors. If necessary to transition to a connector that is not rated for the size or conductor material, compression type adaptors shall be used with the tool and method indicated by the connector manufacturer.			
E. The wires shall be marked with color to simplify circuit identification. Unless otherwise required by local ordinances, equipment grounding conductors shall be green, grounded (neutral) wires shall be white (120V) or gray (277V) and ungrounded ("live" or "hot") wires shall be: 120/208 and 120/240 black (Phase A), red (Phase B) and blue (Phase C); 277/480 shall be brown (Phase A), orange (Phase B) and yellow (Phase C). The wire shall not be smaller than 12 AWG unless otherwise indicated.			
2.5 WIRING DEVICES			
A. Switches: Wall switches shall be specification Grade AC silent type switches 15A, 20A, 120 - 277 volt. Single pole switches shall be Hubbell 1201, 1221 or equal. Device color shall MATCH EXISTING.			
B. Receptacles: Shall be specification grade, duplex type, NEMA 5-15R, 15 ampere, 120 volt grounded type. Outlets shall be Hubbell 5262 or equal. Special application receptacles shall be as indicated on plans. Receptacles connected to dedicated circuits shall have an ampere rating of not less than the rating of the overcurrent protection device for the branch circuit. Device color shall MATCH EXISTING.			
C. Weatherproof Receptacles: Shall be Hubbell WP6M with 5262 outlet or equal.			
D. Device plates shall be equal to Sierra smooth-line plastic wall plates. Color shall be MATCH EXISTING.			
2.6 LIGHTING FIXTURES			
A. Provide all lighting fixtures, wired and connected. The drawings indicate the fixtures for each location. Provide lamps for all fixtures. Lamps shall be GE, Sylvania or Philips. The lamps shall be by the same manufacturer.			
B. Verify ceiling construction before ordering recessed units. Provide plaster frames and hangers as required. Verify ceiling construction, architectural sections and details prior to ordering fixture. Provide fixture with appropriate accessories, voltage and ballasts to meet the existing condition.			
C. Adjustable fixtures shall be located and properly aimed as directed by the Architect and to function best.			
2.7 SAFETY SWITCHES			
A. Safety switches, unless otherwise indicated on the drawings, shall be general duty type, 250 volt, heavy duty type, 600 volt of the number of poles required. Wire terminations shall be listed as suitable for 75 degrees C. Safety switches for air conditioning use shall be of the fusible type where recommended by equipment manufacturer. Fusible switches shall accept class "R" fuses only and will reject all other types. The switch size shall be as required by code and as indicated on the drawings. Where outside the building, the switches shall be type NEMA 3R weatherproof. All switches shall be lockable.			
2.8 FUSES			
A. Fuses shall be of the type, size, and rating as indicated on the drawings.			
B. All fuses shall be by Bussman Mfg. Company, Littelfuse or Mersen.			
C. Verify fuse and switch requirements with the equipment supplied.			
2.9 PANELBOARDS			
A. Circuit breaker type as indicated on drawings. Unless indicated otherwise, all panels shall have panelboard type construction with bolt-on circuit breakers. Panels indicated as loadcenters shall have plug-on circuit breakers. Manufacturers shall be Siemens, Schneider Electric, Eaton or General Electric or equal with voltage, sizes and ratings indicated on drawings.			
B. The circuit breakers shall be operable in any position and be removable from the front of the panelboard without disturbing the adjacent units. Branch breakers shall be of such design that combination of single-pole, double-pole and three-pole breakers can be assembled on the same panel. Each branch circuit shall be clearly numbered. Branch and main terminals shall be of the solderless type. Handle ties to form multi-pole breakers are not acceptable.			
C. Wire termination for panelboards, loadcenters and circuit breakers shall be listed as suitable for 75 degrees C.			
D. Panelboards and load centers shall be fully rated with available interrupting current (AIC) ratings as scheduled on drawings. All overcurrent protection devices in panelboard shall have a minimum AIC rating equal to the AIC rating of the panelboard. Series rating of equipment and overcurrent protection devices will only be allowed where specifically shown on the drawings.			
2.10 MOTOR WIRING			
A. All motors shall be wired to conform with manufacturer's recommendations and with applicable codes. Furnish necessary materials, such as wire, conduit, fittings, etc. required to connect motor. However, motors, controls, etc. shall be furnished by the supplier of the driven equipment. Verify equipment location and sizes with the trade supplying the motor before installing the conduit or outlets.			
B. Use copper wire for motor connections.			
2.11 TELEPHONE SYSTEM			
A. Provide a terminal mounting board for the incoming service cable. Terminal board shall be fire rated plywood and sized as indicated on the drawings.			
B. Telephone wall outlets shall consist of standard boxes mounted 18" above the floor unless otherwise indicated. Connect outlets to telephone terminal with separate 3/4" conduit unless otherwise shown on drawings.			
2.12 LIGHTING CONTROL			
A. Furnish and install lighting control panels, override switches, time switches, photocells/photo sensors, occupancy/vacancy sensors, dimmers, dimmer switches, relays, and contactors required for lighting control as indicated on the drawings.			
B. Lighting control panels shall be as specified on the drawings. Unless specified otherwise, time switches shall be equal to Paragon, General Electric, Tork, or Intermatic and shall have size and number of poles as required.			
C. Contactors shall be electrically operated and mechanically held having ampere capacity and number of poles and voltage class indicated. Contactors shall be installed in NEMA Type I enclosures for indoor locations and in NEMA Type 3R enclosures for outdoor locations.			
D. Photocells shall be compatible with associated lighting control systems as indicated on the drawings.			
2.13 EQUIPMENT IDENTIFICATION			
A. Provide engraved nameplates on all switchboards, generators, transfer switches, motor control centers, panelboards, transformers, safety switches, etc. indicating equipment designation (or designation of equipment served) and voltage.			
B. Equipment designations shall be 1/2" lettering and system voltage shall be 1/8" lettering (minimum).			
C. Nameplates shall be securely attached to equipment with rivets or screws.			
PART 3EXECUTION			
3.1 EXCAVATION, CUTTING AND FITTING - Perform the excavation, cutting, fitting, repairing and finishing of the work necessary for the installation of the equipment of this Section. However, no cutting of the work of other trades or of any structural member shall be done without the consent of the Architect.			
3.2 REMODEL AND DEMOLITION			
A. Remodel and demolition work shall be scheduled and coordinated with the owner for temporary loss of service to the facility of portions of the facility as required. All existing walls, floors, etc. affected by the removal of existing equipment or installations shall be patched, repaired and finished to match adjacent. All existing fire rated assemblies affected by the demolition shall be repaired with fire stoppings and caulking as required to maintain the integrity of fire rated constructions.			
B. Existing equipment shown on the electrical plans is based on available information at the time of design and shall be verified by the contractor. All discrepancies between plans and actual field conditions shall be reported to the engineer in writing prior to bid.			
C. Existing electrical installations in walls and building elements that are to be demolished or changed shall be modified or relocated as necessary. Refer to architectural plans for identification of affected building elements and field verify existing electrical installations in these areas prior to bid.			
D. Existing light fixtures that are to be reused shall be cleaned and relamped with new lamps. Existing emergency battery packs for exit signs and emergency lights shall be replaced with new. Normal ballasts that are not in working order shall be replaced with new ballast that is compatible with existing fixtures.			
E. All existing wiring devices and communication outlets that are to remain or to be relocated shall be replaced with new wiring devices and covers to match new devices being installed as part of this project. Contractor shall field verify existing types and quantities prior to bid.			
F. Repair existing equipment and/or installations that are identified for reuse that is damaged or no longer functioning. Where such repairs are not possible or impractical contractor shall provide replacement as required.			
3.3 CONDUIT, FITTINGS AND SUPPORTS			
A. Where the conduit enters outlet boxes, fixtures or cabinets, firmly fasten by double locknuts and bushings. Firmly fasten conduit to the building construction. Run exposed conduit parallel to the building lines, supported by appropriate hangers (Unistrut, T&B or Appleton).			
B. Cover metallic conduit in contact with earth or fill with polyethylene tape spiral wrapped, 1/2" lapped to provide double thickness. Tape shall be Scotch No. 50 tape. Conduit and ducts not under buildings and feeder ducts shall be installed per N.E.C. 300.5, except that the bends in conduit larger than 1" in diameter shall be made with galvanized steel conduit treated as noted above. Make joints with compound to be watertight.			
C. All empty conduit systems shall have a 200 pound test pull cord to facilitate installation of future wire.			
D. Penetrations through floor slabs shall be wrapped rigid steel.			
E. Conduits and outlets shall be concealed within the building structure, except that certain motor and lighting feeder conduits may be run exposed in certain areas as indicated on the drawings. Conduit shown to be installed in cabinets, counters, and casework shall be run as directed by the Architect.			
F. Flexible metallic and non-metallic conduit systems shall have a code sized copper ground conductor. Increase conduit size as required.			
G. Conduit penetrating through roof shall be by a method approved by roofing manufacturer to maintain the warranty of the roof. Installation shall be watertight.			
H. Conduits shall be routed surface on the structure, parallel and perpendicular to the structure.			
3.4 OUTLET AND JUNCTION BOXES - Outlet and junction boxes installed on opposite sides of walls shall have a minimum of 6 inch horizontal separation in non-rated walls and 24 inch horizontal separation in acoustic and/or fire rated walls. Where such separation is not possible, provide listed sound putty pad (acoustic walls) or fire rated putty pad (fire rated walls). The contractor shall coordinate the junction box size and the derating of conductors when using an insert type putty pad within the interior of the box.			
3.5 WIRE			
A. No wire shall be installed in the conduit system until the conduit system is complete. Use Mineralac No. 100 or equivalent as a lubricant to facilitate the installation of the conductors in the conduit system.			
B. Splices in exterior pullboxes and manholes shall be waterproof using "SCOTCHCAST" splice kit or approved equal. Seal ends of conduits and ducts with "DUCTSEAL" or approved equal.			
3.6 SYSTEM GROUNDING			
A. Grounding shall comply with requirements of Article 250. All exposed noncurrent-carrying metallic parts of electrical equipment, metallic raceway systems, metallic cable armor, grounding conductor or nonmetallic sheathed cables, grounding conductor in nonmetallic raceways, and grounded conductors of the wiring system shall be grounded.			
B. The grounded conductor (neutral) of the wiring system shall be connected to the system grounding conductor at a single place in each system by removable bonding jumpers, sized according to the applicable provisions of the National Electrical Code. The grounded conductor (neutral) to the grounding conductor connection shall be located in the enclosure for the system's overcurrent protection or where otherwise indicated on the plans or specifications.			
C. Ground bus separate from the neutral bus shall be provided in all switchboards and panelboards. Ground bus shall be retorque(d) (checked) prior to energizing equipment per manufacturer's recommendations.			
D. Ground buses and neutral buses in all distribution panels, switchboards, panelboards and those provided in any equipment shall be isolated except where required to be connected as specified above for the service entrance and in transformer terminal compartments.			
E. When indicated on the drawings, equipment grounding conductors shall be extended from the ground bus in the distribution equipment to the receptacle, fixture or device lugs where they are provided. When not provided, they shall be connected to equipment enclosures. The connections shall be arranged such that removal of the receptacle, the equipment ground conductors, or the ground jumpers from ground busing shall not affect the ground system.			
F. Raceways may be used as a grounding conductor for power and lighting circuits unless specifically shown otherwise. Flexible metal and nonmetallic conduit shall have a separate code sized green ground wire installed in the conduit to insure a continuous grounding path.			
G. In inaccessible locations make connections by exothermic weld process.			
H. In accessible locations connections shall be made with bolted through, approved solderless bronze grounding devices.			
I. Provide inter-system bonding terminal with #6 AWG copper conductor to the grounding electrode conductor or grounded bus in the main service per NEC 250.94. Inter-system bonding terminal shall be 2"x12"x1/4" ground bar mounted outside of service equipment enclosure. Where possible, the bonding terminal shall be mounted to service or meter enclosures. Where the installation of the bonding terminal on the service or meter enclosure will interfere with the opening of the enclosure, operation or maintenance of the equipment the bonding terminal shall be mounted immediately adjacent to the service or meter enclosure on insulated stand-offs. For exterior installations the bonding terminal shall be installed in a lockable NEMA 3R enclosure.			
3.7 PANELBOARDS			
A. Provide a typewritten circuit index behind clear plastic cover on inside of door. Information shall include room and type of load served. All circuit breakers shall be identified, including spares. Index card frame shall be metal, secured to door.			
B. Where panelboards are installed flush with the walls, extend empty conduits from the panelboard to an accessible space above or below. Provide 3/4" (minimum size) conduit for every three single spare circuit breakers or space or equivalent multi-pole arrangement, or fraction thereof, but not less than two conduits for each panelboard.			
3.8 EXTERIOR EQUIPMENT - All exterior electrical equipment shall be painted to match the building exterior unless specifically noted otherwise.			
3.9 SATISFACTION - Work shall be performed in a workmanlike manner to the satisfaction of the Architect and Owner.			
3.10 CLEAN-UP - Keep the premises free from accumulation of waste materials, or rubbish caused by employees or work under this division of the specifications. At the completion of the work, remove all surplus materials, tools, etc., and leave the premises "broom-clean".			

CONSULTANT

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NV5 Project # - 25-0004625



PROJECT NAME



SHEET NAME

ELECTRICAL SPECIFICATIONS

REVISIONS

DATE

11.06.2025

SHEET NUMBER

E0.01

IECC LIGHTING COMPLIANCE

COMcheck Software Version 4.1.5.5

Interior Lighting Compliance Certificate

Project Information

Energy Code:

2018 IECC

Project Title:

Food Bank of Northern Nevada

Project Type:

Alteration

Construction Site:

111 W. Front Street  
Elko, NV 89801

Owner/Agent:

Designer/Contractor:

Scott Rutledge  
NV5  
5155 W. Patrick Ln.  
Las Vegas, NV 89118

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Warehouse	12000	0.48	5760
Total Allowed Watts =			5760

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Warehouses (12000 sq.ft.)				
LED 1: A, AE: 8' Lensed Strip Light: Other:	1	42	52	2184
LED 2: B, BE: 4' Lensed Strip Light: Other:	1	9	26	234
LED 3: C: 2' Wall Mounted Light: Other:	1	3	20	60
LED 4: DE: 6" Recessed Downlight: Other:	1	4	14	58
Total Proposed Watts =			2536	

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement:

The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title

Signature

Date

Project Title:

Food Bank of Northern Nevada

Report date:

08/21/25

Data filename:

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Page

1 of 6

LIGHT FIXTURE SCHEDULE										
TYPE	DESCRIPTION	MOUNTING	MANUFACTURER	MODEL	TYPE	COLOR	LUMENS	VOLTS	WATTS	NOTES
A	8' LENSED STRIP LIGHT	SUSPENDED	METALUX	8TSNX-82SL-LN-UNV-L835-CDI-FKO	LED	3500K	8053	120	52	SEE NOTE 11.
AE	8' LENSED STRIP LIGHT - EMERGENCY	SUSPENDED	METALUX	8TSNX-82SL-LN-UNV-L835-CDI-EL14W-FKO	LED	3500K	8053	120	52	SEE NOTE 11.
B	4' LENSED STRIP LIGHT	SUSPENDED	METALUX	4SNX-41SL-LN-UNV-L835-CDI-FKO	LED	3500K	4209	120	26	SEE NOTE 11.
BE	4' LENSED STRIP LIGHT - EMERGENCY	SUSPENDED	METALUX	4SNX-41SL-LN-UNV-L835-CDI-EL7W-FKO	LED	3500K	4209	120	26	SEE NOTE 11.
C	2' WALL LED LIGHT	SURFACE	METALUX	2SWLED-20SL-LW-UNV-L835-CD1-U	LED	3500K	1987	120	20	SEE NOTE 11.
DE	6" RECSSED DOWNLIGHT - EMERGENCY	RECESSED	HALO COMMERCIAL	HC615D010 HM60525835 61MDC	LED	3500K	1700	120	14.5	
WE	WALL MOUNT. EMERGENCY, INTEGRAL MOTION & DAYLIGHT SENSOR	SURFACE	LUMARK	AXCS2A WLSXX CBP	LED	4000K	2561	120	25	
EX	EDGE LIT EXIT SIGN SINGLE FACE	SURFACE	SURELITES	EUX71R	LED	-	INC	UNV	5	RED STROKE
<div>GENERAL NOTES:</div> <div>1. FIXTURES SPECIFIED WITH CATALOG NUMBERS ARE THE BASIS OF DESIGN AND ESTABLISH QUALITY LEVEL FOR EQUAL FIXTURES FROM MANUFACTURERS LISTED WITHOUT CATALOG NUMBERS. WHERE ONLY ONE MANUFACTURER LISTED, THERE SHALL BE NO SUBSTITUTION.</div> <div>2. VERIFY EXACT MOUNTING CONDITIONS AND PROVIDE APPROPRIATE ACCESSORIES AND HARDWARE TO ACCOMMODATE REQUIREMENTS.</div> <div>3. FIXTURE TYPE INDICATED ONCE ON A CONTINUOUS ROW SHALL BE TYPICAL OF ALL FIXTURES IN THE ROW UNLESS NOTED OTHERWISE.</div> <div>4. CONTINUOUS ROWS OF FIXTURES SHALL BE PROVIDED WITH ALL NECESSARY HARDWARE AND FILLERS TO PROVIDE THE EXACT LENGTHS AS INDICATED ON THE PLANS. FIXTURES IN SOFFITS SHALL BE CONTINUOUS END TO END.</div> <div>5. FIXTURES WITH MAXIMUM THD OF 15%, PF GREATER THAN 90%. DRIVERS SHALL BE UL LISTED.</div> <div>6. EFFICIENCY SHALL BE GREATER THAN THAT REQUIRED TO ENSURE THAT THE VALUE LISTED FOR INPUT WATTS IS NOT EXCEEDED.</div> <div>7. MINIMUM CRI SHALL BE 80.</div> <div>8. PROVIDE EXIT SIGNS WITH ARROWS AND MOUNTING ACCESSORIES AS INDICATED ON THE PLANS.</div> <div>9. DRIVERS SHALL HAVE FULL RANGE DIMMING CAPABILITIES FROM 10% TO 100% UNLESS NOTED OTHERWISE.</div> <div>10. BATTERY BACKED DRIVERS SHALL PROVIDE A MINIMUM OF 50% OF THE FIXTURE LUMENS FOR 90 MINUTES. DRIVERS SHALL UL LISTED AND HAVE A 5 YEAR WARRANTY.</div> <div>FIXTURE SPECIFIC NOTES:</div> <div>11. REFER TO ARCHITECTURAL PLANS FOR EXACT MOUNTING HEIGHT/SUSPENSION LENGTH.</div> <div>12. AREA LIGHT TO BE SUPPLIED WITH MOTION SENSOR FOR DIMMING OPERATION FOR MOUNTING HEIGHT SPECIFIED. PROVIDE WITH PROGRAMMING REMOTE CONTROL (ONE PER PROJECT) FOR OWNER AT PROJECT CLOSEOUT.</div>										

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NV5 Project # - 25-0004625

PROJECT NAME

FOOD BANK

OF NORTHERN NEVADA

Tenant Improvement

111 W. Front Street

Elko, Nevada

SHEET NAME

ELECTRICAL IECC AND SCHEDULES

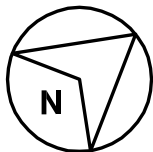
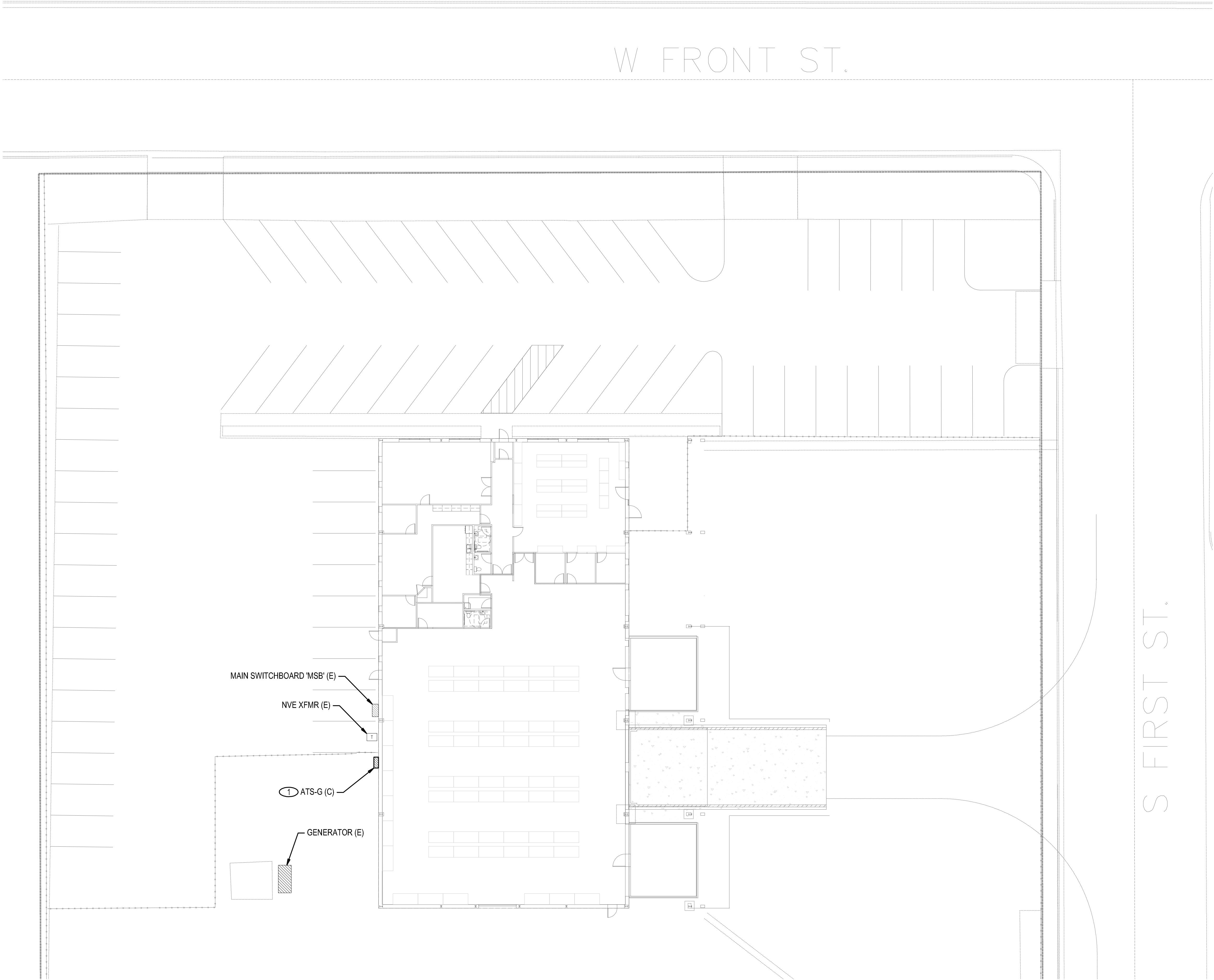
REVISIONS

DATE

11.06.2025

SHEET NUMBER

E0.02



ELECTRICAL SITE PLAN

1/16" = 1'-0"

1  
E1.00

DEMOLITION & REMODEL NOTES

- (E) EXISTING DEVICE OR FIXTURE TO REMAIN. SHOWN FOR REFERENCE ONLY. RECIRCUIT TO NEW CIRCUIT AND CONTROL DEVICES ONLY IF SPECIFICALLY SHOWN.
- (RE) RELOCATE EXISTING DEVICE OR FIXTURE. LOCATION SHOWN IS EXISTING (FIELD VERIFY). REFER TO NEW PLAN FOR NEW LOCATION AND CONNECTION REQUIREMENTS. EXISTING DEVICES OR FIXTURES CONNECTED IN SERIES WITH RELOCATED DEVICE OR FIXTURE SHALL BE RECONNECTED TO EXISTING BRANCH CIRCUIT AND CONTROL DEVICES AS REQUIRED.
- (RN) NEW LOCATION OF RELOCATED DEVICE OR FIXTURE. EXTEND CONDUIT AND CONDUCTORS FROM EXISTING LOCATION TO NEW LOCATION AS REQUIRED OR AS SHOWN. NEW COMMUNICATION CABLING SHALL BE PROVIDED WHERE EXISTING CABLING IS NOT IN SUITABLE CONDITION FOR REUSE (NO SPLICES ALLOWED IN COMMUNICATION CABLING). EXISTING BRANCH CIRCUIT CONDUCTORS SHALL BE REPLACED WITH NEW WHERE THE EXISTING CONDUCTORS ARE NOT IN SUITABLE CONDITION FOR REUSE.
- (X) REMOVE EXISTING DEVICE SHOWN. REMOVE CONDUCTORS BACK TO NEXT DEVICE OR TO PANELBOARD AS REQUIRED. EXISTING DEVICES OR FIXTURES CONNECTED IN SERIES WITH REMOVED DEVICE OR FIXTURE SHALL BE RECONNECTED TO EXISTING BRANCH CIRCUIT AND CONTROL DEVICES AS REQUIRED.
- (C) CHANGE EXISTING DEVICE TO NEW DEVICE SHOWN.
- (N) NEW DEVICE OR FIXTURE TO BE PROVIDED AND INSTALLED AS SHOWN. PROVIDE CONDUIT AND CONDUCTORS AS SHOWN OR SPECIFIED.

SHEET NOTES

- VERIFY ALL UTILITY LOCATIONS AND REQUIREMENTS WITH UTILITY CO. INSTALLATION DRAWINGS FOR THIS PROJECT PRIOR TO ANY WORK.
- REFER TO SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.

KEY NOTES

XX

- REPLACE EXISTING AUTOMATIC TRANSFER SWITCH WITH NEW ASCO 300 SERIES NEMA 3R AUTOMATIC TRANSFER SWITCH. EXISTING CONDUITS AND CONDUCTORS MAY BE REUSED WHERE IN SUITABLE CONDITION. MATCH EXISTING CONDUIT AND CONDUCTORS WHERE NECESSARY TO EXTEND CONNECTIONS. VERIFY EXACT LOCATION WITH OWNER. REFER TO SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.

CONSULTANT

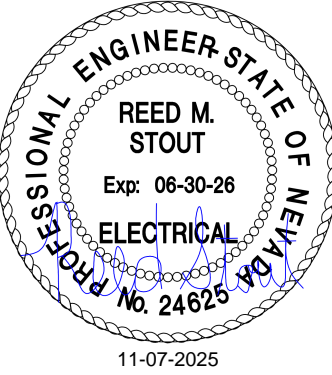
NV5

5155 W Patrick Lane  
Las Vegas, NV 89118

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www.NV5.com

NV5 Project # - 25-0004625



PROJECT NAME



FOOD BANK  
OF NORTHERN NEVADA

Tenant Improvement

111 W. Front Street

Elko, Nevada

SHEET NAME

ELECTRICAL SITE PLAN

REVISIONS

DATE

11.06.2025

SHEET NUMBER

E1.00

DEMOLITION & REMODEL NOTES

- (E) EXISTING DEVICE OR FIXTURE TO REMAIN. SHOWN FOR REFERENCE ONLY. RECIRCUIT TO NEW CIRCUIT AND CONTROL DEVICES ONLY IF SPECIFICALLY SHOWN.
- (RE) RELOCATE EXISTING DEVICE OR FIXTURE. LOCATION SHOWN IS EXISTING (FIELD VERIFY). REFER TO NEW PLAN FOR NEW LOCATION AND CONNECTION REQUIREMENTS. EXISTING DEVICES OR FIXTURES CONNECTED IN SERIES WITH RELOCATED DEVICE OR FIXTURE SHALL BE RECONNECTED TO EXISTING BRANCH CIRCUIT AND CONTOL DEVICES AS REQUIRED.
- (RN) NEW LOCATION OF RELOCATED DEVICE OR FIXTURE. EXTEND CONDUIT AND CONDUCTORS FROM EXISTING LOCATION TO NEW LOCATION AS REQUIRED OR AS SHOWN. NEW COMMUNICATION CABLING SHALL BE PROVIDED WHERE EXISTING CABLING IS NOT IN SUITABLE CONDITION FOR REUSE (NO SPLICES ALLOWED IN COMMUNICATION CABLING). EXISTING BRANCH CIRCUIT CONDUCTORS SHALL BE REPLACED WITH NEW WHERE THE EXISTING CONDUCTORS ARE NOT IN SUITABLE CONDITION FOR REUSE.
- (X) REMOVE EXISTING DEVICE SHOWN. REMOVE CONDUCTORS BACK TO NEXT DEVICE OR TO PANELBOARD AS REQUIRED. EXISTING DEVICES OR FIXTURES CONNECTED IN SERIES WITH REMOVED DEVICE OR FIXTURE SHALL BE RECONNECTED TO EXISTING BRANCH CIRCUIT AND CONTOL DEVICES AS REQUIRED.
- (C) CHANGE EXISTING DEVICE TO NEW DEVICE SHOWN.
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SHEET NOTES

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2. EXISTING EQUIPMENT SHOWN ON THIS PLAN IS BASED ON AVAILABLE INFORMATION AND SHALL BE VERIFIED BY THE CONTRACTOR. ALL DISCREPANCIES BETWEEN PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE ENGINEER IN WRITING PRIOR TO BID.
3. EXISTING ELECTRICAL INSTALLATIONS IN WALLS AND BUILDING ELEMENTS THAT ARE TO BE DEMOLISHED OR CHANGED SHALL BE MODIFIED OR RELOCATED AS NECESSARY. REFER TO ARCHITECTURAL PLANS FOR IDENTIFICATION OF BUILDING ELEMENTS AND FIELD VERIFY EXISTING ELECTRICAL INSTALLATIONS IN THESE AREAS PRIOR TO BID.
4. EXISTING LIGHT FIXTURES THAT ARE TO BE REUSED SHALL BE CLEANED AND RELAMPED WITH NEW LAMPS. ALL EXISTING EMERGENCY BATTERY PACKS FOR EXIT SIGNS AND EMERGENCY LIGHTS SHALL BE REPLACED WITH NEW. NORMAL BALLASTS THAT ARE NOT IN WORKING ORDER SHALL BE REPLACED WITH NEW BALLAST THAT IS COMPATIBLE WITH EXISTING FIXTURES.
5. ALL EXISTING WIRING DEVICES AND COMMUNICATION OUTLETS THAT ARE TO REMAIN OR BE RELOCATED SHALL BE REPLACED WITH NEW WIRING DEVICES AND COVERS TO MATCH NEW DEVICES BEING INSTALLED AS PART OF THIS PROJECT. CONTRACTOR SHALL FIELD VERIFY EXISTING TYPES AND QUANTITIES PRIOR TO BID.

CONSULTANT

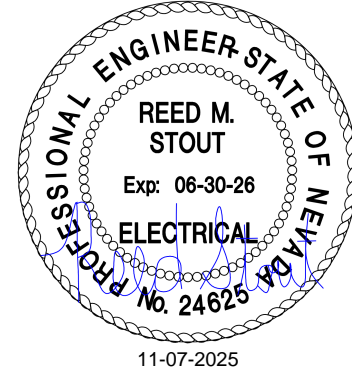
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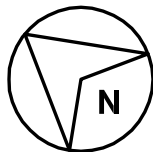
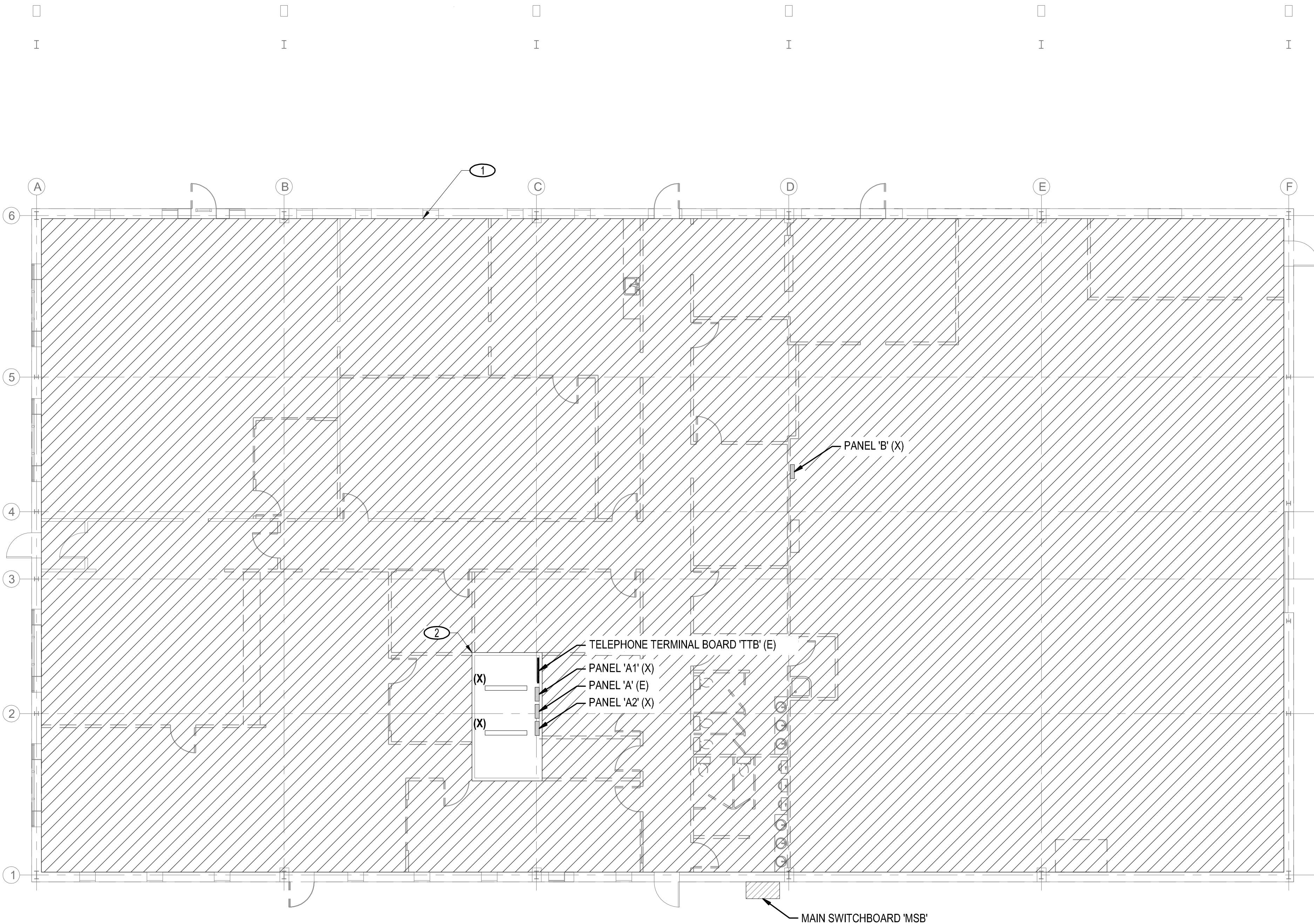


PROJECT NAME



KEY NOTES

1. EXTENTS OF AREA TO BE DEMOLISHED. ALL LIGHTING FIXTURES AND LIGHTING CONTROLS IN THIS AREA TO BE RETURNED TO OWNER OR DISPOSED OF (AS DIRECTED BY OWNER). ALL WIRING DEVICES CONDUITS AND CONDUCTORS IN WALLS TO BE DEMOLISHED TO BE REMOVED. ALL UNUSED CONDUCTORS IN THIS AREA SHALL BE REMOVED FROM CONDUITS AND CONDUITS SHALL BE ABANDONED IN PLACE.
2. EXISTING ELECTRICAL EQUIPMENT AND TELEPHONE TERMINAL BOARD IN THIS ROOM TO REMAIN AS IS. ALL LIGHTING FIXTURES AND LIGHTING CONTROLS IN THIS AREA TO BE RETURNED TO OWNER OR DISPOSED OF (AS DIRECTED BY OWNER).



ELECTRICAL DEMO PLAN

1/8" = 1'-0"

1

ED1.01

SHEET NAME

ELECTRICAL DEMO PLAN

REVISIONS

DATE

11.06.2025

SHEET NUMBER

ED1.01

DEMOLITION & REMODEL NOTES

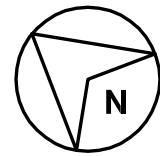
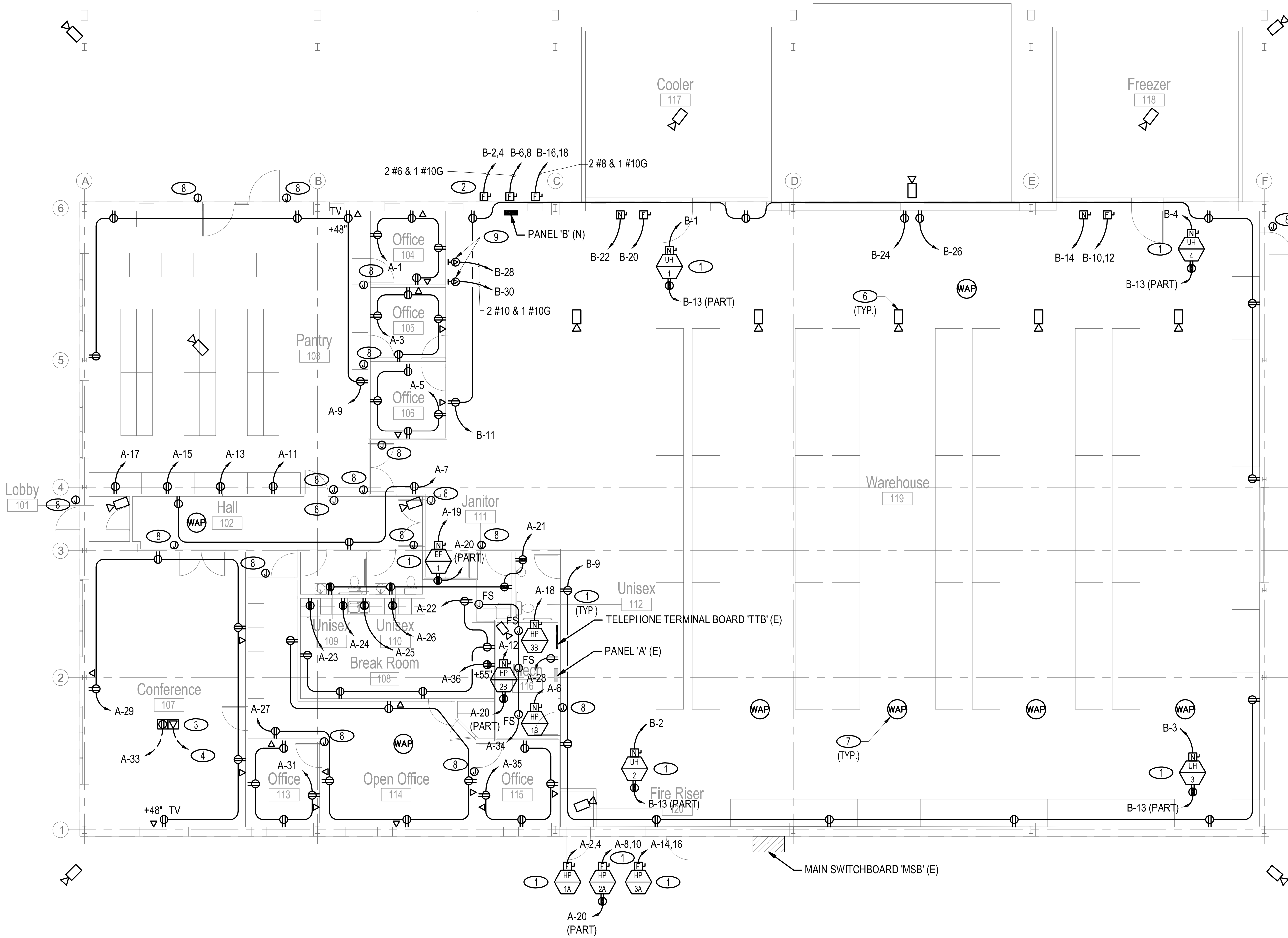
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6. CONTRACTOR SHALL TAKE CARE TO PROTECT IN PLACE ALL INSTALLATIONS RUNNING THROUGH THIS TENANT SPACE THAT SERVE HOUSE/COMMON AREA EQUIPMENT. INSTALLATIONS THAT RUN THROUGH SPACE FOR TENANTS ABOVE OR BELOW AND INSTALLATIONS THAT SERVE EQUIPMENT WITHIN THIS TENANT SPACE THAT IS IDENTIFIED AS EXISTING TO REMAIN. WHERE SUCH INSTALLATIONS RUN THROUGH WALLS THAT ARE TO BE DEMOLISHED CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY THE INSTALLATIONS AND NOTIFY ENGINEER IN WRITING TO DETERMINE WHAT MODIFICATIONS MAY BE REQUIRED.

KEY NOTES (XX)

1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE ON SHEET E5.00 FOR DISCONNECTING MEANS, CONDUIT, CONDUCTOR, AND CONNECTION REQUIREMENTS.
2. PROVIDE NEMA 3R DISCONNECT FOR CONDENSING UNITS FOR COOLER AND FREEZER. COORDINATE EXACT LOCATION WITH ARCHITECT AND EQUIPMENT VENDOR. FUSE PER MANUFACTURER'S RECOMMENDATION.
3. PROVIDE FLUSH RECESSED FLOOR BOX FOR POWER. FLOOR BOX SHALL BE STEEL CITY CAT# 600-SC WITH PRODS SERIES BRASS COVER OR EQUAL. FLOOR BOX TO BE INSTALLED FLUSH WITH FINISHED FLOOR WITH ALL DEVICES INDICATED ON PLANS. PROVIDE ALL ACCESSORIES, MOUNTING CLIPS, HARDWARE, ETC. REQUIRED FOR A COMPLETE INSTALLATION.
4. 3/4" EC TO EXISTING TELEPHONE TERMINAL BOARD TTB'.
5. CONNECTION TO FIRE/SMOKE DAMPER. COORDINATE REQUIREMENTS WITH FIRE ALARM SYSTEM AND MECHANICAL CONTROL DIAGRAMS.
6. LOCATION OF CAMERA. VERIFY ROUGH-IN LOCATION AND REQUIREMENTS WITH OWNER'S I.T. VENDOR.
7. LOCATION OF CEILING MOUNTED WIRELESS ACCESS POINT. VERIFY ROUGH-IN LOCATION AND REQUIREMENTS WITH OWNER'S I.T. VENDOR.
8. ACCESS CONTROL DEVICE. COORDINATE EXACT ROUGH IN LOCATION AND REQUIREMENTS WITH OWNER'S SECURITY VENDOR.
9. NEMA L6-30 RECEPTACLE FOR FORKLIFT CHARGER CABLE, VERIFY WITH FORKLIFT MANUFACTURER.



ELECTRICAL POWER PLAN

1/8" = 1'-0"

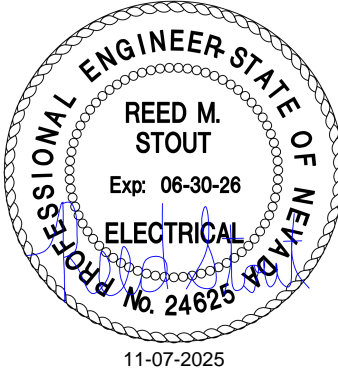
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E2.01

CONSULTANT

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NV5 Project # - 25-0004625



PROJECT NAME



SHEET NAME

ELECTRICAL POWER PLAN

REVISIONS

DATE

11.06.2025

SHEET NUMBER

E2.01

DEMOLITION & REMODEL NOTES

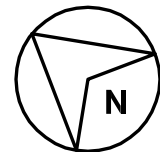
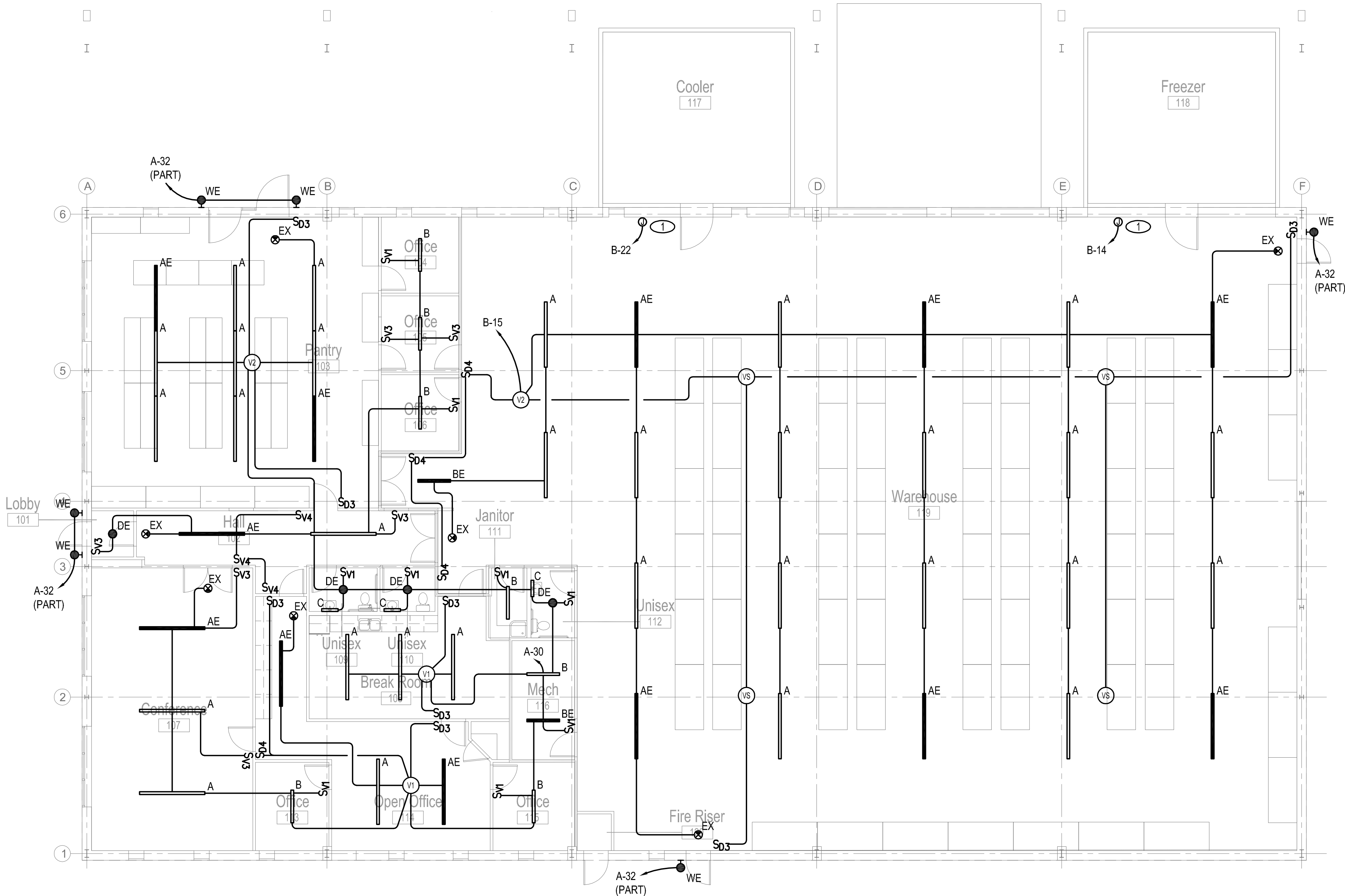
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KEY NOTES

1. COORDINATE CONNECTION OF WALK-IN UNIT LIGHTING WITH EQUIPMENT VENDOR.



ELECTRICAL LIGHTING PLAN

1/8" = 1'-0"

1

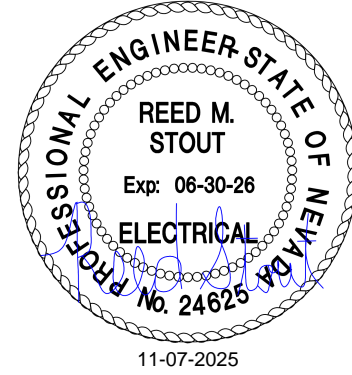
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CONSULTANT

NV5

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NV5 Project # - 25-0004625



PROJECT NAME

**FOOD BANK**  
OF NORTHERN NEVADA  
Tenant Improvement  
111 W. Front Street  
Elko, Nevada

SHEET NAME

ELECTRICAL LIGHTING PLAN

REVISIONS

DATE

11.06.2025

SHEET NUMBER

E3.01

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## COMMUNICATION RISER DIAGRAM

SCALE: NONE

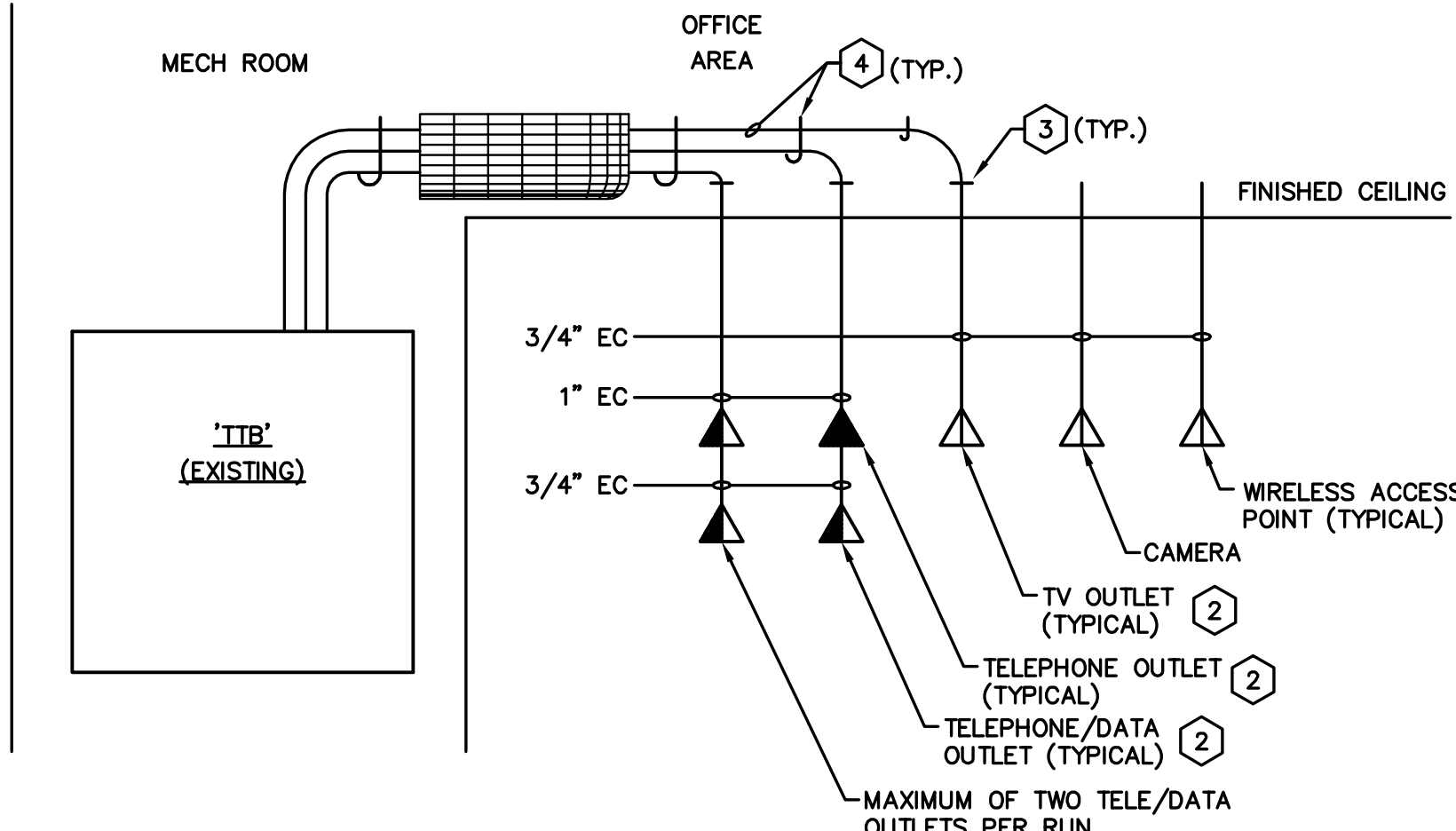
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## DETAIL GENERAL NOTES

- ALL CONDUIT TERMINATIONS SHALL HAVE INSULATED BUSHINGS.
- ALL COMMUNICATIONS CABLES SHALL BE PLENUM RATED.

## DETAIL KEYNOTES

- PROVIDE INTERSYSTEM BONDING TERMINATION (12"X2"X1/4" COPPER GROUND TERMINAL BAR ON INSULATED STANDOFFS) AT MAIN ELECTRICAL SERVICE (EXTERNAL TO ELECTRICAL ENCLOSURES). TERMINAL BAR SHALL BE INSTALLED INSIDE ADJACENT WALL WITH 6"X6" ACCESS PANEL COVER FOR INSPECTION OF CONNECTIONS. PROVIDE (1) 3/4", 1 #6 CU TO MAIN SERVICE GROUNDING ELECTRODE CONDUCTOR. PROVIDE (3) 1/2" EMPTY CONDUITS FROM TERMINAL BAR TO ACCESSIBLE SPACE IN CEILING WITHIN THE BUILDING. INSTALLATION SHALL COMPLY WITH NEC 250.94.
- SEE ELECTRICAL PLANS FOR COMMUNICATION OUTLET TYPES, QUANTITIES AND LOCATIONS.
- STUB CONDUIT ABOVE CEILING.
- CABLING TO BE SUSPENDED FROM STRUCTURE ABOVE CEILING USING CADDY "CAT-LINKS J-HOOKS", SIZED PER MANUFACTURER RECOMMENDATIONS FOR NUMBER OF CABLES, SPACED AT NO MORE THAN 5 INTERVALS MAXIMUM OR AS REQUIRED TO MAINTAIN LESS THAN 12" OF VERTICAL CABLE SAG BETWEEN SUPPORTS. IN AREAS WHERE NO CEILING IS INSTALLED (OPEN TO STRUCTURE ABOVE) PROVIDE CONDUIT TO TELEPHONE ROOM, CABLE TRAY OR TO CONCEALED SPACE ABOVE CEILING IN ADJACENT ROOM. ALL COMMUNICATION SYSTEM CABLES TO BE CONCEALED ABOVE CEILING OR IN CONDUIT EXCEPT FOR THE TELEPHONE ROOM. COORDINATE NUMBER OF CABLES AND ROUTING WITH OWNER PRIOR TO INSTALLATION.

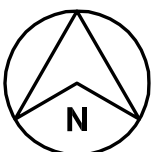
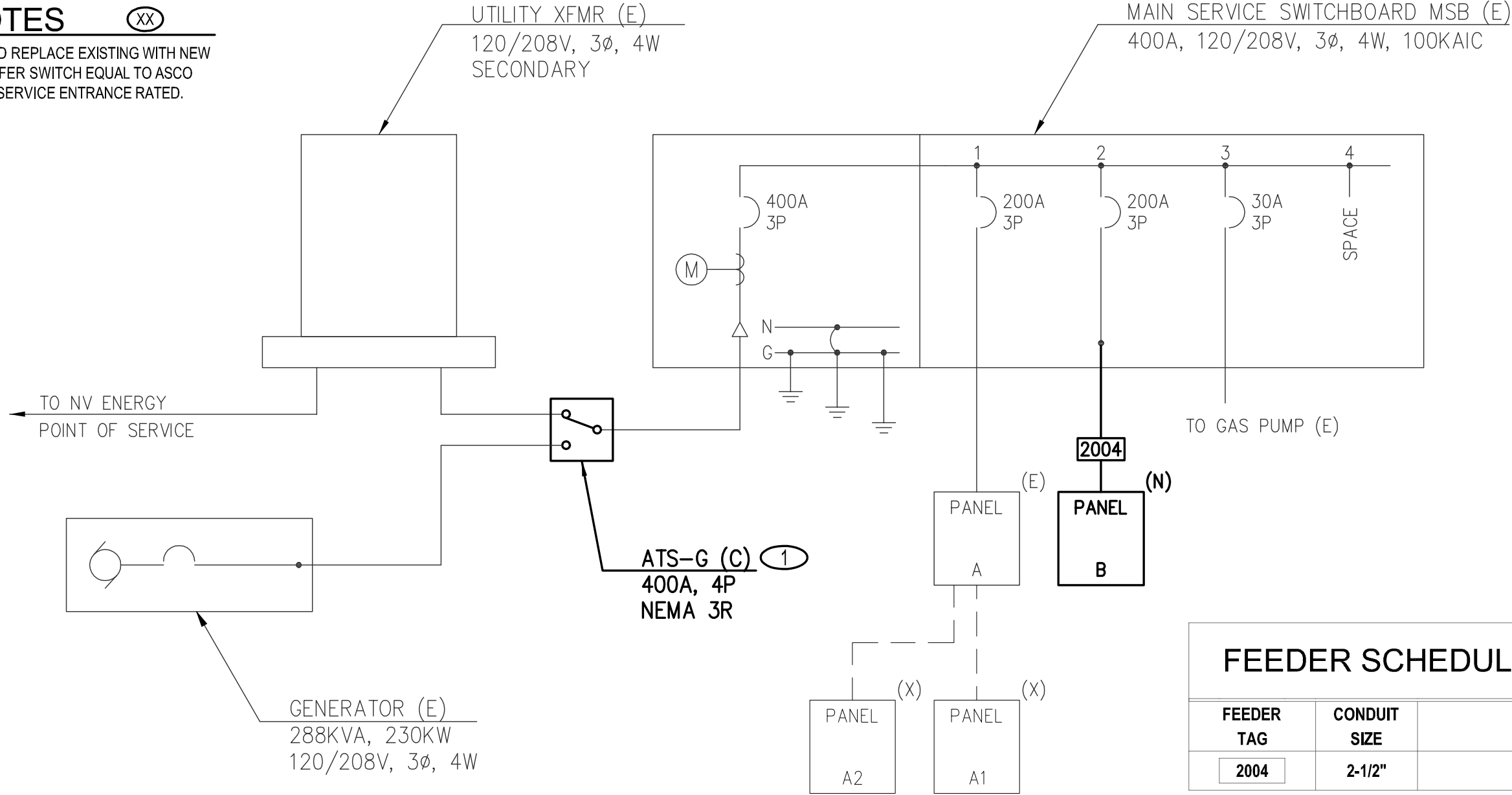


SERVICE LOAD CALCULATION - MSB				
SERVICE VOLTAGE		208		
NUMBER OF PHASES		3		
LOAD DESCRIPTION	QUANTITY	LOAD	DEMAND FACTOR	LOAD W/ DEMAND
PANEL LOADS				
PANEL A	1	38236 VA	100%	38236 VA
PANEL B	1	42390 VA	100%	42390 VA
GAS PUMP	1	6485 VA	100%	6485 VA
TOTAL LOAD (VA) =		87111 VA		
TOTAL LOAD (AMPERES) =		242 AMPS		
SERVICE SIZE (AMPERES) =		400 AMPS		

THREE PHASE SHORT CIRCUIT AND VOLTAGE DROP CALCULATION SUMMARY						
PROJ. NAME:	FOOD BANK OF NORTHERN NEVADA TI					
PROJ. NUMBER:	25-0004625					
CALC. BY:	Joseph G. Crapo, P.E.					
DATE:	7/28/25					
				LAST UPDATED ON 8/21/25 3:39 PM		
DISTRIBUTION POINT	LOCATION	FEEDER SIZE (AWG)	NUMBER OF CONDUCTORS PER PHASE	FEEDER LENGTH (FEET)	AVAILABLE FAULT CURRENT (ISC) (AMPS)	VOLTAGE DROP (VD)
F1	MAIN SERVICE	#3/0	2	150	16892	0.00%
F2	PANEL A	#3/0	1	50	10915	0.62%
F3	PANEL B	#3/0	1	130	6969	1.62%

## KEY NOTES

- REMOVE AND REPLACE EXISTING WITH NEW 400A TRANSFER SWITCH EQUAL TO ASCO 300 SERIES SERVICE ENTRANCE RATED.



## SINGLE LINE DIAGRAM

1  
E5.00

10/29/25 4:14 PM										(EXISTING PANELBOARD)									
PANELBOARD A										NEMA 1									
VOLTS: 208Y/120V, 3 PH, 4W										SURFACE MOUNT									
BUS RATING (AMPS) : 225										BOLT ON CIRCUIT BREAKERS									
MAIN: 200 A										ALUMINUM BUS									
MIN. AIC RATING: 22K										LOCATION MECH RM 116									
CKT. NO.	CIRCUIT DESCRIPTION	NOTE	BKR. SIZE	POLE	LOAD TYPE	LOADS (VA)			LOADS (VA)			LOAD TYPE	BKR. SIZE	POLE	NOTE	CIRCUIT DESCRIPTION	CKT. NO.		
						A	B	C	A	B	C								
1	OFFICE 104 RECEPTS		20	1	R	720	////	////	1850	////	////	M	25	-		HP-1A	2		
3	OFFICE 105 RECEPTS		20	1	R	720	////	////	1850	1850	////	M	-	2	-	-	4		
5	OFFICE 106 RECEPTS		20	1	R	720	////	720	////	////	924	M	15	1		HP-1B	6		
7	HALL RECEPTS		20	1	R	540	////	////	1850	////	////	M	25	-		HP-2A	8		
9	PANTRY RECEPTS		20	1	N	720	////	////	1850	1850	////	M	-	2	-	-	10		
11	PANTRY FREEZER		20	1	N	1000	////	1000	////	////	924	M	15	1		HP-2B	12		
13	PANTRY FRIDGE		20	1	N	1000	////	////	3068	////	////	M	50	-		HP-3A	14		
15	PANTRY FRIDGE		20	1	N	1000	////	1000	////	3068	3068	M	-	2	-	-	16		
17	PANTRY FRIDGE		20	1	N	1000	////	1000	////	////	1212	M	15	1		HP-3B	18		
19	EF-1		20	1	M	90	////	////	540	////	////	R	20	1		MECH RECEPTS	20		
21	BATHROOM RECEPTS		15	1	R	720	////	////	////	900	////	R	20	1		BREAK ROOM RECEPTS	22		
23	BREAK ROOM FRIDGE		20	1	R	1000	////	1000	////	////	1000	R	20	1		BREAK ROOM COUNTER	24		
25	SINK GARBAGE DISPOSAL		20	1	R	180	////	////	1000	////	////	R	20	1		BREAK ROOM COUNTER	26		
27	OPEN OFFICE RECEPTS		20	1	R	1080	////	////	////	180	////	R	20	1		MECH RM RECEPTS	28		
29	CONFERENCE RECEPTS		20	1	R	900	////	900	////	////	1400	L	20	1		OFFICE/PANTRY LTG	30		
31	OFFICE 113 RECEPTS		20	1	R	720	////	////	300	////	////	L	20	1		EXTERIOR EM LTG	32		
33	CONFERENCE TABLE		20	1	R	360	////	////	////	80	////	N	20	1		FIRE DAMPERS	34		
35	OFFICE 115 RECEPTS		20	1	R	720	////	720	////	////	500	R	20	1		MONITOR	36		
37	EXTERIOR LTS	RE	20	1	L	500	////	////	0	////	////	20	1		SPARE	38			
39	EXTERIOR LTS	RE	20	1	L	500	////	500	////	0	////	20	1		SPARE	40			
41	SITE POLE LTS	RE	20	1	L	700	////	700	////	0	////	20	1		SPARE	42			
FEED THROUGH LOAD						0	0	0	95% PERCENT BALANCE										
TOTAL CONN. LOAD (VA)						12358	13028	12000	LOAD ABBREVIATIONS AND DEMAND FACTORS:										
TOTAL DEMAND LOAD (VA)						12558	13153	12525	C=CONTINUOUS LOAD=125%, K=KITCHEN EQUIP.=100%										
PHASE DEMAND AMPS						105	110	104	L=LIGHTING LOAD=125%, LM=LARGEST MOTOR=125%										
TOTAL PANEL DEMAND (VA)						38236			M=MOTOR LOAD=100%, N=NON-CONTINUOUS LOAD=100%										
PANEL DEMAND AMPS						110			P=PANEL LOAD=100%, R=RECEPTACLE LOAD=100%										
SPECIAL PROVISIONS: RE - EXISTING CIRCUIT TO BE RECONNECTED TO NEW CIRCUIT BREAKER																			
PANEL NOTES:																			

10/29/25 4:14 PM (NEW PANELBOARD)																	
PANELBOARD					B NEMA 1												
VOLTS: 208Y/120V, 3 PH, 4W					SURFACE MOUNT												
BUS RATING (AMPS): 200					BOLT ON CIRCUIT BREAKERS												
MAIN: 200 A					MLO ALUMINUM BUS												
MIN. AIC RATING: 10K					LOCATION WAREHOUSE												
CKT. NO.	CIRCUIT DESCRIPTION	NOTE	BKR. SIZE	POLE	LOAD TYPE	LOADS (VA)			LOAD TYPE	BKR. SIZE	POLE	NOTE	CIRCUIT DESCRIPTION	CKT. NO.			
						A	B	C									
1	UH-1		15	1	M	672	////	////	4524	////	////	LM	60	-	WALK-IN FREEZER CU	2	
3	UH-2		15	1	M	////	672	////	////	4524	////	LM	-	2	-		4
5	UH-3		15	1	M	////	////	672	////	////	4524	M	60	-	WALK-IN FREEZER CU	6	
7	UH-4		15	1	M	672	////	////	4524	////	////	M	-	2	-		8
9	WAREHOUSE RECEPTS		20	1	R	////	1260	////	////	312	////	M	20	-	WALK-IN FREEZER FANS	10	
11	WAREHOUSE RECEPTS		20	1	R	////	////	1080	////	////	312	M	-	2	-		12
13	MECH RECEPTS		20	1	R	720	////	////	160	////	////	L	20	1	WALK-IN FREEZER LTS	14	
15	WAREHOUSE LTS		20	1	L	////	1200	////	////	3068	////	M	50	-	WALK-IN COOLER CU	16	
17	SPARE		20	1		////	////	0	////	////	3068	M	-	2	-		18
19	SPARE		20	1		0	////	////	624	////	////	M	20	1	WALK-IN COOLER FANS	20	
21	SPARE		20	1		////	0	////	////	160	////	L	20	1	WALK-IN COOLER LTS	22	
23	SPARE		20	1		////	////	0	////	////	1500	N	20	1	DIESEL BLOCK HEATER	24	
25	SPARE		20	1		0	////	////	1500	////	////	N	20	1	DIESEL BLOCK HEATER	26	
27	SPARE		20	1		////	0	////	////	2000	////	N	30	1	FORKLIFT CHARGER	28	
29	SPARE		20	1		////	////	0	////	2000	////	N	30	1	FORKLIFT CHARGER	30	
31	SPARE		20	1		0	////	////	0	////	////		20	1	SPARE	32	
33	SPARE		20	1		////	0	////	////	0	////		20	1	SPARE	34	
35	SPARE		20	1		////	////	0	////	////	0		20	1	SPARE	36	
37	SPARE		20	1		0	////	////	0	////	////		20	1	SPARE	38	
39	SPARE		20	1		////	0	////	////	0	////		20	1	SPARE	40	
41	SPARE		20	1		////	////	0	////	////	0		20	1	SPARE	42	
FEED THROUGH LOAD						0	0	0	90% PERCENT BALANCE								
TOTAL CONN. LOAD (VA)						13396	13196	13156	LOAD ABBREVIATIONS AND DEMAND FACTORS:								
TOTAL DEMAND LOAD (VA)						14567	14667	13156	C=CONTINUOUS LOAD=125%, K=KITCHEN EQUIP.=100%								
PHASE DEMAND AMPS						121	122	110	L=LIGHTING LOAD=125%, LM=LARGEST MOTOR=125%								
TOTAL PANEL DEMAND (VA)						42390			M=MOTOR LOAD=100%, N=NON-CONTINUOUS LOAD=100%								
PANEL DEMAND AMPS						122			P=PANEL LOAD=100%, R=RECEPTACLE LOAD=100%								
SPECIAL PROVISIONS:																	
PANEL NOTES:																	

## MECHANICAL EQUIPMENT CONNECTION SCHEDULE

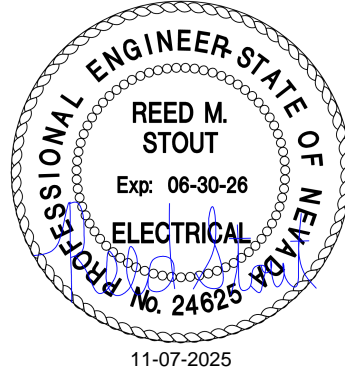
MECH. EQUIP. I.D.	VOLTS	PHASE	WIRE	FLA/ MCA	MFA	FED FROM (SOURCE)	LOAD (VA)	BRANCH CIRCUIT SIZE	INDOOR/ OUTDOOR	DISCONNECTING MEANS TYPE	DISC. SIZE	NEMA TYPE	REMARKS
UH-1	120	1	2	5.6	15	B - 1	672	1/2" C, 2 #12, 1 #12 GRD	INDOOR	NON-FUSED DISC. SW.	30	1	
UH-2	120	1	2	5.6	15	B - 3	672	1/2" C, 2 #12, 1 #12 GRD	INDOOR	NON-FUSED DISC. SW.	30	1	
UH-3	120	1	2	5.6	15	B - 5	672	1/2" C, 2 #12, 1 #12 GRD	INDOOR	NON-FUSED DISC. SW.	30	1	
UH-4	120	1	2	5.6	15	B - 7	672	1/2" C, 2 #12, 1 #12 GRD	INDOOR	NON-FUSED DISC. SW.	30	1	
HP-1A	208	1	2	17.8	25	A - 2,4	3702	1/2" C, 2 #10, 1 #10 GRD	OUTDOOR	FUSED DISC. SWITCH	30	3R	PROVIDE FUSING PER MANUFACTURER'S RATINGS.
HP-1B	120	1	2	7.7	15	A - 6	924	1/2" C, 2 #12, 1 #12 GRD	INDOOR	NON-FUSED DISC. SW.	30	1	
HP-2A	208	1	2	17.8	25	A - 8,10	3702	1/2" C, 2 #10, 1 #10 GRD	OUTDOOR	FUSED DISC. SWITCH	30	3R	PROVIDE FUSING PER MANUFACTURER'S RATINGS.
HP-2B	120	1	2	7.7	15	A - 12	924	1/2" C, 2 #12, 1 #12 GRD	INDOOR	NON-FUSED DISC. SW.	30	1	
HP-3A	208	1	2	29.5	50	A - 14,16	6136	3/4" C, 2 #6, 1 #10 GRD	OUTDOOR	FUSED DISC. SWITCH	60	3R	PROVIDE FUSING PER MANUFACTURER'S RATINGS.
HP-3B	120	1	2	10.1	15	A - 18	1212	1/2" C, 2 #12, 1 #12 GRD	INDOOR	NON-FUSED DISC. SW.	30	1	
EF-1	120	1	2	0.5	15	A - 19	60	1/2" C, 2 #12, 1 #12 GRD	OUTDOOR	NON-FUSED DISC. SW.	30	3R	

## CONSULTANT

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NV5 Project # - 25-0004625



## PROJECT NAME



## SHEET NAME

ELECTRICAL SINGLE LINE  
DIAGRAM AND SCHEDULES

## REVISIONS

## DATE

11.06.2025

## SHEET NUMBER

E5.00