## **BUILDING REMODELING** 3401 S. 84TH STREET, OMAHA, NE 68124 2012

NAME:	ACE HARDWARE	INTERIOR FINISHES:
	BUILDING REMODELING S. 84th STREET OMAHA, NE 68124	
<u>COUNTY:</u>	DOUGLAS COUNTY	
CLIMATE ZONE:	4A	OCCUPANCY SEPARAT
FLOOD ZONE:	LOW RISK CLASSIFICATION	(180 508.4)
PROJECT DESCRIPTION:	A COMBINATION OF SIX COMMERCIAL TENANT SPACES AND REMODELING FOR A NEW RETAIL TENANT	BUILDING ELEMENT FIR RESISTANCE RATING T
BUILDING:	EXISTING: GROUPS B, A-2, & M OCCUPANCIES PROPOSED ADDITION: M - MERCANTILE TYPE II-B CONSTRUCTION, NONSEPARATED FIRE SPRINKLERED 00006 - COMM (Le Nguyen) Change of use shall require new	
<u>APPLICABLE CODE:</u>	2018 INTERNATIONAL BUILDING CODE (IBC) 2012 INTERNATIONAL MECHANICAL CODE (IMC) OMAHA MUNICIPAL CODE 2018 OMAHA PLUMBING CODE (OPC) 2018 INTERNATIONAL EXISTING BUILDING CODE (IEBC) 2017 NATIONAL ELECTRICAL CODE (NEC) 2012 INTERNATIONAL FIRE CODE (IFC) 2012 LIFE SAFETY CODE	
COMPLIANCE METHOD (IEBC 301.3):	MORK AREA METHOD (IEBC 301.3.2) ALTERATION LEVEL 2 IN ACCORDANCE WITH CH. 8	OCCUPANT LOADS:
REHABILITATION WORK CLASSIFICATION:	RENOVATION WITH PARTIAL CHANGE OF USE (A-2, B, M TO M)	
BASIC ALLOWABLE BY OCCUPANCY GROUPS: (IBC 504.3, 504.4, 506.2)	TYPE: M - MERCANTILE ALLOWABLE HEIGHT: 55 FEET ABOVE GRADE PLANE, 2 STORIES (15', I STORY) ALLOWABLE AREA: 50,000 SF/FLOOR	
	THERE IS NO HIGH-PILED STORAGE. $-\sqrt{3}$	EXIT UNIT CALCULATION
ALLOMABLE AREA: (IBC 507.4)	UNLIMITED AREA ALLOWED IN 1-STORY, GROUP B, F, M, AND S OCCUPANCIES, ANY CONSTRUCTION TYPE THAT ARE SPRINKLERED AND SURROUNDED BY 60' OPEN SPACE.	
BUILDING HEIGHT AND AREA:		
EXISTING BUILDING HEIGHT:	15'-0" HIGHEST POINT	<u>PLUMBING FIXTURES:</u> (IBC 2902.1)
EXISTING BUILDING AREA:	62, 018 SF	
REMODELING OF EXISTING TENAN	T AREA: 21,970 NSF	
<u>ALLOMABLE BUILDING DATA:</u> (IBC 506.3 FRONTAGE INCREASE)	(1,672/1,036-0.25)60/30 = 2,72 AREA FACTOR INCREASE 50,000 x 2.72 = 136,000 50,000 + 136,000 = 186,000 SF TOTAL ALLOWABLE AREA	
AUTOMATIC SPRINKLER	THIS BUILDING IS EQUIPPED WITH A PARTIAL AUTOMATIC SPRINKLER	
<u>and Standfife Protection:</u>	STREM. THE STREM MILL BE FULL EXPANDED AND COMPLETED.	<u>ROOF ASSEMBLY/FIRE</u> (IBC 1505.1)
BUILDING SETBACKS:	EXISTING TO REMAIN	

## **PROJECT TEAM**

#### <u>OWNER</u>

DAKOTA REIT MANAGEMENT, L.L.C. 3303 32ND AVE. S. SUITE #250 FARGO, ND 58103 CONTECT: ROBERT RUSH, DIR. OF ASSET MANAGEMENT PHONE: 701-239-6879 EMAIL: rrush@dakotareit.com ARCHITECT ALAN J. PLUTOWSKI ARCHITECT 4125 LAKELAND AVENUE N., SUITE 200 MINNEAPOLIS, MINNESOTA 55422 PHONE: 763-533-7171 CONTACT: AMY SCHWABE (EXT. 20) EMAIL: aschwabe@twparchitects.com

#### CIVIL ENGINEER

CIVIL DESIGN ADVANTAGE 4121 NW URBANDALE DRIVE URBANDALE, IA 50322 PHONE: 505-369-4400 CONTACT: NIKKI NEAL, ASLA EMAIL: nicolen@cda-eng.com

STRUCTURAL ENGINEER PERFORMANCE ENGINEERING 11811 FORT STREET, SUITE 104 OMAHA, NE 68164 PHONE: 402-343-3960 CONTACT: ROB WHORLEY, P.E. EMAIL: rwhorley@performancese.com

ELECTRICAL ENGINEER MORRISSEY ENGINEERING 4940 NORTH 118TH STREET OMAHA, NE 68164 PHONE: 402-491-4144 CONTACT: NICK MANNING, CTS EMAIL: nmanning@morrisseyengineering.com AUTHORITY HAVING JURISDICTION CITY OF OMAHA PLANNING DEPARTMENT PERMIT & INSPECTIONS 1819 FARNAM ST OMAHA, NE 68183-1100

PHONE: 402-444-5360 EMAIL: permit.info@cityofomaha.org CONTACT: ANNA BESPOYASNY, BUILDING SUPERINTENDENT

TENANT

WESTLAKE ACE HARDWARE 14000 MARSHALL DRIVE LENEXA, KS 66215 PHONE: 913-310-3060 CONTACT: JOE MEEKER

MECHANICAL ENGINEER (BY DESIGN BUILD) MORRISSEY ENGINEERING 4940 NORTH 118TH STREET OMAHA, NE 68164 PHONE: 402-491-4144

CONTACT: COLTON BAYLOR EMAIL: cbaylor@morrisseyengineering.com









ARCHI	<b>TECTURAL</b>	MECH/	NICAL DESIGN / BUILD
A2-1	DEMOLITION PLAN & NOTES	M1.1	FIRST FLOOR PLAN - MECHANICAL
A3-1	FLOOR PLAN	M1.2	ROOF PLAN - MECHANICAL
A3-2	ROOF PLAN & DETAILS	M2.1	MECHANICAL DETAILS AND PLUMBING PLANS
A3-3	ENLARGED PLAN	M3.1	MECHANICAL SCHEDULES
A4-1	REFLECTED CEILING PLAN	M4.1	MECHANICAL SPECIFICATIONS
A5-1	EXTERIOR ELEVATIONS		
A8-1	INTERIOR ELEVATIONS		
A10-1	SCHEDULES, DOOR & FRAME TYPES, WALL TYPES/ASSEMBLIES, DETAILS, ABBREVIATIONS		
STRUC	TURAL	ELECT	RICAL
51-0	GENERAL STRUCTURAL NOTES	E1-1	FLOOR PLAN - LIGHTING
S1-1	STRUCTURAL FLOOR PLAN AND NOTE	E2-1	FLOOR PLAN - POWER
52-1	STRUCTURAL ROOF PLAN AND SECTIONS	E3-1	FIRST FLOOR LIGHTING AND POWER PLAN

CODE	E ANALYSIS LEGEND
PATH A	EGRESS PATH WITH NAME, SEGMENT LENGTH, AND DIRECTION INDICATED
	EXIT INDICATOR WITH NAME OF EXIT AND TOTAL OCCUPANTS EXITING INDICATED
B	IBC OCCUPANCY GROUP
FE	WALL MOUNTED BRACKET W/ FIRE EXTINGUISHER.

EGRESS PATH SCHEDULE		
	4	
Egress Path Name	Travel Distance	
PATH A	145'-11"	
PATH B	104'-7"	
PATH C	148'-3"	
PATH D	114'-9"	
PATH E	50'-5"	
PATH F	142'-5"	
PATH G	126'-3"	
РАТН Н	109'-9"	





#### 1. GENERAL REQUIREMENTS

- a. Exterior storefront/sign backdrop is required as "focal" point over main store entrance/exit. 18x Individual Channel Letter Sign (by owner) to be installed over EIFS backdrop w/ faux Trex "Spiced Rum" picket detail. Lighting required specified in this "Electrical-Exterior Signs" section of this document. Typical storefront finishes: standing seam roof panels in Firestone "Silver
- Metallic", corrugated wall panels UC-601 in Firestone "Acrylume" and sealed split face CMU. b. Receiving dock shall be at grade with a 9'-0"H x 8'-6" W insulated coil-over w/manual chain operator and slide locks dock door.
- c. Outside seasonal sales area to be located on the west building side. Seasonal sales area floor to be concrete finished at grade, front sidewalk, and parking lot. Seasonal sales area will be fenced with Ameristar Montage Plus Classic Style fence or similar to be 8' tall. Fence will be gated with two minimum 6' openings at front of store for access to parking lot and an 8' gate at rear to allow forklift access to the area. All gates are to be cantilever style. A swing style 4ft gate will be provided from seasonal sales area to pallet goods sales location. Lighting shall be as specified in "Electrical-Lighting" section of this document.

d. Provide an interior illuminated monument sign base set up for the sign assembly TT will place.

#### 2. CONCRETE/MASONRY

- a. Sidewalk to have zero-entry (no curb) at main entry/exit and handicap parking with bollards for crash protection. The handicap parking that is placed on either side of this zero entry shall have covered bollards for the ADA sign installations. The galvanized square sign post will extend out of the concrete filled bollard through a neatly cut hole in the bollard cover.
- b. All dock and truck traffic areas, as well as the pallet goods space, shall be min 6" concrete. c. Provide 6" diameter pipe bollards at receiving dock overhead door, lawn & garden area, and all exposed building corners. Install bollard covers on all customer facing bollards - Reliance Foundry grey w/red reflective stripes (or approved similar). Provide protection posts at exposed downspouts.
- d. Provide concrete slab for propane tank. Size and location to be as shown ±320sqft of concrete and a maximum of 14 pipe bollards. Concrete shall be 6" with thickened slab to 36" at the base of the propane tank.
- e. Provide thickened slab for sufficient anchoring of the shade structure in seasonal sales area 9 anchors typically.
- f. Provide 6' thick concrete slab in pallet sales area, garden area and east parking area as shown. Slope for drainage. See civil engineer's drawings.
- g. Provide custom-profile cast-in-place concrete bumper curb along the building in the pallet sales area as shown and detailed.
- h. MASONRY
- i. Provide concrete block or brick infill at storefront window replacement infill areas as shown and detailed. Note alternates described and provide a separate cost. j. Provide a unit cost for tuckpointing of the existing masonry to remain.

#### 3. EXTERIOR FINISH SYSTEM

a. Exterior insulation and finish system as shown in designated infill areas of the exterior walls.

#### 9. HVAC

- a. Unit(s) should be roof mounted with insulated ducts preferred gas-fired or electric if no natural gas availability. RTUs should have hail guards, economizers, and smoke detectors (if required by code). Minimum one (1) ton per 350 non-stock square feet.
- b. Units shall be sized to maintain not less than 70 degrees F. for an outside design temperature of - 10 degree F. and 10% fresh air intake and 72 degree F. with 100% relative humidity at ambient outdoor temperature of 95 degrees F
- Provide 7-day programmable setback thermostats with a lock-out feature, tenant's project manager to determine locations. Sales floor thermostats are typically on columns. - Office areas are to have a separate RTU system with thermostat.
- Provide additional supply to the cash register area.
- c. Stockroom should have a suspended gas fired heater sized for the room's area and a thermostat
- located by the tenant project manager (Reznor "B" model or similar) d. Provide a high volume exhaust fan in the service area (typically wall mounted w/ 3-speed switch). Install all conduit and boxes required for thermostats installed with a neat installed appearance.

#### 10. ELECTRICAL

- Requirements: a. Electrical service to typically be 120/208 volt, 3 phase 4 wire, 600 amp minimum.
- b. Business class broadband service must be available to the building.
- c. Separate overhead duct or cable raceway required for low voltage line.
- d. Office Power 2 isolated ground circuits with 2 quad and 1 duplex receptacles, 1 circuit with 5 duplex receptacles. e. Break Room – 1 isolated ground circuits with two duplex receptacles, 3 circuits with 4 duplex
- and 1 quad receptacles (includes switched receptacle for disposer) f. Sales Floor Walls- 1 IG & 4 dirty circuits with 14 duplex receptacles
- g. Provide separate conduit or dual channel power pole drops to conceal cabling/power from above ceiling space to any column/counter-mounted equipment. All wiring and cabling to be dropped from ceiling, not in floor. Typically 4 Wiremold DTP415 GRAY are utilized and approximately 15 conduit drops. (circuit/receptacle counts are noted below) h. Stock Room & Service – 1 isolated ground circuit with 2 quad receptacles, 3 circuits with 9 duplex receptacles
- i. Restroom I ground fault duplex per restroom and one at the mop sink (one circuit) j. Overhead conduits or cable trays can be deleted for low voltage phone/computer cabling if
- code allows wires to run exposed. k. 2-120v 20amp dedicated circuits to building front required with photo cell and a 7-day programmable time clock control, verify additional exterior sign lighting requirements with tenant project manager. Install an override switch for maintenance needs.
- I. Doors Provide electrical service above door header for automatic doors and receptacles over the transom glass for lighted signs.
- m. Provide GFI weatherproof duplex receptacles at exterior front, throughout the garden center and rear of building. (10 receptacles on 4 circuits)
- n. Explosion-proof electrical circuit to Propane filling station and emergency shut-off on the exterior of the building.
- o. 120v 20amp GFI weatherproof duplex receptacles (2 per 1,000 sq. ft.) in outside seasonal sales p. Direct wire the exhaust fans for the service and restrooms. Restroom fans should be
- controlled with the room lighting.
- q. Provide power for the irrigation control box

#### 4. CARPENTRY

- materials as shown.
- c. Provide a 27" deep x 85" to 96" laminated countertop Wilsonart "Graphite Nebula supported by 2- drawer file cabinets in the operations office. d. Install 3 sections of DanBack blocking for the glass cutter. A drawing will be provided for exact
- location. (the shelving installers will mount the cutter) e. Install a ¾"x 48" x 96" fire rated plywood next to the electrical at the designated data/telco area (horizontal placement with top at 96" AFF.

#### 5. THERMAL & MOISTURE PROTECTION

- a. Provide sound transmission reducing materials in stud walls around all offices, break room and
- membrane which leaves the clean look of the steel deck from below R-Value to meet code.
- b. Insulation provide exterior wall insulation as required, roof insulation to be poly-iso under the c. Roofing - 30-year warranty commercial EPDM fully adhered, with tapering to drain properly.
- This includes canopy areas. All metal flashing shall be prefinished metal.
- d. Replace all prefinished metal gutters, roof drains and downspouts to be located on the outside perimeter of the building. Ensure proper drainage in all areas. Any downspouts prone to damage from pallets, forklift or vehicle traffic shall have painted steel guards.

#### 6. DOORS, WINDOWS

- a. Front entry/exit doors to be 14' bi-parting, motion-activated automatic door unit Stanley Dura-Glide 3000 series or approved equal. Finish shall be thermally-broken clear anodized aluminum with tinted insulating glass. Doors to have the factory supplied alarm contact feature and be topped by a transom glass area to 10' AFF height as shown in the plan.
- b. Seasonal sales area entry/exit doors to be a pair of 3' wide sliding, motion activated automatic doors. Door to have the factory supplied alarm contact feature and be topped with a transom glass area to 10' AFF. This door requires an awning of at least 4ft depth to prevent false triggering of the door and precipitation entry.
- c. Provide double-acting impact traffic door for opening between sales and stock/receiving area (6ft wide by 8ft tall) - Eliason LWP-3 with 30" stainless base plates and 9" jamb guard options (or equal).
- d. One 8'-6" wide by 9'-0" high, chain operated, insulated, coiling overhead steel door with slide locks at grade is required for access to rear stock/receiving areas. 3 ft. wide personnel/egress door is required next to overhead door with buzzer, door closer w/hold-open feature and peephole. These two doors will require an awning of at least 4ft depth spanning over both openings to prevent precipitation entry.
- e. Exterior man doors shall be metal doors and frames per code with weather-strip and drip molding; fire exit doors to be equipped with panic bar hardware that features an audible alarm. (no exterior hardware) and be equipped with a 15 second delay which will require 120v power and a tie into the fire panel.

- r. Direct wire the Burglar and Fire panels s. Wire the egress doors with the delayed option t. Make the final connections for the monument sign installed by TT
- Sales Area Displays & Equipment Power Requirements: a. Fixture (Shelving) mounted Receptacles
  - Provide wall mount duplex receptacles for wall fixtures as shown on plan. Duplex receptacles are mounted in the fixture and wired into the wall box with an MC whip. Verify receptacle height and locations from the electrical plan. Gondola units - ceiling mount junction box above island fixtures as shown on plan or as per retailer. Drop conduit from ceiling junction box down to top of fixture. Bend a 90 degree radius and run on top of the fixture strapping to the top cap as required. Mount a steel handy box with a 20amp, 120volt duplex receptacle facing up at the desired location. If a gondola has receptacles extending both directions down the gondola from the drop point a junction box can be set in lieu of the radius bend. Verify final electrical dropped locations with electrical plan. These devices will add up to approximately 2 isolated ground circuits with 2 quad and 1 duplex receptacles, 12 circuits 0 quad and 31 duplex receptacles. This count includes 5 receptacles at the ceiling for Westlake supplied cord reels that should be installed by LL.

Several of these drops need to be tied into the lighting controls if the lighting is 120v. If lighting is 277, then utilize separate contactors to control these areas.

Paint chip displays

LED tool headers (drop has 24hr circuit needed as well) LED strips in sales floor valences (Stihl runs with a tablet and/or video player require 24hr as well) The shelved and suspended Edison lamp and lighting displays Fan & heater receptacles Seasonal gondola receptacles

- All drop cord reel receptacles
- b. Provide20 amp duplex receptacle on each interior column (may not be required on each column – pending the final merchandising plan. Mount duplex receptacle to code at typical height. Verify the positioning of the column mounted receptacle with the fixture plan and
- tenant project manager. c. Point of sale (POS) checkout counters/service counter- provide one standard 120v 20amp duplex receptacle and one 120v 20amp quad receptacle with isolated ground per register location for a total of 2 IG and 2 dirty circuits.

#### <u>Lighting (see reference plan)</u>

- requirements based on municipality. b. Light fixtures: Lithonia TZL1N L96 10000LM FST MVOLT 40K 80CRI WH (4ft fixtures may be be required at 2 per fixture. Provide for after hours security lighting in sales area and
- c. Offices, break room and corridor lighting to be 70 foot-candles (minimum); provide troffer
- a-round: Lithonia SBL4 48LEZ1\_LP840 if hard lid ceiling (or troffers if acoustical system)

a. Install DanBack Flexible Wood Backing at 8'-0" and 12'-0" AFF on all sales area stud walls for Ace fixture anchoring. These DanBack sections fit within the stud cavity, at the same height, to create a smooth wall surface for installers to anchor shelves. Walls with a masonry surfaces do not need these anchor blocks. Confirm wall fixture locations with tenant project manager. b. Provide plastic laminate base and overhead cabinets and countertop in break room. Style and

- f. Interior office and restroom doors are to be solid core wood with metal jambs and closers with the "hold-open" function. Minwax "Slate" stain with a Minwax "Polycrylic" satin is the preferred finish. The Break room door shall have a half-lite. All locksets should be stainless ADA compliant lever style. Lock functions: Multi-user Restrooms – Push/Pull, Operations Office & Cash room – Storeroom function, Managers Office – Entrance/Office function.
- g. One 4'x4' one-way glass window w/ steel frame (matching the interior doors) is required in the operations office. h. Storefront: anodized aluminum thermal-separation with solar-tinted insulated glass, tempered to
- meet code.

#### 7. FINISHES Ceiling systems:

- a. The Sales area ceiling system is to be open with all joist work, deck, and utilities exposed. Sales area: paint all exposed sales area ceiling components including beams, joists and decking with dryfall coating - color to be confirmed by tenant (light gray). If the deck is galvanized or gray in color and the structural steel is finished in foundry gray, then painting can be reduced to just touch-up and natural finishes. The electrical and HVAC equipment/ducting can remain the natural finish.
- b. Offices, Hallway: Provide Armstrong 2910A 2'x 4' acoustical ceiling tile and a 15/16" suspension system at the height shown.
- c. Stock/receiving area, Service area, Utility room: ceiling is open with natural finishes.
- <u>Floor treatment:</u> a. Sales Floor, Break room, Hall: Diamond polished ground hardened finished concrete. During polishing process, apply Prosoco LS densifier and after polishing, apply Prosoco Polish Guard per
- manufacturer's instruction. Install black 5" vinyl base only where walls are not covered by shelving. Stock/Receiving Areas, and Service Area: Exposed concrete sealed by the application of Prosoco densifier. No vinyl base is required. Restrooms: Porcelain floor tile with porcelain tile extending up the walls to just over the light switches. The Tile Shop: Dyrewood Sage 15x60mm (wood look planks) The wall terminations and floor transitions should be the appropriate cosmetic profile
- and the floor stock should be ADA compliant. (aluminum) b. Offices, Breakroom: LVT: provide samples & allowances.
- c. Vestibule or Entry Area: First ±10'x door area or vestibule width using Mats Inc. Diagonal Tile "Beige" installed quarter turn with Release-Bond adhesive. Install 2-3/4" aluminum transition edge to surrounding floor surfaces.

Wall finishes, painting and decorating:

- a. Apply 5/8" sheetrock to all interior walls (Sales area, Offices, Restrooms, Corridor, and Break room). Sand, prime and finish for all areas not covered by fixtures. If any Sales walls are clean masonry block surface, then block seal and a top coat of eggshell paint
- will be an acceptable finish.
- b. Sales Floor wall colors to be approved by tenant's project manager two coats of latex eggshell finish. Walls can include combinations of four colors. With a 5<sup>th</sup> trim color for jambs and frames. c. Interior doors, frames, trim, and columns to be primed and finished with semi-gloss enamel.
- d. Offices, Stock/receiving area and Service area to be painted w/ two coats of latex eggshell. Install 1/2" unpainted plywood on designated stud walls in the Stock/receiving area in lieu of sheetrock.

- d. Stock/receiving and utility room lighting to be 50 foot-candles (minimum); Lithonia TZL1N L96 10000LM FST MVOLT 40K 80CRI WH (4ft fixtures may be require to fit tight areas or finish rows. Appropriate hangers for open or acoustical ceilings will be required at 2 per fixture. e. Provide and install emergency lighting and exit signs/lights as required by code.
- f. Exterior flood light required above rear receiving door, and over storage areas. 50% controlled by photocell and the remaining controlled by photocell and timer as storefront sign lighting. Provide a photocell override switch for service needs. Only LED fixtures allowed
- g. Soffit Lighting: Cree fixtures with trim ring as required CPY250-A-DM-D-B-UL-WH h. Provide lighting for outside seasonal sales area. Typically wall pack lighting controlled 50/50 as above along with wash from lot pole lighting.
- i. Sign Lighting will be Abolite RLM fixtures with Satco S2750 LED lamps (RLM head: AD200-INC-120-GBK-LDS96WL, Arm/base: GB-P-3-GBK & Nursery sign Arm/base:GB-D-3-GBK) j. Propane fill station needs adequate coverage from wall pack or pole lights. If that is not
- feasible, then add a dedicated light source to that fill station must be explosion proof. k. Provide and install LED strip lights into Westlake supplied and installed shelving valance. This
- is typical for the Stihl sales & service areas as well as the BBQ shelving. (approximately 22-8ft and 2-4ft fixtures. These should be controlled with the sales floor lighting master switch. I. Provide and install an 8ft vapor-tight LED fixture in the front 20ft x 20ft section of the shade
- require a 20ft x 1-5/8in x 1-5/8in galvanized Unistrut and two end anchors for spanning truss assembly. (this assumes an overall 20ft x 60ft structure – If the final plan shows a 40ft, or two sections, wide then double the items listed above)

11. Computer Equipment Cabling

- Property must have Multiple Carrier Internet Ingress a. All computer equipment to be provided and installed by retailer. Data cabling, conduit runs, boxes, terminations, and port wall plates to be provided and installed by LL.
- b. Use Cat-5 or better low voltage cable for all computer (data) lines.
- c. CAT 5 Cable run terminations to be located:
- 2 at customer service counter
- 9 in offices
- 1in break room (training pc)
- 2 in service area (Citrix terminal & future STIHL PC/Laptop) 3 at paint mixing area
- 1 located in Sales floor ceiling per plan (antenna –scan access point)
- 1 located inside exterior wall adjacent to Garden Center (external antenna)
- 4 runs to Elec/Telco area (extended frame, extended dsl, music & extended phone) All CAT5 runs should terminate at a patch panel located near the D-MARC. (This is typically located adjacent to the electrical panels and will require a  $\frac{3}{4}$  x 4' x 8' mounting board) Patch panel required.

d. Patch panel required

behind the POS Station area.

a. Sales area lighting level to be targeted at 100 foot-candle at 5'. Must meet local energy usage

require to fit tight areas or finish rows. Appropriate hangers for open or acoustical ceilings will stock/receiving. All remaining sales, stock/receiving, as well as 50% of the wall pack and soffit lighting should be controlled by a master switch and contactors. Switch to be located in the operations office. Lighting on sales floor to be at 45 degrees to side walls – max 10ft on center

fixtures: Lithonia 2GTL 4 48L EZ1 LP840 Restroom lighting to be surface mount low profile wrap-

c. CAT-5 phone runs to be located: All phone lines terminate at the Elec/Telco location on the plans

13. SECURITY EQUIPMENT

14. MUSIC/PAGING

structure. (Williams 96-8-L166/850-HIAFR-DIM-UNV or approved similar) Installation will

e. Install barnwood on the two walls adjacent to the register area and the approach to the Restrooms/Breakroom. Register area will match the height of the transom glass and the approach area will be from floor to drop ceiling. This is a pre-finished barnwood product from Home Depot and will require a plywood backer instead of the sheetrock. Verify and install per manufacturer's strictest recommendations.

#### 8. SPECIAL CONSTRUCTION

- a. Provide automatic fire protection sprinkler/alarm system complete with all necessary related pieces and conforming to requirements of insurance underwriters and local governing authorities. Subcontractor to field verify all existing conditions and provide a complete engineered system for approval including: flow switch, tamper switch, backflow assembly, correct FDC, pull stations, smoke detector wiring, annunciators, horns, strobes, cellular communicator, panels and key pads. Verify capacity of existing pump and supply piping.
- b. Provide and install all required fire extinguishers and sign/decals. Coordinate placement with tenant project manager prior to mounting to avoid shelving/foot traffic clearance. Verify quantity and locations with Fire Marshal. c. Install and anchor the Garden Center Shade Structure supplied by TT. This is a W-Truss
- assembly from Poly-Tex and will be a level installation requiring post cuts to accommodate the slab grade prior to assembly. The concrete expansion anchors to be provided by installer. The structure will be no less than 3 connected 20ft x 20ft squares requiring 32 anchors not less than 8" long. The TT shall install the fabric on the structure.
- Burglar Alarm System: Install all components to provide a fully functioning system with door contacts, motion sensors, keypads, and burglar panel. Westlake would prefer the LL use our existing service provider – ADT.

#### 8. PLUMBING

- a. One men's and one women's A.D.A. compliant restroom with solid surface partitions if applicable. If single use restrooms, men's must include a urinal.
- b. A floor mounted mop sink with FRP wall panels and mop holders typically located in the stock room. c. Break room to include a single bowl sink and a garbage disposer.
- d. 10 gallon electric hot water heater located over the restrooms or mop sink.
- e. One bi-level A.D.A. water cooler is typically located near the restrooms: salvage and re-use the existing unit, if feasible. f. Exterior hose bibs (frost proof if climate requires) at each side of front entrance. One additional
- hose bib should be located adjacent to the dock for cleaning needs. g. Two (2) yard hydrants in outside seasonal sales area. (wall hydrants may also be installed pending the location of the garden center).
- h. Provide an irrigation system for lawn and plantings with a separately metered source of water. i. Provide a complete fire sprinkler system. Use components of existing partial system as feasible. Field verify service capacity and modify as needed.

#### 12. TELEPHONE EQUIPMENT

- a. All phone equipment to be provided and installed by retailer. Voice cabling and, conduit runs and boxes by General Contractor. All terminations and port wall plates will be provided by a
- vendor contracted directly to Westlake.
- b. Use Cat-5 or better low voltage cable for all phone (voice) lines.
- 1 at each checkout counter (3 total)
- 1 at customer service counter
- 3 in offices (1-manager, 1 fax & 1 phone operations)
- 1 in service area 1 in receiving/storage
- 4 column mounts (max) throughout sales area for phone locations

a. Confirm security system electrical requirements with tenant project manager. Burglar alarm, 16 channel closed circuit TV, to be provided and installed by owner. b. Provide and make all CAT5 cable runs for camera system. (15 total terminating on

- data/telco plywood). Patch panel required.
- a. Install the music paging speakers, volume controls and wiring with all terminations at the Data Telco mounting board. Westlake will provide a layout and materials specification for the project. Westlake will contract with Sound Products for the monthly service. Westlake would prefer the LL use our existing service provider – Sound Products

#### 15. MISCELLANEOUS:

- -Toilet Partitions: Solid phenolic, floor supported with wall bracing.
- -Toilet Accessories: Bobrick, Bradley or equal, surface mounted, brushed chrome finish.
- -All shelving shall be furnished and installed by the tenant.
- -All furniture shall be furnished by the tenant and installed by the general contractor.
- -Provide Danback wood blocking in designated areas. -Provide Prefinished Barnwood product from Home Depot over  $\chi''$  CDX plywood sheathing in designated areas
- -Provide 16' long x 4' deep Canvas Awning on Aluminum wall-mounted framing with bottom at 10'-0" at Dock/Access door – see plan. Provide color samples to Tenant.
- -Garden Center Fence shall be Ameristar Montage plus Classic style 8' high with cantilever style gates as shown. All posts shall be set in concrete. All work shall be per Manufacturer's Strictest Recommendations.





#### Hardware Groups

 Sliding Doors Complete Sliding Door Package- Power Operator, Motion-Activated See notes: with Strike-Guard, Cylinder-Keyed Both Sides

#### 2. Office, Breakroom

1-1/2 Pair Butt Hinges 1 Wall Stop 1 Lever Handle Office Lockset 1 Closer with Hold-Open 1 Air Louver: vsl Slimline 6x27, Blk -Breakroom Only 1 Peephole – Omit at Breakroom

#### 2A. Cash Office

- Sim to 2, but Storage Lockset
- Mop Room Sim. to 2, but no Closer, Peephole
- <u>Restrooms</u> 1-1/2 Pair Butt Hinges
- 1 Wall Stop 1 Push Pad
- 1 Pull Bar with Scratch Plate 1 Closer with Hold-Open Feature
- 1 Kickplate
- Egress
- 1-1/2 Pair Butt Hinges 1 Panic Exit Device
- 1 ADA Threshold
- 1 Sweep
- 1 Gasket 1 Closer

- Secure Storage 1-1/2 Pair Butt Hinges 1 Wall Stop 1 Lever Handle Storage Lockset 1 Closer with Hold-Open
- Stockroom Egress 1-1/2 Pair Butt Hinges
- 1 Keyed Entry
- 1 Sweep
- 1 Drip Cap
- 1 Buzzer 1 Closer with Hold-Open Device
- 1 Peephole
- Coiling Overhead Delivery Complete Package as Noted, Chain Operated with Chain-Keeper/Lock, Slide Locks
- Common Electrical 1-1/2 Pair Butt Hinges 1 Lever Handle Storage Lockset 1 Closer with Hold-Open
- Pair Double-Acting Complete Package with Vision Panel as Noted.

- 1 Panic Exit Device Detex V40 EB 1 ADA Threshold
- 1 Gasket





Cer tification Date: 09/27/24 I, Alan J. Plutowski, am the Coordinating Professional on this Westgate Retail -ACE Hardware project. Project Information WESTGATE PLAZA ACE HARDWARE 3401 S. 84TH STREET OMAHA, NE 68124 Revisions 1 05/30/24 TENANT REVISIONS 03/12/2024Date: Drawn By: BG AS/DC Checked By: 00324 Job Number: Sheet Information SPECIFICATIONS **COPYRIGHT 2024** 





#### VICINITY MAP NOT TO SCALE



## OMAHA, NEBRASKA

### OWNER

DAKOTA UPREIT LIMITED PARTNER 3003 32 AVENUE, SUITE 250 FARGO, ND 58103

#### ENGINEER

CDA ENGINEERING, LLC 4121 NW URBANDALE DRIVE URBANDALE, IA 50322 CONTACT: NIKKI NEAL EMAIL: NICOLEN@CDA-ENG.COM PH. (515) 369-4400

### **SURVEYOR**

HUSKER SURVEYING 4535 NORMAL BLVD LINCOLN, NE 68506 CONTACT: JAYME MALONE EMAIL: JAYME@HUSKERSURVEYING.COM PH. (402) 423-5202

## ARCHITECT

TWP ARCHITECTS 4125 LAKELAND AVENUE N, SUITE 200 MINNEAPOLIS, MN 55422 CONTACT: DAN CAYEMBERG EMAIL: DCAYEMBERG@TWPARCHITECTS.COM PH: (763) 533-7171

## SUBMITTAL DATES

FIRST SUBMITTAL: SECOND SUBMITTAL: ZONING BOARD OF APPEALS: PERMIT SUBMITTAL: SIGNED: PCSMP SUBMITTAL:

04/26/2024 07/02/2024 07/20/2024 09/24/2024 10/23/2024 11/13/2024

## **TITLE DESCRIPTION**

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE FOLLOWS:

## ZONING

NEBRASKA.

CC-FF - COMMUNITY COMMERCIAL/FLOOD FRINGE DISTRICT CC - COMMUNITY COMMERCIAL DISTRICT

## **PROJECT SITE ADDRESS**

3457 SOUTH 84TH STREET OMAHA, NEBRASKA 68124

## **EXISTING/ PROPOSED USE**

EXISTING: PROPOSED:

## **DEVELOPMENT SUMMARY**

AREA: ZONING: DISTRICT

SETBACKS FRONT: SIDE:

INTERIOR SIDE: REAR:

#### <u>PARKING</u> REQUIRED

MULTI-TENANT RETAIL CENTER (85,819 SF/250 SF): MEDICAL OFFICE (14,722 SF/200 SF): OUTDOOR SALES (16,064 SF/2,000 SF): RESTAURANT (228 CAPACITY) (1/4 SEAT AUTOMOTIVE REPAIR (4 X CAPACITY): RESTAURANT (2,770 SF/40 SERVICE SF):

\*5% PKNG REDUCTION FOR TRANSIT ACCESS: UPDATED REQUIRED PKNG: PROVIDED:

OPEN SPACE **REQUIRED:** 

EXISTING: PROVIDED:

DATE OF SURVEY 04/01/2024

## **BASIS OF BEARINGS**

WESTGATE SUBDIVISION, DOUGLAS COUNTY, OMAHA, NEBRASKA.

#### PCSMP

OMA-20240523-7335-P

# SITE PLAN FOR: WESTGATE PLAZA - ACE HARDWARE

## OMAHA, NEBRASKA

COUTY OF DOUGLAS, STATE OF NEBRASKA, AND IS DESCRIBED AS

LOT 985, WESTGATE, A SUBDIVISION IN DOUGLAS COUNTY,

MULTI-TENANT RETAIL CENTER

MULTI-TENANT RETAIL CENTER

8.25 ACRES (359,473 SF) COMMUNITY COMMERCIAL

25	FEET	STREE
15	FEET	
NO	NE	
15	FEET	

	343 SPACES
	74 SPACES
	8 SPACES
rs):	57 SPACES
	12 SPACES
•	<u>28_SPACES</u> 522_SPACES*
PUBLIC	
	<u>22 SPACES</u> 500 SPACES
	523 SPACES

53,921 SF (15%) 30,233 SF (8%) 34,179 SF (10%)

1. NORTH 87"19'27" EAST, BEING NORTH LINE OF LOT 732 OF

NDEX	OF	SHEETS	
NO.	DESCF	RIPTION	
C0.0	COVER	SHEET	
C0.1	REFER	ENCE PLAN	
C1.1	TOPOG	RAPHIC SURVEY/DEMOLITION	PLA
C2.1	DIMENS	SION PLAN	
C3.1	GRADIN	NG PLAN	
C4.1	UTILITY	( PLAN	
L1.1	LANDS	CAPE PLAN	

## **APPROVAL CONDITIONS**

PROVIDE LANDSCAPE PLAN PER PLANS APPROVED BY THE ZONING BOARD OF APPEALS ON AUGUST 8, 2024 (CASE #24–148).

CONDITIONS OF APPROVAL LISTED AS FOLLOWS:

- OUTDOOR STORAGE OF BAGGED GOODS ONLY WITHIN THE DESIGNATED AREA; 2. PROVIDING ALL IMPROVEMENTS AS SHOWN ON THE PLANS SUBMITTED, INCLUDING THE INTERIOR AND PERIMETER
- PARKING LOT LANDSCAPING AND THE SCREEN FENCE TO MITIGATE THE REDUCED BUFFERYARD; 3. SUBMITTAL OF A REZONING APPLICATION TO APPLY THE MCC OVERLAY TO THE SITE.



## UTILITY WARNING

ANY UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY AND RECORDS OBTAINED BY THIS SURVEYOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL THE UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION SHOWN.



CDA ENGINEERING 4121 NW URBANDALE DRIVE, URBANDALE, IA 50322 PH: (515) 369-4400 PROJECT NO. 2403.225

## GENERAL LEGEND

PROPOSED	
PROPERTY BOUNDARY	
SECTION LINE	
CENTER LINE	
RIGHT OF WAY	— — – R/W – — —
BUILDING SETBACK	· · · ·
PERMANENT EASEMENT	——————————————————————————————————————
TEMPORARY EASEMENT	
STORM INTAKE	OST
STORM MANHOLE	SI
SANITARY MANHOLE	S
STORM/SANITARY CLEANOUT	OC
WATER VALVE	M
FIRE HYDRANT ASSEMBLY	<del>M</del> -Q
SIGN	<del>- 0-</del>
DETECTABLE WARNING PANEL	00000 20000
WATER CURB STOP	8
SANITARY SEWER	
SANITARY SERVICE	SS
STORM SEWER	
STORM SERVICE	ST ST ST
WATERMAIN WITH SIZE	
WATER SERVICE	www
SAWCUT (FULL DEPTH)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
SILT FENCE	••••••••
USE AS CONSTRUCTED	(UAC)
MINIMUM PROTECTION ELEVATION	MPE
FINISH FLOOR ELEVATION	FFE

### EXISTING

SANITARY MANHOLE WATER VALVE BOX FIRE HYDRANT WATER CURB STOP WELL STORM SEWER MANHOLE STORM SEWER SINGLE INTAKE STORM SEWER DOUBLE INTAKE FLARED END SECTION DECIDUOUS TREE CONIFEROUS TREE DECIDUOUS SHRUB CONIFEROUS SHRUB ELECTRIC POWER POLE GUY ANCHOR STREET LIGHT POWER POLE W/ TRANSFORMER UTILITY POLE W/ LIGHT ELECTRIC BOX ELECTRIC TRANSFORMER ELECTRIC MANHOLE OR VAULT TRAFFIC SIGN TELEPHONE JUNCTION BOX TELEPHONE MANHOLE/VAULT TELEPHONE POLE GAS VALVE BOX CABLE TV JUNCTION BOX CABLE TV MANHOLE/VAULT MAIL BOX BENCHMARK SOIL BORING UNDERGROUND TV CABLE GAS MAIN FIBER OPTIC UNDERGROUND TELEPHONE OVERHEAD ELECTRIC UNDERGROUND ELECTRIC FIELD TILE SANITARY SEWER W/ SIZE STORM SEWER W/ SIZE WATER MAIN W/ SIZE

ALL	CONST			MA	TERI	ALS,	DU	MPS	TERS,	DE
IIEM	S ARE	PRU	ווסוח	ED	UN	PUB	LIU	2141	LE I S	UR
ALL	PROJ	ECT	PRC		DUR	ES,	MA	TERL	ALS,	BC

CONFORM TO THE CITY OF OMAHA'S STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2024 EDITION ("STANDARD SPECIFICATIONS"), STANDARD PLATES AND MATERIALS.





:\2024\2403225\DWG\2403225 - SITE.DWG \TE: 11/13/24 DATE PLOTTED: 11/13/2024 1:57 PM COMMENT: D BY: JOHN BECKER TECH: ENG:









2.	STANDARD DUTY PAVING	6" P.C.C.



25\DWG\2403225 - SITE.DWG DATE PLOTTED: 11/13/2024 1:57 PM C COKEP TECH:





PLAN	T SC	HEDULE		
CODE	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE
OVERS	TORY	TREES		
AM	5	Miyabe Maple	Acer miyabei	B&B, 2" CALIPER
GD	4	Kentucky Coffeetree	Gymnocladus dioicus 'Espresso'	B&B, 2" CALIPER
GS	2	Skyline Honey Locust	Gleditsia triacanthos inermis 'Skyline'	B&B, 2" CALIPER
SHRUB	S	•	•	
SM	3	Golden Sunrise Spirea	Spiraea x bumalda 'Monhud' TM	CONT, 3 GAL
VS	8	Summersweet Vanilla Spice	Clethra alnifolia 'Vanilla Spice'	CONT, 3 GAL
WM	6	Minuet Weigela	Weigela florida 'Minuet'	CONT, 3 GAL
WP	8	Pink Poppet Weigela	Weigela florida 'Plangen'	CONT, 3 GAL
GRASS	ES	•		
CK	8	Karl Foerster Feather Reed Grass	Calamagrostis x acutiflora 'Karl Foerster'	CONT, 1 GAL
PB	12	Little Bunny Fountain Grass	Pennisetum alopecuroides 'Little Bunny'	CONT, 1 GAL
00	10			



E	SENERAL DEMO NOTES:
1.	THE GENERAL CONTRACTOR SHALL ACCEPT THE PROJECT AS IT EXISTS. AS-BUILT DRAWINGS HAVE NOT BEEN FIELD VERIFIED. ALL EXISTING CONDITIONS, WHETHER OR NOT SPECIFICALLY NOTED ON THE DRAWINGS (INCLUDING BUT NOT LIMITED TO ADDITIONAL WALLS, DOORS, PLUMBING, ELECTRICAL, ETC. NOT SHOWN ON THE PLANS), SHALL BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK.
2.	DEMOLITION DRAWINGS INDICATE GENERAL SCOPE OF WORK ONLY. NOT ALL DEMOLITION WORK NECESSARY IS SPECIFICALLY INDICATED. THE EXTENT AND METHOD OF DEMOLITION SHALL BE AS NEEDED TO ACCOMMODATE THE NEW WORK AS DETAILED.
3.	ACCESS ITEMS INDICATED FOR DEMOLITION IN A MANNER DESIGNED TO MINIMIZE IMPACT ON EXISTING WORK INDICATED TO REMAIN. WHENEVER POSSIBLE, PERFORM DEMOLITION ACTIVITIES FROM AREAS TO BE CONCEALED BY NEW WORK.
4.	PATCH AND REPAIR ALL EXISTING CONSTRUCTION WHICH IS DAMAGED OR DISTURBED TO MATCH EXISTING OR RESTORE TO ORIGINAL CONDITION. WHERE AREAS OR ITEMS THAT ARE INDICATED TO BE REMOVED ABUT OR ADJOIN EXISTING CONSTRUCTION INDICATED TO REMAIN, SAWCUT OR OTHERWISE REMOVE TO PROVIDE A CLEAN EDGE. IF EVIDENCE OF DEMOLITION WILL NOT BE CONCEALED BY NEW WORK, PATCH AND/OR REPAIR TRANSITION TO MATCH ADJACENT SURFACE AND FINISH.
5.	ALL CONSTRUCTION SCHEDULING AND SEQUENCING SHALL BE COORDINATED WITH THE OWNER PRIOR TO BEGINNING ANY WORK. COORDINATE ALL DEMOLITION WORK TO ACCOMMODATE OWNER'S NORMAL OPERATIONS.
5.	ERECT TEMPORARY PARTITIONS/BARRIERS AS REQUIRED TO PREVENT CONTAMINATION OF ADJACENT AREAS THAT ARE OR WILL BE USED BY THE OWNER FROM DUST, DEBRIS, AND EXCESSIVE NOISE CAUSED BY DEMOLITION ACTIVITIES.
7.	SHORE AND/OR BRACE EXISTING WORK AS REQUIRED TO SAFELY REMOVE ITEM(S) OR EXISTING CONSTRUCTION WITHOUT DAMAGE TO EXISTING CONSTRUCTION INDICATED TO REMAIN.
3.	DO NOT MODIFY EXISTING STRUCTURE UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR APPROVED IN ADVANCE BY BOTH THE ARCHITECT AND STRUCTURAL ENGINEER.

## DEMOLITION LEGEND:



EXISTING TO REMAIN EXISTING DOOR TO BE REMOVED

EXISTING DOOR TO REMAIN

### DEMOLITION KEY NOTES:

D1	REMOVE FLOOR ADHESIVES, CORRECT SLAB IMPERFECTIONS, PROVIDE FLOOR LEVELER AND PREP CONCRETE SLAB TO BE SMOOTH, LEVEL, AND FREE OF IMPERFECTIONS AS REQUIRED FOR EL COR EINISHES
5	DEMO & REMOVE ALL EXISTING INTERIOR WALLS THIS SHALL INCLUDE BASES TRIMS MIRRORS
	POLES, ETC. WHERE APPLICABLE. REMOVE ALL UNUSED CONDUIT & WIRING BACK TO EXISTING ELECTRICAL PANELS.
D3	DEMO & REMOVE EXISTING INTERIOR DOORS, FRAMES AND HARDWARE.
D4	EXISTING DEMISING WALL TO REMAIN. PATCH TO MATCH AS NEEDED.
D5	EXISTING STRUCTURAL STEEL COLUMN TO BE REMOVED IF FEASEABLE. GC TO INVESTIGATE. REMOVE ANY DECORATIVE COVER / WRAPS.
D6	DEMO & REMOVE EXISTING WATER CLOSETS / URINALS, LAVATORIES, COUNTERTOPS, GRAB BARS
דס	DEMO & REMOVE EXISTING DRINKING FOUNTAIN SALVAGE FOR RELOCATION
D8	DEMO & REMOVE EXISTING WATER HEATER
Dq	DEMO & REMOVE EXISTING TOILET STALL PARTITIONS / DOORS.
D10	DEMO & REMOVE EXISTING SHOWERS, CURTAINS, GYP. BD. CEILING / SOFFITS, AND ANY ASSOCIATED ACCESSORIES.
D11	DEMO & REMOVE ALL EXISTING VCT FLOOR FINISH & WALL BASE. PATCH, REPAIR AND PREP FLOOR SLAB AS NEEDED TO RECEIVE NEW FINISHES.
D12	DEMO & REMOVE EXISTING SHELVES / STORE FIXTURES / CASEWORK.
D13	DEMO & REMOVE EXISTING ACOUSTICAL CEILING TILE & GRID, INCLUDING ANY LIGHT FIXTURES, CEILING MOUNTED EQUIPMENT, ETC. IN ITS ENTIRETY. REMOVE EXISTING DUCTWORK, WIRING, CONTROLS, ETC. CONNECTED TO CEILING MOUNTED ITEMS BACK TO THE SOURCE (RTU, PANEL, ETC.) REMOVE ALL CONDUIT & WIRING BACK TO EXISTING ELECTRICAL PANELS.
D14	DEMO & REMOVE EXISTING ELECTRICAL PANEL AND TIMECLOCK.
D15	EXISTING SOFFIT TO REMAIN. PATCH TO MATCH OR REPLACE GYP. BD. SHEATHING.
D16	DEMO & REMOVE ALL PLUMBING FIXTURES, WATER HEATERS AND ASSOCIATED ACCESSORIES. CAP OR REROUTE PLUMBING TO MEET CODE.
D17	DEMO & REMOVE ALL ELECTRICAL FIXTURES AND ASSOCIATED ACCESSORIES. REMOVE ALL UNUSED CONDUIT & WIRING BACK TO EXISTING ELECTRICAL PANELS.
D18	DEMO & REMOVE EXISTING STOREFRONT DOORS, WINDOWS, FRAMES AND PREP AS NEEDED FOR WALL INFILL.
D19	DEMO & REMOVE EXISTING WOOD FLOOR PLATFORM.
D20	DEMO & REMOVE EXISTING CEILING MOUNTED EQUIPMENT INCLUDING LIGHT FIXTURES AND DUCTWORK. REMOVE WIRING, CONTROLS, ETC. CONNECTED TO CEILING MOUNTED ITEMS BACK TO EXISTING ELECTRICAL PANELS.
D21	DEMO & REMOVE EXISTING RAISED PLATFORM / STAGE, RAILING, STAIRS AND ALL ASSOCIATED ITEMS.
D22	DEMO & REMOVE EXISTING FENCE AND ALL ASSOCIATED PATIO ITEMS.
D23	CAREFULLY SAWCUT & REMOVE PORTION OF EXISTING CMU WALL AS NEEDED FOR LINTEL AND DOOR OPENING.
D24	DEMO & REMOVE EXTING DOOR PAIR, FRAME, ASSOCIATED HARDWARE AND PORTION OF EXISTING CMU WALL AS NEEDED FOR LINTL AND OVERHEAD COILING DOOR INSTALLATION.
D25	DEMO & REMOVE EXISTING FURRING WALLS.
D26	DEMO & REMOVE PORTION OF EXISTING STOREFRONT AND EXTERIOR WALLS AS NEEDED FOR NEW DOORS.
D27	DEMO & REMOVE EXISTING INTERIOR STOREFRONT DOORS / WINDOWS AND WALLS AT ALCOVES.
D28	REMOVE ALL PANELING / FURRING. STRIP AND CLEAN INTERIOR FACE OF EXISTING CMU WALLS IN PROPOSED SALES AREA AS NEEDED FOR PAINT FINISH.
D29	EXISTING CMU BEARING WALL TO REMAIN.
D30	DEMO & REMOVE EXISTING BITUMINOUS. PREP AS NEEDED FOR CONCRETE INFILL.
D31	DEMO & REMOVE PORTION OF EXISTING CONCRETE CURB AND SIDEWALK AS NEEDED FOR ADA-COMPLIANT CURB CUT FROM ADA-COMPLIANT ACCESS AISLE. DEMO & REMOVE EXISTING
D32	DEMO & REMOVE ALL EXISTING CARPET FLOOR FINISH AND WALL BASE. PATCH, REPAIR AND PREF FLOOR SLAB AS NEEDED TO RECEIVE NEW FINISHES.
D33	DEMO & REMOVE EXISTING SLAT WALLS AND FURRING.
D34	DEMO & REMOVE EXISTING TILE FLOOR AND WALL BASE. PATCH, REPAIR AND PREP FLOOR SLAB AS NEEDED TO RECEIVE NEW FINISHES.
D35	DEMO & REMOVE EXISTING STOREFRONT DOORS, WINDOWS, FRAMES AND PREP AS NEEDED FOR STOREFRONT REPLACEMENT.
D36	DEMO & REMOVE EXISTING ROOF MEMBRANE AND INSULATION DOWN TO EXISTING METAL DECK, AND ALL ROOFTOP EQUIPMENT ABOVE AREA OF REMODEL. SEE PLAN FOR EXTENT OF DEMO.
D37	DEMO & REMOVE ELECTRICAL PANELS AND ELECTRICAL COMPONENTS / WIRING AS NEEDED TO COMBINE EXISTING SEPARATE SERVICES INTO ONE SERVICE FOR REMODELED SPACE.
D38	DEMO & REMOVE EXISTING CONCRETE SIDEWALK.
D39	DEMO & REMOVE EXISTING GYP. BD. CEILING / SOFFIT AND FRAMING.
D40	DEMO & REMOVE EXISTING E.I.F.S. FINISH AS NEEDED FOR NEW E.I.F.S. FINISH.
D41	EXISTING DOOR TO REMAIN. CLOSE AND LOCK DOOR. TACK WELD AND SEAL.
D42	SAWCUT & REMOVE EXISTING CONCRETE RAISED STEP TO PROVIDE FOR FURRING OF WALL ACROSS OPENING FLUSH TO MATCH EXISTING.
D43	SAWCUT & REMOVE PORTION OF EXISTING CONCRETE SLAB TO PROVIDE FOR NEW POURED CONCRETE RAMP.

BEGIN DEMO OF ROOF MEMBRANE / INSULATION & ROOF TOP EQUIPMENT AT EXISTING DEMISING WALL **D30** 

D30 -









1 FLOOR PLAN A3-1 3/32" = 1'-0"

![](_page_10_Picture_2.jpeg)

![](_page_10_Picture_3.jpeg)

Certification
ALAN JOHN ALAN JOHN PUTOWSKI A-4872 Date: 09/27/24 I, Alan J. Plutowski, am the Coordinating Professional on this Westgate Retail - ACE Hardware project.
Project Information
WESTGATE PLAZA
ACE HARDWARE
3401 S. 84TH STREET
OMAHA, NE 68124
Revisions
1       05/30/24       TENANT REVISIONS         2       07/11/24       TENANT REVISIONS         3       09/27/24       CITY COMMENTS         4       10/24/24       CITY COMMENTS
Date: 03/12/2024
Drawn By: DM
Checked By: AS/DC
Job Number: 00324
NORTH
Sheet Information
FLOOR PLAN
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A3-1

![](_page_11_Figure_0.jpeg)

## ---WRAP TOP / WD BLOCKING & BASE FLASH W/ FABRIC FLASHING - PREFIN. MTL PARAPET CAP -FELT BASE FLASHING P.T. WD BLOCKING — INSUL. STEEL CURB BY MECH. 1226

## 2 MECH. EQUIP. CURB @ OPENING A3-2 11/2" = 1'-0"

## ROOFING KEYED NOTES:

- REMOVE ALL EXISTING ROOFING & INSULATION FOR
   REPLACEMENT
- REMOVE ALL EXISTING ROOFING & INSULATION IN CANOPIES FOR REPLACEMENT WITH NEW ROOFING. MAINTAIN EXISTING DRAIN LOCATIONS.
- 3 TYPICAL RTU LOCATION W/ ROOF CURB. SEE MECHANICAL.
- FIELD VERIFY EXISTING ROOF DRAIN, DOWNSPOUTS & OTHER COMPONENT. MAINTAIN EXISTING SYSTEM DESIGN & REPLACE EXISTING EXPOSED COMPONENTS & IN SIMILAR LOCATIONS.

### GENERAL ROOF NOTES:

- . AVERAGE ROOF INSULATION TO EXCEED CURRENT STATE CODE REQUIREMENTS. SEE SPEC.
- 2. MECHANICAL INFORMATION SHOWN IS INTENEDED ONLY TO COMMUNICATE DESIGN INTENT. REFER TO MECHANICAL DRAWINGS FOR DETAILED INFORMATION. COORDINATE / VERIFY ALL EQUIPMENT LOCATIONS WITH MECHANICAL
- DRAWINGS. 3. CONNECT DOWNPOUTS TO STORM SEWER. REFER TO CIVIL.
- 4. REFER TO CIVIL FOR GRADE CONDITIONS & DRAINAGE.

ROOF	LEGEND
EXTENT OF ROO	F REPLACEMENT
	SLOPING STRUCTURE WITH RIGID INSULATION & MEMBRANE ROOFING
DSG	DOWNSPOUT TO EMPTY AT GRADE (18) A10.1 SIM
DS	DOWNSPOUT TIED INTO EXISTING STORM SEWER $\begin{pmatrix} 1 \\ 41 \end{pmatrix}$
S	EXISTING SCUPPER W/ MODIFIED DOWNSPOUT
	DRAINAGE ARROW

2

![](_page_11_Picture_15.jpeg)

![](_page_11_Picture_16.jpeg)

![](_page_11_Figure_17.jpeg)

![](_page_12_Figure_2.jpeg)

![](_page_12_Picture_3.jpeg)

![](_page_12_Picture_4.jpeg)

![](_page_12_Figure_5.jpeg)

![](_page_13_Figure_0.jpeg)

 1
 FIRST FLOOR REFLECTED CEILING PLAN

 A4-1
 3/32" = 1'-0"

## CEILING LEGEND

+	
_	
I	I
	$\Phi$
	XX
-	

ACT-1: 2'X4' ACOUSTIC CEILING TILE AND GRID SYSTEM GYP. BD. CEILING @ BOTTOM OF STRUCTURE

GYP. BD. SOFFIT

EXISTING EXTERIOR LINEAR WOOD SOFFIT

EXTERIOR WALL SCONCE

2x4 LAY-IN LED LIGHT FIXTURE

4' CEILING MOUNTED LED STRIP LIGHT 

![](_page_13_Picture_12.jpeg)

![](_page_13_Picture_13.jpeg)

![](_page_13_Picture_14.jpeg)

![](_page_13_Picture_15.jpeg)

![](_page_14_Picture_0.jpeg)

8

(12)-

(7)

(6)

![](_page_14_Figure_1.jpeg)

(5)

(4)

2

46

(3)

 $(\mathbf{2})$ 

1

![](_page_14_Picture_3.jpeg)

![](_page_14_Picture_4.jpeg)

![](_page_14_Picture_5.jpeg)

3401 S. 84TH STREET OMAHA, NE 68124 Revisions

Date:	03/12/2024
Drawn By:	DM
Checked By:	AS/DC
Job Number:	00324

Sheet Information

EXTERIOR ELEVATIONS

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A5 - 1

![](_page_15_Figure_0.jpeg)

![](_page_15_Figure_2.jpeg)

![](_page_15_Picture_3.jpeg)

![](_page_15_Picture_4.jpeg)

![](_page_16_Figure_0.jpeg)

![](_page_16_Figure_1.jpeg)

![](_page_16_Figure_2.jpeg)

![](_page_16_Figure_3.jpeg)

![](_page_16_Figure_4.jpeg)

![](_page_16_Figure_5.jpeg)

![](_page_16_Figure_6.jpeg)

				HARDWAR	
TH	DOOR / FRAME LABEL	FRAME TYPE	<u>DETAILS</u>	EGROUP	NOTES
				•	
4 1/2"	CLR. ANOD. ALUM	NA		1	STANLEY DURA-GLIDE 3000, FULL BLACKOUT, FACTORY CONTACTS, 1" INSUL. GLASS
4 1/2"	CLR. ANOD. ALUM	NA		1	STANLEY DURA-GLIDE 3000, FULL BLACKOUT, FACTORY CONTACTS, 1" INSUL. GLASS
4 1/2"	CLR. ANOD. ALUM	NA		1	STANLEY DURA-GLIDE 3000, FULL BLACKOUT, FACTORY CONTACTS, 1" INSUL. GLASS
1 3/4"	EXIST	EXIST		-	REPAIR AS NEEDED & PAINT
3"					
1 3/4"	SC WD - STAIN	F1		2	MINWAX "SLATE" W/ POLYCRYLIC SATIN
1 3/4"	SC MD - STAIN	F1		2A	MINWAX "SLATE" W/ POLYCRYLIC SATIN
1 3/4"	SC MD - STAIN	F1		2B	MINWAX "SLATE" W/ POLYCRYLIC SATIN
1 3/4"	SC WD - STAIN	F1		З	MINWAX "SLATE" W/ POLYCRYLIC SATIN
1 3/4"	SC WD - STAIN	F1		З	MINWAX "SLATE" W/ POLYCRYLIC SATIN
1 3/4"	SOLID CORE STAIN GRADE	F1		2	MINWAX "SLATE" W/ POLYCRYLIC SATIN
1 3/4"	HM - INSULATED	F1/GROUT SOLID		4	PAINT EXT TO MATCH EX. WALL / REVERE PEWTER S.G.
1 3/4"	НМ	F1		5	PAINT "REVERE PEWTER" S.G.
1 3/4"	HM - INSULATED	57/CERQLHASORED		6	PAINT EXT TO MATCH EX. WALL / REVERE PEWTER S.G.
	INSULATED COILING			7	COILING OVERHEAD DOOR, FACTORY FINISH (CLOSEST TO EXT WALL COLOR)
1/2"	ALUM DBL ACTION	F2		9	PAIR - DOUBLE ACTING, ELIASON LWP-3 W/ 9" JAMB GUARD & 36" SS BASE PLATES
1 2/1"	SC IND - STAIN	E1		٩	

![](_page_16_Picture_8.jpeg)

![](_page_16_Picture_9.jpeg)

Certification
ALAN JOHN PUTOWSKI A-4872 Date: 09/27/24 I, Alan J. Plutowski, am the Coordinating Professional on this Westgate Retail - ACE Hardware project. Project Information VESTGATE PLAZE
ACE HARDWARE
3401 S. 84TH STREET OMAHA, NE 68124 Revisions
1 05/30/24 TENANT REVISIONS
Date: 03/12/2024
Drawn By: DM
Job Number: 00324
Sheet Information
SCHEDULES, DOOR & FRAME TYPES, WALL TYPES/ASSEMBLIES, DETAILS, ABBREVIATIONS COPYRIGHT 2024
A 1 0 - 1

GENERAL STRUCTURAL NOTES:						
A. DESIGN DATA:						
DESIGN CODE:	IBC 2018					
CONCRETE 28 DAY STRENGTH:	F'C = 4,000 PSI					
STRUCTURAL STEEL (BEAMS & COLUMNS)	ASTM A992					
MISCELLANEOUS ROLLED SECTIONS AND PLATES (ANGLES, CHANNELS, PLATES, ETC.)	ASTM A36					
HIGH STRENGTH BOLTS	ASTM A325					
PLAIN BOLTS AND ANCHORS OR GR. 36 (WELDABLE, S1)	ASTM F1554 GR. 36					
REINFORCING STEEL	ASTM A615 FY = 60,000 PSI					
WELDED REINFORCING	ASTM A615 FY = 60,000 PSI					
WELDED WIRE FABRIC	ASTM A185					
CONCRETE MASONRY UNITS (ASTM C90/ NORMAL WEIGHT/ 1,900 PSI UNIT STRENGTH)	F'M = 1,500 PSI					
MORTAR TYPE M OR S GROUT 28 DAY STRENGTH	E'C = 2 000 PSI					
ALLOWABLE SOIL BEARING CAPACITY	1.500 PSE (ASSUMED)					
DESIGN LOADS						
GRAVITY LOADS:						
FLOORS DL = 25 PSF ROOFS DL = 25 LL BAS	LL = 100 PSF 5 PSF SED ON GROUND SNOW LOAD OF 30 PSF 0. Ct = 1.0. AND I=1.0)**					
**INCREASE LIVE LOAD FOR SNOW DRIFTIN CONFORMANCE WITH THE AMERICAN SOCI ENGINEERS ANSI/ASCE 7-16.	G AS REQUIRED IN ETY OF CIVIL					
WIND LOADING CRITERIA (2018 IBC) BASE WIND SPEED (3 SECOND GU	ST) 'V' = 115 MPH					
BUILDING CATEGORY II						
EXPOSURE CATEGORY B						
B FOUNDATION WORK						
1. SUBSOILS SUPPORTING OR IN DIF ELEMENTS SHALL BE PROTECTED AGAINST EFFECT TO THE STRUCTURE AS A WHOLE (	ECT CONTACT WITH FOOTINGS, SLABS ON GRADE, OR OTHER FOUNDATION FREEZING CONDITIONS THAT COULD CAUSE MOVEMENT OR OTHER DETRIMENTAL					
2. WHEN WORKING NEAR EXISTING A CAUTION SO AS NOT TO UNDERMINE, DIST	ND/OR NEW CONSTRUCTION, THE CONTRACTOR SHALL EXERCISE EXTREME JRB, DAMAGE OR, IN ANY WAY, CAUSE UNDESIRABLE MOVEMENT, CRACKING,					
AND/OR SETTLEMENT OF THE ADJACENT C 3. ALL SLABS ON GRADE SHALL BEAN	ONSTRUCTION. R ON UNDISTURBED VIRGIN SOIL OR PROPERLY COMPACTED BACKFILL/GRANULAR					
FILL. ANY UNACCEPTABLE UNDISTURBED VIRGIN SOIL OR BACKFILL/GRANULAR FILL, AS DETERMINED BY THE OWNER'S GEOTECHNICAL ENGINEER, SHALL BE REMOVED AND REPLACED AS REQUIRED BY THE GEOTECHNICAL ENGINEER.						
OF GRADE ABOVE THE BOTTOM OF ALL FOOTINGS FOR FROST PROTECTION.						
C. CONCRETE:						
1. CONCRETE SHALL BE REGULAR W CONFORMING TO REQUIREMENTS OF NEBR CONCRETE SHALL CONFORM TO ACI 301-10	EIGHT (144 PCF) WITH TYPE I CEMENT, POTABLE WATER, AND AGGREGATES ASKA DEPARTMENT OF ROADS FOR 47-B CONCRETE, UNLESS NOTED OTHERWISE.					
2. MECHANICALLY VIBRATE CONCRETE, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND UNDERFLOOR DUCTS AND OTHER ITEMS EMBEDDED IN THE SLAB.						
3. DO NOT PLACE PIPES, DUCTS, OR CHASES IN STRUCTURAL CONCRETE WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR LOCATIONS.						
4. CONSTRUCT FORMWORK SO CONCRETE MEMBERS AND STRUCTURES ARE OF SIZE, SHAPE, ALIGNMENT, ELEVATION, AND POSITION INDICATED, WITHIN TOLERANCE LIMITS OF ACI 117.						
5. ALL REINFORCING STEEL SHALL BE DEFORMED NEW BILLETS BARS (A615, GRADE 60), BENT COLD, AND DETAILED, FABRICATED, AND HELD IN PLACE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315 LATEST EDITION) EXCEPT AS OTHERWISE DETAIL FD OR SPECIFIED						
6. UNLESS NOTED OTHERWISE, SLAF WIRE FABRIC ON 4" GRANULAR FILL WITH V	3S ON GRADE SHALL BE 4" CONCRETE REINFORCED WITH 6 X 6 W1.4 X W1.4 WELDED APOR BARRIER.					
D. MASONRY:						
1. FURNISH AND CONSTRUCT MASO	NRY IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR					
MASONRY CONSTRUCTION (ACI 530.1-02/AS	CE 6-02/TMS 602-02.					
2. LAY MASONRY UNITS IN RUNNING	BOND.					
3. MAXIMUM GROUT LIFT WITHOUT C	LEANOUTS SHALL BE 4'0" IN BLOCK WALLS AND 8" GROUTED TWO WYTHE WALLS.					
4. 8" WALLS PROVIDE CONTINUOUS I TYPICAL REINFORCING SHALL BE 1 #5 AT 4" WINDOW JAMBS, AND SIDE OF EXPANSION	FULL HEIGHT VERTICAL REINFORCING IN CENTER OF GROUT AT CENTER OF WALL. 0" ON CENTER AND 1 #5 AT CORNERS, INTERSECTIONS, WALL ENDS, DOOR AND OR CONTROL JOINTS UNLESS NOTED OTHERWISE.					
5. PROVIDE LADDER TYPE #9 JOINT I AND UNLESS NOTED OTHERWISE.	REINFORCING AT 16" ON CENTER VERTICAL SPACING IN ALL CONCRETE MASONRY					
6. SPLICE MASONRY WALL REINFOR	CING 48 BAR DIAMETERS.					
7. SPLICE PLACE BOND BEAM REINFO DETAIL ON THIS SHEET.	DRCING AT MASONRY CONTROL/EXPANSION JOINTS AS SHOWN ON MASONRY JOINT					
8. PROVIDE CONTINUOUS BOND BEA	MS AT ALL BEAM BEARING ELEVATIONS AND AT THE TOP OF ALL WALLS.					
9. PROVIDE CONTINUOUS WIRE LATH	I GROUT BARRIERS BELOW BOND BEAMS.					
PROVIDE LINTELS OVER ALL OPENINGS AN	D RECESSES IN MASONRY WALLS. EXTERIOR LINTELS SHALL BE GALVANIZED,					
UNLESS NOTED OTHERWISE.						
10. FOR ALL OPENINGS NOT OTHERW MASONRY WIDTH 1 L 3 ½ X 3 ½ X ¼ FOR SPANS UP TO 8' 0". FOR SPANS LESS THAN	ISE DETAILED OR SCHEDULED, MINIMUM LINTELS SHALL BE FOR EACH 4 INCH OF ANS UP TO 4'0", 1 L 4 X 3 $\frac{1}{2}$ X $\frac{1}{4}$ FOR SPANS UP TO 6' 0" AND 1 L 5 X 3 $\frac{1}{2}$ X 5/16 FOR 2' 0" PROVIDE A 5/16" PLATE.					
11. ALL LINTELS SHALL HAVE A MINIM	JM BEARING OF 8 INCHES EACH END.					
E. STEEL:						

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS AND OSHA REGULATION 29 CFR PART 1926. 2. ALL STEEL BEAMS BEARING ON MASONRY SHALL HAVE A MINIMUM OF 8" OF BEARING. PROVIDE THE BEAMS WITH BEARING PLATES AND WALL ANCHORS UNLESS NOTED OTHERWISE. PROVIDE A MINIMUM OF 4 COURSES OF BRICK OR SOLID

CONCRETE MASONRY FOR BEAM BEARING. 3. SHOP PAINT STRUCTURAL STEEL WITH FABRICATOR'S STANDARD LEAD- AND CHROMATE-FREE, NONASPHALTIC, RUST-INHIBITING PRIMER, UNLESS NOTED OTHERWISE. ALL EXTERIOR EXPOSED STEEL SHALL BE GALVANIZED. UPON APPROVAL OF ARCHITECT, PAINTING MAY NOT BE REQUIRED FOR SURFACES ENCLOSED IN INTERIOR CONSTRUCTION.

4. COMPLY WITH AMERICAN WELDING SOCIETY STANDARDS. ALL WELDERS SHALL HAVE VALID CERTIFICATES AND HAVE CURRENT EXPERIENCE IN TYPE OF WELD CALLED FOR.

5. WELDING ELECTRODES SHALL BE E70 FOR ALL STEEL, UNLESS NOTED OTHERWISE.

#### F. STEEL DECK:

1. MATERIAL, DESIGN, MANUFACTURE, AND INSTALLATION OF METAL DECKING SHALL BE FURNISHED BY A MEMBER OF

THE STEEL DECK INSTITUTE. 2. PROVIDE L 3X3X1/4 ANGLE FRAMING AROUND ALL ROOF PENETRATIONS AND AS REQUIRED FOR SUPPORT OF ROOF

CURBS TO STIFFEN METAL DECK EDGES.

3. NEW ROOF DECK SHALL MATCH EXISTING PROFILE AND GAUGE. WELD STEEL DECK TO STRUCTURAL MEMBERS WITH MINIMUM 5/8" DIAMETER PUDDLE WELDS AT 6" ON CENTER AT DECK ENDS AND LAPS, 12" ON CENTER AT INTERMEDIATE LOCATIONS. FASTEN STEEL DECK SIDELAPS WITH #10 TEK SCREWS AT 8" ON CENTER.

G. LIGHT GAUGE METAL:

HAS BEEN CUT.

H. INSPECTIONS:

b.

I. OTHER:

5.

6.

OPENINGS.

1. LIGHT GAUGE METAL FRAMING SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITION OF "THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" AND "THE COLD FORMED STEEL FRAMING DESIGN GUIDE" OF THE AMERICAN IRON AND STEEL INSTITUTE.

2. PROVIDE TRACKS, BLOCKING, LINTELS, CLIP ANGLES, STRAP BRACING, SHOES, REINFORCEMENTS, FASTENERS, AND ACCESSORIES TO PROVIDE A COMPLETE METAL FRAME SYSTEM.

3. ISOLATE PARTITIONS FROM STRUCTURAL ELEMENTS WITH SLIP OR CUSHION-TYPE JOINTS BETWEEN STEEL FRAMING AND STRUCTURE AS RECOMMENDED BY STEEL FRAMING MANUFACTURER TO PREVENT TRANSFER OF STRUCTURAL LOADS OR MOVEMENTS TO PARTITIONS.

4. INSTALL HORIZONTAL BRIDGING IN WALL SYSTEM AS REQUIRED BY METAL STUD SUPPLIER. MINIMUM BRIDGING SPACING SHALL BE 4'0" O.C. (VERTICAL DISTANCE ) UNTIL PERMANENT INTERIOR WALL SHEATHING IS INSTALLED. 5. FASTEN PLYWOOD WITH 1/4 INCH TEK SCREWS AT 6 INCH AT ALL SUPPORTS AND EDGES.

6. BEARING STUDS MUST BE FABRICATED WITH FULL STUD END SEATED AGAINST TRACK WEB. DO NOT USE STUD THAT

7. PROVIDE DOUBLE METAL STUD AROUND ALL OPENINGS IN STUD WALL SYSTEM AT JAMBS, HEADS, AND SILLS. WELD AT ALL INTERSECTIONS.

1. IN ACCORDANCE WITH 2018 IBC SECTION 1705, AS NOTED BELOW, TESTING AND INSPECTION SHALL BE BY AN INDEPENDENT TESTING/INSPECTION FIRM UNDER THE SUPERVISION OF A LICENSED ENGINEER EMPLOYED BY THAT FIRM. THIS ENGINEER SHALL BE DEEMED THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS PERFORMED BY HIS FIRM OR HIS CONSULTANTS. INSPECTORS SHALL BE ICBO CERTIFIED AND APPROVED BY THE BUILDING OFFICIAL.

2. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RESPONSIBLE FOR DEFINING THE ACTIVITIES OF THE INSPECTORS, FOR CERTIFYING THE QUALIFICATIONS OF THE INSPECTORS WITH THE BUILDING OFFICIAL AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO DEFINE THEIR SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRED AS OUTLINED IN THE INTERNATIONAL BUILDING CODE.

3. SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION THE INSPECTIONS CONDUCTED BY THE LOCAL DEPARTMENT OF BUILDING SAFETY AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR HIS AUTHORIZED AGENT FROM REQUESTING THE PERIODIC AND CALLED INSPECTIONS REQUIRED BY SECTION 104.4 OF THE INTERNATIONAL BUILDING CODE.

4. SPECIAL INSPECTIONS REQUIRED INCLUDE, BUT MAY NOT BE LIMITED TO, THE FOLLOWING: a. CONCRETE PER SECTION 1705.3 AND TABLE 1705.3 AND ALL APPLICABLE EXCEPTIONS.

WELDING: PER SECTION 1705.3.

c. STRUCTURAL MASONRY PER SECTION 1705.4.

1. UNLESS NOTED OTHERWISE, EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT 3 EXPANSION ANCHORS OR APPROVED EQUAL. ADHESIVE (EPOXY) ANCHORS SHALL CONSIST OF HILTI STANDARD HAS-E RODS WITH THE HIT-HY 200 ADHESIVE SYSTEM OR APPROVED EQUAL. INSTALL ANCHOR PER MANUFACTURER'S REQUIREMENTS.

2. VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO STARTING WORK. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES.

3. VERIFY IN FIELD ALL EXISTING CONDITIONS SHOWN ON DRAWINGS.

4. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL, AND PLUMBING WITH APPROPRIATE TRADES. PROVIDE ALL TEMPORARY BRACING, SHORING, GUYING, OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.

INSTALLING CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SHORING OF EXISTING STRUCTURE AT NEW WALL

ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE STAMP (AND SIGNATURE) OF AN ENGINEER REGISTERED IN NEBRASKA.

![](_page_17_Picture_30.jpeg)

![](_page_17_Picture_31.jpeg)

![](_page_17_Picture_32.jpeg)

GENERAL STRUCTURAL

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NOTES

![](_page_17_Picture_35.jpeg)

![](_page_18_Figure_0.jpeg)

1 STRUCTURAL FLOOR PLAN S1-1 3/32" = 1'-0"

![](_page_18_Picture_2.jpeg)

A

![](_page_18_Picture_3.jpeg)

![](_page_18_Picture_4.jpeg)

![](_page_18_Picture_5.jpeg)

![](_page_19_Figure_0.jpeg)

![](_page_19_Picture_25.jpeg)

![](_page_19_Picture_26.jpeg)

![](_page_19_Picture_27.jpeg)

![](_page_19_Picture_28.jpeg)

![](_page_20_Figure_0.jpeg)

1. CON	TRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO NEW WORK.
TO A	VOID CONFLICTS WITH EXISTING STRUCTURE AND WITH ALL TRADES OF NEW WORK.
2. DO N REQI	IOT ROUTE PIPING OR DUCTWORK ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE JIRED CLEARANCES.
3. Main Air II	TAIN MINIMUM 10'-0" CLEARANCE TO EXHAUST FANS AND WASTE VENTS FROM ALL FRES NTAKES.
4. main Allc	TAIN MANUFACTURER'S REQUIRED CLEARANCE AROUND ALL MECHANICAL EQUIPMENT W PROPER OPERATION AND FOR EASY MAINTENANCE AND FILTER ACCESS.
5. COO BE P PENE RESF	RDINATE EXACT LOCATION OF ALL FLOOR, WALL, AND ROOF PENETRATIONS AND WORK ERFORMED ABOVE THE FLOORS AND ROOF WITH GENERAL CONTRACTOR. SEAL ALL ETRATIONS OF EXTERIOR ENVELOPE WEATHER TIGHT. CONTRACTOR SHALL BE PONSIBLE FOR PROVIDING ROOF WORK IN ACCORDANCE WITH ROOF WARRANTY.
6. UNLE JOIS <sup>-</sup> AND REQI	ESS OTHERWISE NOTED, ROUTE PIPING AND DUCTWORK AS HIGH AS POSSIBLE. UTILIZE T SPACE TO AVOID CONFLICTS. COORDINATE EXACT ROUTING WITH STRUCTURE, LIGHT ALL OTHER TRADES. PROVIDE NECESSARY OFFSETS, TRANSITIONS, AND EXTENSIONS A JIRED TO COMPLETE INSTALLATION AT NO ADDITIONAL COST TO OWNER.
7. Plan Geni Pro <sup>v</sup>	IS ARE SCHEMATIC IN NATURE. DUCTWORK/PIPE ROUTING IS SHOWN FOR CLARITY AND ERAL ROUTING INFORMATION. COORDINATE EXACT ROUTING WITH ALL OTHER TRADES. VIDE ALL ADDITIONAL OFFSETS AS REQUIRED TO COMPLETE INSTALLATION.
8. PLAN OWN	I WORK TO MINIMIZE SHUT DOWNS. COORDINATE ALL REQUIRED SHUT-DOWNS WITH ER AND ADJACENT TENANTS.
9. INST. LOCA	ALL ALL VALVES AND HVAC DAMPERS ABOVE ACCESSIBLE CEILINGS OR IN ACCESSIBLE ATIONS. PROVIDE ACCESS PANELS WHERE REQUIRED.
10. DO N ROU	NOT ROUTE WATER PIPING IN EXTERIOR WALLS UNLESS OTHERWISE NOTED. PIPING TED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION.
11. FIRE ASSE TO A	CAULK ALL PIPE AND DUCTWORK PENETRATIONS THROUGH FIRE RATED WALLS AND EMBLIES. CAULK AROUND ALL PENETRATIONS THOUGH FULL HEIGHT SOUND WALLS. RE RCHITECTURAL DRAWINGS FOR WALL CONSTRUCTION.
12. CEN DEVI	TER DIFFUSERS, REGISTERS, AND GRILLES IN CEILING TILES WHERE 24X24 OR 24X12 CEI CES ARE NOT USED.
13. SPA BUILI PLEN	CE ABOVE ALL CEILINGS SHALL BE MAINTAINED AS A RETURN AIR PLENUM PER APPLICAE DING CODES AND AHJ. COMBUSTIBLE MATERIALS ARE NOT PERMITTED WITHIN RETURN IUM. ONLY PLENUM RATED MATERIALS CAN BE EXPOSED TO RETURN AIR PLENUM.
14. CON ADDI LOCA	TRACTOR SHALL VERIFY RETURN AIR PATH IS MAINTAINED THROUGHOUT. PROVIDE TIONAL OPENING AS REQUIRED TO MAINTAIN RETURN AIR PATH. ADJUST ORIENTATION ATION OF DUCTWORK AS REQUIRED TO AVOID CONFLICTS.
15. COO THEF	RDINATE FINAL LOCATIONS OF THERMOSTATS WITH OWNER. DO NOT INSTALL RMOSTATS IN DIRECT SUNLIGHT. ROUGH-IN BY ELECTRICAL.
16. SEE DEVI ALIG APPL	ELECTRICAL DRAWINGS DEVICE ALIGNMENT DETAIL FOR ALL SENSOR AND/OR CONTROL CE INSTALLATION HEIGHTS AND SPACING NOTES UNLESS OTHERWISE NOTED. IF DEVICE NMENT DETAIL NOT AVAILABLE, MOUNT AT PREFERRED MOUNTING HEIGHT WHERE ICABLE, SEE SPECIFICATIONS, OR CONFIRM WITH ENGINEER PRIOR TO INSTALLATION.
17. CON FOR	TRACTOR TO FURNISH ALL LOW VOLTAGE AND LINE VOLTAGE CONTROL WIRING REQUIF COMPLETE OPERATION OF ALL MECHANICAL EQUIPMENT.
GENI	ERAL DETAIL REFERENCES APPLICABLE TO ALL MECHANICAL SHEE
4 M2	PROVIDE DUCTWORK FITTINGS PER DETAIL NOTED.
5	PROVIDE RUN OUTS TO DIFFUSERS AND REGISTERS SHALL MATCH
M2	1 NECK SIZE UNLESS OTHERWISE NOTED PER DETAIL NOTED.
M2	TERMINALS NOT DUCTED PER DETAILS NOTED.
(13 (M2	PROVIDE TRANSFER DUCTWORK AND OPENINGS ABOVE CEILINGS AS NOTED ON PLAN.
KEYN	OTES
M101	DO NOT ROUTE DUCTWORK OVER ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED
M102	CLEARANCES. INSTALL THERMOSTAT/SENSOR ON STEEL/CONCRETE COLUMN. WHERE POSSIBLE, INS' IN OPEN WEBBING OF STEEL. INSTALL ASSOCIATED CONDUIT IN A NEAT AND ORDERLY
M103	FASHION. COORDINATE FINAL PLACEMENT WITH ARCHITECT PRIOR TO INSTALLATION. PROVIDE OPENING ON TOP SIDE OF DUCTWORK (MATCHING SIZE OF DUCT) FOR PLENU RETURN PROVIDE OPENING WITH S/S WIRE MESH WITH MINIMUM 2" OPENINGS
M104	ROUTE S.A. AND R.A. DUCTWORK UP TO ROOFTOP UNIT. TRANSITION/OFFSET DUCT IN VERTICAL AS REQUIRED TO MATCH ROOFTOP UNIT INLET/OUTLET SIZE.

- M104 ROUTE S.A. AND R.A. DUCTWORK UP TO ROOF TOP UNIT. TRANSITION/OFFSET DUCT IN VERTICAL AS REQUIRED TO MATCH ROOFTOP UNIT INLET/OUTLET SIZE.
   M105 E.A. DUCTWORK UP TO EXHAUST FAN ON ROOF. TRANSITION AS REQUIRED TO FAN INLET SIZE.
   M106 DIFFUSER LOCATED IN SPACE WITHOUT A CEILING. INSTALL AT THE SAME ELEVATION OF LIGHTING. CONFIRM FINAL ELEVATION WITH ARCHITECT PRIOR TO INSTALLATION. COORDINATE INSTALLATION WITH LIGHTING AND ALL OTHER TRADES. EXTEND AND OFFSET DUCT RUNOUT AS REQUIRED TO MAKE CONNECTION AND AVOID CONFLICTS.
   M107 EXHAUST REGISTER LOCATED IN SPACE WITHOUT A CEILING. INSTALL AT 10'-0" A.F.F. CONFIRM FINAL ELEVATION WITH OWNER PRIOR TO INSTALLATION. COORDINATE INSTALLATION WITH OWNER PRIOR TO INSTALLATION. COORDINATE INSTALLATION WITH LIGHTING AND ALL OTHER TRADES. EXTEND AND OFFSET DUCT RUNOUT
- AS REQUIRED TO MAKE CONNECTION AND AVOID CONFLICTS. M108 PROVIDE PAINT GRIP ON OUTSIDE SURFACE OF ALL EXPOSED DUCTWORK FOR FIELD PAINTING. COORDINATE FINAL FINISH WITH GENERAL CONTRACTOR AND ARCHITECT. M110 MOUNT AIR CURTAIN ABOVE DOOR AND INSTALL PER MANUFACTURER RECOMMENDATIONS.

![](_page_20_Picture_4.jpeg)

![](_page_20_Figure_5.jpeg)

![](_page_21_Figure_0.jpeg)

#### GENERAL ROOF NOTES

- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO NEW WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING PIPING AND DUCTWORK AS NECESSARY TO AVOID CONFLICTS WITH EXISTING STRUCTURE AND WITH ALL TRADES OF NEW WORK.
- 2. MAINTAIN MINIMUM 10'-0" CLEARANCE TO EXHAUST FANS AND VENTS THROUGH ROOF FROM ALL FRESH AIR INTAKES.
- 3. MAINTAIN MANUFACTURER'S REQUIRED CLEARANCE AROUND ALL MECHANICAL EQUIPMENT TO ALLOW PROPER OPERATION AND FOR EASY MAINTENANCE AND FILTER ACCESS.
- 4. MAINTAIN A MINIMUM 10'-0" CLEARANCE FROM ROOFTOP EQUIPMENT TO ROOF EDGE.
- 5. COORDINATE EXACT LOCATION OF ALL ROOF PENETRATIONS WITH GENERAL CONTRACTOR. SEAL ALL PENETRATIONS OF EXTERIOR ENVELOPE WEATHER TIGHT.
- 6. COORDINATE ALL ROOF WORK WITH ROOFING CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ROOF WORK IN ACCORDANCE WITH ROOF WARRANTY.

#### <u>KEYNOTES</u>

( **B** 

(C)

 $(\mathbf{D})$ 

- M109 TERMINATE GAS UNIT HEATER COMBUSTION AIR/EXHAUST THROUGH ROOF WITH CONCENTRIC ROOF TERMINATION DEVICE. SIZE, LOCATE, AND INSTALL PIPING PER FURNACE MANUFACTURER'S RECOMMENDATIONS. MAINTAIN A MINIMUM OF 10'-0" FROM FLUE EXHAUST TERMINATION TO O.A. INTAKES. FLASH AND SEAL ROOF PENETRATION WATER TIGHT. M205 ROUTE 1-1/4" GAS LINE DOWN EXTERIOR WALL TO EXISTING GAS METER ON GRADE. PRIOR TO NEW GAS WORK CONTRACTOR SHALL COORDINATE WITH MUD NEW GAS LOAD AND EXISTING METER CAPACITY RATING. PROVIDE NEW METER UPGRADES AS RECOMMENDED BY MUD. GAS SERVICE SHALL BE 2 PSI. COORDINATE GAS PIPE INTEGRITY TEST WITH MUD PRIOR TO ACTIVATION OF GAS SERVICE. TOTAL GAS LOAD FOR TENANT SHALL BE 1160 CFH.
- M206 SUPPORT GAS PIPING OFF OF ROOF UTILIZING PRE-MANUFACTURED PIPE SUPPORTS (PIPE PIER ELITE OR APPROVED EQUAL) COMPATIBLE WITH ROOFING SYSTEM. INSTALL SUPPORTS PER MANUFACTURER RECOMMENDATIONS.

![](_page_21_Figure_11.jpeg)

![](_page_21_Figure_12.jpeg)

![](_page_22_Figure_0.jpeg)

## **GENERAL PLUMBING NOTES**

- REQUIRED CLEARANCES.
- MAINTENANCE AND FILTER ACCESS.
- ENVELOPE WEATHER TIGHT.
- TO COMPLETE INSTALLATION.
- INTERIOR SIDE OF INSULATION. CONSTRUCTION.

- PLUMBING SIZES AND CONFIGURATION.

CONTRACTOR. BELOW WATER HEATER. HYDRANTS AND AVOID CONFLICTS.

![](_page_22_Figure_14.jpeg)

![](_page_22_Figure_15.jpeg)

EMARKS: MOUNT UNIT ABOVE DOOR AND INSTALL PER MANUFACTURER R PROVIDE WITH REMOTE MOUNTED NON-FUSED DISCONNECT. FREE DISCHARGE. POWDER COATED DECORATIVE INTAKE GRILLE. FINISH SHALL B UNIT SHALL BE CONTROLLED WITH MOTION DETECTOR WITH BUI OCATION WITH OWNER AND ARCHITECT). PROVIDE WITH DIGITAL CONTROLLER WITH THE FOLLOWING FEAT MERGENCY STOP, PRESET PROGRAMS, AND LOCKABLE DISPLAY. 24V MAGNETIC REED LIMIT SWITCH FOR AUTOMATIC ON/OFF ACTI AMCA CERTIFIED AIR PERFORMANCES WITH ELECTRIC HEATER A ALUMINUM WASHABLE AIR INLET FILTER CONCEALED ON THE BA								
	GENERAL							
PLAN TAG	MFR.	MODEL	SERVES					
			·					
ACUR-1A	MARS	STD296-2EBH-OB	WEST ENTRY					
ACUR-1B	MARS	STD296-2EBH-OB	WEST ENTRY					
ACUR-1C	MARS	STD296-2EBH-OB	SOUTH ENTR'					

REMARKS: 0. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVID 1. ELECTRIC WATER HEATER WITH INTEGRAL GLASS-LINED 2. PROVIDE WITH PRESSURE / TEMPERATURE RELIEF VALVE 3. ELECTRICAL DISCONNECT BY ELECTRICAL CONTRACTOR 4. DUAL, SIMULTANEOUS ELECTRIC HEATING ELEMENTS. GENERAL							
	GENER	RAL					
PLAN TAG	MFR. (0)	MODEL	SERVES	;			
EWH-1	A.O. SMITH	DEL-10	DOM. HW				

#### 0. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT BY ONE OF THE FOLLOWING MANUFACTURERS: CARRIER, LENNOX, AAON, YORK, TRANE. 1. DOWNFLOW, VARIABLE AIR VOLUME, ROOFTOP UNIT WITH DX COOLING, AND GAS HEATING 2. PROVIDE WITH CONDENSER COIL HAIL GUARDS IF NOT INTEGRAL TO CONDENSER COIL CONFIGURATION. 3. PROVIDE WITH DIFFERENTIAL ENTHALPY CONTROLLED OUTSIDE AIR ECONOMIZER AND POWERED EXHAUST FANS.

NAILER (VERIFY REQUIRED FLASHING DIMENSION WITH ROOFING CONTRACTOR). INCREASE INDICATED CURB HEIGHT AS REQUIRED. . PROVIDE UNIT WITH SUPPLY AIR AND RETURN AIR SMOKE DETECTORS. UNIT SHALL SHUT DOWN UPON SMOKE DETECTION. SEE ELECTRICAL DRAWINGS. 7. PROVIDE WITH SINGLE POINT CONNECTION AND FACTORY INSTALLED DISCONNECT. 3. PROVIDE WITH FIELD POWERED GFI CONVENIENCE RECEPTACLE. 9. PROVIDE WITH 2" MERV 13 FILTERS WITH DIRTY FILTER STATUS SWITCH. 11. PROVIDE WITH STAINLESS STEEL HEAT EXCHANGER WITH 10-YEAR MINIMUM WARRANTY.

#### 12. PROVIDE WITH STAINLESS STEEL CONDENSATE DRAIN PAN AND CONDENSATE OVERFLOW SWITCH. 13. PROVIDE WITH 5-YEAR COMPRESSOR WARRANTY.

GENERAL				PHYSICAL SI	ZE (4)	AIRFLOW (CFM)			
PLAN TAG	MFR. (0)	MODEL	SERVES	CONFIG.	DIMENSIONS (W x H x L)	WEIGHT (lbs.)	TOTAL SUPPLY AIRFLOW	ECONOMIZER	MINII
RTU-1	CARRIER	48FCDM12	SEE PLANS	(1)	60" x 49" x 88"	900	3,680	3,680	70
RTU-2	CARRIER	48FCDM12	SEE PLANS	(1)	60" x 49" x 88"	900	3,680	3,680	70
RTU-3	CARRIER	48FCDM12	SEE PLANS	(1)	60" x 49" x 88"	900	3,680	3,680	70
RTU-4	CARRIER	48FCDM12	SEE PLANS	(1)	60" x 49" x 88"	900	3,680	3,680	70
RTU-5	CARRIER	48FCDM12	SEE PLANS	(1)	60" x 49" x 88"	900	3,680	3,680	70
RTU-6	CARRIER	48FCDA04	SEE PLANS	(1)	47" x 33" x 74"	500	1,080	1,080	11

#### **AIR CURTAIN SCHEDULE**

RECOMMENDATIONS.

BE BLACK TO BE CONFIRMED BY ARCHITECT. UILT IN TIME DELAY RELAY. AIR CURTAIN SHALL ENABLE BASED ON OUTSIDE AIR TEMPERATURE (CONTRACTOR SHALL COORDINATE TEMPERATURE SENSOR TURES: TIME DELAY, FAN SPEED SELECTION, ON/OFF/AUTO OPERATION, START/STOP TIMES, TRANSFORMER FOR 24V CONTROL, TIME CLOCK, LED DISPLAY, TIVATION OF THE AIR CURTAIN FAN WITH THE OPENING AND CLOSING OF THE DOOR. FIELD INSTALLED AND WIRED. AND LICENSED TO BEAR THE AMCA SEAL. ACK OF THE AIR INLET SCREEN.

		SL	ZE	FAI	N (8)	E	ELECTRIC	AL (2)		MOTOF	2	HEAT	NG	
	FINISH	WIDTH	WEIGHT	CFM	ESP (IN WC)	MCA	FLA	VOLTAGE / PHASE	QTY	HP	TYPE	CAPACITY (kW)	TEMP RISE (°F)	REMARKS
	(4)	8' - 0"	230	2,298	(3)	78.8 A	63 A	208 / 1	2	0.5	TEAO	12.0	17	(1-9)
	(4)	8' - 0"	230	2,298	(3)	78.8 A	63 A	208 / 1	2	0.5	TEAO	12.0	17	(1-9)
(	(4)	8' - 0"	230	2,298	(3)	78.8 A	63 A	208 / 1	2	0.5	TEAO	12.0	17	(1-9)

#### **ELECTRIC WATER HEATER SCHEDULE**

DE PRODUCT BY ONE OF THE FOLLOWING MANUFACTURERS: A.O. SMITH, STATE INDUSTRIES, RHEEM MANUFACTURING AND PVI.

SEE ELECTRICAL DRAWINGS. COORDINATE ELECTRICAL REQUIREMENTS WITH SUPPLIED UNIT AND WITH ELECTRICAL CONTRACTOR.

					-						
1	<b>TANK</b>	DOMES	STIC HOT WATE	R	ELECTR	ICAL		ELECT	RIC HEAT		
STORAGE CAPACITY	DIMENSIONS (DIA. Ø x H)	RECOVERY	DISCHARGE TEMP.	TEMP. RISE	VOLTAGE / PHASE	FLA	CAPACITY (kW)	kW / ELEMENT	# OF STAGES	# OF Elements	REMARKS
10	18"Ø x 19"	15 GP	120 °F	80 °F	208 V / 1	14.4 A	3.0 kW	1.5 kW	1	2	(1) (2) (3) (4)

#### 1. GAS FIRED, SEPARATED COMBUSTION, LOW STATIC, AXIAL FAN UNIT HEATER. 3. PROVIDE WITH CONCENTRIC ROOF TERMINATION. 4. PROVIDE WITH 24V THERMOSTAT (REMOTE MOUNT) AND CONTROL TRANSFORMER. THERMOSTAT SHALL HAVE FAN ONLY SWITCH TO ALLOW FAN (NO HEAT) TO OPERATE MANUALLY. 5. STANDARD COLOR SELECTED BY ARCHITECT 6. FREE DISCHARGE.

		GENERAL		
PLAN TAG	MFR.	MODEL	SERVES	CONFIG
GUH-1	REZNOR	UDX-075	STOCK ROOM	(1)
GUH-2A	REZNOR	UDX-060	STOCK ROOM	(1)
GUH-2B	REZNOR	UDX-060	STOCK ROOM	(1)

### REMARKS 1. ROOF MOUNTED, DIRECT DRIVE, CENTRIFUGAL DOWNBLAST EXHAUST FAN. 3. DIRECT DRIVE WITH EC MOTOR. 4. TIMECLOCK BY ELECTRICAL CONTRACTOR. SEE ELECTRICAL DRAWINGS. FAN TO RUN CONTINUOUSLY DURING OCCUPIED HOURS.

GENERAL							FAN							MOTOR						]		
		MODEL		TVDE	100	ROOF / WALL	WEIGHT	DIMENSIONS	AIRFLOW	E.S.P.	WH	IEEL	DDIVE	MAXIMUM		DUD	ШΒ	DDM	VOLTAGE /	TVDE	CONTROL	REN
FLANTAG	WIFK. (0)	MODEL	JERVEJ		ACC.	OPENING SIZE	(lbs)	(D x W x H)	(CFM)	(in-wg)	TYPE	DIA. Ø		RPM	SONES	DIF	nr		PHASE		DEVICE	I
EF-1	GREENHECK	G-098-VG	RESTROOMS	DOWNBLAST (1)	(2)	14.5" x 14.5"	40	24" x 24" x 24"	375 CFM	0.75	B.I.	11.2"	DIRECT	1725	8.7	0.10	0.25	1527	120 V / 1	O.D.P.	(4)	(1)
EF-2	GREENHECK	G-120-VG	STOCK ROOM	DOWNBLAST (1)	(2)	14.5" x 14.5"	50	24" x 24" x 24"	1200 CFM	0.50	B.I.	13.0"	DIRECT	1725	10.3	0.18	0.50	1312	120 V / 1	O.D.P.	(5)	(1)

RE	EMA	RKS
0. 1.	SUI VEF a. b.	BJE RIFY VE SE
2. 3. 4. 5. 6. 7.	NOI NOI COO PRO ROI PRI	ISE N-R. ORE OVIE UNE MEI
A	PPX (1a	(. Q1 ,1b)
A	PPX (1a	(. Q1 , <b>1b</b> ) 8
A	PPX (1a	(, <b>Q</b> ) , <b>1b)</b> 8
A	PPX (1a	(, <b>Q</b> ) , <b>1b</b> ) 8 1 3
A	PPX (1a	(, <b>Q</b> ) , <b>1b</b> ) 8 1 3
A	.PPX (1a	(, Q1 ,1b) 8 1 3 6 4
A	PPX (1a	(, Q1 , <b>1b</b> ) 8 1 3 6 4 22

#### PLUMBING FIXTURE SCHEDULE

TAG		CONNE	ECTIONS		REMARKS	]	SEDVICE				INSULATION	MINIMUM	VAPOR	
IAG	CW	HW	WASTE	VENT	(1) (2)		JERVICE	DUCIWORK	AFFLICATION		THICKNESS	<b>R-VALUE</b>	RETARDER	
<u>WC-1</u>	1/2"	-	4"	2"	-		SUPPLY AIR	RECTANGULAR	CONCEALED ABOVE CEILING	MINERAL FIBER BLANKET	2-3/16"	R-6	YES	-
<u>WC-2</u>	1/2"	-	4"	2"	-		SUPPLY AIR	RECTANGULAR	EXPOSED	DUCT LINER	1-1/2"	R-6	YES	(3) (4)
<u>UR-1</u>	3/4"	-	2"	1-1/2"	-	]	-	-	-	-	-	-	-	-
<u>L-1</u>	1/2"	1/2"	1-1/4"	1-1/4"	-	]	RETURN AIR	RECTANGULAR	EXPOSED AND CONCEALED	DUCT LINER	1-1/2"	R-6	YES	(3)
<u>S-1</u>	1/2"	1/2"	1-1/2"	1-1/2"	-	]	RETURN / XFR AIR	RECTANGULAR	PLENUM BOOTS & TRANSFER DUCTS	DUCT LINER	1"	-	NO	-
EWC-1	1/2"	-	1-1/4"	1-1/4"	-	]	-	-	-	-	-	-	-	-
<u>MS-1</u>	3/4"	3/4"	3"	2"	-	]	EXHAUST AIR	FROM FAN	BACK 36" INTO BUILDING	MINERAL FIBER BLANKET	2-3/16"	R-6	YES	-
<u>FD-1</u>	-	-	(3)	(3)	-	1	REMARKS:							
REMARKS: 1. SEE SPEC STOPS FI	IFICATIONS		DITIONAL F	REQUIREM	ENTS INCLUDING		<ol> <li>INSULATION TYPE</li> <li>SEE SPECIFICATIO</li> <li>PROVIDE EXPOSE</li> </ol>	AND THICKNESS SHALL N ON SECTION 23 07 00 FOR D DUCTWORK WITH PAIN	/IEET ALL REQUIREMENTS OF 2018 IECC / ASH ADDITIONAL INFORMATION. T GRIP WHERE APPLICABLE. COORDINATE FII	RAE 90.1-2016. NAL PAINT FINISH WITH ARCHITECT.				

STOPS, FITTINGS AND ALL OTHER SPECIALTIES. SPECIFIC PLUMBING FIXTURES WILL BE DETAILED IN SELECTION PACKAGE FURNISHED BY CONTRACTOR AND OWNER.

COORDINATE EXACT PLUMBING REQUIREMENTS WITH PACKAGE. SEE FLOOR PLANS FOR WASTE AND VENT SIZE REQUIREMENTS.

#### **ROOF-TOP UNIT SCHEDULE**

3,680 0.75

0.75

3,680

4. PROVIDE WITH INSULATED 20" ROOF CURB. DIMENSIONS GIVEN ARE FOR UNIT ONLY AND DO NOT INCLUDE CURB HEIGHT. STANDARD UNIT WEIGHT GIVEN; WEIGHT FOR CURB AND UNIT ACCESSORIES NOT INCLUDED. CONTRACTOR SHALL CONFIRM ROOF INSULATION THICKNESS AT FINAL PLACEMENT OF EQUIPMENT. PROVIDE ROOF CURB HEIGHT TO ALLOW A MINIMUM 8" ROOF FLASHING UP TO 5. INTEGRATED SOLID-STATE CONTROLS WITH BLOWER AND LIMIT CONTROLS. PROVIDE WITH THERMOSTAT, WHICH SHALL HAVE THE FOLLOWING FEATURES: 7-DAY PROGRAMMABLE WITH FAN ON/OFF/AUTO, SETBACK CAPABILITIES, 2-HOUR MANUAL OVERRIDE, AND 5°F DEADBAND.

> SUPPLY FAN ELECTRICAL (7 DX COOLING GAS FIRED HEATING CAPACITY (BTU/h) GAS LOAD AMBIENT MIN. IMUM | AIRFLOW | E.S.P. | BLOWER | VOLTAGE / | # OF TEMPERATURES (°F) HIGH (BTU/h) LOW (BTU/h) MCA MOCP NOM. AIR TEMP NET TOTAL SENSIBLE DB (°F) EER OA (CFM) (in-wg) TYPE PHASE STAGES DB / WB - (EAT | LAT) FUEL TONS INPUT OUTPUT INPUT OUTPUT 80.0 / 67.0 | 54.5 / 54.4 | NATURAL GAS | 180,000 | 147,600 | 120,000 | 98,400 10 123,100 89,200 95.0 15 2 3,680 DIRECT 208 V / 3 | 54.0 A | 60.0 A |

#### GAS UNIT HEATER SCHEDULE

DIRECT 208 V / 3 54.0 A 60.0 A 10 123,100 89,200 95.0 15 2

DIRECT 208 V / 3 54.0 A 60.0 A 10 123,100 89,200 95.0 15 2

2. PROVIDE WITH ADJUSTABLE DISCHARGE LOUVERS, FAN GUARDS, AND FACTORY MOUNT DISCONNECT SWITCH. PROVIDE WITH MOUNTING BRACKET AND VIBRATION ISOLATORS.

PHYSICAL	SIZE			FAN				MOTOR		ELEC	TRICAL					HEATING						
DIMENSIONS	WEIGHT								CONTROL				GAS-FIRED HEATING									
	(lbs)	QTY.	(CEM)	E.S.P.	DRIVE	HP	RPM	TYPE			FLA	MOCP	(BTU/h)	GAS LO	AD (BTU/h)		# OF	CCC	CC	)NN. SIZ	′ES	REMARKS
	(105)								DEVICE					FUEL	INPUT	OUTPUT	STAGES	LII.	GAS	INT.	EXH.	
						_				-												
26" x 27" x 17"	80	1	961	(6)	-	0.06	1550	T.E.F.M.	(4)	120 V / 1	3.7 A	15.0 A	62,300	NATURAL GAS	75,000	62,300	2	83%	1/2"	4"	4"	(2) (3) (5)
26" x 27" x 17"	80	1	769	(6)	-	0.06	1550	T.E.F.M.	(4)	120 V / 1	2.4 A	15.0 A	49,800	NATURAL GAS	60,000	49,800	2	83%	1/2"	4"	4"	(2) (3) (5)
26" x 27" x 17"	80	1	769	(6)	-	0.06	1550	T.E.F.M.	(4)	120 V / 1	2.4 A	15.0 A	49,800	NATURAL GAS	60,000	49,800	2	83%	1/2"	4"	4"	(2) (3) (5)

3,680 0.75 DIRECT 208 V / 3 54.0 A 60.0 A 10 123,100 89,200 95.0 15 2 80.0 / 67.0 54.5 / 54.4 NATURAL GAS 180,000 147,600 120,000 98,400

3,680 0.75 DIRECT 208 V / 3 54.0 A 60.0 A 10 123,100 89,200 95.0 15 2 80.0 / 67.0 | 54.5 / 54.4 NATURAL GAS 180,000 147,600 120,000 98,400

### FAN SCHEDULE

0. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT BY ONE OF THE FOLLOWING MANUFACTURERS: ACME, GREENHECK, COOK, TWIN CITY.

PROVIDE WITH 20" INSULATED ROOF CURB COMPATIBLE WITH ROOFING SYSTEM. CONTRACTOR SHALL CONFIRM ROOF INSULATION THICKNESS AT FINAL PLACEMENT OF EQUIPMENT. PROVIDE ROOF CURB HEIGHT TO ALLOW A MINIMUM 8" ROOF FLASHING UP TO NAILER (VERIFY REQUIRED FLASHING DIMENSION WITH ROOFING CONTRACTOR). INCREASE INDICATED CURB HEIGHT AS REQUIRED. ALSO PROVIDE BIRDSCREEN, FAN-MOUNTED SPEED CONTROLLER, MOTORIZED DAMPER (SAME VOLTAGE AS FAN MOTOR & INTERLOCKED WITH FAN), AND ELECTRICAL DISCONNECT.

5. WALL SWITCH WITH TIMER AND SPEED CONTROL FUNCTIONS. COORDINATE LOCATION OF SWITCH WITH ARCHITECT AND OWNER. SEE ELECTRICAL DRAWINGS.

#### DIFFUSER REGISTER AND GRILLE SCHEDULE (1) (2)

JECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT BY ONE OF THE FOLLOWING MANUFACTURERS: KRUEGER, NAILOR, PRICE, OR TITUS. Y ALL FRAMES, FINISHES, AND ACCESSORIES WITH CEILING CONSTRUCTION PRIOR TO FURNISHING MATERIAL.

/ERIFY QUANTITIES WITH PLANS. SEE PLANS FOR NECK SIZES.

SE CRITERIA (NC) SHALL BE LESS THAN 25 ON DIFFUSERS, REGISTERS AND GRILLES LOCATED IN OCCUPIED SPACES. I-RADIAL OPPOSED BLADE DAMPER. MAIN BALANCING SHALL BE DONE WITH BRANCH VOLUME DAMPER AT TAKEOFF LOCATION OF MAIN DUCT. OPPOSED BLADE DAMPER SHALL BE USED FOR FINE TUNING ONLY. RDINATE FINAL FINISH WITH ARCHITECT PRIOR TO THE ORDERING OF DIFFUSERS, GRILLES AND REGISTERS.

VIDE RETURN AIR BOOT. SEE DETAIL ON SHEET M2.1. ND DUCT MOUNTED REGISTER WITH DAMPER / EXTRACTOR, FOAM GASKET AND RADIUS MATCHING DUCT SIZE (ACCOUNT FOR DOUBLE WALL DUCT WHERE APPLICABLE). IER COAT WITH FIELD PAINTING.

Y.	PLAN TAG	MFR. (0)	MODEL	FUNCTION	DESCRIPTION	MOUNTING (1)	DEFLECTION	AIR P.D. (IN WG)	MATERIAL	FINISH (4)	NECK SIZE	FACE SIZE	REMAR
	D-1	KRUEGER	PLQ	SUPPLY	PLAQUE DIFFUSER	ACT/GYP CEILING	360°	0.10"	STEEL	WHITE	SEE PLANS	24"x24"	(1) (2)
	D-2	KRUEGER	PLQ	SUPPLY	PLAQUE DIFFUSER	ACT/GYP CEILING	360°	0.10"	STEEL	WHITE	SEE PLANS	12"x12"	(1) (2)
	DD-1	RSS ROOFTOP SYSTEMS	90-578-10	SUPPLY	DRUM DIFFUSER	EXPOSED	6-WAY	0.42"	STEEL	WHITE	22"x22"	49"x49"	(1) (2)
	G-1	KRUEGER	6490	RETURN / XFR	RECT NECK PERFORATED FACE	ACT/GYP CEILING	PERFORATED	0.10"	STEEL	WHITE	SEE PLANS	12"x24"	(1) (2)
	R-1	KRUEGER	580H	EXHAUST	RECT SINGLE DEFLECTION GRILLE	ACT/GYP CEILING	SINGLE 3/4"	0.10"	ALUMINUM	WHITE	SEE PLANS	NECK SIZE + 1-3/4"	(1) (2)
	RR-1	KRUEGER	5DMGDR	SUPPLY	DUCT MOUNTED REGISTER	DUCT	DOUBLE 3/4"	0.10"	ALUMINUM	(7)	SEE PLANS	NECK SIZE + 1-3/4"	(1) (2) (6

#### **DUCTWORK INSULATION SCHEDULE (1) (2)**

4. PROVIDE DUCT LINERS SPECIFICALLY FOR ROUND DUCT (JOHNSMANVILLE SPRIACOUSTIC OR APPROVED EQUAL).

#### PIPING INSULATION SCHEDULE (1) (2) (3)

SERVICE	PIPING SIZES	INSULATION TYPE	INSULATION THICKNESS	VAPOR RETARDER	REMARK
DOMESTIC COLD WATER (CW)	ALL	MINERAL FIBER	1/2"	YES	-
DOMESTIC HOT WATER (HW)	1/2" TO 2"	MINERAL FIBER	1/2"	YES	-
-	-	-	-	-	-
SANITARY WASTE	ALL	NONE	-	-	-
PLUMBING VENTS (24" BELOW ROOF)	ALL	MINERAL FIBER	1/2"	YES	-

REMARKS:

1. SEE PIPING INSULATION DETAIL ON SHEET M2.1. 2. INSULATION TYPE AND THICKNESS SHALL MEET ALL REQUIREMENTS OF 2018 IECC / ASHRAE 90.1-2016. 3. SEE SPECIFICATION SECTIONS 22 07 20 & 23 07 20 FOR ADDITIONAL INFORMATION.

![](_page_23_Figure_50.jpeg)

# OF

STAGES

80.0 / 67.0 | 54.5 / 54.4 NATURAL GAS 180,000 | 147,600 | 120,000 | 98,400 |

80.0 / 67.0 | 54.5 / 54.4 | NATURAL GAS | 180,000 | 147,600 | 120,000 | 98,400 |

EFF.

82.0%

82.0%

82.0%

82.0%

1.1	<mark>ኘ Mech</mark> a	nical Complia	ince Ce	rtificate	SYMBOL
					+++ +.
Project Ir	nformation				<u> </u>
Energy Code Project Title:	e:	2018 IECC			
Location:		Omaha, Nebraska			
Project Type	e. e:	Alteration			
					WC
Constructior	n Site:	Owner/Agent:	D	esigner/Contractor:	UR           
Mechanic	Systems List	rintion			EWC
1	RTU-1 (Single Zone):	npuon			MS DI
	Heating: 1 each - Central Proposed Efficiency =	Furnace, Gas, Capacity = 180 kBtu/h 82.00% Et, Required Efficiency: 80.00 %	bet or 80% AFUE		CI
	Cooling: 1 each - Single I Proposed Efficiency = Fan System: Unspecified	Package DX Unit, Capacity = 123 kBtu/h, 15.00 EER, Required Efficiency: 11.00 E 1	Air-Cooled Condense ER + 12.6 IEER	er, Air Economizer	PVC
1	RTU-2 (Single Zone):				[]_6x6 R-1
	Proposed Efficiency =	Furnace, Gas, Capacity = 180 kBtu/h 82.00% Et, Required Efficiency: 80.00 %	Et or 80% AFUE		
	Cooling: 1 each - Single I Proposed Efficiency = Fan System: Unspecified	-ackage DX Unit, Capacity = 123 kBtu/h, 15.00 EER, Required Efficiency: 11.00 E 1	Air-Cooled Condense ER + 12.6 IEER	er, Air Economizer	
1	RTU-3 (Single Zone):				60D-1 100
	Heating: 1 each - Central Proposed Efficiency =	Furnace, Gas, Capacity = 180 kBtu/h 82.00% Et, Required Efficiency: 80.00 %	Et or 80% AFUE		
	Cooling: 1 each - Single I Proposed Efficiency = Fan System: Unspecified	Package DX Unit, Capacity = 123 kBtu/h, 15.00 EER, Required Efficiency: 11.00 E 1	Air-Cooled Condense ER + 12.6 IEER	er, Air Economizer	
1	RTU-4 (Single Zone):				<u>-</u> 12/8 <u>-</u>
	Heating: 1 each - Central Proposed Efficiency =	Furnace, Gas, Capacity = 180 kBtu/h 82.00% Et, Required Efficiency: 80.00 %	Et or 80% AFUE		
	Cooling: 1 each - Single I Proposed Efficiency = Fan System: Unspecified	Package DX Unit, Capacity = 123 kBtu/h, 15.00 EER, Required Efficiency: 11.00 E I	Air-Cooled Condense ER + 12.6 IEER	er, Air Economizer	<u><u>5</u>12"Ø 5</u>
1	RTU-5 (Single Zone):	Europe Con Conneity = 190 kBtu/h			
	Proposed Efficiency = Cooling: 1 each - Single I	82.00% Et, Required Efficiency: 80.00 % Package DX Unit, Capacity = 123 kBtu/h.	Et or 80% AFUE	er. Air Economizer	
	Proposed Efficiency =	15.00 EER, Required Efficiency: 11.00 E	ER + 12.6 IEER		
1	RTLI-6 (Single Zone)	4			
	Heating: 1 each - Central Proposed Efficiency = Cooling: 1 each - Single I Proposed Efficiency = Ean System: Unspecifier	Furnace, Gas, Capacity = 65 kBtu/h 81.00% Et, Required Efficiency: 80.00 % Package DX Unit, Capacity = 34 kBtu/h, / 14.00 SEER, Required Efficiency: 14.00	Et or 80% AFUE Air-Cooled Condenser SEER	, Air Economizer	
1	GUH-1 (Single Zone):	1			
	Heating: 1 each - Unit He	ater, Gas, Capacity = 75 kBtu/h			
Quantity	System Type & Desc Proposed Efficiency = Fan System: Unspecifier	ription 83.00% Ec, Required Efficiency: 80.00 %	% Ec		
1	GUH-2A (Single Zone): Heating: 1 each - Unit He Proposed Efficiency =	ater, Gas, Capacity = 60 kBtu/h 83.00% Ec, Required Efficiency: 80.00 %	% Ec		
1	GUH-2B (Single Zone):				
	Heating: 1 each - Unit He Proposed Efficiency = Fan System: Unspecified	ater, Gas, Capacity = 60 kBtu/h 83.00% Ec, Required Efficiency: 80.00 % I	6 Ec		
1	ACUR-1A (Single Zone): Heating: 1 each - Unit He No minimum efficiency Fan System: Unspecified	ater, Electric, Capacity = 41 kBtu/h requirement applies t			
1	ACUR-1B (Single Zone): Heating: 1 each - Unit He No minimum efficiency Fan System: Unspecified	ater, Electric, Capacity = 41 kBtu/h requirement applies t			
1	ACUR-1C (Single Zone): Heating: 1 each - Unit He No minimum efficiency Fan System: Unspecified	ater, Electric, Capacity = 41 kBtu/h requirement applies t			
	EWH-1: Electric Storage Water H	eater, Capacity: 10 gallons	ancy: 3.00 SL %/h (if	> 12 kW)	
1	Proposed Efficiency: 3	.00 SL, %/h (if > 12 kW), Required Efficie	ancy. 0.00 OE, 70/11 (ii		
1 Mechanic	Proposed Efficiency: 3	.00 SL, %/h (if > 12 kW), Required Efficie cement	shoy. 5.00 GE, 76/1 (ii		

#### MECHANICAL SYMBOLS DESCRIPTION SYMBOL DESCRIPTION YPICAL PIPING ELBOW LBOW UP LVE (BALL OR BUTTERFLY) - RESSURE REGULATING VALVE (PRV) MPERATURE TEST PORT I I THERMOMETER TYPICAL PLUMBING T (SEE SPECIFICATIONS FOR TYPE) © 2" D-1 | FLOOR DRAIN - SIZE TYPE PECIFICATIONS FOR TYPE) E SPECIFICATIONS FOR TYPE) © 2" RD-1 ROOF DRAIN - SIZE TYPE ECIFICATIONS FOR TYPE) ◎ 2" <u>OD-1</u> OVERFLOW DRAIN - SIZE TYPE TER COOLER (SEE SPECIFICATIONS FOR TYPE) ++ HB HOSE BIBB SPECIFICATIONS FOR TYPE) +\*\* WH WALL HYDRANT (NON-FREEZE) VTR VENT THROUGH ROOF HLORIDE F.L. FLOW LINE HVAC SENSOR NECKSIZE (IN), TAG GRILLE THERMOSTAT AIRFLOW (CFM) TURN OR EXHAUST NECKSIZE (IN), TAG HUMIDISTAT GRILLE AIRFLOW (CFM) CARBON DIOXIDE SENSOR OCCUPANCY SENSOR NECKSIZE (IN), TAG MOTORIZED CONTROL DAMPER WITH ACTUATOR AIRFLOW (CFM) BACKDRAFT DAMPER OUTSIDE AIR OR MIXED AIR DUCT END RISER DN EXHAUST AIR OR RELIEF AIR RISER UP/RISER DN SMOKE DAMPER WITH SLEEVE AND ACCESS DOOR R DUCTWORK (WIDTH/DEPTH)(IN) → FSD FIRE/SMOKE DAMPER WITH SLEEVE AND ACCESS DOOR R IS SIDE SHOWN) TURNING VANES

#### WORK (DIAMETER)(IN) IN EXPOSED AREAS)

ENE	RGY CODE COMPLIANCE	
CODE	2018 IECC	REMARK
ComCHECK	YES	(1)
COMMISSIONING	YES	(2) (3) (4)
TAB REPORT	YES	(3) (4)
REMARKS:		

1. ComCHECK COMPLIANCE REPORT CAN BE FOUND ON THIS SHEET.

DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

2. COMMISSIONING IS REQUIRED.

3. REQUIRED DOCUMENTS (REFER TO CODE) SHALL BE PROVIDED TO THE BUILDING OWNER OR OWNER REPRESENTATIVE WITHIN 90 DAYS OF THE

4. SEE RESPECTIVE SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.

## MECHANICAL SPECIFICATIONS

#### SECTION 220100 - GENERAL REQUIREMENTS FOR PLUMBING

A. RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this

2. Division 22 and 23 Conditions apply to this Section.

B. SUMMARY

1. This Section includes general mechanical requirements and shall apply to all phases of the work specified indicated on the drawings or required to provide for complete installation of plumbing systems.

2. Refer to Section 230100 for General Requirements for Mechanical

3. Refer to Section 230500 for Basic Mechanical Materials and Methods

SECTION 220720 - PIPE INSULATION FOR PLUMBING

A. MINERAL-FIBER INSULATION: Glass fibers bonded with a thermosetting resin. Preformed Pipe Insulation: Comply with ASTM C 547, Type 1, with factory-applied, all-purpose, vapor-retarder jacket. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Apply insulation to pipes buy securing each layer of preformed pipe insulation to pipe with wire, tape, or bands without deforming insulation materials. B. VAPOR RETARDER: On piping systems operating below ambient space temperature, seal joints and seams

with vapor-retarder mastic. Seal penetrations in insulation at hangers, supports, anchors, and other projections with vapor-retarder mastic Mastics.

C. See Piping Insulation Schedule on sheet M3.1 for insulation application.

#### SECTION 221116 - WATER DISTRIBUTION PIPING

A. DOMESTIC WATER PIPING: Above ground; hard copper tube, ASTM B 88, Type L; copper, 95-5 solder-joint fittings; and lead free soldered joints.

B. VALVES: Provide gate, ball or butterfly isolation valves close to main on each branch and riser serving plumbing fixtures or equipment, and where indicated . Provide globe, ball or butterfly valve for throttling where indicated. Provide supply stops at each plumbing fixture. Provide calibrated or automatic balancing valves as indicated.

C. TESTING: Test water distribution piping according to authority having jurisdiction. Clean and disinfect water distribution piping. Fill water piping. Check components to determine that they are not air bound and that piping is full of water.

#### SECTION 221316 - DRAINAGE AND VENT PIPING

A. ABOVEGROUND, SANITARY WASTE AND VENT PIPING: CISPI 301, ASTM A888, Hubless, cast-iron soil pipe; hubless, cast-iron, soil-pipe fittings and hubless, cast-iron, neoprene sleeve coupling with stainless steel clamps.

B. CONDENSATE DRAIN LINES: ASTM B 88, Type L drawn-temper copper tubing with soldered joints or Schedule 40, PVC pipe with solvent-welded joints. Do not install PVC in return air plenums.

B. UNDERGROUND, SANITARY WASTE, AND VENT PIPING: ASTM A74. Hub-and-spigot, cast-iron soil pipe, Service class; hub-and-spigot, cast-iron, soil-pipe fittings, with compression joints.

C. PIPING INSTALLATION: Make changes in direction for drainage and vent piping using appropriate branches, bends, and long-sweep bends. Do not make change in direction of flow greater than 90 degrees. Lay buried building drain piping beginning at low point of each system. Install true to grades and alignment indicated, with unbroken continuity of invert. Place hub ends of piping upstream. Install required gaskets according to manufacturer's written instructions.

D. SLOPE: Install drainage and vent piping at the following minimum slopes, unless otherwise indicated: 1. Sanitary Piping: 2 percent downward in direction of flow for piping 3-inch NPS and smaller; 1 percent downward in direction of flow for piping 4-inch NPS and larger.

2. Vent Piping: 1 percent down toward vertical fixture vent or toward vent stack.

3. Condensate Drain Lines: 1-2 percent downward in direction of flow.

E. TESTING: Test drainage and vent piping according to procedures of authorities having jurisdiction.

#### SECTION 221319 - PLUMBING SPECIALTIES

A. WATER PRESSURE REGULATORS: water regulators, rated for initial working pressure of 150 psig minimum, of size, flow rate, and inlet for 80 psig outlet pressure. Install on building service piping.

B. WALL CLEANOUTS (WCO): Cast iron body adaptable to pipe with cast bronze or brass cleanout plug; stainless steel cover, vandal proof screws. Install as shown and as required by code.

C. CLEANOUT PLUGS (CO): Cast iron or brass threads complying with ANSI B2.1, countersunk head. Engrave heads to identify system.

D. FLOOR CLEANOUTS (FCO): Cast iron body and frame with cleanout plug and adjustable round nickel bronze top. Provide to match floor system:

- 1. Exposed finish type, standard mill finish. 2. Exposed flush type, standard non-slip scored or abrasive finish.
- 3. Exposed flush type, standard mill finish and carpet marker.

waterproof membrane, 0.40" thick, solvent weldable or Lead sheet, 2-1/2" lb/sf, concealed. F. FLOOR DRAIN FLASHING: Non-plasticized, chlorinated, polyethylene, concealed, water-proof membrane,

E. VENT FLASHING (VTR): 24" square minimum. Non-plasticized, chlorinated, polyethylene, concealed,

#### 224000 PLUMBING FIXTURES

0.40" thick, solvent weldable. 48" square minimum.

A. Installation: Install handles for accessible water closets and urinals with handle mounted on wide side of compartment. Install individual stop valve in each water supply to fixture. Install water-supply stop valves in accessible locations. Install traps on fixture outlets. Omit traps on fixtures having integral traps and on indirect wastes. Vent all fixtures as required by local code. Seal joints between fixtures and walls, floors, and counters using sanitary-type, 1-part, mildew-resistant, silicone sealant. Match sealant color to fixture color. Install hot and cold water supply, waste and vent piping of sizes indicated, but not smaller than required by authorities having jurisdiction

B. See Plumbing Fixture Schedule on sheet M3.1 for plumbing fixture specifications.

SECTION 230100 - GENERAL REQUIREMENTS FOR MECHANICAL

A. WARRANTIES - All materials, workmanship and equipment shall be warranted against defects or against injury from proper and usual wear for a period of one year after the date of substantial completion. Any item that becomes defective within the warranty period shall be repaired or replaced, at no additional cost to the Owner. Warranty shall include repair of faulty workmanship.

B. DEFINITIONS ABBREVIATIONS - The following shall apply throughout the contract documents:

Furnish Supply and deliver to site ready for installation Indicated Noted, scheduled or specified

Provide Furnish, install and connect complete and ready for final use
ADA Americans with Disabilities Act
ANSI American National Standards Institute
ASME American Society of Mechanical Engineers
ASHRAE American Society of Heating, Refrigeration and Air Conditioning Engineers
NEC National Electric Code (NFPA 70)
NEMA National Electrical Manufacturers Association
NFPA National Fire Protection Association
SMACNA Sheet Metal and Air Conditioning Contractors National Association
UL Underwriters Laboratories Inc.
C. CODES AND STANDARDS - All work shall be performed by competent craftsmen skilled in the trade

involved and shall be done in a manner consistent with normal industry standards. All work shall conform to the currently adopted edition of the National Electric Code (NEC), Local Building Code, Local Plumbing Code, Local Mechanical Code, Local Fire Code, and all other applicable state and local codes or standards. Where there is a conflict between the code and the contract documents, the code shall have precedence only then it is more stringent than the contract documents.

D. PERMITS - Contractor shall become familiar and comply with all requirements regarding permits, fees, licenses, etc. All permits, licenses, inspections and arrangements required for the work shall be obtained by Contractor's effort and expense. All utilities shall be installed in accordance with the local rules and regulations and all charges shall be paid by the Contractor.

E. SUBMITTALS - Shop drawings shall be submitted to Architect/Engineer for all items of mechanical equipment including the following:

Diffusers, Registers, Grilles Sheet Metal Accessories HVAC Equipment Plumbing Fixtures Plumbing Specialties Plumbing Equipment Plumbing Piping HVAC Piping Pipe Accessories Pipe Insulation Duct Insulation Temperature Controls

1. Shop drawings include fabrication and installation drawings, diagrams, schedules and other data specifically prepared for the project. Include dimensions and notations showing compliance with specified standards. Unless otherwise noted, submit a minimum of six (6) copies of shop drawings for review. Electronic copies (in pdf format) by e-mail are acceptable in lieu of hard copies.

2. Architect/Engineer will review or take appropriate action for submittals. Review is only to determine general conformance with design shown in contract documents. Review of submittals shall not relieve contractor of responsibility for deviation from requirements of the contract documents or from errors or omissions within submittals.

F. MATERIALS - All materials and equipment used in the construction of the project shall be new unused and undamaged unless otherwise specified. Materials and equipment shall be of latest design standards of manufacturer specified. Verify installation details and requirements for materials and equipment furnished by others and installed under this contract.

G. DEMONSTRATION AND TRAINING - Instruct Owner's personnel to adjust, operate, and maintain mechanical systems. Schedule training with Owner with at least seven days' advance notice.

H. STARTING AND ADJUSTING - Start and test all equipment and operating components to confirm proper operation. Test and adjust all systems to achieve designed capacity and performance. All equipment and systems discrepancies shall be corrected prior to final acceptance.

#### SECTION 230500 - BASIC MECHANICAL MATERIALS AND METHODS

A. PIPING INSTALLATION: Install piping at required slope. Install components with pressure rating equal to or greater than system operating pressure. Install piping in concealed locations, except in equipment rooms and service areas. Install piping free of sags and bends. Install piping at right angles or parallel to building walls. Install piping tight to slabs, beams, joists, columns, walls, and other building elements. Locate groups of pipes parallel to each other, spaced to permit valve servicing. Install fittings for changes in direction and branch connections. Install pipe escutcheons for exposed pipe penetrations walls and ceilings. Install sleeves for pipes passing through concrete and masonry walls, and concrete floor and roof slabs. Provide dielectric fitting where two different types of pipe materials are joined. Comply with MSS-69 for pipe hanger selection and application.

B. EQUIPMENT INSTALLATION: Install equipment per manufacturer's recommendations Install equipment as high as possible. Install equipment level and plumb, parallel and perpendicular to building. Install mechanical equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference to other installations. Install equipment giving right of way to piping installed at required slope.

C. LABELING AND IDENTIFYING

Piping: Provide pipe markers on each system where pipe is exposed to view and above removable ceilings. Include pipe description of system and arrows showing normal direction of flow. Equipment: Install engraved plastic-laminate sign or equipment marker on or near each major item of

mechanical equipment. D. CUTTING AND PATCHING: Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other

surfaces necessary for mechanical installations. Perform cutting by skilled mechanics of trades involved. Repair cut surfaces to match adjacent surfaces.

SECTION 230593 - TESTING, ADJUSTING, AND BALANCING

A. Examine air-handling equipment to ensure clean filters have been installed, bearings are greased, belts are aligned and tight, and equipment with functioning controls is ready for operation. Check dampers for proper position.

B. Perform testing and balancing procedures on each system according to the procedures contained in NEBB's "Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems" and this Section.

C. Adjust fans to deliver total design airflow within the maximum allowable rpm listed by the fan manufacturer. Provide new fan sheaves as required. Measure fan airflow, static pressure, rpm and amp draw.

D. Adjust volume dampers to achieve design airflow within 10% of specified values. Adjust diffusers, registers and grilles. Adjust minimum and maximum outside airflow.

E. Prepare report listing date, project information, equipment data and measured airflow results. Report shall include drawing indicating locations of air outlets and final measured airflow of each outlet. Submit four copies of report to engineer for review.

#### SECTION 230700 - DUCT INSULATION

A. MINERAL-FIBER BLANKET THERMAL INSULATION: Glass fibers bonded with a thermosetting resin. Comply with ASTM C 553, Type II, with all-service jacket manufactured from kraft paper, reinforcing scrim, aluminum foil, and vinyl film. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Apply insulation materials, accessories, and finishes according to the manufacturer's written instructions with the least number of joints practical. Seal joints and seams with vapor-retarder mastic on cold air ducts. Seal penetrations in insulation at hangers, supports, anchors, and other projections with vapor-retarder mastic.

B. ACOUSTICAL DUCT LINER: ASTM C 518 with resin and black mat coated surface exposed to air stream to prevent erosion of glass fibers. Thermal Conductivity (k-Value): 0.26 at 75 deg F mean temperature. Nominal Density 1.5 lbs per cubic foot, minimum noise reduction characteristic shall be 0.55 for 1" thickness; rated for 6000 fpm air velocity; air friction multiplier less than 1.6 at 2000 fpm. Adhere a duct liner with 100 percent coverage of adhesive. Butt transverse joints without gaps and coat joint with adhesive. Secure liner with mechanical fasteners. Apply metal nosing on leading edge of liner.

C. See Ductwork Insulation Schedule on sheet M3.1 for insulation application.

SECTION 231123 - NATURAL GAS PIPING

A. STEEL PIPE: Pipe: ASTM A 53; Type E or S; Grade B; Schedule 40; black. Malleable-Iron. Threaded Fittings ASME B16.3, Class 150, standard pattern, with threaded ends according to ASME B1.20.1. Unions: ASME B16.39, Class 150, malleable iron with brass-to-iron seat, ground joint, and threaded ends according to ASME B1.20.1. Joint Compound and Tape: Suitable for natural gas.

B. Install and test gas piping according to NFPA 54 "National Fuel Gas Code" and Authority having jurisdiction.

#### SECTION 233113 - METAL DUCTS AND ACCESSORIES

A. GENERAL: Drawings indicate general arrangement of ducts, fittings, and accessories. Minor modifications to route, size and shape of duct may be made to meet structural and other interference. Changes which could affect system performance shall be reviewed by Architect/Engineer prior to fabrication or installation of duct. Coordinate layout with suspended ceiling, fire- and smoke-control dampers, lighting layouts, and similar finished work.

B. DUCT FABRICATION: Sizes shown on plans are inside clear dimensions. Ductwork utilizing duct liner shall be increased in size to accommodate the duct liner thickness.

C. MATERIAL: Construct all rectangular and round ducts from galvanized sheet steel: Lock-forming quality; ASTM A 653/A 653M, G90 coating designation; mill-phosphatized finish for surfaces of ducts exposed to view.

D. QUALITY ASSURANCE: Fabricate and install duct per SMACNA's "HVAC Duct Construction Standards--Metal and Flexible" and applicable codes. Comply with requirements for metal thickness, reinforcing types and intervals, tie-rod applications, and joint types and intervals. Comply with NFPA 90A, "Installation of Air Conditioning and Ventilating Systems," unless otherwise indicated.

E. PRESSURE CLASS: Unless otherwise noted construct all ducts to 2.0" WG positive or 2.0" WG negative pressure class. F. DUCT SEALING: UL classified, non-combustible, flame spread 25 or less, smoke developed rating of 540 or

less, resistant to water, pressure rupture rating of 16" WG minimum, suitable for use alone or with tape, application an operational temperature ranges appropriate for usage. Seal all duct per SMACNA class 'C' duct seal requirements.

G. TURNING VANES: Fabricate of 1-1/2" wide, curved blades 3/4" on center. Provide turning vanes in all mitered elbows and duct turns.

H. DUCT ACCESS DOORS: Install insulated duct access doors with hinges and latches for access to inlet side of coils, equipment, control dampers, fire dampers, and smoke dampers.

I. VOLUME DAMPERS: Fabricate single blade dampers for duct sizes 9 1/2: high x 30" width maximum. Fabricate multi-blade dampers of opposed blade pattern using minimum 16 gauge steel with maximum blade sizes 6" x 48" for larger ducts. Provide end bearings with end seals for pressure class required except in round duct 12" in diameter and smaller. Provide locking indicating quadrant regulators on all volume dampers. Mark ends of damper shanks for open/closed indication. Insulated ducts to have elevated dial indicators. Motorized dampers to have 115 volt operators. Provide manual volume dampers at branch take-offs and as shown. Provide motorized dampers as indicated.

J. FLEXIBLE CONNECTORS: Flame-retarded or noncombustible fabrics, coatings, and adhesives complying with UL 181, Class 1. Neoprene double-coated woven glass fibber fabric in accordance with NFPA 90A, suitable for temperatures and pressures of application, approximately 6" wide, crimped into metal edge strip. Provide flexible connections to motor driven equipment.

K. FLEXIBLE DUCTS: Factory-fabricated, insulated, round duct, with an outer jacket enclosing 1-1/2-inch- thick, glass-fiber insulation around a continuous inner liner, steel-wire helix encapsulated in polyethylene inner liner. Comply with UL 181, Class 1. Final connections to air outlets and terminal units may be made with flexible duct. Install flexible ducts with metal collars or sleeves with draw bands. Length of flexible duct shall not exceed 36" path shall not exceed 45°.

![](_page_24_Picture_94.jpeg)

![](_page_25_Figure_0.jpeg)

## 2 TYPICAL CEILING OCCUPANCY SENSOR CONNECTION DETAIL E1-1 NOT TO SCALE

		LIGHTI	NG	FIXTUF	RE S	CHE	Đ	I	١L	E			
				LAMP DATA				N	100	INTI	NG		
FIXT #	MANUFACTURER	(NOTE 2)	QTY.	SIZE	TYPE (NOTE 3)	VOLTAGE	SURF.	FLUSH	CLG.	WALL	HEIGHT	DESCRIPTION	REMARK
1	LITHONIA, NOTE 1	TZL1N L96 10000LM FST MVOLT 40K 80CRI WH	N/A	10,000 LM / 4000K	LED	120/277	х		х			8FT STRIP LIGHT	
2	LITHONIA, NOTE 1	ZL1N L48 5000LM FST MVOLT 40K 80CRI WH	N/A	5,000 LM / 4000K	LED	120/277	х		х			4FT STRIP LIGHT	
3	LITHONIA, NOTE 1	LHQM LED R HO RO	N/A	N / A	LED	120/277	х			х		EXIT LIGHT	NOTE 4
3	LITHONIA, NOTE 1	2GTL4 48L EZ1 LP840	N/A	4,800 LM / 4000K	LED	120/277		х	х			2X4 TROFFER	
4	CREE	CPY250 C 13L 50K7 D UL DM WH	N/A	13,7500 LM / 5000K	LED	120/277	х		х			CANOPY LIGHT	
5	LITHONIA, NOTE 1	WST LED P3 40K VW MVOLT E20WC	N/A	6,000 LM / 4000K	LED	120/277	х			х	-	WALL PACK	
5E	LITHONIA, NOTE 1	WST LED P3 40K VW MVOLT E20WC	N/A	6,000 LM / 4000K	LED	120/277	х			х	-	WALL PACK	W/ EM BATTER
6	LITHONIA, NOTE 1	WDGE3 LED P3 50K 70CRI RFT MVOLT	N/A	10,000 LM / 4000K	LED	120/277	х			х	-	WALL PACK	
7	LSI ABOLITE	RD200 INC 120 MSV CA120BLK	1	NOTE 5	LED	120/277	х		х		-	PENDANT	
8	WILLIAMS, NOTE 1	96-8-L160/850-HIAFR-DIM-UNV	N/A	16,000 LM / 5000K	LED	120/277	х		х		-	8FT GASKETED	
9	BASELITE	A812-41-E12-100W	1	NOTE 6	LED	120/277	х			х	-	SIGN LIGHT	

NOTES:

1. FIXTURE SHALL BE CONSIDERED EQUAL AS MANUFACTURED BY COLUMBIA, DAY-BRITE, COOPER, AND H.E. WILLIAMS. 2. CONTRACTOR SHALL VERIFY LIGHT FIXTURE CATALOG NUMBER & INSTALLATION REQUIREMENTS PRIOR TO ORDERING.

3. LAMP TYPE DESCRIPTION: LED=LIGHT EMITTING DIODE

4. WHERE INDICATED ON PLAN PROVIDE REMOTE HEAD - LITHONIA #ELA B T SD QWP L0309.

5. PROVIDE WITH LED RETROFIT LAMP - 4000K, 100W EQUIVALENT. 6. PROVIDE WITH LED RETROFIT LAMP - SATCO #S39750.

![](_page_25_Figure_8.jpeg)

		LIGHTING CO	ONTROL DEVICE SCHEDULE
SYMBOL	MANUFACTURER	CATALOG NUMBER	DESCRIPTION
E	SENSORSWITCH	nECY MVOLT ENC 12MO	LIGHTING CONTROL NETWORK HEAD END WITH TIME CLOCK
: 4SD	SENSORSWITCH	nPODM 4S DX	FOUR SCENE LIGHTING CONTROL NETWORK ENTRY STATION WITH ON / OFF PUSH BUTTONS AND RAISE / LOWER DIMMING CONTROLS
PP n	SENSORSWITCH	nPP16	LIGHTING CONTROL NETWORK POWER PACK - NO DIMMING
PP <sub>n,EM</sub>	SENSORSWITCH	nPP16 ER	LIGHTING CONTROL NETWORK POWER PACK - NO DIMMING, WITH UL924 EMERGENCY OPERATION
PP <sub>n,D</sub>	SENSORSWITCH	nPP16 DS	LIGHTING CONTROL NETWORK POWER PACK - WITH DIMMING
PP <sub>n,D,EM</sub>	SENSORSWITCH	nPP16 DS ER	LIGHTING CONTROL NETWORK POWER PACK - WITH DIMMING, WITH UL924 EMERGENCY OPERATION
$\mathbf{k}$	SENSORSWITCH	WSX PDT XX	LINE VOLTAGE SINGLE POLE WALL BOX OCCUPANCY SENSOR
$\diamond$	SENSORSWITCH	CM PDT 10	LOW VOLTAGE CEILING SENSOR, STAND ALONE TYPE.

ENERGY	CODE COM	PLIANCE
CODE	2018 IECC	
ComCHECK	YES	
COMMISSIONING	YES	NOTE 1

	1	PROVIDE NEW CENTRAL INVERTER - EVENLITE #LM 1000VA LC 1A OA C5 FS WM OF
	2	CONNECT EXIT LIGHTING AND LIGHTING INDICATED WITH CROSS HATCHING TO O OF FIVE DEDICATED OUTPUT BREAKERS IN NEW CENTRAL INVERTER.
		BREAKER #1 - SALES FLOOR EMERGENCY LIGHTING BREAKER #2 - STOCK ROOM EMERGENCY LIGHTING BREAKER #3 - HALL EMERGENCY LIGHTING BREAKER #4 - EXIT LIGHTING BREAKER #5 - SPARE
		PROVIDE ONE Pn,D,EM FOR EACH OF THREE EMERGENCY LIGHTING CIRCUITS ALLOWING THE LIGHTING TO BE CONTROLLED IN A SIMILAR FASHION AS SURROUNDING LIGHTING UNTIL A POWER OUTAGE. THEN THE LIGHTING IN THESE CIRCUITS WILL TURN TO 100% ON.
	3	PROVIDE LINE VOLTAGE WALL BOX OCCUPANCY SENSOR - SEE LIGHTING CONTRODUCE SCHEDULE AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
	4	PROVIDE NEW CEILING MOUNTED OCCUPANCY SENSOR - SEE SPECIFICATIONS. ROUTE CIRCUIT THROUGH NEW POWER PACK WITH AUXILIARY RELAYS, CONTROLLED BY NEW OCCUPANCY SENSOR(S). PROVIDE AUXILIARY POWER PAC AS REQUIRED. SEE DETAIL 2 E1-1 FOR ADDITIONAL INFORMATION.
	5	CONNECT SWITCH DOWNSTREAM OF OCCUPANCY SENSORS. SWITCH SHALL SEF AS MANUAL SHUTOFF ONLY.
	6	EXISTING PANEL BOARD SERVING AREA OF REMODEL. REUSE EXISTING CIRCUITS WHERE POSSIBLE. PROVIDE NEW BREAKERS AS REQUIRED TO ACCOMMODATE REMODEL. PROVIDE AN UPDATED TYPED CIRCUIT DIRECTORY AFTER REMODEL I COMPLETE.
	7	CONNECT TO EXISTING (20/1) BREAKER IN PANEL INDICATED THAT BECOMES SPA DURING DEMOLITION OR EXISTING SPARE (20/1) BREAKER IN PANEL SERVING ARE OF REMODEL.

MECHANICAL AND PLUMBING EQUIPMENT IS NOT INDICATED ON THIS PLAN AND INFORMATION WAS NOT AVAILABLE AT THE TIME OF THIS DESIGN. PRIOR TO PURCHASING ELECTRICAL EQUIPMENT, BREAKERS, DISCONNECT SWITCHES, WIRE AND CONDUIT(S) ASSOCIATED WITH MECHANICAL AND PLUMBING EQUIPMENT, COORDINATE EXACT REQUIREMENTS WITH MECHANICAL AND PLUMBING CONTRACTORS. PROVIDE SUPPLY SIDE DUCT SMOKE DETECTORS IN EQUIPMENT WITH CFM RATING OVER 2,000. IF OTHER AIR HANDLING UNITS SHARE THE SAME AIR SYSTEM AS ANY AIR HANDLING UNIT REQUIRING A DUCT SMOKE DETECTOR THEN PROVIDE A FIRE ALARM RELAY TO SHUT DOWN ALL MECHANICAL EQUIPMENT SERVING SAME AIR SYSTEM. PROVIDE REMOTE INDICATOR / RESET STATION WHEN DUCT DETECTOR IS NOT LOCATED IN ACCESSIBLE CEILING SPACE.

![](_page_26_Figure_1.jpeg)

#### **COMMUNICATION BOARD DETAIL** E2-1 NOT TO SCALE

![](_page_26_Figure_3.jpeg)

![](_page_26_Figure_4.jpeg)

— 12"L x 2"W x 1/4" TIN PLATED GROUND BAR KIT STORM POWER PRODUCTS # SCGBM-250212-T-KT

CONDUIT TO GROUND BAR IN ELECTRICAL PANEL 'IG'

RETARDANT PAINT (LENGTH AS

1ST FLOOR

-- 120V DISPOSAL CIRCUIT (SEE PLANS)

#### - BRANCH CIRCUITING CONCEALED IN WALL (TYP.) - SINGLE POLE TOGGLE SWITCH

![](_page_26_Figure_11.jpeg)

#### **FLOOR PLAN - POWER** E2-1 3/32" = 1'-0"

## **GENERAL NOTES**

- MINIMUM SIZE FOR BRANCH CIRCUIT CONDUITS SHALL BE 1/2." MINIMUM 1. DATA/COMMUNICATIONS CONDUIT SIZE SHALL BE 1." SEE DRAWINGS FOR AREAS
- AT CONTRACTOR'S OPTION. THE USE OF MULTI-WIRE BRANCH CIRCUITS IS ALLOWED.
- SHARING A COMMON NEUTRAL. PROVIDE A GREEN INSULATED GROUND WIRE IN ALL LIGHTING AND POWER BRANCH 3.
- CIRCUITS. COORDINATE ROUTING OF EXPOSED CONDUIT WITH OWNER AND GENERAL 4
- TO STRUCTURE. TAKE CARE TO ENSURE THAT ALL ELECTRICAL AND MECHANICAL DEVICES LOCATED WITHIN SAME VICINITY OF EACH OTHER ARE ALIGNED BOTH VERTICALLY AND HORIZONTALLY. SEE DETAIL 3 FOR ADDITIONAL INFORMATION.

- GLAZING PER NEC 210.62.
- EQUIPMENT MANUFACTURER PRIOR TO ROUGH IN. > PROVIDE NEW METER SOCKET FOR LANDLORD'S EXISTING ELECTRICAL HOUSE PROVIDE EXPLOSION PROOF RECEPTACLE AND EMERGENCY SHUTDOWN SWITCH AT SERVICE. PROVIDE MODIFICATIONS ON INTERIOR OF BUILDING AS REQUIRED TO PROPANE FILLING STATION. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ACCOMMODATE NEW WORK. ROUGH IN. PROVIDE ALL SWITCH(ES), RELAY(S), ETC. REQUIRED TO ACCOMMODATE SHUTDOWN.
- COMPLETE. PROVIDE JUNCTION BOX IN WALL NEAR RECEPTACLE. CONNECT RECEPTACLE TO JUNCTION BOX WITH FLEXIBLE CONDUIT. GONDOLA FIXTURES WITH OWNER PRIOR TO ROUGH IN. SURFACE MOUNT OF REMODEL. RECEPTACLES TO TOP FIXTURES FACE UP. PROVIDE JUNCTION BOX AT CEILING 12 REMOVE EXISTING METER CENTER ON THIS WALL AND ADJACENT SERVICE NEAR RECEPTACLE. CONNECT RECEPTACLE TO JUNCTION BOX WITH CONDUIT. AT DISCONNECT AND TELEPHONE CABINET ON ADJACENT WALL COMPLETE. FIXTURE TURN CONDUIT WITH 90 DEGREE BEND AND STUB INTO JUNCTION BOX WITH COORDINATE DEMOLITION WITH GENERAL CONTRACTOR AND OPPD PRIOR TO RECEPTACLE. COORDINATE WHICH RECEPTACLES NEED TO BE INTERLOCKED INTO DEMOLITION. LIGHTING CONTROL SYSTEM AND PROVIDE NON DIMMING POWER PACK(S) WHERE REQUIRED.

![](_page_26_Figure_28.jpeg)

## ELECTRICAL SPECIFICATIONS

SECTION 260100 - GENERAL ELECTRICAL REQUIREMENTS

A. WARRANTIES - All materials, workmanship and equipment shall be warranted against defects or against injury from proper and usual wear for a period of one year after the date of substantial completion. Any item that becomes defective within the warranty period shall be repaired or replaced, at no additional cost to the Owner, Warranty shall include repair of faulty workmanship.

B. DEFINITIONS ABBREVIATIONS - The following shall apply throughout the contract documents:

- Furnish Supply and deliver to site ready for installation
- Indicated Noted, scheduled or specified
- Provide Furnish, install and connect complete and ready for final use
- NEC National Electric Code (NFPA 70)
- NEMA National Electrical Manufacturers Association
- NFPA National Fire Protection Association
- Underwriters Laboratories Inc.

C. CODES AND STANDARDS - All work shall be performed by competent craftsmen skilled in the trade involved and shall be done in a manner consistent with normal industry standards. All work shall conform to the currently adopted edition of the National Electric Code (NEC). Local Building Code, and all other applicable state and loca codes or standards. Where there is a conflict between the code and the contract documents, the code shall have precedence only then it is more stringent than the contract documents.

- D. PERMITS Contractor shall become familiar and comply with all requirements regarding permits, fees, licenses, etc. All permits, licenses, inspections and arrangements required for the work shall be obtained by Contractor's effort and expense. All utilities shall be installed in accordance with the local rules and regulations and all charges shall be paid by the Contractor.
- E. SUBMITTALS Shop drawings shall be submitted to Architect/Engineer for the following items of electrical equipment:
- Wiring devices
- Enclosed controllers, switches, and circuit breakers
- Panelboards
- Lighting fixtures
- Lighting control Fire alarm
- 1. Shop drawings include fabrication and installation drawings, diagrams, schedules and other data specifically prepared for the project. Include dimensions and notations showing compliance with specified standards. Unless
- otherwise noted, submit a PDF copy of shop drawings for review. 2. Architect/Engineer will review or take appropriate action for submittals. Review is only to determine general
- conformance with design shown in contract documents. Review of submittals shall not relieve contractor of responsibility for deviation from requirements of the contract documents or from errors or omissions within submittals
- F. MATERIALS All materials and equipment used in the construction of the project shall be new unused and undamaged unless otherwise specified. Materials and equipment shall be of latest design standards of manufacturer specified. Verify installation details and requirements for materials and equipment furnished by others and installed under this contract.
- G. DEMONSTRATION AND TRAINING Instruct Owner's personnel to adjust, operate, and maintain electrical systems. Schedule training with Owner with at least seven days' advance notice.
- H. STARTING AND ADJUSTING Start and test all equipment and operating components to confirm proper operation. Test and adjust all systems to achieve designed capacity and performance. All equipment and systems discrepancies shall be corrected prior to final acceptance.
- I. TEMPORARY POWER AND LIGHTING Provide temporary electric power from local utility with metering and payment of use charges.
- 1. Provide receptacle outlets adequate for connection of power tools and construction equipment.
- 2. Provide temporary lighting with local switching that provides adequate illumination for construction operations and traffic conditions.

SECTION 260500 - BASIC ELECTRICAL MATERIALS AND METHODS

- A. QUALITY ASSURANCE Electrical Components, Devices, and Accessories shall be listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended B. COORDINATION - Coordinate chases, slots, inserts, sleeves, and openings with general construction work and arrange in building structure during progress of construction to facilitate the electrical installations that follow. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the work. C. CONDUCTORS - All conductors shall be installed in raceways. Conductors for pilot and control circuits shall be #14. All other conductors shall be #12 or larger. 1. Conductors, No. 10 AWG and Smaller: Solid or stranded copper. 2. Conductors, Larger Than No. 10 AWG: Stranded copper. 3. Insulation: Thermoplastic, rated at 75 deg C minimum. 4. Wire Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service indicated. D. RACEWAYS - Minimum raceway size shall be 1/2". Raceway types and applications shall be as follows: 1. Electrical metallic tubing (EMT): ANSI C80.3, zinc-coated steel, with set-screw or compression fittings. EMT shall be used for all other applications not listed below. 2. Liquid tight flexible metal conduit (LFMC); Zinc-coated steel with sunlight-resistant and mineral-oil-resistant plastic jacket. LFMC shall be used for connections to vibrating equipment or in wet or damp locations 3. Raceway Fittings: Specifically designed for the raceway type with which used. E. JUNCTION AND DEVICE BOXES - Minimum box size shall be 4" square with extension or plaster ring as required. Box types and applications shall be as follows 1. Sheet metal boxes: NEMA OS 1 galvanized steel. Sheet metal boxes shall be used for all surface mounted applications and flush mounting in gypsum or plaster walls. 2. Masonry boxes: square cornered suitable for flush mounting in masonry construction. 3. Cast metal boxes: NEMA FB 1, Type FD, cast box with gasketed cover. Cast metal boxes shall be used for exterior surface mounted applications. F. ELECTRICAL IDENTIFICATION - All conductors shall be color coded throughout the installation. Color coding shall be as prescribed by ANSI A13.1 and NFPA 70. 1. Provide engraved-plastic labels for all disconnect switches, switchboards, panelboards, transformers, and control devices. Labels shall be melamine plastic laminate engraving stock with 3/8" engraved lettering and shall be punched or drilled for mechanical fasteners. centerline of device. G. FIRESTOPPING - Apply firestopping to cable and raceway penetrations of fire-rated floor and wall assemblies to achieve fire-resistance rating of the assembly. H. DEMOLITION - Protect existing electrical equipment and installations indicated to remain. If damaged or Receptacles = 16" disturbed in the course of the Work, remove damaged portions and install new products of equal capacity, quality, and functionality.
- 1. Cut and remove buried raceway and wiring, indicated to be abandoned in place, 2 inches below the surface of adjacent construction. Cap raceways and patch surface to match existing finish. 2. Remove demolished material from Project site.
- 3. Existing utilities shall not be interrupted without prior written approval from the owner. All interruptions shall occur during off hours.
- I. CUTTING AND PATCHING Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces required to permit electrical installations. Perform cutting by skilled mechanics of trades involved.
- 1. Repair and refinish disturbed finish materials and other surfaces to match adjacent undisturbed surfaces. Install new fireproofing where existing firestopping has been disturbed. Repair and refinish materials and other surfaces by skilled mechanics of trades involved.

connections. D. DEVICE COLOR - Color shall be white unless otherwise indicated or required by code.

DIS	TRIB	UTION PAN	IEL	SCF	IED	ULE	
DESIGNATION	CIRCUIT NUMBER	NAMEPLATE DESIGNATION	ACTIVE	SPARE	FUSE	SPACE	REMARKS
•208Y/120V, 3Ø, 4W	1	PANEL 'A'	400/3				
WITH GROUND BAR •800A MAIN BREAKER	2	PANEL 'C'	400/3				
•BREAKER DISTRIBUTION •42K A.I.C.	3	PANEL 'IG'	100/3				
	4	EXISTING PANEL		200/3			
	5	SPACE				200A	
	6	SPARE		100/3			
	7	SPARE		100/3			
	8	SPARE		100/3			

LIGH	ITING PANEL SCHEDULE	LIGHTING PA	ANEL SCHEDULE (TUB TWO)
LIGHTING PANEL: A RATING: 400A MOUNTING: SURFACE TYPE: MLO W/FEED THRU LUGS AND GND. BA	VOLTAGE: 208/120V PHASE: 3 Wire: 4 A.I.C. Rating: Series	LIGHTING PANEL: A RATING: 400A Mounting: Surface Type: Mlo W/ GND. Bar	VOLTAGE: 208/120V PHASE: 3 WIRE: 4 A.I.C. RATING: SERIES
DESCRIPTION	O/C CKT. O/C DESCRIPTION	DESCRIPTION	O/C CKT. O/C DESCRIPTION
LTG - SALES FLOOR	20/1 1 2 20/1 (L) LIGHTING CONTROL NETWORK	REC - SALES FIXTURES	20/1 43 44 20/1 REC - GONDOLA
LTG - SALES FLOOR	20/1 3 4 20/1 REC - OPS OFFICE	REC - SALES FIXTURES	20/1 45 46 20/1 REC - GONDOLA
LTG - SALES FLOOR	20/1 5 6 20/1 (G) REC - REFRIGERATOR	REC - SALES FIXTURES	20/1 47 48 20/1 REC - GONDOLA
LTG - SALES FLOOR	20/1 7 8 20/1 REC- BREAK ROOM	REC - SALES FIXTURES	20/1 49 50 20/1 REC - GONDOLA
LTG - SALES FLOOR	20/1 9 10 20/1 (G) REC - DISPOSAL	REC - SALES FIXTURES	20/1 51 52 20/1 REC - GONDOLA
LTG - SALES FLOOR	20/1 11 12 20/1 REC- BREAK ROOM	REC - SALES FIXTURES	20/1 53 54 20/1 REC - GONDOLA
LTG - SALES FLOOR	20/1 13 14 20/1 ADA DOORS	REC - SALES FIXTURES	20/1 55 56 20/1 REC - GONDOLA
LTG - SALES FLOOR	20/1 15 16 20/1 REC - SECURE STORAGE	REC - SALES FIXTURES	20/1 57 58 20/1 REC - GONDOLA
LTG - SALES FLOOR	20/1 17 18 20/1 REC - DOOR SIGNAGE	PWR - DOOR ALARM	20/1 59 60 20/1 REC - GONDOLA
LTG - SALES FLOOR	20/1 19 20 20/1 REC - MOP ROOM	REC - GONDOLA	20/1 61 62 20/1 REC - GONDOLA
LTG - SALES FLOOR	20/1 21 22 20/1 ADA DOORS	REC - GONDOLA	20/1 63 64 20/1 REC - GONDOLA
LTG - SALES FLOOR	20/1 23 24 20/1 REC - DOOR SIGNAGE	REC - GONDOLA	20/1 65 66 20/1 REC - GONDOLA
LTG - PALLETS	20/1 25 26 20/1 REC - FLOOR SCRUBBER	REC - GONDOLA	20/1 67 68 20/1 REC - GONDOLA
LTG - PENDANTS	20/1 27 28 20/1 REC - REST / MOP ROOMS	REC - GONDOLA	20/1 69 70 20/1 REC - GONDOLA
LTG - ELECTRICAL / IT ROOMS	20/1 29 30 20/1 BUILDING SIGNAGE	REC - GONDOLA	20/1 71 72 20/1 REC - GONDOLA
REC - EXTERIOR	20/1 31 32 20/1 BUILDING SIGNAGE	REC - GONDOLA	20/1 73 74 20/1 REC - GONDOLA
REC - EXTERIOR	20/1 33 34 20/1 REC - PROPANE FILLING STATION	REC - GONDOLA	20/1 75 76 20/1 LTG - BUILDING SIGNAGE
REC - EXTERIOR	20/1 35 36 20/1 (G) REC - WATER COOLER	REC - GONDOLA	20/1 77 78 80/2 ACUR-1A
LTG - GARDEN CENTER	20/1 37 38 20/1 REC - UTILITY ROOMS	REC - GONDOLA	20/1 79 80
REC - COLUMNS	20/1 39 40 20/1 HAND DRYER - WOMEN'S	REC - GONDOLA	20/1 81 82 80/2 ACUR-1B
REC - POS	20/1 41 42 20/1 HAND DRYER - MEN'S	REC - GONDOLA	20/1 83 84

![](_page_27_Figure_40.jpeg)

- DEVICES: (1) WALL SWITCH, WALL OCCUPANCY SENSOR SWITCH, WALL BOX DIMMER SWITCH, OR ENTRY STATION
- (2) THERMOSTAT, TEMPERATURE SENSOR, OR CARBON DIOXIDE SENSOR ROUGH-IN
- (3) FIRE ALARM AUDIO/VISUAL INDICATING DEVICE
- (4) FIRE ALARM PULL STATION
- (5) ACCESS CONTROL CARD READER
- (6) EXIT SIGN

![](_page_27_Figure_50.jpeg)

- ALIGN DEVICES VERTICALLY AND HORIZONTALLY WHEREVER POSSIBLE. NOT ALL DEVICES OR CONFIGURATIONS ARE ARE DEPICTED ON THIS DETAIL. FOR ANY CONFIGURATIONS WITH FOUR OR MORE DEVICES, COORDINATE ARRANGEMENT WITH THE ENGINEER PRIOR TO ROUGH-IN. SEE FLOOR PLANS FOR INDIVIDUAL DOOR REQUIREMENTS.
- . WHERE MULTIPLE SWITCHES OR WALL BOX DIMMERS ARE GANGED TOGETHER, ALIGN FIRST GANG WITH DEVICES
- ABOVE AND ADD DEVICES TO THE RIGHT AS REQUIRED. 3. DIMENSIONS ARE TO BE MEASURED FROM OUTSIDE EDGE OF DOOR FRAME OR TRIM. WHERE SIDE LIGHT WINDOWS
- 4. ALL DEVICES SHALL BE LOCATED TO MAINTAIN ALL A.D.A. MOUNTING HEIGHT REQUIREMENTS AND SUCH THAT CENTER
- OF ADJACENT DEVICES ARE AT SAME ELEVATION (TYPICALLY 44" A.F.F. TO CENTER OF DEVICE). NOTIFY ENGINEER OF ANY CONFLICTS WITH THE PROPOSED INSTALLATION.

#### SECTION 262416 - PANELBOARDS

A. GENERAL - Panelboard cabinets shall be NEMA PB 1, type 1 zinc coated steel with manufacturer's standard enamel finish over corrosion-resistant treatment or primer coat. Each panelboard shall be furnished with a directory card indicating the load served by each branch circuit.

#### 1. Panelboard bus material shall be hard-drawn copper, 98 percent conductivity.

2. Provide each panelboard with an equipment ground bus adequate for feeder and branch-circuit equipment ground conductors. Bus shall be bonded to box.

#### 3. Where future devices (spaces) are scheduled provide mounting brackets, bus connections, and necessary appurtenances required for future installation of devices.

- 4. Each panelboard shall be fully rated to interrupt symmetrical short-circuit current available at terminals. See schedules for required interrupting current (A.I.C.).
- 5. Panelboards shall be mounted with top of trim at 74" above finished floor, unless otherwise indicated.
- 6. Panelboards shall be mounted plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish.
- 7. Panelboards shall be manufactured by Cutler-Hammer, General Electric, Siemens, or Square D.
- B. LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS
- 1. Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units. 2. Doors: Front mounted with concealed hinges; secured with flush latch with tumbler lock; keyed alike.

#### C. DISTRIBUTION PANELBOARDS

1. Overcurrent Protective Devices: Bolt-on circuit breakers

- 2. Doors: Front mounted secured with vault-type latch with tumbler lock; keyed alike.
- D. OVERCURRENT PROTECTIVE DEVICES Thermal-magnetic circuit breakers with inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger. Circuit breaker lugs shall be mechanical style, suitable for number, size,
- trip ratings, and material of conductors. 1. Each overcurrent protective device shall have an application listing appropriate for the application.

#### SECTION 262726 - WIRING DEVICES

A. GENERAL - Devices shall be installed plumb and secure. Unless otherwise indicated, flush mount wiring devices

#### with long dimension vertical, and grounding terminal of receptacles on bottom. 1. Unless otherwise indicated wiring devices shall be mounted at the following heights, measured from finished floor to

Wall switches and wall box dimmers = 44"

#### 2. Group adjacent devices under single multi-gang wall plates.

3. Wiring devices shall be manufactured by Pass and Seymour, Leviton, Hubbell, or General Electric.

B. RECEPTACLES - Duplex receptacles shall be specification grade 20 ampere, 120 volt.

#### 1. Ground fault interrupting (GFI) receptacles shall be feed-through type arranged to protect connected downstream receptacles on same circuit.

2. Receptacles serving owner furnished equipment shall have configuration to match that of equipment plug.

#### C. SWITCHES - Snap switches shall be specification grade, quiet type, single pole, two pole, or three-way to suit

E. WALL PLATES - Plates shall be smooth finish plastic in single and combination types to match corresponding wiring devices. Match color of associated device(s).

#### 1. Weatherproof plates in damp locations: Heavy cast aluminum; hinged, gasketed, equal to Pass & Seymour #4511

for horizontal mount or #4512 for vertical mount. These covers shall be installed outdoors in a location protected from the weather such as roofed open porches, canopies, eves, and the like or in other damp locations where the receptacle will not be subject to beating rain or water run-off. These covers may also be used at roof mounted

#### mechanical equipment for use with portable tools that would be normally connected to the outlet when attended.

2. Weatherproof plates in wet locations: Self closing transparent cover, lockable weatherproof enclosure, the integrity of which is not affected when the attachment plug cap is inserted. Equal to Cooper Wiring Devices Weatherbox.

SECTION 262816 - ENCLOSED SWITCHES

A. ENCLOSED SWITCHES - Enclosed switches shall be heavy-duty grade with lockable handle. Switches shall be non-fusible unless otherwise indicated and shall have clips to accommodate fuse sizes indicated on the drawings. 1. Exterior mounted switches shall be NEMA 3R rated and shall be bolted closed.

2. Cartridge fuses shall be class dual-element time delay, Class "RK-1" Bussman low peak. Equivalent fuses as manufactured by Gould Shawmut, littlefuse, or GE are acceptable.

3. Enclosed switches shall be manufactured by Cutler-Hammer, General Electric, Siemens, or Square D.

#### SECTION 265100 - LIGHTING

A. LUMINAIRE AND FIXTURE COMPONENTS - All metal parts and components shall be free from burrs, sharp corners, and edges. All fixtures shall be shipped pre-wired and ready for mounting.

- 1. Doors, frames, and other internal access mechanisms shall be smooth operating, free from light leakage under operating conditions, and arranged to permit relamping without use of tools.
- B. LED LIGHT SOURCE REQUIREMENTS:
- 1. Rated life (L70): Minimum 50,000 hours as defined by IES LM80 and TM21.
- 2. Color Rendering Index (CRI): 80 CRI minimum.
- 3. Each luminaire type type shall be binned within a three-step MacAdam Ellipse to ensure color consistency among luminaires.
- C. LED DRIVER REQUIREMENTS:
- 1. 0-10V Dimming.
- 2. Total Harmonic Distortion Rating: Less than 20 percent.
- 3. Ambient Temperature Rating: -40° to + 55° C.
- 4. Power Factor (100% output): >0.95
- D. WARRANTY Include labor allowance required for replacement on-site at no extra cost to Owner within 1-year construction warranty. Transfer remainder of the manufacturer's warranty. including ballast manufacturer's labor stipend to owner after 1-year construction warranty.
- 1. Drivers: 5-year replacement warranty.
- 2. LED system Warranty: 5-year replacement warranty.

ceiling tees.

- E. FINISHES Luminaire finishes shall be manufacturer's standard, unless otherwise indicated. Painted finishes shall be applied over corrosion-resistant treatment or primer, free of defects. Metallic finishes shall be corrosion resistant. F. INSTALLATION - Luminaires shall be set level, plumb, and square with ceiling and walls, and secured according to
- manufacturer's written instructions and approved submittal materials.
- 1. Luminaires in or on grid-type suspended ceilings shall be supported with support clips and a minimum of four ceiling support system rods or wires for each fixture, located not more than 6 inches from fixture corners.

2. Luminaires of Sizes Less Than Ceiling Grid shall be arranged as indicated on reflected ceiling plans or center in acoustical panel, and supported independently with at least two 3/4-inch metal channels spanning and secured to

![](_page_27_Picture_114.jpeg)

	LIGHT	ING P	'AN	١E	L SC	HEDULE
LIGHTING PANEL: RATING: MOUNTING: TYPE:	C 400A SURFACE MLO W/FEED THRU LUGS AND GND. BAR				Voltage Phase: Wire: A.I.C. Ra	E: 208/120V 3 4 TING: SERIES
DESCRI	PTION	O/C	CK	(T.	O/C	DESCRIPTION
RTU-1		60/3	1	2	60/3	RTU-2
			3	4		
			5	6		
RTU-3		60/3	7	8	60/3	RTU-4
			9	10		
			11	12		
RTU-5		60/3	13	14	30/3	RTU-6
			15	16		
			17	18		
REC - ROOF TOP		20/1	19	20	15/1	EF-1
EWH-1		20/2	21	22	20/1	EF-2
			23	24	80/2	ACUR-1C
SPARE		20/1	25	26		
SPARE		20/1	27	28		SPACE ONLY
SPARE		20/1	29	30		SPACE ONLY
SPARE		20/1	31	32		SPACE ONLY
SPARE		20/1	33	34		SPACE ONLY
SPARE		20/1	35	36		SPACE ONLY
SPACE ONLY			37	38		SPACE ONLY
SPACE ONLY			39	40		SPACE ONLY
SPACE ONLY			41	42		SPACE ONLY

![](_page_27_Figure_116.jpeg)

![](_page_27_Picture_117.jpeg)

RATING:

MOUNTING:

LIGHTING PANEL: IG

SURFACE

BAR

DESCRIPTION

MLO W/ GND.

LIGHTING PANEL SCHEDULE

O/C CKT. O/C

20/1 25 26

20/1 27 28

31 32

33 34 35 36

39 40

VOLTAGE

A.I.C. RATING:

 20/1
 1
 2
 20/1 (L)
 REC - COMMUNICATIONS BOARD

 20/1
 3
 4
 20/1 (L)
 REC - COMMUNICATIONS BOARD

20/1 5 6 20/1 (L) REC - COMMUNICATIONS BOARD 20/1 7 8 20/1 (L) REC - COMMUNICATIONS BOARD

20/1 9 10 20/1 (L) REC - COMMUNICATIONS BOARD

SPACE ONLY

SPACE ONLY

SPACE ONLY

SPACE ONLY

SPACE ONLY

SPACE ONLY

PHASE:

WIRE:

20/1 11 12 SPACE ONLY

20/1 13 14 SPACE ONLY

20/1 15 16 SPACE ONLY

20/1 17 18 SPACE ONLY

20/1 19 20 SPACE ONLY 20/1 21 22 SPACE ONLY 20/1 23 24 SPACE ONLY

20/1 29 30 SPACE ONLY

37 38 SPACE ONLY

41 42 SPACE ONLY

208/120

SERIES

DESCRIPTION

4

![](_page_27_Picture_118.jpeg)

SPACE ONLY

![](_page_27_Figure_119.jpeg)

FLOOR

ARE PROVIDED, DIMENSIONS SHOULD BE MEASURED FROM OUTSIDE EDGE OF SIDE LIGHT WINDOW FRAME OR TRIM.

Energy Code: Project Title: Project Type:	2018 IECC Westgate Plaza Ace Hardware Alteration				
Construction Site: South 84th Street Omaha, NE 68124	Owner/Agent:	Designer/C Morrisse 4940 Noi Omaha, I 402.491.	ontractor: y Engineerin rth 118th Sti NE 68164 4144	ig, Inc. reet	
Allowed Interior Ligh	ting Power				
	A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	Allo	D wed Watts (B X C)
-Retail		22710	1.06		24073
		To	tal Allowed W	atts =	24073
Fixture ID : I	A Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
LED: 1: 8FT STRIP LIGH LED: 2: 4FT STRIP LIGH	IT: Other: IT: Other:	1 1	219 8	68 34	14892 272
LED: 4: 2X4 TROFFER:	Other:	1	34 Total Propos	36 ed Watts =	1224
	2050		· · · · · · · · · · · · · · · · · · ·		
Compliance Statement:	The proposed interior lighting alteration project reprisions, and other calculations submitted with this perrigned to meet the 2018 IECC requirements in COMch quirements listed in the Inspection Precklist.	resented in this docu mit application. The <i>eck</i> Version 4.1.5.4	ument is cor proposed in and to comp — <u>March</u> Date	nsistent w terior ligh oly with a n 28, 2024	ith the iting ny
systems have been desi applicable mandatory re Nick Manning - Electrical Pr Name - Title	Si ostero				

Energy Code:	2018 IECC					
Project Title:	Westgate Plaza Ace Har	dware				
Project Type:	Alteration					
Exterior Lighting Zone	2 (Neighborhood busines	s district (LZ2))				
Construction Site: South 84th Street Omaha, NE 68124	Owner/Agent:		Designer/Co Morrissey 4940 Nor Omaha, I 402.491.	ontractor: • Engineering th 118th Str NE 68164 4144	g, Inc. eet	
Allowed Exterior Lighting	1 Power					
A		в	с	D		E
Area/Surface (	Category	Quantity	Allowed Watts / Unit	Tradable Wattage	Allowe (B	ed Watts X C)
Free standing/attached sales can	ору	4080 ft2	0.4	Yes	1	632
			Total Tradab	le Watts (a) =	1	632
		Total All	Total All owed Supplement	owed Watts = al Watts (b) =	1	400
(D) A supplemental allowance	a Dowor	d compliance or s	Dill non-tradadic c		D	E.
Proposed Exterior Lightin	A A	Bellest	B Lomne/	# of	Cisturo	
Proposed Exterior Lightir Fixture ID : Descr	A ription / Lamp / Wattage Per Lamp	) / Ballast	Lamps/ Fixture	# of Fixtures	Fixture Watt.	(C X D)
Free standing/attached sales of	A ription / Lamp / Wattage Per Lamp 	) / Ballast	E Lamps/ Fixture	# of Fixtures	Fixture Watt.	(C X D)
Free standing/attached sales of LED: 4: CANOPY LIGHT: Othe LED: 5: WALL PACK: Other:	A ription / Lamp / Wattage Per Lamp 2anopy (4080 ft2): Tradable Wattage r:	o / Ballast	Lamps/ Fixture	22 22	Fixture Watt. 82 56	(C X D)
Proposed Exterior Lightir Fixture ID : Descr Eree standing/attached sales of LED: 4: CANOPY LIGHT: Othe LED: 5: WALL PACK: Other:	A ription / Lamp / Wattage Per Lamp canopy (4080 ft2): Tradable Wattage r:	2 / Ballast	Lamps/ Fixture	# of Fixtures	Fixture Watt. 82 56 ed Watts =	(C X D) 1804 112 1916
Proposed Exterior Lightin Fixture ID : Descu Free standing/attached sales of LED: 4: CANOPY LIGHT: Othe LED: 5: WALL PACK: Other: Exterior Lighting PASSES	A ription / Lamp / Wattage Per Lamp canopy (4080 ft2): Tradable Wattage r:	2 2	B Lamps/ Fixture 1 1 Total Trad	# of Fixtures 22 2 Jable Propose	Fixture Watt. 82 56 ed Watts =	(C X D)
Proposed Exterior Lightin Fixture ID : Desci Free standing/attached sales of LED: 4: CANOPY LIGHT: Othe LED: 5: WALL PACK: Other: Exterior Lighting PASSES Exterior Lighting Complia Compliance Statement: The p building plans, specifications, systems have been designed applicable mandatory require Nick Manning - Electrical Project N	A ription / Lamp / Wattage Per Lamp canopy (4080 ft2): Tradable Wattage r: S ance Statement proposed exterior lighting alteration and other calculations submitted w to meet the 2018 IECC requirement ments listed in the Inspection cleck Wanager	project represent ith this permit a is in COM <i>check</i> N	B Lamps/ Fixture	# of Fixtures 22 2 dable Propose Jable Proposed proposed exi and to comp	Fixture Watt. 82 56 ad Watts = hsistent w terior ligh ly with an 28, 2024	(C X D)

![](_page_27_Picture_130.jpeg)

![](_page_27_Picture_131.jpeg)

![](_page_27_Figure_132.jpeg)