

September 8, 2022 – 7:00 pm Village Hall 235 Hickory Street, Pewaukee, WI 53072

1. Call to Order and Roll Call

2. <u>Citizen Comments</u> – This is an opportunity for citizens to share their opinions with Commission Members on any topic they choose. However, due to Wisconsin Open Meeting laws, the Commission is not able to answer questions or respond to your comments. All comments should be directed to the Commission. Comments are limited to 3 minutes per speaker. Speakers are asked to use the podium and state their name and address.

3. Approval of the Minutes:

a. Regular Plan Commission Meeting – August 11, 2022

4. Old Business.

a. Review and discussion on the topic of possible updates to the Village's 'Off-Street Parking Requirements' as setforth in Chapter 40, Article VII, Division 2. of the Village Code. This topic is Village initiated.

5. New Business.

- a. Review, discussion and possible action on the Sign Code waiver request of Walmart, in c/o Jacob Hiatt of LK Architecture, to add multiple new wall signs to their existing building at 411 Pewaukee Road thereby increasing in the extent to which the building already exceeds (with waiver approval) the permissions of the Sign Code as to quantity and size of wall signs. This 13+/- acre property is zoned B-1 Community Business w/ PUD Planned Unit Development Overlay District. The property owner is CJM&W Investment Company LLC.
- b. Review, discussion and possible action on the Architectural Plan Amendment request of Walmart, in c/o Jacob Hiatt of LK Architecture, to modify the exterior colors of their principal building by adding blue color in certain specific portions of the building elevations. This 13+/- acre property is zoned B-1 Community Business w/ PUD Planned Unit Development Overlay District. The property owner is CJM&W Investment Company LLC.
- c. Review, discussion, and possible action on the Architectural Plan Amendment (i.e., exterior building color changes [adding green color in certain specific portions of the building elevations] and applying window film/decals) request of Dollar Tree, in c/o Greg and Suzanna Kelson of VWS-Viper Construction Services LLC and in c/o Sarah Goeke of Access Permits. The owner of this B-1 Community Business zoned property is 690 Westfield Way LLC in c/o Saf Sarich of the Kenmore Group.
- d. Review, discussion and possible action on the Site and Architectural Plan Amendment request of property owner/applicant Ben Mohn to establish an outdoor dumpster storage location on this site with related screening structure, and to add elevated, exterior deck features on the north, west and south building elevations at the existing patio doors of the apartments. This +/- .9-acre site is zoned R-M Multi-Family Residential District.

6. <u>Citizen Comments.</u> – This is an opportunity for citizens to share their opinions with Commission Members on any topic they choose. However, due to Wisconsin Open Meeting laws, the Commission is not able to answer questions or respond to your comments. All comments should be directed to the Commission. Comments are limited to 3 minutes per speaker. Speakers are asked to use the podium and state their name and address.

7. Adjournment

Note: It is possible that members and/or possibly a quorum of members of other governmental bodies of the municipality may be in attendance at the above-stated meeting to gather information; action will not be taken by any governmental body at the above-stated meeting other than the governmental body specifically referred to above in the notice. Upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. To request such assistance, contact the Village Clerk at 262-691-5660.

Dated: September 2, 2022

PLAN COMMISSION MINUTES

August 11, 2022 – 7:00 p.m. Village Hall 235 Hickory Street, Pewaukee, WI 53072

DRAFT-DRAFT-DRAFT-DRAFT-DRAFT-DRAFT

1. Call to Order and Roll Call

President Knutson called the meeting to order at approximately 7:00 p.m. Plan Commission members present: Comm. Mark Grabowski, Comm. Ryan Lange, Comm. Cheryl Mantz, Comm. Brian Belt, Trustee Craig Roberts and President Jeff Knutson. Excused: Comm. Theresa Hoff.

Also present: Village Planner, Mary Censky; Village Contracted Engineer, Tim Barbeau; Village Attorney, Matt Gralinski; Village Administrator; Scott Gosse, and Village Deputy Clerk/Treasurer, Jenna Peter.

2. Public Hearings:

a. On a Conditional Use Grant request of applicant/property owner 230 Sussex Street LLC in c/o Tim Knepprath, to develop approximately .46 acres of their 1.83 +/- acre, B-5 Light Industrial zoned site located at 227 Sussex Street into an outdoor POD's storage container staging area for approximately 50 such units.

Property owner, Nick Wellenstein, stated that he is open to answer any questions.

b. On a Conditional Use Grant request of applicant/property owner Cornerstone Development, in c/o Joe Orendorf and John Wahlen, and Alan Peters of True Vine Development, to develop Outlot 5 of the Glen at Pewaukee Lake Subdivision with a Clubhouse, including related parking and accessory facilities, for the benefit of the owners of the lots in the subdivision owner's association. This .69-acre outlot is zoned R-5 Single-Family Residential with Residential Infill-Redevelopment Overlay District.

None.

3. Citizen Comments:

Kristin Schrank – 549 E. Potter Ave, Milwaukee; with the Alliance for Animals, asked the Commission members to pass the Draft Ordinance adding regulations/prohibitions on the sale of live dogs, cats and rabbits (companion animals) being discussed in section 6.c. on the agenda.

Trustee Jim Grabowski – 128 Park Ave, Pewaukee, would like the Commission members to consider striking the prohibited use of "offer for adoption" line out of the Draft Ordinance from Sec. 40.250.5 – Prohibited Uses.

Sandy Hoffmann – 1262 Timber Ridge, Pewaukee, spoke in favor of passing the Draft Ordinance.

Kathy Line – 350 Stone Ct, Pewaukee, spoke in favor of passing the Draft Ordinance.

4. Approval of the Minutes - Regular Plan Commission Meeting – July 14, 2022: Comm. Mantz motioned, seconded by Comm. Belt to approve the minutes of the July 14, 2022 Regular Plan Commission meeting with the spelling correction in line one of paragraph 6.c.

Motion carried 4-0-2; Members Lange and Grabowski abstained.

5. Old Business - Item 5.a.

a. Review and general discussion regarding the Village's parking requirements for all business zoning districts as it relates to the apparent decline in brick-and-mortar retail shopping and the continuing practice of working remotely-away from brick-and-mortar office environments. Of particular interest is the potential for excessive parking allocations displacing underutilized otherwise useable/developable space in the Village's business areas.

Item was not discussed at this meeting.

6. New Business

a. Possible action on the Conditional Use Grant request of applicant/property owner 230 Sussex Street LLC in c/o Tim Knepprath, to develop approximately .46 acres of their 1.83+/- acre, B-5 Light Industrial zoned site located at 227 Sussex Street into an outdoor POD's storage container staging area for approximately 50 such units.

Planner Censky explained that this property was split off into a smaller lot in favor of developing mini-warehouse use to the north and west. Previously, a PODs storage area was permitted and in effect on that northwest part of this site; that use allowed for up to 30 POD containers – no stacking or racking. The applicant now proposes to set aside approximately 19,900 square feet of the newly split site, between the principal building and Maiden Lane, to establish a compacted gravel base and park/store the PODs units. Based upon the applicants' calculations, the site will still comply with the greenspace requirement – minimum 35%. At 128 sq. ft./unit for the largest units x 50 units (proposed), the cumulative coverage within this 19,900 sq.ft. space with PODs equals 6,400 sq.ft. No new landscaping or screening of the stored PODs is proposed. There is an existing vegetive growth area along both Maiden Lane and Sussex Street that generally, in the Summertime, does obscure the view. This existing vegetation is very mature and appears to be waning. Planner Censky suggested that if approved, it is recommended that the applicant be required to devise a landscaping/screening plan because of the adjoining residential uses. General operating characteristics are represented to include two – three trips inbound related to PODs per day and hours of PODs operation 8 a.m. to 5 p.m. Monday through Saturday.

Village Planner Recommendations:

- 1) Full signatures and recording of the Conditional Use Grant prior to the placement of any PODs at this site;
- 2) Village Engineer review and approval of the grading and drainage plan to be prepared in support of this project;
- 3) Applicant to design and install a suitable landscaping or similar screening plan, to be installed at the perimeter edge of the proposed PODs storage area, as will ensure year-round and long-term screening of the PODs from the neighboring residential land uses. This plan shall be subject to review and approval by Village Staff. If plantings are proposed, they shall be no less than 6 feet in height at planting. The deadline for installation of the approved screening plan shall be determined and set by the Village Staff, but in no case later than 12 months from the date of recording the CUG;
- 4) No other materials, including for instance but not necessarily limited to boats, trailers, docks, lifts, equipment, or supplies may be parked or stored within the site plan delineated POD's area.

Engineer Barbeau explained the current site is grass/weeds. The proposal is to remove the grass area and replace it with a 19,990 sq.ft (0.46 acre) stone base. The proposed addition of the stone base is below the Village code's 0.5-acre threshold to require stormwater management facilities; therefore, none are required. He also said that the site is relatively flat and will not affect the drainage pattern. Storm run-off will flow to a floodplain area to the northwest of the site and will not affect any existing residents.

Village Engineer recommendation:

1) Owner provides a grading plan confirming that the stone pad will sheet flow to the west.

Discussion followed as to options for screening the lot with vegetation or a fence. Trustee Roberts and President Knutson would like to see a fairly tall and opaque fence blocking the area from the road on Maiden Lane. Property owner Nick Wellenstein stated that adding a substantial fence would not be economical because they would have to cut down all the trees in order to get the fence installed. Applicant, Tim Knepprath would not be opposed to adding 6-foot pine trees inside of the existing vegetation. Comm, Lange did not think asking for an 8-foot fence would be necessary but something significant is needed to hide the area from view. Comm. Mantz agreed the site needs some sort of landscaping and screening. Comm. Belt stated that fencing might not be feasible and would like to see options that are more economical for the property owners.

Comm. Grabowski was concerned with the wording on 4) of the Planner's recommendations and feels it limits the site as far as storage because a construction company owns the lot. Property owner Wellenstein agreed that the current wording as it stands would be a hinderance because they do have trucks, trailers, and equipment that will need to be stored on the property for the business.

There were also concerns about too much storage of equipment on the property and the increased foot traffic of people going in and out of their storage units will increase the traffic on Sussex St.

President Knutson stated that he wants the screening plan to be effective right away, not in future years after the landscaping matures.

Trustee Roberts motioned, seconded by Comm. Grabowski to approve the Conditional Use Grant for POD Storage units subject to the Village Planner's recommendations with the following conditions:

- 1) Access to/from the PODs use shall only be from Sussex St.
- 2) Applicant to design and install a suitable landscaping or similar screening plan, to be installed at the perimeter edge of the proposed PODs storage area, as will ensure year-round and long-term screening of the PODs from the neighboring residential land uses. This plan shall be subject to review and approval by Village Staff. If plantings are proposed, they shall be no less than 6 feet in height at planting and must provide an immediate screening benefit. The deadline for installation of the approved screening plan shall be determined and set by the Village Staff, but in no case later than 12 months from the date of recording the CUG;
- 3) Village Engineer review and approval of the grading and drainage plan to be prepared in support of this project;
- 4) No other materials, including for instance but not necessarily limited to boats, trailers, docks, lifts, equipment, or supplies may be parked or stored within the site plan delineated POD's area.

Motion carried 5-1; President Knutson nay.

b. Possible action on the Conditional Use Grant request of applicant/property owner Cornerstone Development, in c/o Joe Orendorf and John Walen, and Alan Peters of True Vine Development, to develop Outlot 5 of the Glen at Pewaukee Lake Subdivision with a Clubhouse, including related parking and accessory facilities, for the benefit of the owners of the lots in the subdivision owner's association. This .69-acre outlot is zoned R-5 Single-Family Residential with Residential Infill-Redevelopment Overlay District.

Planner Censky explained this project was originally approved 12 months ago and the time ran out on the Conditional Use Grant. She noted that the setbacks, offsets and greenspace comply with the zoning. There will also be parking provided on site along with outdoor recreational activity areas. A detailed and thorough landscaping plan has been provided.

Village Planner Recommendations:

- 1) All items pending final review and approval as noted in the Planner Staff Report shall be completed/approved and incorporated into the CUG document prior to its release for signatures and recording;
- 2) A revision to the floor plan shall be reflected in the CUG document taking out the reference to a "pool";
- 3) Village Engineer review and approval of the overall site grading, drainage and utilities plans for this project/site prior to issuance of a building permit;
- 4) The public access and business use of this building (i.e. sales center) shall terminate upon the sale of all lots contained within this development or within 3 years of the date of recording this conditional use grant, whichever happens first;

5) Recording of the Conditional Use Grant, and issuance of any/all required building, electrical, erosion control, and similar permits, prior to the start of any site or building work in support of this project.

Engineer Barbeau stated that nothing will change from the grading plan that was approved a year ago.

Comm. Mantz motioned, seconded by Comm. Belt to approve the Conditional Use Grant as presented subject to the Village Planner's recommendations.

Motioned carried unanimously

c. Discussion and possible recommendation to the Village Board on Draft Ordinance to add regulations/prohibitions on the sale of live dogs, cats, and rabbits (companion animals) by pet shops, retail businesses, or other commercial establishments located in the B-1 Community Business, B-2 Downtown Business, B-3 Office & Service Businesses, B-4 Business Park, B-5 Light Industrial, and IPS-Institutional and Public Service Zoning District.

Trustee Roberts gave the Commission members a background on the matter from the July 5 and July 19, 2022 Village Board Meetings. Trustee Jim Grabowski introduced an ordinance that banned the retail sale of dogs, cats, and rabbits, as well as, issues regarding puppy mills. Roberts explained the original ordinance at the July 5 meeting was found to have issues with wording, specifically targeting retail which is a large tax base for the Village. The Village Board reviewed the amended draft ordinance at the July 19th meeting and it was suggested that this topic might be better addressed in the zoning ordinance. The amended ordinance presented for consideration in the zoning code prohibits the breeding, retail sale, and offering for adoption of live dogs, cats, and/or rabbits, or other exotic or endangered animals. Trustee Roberts went on to explain the ordinance does not impact residential zones and will not adversely impact responsible professional home-based breeders.

Village Attorney Matt Gralinski discussed current state laws and regulations, as well as, restrictions on local Conditional Use Grant abilities.

Trustee Roberts motioned, seconded by Comm. Mantz to recommend approval as presented to the Village Board with the following edit "Individuals, businesses and/or organizations that breed, sell or offer for adoption live animals including dogs, cats, rabbits or exotic/endangered animals." to read, "Individuals, businesses and/or organizations that breed or sell dogs, cats, rabbits or exotic/endangered animals." Motion carried 5-1; Comm. Belt nay.

7.a. Reports:

Report to the Planning Commission regarding the Staff level approval of a Certified Survey Map combining the two adjoining lots owned by Northshore Bank FSB and Northshore Savings Bank located at 104 and 120 W. Wisconsin Avenue respectively. Together these parcels total approximately .6852 acres and they are both zoned B-2 Downtown Business District.

Planner Censky stated no buildings are being added to the lot at this time. The newly created lot meets/exceeds both the minimum required lot size (i.e 7,000 sq.ft.) and the minimum required lot width (i.e. 70 feet) for the B-2 District.

Engineer Barbeau stated the surveyor has included a vision triangle at the corner of W. Wisconsin Ave and Park Ave stating that no structure or plantings greater than two (2) feet are allowed within the triangle.

No action was needed or taken.

8. Citizen Comments:

The members were thanked for passing the recommendation for the draft ordinance concerning the regulations/prohibitions of the sale of companion animals.

9. Adjournment

Comm. Belt motioned, seconded by Comm. Grabowski to adjourn the August 11, 2022, Regular Plan Commission meeting at approximately 9:05 p.m. Motion carried unanimously.

Respectfully submitted,

Jenna Peter Deputy Village Clerk/Treasurer

STAFF REPORT

To: Village of Pewaukee Plan Commission By: Mary Censky

General Information:

Agenda Item: 4.a.

Requested Action:

Applicant: N/A

Status of Applicant: Village initiated item

Review and general discussion regarding the Village's parking requirements for all business zoning districts as it relates to the apparent decline in brick-and-mortar retail shopping and the continuing practice of working remotely-away from brick-and-mortar office environments. Of particular interest is the potential for excessive parking allocations displacing underutilized otherwise useable/developable space in the Village's business areas.

Date Prepared: September 8, 2022

Discussion:

The Planner has had topic discussions with a couple of key area property owners who have large enough parking lots within the Village that we thought they may be helpful in researching this topic -i.e.

- Should the Village begin tweaking its parking stall count requirements at this time based upon changes surfacing in the wake of the pandemic (i.e. more online shopping/less brick mortar shopping, and more remote work arrangements vs office occupancy), and
- Do you feel you that currently possess any paved areas that could be developed into new building projects where sufficient room is available to park for the new project and to support the existing uses?

General consensus feedback was that: the Village does presently have, and has appropriately and effectively utilized, the "flexibility in application" provision in our Parking Requirements section of the Code (i.e. Section 40.426(g)); no one feels they have enough unused parking area (at this time) that they could expand into and still provide enough spaces to accommodate both the existing and any new use(s); and both agree that the "new normal" has not been arrived at in terms of retail and office occupancies post-pandemic. They continue to see things moving back toward the 'pre' conditions but are unable to forecast how far or fast that will continue to be the

case.

Recommendation:

At this time the Planner recommends that this topic and related communications/findings be placed on file and revisited again at some prescribed future date for reevaluation. No changes are recommended to be implemented at this time.

STAFF REPORT

To: Village of Pewaukee Plan Commission By: Mary Censky

Date Prepared: September 8, 2022

General Information:

Agenda Item: 5.a.

Applicant: Walmart, in c/o Jacob Hiatt of LK

Architecture

Property Owner: CJM&W Investment Company LLC

Requested Action: Sign Code waiver approval.

Current Zoning: B-1 Community Business w/

PUD - Planned Unit Development

Current Master Plan Classification:Community Commercial

Surrounding Zoning/Land Use: North: B-1 Community Business w/

PUD overlay (Costco)

South: B-1 Community Business w/

PUD overlay (Meadow Creek

Shopping Center)
East: B-1 Hwy.164

West: B-1 Community Business w/ PUD overlay (Meadow Creek Shopping Center/Menards)

Lot Size: Approximately 13.88 acres

Location: 411 Pewaukee Road

Discussion:

The applicant requests approval to install 4 new illuminated wall signs, totaling 92 square feet in combined sign area, to the front (i.e., main entrance) building elevation which faces the interior parking area attendant to the use and the internal private roads of Meadow Creek development. These signs range from 14 sq. ft. to 31 sq. ft. in area and will read "HOME", "GROCERY", "PHARMACY", and "PICKUP". An additional wall sign is proposed to replace existing "Tire & Lube Express sign on this elevation.

On the left elevation, the applicant proposes to remove/replace the few existing signs above the overhead doors and add additional signs over the doors that presently have no signs (or door numbers).

The Village Sign Code permits up to one wall sign, not to exceed 40 sq. ft. in area, per building per, street frontage. In the past, the Village has treated this building as having three "street"

frontages – the front, left, and right elevations.

Sec. 70.103 of the Villages Sign Code provides as follows:

Appeals. The planning commission may, in its judgment, waive or modify the provisions of this chapter where it would further the public interest and uphold the purpose of this chapter as put forth in section 70.100. Such waiver or modification may be based on, among other things, site-specific hardships such as topographic aberrations, traffic safety, accessibility and visual encumbrances.

Section Sec. 70.100 of the Villages Sign Code provides as follows:

Purpose. The purpose of this chapter shall be to:

- (1) Regulate the size, type, construction standards, maintenance and placement of signs situated within the boundaries of the Village of Pewaukee, Wisconsin.
- (2) Promote the public health, safety, welfare and comfort of the general public by:
 - a. Reducing distractions and obstructions from signs which would adversely effect traffic safety and alleviate hazards caused by signs projecting over or encroaching upon the public right-of-way;
 - b. Discouraging excessive visual competition in signage and ensuring that signs aid orientation and adequately identify uses and activities to the public; and
 - c. Preserving or enhancing the natural beauty and unique physical characteristics of the village as a community in which to live and work by requiring new and replacement signage which is:
 - 1. Harmonious with the building, surrounding neighborhood aesthetics and other signs in the area;
 - 2. Appropriate to the type of activity to which it pertains;
 - 3. Expressive of the village's identity in a manner which will not diminish property values; and
 - 4. Complementary to the village's architectural character and unobtrusive commercial developments.

Recommendation:

Given that Planning Commissions did fairly recently review but deny a similar request for the "Pick-up" sign to be added to the front elevation, it would appear that it remains the Villages intent at this time to prohibit secondary and tertiary wall signs for single use buildings such as this unless "specific hardships" warrant. The Planner doesn't find that a "specific hardship" has been articulated in this case with respect to the and so does not recommend in favor of this request for waiver as regards the proposed new "HOME", "GROCERY", "PHARMACY", and "PICKUP" signs.

With respect to the signs proposed to be removed and replaced/expanded upon in the auto service area, the Planner suggests these might be considered directional in nature and wouldn't necessarily object to allowing for the waiver as to these signs.

If the Planning Commission is inclined toward granting any approval in this matter, it is recommended that the following conditions be considered for attachment:

1) Applicant to secure a sign permit, and including any electrical permits as may be necessary, prior to the installation of any new signs at this location.

Application is due 3 weeks prior to the Meeting Date.



Village of Pewaukee – Planning Commission Miscellaneous Approval Application Form – Return Completed Form along with 11 copies of all materials to be reviewed.

Address/Parcel No. of Property Involved: 411 Pe	ewaukee Road
Zoning of Property: B1	
Current Owner of Property: Walmart RE Busine	ess Trust
Applicant – Name: <u>Jacob Hiatt - LK Architectu</u> Address: <u>345 Riverview</u> , <u>Suite 2</u>	
Phone: 316-268-0230 Fax:	
Type of Request: Check All That Apply	
Sign Plan Approval: Final Plat Approval: Certified Survey Map: Other (Describe Below):	Prelim. Plat Approval: Developer's Agreement:
Exterior paint approval	
Signature of Property Owner as listed on this Ap —Docusigned by: Kichard Goff —315A1A0FFB10415	plication:
Application will not be processed without who is listed as the Applicant. This signate Pewaukee to process the Application as it authorizes the Village or its representative routine inspections of my property for the Application.	ure authorizes the Village of pertains to my property and further as to conduct reasonable and
Signature of Applicant (if different than Owner): acob Hiatt	



PROFESSIONAL SERVICES REIMBURSEMENT NOTICE

Pursuant to the Village of Pewaukee Code of Ordinances, the Village Board has determined that whenever the services of the Village Attorney, Village Engineer, Village Planner or any other of the Village's professional staff results in a charge to the Village for that professional's time and services and such service is not a service supplied to the Village as a whole, the Village Clerk shall charge that service for the fees incurred by the Village. Also, be advised that pursuant to the Village of Pewaukee Code of Ordinances, certain other fees, costs, and charges are the responsibility of the property owner or responsible party.

I, the undersigned, have been advised that, pursuant to the Village of Pewaukee Code of Ordinances, if the Village Attorney, Village Engineer, Village Planner or any other Village professional provides services to the Village because of my activities, whether at my request or at the request of the Village, I shall be responsible for the fees incurred by the Village. In addition, I have been advised that pursuant to the Village of Pewaukee Code of Ordinances, certain other fees, costs, and charges are my responsibility.

The Village will place fees from unpaid invoices on the real estate tax bill of the property that corresponds to the incurred services.

RESPONSIBLE PARTY & MAILING ADDRESS

LK Architecture			
Name of Company and/or Individual			
345 Riverview, Suite 200 Wichita, KS 672	203		
Street C	ty	State	Zip
Phone: 3162680230 Fax:E	- _{Mail:} jhiatt@lk-arc	hitecture.co	m
Signature of Applicant & Date Signature Of Property Owner & Date Village Official Accepting Form & Date	SEND ALL P SERVICES I (Che Property Applican	INVOICES ck One) v Owner	

Walmart Site



273.21 Feet

The information and depictions herein are for informational purposes and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified maps, surveys, plats, Flood Insurance Studies, or orther official means. Waukesha County will not be responsible for any damages which result from third party use of the information and depictions herein, or for use which ignores this warning.

Notes:

Printed: 9/1/2022



STAFF REPORT

To: Village of Pewaukee Plan Commission By: Mary Censky

Date Prepared: September 8, 2022

General Information:

Agenda Item: 5.b.

Applicant: Walmart, in c/o Jacob Hiatt of LK

Architecture

Property Owner: CJM&W Investment Company LLC

Requested Action: Architectural Plan Amendment approval.

Current Zoning: B-1 Community Business w/

PUD - Planned Unit Development

Current Master Plan Classification:Community Commercial

Surrounding Zoning/Land Use: North: B-1 Community Business w/ PUD

overlay (Costco)

South: B-1 Community Business w/ PUD overlay (Meadow Creek Shopping Center)

East: B-1 Hwy.164

West: B-1 Community Business w/ PUD

overlay (Meadow Creek Shopping

Center/Menards)

Lot Size: Approximately 13.88 acres

Location: 411 Pewaukee Road

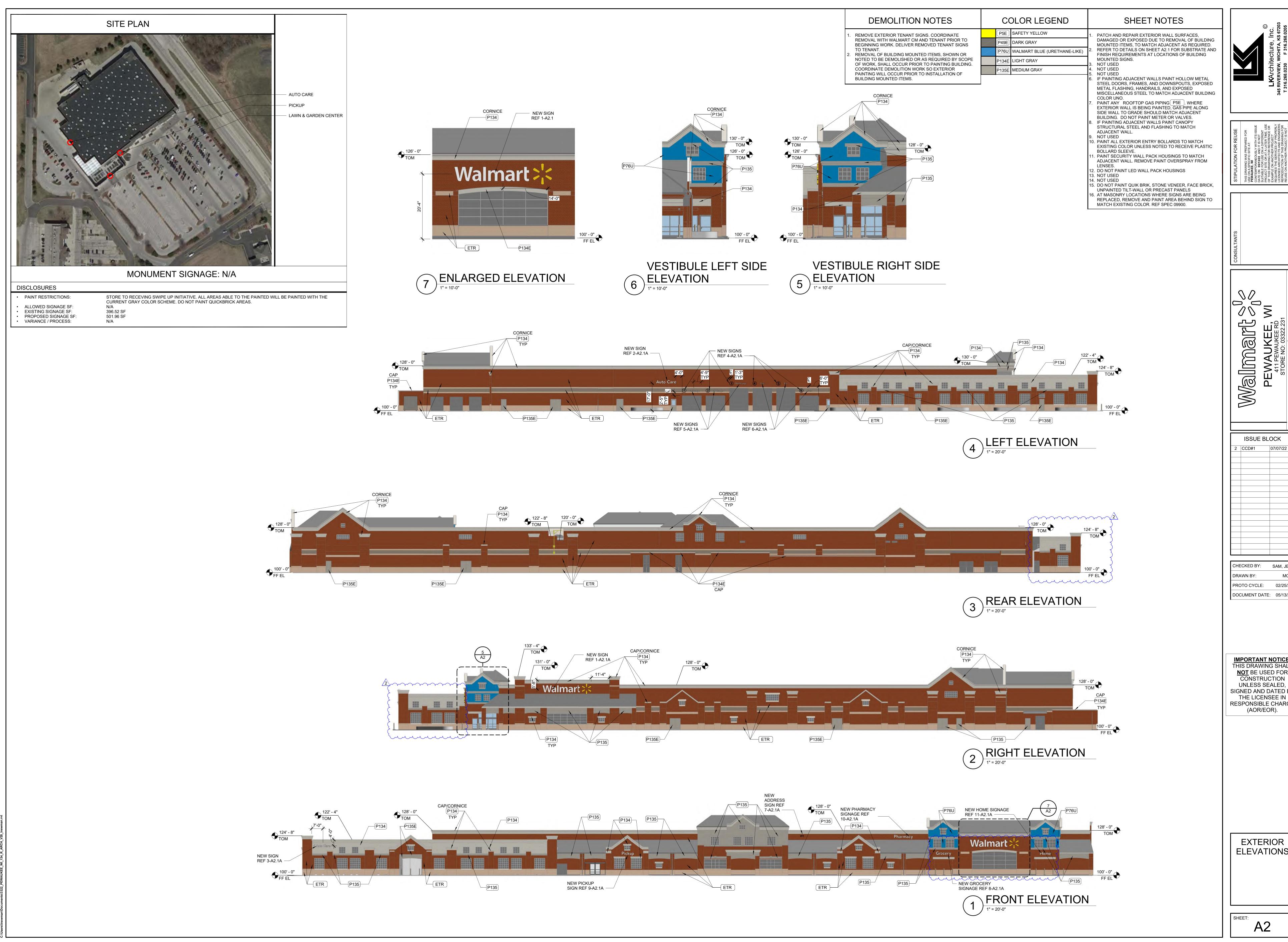
Discussion:

The applicant proposes to add "Walmart Blue" coloration to certain specific sections of the building elevations (see plan sheet enclosed) which are currently, as previously approved, painted principally grey and tan in color.

Section 40.447(4) of the Village Code pertaining to architectural standards and requirements for commercial buildings in the Village, provides as to "Colors", that "Buildings shall generally reflect earth tone colors. Awnings, trim and window colors are allowed greater color latitude subject to plan commission approval".

Recommendation:

The Planner defers to Planning Commission determination whether the extent of the proposed Walmart Blue painting and the color of the Walmart Blue paint are satisfactory under the guidance of Section 40.477(4) as setforth above.



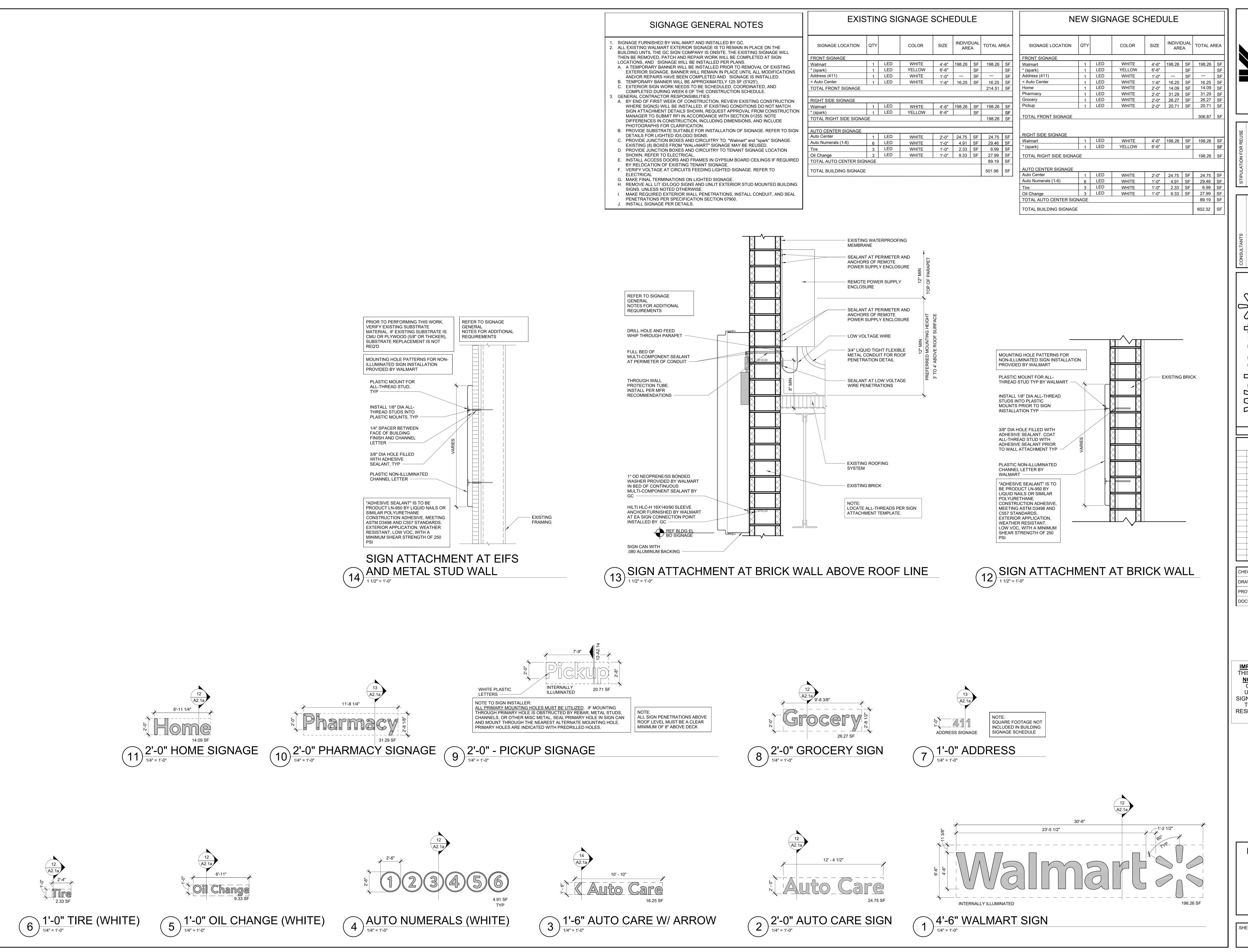
ISSUE BLOCK

CHECKED BY: SAM, JEH DRAWN BY: PROTO CYCLE: DOCUMENT DATE: 05/13/22

IMPORTANT NOTICE:
THIS DRAWING SHALL
NOT BE USED FOR
CONSTRUCTION
UNLESS SEALED,
SIGNED AND DATED BY
THE LICENSEE IN RESPONSIBLE CHARGE (AOR/EOR).

EXTERIOR ELEVATIONS

A2



ISSUE BLOCK CHECKED BY:

DRAWN BY: PROTO CYCLE: DOCUMENT DATE: 05/13/22

IMPORTANT NOTICE: THIS DRAWING SHALL **NOT** BE USED FOR CONSTRUCTION UNLESS SEALED, SIGNED AND DATED BY THE LICENSEE IN RESPONSIBLE CHARGE (AOR/EOR).

EXTERIOR SIGNAGE

A2.1a

STAFF REPORT

To: Village of Pewaukee Plan Commission By: Mary Censky

Date Prepared: September 8, 2022

General Information:

Agenda Item: 5.C.

Applicant: Dollar Tree, in c/o Greg and Suzanna Kelson

of VWS-Viper Construction Services LLC and in c/o Sarah Goeke of Access Permits.

Property Owner: 690 Westfield Way LLC in c/o Saf Sarich of

the Kenmore Group

Requested Action: Architectural Plan Amendment approval.

Current Zoning: B-1 Community Business

Current Master Plan Classification:Community Commercial

Surrounding Zoning/Land Use: North: R-M Multi-Family Residential

South: B-1 Community Business East: B-1 Community Business West: B-1 Community Business

Lot Size: ~4.47 acres

Property Location: 609 Westfield Way – easternmost tenant

space

Discussion:

The applicant requests, after-the-fact approval to retain the Sherwin Williams green paint color "Envy" they have added to certain specific sections of the building elevations which were, as previously approved, painted tan in color. Also, the applicant has added decals with imaging to the windows in this tenant space where the reviewed plan had called for an opaque window film. This is considered an amendment to the architectural plan as well since the original window specifications were approved as clear view glass with a recent staff level amendment given to permit an opaque film covering.

Section 40.447(4) of the Village Code pertaining to architectural standards and requirements for commercial buildings in the Village, provides as to "Colors", that "Buildings shall generally reflect earth tone colors. Awnings, trim and window colors are allowed greater color latitude subject to plan commission approval".

Recommendation:

The Planner defers to Planning Commission determination whether the extent of the existing green painting and the color of the Sherwin Williams "Envy" paint is satisfactory under the guidance of Section 40.477(4) as setforth above, and whether the change from opaque window film to decals with imaging are considered acceptable in this case.



July 21, 2022

Sent via email to greg@viperwall.com & USPS

Dollar Tree c/o Viper Wall Systems, LLC ATTN: Greg 76 Westpark Road Dayton, OH 45459

Dear Greg:

The Village is aware of the recent painting of the trim green for the new Dollar Tree location at 690 Westfield Way, Pewaukee, WI (copy of photo enclosed). Please note that Village Code Section 40.438(a) requires Village Plan Commission approval prior to any changes to a commercial structure:

Section 40.438(a) No commercial, industrial, institutional, park or multifamily residential structure or facility (note: does not include single-family and two-family dwellings) shall be erected, moved, reconstructed, extended, enlarged, altered or changed until the planning commission has reviewed and approved plans for the site and structure. The planning commission shall not approve any plans unless they find after review and study of the application that the use or structure, as planned, will not violate the intent and purposes of this chapter.

You will need to submit the enclosed Business Site Plan Application form no later than Thursday, August 18, 2022 by 4:30PM CST to appear on the September 8, 2022 Plan Commission agenda for review and consideration of the change in color. In the event of non-compliance, a municipal citation can be issued. Each day that the noncompliance continues is considered a separate violation and subject to a separate forfeiture.

Thank you for your prompt attention to this matter. Please do not hesitate to contact me at 262-691-5660 or sgosse@villageofpewaukee.com.

Sincerely,

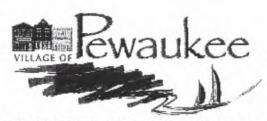
Scott A. Gosse

Village Administrator

Enclosures

C: Saf Sarich, The Kenmore Group, LLC; SAF@TheKenmoreGroup.com





APPLICATION PROCESS FOR BUSINESS SITE PLAN APPROVAL REQUESTS

Step 1: Please read through the attached sections of the Village's Development Code that explain the process for requesting site plan approval (Section 40.437 of Land Development Code or web link:

https://library.municode.com/wi/pewaukee/codes/code of ordinances?nodeId=PTIIMUCO CH40LADE ARTIXSIPLDECR DIV2SIPLRECOININPAMUREDE).

Contact Village Planner Mary Censky at (262) 255-1878 to discuss your application and determine whether to proceed with a consultation or move directly to a request for action on an application for site plan approval.

The consultation process is intended to allow applicants an opportunity to conceptually discuss their plans with the Plan Commission and receive valuable feedback prior to drafting detailed plans. The Village Planner will assist the applicant in determining what type of conceptual plans, if any, to submit for this process.

Step 2: Submit a <u>fully completed</u> application form along with 13 copies (<u>and one digital copy</u>) of all attachments that you wish to have considered by the Plan Commission as part of your application. (Please fold all attachments so that they are 8 ½" x 11" size and with project name/identification visible.) Please note: Incomplete applications will not be accepted.

Please note: Applications must be submitted to Village Hall three weeks prior to the Plan Commission meeting. Plan Commission meetings are held on the second Thursday of each month at 7:00 p.m. The three week submittal requirement allows the Village time to review the application, obtain additional information from you if need be and set up a public hearing, if required.

Step 3: The Village Planner and the Village's consulting Engineer will be reviewing your application and will prepare a report for the Plan Commission, which will include recommendations for action.

Please note: Multiple Plan Commission meetings are often required prior to final project approval.

(Revised 4/12/10; 01/28/19; 6/12/19)



Business Site Plan Application Form

Current Owner of	Property: 690 WESTFIELD WAY, LLC
Pho	Sarah Goeke lress: N2533 Van Matre Ln. Monroe, WI 53566 ne:815-541-7995 : 815-369-4495
	ail:_sarah@accesspermits.com
Name of Business	s that Corresponds to Site Plan: Dollar Tree
Summary of Requ	uest (New Construction, Addition, Modification, etc.):
Site Plan Plan of	f opperations amendment of building paint colors.

Provide detailed information with your application that addresses the following:

1. Development Plans of the proposed use in sufficient detail to enable the Commission to evaluate the suitability of architectural & landscape treatment, proper placement of the building(s) on the lot, traffic generation & circulation, provision for parking, drainage, exterior lighting, control devices (when necessary) to eliminate noise, dust, odor, smoke or other objectionable operating conditions & general compatibility of the proposed use with the area in which it is located.

- 2. It is the responsibility of the applicant/owner to ensure that the proposed project meets the Village's Land Development Code. It is also highly recommended that the applicant/owner review the Village's adopted Land Use Plan.
- 3. Signage shall be determined through a sign permit process and/or a sign plan approved by the Plan Commission. Permits for individual signs may be applied for with the Village's Code Compliance Officer.

7/27/22

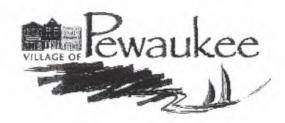
Signature of Property Owner as listed on this Application:

Application will not be processed without the Owner's Signature regardless of who is listed as the Applicant. This signature authorizes the Village of Pewaukee to process the Site Plan Approval Application proposed for my property and further authorizes the Village or its representatives to conduct reasonable and routine inspections of my property for the purposes of evaluating this application.

Signature of Applicant (if different than Owner):

Sarah Goeke 07/27/2022

Please return <u>Completed Application Forms</u> along with <u>11 copies</u> of all attachments (<u>as well as a digital copy</u>) you wish to have considered by the Plan Commission as part of your application to Pewaukee Village Hall, 235 Hickory Street, Pewaukee, WI 53072. If you have any questions, please call Village Hall at (262) 691-5660.



PROFESSIONAL SERVICES REIMBURSEMENT NOTICE

Pursuant to the Village of Pewaukee Code of Ordinances, the Village Board has determined that whenever the services of the Village Attorney, Village Engineer, Village Planner or any other of the Village's professional staff results in a charge to the Village for that professional's time and services and such service is not a service supplied to the Village as a whole, the Village Clerk shall charge that service for the fees incurred by the Village. Also, be advised that pursuant to the Village of Pewaukee Code of Ordinances, certain other fees, costs, and charges are the responsibility of the property owner or responsible party.

I, the undersigned, have been advised that, pursuant to the Village of Pewaukee Code of Ordinances, if the Village Attorney, Village Engineer, Village Planner or any other Village professional provides services to the Village because of my activities, whether at my request or at the request of the Village, I shall be responsible for the fees incurred by the Village. In addition, I have been advised that pursuant to the Village of Pewaukee Code of Ordinances, certain other fees, costs, and charges are my responsibility.

The Village will place fees from unpaid invoices on the real estate tax bill of the property that corresponds to the incurred services.

RESPONSIBLE PARTY & MAILING ADDRESS

Sarah Goeke Name of Company and/or Individual			
N2533 Van Matre Ln. Monroe, WI	53566 City	State	Zip
Phone: 815-541-7995 Fax: 815-369-4495		h@accesspermits.con	n
Sarah Gocks 07/27/2022 Signature of Applicant & Date 7/27/22 Signature of Property Owner & Date	SEF	ID ALL PROFESS: RVICES INVOICE (Check One) Property Owner	
Village Official Accepting Form		Applicant	





Dollar Tree Site



Legend

Municipal Boundary_2K
Parcel_Dimension_2K
Note_Text_2K

Lots_2K

Uı

General Common Element

Outlo

SimultaneousConveyance

Assessor Plat

CSM

Condominium

Subdivision

Cartoline_2K

EA-Easement_Line

PL-DA

PL-Extended_Tie_line

PL-Meander_Line

PL-Note

PL-Tie_Line

<all other values>

Railroad 2K

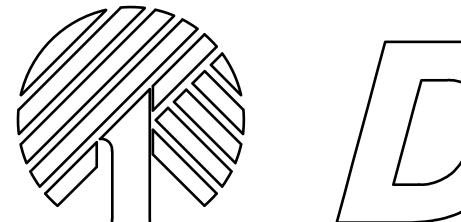
<u>13</u>6.61 Feet

The information and depictions herein are for informational purposes and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified maps, surveys, plats, Flood Insurance Studies, or other official means. Waukesha County will not be responsible for any damages which result from third party use of the information and depictions herein, or for use which ignores this warning.

Notes:

Printed: 9/1/2022





CONDITIONS PRIOR TO BID TO DETERMINE THE EXTENT OF WORK. THE

CONTRACTOR SHALL NOTIFY THE ARCHITECT AND THE TENANT OF ANY

EXISTING. AND SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR

CONTRACTOR PER TENANT'S REQUIREMENTS AND/OR MANUFACTURER'S

7. ALL EXISTING MATERIALS TO REMAIN WHICH ARE DAMAGED OR OTHERWISE

DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE PATCHED OR

REPAIRED TO MATCH THE EXISTING ADJACENT MATERIALS, SO THAT THE

8. DURING THE COURSE OF CONSTRUCTION, IF THE CONTRACTOR UNCOVERS

ANY CODE VIOLATION KNOWN TO HIM OR ANY DISCREPANCY WITH THE

DESIGN, CONTRACTOR SHALL NOTIFY THE ARCHITECT OF SUCH

AND INDUSTRIAL/ASSOCIATION STANDARDS.

ARCHITECT AND TENANT UPON DISCOVERY.

9. CONTRACTOR SHALL ASSEMBLE AND INSTALL MATERIALS/ PRODUCTS IN

10. FIELD VERIFY AND/OR REPORT ASBESTOS-CONTAINING MATERIAL TO

11. SMOKE AND FIRE PARTITIONS SHALL BE CONSTRUCTED PER THE

PATCHING, FLOATING/LEVELING OF FLOORS AND INFILLING.

STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS

DESIGNATED UL DESIGN AND SHALL BE EXTENDED VERTICALLY TO THE

BOTTOM OF THE STRUCTURE ABOVE. PROVIDE FIRE STOPS AND SEAL ALI

PIPE AND CONDUIT PENETRATIONS WITH SEALANT THAT COMPLIES WITH

12. ALL INTERIOR CONCRETE SHALL BE PORTLAND CEMENT BASED TO INCLUDE

SMOKE PARTITIONS SHALL BE PERMANENTLY IDENTIFIED WITH SIGNS OR

STENCILING, LETTERING SHALL BE NOT LESS THAN 1/2" IN HEIGHT LOCATED

SUGGESTED WORDING SHALL BE "FIRE AND/OR SMOKE BARRIER-PROTECT

SHALL BE SUPPLIED BY THE ENGINEER/ARCHITECT AND SUBMITTED TO THE

CONTRACTOR IN ADVANCE OF ITS REQUIREMENT ON THE JOB. THE TRUE

INTENT OF THE PLANS AND SPECIFICATIONS IS TO PRODUCE A COMPLETE WORKING FACILITY AND INCOMPLETE DETAIL WILL NOT ABROGATE THIS

JURISDICTION FOR APPROVAL BY THE ARCHITECT/ENGINEER OF RECORD.

PENETRATIONS SHALL BE PROTECTED WITH SMOKE AND/OR FIRE DAMPERS

THE MINIMUM FIRE RATED REQUIREMENTS FOR THE PARTITION, DUCT

13. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND

ABOVE AN ACCESSIBLE CEILING AND REPEATED IN INTERVALS NOT

14. ANY DETAIL WHICH MAY BE INCOMPLETE OR LACKING IN THE PLANS OR

COMPENSATION. SUCH DETAIL, IF REQUESTED BY THE CONTRACTOR,

15. THE CONTRACTOR SHALL PROVIDE ALL SHOP DRAWINGS (WITH THEIR

STAMP OF APPROVAL) AS REQUIRED BY THE AUTHORITY HAVING

SPECIFICATIONS SHALL NOT CONSTITUTE CLAIM FOR EXTRA

EXCEEDING 30' HORIZONTALLY ALONG THE WALL OR PARTITION.

6. ALL MATERIALS INDICATED ARE NEW, UNLESS SPECIFICALLY NOTED AS

ITEMS INDICATED AS TENANT SUPPLIED SHALL BE INSTALLED BY THE

DISCREPANCIES PRIOR TO BIDDING.

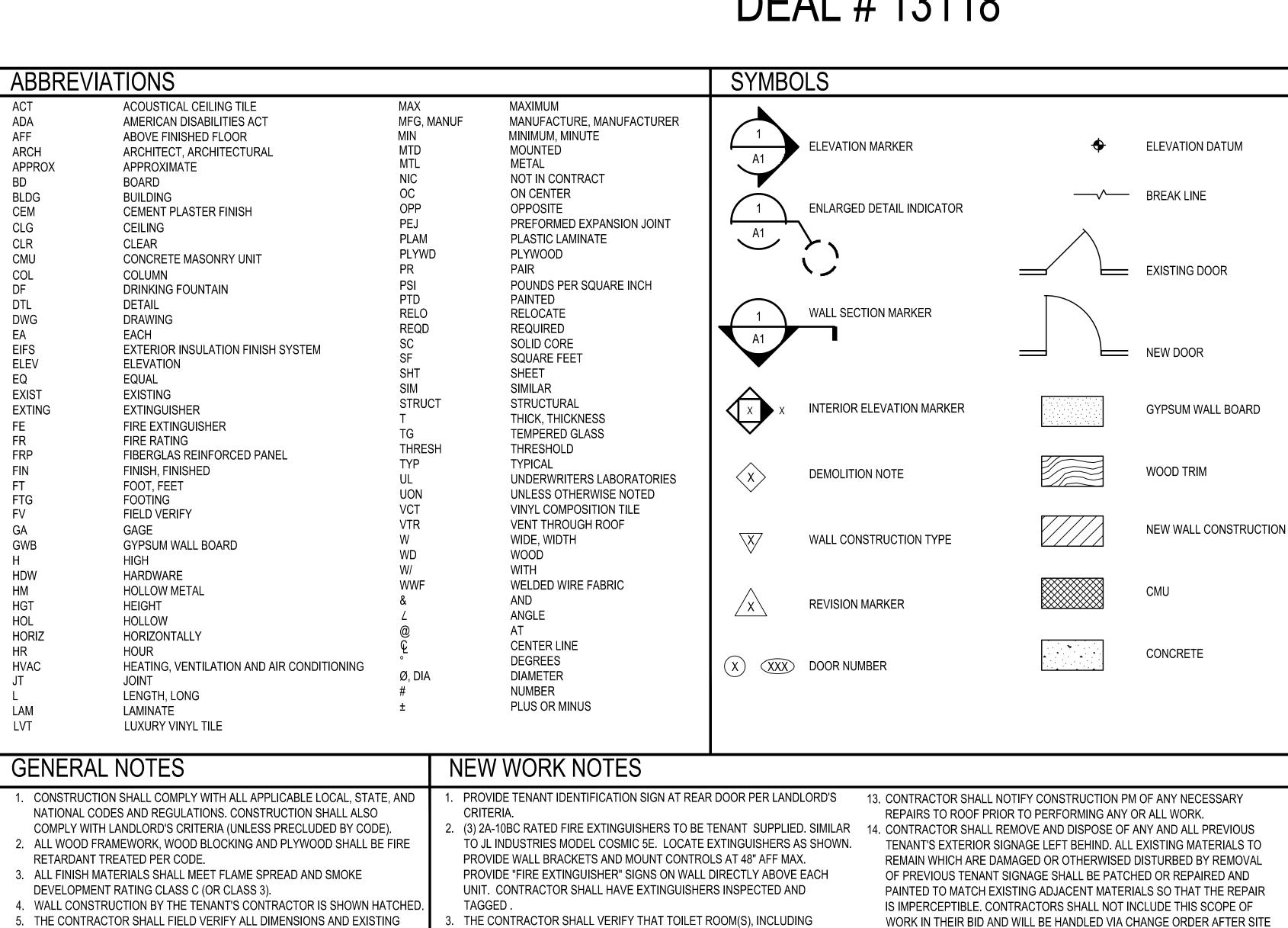
PUBLISHED STANDARDS.

REPAIR IS IMPERCEPTIBLE

ALL OPENINGS."

LAKE COUNTY MARKET

690 WESTFIELD WAY, PEWAUKEE, WI 53072 DEAL # 13118



FIXTURES AND ACCESSORIES (BOTH EXISTING AND NEW) MEET ALL

. PROVIDE EXTERIOR LIGHT ABOVE REAR DOOR, AS APPROVED BY

WALL COLOR (IE WHITE OR YELLOW)

OUT WITH METAL STUDS AND GWB.

COLUMN SURROUNDS TO AVOID INJURY.

APPLICABLE LOCAL, STATE AND FEDERAL ACCESSIBILITY CODES AND

LANDLORD, IF ONE DOES NOT EXIST WITHIN 10 FEET OF REAR DOOR.

3. CONTRACTOR SHALL CAULK AROUND TOP AND BOTTOM EDGES OF

PAINT ALL EXPOSED SURFACE MOUNTED CONDUIT TO MATCH ADJACENT

REPAIR AND CLEAN ALL EXISTING MATERIALS (IE STOREFRONT FRAMING

NOTIFY DOLLAR TREE'S CONSTRUCTION PM AS TO THE CONDITION OF

EXPOSED CONCRETE BLOCK WALL TO REMAIN ON THE SALES FLOOR.

DOLLAR TREE WILL MAKE THE DETERMINATION AS TO WHETHER THE

). CONTRACTOR SHALL INSTALL TENANT SUPPLIED FIXTURES TO INCLUDE

CABINET (SALES FLOOR), HELIUM TANK BRACKETS (STOCKROOM, SEE

TENANT'S FIXTURE PLAN, CALIFORNIA PROJECTS ONLY, CONTRACTOR

DETAIL), GRAVITY CONVEYOR SYSTEM, AND MOBILE FIXTURES PER

NOTED) SHALL BE SUPPLIED AND INSTALLED BY CONTRACTOR AS

REQUIRED. AUTOMATIC DOORS (WHEN NOTED) WILL BE SUPPLIED AND

MADE AVAILABLE TO YOU DURING YOUR BIDDING PROCESS.

BUT NOT LIMITED TO CART CORRAL, PERIMETER WALL GONDOLA, FLOOR

GONDOLA, BALLOON CENTER, HANGING BALLOON CORRALS, HELIUM TANK

WALL'S CONDITION IS SUITABLE FOR PAINTING OR NEEDS TO BE FURRED

AND GLAZING, WALLS, CEILING, ETC) TO REMAIN TO A LIKE NEW CONDITION.

PROPOSED

STORE SEE 'GENERAL SITE ACCESSIBILITY NOTES', SHEET CS1, FOR ADDITIONAL REQUIREMENTS.

GENERAL SITE

KEY PLAN

ACCESSIBILITY NOTES

IN ACCORDANCE WITH CHAPTER 11, ACCESSIBILITY - SECTIONS 1104 AND 1106 OF THE 2015 INTERNATIONAL BUILDING CODE . THE EXTERIOR ROUTES OF TRAVEL AND ACCESSIBLE PARKING ARE EXISTING PRIOR TO THE OCCUPANCY OF THE NEW TENANT. NO CHANGE OF OCCUPANCY OR EXTERIOR SITE MODIFICATION SHALL OCCUR WITHOUT PRIOR PERMITTING AND COMPLIANCE TO ABOVE MENTIONED CODE. REQUIRED SITE DEVELOPMENT OR COMPLIANCE TO ABOVE MENTIONED CODE SHALL BE SOLE RESPONSIBILITY OF LANDLORD AND/OR OWNER OF EXISTING BUILDING AND SITE

ENVIRONMENTAL HEALTH NOTES

- 1. THIS FACILITY CARRIES ONLY 100 % PRE-PACKAGED FOOD TO INCLUDE THE FREEZER/COOLER PRODUCT. 2. THIS FACILITY IS A NON DINING FACILITY. NO DINING SEATING WILL BE PROVIDED TO CUSTOMERS
- 3. THIS FACILITY DOES NOT PERFORM ANY TYPE OF FOOD PREPARATION WITHIN THE STORE FOR CUSTOMER CONSUMPTION AND/OR EMPLOYEE CONSUMPTION.
- 4. THIS FACILITY HAS NO FOOD EQUIPMENT WITHIN THE STORE. 5. THIS FACILITY WILL HAVE 3 TO 4 EMPLOYEES PER SHIFT MAXIMUM. ONE STORE MANAGER. ONE TO TWO CASHIERS AND ONE STOCKER.
- EMPLOYEE LOCKERS- EASILY CLEANABLE LOCKERS WILL BE PROVIDED TO ALL EMPLOYEES, REFER TO FIXTURE PLAN FOR MOP SINK- THIS FACILITY WILL BE SUPPLIED WITH A 24"x36" FLOOR
- MOUNTED MOP SINK WITH APPROVED VACUUM BREAKER FAUCET. WALLS SURROUNDING MOP SINK WILL HAVE FRP TO 8'-0" ABOVE FINISH FLOOR FOR EASY CLEANABLE SURFACE.
- NSF, ANSI AND UL APPROVED- ALL EQUIPMENT WITHIN THIS FACILITY IS NSF, ANSI AND UL APPROVED, CUT SHEETS FOR EQUIPMENT AVAILABLE UPON REQUEST.
- FINISH SCHEDULE- A FINISH SCHEDULE IS INCLUDED IN THIS SET OF CONSTRUCTION DOCUMENTS AND LOCATED ON SHEET A4 FOR
- ARCHITECT AND ENGINEERS LISTED ON SHEET CS1 WITH ANY CONTACT STEVEN McMAHON, DIRECTOR OF ARCHITECTURAL SERVICES AT 757-321-5830.

					MECHANICAL/ PLUMBING
				M-101	MECHANICAL FLOOR PLAN
				M-201	MECHANICAL SCHEDULES
				M-301	MECHANICAL DETAILS
				M-401	MECHANICAL SPECIFICATIONS
				P-101	PLUMBING FLOOR PLAN
				P-201	PLUMBING SCHEDULES
				P-301	PLUMBING DETAILS
				P-401	PLUMBING SPECIFICATIONS
					ELECTRICAL
				E-001	ELECTRICAL LEGEND
				E-101	ELECTRICAL LIGHTING PLAN
			Х	E-102	ELECTRICAL POWER PLAN
				E-201	ELECTRICAL DETAILS
			Х	E-202	ELECTRICAL SINGLE LINE AND SCHEDULES
				EN-101	ELECTRICAL COMPLIANCE
				EN-102	MECHANICAL COMPLIANCE
	_	_			FOR REFERENCE ONLY
				DS1	REACH-IN UNITS DETAILS AND SPECIFICATIONS
				DS2	WALK-IN DETAILS AND SPECIFICATIONS
				DS3	WALK-IN DETAILS AND SPECIFICATIONS
				EM-101	EMS DETAILS
				EM-102	EMS DETAILS
				EM-103	EMS DETAILS
				EM-104	EMS DETAILS

LINGLE DESIGN

LENA, IL 61048

158 WEST MAIN STREET

PHONE (815) 369-9155

PLUMB. MECH. ELEC ENGINEER

1538 ALEXANDRIA PIKE, SUITE 11

FORT THOMAS, KY 41705

PHONE (859) 303-3715

SIMON GOYERT, PM

SIGN CONTRACTOR

1711 SCHEURING ROAD

PHONE (800) 536-7446 EXT 1088

DE PERE, WI 54115

FAX (920) 983-9145

MICKEY WISKOW

JONES SIGN

FAX (815) 369-4495

CHAD ARIANS, PM

KLH ENGINEERS

ARCHITECTURAL

DEMOLITION PLAN

NOTES, LEGEND AND KEY PLAN

NOTES AND ACCESSIBILITY DETAILS

FLOOR PLAN, WALL CONSTRUCTION TYPES

REFLECTED CEILING PLAN, LEGEND, NOTES, AND DETAILS

ENLARGED TOILET PLAN, ENLARGED EMPLOYEE AREA, DETAILS, AND ELEVATIONS

ENLARGED OFFICE PLANS, AND DETAILS

INTERIOR ELEVATIONS AND DETAILS

EXTERIOR ELEVATIONS AND DETAILS

FIRE ALARM/ SPRINKLER

FIRE SPRINKLER PLAN AND RISER

FIRE SPRINKLER SPECIFICATIONS

FIRE SPRINKLER DEMO PLAN

FIRE ALARM DEMO PLAN

STRUCTURAL

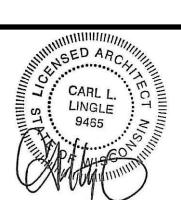
ROOF FRAMING PLAN

PARTIAL FOUNDATION PLAN

FIXTURE/ EGRESS PLAN

WALL SECTIONS, DETAILS, AND SCHEDULES





SHEET

PROJECT DIRECTORY BUILDING CODE SUMMARY

APPLICABLE BUILDING CODE:	2015 INTERNATIONAL BUILDING CODE
APPLICABLE PLUMBING CODE:	UNIFORM STATE PLUMBING CODE
APPLICABLE ELECTRICAL CODE:	2015 NEC ELECTRIC CODE
APPLICABLE FIRECODE:	2015 INTERNATIONAL FIRE CODE
APPLICABLE MECHANICAL CODE:	2015 INTERNATIONAL MECHANICAL CODE
APPLICABLE ENERGY CODE:	2018 INTERNATIONAL ENERGY CODE
APPLICABLE ACCESSIBILITY CODE:	CURRENT WI ACCESSIBILITY CODE

TOMBER OF GROWIEG.	•		
SPRINKLERED:	YES		
TOTAL LEASE AREA:	9,153 S.F.		
OCCUPANCY LOAD:	SALES AREA	7,478	/60=
	STOCKROOM	1,013	/300=

690 WESTFIELD WAY, PEWAUKEE, WI 53072

YES FIRE MONITORING REQUIRED

SPECIFICATIONS. THE UNIT IS SELF-CONTAINED AND DOES NOT REQUIRE A FLOOR SINK DRAIN. THE INTERIOR CEILING AND WALL FINISH ARE A NSF APPROVED GALVANIZED FINISH. THE FREEZER FLOOR IS TO HAVE AN

INSTALLED BY TENANT'S VENDOR (CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL CONNECTION.) 11. CONTRACTOR SHALL REMOVE ANY EXISTING SIGNAGE THAT HAS PREVIOUS TENANT'S NAME (INTERIOR AND/OR EXTERIOR.) ANY SIGNAGE THAT IS REQUIRED SHALL BE REPLACED IN LIKE KIND WITH DOLLAR TREE'S NAME

12. CONTRACTOR SHALL VERIFY IF THERE IS AN EXISTING ACCESS PANEL TO TENANT'S SIGNAGE. IF ACCESS PANEL DOES NOT EXIST, INSTALL 2'-0" X 2'-0" ACCESS PANEL EITHER INSIDE AT DOLLAR TREE'S SPACE ABOVE THE CEILING (VERIFY FIRE RATINGS AND CODE REQUIREMENTS) OR IN THE EXTERIOR SOFFIT TO MATCH CANOPY CONSTRUCTION AS ALLOWED BY LANDLORD, CONFIRM WITH SIGN VENDOR FOR LOCATION PRIOR TO INSTALLING.

19. PROVIDE NEW ALUMINUM AND GLASS STOREFRONT SYSTEM EQUAL TO KAWNEER TRIFAB VG 451 SERIES, STICK SYSTEM FABRICATION, CLEAR SHALL STRAP ALL FIXTURES AS PER THE SEISMIC DRAWINGS PROVIDED. ANODIZED FINISH. PROVIDE TEMPERED 1" INSULATED LOW E GLAZING AS CONTACT THE CONSTRUCTION PM IF FIXTURE/SEISMIC DRAWING WAS NOT INDICATED. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL FIELD CONDITIONS, AND FOR ALL ACCESSORY PARTS AND HARDWARE REQUIRED. 10. DOORS AND FRAMES (OTHER THAN THOSE LISTED AS EXIST) ARE TENANT CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE LANDLORD FOR SUPPLIED FOR CONTRACTOR INSTALLATION. STOREFRONT DOORS (WHEN APPROVAL PRIOR TO CONSTRUCTION

EVALUATION IS DONE BY WINNING BIDDER. CONTRACTOR SHALL FORWARD

THE EVALUATION AND PRICE QUOTE TO THE CONSTRUCTION PM FOR

15. CONTRACTOR SHALL INSTALL TENANT SUPPLIED INTERIOR GRAPHICS AND

GRAPHICS/SIGNAGE, HANGING GRAPHICS/SIGNAGE AND STOREFRONT

16. CONTRACTOR SHALL SEAL ALL EXTERIOR PENETRATIONS INCLUDING

17. CONTRACTOR SHALL POST ON BULLETIN BOARD IN OFFICE FINAL

CRACKS, HOLES, GAPS, AND EXISTING PENETRATIONS. CONTRACTOR

SHALL SELECT MATERIAL APPROPRIATE FOR CONDITION TO PROVIDE

PERMANENT RODENT-PROOF INFILL (INSULATION SPRAY FOAM IS NOT AN

18. WALK-IN FREEZER COOLER UNIT IS TO BE INSTALLED PER MANUFACTURER'S

APPROVAL PRIOR TO PERFORMING ANY AND ALL WORK.

SIGNS TO INCLUDE BUT NOT LIMITED TO PERIMETER WALL

WINDOW DECALS. CONTACT THE CONSTRUCTION PM FOR

GRAPHIC/SIGNAGE DRAWINGS.

ACCEPTABLE FINISHED MATERIAL.

ALUMINUM DIAMOND TREAD FINISH.

INSPECTIONS & CERTIFICATE OF OCCUPANCY.

10. QUESTIONS- EXAMINER PLEASE FEEL FREE TO CONTACT THE QUESTIONS OR ITEMS YOU NEED CLARIFICATION ON. ALSO YOU CAN

RISK CLASS "LOW"

NO SECURITY MEASURE NECESSARY

USE GROUP:

INDEX OF DRAWINGS

/X\|/X\|/X\|/X\|/X\|/2\|/1

APPLICABLE BUILDING CODE:	2015 INTERNATIONAL BUILDING CODE
APPLICABLE PLUMBING CODE:	UNIFORM STATE PLUMBING CODE
APPLICABLE ELECTRICAL CODE:	2015 NEC ELECTRIC CODE
APPLICABLE FIRECODE:	2015 INTERNATIONAL FIRE CODE
APPLICABLE MECHANICAL CODE:	2015 INTERNATIONAL MECHANICAL CODE
APPLICABLE ENERGY CODE:	2018 INTERNATIONAL ENERGY CODE

CONSTRUCTION TYPE: NUMBER OF STORIES: = 125

M - MERCANTILE

00= 4 PROJECT ADDRESS: LAKE COUNTY MARKET

BUILDING DEPARTMENT PHONE NO: (262)691-0770

DOLLAR TREE STORES

PHONE (604) 321-2550

THE KENMORE GROUP

saf@thekenmoregroup.com

BROYLES AND ASSOCIATES

CHESAPEAKE, VA 23320

DON BROYLES, ENGINEER

PHONE (757) 642-2251

FAX (757) 436-0610

508 BAYLOR COURT, SUITE C

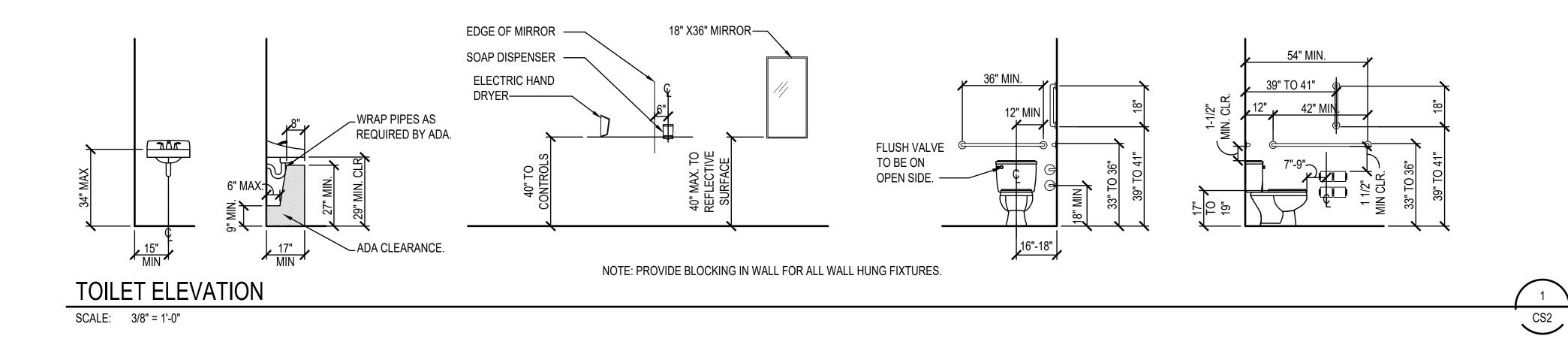
PHONE (773)383-5040

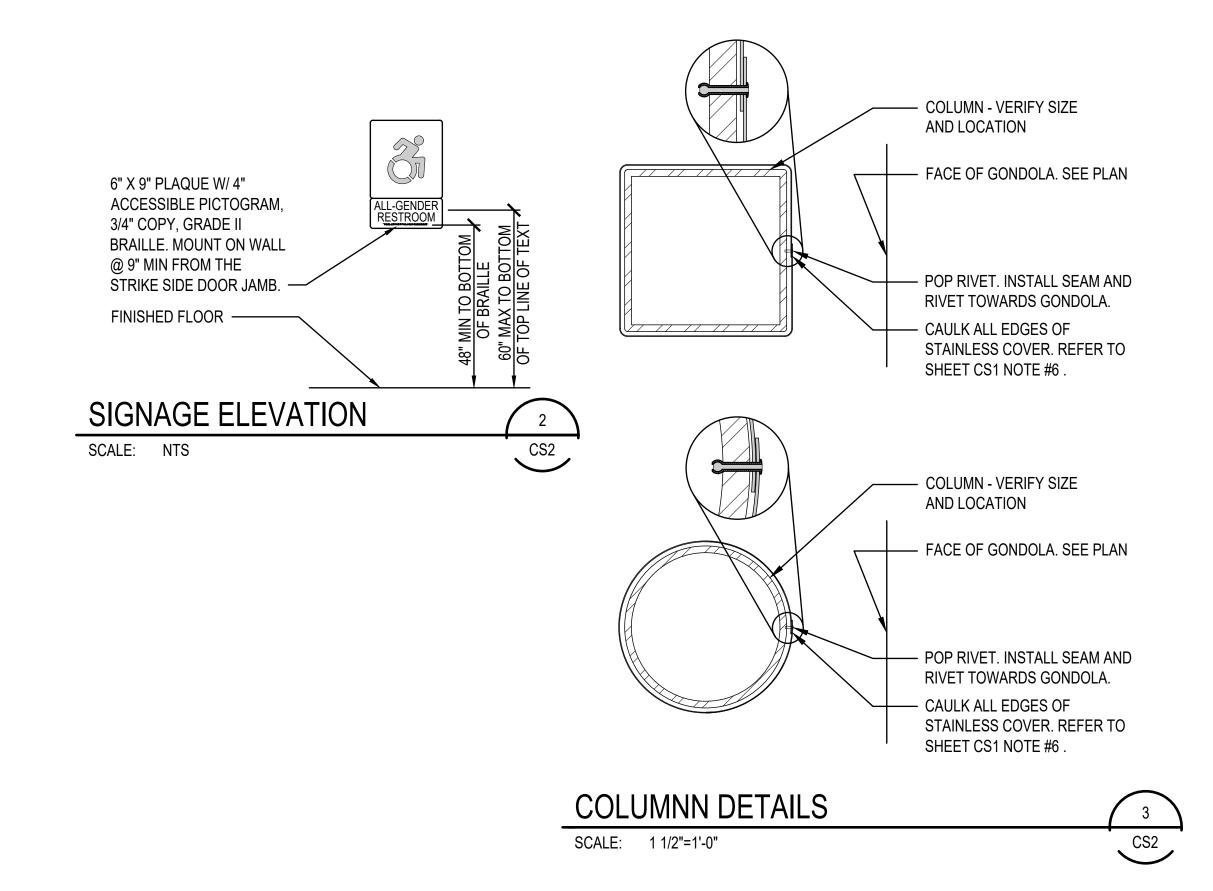
DAVOR RONDAS

SAF SARICH

206-3185 WILINGDON GREEN

BURNABY, BC V5G 4P3 CAN



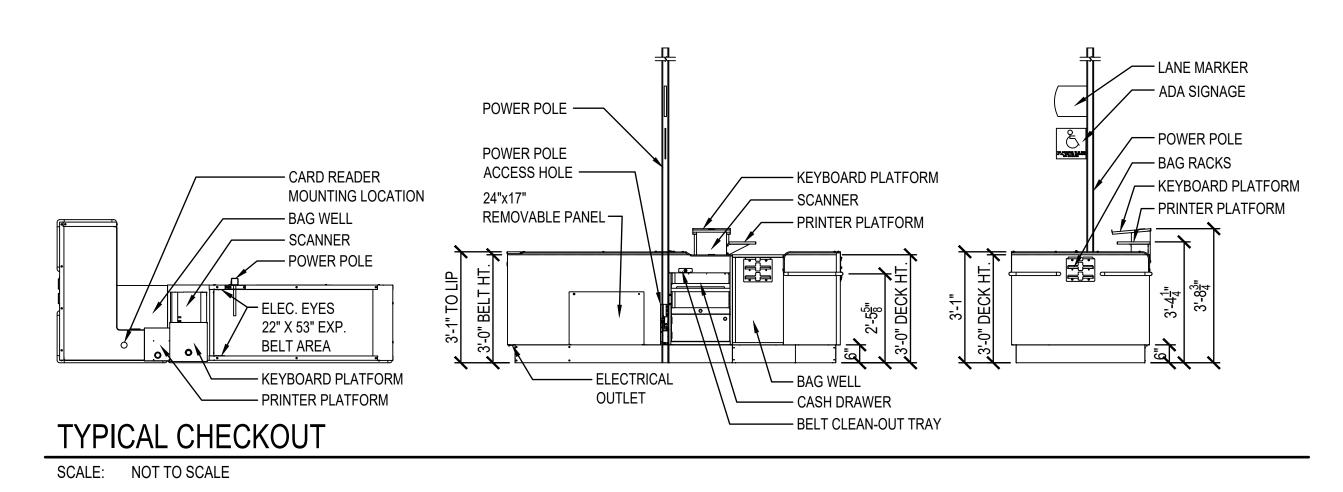


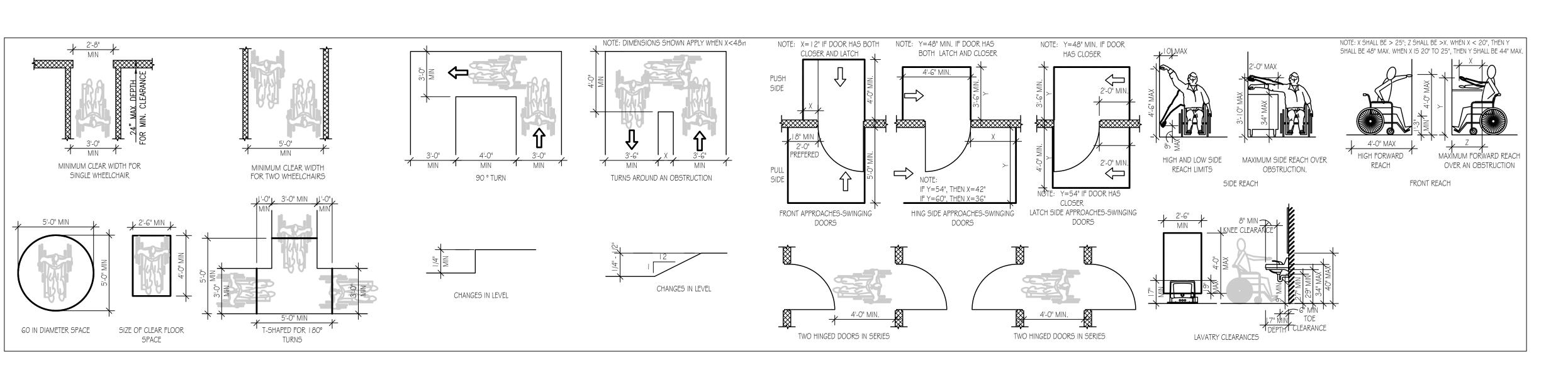
NOTE:

1. CHECKOUTS AND POWER POLES ARE TENANT SUPPLIED / CONTRACTOR INSTALLED.

2. CHECKOUT AISLES SHALL COMPLY WITH BUILDING CODE SECTION 1109.12.2 (PROVIDE 2 when 5 or more)

3. PROVIDE SIGN DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY IN BLUE AND WHITE ABOVE THE CHECKOUT AISLE IN THE SAME LOCATION AS THE CHECKOUT NUMBER OR TYPE OF CHECKOUT IDENTIFICATION.



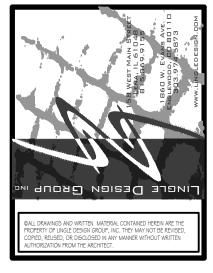


TYPICAL ACCESSIBILITY CONFIGURATIONS

SCALE: NOT TO SCALE

MARK DATE BY DESCRIPTION REVISIONS

DATE 01/12/21
PROJECT 21-848
DRAWN KR
CHECKED DG







ECT

(D)(D)(L)(L/A)(P) [F](E)(E)

LAKE COUNTRY MARKET

690 WESTFIELD WAY, PEWAUKEE, WI 53072

NOTES AND ACCESSIBILITY DETAILS

CS2

GENERAL DEMOLITION NOTES

- 1. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEM SELF WITH ALL APPLICABLE CODES, RULES, PROCEDURES, OR CONSTRAINTS OF ANY KIND PRIOR TO COMMENCEMENT OF DEMOLITION INCLUDING ANY FEDERAL, STATE, CITY, MUNICIPAL, OR LANDLORD REQUIREMENTS.
- 2. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO KEEP ORDERLY WORKING CONDITIONS WITHIN, AND AROUND THE PREMISES - REMOVE ALL DEBRIS IN THE APPROPRIATE MANNER.
- 3. SPACE IS TO BE BROOM CLEAN READY FOR BUILD OUT OF NEW SPACE & FINISHES.
- 4. GENERAL CONTRACTOR IS RESPONSIBLE FOR CONTRACTING TRASH REMOVAL SERVICE. TRASH REMOVAL MUST BE COORDINATED WITH ON-SITE PROPERTY MANAGEMENT.
- 5. CONTRACTOR TO PROTECT DEMISING WALL FRAMING & REPLACE ALL DAMAGED AREAS.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING & PAYING FOR ALL DEMOLITION PERMITS.
- 7. THIS DRAWING REFLECTS AVAILABLE DEMOLITION INFORMATION, HOWEVER, IT SHALL BE THE RESPONSIBILITY OF ALL CONTRACTORS TO VISIT THE & REVIEW ALL CONSTRUCTION DOCUMENTS TO FULLY DETERMINE THE SCOPE & INTENT OF THE DEMOLITION ACTIVITY.
- 8. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL SPECIFIC DEMOLITION INFORMATION & INSTRUCTION AS TO WHAT EXISTING EQUIPMENT AND/OR CONSTRUCTION IS TO REMAIN.
- 9. CONTRACTOR IS TO INSPECT THE PREMISES PRIOR TO SUBMITTING A BID AND BE RESPONSIBLE FOR ALL DEMOLITION WORK REQUIRED FOR NEW CONSTRUCTION.

- 10. GENERAL CONTRACTOR IS TO PROVIDE ALL NECESSARY DUST & TRAFFIC BARRIERS & TEMPORARY PARTITIONS AS REQUIRED TO MAINTAIN A SAFE & CLEAN ENVIRONMENT FOR THE PUBLIC, EMPLOYEES, AND PROPERTY THROUGHOUT THE PROJECT.
- 11. ANY EXISTING EQUIPMENT TO BE ABANDONED MUST BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF, AND ANY REPAIRS TO ROOFING SYSTEMS OR OTHER PARTS OF THE BUILDING MUST BE COMPLETED TO LANDLORD'S SPECIFICATIONS.
- 12. IN ALL WALLS & FIXTURES THAT ARE TO BE REMOVED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTION OF THE SOURCE AND REMOVING OR CAPPING ANY ELECTRICAL, PLUMBING AND/OR GAS LINES THAT ARE DISCLOSED AND NOT SCHEDULED FOR REUSE.
- 13. CONTRACTOR TO PATCH/REPAIR/REPLACE EXISTING FLOORS, WALLS, AND CEILINGS TO MATCH ADJACENT CONSTRUCTION DUE TO DEMOLITION OF FIXTURES, EQUIPMENT, AND ETC.
- 14. THE CONTRACTOR SHALL ADHERE TO PROPER RECOVERY AND DISPOSAL ALL REFRIGERANTS. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR COMPLIANCE WITH STATE AND FEDERAL REGULATIONS RELATING TO CLEAN AIR AND/OR VENTING OF CFC AND/OR HCFC REFRIGERANTS UNTIL THE EQUIPMENT IS TURNED OVER TO BRUNSWICK FOR OPERATION AND MAINTENANCE. THIS RESPONSIBILITY SHALL INCLUDE ALL WORK RELATING TO DISCHARGING ANY AND ALL HVAC REFRIGERANT SYSTEMS OF ANY EXISTING EQUIPMENT REUSED OR REMOVED.
- 15. G.C. SHALL PROVIDE ALL TEMPORARY SHORING, BRACING & PINNING OF WALLS REQUIRED TO MAINTAIN INTEGRITY OF WALL CONSTRUCTION DURING DEMOLITION & UNTIL WALL HAS BEEN COMPLETED.

- **DEMOLITION NOTES** (1) REMOVE PARTITION COMPLETE.
- 2 > REMOVE DOOR AND FRAME COMPLETE.
- 3 > REMOVE EXISTING WALL FIXTURES AND FINISHES COMPLETE. 4 > FLOORING CONTRACTOR (TENANT HIRED) SHALL REMOVE
- EXISTING CARPET COMPLETE. GC SHALL NOT INCLUDE IN BID. 5 > FLOORING CONTRACTOR (TENANT HIRED) SHALL REMOVE EXISTING FLOOR TILE COMPLETE. GC SHALL NOT INCLUDE IN
- \langle 6 \rangle REMOVE EXISTING BASE COMPLETE.
- 7 > REMOVE EXISTING GWB CEILING COMPLETE.
- 8 REMOVE EXISTING ACT AND GRID COMPLETE
- 9 > REMOVE EXISTING LIGHT FIXTURES COMPLETE. FLOORING CONTRACTOR (TENANT HIRED) SHALL REMOVE
- 11> REMOVE AND CAP EXISTING CONDUIT / OUTLETS COMPLETE TO BELOW FINISH FLOOR.

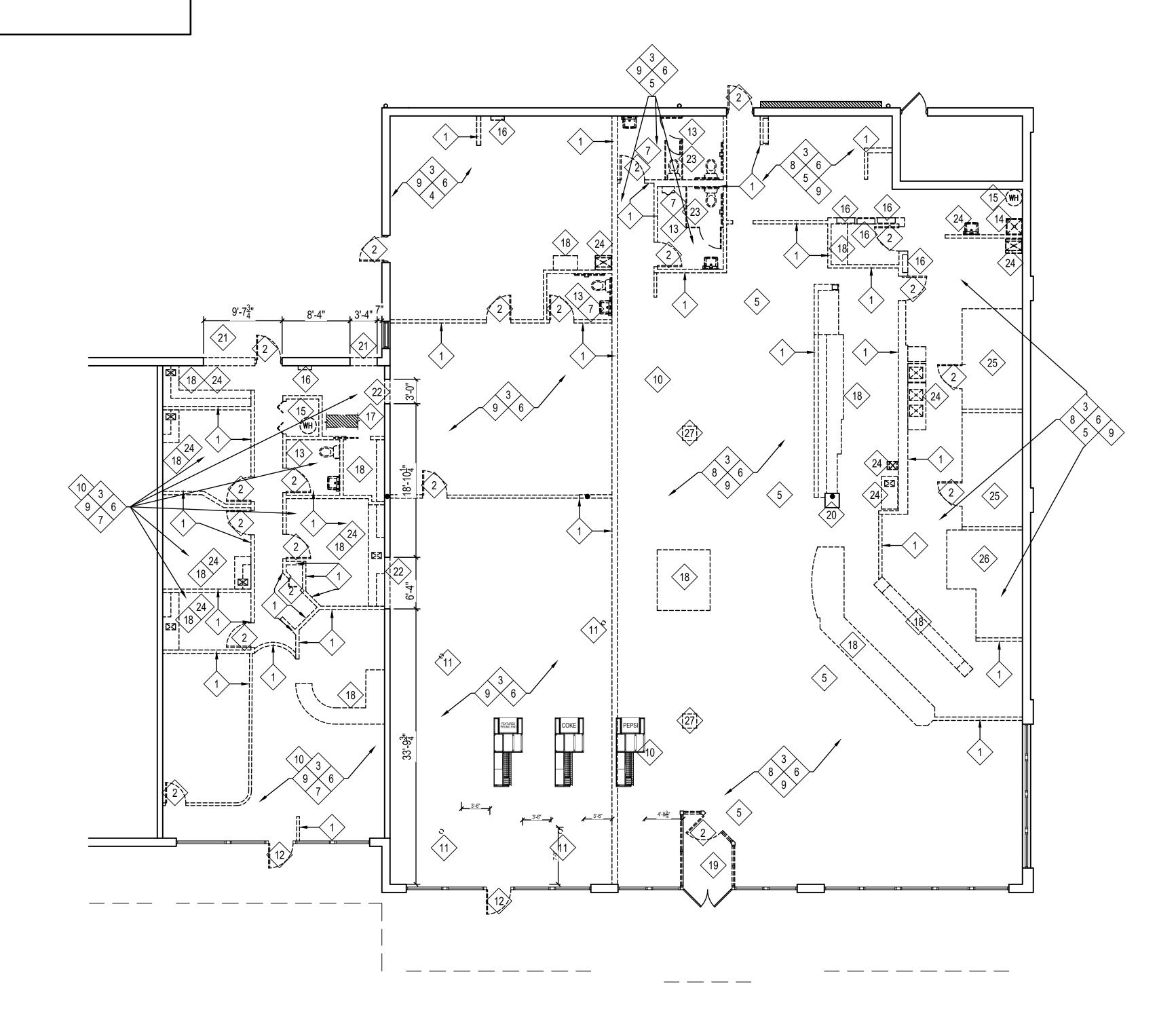
10 Existing vct flooring complete. GC shall not include in

- 12 REMOVE EXIST STOREFRONT DOORS, TRANSOM AND THRESHOLD COMPLETE
- 13 REMOVE EXISTING TOILET FIXTURES AND ACCESSORIES COMPLETE. TRENCH FLOOR AS REQUIRED FOR RELOCATION OF PLUMBING
- <14> REMOVE EXISTING MOP SINK COMPLETE. FOR REMOVAL OF PLUMBING

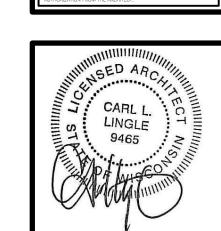
FIXTURES SEE PLUMBING SHEETS.

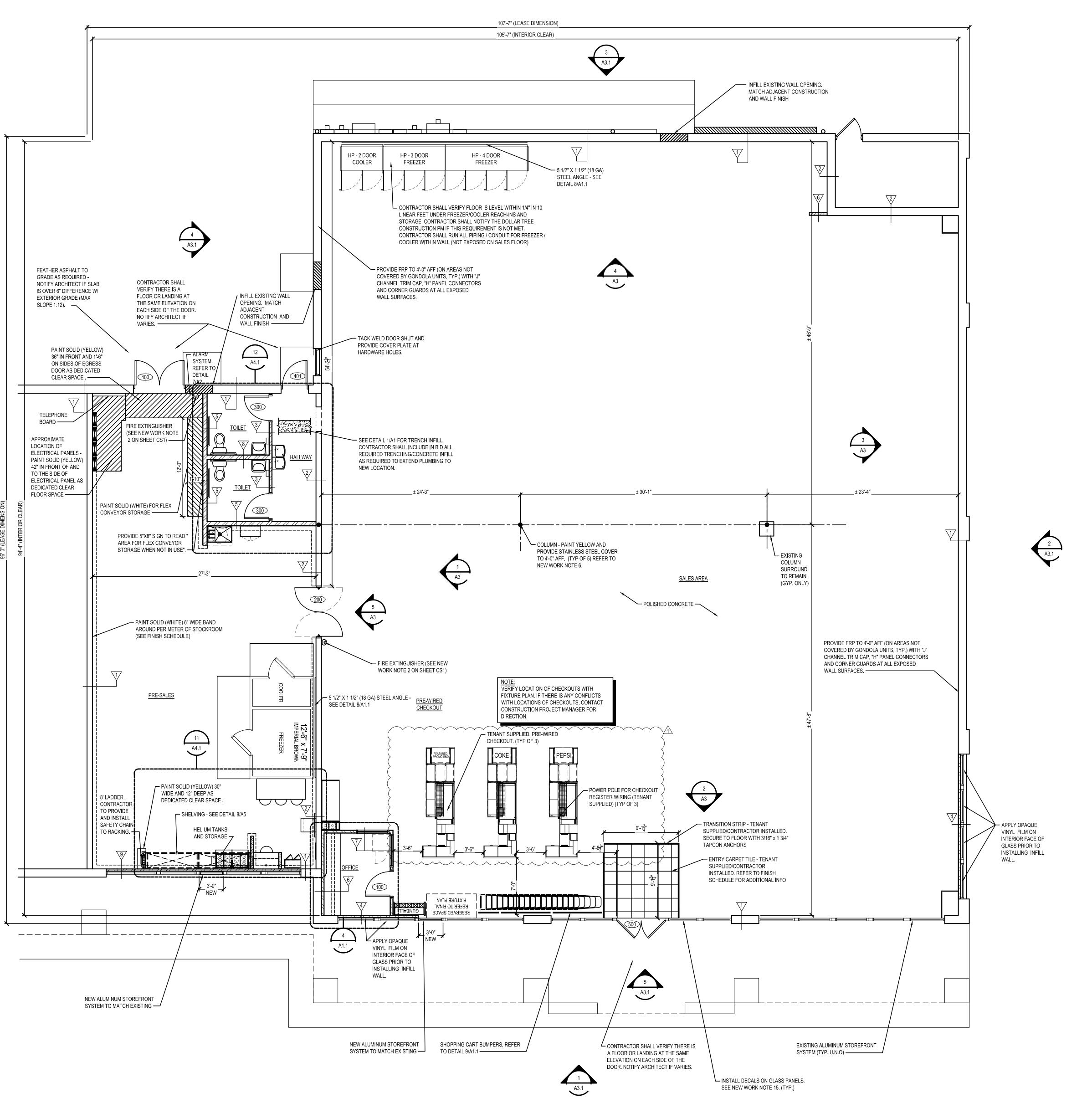
15 REMOVE EXISTING WATER HEATER COMPLETE. FOR REMOVAL OF PLUMBING FIXTURES SEE PLUMBING SHEETS.

- <16> FOR REMOVAL AND/OR RELOCATION OF EXISTING ELECTRICAL PANELS AND TRANSFORMER SEE ELECTRICAL SHEETS.
- <17 REMOVE PORTION OF EXISTING CONCRETE SLAB AS REQUIRED TO</p> TRENCH FLOOR FOR RELOCATION OF PLUMBING FIXTURES. CONTRACTOR SHALL INCLUDE IN BID ALL TRENCHING REQUIRED TO EXTEND PLUMBING IN NEW WORK. (CONTRACTOR SHALL AVOID SALES FLOOR IF POSSIBLE.)
- (18) REMOVE EXISTING EQUIPMENT, CASEWORK, AND FIXTURES
- 19 REMOVE EXIST VESTIBULE.
- (20) EXISTING COLUMN SURROUND COMPLETE TO REMAIN.
- REMOVE PORTION OF EXTERIOR MASONRY WALL TO EXISTING SLAB (21) AS INDICATED FOR INSTALLATION OF DOOR IN NEW WORK. REFER TO STRUCTURAL DWGS.
- 22 REMOVE PORTION OF EXISTING WALL COMPLETE.
- 23 REMOVE EXISTING TOILET PARTITIONS COMPLETE.
- REMOVE, CAP, OR FILL EXISTING DRAIN COMPLETE. FOR MODIFICATION OF EXISTING DILIMPING OF BUILDING MODIFICATION OF EXISTING PLUMBING SEE PLUMBING SHEETS.
- 25 REMOVE WALK-IN COOLER/FREEZER
- 26 REMOVE EXISTING OVEN. SEAL ANY PENETRATION IN ROOF.
- 27 REMOVE EXISTING COLUMN COMPLETE.









GENERAL INFORMATION: SHOPPING CENTER: LAKE COUNTRY MARKET PEWAUKEE STATE: CEILING HEIGHT (SALES AREA): SPRINKLERED: SQUARE FOOTAGES TOTAL SPACE LEASED: 9153 SF SALES FLOOR AREA: 7478 SF 1675 SF 18.3 % NON-SALES AREA: USABLE STOCKROOM: 1013 SF 11.1 %

7051

USABLE SALES FLOOR

WALL CONSTRUCTION TYPES 1/ EXTERIOR DEMISING WALL: EXISTING WALL, PATCH AND REPAIR WALL AS REQUIRED. FINISH PER FINISH SCHEDULE, SHEET A4.

2/ PARTITION WALL: 6" EXISTING PARTITION WALL TO DECK W/ GYP BOTH SIDES - G.C. TO CONFIRM GYP BOARD RUNS TO MINIMUM 11'-6" BOTH SIDES. PATCH/REPAIR AS REQUIRED. Nation Wall: 3 5/8" (20 GA) METAL STUDS @ 16" OC WITH ONE LAYER 5/8" GWB ON RESTROOM SIDE TO FINISHED CEILING & ONE

CEILING. PLUMBING WALLS ON INTERIOR OF TOILETS SHALL HAVE WATER RESISTANT GWB. SEE DETAIL 1/A2. FINISH PER FINISH SCHEDULE, SHEET A4. | \quad \quad A | INFILL PARTITION: 2 1/2" (20 GA) METAL STUDS @ 12" OC WITH ONE LAYER 5/8" GWB ON EXPOSED SIDE. ALIGN EXIST ADJACENT SURFACES. FINISH PER FINISH SCHEDULE, SHEET A4. - SEE DETAIL

LAYER 5/8" GWB ON HALLWAY SIDE TO 6" ABOVE FINISHED

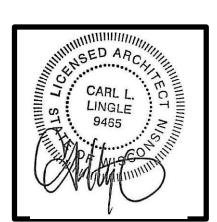
5/ PARTITION WALL: 6" (20 GA) METAL STUDS TO DECK @ 16" OC WITH ONE LAYER 5/8" GWB EACH SIDE TO 12'-0" STOCKROOM SIDE, ONE LAYER 5/8" GWB TO 6" ABOVE FINISHED CEILING ON HALLWAY SIDE & TO FINISHED CEILING ON TOILET ROOM SIDE. PLUMBING WALLS ON INTERIOR OF TOILETS SHALL HAVE WATER RESISTANT GWB. SEE DETAIL 6/A4. FINISH PER FINISH SCHEDULE, SHEET A4.

6/ PARTITION WALL: 3 5/8" (20 GAGE) METAL STUDS @ 16" OC WITH ONE LAYER 5/8" GWB ON EXPOSED SIDE TO 6" ABOVE FINISHED CEILING. FINISH PER FINISH SCHEDULE SHEET A4.

7/ PARTITION WALL: 3 5/8" (20 GAGE) METAL STUDS @ 16" OC WITH ONE LAYER 5/8" GWB EACH SIDE TO 8'-0" AFF. SEE DETAIL 11 & 12 ON A1.1. FINISH PER FINISH SCHEDULE SHEET A4.

8/ PLUMBING PARTITION: 6" (20 GA) METAL STUDS @ 16" OC WITH ONE LAYER 5/8" GWB EACH EXPOSED SIDE TO FINISHED CEILING. PLUMBING WALLS ON INTERIOR OF TOILETS SHALL HAVE WATER RESISTANT GWB. SEE DETAIL 4/A4. FINISH PER FINISH SCHEDULE, SHEET A4.

SA BY



ALL CEMENT USED SHALL CONFORM TO THE LATEST ASTM SPECIFICATION C 150, TYPE 3. ONLY ONE (1) BRAND OF PORTLAND CEMENT

PROVIDE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 3 DAYS. — PROVIDE (3000 PSI) CONC FLOOR SLAB ON 10 MIL POLYETHELENE VAPOR BARRIER ON EXIST COMPACTED FILL. DEPTH TO MATCH EXISTING SLAB THICKNESS. — FINISHED JOINT SHALL BE SMOOTH AND STRAIGHT

TOP OF CONC SLAB

UTILITY PIPE OR CONDUIT,

COORD W/ MECHANICAL,

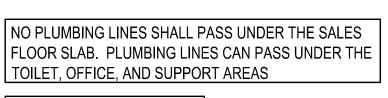
DRAWINGS

PLUMBING AND ELECTRICAL

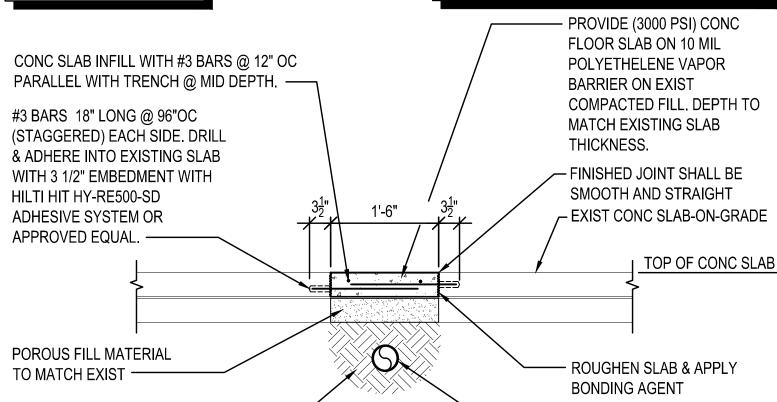
SHALL BE USED IN ANY ONE STRUCTURE.

CONCRETE MIXTURE SHALL BE DESIGNED TO

SHEET **A**1



TYPICAL @ NEW SANITARY SEWER PIPE



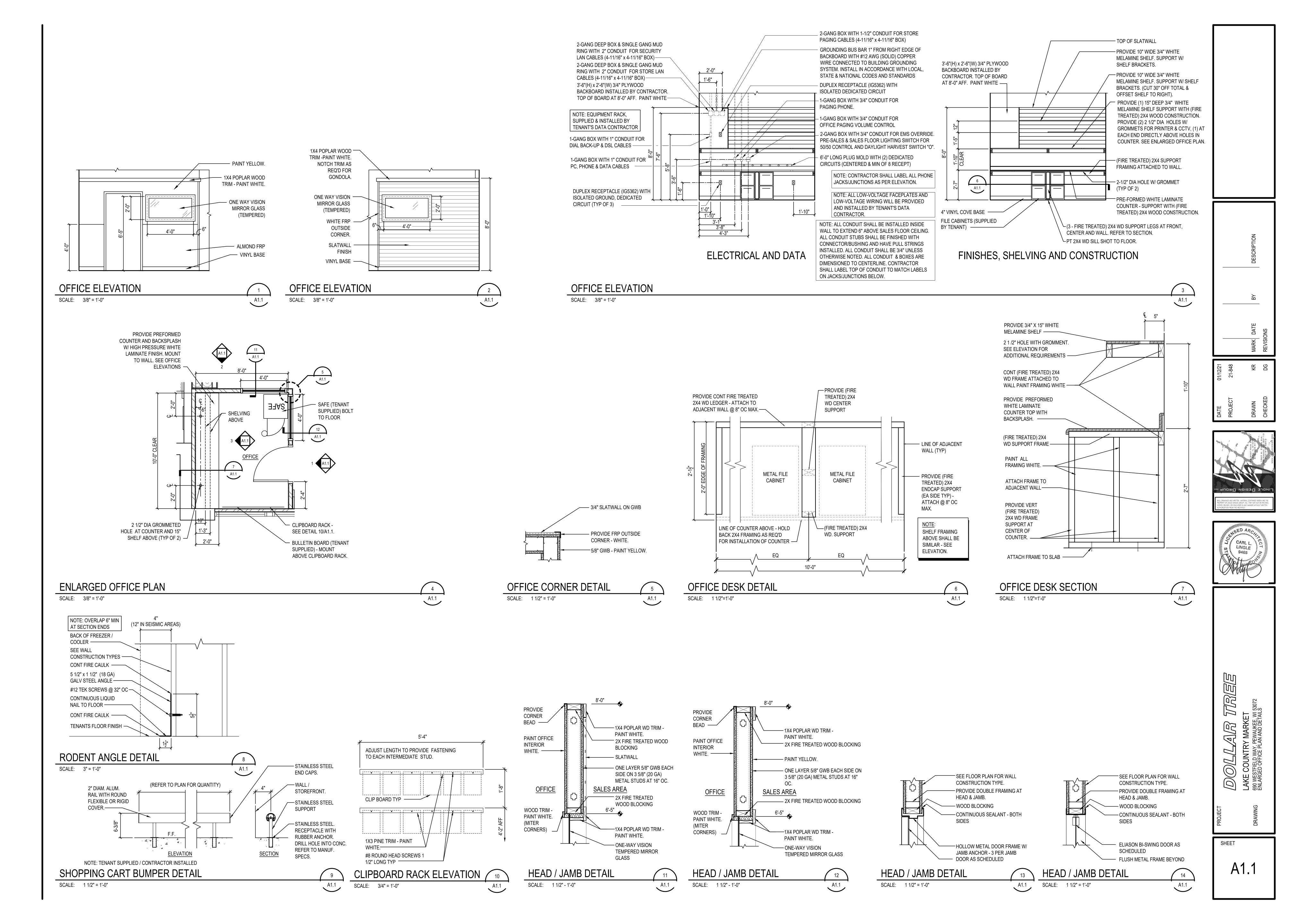
COMPACT FILL TO 95% DRY DENSITY IN ACCORDANCE w/ ASTM D698 (COMPACT IN 8" LIFTS MAX) ——

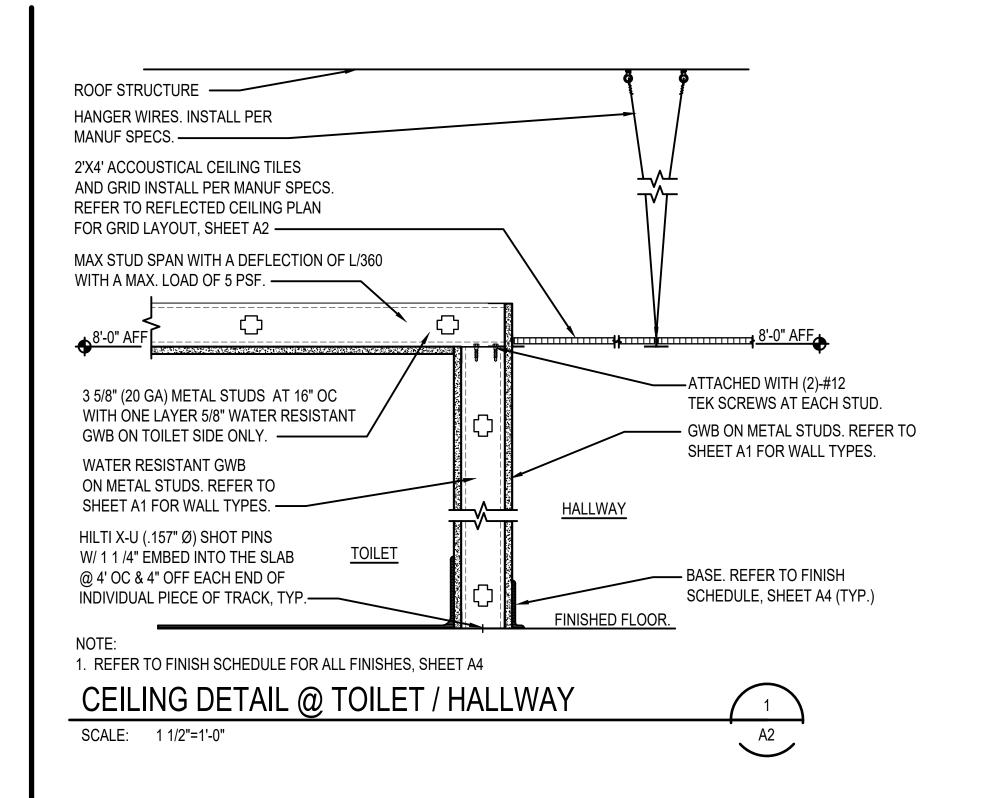
SLAB IN-FILL DETAIL

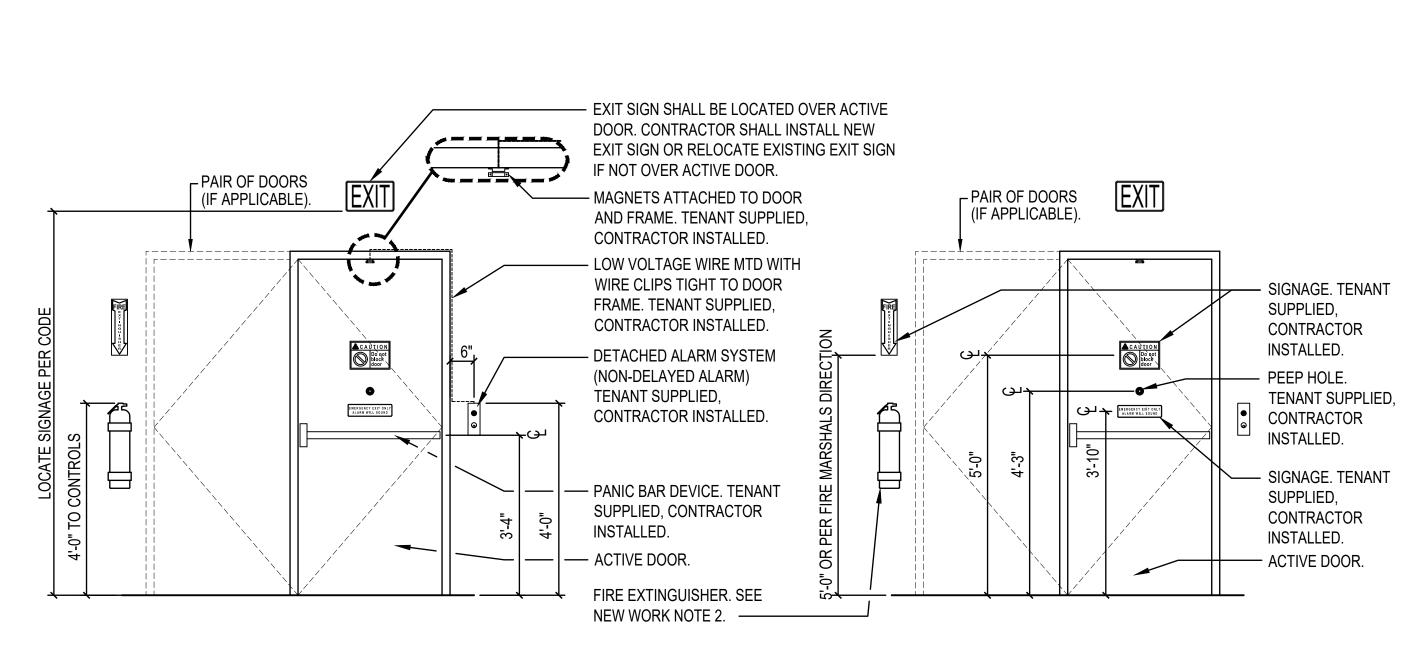
SCALE: 3/4"=1'-0"

PROJECT NORTH

FLOOR PLAN







TYP REAR DOOR ALARM MOUNTING DETAIL

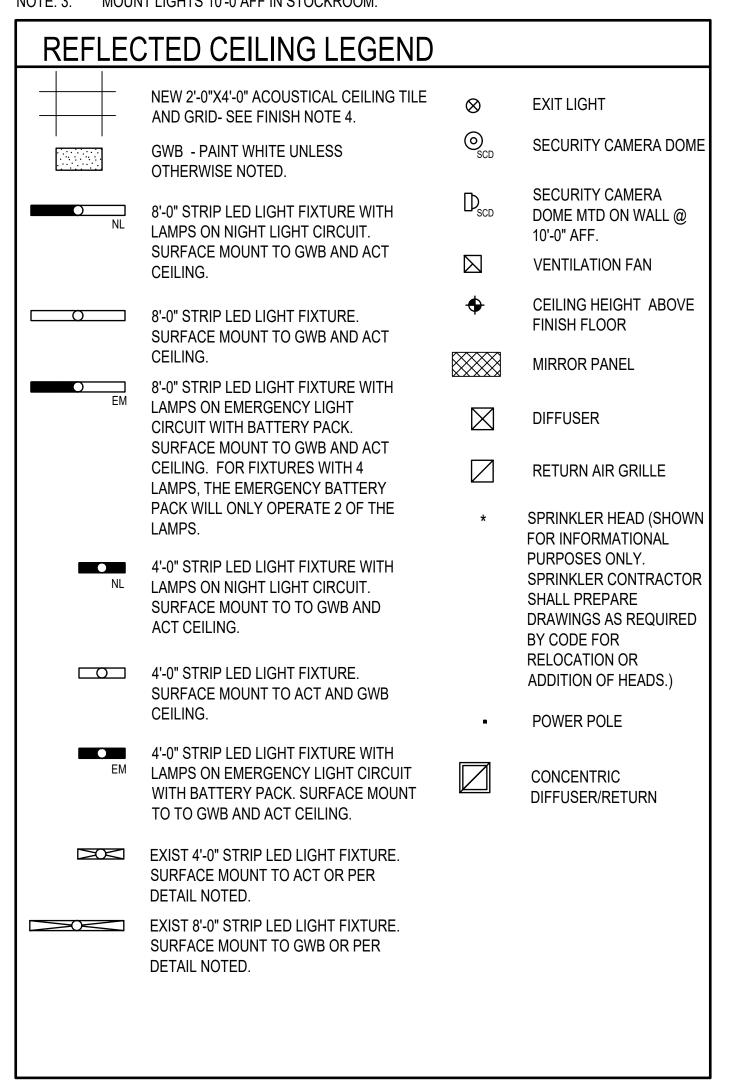
SCALE: 1/2" = 1'-0"

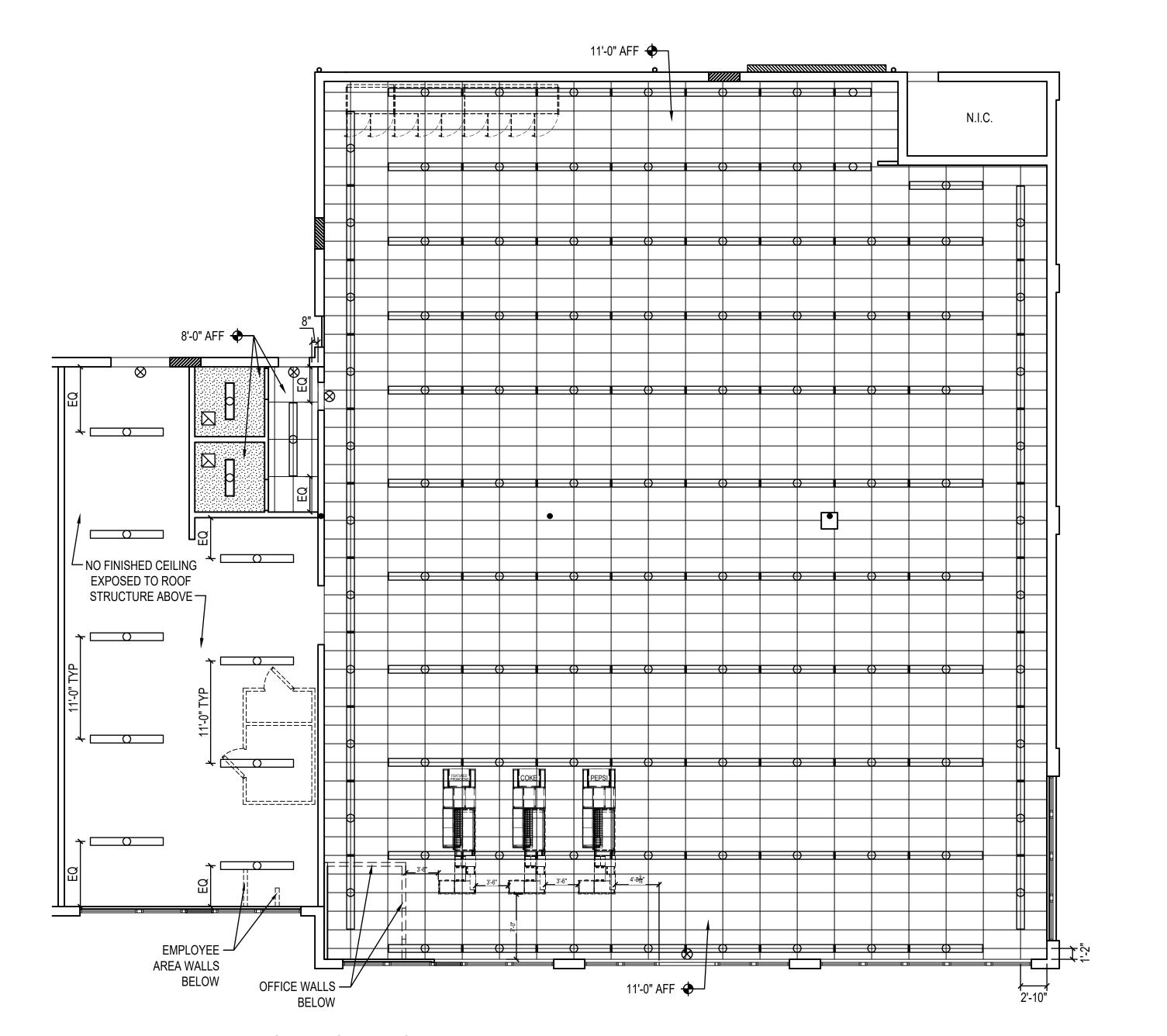
 $\frac{7}{A2}$

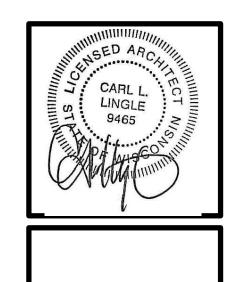
NOTE: 1. THE ELECTRICIAN SHALL INSTALL ADDITIONAL #12 WIRE TIE SUPPORTS FROM THE CEILING GRID TO THE STRUCTURE ABOVE FOR SUPPORT OF THE LIGHT FIXTURES CLIPPED ON THE GRID.

NOTE: 2. LIGHT FIXTURES, SECURITY CAMERA DOMES, AND MIRROR PANELS (UON) ARE TENANT SUPPLIED / CONTRACTOR INSTALLED.

NOTE: 3. MOUNT LIGHTS 10'-0 AFF IN STOCKROOM.







DOULLAB TIPEEEEEECTED WAY, PEWAUKEE, WI 53072
REFLECTED CEILING PLAN, LEGEND, NOTES AND DETAILS

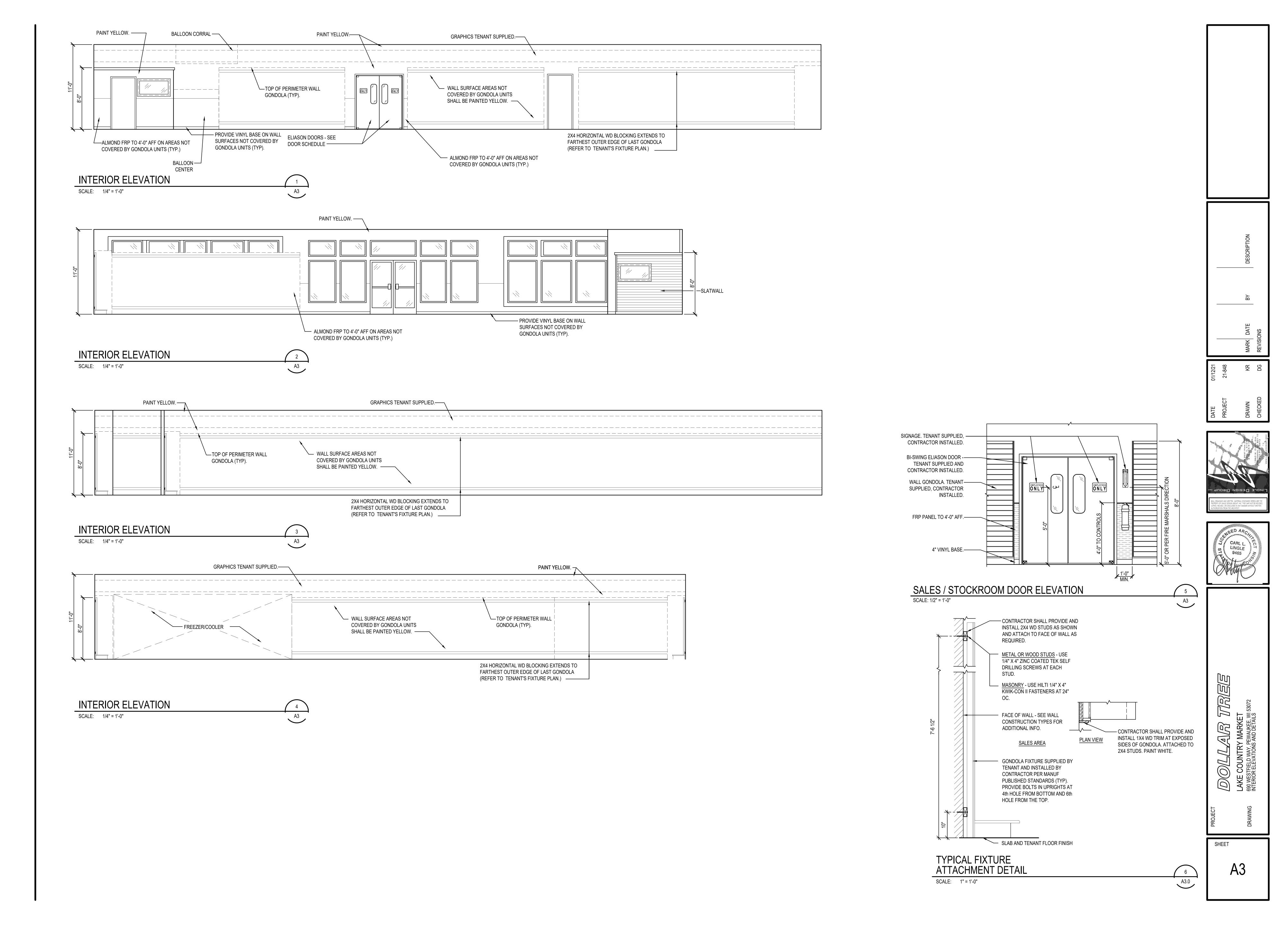
PROJECT DRAWING

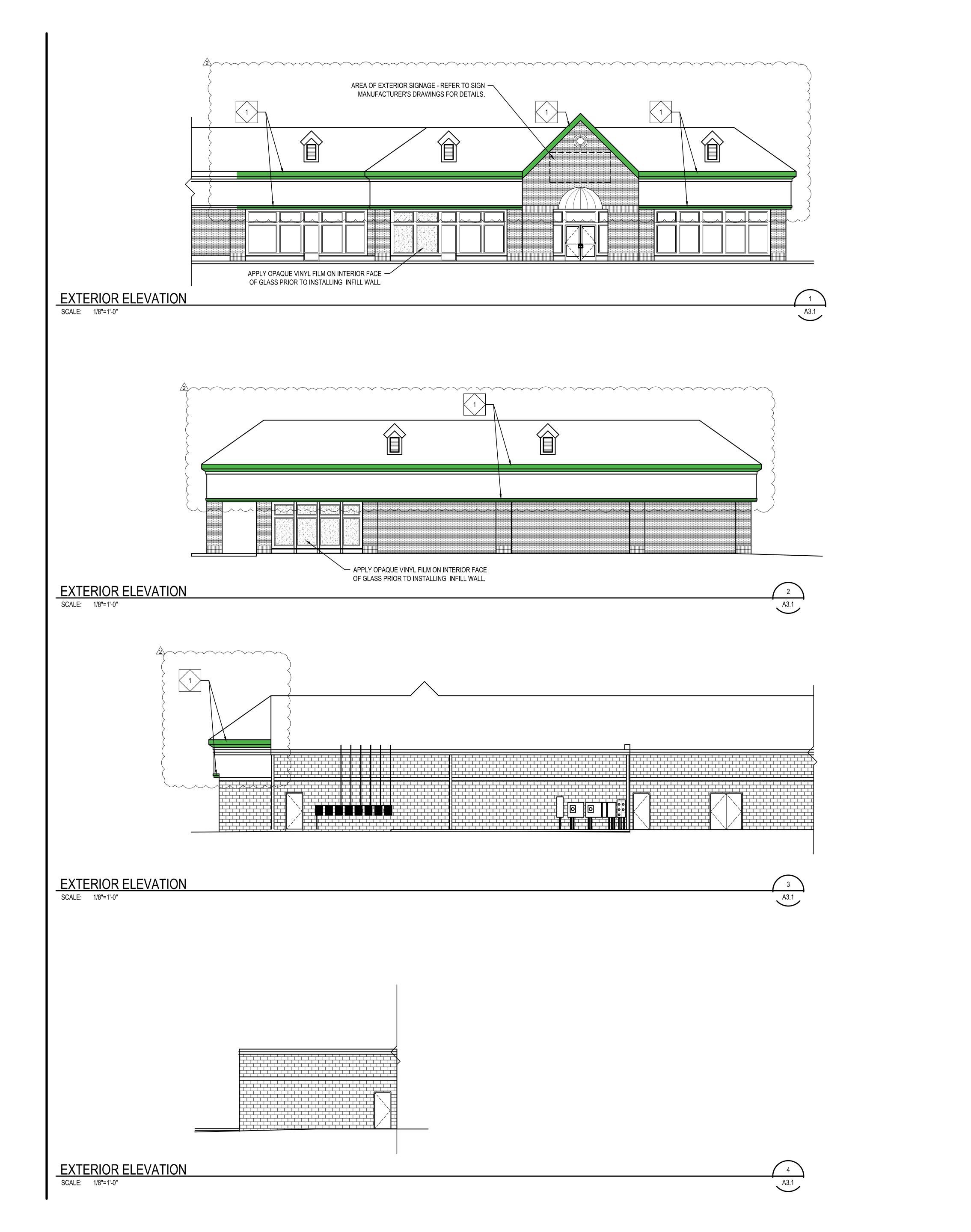
A2

PROJECT NORTH

REFLECTED CEILING PLAN

SCALE: 1/8"=1'-0"

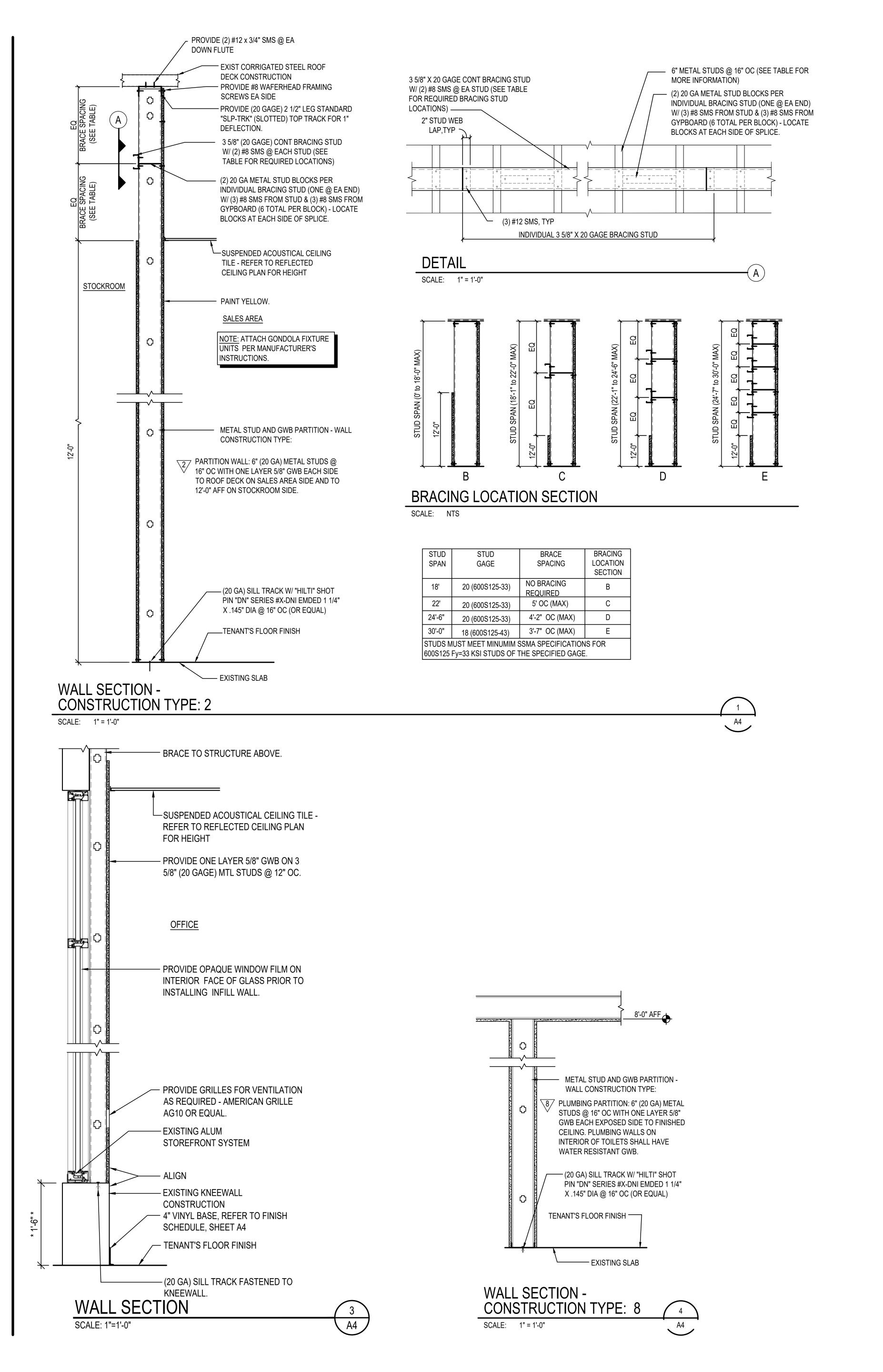




SIGNS, LOCATION, NUMBER AND SIZE ARE NOT APPROVED UNDER THIS BUILDING PERMIT. A SEPARATE SIGN LOCATION PERMIT IS REQUIRED FOR EACH SIGN. GENERAL CONTRACTOR VERIFY FINAL PAINT AND SIGN RENDERING WITH CONSTRUCTION PROJECT MANAGER PRIOR TO COMPLETING THE BID PROCESS PAINT FACADE PER COLORS NOTED: VERIFY FINAL PAINT AND SIGN RENDERING WITH CONSTRUCTION PM. PRIOR TO PAINTING. SHERWIN WILLIAMS "ENVY" LRV 18% #2032.10 - SATIN FINISH S S ≥ 5"x 5" ENTRANCE ACCESSIBILITY DECAL TENANT SUPPLIED. DECAL SHALL BE MOUNTED TO THE RIGHT OF THE MAIN ENTRANCE STOREFRONT DOOR (DO NOT MOUNT NEXT TO EXIT DOORS). NOTE: IF HARD SURFACE EXIST NEXT TO STOREFRONT ENTRANCE DOOR, CONTRACTOR SHALL SUPPLY AND INSTALL BACKER FOR DECAL TO ADHERE TO AND ATTACH TO HARD SURFACE AS REQUIRED. ACCESSIBILITY DECAL AT STOREFRONT ENTRANCE 5 A3.1 SCALE: 1/2"=1'-0" 2 A3.1 A3.1

PROJECT NORTH

KEY PLAN
SCALE: N.T.S.



FINISH SCHEDULE							DOOR SCHEDULE									
SPACES	FLOORS	BASES	WALLS	CEILING	NOTES		DOORS					DETAILS			HDW	DOOR
SALES	ENTRY CARPET TILE *POLISHED CONC	4" VINYL	GWB-PAINT YELLOW / CMU-PAINT YELLOW / FRP	ACT	1,2,4,5,6,9,11,12,14	#	W	Н	Т	MATERIAL	HEAD	JAMB	SILL	FR	NOTES	NOTES
STOCKROOM	CONCRETE		EXISTING / GWB		2,8,11	100	3'-0"	6'-8"	1 3/4"	SOLID CORE WD	13/A1.1	13/A1.1	-		100A	5
EMPLOYEE AREA	CONCRETE	-	GWB / PLYWOOD		6,13	200	PR 3'-0"	7'-0"	.063"	TEMP. ALUM ALLOY	14/A1.1	14/A1.1	-		200A	2,7,10,12
OFFICE	*POLISHED CONC	4" VINYL	GWB-PAINT WHITE		2,5,6,9,10,12	300	3'-0"	6'-8"	1 3/4"	SOLID CORE WD	13/A1.1	13/A1.1			300C	5,6,9
TOILET	SHEET VINYL	6" SHEET VINYL	*FRP/EXIST FRP	GWB	3,5,6,7,11	400	PR 3'-0"	7'-0"	1 3/4"	HOL METAL	-	-	-		400A	4,5
HALLWAY	*POLISHED CONC	4" VINYL	GWB-PAINT WHITE / FRP	ACT	2,4,6,11,12	401	3'-0"	7'-0"	1 3/4"	HOL METAL	-	-	-		400C	5,11
						500	PR 3'-0"	7'-0"	1 3/4"	EXIST STOREFRONT	-	-	-		500A	1,3
	-		•		=											

FINISH NOTES

- CARPET TILE: MANUFACTURED BY INTERFACE FLOORING SYSTEMS AND TENANT SUPPLIED /CONTRACTOR INSTALLED. INSTALL TILES QUARTER TURNED AND PER TENANT'S
- CRITERIA. ENTRY TILE: DECO RIB, STYLE #678609900. CONTRACTOR SHALL PREPARE FLOOR SURFACE AND COORDINATE CARPET INSTALLATION W/ CARPET INSTALLER.
- VINYL COVE BASE: COLOR BLACK. (VINYL BASE ONLY ON EXPOSED WALLS NOT COVERED BY GONDOLAS IN SALES
- AREA.) VINYL COVE BASE TO BE LOCATED IN STOCKROOM AT MOP SINK AND CABINET ONLY UON.
- SHEET VINYL: CLASSIC CORLON SERIES MANUFACTURED BY ARMSTRONG - CONNECTION CORLON "PORCELAIN" #88724 OR EQUAL. SHEET VINYL BASE: INTEGRAL, 3/8" RADIUS, 6" HIGH COVED BASE W/ COVE STICK AND EXTRUDED ALUMINUM CAP TRIM.
- PROVIDE 2'-0" X 4'-0" CEILING TILE EQUAL TO ARMSTRONG "CORTEGA" MINABOARD #769, WHITE, IN A WHITE METAL GRID. (IN AREAS WITH SIGNIFICANT AIR PRESSURE DIFFERENTIALS PROVIDE RETENTION CLIPS TO RETAIN PANELS IN PLACE.)
- SLATWALL: 3/4" SLATWALL WITH WHITE MELAMINE FINISH. SEE MANUFACTURER'S DRAWINGS FOR INSTALLATION DETAILS. PAINT COLORS ARE AS FOLLOWS:
- WHITE SHERWIN WILLIAMS PRO 200 LATEX SEMI-GLOSS WHITE W/ B-1 PER GALLON. YELLOW -BENJAMIN MOORE PRODUCT 274 "LEMON SORBET" #2019-60 (EGGSHELL FINISH)
- FOREST GREEN -BENJAMIN MOORE PRODUCT 274 "FOREST GREEN" #2047-10 (EGGSHELL
- A. EXPOSED CMU WALLS IN THE SALES AREA SHALL HAVE ONE COAT OF PRIMER AND A MINIMUM OF ONE COAT OF YELLOW

- PAINT TOILET ROOM EXTERIOR WALLS WHITE
- EXIST CONCRETE FLOOR TO REMAIN. PATCH AND REPAIR AS REQUIRED TO PROVIDE SMOOTH SURFACE. SLATWALL IS TENANT SUPPLIED / CONTRACTOR INSTALLED. ALL OTHER FINISHES SHALL BE PROVIDED
- AND INSTALLED BY CONTRACTOR. 10. PROVIDE PREFORMED COUNTER WITH WHITE HIGH PRESSURE LAMINATE FINISH. MOUNT TO WALLS. FILING CABINETS PROVIDED BY TENANT. SEE ENLARGED OFFICE
- PLAN AND OFFICE ELEVATION. 11. F R P (FIBERGLASS REINFORCED PANEL): IN TOILET ROOM FROM FLOOR TO 8'-0" AFF SHALL BE WHITE COLOR (IN STOCKROOM BEHIND MOP SINK AND UTILITY CABINET ONLY, IN HALLWAY BEHIND DRINKING FOUNTAIN ONLY SHALL BE WHITE COLOR) FRP ON SALES FLOOR (WHERE NOTED ON PLANS/ELEVATIONS) SHALL BE ALMOND COLOR WITH "J" CHANNEL TRIM CAP AND "H" CHANNEL PANEL
- 12. POLISHED CONCRETE FLOOR ON SALES FLOOR AND OFFICE. POLISHED CONCRETE FLOOR BY TENANT'S VENDOR. COORDINATE WITH TENANT.
- 13. PAINT EMPLOYEE AREA WALLS TO 4'-0" AFF "FOREST GREEN".

CONNECTORS.

- 14. SALES AREA TO RECEIVE LEVEL 5 FINISH. PROVIDE FINISH TO 1'-0" BEHIND FREEZER / COOLER AND GONDOLA. TO FF EVERYWHERE ELSE. CONTRACTOR SHALL ALLOW 72 HOUR CURE TIME.
- 15. PAINT 6" WIDE BAND ON CONCRETE FLOOR AROUND PERIMETER OF STOCKROOM WITH 2 COATS BENJAMIN MOORE "FD BM WHITE" TOUGH SHIELD ACRYLIC GLOSS TY-43. PAINT BAND PRIOR TO PAINTING ANY YELLOW CLEAR FLOOR SPACE AREAS.

PROVIDE (2) #12 x 3/4" SMS @ EA

CONSTRUCTION

SCREWS EA SIDE

CORRUGATED STEEL ROOF DECK

- PROVIDE #8 WAFERHEAD FRAMING

- PROVIDE (20 GAGE) 2 1/2" LEG

STANDARD "SLP-TRK" (SLOTTED)

TOP TRACK FOR 1" DEFLECTION.

W/ (2) #8 SMS @ EACH STUD (SEE

TABLE FOR REQUIRED LOCATIONS)

· (2) 20 GA METAL STUD BLOCKS PER

INDIVIDUAL BRACING STUD (ONE @

EA END) W/ (3) #8 SMS FROM STUD &

BLOCKS AT EACH SIDE OF SPLICE.

(3) #8 SMS FROM GYPBOARD (6

TOTAL PER BLOCK) - LOCATE

TEK SCREWS AT EACH STUD.

__ 3 5/8" (20 GAGE) METAL STUD JOIST WITH ONE LAYER 5/8" GWB

WITH AND A DEFLECTION OF L/360 AND A MAX. LOAD OF 5 PSF.

2'X4' ACCOUSTICAL CEILING TILES

AND GRID INSTALL PER MANUF SPECS. REFER TO REFLECTED CEILING PLAN

FOR GRID LAYOUT, SHEET A2 ———

PARTITION WALL: 6" (20 GA) METAL STUDS TO

DECK @ 16" OC WITH ONE LAYER 5/8" GWB

EACH SIDE TO 12'-0" STOCKROOM SIDE, ONE

TOILET ROOM SIDE. PLUMBING WALLS ON INTERIOR OF TOILETS SHALL HAVE WATER

-HILTI X-U (.157" Ø) SHOT PINS W/ 1 1/4"

TENANT'S FLOOR FINISH

— EXISTING SLAB

EMBED INTO THE SLAB @ 4' OC & 4" OFF EACH END OF THE INDIVIDUAL PIECE OF

LAYER 5/8" GWB TO 6" ABOVE FINISHED CEILING

ON HALLWAY SIDE & TO FINISHED CEILING ON

METAL STUD AND GWB PARTITION -

WALL CONSTRUCTION TYPE:

RESISTANT GWB.

TRACK, TYP.

WALL SECTION -

SCALE: 1" = 1'-0"

CONSTRUCTION TYPES: 5

TOP OF JOIST BEYOND (WHERE OCCURS) ——

OFFICE LOCATION

/— ATTACHED WITH (2)-#12

AT TOILET LOCATION

STOCKROOM

3 5/8" (20 GAGE) CONT BRACING STUD

DOWN FLUTE

DOOR NOTES

- PROVIDE A SIGN POSTED ON THE EGRESS SIDE, ON OR ADJACENT TO THE DOOR STATING: "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED." THE SIGN
- CONTRASTING BACKGROUND. NEW DOORS - SUPPLIED BY TENANT - ELIASON BI-SWING DOORS W/ WINDOW . EXIST DOORS -INSTALL ALUM COVER PLATE (SUPPLIED BY

SHALL BE IN LETTERS 1" HIGH ON A

- TENANT) ON EXIST DOORS TO REMAIN. . DOOR, FRAME AND HINGES ARE EXISTING OR BY LANDLORD'S CONTRACTOR. CONTRACTOR TO PROVIDE AND INSTALL ANY MISSING ITEMS
- OF HARDWARE PER HARDWARE NOTES. PROVIDE (ONE) PEEP HOLE TO VIEW OUT. MOUNT @ 4'-3" AFF.
- . PAINT DOOR AND FRAME W/ WHITE SEMI-GLOSS ENAMEL PAINT.
- INSTALL TENANT SUPPLIED SIGNAGE PER DETAIL 2/CS2.
- . REINFORCE JAMBS WITH WOOD BLOCKING. CONTRACTOR TO PROVIDE AND INSTALL DOOR
- WATER, WIND AND DEBRIS INFILTRATION.

SWEEP ON ALL EXTERIOR DOORS TO PREVENT

ENAMEL PAINT. DOOR TO REMAIN WITH ORIGINAL

- 9. PROVIDE COAT HOOK AT 48" AFF. ON BACK SIDE OF DOOR. 10. PAINT DOOR FRAME WHITE WITH SEMI-GLOSS
- 11. PROVIDE SIGNAGE THAT READS "EMERGENCY
- EXIT ONLY." 12. PROVIDE SIGNAGE THAT READS "EMPLOYEES
- 13. PROVIDE STOREFRONT DOORS AND THRESHOLD TO MATCH EXIST. PROVIDE SHOP DRAWINGS TO LANDLORD FOR APPROVAL PRIOR TO INSTALLATION.

GENERAL HARDWARE NOTES:

THRESHOLDS AT EGRESS DOORS SHALL BE NO

- MORE THAN 1/2" (MAX) HEIGHT AFF. . ALL DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES SHALL BE INSTALLED 34" (MIN) TO 44" (MAX) AFF AND SHALL BE "SINGLE-HANDED" OPERABLE WITHOUT USE OF KEY OR SPECIAL KNOWLEDGE
- WHERE EGRESS DOORS ARE USED IN PAIRS, THE UNLATCHING OF THE LEAF SHALL NOT REQUIRE MORE THAN ONE (1) OPERATION AS MENTIONED IN GENERAL HARDWARE NOTE #2 ABOVE. . CONTROLS AND OPERATING MECHANISMS SHALL
- BE LEVER-TYPE (OR EQUAL) PROVIDING OPERATION WITH ONE HAND AND NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST.
- THE FORCE REQUIRED TO ACTIVATE CONTROLS OF INTERIOR HINGED DOORS SHALL BE NO GREATER THAN 5 POUNDS (22.2 N).
- DOORS EQUIPPED WITH CLOSERS SHALL BE ADJUSTED SO THAT THE SWEEP PERIOD FROM AN OPEN POSITION OF 70 DEGREES WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH, MEASURED FROM THE LEADING EDGE OF THE DOOR.

HARDWARE NOTES

- HDW # 100A 1 1/2 PAIR HINGES: STANDARD WEIGHT 1 MECHANICAL PUSH BUTTON LOCKSET
- WITH LEVER HANDLE 1 CLOSER 1 FLOOR STOP

HDW # 200A

- LWP-3 ALUMINUM TRAFFIC DOOR EASY SWING HINGE SYSTEM 9" X 30" CLEAR ACRYLIC WINDOW
- FLUSH HOLLOW METAL FRAME DRYWALL HDW # 300C
- 1 1/2 PAIR HINGES: STANDARD WEIGHT 1 PRIVACY SET WITH LEVER HANDLE
- (FLOOR/WALL STOP IF SHIPPED WITH HARDWARE)

HDW # 400A

- 3 PAIR HINGES: 4 1/2" HEAVY WEIGHT, NON- REMOVABLE PINS 1 NON-ALARMED, NON-KEYED PANIC BAR
- DEVICE: WITH STAND ALONE ALARM REFER TO DOOR ALARM MOUNTING
- DETAIL 2 OVERHEAD HOLDERS/STOPS
- 2 FLUSH BOLTS (ON INACTIVE LEAF) 1 DUST PROOF STRIKE 1 PEEP HOLE
- 1 ALUM THRESHOLD (1/2" MAX HEIGHT)
- 2 SWEEPS 1 WEATHER STRIP
- 1 RAIN DRIP 1 ASTRAGAL

- HDW # 400C 1 1/2 PAIR HINGES: STANDARD WEIGHT, NON- REMOVABLE PINS
- 1 NON-ALARMED, NON-KEYED PANIC BAR DEVICE: WITH STAND ALONE ALARM
- REFER TO DOOR ALARM MOUNTING
- DETAIL.
- 1 CLOSER WITH STOP ARM 1 PEEP HOLE
- 1 ALUM THRESHOLD (1/2" MAX HEIGHT)
- 1 SWEEP

1 WEATHER STRIP 1 RAIN DRIP

HDW # 500A HINGES PER STOREFRONT MANUFACTURER (BY GENERAL CONTRACTOR)

2 CLOSERS WITH STOP ARM AND DROP PLATE 2 PUSH PLATES (BY GENERAL CONTRACTOR) 2 PULL HANDLES (BY GENERAL CONTRACTOR)

1 KABA CYLINDER (SUPPLIED BY TENANT) 1 COMMERCIAL GRADE DEADLOCK W/ THUMB TURN ON SALES SIDE (BY GENERAL CONTRACTOR)

NOTE: CONTRACTOR SHALL VERIFY CLOSER DOES NOT HAVE A HOLD-OPEN FEATURE. IF CLOSER DOES, THE CONTRACTOR SHALL REPLACE WITH NEW CLOSER.



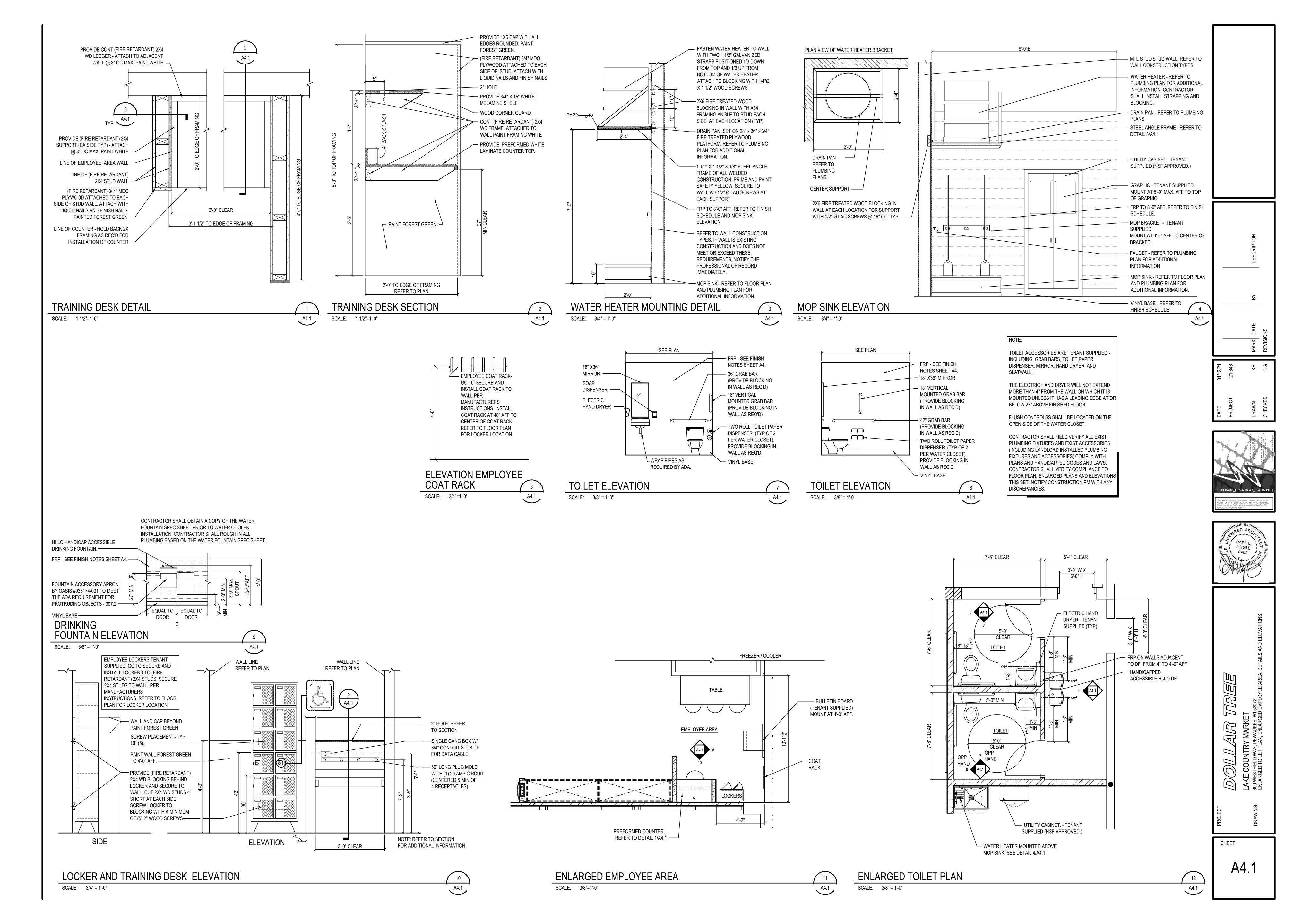


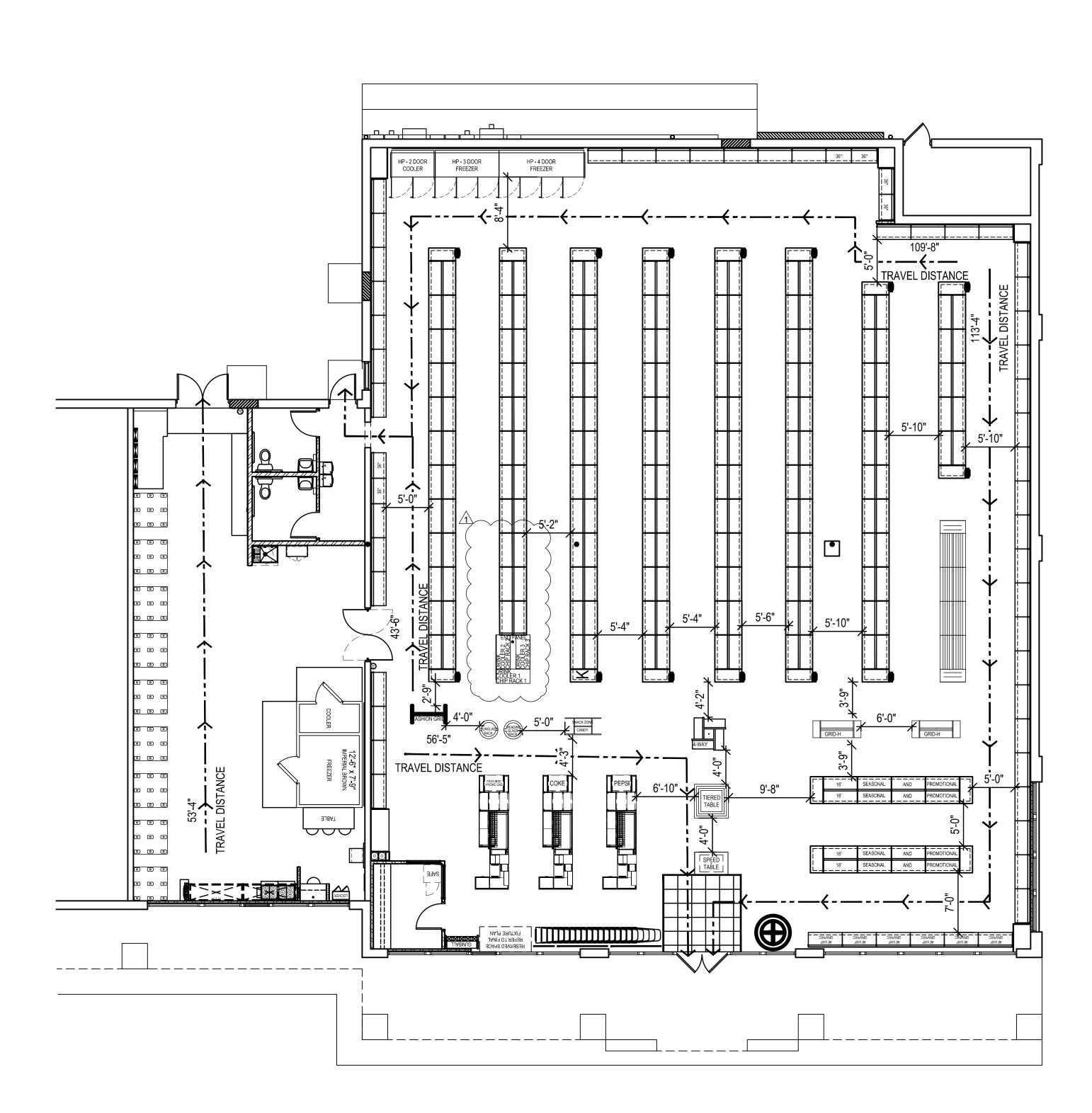


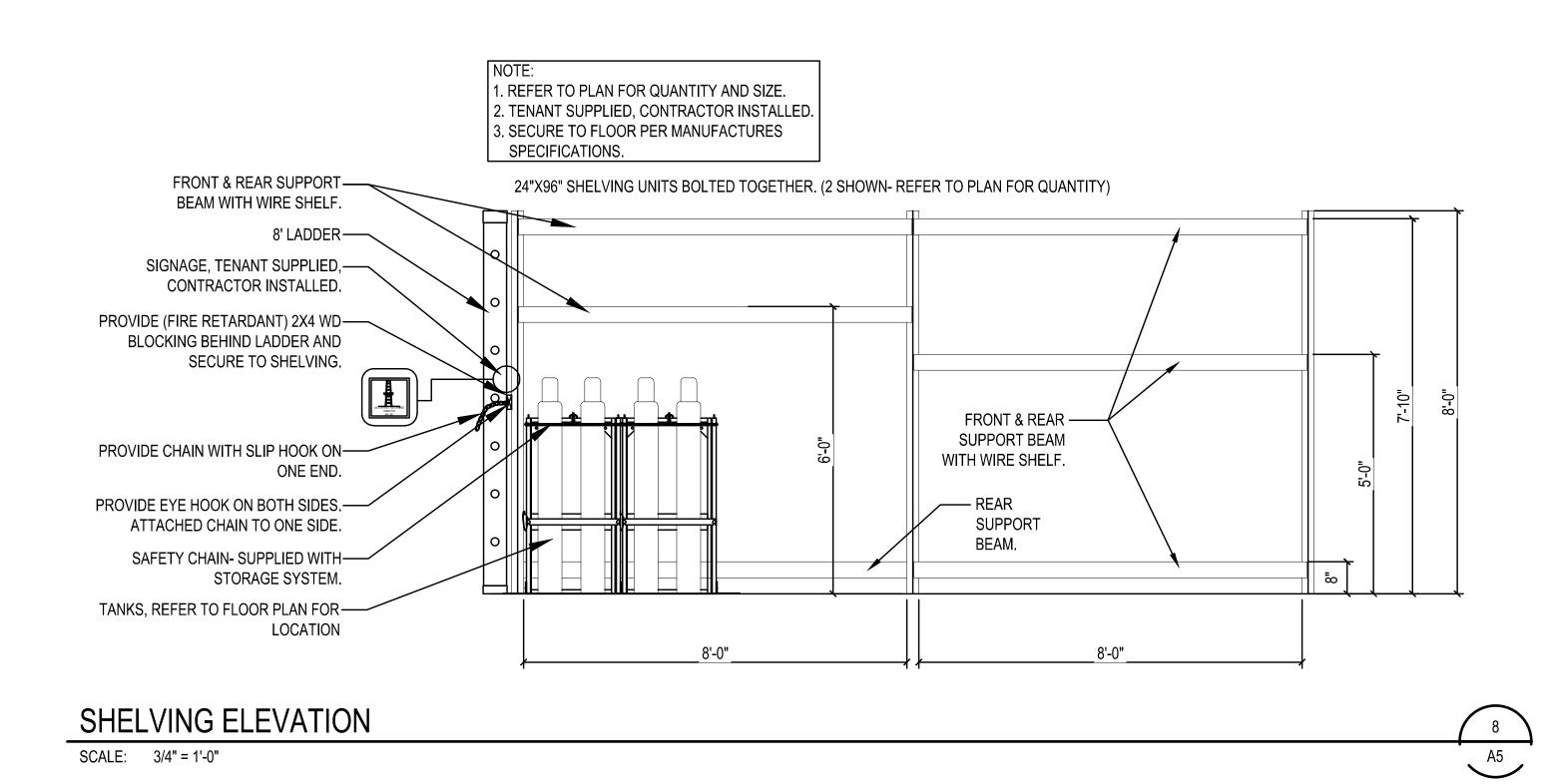
A4

SHEET









CA B≪

SHEET

A5

NOTES:

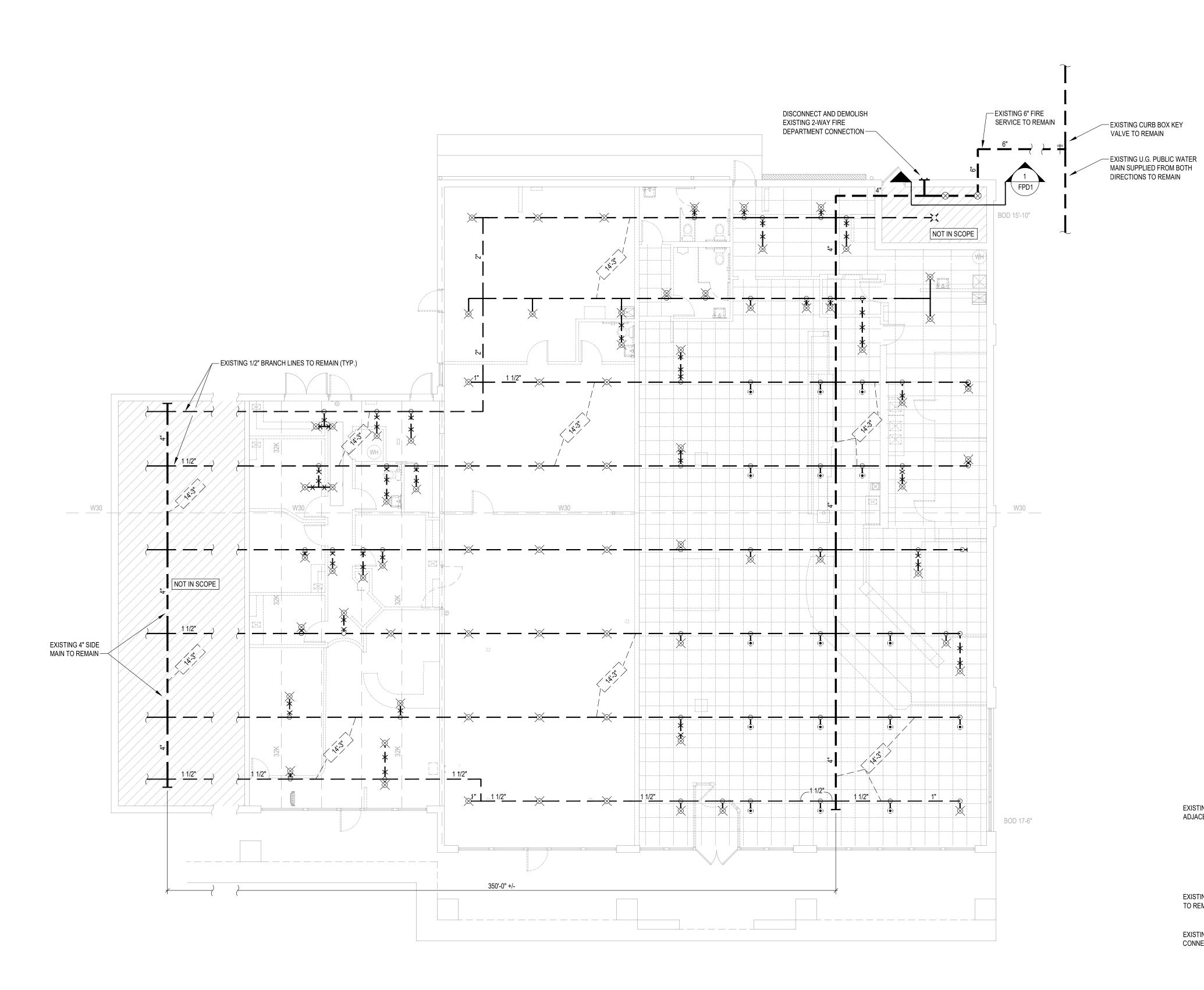
1. NO GONDOLA UNITS, FIXTURES, OR PALLETS SHALL BE OVER 8'-0" A.F.F.

2. FIXTURE PLAN IS "FOR REFERENCE ONLY".
CONTRACTOR SHALL CONTACT DOLLAR TREE FOR FINAL APPROVED LAYOUT.

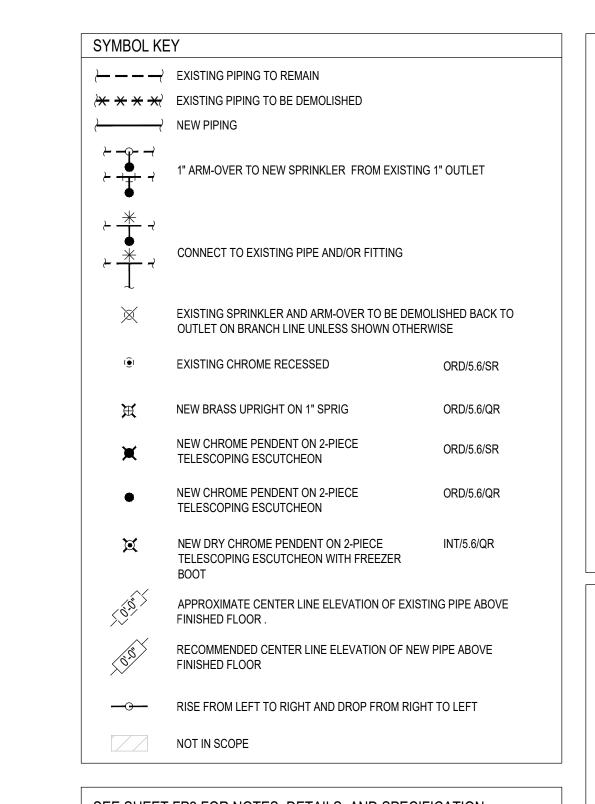
3. CHECKOUTS ARE NOT ATTACHED TO FLOOR.

FIXTURE/EGRESS PLAN

SCALE: 1/8"=1'-0"







SEE SHEET FP2 FOR NOTES, DETAILS, AND SPECIFICATION

ALL ARM-OVERS TO NEW SPRINKLERS ARE 1" DIAMETER

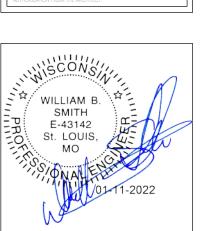
FIRE SPRINKLER DEMOLITION NOTES

I. FIRE SPRINKLER CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE:

SHUT DOWN AND DRAINING OF EXISTING SYSTEM.

 DEMOLITION OF EXISTING SPRINKLERS, PIPING, HANGERS, ETC. WHERE INDICATED ON THE PLANS.

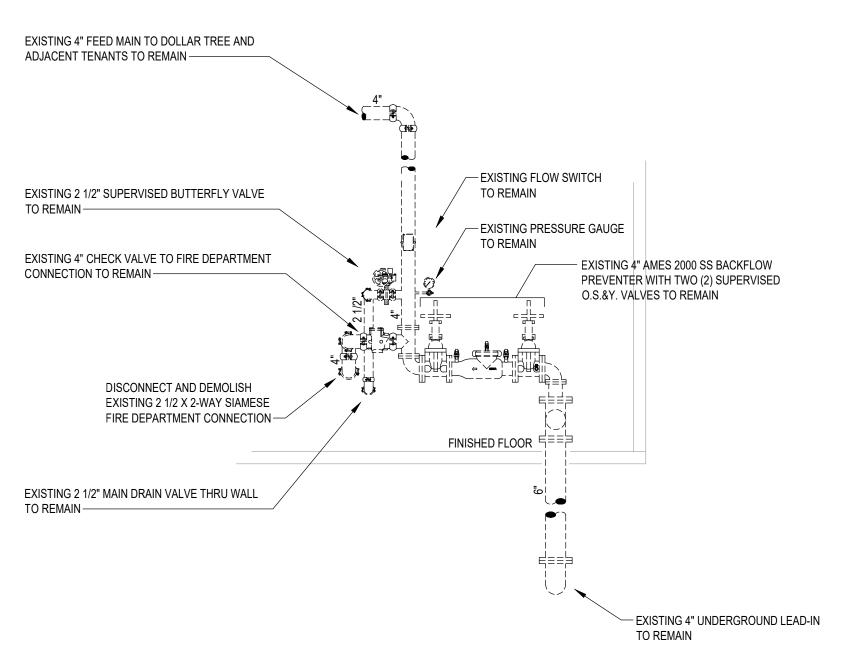
FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY EXISTING PIPE OR FITTINGS TO REMAIN THAT ARE DAMAGED AS A RESULT OF THEIR WORK AT NO COST TO THE OWNER.



ENGINEER OF RECORD: WILLIAM B. SMITH, PE LICENSE NO. E-43142 CODE CONSULTANTS, INC.
2043 WOODLAND PKWY, SUITE 300
ST. LOUIS, MO 63146-4235
PHONE: 314-991-2633
CORPORATE CERTIFICATE OF AUTHORITY
NO. 2745-011

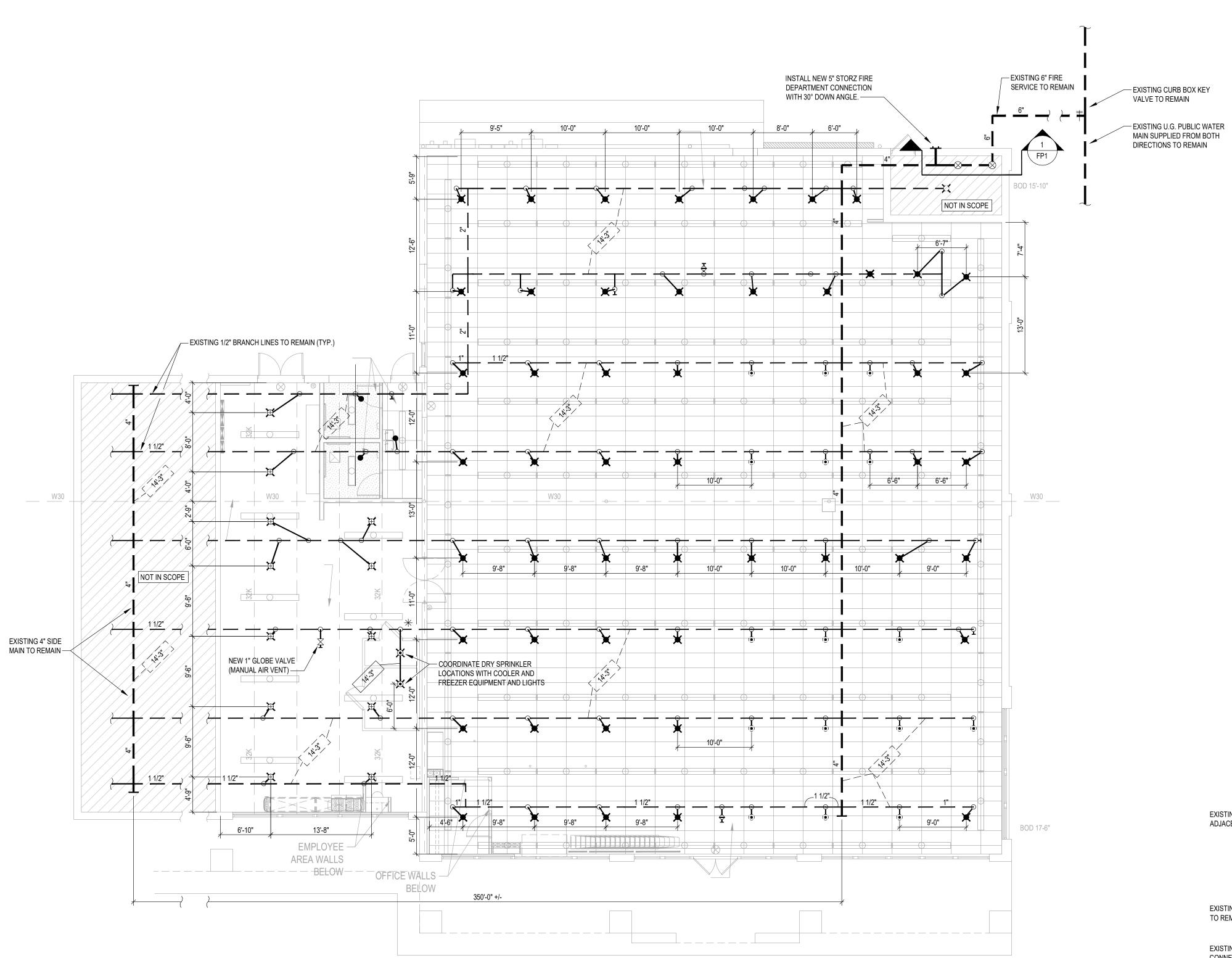
SHEET

FPD1

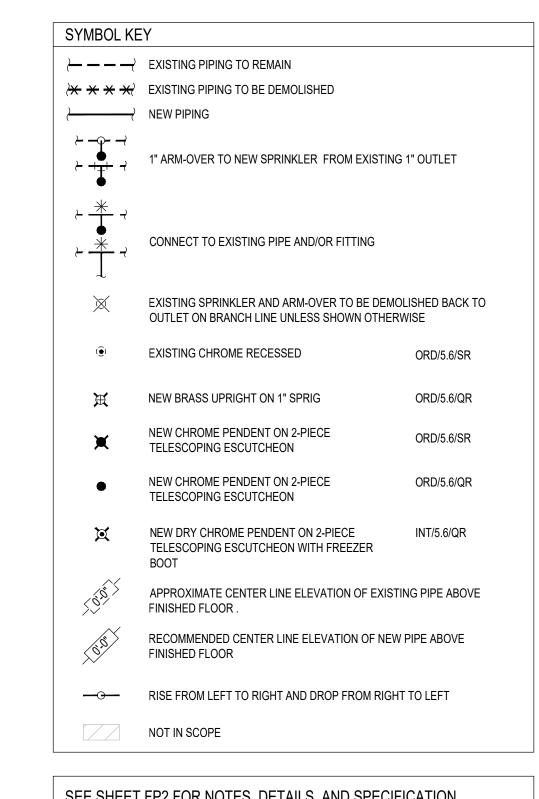


ELEVATION AT EXISTING BUILDING FIRE SPRINKLER RISER

NOT TO SCALE
FP1

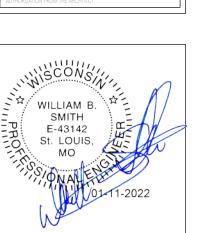






SEE SHEET FP2 FOR NOTES, DETAILS, AND SPECIFICATION

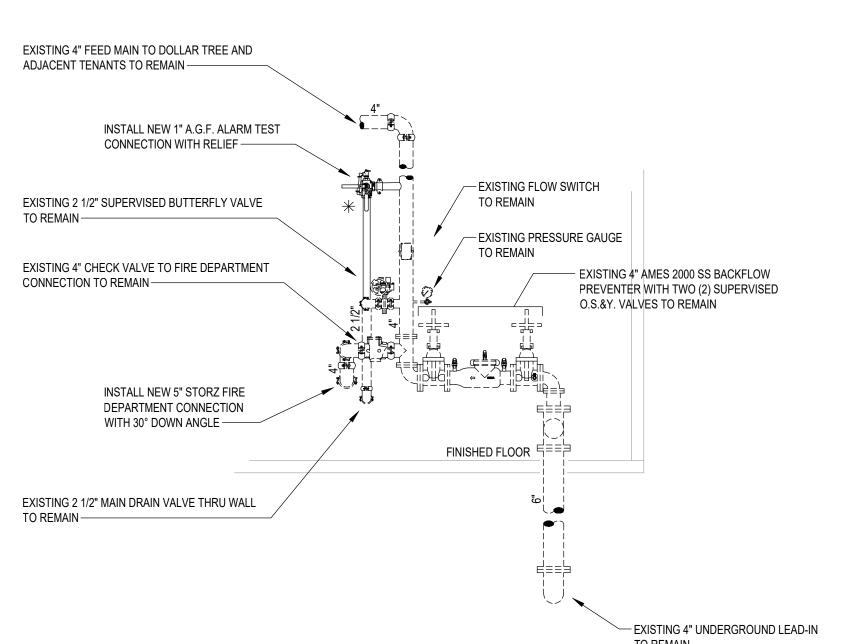
ALL ARM-OVERS TO NEW SPRINKLERS ARE 1" DIAMETER



ENGINEER OF RECORD: WILLIAM B. SMITH, PE LICENSE NO. E-43142 CODE CONSULTANTS, INC.
2043 WOODLAND PKWY, SUITE 300
ST. LOUIS, MO 63146-4235
PHONE: 314-991-2633
CORPORATE CERTIFICATE OF AUTHORITY
NO. 2745-011

SHEET

FP1



ELEVATION AT EXISTING BUILDING FIRE SPRINKLER RISER

SECTION 15300 - FIRE SPRINKLER SYSTEMS

PART 1 - GENERAL

1.01 <u>SUMMARY</u>

A. RELATED DOCUMENTS: CONDITIONS OF THE CONTRACT, DIVISION 1 - GENERAL REQUIREMENTS AND DRAWINGS APPLY TO THE WORK OF THIS SECTION.

1.02 <u>DESCRIPTION OF WORK</u>

- A. PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, TESTING AND SERVICES NECESSARY FOR A COMPLETE AND OPERATIONAL REMODELED FIRE PROTECTION SYSTEM FOR THE PROPOSED DOLLAR TREE AS HEREINAFTER DESCRIBED AND AS SHOWN ON THE ENGINEERING DRAWINGS.
- B. WORK SHALL BEGIN AT EXISTING OVERHEAD SYSTEM AND SHALL INCLUDE THE
- 1. REMODELED WET PIPE FIRE SPRINKLER SYSTEM FOR PROPOSED DOLLAR
- 2. COORDINATION OF WORK AND SCHEDULES WITH OTHER TRADES.
- C. INTERIOR WORK PROVIDE THE FOLLOWING:
- OVERHEAD PIPE, FITTINGS, HANGERS AND SPRINKLERS.
- AUXILIARY DRAINS.
- D. IT IS INTENDED THAT THE ENGINEERING DRAWINGS AND SPECIFICATION SHALL DESCRIBE AND PROVIDE FOR A WORKING INSTALLATION COMPLETE IN EVERY DETAIL AND ALL ITEMS NECESSARY FOR SUCH COMPLETE INSTALLATION SHALL BE PROVIDED WHETHER OR NOT SPECIFICALLY MENTIONED HEREIN OR SHOWN ON THE ENGINEERING DRAWINGS.

1.03 <u>REFERENCES</u>

- A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REFERENCED DESIGN STANDARDS:
- 1. INTERNATIONAL BUILDING CODE 2018 EDITION INTERNATIONAL FIRE CODE - 2018 EDITION
- 3. NFPA 13, SPRINKLER SYSTEMS 2016 EDITION

1.04 SYSTEM DESCRIPTION

- A. REMODELED FIRE SPRINKLER SYSTEM DESIGN CRITERIA SHALL BE STRICTLY PER THIS SPECIFICATION.
- B. REMODELED FIRE SPRINKLER SYSTEM TO PROVIDE FIRE PROTECTION FOR THE AREAS INDICATED ON THE ENGINEERING DRAWINGS.
- C. INTERFACE REMODELED FIRE SPRINKLER SYSTEM WITH BUILDING FIRE AND SMOKE ALARM SYSTEMS
- 1.05 SYSTEM DESCRIPTION
- A. REMODELED FIRE SPRINKLER SYSTEM DESIGN CRITERIA SHALL BE STRICTLY PER THIS SPECIFICATION. B. REMODELED FIRE SPRINKLER SYSTEM TO PROVIDE FIRE PROTECTION FOR THE
- AREAS INDICATED ON THE ENGINEERING DRAWINGS. C. INTERFACE REMODELED FIRE SPRINKLER SYSTEM WITH BUILDING FIRE AND SMOKE
- D. <u>OFFICE AREAS</u> (LIGHT HAZARD WET PIPE FIRE SPRINKLER SYSTEM):
- DENSITY 0.10 GPM/SQ FT
- OPERATING AREA 1,500 SQ FT
- TEMP. CLASSIFICATION / NOMINAL K-FACTOR / RESPONSE TYPE ORD/ 5.6 /QR
- HOSE STREAM ALLOWANCE 100 GPM
- DURATION 0.50 HR
- E. SALES AREA (ORDINARY HAZARD GROUP 2 WET PIPE FIRE SPRINKLER SYSTEM):
- DENSITY 0.20 GPM/SQ FT
- OPERATING AREA 1,500 SQ FT
- TEMP. CLASSIFICATION / NOMINAL K-FACTOR / RESPONSE TYPE ORD / 5.6 / SR
- HOSE STREAM ALLOWANCE 250 GPM
- DURATION 1.0 HR
- F. STOCK ROOM AND RECEIVING (ORDINARY HAZARD GROUP 2 WET PIPE FIRE SPRINKLER SYSTEM):
- DENSITY 0.20 GPM/SQ FT
- OPERATING AREA 1,500 SQ FT
- TEMP. CLASSIFICATION / NOMINAL K-FACTOR / RESPONSE TYPE ORD/ 5.6 / QR
- HOSE STREAM ALLOWANCE 250 GPM DURATION 1.0 HR
- G. SPRINKLER SPACING SHALL BE AS SHOWN ON THE ENGINEERING DRAWINGS.
- H. PROVIDE ALL NECESSARY OFFSETS, RAISES OR DROPS IN MAIN OR BRANCH LINE PIPING AND AUXILIARY DRAINS REQUIRED BY BUILDING CONDITIONS WHETHER OR NOT SHOWN ON THE ENGINEERING DRAWINGS.
- I. PROVIDE FIRE DEPARTMENT CONNECTION AS INDICATED ON THE ENGINEERING
- J. EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS, CLEARANCES, PIPE SIZES, ETC.
- K. IT IS UNDERSTOOD, UNLESS SPECIFICALLY INDICATED OTHERWISE, THAT THE PIPE SIZES AS SHOWN ON THE ENGINEERING DRAWINGS WILL BE USED.

1.06 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS:

- 1. INSTALLER'S RESPONSIBILITIES INCLUDE PREPARING SHOP DRAWING SUBMITTAL, FABRICATING AND INSTALLING SPRINKLER SYSTEMS. BASE CALCULATIONS ON WATER SUPPLY COORDINATES PROVIDED HEREIN.
- B. INSTALLER SHALL BE STATE AND LOCALLY LICENSED.
- C. EQUIPMENT AND COMPONENTS NOT SPECIFICALLY SPECIFIED SHALL BE LISTED BY UNDERWRITERS LABORATORIES INC. FOR FIRE PROTECTION SYSTEMS INSTALLATION.
- D. ALL FIRE SPRINKLER SYSTEM COMPONENTS SHALL BE INSTALLED FREE OF ANY RUST, CORROSION OR VISIBLE DAMAGE. ALL ITEMS NOT COMPLYING WITH THIS REQUIREMENT SHALL BE REPLACED WITHOUT COST TO THE OWNER.

1.07 PROJECT CONDITIONS

- A. INTERRUPTION OF EXISTING SPRINKLER SERVICE: DO NOT INTERRUPT SPRINKLER SERVICE TO FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY SPRINKLER SERVICE ACCORDING TO REQUIREMENTS INDICATED:
- 1. NOTIFY CONSTRUCTION MANAGER IN ADVANCE OF PROPOSED INTERRUPTION OF SPRINKLER SERVICE.
- 2. DO NOT PROCEED WITH INTERRUPTION OF SPRINKLER SERVICE WITHOUT CONSTRUCTION MANAGER'S WRITTEN PERMISSION.
- 3. PROVIDE TEMPORARY PIPING, FITTINGS AND VALVES AS REQUIRED TO MAINTAIN SPRINKLER SERVICE.

1.08 <u>REGULATORY REQUIREMENTS</u>

A. ALL WORK SHALL MEET THE REQUIREMENTS OF SECTION 1.03.

- B. THE FIRE SPRINKLER CONTRACTOR SHALL NOT PURSUE ANY APPROVALS OR INTERPRETATIONS OF CCI'S CONSTRUCTION DOCUMENTS EXCEPT THROUGH CCI.
- SPRINKLER PIPING SHALL NOT BE CONCEALED WHERE IT IS INACCESSIBLE UNLESS IT IS FIRST INSPECTED AND ACCEPTED BY A REPRESENTATIVE OF THE AUTHORITY
- HAVING JURISDICTION. D. ANY WORK PERFORMED PRIOR TO THE SATISFACTORY REVIEW BY CCI AND APPROVAL BY THE AUTHORITY HAVING JURISDICTION AND THE INSURANCE
- UNDERWRITER WILL BE SOLELY AT THE FIRE SPRINKLER CONTRACTOR'S RISK. E. THE SYSTEM WILL NOT BE ACCEPTABLE UNTIL FINAL TESTING AND RECEIPT OF THE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE HAS BEEN OBTAINED.

1.09 <u>SUBMITTALS</u>

- A. THE ENGINEERING DRAWINGS HAVE BEEN PREPARED USING AUTOCAD. THE ENGINEERING DRAWINGS ARE 100% CAD. THESE DOCUMENTS WILL BE MADE AVAILABLE TO THE SUCCESSFUL FIRE SPRINKLER CONTRACTOR IN EITHER ELECTRONIC FORM OR HARD COPY. UTILIZATION OF THESE DOCUMENTS FOR THE DEVELOPMENT OF SHOP DRAWINGS AND SUBMITTALS DOES NOT RELIEVE THE FIRE SPRINKLER CONTRACTOR FROM ANY OF HIS RESPONSIBILITIES REQUIRED HEREIN.
- B. SUBMIT THE FOLLOWING:
- 1. SHOP DRAWINGS. SUBMIT IN .PDF FORMAT OR TWO (2) HARD COPIES OF EACH DRAWING. DRAWINGS WILL BE RETURNED IN THE SAME FORMAT RECEIVED. SUBMITTAL MUST BE COMPREHENSIVE OF ENTIRE PROJECT, COMPLETE IN ALL DETAIL AND THE SAME SCALE AS THE ENGINEERING DRAWINGS.
- 2. MANUFACTURER'S LITERATURE ON ALL SYSTEM EQUIPMENT. SUBMIT IN .PDF FORMAT OR TWO (2) HARD COPIES OF THE LITERATURE. LITERATURE WILL BE RETURN IN THE SAME FORMAT AS RECEIVED. LITERATURE SHALL CLEARLY IDENTIFY EXACTLY WHAT COMPONENTS ARE BEING PROVIDED WHICH SHALL INCLUDE: FINISH, SIZE, TYPE, OPTIONS, ETC. LITERATURE WHICH IS NOT CLEARLY IDENTIFIED WILL BE REJECTED.
- C. CCI WILL REVIEW THIS SUBMITTAL FOR CONSISTENCY WITH CCI'S CONSTRUCTION DOCUMENTS.
- D. AFTER THE SATISFACTORY REVIEW BY CCI, PROVIDE SUBMITTALS TO THE AUTHORITY HAVING JURISDICTION AND THE INSURANCE UNDERWRITER FOR APPROVAL.
- E. THE FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR RESPONDING, IN WRITING, TO ANY COMMENTS FROM THE AUTHORITY HAVING JURISDICTION OR THE INSURANCE UNDERWRITER WITHIN TEN (10) WORKING DAYS AFTER THE RECEIPT OF THEIR COMMENTS. COPIES OF THE RESPONSE SHALL BE SENT TO THE GENERAL CONTRACTOR AND CCI.

1.10 AS-BUILT DRAWINGS

A. PROVIDE AS-BUILT DRAWINGS IN ACCORDANCE WITH REQUIREMENTS OF THE GENERAL CONDITIONS OF THE CONTRACT AND NFPA 13.

1.11 OPERATION AND MAINTENANCE DATA

A. PROVIDE OPERATING AND MAINTENANCE INSTRUCTIONS TO THE OWNER IN ACCORDANCE WITH REQUIREMENTS OF THE GENERAL CONDITIONS OF THE CONTRACT AND NFPA 13.

1.12 WARRANTY

A. REPAIR ALL DEFECTIVE WORKMANSHIP OR REPLACE ALL DEFECTIVE MATERIALS FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER. WORKMANSHIP OR EQUIPMENT FOUND TO BE DEFECTIVE DURING THAT PERIOD SHALL BE REPLACED WITHOUT COST TO THE OWNER.

PART 2 - PRODUCTS

2.01 <u>PIPING</u> A. UNDERGROUND PIPING: NONE.

- B. OVERHEAD PIPE: PER LOCAL REQUIREMENTS AND NFPA 13. ALL PIPE SHALL HAVE A CORROSION RESISTANCE RATIO (CRR) EQUAL TO OR GREATER THAN 1.00. REFER TO THE CURRENT UL FIRE PROTECTION EQUIPMENT DIRECTORY - STEEL SPRINKLER
- C. ALL WET PIPE SYSTEM RISERS, FEED AND CROSS MAINS SHALL HAVE HYDRAULIC

PIPE FOR ACCEPTABLE MANUFACTURERS, SIZES, AND JOINING METHODS.

CHARACTERISTICS EQUAL TO OR GREATER THAN SCHEDULE 40 PIPE.

- 2.02 JOINING OF PIPE AND FITTINGS A. ALL PIPE SHALL BE JOINED IN ACCORDANCE WITH NFPA 13 AND MANUFACTURER'S
- RECOMMENDATIONS. B. FITTINGS SHALL BE 175 PSI SCREWED OR FLANGED BLACK CAST IRON OR APPROVED EQUAL SUCH AS MECHANICAL, GROOVED, PLAIN END OR WELDED CONNECTIONS. WHERE GROOVED FITTINGS AND COUPLINGS ARE USED TOGETHER,
- THEY SHALL BE OF THE SAME MANUFACTURER. C. BUSHINGS SHALL NOT BE USED.
- D. FLEXIBLE COUPLINGS SHALL BE IDENTIFIED ON THE SHOP DRAWINGS.

NFPA 13 AND THE PIPING MANUFACTURER'S SPECIFICATIONS.

2.03 HANGERS AND SLEEVES

- A. SLEEVES SHALL BE SET FOR ALL PIPES PASSING THROUGH CONCRETE FLOORS, FOUNDATIONS AND MASONRY WALLS.
- B. PROVIDE PRIMED ESCUTCHEON PLATES AT ALL WALL PENETRATIONS WHERE THE HOLE WOULD OTHERWISE BE EXPOSED TO VIEW.
- C. ALL HANGERS TO BE OF APPROVED MATERIALS AND SPACED IN ACCORDANCE WITH
- D. THE SECTION MODULUS REQUIRED BY NFPA 13 SHALL BE PROVIDED FOR ALL TRAPEZE MEMBERS SUPPORTING PIPING.

2.04 FIRE DEPARTMENT CONNECTION

- A. 5 IN. STORZ STANDARD WALL MOUNT POLISHED CHROME PLATED FINISH WITH 30 DEGREE DOWN ANGLE; THREADED CAP AND CHAIN OF SAME FINISH; IDENTIFICATION PLATE LETTERED "AUTOMATIC SPRINKLER" OF SAME FINISH.
- a. ACCEPTABLE MANUFACTURERS: CROKER, ELKHART, POTTER ROEMER OR APPROVED EQUAL.

2.05 <u>VALVES</u>

A. INTERIOR VALVES:

- 1. GLOBE VALVE: BRONZE THREADED; RENEWABLE COMPOSITION DISC; 175 PSI RATED WORKING PRESSURE.
- a. ACCEPTABLE MANUFACTURERS: CRANE, MILWAUKEE, NIBCO, STOCKHAM OR

2.06 SPRINKLERS

- 1. CHROME PENDENT GLASS BULB STANDARD AND QUICK RESPONSE COVERAGE PENDENT SPRINKLER WITH POLISHED CHROME 2-PIECE
- BRASS UPRIGHT- GLASS BULB QUICK RESPONSE
- 3. CHROME DRY PENDENT GLASS BULB QUICK RESPONSE DRY PENDENT SPRINKLER WITH POLISHED CHROME 2-PIECE TELESCOPING ESCUTCHEON WITH FREEZER BOOT
- B. ACCEPTABLE MANUFACTURERS: GLOBE, RELIABLE, TYCO, VICTAULIC AND VIKING.
- C. ONLY SPRINKLERS MANUFACTURED <u>AFTER</u> JANUARY 1, 2021 WILL BE ACCEPTED
- D. ONLY SPRINKLERS MANUFACTURED UTILIZING BELLEVILLE SPRING SEALS WILL BE ACCEPTABLE FOR USE.
- E. IF FLEXHEAD, OR A SIMILAR PRODUCT, IS USED, HYDRAULIC CALCULATIONS SHALL BE PROVIDED TO INCLUDE THE ADDITIONAL FRICTION LOSS, AND PIPE SIZES ADJUSTED IF REQUIRED AT NO ADDITIONAL COST.
- F. PROVIDE AT THE EXISTING BUILDING RISER ONE (1) SIX (6) HEAD SPARE SPRINKLER CABINET STOCKED WITH SPRINKLERS AND ESCUTCHEON ASSEMBLIES PROPORTIONATE TO THOSE PROVIDED IN THE BUILDING AND ALL NECESSARY SPRINKLER WRENCHES.

- A. APPROVED ENAMELED METAL SIGNS SHALL BE SECURELY ATTACHED AT ALL MAIN DRAINS, AUXILIARY DRAINS ALARM TEST CONNECTIONS AND CONTROL VALVES.
- B. PROVIDE A PERMANENTLY ATTACHED PLACARD INDICATING GENERAL INFORMATION IN ACCORDANCE WITH NFPA 13 AND PLACED ADJACENT TO EXISTING RISER. A MOCK-UP OF PLACARD SHALL BE INCLUDED WITH EQUIPMENT LITERATURE.
- C. PROVIDE AT EXISTING BUILDING RISER A PLAN INDICATING THE LOCATION OF EACH LOW POINT OR AUXILIARY DRAIN VALVE. THE PLAN SHALL CLEARLY IDENTIFY THE SYSTEM ASSOCIATED WITH EACH LOW POINT AND AUXILIARY DRAIN VALVE. THIS PLAN SHALL BE FRAMED WITH A PLEXIGLASS COVER AND SHALL BE PERMANENTLY ATTACHED TO A WALL. PLAN SHALL BE LARGE ENOUGH TO CLEARLY DEFINE THE AREAS PROTECTED BY EACH SYSTEM.

PART 3 - EXECUTION

3.01 COORDINATION WITH OTHER TRADES

A. COORDINATE CLOSELY WITH ALL OTHER TRADES TO EXPEDITE CONSTRUCTION AND

3.02 PAINTING AND PATCHING

- A. PAINTING OF SPRINKLER PIPING IS NOT INCLUDED IN THIS CONTRACT. ALL EXPOSED SPRINKLER PIPING SHALL BE THOROUGHLY CLEANED, REMOVING ALL DIRT, OIL, ETC. AND MADE READY TO RECEIVE PAINT IN ACCORDANCE WITH THE GENERAL CONDITIONS OF THE CONTRACT.
- B. HOLES IN WALLS OR FLOORS CUT DURING THE PERFORMANCE OF THIS WORK SHALL BE PATCHED IF THE HOLES CANNOT BE COVERED BY STANDARD ESCUTCHEON PLATES SO AS TO COMPLETELY CONCEAL THE CUTS WHERE THEY WOULD OTHERWISE BE EXPOSED TO VIEW.
- C. FIRE STOP ALL PENETRATIONS OF FIRE RATED ASSEMBLIES.

3.03 SYSTEM TESTS

OWNER'S AUTHORIZED AGENT.

ACCEPTANCE MAY BE GIVEN.

- A. HYDROSTATICALLY TEST ENTIRE SYSTEM IN ACCORDANCE WITH NFPA 13.
- B. TEST SHALL BE WITNESSED BY THE AUTHORITY HAVING JURISDICTION AND
- PRELIMINARY TESTING PROCEDURES SHALL BE CONDUCTED AS MENTIONED ABOVE
- TO ASSURE PROPER OPERATION WHEN THE FINAL TESTING IS PERFORMED. D. THE CONTRACTOR'S MATERIAL AND TEST CERTIFICATES AS SHOWN IN NFPA 13 MUST BE COMPLETED AND SUBMITTED TO THE ENGINEER BEFORE FINAL
- WHEN THE SYSTEMS ARE INITIALLY COMMISSIONED (FILLED WITH WATER), USE THE MANUAL AIR VENT AND HOSE END ADAPTER AT THE END OF EACH SYSTEM, ATTACH A HOSE TO THE EXTERIOR AND OPEN THE VALVE UNTIL WATER IS DISCHARGED THROUGH THE HOSE. REPEAT THIS PROCEDURE FOR EACH SYSTEM AND ANY TIME THE SYSTEM IS DRAINED AND REFILLED.

END OF SECTION

HANGER NOTES

ALL HANGERS TO BE OF APPROVED MATERIALS AND SPACED IN ACCORDANCE WITH NFPA 13 AND THE PIPING MANUFACTURER'S SPECIFICATIONS.

SPRINKLER BELOW DUCT NOTE

PROVIDE SPRINKLER PROTECTION BELOW DUCTS IN EXPOSED STRUCTURE AREAS PER

CONSTRUCTION NOTES

DURING CONSTRUCTION, FIRE SPRINKLER CONTRACTOR SHALL KEEP FIRE SPRINKLER SYSTEM OUT OF CONSTRUCTION AREA FULLY CHARGED AND OPERATIONAL DURING BUSINESS HOURS.

SERVICE TO FIRE SPRINKLER SYSTEMS DURING CONSTRUCTION.

- COORDINATE REQUIRED SHUT-DOWN OF THE EXISTING SYSTEM WITH THE OWNER, INSURANCE UNDERWRITER, AND FIRE DEPARTMENT.
- PROVIDE TEMPORARY PIPING, VALVES, AND FITTINGS AS REQUIRED TO MAINTAIN
- SKYLIGHTS, ETC.) SHALL HAVE TEMPERATURE RATINGS IN ACCORDANCE WITH 4. COORDINATE CONSTRUCTION PHASES WITH OWNER AND GENERAL CONTRACTOR.

HYDRAULIC CALCULATIONS

HYDRAULIC CALCULATIONS ARE NOT REQUIRED PER A CONVERSATION WITH FIRE CHIEF BIERCE ON JANUARY 6, 2022 WITH THE SCOPE OF WORK CONSISTING OF RELOCATING AND DELETING SPRINKLERS FROM THE EXISTING SYSTEM. EIGHT (8) LESS SPRINKLERS ON THE EXISTING FIRE SPRINKLER SYSTEM AFTER FINAL TENANT DESIGN.

MAXIMUM HANGER SPACING

GENERAL NOTES

1" - 1 1/4" BLACK STEEL PIPE - 12 FT MAXIMUM HANGER SPACING 1 1/2" - 3" BLACK STEEL PIPE - 15 FT MAXIMUM HANGER SPACING

ELEVATIONS, CLEARANCES, PIPE SIZES, ETC.

QUANTITIES OF OTHER TRADES' WORK.

NEW BRANCH LINES AS REQUIRED.

SPRINKLER NOTES

- ALL SPRINKLERS ARE AS NOTED.
- SPRINKLER SPACING IN LIGHT HAZARD AREAS MAX 225 SQ FT PER SPRINKLER AND MAX 15 FT BETWEEN SPRINKLERS.

SPRINKLER SPACING IN ORDINARY HAZARD AREAS (STANDARD COVERAGE

SPRINKLERS) - MAX 130 SQ FT PER SPRINKLER & MAX 15 FT BETWEEN SPRINKLERS.

PROVIDE ALL NECESSARY OFFSETS, RAISES OR DROPS IN PIPING AND AUXILIARY

DRAINS REQUIRED BY BUILDING CONDITIONS WHETHER OR NOT SHOWN ON THE

EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES,

BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY.

ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL

REFER TO THE PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES, AND

THE ENGINEERING DRAWINGS HAVE BEEN PREPARED USING AUTOCAD. THE

DRAWINGS ARE 100% CAD. THESE DOCUMENTS WILL BE MADE AVAILABLE TO THE

SUCCESSFUL FIRE SPRINKLER CONTRACTOR IN EITHER ELECTRONIC FORM OR

SUPPLY ONLY ONE (1) SPRINKLER FROM A SINGLE BRANCH LINE OUTLET. PROVIDE

SPRINKLERS NEAR A HEAT SOURCE (UNIT HEATERS, DIFFUSERS, STEAM MAINS,

ALL UNUSED OUTLETS ON EXISTING BRANCH LINES SHALL BE PLUGGED.



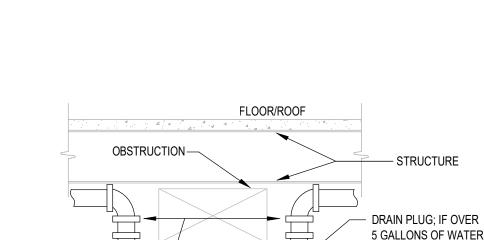
ALL THREAD ROD

ADJUSTABLE RING

IS TRAPPED, PROVIDE

1 INCH GLOBE VALVE

TOP BEAM CLAMP, ROD AND RING



TIGHT TO OBSTRUCTION — TYPICAL OFFSET AT OBSTRUCTION

NOT TO SCALE

SPRINKLER PIPE HELD

-BRANCH LINE

TYPICAL JOIST

NOT TO SCALE

TOP BEAM CLAMP, ROD AND RING

CLEARANCE REQUIREMENT

—LOCK

NUT REQ'D

----- FIG. 100 ALL

- FIG. 65 BEAM CLAMP

THREAD ROD

FIG. 200 ADJUSTABLE RING

STANDARD HANGER

PIPE

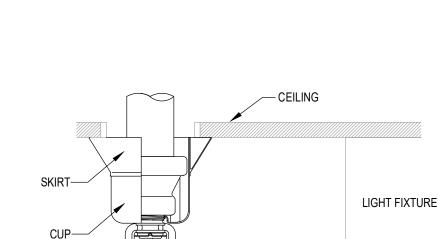
1" THROUGH 4"

ROD

-ROOF/FLOOR DECK

(STANDARD COVERAGE

UPRIGHT ON SPRIG)

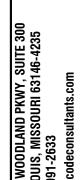


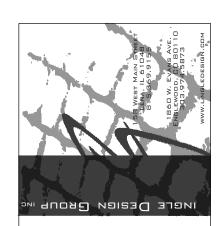
2 PIECE TELESCOPING ESCUTCHEON DETAIL

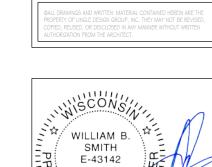
DEFLECTOR EVEN OR 1"

BELOW BOTTOM OF LIGHT

NOT TO SCALE

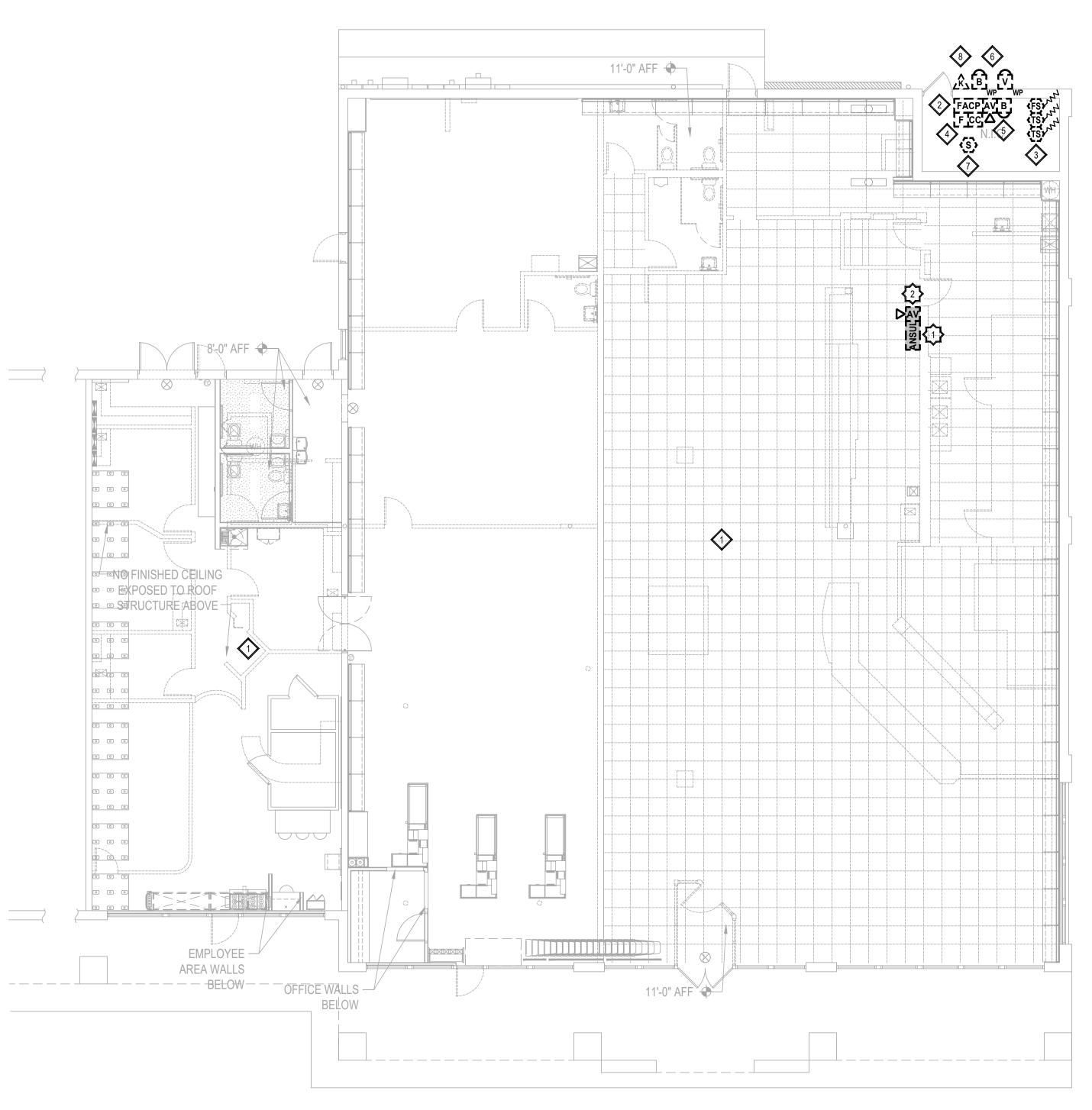






ENGINEER OF RECORD: WILLIAM B. SMITH, PE LICENSE NO. E-43142 CODE CONSULTANTS, INC. 2043 WOODLAND PKWY, SUITE 300 ST. LOUIS, MO 63146-4235 PHONE: 314-991-2633

CORPORATE CERTIFICATE OF AUTHORITY
NO. 2745-011





FIRE ALARM DEMOLITION KEYED NOTES (DENOTED AS 🏟)

- . ALL FIRE ALARM COMPONENTS ASSOCIATED WITH THE EXISTING ANSUL SYSTEM, INCLUDING CABLING/CONDUIT, SHALL BE DEMOLISHED AND COMPLETELY REMOVED FROM THE FUTURE DOLLAR TREE SPACE.
- THE EXISTING OCCUPANT NOTIFICATION APPLIANCE AND THE ASSOCIATED CABLING/CONDUIT SHALL BE DEMOLISHED AND BE COMPLETELY REMOVED FROM THE FUTURE DOLLAR TREE SPACE.

FIRE ALARM EXISTING TO REMAIN KEYED NOTES (DENOTED AS 🗱)

- THE EXISTING FIRE SPRINKLER RISER SERVING THE DOLLAR TREE SPACE IS CURRENTLY BEING ELECTRONICALLY MONITORED BY THE LANDLORDS FIRE ALARM CONTROL PANEL LOCATED OUTSIDE OF THE PROPOSED DOLLAR TREE SPACE. THE PROPOSED DOLLAR TREE SPACE HAS AN OCCUPANT LOAD OF LESS THAN 500 AND DOES NOT REQUIRE OCCUPANT NOTIFICATION. THEREFORE, A FIRE ALARM SYSTEM IS NOT REQUIRED AND WILL NOT BE PROVIDED WITHIN THE PROPOSED DOLLAR TREE SPACE. THE EXISTING LANDLORD FIRE ALARM SYSTEM SHALL CONTINUE TO MONITOR THE FIRE SPRINKLER SYSTEM AS CURRENTLY CONFIGURED
- THE EXISTING FIRE ALARM CONTROL PANEL AND ASSOCIATED EQUIPMENT SHALL REMAIN AS CURRENTLY INSTALLED TO SERVE THE FUTURE DOLLAR TREE SPACE. THE FACP SHALL CONTINUE REPORTING OFF-SITE AS CURRENTLY CONFIGURED.
- THE EXISTING FIRE SPRINKLER WATERFLOW SWITCHES AND TAMPER SWITCHES ARE ELECTRONICALLY SUPERVISED BY THE FIRE ALARM SYSTEM. THE ADDRESSABLE INPUT MODULES AND ASSOCIATED CABLING/CONDUIT SHALL REMAIN AS CURRENTLY CONFIGURED.
- 4. THE EXISTING MANUAL PULL STATION AND ASSOCIATED CABLING/CONDUIT SHALL REMAIN AS CURRENTLY CONFIGURED.
- 5. THE EXISTING OCCUPANT NOTIFICATION APPLIANCES AND ASSOCIATED CABLING/CONDUIT SHALL REMAIN AS CURRENTLY CONFIGURED.
- 6. THE EXISTING EXTERIOR NOTIFICATION APPLIANCE AND ASSOCIATED CABLING/CONDUIT SHALL REMAIN AS CURRENTLY CONFIGURED.
- THE EXISTING SMOKE DETECTOR AND ASSOCIATED CABLING/CONDUIT SHALL REMAIN AS CURRENTLY CONFIGURED.
- 8. THE EXISTING KNOX BOX SHALL REMAIN AS CURRENTLY CONFIGURED.

PROJECT INFORMATION

PROJECT NAME:	DOLLAR TREE - PEWAUKEE, WI
LOCATION:	690 WESTFIELD WAY PEWAUKEE, WI 53072
FIRE PROTECTION:	100% SPRINKLERED
OCCUPANCY:	MERCANTILE (EXISTING)

SCOPE OF WORK

- 1. THE FIRE ALARM SYSTEM WITHIN THE FUTURE DOLLAR TREE SHALL UTILIZE THE EXISTING FIRE ALARM EQUIPMENT AS NEEDED.
- THE EXISTING FIRE ALARM CONTROL PANEL SHALL REPORT ALL ALARM, SUPERVISORY, AND TROUBLE SIGNAL OFF-SITE AS CURRENTLY CONFIGURED.
- 3. THE NEW SCOPE OF WORK ON THE EXISTING FIRE ALARM SYSTEM SHALL CONSIST OF THE FOLLOWING: REMOVE EXISTING ANSUL SYSTEM AND ASSOCIATED WALL MOUNTED AUDIBLE/VISUAL NOTIFICATION LOCATED IN FUTURE DOLLAR TREE'S SALES

APPLICABLE CODES

FOR RESOLUTION.

ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REFERENCED DESIGN STANDARDS.

2015 INTERNATIONAL BUILDING CODE

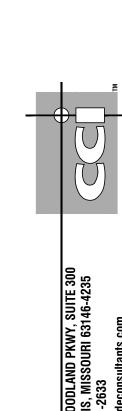
FLOOR AREA

- 2015 INTERNATIONAL FIRE CODE
- 2015 INTERNATIONAL MECHANICAL CODE
- 2017 NATIONAL ELECTRICAL CODE
- 2013 EDITION NFPA 72 NATIONAL FIRE ALARM CODE
- CONFLICTS BETWEEN THE REFERENCE NFPA STANDARDS, FEDERAL OR STATE CODES, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF ENGINEER OF RECORD (CCI)

	FIRE ALA	RM SYMBOL KEY
	ANSUL	EXISTING FIRE ALARM CONTROL PANEL TO BE DISCONNECTED AND REMOVED
	₽ ₹	EXISTING WALL MOUNTED AUDIBLE/VISUAL APPLIANCE TO BE DISCONNECTED AND REMOVED
	FACP	EXISTING FIRE ALARM CONTROL PANEL TO REMAIN (FIREWORX FX-5 (G/R)D)
	53	EXISTING IP/CELL COMMUNICATOR TO REMAIN
	₽ ₹	EXISTING WALL MOUNTED AUDIBLE/VISUAL NOTIFICATION APPLIANCE TO REMAIN
	[£]	EXISTING WALL MOUNTED WATERFLOW BELL APPLIANCE TO REMAIN
	₹ §}	EXISTING WATERFLOW SWITCH TO REMAIN
	₹ §}	EXISTING TAMPER SWITCH TO REMAIN
	55	EXISTING MANUAL PULL STATION TO REMAIN
	(S)	EXISTING SMOKE DETECTOR TO REMAIN
	[B] _{WP}	EXISTING EXTERIOR WALL MOUNTED WATERFLOW BELL APPLIANCE TO REMAIN (WP = WEATHER PROOF)
		EXISTING EXTERIOR WALL MOUNTED VISUAL APPLIANCE TO REMAIN (WP = WEATHER PROOF)
	∠k²	EXISTING KNOX BOX TO REMAIN
		FIRE ALARM PLENUM RATED CONDUCTORS (RED IN COLOR)
- 1		

JUNCTION BOX

----- END OF LINE RESISTOR





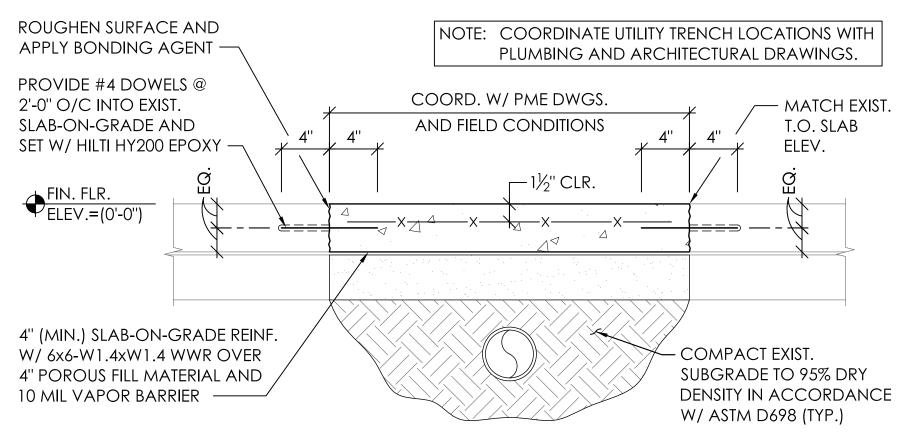








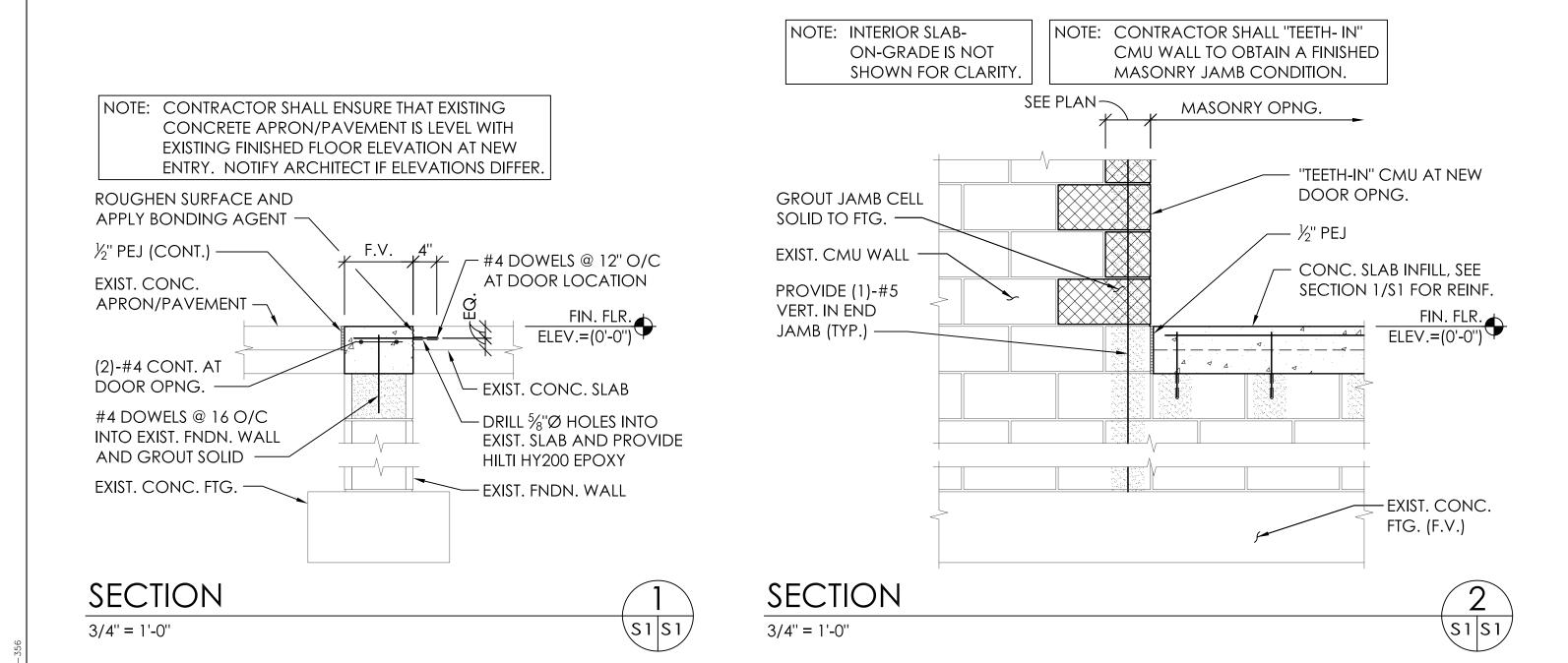
FAD1



TYPICAL UTILITY TRENCH INFILL DETAIL

NOT TO SCALE

NORTH



FOUNDATION - GENERAL NOTES:

- ALL WORK SHOWN IS NEW WORK UNLESS DENOTED AS EXISTING. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO STARTING CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
- 2. TOP OF EXISTING INTERIOR SLAB ELEVATION EQUALS REFERENCE ELEVATION (0'-0"). ALL ELEVATIONS ARE BASED ON THIS REFERENCE ELEVATION.
- 3. INDICATES AREA OF NEW CONCRETE SLAB.

FOUNDATION - PLAN NOTES:

- DEMOLISH EXISTING MASONRY WALL DOWN TO (-0'-8") BELOW FINISHED FLOOR ELEVATION AND INFILL WITH CONCRETE REINFORCED WITH (2)-#4 BARS CONTINUOUS. MATCH TOP OF FINISH FLOOR ELEVATION (0'-0"). DOWEL INTO EXISTING SLAB WITH #4 BARS AT 12" ON CENTER. SEE SECTIONS ON THIS SHEET FOR ADDITIONAL INFORMATION.
- 2. CONTRACTOR SHALL "TEETH-IN" CMU (8" MINIMUM), TO MATCH EXISTING, AT JAMB LOCATION. PROVIDE (1)-#5 VERTICAL IN END CELL AND GROUT SOLID.
- 3. INFILL PORTION OF EXISTING MASONRY OPENING TO MATCH EXISTING. SEE ELEVATION A/S2 FOR ADDITIONAL INFORMATION.
- 4. INFILL EXISTING MASONRY OPENING TO MATCH EXISTING. SEE TYPICAL CMU WALL INFILL DETAIL ON THIS SHEET FOR ADDITIONAL INFORMATION.

GENERAL NOTES:

LIVE LOADS:

NOTE: SEE PLAN AND ARCHITECTURAL

DRAWINGS FOR CMU INFILL LOCATIONS.

TYPICAL CMU WALL INFILL DETAIL

NOT TO SCALE

- 1. ALL ITEMS SHOWN ON THIS DRAWING ARE NEW CONSTRUCTION, UNLESS OTHERWISE NOTED AS EXISTING.
- 2. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION AND ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD.
- 3. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.
- 4. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO ANCHORAGE AND FLASHING AROUND MECHANICAL EQUIPMENT AND ROOF PENETRATIONS.
- 5. THE STRUCTURE WAS DESIGNED IN ACCORDANCE WITH THE WISCONSIN BUILDING CODE AND THE 2015 INTERNATIONAL BUILDING CODE (IBC 2015). THE FOLLOWING LOADS IN ADDITION TO THE LOADS OF THE PERMANENT MATERIALS AND CONSTRUCTION, WERE USED:

ROOFGROUND FLOOR	
$\frac{\text{SNOW LOADS:}}{\text{GROUND SNOW LOAD}}$ $\frac{\text{IMPORTANCE FACTOR (I)}}{\text{EXPOSURE FACTOR (Ce)}}$ $\frac{\text{THERMAL FACTOR (CT)}}{\text{FLAT ROOF SNOW LOAD (PF)}}$	1.0 1.0 1.0
WIND: WIND (3 SECOND GUST) EXPOSURE RISK CATEGORY INTERNAL PRESSURE (GC _{PC}) SEISMIC:	V _{ASD} = 89 MPH C II
SEISMIC IMPORTANCE FACTOR (Ie)	0.086g 0.046g
DESIGN SPECTRAL RESPONSE ACCELERATIONS, S _{DS}	
SITE CLASS SEISMIC DESIGN CATEGORY BASIC SEISMIC-FORCE RESISTING SYSTEM RESPONSE MODIFICATION FACTOR (R) ANALYSIS PROCEDURE USED	D B ORDINARY REINFORCED MASONRY SHEAR WALLS 2

6. CONTRACTOR SHALL COORDINATE STRUCTURAL, ARCHITECTURAL, MECHANICAL AND CIVIL DRAWINGS PRIOR TO BEGINNING CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

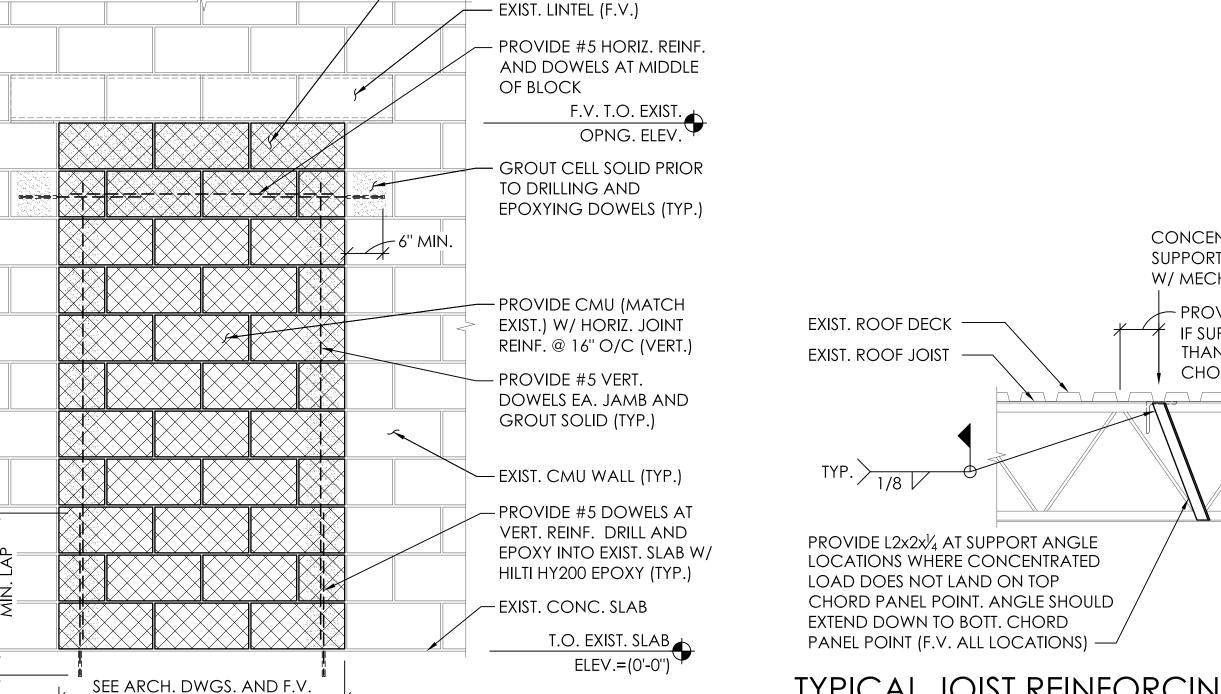
CAST-IN-PLACE CONCRETE NOTES:

- 1. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 301 "STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318/318R "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
- 2. CONCRETE SHALL HAVE THE FOLLOWING (28) DAY COMPRESSIVE STRENGTH AND MAXIMUM SLUMPS: A. EXTERIOR SLAB-ON-GRADE . 4,000 PSI, 4" WITH AIR
- B. INTERIOR SLAB-ON-GRADE . 3,500 PSI, 4" TO 5" NOTE: ALL SUMPS SHALL BE $\pm \frac{1}{2}$ " (SLUMP MEASURED PRIOR TO SUPERPLASTICIZER, WHERE OCCURS)
- 3. ALL CONCRETE EXPOSED TO FREEZE/THAW CYCLE SHALL HAVE 6% (±1½%) ENTRAINED AIR.
- 4. REINFORCING STEEL: A. DEFORMED BARS (DO NOT WELD) ASTM A615 (GRADE 60) B. WELDED WIRE REINFORCING .. ASTM A185 (FLAT SHEETS ONLY)
- 5. COVER TO REINFORCEMENT AS NOTED IN SECTIONS AND AS FOLLOWS:
 - A. TOP COVER TO WWR..
- ADHESIVE ANCHORS SHALL CONSIST OF GRADE 60 REBAR, ASTM A307 GRADE A ALL-THREAD OR ANCHOR ROD, NUT, WASHER AND ADHESIVE. EPOXY ANCHORS SHALL BE INSTALLED USING AT LEAST MINIMUM DEPTHS, EDGE DISTANCES, SPACING (UNLESS NOTED OTHERWISE), AND INSTALLATION PROCEDURES AS RECOMMENDED BY THE MANUFACTURER. DO NOT APPLY LOAD TO ANCHOR UNTIL RESIN HAS CURED IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER.
- 7. TORCHING TO BEND REINFORCING BARS SHALL NOT BE ALLOWED.
- 8. ALL ITEMS EMBEDDED IN CONCRETE OR GROUTED CMU MUST BE TIED AND SECURED PRIOR TO PLACEMENT OF CONCRETE OR GROUT. NO "WET SETTING" IS ALLOWED.
- 9. FOR SLAB-ON-GRADE, SLAB REINFORCING SHALL BE HELD IN PLACE BY BAR SUPPORTS AND ACCESSORIES AS DESCRIBED IN CHAPTER 3 OF THE CRSI MANUAL OF STANDARD PRACTICE. BAR SUPPORTS SHALL BE SPACED A MAXIMUM OF 4'-0" ON CENTER BOTH WAYS IN STRAIGHT LINES ON THE WELDED WIRE REINFORCING GRID.

MASONRY NOTES:

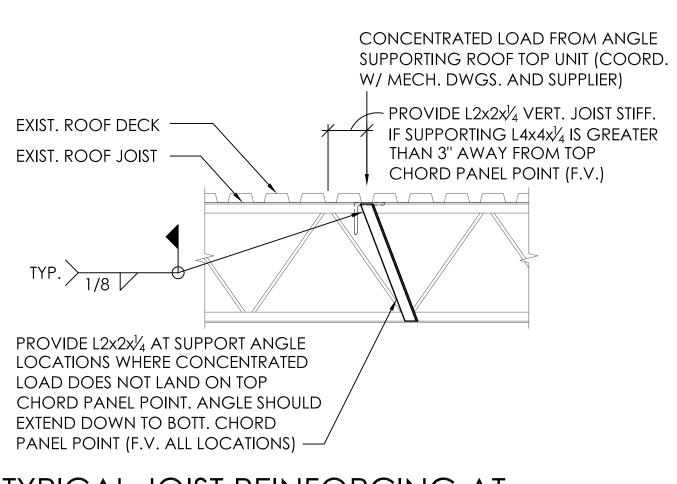
B. OTHER: AS NOTED IN ACI 318.

- 1. ALL MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 530, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" AND ACI 530.1, "SPECIFICATIONS FOR MASONRY STRUCTURES."
- 2. ALL LOAD-BEARING CONCRETE MASONRY UNITS SHALL BE TYPE I UNITS IN CONFORMANCE WITH ASTM C 90 AND SHALL BE MADE WITH LIGHTWEIGHT AGGREGATE.
- 3. ALL MASONRY UNITS SHALL BE IN ACCORDANCE WITH ASTM C 90. ALL ASSEMBLED CONCRETE MASONRY SHALL ATTAIN AN ULTIMATE NET AREA COMPRESSIVE STRENGTH (f'm) OF 2,000 PSI AT 28 DAYS.
- 4. ALL MORTAR SHALL BE ASTM C270, TYPE S.
- 5. ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 60.
- 6. THE MASONRY CONTRACTOR SHALL BUILD, REINFORCE, AND GROUT THE WALL IN NO GREATER THAN 4'-0" LIFTS, VIBRATING GROUT IMMEDIATELY AFTER EACH LIFT.
- 7. ALL REINFORCED CELLS SHALL BE FULLY GROUTED FROM TOP TO BOTTOM. GROUT SHALL BE 3,000 PSI. ALL GROUT SHALL CONFORM TO ASTM C 476. GROUT SHALL HAVE A SLUMP BETWEEN 8 TO 10 INCHES.
- 8. UNLESS OTHERWISE NOTED OR DETAILED, CENTER REINFORCING IN BLOCK CELLS AND TIE IN PLACE AT INTERVALS OF 4'-0" ON CENTER, MAXIMUM.
- 9. PROVIDE GALVANIZED HORIZONTAL TRUSS TYPE JOINT REINFORCING WITH STANDARD LADDER TYPE NO. 9 GAGE CROSS RODS AT 16" ON CENTER ON ALL WALLS. PROVIDE HORIZONTAL JOINT REINFORCING IN TWO JOINTS IMMEDIATELY ABOVE AND BELOW ALL OPENINGS, EXTENDING A MINIMUM OF 2'-0" BEYOND THE JAMB ON EACH SIDE OF THE OPENING.
- 10. VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED, CONTINUOUS VERTICAL CELL MEASURING NOT LESS THAN 2 INCHES BY 3 INCHES.



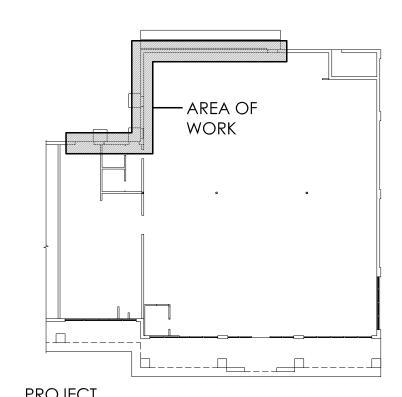
— PACK TOP COURSE SOLID

W/ GROUT (TYP.)



TYPICAL JOIST REINFORCING AT CONCENTRATED LOAD DETAIL

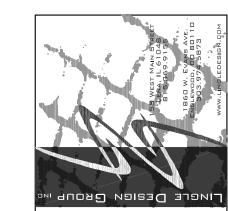
NOT TO SCALE



PROJECT KEY PLAN NOT TO SCALE NORTH

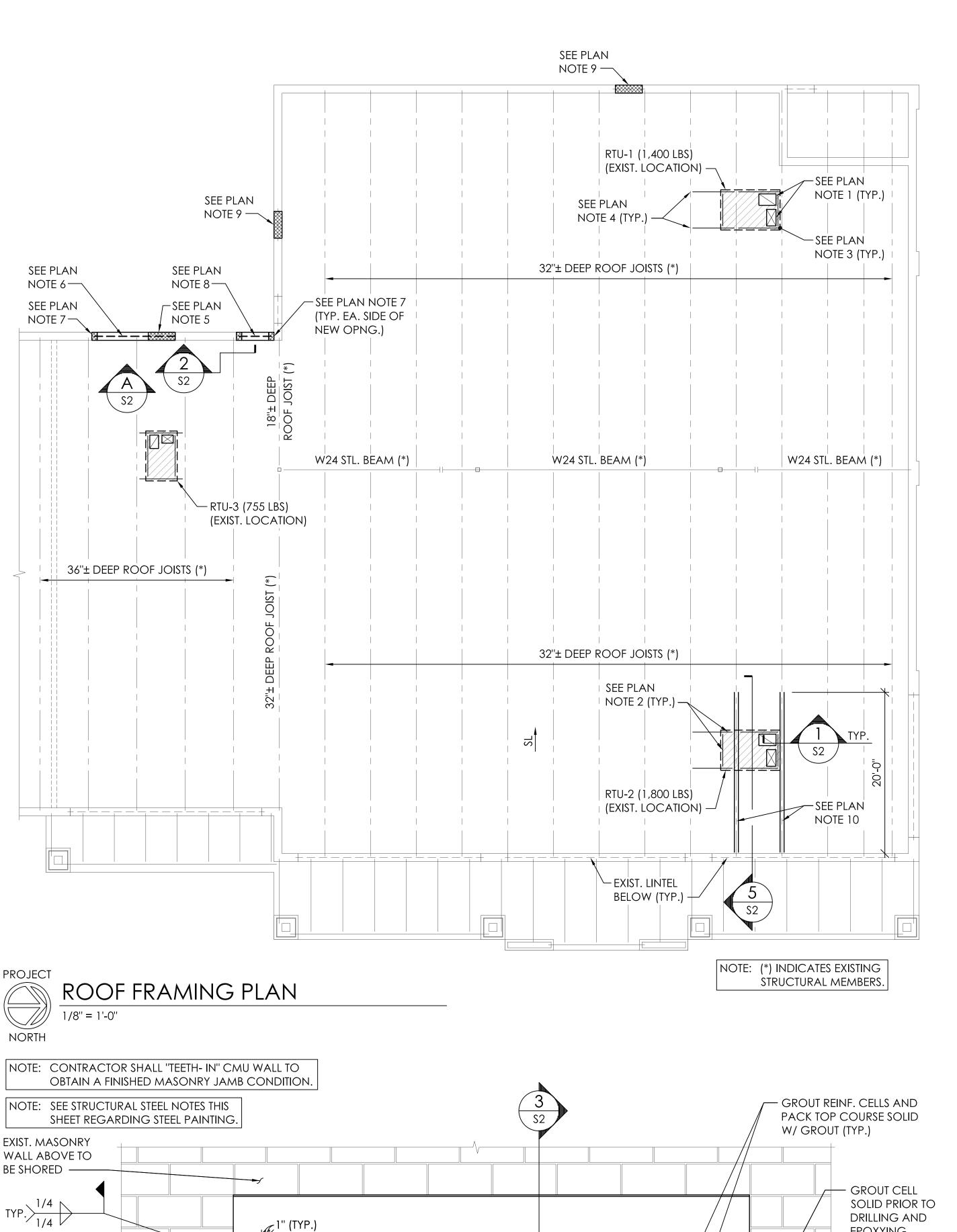
7

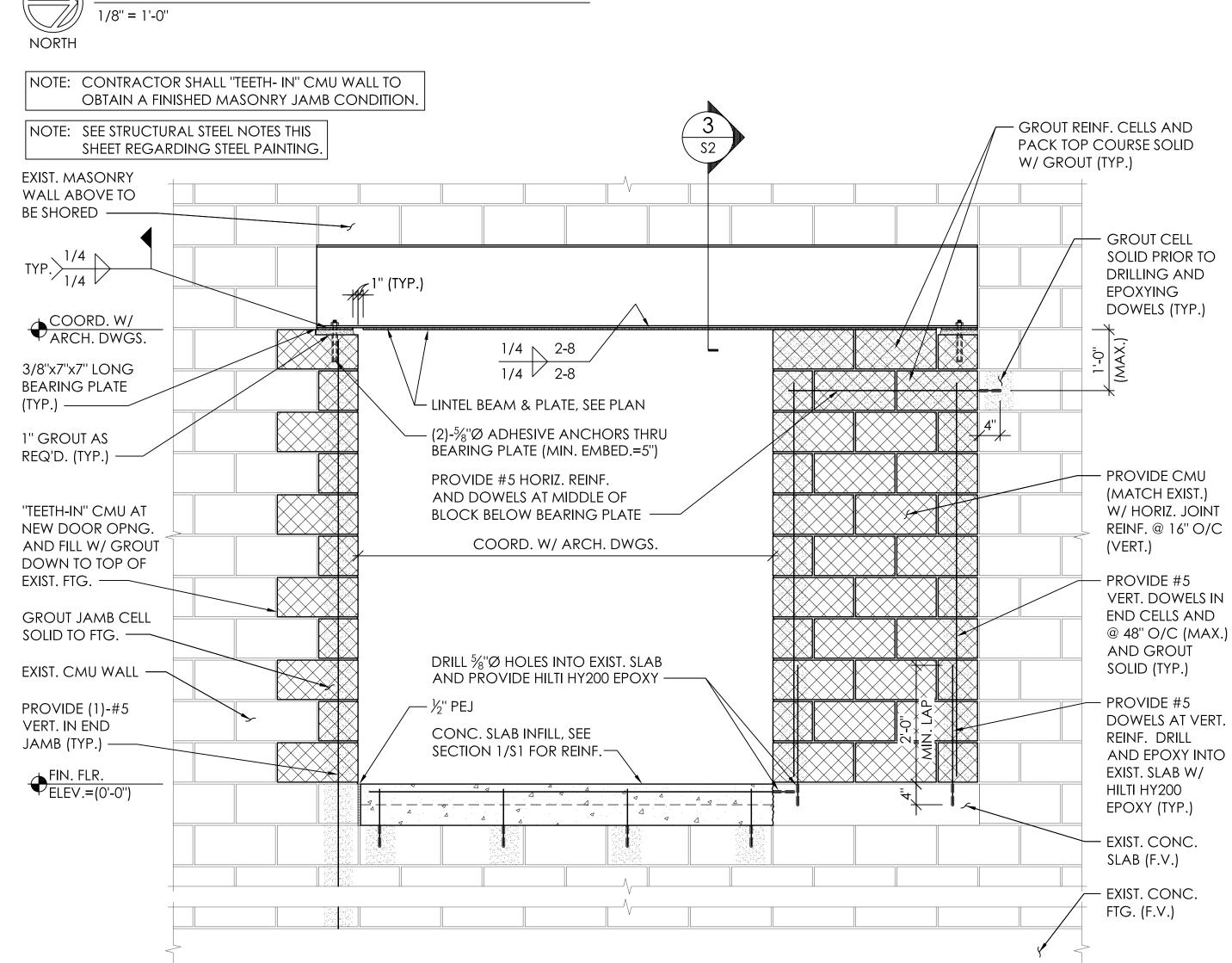
e C





SHEET





ELEVATION

3/4" = 1'-0"

ROOF FRAMING - GENERAL NOTES:

1. ALL WORK SHOWN IS NEW WORK UNLESS DENOTED AS EXISTING. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO STARTING CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

- 2. SEE THE ARCHITECTURAL DRAWINGS FOR DEMOLITION NOT NOTED.
- 3. COORDINATE DIMENSIONS NOT NOTED ON PLAN WITH THE ARCHITECTURAL DRAWINGS.
- 4. CONTRACTOR SHALL IN NO WAY DAMAGE ANY BUILDING COMPONENT TO REMAIN. IF DAMAGE OCCURS, IT SHALL BE REPAIRED OR REPLACED (TO THE SATISFACTION OF THE OWNER) AT THE CONTRACTOR'S EXPENSE.
- 5. COORDINATE SIZE AND LOCATION OF MECHANICAL ROOF TOP UNITS (RTU) WITH MECHANICAL DRAWINGS AND ACTUAL FIELD CONDITIONS.

ROOF FRAMING - PLAN NOTES:

SECTION

3/4" = 1'-0"

S1 S2 S2/

1. CONTRACTOR SHALL LOCATE SUPPLY AND RETURN DUCT PENETRATIONS AWAY FROM EXISTING JOISTS AND BRIDGING TO REMAIN.

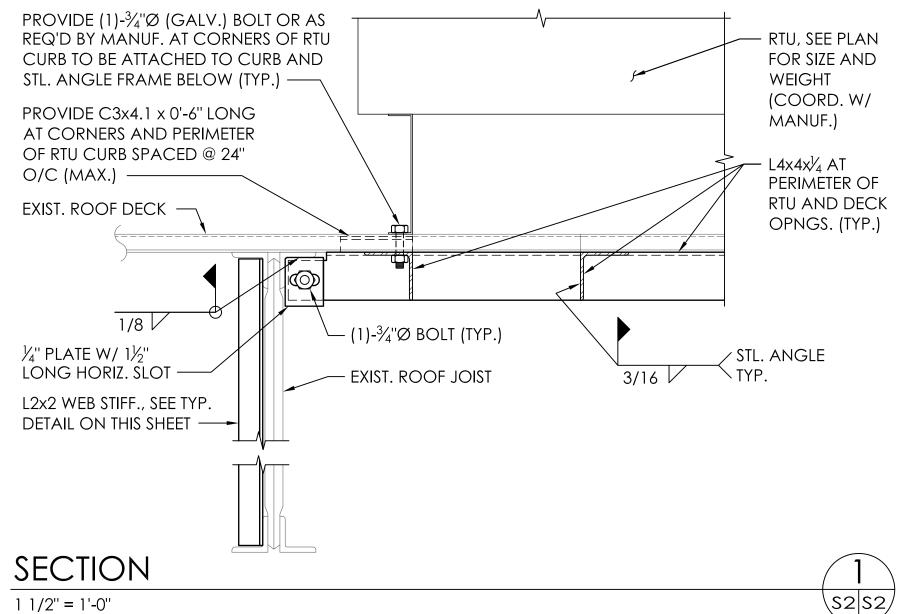
- 2. CONTRACTOR SHALL FIELD VERIFY PRESENCE OF SUPPORT ANGLES BELOW EXISTING RTU CURBS AND ROOF DECK OPENINGS. IF NONE EXIST, PROVIDE L4x4x $\frac{1}{4}$ AT PERIMETER OF CURB AND ROOF DECK OPENING. COORDINATE CURB SIZE WITH MECHANICAL SUPPLIER.
- 3. PROVIDE (1)-3/4"Ø BOLT (GALVANIZED) OR AS REQUIRED BY MANUFACTURER AT EACH CORNER OF RTU CURB DOWN TO SUPPORTING STRUCTURE BELOW.
- 4. PROVIDE L2x2x1/2 DIAGONAL WEB STIFFENER IN EXISTING JOIST AT L4x4x1/2 LOCATIONS. SEE TYPICAL JOIST REINFORCING AT CONCENTRATED LOAD DETAIL ON SHEET S1.
- 5. INFILL PORTION OF EXISTING MASONRY OPENING TO MATCH EXISTING. SEE ELEVATION A/S2 FOR ADDITIONAL INFORMATION.
- 6. PROVIDE W16x26 LINTEL BEAM WITH CONTINUOUS $\frac{3}{6}$ " THICK PLATE. PLATE WIDTH SHALL EQUAL WALL WIDTH, MINUS 1". SEE STRUCTURAL NOTES FOR PAINTING.
- 7. CONTRACTOR SHALL "TEETH-IN" CMU (8" MINIMUM), TO MATCH EXISTING, AT JAMB LOCATION. PROVIDE (1)-#5 VERTICAL IN END CELL AND GROUT SOLID.
- 8. PROVIDE W8x15 LINTEL BEAM WITH CONTINUOUS $\frac{3}{6}$ " THICK PLATE. PLATE WIDTH SHALL EQUAL WALL WIDTH, MINUS 1". SEE STRUCTURAL NOTES FOR PAINTING.
- 9. INFILL EXISTING MASONRY OPENING TO MATCH EXISTING. SEE TYPICAL CMU WALL INFILL DETAIL ON SHEET S1 FOR ADDITIONAL INFORMATION.
- 10. REINFORCE EXISTING JOISTS AT RTU LOCATION. SEE SECTION 5/S2 FOR JOIST REINFORCING REQUIREMENTS. STRUCTURAL STEEL REINFORCEMENT SHALL BE DONE PRIOR TO MECHANICAL RTU PLACEMENT ON ROOF.

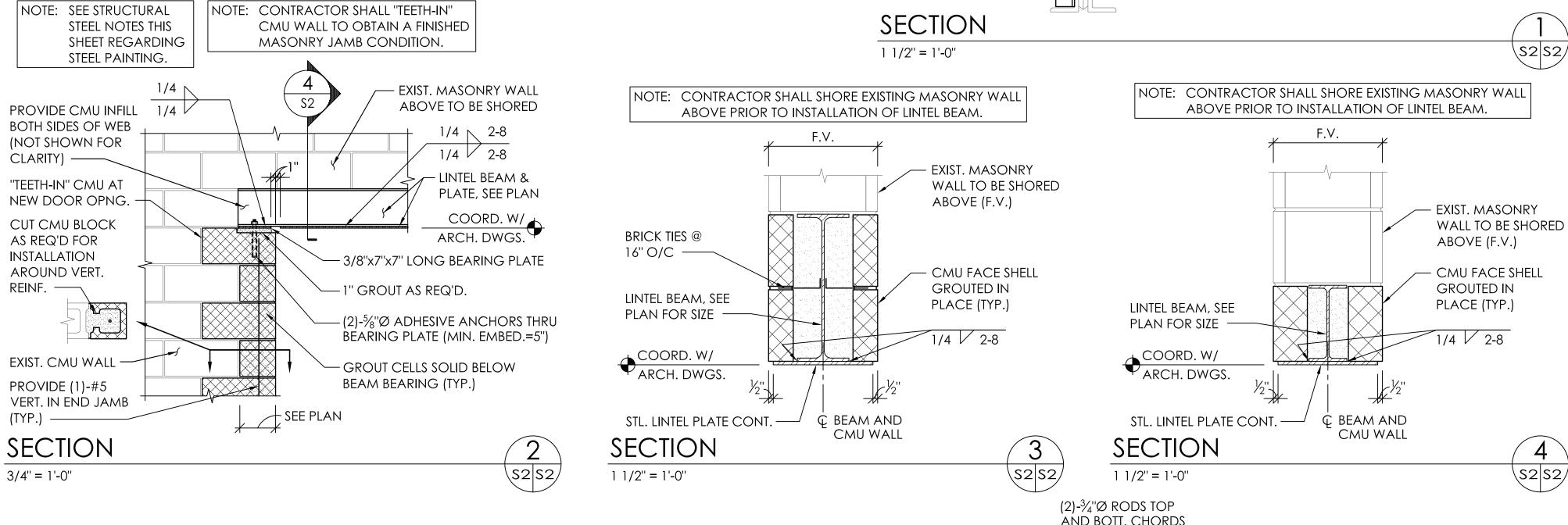
STRUCTURAL STEEL NOTES:

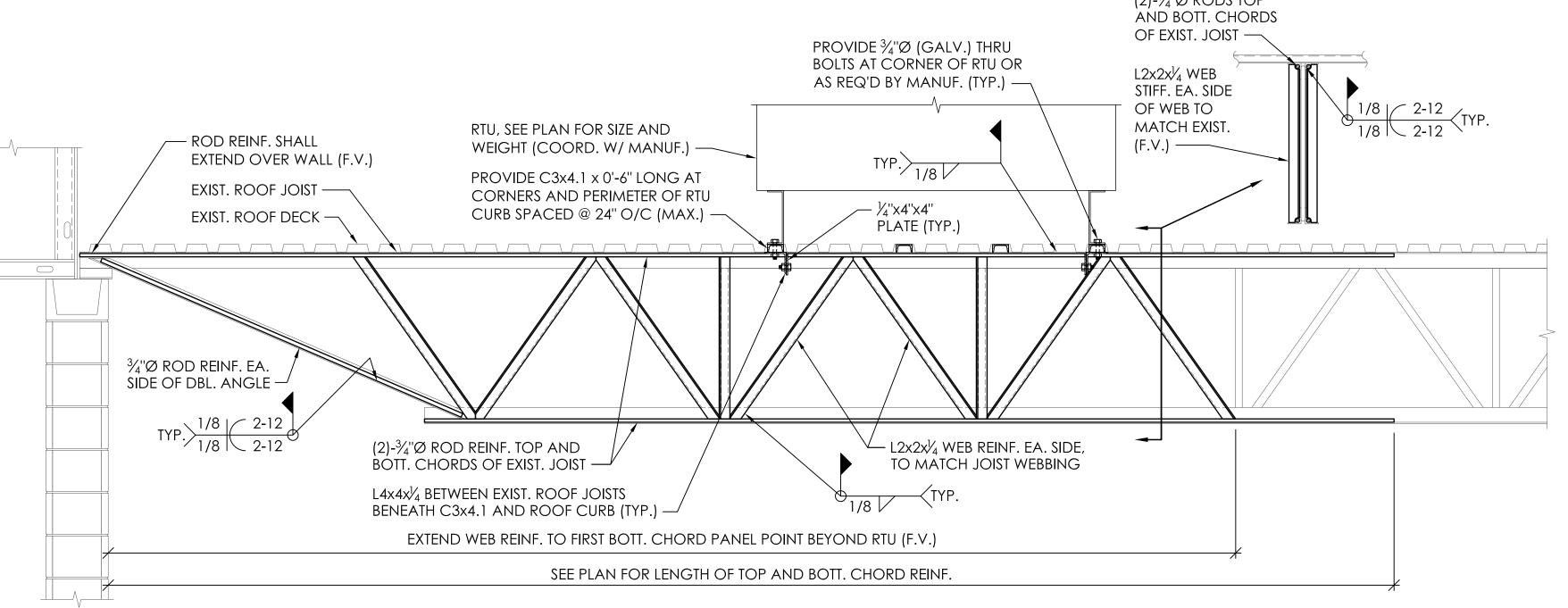
1. STRUCTURAL STEEL FOR THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE FOURTEENTH EDITION OF THE "MANUAL OF STEEL CONSTRUCTION" OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), ALLOWABLE STRESS DESIGN".

- 2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS UNLESS OTHERWISE NOTED:
 - A. STRUCTURAL STEEL WIDE FLANGE SHAPES ASTM A992, GRADE 50 KSI. B. MISCELLANEOUS STEEL ANGLES, CHANNELS AND PLATES - ASTM A36, GRADE 36 KSI.
 - C. POST CONSTRUCTION ADHESIVE ANCHORS GRADE 60 REBAR, ASTM A307 GRADE A ALL-THREAD OR ANCHOR ROD WITH HILTI HY200 EPOXY (IN CONCRETE) OR HILTI HY270 EPOXY (IN MASONRY).
- 3. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO AISC STANDARDS (AISC 303).
- 4. STRUCTURAL STEEL EXPOSED TO WEATHER OR SUPPORTING MASONRY SHALL BE PAINTED WITH TNEMEC HI-BUILD EPOXOLINE, SERIES 66. PRIME INTERMEDIATE COATS. FINISH COAT SHALL BE PAINTED WITH EXDURA-SHIELD II, SERIES 1074. ALL PAINTING SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. AT CONTRACTOR'S OPTION, STEEL MAY BE HOT-DIP GALVANIZED.
- 5. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1, "STRUCTURAL WELDING CODE STEEL." WELD ELECTRODES SHALL BE E70XX LOW HYDROGEN.
- 6. 0.157" DIAMETER POWDER ACTUATED FASTENERS (PAF) SHALL HAVE A MINIMUM ALLOWABLE CAPACITY INTO THE BASE MATERIAL AS FOLLOWS, UNLESS OTHERWISE NOTED:
 - A. CONCRETE: SHEAR = 260 LBS; TENSION = 255 LBS (3" EDGE DISTANCE)
 - B. STEEL: SHEAR = 600 LBS; TENSION = 250 LBS ($\frac{1}{2}$ " EDGE DISTANCE)

CONTRACTOR'S OPTION: IN LIEU OF THE %"Ø BOLT AT CORNERS OF THE RTU CURB, CONTRACTOR CAN PROVIDE A 12 GAGE METAL STRAP SCREWED TO INSIDE OF EXISTING CURB, CURB ADAPTER (IF ENCOUNTERED) AND WELDED TO INSIDE OF STEEL FRAMING BELOW. PROVIDE A MINIMUM OF (4)-#10 TEK SCREWS IN EXISTING CURB AND CURB ADAPTER AND $\frac{1}{8}$ " WELD TO STEEL ANGLE BELOW. TYPICAL AT EACH CORNER OF RTU CURB. COORDINATE WITH MECHANICAL SUPPLIER.







SHEET

6 — e

ار

S2

PE-45899-6 CHESAPEAKE VIRGINIA

S2 S2/

ABOVE (F.V.)

S2|S2/

DESIGN DRAWINGS ARE SCHEMATIC. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT. ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES. THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN

GENERAL DUCTWORK NOTE

CONTRACTOR SHALL SITE VERIFY EXISTING HVAC UNIT LOCATION(S) & POTENTIAL DUCTWORK OBSTRUCTIONS (SPRINKLER LINES, STRUCTURAL BEAMS & JOIST, ETC..) PRIOR TO FABRICATING DUCTWORK. CONTRACTOR SHALL CONTACT THE DTFD CONSTRUCTION PROJECT MANAGER IF CONFLICTS BETWEEN CONSTRUCTION DOCUMENTS & EXISTING CONDITION EXIST FOR DIRECTION.

GENERAL DEMOLITION NOTE

MECHANICAL CONTRACTOR TO REMOVE EXISTING HVAC EQUIPMENT, DUCTWORK, HANGERS, INSULATION, AIR DEVICES, CONTROLS AND MISCELLANEOUS EQUIPMENT, ETC... NOT INTENDED FOR REUSE.

HVAC CONTROLS NOTE

CONTRACTOR SHALL REFER TO THE EM SHEETS FOR INSTALLATION INSTRUCTIONS FOR THE VENDOR FURNISHED, CONTRACTOR INSTALLED HVAC M02 CONTROL SYSTEM AND TEMPERATURE AND CO2 SENSOR LOCATIONS PRIOR TO THE INSTALLATION OF ALL RELATED ITEMS

KEYED NOTES

TENANTS CONTRACTOR SHALL INSTALL TENANT VENDOR PROVIDED CO2 SENSOR 7'-0" A.F.F. THESE SENSOR SHALL CONTROL SALES RTU'S. PROVIDE NEW ROOF MOUNTED EXHAUST FAN AND BALANCE TO THE SCHEDULED AIR FLOW. MAINTAIN A MINIMUM OF 10' 0" FROM ANY BUILDING INTAKE. ALL ROOF WORK TO BE DONE BY LANDLORD

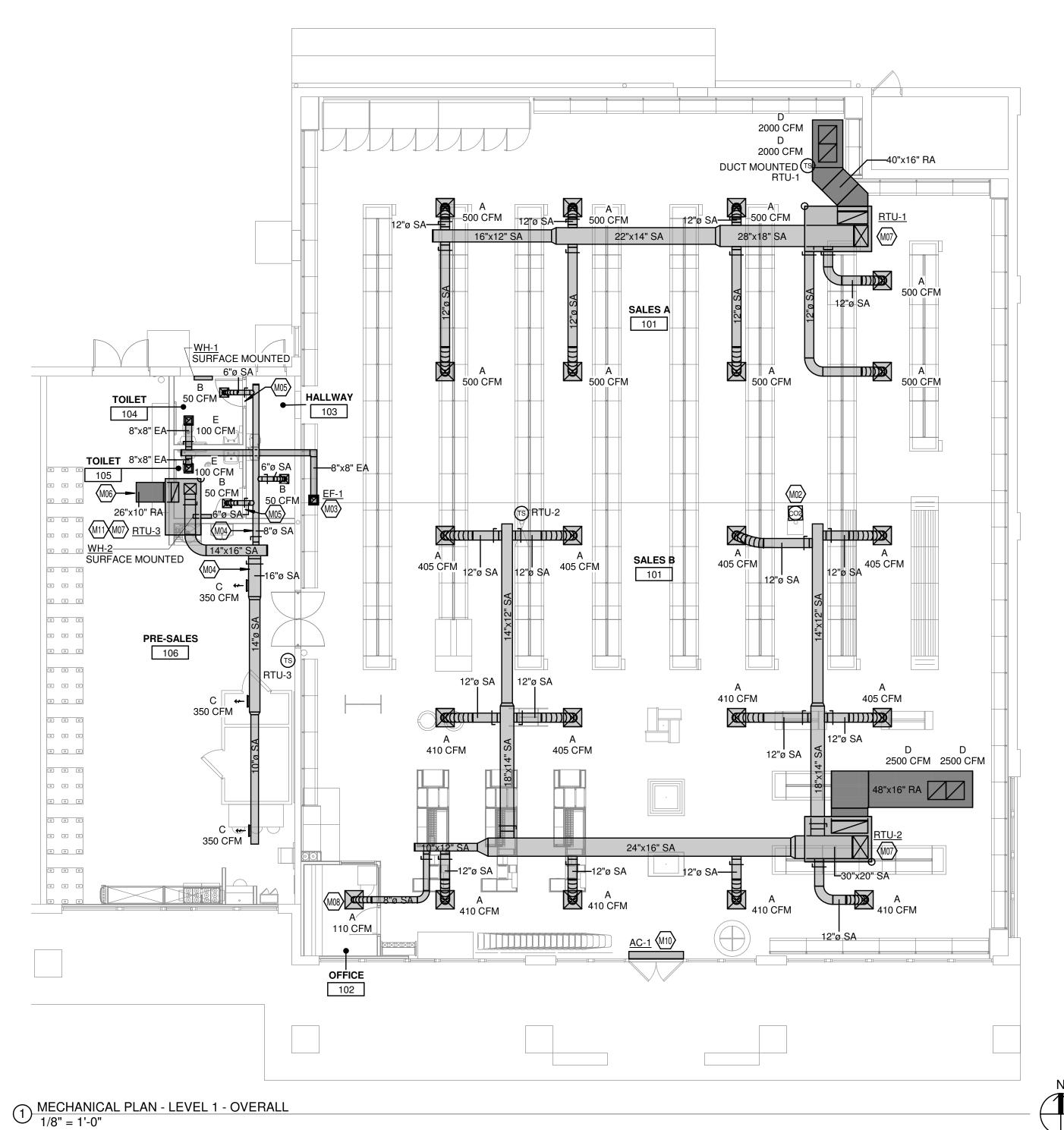
APPROVED ROOFING CONTRACTOR AT THE GENERAL CONTRACTORS CONTRACTOR SHALL LOCATE BOTTOM OF STOCK ROOM DUCTWORK ABOVE LIGHTING. ANY DEVIATION TO THIS DIMENSION DUE TO INTERFERENCE WITH ANY BUILDING OBSTRUCTIONS SUCH AS STRUCTURE, OVERHEAD DOORS, ETC. SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO FABRICATING THE DUCTWORK. PROVIDE 1" AIRSPACE BETWEEN BOTTOM OF DOOR AND FINISHED

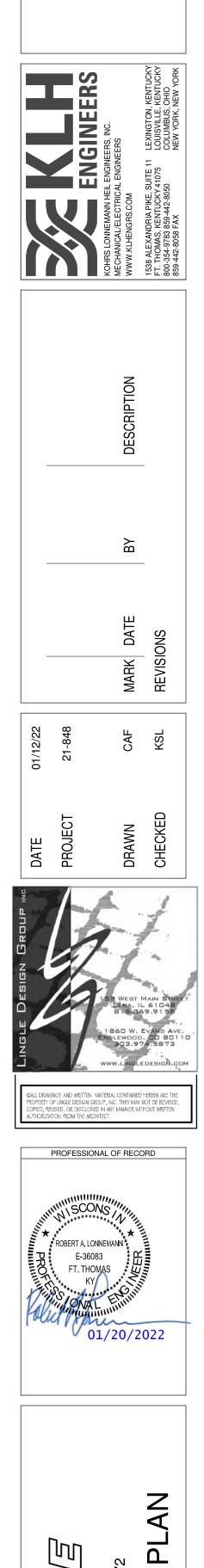
FLOOR FOR AIRFLOW. COVER OPEN END OF RETURN DUCT WITH 1" MESH HARDWARE CLOTH IN A REMOVABLE METAL FRAME. CONTRACTOR SHALL INSTALL NEW TEN INDICATED ON PLANS, SCHEDULE AND REMOVE EXISTING CURB AND PROVIDE CUT AND PATCH ROOF AS REQUIRED 1 DUCT DROPS TO BOTTOM CHORD OF S M08 ADJUST DIFFUSER FOR FULL VERTICAL INSTALL AIR CURTAIN 1" ABOVE FRONT

OFF WHEN DOOR IS CLOSED. VERIFY EXACT LOCATION OF THE RTU IN MINIMUM OF 10'-0" FROM THE ROOF EDG 10'-0" PROVIDE FALL PROTECTION PER

CONTRACTOR SHALL INSTALL NEW TENANT FURNISHED HVAC UNIT AS INDICATED ON PLANS, SCHEDULE AND NOTES. CONTRACTOR TO REMOVE EXISTING CURB AND PROVIDE MANUFACTURER ROOF CURB. CUT AND PATCH ROOF AS REQUIRED TO ALLOW FOR NEW FULL SIZE DUCT DROPS TO BOTTOM CHORD OF STRUCTURE. ADJUST DIFFUSER FOR FULL VERTICAL DISCHARGE INTO OFFICE BELOW. INSTALL AIR CURTAIN 1" ABOVE FRONT ENTRANCE DOOR. AIR CURTAIN TO OPERATE WHEN FRONT ENTRANCE DOOR IS OPENED AND TO SHUT OFF WHEN DOOR IS CLOSED. VERIFY EXACT LOCATION OF THE RTU IN FIELD. EQUIPMENT IS TO BE A MINIMUM OF 10'-0" FROM THE ROOF EDGE. IF THE NEW UNIT IS WITHIN 10'-0" PROVIDE FALL PROTECTION PER THE IMC.		ENGINEE	KOHRS LONNEMANN HEIL ENGINEERS, INC. MECHANICAL/ELECTRICAL ENGINEERS WWW KLHENGRS.COM	FT. THOMAS, KENTUCKY 41075 LOUISVILLE, KEI 800-354-9783 859-442-8050 COLUMBUS, ON SED A12 9056 814 914 915 915 915 915 915 915 915 915 915 915

	MECHANICAL LEGEND
SYMBOL	DESCRIPTION
	PLAN-VIEW LINE TYPES
	WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE
	WORK SHOWN BOLD-DASHED INDICATES SELECTIVE DEMOLITION WORK
	WORK SHOWN BOLD-CONTINUOUS INDICATES NEW WORK
	MECHANICAL AIR DEVICES
SR X	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG X	SUPPLY GRILLE
RG	RETURN GRILLE
CD X	CEILING DIFFUSER
CD-10"Ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
RCD (X)	ROUND CEILING DIFFUSER
	MECHANICAL DUCTWORK
UP	SUPPLY DUCT WITH ELBOW TURNED UP
DN	SUPPLY DUCT WITH ELBOW TURNED DOWN
UP	RETURN DUCT WITH ELBOW TURNED UP
DN	RETURN DUCT WITH ELBOW TURNED DOWN
UP	EXHAUST DUCT WITH ELBOW TURNED UP
DN	EXHAUST DUCT WITH ELBOW TURNED DOWN
24X12 SA	SUPPLY DUCT
24X12 RA	RETURN DUCT
24X12 EA	EXHAUST DUCT
24X12 OA	OUTSIDE AIR DUCT
	1" LINED DUCTWORK
	DUCT FLEX CONNECTOR
	FLEXIBLE DUCTWORK CONNECTION
	BRANCH TAKEOFF
	REDUCER, CONCENTRIC
	REDUCER, NONCONCENTRIC
	MECHANICAL DUCTWORK ACCESSORIES
	DUCT WITH MANUAL VOLUME DAMPER
	ROUND ELBOW WITH TURNING VANES
<u> </u>	ELBOW WITH TURNING VANES
	DUCT MOUNTED SMOKE DETECTOR (HARD WIRE INTERLOCK TO FAN MOTOR BY E.C.)
	FURNISHED BY E.C., INSTALLED BY M.C. MECHANICAL STATS & SENSORS
(TS)	TEMPERATURE SENSOR
	LOW VOLTAGE THERMOSTAT
R	REVERSE ACTING THERMOSTAT
(00)	CARBON MONOXIDE SENSOR
(CO2)	CARBON DIOXIDE SENSOR
	MECHANICAL MISCELLANOUS
	NACL D & NOT BY NATE OF STREET







SHEET

KLH PROJECT

M-101

	DOLLAR TREE HVAC FANS SCHEDULE														
Equipment shall be bra	ipment shall be braced and labeled by the equipment manufacturer to withstand the minimum scheduled available fault current value for listed equipment.														
EQUIPMENT MARK	DESCRIPTION	WEIGHT (lbs)	MANUFACTURER	MODEL	VOLTS	PHASE	WATTS (Watts)	CFM (cfm)	ESP (in WC)	HP (hp)	FLA (amps)	MCA (amps)	OCP (amps)	AVAILABLE FAULT CURRENT	
AC-1	AIR CURTAIN	130	POWERED AIRE	ETA-2-72	120	1		2802	0			16		1284	
EF-1	CENTRIFUGAL ROOF VENTILATOR	50	JOHNSON CONTROLS	EVD06B	120	1	71	200	0.5					1557	

DOLLAR TREE ROOFTOP UNIT SCHEDULE																											
Equipment shall be bra	aced and labeled by the equipment ma							t. M (cfm) ESP (in	MC) OACEM (cfm)	CO2 CFM (cfm)	NOMINAL TONS	MAT CLG DR (Dog E)	MAT CLG WB (Deg F) CLC	MRH (mbb)	CLG SENS (mbh)	LAT DR (Dog E)) I AT CLG WR (Dog E)	HTC MRH (mbb)	LAT HTG (Dog E)	GAS HTG IN (m	mbb) GAS HTG OUT (mb	ah) MIN GAS DDESSIDE (in)	WC) MAX GAS PRESSURE (in W	C) MCA (amps)	OCP (amps)	AVAILABLE FAULT CURRENT	ACCESSODIES
DTII 1 D	ACKAGED OUTDOOR ROOFTOP LINIT	BOOF	1400	CARRIER	48HC12 208	3	TIASE CI	0 05	VC) OACFM (cfm)	398	10	80	67 139		IOO	55	54	114	81	180	148	JII) WIIN GAS PRESSORE (III)	13	53	60 (amps)		3,4,7,10,20,22
	TOTALD COTDOCTTIOOT TOT ONLY	11001	1700	0,4111211	10110 12 200	0		0.5	1150	400	10.5	70	07	'	100	55	E4	170	00	100	140	2	10 5	60	70		3.4.7.10.20.22
RTU-2 P/	ACKAGED OUTDOOR ROOFTOP UNIT	ROOF	1800	CARRIER	48HC14 208	3	50c	0 10.5	11130	1460	112.0	1/9	6/ 168		123	100	134	11/0	109	1100	1140	13	110.5	100	170		
RTU-2 P/	ACKAGED OUTDOOR ROOFTOP UNIT ACKAGED OUTDOOR ROOFTOP UNIT	ROOF	1800 755	CARRIER CARRIER	48HC14 208 48GCEM04 208	3	120	0 0.5	216	460	3	79	67 35	2	<u>123</u> <u>29</u>	55	54	58	105	110	93	4	13	21	30	0575	3,4,7,10,22

	DOLLAR TREE HVAC VENTILATION SCHEDULE														
NUMBER	NAME	AREA	PEOPLE RED	OA PER PERSON	OA PER SQ FT.	REQ SUP	ACT SUP	REQ OA	ACT OA	ACT RET	ACT EXH	CRIT OA	PRESSURE	PCT OPERABLE	NATURAL VENTILATION
101	SALES A	3318 SF	50	7.5	0.12	3864	4000	966	1000	4000	0	0.2415	E	0	
101	SALES B	3788 SF	57	7.5	0.12	4748	4890	1092	1125	4890	0	0.2253	E	0	
102	OFFICE	80 SF	1	5	0.06	109	110	25	25	110	0	0.109	E	0	
103	HALLWAY	83 SF	0	0	0.06	50	50	9	9	50	0	0.12	E	0	
104	TOILET	56 SF	0	0	0	50	50	9	9	0	75	0	N	0	
105	TOILET	56 SF	0	0	0	50	50	9	9	0	75	0	N	0	
106	PRE-SALES	1352 SF	0	0	0.12	1033	1050	186	189	1050	0	0.1923	E	0	
TOTAL		8733 SF													

	00011110	COOLING LOAD BREAKDOWN CROOF SENSIBLE HEAT GAIN FROM ROOF															1							
HVAC LOADS		LOAD BRE																HEATING LOAD BREAKDOWN						
						CSSE CFAN COAS CTSEI CPLA ^T COAL CTLA ^T CTOT	NS T	SENSIBLE SENSIBLE TOTAL SE LATENT H LATENT H TOTAL LA	HEAT GAIN NSIBLE HEA IEAT GAIN FF	FROM AIR FROM OUT T GAIN ROM PEOP ROM OUTE GAIN	HANDLER FAI TDOOR VENTI LE DOOR VENTILA	LATION AIF	HROC HWAI HPAF HGL ^A HSLA HSPA HOA HTOT	LL RT SS B CE	HEAT LOSS HEAT LOSS HEAT LOSS TOTAL HEA	FROM ROOF FROM EXTE FROM PART FROM GLAZ FROM SLAB T LOSS FROI FROM OUTE T LOSS	RIOR WALLS ITIONS ING M SPACE							
EQUIPMENT MARK	K CROOF	CWALL	CPART	CGLASS	CSOLAR	CLIGHTS	CEQUIP	CPSENS	CSSENS	CFAN	COAS	CTSENS	CPLAT	COAL	CTLAT	СТОТ	HROOF	HWALL	HPART	HGLASS	HSLAB	HSPACE	НОА	
RTU-1	4.9	0.3	0	0	0	16.9	17	12.2	51.6	2.7	16.8	99.6	10.2	28.5	38.8	138.4	13	1.7	0	0	4.4	19.1	84.4	103
RTU-2	5.7	1.3	0	5.2	16.3	19.8	18.4	14.2	81.1	3.3	19.4	123	11.8	32.8	44.7	167.7	15.1	5.9	0	34.2	9.9	65.2	97	162
RTU-3	2.3	2.1	n	1.5	5.2	7.9	17	0	20.9	0.0	3.6	28.6	n	6.1	6.1	34.7	6	0.5	0	10.4	8.6	34.7	18.2	52.

HVAC ACCE	ESSORIES				
ACCESSORIES:					
 MOTOR DAMPER ECONOMIZER ROOF CURB HAIL GUARDS 	5. INTAKE HOOD6. VIBRATION ISOLATION7. FLAT FILTER8. FILTER/MIXING BOX	9. ACCESS DOOR10. FLEX CONNECTIONS11. MOUNTING COLLAR12. HOT GAS BYPASS	13. FACE/BYPASS DAMPER14. CONDENSATE PUMP15. MOTOR GUARD16. GREASE TRAP	17. DUCT FLANGES 18. BASE RAIL 19. HUMIDIFIER 20. CO2 SENSORS	21. ECON POWERED EXHAUST22. ECON BAROMETRIC RELIEF23. HOT GAS REHEAT COIL24. SHAFT GROUNDING BRUSHES

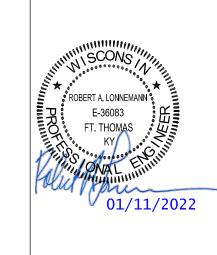
				ŀ	HVAC UI	VIT HEA	TERS SC	CHEDULI	Ξ				
Equipment shall b	e braced and labeled	d by the equipment	manufacturer to with	nstand the minimum	scheduled available	e fault current value	for listed equipment						
EQUIPMENT MARK	DESCRIPTION	LOCATION	WEIGHT (lbs)	MANUFACTURER	MODEL	VOLTS	PHASE	HTG MBH (mbh)	HTG KW (kW)	FLA (amps)	MCA (amps)	OCP (amps)	AVAILABLE FAULT CURRENT
WH-1	WALL AND CEILING HEATER	TOILET 104	25	MARKEL	E3055	120	1	5	1.5		12.5		2345
WH-2	WALL AND CEILING HEATER	TOILET 105	25	MARKEL	E3055	120	1	5	1.5		12.5		2015

	OLILING HEATTER			
IOTE: CONTRA	ACTOR PROVIDE	ED, CONTRACTO	OR TO INSTALL	

	DOLL	AR TRE	E HVA	C DIFFL	JSERS A	ND REGIS	STERS SCHED	ULE
TAG	MANUFACTURER	MODEL	FACE	MOUNTING	MATERIAL	FINISH	DAMPER TYPE	BORDER STYLE
A	TITUS	TMS	24"x24"	CEILING	STEEL	STANDARD WHITE	BUTTERFLY	LAY IN MOUNTING
В	TITUS	TMS	12"x12"	CEILING	STEEL	STANDARD WHITE	BUTTERFLY	LAY IN MOUNTING
C	TITUS	S300FL	14"x6"	DUCT	ALUMINUM	STANDARD WHITE	OPPOSED BLADE	SURFACE MOUNT
D	TITUS	50F	24"x24"	CEILING	STEEL	STANDARD WHITE	(none)	LAY IN MOUNTING
F	TITUS	350BI	12"x12"	CFILING	STFFI	STANDARD WHITE	OPPOSED BLADE	LAY IN MOUNTING

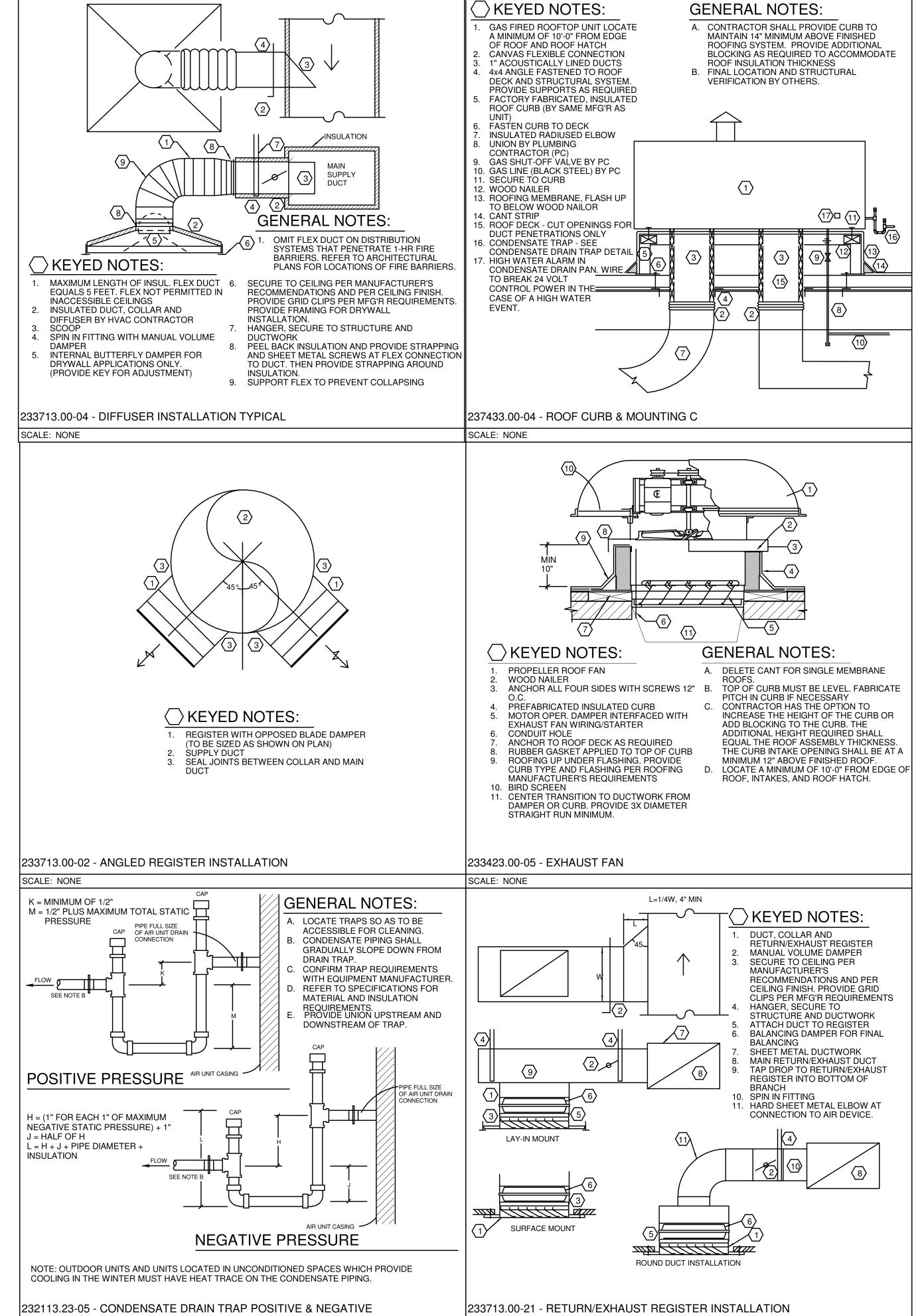
				HVA	C AIR C	URTAINS	SCHE	DUI F				
Equipment shall be	quipment shall be braced and labeled by the equipment manufacturer to withstand the minimum scheduled available fault current value for listed equipment.											
EQUIPMENT												
MARK	DESCRIPTION	LOCATION	WEIGHT (lbs.)	MANUFACTURER	MODEL	VOLTS	PHASE	CFM (cfm)	FLA (amps)	MCA (amps)	OCP (amps)	FAULT CURRE



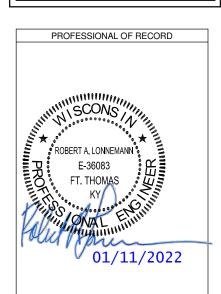


M-201

OWNERSHIP OF INSTRUMENTS OF SERVICE
All reports, plans, specifications, computer files, field data, notes and oth service shall remain the property of the Consultant. The Consultant shall limitation, the copyright thereto.







DE

M-301

SHEET

M-401

General Provisions of the Contract including General and Supplementary Conditions and General Requirements apply to work of this section.

SECTION 23 05 01.00 - COMMON REQUIREMENTS

The base bid includes furnishing all materials, labor, tools, and equipment and the performance of all work required to install a complete heating and air conditioning system as outlined herein. Guarantee

The contractor shall provide a guarantee in written form stating that all work under this section shall be free of defective work, materials, or parts for a period of one year from the date of owner's final acceptance and shall repair, revise or replace at no cost to the owner any such defects occurring within the guarantee period. Contractor shall also state in written form that any items or occurrences arising during the guarantee period will be attended to in a timely manner and will in no case exceed four (4) working days from date of notification by owner.

Quality Assurance Provide a complete installation in conformance with the following standards. AGA: American Gas Association

ASHRAE: American Society of Heating, Refrigerating and Air Conditioning Engineers NFPA: National Fire Protection Association SMACNA: Sheet Metal and Air Conditioning Contractors

National Association. Statewide Building Code

IMC: International Mechanical Code Permits, Fees, Inspections, Laws and Regulations Permits and fees of every nature required in connection with this work shall be obtained and paid for by this contractor who shall also pay for all the installation fees and similar charges. Laws and regulations, which bear upon or affect the various branches of this work shall be complied with by this contractor and are hereby made a part of this contract. All work, which such laws require to be inspected, shall be submitted to the proper public official for inspection and a certificate of final approval must be furnished. Work in Existing Spaces

General: Care shall be taken when working in existing spaces so as not to damage existing walls and ceilings where work is being performed. Ceilings: Where work is being performed above ceilings, and the architectural drawings do not indicate ceiling modifications by the general contractor, it shall be the responsibility of this contractor to remove and replace existing ceilings where work is being performed. In those instances, all repair and installation of new grid, ceiling panels, etc shall be the responsibility of this contractor. Match existing finishes. Walls & Floors: It shall be the responsibility of this

contractor to patch existing walls and floors and match existing finishes where work is being removed or installed and patching is being performed, unless noted otherwise on the architectural drawings. Any Equipment to be demolished shall also include the

demolition of any and all ductwork, piping etc serving or served by the equipment, all accessories, air devices, wiring, gas piping, venting, control wiring and power wiring associated with the equipmen Demolition shall be coordinated with all trades. All materials shall be turned over to the owner or disposed at the owner's direction. Contractor is responsible for reclaiming any refrigerant in association with the demolition in accordance with all local, state and federal regulations. Any roof or wall penetration shall be patched watertight to the satisfaction of the architect

Tests and Adjustments No ducts, piping, fixtures or equipment shall be concealed or covered until they have been inspected and approved by the Architect and the inspector who shall be notified by the contractor when the work is ready for inspection. Work shall be completely installed, tested and leak tight before inspection is required. All tests shall be repeated to the satisfaction of those making the inspection. Architectural coordination items

Cutting and Patching: Cut and drill all openings in walls and floors required for the installation. Secure approval of Engineer before cutting and drilling. Neatly patch all openings cut Fire Caulking: Patching through fire rated walls and enclosures shall not diminish the rating of that wall or enclosure. Patch shall be equal to rockwool, firestop,

caulk or approved "rated" patch. Access Panels and Pathways: Furnish all access panels required for proper servicing of equipment. Provide access panels for all concealed valves, vents, controls, cleanout doors, and sprinkler devices required by NFPA. Provide access panels for all fire and/or fire & smoke dampers. Provide frame as required for finish. Furnish panels to General Contractor. Exact locations to be approved by the Architect. Minimum size to be 12" x 12", units to be 16 gauge steel, locking device shall be

screwdriver cam locks.

project conditions

Where new HVAC systems are required to be connected to existing HVAC systems, it is the contractor's responsibility to verify the location, size, pressure, condition, and they shall verify that the existing HVAC system is indeed the correct and appropriate HVAC system before any work is done. Provide all necessary camera scoping and dye testing as necessary. If there is any need for concern, if it is determined that the existing HVAC system is not a correct or appropriate HVAC system or not connected to a correct or appropriate HVAC system, if the condition of the existing HVAC system is not viable for re-use, or any other condition that would not allow the proper functioning of the new HVAC system, the contractor shall notify the engineer in writing immediately via RFI and wait for direction before proceeding. Interruption of Existing HVAC Services: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated: Notify, Architect, Construction Manager, and Owner no fewer than seven days in advance of proposed interruption of service.

Do not proceed with interruption of service without Architect's written permission. DELEGATED DESIGN

For equipment supports, this contractor shall retain a qualified professional engineer to provide support calculations of static and dynamic loading due to operating equipment weight. The signed and sealed calculations and details shall be submitted by the retained professional

MECHANICAL EQUIPMENT COMMON REQUIREMENTS

INSPECTION Examine areas and conditions under which mechanical equipment is to be installed. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer Uncrate equipment and inspect for damage. Verify that nameplate data corresponds with unit designation.

INSTALLATION General: Install mechanical equipment as indicated, and in accordance with manufacturer's installation instructions. Location: Install each unit level/plum and accurately in position indicated in relation to other work; and maintain sufficient clearance for normal service and maintenance, but in no case less than that recommended by manufacturer.

Coordinate with other trades to assure correct recess size for recessed units. Protect interior mechanical equipment with protective covers during balance of construction. For ducted equipment, connect ductwork to units with flexible duct connections. Provide transitions to exactly match unit duct connection size. Provide 1" acoustic duct lining on return air side a minimum of 10' from fan. Piping: Restrictors or piping changes shall be made as necessary to achieve manufacturers recommended pressure drops. The findings shall be reported to the engineer at project closeout.

Provide trap at drain piping connection to unit sized per manufacturer's recommendations. Access: Provide access space around and over mechanical equipment for service as indicated, but in no case less than that recommended by manufacturer or required by code in effect. Access Panels: Furnish all access panels required for proper servicing of equipment. Provide access panels for all concealed valves, vents, controls and cleanout doors, and sprinkler devices required by NFPA. Provide frame as required for finish. Furnish panels to General Contractor.

is installed per the local building code. See the

Roof Curbs: Furnish roof curbs to roofing Installer for

in accordance with National Roofing Contractor's

coordinate roof penetrations and flashing. Install

ELECTRICAL COORDINATION ITEMS

installation. Install and secure roof curb to roof structure,

Association (NRCA) installation recommendations and

Electrical Wiring: Install electrical devices furnished by

manufacturer but not specified to be factory-mounted.

Verify that electrical wiring installation is in accordance

with manufacturer's submittal and installation

NEC and NECA's "Standard of Installation".

Furnish copy of manufacturer's wiring diagram submittal to

requirements of Division 26 sections. Do not proceed with

equipment start-up until wiring installation is acceptable to

Install electric heating terminal units including components

in accordance with equipment manufacturer's written

complying with applicable installation requirements of

Tighten connectors and terminals, including screws and

connectors. Where manufacturer's torquing requirements

comply with tightening torques specified in UL Std 486A.

Grounding: Provide equipment grounding connections for

instructions, and with recognized industry practices;

bolts, in accordance with equipment manufacturer's

are not indicated, tighten connectors and terminals to

connections to comply with tightening torque values

Testing: After installation has been completed, test to

demonstrate proper operation of mechanical equipment at

performance requirements specified. When possible, field

correct malfunctioning units, then retest to demonstrate

Cleaning: After construction is completed, including

Provide the services of a factory-authorized service

damaged or malfunctioning controls and equipment.

TRAINING OF OWNER'S PERSONNEL

Provide services of manufacturer's technical

Repair any marred or scratched surfaces with

compliance. Replace units, which cannot be satisfactorily

corrected. Test controls and demonstrate compliance with

painting, clean unit exposed surfaces, vacuum clean coils

representative to start-up rooftop units, in accordance with

manufacturer's written start-up instructions. Test controls

and demonstrate compliance with requirements. Replace

representative for 1-half day to instruct Owner's personnel

in operation and maintenance of units. Schedule training

For belt driven equipment: Furnish to Owner, with receipt,

one spare set of belts for each belt drive power ventilator.

Install new filters at completion of system work, and prior

to testing, adjusting, and balancing work. Obtain receipt

SECTION 23 05 03.00 - SUBMITTALS FOR HVAC

Documents, they shall be prepared and supplied in

Division 01, the Contractor is advised to review and

Division and within each section of that Division.

apply to the work of that Division.

and returned, without technical review.

Requirements

comply with the requirements articulated within each

accordance with the Contract Documents. In addition to

Some Divisions may include a division-specific "Submittal

The following requirements help to identify, track and keep

Requirements for" section. Where this section exists,

it articulates additional requirements for submittals that

the project organized for all parties involved. They are

conform to the administrative requirements are rejected

Supply submittals for each section: Submittals shall be

supplied on a section-by-section and type-by-type basis.

For example, independent product data submittals shall

be furnished for each section that requires product data

furnished for each section that requires shop drawings.

submittals are required for the project. Separate PDF file

submittal type, where electronic submittals are required.

Each PDF shall represent a single standalone submittal.

Include a transmittal: Transmittals shall enumerate each

documents. It shall be included as the first page of each

electronic and/or hardcopy document-based submittal. An

fields and specification compliant appearance is available

from KLH upon request. It is also downloadable from the

Include an index: The index shall enumerate the contents

Include checklists: Where checklists are included with the

specifications, complete and include them within the

Complete submittals of each type are required. Partial

submittals will be rejected. Where a section requires a

product data submittal, all product data for that section

submittal. Do not send half the product data as one

submittal and the other half as a separate one. When

and more contract-compliant than its rejected

resubmittal is required (e.g. Revise and Resubmit) the

revised submittal shall be more complete, more accurate

predecessor. The submittal number (for each section and

type) shall increment for each subsequent submittal (00 -

Second Resubmission, etc...). Resubmittals shall include

a copy of the reviewer's comments supplied with the prior

description of the specific action taken to comply with the

reviewer's comments. The absence of this on resubmittal

Name electronic files to match the submittal ID and cover

sheet: The electronic file name of submittals shall match

the submittal ID included on the submittals cover page.

For example: The original/first product data submittal for

Section 234116 would be labeled as "234116.00-PD-00";

the first resubmittal of same shall be labeled "234116.00-

the first resubmittal of same shall be labeled "234116.00-

Plan drawings for the Project were created with AutoCAD

PD-01". The original/first shop drawings submittal file for

the same section would be labeled "234116.00-SD-00";

Use of Electronic Drawings from the Owner's Design

Original submission, 01 – First Resubmission, 02

submittal rejection and shall be amended with a

shall be supplied together, at one time, as one complete

appropriate submittal. Supply complete submittals:

editable and printable PDF form created with editable

Refer to the specifications for identification of which

packages shall be supplied for each section, for each

Separately bound and identified submittals shall be

submittal for each section of each type and iteration.

include the information identified in the contract

Include cover sheet / title page: The cover sheet shall

provided where hardcopies are required.

KLH website at <u>www.klhengrs.com</u>.

of the submittal.

is cause for rejection.

submittals. Independent shop drawing submittals shall be

appropriate technical review. Submittals that do not

necessary to ensure a timely turnaround and an

from Owner that new filters have been installed.

Where submittals are required by the Contract

Provide one complete extra set of filters for each unit.

with Owner, provide at least 7-day notice to Contractor

and inside of cabinets. Clean factory-finished surfaces.

specified in UL Std 486A to assure permanent and

published torque tightening values for equipment

electric heating terminals as indicated. Tighten

according to roofing manufacturer's recommendation and

shop drawings. Install and secure units on curbs and

architectural plans for coordination.

specifications.

Electrical Installer.

equipment installer.

effective grounding

requirements.

START-UP

FIELD QUALITY CONTROL

manufacturer's touch-up paint.

and Engineer of training date.

SPARE PARTS

36 (.dwg) files may be made available for coordination Due to the proprietary nature of internal design systems, editable native-software versions of some drawings, including but not limited to system diagrams and details Exact locations to be approved by the Architect. Minimum will not be made available in an editable form. In these size to be 12" x 12", units to be 16 gauge steel, locking cases, electronic versions of the drawings may be made available only in PDF, JPG or similar non-editable device shall be screwdriver cam locks. Rooftop mechanical equipment shall be installed a electronic form, at the sole discretion of the Design minimum of 10'-0" from any roof edge regardless of location indicated on plans, unless a screen wall or railing

The Request Drawings form can be accessed, filled out and submitted at the following internet address (scroll down to bottom of home page): http://www.klhengrs.com.

If expressly permitted by the Owner and the terms of the

Contract, editable electronic versions of standard-scale,

Upon request when available, electronic versions of

the creation of shop and as-built drawings.

AutoCAD-based plan drawings may be made available for

standard-scale, Navisworks (.dwf) and (.nwc) or AutoCAD

SECTION 23 05 29.00 - HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

Submittal Requirements Product Data: For each type of product indicated. Shop Drawings: Fabrication and installation

Support all piping, ductwork and equipment by hangers or brackets properly from the building structure. Support from decking above is prohibited. Furnish structural steel members where required to support piping and equipment. No portion of piping or valves shall be supported by equipment. Ductwork - Support by means of hangers as follows: Duct Width Hanger Size and Type Max. Spacing (#16 gage) 30 or less 31 to 60 (#14 gage) A pair of hangers shall be located at every transverse joint and elsewhere according to the table.

SECTION 23 05 93.00 – TESTING, ADJUSTING AND **BALANCING FOR HVAC**

Submittal Requirements Shop Drawings: Certified Reports: Submit testing, adjusting, and balancing reports bearing the seal and signature of the Test and Balance Engineer. The reports shall be certified proof that the systems have been tested, adjusted, and balanced in accordance with the referenced standards; are an accurate representation of how the systems have been installed; are a true representation of how the systems are operating at the completion of the testing, adjusting, and balancing procedures; and are an accurate record of all final quantities measured, to establish normal operating values of the systems. Final Report: Upon verification and approval prepare final reports, type written, and organized and formatted as specified below. Submit 2 complete sets of final report to the landlord.

Test, adjust, and balance the following mechanical Supply air systems, all pressure ranges Return air systems Exhaust air systems.

Test systems for proper sound and vibration levels. Quality Assurance Codes and Standards: AABC: "National Standards for Total System Balance". ASHRAE: ASHRAE Handbook, 2011 Applications,

Chapter 38, Testing, Adjusting, and Ealancing. The contractor shall procure the services of an independent Balance and Testing Agency, approved by the Engineer, and a member of Associated Air Balance Council (AABC) or NEBB, which specializes in the balancing and testing of heating, ventilating and air conditioning systems, to balance, adjust and test all air and water systems and equipment as herein specified. All work by this agency shall be done under direct supervision of a qualified heating and ventilating Engineer employed by this agency. All instruments used by this agency shall

be accurately calibrated and maintained in good working Sequencing and Scheduling Test, adjust and balance air conditioning systems during summer season and heating systems during winter season, including at least a period of operation at outside conditions within 5 deg F wet bulb temperature of maximum summer design condition, and within 10 deg F dry bulb temperature of minimum winter design condition.

Take final temperature readings during seasonal

Check all filters for cleanliness, provide new as required. Check dampers (volume and fire) for correct and locked position, and temperature control for completeness of installation before starting fans. Place outlet dampers in full open position. Lubricate all motors and bearings. Check fan belt tension. Check fan rotation. Air balance and testing shall not begin until the system has been completed and is in full working order. The Contractor shall put all heating, ventilating and air conditioning systems and equipment into full operation and shall continue the operation of same during each working day of testing and balancing. The contractor shall submit within 30 days after receipt of contract, 8 copies of submittal data for the testing and balancing of the air conditioning, heating, and ventilating systems. The Air Balance and Testing Agency shall provide proof of having

successfully completed at least five projects of similar size

and scope. The air balancing contractor shall include the additional cost to change every fan factory installed sheave, pulley and/or belt of in order to obtain the design air flows. Performing Testing, Adjusting and Balancing Perform testing and balancing procedures on each system identified, in accordance with the detailed procedures outlined in the referenced standards. Cut insulation, ductwork, and piping for installation of test probes to the minimum extent necessary to allow adequate performance of procedures. Patch insulation, ductwork, and housings, using materials identical to those removed. Seal ducts and piping, and test for and repair leaks. Seal insulation to re-establish integrity of the vapor barrier. Mark equipment settings, including damper control positions; valve indicators, fan speed control levers, and

similar controls and devices, to show final settings. Mark with paint or other suitable, permanent identification Retest, adjust, and balance systems subsequent to

significant system modifications, and resubmit test results.

SECTION 23 07 13.00 - DUCT INSULATION Submittal Requirements Product Data: For each product indicated. Shop Drawings: Include plans, elevations,

sections, details and attachments to other work. All liners, insulation and adhesives shall have a flame spread index not more than 25 and a smoke developed index of not more than 50. Insulation shall have a minimum installed thermal resistance value of R6 or code minimum, whichever higher. Rigid Fiberglass Ductwork Insulation: Glass fibers bonded with a thermosetting resin. Comply with ASTM C 612, Type IB, without facing and with vapor barrier all-service jacket manufactured from kraft paper, reinforcing scrim, aluminum foil, and vinyl film. Flexible Fiberglass Ductwork Insulation: Glass fibers bonded with a thermosetting resin. Comply with ASTM C 553, Type II, without facing and with vapor barrier all-service jacket manufactured from kraft paper, reinforcing scrim, aluminum foil, and vinyl film. Vapor Barrier Material for Ductwork: Paper-backed aluminum-foil, except as otherwise indicated; strength and

permeability rating equivalent to factory-applied vapor

barriers on adjoining ductwork insulation, where available; with following additional construction characteristics: High Puncture Resistance: Low vapor transmission (for ducts in exposed areas: Mech. Rooms, etc.) Moderate Puncture Resistance: Medium vapor transmission (for ducts in concealed areas). All ductwork shall be insulated except: Double wall ductwork Fabric ductwork

Except where specifically indicated otherwise above, the HVAC/Temperature Control Contractor shall provide all Metal ducts with duct liner of sufficient thickness to comply electrical work as required for all temperature control related wiring (i.e. conduit, raceway, outlet boxes, junction with energy code. Factory insulated flexible ductwork boxes, wiring, etc.) in accordance with Electrical Specifications requirements. All conduit shall be 3/4" Factory insulated plenums and casings Flexible connectors Coordinate all thermostat/sensor locations in field (case by Vibration control devices case) with Architect, Owner and Electrical Contractor to ensure that they are placed in locations that will not

The recommended calibration interval shall be a minimum of 5

Space mounted applications shall utilize diffusion through an

General Control Wiring Requirements and Installation

interfere with furniture, equipment, artwork, wall-hung

and must be verified case-by-case prior to rough-in.

(NEC) and per applicable state and local codes.

any) exist and install as defined under Electrical

Specifications. Install low voltage circuits, located in

locations, or exposed in occupied areas, in electrical

Where cable trays or bridle rings are provided by the

electrical contractor for low voltage cables, these

raceways may be utilized for control wiring by this

Regardless of permitted methods in Electrical

conduit regardless of what wiring methods are permitted

contractor (provide special color coded jackets, label cable

wiring cables together). Provide conduit drops from cable

jackets per Electrical Specifications and group control

tray/bridle ring paths to wall outlet boxes and equipment

unless directed otherwise under Electrical Specifications.

gypsum board, masonry or other inaccessible materials in

necessary for complete operational installation of control

wiring shall be provided (furnished and installed) by the

Electrical Specifications documents. Coordinate all work

temperature control contractor in strict compliance with

with all other applicable trades including the electrical

equipment in a manner compliant with that described

Install control wiring without splices between terminal

securely fastened. Install in accordance with National

electrical metallic tubing, per Electrical Specifications.

with 0.031" high temperature (105 degs. F) plastic

Electrical Code and per Electrical Specifications.

points, color-coded. Install in neat workmanlike manner,

Install circuits over 25 volt with color-coded No. 12 wire in

Install circuits under 25 volt with color-coded No. 18 wire

insulation on each conductor and plastic sheath over all.

0.023" polyethylene insulation on each conductor with

All fresh air intakes and exhaust louvers shall have motor

operated dampers. Dampers shall be low leak with blade

provided and wired by the mechanical contractor unless

contactors, controls and wiring for interlocking equipment

Shop Drawings: Sheet metal thickness,

Exposed Ductwork Materials: Where ductwork is indicated

to be exposed to view in occupied spaces, provide

including pitting, seam marks, roller marks, stains and

discolorations, and other imperfections, including those

which would impair painting. Mechanical contractor shall

Exposed ductwork which is to be painted shall have paint

ductwork from galvanized sheet steel, lock forming quality;

with G 90 zinc coating and mill phosphatized for exposed

Volume Dampers: Provide volume dampers in all branch

ducts or as required for balancing to required air flows.

Fittings: Provide radius type fittings fabricated of multiple

sections with maximum 15 deg. change of direction per

section. Unless specifically detailed otherwise, use 45

deg. laterals and 45 deg. elbows for branch takeoff

connections. Where 90 deg. branches are indicated,

Duct Sealant: Non-hardening, non-migrating mastic or

recommended by manufacturer specifically for sealing

Duct Cement: Non-hardening migrating mastic or liquid

recommended by manufacturer specifically for cementing

fitting components, or longitudinal seams in ductwork.

indicated, provide hot-dipped galvanized steel fasteners,

anchors, rods, straps, trim and angles for support of

Either spiral-wound spring steel with flameproof vinyl

equals 5 feet. Flex is not allowed for return, relief or

sheathing, or corrugated aluminum. Unless specifically

mentioned, the maximum length of flex duct on the supply

exhaust applications. The flexible ducts indicated for use

in the H.V.A.C. system shall conform to the requirements

of UL 181 for Class 0 or Class 1 flexible air ducts and shall

Where installed in unconditioned spaces other than return

Shop fabricate ductwork in 4, 8, 10 or 12-ft lengths, unless

ductwork shall be Pittsburgh Construction with a minimum

air plenums, provide 1" thick 1-1/2 lb. continuous flexible

Installation is not permitted above drywall ceilings and

otherwise indicated or required to complete runs. All

of thickness of 24 gauge. In addition, ductwork used in

systems over 3" W.G. shall have cold sealant applied.

Shop fabricate ductwork of gauges and reinforcement

Fabricate ductwork with duct liner in each section of duct

duct in accordance with instructions by manufacturers of

Duct liner to be 3-lb density for acoustic requirements 1"

thick or as noted. Size of ductwork shown on the drawings

is free net area, outside dimension of ducts will need to be

Size of ductwork shown on the drawings is free net area,

outside dimension of ducts will need to be increased if

Duct Liner: Fibrous glass of thickness indicated. 3-lb

density. All liners, insulation and adhesives shall have a

lining and adhesive, and fasten with mechanical fasteners.

where indicated. Laminate liner to internal surfaces of

complying with SMACNA "HVAC Duct Construction

fiberglass sheath with vinyl vapor barrier jacket.

fabrication/installation detail, as compounded and

fabrication/installation detail, as compounded and

Ductwork Support Materials: Except as otherwise

neoprene based cement, type applicable for

confirm ductwork paint scope and color with architect.

Sheet Metal: Except as otherwise indicated, fabricate

materials which are free from visual imperfections

Product Data: For liners, adhesives, sealants and

reinforcing details, duct layouts indicating sizes,

configuration, liner material, elevation and static

and edge seals. All motor operated dampers shall be

otherwise noted. Provide all necessary transformers,

Install electronic circuits with color-coded No. 22 wire with

above (i.e. between VAV boxes, to boilers, starters,

Provide all required conduit work to and between

condensing units, etc. as applicable).

plastic-jacketed copper shield over all.

SECTION 23 31 13.00 - METAL DUCTS

Motor Operated Dampers

to motor operated dampers.

Submittal Requirements

Ductwork Materials

pressure class.

grip applied and be oil free.

provide conical type tees

joints and seams in ductwork.

Flexible Ducts

be so identified.

inaccessible ceilings.

Fabrication

Lined Duct

increased if lined duct is used.

lined duct is used.

locations. Minimum gauge shall be 24.

liquid elastic sealant, type applicable for

Miscellaneous Ductwork Materials

walls or above ceilings shall be installed in conduit, 3/4"

All conduit, bridle rings, raceway, outlet boxes, etc.

Specifications, all cables/wiring installed concealed by

concrete slabs and masonry walls, in inaccessible

under Electrical Specifications.

specialties, room finishes, etc. All thermostat/sensor wall

All electrical work as described in this specification shall

be per the latest edition of the National Electrical Code

Where "free-air" installation methods (either exposed

above the ceilings, in bridle rings or in cable trays) are

permitted under Electrical Specifications above ceilings,

provide plenum-rated cables wherever plenum ceilings (if

locations indicated on HVAC drawings are schematic only

attractive, satin finish, high impact housing.

Factory insulated access panels and doors Supply ductwork exposed in conditioned spaces excluding mechanical rooms, server rooms and electric equipment Toilet exhaust, general exhaust and return ductwork in an insulated joist or attic space.

SECTION 23 09 93.00 – SEQUENCE OF OPERATIONS FOR HVAC CONTROLS

Submittal Requirements Product Data: Provide written sequences of operation for each controlled system and piece of

Packaged Rooftop Unit All setpoints listed in this section are adjustable through the Building Automation System (BAS). Control & Monitoring points shall include but not be limited to the Startup

The unit shall operate on an occupied/unoccupied cycle as controlled from the BAS. Occupancy shall be predetermined by the owner and programmed into the During startup, the fan shall run with the dampers in the full recirculation position. Provide occupied changeover sequence with optimum start function. When the return air

temperature reaches occupied setpoint (adjustable), the minimum outside air damper shall open to the controlled minimum outdoor air position. Supply Fan Control The supply fan shall be two staged and modulate up and down based on a call for heating or cooling. Space Temperature Control Provide 7-day programmable thermostat with digital display of space temperature and setpoint (+/- deg. F

adjustable), with override feature and remote space

temperature sensor 4. Minimum Outside Air Control During occupied mode, the minimum outside air damper shall be open to the scheduled minimum outdoor air flow and modulate proportionally with the supply fan speed to maintain the scheduled minimum outside airflow. When the supply fan speed is set to high, outside air damper shall be partially closed allowing minimum outside air flow as scheduled. As supply fan speed is set to low, damper shall fully open allowing minimum outside air flow as scheduled. Provide motor operated dampers. Provide carbon dioxide sensors in the space to measure carbon dioxide levels. Outside air damper shall modulate to maintain maximum carbon dioxide level setpoint at all times during occupied mode. CO2 levels shall be held below 1000 ppm (adjustable). When CO2 levels are below setpoint, outside air damper shall be at a minimum position, which equates to the sum of the "OA SQFT"

multiplied by the room areas of each room in the "HVAC

Ventilation Schedule" during occupied mode. Economizer Control Provide dual enthalpy economizer control. Economizer control shall be enabled whenever the outside air enthalpy is lower than the return air enthalpy. Enthalpy shall be calculated from sensors which are tied to the same controller for accuracy. During economizer mode, the outside air damper shall modulate to 100% open. The economizer damper shall modulate open on a call for cooling and modulate closed on a call for heating. The return damper shall modulate inversely with the economizer damper.

Cooling Control Cooling shall be controlled to maintain space temperature setpoint. On a call for cooling, the heating shall be off and supply fan speed shall be low. On a further call for cooling, the economizer shall be enabled. On a further call for cooling, disable the economizer and energize first stage cooling on. On a further call for cooling, the supply fan speed shall be high and energized second stage of cooling

Heating Control Heating shall be controlled to maintain space temperature setpoint. On a call for heating, the mechanical cooling shall be off. On a further call for heating, the economizer mode shall be disabled. On a further call for heating, the supply fan shall be set to low speed and the gas heating shall be disabled. On a further call for heating, the supply fan shall be set to high speed and the gas heating shall be staged on.

Unoccupied Mode During the unoccupied mode of operation, the RTU shall go into night setback mode. Night Setback/Shutdown

At night setback/shutdown the RTU shall go to fail safe position. Fail safe position is defined by the following: The supply fan is off, the outdoor air intake damper is closed, the heating is off and the mechanical cooling is off. The supply fan shall cycle in conjunction with either the heating or cooling system to maintain a minimum/maximum space temperature depending on the season. Toilet Exhaust Fans (Timeclock)

Exhaust fans shall be tied to timeclock, which shall be furnished, installed and wired by electrical contractor. When activated, exhaust fan motor damper shall open and fan shall start. (Indicated by EC on HECS schedule)

Electric Wall Heater/ Unit Heater Provide a line voltage wall mounted room thermostat with adjustable setpoint. On a call for heating, fan shall start and coil shall activate to maintain room temperature Provide relays and controls to automatically disconnect power to the electric heaters when the Cooling system is

Heated Air Curtain Provide a line voltage wall mounted room thermostat with adjustable setpoint. On a call for heating, fan shall start and coil shall activate to maintain room temperature Provide relays and controls to automatically shut off heat

when outdoor air temperatures are greater than 45F. Electrical contractor will provide power wiring. HVAC contractor shall provide all the low voltage wiring of HVAC units and controls, thermostats and controllers. Thermostat shall be by the manufacturer of the HVAC unit (heat/cool/auto/off) with night setback. Provide plastic

Temperature Sensors tied to BAS Sensors shall be furnished, installed and wired by the Temperature Control Contractor. The electrical contractor shall provide 4" square x 1- 1/2" deep wall outlet boxes at 54" above finished floor (with single-gang rings) for all thermostats/sensors. The electrical contractor shall provide one 3/4" empty conduit from each thermostat/sensor location, turned out above accessible ceilings (in joist space or against overhead slab/deck). The Temperature Control Contractor shall provide all other necessary conduit, raceway and wiring related work. Conduit shall be identified in ceiling cavity and shall be provided with sweep bends, bushings and dragline. The HVAC/TemperatureControl Contractor shall coordinate with the General Contractor to ensure thermal envelope is maintained at these locations.

protective cover for all thermostats.

Carbon Dioxide Sensors Carbon dioxide sensors shall be non-dispersive infrared (NIDR) type with a measurement range of 0-2000 ppm, repeatability of +/- 20 ppm and a measurement accuracy of +/- 75 ppm.

flame spread index not more than 25 and a smoke developed index of not more than 50. Duct Liner Adhesive: As recommended by insulation manufacturer and complying with NFPA 90A or NFPA 90B. Duct Liner Fasteners: Comply with SMACNA HVAC Duct Construction Standards.

Installation of Metal Ductwork General: Assemble and install ductwork in accordance with recognized industry practices which will achieve airtight (5% leakage for systems rated 3" and under; 1% for systems rated over 3") and noiseless (no objectionable noise) systems, capable of performing each indicated service. Install each run with minimum number of joints. Align ductwork accurately at connections, within 1/8" misalignment tolerance and with internal surfaces smooth. Support ducts rigidly with suitable ties, braces, hangers and anchors of type which will hold ducts true-to-shape and to prevent buckling. Support vertical ducts at every

Sealing: Seal all longitudinal seams, S's and drives and all joints with mastic or cement. Install according to SMACNA Balancing Dampers: The sheet metal contractor shall be fully responsible for installing balancing dampers in the ductwork, (whether shown on the drawing or not) in order to arrive at the intended air flow. The balancing subcontractor shall provide direction and assistance in determining locations where dampers are required. Additional dampers, if required shall be installed at no additional cost to the owner. Wall Penetrations: Seal and pack around all ducts and piping sleeves which pass through walls that extend to

bottom side of structure and rated walls. Field Fabrication: Complete fabrication of work at project as necessary to match shop-fabricated work and accommodate installation requirements. Routing: Locate ductwork runs, except as otherwise indicated, vertically and horizontally and avoid diagonal runs wherever possible. Run ductwork in shortest route which does not obstruct useable space or block access for servicing building and its equipment. Hold ducts close to walls, overhead construction, columns, and other structural and permanent enclosure elements of building. Limit clearance to 1/2" where furring is shown for enclosure or concealment of ducts, but allow for insulation thickness, if any. Where possible, locate insulated ductwork for 1" clearance outside of insulation. Wherever possible in finished and occupied spaces, conceal ductwork from view, by locating in mechanical shafts, hollow wall construction or above suspended ceilings. Do

not encase horizontal runs in solid partitions, except as specifically shown. Coordinate layout with suspended ceiling and lighting layouts and similar finished work. Electrical Equipment Spaces: Do not route ductwork through transformer vaults and their electrical equipment spaces and enclosures.

Penetrations: Where ducts pass through interior partitions and exterior walls, and are exposed to view, conceal space between construction opening and duct or duct insulation with sheet metal flanges of same gage as duct. Overlap opening on 4 sides by at least 1-1/2". Fasten to duct and substrate. Where ducts pass through fire-rated floors, walls, or partitions, provide fire dampers and firestopping between duct and substrate, in accordance with requirements of Division-7 Section "Firestopping

All dampers integral to or utilized as part of an engineered smoke control system shall be listed and comply with UL All fire dampers shall be listed and comply with UL 555. All dampers shall be low leakage with edge and blade seals. Damper manufacturers are subject to specification compliance. Provide products by one of the following: Greenheck Fan Corporation Nailor Industries

Ruskin Company Young Regulator Company Coordination: Coordinate duct installations with installation of accessories, dampers, coil frames, equipment, controls and other associated work of ductwork system.

Installation of Duct Liner General: Install duct liner in accordance with SMACNA HVAC Duct Construction Standards. Size of ductwork shown on the drawings is free net area, outside dimension of ducts will need to be increased if lined duct is used. Store internally lined ductwork up off of the floor. Protect internally lined ductwork from water and dust. The following ductwork shall be lined in addition to that shown per plans: Return from open ceiling plenum return to HVAC unit.

Supply and return ductwork 10 feet downstream of HVAC Transfer air ducts. Butter the leading edge of all internal duct lining with the manufacturer's recommended adhesive. Inspect and repair all damaged lining prior to installation of ductwork.

Installation of Flexible Ducts Maximum Length: For any duct run using flexible ductwork, do not exceed 5' - 0" extended length. Installation shall have smooth full radius turns down to Installation not permitted above inaccessible ceilings.

23 34 23.00 - HVAC POWER VENTILATORS Submittal Requirements Product Data: For each type of product indicated. Centrifugal Roof Ventilators Provide centrifugal roof type, curb mounted, power ventilators of type, size, and capacity as scheduled, and as specified herein Type: Centrifugal fan, direct or belt driven as scheduled Provide aluminum, galvanized steel, or fiberglass weatherproof housings as scheduled. Provide square base to suit roof curb. Provide permanent split-capacitor type motor for direct driven fans; capacitor-start, inductionrun type motor for belt driven fans. Provide the Following Types of Housing Design: Hooded dome type. Electrical: Provide factory-wired non-fusible type disconnect switch at motor in fan housing. Provide thermal overload protection in fan motor. Provide conduit chase within unit for electrical connection. Provide NEMA 1 disconnect factory mounted. For single phase fractional HP fans use a toggle type disconnect switch. On three phase integral HP fans use a NEMA 1 safety switch. Bird Screens: Provide removable bird screens, 1/2" mesh 16-ga aluminum or brass wire. Roof Curb: Provide factory fabricated roof curb by the same manufacturer as the equipment. Roof curb to be Manufacturer: Subject to compliance with requirements, provide centrifugal roof ventilators of one of the following: CaptiveAire Cook (Loren) Co.

Greenheck. Twin City Fan & Blower Prefabricated Roof Curbs General: Provide manufacturer's standard shoprequirements. Fabricate structural framing for units of structural quality sheet steel, formed to manufacturer's standard profiles for coordination with roofing, insulation and deck construction. Include 45 deg. cant strips and deck flanges with offsets to accommodate roof insulation. Weld corners and seams to form watertight units. Clean and paint units with manufacturer's standard rustinhibitive metal primer paint. Reinforce continuous runs of over 3'-0" length, by inserting welded stiffeners of heavy gage with flanges as required to provide sufficient rigidity and strength to withstand maximum lateral forces in addition to superimposed vertical loads. Gage and Height: Fabricate units of metal gage and to

Where gage or height are not indicated, fabricate units of

Provide pressure treated wood nailer, not less than 1-5/8"

thick and of width indicated, but not less than width of

height above roof surface as indicated.

14-ga metal, and nominal height of 14".

metal frame unit. Provide lumber pressure treated with water-borne preservatives for "above ground" use. Insulate units inside structural support wall with rigid glass fiber insulation board of approximately 3-lb. density and 1-1/2" minimum thickness, except as otherwise indicated. Manufacturer: Subject to compliance with requirements, provide prefabricated roof curbs of one of the following: Custom Curb, Inc. Equipment Manufacturer. MicroMetl Pate Co. Shipman

support wall assembly. Anchor nailer securely to top of

Thycurb. INSTALLATION Coordinate ventilator work with work of roofing, walls, and ceilings, as necessary for proper interfacing. Provide access door in duct below ventilator to service Solder bottom joints and up 2" of side joints of duct under roof ventilator to retain any moisture entering ventilator.

SECTION 23 34 33.00 – AIR CURTAINS

Submittal Requirements Product Data: For each type of product indicated.

General: Provide air doors of size and capacity as noted on drawings. Air doors shall operate at a low sound level and meet OSHA standards. Construction:

Wheels: Talc-filled polypropylene or aluminum. Housing: Galvanized steel. Motorboard: Galvanized steel Velocity Control: Provide adjustable louver damper controls for regulating rate of air flow. When louvers are completely closed air velocity shall reduce to sixty percent. Directional Control: Provide adjustable vanes at outlet nozzle for directing air where needed and readily set to compensate for possible draft conditions through door openings. Vanes shall have a forty percent girth sweep front to back. Motors: Provide totally enclosed shaded-pole, or permanent-split capacitor motors, Class "B" insulation, resiliently mounted, tap wound with built-in thermal

overload protection, and with permanently lubricated type sleeve or ball bearings. Select motors with the voltage as Extended Motor Oilers: Provide plastic tubes for lubricating motor bearings which are installed beneath

Motor Controls: Provide multi-speed motor control switch with OFF position, mounted behind access door. Fans: Provide double width, double inlet centrifugal fans which are balanced statically and dynamically, of indicated capacity. Select fans with single or double extended motor shaft, with fan housing and motor fastened as an integral assembly to a motorboard. Electric Air Curtains Heating Elements: Except as otherwise indicated, provide

manufacturer's standard heating elements of types, sizes, capacities and ratings for duty indicated; consisting of resistance elements enclosed in steel sheath with extended fins, or with spirally finned sheath. Electric Heating Capacity: Size elements for indicated fan speed, CFM, room heating load (BTUH), entering air temperature, and electric input (watts, voltage, phase). Internal Electrical Wiring: Provide units with high temperature, electrical heat-resistant wiring in flexible metal conduit from terminal junction box to electrical devices. Provide fusing for motor and control circuit wiring. Provide all required control transformers. Devices: Provide air doors with the following devices: Thermally activated fan switch to keep fan motor operating until residual heat is dissipated. Disconnect switch. Automatic reset, high limit cut-out switch located in discharge air stream. Manual "Summer-OFF-Winter" switch.

Unit-mounted line voltage thermostat Automatic door switch: Plunger type installed in door area to activate air curtain when door opens and to deactivate air curtain when door closes. Control Power Transformer Magnetic Contactor (Relay Kit) Manufacturers: Subject to compliance with requirements. provide electric air doors of one of the following: Mars Sales Company, Inc. King National

Ravwall Installation Provide disconnect at side or unit for installation in recessed ceiling Provide trim piece to finish linear slot supply in ceiling for recessed units. Coordinate with other electrical work, including wiring/cabling, as necessary to properly interface installation of heating terminal units with other work.

installed to ensure cleanliness Comb out damaged fins where bent or crushed before covering elements with enclosures. Touch-up scratched or marred heating terminal enclosure surfaces to match original finishes. Field Quality Control Upon completion of installation of electric heating terminals, and after building circuitry has been energized, test heating terminals to demonstrate capability and compliance with requirements

Clean dust and debris from each heating terminal as it is

construction site. 23 37 13.00 - DIFFUSERS, REGISTERS AND LOUVERS

Replace electric heating terminals and accessories which

are damaged and remove damaged items from

Submittal Requirements Product Data: For each type of product indicated. DIFFUSERS, GRILLES AND REGISTERS Manufacturer: Subject to compliance with requirements. provide diffusers of one of the following: Anemostat Products Div., Dynamics Corp. of America. Titus Products Div., Philips Industries, Inc. Tuttle and Bailey. Louvers and dampers Provide louvers and dampers of size as noted. Manufacturer: Subject to compliance with requirements, provide diffusers of one of the following: Aerolite Greenheck

23 74 33.00 - PACKAGED OUTDOOR ROOFTOP UNITS Submittal Requirements

Product Data: For each type of product indicated.

Warranty on Compressor and Heat Exchanger: Provide written warranty, signed by manufacturer, agreeing to replace/repair, within warranty period, compressors and heat exchangers with inadequate and defective materials and workmanship, including leakage, breakage, improper assembly, or failure to perform as required; provided manufacturer's instructions for handling, installing,

protecting, and maintaining units have been adhered to

component replacement only, and does not include labor

during warranty period. Replacement is limited to

for removal and reinstallation. Warranty Period: 5 years from date of owner acceptance. STAGED VOLUME General: Rooftop unit shall be factory-assembled and tested, designed for roof or slab installation and, consisting of compressors, condensers, evaporator coils, condenser and evaporator fans, refrigeration and temperature controls, filters, and dampers. Capacities

and electrical characteristics are scheduled. Casing

having corrosive protective coating, complete with factoryinstalled wood nailer and drain nipple. Construction shall be in accordance with NRCA Standards. Evaporator Fans: Forward-curved, centrifugal, belt-driven fans with adjustable sheaves; and permanently lubricated motor

Condenser fans: Propeller-type, direct-driven fans with permanently lubricated bearings. Coils: Aluminum plate fin and seamless copper tube type. Fins shall have collars drawn, belled and firmly bonded to the tubes by means of mechanical expansion of the tubes. No soldering or tinning shall be used in the bonding process. Coils shall have a galvanized steel casing. Coils shall be mounted in the coil casing with same end connections accessible for service. Coils shall be removable from the unit through the roof or through the piping enclosure. Coil section shall be completely insulated. Refrigerant cooling coils: have an equalizing type vertical distributor to ensure each coil circuit receives the same amount of refrigerant. Coils shall be proof (450 psig) and leak (300 psig) tested with air pressure under water, then cleaned, dehydrated, and sealed with a holding charge of nitrogen. Condensate Pan: Provide IAQ steel, double sloping drain pain. Provide high condensate in primary condensate pan to deenergize unit upon detection of high condensate levels. Compressors: Serviceable, semi-hermetic, or hermetic compressors with integral vibration isolators, and crankcase heaters, which de-energize during compressor operation. Units shall also have: Lead compressor shall be 2-stage.

manufacturer's standard casing construction, having

shall have removable panels or access doors for

Unit casing shall be single wall construction.

and lifting lugs.

corrosion protection coating, and exterior finish. Casings

inspection and access to internal parts, a minimum of 1"

thick thermal insulation, knockouts for electrical and piping

connections, and an exterior condensate drain connection,

Roof Curbs: Manufacturer's standard construction, insulated and

Safety Controls: low pressure cutout, manual reset; high pressure cutout, manual reset; compressor motor overload protection, manual reset; anti-recycling timing device; adjustable low-ambient lockout; oil pressure switch. Controls: redundant gas valves; intermittent pilot ignition; electronic spark ignition system; high limit cutout; forced draft proving switch; flame roll-out switch.

Enthalpy Economizer Control: Provide dual enthalpy economizer control. Provide return and outside air dampers, outside air filter, fully modulating electric control system with dry control, and adjustable mixed-air thermostat. System shall be capable of driving 100% closed for unoccupied mode, minimum outside air position and modulation to 100 percent open outside air capability. Provide automatic changeover through adjustable control device. Heating Types: Heat exchangers: Provide manufacturer's construction of

aluminized steel gas-fired heat exchangers and burners, designed for minimum of 2-stage operation. Provide single gas connection. Temperature Control: Temperature control: factory-installed, demand-oriented solid state control system above 5 tons shall have minimum of 2 cooling steps and 2 heating steps. Controls shall include solidstate thermostats with dead-band, and sub-base with system and fan switches. Other control features include:

Barometric Relief - Shall include relief damper section with mist eliminator. Dampers open to relieve positive pressure within the building. Available only with economizer. Provide air filters to fit in filter box, with a Maximum filter face velocity of 500 fpm, of the following type:

Disposable Type: Provide 30% efficient disposable type air filters 2" thick, consisting of viscous coated fibers with filtering media encased in fiberboard cell sides having perforated metal grids on each side to provide media support Filters: Provide, 95%, efficient filters. Provide filters with clean resistance not exceeding 0.10" w.g. at face velocity of 300 fpm, and ASHRAE weight arrestance efficiency of 70-82%, based on final operating resistance of 0.5" w.g.Options:

Hail guards protecting the condenser fins. Self Contained: Programmable Electronic Night Setback Thermostat - Shall provide heating setback and cooling setup with 7-day, programming capability. Optional remote sensor Manufacturers: Subject to compliance with requirements, provide rooftop units of one of the following: Carrier Air Conditioning, Div of Carrier Corp. Lennox Industries Inc Trane; a division of Ingersoll Rand.

Submittal Requirements

23 82 39.00 - UNIT HEATERS

Product Data: For each type of product indicated. General: Provide unit heaters in locations as indicated, and of capacities, style, and having accessories as scheduled. Provide temperature control valves for

modulation during a call for heat and closed during Wall and ceiling unit heaters General: Provide a heavy duty fan forced wall heater Heating grid shall be made up of rugged steel fins, copper brazed to non glowing, steel sheathed elements. Unit to have built in, tamper proof thermostat or remote thermostat, built in disconnect switch. Front cover shall be decorative 16 gauge welded bar Fan delay and thermal cutout are standard. Provide all required control transformers. Accessories 1" semi recessed mounting sleeve.

Surface mounting box. Provide wall heaters with the following devices: Thermally activated fan switch to keep fan motor operating until residual heat is dissipated. Disconnect switch. Automatic reset, high limit cut-out switch located in discharge air stream. Manual "Summer-OFF-Winter" switch. Unit-mounted line voltage thermostat Control Power Transformer Magnetic Contactor (Relay Kit) Manufacturers: Subject to compliance with requirements, provide wall heaters of one of the following: Trane Co

Hang units from building substrate, not from piping. Mount as high as possible to maintain greatest headroon possible unless otherwise indicated. Support units with rod-type hangers anchored to building substrate Protect units with protective covers during balance of construction. Installation

Coordinate with other electrical work, including wiring/cabling, as necessary to properly interface installation of heating terminal units with other work. Clean dust and debris from each heating terminal as it is installed to ensure cleanliness. Comb out damaged fins where bent or crushed before covering elements with enclosures. Touch-up scratched or marred heating terminal enclosure surfaces to match original finishes. Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values for equipment connectors. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Std 486A. Provide equipment grounding connections for electric heating terminals as indicated. Tighten connections to comply with tightening torque values specified in UL Std 486A to assure permanent and effective grounding.

 \bigcirc

FIELD VERIFY ALL CONDITIONS

DESIGN DRAWINGS ARE SCHEMATIC. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN

GENERAL DEMO PLUMBING NOTES

- AT ALL LOCATIONS WHERE PLUMBING FIXTURES ARE TO BE REMOVED, PLUMBING SUBCONTRACTOR SHALL REMOVE PIPING (WATER, WASTE, VENT) TO A POINT BEYOND FINISH SURFACE AND CAP OFF. WHERE PIPING SERVING EXISTING FIXTURE TO BE REMOVED ALSO SERVES FIXTURES THAT ARE TO REMAIN, PIPING SHALL BE REROUTED AND RECONNECTED AS REQUIRED TO ACCOMMODATE REMODELED AREAS
- AS REQUIRED. WHERE EXISTING WALLS ARE REMOVED AND PIPING IS FOUND THAT MUST REMAIN, PLUMBING SUBCONTRACTOR SHALL REROUTE AND RECONNECT PIPING AS REQUIRED, E.G. DOMESTIC WATER PIPING,
- GAS, SOIL, WASTE, VENT, AND ROOF LEADER PIPING. ALL PLUMBING PIPING THAT IS FOUND TO NO LONGER SERVE ANY PURPOSE SHALL BE REMOVED AND CAPPED OFF BEYOND FINISH SURFACE.

SUBSTITUTION NOTE

PEX AND CPVC IS APPROVED FOR INTERIOR WATER PIPING. COORDINATE WITH LOCAL JURISDICTION PRIOR TO INSTALLATION. IF PEX AND CPVC IS NOT APPROVED BY AHJ, USE HARD COPPER TUBE, ASTM B 88, TYPE L. SCHEDULE 40 PVC PIPE AND FITTINGS CAN BE USED THROUGHOUT. CONTRACTOR SHALL MAINTAIN INTEGRITY OF FIRE RATINGS. PIPING SHALL NOT BE RUN IN PLENUM SPACES AND CONTRACTOR SHALL PROVIDE INTUMESCENT COLLARS WHEN PENETRATING A RATED WALL, FLOOR, OR OTHER ASSEMBLY

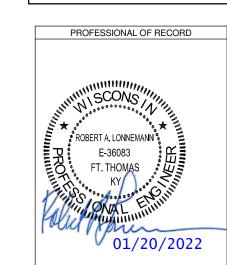
KEYED NOTES

- PROVIDE NEW 4" VENT THRU ROOF. COORDINATE ROOF PENETRATION REQUIREMENTS WITH LANDLORD'S ROOFING CONTRACTOR. EXTEND EXISTING WATER SERVICE TO EXISTING BFP AND WATER METER. FIELD VERIFY EXISTING LOCATION.
- CONNECT NEW SANITARY PIPING TO NEAREST EXISTING PIPING. FIELD VERIFY EXACT LOCATION, INVERT, DIRECTION OF FLOW, AND SYSTEM TYPE PRIOR TO STARTING WORK. CONTACT ENGINEER WITH ANY DIFFERENCES OTHER THAN WHAT IS SHOWN ON PLAN. PROVIDE CAMERA SCOPING TO INSURE PIPING SIZES AND LOCATION. FAILURE TO DO SO MAY RESULT IN CONTRACTOR REPLACING PIPING AT NO ADDITIONAL COST TO TENANT. (NOTE: NEW RESTROOMS ARE APPROXIMATELY IN THE
- P04 PROVIDE ELECTRIC HOT WATER HEATER ABOVE MOP SINK WITH 6'8" CLEAR TO BOTTOM OF WATER HEATER SUPPORT PLATFORM. PROVIDE EXPANSION TANK: AMTROL ST-5.
- FROM NEAREST MAIN TO NEW TRAP PRIMER. CONTRACTOR SHALL OBTAIN A COPY OF ALL PLUMBING FIXTURE SPEC.
- ROUGH IN PLUMBING BASED ON THE FIXTURE INSTALLATION INSTRUCTIONS.

EXTEND AND CONNECT TO EXISTING GAS METER. ROUTE ALL GAS PIPING ABOVE ROOF.





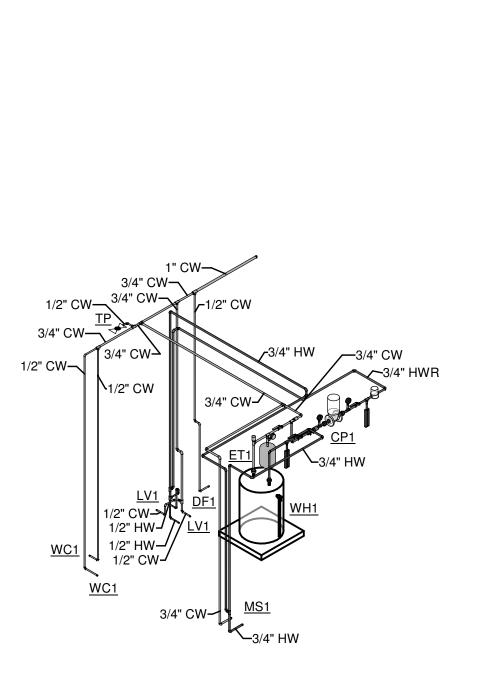


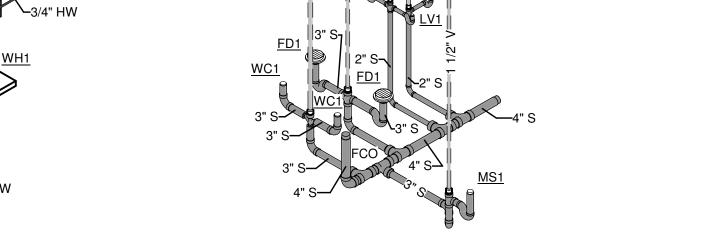
SHEET

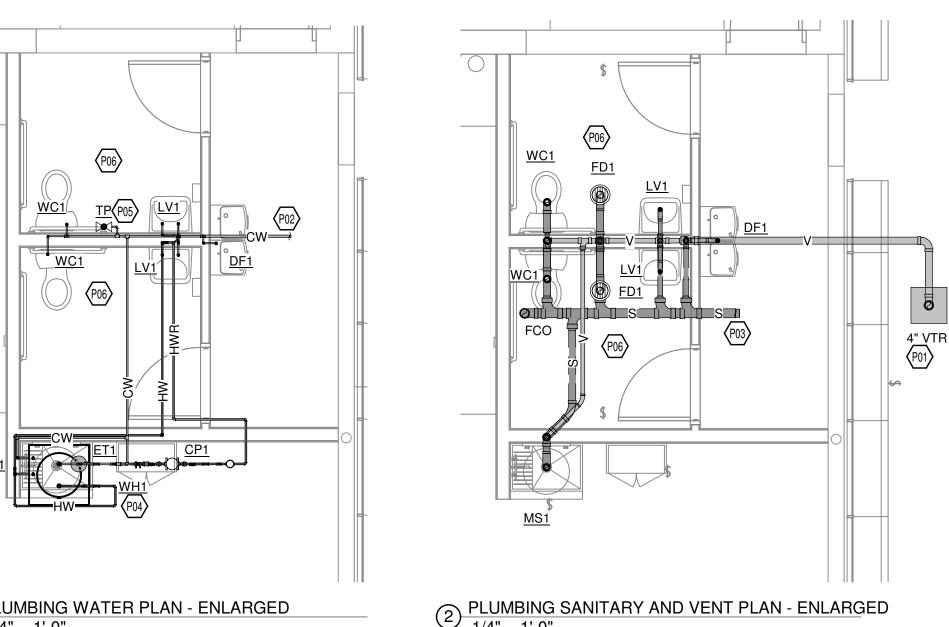
P-101

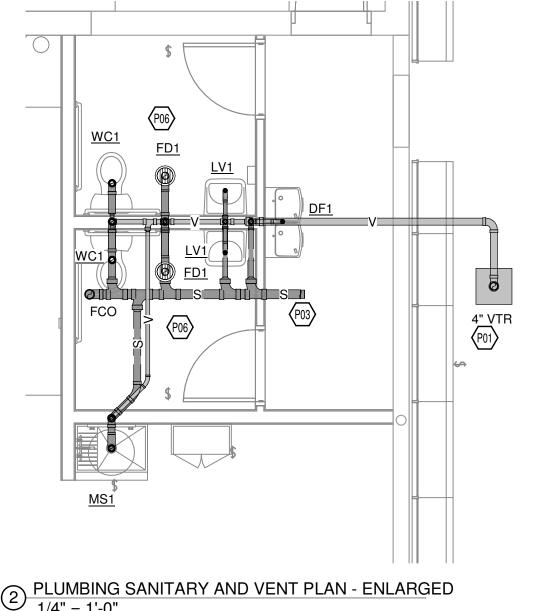
KLH PROJECT

SAME LOCATION AS THE OLD RESTROOM.) PROVIDE TRAP PRIMER TO SERVE NEW FLOOR DRAINS. PROVIDE 1/2" CW SHEETS PRIOR TO INSTALLATION OF ANY PIPING. CONTRACTOR SHALL





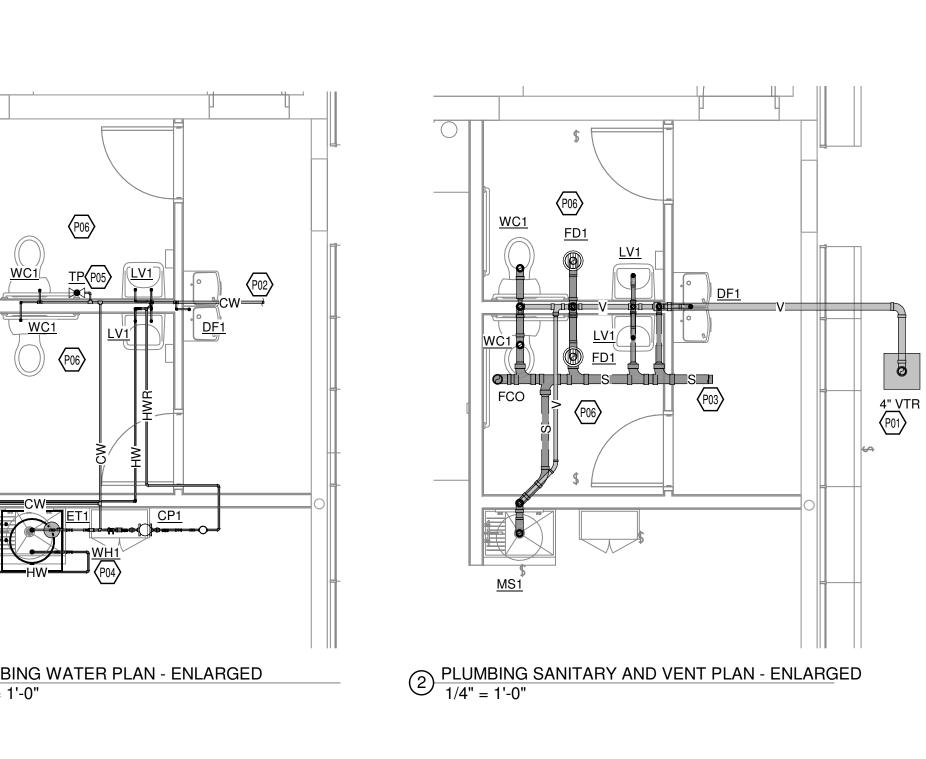


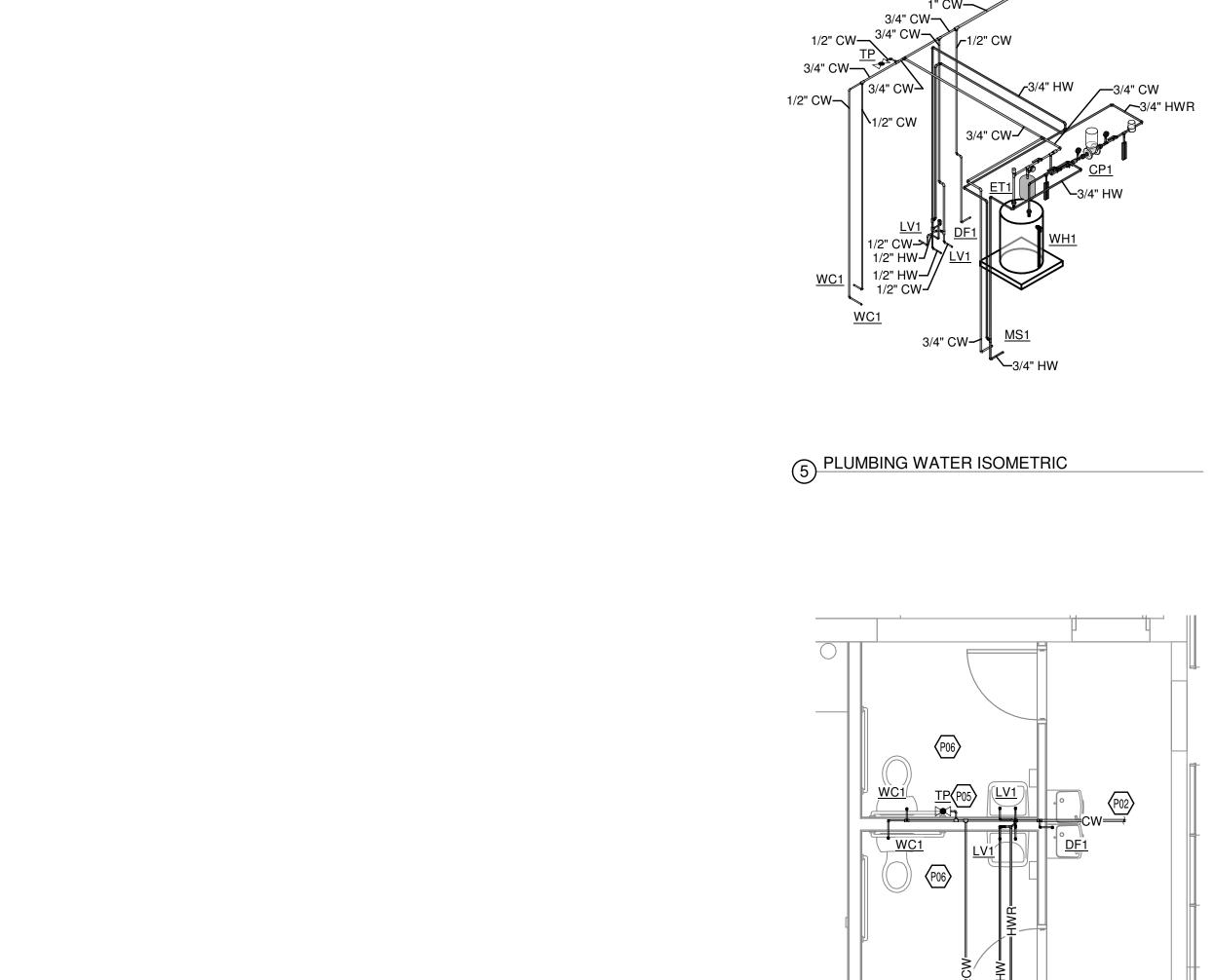


0 0 0

0 0 0

1) PLUMBING WATER & GAS PLAN - LEVEL 1 - OVERALL 1/8" = 1'-0"





OWNERSHIP OF INSTRUMENTS OF SERVICE All reports, plans, specifications, computer files, field data, notes and other documents and instruments prepared by the Consultant as instruments of service shall remain the property of the Consultant. The Consultant shall retain all common law, statutory and other reserved rights, including, without limitation, the copyright thereto.			

// ARK	DESCRIPTION	MANUFACTURER MODEL	EFFICIENCY	EWT (DEG F)	LWT (DEG F)	STORAGE (GAL)	FUEL	HTG KW	VOLTS	PHA	SE	WEIGHT	EMERGENC)	/ FLA	A MC	CA	OCP	ACC	CESS
/H1 DOMEST	IC ELECTRIC TANK-TYPE WATER HEATE	R BRADFORD RE110U6	98	56 1	40	10	ELECTRIC	2	120	1	30							PROVIDE P RELIEF AND INTE HEAT TRA	VALVE EGRAL
TE: TENA	NT PROVIDED, CONTRACTOR T	REE PLUMBING E	I FCTRI	CAL COOL	RDINAT	ON SCH	IFDUI F	;											
	ABBREVIATIONS	TEET EOMBIIVA E		ACTOR TYPE		011 001		OTOR CONTRO	L TYPE					CONTROL	. TYPE				
	DC LOCAL DISCO MC MOTOR CON SD DUCT SMOKE CN CONTROLS TS TOGGLE SWI C/B H.A.C.R. CIRC	ROL (POWER) DETECTOR CH UIT BREAKER AT SOURCE PANELBO <i>I</i>		ELECTRICAL COI EXISTING FIRE PROTECTIC GENERAL CONTI HVAC CONTRAC MANUFACTUREF PLUMBING CONT	N CONTRACTOR RACTOR FOR RACTOR	R	CS MC MS VF MS ON	CC MOT G MAC S MAN FD VAR SR MAN	MBINATION STARTE OR CONTROL STA INETIC STARTER C IUAL STARTER IABLE FREQUENC IUAL STARTER IABLE FREQUENC IUAL STARTER W/ RCURRENT PROTI	ARTER DR CONTACT Y DRIVE CONTROL RELA	ΑΥ			BAS LOW LINE RLINE MAN FA	TIMECLOCK CONTROL POWE BUILDING AUTO LOW VOLTAGE (LINE VOLTAGE (REVERSE ACTIN MANUAL FIRE ALARM	MATION SY CONTROLS CONTROLS	/STEM ; ; LTAGE THERN	MOSTAT	
	FUSE FUSE AT LOC FLA OPERATING I MCA MINIMUM CIR	AL DISCONNECT (VERIFY FIELD RATII ULL LOAD AMPS CUIT AMPACITY UG CONNECTION	OR	OWNER OR OTH	=RS									CO	CARBON MONO		OR		
	FUSE FUSE AT LOC FLA OPERATING I MCA MINIMUM CIR	ULL LOAD AMPS CUIT AMPACITY	OR VOLTS (V)			HP (HP) HTG KW	(kW) WATTS (V	V) FLA (A) N	CA (A) OCP (A)	DC TYPE	DC FURN	DC INST DO	WIRE MC TYPE	INT		QUIPMENT		CN INST	CN WI

					DOI	LAR	TRE	E PL	.UME	BING	FIX	TURE SCHEDULE
MARK	DESCRIPTION	MANUFACTURER	MODEL	VALVE/FAUCET MFGR	VALVE/FAUCET MODEL	CW SIZE (in)	HW SIZE (in)	SAN SIZE (in)	VENT SIZE (in)	TRAP SIZE (in)	INT TRAP	ACCESSORIES
DF1	DRINKING FOUNTAIN	MURDOK	A172-UG- BF			1/2		2	1-1/2	1-1/2	NO	FURNISH STD. CABINET FINISH FOUNTAIN, SUPPLY STOP & TUBE, DRAIN KIT, AND WALL HANGER KIT
LV1	LAVATORY	ZURN	Z5344	ZURN	Z86500-XL	1/2	1/2	1-1/2	1-1/2	1-1/2	NO	FURNISH LAVATORY, LEAD FREE METERING FAUCET, WALL HANGER KIT, SUPPLY STOPS & TUBES, DRAIN, AND ADA PIPING PROTECTION
MS1	MOP SINK	ZURN	Z1996-36	ZURN	Z843MI	1/2	1/2	3	1-1/2	3	NO	FURNISH VACUUM BREAKER, HOSE AND BRACKET, MOP HANGER, AND DRAIN KIT.
TP	TRAP PRIMER	SOUIX CHIEF	695-01			1/2		1 1/2				
WC1	TANK WATER CLOSET	ZURN	Z5560			1/2		3	2			FURNISH ADA CLOSET & TANK, ADA OPEN FRONT SEAT, SELF SUSTAINING HINGE, FLOOR FLANGE, CLOSET BOLTS & CAPS, WAX RING, SUPPLY STOP & TUBE. FLUSH CONTROL MUST BE LOCATED ON THE WIDE/ACCESS SIE OF THE WC (SIDE OPPOSITE THE WALL).

DOLLAR TREE PLUMBING DRAIN SCHEDULE											
MARK DESCRIPTION MANUFACTURER MODEL TRAP PRIMER TRAP SIZE (in) SAN SIZE (in) VENT SIZE (in) ACCESSORIES/REMARKS											
FD1	FLOOR DRAIN	ZURN	Z-415	YES	3	3	1-1/2	TYPE "N" STRAINER. PROVIDE WITH COMPLETE BODY ASSEMBLY WITH TRAP PRIMER CONNECTION.			

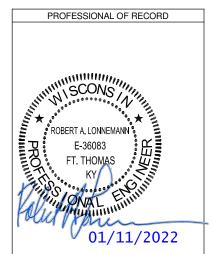
			PLUM	BING G	AS	LOAD	SCHE	DUL	E.			
Total Equivale Pipe(F		178	Pressure Drop (inches W.C):		С		re After Meter & nes W.C.):	7	Gas Ty	ре	[NATURAL GAS]	
MARK	HVACTYPE	DESC	CRIPTION	STATUS	GAS H	ITG IN (CFH)	MIN GAS PRES	SSURE (IN WC)	MA	X GAS PRESSURE (IN WC)	
RTU-1	23 74 33.00.00	OUTDO				180		4			13	
RTU-2	23 74 33.00.00	PACKAGED OUTDOOR ROOFTOP UNIT			180		3				10.5	
RTU-3	23 74 33.00.00	OUTDO				110		4			13	
GAS LOAD:		•	'	TOTAL		470						

STA	NDARD PLUMB	ING A	BBREVIATIONS
AAV	AIR ADMITTANCE VALVE	HW	DOMESTIC HOT WATER
AD	AREA DRAIN	HWR	HOT WATER RETURN
AFF	ABOVE FINISHED FLOOR	ΙΕ	INVERT ELEVATION
AFG	ABOVE FINISHED GRADE	IN WC	INCH WATER COLUMN
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	KW KWH	KILOWATT KILOWATT HOUR
APPROX	APPROXIMATE	LPG	LIQUID PROPANE GAS
ASPE	AMERICAN SOCIETY OF	LV	LAVATORY
	PLUMBING ENGINEERS	MAU	MAKEUP AIR UNIT
AV	ACID VENT	MAX	MAXIMUM
AW BAS	ACID WASTE BUILDING AUTOMATION SYSTEM	MBH MH	1000 BTUH MANHOLE
BFP	BACKFLOW PREVENTER	MIN	MINIMUM
ВТ	BATHTUB	MOCP	MAXIMUM OVERCURRENT
BTU	BRITISH THERMAL UNIT		PROTECTION
BTUH	BRITISH THERMAL UNIT PER HOUR	MS MV	MOP SINK MIXING VALVE
BWV	BACK WATER VALVE	N	NITROGEN
CA	COMPRESSED AIR	NC	NORMALLY CLOSED
СВ	CATCH BASIN	NIC	NOT IN CONTRACT
CFH	CUBIC FEET PER HOUR	NO	NITROUS OXIDE
CFM CI	CUBIC FEET PER MINUTE CAST IRON	NOM NTS	NOMINAL NOT TO SCALE
CO	CLEAN OUT	0	OXYGEN
CO2	CARBON DIOXIDE	OCP	OVER CURRENT PROTECTION
CP	CIRCULATION PUMP	OD	OVERFLOW DRAIN
CW	DOMESTIC COLD WATER	OI	OIL INTERCEPTOR
DF DI	DRINKING FOUNTAIN DEIONIZED WATER	PC PRV	PLUMBING CONTRACTOR PRESSURE REGULATING VALVE
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DN	DOWN	RD	ROOF DRAIN
DS	DOWNSPOUT	RH	ROOF HYDRANT
DSN EC	DOWNSPOUT NOZZLE ELECTRICAL CONTRACTOR	RO RPZ	REVERSE OSMOSIS REDUCED PRESSURE ZONE
EC ET	EXPANSION TANK	NFZ	VALVE
EWC	ELECTRIC WATER COOLER	RTU	ROOF TOP UNIT
EWH	ELECTRIC WATER HEATER	S	SANITARY
EX	EXISTING	SI	SOLIDS INTERCEPTOR
F FCO	FAHRENHEIT FLOOR CLEAN OUT	SK SOFT	SINK SOFT WATER
FD	FLOOR DRAIN	SPEC	SPECIFICATION
FFE	FINISHED FLOOR ELEVATION	SQ FT	SQUARE FOOT (FEET)
FLA	FULL LOAD AMPERES	ST	STORM PIPING
FS FT	FLOOR SINK FEET	TD TEMP	TRENCH DRAIN TEMPERATURE
FW	FILTERED WATER	TMV	THERMOSTATIC MIXING VALVE
G	GAS	TP	TRAP PRIMER
GCO	GRADE CLEAN OUT	UH	UNIT HEATER
GWH	GAS FIRED WATER HEATER	UR	URINAL
GI GPD	GREASE INTERCEPTOR GALLONS PER DAY	VAC VFD	VACUUM VARIABLE FREQUENCY DRIVE
GPH	GALLONS PER HOUR	VP VP	VACUUM PUMP
GPM	GALLONS PER MINUTE	VTR	VENT THRU ROOF
GPR	GAS PRESSURE REGULATOR	WAGD	WASTE ANESTHESIA GAS
GW LL CW	GREASE WASTE	WB WC	WASHER BOX
H&CW HB	HOT & COLD WATER HOSE BIBB	WC WCO	WATER CLOSET WALL CLEAN OUT
HC	HVAC CONTRACTOR	WH	WALL HYDRANT
HD	HUB DRAIN	WF	WATER FILTER
HP	HORSEPOWER	YH	YARD HYDRANT

	PLUMBING LEGEND
SYMBOL	DESCRIPTION
	PLAN-VIEW LINE TYPES
	WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE
	WORK SHOWN BOLD-DASHED INDICATES SELECTIVE DEMOLITION WORK
	WORK SHOWN BOLD-CONTINUOUS INDICATES NEW WORK
-	DIRECTION OF FLOW
	PIPING LINE TYPES
—-s—	SANITARY WASTE PIPING
v	SANITARY VENT PIPING
CW	DOMESTIC COLD WATER PIPING
——HW——	DOMESTIC HOT WATER PIPING (120 °F)
——G——	NATURAL GAS PIPING
	PLUMBING ACCESSORIES
E	PIPE CAP
<u> </u>	<u>CO</u> - CLEANOUT, <u>FCO</u> - FLOOR CLEANOUT, <u>GCO</u> - GRADE CLEANOUT, <u>WCO</u> - WALL CLEANOUT
● <u>FD</u>	FLOOR DRAIN
ĒŢ	EXPANSION TANK
	PIPE VALVES
->>-	CONTROL VALVE , SHUT-OFF VALVE
<u></u>	CHECK VALVE
—_TMV—	THERMOSTATIC MIXING VALVE
— 	PRESSURE REGULATOR VALVE
	BACKFLOW PREVENTER
- >≈\-	TRAP PRIMER VALVE
	PLUMBING SYMBOLS
——ю	PIPE UP
	PIPE DOWN
	PIPE TEE DOWN
─ IOI	PIPE TEE UP
_	PIPE CONTINUATION
A	CONNECT TO EXISTING (FIELD VERIFY EXISTING UTILITY SERVICE TYPE, PRIOR TO MAKING CONNECTION)



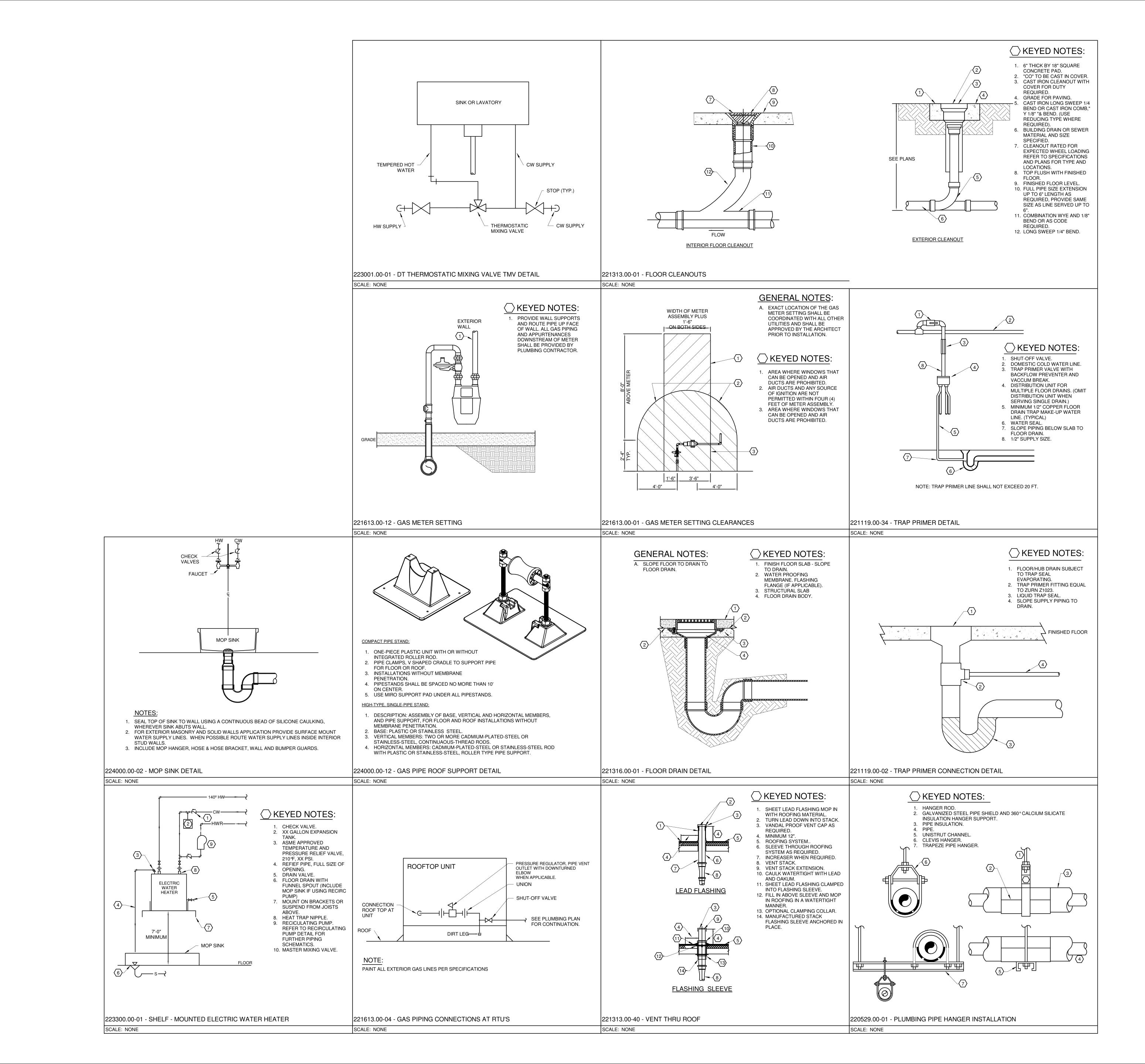




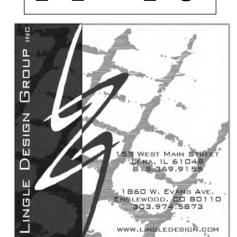
DOJGGGGGGGGGOWESTFIELD WAY, PEWAUKEE, WI 53072
PLUMBING SCHEDULES

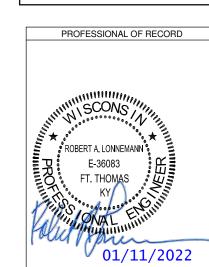
SHEET

P-201









SHEET

P-301

SECTION 22 05 00.00 - COMMON WORK RESULTS FOR PLUMBING

GENERAL The General Provisions of the Contract including the General and Supplemental Conditions and General Requirements apply to the work in this section. Before submitting a bid, examine documents of all other trades, visit the site and get acquainted with all conditions that may in any way affect the execution of this contract. Contractor shall obtain and pay for all permits, certificates of inspection and approvals required. Submittal of a bid indicates that the contractor has examined the drawings, specifications, and had an opportunity to visit the site to be able to provide a comprehensive complete bid to include providing all materials, labor, tools, and equipment required to provide complete plumbing systems as outlined in Division-22. Contractor shall be responsible for all the costs associated with work provided by the utility company, including tap fees, installation costs, materials, equipment, road cuts, and bores if applicable. Clearly state all full load amps (FLA), voltages and model numbers on all submittals. Include rated capacities, operating characteristics,

electrical characteristics, and furnished specialties and accessories. Provide wiring diagrams: For power, signal, and control wiring. APPLICABLE STANDARDS The installation of all plumbing work shall conform to all

the following, but not limited, applicable local and municipal utility standards, rules and regulations, plumbing codes and statutes having jurisdiction. All plumbing fixtures, equipment, accessories, and appurtenances shall be NSF/ANSI 61-372 compliant. Wisconsin Building Code; Wisconsin Plumbing Code; American Society for Test Materials (ASTM);

National Sanitation Foundation (NSF); American Standards Association (ASA); Underwriters Laboratories (UL); National Fire Protection Association (NFPA); National Electric Code (NEC);

PLANS AND SPECIFICATIONS Obtain the latest owner design and construction standards document(s). Comply with all owner-specific requirements in addition to requirements set forth in these specifications and accompanying drawings. Should there be a conflict, the owner's standards shall take precedence, unless prevailing codes and regulations mandate otherwise.

The drawings that accompany these specifications are diagrammatic. Wherever possible make use of submittal data and verify all dimensions on site. Provide additional fittings as required by site conditions and codes at no additional cost to conform to the structure, avoid obstructions, provide required service clearances and preserve headroom. Do not scale from drawings, all measurements should be taken in the field. EXISTING CONDITIONS

Where new plumbing systems are required to be connected to existing plumbing systems, provide all camera scoping and dye testing necessary to verify the exact location, size, invert elevation, pressure, pipe integrity, and system type to ensure a proper connection is executed. The contractor shall notify the engineer immediately if it is found a proper connection cannot be

CUTTING, PATCHING AND DEMOLITION The contractor shall be responsible for damages to the grounds, walks, road, building, piping systems, electrical systems, and their equipment and contents, caused by leaks in the piping systems being installed or having been installed by him. The contractor shall repair at his expense all damaged so caused. All repair work shall be done as directed by and in such manner as satisfactory to the

Owner reserves the right to make emergency repairs as required to keep equipment in operation without voiding the contractor's guarantee bond nor relieving the contractor of his responsibilities during the bonding period. Cut and drill all openings in roofs, walls, and floors required for the installation. Neatly patch all openings cut. Hold cutting and patching to a minimum by arranging with other contractors for all sleeves and openings before construction is started. When drilling/cutting concrete slabs, utilize ground penetrating radar (GPR) and/or X-ray scanning equipment to verify the location is free from obstructions, including but not limited to: structural rebar/strands/tendons, electrical conduit/wiring, and/or piping/ductwork.

EXCAVATION AND BACKFILL Perform all excavation and backfilling required for this work. Contractor shall consult with utility company prior to beginning excavation. At a minimum, all piping shall be laid on a bed of sand, 6" deep, well tamped into place and properly graded to permit the pipe to have an even bearing throughout its entire length. Sand shall be installed around the piping in 6" lifts to a point 6" above the

INTERRUPTION OF EXISTING SERVICES Interruption of Existing Plumbing Services: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated: Notify, Architect, Construction Manager, and Owner no fewer than seven days in advance of proposed interruption of service. Do not proceed with interruption of service without

Architect's written permission DELEGATED DESIGN For equipment supports, this contractor shall retain a qualified professional engineer to provide support calculations of static and dynamic loading due to operating equipment weight. The signed and sealed calculations

and details shall be submitted by the retained professional WARRANTY This contractor shall warrant that all work under this section shall be free of defective work, materials and parts for a period of one year after acceptance of the work and

shall repair, revise, and replace, at no cost to the owner, any such defects occurring within the warranty period. Use of Electronic Drawings from the Owner's Design If expressly permitted by the Owner and the terms of the Contract, editable electronic drawings may be made available for the creation of shop and as-built drawings

upon request. Drawings will be made available at the discretion of the Engineer. "Request Drawings" form can be accessed, filled out and submitted at http://www.klhengrs.com (right hand side of page -Contractor Resources). Direct access to this form can be found here: http://files.klhengrs.com/requestdrawings.html

22 05 03.00 - SUBMITTALS FOR PLUMBING Provide submittals in accordance with the Contract Documents. In addition to Division 01, the Contractor is advised to review and comply with the requirements articulated within each Division and within each section of that Division.

Some Divisions may include a division-specific "Submittal Requirements for" section. Where this section exists, it apply to the work of that Division. The following requirements help to identify, track and keep the project organized for all parties involved. They are necessary to ensure a timely turnaround and an appropriate technical review. Submittals that do not conform to the administrative requirements are rejected and returned, without technical review. Supply submittals for each section: Submittals shall be supplied on a section-by-section and type-by-type basis. For example, independent product data submittals shall be furnished for each section that requires product data submittals. Independent shop drawing submittals shall be furnished for each section that requires shop drawings. Separate PDF file packages shall be supplied for each section, for each submittal type. Each PDF shall represent a single standalone submittal. Include a transmittal: Transmittals shall enumerate each submittal for each section of each type and iteration. Include cover sheet / title page: The cover sheet shall include the information identified in the contract

documents. It shall be included as the first page of each electronic and/or hardcopy document-based submittal. An editable and printable PDF form created with editable fields and specification compliant appearance is available from KLH upon request. It is also downloadable from the KLH website at www.klhengrs.com. Include an index: The index shall enumerate the contents of the submittal.

Include checklists: Where checklists are included with the specifications, complete and include them within the appropriate submittal. Supply complete submittals: Complete submittals of each type are required. Partial submittals will be rejected. Where a section requires a product data submittal, all product data for that section shall be supplied together, at one time, as one complete submittal. When resubmittal is required (e.g. Revise and Resubmit) the revised submittal shall be more complete, more accurate and more contract-compliant than its rejected predecessor. The submittal number (for each section and type) shall increment for each subsequent submittal (00 – Original submission, 01 – First Resubmission, 02 – Second Resubmission, etc...). Resubmittals shall include a copy of the reviewers comments supplied with the prior submittal rejection and shall be amended with a description of the specific action taken to comply with the reviewer's comments. The absence of this on resubmittal is cause for rejection. Name electronic files to match the submittal ID and cover sheet: The electronic file name of submittals shall match the submittal ID included on the submittals cover page. For example: The original/first product data submittal for Section 220523 would be labeled as "220523.00-PD-00"; the first resubmittal of same shall be labeled "220523.00-PD-01". The original/first shop drawings submittal file for the same section would be labeled "220523.00-SD-00"; the first resubmittal of same shall be labeled "220523.00-If expressly permitted by the Owner and the terms of the

Contract, editable electronic drawings may be made available for the creation of shop and as-built drawings upon request. Drawings will be made available at the discretion of the Engineer. "Request Drawings" form can be accessed, filled out and submitted at http://www.klhengrs.com (right hand side of page - Contractor Resources). Direct access to this form

can be found here: http://files.klhengrs.com/requestdrawings.html

22 05 23.00 - GENERAL DUTY VALVES Submittal Requirements

Product Data: For each type of product indicated. GENERAL Provide stops or isolation valves on domestic water supplies to isolate hot and cold water to each fixture, including all equipment and equipment provided by others. Access shall be provided to all valves. Provide fire-rated access panel(s) to maintain full access to concealed

Ball valves - 2 inch and smaller: Lead-Free, 600 psi CWP, 100 psi at 300°F, cast bronze body, blowout-proof stem. Butterfly Valves - 3" and up: Ductile Iron Butterfly Valve, 200 WOG, Lug Body, Lever Operator. Approved Manufacturers: Milwaukee Valve, NIBCO, and Watts Water Technologies Co. Valves to conform to: MSS-SP-110 Type I/ MSS-SP-67 Type I, NSF/ANSI -61/372. Check valves - to be same size as system piping accompanies. Lead-free, bronze body, 250 WOG, nonshock, spring check valve. Conforms to the following standard(s): MSS-SP-80 I, NSF/ANSI -61/372

22 05 29.00 - HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT

Provide hangers, supports, clamps, attachments, and structural steel members where required to support piping and equipment from building structure. Support of piping from the decking or equipment is prohibited.

Arrange for grouping of parallel runs of horizontal piping supported together on field-fabricated, heavy-duty trapeze hangers where possible. Trapeze hangers shall conform to: MSS SP-69, Type 59. Horizontal-Piping Clamps: Provide Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3) for suspension of pipes requiring clamp flexibility and up to 4 inches of insulation. Vertical-Piping Clamps: Provide extension pipe or Riser Clamps (MSS Type 8) for support of pipe risers. Hangers shall be sized to allow insulation to pass through unobstructed

Hanger and support types: Hangers: Provide adjustable, Steel Clevis Hangers (MSS Type 1) for suspension of noninsulated or insulated, stationary pipes. Horizontal-Piping Clamps: Provide Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3) for suspension of pipes requiring clamp flexibility and up to 4 inches of insulation. Vertical-Piping Clamps: Provide extension pipe or Riser Clamps (MSS Type 8) for support of pipe

Hanger and support types: Hangers: Provide adjustable, Steel Clevis Hangers (MSS Type 1) for suspension of noninsulated or insulated, stationary pipes. Horizontal-Piping Clamps: Provide Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3) for suspension of pipes requiring clamp flexibility and up to 4 inches of insulation. Vertical-Piping Clamps: Provide extension pipe or Riser Clamps (MSS Type 8) for support of pipe

Hanger and support types: Hangers: Provide adjustable, Steel Clevis Hangers (MSS Type 1) for suspension of noninsulated or insulated, stationary pipes. Horizontal-Piping Clamps: Provide Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3) for suspension of pipes requiring clamp flexibility and up to 4 inches of insulation. Vertical-Piping Clamps: Provide extension pipe or Riser Clamps (MSS Type 8) for support of pipe Horizontal-Piping Clamps: Provide Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3) for suspension of pipes requiring clamp

Vertical-Piping Clamps: Provide extension pipe or Riser Clamps (MSS Type 8) for support of pipe Hangers and supports shall be placed at all changes in direction, valves and equipment. The maximum horizontal spacing of cast-iron pipe hangers can be 10' where 10-foot lengths of pipe are

flexibility and up to 4 inches of insulation.

Piping shall also be supported at each change in direction, valves and equipment. Clevis-type hangers shall and supports shall conform to: MSS SP-58, Type 1-58.

22 05 53.00 - IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

Provide self-adhesive pipe labels with white background and black lettering, contact type with permanent adhesive backing. Include identification of piping service using same designations or abbreviations as used on the drawings and an arrow indicating flow direction. EQUIPMENT

Provide self-adhesive plastic equipment labels with white background and black lettering, contact type with permanent adhesive backing, 160 degree F temperature. Include equipment's drawing designation and specification section number where equipment is specified.

22 07 19.00 – PLUMBING SYSTEM INSULATION

Insulation shall be listed and labeled per ASTM E 84 for plenum installations employing slip on techniques.

Provide insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of piping including fittings, valves, and specialties.

Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application PIPING SYSTEMS REQUIRING INSULATION Insulate domestic cold water piping, associated fittings and valves with flexible elastomeric 1/2" wall thickness

valves with 1" thick flexible elastomeric, 1-1/2" thick fiberglass insulation or per local energy code, whichever Insulate domestic hot water return piping, associated fittings and valves with 1" wall thickness insulation or per local energy code, whichever greater. Insulate waste piping above ceilings that receive condensate with 1/2" wall thickness insulation. Insulate exposed sanitary drains, domestic water, domestic hot water, and stops for plumbing fixtures for

Insulate domestic hot water piping, associated fittings and

people with disabilities. FLEXIBLE ELASTOMERIC INSULATION Closed-cell, sponge- or expanded-rubber materials. Comply with ASTM C 534, Type I for tubular materials and Type II for sheet materials. Adhesives, Sealers, and Protective Finishes: As recommended by insulation manufacturer for applications

Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following: Aeroflex USA, Inc.; Aerocel., Armacell LLC; AP Armaflex.,K-Flex USA; FIBERGLASS INSULATION

Fiberglass piping insulation: ASTM C 547, Class 1

Encase pipe fittings insulation with one-piece pre-molded PVC fitting covers. Vapor Barrier Material: Paper-backed aluminum foil, except as otherwise indicated, strength and permeability rating equivalent to adjoining pipe insulation jacketing. Staples, Bands, Wires, and Cement: As recommended by insulation manufacturer for applications indicated. Adhesives, Sealers, and Protective Finishes: As recommended by insulation manufacturer for applications Manufacturers: Subject to compliance with requirements,

available products that may be incorporated into the work include, and are limited to, the following: Armstrong World Industries, Inc., Owens-Corning Fiberglass Corp., Johns Manville. **ADHESIVES** Materials shall be compatible with insulation materials, jackets, and substrates and for bonding insulation to itself

and to surfaces to be insulated, unless otherwise indicated. Insulation for handicap accessible fixtures All handicap lavatory p-trap and angle stop assemblies shall be insulated with trap wrap protective kit manufactured by Proflo model PF202WH or equal. Abrasion resistant, anti-microbial vinyl exterior cover shall be smooth. For traps, the insulation shall have a cleanout nut cap to allow service to the trap without disassembly. For stops, the insulation shall have a lock lid that prevents tampering but allows access without removal of the insulation. Fasteners shall remain substantially out of

Manufacturers: subject to compliance with requirements: Proflo, Truebro, Plumberex

22 11 16.00 - DOMESTIC WATER PIPING Submittal Requirements

Product Data: For each type of product indicated. Install piping concealed from view unless noted otherwise, free of sags and bends. Do not enclose, cover, or put piping into operation until it has been inspected and approved by authorities having jurisdiction. Clean and disinfect potable domestic water piping using approved procedures by authorities having jurisdiction or AWWA C651, whichever is more rigorous. Install at right angles; diagonal runs are prohibited unless otherwise shown. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal. Coordinate all piping with all other trades. Provide water pressure regulators where necessary to limit the incoming water pressure to 80 psi inside the DOMESTIC WATER PIPING ABOVE GROUND: Hard copper tube, ASTM B 88, Type L; wrought-copper,

solder-joint fittings; and soldered joints. Solder Filler Metals: ASTM B 32, lead-free alloys. Flux: ASTM B 813, water flushable. Type "L"; copper pressure-seal joint; and pressure-seal ioint systems. CATHODIC PROTECTION Provide dielectric insulation at points where copper or brass pipe comes in contact with ferrous piping,

reinforcing steel or other dissimilar metal in structure.

22 11 19.00 – DOMESTIC WATER PIPING SPECIALTIES Submittal Requirements

Product Data: For each type of product indicated. Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following: Conbraco Industries, Inc., Watts Water Technologies Cc., Zurn Industries, LLC., Thermomegatech, Acorn Engineering Co., and Caleffi, N. America., MIFAB, Inc., Precision Plumbing Products, Inc., Sioux Chief Manufacturing Company, Inc., Jay R. Smith Mfg. Co., Provent Systems, Rector Seal.

TRAP-SEAL PRIMER DEVICE The plumbing contractor shall provide trap primers for all floor drains. Provide access panel in wall or ceiling for all concealed trap primers. Install trap seal primer valves with outlet piping pitched down toward drain trap a minimum of 1% and connect to floor drain body, trap or inlet fitting. Coordinate exact location with architect prior to installation WATER HAMMER ARRESTERS Provide water-hammer arresters in water piping according

to PDI-WH 201. Standard: ASSE 1010 or PDI-WH 201. Type: Metal bellows or copper tube with piston. Size: ASSE 1010, sizes AA and A through F, or PDI-WH 201, sizes a through F.

22 11 23.00 - RECIRCULATION DOMESTIC WATER Submittal Requirements

Product Data: For each type of product indicated.

Hot-water circulating pump shall be constructed of the following: in-line wet-rotor, lead-free bronze body, plastic impeller, with ceramic bearings. Working pressure to be a minimum 125 psig with a maximum continuous operating temperature of 220° F. Pump shall be controlled with an aquastat and timer. Aquastat: Electric; surface mounted sensing element. Adjustable temperature control of hot-water circulation from 65 to 200 °F. Timer: Electric; for control of hot-water circulation. Programmable type, seven-day, twenty-four hour clock with manual override on-off switch. Programmable for preset times during the day for each day for seven days. Approved Manufacturers: Armstrong Pumps Inc, Bell & Gossett/Goulds Water Technology; Xylem Inc., Taco inc., Honeywell International inc. Pumps shall conform to: UL 778, NSF 61/372. CONNECTIONS

22 13 16.00 - SANITARY, WASTE AND VENT PIPING SYSTEM

On water heating systems with separate storage tanks,

interlock pump between water heater(s) and hot-water

storage tank(s) with water heater burner and time-delay

Submittal Requirements Product Data: For each type of product indicated. GENERAL

Provide a complete soil, waste and vent system in the building and on the site as indicated on the drawings and Corp., State Industries.

as specified herein. Above ground soil, waste and vent piping within buildings including soil stacks, vent stacks, horizontal branches, traps, and connections to fixtures and drains. Underground building drain piping including mains, branches, traps, connections to fixtures and drains, and connections to stacks, terminating at connection to existing sanitary sewer.

INTERIOR PIPING ABOVE GRADE

No-Hub cast iron soil, waste, and vent piping and fittings 1-1/2" and larger shall conform to ASTM A-888. Pipe couplings shall conform to ASTM C 1277 and CISPI 310. Piping alignment shall be as indicated on the drawings using approved wye branches or eight bands for direction changes and shall be surely supported or secured to maintain such alignment. Soil, waste and vent piping smaller than 1-1/2" shall be Type "M" copper and conform to ASTM B-306. BELOW GRADE PIPING Solid wall schedule 40 PVC pipe and fittings 2" and larger shall conform to ASTM D 2665 / ASTM D 1785 DWV. Fittings shall conform to ASTM D 2665, made to ASTM D,

DWV patterns and fit schedule 40 pipe. Piping alignment shall be as indicated on the drawings using approved wye branches or eight bands for direction changes and shall be surely set and buried to maintain such alignment. Soil, waste and vent piping smaller 1-1/2" and smaller below grade shall not be permitted Pitch of sanitary piping shall be uniform at a minimum of

1/8" per foot for building drains, drainage piping greater than 2" and as indicated on the drawings. Pitch of sanitary piping shall be uniform at a minimum of 1/4" per foot for drainage piping 2" and smaller and as indicated on the Protection shall be given all footings, other structural elements during underground work adjacent to such items. Refer to architectural and/or structural drawings for

Vent all fixtures, connect branch vents to main vent risers at least six inches above flood rim of fixtures. Pitch vent lines back to soil or waste pipe, free of drops and sags. Cleanouts shall be full size of pipe up to 4", and 4" for larger sizes. For underground and concealed lines, provide cleanouts in accessible positions at each right angle turn and at intervals not to exceed fifty feet. In floors, install flush with finish floor with extension pipe from cleanout wye.

22 13 19.00 - SANITARY WASTE PIPING SPECIALTIES Submittal Requirements Product Data: For each type of product indicated.

CLEANOUTS Floor cleanout equal to Zurn Z-1400 adjustable floor Wall cleanout equal to Zurn Z-1443 with smooth nickel bronze square wall access panel and frame.

Provide a sanitary tee with threaded cap cleanout plug for

changes-in-direction in aboveground horizontal waste Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following: av R Smith MFG. Co., Watts Drainage Products Inc., Zurn Plumbing Products Group. FLOOR DRAINS

Provide floor drains in compliance with ASME A112.6.3. Provide floor drains with trap-seal primer fitting. All floor drains located in rooms with tile floors shall be provided with manufacturer's standard square grate, unless noted Refer to plumbing drain schedule for project specific floor drain manufacturers and models.

Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following: Jay R Smith MFG. Co., Watts Drainage Products Inc., Zurn Plumbing Products Group.

22 16 13.00 - NATURAL GAS PIPING SYSTEMS Submittal Requirements

Product Data: For each type of product indicated. GENERAL Plumbing contractor shall be responsible for installing gas piping run-outs to all gas-fired equipment, including equipment supplied by the HVAC and electric contractors. Piping shall be installed full-size (as indicated on the drawings) to each units' gas inlet connection, burner, regulator, etc. Plumbing subcontractor shall provide gas cock and make final connections. Connections to each gas-fired equipment item shall include a drip leg and shutoff gas cock. Comply with equipment manufacturer's instruction. For connections to gas-fired rooftop equipment, plumbing contractor shall be responsible for the roof penetration and shall install the gas piping through the roof in a location that has been coordinated with the HVAC contractor. Contractor shall be responsible for all the costs associated with work provided by the utility company, including tap fees, installation costs, materials, equipment, road cuts, and bores if applicable.

BUILDING DISTRIBUTION PIPING All piping from meter/regulator to gas fired equipment connections shall be black steel. Steel Pipe: ASTM A 53/A 53M, black steel, Schedule 40, Type E or S, Grade B. Pipe size 2" and smaller: Malleable-Iron Threaded Fittings Malleable-Iron Threaded Fittings: ASME B16.3, Class 150, standard pattern. Press-Connect fittings: Carbon steel, cold-pressed, ANSI LC4/CSA 6.32 Pipe size 2-1/2" and larger: Wrought-Steel Welding Fittings for butt welding and socket welding. Wrought-Steel Welding Fittings: ASTM A 234/A 234M for butt welding and socket welding Field prepare and paint exterior natural gas piping, fittings, etc... with alkyd anticorrosive metal primer and topcoat with exterior alkyd enamel flat. Color to match building exterior and approved by the architect GENERAL DUTY VALVES:

Metallic valves 2 inches and smaller shall comply with ASME B16.33, cold working pressure of 125 psig. Metallic valves larger than 2 inches shall comply with ASME B16.38, cold working pressure of 125 psig. Provide one-piece ball valves with bronze body, chromeplated brass ball, blowout proof stem and seat, and bronze trim complying with MSS SP-110. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, and limited to, the Milwaukee valve, NIBCO, and Watts Water Technologies

22 33 00.00 - COMMERCIAL ELECTRIC, DOMESTIC WATER HEATERS Submittal Requirements

Product Data: For each type of product indicated. Provide commercial electric tank type water heater as scheduled. Comply with UL 1453 Standard. Provide corrosion resistant metal drain pan with raised edges at the base of the water heater and include drain Provide field fabricated piping heat trap arrangement

least as great as heat input and pressure setting less than water heater's rated operating pressure. Provide water heater stands or mounting brackets with manufacturer's factory fabricated steel capable of supporting water heater. Provide steel pressure-rated thermal expansion tank constructed with welded joints and factory-installed butyl rubber diaphragm, pre-charged to minimum system operating pressure at tank. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the work include, and are limited to, the

Provide combination temperature and pressure relief

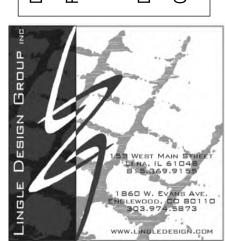
valve, ASME rated and stamped with relieving capacity at

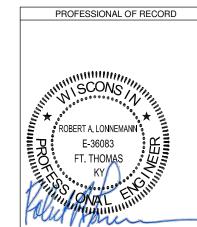
according to ASHRAE/IESNA 90.1.

Bock Water Heaters, Bradford White Corp., Lochinvar

22 40 00.00 - PLUMBING FIXTURES Submittal Requirements

Product Data: For each type of product indicated. Refer to plumbing fixture schedule and install per the manufacturer's installation and operation manual. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the work include, and are limited to, the American Standard, Kohler Co., Zurn Industries, LLC.





SHEET

P-401

ELECTRICAL SPECIFICATIONS

installation. Consult all other disciplines drawings and coordinate with contractors in field before performing work so that this work will not interfere with other disciplines work.

The General Provisions of the contract apply to the work in this section. Before submitting a bid, examine documents of all other trades,

visit the site and get acquainted with all conditions that may in any way affect the execution of this contract. Include all labor, material, equipment, tools and incidental costs to provide all work in contract documents. Apply for, secure and pay for all required permits.

Exposed finished materials and equipment shall be carefully cleaned and wiped to remove grease, smudges, fingerprints, dust and other spots. During the progress of the work, the electrical sub-contractor shall carefully clean the job site and shall leave the premises and all portions of the building in which he is working free of debris and in a clean and safe condition.

Neatly provide all cutting and patching required for the admission of work. Patching shall match quality of surroundings to owner's satisfaction. Seal all new floor, ceiling, wall, slab, etc. penetrations to match or exceed existing assembly fire ratings.

Provide two clean sets of contract drawings reserved for showing a complete picture of the work as actually installed at completion of project. Provide two neatly bound and tabbed copies of all maintenance books, instruction books and parts list pertaining to all equipment

All work, materials, and equipment shall have a one year warranty after acceptance of the work by the Owner. Any defective items shall be removed and replaced at the electrical sub-contractor's expense and to the satisfaction of the engineer and owner's representative. Train the owner's representatives of each system to the satisfaction of the owner's representative.

Provide product data submittals for each of the following sections. Provide submittals as individual PDFs by section. Provide cover sheet for and naming of each submittal per http://www.klhengrs.com/the-firm/contractor-resources.html

26 05 19.00 LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES 26 05 26.00 GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

26 05 29.00 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS 26 05 33.00 RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

26 09 23.00 LIGHTING CONTROL DEVICES 26 24 16.00 PANELBOARDS

26 27 13.00 ELECTRICITY METERING 26 27 26.00 WIRING DEVICES

28 46 21.25 FIRE ALARM SYSTEM EXTENSION

26 29 13.13 ACROSS-THE-LINE MOTOR CONTROLLERS 26 51 00.00 LIGHTING

All metallic conduit, surface raceways, wireways, supports, cabinet and equipment shall be grounded per NEC.

Provide temporary lighting, power and life safety measures in areas affected by construction.

Where demolition is required, selectively demolish equipment, conduit, wiring, devices, etc. to accommodate project demolition and as required to accommodate new construction. Restore power to all downstream devices not affected by demolition. Reinstall work that is intended to be operational after demolition and construction is complete. Appropriately and legally dispose of items demolished.

Provide 600V rated conductors (#12 AWG minimum) wire with color coded insulation/jacket to identify phases, grounded conductor and grounding conductor. Insulation shall be THHN/THWN-2 unless installed underground or subject to moisture where it shall be XHHW-2. rovide copper conductors unless stated otherwise on drawings. Provide insulated equipment grounding conductor for each branch circuit. Do not share neutrals. Provide copper jumpers for final terminations of aluminum conductors where required by equipment.

Provide Type MC cable for feeders and branch circuits indoors, Schedule 40 PVC conduit for underground wiring, and EMT conduit for other applications. Conduit and cable shall be independently supported directly from structural members by approved straps, fasteners and hangers. Conduit and cables shall be neatly installed parallel and perpendicular to structural members. Noncompliant work shall be removed and replaced to satisfaction of owner. Do not support conduit or cables from roof deck or install within 4" of roof deck. Provide flexible conduit or fittings, and leave slack in cables, at all expansion joints. Provide separate raceways for normal and emergency

branches of power compliant. Install raceways and cables concealed in new construction. Provide surface raceway for existing surfaces. Recessed steel boxes shall not be less than 4" x 1-1/2" deep. No ganged boxes. Cut in box neatly. Verify all box/device mounting heights and locations in field with Owners representative.

Where technology devices shown on plan, provide 4" x 2-1/8" deep square box, with at least (1) 1" conduit (with plastic bushings or insulated throats at end fittings) to above accessible ceiling and pull string to facilitate future cable installation. Where no accessible ceiling route to technology room. Provide blank wall plates for boxes that are not immediately deviced.

Provide engraved plastic laminate naming identification for all electrical equipment and circuit identification for junction boxes and conductors. Provide accurate typed panel schedules.

Provide all necessary electrically related work as required to render all fire protection, plumbing, mechanical, electrical, technology, architectural and Owner equipment fully operational and fully compliant with manufacturer instructions and codes. Review equipment submittal data and coordinate with installing contractors to ensure the correct size, rating and quantity of conductors and overcurrent protective devices (OCP's) are provided. Provide electrical disconnect ahead of all equipment. Locate electrical equipment to maintain clearances required by respective manufacturers and by NEC 110.26. Provide boxes and conduits to controlled equipment for control and monitor devices of other trades (thermostats, other environmental control devices, alarms, etc.).

Provide exterior photocells equal to Tork 210# series for surface mount and Tork 30## for flush applications.

Provide occupancy sensor switches equal to Wattstopper DW-100-24. Provide ceiling mounted occupancy sensors equal to Wattstopper DT-300. Provide enough sensors for 100% coverage without nuisance

tripping. Provide BZ-150 power packs and other accessories for a complete system. Provide specification grade wiring devices. Provide WR type and NEMA 3R while-in-use covers for wiring devices installed outdoors and other areas exposed to water. All GFCI receptacles shall be accessible or protect the circuit with a GFCI circuit breaker. Device colors shall be ivory. Provide standard size stainless steelwall plates. Provide neutral in each switch box. Unless noted otherwise, install receptacles 18" to center and switches 46" to center. Ensure that lighting control devices are fully compatible with luminaires controlled.

Provide motor starters, manual or combination type, of sizes, ratings and control types as required per coordination schedules and per requirements of equipment that will actually be provided.

Provide luminaires and/or luminaire outlet boxes to properly support luminaire weight. All luminaires installed in suspended ceiling systems shall be independently supported directly to the building structural system. Connect all emergency lighting ahead of switching providing additional unswitched "hots" where required for operation.

Provide all work in strict compliance with all prevailing codes, standards and ordinances. Provide a complete multiplexed intelligent addressable fire alarm system throughout the building. All equipment and devices shall be UL listed and labeled. Provide the final Fire Alarm System design completed by an approved and certified Fire Alarm System contractor, who shall coordinate the final design with all national and local codes, regulations and AHJ (Authority/Authorities Having Jurisdiction). Fire alarm contractor with system manufacturer shall provide detailed shop drawings including floor plans, wiring diagrams, risers, battery calculations and product data Demonstrate testing to AHJ as required for occupancy. Provide 120V power to new battery cabinets. Furnish and wire duct smoke detectors where shown, interlock to shutdown mechanical equipment, and programmed to report as alarm or supervisory signal to the fire alarm system and monitoring central station based on prevailing codes and direction from AHJ – verify in field with AHJ). For smoke or fire/smoke dampers, provide 120V power and smoke detector interlocked to damper. Receive, install, wire, connect and test ownerfurnished digital communicator - programmed to report to the owner's UL approved Central Station monitoring agency. Install new wiring in EMT unless special permission granted from Owner to "free-air" cable using J-hooks. Provide all specified items, plus all incidentals and required items necessary to provide a complete and working system, installed in a professional manner, and in accordance with applicable codes and industry accepted "best practices", including all monitoring and alarming associated with fire suppression systems. Provide isolation modules and wiring configurations (using Class A, or Class A and B, pathways) for fault isolation so that any one fault will not cause any part of the system to go down other than the zone of the fault; provide zoning compliant with prevailing codes, with at least one zone per floor (more if areas are subdivided into multiple zones by fire and/or smoke barriers). Initiating Device, Notification Appliance and Signaling Line Circuits: Class A or Class A and B (provide Class A for circuits that provide isolation module protection for zones). Provide power-limited cables that have a temperature rating of at least 60 degrees C; provide additional marking for conductor size and temperature ratings for cables rated in excess of 60 ℃ (140 ℉). Program detailed device and room descriptions so that any trouble, supervisory or alarm condition clearly annunciates floor level, room number, room name, device, and indication of normal, alarm, trouble and supervisory status at fire alarm control panel(s), at fire alarm annunciator panel(s) and at the supervising central station. Provide documentation (hard-copy and digital) of fire alarm system documentation, and provide a single documentation cabinet at the main fire alarm control unit, including Chapter 7. Qualifications of system designers, installers, programming personnel, inspection personnel, testing personnel and maintenance personnel shall be trained and certified by manufacturer for installation of units required for this Project, and shall be qualified in compliance with requirements prevailing codes, standards and authorities. Refer to Division 26 sections for requirements associated with all electrical work not specifically defined in this section, which shall be considered additional and concurrent scope of work that is associated with work of this section. Provide submittals for equipment, materials and systems specified in this section. Include cuts, descriptive information, technical data, wiring diagrams, plan-view layouts, legend, point-to-point wiring, etc. Identify all information that is specific to this project. Submit to applicable authority or authorities having jurisdiction and obtain fire alarm permit prior to submitting to consultant for review.

Provide conventional photoelectric duct smoke detector with sampling tube. Install the duct detector in an indoor accessible location. Provide sampling tube, test station and all other required accessories.

Install all duct smoke detectors in the return air duct/plenum of the respective air handling equipment, or in multiple locations of the return duct branches if necessary to meet the minimum straight distances that are required by manufacturer of smoke duct detectors. Refer to HVAC ductwork drawings, and to HVAC installer's coordination drawings, for configurations when determining actual locations and quantities of duct smoke detectors. Where more than one detector is already indicated associated with a particular piece of air handling equipment, there are special reasons for the additional detectors (i.e. split returns, return risers serving multiple floors, etc.); coordinate all locations for same with the HVAC installer. Provide all required power and control wiring so that upon detection of smoke, the following sequence of operations occurs: An alarm signal is sent to alarm system (fire alarm system or remote test station or both as applicable); The HVAC unit shut down (including applicable dampers); Associated smoke dampers close, if present (wired to automatically re-open on duct detector reset).

Provide keyed test/monitor station (with status/alarm/trouble indicating LED's) on the ceiling or wall (flush in finished areas) beneath the duct detector at discreet but readily visible location as determined in field unless specific location is shown on drawings. Provide engraved (or approved equivalent method) plate at each remote station to read: "#### Duct Smoke Detector", where #### is the equipment identification used on drawings. Connect to fire alarm system.

If required by authority having jurisdiction, provide identified key-operated air handler reset station on the ceiling or wall (flush in finished areas) beneath the air handler at discreet but readily visible location as determined in field unless specific location is shown on drawings. Provide engraved (or approved equivalent method) plate at each reset station to read: "#### Reset Switch to reset #### after a duct smoke detection event has been cleared and the fire alarm system has been reset.", where #### is the equipment identification used on drawings. Coordinate with authority having jurisdiction for verification of, or required modification to, the language to be engraved.

Provide 20A/120VAC power as required to energize components. This requirement applies whether or not such power work is shown on the drawings. Dedicate branch circuits serving fire alarm related equipment to fire alarm related equipment only.

Properly identify system components, wiring, cabling, and terminals. Install framed instructions in a location visible from fire-alarm control unit. Provide red color on jacket of all fire alarm cables associated with the fire alarm system. Provide red-colored breaker handle and red-colored lock-on device at source circuit breakers that feed fire alarm related equipment. Provide red coloring for all fire alarm system junction boxes, along with identification.

	TECHNOLOGY LEGEND						
SYMBOL	DESCRIPTION	Ī					
TECHNOLOGY (ROUGH-IN ONLY)							
COORDINATE WITH SYSTEM INSTALLERS PRIOR TO INSTALLATION FOR LOCATIONS, HEIGHTS, CONDUIT TERMINATIONS, ETC. ALL OUTLET BOXES FOR ROUGH-IN SHALL BE MINIMUM 2-1/4" DEEP.							
■ M ■	COMMUNICATION OUTLET - VOICE, DATA, VOICE/DATA RESPECTIVELY LEFT TO RIGHT - PROVIDE 4"X4" OUTLET BOX WITH 1-GANG RING AND (1) 1" CONDUIT TO ABOVE ACCESSIBLE CEILING UNLESS NOTED OTHERWISE.						
	COORDINATE WITH S	SYMBOL DESCRIPTION TECHNOLOGY (ROUGH-IN ONLY) COORDINATE WITH SYSTEM INSTALLERS PRIOR TO INSTALLATION FOR LOCATIONS, HEIGHTS, CONDUIT TERMINATIONS, ETC. ALL OUTLET BOXES FOR ROUGH-IN SHALL BE MINIMUM 2-1/4" DEEP. COMMUNICATION OUTLET - VOICE, DATA, VOICE/DATA RESPECTIVELY LEFT TO RIGHT - PROVIDE 4"X4" OUTLET					

GENERAL ELECTRICAL NOTES

- BEFORE SUBMITTING THE BID PROPOSAL, THE CONTRACTOR SHALL VISIT THE JOB SITE AND FULLY ACQUAINT HIMSELF WITH THE JOB CONDITIONS AND VERIFY SERVICE CONNECTIONS, INCLUDING ALL NECESSARY PULL BOXES, SIZE AND NUMBER OF CONDUITS AND CONDUCTORS, SWITCH GEAR, METERING, CABLE CHARGES ETC., WHETHER SHOWN ON DRAWINGS OR NOT BUT REQUIRED BY SERVICE UTILITY CO. TO MAKE A COMPLETE AND OPERATING ELECTRICAL SERVICE WITHOUT ADDITIONAL COST TO THE TENANT. VERIFY
- SERVICES AND CHARGES WITH POWER AND TELEPHONE COMPANIES CONTRACTOR SHALL VERIFY ALL REQUIREMENTS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND SPECIFICATIONS, AND SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED BY THE CONTRACTOR FOR COMPLETE INSTALLATION. VERIFY LOCATION AND REQUIREMENTS OF MECHANICAL EQUIPMENT
- WITH CONTRACTOR, (DOOR HEATERS, UNIT HEATERS, ROOF TOP UNITS, TRANSFER FANS, ETC.). ELECTRICAL WORK AND MATERIALS SHALL COMPLY WITH LATEST 'N.E.C.' AND ALL LOCAL CODES AND ORDINANCES. IN CASES OF

CONFLICT AMONG REQUIREMENTS, THE MOST RESTRICTIVE SHALL

- ALL CONDUCTORS SHALL BE # 12 AWG COPPER. EXCEPT AS OTHERWISE NOTED OR AS REQUIRED FOR VOLTAGE DROP (SEE SPECS.). ALL CONDUIT SHALL BE 1/2" MINIMUM EXCEPT AS OTHERWISE NOTED OR AS REQUIRED FOR CONDUCTORS. TENANT'S ELECTRICAL EQUIPMENT SHALL BE RELOCATED AS REQUIRED TO MINIMIZE LENGTH OF CONDUIT/CONDUCTOR BETWEEN SERVICE DISCONNECT SWITCH AND PANEL "MDP". OBTAIN APPROVAL FROM TENANT'S ARCHITECTURAL DEPARTMENT OF PROPOSED LOCATION PRIOR TO INSTALLATION, COST CLAIMS FOR
- CONSIDERED IF PANEL RELOCATION IS NOT PROPOSED TO MINIMIZE THESE COSTS PRIOR TO INSTALLATION. TELEPHONE: FURNISH AND INSTALL ALL NECESSARY CONDUIT, DEVICE BOXES AND PLATES.

CONDUIT/CONDUCTOR IN EXCESS OF BASE BID WILL NOT BE

- NEW TELEPHONE SERVICE TO TENANT'S SPACE. NEW TELEPHONE EQUIPMENT BOARD. COORDINATE WITH LANDLORD AND TELEPHONE
- CO. AS REQUIRED FOR INSTALLING THIS SERVICE. FURNISH AND INSTALL 3/4" CONDUIT FROM EACH TELEPHONE OUTLET 1'-0" INTO CEILING CAVITY, OR UP TO JOIST WHERE NO CEILING IS INSTALLED.
- FIRE ALARM SYSTEM: a. IF THERE IS NO EXISTING FIRE ALARM SYSTEM AND THE NATIONAL, STATE, OR LOCAL CODES, OR LOCAL FIRE AUTHORITY HAVING JURISDICTION NOW REQUIRES A FIRE ALARM SYSTEM. FURNISH AND INSTALL DEVICES, COMPONENTS, ETC., AS DIRECTED BY ENFORCING AGENCY.
 - CONNECT ALARM CONTACT(S) OF SPRINKLER SYSTEM FLOW SWITCH AND SUPERVISED VALVE AND AIR DUCT DETECTORS TO FIRE ALARM SYSTEM AS REQUIRED. IF REQUIRED, CONNECT FIRE ALARM DEVICES (AIR DUCT DETECTORS, ETC.) AND ANY OTHER ASSOCIATED
 - PROVIDE LOCAL STATUS INDICATOR AND ALARM FOR ALARM DEVICES WHERE NOT CONNECTED TO FIRE ALARM SYSTEM VERIFY ALL REQUIREMENTS AND FURNISH AND INSTALL IN ACCORDANCE WITH NFPA, NATIONAL, STATE, LOCAL CODES,

REQUIREMENTS.

EXISTING CONDITIONS - GENERAL NOTES

PLANNING REFERENCE ONLY.

EXCEEDED, NOTIFY DESIGN PROFESSIONAL

WITH AUTHORITIES HAVING JURISDICTION.

CANNOT BE PERMANENTLY SEALED WITHIN FOUR HOURS.

AFTER TEMPORARY LIGHTING AND POWER IS NO LONGER NEEDED.

ROUTES. REMOVE THIS SCOPE WHEN NO LONGER NEEDED.

(IF ANY) ON THE CONSTRUCTION SCHEDULE.

SAFETY WORK WHEN NO LONGER NEEDED.

REMAIN OR TO BE RELOCATED

INTENT OF DOCUMENTS: EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE BASED ON VISUAL FIELD

IN PROJECT DOCUMENTS, OR AS DIRECTED BY OWNER'S REPRESENTATIVE IN FIELD.

NFPA 70 OR IS NOT CONSISTENT WITH EXISTING CONDITIONS, MODIFY TO COMPLY

ELECTRICAL WORK IS SHOWN TO A VERY LIMITED EXTENT ON THE DRAWINGS AND IS SHOWN FOR GENERAL

DBSERVATIONS AND THE REVIEW OF PREVIOUS DRAWINGS THAT MAY NOT HAVE BEEN CERTIFIED "AS-BUILTS". IT IS

NOT THE INTENT OF THE ELECTRICAL DOCUMENTS THAT EXISTING CONDITIONS BE ACCURATELY SHOWN. EXISTING

PRE-BID SURVEY: PERFORM A DETAILED PRE-BID WALK-THROUGH FIELD INSPECTION AND SURVEY TO REVIEW THE

REUSE OF REMOVED MATERIALS: DO NOT REUSE REMOVED ELECTRICAL MATERIALS UNLESS SPECIFICALLY INDICATED IN PROJECT DOCUMENTS. EXISTING WIRING SYSTEMS MAY BE UTILIZED ONLY TO THE EXTENT INDICATED

EXISTING POWER DISTRIBUTION EQUIPMENT: WHERE MODIFICATIONS ARE MADE TO EXISTING POWER DISTRIBUTION

ADDING COMPONENTS TO EXISTING POWER DISTRIBUTION EQUIPMENT, PROVIDE FULL SIZE (NO SPLIT OR TANDEM

FIELD-INSTALLED HANDLE TIES) IN THE SAME GUTTER FOR MULTI-POLE DEVICES. PROVIDE SWITCHING DUTY (SWD).

HACR AND HID RATINGS WHERE APPLICABLE FOR LOADS. PROVIDE HANDLE LOCK-ON DEVICES FOR EMERGENCY AND

EXISTING BRANCH CIRCUITS: MAINTAIN, AND RECONNECT IF REQUIRED, BRANCH CIRCUITS THAT ARE EXISTING TO REMAIN. UNLESS NOTED OTHERWISE, ALL CIRCUIT DESIGNATIONS SHOWN ON THE DRAWINGS INDICATE NEW CIRCUIT

ASSIGNMENTS, NOT EXISTING. WHERE COLOR CODING OF BRANCH CIRCUIT CONDUCTORS DOES NOT COMPLY WITH

ADDED LOADS TO EXISTING CIRCUITS: IN CASES WHERE NEW LOADS ARE INDICATED TO BE CONNECTED TO EXISTING CIRCUITS WITH EXISTING LOADS, METER THE EXISTING CIRCUIT IN ADVANCE AND ENSURE THE EXISTING PLUS ADDED

REASSIGNMENT OF EXISTING CIRCUITS: IN CASES WHERE EXISTING CIRCUITS ARE REUSED (BASED ON INFORMATION SHOWN ON DRAWINGS OR BASED ON FIELD CONDITIONS) BUT MUST BE CONNECTED TO BREAKERS OTHER THAN

THEIR ORIGINAL BREAKER, MODIFY COLOR-CODING AS REQUIRED IF THE NEW BREAKER ASSIGNMENT IS CONNECTED

O A DIFFERENT LINE/PHASE THAN THE ORIGINAL ONE. USE MEANS AND METHODS COMPLIANT WITH NFPA 70 AND

CTIVITIES OR WHERE SPECIFICALLY SHOWN ON THE DRAWINGS, TEMPORARILY REMOVE. STORE IN PROTECTED

LOCATION ON SITE, AND REINSTALL CONFLICTING ELECTRICAL EQUIPMENT, LUMINAIRES, OR DEVICES THAT ARE TO

BARRIERS AFTER DEMOLITION OPERATIONS ARE COMPLETE. PREVENT AIRBORNE DUST AND PARTICULATE MATTER

OPERATING HVAC SYSTEMS, MEET WITH OWNER AND HVAC INSTALLER TO DETERMINE SPECIAL INDOOR AIR QUALITY

PENETRATIONS: MAKE REQUIRED ELECTRICAL OPENINGS THROUGH WALLS, FLOORS, ETC. IMMEDIATELY PRIOR TO

PRE-EXISTING CODE VIOLATIONS: INSPECT EXISTING ELECTRICAL WORK IN AREAS ACCESSED UNDER THIS PROJECT

D BRING INTO COMPLIANCE WITH NFPA 70. THIS APPLIES ONLY TO THE EXTENT THAT SUCH WORK IS UNCOVERED

THAT IT APPLIES TO PRE-EXISTING GENERAL INSTALLATION METHODS SUCH AS MISSING JUNCTION BOX PLATE, OPEN

EXTENSIVE CODE OR SAFETY VIOLATIONS ARE DISCOVERED, IMMEDIATELY BRING THEM TO THE ATTENTION OF THE

OWNER'S REPRESENTATIVE (DETAILED IN WRITING) ALONG WITH PROPOSED COST FOR CORRECTIONS AND IMPACT

TEMPORARY LIGHTING AND POWER: COMPLY WITH NFPA 70 (INCLUDING ARTICLE 590), NFPA 70E AND ALL OTHER

OR RENOVATION SCOPE PROVIDE GECLEROTECTION FOR ALL WORK COORDINATE WITH GENERAL CONTRACTOR

REPRESENTATIVE, TEMPORARY ELECTRICAL SERVICE(S) MAY BE DERIVED FROM EXISTING BUILDING ENERGIZED

SERVICE. PROVIDE OVERCURRENT PROTECTION, DISCONNECTS, CABLES, CONDUCTORS, RACEWAY, ETC.

AND OTHER TRADES, AND PROVIDE ANY ADDITIONAL TEMPORARY ELECTRICAL NEEDS THAT ARE REQUIRED. FULLY DEMOLISH TEMPORARY ELECTRIC BY END OF PROJECT. UPON RECEIVING WRITTEN PERMISSION FROM OWNER'S

ACCORDINGLY. PROVIDE TEMPORARY SERVICE FROM UTILITY IF PERMISSION TO USE EXISTING BUILDING POWER IS

ASSOCIATED FEES FOR INSPECTIONS, CONNECTIONS, ETC., AND PAY FOR UTILITY ELECTRIC USAGE/CONSUMPTION

. INTERIM LIFE-SAFETY PROVISIONS: PROVIDE INTERIM FIRE ALARM AND CODE MINIMUM LIGHTING IN DEMOLITION AND CONSTRUCTION AREAS. PROVIDE TEMPORARY PLASTIC COVERS, OBTAINED FROM SMOKE DETECTOR

DETECTOR MANUFACTURER, OVER EXISTING SMOKE DETECTORS WITHIN PROJECT AREA, AND IN ADJACENT AREAS

THAT ARE EXPOSED TO CONSTRUCTION-RELATED DUST OR AIRBORNE PARTICULATES. REMOVE ALL TEMPORARY LIFE

MANUFACTURER OR OBTAINED FROM A THIRD PARTY AND SPECIFICALLY APPROVED FOR SUCH USE BY SMOKE

INTERIM EGRESS PATH PROVISIONS: PROVIDE TEMPORARY UL 924 COMPLIANT EXIT AND/OR EGRESS LIGHTING

ALONG EGRESS ROUTES THAT MUST REMAIN ACCESSIBLE DURING CONSTRUCTION. PROVIDE TEMPORARY FIRE

ALARM SYSTEM PULL STATIONS AND AUDIO/VISUAL ALARM NOTIFICATION DEVICES ALONG ALL AFFECTED EGRESS

COSTS. RESTORE ASSOCIATED SITE AND BUILDING MATERIALS TO THEIR PRE-CONSTRUCTION STATE AND CONDITION

NOT GRANTED BY OWNER'S REPRESENTATIVE: ARRANGE WITH LOCAL UTILITY FOR TEMPORARY SERVICE AND PAY

PREVAILING CODES. PROVIDE SUFFICIENT LIGHTING AND POWER CENTERS THROUGHOUT INTERIOR OF NEW WORK

STALLATION OF WORK. PROPERLY AND PERMANENTLY SEAL ELECTRICAL OPENINGS IMMEDIATELY AFTER

INSTALLATION OF WORK. PROVIDE TEMPORARY SEALS FOR APPLICATIONS WHERE PENETRATIONS ARE MADE BUT

IN THE IMMEDIATE PROJECT AREAS AFFECTED BY CONSTRUCTION ACTIVITIES. AND ONLY TO THE LIMITED EXTENT

(IAQ) REQUIREMENTS RELATED TO ELECTRICAL THAT MAY APPLY TO THIS PROJECT. COOPERATE FULLY WITH HVAC

RESULTING FROM ELECTRICAL WORK FROM ENTERING OCCUPIED SPACES, AND FROM ENTERING AIR INTAKES TO

E SPREAD OF DUST AND DIRT TO ADJACENT FINISHED AREAS AND OTHER SYSTEM COMPONENTS

ELECTRICAL WORK TO REMAIN OR BE RELOCATED: IF REQUIRED TO ACCOMMODATE CONSTRUCTION RELATED

PROTECTIVE BARRIERS: PROVIDE AND MAINTAIN TEMPORARY PARTITIONS AND DUST BARRIERS ADEQUATE TO

PROTECT ADJACENT INSTALLATIONS DURING CUTTING AND PATCHING OPERATIONS. REMOVE PROTECTION AND

IAQ REQUIREMENTS THAT AFFECT ELECTRICAL WORK AND ARE AFFECTED BY ELECTRICAL WORK.

LOAD DOES NOT EXCEED 80 PERCENT OF THE SOURCE CIRCUIT BREAKER AMPERE RATING. IF THAT LOAD IS

MANUFACTURER, MODEL/SERIES, SHORT CIRCUIT CURRENT (SCCR/AIC) RATINGS. PROVIDE COMMON TRIPS (NO

DEVICES) OVERCURRENT PROTECTION DEVICES (OCPs) TO MATCH THOSE ALREADY IN PLACE, INCLUDING

ELY RE-TYPE PANELBOARD DIRECTORIES USING ACCURATE "AS-BUILT" INFORMATION. WHEN

TING STRUCTURES AND PREMISES, TO ACCURATELY DETERMINE EXISTING CONDITIONS, AND TO DETERMINE SCOPE OF REQUIRED ELECTRICALLY RELATED WORK. INCLUDE APPLICABLE ACCESSIBLE CEILING CAVITY AREAS IN

LOCAL FIRE AUTHORITY HAVING JURISDICTION AND LANDLORD

EQUIPMENT TO DEDICATED 120V CIRCUIT.

	OTNIBOL	BEGOTTI FIGH	OTMBOL		DECOLUI	
		LIGHTING AND LIGHTING CONTROLS		SINGLE LIN	E DIAGR	₹AM
	• ◆ ₽¤₽ <mark>@</mark> @@	LUMINAIRE (REFER TO THE LUMINAIRE SCHEDULE) NOTE THAT OTHER SHAPES MAY ALSO BE USED TO REPRESENT LUMINAIRES	1 400 T	HEAVY DUTY DISCONNECT SWITCH (NC SIZES MAY BE SHOWN ONLY IN SCHEDU	N-FUSED)(LEFT)) (FUSED
JTLET E.	• HD	SHADED LUMINAIRES DENOTE THOSE CONNECTED TO EMERGENCY OR STANDBY POWER AS APPLICABLE (UNSWITCHED LUMINAIRES ARE EGRESS LIGHTS AND/OR NIGHT-LIGHTS THAT OPERATE 24/7)	PANEL NAME	ELECTRICAL PANELBOARD OR DISTRIBU	TION BOARD	
	WALL 10 S S S S S S S S S S S S S S S S S S	SINGLE / DOUBLE SIDED EXIT SIGN CONNECT AHEAD OF SWITCHING & CONFIGURE ARROWS TO INDICATE DIRECTION OF EGRESS TRAVEL	\sim	SURGE PROTECTIVE DEVICE		
	···· = • •	EMERGENCY LIGHTING UNIT WITH 90-MINUTE BATTERY BACKUP AND ASSOCIATED REMOTE HEADS WHERE APPLICABLE. CONNECT TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCHING		WIRE / CABLE	/ RACE	WAY
	A NL a EL	A = LUMINAIRE TYPE, NL = NIGHT-LIGHT (UNSWITCHED), a = SWITCHING DESIGNATION, EL = EGRESS LUMINAIRE (ILLUMINATES PATH OF EGRESS, ON ALL TIMES SPACE IS OCCUPIED)	▶ LPA-1,3	BRANCH CIRCUIT HOME RUN WITH PANE	L NAME AND CIF	RCUIT NUI
	\$	LIGHTING SWITCH (KEYS: 2 = 2-POLE, 3 = 3-WAY, 4 = 4-WAY, D=DIMMER, K=KEYED, LV = LOW VOLTAGE M = MOMENTARY-CONTACT 1PDT W/CENTER-REST, P = SWITCH W/PILOT LIGHT, T = TIMER SWITCH)		CABLING / RACEWAY INSTALLED CONCE	ALED IN WALLS	OR ABOV
	 ■ TYPE	CEILING-MOUNTED OCCUPANCY SENSOR. DUAL TECHNOLOGY UNLESS OTHERWISE NOTED BY TYPE. TYPE "IR" = INFRARED, TYPE "US" = ULTRASONIC		CABLING / RACEWAY INSTALLED BELOW	FLOOR OR GRA	ADE
	TYPE#	WALL-MOUNTED OCCUPANCY SENSOR SWITCH. DUAL TECHNOLOGY UNLESS OTHERWISE NOTED BY TYPE. TYPE "IR"=INFRARED, TYPE "US"=ULTRASONIC, "V"=VACANCY SENSOR, "#" = CONTROLLED CIRCUITS.		CABLE TRAY		
	LCP# LCP#	LIGHTING CONTROL PANEL	o	JUNCTION BOX ABOVE ACCESSIBLE CEIL JUNCTION BOX AT OVERHEAD STRUCTU	 .ING RE IN AREAS WI	ITH NO CE
	RE	CEPTACLES AND MISCELLANEOUS OUTLETS	J	FLUSH MOUNTED JUNCTION BOX OR PUI	_L BOX AS APPLI	ICABLE F
	Ф Ф 🖶	SINGLE ("SIMPLEX"), DUPLEX, AND DOUBLE DUPLEX ("QUAD") RECEPTACLE RESPECTIVELY	P	FLUSH MOUNTED PULL BOX		
	ф ф	GFI / GFCI RECEPTACLES		SINGLE-SERVICE SURFACE RACEWAY (C	NE COMPARTME	ENT - POV
		ISOLATED GROUND RECEPTACLES		MULTI-SERVICE SURFACE RACEWAY (TW	O COMPARTME	ENT - POW
	0 +	FULL SWITCHED RECEPTACLES	•	SERVICE POLE - POWER AND TECHNOLO	OGY WHERE APP	PLICABLE
	● ●	CEILING MOUNTED RECEPTACLES	UPO _{DN}	CONDUIT UP OR DOWN		
	ф ^Н ф ^С	RECEPTACLE ATTRIBUTES 42" = MOUNT RECEPTACLE AT THIS HEIGHT ABOVE GRADE / FINISHED FLOOR C = INSTALL ABOVE COUNTER AND BACKSPLASH		ABBREV	IATIONS	;
	^т ф ^{42"} ф ^w ф ^L	H = INSTALL RECEPTACLE HORIZONTALLY L = LIT (PROVIDE ILLUMINATED FACE OR INDICATOR LIGHT TO INDICATE THERE IS POWER TO RECEPTACLE) SW = SPLIT WIRED T = TAMPER-RESISTANT W = WEATHER PROOF WHILE IN USE COVER AND WEATHER RESISTANT RECEPTACLE DOOR OPERATORS/DEVICES	42" DISTAN PAVEMI AF AMP FR BREAKE	AME OF FUSED SWITCH OR CIRCUIT	IG LR LI LSI LSIG	ISO LEC LON LON
		ELECTRIC DOOR OPERATOR MANUAL (LEFT) AUTOMATIC (RIGHT)	AIC AMPS IN AMP TR BREAKE	NTERRUPTING CURRENT IP OF FUSED SWITCH OR CIRCUIT	MCB MFR MLO	MAI MAI MAI
	•	PUSH PLATE FOR MANUAL CONTROL OF ELECTRIC DOOR OPERATOR		IG AUTOMATION SYSTEM	MTS MW	IAM OIM
	⊏⊄	DOOR BELL WITH TRANSFORMER & PUSHBUTTONS	APPLIC/		NIC	NO ⁻
		MISCELLANEOUS		「BREAKER ER HEIGHT OR SPECIAL HEIGHT DEVICE ASHER	NTS OFE	NO ⁻ OW
	•	INDICATES DIRECT CONNECTION TO EQUIPMENT	E EMERG	ENCY	os	OP
	\$ \$ ^{MS} \$ ^{MSR}	MOTOR RATED TOGGLE SWITCH, MANUAL STARTER WITH PILOT LIGHT, AND MANUAL STARTER WITH PILOT LIGHT WITH EXTERNAL RELAY FOR CONTROL OR MONITORING RESPECTIVELY - ALL MAY BE KEYED "K"	EMS ENERGY	JNDER DIVISION 26 Y MANAGEMENT SYSTEM ENCY POWER OFF	P.C.	WO

ELECTRIC LEGEND

LIGHT WITH EXTERNAL RELAY FOR CONTROL OR MONITORING RESPECTIV

DIMENSIONS MAY VARY / FLUSH OR SURFACE MOUNTED AS INDICATED)

LOW VOLTAGE THERMOSTAT (LEFT) AND TEMPERATURE SENSOR (RIGHT)

LINE VOLTAGE THERMOSTAT (LEFT) AND REVERSE ACTING THERMOSTAT

HEAVY DUTY DISCONNECT SWITCH (NON-FUSED) (LEFT)

HEAVY DUTY DISCONNECT SWITCH (FUSED) (RIGHT)

ELECTRICAL PANELBOARD OR DISTRIBUTION BOARD

HUMIDITY STAT (LEFT) AND HUMIDITY SENSOR (RIGHT)

PRESSURE STAT (LEFT) AND PRESSURE SENSOR (RIGHT)

PLYWOOD EQUIPMENT BOARD

OIL FILLED TRANSFORMER

DESCRIPTION

SYMBOL

TS TS

L R

H HS

P PS

THAT OPERATE 24/7)									
IRECTION OF EGRESS TRAVEL	\sim	SURGE PROTECTIVE DEVICE							
SOCIATED REMOTE HEADS SWITCHING		WIRE / CABLE	E / RACE\	WAY					
DESIGNATION, SPACE IS OCCUPIED)	► LPA-1,3	BRANCH CIRCUIT HOME RUN WITH PANE	L NAME AND CIRC	CUIT NUMBER(S)					
(=KEYED, LV = LOW VOLTAGE LIGHT, T = TIMER SWITCH)		_ CABLING / RACEWAY INSTALLED CONCE	ALED IN WALLS O	R ABOVE CEILING					
OTHERWISE NOTED BY TYPE.		CABLING / RACEWAY INSTALLED BELOW	FLOOR OR GRAD	E					
LESS OTHERWISE NOTED BY TYPE. " = CONTROLLED CIRCUITS.		CABLE TRAY							
	0	JUNCTION BOX ABOVE ACCESSIBLE CEIL JUNCTION BOX AT OVERHEAD STRUCTU		H NO CEILING					
UTLETS	IJ	FLUSH MOUNTED JUNCTION BOX OR PUL	LL BOX AS APPLIC	ABLE FOR APPLICATION					
LE RESPECTIVELY	P	FLUSH MOUNTED PULL BOX	FLUSH MOUNTED PULL BOX						
		SINGLE-SERVICE SURFACE RACEWAY (C	DNE COMPARTMEN	NT - POWER)					
		MULTI-SERVICE SURFACE RACEWAY (TW	VO COMPARTMEN	T - POWER AND TECHNOLOGY)					
	•	SERVICE POLE - POWER AND TECHNOLO	OGY WHERE APPL	ICABLE.					
	UPO DN	CONDUIT UP OR DOWN							
OOR		ABBREV	IATIONS						
THERE IS POWER TO RECEPTACLE)	42" DISTA	CATE FIXTURE, EQUIPMENT OR DEVICE ANCE ABOVE FINISHED FLOOR / GRADE / MENT	IG LR LI LSI	ISOLATED GROUND LEGALLY REQUIRED STANDBY LONG - INSTANTANEOUS LONG - SHORT - INSTANTANEOUS					
	AIC AMPS AT AMP BREA ATS AUTC BAS BUILE C.T.C. WORI APPL C/B CIRCI CH COUN DW DISHV	FAULT CIRCUIT INTERRUPTER SINTERRUPTING CURRENT TRIP OF FUSED SWITCH OR CIRCUIT	LSIG MCB MFR MLO MTS MW NIC NTS OFE OS	LONG - SHORT - INSTANTANEOUS - GROUND FAULT MAIN CIRCUIT BREAKER MANUFACTURER MAIN LUGS ONLY MANUAL TRANSFER SWITCH MICROWAVE OVEN NOT IN CONTRACT (SHOWN FOR REFERENCE ONLY) NOT TO SCALE OWNER-FURNISHED EQUIPMENT - INSTALLED AND WIRED BY E.C. OPTIONAL STANDBY					
AND MANUAL STARTER WITH PILOT IVELY - ALL MAY BE KEYED "K"	E.C. WORI EMS ENER EPO EMEF ER EQUII ERM ENER ESP EMEF ETR EXIST	K UNDER DIVISION 26 GY MANAGEMENT SYSTEM RGENCY POWER OFF PMENT ROOM RGY REDUCTION MAINTENANCE SWITCH RGENCY STANDBY RATING TING TO REMAIN TRIC WATER COOLER	P.C. S.C. SCCR SPD ST TAAC	WORK UNDER DIVISION 22 WORK UNDER DIVISION 21 SHORT CIRCUIT CURRENT RATING SURGE PROTECTIVE DEVICE SHUNT TRIP TO ABOVE ACCESSIBLE CEILING					
	WIRE FIBO FURN WIRE FP RECE DISPL FWE FURN	IISHED BY OTHERS - INSTALLED AND D BY E.C. IISHED AND INSTALLED BY OTHERS - D BY E.C. PTACLE TO BE USED FOR A FLAT PANEL LAY. IISHED WITH EQUIPMENT BY OTHERS - ALLED AND WIRED BY E.C.	TR TTB TYP UCR UL U.L.S.E. UNO	TAMPER RESISTANT TELEPHONE TERMINAL BOARD TYPICAL UNDER COUNTER REFRIGERATOR UNDERWRITER'S LABORATORY LISTED FOR SERVICE ENTRANCE UNLESS NOTED OR INDICATED OTHERWISE OF THE PROPERTY OF THE					
Γ) Τ (RIGHT)	GFEP GROU	BAGE DISPOSAL JND FAULT EQUIPMENT PROTECTION JND FAULT CIRCUIT INTERRUPTER DEVICE JND	VFD / VSD VIF VM VP	VARIABLE FREQUENCY / SPEED DRIVE VERIFY IN FIELD VENDING MACHINE VANDAL PROOF					
		K UNDER DIVISION 23 D - OFF - AUTO" SWITCH	W / WP WG WR	WEATHERPROOF WIRE GUARD WEATHER RESISTANT					
	-	PLAN-VIEW AND GF	RAPHIC LI	INE TYPES					
	WORK SHOWN BOLD-C (UNLESS OTHERWISE I	CONTINUOUS INDICATES NEW WORK NDICATED)							
	WORK SHOWN FADED (UNLESS OTHERWISE I	INDICATES EXISTING WORK TO REMAIN OR NI NDICATED)	EW WORK BY OTH	HERS AS APPLICABLE					

ELECTRIC LEGEND

DESCRIPTION

CH (NON-FUSED)(LEFT) (FUSED)(RIGHT)

SYMBOL

ELECTRIC DESIGN CRITERIA

APPLICABLE BUILDING CODES

2015 WISCONSIN BUILDING CODE (BASED ON THE INTERNATIONAL BUILDING CODE) 2017 NFPA 70 - 2017 NATIONAL ELÈCTRICAL CODE (NEC) 2016 NFPA 72 - 2013 NATIONAL FIRE ALARM AND SIGNALING CODE 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

WORK SHOWN BOLD-DASHED INDICATES SELECTIVE DEMOLITION WORK

TESTING/COMMISSIONING FOR LIGHTING CONTROLS

LIGHTING CONTROL DEVICES AND SYSTEMS SHALL BE TESTED TO ENSURE THE HARDWARE AND SOFTWARE IS CALIBRATED, PROGRAMMED, AND IN PROPER WORKING ORDER. INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED INSTALLATION CERTIFICATES AND SHALL PROVIDE MANUALS FOR LIGHTING CONTROL DEVICES TO OWNER PRIOR TO PROJECT CLOSE-OUT. INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACTING WITH APPROPRIATE PARTIES TO ARRANGE FOR TESTING/COMMISSIONING OF THE LIGHTING CONTROL SYSTEMS AND SHALL BE RESPONSIBLE FOR ENSURING ALL REQUIRED FUNCTIONAL TESTING FORMS ARE COMPLETED AND SUBMITTED TO THE OWNER AND LOCAL AHJ PRIOR TO PROJECT

UTILITY COORDINATION - CONTRACTOR RESPONSIBILITY

OBTAIN AND COMPLY WITH ALL UTILITY INSTALLATION DETAILS AND STANDARDS.

CONTACT 811 "CALL BEFORE YOU DIG" SERVICE PRIOR TO COMMENCING WITH ANY UNDERGROUND WORK.

COORDINATE UTILITY SERVICE WORK CONTAINED WITHIN THIS DRAWING SET WITH RESPECTIVE LOCAL UTILITY COMPANY. UTILITY COORDINATION HAS NOT BEEN PERFORMED AS PART OF THIS DRAWING SET. FAULT CURRENT VALUES SHOWN ON THE DRAWINGS ARE ASSUMED VALUES BASED ON SERVICE SIZE, AND EXPECTED UTILITY TRANSFORMER SIZE. VERIFY THE AVAILABLE FAULT CURRENT AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

MC - METAL CLAD CABLE MI - MINERAL INSULATED CABLE HMC - HEALTHCARE METAL CLAD CABLE USE - UNDERGROUND SERVICE ENTRANCE CABLE SE - SERVICE ENTRANCE CABLE UF - UNDERGROUND FEEDER NM - NON-METALLIC SHEATHED CABLE RMC - RIGID METAL CONDUIT RNC - RIGID NON-METALLIC CONDUIT RTRC - REINFORCED THERMOSETTING RESIN CONDUIT LIM - LINE ISOLATION MONITOR

(UNLESS OTHERWISE INDICATED)

ARC - ALUMINUM RIGID CONDUIT EMT - ELECTRIC METALLIC TUBING ENT - ELECTRIC NON-METALLIC TUBING FMC - FLEXIBLE METALLIC CONDUIT GRC - GALVANIZED RIGID STEEL CONDUIT HDPE - HIGH DENSITY POLYETHYLENE CONDUIT IMC - INTERMEDIATE METAL CONDUIT LFMC - LIQUID-TIGHT FLEXIBILE METALLIC CONDUIT LFNC - LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT SCH 40 PVC - SCHEDULE 40 POLYVINYL CHLORIDE CONDUIT SCH 80 PVC - SCHEDULE 80 POLYVINYL CHLORIDE CONDUIT

CONDUIT APPLICATION	CONDUCTOR TYPE	RACEWAY TYPE	RACEWAY AND CONDUCTOR NOTES
FIRE ALARM			
EXISTING HOLLOW PARTITIONS	NON-PLENUM RATED	EMT	
CONCEALED	NON-PLENUM RATED	EMT	
EXPOSED	NON-PLENUM RATED	EMT	
POWER - INDOOR			
EXISTING HOLLOW PARTITIONS	THHN	MC	
CONCEALED	THHN	MC	
VERTICAL RISERS FROM BELOW GRADE INCLUDING ELBOW	XHHW-2	RMC (GRC)	
CONNECTION TO SYSTEMS FURNITURE	THHN	LFMC	
LUMINAIRE WHIPS IN ACCESSIBLE CEILING, 72" MAX	THHN	MC	
CONNECTION TO VIBRATING EQUIPMENT, 72" MAX	THHN	LFMC	
EXPOSED	THHN	EMT	
UNDERGROUND	XHHW-2	RNC (SCH 40 PVC)	
POWER - OUTDOOR			
EXPOSED	XHHW-2	RMC (GRC)	
EXPOSED TO DIRECT SUNLIGHT, ROOF	XHHW-2	RMC (GRC)	
TEOLINOLOOV			
TECHNOLOGY	NOV DI ENIMA DATED		
EXISTING HOLLOW PARTITIONS	NON-PLENUM RATED	EMT	
CONCEALED, ABOVE INACCESSIBLE CEILINGS	NON-PLENUM RATED	EMT	
CONCEALED, ABOVE ACCESSIBLE CEILINGS	PLENUM RATED	J-HOOKS	

EXISTING CONDITIONS - DEMOLITION NOTES

DEFINITION OF DEMOLITION: WHERE THE TERM "DEMOLITION" IS USED IN ELECTRICAL DOCUMENTS, INTERPRET IT TO MEAN "DEMOLITION" OR "SELECTIVE DEMOLITION" AS APPLICABLE FOR THE RESPECTIVE SCOPE OF WORK. WHERE THE TERM "DEMOLISH", "REMOVE" OR SIMILAR TERMS ARE USED IN ELECTRICAL DOCUMENTS, INTERPRET TO MEAN "DISCONNECT, REMOVE, DISPOSE OF, AND REMOVE ALL RELATED ELECTRICAL CONDUIT, RACEWAYS, WIRING, CABLES, BOXES, SUPPORTS, ETC." GENERAL ACCOMMODATIONS: PROVIDE ELECTRICAL DEMOLITION WORK AS REQUIRED TO ACCOMMODATE PROJECT DEMOLITION AND AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION. DISCONNECT AND REMOVE WORK TO BE

PROJECT UNLESS SPECIFICALLY NOTED OTHERWISE. COORDINATE PHASING OF WORK CAREFULLY WITH OWNER PRIOR TO BEGINNING ELECTRICAL DEMOLITION WORK. REMOVAL OF ABANDONED WORK: REMOVE ACCESSIBLE ABANDONED, INACTIVE AND OBSOLETE RACEWAY SYSTEMS. QUIPMENT, LUMINAIRES, DEVICES, CONDUIT, WIRING, CABLES, BOXES, SUPPORTS, CONTROLS, ETC. ABANDONED RACEWAYS EMBEDDED IN FLOORS. WALLS, AND CEILINGS MAY REMAIN IF SUCH MATERIALS DO NOT INTERFERE WITH NEW INSTALLATIONS. THIS APPLIES FOR ALL ELECTRICAL WORK, AND ALL COMMUNICATIONS AND INFORMATION FECHNOLOGY TYPE WORK, INCLUDING ALL SUCH WORK ABOVE CEILINGS, ETC. REMOVE RELATED ABANDONED UNUSED RACEWAY BACK TO THE NEAREST RESPECTIVE "UPSTREAM" JUNCTION BOX THAT REMAINS ACTIVE EVEN IF

OUTSIDE OF THE CONFINES OF THE PROJECT AREA. REMOVE ABANDONED UNUSED WIRING AND CABLES BACK TO

RESPECTIVE SOURCES SOURCE EVEN IF SOURCES ARE OUTSIDE THE CONFINES OF THE PROJECT AREA.

ABANDONED, AND AS REQUIRED TO ACCOMMODATE WORK OF OTHER TRADES, IN AREAS AFFECTED BY THIS

RE-USE OF EXISTING CONDUIT: EXISTING BRANCH CIRCUIT AND SYSTEMS CONDUIT, NOT CONFLICTING WITH NEW RUCTION AND NOT CONFLICTING WITH OVERHEAD OR CEILING CAVITY REQUIREMENTS, MAY BE RE-USED AT THE DISCRETION OF THE ELECTRICAL INSTALLER IF IT COMPLIES WITH THESE CONTRACT DOCUMENTS AFTER ALL ABANDONED CONDUCTORS AND CABLES HAVE BEEN REMOVED FROM THEM. DO NOT EXCEED NFPA 70 REQUIRED CONDUIT FILL AND DO NOT INSTALL WIRING FED FROM DIFFERENT SOURCES IN COMMON CONDU MODIFICATIONS TO ACCOMMODATE NEW WORK: REMOVE AND RELOCATE EQUIPMENT, LUMINAIRES, DEVICES, ONDUIT. RACEWAYS. WIRING. CABLES. BOXES. SUPPORTS. ETC. THAT CONFLICT WITH CONSTRUCTION RELATED WORK OF ALL TRADES AS NECESSARY TO ACCOMMODATE NEW WORK OF RESPECTIVE TRADES. REWORK AND EXTEND RACEWAY AND WIRING AS REQUIRED TO ACCOMMODATE NEW OR RELOCATED ELECTRICAL WORK.

CUTTING AND PATCHING: PERFORM CUTTING AND PATCHING REQUIRED FOR DEMOLITION, RESTORED TO MATCH SURROUNDING REMAINING SURFACES, INCLUDING FIRE/SMOKE RATINGS. LUMINAIRES: FOR ALL EXISTING LUMINAIRES WHICH ARE SCHEDULED FOR REUSE. REMOVE FROM EXISTING CFILINGS DURING DEMOLITION; PROTECT DURING CONSTRUCTION; CLEAN, SERVICE (IF REQUIRED), RE-LAMP (WITH LAMPS TO MATCH BUILDING STANDARD) AND REINSTALL AT LOCATIONS INDICATED. FOR ALL EXISTING LUMINAIRES WHICH ARE SCHEDULED TO BE REMOVED AND TURNED OVER TO OWNER, THE LUMINAIRES SHALL BE DISCONNECTED,

CAREFULLY REMOVED AND TURNED OVER TO OWNER. TRANSFER SUCH LUMINAIRES TO STORAGE AREA AS

INDICATED ON DRAWINGS. MODIFY AND EXTEND RELATED EXISTING WIRING IN CONDUIT ACCORDINGLY.

MAINTAIN (OR RECONNECT IF APPLICABLE) REMAINING WIRING. PROVIDE ELECTRICAL DISCONNECTIONS, AND

RECONNECTIONS WHERE APPLICABLE, FOR EQUIPMENT TO BE REMOVED (OR RELOCATED) BY OTHER TRADES.

DISPOSAL OF MATERIALS: REFER TO OWNER'S REPRESENTATIVE FOR DISPOSAL INSTRUCTIONS FOR ABANDONED RICAL MATERIALS REMOVED DURING DEMOLITION AND THEREAFTER. NEATLY STORE ELECTRICAL MATERIALS THAT THE OWNER ELECTS TO RETAIN AT THE SITE AS DESIGNATED BY THE OWNER'S REPRESENTATIVE. LEGALLY DISPOSE OF MATERIALS THAT THE OWNER ELECTS NOT TO RETAIN. DISCONNECT AND REMOVE ELECTRICAL MATERIALS DESIGNATED FOR SALVAGE (REMOVAL AND REUSE, OR FOR TURNING OVER TO OWNER) UNDAMAGED. DISCONNECT AND REMOVE WIRING AND "WHIPS" FROM EQUIPMENT TERMINAL POINTS. CAREFULLY TRANSPORT SALVAGED ELECTRICAL MATERIALS TO A PROTECTED ON-SITE STORAGE LOCATION AS DIRECTED IN FIELD AND NEATLY STORE THEM GROUPED BY SYSTEM TYPE. CLEANING OF REUSED COMPONENTS: CLEAN COMPONENTS TO BE REUSED INSIDE AND OUT, AND REINSTALL WHERE ELECTRIC CONDUIT AND WIRE MATERIAL SCHEDULE

CONDUIT APPLICATION	CONDUCTOR TYPE	RACEWAY TYPE	RACEWAY AND CONDUCTOR NOTES
FIRE ALARM			
EXISTING HOLLOW PARTITIONS	NON-PLENUM RATED	EMT	
CONCEALED	NON-PLENUM RATED	EMT	
EXPOSED	NON-PLENUM RATED	EMT	
POWER - INDOOR			
EXISTING HOLLOW PARTITIONS	THHN	MC	
CONCEALED	THHN	MC	
VERTICAL RISERS FROM BELOW GRADE INCLUDING ELBOW	XHHW-2	RMC (GRC)	
CONNECTION TO SYSTEMS FURNITURE	THHN	LFMC	
LUMINAIRE WHIPS IN ACCESSIBLE CEILING, 72" MAX	THHN	MC	
CONNECTION TO VIBRATING EQUIPMENT, 72" MAX	THHN	LFMC	
EXPOSED	THHN	EMT	
UNDERGROUND	XHHW-2	RNC (SCH 40 PVC)	
POWER - OUTDOOR			
EXPOSED	XHHW-2	RMC (GRC)	
EXPOSED TO DIRECT SUNLIGHT, ROOF	XHHW-2	RMC (GRC)	
TECHNOLOGY			
EXISTING HOLLOW PARTITIONS	NON-PLENUM RATED	EMT	
CONCEALED, ABOVE INACCESSIBLE CEILINGS	NON-PLENUM RATED	EMT	
CONCEALED, ABOVE ACCESSIBLE CEILINGS	PLENUM RATED	J-HOOKS	

SHEET

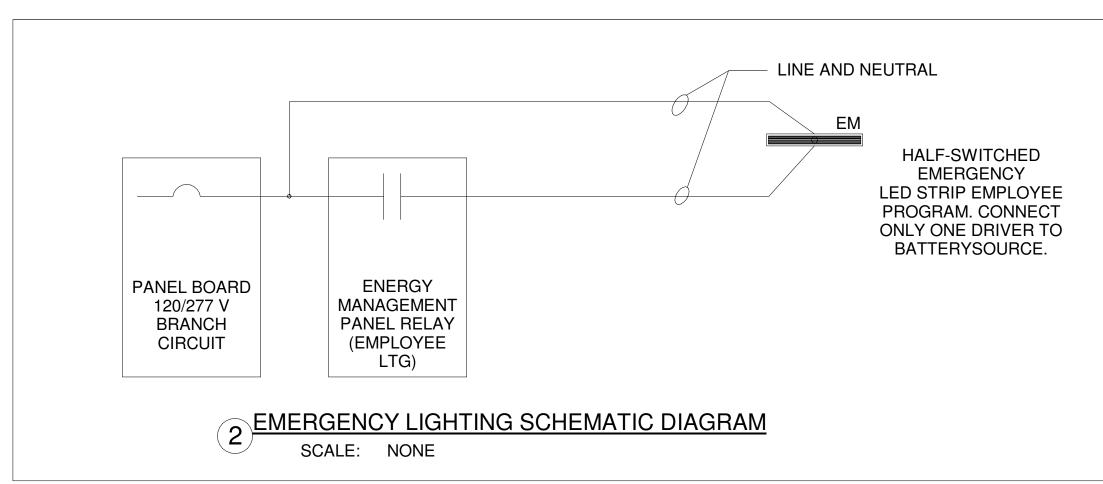
PROFESSIONAL OF RECORD

	DOLLAR	TREE EI	_ECTRIC	LUMINA	IRE SCH	HEDULE	
TYPE	DESCRIPTION	VOLTAGE	LOAD	LAMP QTY	LAMP BASE	HOUSING / MOUNTING	COMMENTS
F4	4'-0" STRIP LIGHT	120 V	36 VA	(2) 18W LED	FURNISHED W/ FIXTURE	CEILING/SURFACE	
F4-EMB	4'-0" STRIP LIGHT EMERGENCY LIGHT WITH INTEGRAL BATTERY	120 V	36 VA	(2) 18W LED	FURNISHED W/ FIXTURE	CEILING/SURFACE	EMERGENCY LIGHT LUMEN LEVEL IS 1200. PROVIDE WITH 90 MINUTE BATTERY BACK-UP.
F8	8'-0" STRIP LIGHT	120 V	36 VA	(2) 18W LED	FURNISHED W/ FIXTURE	CEILING/SURFACE	
F8-EMB	8'-0" STRIP LIGHT EMERGENCY LIGHT WITH INTEGRAL BATTERY	120 V	36 VA	(2) 18W LED	FURNISHED W/ FIXTURE	CEILING/SURFACE	EMERGENCY LIGHT LUMEN LEVEL IS 1200. PROVIDE WITH 90 MINUTE BATTERY BACK-UP.
W	EMERGENCY LIGHT	120 V	3 VA	(2) ADJUSTABLE HEADS WITH (3) LEDR-16 MR LAMPS EACH. 3.5 VA TOTAL	FURNISHED W/ FIXTURE	WALL OR CEILING SURFACE	EMERGENCY LIGHT WITH 90 MINUTE REMOTE BATTERY. MOUNT BATTERY INSIDE.
X	EXIT LIGHT SINGLE OR DOUBLE FACE	120 V	3 VA	LED LAMP ARRAY FURNISHED W/ FIXTURE, 3VA	FURNISHED W/ FIXTURE	CEILING	L.E.D. SINGLE/DOUBLE FACE EXIT SIGN W/EMERG. BAT.

ENERGY MANAGEMENT SYSTEM (EMS) SCHEDULE 1) PROVIDE A MINIMUM 10% SPARE RELAY OR DIMMER (OR BOTH IF LCP CONTAINS BOTH) CAPACITY PER LIGHTING CONTROL PANEL WITH NO LESS THAN 1 SPARE RELAY AND/OR DIMMER SPACE. 2) THIS SCHEDULE IS INTENDED ONLY TO CONVEY MINIMUM QUANTITIES OF LIGHTING CONTROL PANELS AND POLE SPACE WITHIN THOSE PANELS. PROVIDE ADDITIONAL PANELS AND/OR POLE SPACE AS REQUIRED BY CHOSEN LIGHTING CONTROL SYSTEM MANUFACTURER FOR THE QUANTITY OF CONTROLLED CIRCUITS/ZONES SHOWN IN THIS SCHEDULE.

LIGHTING COI	NTROL ZONING SCHED	ULE:		
(EMPLOYEE) -	EMPLOYEE WORK LIG	HTING		
` ,	- CUSTOMER LIGHTING SIGN AND SITE LIGHTIN			
SUPPLY	CIRCUIT NUMBER	NUMBER OF POLES	CURRENT	LOAD NAME
CUSTOMER				
L	3	1	5 A	LIGHTING 101,101
L	7	1	5 A	LIGHTING SALES A 101
L	11	1	5 A	(#) LIGHTING 101,101
L	13	1	6 A	(#) LIGHTING 101,101
EMPLOYEE				
L	1	1	5 A	LIGHTING SALES B 101
L	5	1	5 A	LIGHTING SALES A 101
L	9	1	2 A	(#) LIGHTING SALES A 101
EXTERIOR				
L	25	1	10 A	(#) EXTERIOR SIGN

	LIGHTI	NG DEVICE SCHEDULE
FAMILY AND TYPE	SWITCH TAG	COMMENTS
Lighting Switches: Switch	a	MOMENTARY SWITCH. CONFIGURE LIGHTING IN THIS AREA TO BE MAN ON AND AUTO OFF.
Occ Sensor - Wall: Switched	b	REFER TO RESTROOM DETAIL ON SHEET E002 FOR MORE INFORMAT SET TO AUTO ON/AUTO OFF WITH A TIME-OUT SETTING OF 5 MINUTES.
Occ Sensor - Ceiling: Occ Sensor - Ceiling	С	DUAL TECHNOLOGY OCCUPANY SENSOR. MOUNT AT SAME HEIGHT LUMINAIRES IN THIS ROOM. SET TI DELAY TO 20 MINUTES.
Lighting Switches: Switch	EMS	ENERGY MANAGEMENT SYSTEM



LIGHT FIXTURE SCHEDULE **GENERAL NOTES**

DESIGNATED FIXTURE SHALL HAVE LED LAMPS 48" LED T8 LAMPS WITH 4 WIRE HARNESS AND DISCONNECT. CUT INSULATION (WHEN BATTERY TYPE IS USED) OR PROVIDE SHIELD AROUND FIXTURE (WHEN BLOWN-IN IS USED) TO KEEP INSULATION A MINIMUM OF 3" AWAY FROM RECESSED FIXTURE. ATTACH FIXTURE TO T-BAR PER NEC 410.36 WHERE APPLICABLE. PROVIDE "CADDY" CLIP #CAD-IDS WHERE REQUIRED BY LOCAL AUTHORITY AND SEISMIC INSTALLATION REQUIREMENTS.

FIXTURE PROVIDED WITH DUAL VOLTAGE 120/277V POWER SUPPLY. VERIFY VOLTAGE FOR EACH FIXTURE LOCATION. LIGHT FIXTURES DENOTED BY "NL" SHALL REMAIN ON DURING NON-BUSINESSWORKING HOURS. WITH NO FINISHED CEILING, LIGHT FIXTURES IN THE SALES AREA SHALL BE SUSPENDED @ 12'-0" AFF AND LIGHT FIXTURES IN THE STOCKROOM AREA SHALL BE SUSPENDED @ 10'-0" AFF.

EXTERIOR FIXTURES SHALL BE SUITABLE FOR WET/DAMP LOCATION AND COLD WEATHER OPERATION. LIGHT FIXTURES ARE TO BE PROVIDED BY DOLLAR TREE VENDOR UNLESS OTHERWISE NOTED.

LIGHTING GENERAL NOTES

LIGHTING CIRCUIT HOMERUNS SHALL BE RUN IN A COMMON CONDUIT TO THE EMS PANEL. PROVIDE APPROPRIATELY SIZED CONDUIT AND JUNCTION BOXES. PROVIDE DEDICATED NEUTRAL FOR EACH LIGHTING CIRCUIT. PROVIDE HANDLE TIES IN ACCORDANCE WITH NEC 210.4B. ALL LIGHTING CIRCUITS SHALL BE ROUTED THROUGH THE LIGHTING CONTROL PANEL AS SHOWN.

EXIT FIXTURES SHALL BE INSTALLED AND CIRCUITED PER LOCAL AND LATEST NATIONAL ELECTRICAL CODES. ALL EMERGENCY AND EXIT FIXTURES SHALL BE DUAL-VOLTAGE (120/277 VOLT INPUT). CONNECT TO THE LINE SIDE OF LOCAL SWITCHING AND CONTACTOR OR CONNECT TO DESIGNATED NIGHT LIGHT CIRCUIT. IN STOCKROOM

INSTALL WALL MOUNTED TYPE ON WALL CENTERED 1'0" ABOVE THE

DOOR OPENING. IN SALES AREA, MOUNT ON CEILING 1'0" FROM THE

"EMB" EMERGENCY LIGHTING: FIXTURE EQUIPPED WITH 90 MINUTE INTEGRAL BATTERY. CONNECT TO BOTH SWITCHED AND

UNSWITCHED HOT UNLESS INDICATED AS NL. MAKE ALL FINAL CONNECTIONS AS REQUIRED FOR A FULLY COMPLETE AND OPERABLE SYSTEM.

KEYED NOTES

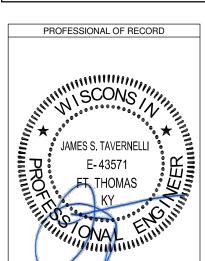
CONTRACTOR SHALL SUSPEND LIGHTING IN THIS AREA FROM THE BOTTOM OF EXISTING STRUCTURE. SUSPEND LIGHTING AT 10'-0" CLEAR AFF. PROVIDE MATERIALS AS REQUIRED. FIXTURES SHALL BE SEISMICALLY RESTRAINED WHERE REQUIRED BY LOCAL CODE AUTHORITY.

MOUNT EMERGENCY FIXTURE ABOVE DOOR 10'-0" A.F.G. OR SURFACE MOUNTED TO CANOPY (WHERE APPLICABLE). COORDINATE WITH EXISTING CONDITIONS AWNINGS AND/OR SIGNAGE. LOCATE REMOTE BATTERY INSIDE ON CEILING.

EXTERIOR LIGHTING TO REMAIN. VERIFY IF EXISTING LIGHTING IS CONNECTED TO TENANT PANEL OR LANDLORD PANEL. IF CONNECTED TO TENANT PANEL, RE-ROUTE EXISTING EXTERIOR LIGHTING THROUGH NEW EMS FOR CONTROLS. DUPLEX OUTLET MOUNTED IN CEILING TILE. COORDINATE LOCATIONS

WITH TENANT PRIOR TO ROUGH-IN.





SHEET

E-101

KLH PROJECT

1/8" = 1'-0"

F8 L - 15

F8 L - 15

F8 L - 15

TOILET TOILET

F8 L - 15



<u>F8 L - 7 F8 L - 7 F4 L - 7 F8 L - 7 F8</u>

- 13 F8-EMB L - 5 F8 L - 5 F8 L - 5 F8-EMB L - 5 F8 L - 5 F8 L - 5 F8 L - 5 F8-EMB L - 5 L

F8-EMB L - 5 F8 L - 5 F8 L - 5 F8-EMB L - 5 F8 L - 5 F8 L - 5 F8-EMB L - 5

F8-EMB L-1 | F8 L-1 | F8 L-1 | F8-EMB L-1 | F8 L-1 | F8 L-1 | F8 L-1 | F8-EMB L-1

F8-EMB L - 1 F8 L - 1 F8 L - 1 F8-EMB L - 1 F8 L - 1 F8 L - 1 F8-EMB L - 1

(L04) (D) L- 17

- 13 F8-EMB L - 9 F8 L - 9 F8 L - 9 F8-EMB L - 9 F8 L - 9 F4-EMB

DOLLA	R TREE HVAC ELE	CTRI		COORD	INATI	ON S	CHE	EDU	ILE		OTOP C	ONTROL T	VDE					CONTE	ROL TYF	DE		
DC LOC MC MOT SD DUC CN CON TS TOG C/B H.A.G FUSE FUS FLA OPE MCA MINI	AL DISCONNECT FOR CONTROL (POWER) ST SMOKE DETECTOR STROLS GLE SWITCH C.R. CIRCUIT BREAKER AT SOURCE PAN E AT LOCAL DISCONNECT (VERIFY FIELD FRATING FULL LOAD AMPS MUM CIRCUIT AMPACITY RD AND PLUG CONNECTION		EC EX FC GC HC MFF PC OR	ELECTRICA EXISTING FIRE PROTE GENERAL C HVAC CONT R MANUFACT	URER CONTRACTO	ITRACTOR PR				C: M M M	S CC M G M S M FD V	COMBINAT MOTOR CO MAGNETIC MANUAL ST MARIABLE I MANUAL ST	ION STAR ONTROL S STARTER TARTER FREQUEN	ARTER OR CONTACT CY DRIVE // CONTROL RE				TC CPT BAS LOW LINE RLINE MAN FA CO INT	TIM CC BL LC LIM RE MA FIR	MECLOCK ONTROL POW JILDING AUTO OW VOLTAGE NE VOLTAGE	OMATION SYS CONTROLS CONTROLS NG LINE VOL	STEM .TAGE THERMOSTAT
EQUIPMENT MAR	RK DESCRIPTION	VOLTS (V)	PHASE	BHP (HP) HP (HP)	HTG (kW)	WATTS FL	.A (A) N	ICA (A)	OCP (A)	DC FURI	N DC IN	ST DC WI	RE MC T	PE MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INS	ST CN WIRE	SD TYPE	AVAILABLE FAULT CURRENT
AC-1	AIR CURTAIN	120	1				16	3		EC	EC	EC	MG	MFR	MFR	MFR	LINE	HC	EC	EC		1284
EF-1	CENTRIFUGAL ROOF VENTILATOR	120	1		7	71				EC	EC	EC	MG	MFR	MFR	MFR	TC	EC	EC	EC		1557
RTU-1	PACKAGED OUTDOOR ROOFTOP UNIT	208	3				53	3 6	60	EC	EC	EC	MG	MFR	MFR	MFR	BAS	OR	OR	OR		3539
RTU-2	PACKAGED OUTDOOR ROOFTOP UNIT	208	3				60) 7	70	EC	EC	EC	MG	MFR	MFR	MFR	BAS	OR	OR	OR		2801
RTU-3	PACKAGED OUTDOOR ROOFTOP UNIT	208	3				21	3	30	EC	EC	EC	MG	MFR	MFR	MFR	BAS	OR	OR	OR		3575
WH-1	WALL AND CEILING HEATER	120	1		1.5		12	2.5		EC	EC	EC					INT	MFR	MFR	MFR		2345
WH-2	WALL AND CEILING HEATER	120	1		1.5		12	2.5		EC	EC	EC					INT	MFR	MFR	MFR		2015

DOLLAR 7	TREE PLUMBING ELE	CTRIC	CAL	COORE	TANIC	ΓΟΝ	SCHE	DULE	<u> </u>														
ABBREVIATIONS		CONTRA	CTOR TY	PE				М	OTOR CO	NTROL TYP	PΕ						CONTR	ROL TYPE					
MC MOTOR C SD DUCT SM CN CONTROL TS TOGGLE C/B H.A.C.R. C FUSE FUSE AT FLA OPERATI		EC EX FC GC HC MFR PC OR	EXIST FIRE F GENE HVAC MANU PLUM	TRICAL CONTR/ ING PROTECTION CONTRACTOR CONTRACTOR FACTURER BING CONTRACER ER OR OTHERS	ONTRACTO TOR CTOR	R		M M VI	CC	MOTOR C MAGNETION MANUAL S VARIABLE MANUAL S	STARTER FREQUEN	TARTER R OR CONTACT CY DRIVE I/ CONTROL REL/	AY				TC CPT BAS LOW LINE RLINE MAN FA CO INT	BUILDI LOW V LINE V REVEF MANU/ FIRE A CARBO	ROL POWER NG AUTOM OLTAGE CO OLTAGE CO RSE ACTINO AL	ATION SYS DNTROLS DNTROLS & LINE VOLT DE SENSO	STEM	≀MOSTAT	
EQUIPMENT MARK	DESCRIPTION	VOLTS (V)	PHASE	EMERGENCY	BHP (HP)	HP (HP)	HTG KW (kW)	WATTS (\	W) FLA (A	A) MCA (A) OCP (A)	DC TYPE	DC FURN	I DC INST	DC WIRE	MC TYPE	MC FURI	N MC INST	MC WIRE	CN TYPE	CN FURN	I CN INST	CN WI
CP1	HOT WATER RECIRCULATING PUMP	120	1			1/40			.52				EC	EC	EC	MG	MFR	MFR	MFR	LINE	PC	PC	PC
WH1	DOMESTIC ELECTRIC TANK-TYPE WATER HEATER	120	1				2						EC	EC	EC					INT	MFR	MFR	MFR

	DOLLA	R TREE	ELECTI	RIC REF	RIGEF	RATION SCHEDULE
FIXTURE ID	DESCRIPTION	LOAD	POLES	VOLTAGE	OCP	COMMENTS
FREEZER	WALK-IN FREEZER	5719 VA	2	208 V	30	PROVIDE 4"X4" JUNCTION BOX AT 120" AFF WITH 10' WHIP FOR CONNECTION TO EQUIPMENT. NOTE ALL WALK-IN CIRCUITS TO TERMINATE AT THIS JUNCTION BOX. PROVIDE LOCAL DISCONNECT FOR FREEZER REFRIGERATION EQUIPMENT. PROVIDE NEUTRAL FOR BRANCH CIRCUIT. THE MANUFACTURER'S REPRESENTATIVE WILL MAKE THE FINAL CONNECTION TO THE EQUIPMENT DISCONNECTS AT TIME OF START-UP.
COOLER	WALK-IN COOLER	1548 VA	1	120 V	20	REFER TO FREEZER COMMENTS.
2DRC	REACH-IN 2-DR COOLER	3391 VA	2	208 V	20	PROVIDE NEUTRAL FOR BRANCH CIRCUIT. VENDOR PROVIDES DISCONNECT FOR UNIT. PROVIDE JUNCTION BOX AT 100" AFF. PROVIDE 15' LONG WHIP FROM BOX FOR CONNECTION TO EQUIPMENT. THE MANUFACTURER'S REPRESENTATIVE WILL MAKE THE FINAL CONNECTION TO THE INTEGRAL EQUIPMENT DISCONNECTS AT TIME OF START-UP.
3DRC	REACH-IN 3-DR COOLER	3432 VA	2	208 V	20	PROVIDE NEUTRAL FOR BRANCH CIRCUIT. VENDOR PROVIDES DISCONNECT FOR UNIT. PROVIDE JUNCTION BOX AT 100" AFF. PROVIDE 15' LONG WHIP FROM BOX FOR CONNECTION TO EQUIPMENT. THE MANUFACTURER'S REPRESENTATIVE WILL MAKE THE FINAL CONNECTION TO THE INTEGRAL EQUIPMENT DISCONNECTS AT TIME OF START-UP.
4DRF	REACH-IN 4-DR FREEZER	6198 VA	2	208 V	30	PROVIDE NEUTRAL FOR BRANCH CIRCUIT. VENDOR PROVIDES DISCONNECT FOR UNIT. PROVIDE JUNCTION BOX AT 100" AFF. PROVIDE 15' LONG WHIP FROM BOX FOR CONNECTION TO EQUIPMENT. THE MANUFACTURER'S REPRESENTATIVE WILL MAKE THE FINAL CONNECTION TO THE INTEGRAL EQUIPMENT DISCONNECTS AT TIME OF START-UP.

	ELE	ECTF	RIC E	QU	IPMEI	NT S	SUF	PL	_Y	SC	HE	DL	JLE	
EQUIPMENT MARK	SUPPLY FROM	СКТ	EMERG.	LOAD (kVA)	AVAILABLE FAULT CURRENT	VOLTS	POLE	HTG KW	WATT	HP	FLA (A)	MCA (A)	RQD OCP (A)	BREAKEI RATING (A
AC-1	Р	4		1.73	1284	120 V	1					16		20
CP1	Р	8		0.06	1781	120 V	1			1/40	.52			20
EF-1	Р	2		0.07	1557	120 V	1		71					20
RTU-1	MDP	13,15,17		17.18	3539	208 V	3					53	60	60
RTU-2	MDP	19,21,23		19.45	2801	208 V	3					60	70	70
RTU-3	MDP	25,27,29		6.81	3575	208 V	3					21	30	30
WH1	Р	6		2.00	3029	120 V	1	2						25
WH-1	Р	10		1.50	2345	120 V	1	1.5				12.5		20
WH-2	Р	12		1.50	2015	120 V	1	1.5				12.5		20

GENERAL ELECTRICAL NOTES

- BEFORE SUBMITTING THE BID PROPOSAL, THE CONTRACTOR SHALL VISIT THE JOB SITE AND FULLY ACQUAINT HIMSELF WITH THE JOB CONDITIONS AND VERIFY SERVICE CONNECTIONS, INCLUDING ALL NECESSARY PULL BOXES, SIZE AND NUMBER OF CONDUITS AND CONDUCTORS, SWITCH GEAR, METERING, CABLE CHARGES ETC., WHETHER SHOWN ON DRAWINGS OR NOT BUT REQUIRED BY SERVICE UTILITY CO. TO MAKE A COMPLETE AND OPERATING ELECTRICAL SERVICE WITHOUT ADDITIONAL COST TO THE TENANT. VERIFY SERVICES AND CHARGES WITH POWER AND TELEPHONE COMPANIES.
- CONTRACTOR SHALL VERIFY ALL REQUIREMENTS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND SPECIFICATIONS, AND SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED BY THE CONTRACTOR FOR COMPLETE INSTALLATION. VERIFY LOCATION AND REQUIREMENTS OF MECHANICAL EQUIPMENT
- WITH CONTRACTOR, (DOOR HEATERS, UNIT HEATERS, ROOF TOP UNITS, TRANSFER FANS, ETC.). ELECTRICAL WORK AND MATERIALS SHALL COMPLY WITH LATEST
- 'N.E.C.' AND ALL LOCAL CODES AND ORDINANCES. IN CASES OF CONFLICT AMONG REQUIREMENTS, THE MOST RESTRICTIVE SHALL ALL CONDUCTORS SHALL BE # 12 AWG COPPER. EXCEPT AS
- SPECS.). ALL CONDUIT SHALL BE 1/2" MINIMUM EXCEPT AS OTHERWISE NOTED OR AS REQUIRED FOR CONDUCTORS. TENANT'S ELECTRICAL EQUIPMENT SHALL BE RELOCATED AS REQUIRED TO MINIMIZE LENGTH OF CONDUIT/CONDUCTOR BETWEEN SERVICE DISCONNECT SWITCH AND PANEL "MDP". OBTAIN APPROVAL FROM TENANT'S ARCHITECTURAL DEPARTMENT OF PROPOSED LOCATION PRIOR TO INSTALLATION, COST CLAIMS FOR CONDUIT/CONDUCTOR IN EXCESS OF BASE BID WILL NOT BE

OTHERWISE NOTED OR AS REQUIRED FOR VOLTAGE DROP (SEE

- CONSIDERED IF PANEL RELOCATION IS NOT PROPOSED TO MINIMIZE THESE COSTS PRIOR TO INSTALLATION. TELEPHONE: FURNISH AND INSTALL ALL NECESSARY CONDUIT, DEVICE BOXES AND PLATES.
- NEW TELEPHONE SERVICE TO TENANT'S SPACE. NEW TELEPHONE EQUIPMENT BOARD. COORDINATE WITH LANDLORD AND TELEPHONE CO. AS REQUIRED FOR INSTALLING THIS SERVICE. FURNISH AND INSTALL 3/4" CONDUIT FROM EACH TELEPHONE OUTLET 1'-0" INTO CEILING CAVITY, OR UP TO JOIST WHERE NO CEILING IS FIRE ALARM SYSTEM:
- a. IF THERE IS NO EXISTING FIRE ALARM SYSTEM AND THE NATIONAL, STATE, OR LOCAL CODES, OR LOCAL FIRE AUTHORITY HAVING JURISDICTION NOW REQUIRES A FIRE ALARM SYSTEM. FURNISH AND INSTALL DEVICES, COMPONENTS, ETC., AS DIRECTED BY ENFORCING AGENCY. CONNECT ALARM CONTACT(S) OF SPRINKLER SYSTEM
- FLOW SWITCH AND SUPERVISED VALVE AND AIR DUCT DETECTORS TO FIRE ALARM SYSTEM AS REQUIRED. IF REQUIRED, CONNECT FIRE ALARM DEVICES (AIR DUCT DETECTORS, ETC.) AND ANY OTHER ASSOCIATED EQUIPMENT TO DEDICATED 120V CIRCUIT. PROVIDE LOCAL STATUS INDICATOR AND ALARM FOR ALARM DEVICES WHERE NOT CONNECTED TO FIRE
- ALARM SYSTEM. VERIFY ALL REQUIREMENTS AND FURNISH AND INSTALL IN ACCORDANCE WITH NFPA, NATIONAL, STATE, LOCAL CODES, LOCAL FIRE AUTHORITY HAVING JURISDICTION AND LANDLORD REQUIREMENTS.

GENERAL POWER PLAN NOTES

- EQUIPMENT COORDINATION SCHEDULES: REFER TO EQUIPMENT COORDINATION SCHEDULES FOR REQUIREMENTS ASSOCIATED WITH EQUIPMENT CIRCUITING, CONNECTIONS, ANCILLARY DEVICES AND EQUIPMENT, ETC. COORDINATE LOCATIONS AND REQUIREMENTS FOR ALL EQUIPMENT WITH RESPECTIVE EQUIPMENT SUPPLIERS AND INSTALLERS PRIOR TO ORDERING ANY RELATED MATERIALS OR COMMENCING WITH ANY RELATED ROUGH-IN WORK.
- TECHNOLOGY SYSTEMS: PROVIDE RACEWAY AND PATHWAY SYSTEMS FOR ALL TECHNOLOGY WORK. INCLUDE OUTLET BOXES, CONDUITS, RACEWAYS, J-HOOKS, CABLE TRAY, ETC. AS REQUIRED FOR COMPLETE OPERATIONAL SYSTEMS. COORDINATÉ ALL RELATED WORK (INCLUDING ASSOCIATED POWER) WITH OWNER (INCLUDING OWNER'S PROJECT MANAGER), FIELD CONDITIONS, FURNITURE INSTALLER(S). TECHNOLOGY INSTALLER(S) AND WORK OF OTHER TRADES AND SUPPLIERS/INSTALLERS AS APPLICABLE. TERMINATE ALL CONDUITS FROM OUTLET BOXES TO NEAREST ACCESSIBLE CEILING CAVITY, OR TO OVERHEAD STRUCTURAL SPACE FOR AREAS WITH NO CEILINGS. PROVIDE CONDUITS WITH SWEEP BENDS, PULL STRINGS, PLASTIC BUSHINGS AND IDENTIFICATION AT OVERHEAD ENDS. PROVIDE BLANK WALL PLATES TO MATCH WIRING DEVICE WALL PLATES. . <u>STOREFRONT WINDOWS</u>: INSTALL RECEPTACLE(S) INDICATED ABOVE STOREFRONT WINDOWS WITHIN 18 INCHES OF THE TOP OF STOREFRONT WINDOWS, AND INSTALL COMPLIANT WITH NEC, INCLUDING ARTICLE 210.62.
- . <u>GFCI PROTECTION</u>: PROVIDE GROUND FAULT CIRCUIT INTERRUPTER (GFCI)
 PROTECTION FOR PERSONNEL FOR ALL SINGLE-PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 50 AMPERES OR LESS AND THREE-PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 100 AMPERES OR LESS INSTALLED IN/FOR THE FOLLOWING LOCATIONS/APPLICATIONS: BATHROOMS, KITCHENS, ROOFTOPS, OUTDOORS, SINKS (WHERE RECEPTACLES ARE INSTALLED WITHIN 6 FEET FROM THE TOP INSIDE EDGE OF THE BOWL OF THE SINK), INDOOR WET LOCATIONS. VENDING MACHINES AND AREAS, ELECTRIC WATER COOLERS, LOCKER ROOMS WITH ASSOCIATED SHOWERING FACILITIES, AND GARAGES. SERVICE BAYS, AND SIMILAR AREAS OTHER THAN VEHICLE EXHIBITION HALLS AND SHOWROOMS. PROVIDE GFCI RECEPTACLES AT LOCATIONS THAT ARE AND WILL REMAIN READILY ACCESSIBLE. ELSEWHERE PROVIDE GFCI PROTECTION AT THE RESPECTIVE SOURCE CIRCUIT BREAKER. TRIM AND DOOR FINISHES: PROVIDE FACTORY-PAINTED OR FIELD-PAINTED TRIMS
- IND DOORS TO MATCH WALL FINISH COLOR FOR ALL PANELBOARDS AND SIMILAR FOUIPMENT THAT ARE INSTALLED RECESSED IN FINISHED WALLS. IF FIFL D-PAINTED. PAINT ALL SIDES AND EDGES WITH TWO COATS OF PAINT BEFORE INSTALLATION, AND LET DRY BEFORE INSTALLING THEM. SIGNAGE: COORDINATE ALL SIGNAGE REQUIREMENTS WITH OWNER (INCLUDING DWNER'S PROJECT MANAGER), SIGNAGE SUPPLIERS AND INSTALLERS, AND ARCHITECT TO DETERMINE SPECIFICS REGARDING LOCATIONS, POWER, CONTROL, AND OTHER PERTINENT INFORMATION. PROVIDE POWER (ON DEDICATED CIRCUIT(S)) FOR SIGNAGE REQUIRING POWER CONNECTIONS. PROVIDE PHOTOCELL AND TIME-BASED CONTROL. CONFIGURED AS DIRECTED BY OWNER. PROVIDE ALL ELECTRICAL WORK, INCLUDING DISCONNECTING MEANS, COMPLIANT WITH ARTICLE 600 OF NFPA 70. COMPLY WITH LANDLORD REQUIREMENTS WHERE APPLICABLE.

KEYED NOTES

SIGNAL SYSTEMS: REAR DOOR BELL AND PUSH-BUTTON: FURNISH AND INSTALL AN EDWARDS #55-6G5, 24V AC "ADAPT-A-BELL" ABOVE CEILING AND A #852 WEATHERPROOF PUSH-BUTTON IN FLUSH (NEW CONST.) SWITCH BOX AT TENANT SPACE BACK DOOR. CONNECT SO THAT BELL SOUNDS WHEN PUSH-BUTTON IS PRESSED. PROVIDE ROUGH IN FOR TENANT STOREFRONT SIGN(S) WHERE

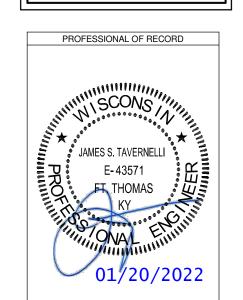
APPLICABLE. FINAL CONNECTIONS WILL BE FURNISHED AND INSTALLED BY TENANT'S SIGN CONTRACTOR. FURNISH AND INSTALL DISCONNECT AND JUNCTION BOXES W/6' WHIP ON INTERIOR WALL ABOVE ACCESSIBLE CEILING. WHERE INSTALLED OUTDOORS PROVIDE WEATHERPROOF, INSULATED JUNCTION BOX AND WEATHERPROOF DISCONNECT. CONTRACTOR SHALL COORDINATE FINAL EXTERIOR JUNCTION BOX LOCATION WITH SIGN VENDOR. JUNCTION BOXES NEED TO BE WITHIN 5 FEET OF SIGN FOR SIGN VENDOR TO MAKE FINAL ELECTRICAL CONNECTION. IF STORE HAS ADDITIONAL SIDE OR REAR SIGNAGE THE CONTRACTOR SHALL COORDINATE WITH THE SIGN VENDOR FOR ANY ADDITIONAL EXTERIOR SIGNAGE AND THE ASSOCIATED ELECTRICAL REQUIREMENTS. AFTER THE ELECTRICAL DESIGN IS COMPLETE, IT MAY BE DETERMINED THAT CERTAIN SITES REQUIRE SIDE OR REAR SIGNAGE. MOUNT ON FLOOR AND MAKE MC CONNECTION TO DUPLEX RECEPTACLE INSTALLED IN FIXTURE KICK PLATE. ASSEMBLE JUNCTION BOX AROUND INSTALLED FIXTURE.

CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH LANDLORD AND/OR LOCAL UTILITY COMPANY REQUIREMENTS FOR BRINGING A COMPLETE TELEPHONE SERVICE INTO TENANT SPACE. DO NOT CONNECT "ISOLATED" GROUND WIRE TO RACEWAY OR BOX. E06 CONDUIT AND BOX SHALL BE METAL AND METAL-TO-METAL CONNECTORS SHALL BE USED (NO FLEX CONDUIT) TO ESTABLISH GROUND PATH FOR BOX AND RACEWAY. DO NOT RUN ANY CIRCUITS WITH CASH REGISTER OR COMPUTER (IG) CIRCUITS. CASH REGISTER DATA SYSTEM CABLE SHALL BE FURNISHED AND INSTALLED BY OTHERS. THREE-CHANNEL TELEPOWER POLE WITH DIVIDER FOR TELEPHONE/DATA, ISOLATED POWER, AND NORMAL POWER. INSTALL TELEPOWER POLE AS SHOWN AT CHECKOUT AREA, WHEN COUNTER IS SET. POWER POLE WILL BE FURNISHED WITH (1) ISOLATED GROUND TWIST LOCK RECEPTACLE (CONNECT ISOLATED GROUND CIRCUIT TO THIS RECEPTACLE) AND (1) DUPLEX RECEPTACLE (CONNECT (1) NORMAL POWER CIRCUIT TÓ THIS RECEPTACLE). CONTRACTOR SHALL REFER TO EMS SHEETS FOR INSTRUCTION AND

RESPONSIBILITIES FOR INSTALLING TENANT SUPPLIED ENERGY MANAGEMENT SYSTEM PRIOR TO BIDDING AND INSTALLATION. POWER POLES ARE OWNER FURNISHED AND CONTRACTOR INSTALLED. PROVIDE ALL NECESSARY MATERIAL TO PROVIDE A COMPLETE INSTALLATION. CONTRACTOR SHALL REFER TO FINAL FIXTURE PLAN FOR SNACK ZONE, CHECKOUT AND ANY OTHER FIXTURE THAT REQUIRES POWER PRIOR TO INSTALLING ELECTRICAL AND DATA.

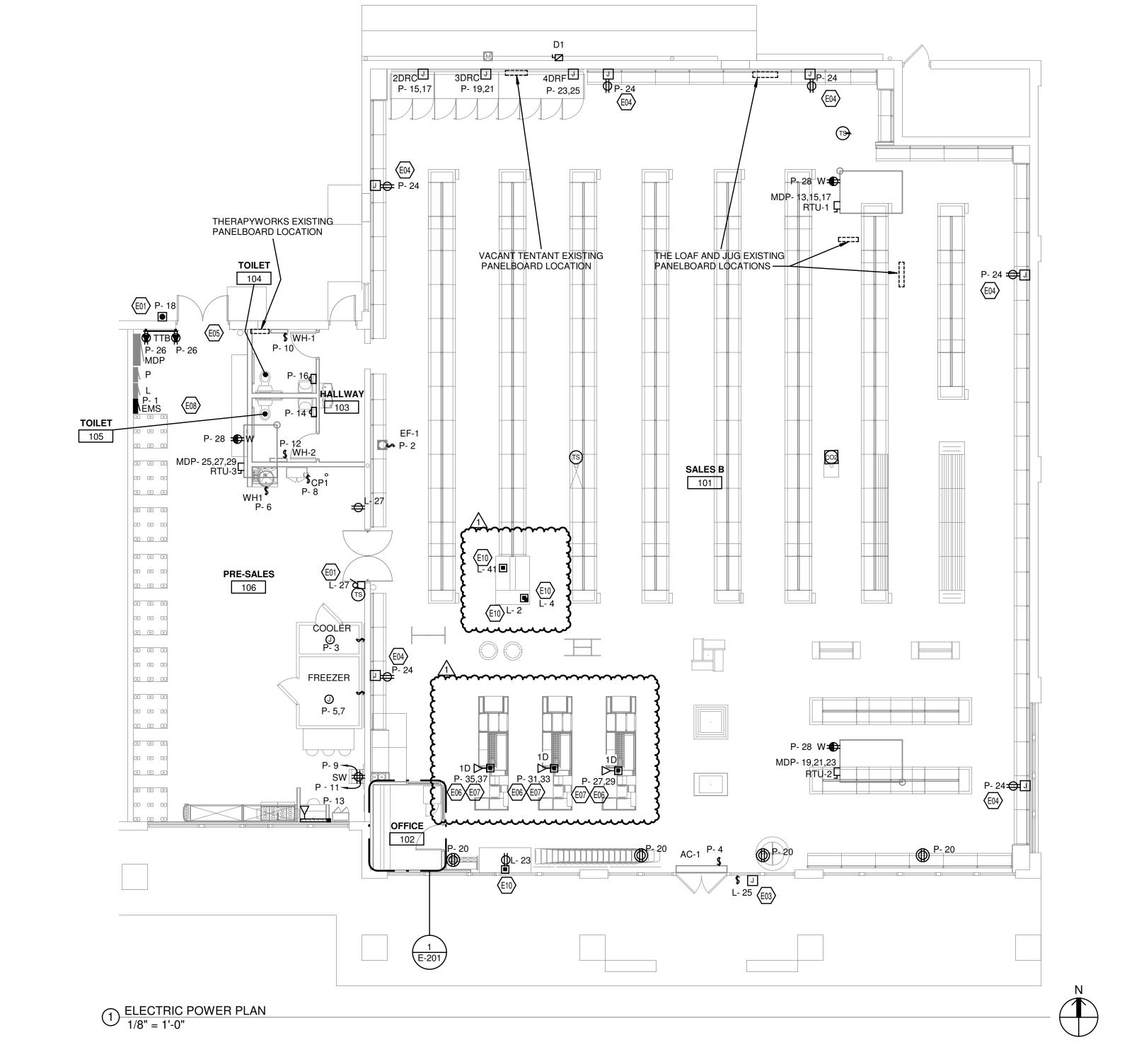


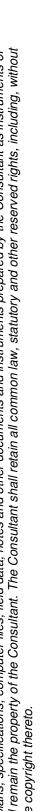


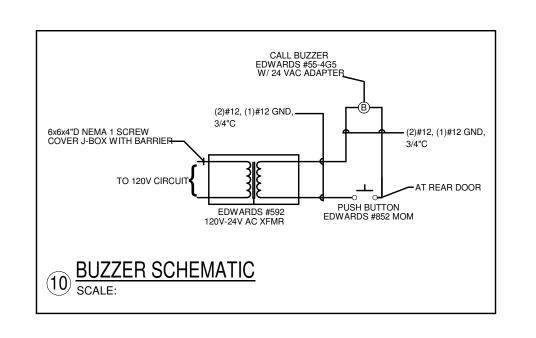


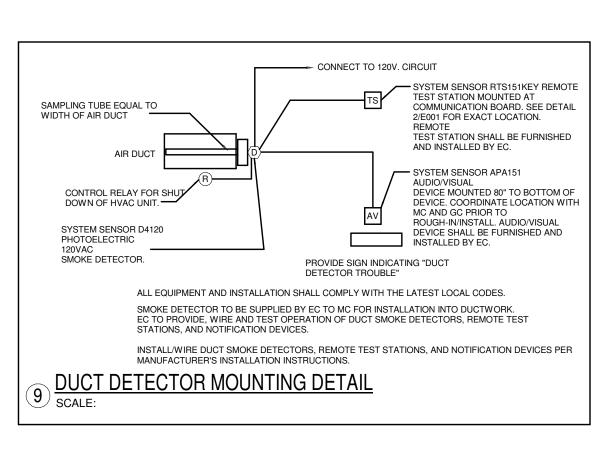


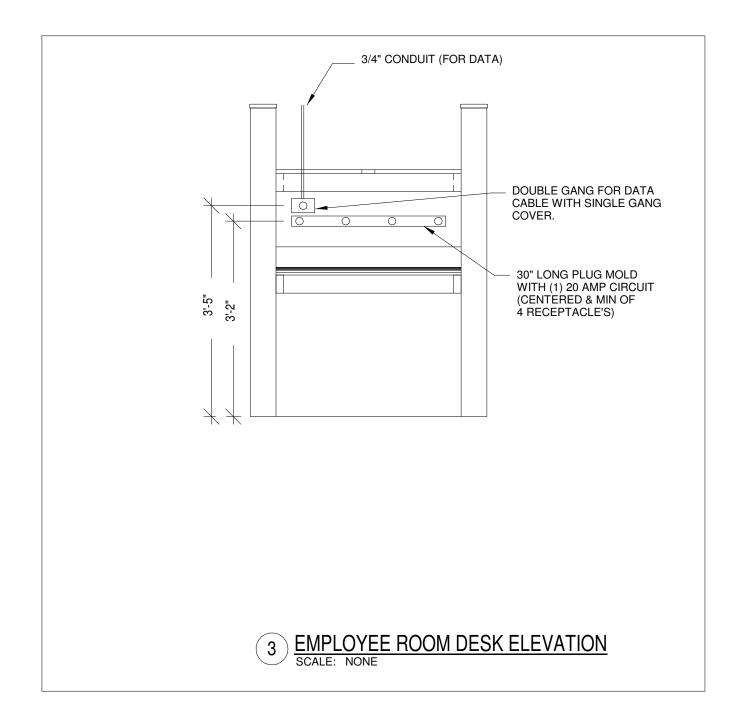
SHEET E-102

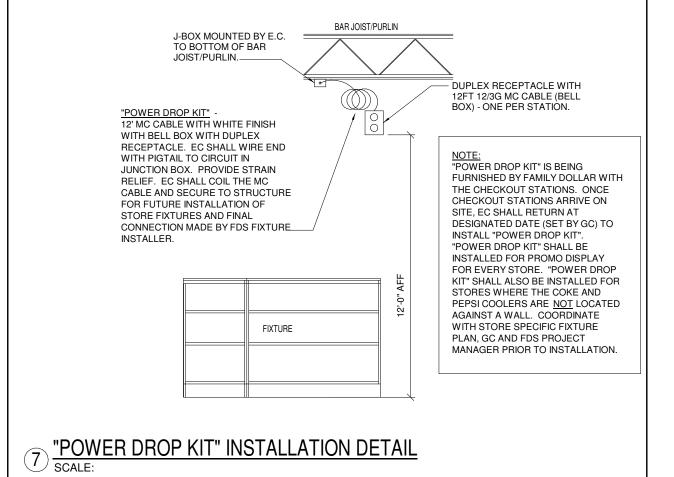




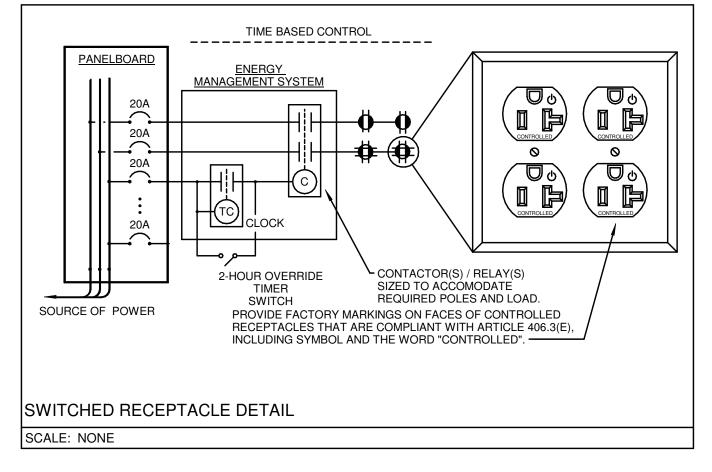


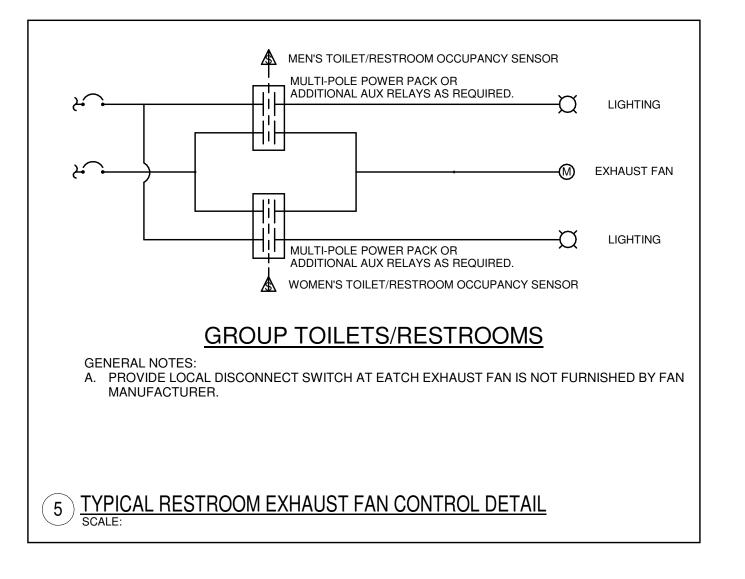


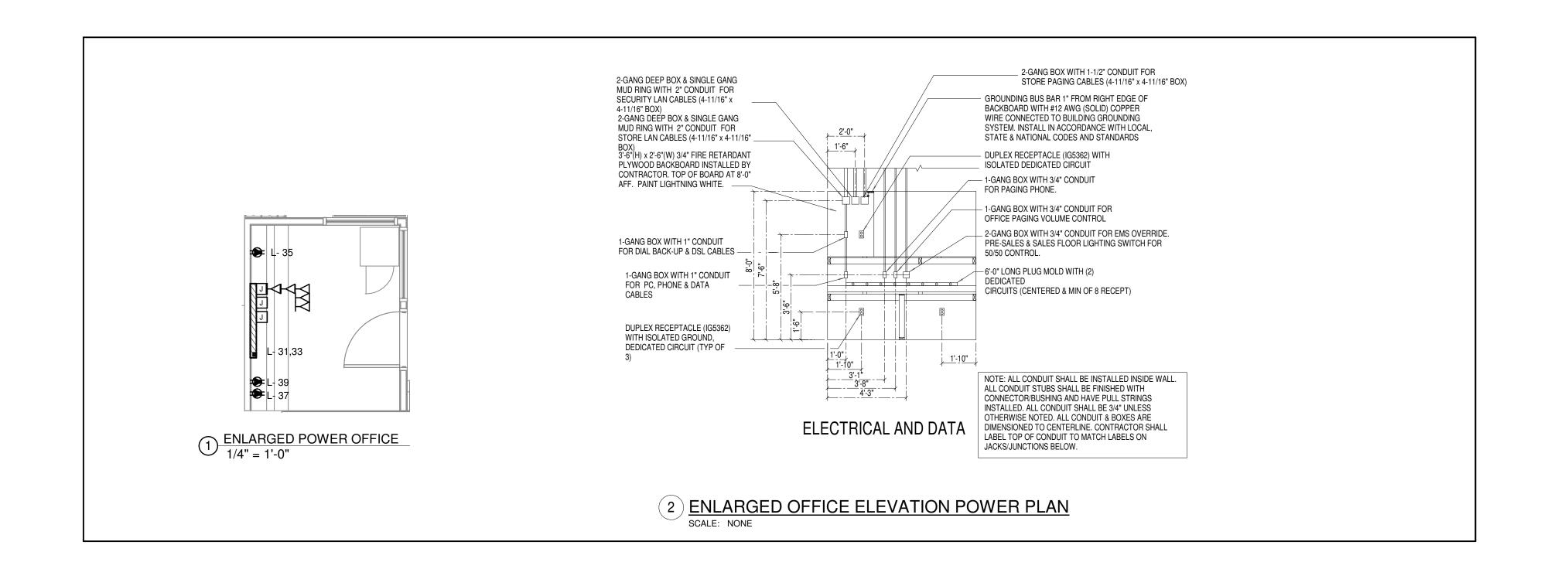


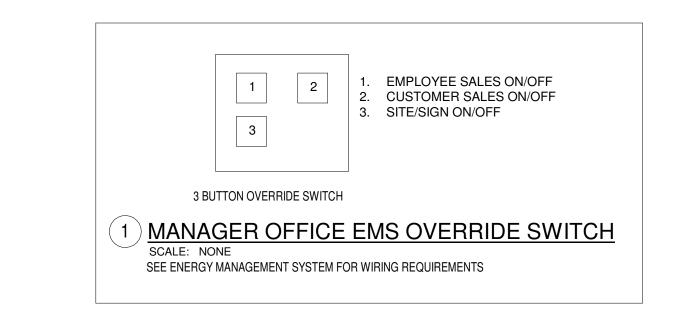


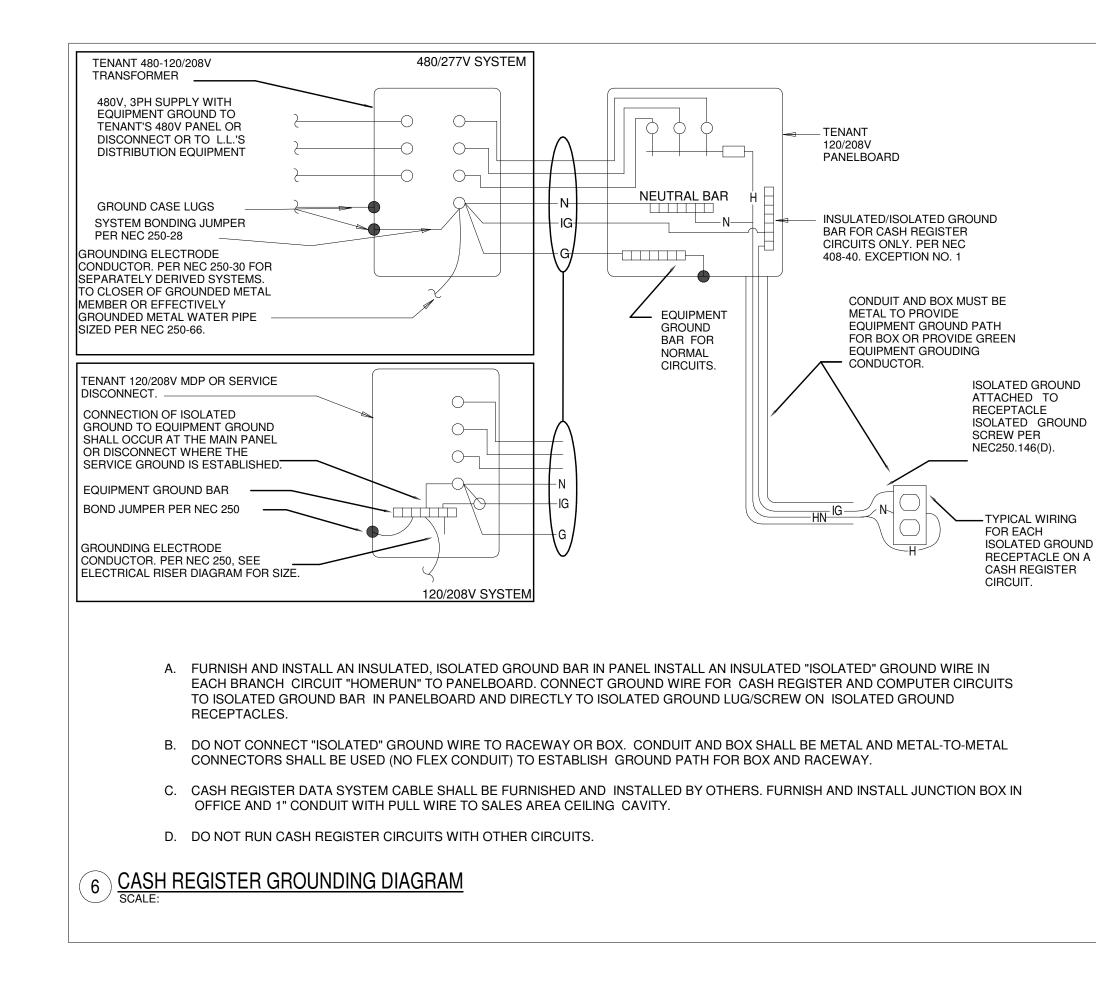
OWNERSHIP OF INSTRUMENTS OF SERVICE
All reports, plans, specifications, computer files, field data, notes an service shall remain the property of the Consultant. The Consultant limitation, the copyright thereto.

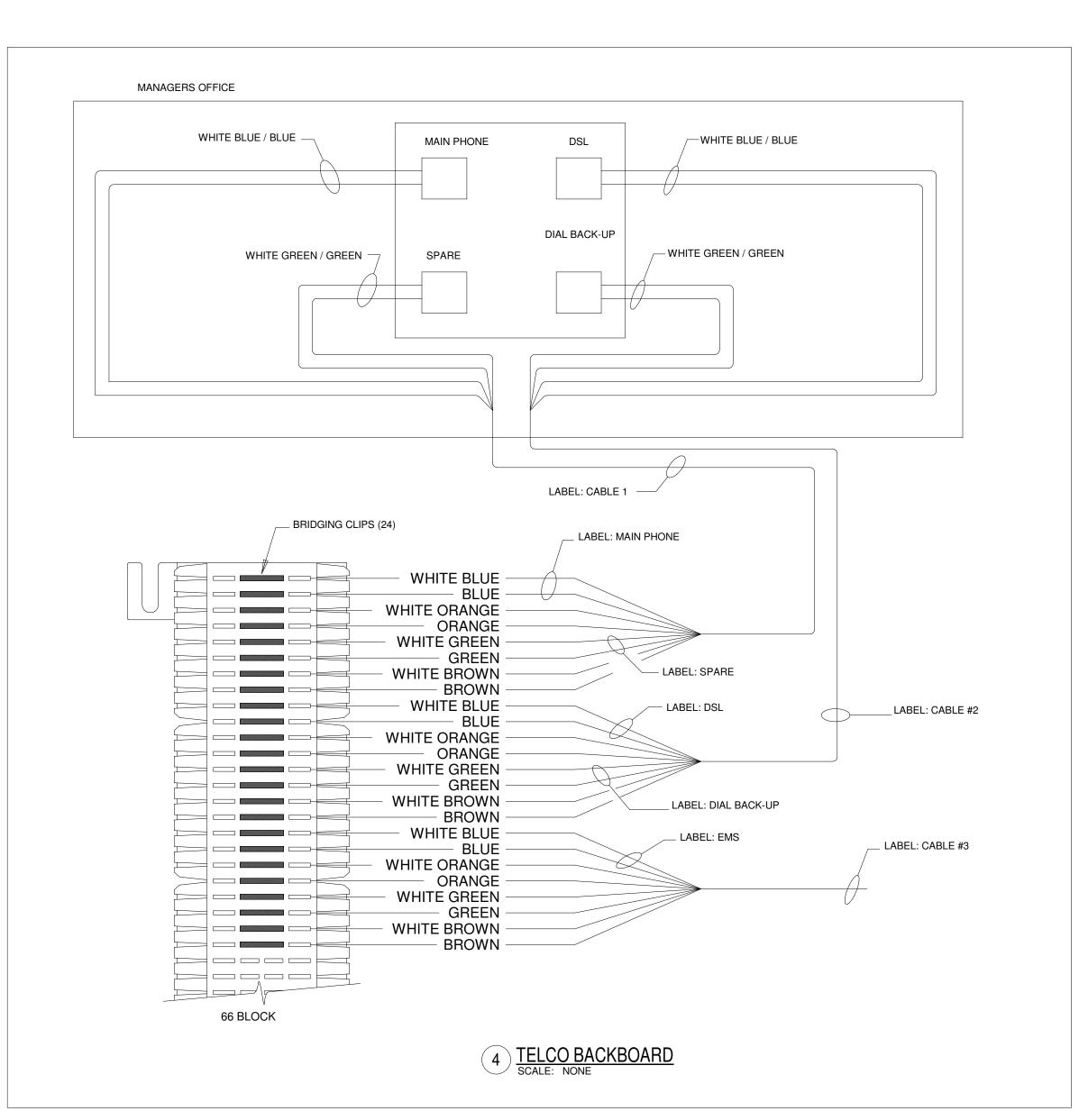


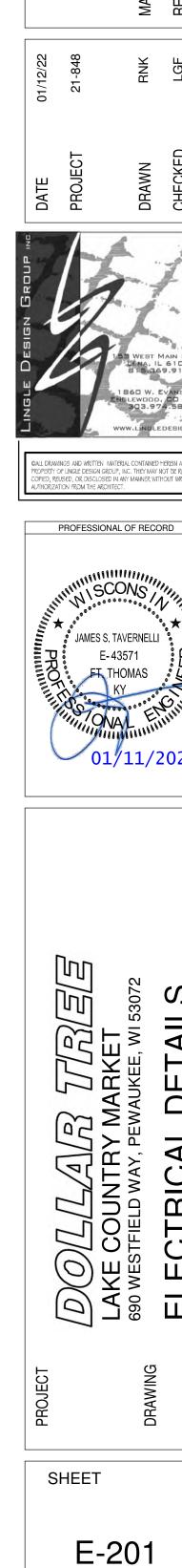












PROVIDE LOCK-ON DEVICE

SOURCE AS PART OF SELECTIVE DEMOLITION, TO POLE SPACE(S) INDICATED, A. NEW CIRCUIT TO EXISTING CIRCUIT BREAKER DETERMINE EXACT POLE ASSIGNMENT(S) BASED ON EXISTING COLOR-CODING PROVIDE GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) CIRCUIT BREAKER OF THE BRANCH CIRCUIT CONDUCTOR INSULATION. PROVIDE NEW BREAKER IF PROVIDE GROUND-FAULT EQUIPMENT PROTECTION (GFEP) CIRCUIT BREAKER REQUIRED. PROVIDE SHUNT TRIP CIRCUIT BREAKER WIRE SIZED TO COMPENSATE FOR VOLTAGE DROP PROVIDE ARC FAULT CIRCUIT INTERRUPTER (AFCI) CIRCUIT BREAKER

REFER TO DRAWINGS FOR SPECIFICATIONS SEE THE SINGLE LINE DIAGRAM / SCHEDULE FOR WIRE SIZE AND VOLTAGE DROP

** =

PANEL SCHEDULE GENERAL NOTES

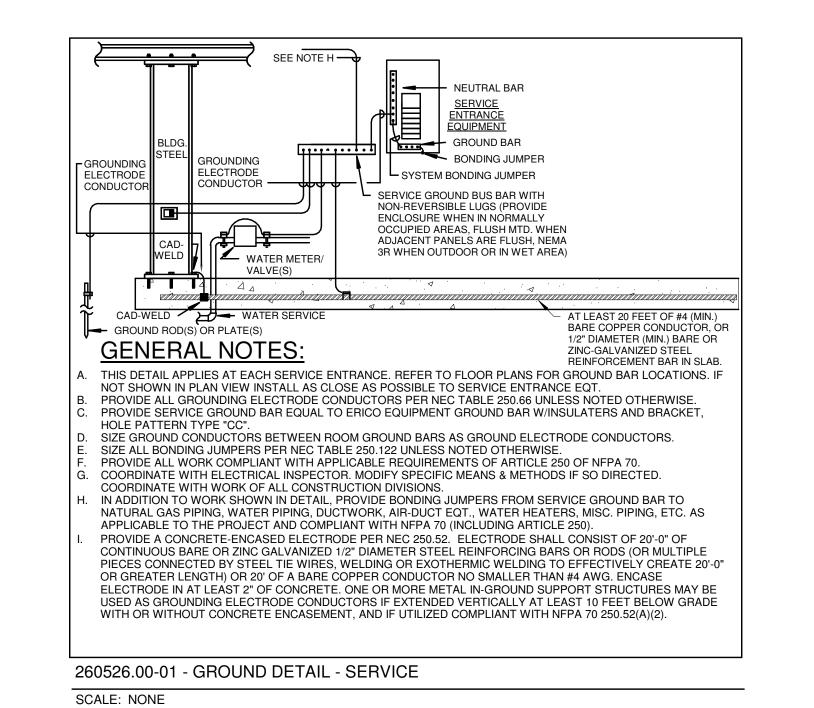
PROVIDE HACR RATED BREAKERS ON ALL MOTOR LOADS. ALL CONDUCTORS SHOWN ARE COPPER. ALL VOLTAGE DROP CALCULATIONS AND COMPENSATED WIRE SIZES ARE BASED ON RIGHT ANGLE CIRCUIT LENGTHS. ACTUAL VOLTAGE DROP MAY VARY BASED ON INSTALLED WIRE LENGTH. VOLTAGE DROP CALCULATIONS AND WIRE SIZES SHOWN IN THE PANEL SCHEDULES ARE FOR HOMERUN CONDUCTORS ONLY. FOR CIRCUITS WITH MORE THAN 1 DEVICE, THESE SIZES ASSUME THE CONDUCTORS DOWNSTREAM OF THE HOMERUN DEVICE ARE THE MINIMUM SIZE REQUIRED BY THE NEC BASED ON THE RATING OF THE CIRCUIT. WHERE THIS IS NOT THE CASE, IT HAS BEEN INDICATED ON THE DRAWINGS. VOLTAGE DROP TO THE FARTHEST DEVICE HAS BEEN CALCULATED TO

RECEPTACLE LOADS CALCULATED AT 100% OF FIRST 10kVA, 50% OF REMAINDER. MOTOR LOADS CALCULATED AT 125% OF THE LARGEST MOTOR, 100% OF ALL OTHER MOTORS.

	DISTRIBUTION SYST	OM: MDP ON: PRE-SALES 106 EM: 208/120V 3PH 4W IER: (4) #4/0 AWG CU, (2) #4	AVVC (CII CNI		MAIN: FEE	ING (A): 2 S TYPE: 1 DER ID: 2	MAIN I 2301-40	С	ONLY			SHOR	CIRC	UIT RA	RENT (A ATING (A GS TYP RE TYP	A): 2200 E:	00				PHASE: Existing URGE SUPRESSION: ULSE: 200% NEUTRAL: ISOLATED GROUND: Yes	
OVT		DESCRIPTION	1													FRAME	1		414/0	\/D0/			
CKT	(L) NON-CONTINUOUS P			#12		20 A	FRAME I	OLE 1		A 0.07	E	5	C	,		20 A	20 A	#12			(#) EE 1 I N	CIRCUIT DESCRIPTION MOTOR SALES A 101	Ck 2
3	, ,	-CONTINUOUS PRE-SALES				20 A	20 A	1	0.20	0.07	1.55	1 72			1	20 A	20 A	*#8				MOTOR SALES B 101	4
	'		2.509	#12	#12	20 A	20 A	1			1.55	1.73	2.86	2.00		25 A	25 A					ITINUOUS PRE-SALES 106	
5	WALK-IN FREEZER NOI 106	N-CONTINUOUS PRE-SALES	2.133	#10	#10	30 A	30 A	2	0.00	0.00			2.00	2.00	1			#10			'		-
7		N 50 400	0.005	1140	1140	00.4	00.4	4	2.86	0.06	0.40	4.50			1	20 A	20 A				` '	OTOR PRE-SALES 106	
9	(#) RECEPTACLE PRE-SA		0.395		#12	20 A	20 A	1			0.18	1.50	0.40	4 = 0	1	20 A	20 A	#12				HEATING TOILET 104	1
11	(#) RECEPTACLE PRE-SA		0.395			20 A	20 A	1					0.18	1.50	1	20 A	20 A	#12			` '	HEATING TOILET 105	1
	(#) EMPLOYEE AREA PLU	•	0.901			20 A	20 A	1	0.40	1.80					1	20 A	20 A	#12			. , , , ,	HAND DRYER NON-CONTINUOUS TOILE	. 1
15	REACH-IN 2-DR COOLER	NON-CONTINUOUS SALES	2.249	#12	#12	20 A	20 A	2			1.70	1.80			1	20 A	20 A					HAND DRYER NON-CONTINUOUS TOILE	. 1
17	A 101												1.70	0.03	1	20 A	20 A	#12			(#) PUSHB		1
19	REACH-IN 3-DR COOLER	NON-CONTINUOUS SALES	2 516	#12	#12	20 A	20 A	2	1.72	0.72					1	20 A	20 A	#12	#12	2.04	(#) SHOW	WINDOW RECEPTACLE SALES B 101	2
21	A 101		2.010	1112	#12	2071	2071	_			1.72	0.00			1		20 A				SPARE		2
23	REACH-IN 4-DR FREEZE	R NON-CONTINUOUS	2.043	*#8	*#8	30 A	30 A	2					3.10	1.08	1	20 A	20 A	*#10	*#10	0.999	(#) RECEP	TACLE 101,101	2
25	SALES A 101		2.043	#0	#0	30 A	30 A	2	3.10	0.36					1	20 A	20 A	#12	#12	0.093	(#) (IG) TTE	B RECEPTACLE PRE-SALES 106	2
27	(IC) CHECK LANE LNON	CONTINUOUS	0.400	440	440	20. 4	20. 4	0			0.20	0.54			1	20 A	20 A	#12	#12	0.355	(#) RECEP	TACLE 106,101,101	2
29	(IG) CHECK LANE NON-	CONTINUOUS	0.400	#12	#12	20 A	20 A	2					0.20	0.00	1		20 A				(EX) SPAR	E	3
31	(10) 01150((1 AN)5 1 NON	00171111010	0.070	"40	"40	00.4	00.4	_	0.20	0.00					1		20 A				SPARE		3
33	(IG) CHECK LANE NON-	CONTINUOUS	0.378	#12	#12	20 A	20 A	2			0.20	0.00			1		20 A				SPARE		3
35								_					0.20	0.00	1		20 A				SPARE		3
37	(IG) CHECK LANE NON-	CONTINUOUS	0.349	#12	#12	20 A	20 A	2	0.20	0.00					1		20 A				SPARE		1
39	(EX) SPARE					20 A		1			0.00	0.00			1		20 A				SPARE		4
	(EX) SPARE					20 A		1					0.00	0.00	1		20 A				(EX) SPAR	E	4
• •	(=/) 0. / (=			1			ECTED LO	DAD:	11.7	kVA	11.1	k\/A	12.8		•						(=//) 0// // //		<u> </u>
LOAD	CLASSIFICATION	CONNECTED LOAD	<u> </u>		01712		MAND FA						/ATED		AND						PA	NEL TOTALS	
	nuous	2000 VA					125.00%		•				2500				E	XISTIN	IG COI	NECT	TED LOAD:		
Coolir	ng	0 VA					0.00%						0 V				EXISTI	NG LO	AD DE	MANE	FACTOR:		
Eleva	tor	0 VA					0.00%						0 V	A				ADDE	D COI	NEC	TED LOAD:	35639 VA	
Heati	ng	3000 VA					100.00%						3000	VA			DEM	IAND (CALCI	II ATI	N NOTES.		
Kitche	en Equipment	0 VA					0.00%						0 V	A			DEN	IAND (JALU	ILATIC	ON NOTES:		
Lightii	ng	0 VA					0.00%						0 V	A					1	OTAL	DEMAND:	36571.4 VA	
Motor		1861 VA					123.21%						2293										
	Continuous	25718 VA					100.00%						25718					T	OTAL	DEMA	ND AMPS:	102 A	
	ptacle	3060 VA					100.00%	ı					3060										
NOTE	ES:									E	REAK	FR QU	JANTIT	IES (N	IEW ON	ILY)							

		DISTRIBUTION SYSTEM:	MDP PRE-SALES 106	WG CU	J GND.		MAIN FEE	ING (A): S TYPE: DER ID: NDUIT 7	MAIN 1001-4	4C	ONLY				CIRC	UIT RA	RENT (A ATING (A IGS TYPI	.): 220 E:	00				PHASE: Existing JRGE SUPRESSION: ULSE: 200% NEUTRAL: SOLATED GROUND: Yes	
СК	т	CIRCUIT DESC	RIPTION	VD%	AWG	GND	TRIP	FRAME	POLE		A		3	(;	POLE	PRAME	TRIP	640	AVVO	Y 0%	\sim	~~CIRCUITY DESORIBITION ~~~~	₩ GKT
1		LIGHTING SALES B 101		1.221	#12	#12	20 A	20 A	1	0.58	0.20				\	1	20 A	20 A	#12	#12	0.423	SNACK ZOI	NE NON-CONTINUOUS	2
3		LIGHTING 101,101		0.901	#12	#12	20 A	20 A	1			0.58	0.20		7	1	20 A	20 A	#12	#12	0.426	SNACK ZOI	NE NON-CONTINUOUS SALES B 101	4
5		LIGHTING SALES A 101		0.895	#12	#12	20 A	20 A	1					0.58	0.00	Y	سيس	20 A	سيد	سيد	سيس	SPARE	······································	- You
7		LIGHTING SALES A 101		1.089	#12	#12	20 A	20 A	1	0.54	0.00					1		20 A		-		(EX) SPARE	E	8
9		(#) LIGHTING SALES A 101		0.647	#12	#12	20 A	20 A	1			0.29	0.00			1		20 A				(EX) SPARE		10
1	\rightarrow	(#) LIGHTING 101,101		1.385	#12	#12	20 A	20 A	1					0.58	0.00	1		20 A				SPARE		12
3	\rightarrow	(#) LIGHTING 101,101		0.86	_			20 A	1	0.76	0.00					1		20 A			 	SPARE		14
_	-	LIGHTING 106,103,105,104		1	#12		20 A	20 A	1		-	0.43	0.00			1		20 A			 	SPARE		16
7	-	RECEPTACLE 101,101		-	#12		20 A	20 A	1			1	3.00	1.08	0.00	1		20 A				SPARE		18
c	-	(#) LIGHTING 106,103,101,101			#12	ļ · ·		20 A	1	0.03	0.00			1.00	0.00	1		20 A				SPARE		20
_	\rightarrow	SPARE					20 A		1	0.00	0.00	0.00	0.00			1		20 A				SPARE		22
_	\rightarrow	(#)(G) REF. MOTOR		2.364	#12		-	20 A	1			0.00	0.00	0.80	0.00	1		20 A				SPARE		24
_	\rightarrow	(#) EXTERIOR SIGN		2.68		*#10		20 A	1	1 20	0.00			0.00	0.00	1		20 A				SPARE		26
	\rightarrow	(#) DOORBELL NON-CONTIN	IOUS SVIES B 101		#12		1	20 A	1	1.20	0.00	0.23	0.00			1		20 A			<u>-</u>	SPARE		28
_	\rightarrow	SPARE	0003 3ALL3 B 101		#12	#12	20 A	20 A	1			0.23	0.00	0.00	0.00	1		20 A				SPARE		30
_	\rightarrow	SPARE			-	-	20 A		'	0.20	0.00			0.00	0.00	1		20 A				SPARE		_
-	1	PLUG MOLD NON-CONTINUO	OUS OFFICE 102	0.325	#12	#12	20 A	20 A	2	0.20	0.00	0.00	0.00			1				-				32
_	3	(#) (IO) I DECERTACI E CEEIO	- 400	0.400	//40	1140	00.4	00.4	_			0.20	0.00	0.40	0.00	1		20 A				SPARE		34
55	\rightarrow	(#) (IG) RECEPTACLE OFFICE		-	#12			20 A	1	0.40	0.00			0.18	0.00	1		20 A		-		SPARE		36
3/	\rightarrow	(IG) RECEPTACLE OFFICE 10			#12			20 A	1		0.00					1		20 A				SPARE		38
E	-	HC) LARCEPTACLE OFFICE 1			#12-		20,4	~ 2 0.A~	ᠰᠰ	`		0.18	0.00			1		20 A				SPARE		40
1	1	SNACK ZONE NON-CONTINU	IOUS	0.389	#12			20 A	1	3				0.20		1		20 A		-		SPARE		42
_						TOTAL		ECTED			kVA	2.1	kVA	3.4										
-		O CLASSIFICATION	CONNECTED LOAI	D			DEI	MAND F		₹			ESTIN	//ATED		AND							NEL TOTALS	
_		nuous	1200 VA					125.00						1500								TED LOAD:		
_	olir	•	0 VA					0.00%						0 V				EXISTI				D FACTOR:	0000 \/A	
_		tor	0 VA 0 VA					0.00%						0 V					ADDE	ט עכ	INNEC	TED LOAD:	9200 VA	
_		ng en Equipment	0 VA					0.00%						0 V				DEN	IAND (CALC	ULATI	ON NOTES:		
_		ng	4350 VA		$\overline{}$			125.00			_			5438							ΤΩΤΔΙ	DEMAND:	10787.5 VA	
-	tor	·	800 VA					125.00						1000							·	- DEMINITO.	10.01.0 11.	
		Continuous	1050 VA					100.00						1050					т	OTAI	_ DEMA	AND AMPS:	30 A	
-		ptacle	1800 VA					100.00						1800					•	J 16		31		
_	_	ES:										BREAK	ER ດເ	JANTIT		IEW O	NLY)							
		/IDE PANEL WITH ISOLATED G	ROUND BAR											(1) 20			,							

	DISTRIBUTION SYST	OM: D1 ION: PRE-SALES 106 FEM: 208/120V 3PH 4W DER: (2) SETS OF (4) #350 K	(CMIL CU	J, (1) ‡		MAIN FEE	ING (A): S TYPE: DER ID: ND. IN 3	MAIN 620-4	С		RAT			CIRC	UIT R	RRENT (/ ATING (/ IGS TYP JRE TYP	Á): 220 E:	000				SURGE SUPRESSION: ULSE: 200% NEUTRAL: ISOLATED GROUND:	
CKT	CIRCUIT	DESCRIPTION	VD%	AWG	GND	TRIP	FRAME	POLE	A		В	3	(;	POLE	FRAME	TRIP	GND	AWG	VD%	6	CIRCUIT DESCRIPTION	СК
1									11.69	0.00					1		20 A	-		-	SPARE		2
3	(#) P		SL	SL	SL	225 A	225 A	3		1	1.11	0.00			1		20 A				SPARE		4
5													12.84	0.00	1		20 A	-			SPARE		6
7									3.68	0.00					1		20 A				(EX) SPAR	RE	8
9	(#) L		SL	SL	SL	100 A	100 A	3		2	2.11	0.00			1		20 A				(EX) SPAR	RE	10
11													3.41	0.00	1		20 A	-			(EX) SPAR	RE	12
13									5.73	0.00					1		20 A	-			(EX) SPAR		14
15	RTU-1 MOTOR SALES A	A 101	1.331	#4	#10	60 A	60 A	3		5	5.73	0.00			1		20 A	-			(EX) SPAR		16
17	'												5.73	0.00	1		20 A	-			(EX) SPAR		18
19									6.48	0.00					1		20 A	-			(EX) SPAR		20
	RTU-2 MOTOR SALES E	3 101	1.999	#4	#8	70 A	70 A	3	01.10		5.48	0.00			1		20 A	-			(EX) SPAR		22
23					""								6.48	0.00	1		20 A	-			(EX) SPAR		24
25									2.27	0.00					1		20 A	-			SPARE	<u></u>	26
	RTU-3 MOTOR PRE-SA	LES 106	0.522	#10	#10	30 A	30 A	3			2.27	0.00			1		20 A	-			SPARE		28
29			0.022	,, .0	"	0071	0071						2.27	0.00	1		20 A	_	-		SPARE		30
31									0.02	0.00					1		20 A	-			SPARE		32
22	PHASE LOSS MONITOR	NON-CONTINUOUS	0.002	#12	#12	20 A	20 A	3	0.02		0.02	0.00			1		20 A	-			SPARE		34
35	PRE-SALES 106		0.002	1112	"12	2071	2071				J.UZ		0.02	0.00	1		20 A				SPARE		36
	SPARE					20 A		1	0.00	0.00			0.02	0.00	1		20 A				SPARE		38
	SPARE		-			20 A		1	0.00		0.00	0.00			1		20 A				SPARE		40
	SPARE		+	-		20 A		1			7.00		0.00	0.00	1		20 A		+-	-	SPARE		42
41	OF AILL						ECTED I	·	29.9 1	k \/Δ	27.7		30.8				20 A				SFAIL		42
OAD	CLASSIFICATION	CONNECTED LOA	AD		IOIAL		MAND F					ESTIM			AND						PΔ	ANEL TOTALS	
	nuous	3200 VA					125.00						4000				E	XISTI	NG CC	NNEC	TED LOAD:		
Coolir	g	0 VA					0.00%	,)					0 V	A			EXIST	ING LO	DAD D	EMAN	ID FACTOR:		
Elevat	or	0 VA					0.00%	,)					0 V	A				ADD	ED CC	NNEC	CTED LOAD:	88336 VA	
Heatir	<u> </u>	3000 VA					100.00						3000				DE	MAND	CALC	ιιι ΔΤ	ION NOTES:		
	n Equipment	0 VA					0.00%						0 V				DL.	117.110					
ightir	-	4350 VA					125.00						5438							TOTA	L DEMAND:	95087.4 VA	
Notor		46108 VA					110.55						50972										
	continuous	26818 VA					100.00						26818						IOTAL	_ DEM	AND AMPS:	264 A	
kecep	tacle	4860 VA					100.00	70					4860			NLY)							



GENERAL ELECTRICAL POWER DISTRIBUTION NOTES

- PARALLEL CONDUCTOR SETS: CUT PARALLEL SERVICE/FEEDER CONDUCTORS TO EXACTLY THE SAME LENGTHS AND USE CONDUCTORS FROM THE SAME FACTORY RUN. TORQUE ALL CONNECTIONS FOR PARALLEL SERVICE/FEEDER CONDUCTORS TO IDENTICAL VALUES. OVERCURRENT PROTECTION RATINGS: UNLESS INDICATED OTHERWISE, PROVIDE FULLY-RATED OR SERIES-RATED OVERCURRENT PROTECTION (OCP) AS REQUIRED TO COMPLY WITH ALL APPLICABLE REQUIREMENTS OF NFPA 70. PROVIDE EQUIPMENT AND OCP RATED TO MEET OR EXCEED THE AVAILABLE SERIES-RATED FAULT CURRENT AT THE RESPECTIVE NODE IN THE POWER DISTRIBUTION SYSTEM, SERIES-BATED BREAKERS/SYSTEMS ARE NOT PERMITTED WHERE PROHIBITED BY PREVAILING CODES AND STANDARDS, INCLUDING APPLICATIONS INVOLVING MOTOR CONTRIBUTION AS ADDRESSED IN ARTICLE 240.86(C) OF NEPA 70. FURNISH FLECTRONIC COPIES OF THE ELECTRICAL DOCUMENTS TO THE MANUFACTURER'S REPRESENTATIVE AND/OR EQUIPMENT SUPPLIER SO THAT PROPERLY RATED AND BRACED EQUIPMENT IS PROVIDED UNDER BASE BID. IF FAULT CURRENT VALUES ARE NOT INDICATED ON PLANS, ALSO PROVIDE FAULT CURRENT CALCULATIONS AND FURNISH RESULTS WITH EQUIPMENT SUBMITTALS. GROUNDING ELECTRODE CONDUCTOR SYSTEM: PROVIDE GROUNDING ELECTRODE CONDUCTOR SYSTEM IN STRICT COMPLIANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70), INCLUDING ARTICLE 250 AND TABLE 250.66. THESE CONDUCTORS MAY
- NEVERTHELESS. FLUSH MOUNTED EQUIPMENT: PROVIDE FLUSH MOUNTED POWER DISTRIBUTION AND RELATED EQUIPMENT FOR APPLICATIONS IN FINISHED AREAS AND COORDINATE THESE LOCATIONS AND

OR MAY NOT BE INDICATED ON SINGLE-LINE DIAGRAMS, BUT SHALL BE PROVIDED UNDER BASE BID

- INSTALLATIONS WITH ARCHITECT, OWNER AND AFFECTED TRADES. ELSEWHERE PROVIDE SURFACE MOUNTED EQUIPMENT UNLESS FLUSH MOUNTED EQUIPMENT IS SHOWN ON DRAWINGS OR UNLESS NEEDED TO ACCOMMODATE UNUSUAL CONDITIONS.
- POWER DISTRIBUTION EQUIPMENT LABELS: IN ADDITION TO LABELS REQUIRED WITHIN THE SPECIFICATIONS, INCLUDE CORRESPONDING MAXIMUM AIC (AVAILABLE INRUSH CURRENT) AND SHORT-CIRCUIT CURRENT BATING (SCCB) FOR EACH PIECE OF POWER DISTRIBUTION EQUIPMENT. ALONG WITH ARC FLASH LABELS COMPLIANT WITH ARTICLE 110.16 OF NFPA 70. ALSO INCLUDE
- CONDUCTOR COLOR CODING FOR THE BUILDING AND PHASE ROTATION AS APPLICABLE. CONDUCTOR TERMINATIONS: IN CASES WHERE CONDUCTOR SIZES ARE TOO LARGE TO FIT INTO UGS/TERMINALS, PROVIDE APPROPRIATE FACTORY LUG KITS FOR AFFECTED EQUIPMENT IF AVAILABLE, ELSEWHERE, PROVIDE INSULATED BUTT-SPLICES OR EQUIVALENT METHOD, WITH TAILS SIZED TO FIT LUGS/TERMINALS. PROVIDE SPLICES IN SEPARATE BOXES IF REQUIRED BASED ON FIELD CONDITIONS, BOX SIZE LIMITATIONS, ETC. CONCEAL BOXES IN ACCESSIBLE OVERHEAD JOIST SPACES IN FINISHED REGULARLY OCCUPIED AREAS.
- ALUMINUM CONDUCTORS: PROVIDE THE FOLLOWING SUPPLEMENTAL WORK FOR ALUMINUM-CONDUCTOR ELECTRICAL EQUIPMENT CONNECTIONS, REGARDLESS OF WHO FURNISHES THE EQUIPMENT: REVIEW EQUIPMENT SUBMITTALS, INSTALLATION DOCUMENTS AND NAMEPLATES TO DETERMINE IF THERE ARE ANY WARRANTY OR UL LIMITATIONS REGARDING COPPER VERSUS ALUMINUM WIRING CONNECTIONS AT EQUIPMENT; IF THERE ARE ANY LIMITATIONS, PROVIDE LOCAL DISCONNECT AT OR NEAR EQUIPMENT (EXTERNAL TO THE EQUIPMENT) AND TERMINATE ALUMINUM CONDUCTORS TO THE LINE-SIDE LUGS/TERMINALS OF THE DISCONNECT SWITCH; PROVIDE COPPER CONDUCTORS FROM LOAD-SIDE LUGS/TERMINALS OF THE DISCONNECT SWITCH TO THE RESPECTIVE EQUIPMENT FACTORY DISCONNECT OR LUG/TERMINALS AS APPLICABLE; COORDINATE
- ALL RELATED WORK WITH ALL AFFECTED INSTALLERS. BREAKER FRAME SIZES: AMPERE RATINGS INDICATED ON DRAWINGS FOR CIRCUIT BREAKERS ARE SHOWN TO DEFINE OVERCURRENT REQUIREMENTS/TRIP RATINGS. PROVIDE BREAKER FRAMES IN SIZES AND TYPES GREATER THAN THE DESIGNATED OVERCURRENT TRIP RATINGS WHERE NECESSARY TO ACHIEVE THE REQUIRED SELECTIVE COORDINATION, AND/OR AS NECESSARY FOR OTHER APPLICABLE REASONS. PLYWOOD EQUIPMENT BOARDS: SEE SPECIFICATION SECTION 260529.00 FOR REQUIREMENTS ASSOCIATED WITH PLYWOOD EQUIPMENT BOARDS.
- FIELD ADJUSTMENTS OF CIRCUIT BREAKERS: SET FIELD-ADJUSTABLE OVERCURRENT TRIP VALUES AS INDICATED ON DRAWINGS (UNLESS OTHERWISE SPECIFIED IN OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY). UNLESS INDICATED OTHERWISE ON DRAWINGS, OR DIRECTED OTHERWISE BY AHJ OR PREVAILING CODES, MANUFACTURER SHALL FURNISH SETTING INFORMATION BASED ON PROJECT REQUIREMENTS AND PREVAILING CODES, WHILE MINIMIZING THE POSSIBILITY OF NUISANCE TRIPPING. MANUFACTURER SHALL PROVIDE REMOVABLE AND SEALABLE COVERS OVER ALL ADJUSTABLE CIRCUIT BREAKER SETTINGS PER NEC 240.6(C). ELECTRIC UTILITY SERVICE WORK: PROVIDE ALL ELECTRIC UTILITY SERVICE WORK IN STRICT COMPLIANCE WITH PREVAILING REQUIREMENTS OF THE UTILITY COMPANY. THE DRAWINGS INDICATE RELATED REQUIREMENTS AT A SCHEMATIC LEVEL. IT IS NOT THE INTENT OF THESE DRAWINGS TO DETAIL ANY SUCH WORK, UTILITY COMPANY WILL PROVIDE (FURNISH AND INSTALL) UTILITY TRANSFORMER(S). PROVIDE METER SOCKET(S) AND EMPTY CONDUIT (WITH DRAG LINE) FROM METER TO CURRENT TRANSFORMER LOCATION. UNLESS METERING OCCURS AT A PAD-MOUNTED UTILITY TRANSFORMER, PROVIDE CURRENT TRANSFORMER (CT) CABINET COMPLIANT WITH UTILITY COMPANY STANDARDS. PROVIDE CONCRETE PAD OR VAULT FOR PAD-MOUNTED UTILITY TRANSFORMER(S), AS DIRECTED BY UTILITY COMPANY AND COMPLIANT WITH UTILITY COMPANY STANDARDS. COORDINATE WITH UTILITY COMPANY AS REQUIRED TO PROVIDE COMPLETE OPERATIONAL ELECTRIC SERVICE(S)
- NATIONAL ACCOUNT VENDOR: FOR INTERIOR PANELS CONTRACTOR SHALL CONTACT NATIONAL ACCOUNT VENDOR FOR EQUIPMENT TO BE FURNISHED BY TENANT FOR THE PROJECT. CONTRACTOR SHALL PROVIDE ALL OTHER EQUIPMENT INCLUDING EXTERIOR CABINETS. DISCONNECTS, METERS, WIREWAYS, CONDUIT AND WIRE NEEDED FOR COMPLETE SYSTEM.
- PROVIDED BY CONTRACTOR: ALL CONDUIT, WIRE, MISCELLANEOUS ITEMS AND HARDWARE, ETC... FOR A COMPLETE AND OPERATIONAL SYSTEM. EMS UPDATES: CONTRACTOR IS TO COORDINATE ANY EMS UPDATES AND CHANGES FOR LIGHTING
- CONTROL AND HVAC SYSTEMS INCLUDING ANY CONTRACTOR LABOR AND MATERIALS NEEDED TO COMPLETE SYSTEM REVISIONS. DESIGN DRAWINGS ARE SCHEMATIC. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING
- THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST. BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE

REFER TO LANDLORD DRAWINGS FOR AIC RATINGS FOR ALL ELECTRICAL EQUIPMENT

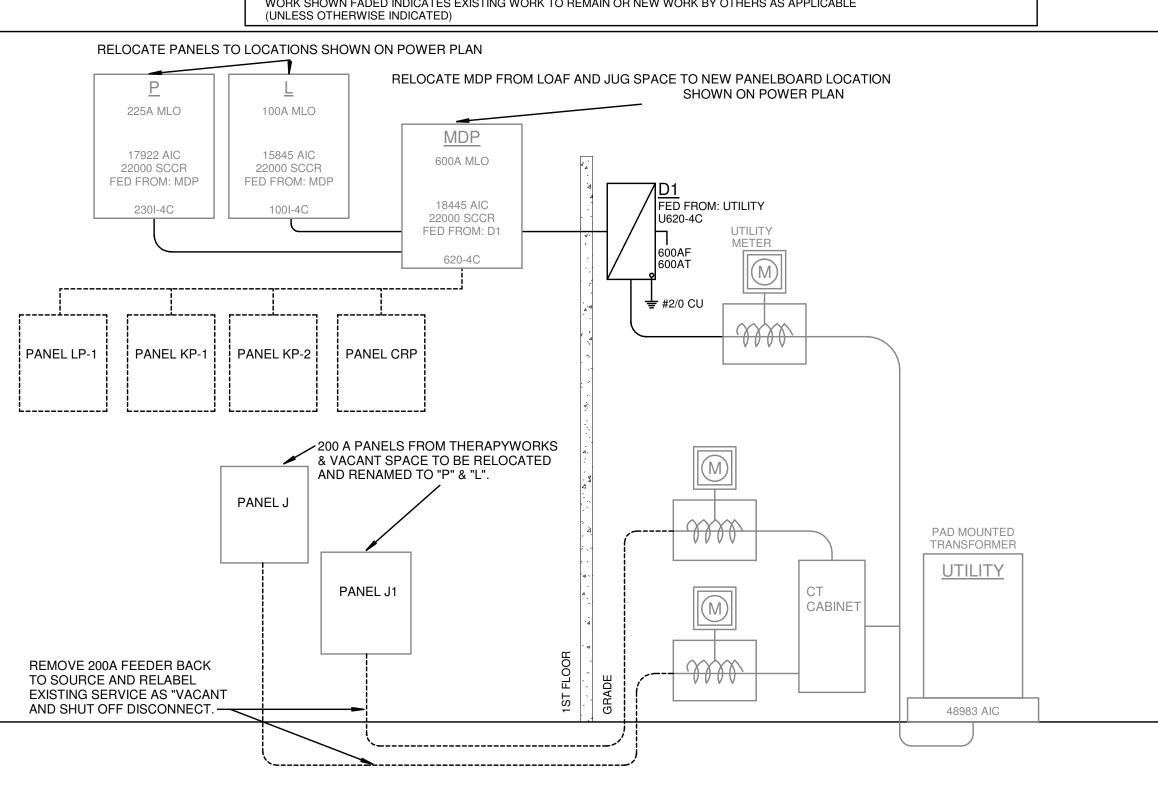
CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES

PLAN-VIEW AND GRAPHIC LINE TYPES

BETWEEN GOVERNING CODES AND DESIGN INTENT.

WORK SHOWN BOLD-CONTINUOUS INDICATES NEW WORK (UNLESS OTHERWISE INDICATED)

WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE



									1	DOLLAF	RTRE	E ELE	CTRIC SINGLE	LINE	EQUIPMENT SCHEDULE									
ACCOMMODATE C	ONDUCTOR PULLIN	MINIMUM SIZES. INCREASE SIZES AS ING EASE, FIELD CONDITIONS, ETC. ALUMINUM CONDUCTOR	S REQUIRED TO	O 1 - P 2 - D 3 - F	ICAL EQUIPMENT NAME OWER DISTRIBUTION S DESCRIPTION (H - 480Y/2 LOOR / LEVEL EQUENCE	YSTEM (BL	_ANK - NC		MERGENCY, S - STAN	NDBY, L - LIFE SAF	-ETY)	* - INDI 1 - GRO U = P = X =	ER ID NOMENCLATURE: ICATES FEEDER SIZED TO COMPI OUND TYPE (MAY BE BLANK) EQUIPMENT GROUND CONDUCTO PARITY-SIZED EQUIPMENT GROU EXISTING FEEDER TO REMAIN UN UPSIZED GROUND CONDUCTORS	OR REMOVED JND CONDUC NLESS OTHER	FOR SERVICE ENTRANCE FROM UTILITY FOR WISE NOTED	4 - CONDUCTOR MA 5 - SPECIAL (MAY B	OF PHASE AND GROUND TERIAL: C = COPPER, A = E BLANK)	ALÙMINU	M		JIPMENT GROUNDING (DING ELECTRODE CON	CONDUCTOR	OR(S) FROM IN AS APPLICABL	ISULATED ISOLATED GROUND BAR(S) T E.
																						FAULT	SHORT	T
EQUIPMENT	PHASE	EQUIPMENT TYPE		SPACE NUMBER	SPACE NAME	VOL	TAGE P	OLES WIRE	ES DEMAND (kVA)	DEMAND (A)	MAINS RATING (MAINS FRAM		FEEDER II	FEEDER		VD % LUGS TYPE	SPD UI	SE GEO	ENCLOSURE TYPE		FAULT CURREN		NOTES
EQUIPMENT UTILITY	PHASE Existing	EQUIPMENT TYPE Pad Mounted	SUPPLY		SPACE NAME	VOL ²⁰⁸	TAGE P	OLES WIRE	ES DEMAND (kVA)	DEMAND (A)		MAINS FRAM RATING (A)		FEEDER II	FEEDER		VD % LUGS TYPE	SPD UI	SE GEO		200% NEUTRAL K-RATING	CURREN	IT CIRCUIT	NOTES
EQUIPMENT UTILITY D1		Pad Mounted			SPACE NAME	VOL ⁻ 208 208	TAGE P 3 3	OLES WIRE	ES DEMAND (kVA) 95.1 kVA	DEMAND (A) 264 A				FEEDER III	FEEDER (2) SETS OF (4) #350 KCMIL CU IN 3" CONDUIT EACH 75C RATE	ED ED	VD % LUGS TYPE 0.613	SPD UI		TYPE		CURREN	IT CIRCUIT	NOTES
EQUIPMENT UTILITY D1 MDP	Existing	Pad Mounted	FROM	NUMBER	SPACE NAME PRE-SALES	VOL ⁻ 208 208 208	TAGE P 3 3 3 3 3	OLES WIRE	,				MAINS TYPE				VD % LUGS TYPE 0.613 1.125			NEMA 3R		CURREN (A) 48983	IT CIRCUIT	NOTES
UTILITY D1	Existing New Construction	Pad Mounted Fused Switch	FROM	NUMBER 106		VOL ⁻ 208 208 208 208	TAGE P 3 3 3 3 3 3 3	OLES WIRE 4 4 4	95.1 kVA	264 A			MAINS TYPE FUSED	U620-4C 620-4C	(2) SETS OF (4) #350 KCMIL CU IN 3" CONDUIT EACH 75C RATE	IDUIT EACH 75C RATED	VD % LUGS TYPE 0.613 1.125 1.183			NEMA 3R NEMA 3R		CURREN (A) 48983 26155	IT CIRCUIT	NOTES PROVIDE PANEL WITH ISOLATED GROUND BAR

FAULT CURRENT CALCULATIONS FAULT CURRENT CALCULATIONS ARE BASED ON A 300KVA UTILITY

TRANSFORMER AT 1.7% IMPEDANCE. VERIFY THE AVAILABLE FAULT CURRENT

AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.



PROFESSIONAL OF RECORD

SHEET

E-202

2015 IECC Energy Code:

Project Title: LAKE COUNTRY MARKET Project Type: Alteration

Owner/Agent: Construction Site: Designer/Contractor: KLH Engineers 1538 Alexandria Pike 690 WESTFIELD WAY PEWAUKEE, WI 53072 Fort Thomas, KY 41075

Allowed Interior Lighting Power

A	В	C	D
Area Category	Floor Area (ft2)	Allowed Watts / ft2	Allowed Wa (B X C)
6-SALES A 101 (Retail:Sales Area)	3318	1.59	5275
5-PRE-SALES 106 (Common Space Types:Storage)	1352	0.63	852
2-HALLWAY 103 (Common Space Types:Corridor/Transition >=8 ft wide)	83	0.66	55
1-SALES B 101 (Retail:Sales Area)	3788	1.59	6024
4-TOILET 105 (Common Space Types:Restrooms)	56	0.98	55
3-TOILET 104 (Common Space Types:Restrooms)	56	0.98	55
		Total Allowed Watt	s = 12315
Proposed Interior Lighting Power			
A	В	С	D E

Proposed Interior Lighting Power				
Α	В	С	D	E
Fixture ID: Description / Lamp / Wattage Per Lamp / Ballast	Lamps/ Fixture	# of Fixtures	Fixture Watt.	(C X D
SALES A 101 (Retail:Sales Area 3318 sq.ft.)				
F4: F4: 4'0" STRIP LIGHT: Other:	2	1	36	36
F8: F8: 8'0" STRIP LIGHT: Other:	2	48	36	1728
F4-EMB: F4-EMB: 4'0" STRIP LIGHT EMERGENCY LIG: Other:	2	1	36	36
F8-EMB: F8-EMB: 8'0" STRIP LIGHT EMERGENCY LIG: Other:	2	8	36	288
PRE-SALES 106 (Common Space Types:Storage 1352 sq.ft.)				
F8: F8: 8'0" STRIP LIGHT: Other:	2	5	36	180
F8-EMB: F8-EMB: 8'0" STRIP LIGHT EMERGENCY LIG: Other:	2	4	36	144
HALLWAY 103 (Common Space Types:Corridor/Transition >= 8 ft wide 83 sq.ft.)				
F8-EMB: F8-EMB: 8'0" STRIP LIGHT EMERGENCY LIG: Other:	2	1	36	36
SALES B 101 (Retail:Sales Area 3788 sq.ft.)				
F8: F8: 8'0" STRIP LIGHT: Other:	2	44	36	1584
F8-EMB: F8-EMB: 8'0" STRIP LIGHT EMERGENCY LIG: Other:	2	6	36	216
TOILET 105 (Common Space Types:Restrooms 56 sq.ft.)	_			
F4-EMB: F4-EMB: 4'0" STRIP LIGHT EMERGENCY LIG: Other:	2	1	36	36
	2	'	30	30
TOILET 104 (Common Space Types:Restrooms 56 sq.ft.)	_			
F4-EMB: F4-EMB: 4'0" STRIP LIGHT EMERGENCY LIG: Other:	2	1	36	36

Project Title:	LAKE COUNTRY MARKET	Report date:	01/07	/22
Data filename:	lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:	Page	1 of	6

Total Proposed Watts = 4320

Interior Lighting Compliance Statement

Project Title: LAKE COUNTRY MARKET

Data filename: \\klhfs01.klhengrs.com\g\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Electric.cck

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Report date: 01/07/22

Page 2 of 6

Requirements: 100.0% were addressed directly in the COMcheck software Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.		Requirement will be met.

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.1 [EL15] ¹	Lighting controls installed to uniformly reduce the lighting load by at least 50%.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C405.2.1 [EL18] ¹	Occupancy sensors installed in required spaces.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C405.2.1, C405.2.2. 3 [EL23] ²		□Complies □Does Not □Not Observable □Not Applicable	Exception: Areas such as security or emergency areas that need continuous lighting.
C405.2.2. 1 [EL22] ²	Automatic controls to shut off all building lighting installed in all buildings.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Areas such as security or emergency areas that need continuous lighting.
C405.2.3 [EL16] ²	Daylight zones provided with individual controls that control the lights independent of general area lighting.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C405.2.3, C405.2.3. 1, C405.2.3. 2 [EL20] ¹	Primary sidelighted areas are equipped with required lighting controls.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C405.2.3, C405.2.3. 1, C405.2.3. 3 [EL21] ¹	Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C405.2.4 [EL4] ¹	Separate lighting control devices for specific uses installed per approved lighting plans.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C405.2.4 [EL8] ¹	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C405.3 [EL6] ¹	Exit signs do not exceed 5 watts per face.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: LAKE COUNTRY MARKET Report date: 01/07/22 $\label{lem:decomposition} Data\ filename: $$ \\left(\frac{3000-2399}{23700-23799}\right)^2 To -23799 $$ Data\ Energy \ Compliance \ Electric.cck$ Page 3 of 6

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3) Project Title: LAKE COUNTRY MARKET

Report date: 01/07/22 Page 4 of 6

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5. 2 [FI17] ³	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C405.4.1 [Fi18] ¹	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	□Complies □Does Not □Not Observable □Not Applicable	See the Interior Lighting fixture schedule for values.
C408.2.5. 1 [FI16] ³	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C408.3 [FI33] ¹	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3) Project Title: LAKE COUNTRY MARKET Data filename: \\klhfs01.klhengrs.com\g\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Electric.cck

Report date: 01/07/22 Page 5 of 6 $\label{lem:decomposition} Data\ filename: $$ \heights 01.klhengrs.com\g\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Electric.cck$

PROFESSIONAL OF RECORD

EN-101

OWNERSHIP OF INSTRUMENTS OF SERVICE
All reports, plans, specifications, computer files, field data, notes and oth service shall remain the property of the Consultant. The Consultant shall limitation, the copyright thereto.

Project Information

Energy Code: 2015 IECC Project Title: Dollar Tree Location: Pewaukee, Wisconsin Climate Zone: Project Type: Alteration

Construction Site: Owner/Agent: 690 Westfield Way Pewaukee, WI 53072

KLH Engineers 1538 Alexandria Pike Fort Thomas, KY 41075 859.442.8050

Report date: 01/10/22

Comments/Assumptions

Exception: Requirement does not apply.

Exception: Requirement does not apply.

Exception: Requirement does not apply.

Comments/Assumptions

Mechanical Systems List Quantity System Type & Description

1 RTU 12.5-Ton (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 178 kBtu/h Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et or 78% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 168 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 12.20 EER, Required Efficiency: 10.80 EER + 12.2 IEER Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP method) : Passes

FAN 1 Supply, Single-Zone VAV, 5000 CFM, 2.9 motor nameplate hp, 80.0 fan efficiency grade 1 RTU 10-Ton (Single Zone):

Heating: 1 each - Central Furnace, Gas, Capacity = 114 kBtu/h Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et or 78% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 139 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 12.00 EER, Required Efficiency: 10.80 EER + 12.2 IEER Fan System: FAN SYSTEM 2 -- Compliance (Motor nameplate HP method): Passes

FAN 2 Supply, Single-Zone VAV, 4000 CFM, 2.4 motor nameplate hp, 80.0 fan efficiency grade 1 RTU 3-Ton (Single Zone):

Heating: 1 each - Central Furnace, Gas, Capacity = 58 kBtu/h Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et or 78% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 29 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 15.00 SEER, Required Efficiency: 14.00 SEER Fan System: FAN SYSTEM 3 -- Compliance (Motor nameplate HP method) : Passes

FAN 3 Supply, Single-Zone VAV, 1200 CFM, 1.2 motor nameplate hp, 80.0 fan efficiency grade

Electric Storage Water Heater, Capacity: 10 gallons w/ Circulation Pump Proposed Efficiency: 0.98 SL, %/h (if > 12 kW), Required Efficiency: 3.00 SL, %/h (if > 12 kW)

Plumbing Rough-In Inspection Complies?

C404.5, Heated water supply piping conforms Complies

C404.5, Heated water supply piping conforms Complies

C404.5.1, to pipe length and volume

C404.5.1, to pipe length and volume

C404.6.2 automatically switch off the

C404.5.2 requirements. Refer to section details. Not Observable

C404.5.1, to pipe length and volume C404.5.2 requirements. Refer to section details.

C404.5.2 requirements. Refer to section details.

C404.5.2 requirements. Refer to section details. Not Observable

[PL3]¹ recirculating hot-water system or heat Not Observable

C404.6.3 Pumps that circulate water between a Complies [PL7]³ heater and storage tank have controls Does Not

2404.6.3 Pumps that circulate water between a Complies

PL7]³ heater and storage tank have controls Does Not

L7]³ heater and storage tank have controls Does Not

Pumps within this system have

controls that start the pump upon

user of a fixture or appliance and

limits the temperature of the water entering the cold-water piping to

receiving a signal from the action of a

Final Inspection

[FI27]³ capacity does not exceed calculated □Does Not

2403.2.4. Heating and cooling to each zone is Complies

[FI47]³ Controlled by a thermostal control.

Minimum one humidity control device

Not Observable

controlled by a thermostat control. Does Not

controlled by a thermostat control. Does Not

FI47]³ Minimum one humidity control device

Not Observable

FI47]³ Minimum one humidity control device

humidification/dehumidification

C403.2.4. Thermostatic controls have a 5 °F

2403.2.4. Temperature controls have setpoint

overlap restrictions.

C403.2.4. Each zone equipped with setback

C403.2.4. hour occupant override, 10-hour

C403.2.4. Systems include optimum start

C403.2.4. Systems include optimum start

C403.2.4. Systems include optimum start

backup

Project Title: Dollar Tree

2 controls using automatic time clock or ☐Does Not [FI39]³ programmable control system. ☐Not Observ

2403.2.4. Heating and cooling to each zone is Complies Requirement will be met.

C303.3. Furnished O&M manuals for HVAC

C403.2.2 HVAC systems and equipment

acceptance.

per installed

deadband.

C408.2.5. systems within 90 days of system

& Req.ID

[PL7]³ heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle. □Not Observable □Not Applicable

heater and storage talk have controls
that limit operation from startup to
<= 5 minutes after end of heating

Not Applicable

heater and storage talk have that limit operation from startup to <= 5 minutes after end of heating
Not Observable
Not Applicable

heater and storage tank have control
that limit operation from startup to
<= 5 minutes after end of heating

Not Applicable

pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system.

C404.6.3 Pumps that circulate water between a Complies Requirement will be met.

C404.6.1, Automatic time switches installed to Complies

Data filename: G:\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Mechanical 2015 IECC.c Page 1 of 11

□Does Not

□Does Not

C404.5, Heated water supply piping conforms C404.5.1, to pipe length and volume Complies C404.5.1 | Exception: Requirement does not apply.

C404.5, Heated water supply piping conforms Complies Requirement will be met.

□Does Not

□Does Not

☐Not Applicable

☐Not Applicable

☐Not Applicable

□Not Applicable

☐Not Applicable

C404.6.3 Pumps that circulate water between a Complies Exception: Requirement does not apply.

Report date: 01/10/22 Project Title: Dollar Tree

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building

plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been

designed to meet the 2015 IECC requirements in COMcheck Version 4.1.5.3 and to comply with any applicable mandatory

Data filename: G:\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Mechanical 2015 IECC.c Page 2 of 11

Plumbing Rough-In Inspection Complies? Comments/Assumptions C404.7 Water distribution system that pumps ☐Complies ☐PL8]³ water from a heated-water supply ☐Does Not Exception: Requirement does not apply water from a heated-water supply Does Not pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system.

Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to Water distribution system that pumps ☐Complies Requirement will be met. water distribution system that pumps
water from a heated-water supply
pipe back to the heated-water source
through a cold-water supply pipe is a
demand recirculation water system. Pumps within this system have

entering the cold-water piping to Additional Comments/Assumptions:

controls that start the pump upon

limits the temperature of the water

receiving a signal from the action of a user of a fixture or appliance and

Mechanical Compliance Statement

Name - Title

requirements listed in the Inspection Checklist.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Requirement will be met.

Requirement will be met.

Requirement will be met.

Data filename: G:\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Mechanical 2015 IECC.c Page 5 of 11

Complies?

□Not Observable

□Not Applicable

□Not Observable

□Not Applicable

□Not Applicable

□Does Not

□Does Not

☐Not Observable

□Not Applicable

□Not Observable

□Not Observable

□Not Applicable

■Not Observable

☐Not Applicable

☐Not Observable □Not Applicable

☐Not Observable

□Not Applicable

☐Not Observable

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Data filename: G:\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Mechanical 2015 IECC.c Page 9 of 11

☐Not Applicable

□Does Not

☐Complies

□Does Not

□Complies □Does Not

☐Complies Requirement will be met.

Report date: 01/10/22

□Does Not

☐Complies

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3) Data filename: G:\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Mechanical 2015 IECC.c Page 6 of 11

Final Inspection Comments/Assumptions & Req.ID C404.3 Heat traps installed on supply and Exception: Requirement does not apply [FI11]³ discharge piping of non-circulating Does Not ☐Not Observable ☐Not Applicable C404.4 All piping insulated in accordance with □Complies Requirement will be met. section details and Table C403.2.10. Does Not ☐Not Observable □Not Applicable C404.6.1 Controls are installed that limit the Complies operation of a recirculation pump Does Not installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe. C408.2.1 Commissioning plan developed by Complies □Does Not [FI28]¹ registered design professional or approved agency. □Not Observable □Not Applicable C408.2.3. HVAC equipment has been tested to Complies Requirement will be met. ensure proper operation. Does Not □Not Observable □Not Applicable C408.2.3. HVAC control systems have been Requirement will be met. Complies tested to ensure proper operation, Does Not [FI10]¹ calibration and adjustment of controls. Not Observable ☐Not Applicable C408.2.3. Economizers have been tested to ensure proper operation. Does Not □Not Observable □Not Applicable □Not Observable agency. □Not Applicable C408.2.5. Furnished HVAC as-built drawings Complies Requirement will be met. submitted within 90 days of system Does Not acceptance. □Not Observable □Not Applicable C408.2.5. An air and/or hydronic system 3 balancing report is provided for HVAC □Does Not [FI43]¹ systems. □Not Observe □Not Observable

Additional Comments/Assumptions:

C408.2.5. Final commissioning report due to building owner within 90 days of

[FI30]¹ receipt of certificate of occupancy.

Not Observable

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3) Project Title: Dollar Tree Report date: 01/10/22 Data filename: G:\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Mechanical 2015 IECC.c Page 10 of 11

□Not Applicable

□Not Applicable

□Does Not

Requirement will be met.

Requirements: 100.0% were addressed directly in the COMcheck software

Plan Review

C103.2 Plans, specifications, and/or [PR2]¹ calculations provide all information

with which compliance can be

determined for the mechanical

systems and equipment and

calculations per acceptable

engineering standards and

Plans, specifications, and/or

handbooks.

sizing guide.

Project Title: Dollar Tree

Mechanical Rough-In Inspection Complies?

C402.2.6 Thermally ineffective panel surfaces of Complies

[ME41]³ sensible heating panels have

insulation >= R-3.5.

[ME71]² use only radiant heat.

C403.2.13 Unenclosed spaces that are heated

C403.2.4. Fault detection and diagnostics

C403.2.4. Fault detection and diagnostics

[ME113]² units having economizers.

installed with air-cooled unitary DX

7 installed with air-cooled unitary DX Does Not [ME113]² units having economizers.

C403.2.6. Demand control ventilation provided Complies

C403.2.8 Kitchen exhaust systems comply with ☐Complies [ME116]³ replacement air and conditioned ☐Does Not

C403.2.9 HVAC ducts and plenums insulated.

Complies

C403.2.9 Ducts and plenums sealed based on Complies

[ME60]² Where ducts or plenums are installed □Does Not

need to occur during Foundation

column requires air leakage testing.

[ME10]² static pressure and location.

C403.2.9. Ductwork operating >3 in. water

Project Title: Dollar Tree

has automatic contaminant detection Does Not

and capacity to stage or modulate fans to 50% or less of design capacity. □Not Observable □Not Applicable

supply air limitations, and satisfy hood rating requirements and maximum

Not Observable

Not Applicable

for spaces >500 It2 and >25

[ME59]¹ people/1000 ft2 occupant density and people/1000 ft2 occupant density and Not Observable

economizer, auto modulating outside

Not Applicable

for spaces >500 ft2 and >25

ME11513 and capacity to stage or modulate

C403.2.7 Exhaust air energy recovery on [ME57]¹ systems meeting Table C403.2.7(1) and C403.2.7(2).

served by systems with air side

air damper control, or design airflow

Additional Comments/Assumptions:

document where exceptions to the standard are claimed. Load

calculations provide all information with which compliance can be

heating systems and equipment and

determined for the service water

document where exceptions to the

standard are claimed. Hot water

system sized per manufacturer's

& Req.ID

▲ COMcheck Software Version 4.1.5.3 **Inspection Checklist**

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception

is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

□Does Not

☐Not Observable

□Not Applicable

☐Not Applicable

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Data filename: G:\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Mechanical 2015 IECC.c Page 3 of 11

Does Not

☐Not Observable

Not Applicable

☐Not Observable

□Not Applicable

☐Not Observable

□Not Applicable

☐Not Observable

Not Applicable

□Not Observable

□Not Applicable

□Not Observable □Not Applicable

☐Not Applicable

☐Not Observable

☐Not Applicable

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Data filename: G:\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Mechanical 2015 IECC.c Page 7 of 11

Data filename: G:\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Mechanical 2015 IECC.c Page 11 of 11

Does Not

□Does Not ☐Not Observable ☐Not Applicable

□Does Not

Complies

□Does Not

Does Not

Requirement will be met.

Requirement will be met.

Comments/Assumptions

Report date: 01/10/22

Comments/Assumptions

Requirement will be met.

Requirement will be met.

Requirement will be met.

Exception: Requirement does not apply.

Exception: Requirement does not apply.

Exception: Requirement does not apply.

Requirement will be met.

Exception: Requirement does not apply.

Footing / Foundation Inspection Complies? Comments/Assumptions C403.2.4. Snow/ice melting system sensors for 5, future connection to controls. Freeze
C403.2.4. protection systems have automatic
controls installed controls installed. ☐Not Applicable

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Dollar Tree Data filename: G:\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Mechanical 2015 IECC.c Page 4 of 11

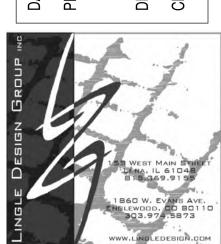
Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumption
C403.2.9. 1.3 [ME11] ³	Ductwork operating >3 in. water column requires air leakage testing.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C403.2.9. 1.3 [ME11] ³	Ductwork operating >3 in. water column requires air leakage testing.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C403.3 [ME62] ¹	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C403.3 [ME62] ¹	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C403.4.4. 6 [ME110] ³	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C403.4.4. 6 [ME110] ³	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C403.4.4. 6 [ME110] ³	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C408.2.2. 1 [ME53] ³	Air outlets and zone terminal devices have means for air balancing.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C403.5, C403.5.1, C403.5.2 [ME123] ³	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

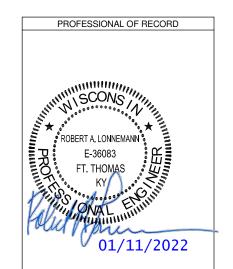
1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Data filename: G:\23000-23999\23700-23799\23732\Project Data\Energy\Compliance\Mechanical 2015 IECC.c Page 8 of 11

COMMISSIONING NOTE

HVAC AND PLUMBING SYSTEMS SHALL BE TESTED TO ENSURE THE EQUIPMENT IS PROPERLY INSTALLED AND CONTROLLED. AND IN PROPER WORKING ORDER. INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED INSTALLATION CERTIFICATES AND SHALL PROVIDE MANUALS FOR EQUIPMENT TO OWNER PRIOR TO PROJECT CLOSE-OUT. INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACTING WITH APPROPRIATE PARTIES TO ARRANGE FOR TESTING/COMMISSIONING OF THE HVAC AND PLUMBING SYSTEMS AND SHALL BE RESPONSIBLE FOR ENSURING ALL REQUIRED FUNCTIONAL TESTING FORMS ARE COMPLETED AND SUBMITTED TO THE OWNER AND LOCAL AHJ PRIOR TO PROJECT CLOSE-OUT



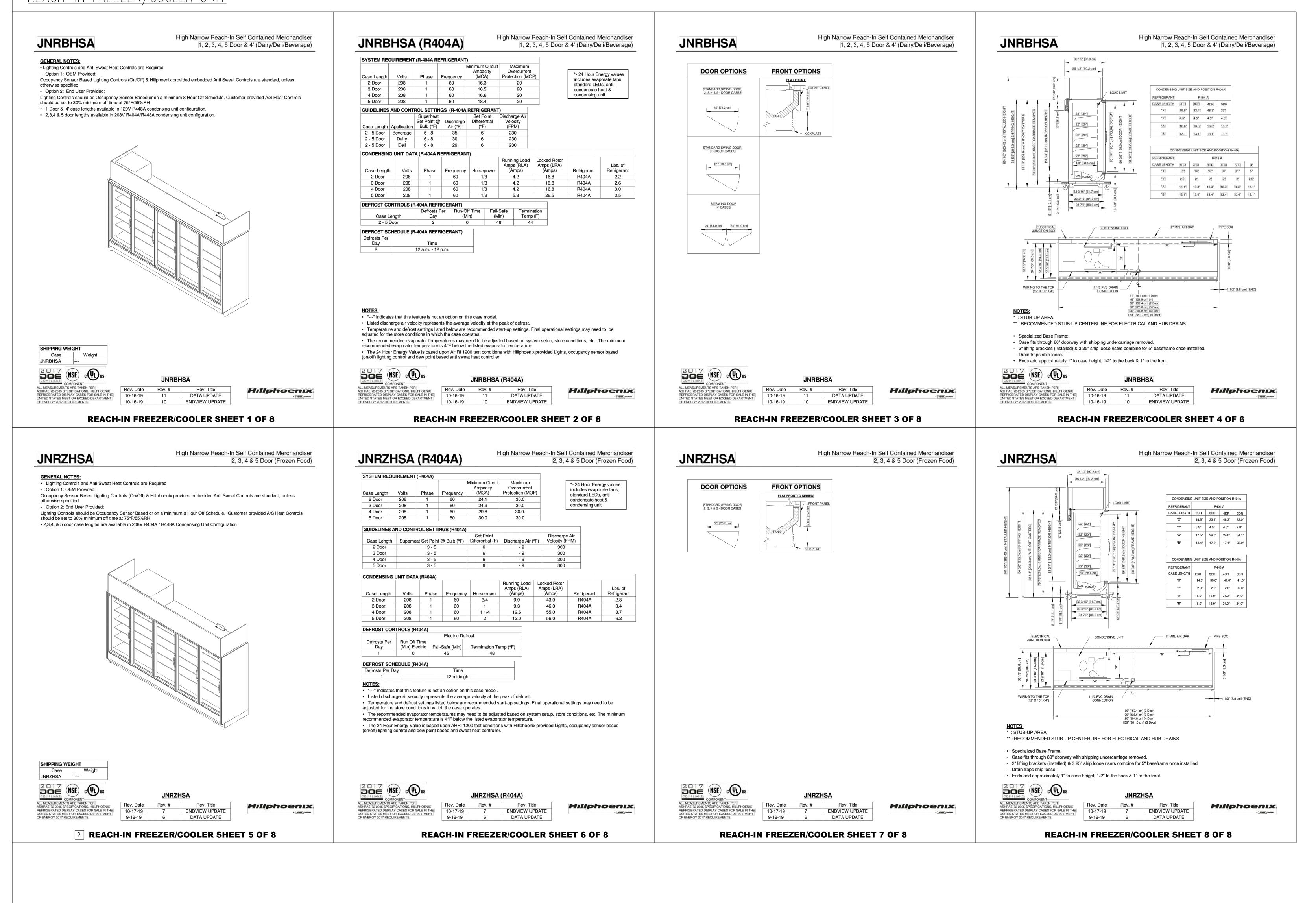


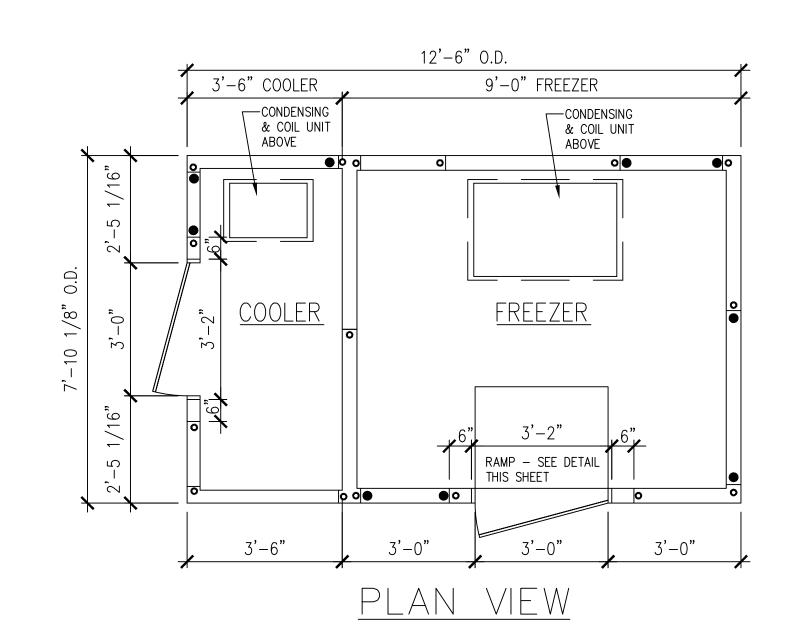
SHEET

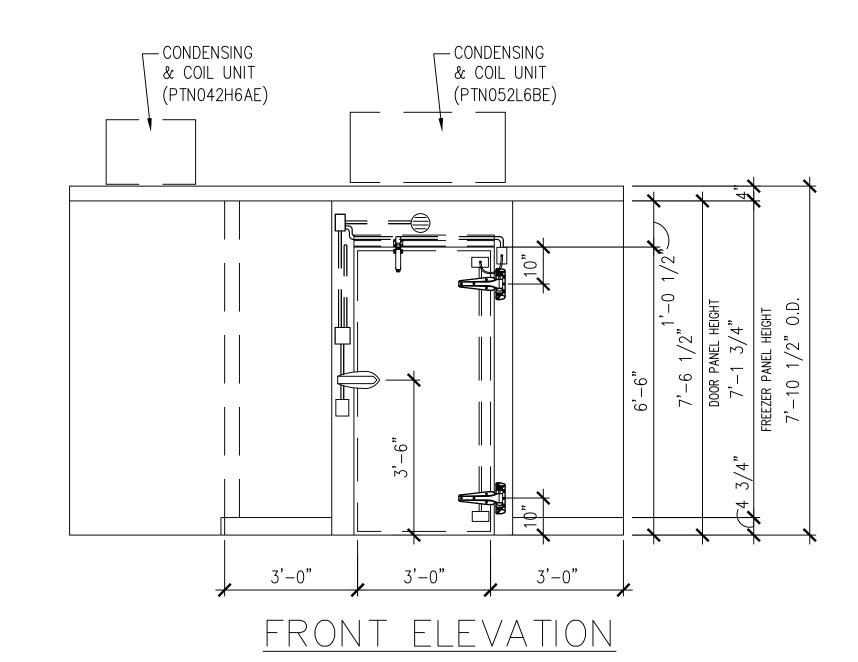
KLH PROJECT

OWNERSHIP OF INSTRUMENTS OF SERVICE
All reports, plans, specifications, computer files, field data, notes and service shall remain the property of the Consultant. The Consultant s limitation, the copyright thereto.

Report date: 01/10/22

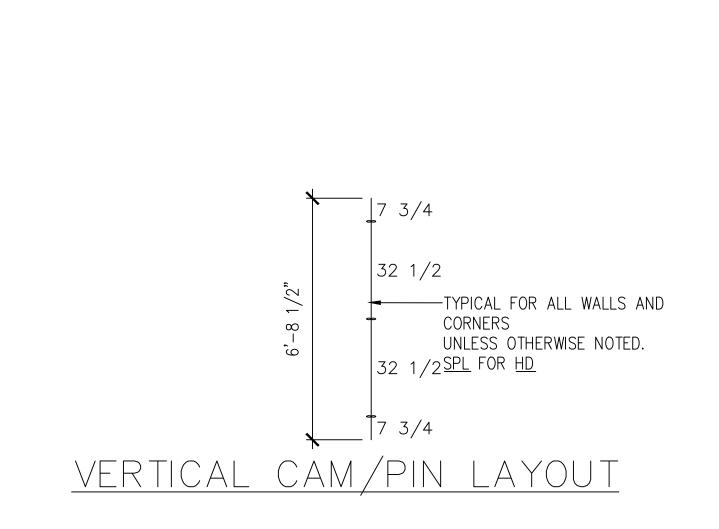


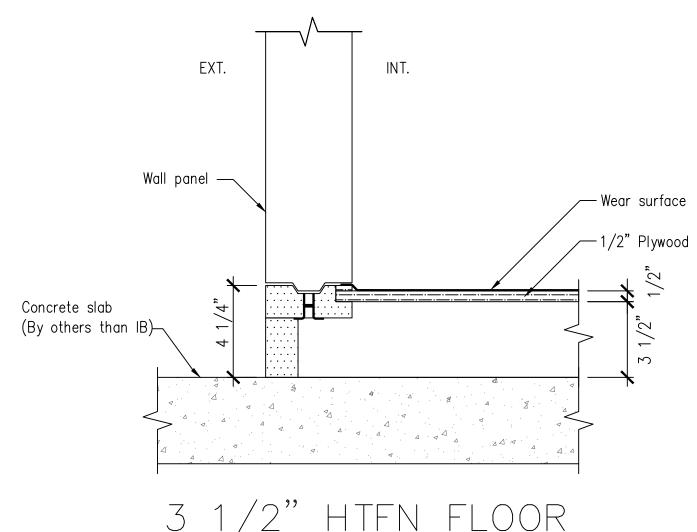




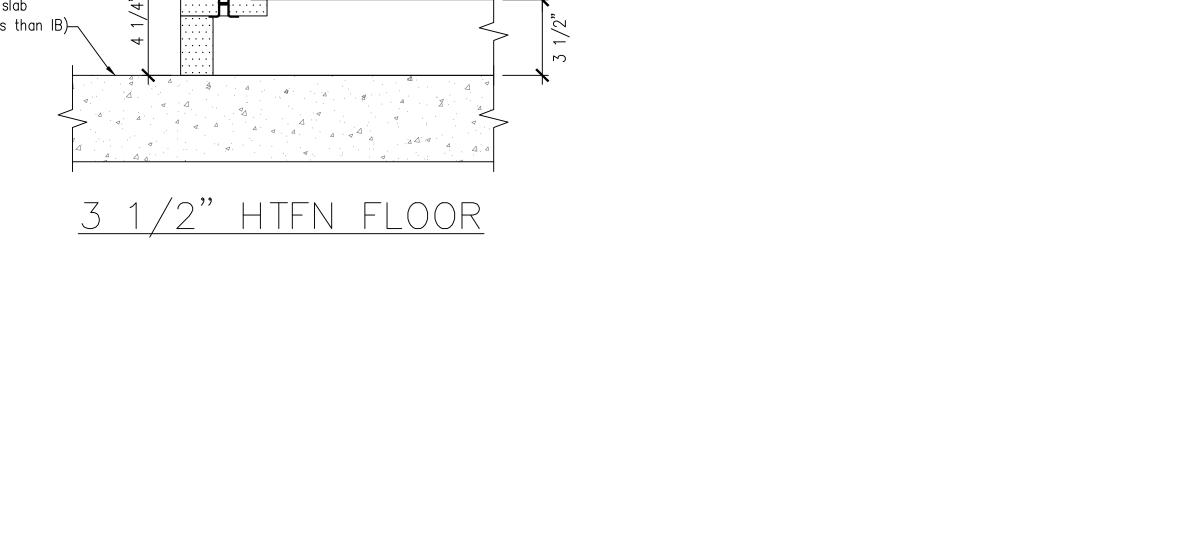
Allow 2 feet clearance above refrig. unit to remove top panel and to allow service access.

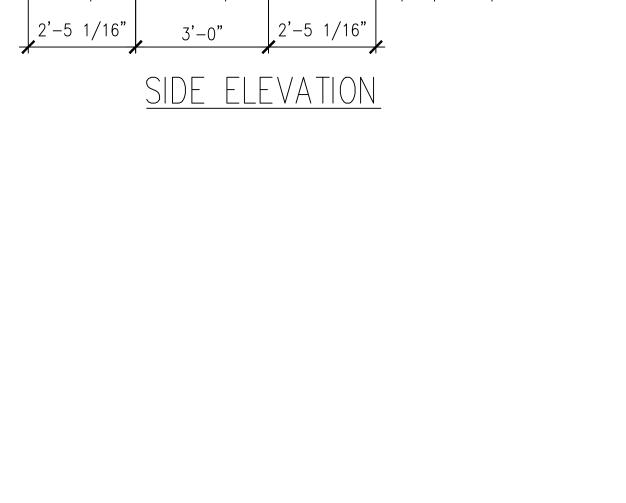
Packaged refrigeration systems need proper ventilation to operate correctly. A minimum of 1,000 cfm per compressor horsepower of make up air and exhaust air is required for proper cooling. Failing to provide adequate ventilation can cause premature compressor failure and may void compressor warranty. Contact manufacturer for additional details.





NOTE: Fill all voids solid below





SPECIFICATIONS Indoor freezer (with floor) Vinyl NSF gasket (1/16" joint thickness), Cam-lock layout SN1

SPECIAL INSTRUCTIONS Standard crating

WALL PANELS

Construction: 4" urethane Exterior Finish: Stucco galvalume Interior Finish: Stucco galvalume Ceiling connections: Camlock Floor connections: Camlock

CEILING PANELS

Construction: 4" high density urethane Exterior Finish: Metal Interior Finish: Stucco galvalume Ceiling Caps: Factory mounted

Live Load: 10 psf

FLOOR PANELS Model: Hand—Truck Floor panels model #HTFN (NSF)

Construction: 3 1/2" high density urethane w/ .063 aluminum diamond tread (low profile) @ interior

over 1/2" plywood w/ Metal @ exterior

A: 36" x 75 1/4" flush model G3 self-closing freezer door *** ELECTRICAL COMPONENTS PRE-WIRED *** Frame: 4" high density urethane, 3—sided

w/ Stucco galvalume both sides w/ 24 ga. stainless steel 430 (magnetic) liners

w/ 4-sided heat cable in frame [FL-4-116W] (24'-11 1/2" x 5 ohms/ft (125 total ohms) @ 4.7 watts/ft + Pepi - 120V, 1A)

Leaf: 4" thick, 3—side lap, raised 1/4" w/ Stucco galvalume both sides

w/ Magnetic gasket

(2) Component Hardware #W59 spring assisted adjustable hinge (1) Kason #1229 handle only

(1) Kason #1094 hydraulic door closer (1) Weiss XWA11V temperature monitor w/ external buzzer

(2) Terminal J-box @ int.

(1) Kason 1832 heated air vent (23W, 120V, .2A)

(1) .080 smooth aluminum threshold for interior ramp

(1) ea. Freezer — Indoor R404a self—contained system

7059 BTU/H @ 10°F TD with 14.7 hr runtime @ -10°F inside/95°F outside room 95℉ @ cond. unit, 1289ft altitude

(1) Climate Control R404a air cooled self contained unit #PTN052L6BE

208-230V/1ø/60Hz/3HP Pro3 compressor MCA=24, MOPD =30 42W x 52D x 19H x 280lbs.

Opening: 25W x 38.5D

NOTES

Meets 2009 Federal Energy Independence and Security Act Requirements.

STANDARD NOTES

1. To prevent condensation, a minimum 2" from the walk—in exterior surface is required. High humidity conditions may require force ventilation in addition to clearance.

2. Installation site floor must be true and level within 3/16" per 10' or additional costs may be incurred.

3. Imperial Brown's sliding and vertical lift doors shall not be considered means of egress. Check code egress requirements for your application.

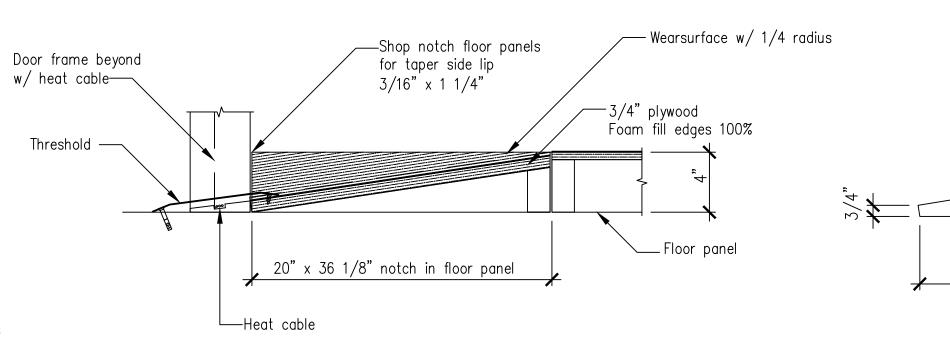
ELECTRICAL
Field electrician to verify maximum acceptable load for light switches.If load is too high, then relay type controls

After wiring devices, ALL conduits must be sealed to stop moisture transfer through electrical raceways. Failure to seal device per NEC codes WILL VOID WARRANTY.

REVISIONS

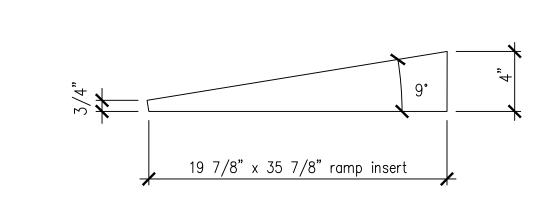
01 05/22/2019 process order

Seal under threshold Tension Breaks — .080 Smooth Aluminum & sides with caulking & *** <u>THRESHOLD</u> 38 7/8 Field drill 5/16" holes 1/2" from edges for (4) #14 x 3/4" FHSMS & (4) 1/4" dia. x 2 1/4" FH concrete sleeve anchors @ 12" o/c 24" DEEP INTERIOR RAMP DETAIL

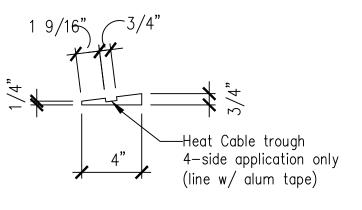


threshold w/ urethane foam or grout seal threshold/jamb joint w/ silicone

NOTE: Due to construction variables

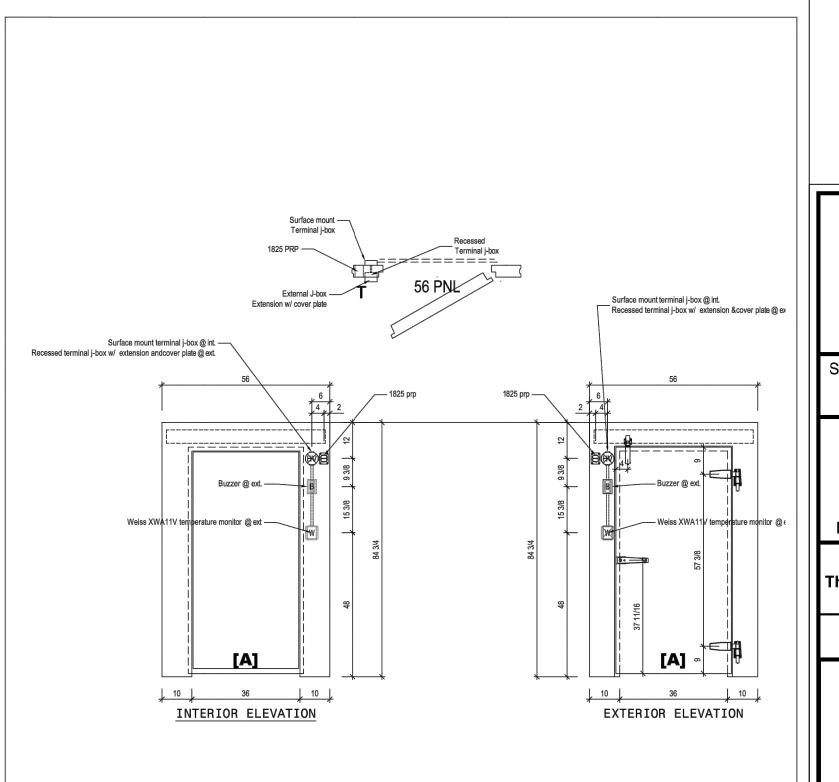


NOTE: Raise door leaf 1/4" for sloped ramp sill



TAPERED THERMOLITE

 $egthinspace{1.5em}$



Guangzhou LEDIA Lighting Technology Co., Ltd

Factory address: No.1 Xian Ke 1st road, Huadong Town, Huadu Dist., Guangzhou, China

Specification

LED Vapor Tight Light

LD-TL-B024

LD-TL-B030

LD-TL-B040 LD-TL-B050

LD-TL-B060

2. The right of final interpretation of this specification to Guangzhou LEDIA Lighting Technology Co., Ltd.

Outlook

Dimensions

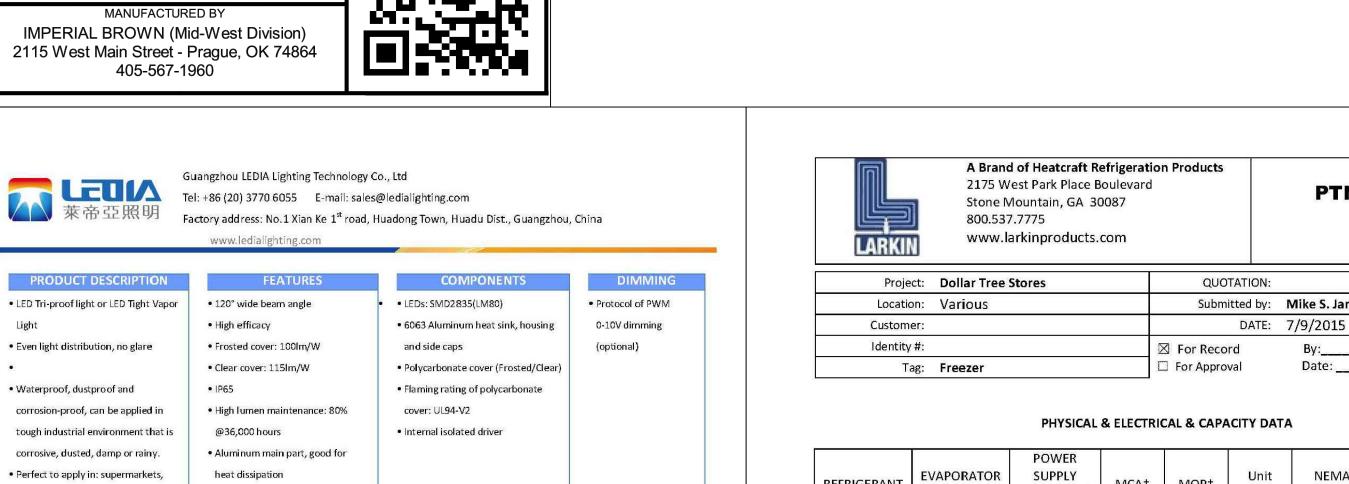
Tel: +86 (20) 3770 6055 E-mail: sales@ledialighting.com

Item No.

1. This specification for our regular product specifications.

Close View





REFRIGERANT

R404A

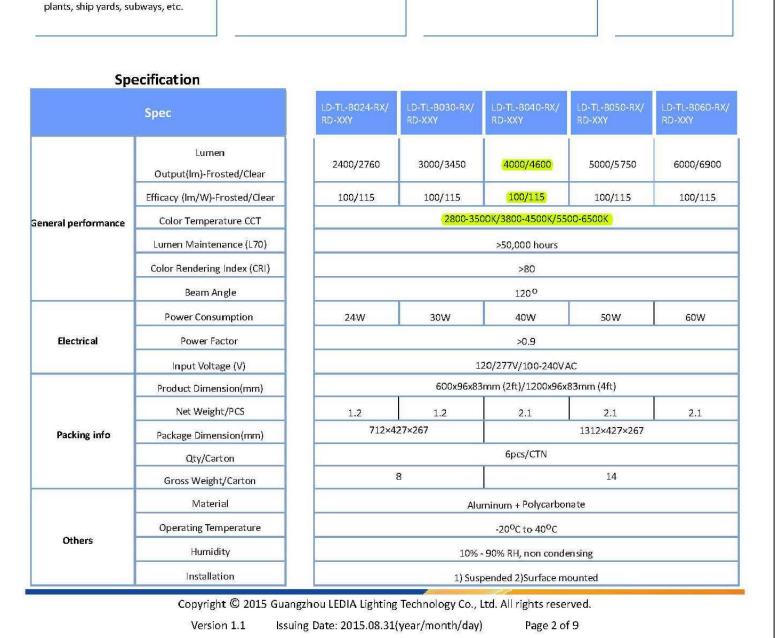
CFM

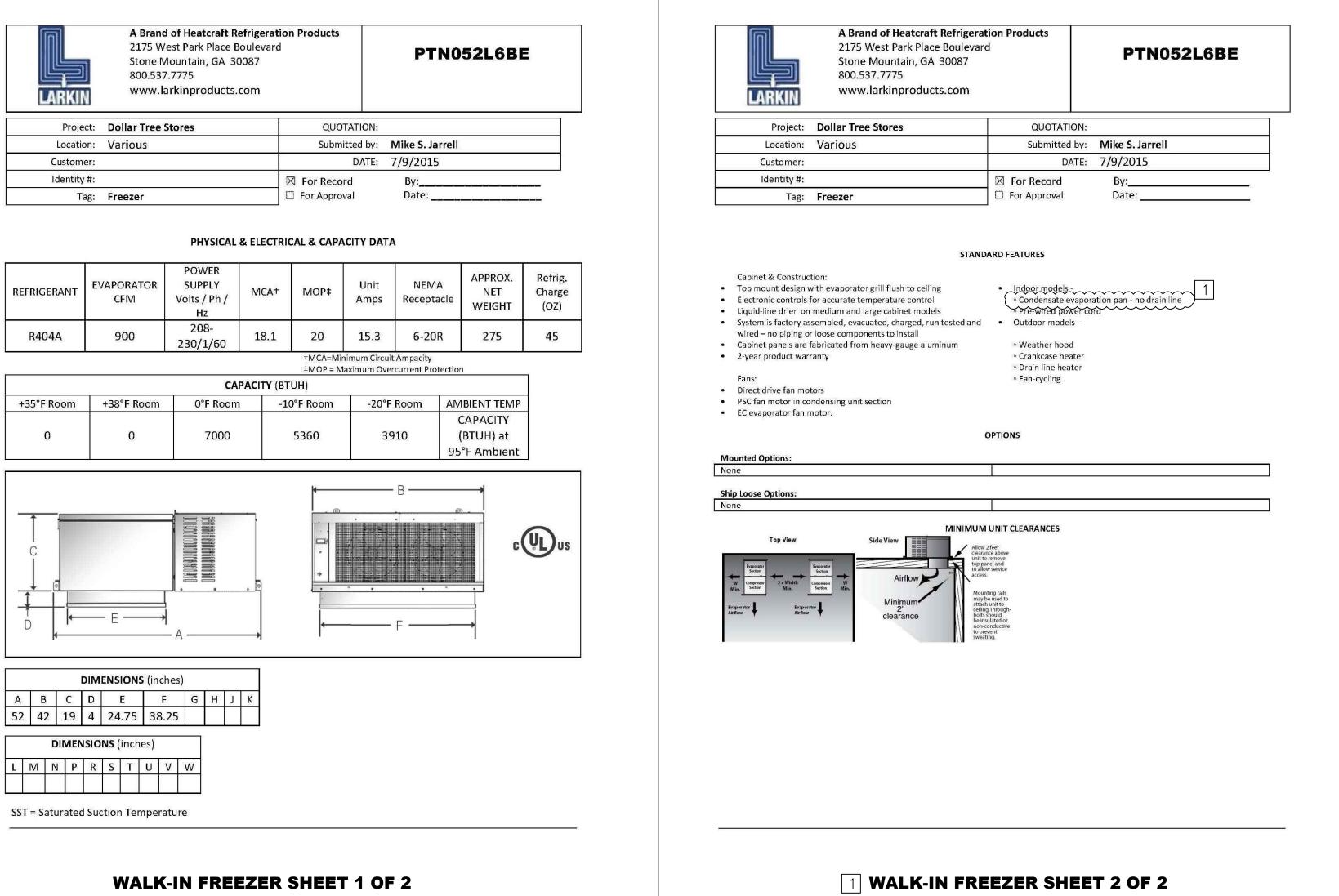
DIMENSIONS (inches)

DIMENSIONS (inches)

L M N P R S T U V W

SST = Saturated Suction Temperature





GENERAL NOTES:

FLOOR DRAIN.

1 REFER TO SPECIFICATIONS

1. THE PROPOSED FREEZER/COOLER UNIT SIZE

2. ALL WALK-IN & MERCHANDISING UNITS ARE

SELF CONTAINED AND DO NOT REQUIRE A

IS INDICATED ON FLOOR PLAN.

3. INSTALLATION OF THESE NSF, ETL & UL

4. ALL PANELS ARE LISTED UNDER <u>LARR</u>

PLANS.

LISTED UNITS SHALL COMPLY WITH ALL

STATE AND LOCAL CODES PER APPROVED

FOR REFERENCE ONLY

Version 1.1 Issuing Date: 2015.08.31(year/month/day) Page 1 of 9

Flexible installation: suspended or

warehouses, parking lots, bus stops,

power plants, steel plants, petroleum

c. Language end unit (e.g. lighting, HVAC unit, supply air fan, etc.) cannot be operated for mechanical or electrical reasons, CRS will verify the proper operation of the EMS control devices (e.g. contactors, discrete I/O) leading up to the unit, in order to fully verify the operations of the

	DEVICE LEGEND
SYMBOL	DESCRIPTION
SSC	HVAC UNIT CONTROLLER (SIMPLESTAT)
TRC	HVAC UNIT CONTROLLER (TRC)
— DTS	DUCT TEMPERATURE SENSOR
STS	SPACE TEMPERATURE SENSOR
OLS	OUTDOOR LIGHT SENSOR
OHS OTS	OUTDOOR TEMPERATURE & RELATIVE HUMIDITY SENSORS
RTS	REMOTE TEMPERATURE SENSOR
(CO ₂ S)	INDOOR CO ₂ SENSOR
IHS	INDOOR RELATIVE HUMIDITY SENSOR
ILS	INDOOR LIGHT SENSOR
DOOR SENSOR	O/H DOOR SENSOR
SID	SECURITY INTERFACE DEVICE
eSC	eBUILDING SYSTEM CONTROLLER
ROS	REMOTE OVERRIDE SWITCH
OCC	OCCUPANCY SENSOR

					LO
		CABLE	LEGEND		RE
KEY	SIZE	TYPE	MFG.	MFG. PART #	DA
10	18/2	SHIELDED PLENUM	WINDY CITY	# 002320-S	
12	18/4	SHIELDED PLENUM	WINDY CITY	# 002340-S	DA
14	18/8	NON SHIELDED PLENUM	WINDY CITY	# 002392-S	
16	18/10	NON SHIELDED PLENUM	WINDY CITY	# 002393-S	DA
18	24/8	CAT5 E PLENUM	WINDY CITY	# 5556140-S	DF

DOLLAR TRE	DRAWING NOTES	FOR REFERENCE ONL
REVISION: 1 DATE: 06/05		√#: 2390

Suite 0310

OOSE DT OPTION REVISION: DATE: ECN#: REVISION: DATE: ECN#: REVISION: DATE: ECN#: ENGINEER: CGF PART #: 94-402 | OPTION: P

> **ENERGY** MANAGEMENT PLAN

> > EM-1 of 4

SHEET

EM-101

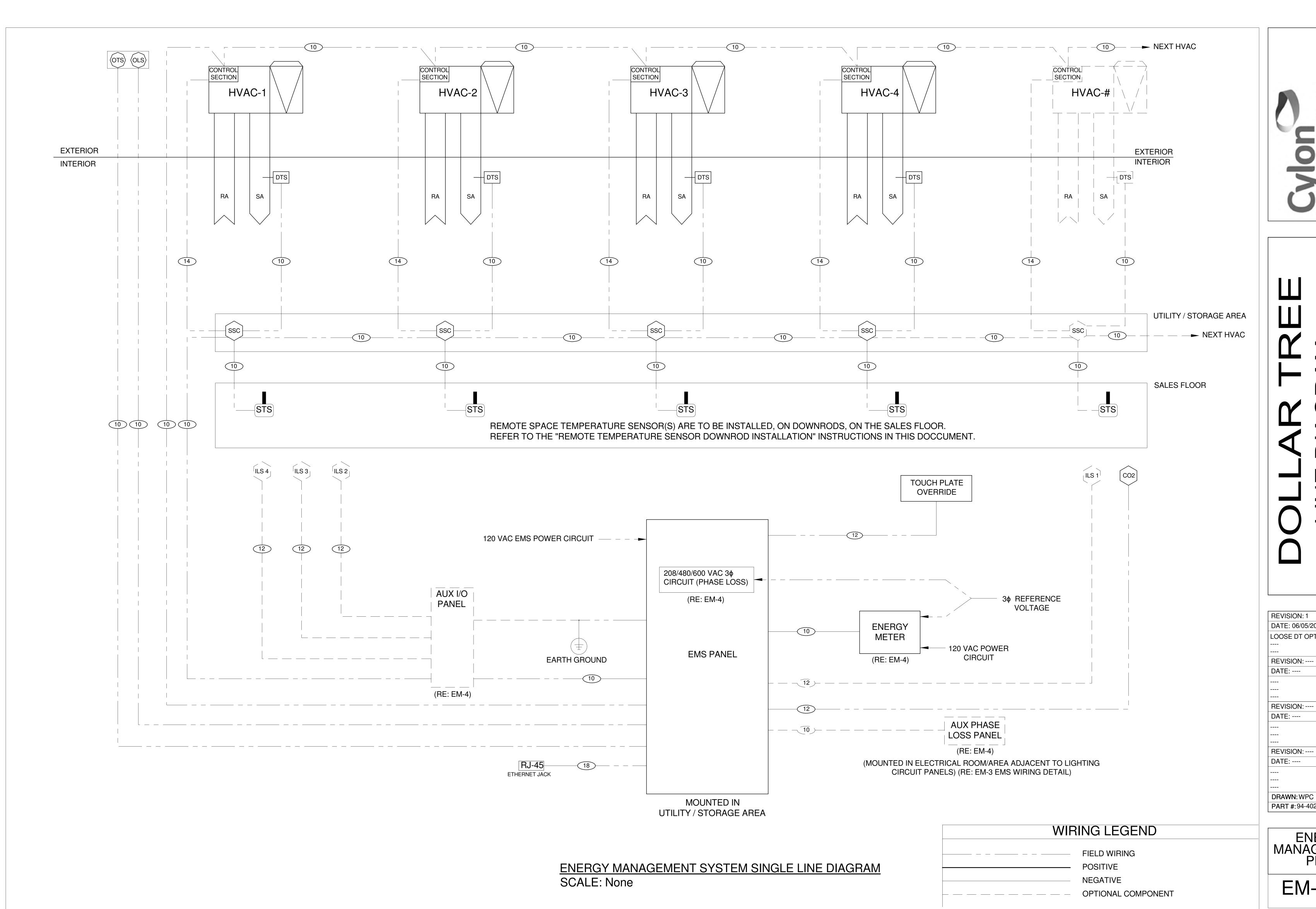
PROFESSIONAL OF RECORD

KLH PROJECT

iv. Operation of HVAC cooling stages, as indoor and outdoor environments allow.

d. CRS will issue an "EMS Check-Out Number" once all store systems are verified as operational.

v. Verification of HVAC unit sensor readings - space and supply temperatures.



PROFESSIONAL OF RECORD

25 Sundial Ave - Suite 310 W Manchester, NH 03103

SION: 1		
E: 06/05/20	ECN#: 2390	
SE DT OPTION	N	_
SION:		
<u>:</u>	ECN#:	
SION:		
<u>=</u> :	ECN#:	
SION:		
E:	ECN#:	

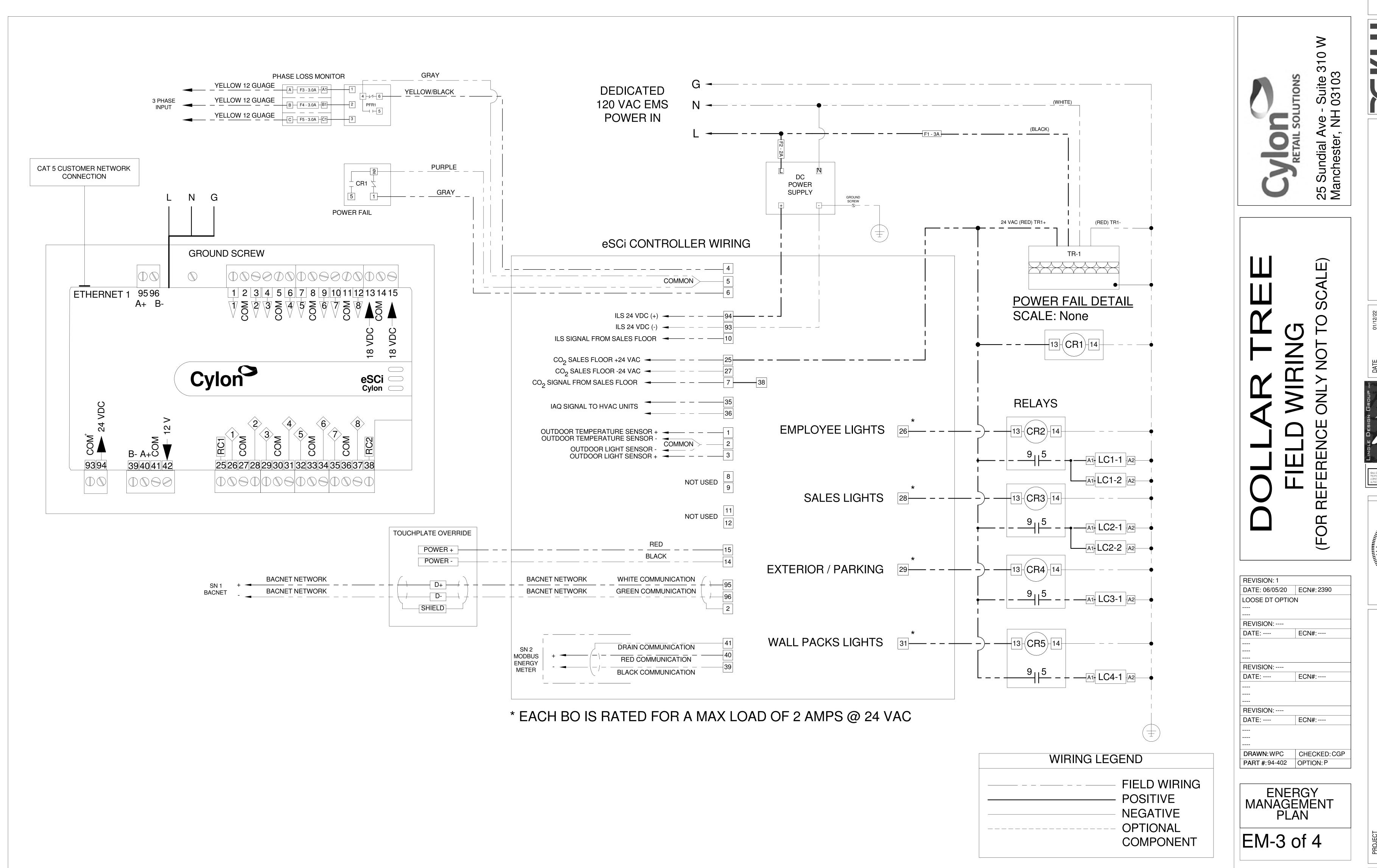
DRAWN: WPC CHECKED: CGP PART #:94-402 OPTION: P

ENERGY MANAGEMENT PLAN

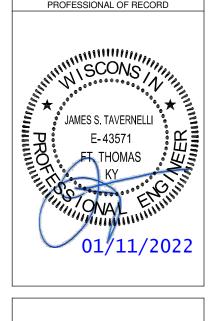
EM-2 of 4

SHEET EM-102

LAKE G90 WEST EMS

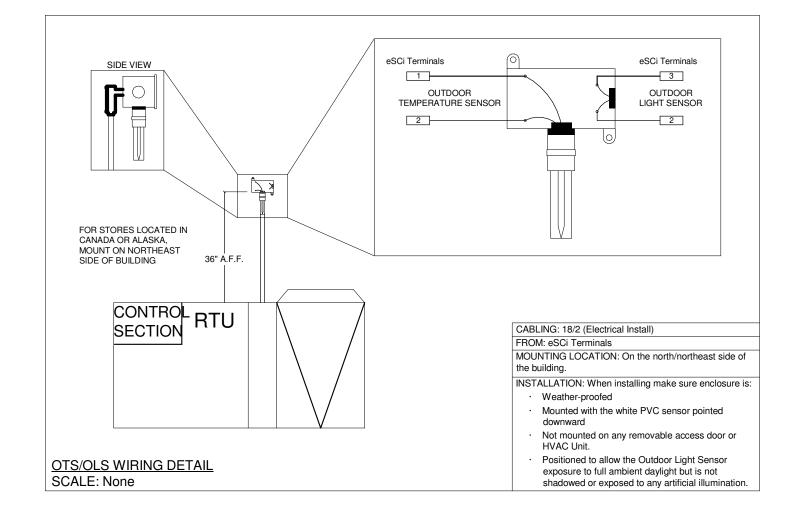


PROFESSIONAL OF RECORD



DOCCAPS THE COUNTRY MARKET 690 WESTFIELD WAY, PEWAUKEE, WI 53 EMS DETAILS

EM-103



REMOTE TEMPERATURE SENSOR

NEXT TYP. SSC

SIMPLESTAT WIRING DETAIL

WIRE TO BE LANDED ON

ECONOMIZER BOARD HH63AW001 (W7212), AS

HVAC IAQ CONNECTION DETAIL

SCALE: None

SHOWN

SCALE: None

SUBNET #1 SIMPLESTAT COMMUNICATION

DUCT SENSOR

SCALE: None

YORK (option 2) WIRE TO BE TRANE WIRE TO BE LANDED

CABLING: 18/2 (Electrical Install)

MOUNTING LOCATION: N/A

INSTALLATION: Special Instructions

make note on survey form.

2. Daisy chain to next sales floor hvac unit, as required

FROM: eSCi Terminals

ON TERMINALS,

AS SHOWN

Terminal designations are for economizer actuator motors. If hvac units do not have

economizer section or do not have iaq/dcv option, then do not terminate wires and

LANDED ON INTERFACE

BOARD Q769C AS SHOWN

BACK VIEW OF SIMPLESTAT

FRONT VIEW OF SIMPLESTAT

Terminate C, R, G, Y1, Y2, W1, and W2 for control of fan, cooling, and heating. Secure the communications cables to the SimpleStat as

eSCi Terminals

GROUND SCREW

Output DC 24V 30W

○ DC OK

Input AC

100V-240V

INSTALLATION: TERMINALS WIRED TO INDOOR LIGHT SENSORS

Provide 24VAC power to the SimpleStat Thermostat Module from the RTU transformer. Power to the controller must be off while

RTU WIRING

· Install cable between SimpleStat Thermostat module and RTU

CABLING: (18/2 Shielded - Communication) (18/8 - HVAC Control) (18/2 - Remote Sensor)

MOUNTING LOCATION: (SimpleSTAT - Adjacent to EMS Panel) (Remote Sensor - On Downrods on Sales Floor)

The remote space temperature sensor must be connected prior to applying power to the SimpleStat.

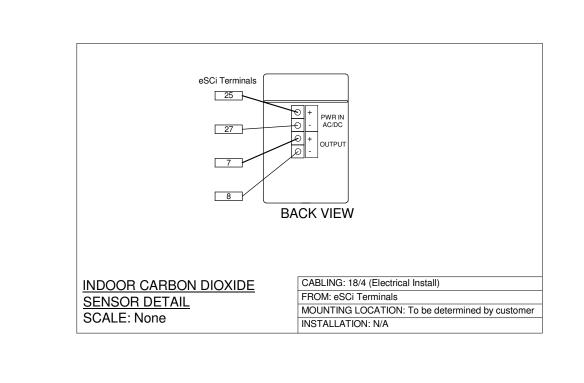
SUBNET #1 SIMPLESTAT COMMUNICATION 96
SUBNET #1 SHIELD 2

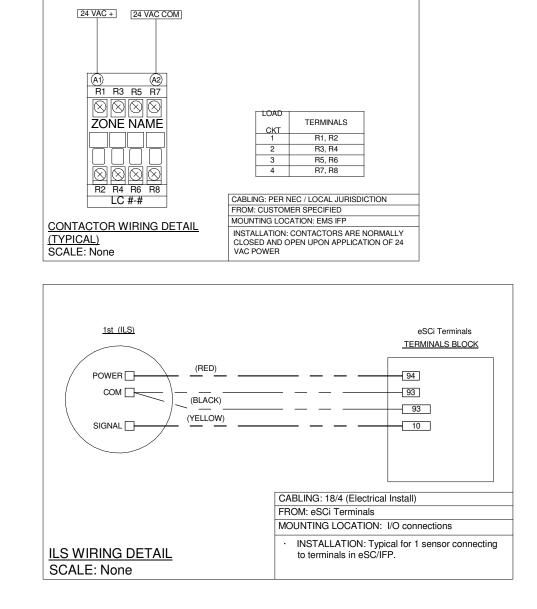
FROM: eSCi Terminals

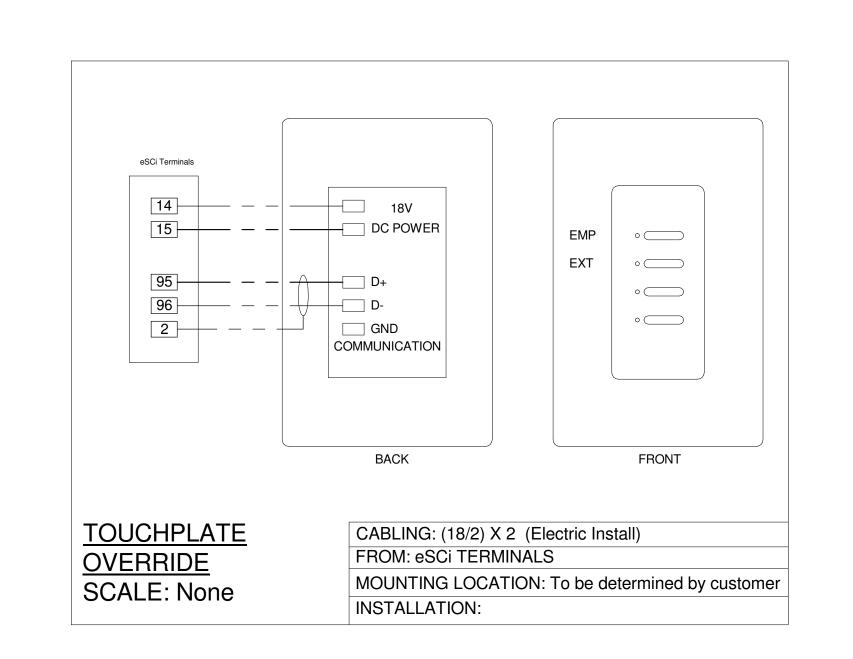
LENNOX L SERIES WIRE TO BE LANDED ON

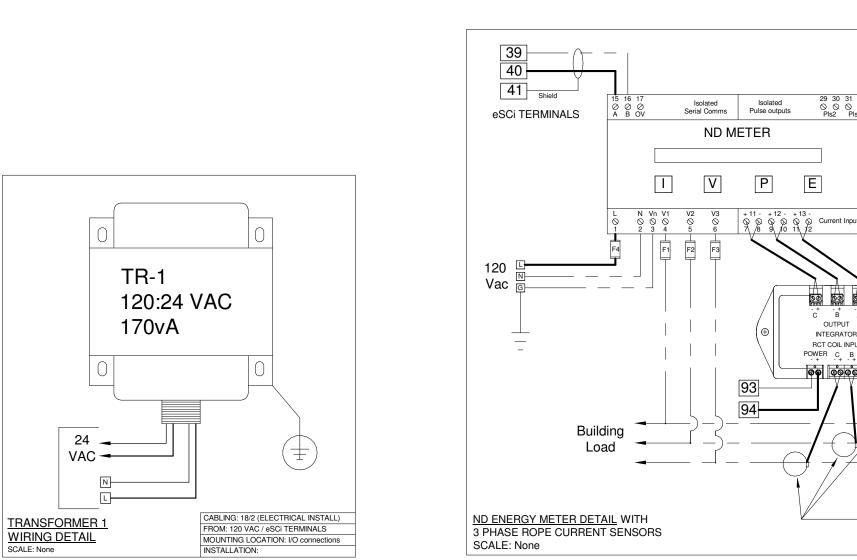
TERMINAL TB1, AS SHOWN

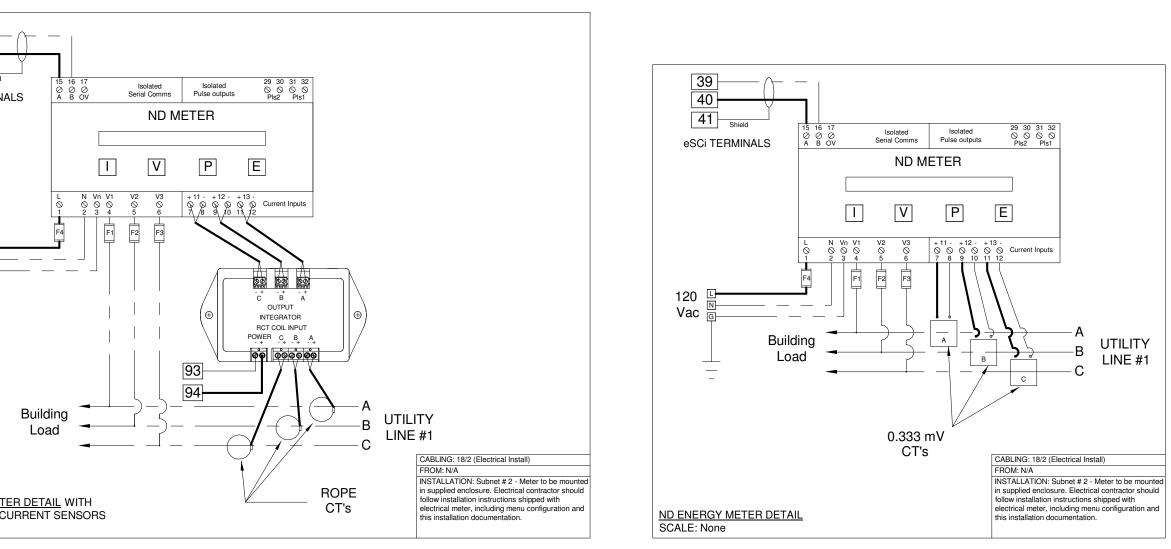
INSTALLATION:

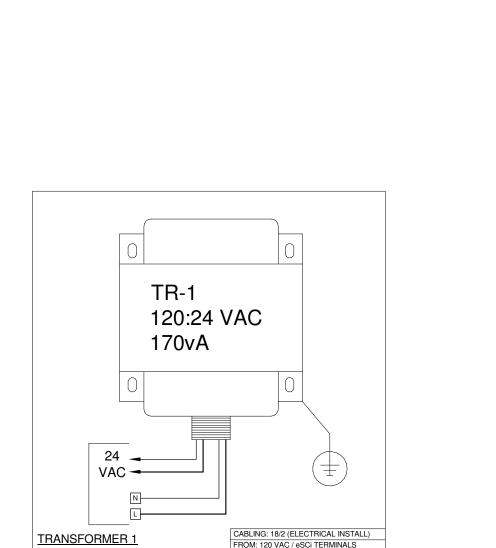












PROVIDE 15 FEET EXCESS SENSOR WIRE ABOVE CEILING TO ACCOMMODATE SENSOR RELOCATION.

TEMPERATURE SENSOR WIRE INSIDE

PVC PIPE- PROVIDED & INSTALLED BY TENANT'S GC.

CABLING: 18/2 (MECHANICAL INSTALL)

MOUNTING LOCATION: Adjacent to monitored panels.

· For stores with ACT ceilings at 15'-0" AFF or less,

temperature sensor mounting rods are supplied by

· For stores with exposed roof decks, ACT ceilings higher than 15'-0" AFF or hard ceilings, the GC is required to supply and install a 2"x2" power pole, cut

to fit and painted to match sales floor walls.

Refer to the reflected ceiling plan for ceiling

INSTALLATION: Mounted in HVAC zone on Sales Floor

FROM: SimpleSTAT Terminals

tenant for installation by GC.

information prior to bidding.

TEMPERATURE SENSOR WIRE

INSIDE PVC PIPE

VARIES ——CEILING GRID CLIP (WHITE)

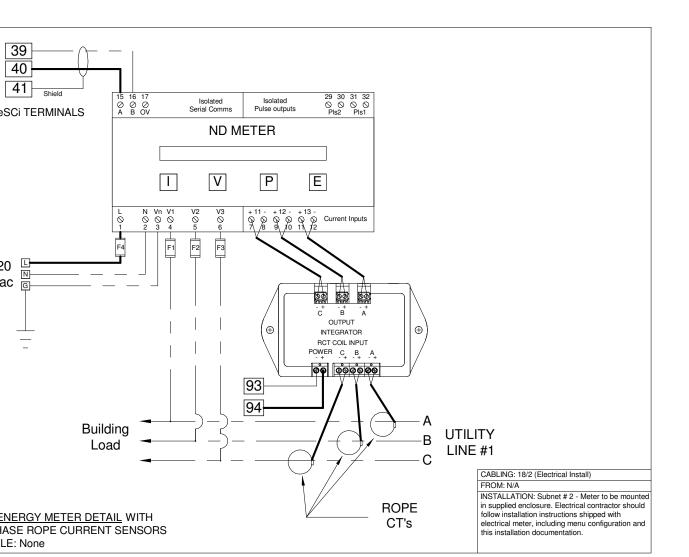
ACT CEILING & GRID 2

REMOTE SENSOR MOUNTING DETAIL

1/8" NOTCH IN TOP

SENSOR WIRE

SCALE: None



CABLING: 18/2 (ELECTRICAL INSTALL)

MOUNTING LOCATION: Adjacent to monitored panels.

Line voltage per NEC
PFR shown in an alarm condition.

FROM: eSCi I/O Terminals 4, 5

INSTALLATION:

A A F2 - 3A A1 1

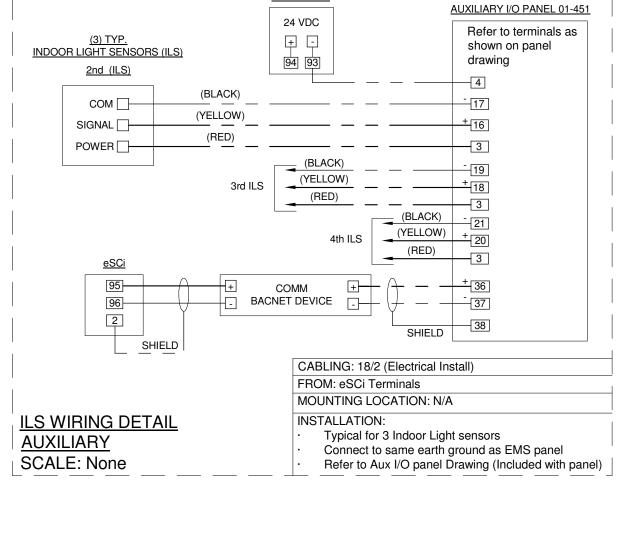
PHASE LOSS MONITOR(S)

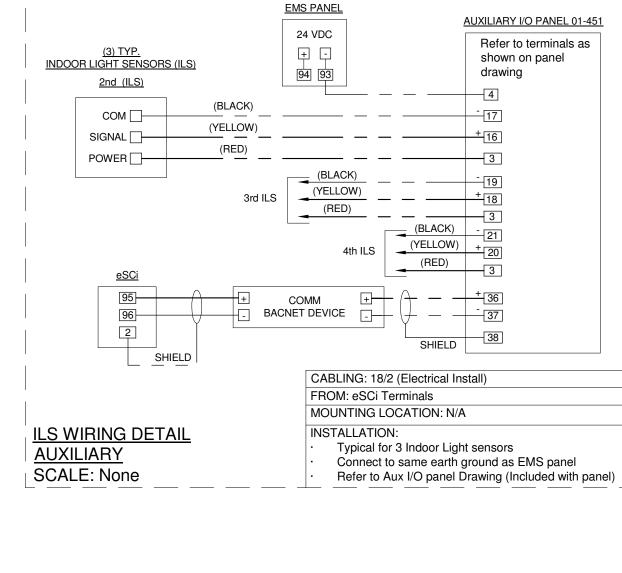
WIRING DETAIL

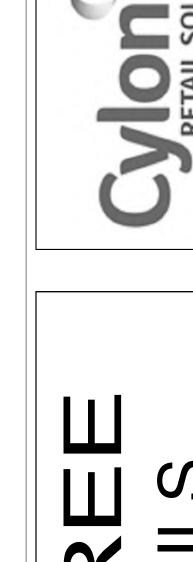
SCALE: None

B B F3-3A B1 2 PFR1

C C F4-3A C1 3







DRAWN: WPC

PART #:94-402 OPTION: P

ENERGY

MANAGEMENT PLAN

EM-4 of 4



0

Jana Jana Jana Jana Jana Jana Jana Jana			JAMES S. TAVERNELLI E-43571 FT THOMAS KY ONAL
REVISION: 1			01/11/20
DATE: 06/05/20	ECN#: 2390		
LOOSE DT OPTION			
REVISION:			
	EON!		
DATE:	ECN#:		
		Ппп	
REVISION:			72
DATE:	ECN#:		7773/3/2/ RKET JKEE, WI 53072
			E, C
			IARK AUKEE
REVISION:			Y Y Y
DATE:	ECN#:		

CHECKED: CGP

PROFESSIONAL OF RECORD

SHEET

EM-104

STAFF REPORT

To: Village of Pewaukee Plan Commission By: Mary Censky

Date Prepared: September 8, 2022

General Information:

Agenda Item: 5.d.

Applicant: Ben Mohns

Property Owner: Ben and Nancy Mohns

Requested Action: Approval of Site and Architectural Plan

Amendment to add an outdoor dumpster location w/ related screening structure, and to add elevated decks to the apartments with elevated north, west, and east facing patio

doors.

Existing Zoning: R-M Multi-Family Residential

Surrounding Zoning/Land Use: North: R-M Multi-Family Residential

South: City of Pewaukee

East: P-1 Park and Recreation

West: Hwy. 16

Existing Master Plan Classification: Multi-Family Residential

Location: 357 Morris Street

Lot Size: .9024 +/- acres

Discussion:

The applicant proposes to add nine elevated decks to serve the nine (out of 10 total) apartments in this building with elevated patio doors. Each 13.5 ft. wide x 5 ft. deep (i.e., 67.5 sq. ft.) deck will supported by posts-to-ground and the entire system will be constructed of treated wood materials. These decks are proposed to be painted white/tan to match other existing painted features of this building such as the trim and the east/west gable ends. A 13.5 ft. x 5 ft. patio will be installed at grade for the 10th unit where the patio doors open at grade on the west side of the building.

The applicant also proposes to place an outdoor dumpster at this site with a related 10 ft. wide x 8 ft. deep x 6 ft. tall screening structure constructed of treated wood materials and painted brown to blend in with the surroundings. A thorough landscaping screening plan is also proposed to be installed around the exterior of this proposed new enclosure. This structure does include operable doors. The combined

new impervious surface to serve this dumpster location and access thereto is approximately 175 sq. ft. in area. The maximum combined area of the site that can be covered in buildings, structures and paved area in this district is 30%.

The required minimum building and structure setback for this district (including any attached building elements such as the decks and any accessory structures like the proposed new dumpster screening corral) is 35 feet to the ultimate right-of-way line of any public street, road or highway. The required minimum offset for the principal building to the side lot line is 10 feet and to the rear lot line it is 25 feet. Storage related accessory structures (such as the dumpster corral) must maintain a minimum 10-foot offset from side or rear lot lines.

It does not appear that the decks proposed on the south building elevation will meet the required 35-foot setback from the south property line. Also, it does not appear that the proposed dumpster screening structure will be able to meet *both* the required 35-foot setback from the west property line, and the required 10 foot offset from the east property line.

Recommendation:

The Planner feels that there is merit in the requests presented by the applicant, such as getting the garbage out of the below-grade parking area of this building as a sanitary and odor matter, as well as improving the fire safety access to tenants of the apartments with above grade floor elevations, for instance. The following conditions are recommended to be considered for attachment to any approval the Commission may be inclined toward granting at this time:

1) Applicant to complete the requisite survey of the property and to depict the proposed new modifications/improvements thereon. In the event this survey detail reveals that the greenspace will be reduced to below 30%, or if any of the proposed new structures will not comply with the required setbacks/offsets, then the applicant must secure a variance for each digression from the Board of Zoning Appeals before being permitted to proceed with that element of the project; and 2) Applicant to secure all required building permits and grading/paving plan approvals from the inspections and/or public works/engineering departments prior to the start of any work in support of this project.

Village of Pewaukee Planning Commission

RE: 357 Morris Street, Pewaukee, WI 53072

To Plan Commission Members

This submittal is for the addition of decks to the above listed project as well as a dumpster corral. After talking with Chief Bierce in February of this year he concurred the decks would be advantageous for emergency egress. While at the same time providing an enhancement for the tenants occupying the space.

The decks will be constructed out of pressure treated lumber and then painted white after the osmose treatment evaporates (within 9 months or so) as shown on page T1.0 the south side of the building is 40.75' from the fence at the shortest point which would leave 35.75' to the fence after construction.

I am seeing approval on the 3 sets of decks that are certain to fall within the set back requirements and approval of the other 2 sets of decks pending the survey for staff review or if not in compliance with the setbacks an approval pending acceptance or approval from the zoning appeals board.

The approval request for the dumpster enclosure and placement are shown on T1. The location of the dumpster was originally approved located in the interior lower level parking area. Due to summer heat and smells we are asking to relocate this. While the proposed location is heavily screened by natural foliage it is mainly deciduous trees and we are proposing coniferous screening. Please see additional details on page A2.1

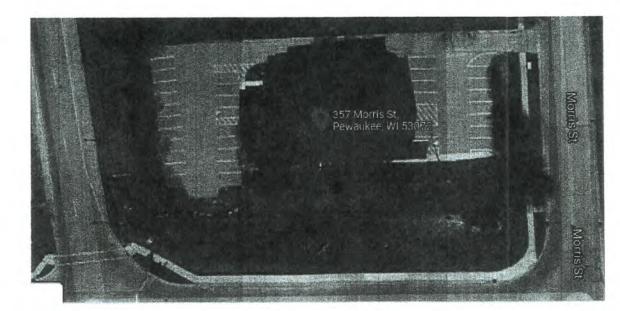
Thank you for your consideration.

Ben Mohns

MORRIS STREET APARTMENTS - RENOVATION

357 MORRIS STREET PEWAUKEE, WISCONSIN

OWNER: **BEN AND NANCY MOHNS** 2285 HAMMOCK HILL LANE **BROOKFIELD, WI 53045**



SITE MAP NO SCALE

DEVELOPMENT INFORMATION

PARKING:

PARKING REQUIRED: PARKING PROVIDED:

2 SPACES PER UNIT = 20 REQUIRED EXTERIOR SPACES OTAL SPACES

AREA

BUILDING:

LOWER LEVEL (PARKING): FIRST LEVEL: SECOND LEVEL: 7027 S.F. 7027 S.F. 7027 S.F. TOTAL AREA:

TRASH:

TRASH STORAGE

PROPOSED IN LIPPER LEVEL PARKING

UNITS

FIRST LEVEL: SECOND LEVEL

5 UNITS (2 BR) 5 UNITS (2 BR) 10 UNITS (2 BR)

SHEET INDEX:

TI.O SITE PLAN TITLE PAGE SI EXISTING SURVEY FROM FILE AZ ELEVATIONS A 2.1 ELEVATIONS & DETAILS

STREET APARTMENTS
RENOVATIONS

MORRIS

N30 W22377 GREEN RD., SUITE B WAUKESHA, WI 53186 PHONE: 262-522-6585 FAX: 262-

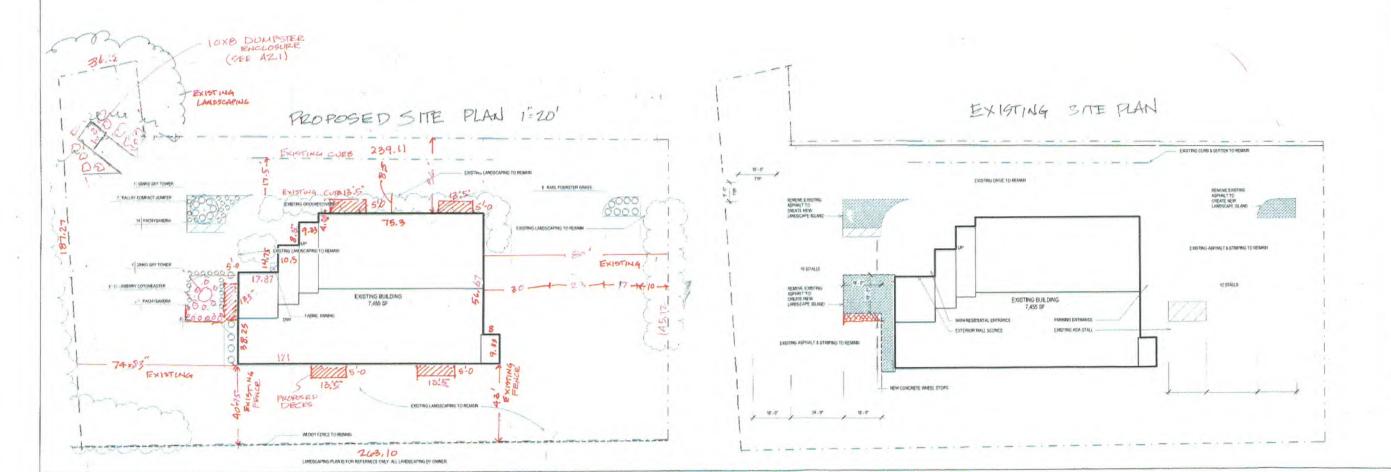
S STREET WI 53072 MORRIS AUKEE, W 357 PEW

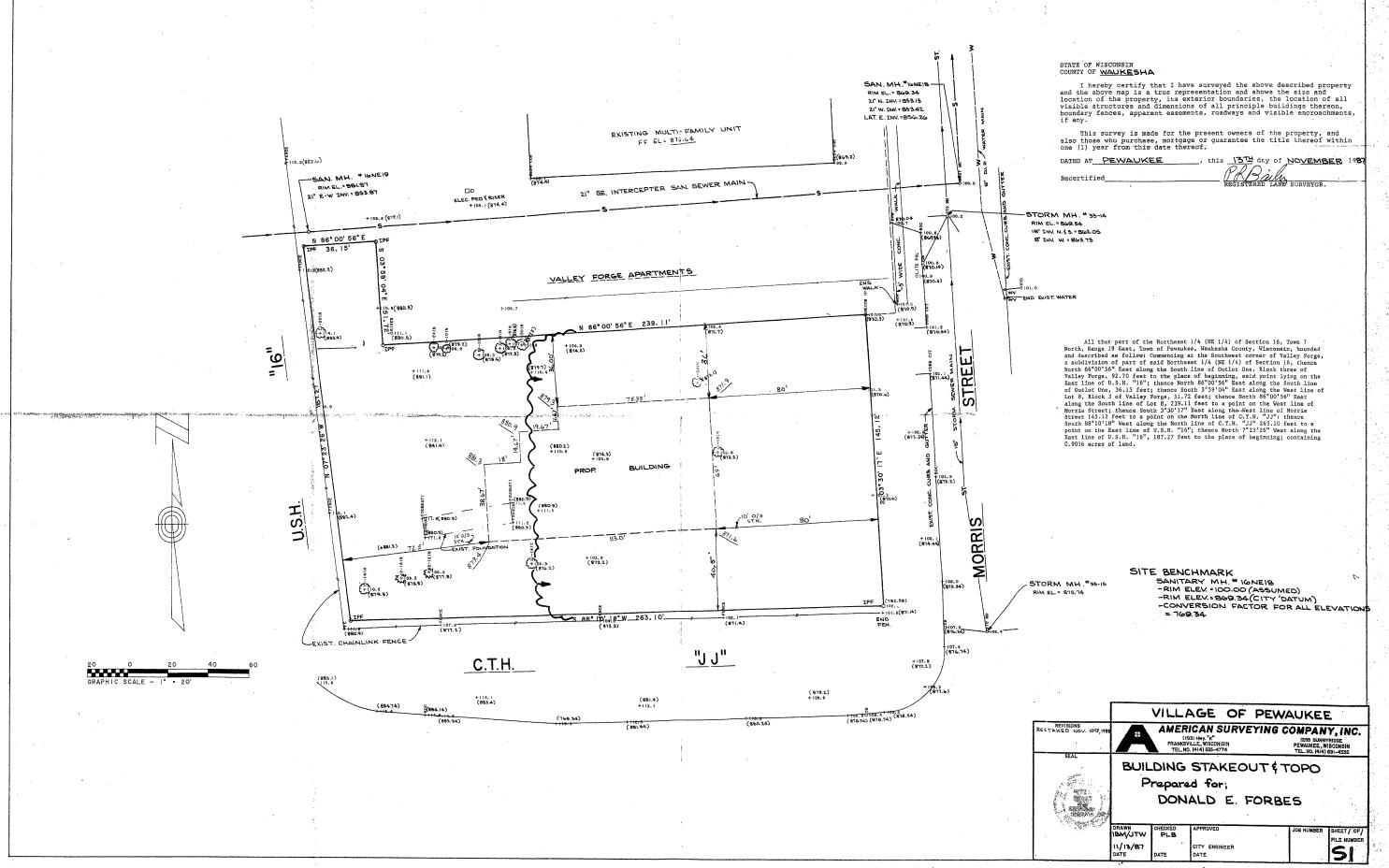
DATE: 02/21/22

TITLE SHEET DRAWN BY

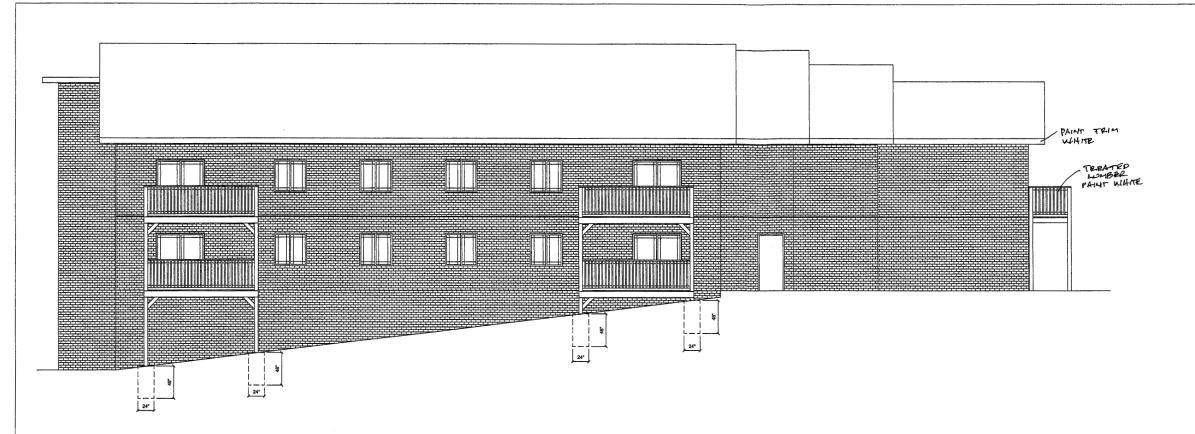
APPROVED BY: BCM JOB NUMBER:

REV:



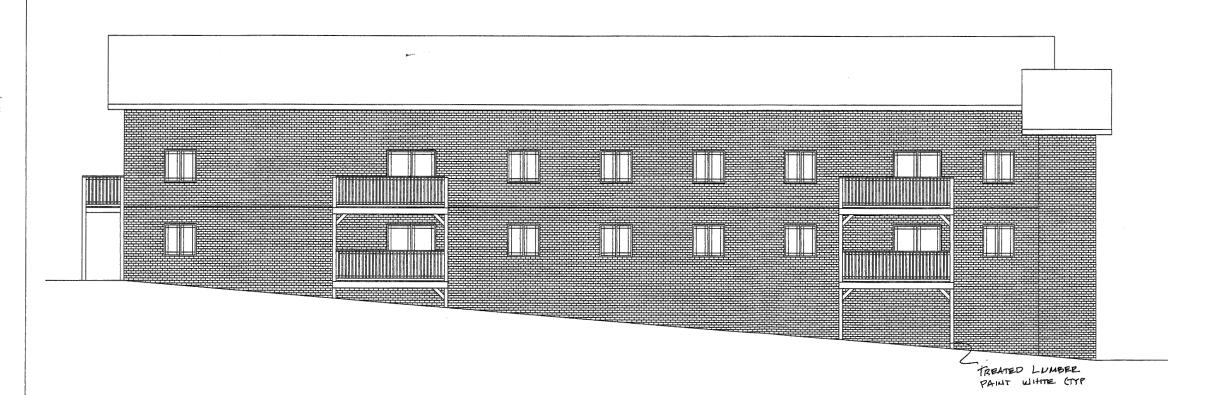


SHEET 5 |



NORTH ELEVATION

SCALE: 3/16" = 1'-0"



SOUTH ELEVATION SCALE: 3/16" = 1'-0"

STREET APARTMENTS RENOVATIONS MORRIS

357 MORRIS STREET PEWAUKEE, WI 53072

N30 W22377 GREEN RD., SUITE B WAUKESHA, WI 53186 PHONE: 262-522-6585 FAX: 262-MOHNO ON QUALITY SINCE 1978

FAX: 262-522-6584

*GENERAL CONTRACTORS

* SPACE PLANNING

* CONSTRUCTION MANAGERS

SHEET NUMBER: ·A2.0

DATE: 02/21/22

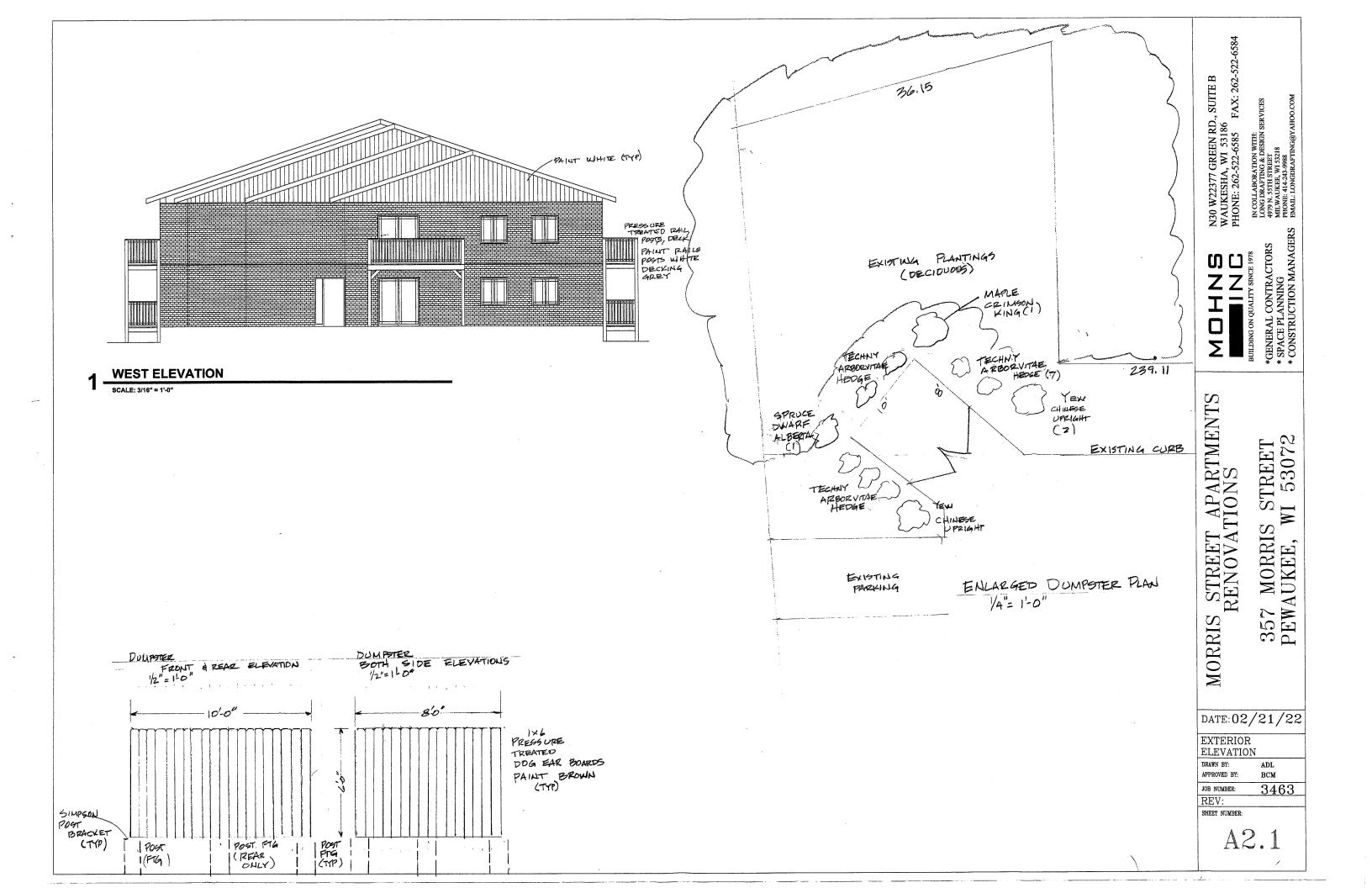
ADL BCM

3463

EXTERIOR ELEVATIONS

DRAWN BY: APPROVED BY:

JOB NUMBER: REV:







68.30 Feet

The information and depictions herein are for informational purposes and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified maps, surveys, plats, Flood Insurance Studies, or orther official means. Waukesha County will not be responsible for any damages which result from third party use of the information and depictions herein, or for use which ignores this warning.

Notes:

Printed: 9/1/2022

