



ALL PLANS, SPECIFICATIONS AND REPORTS TO WHICH THE SEAL OF AN ARCHITECT HAS BEEN APPLIED, THESE SHALL ALSO BE APPLIED A STAMP WITH APPROPRIATE WORDING WARNING THAT IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT IS ALTERED, THE ALTERING ARCHITECT SHALL AFFIX TO HIS ITEM THE SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

mark	date	by	description

date	06/15/2022
project	2022.27/D13216
designed	RLD
drawn	PDG
checked	JWD



CS1

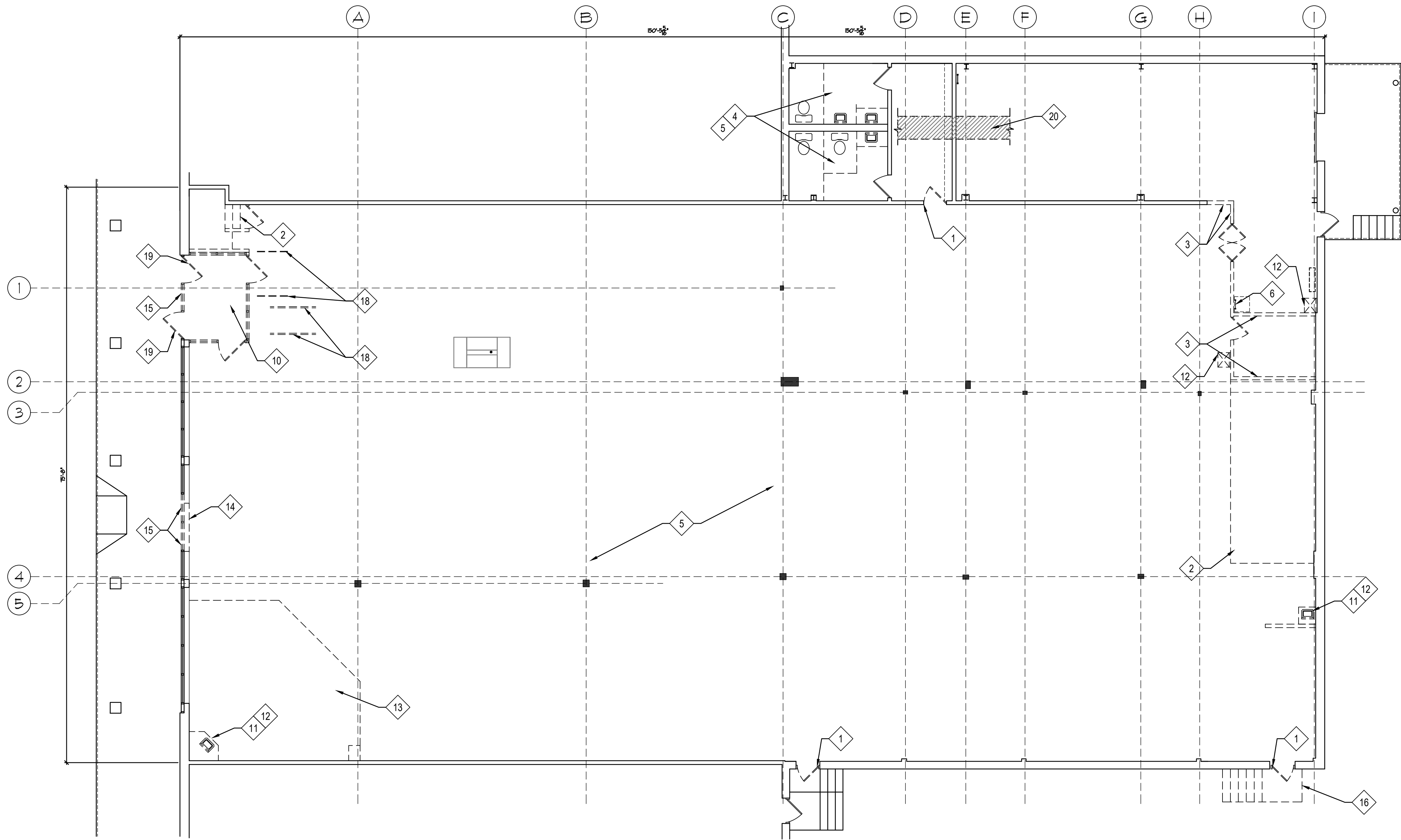
sheet

project

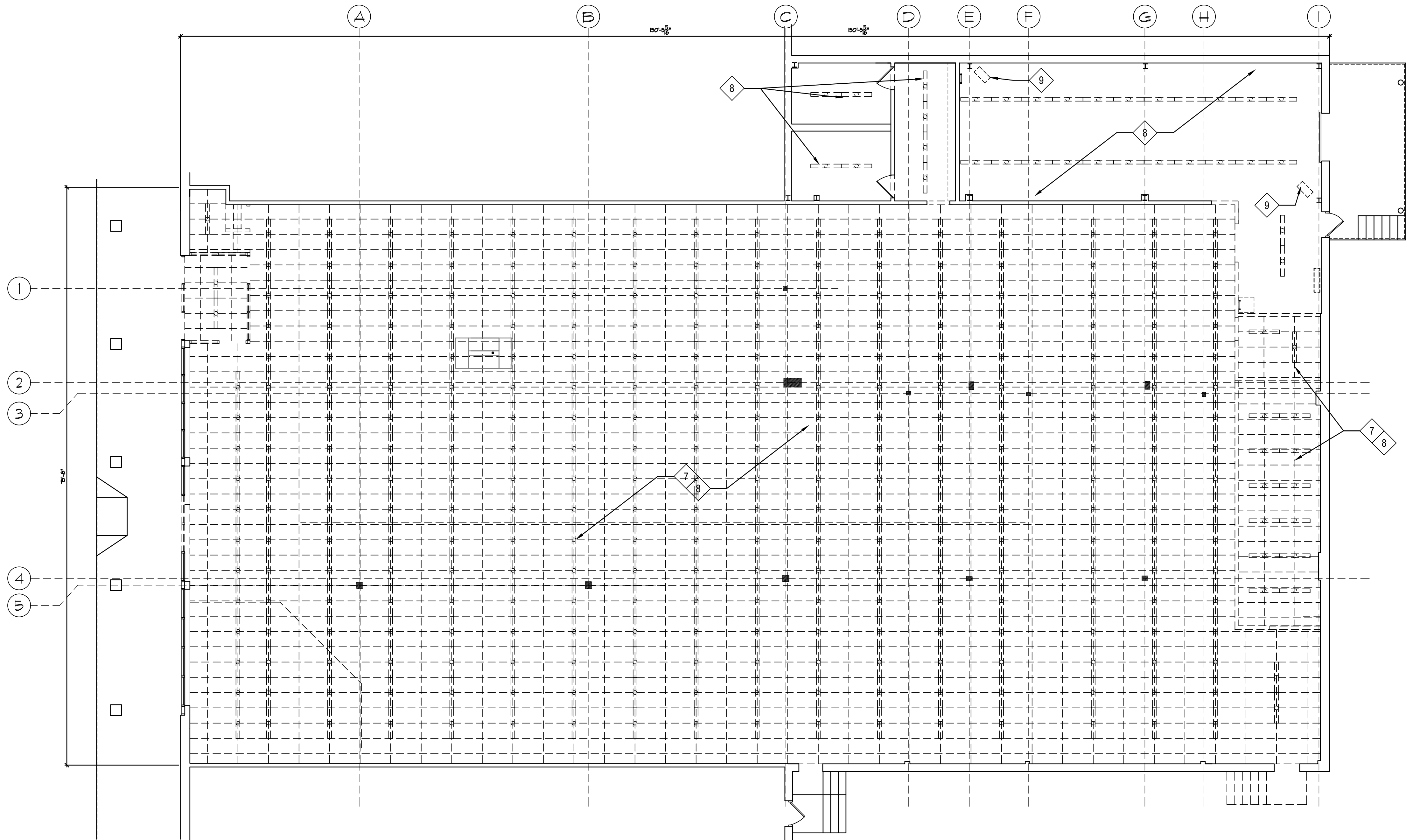
DOLLAR TREE

166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10880
NOTES, LEGEND AND KEY PLAN

drawing



1 DEMOLITION PLAN
D1 1/8" = 1'-0"



2 REFLECTED CEILING DEMOLITION PLAN
D1 1/8" = 1'-0"

DEMOLITION NOTES

- 1 REMOVE DOOR AND FRAME COMPLETE.
- 2 REMOVE EXISTING RAISED FLOOR COMPLETE.
- 3 REMOVE PARTITION COMPLETE.
- 4 REMOVE EXISTING TOILET FIXTURES, WALL FINISHES AND ACCESSORIES COMPLETE. FOR REMOVAL OF PLUMBING FIXTURES AND NEW FINISHES. SEE PLUMBING SHEETS.
- 5 FLOORING CONTRACTOR (TENANT HIRED) SHALL REMOVE EXISTING VCT COMPLETE. GC SHALL NOT INCLUDE IN BID.
- 6 REMOVE EXISTING LADDER COMPLETE. BOLT SHUT ROOF HATCH.
- 7 REMOVE EXISTING ACT AND GRID COMPLETE.
- 8 REMOVE EXISTING LIGHT FIXTURES COMPLETE.
- 9 REMOVE EXISTING CEILING HUNG HEATER COMPLETE.
- 10 REMOVE EXISTING VESTIBULE INCLUDING ACT, LIGHT FIXTURES, FLOORING, DOORS AND GLAZING PARTITIONS COMPLETE.
- 11 REMOVE EXISTING MILLWORK COMPLETE.
- 12 REMOVE EXISTING MOP SINK COMPLETE.
- 13 FLOORING CONTRACTOR (TENANT HIRED) SHALL REMOVE EXISTING CARPET COMPLETE. GC SHALL NOT INCLUDE IN BID.
- 14 REMOVE PORTION OF EXISTING KNEE WALL COMPLETE FOR INSTALLATION OF STOREFRONT AND DOOR IN NEW WORK.
- 15 REMOVE EXIST STOREFRONT FRAMING AND GLAZING COMPLETE.
- 16 REMOVE EXISTING STAIR COMPLETE.
- 17 REMOVE EXISTING GWB CEILING COMPLETE.
- 18 REMOVE EXISTING RAILING COMPLETE.
- 19 REMOVE EXIST STOREFRONT DOORS, TRANSOM AND THRESHOLD COMPLETE
- 20 REMOVE PORTION OF EXISTING CONCRETE SLAB AS REQUIRED TO 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.)

DEMOLITION GENERAL NOTES

1. REMOVE COMPLETE ALL IMPROVEMENTS AS REQUIRED TO FACILITATE CONSTRUCTION INDICATED BY THE CONSTRUCTION DOCUMENTS AND FOR THE SCOPE OF NEW WORK.
2. ABATEMENT WORK BY OTHERS PRIOR TO PROJECT START MAY IMPACT THE SCOPE OF DEMOLITION WORK. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID AND NOTIFY ARCHITECT OF ANY DISCREPANCIES.

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description

by

date

mark

revisions

06/15/2022	2022/27 D13216	RLD	PUG	JNO
date	project	designed	drawn	checked



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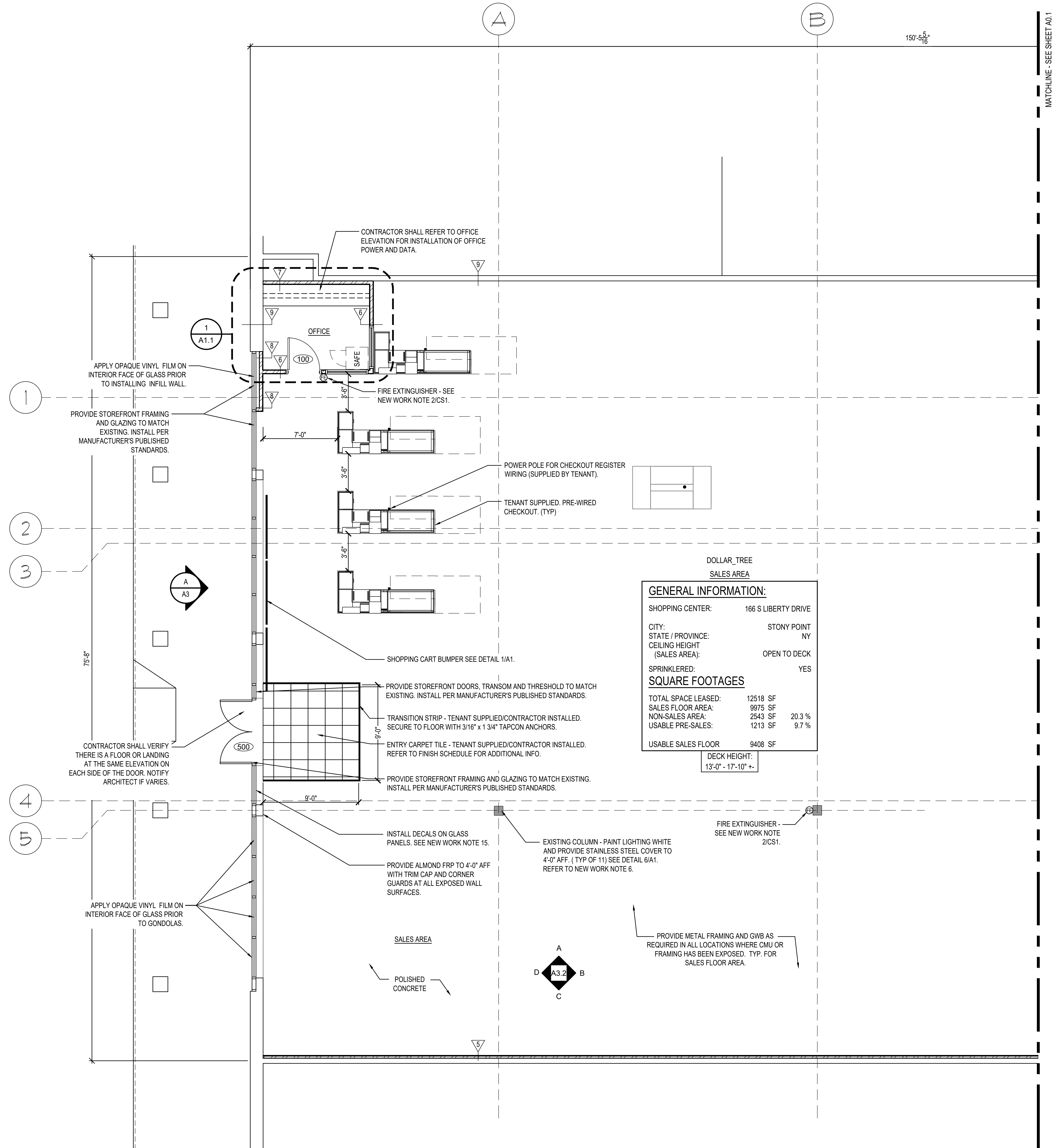
DOLLAR TREE
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STONY POINT, NY 10980
DEMOLITION PLAN AND REFLECTED CEILING DEMO PLAN

project

drawing

sheet

D1



WALL CONSTRUCTION TYPES

- ▽ PARTITION WALL: 6" (20 GA) METAL STUDS @ 16" OC WITH ONE LAYER 5/8" GWB EACH SIDE TO ROOF DECK ON SALES AREA SIDE AND TO 12'-0" AFF ON STOCKROOM SIDE. SEE DETAIL 1/A4.1 FOR ADDITIONAL REQUIREMENTS AND BRACING. FINISH PER FINISH SCHEDULE, SHEET A4.
- ▽ PARTITION WALL: 6" (20 GA) METAL STUDS @ 16" OC WITH ONE LAYER 5/8" GWB EACH SIDE TO ROOF DECK ON SALES / STOCKROOM SIDE AND TO FINISHED CEILING ON TOILET ROOM / HALLWAY SIDE. SEE DETAIL 2/A4.1. FINISH PER FINISH SCHEDULE, SHEET A4.
- ▽ NOT USED
- ▽ PLUMBING PARTITION: 6" (20 GA) METAL STUDS @ 16" OC WITH ONE LAYER 5/8" GWB EACH EXPOSED SIDE TO FINISHED CEILING OR UNDERSIDE OF DECK. PLUMBING WALLS SHALL HAVE WATER RESISTANT GWB. FINISH PER FINISH SCHEDULE, SHEET A4.
- ▽ PARTITION WALL: 3 5/8" (20 GA) METAL STUDS @ 16" OC WITH ONE LAYER 5/8" GWB EACH EXPOSED SIDE TO FINISHED HARD CEILING OR 6" ABOVE SUSPENDED CEILING. PLUMBING WALLS ON INTERIOR OF TOILETS SHALL HAVE WATER RESISTANT GWB.
- ▽ 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 4/A1.1. FINISH PER FINISH SCHEDULE SHEET A4.
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- ▽ TENANT DEMISING WALL: EXISTING METAL STUDS AND GWB. PATCH AND REPAIR AS REQUIRED. PROVIDE FIRE TAPED GWB ON EXISTING STUDS WHERE WALL CAVITY HAS BEEN EXPOSED. FINISH PER FINISH SCHEDULE, SHEET A4.

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description
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revisions

08/15/2022
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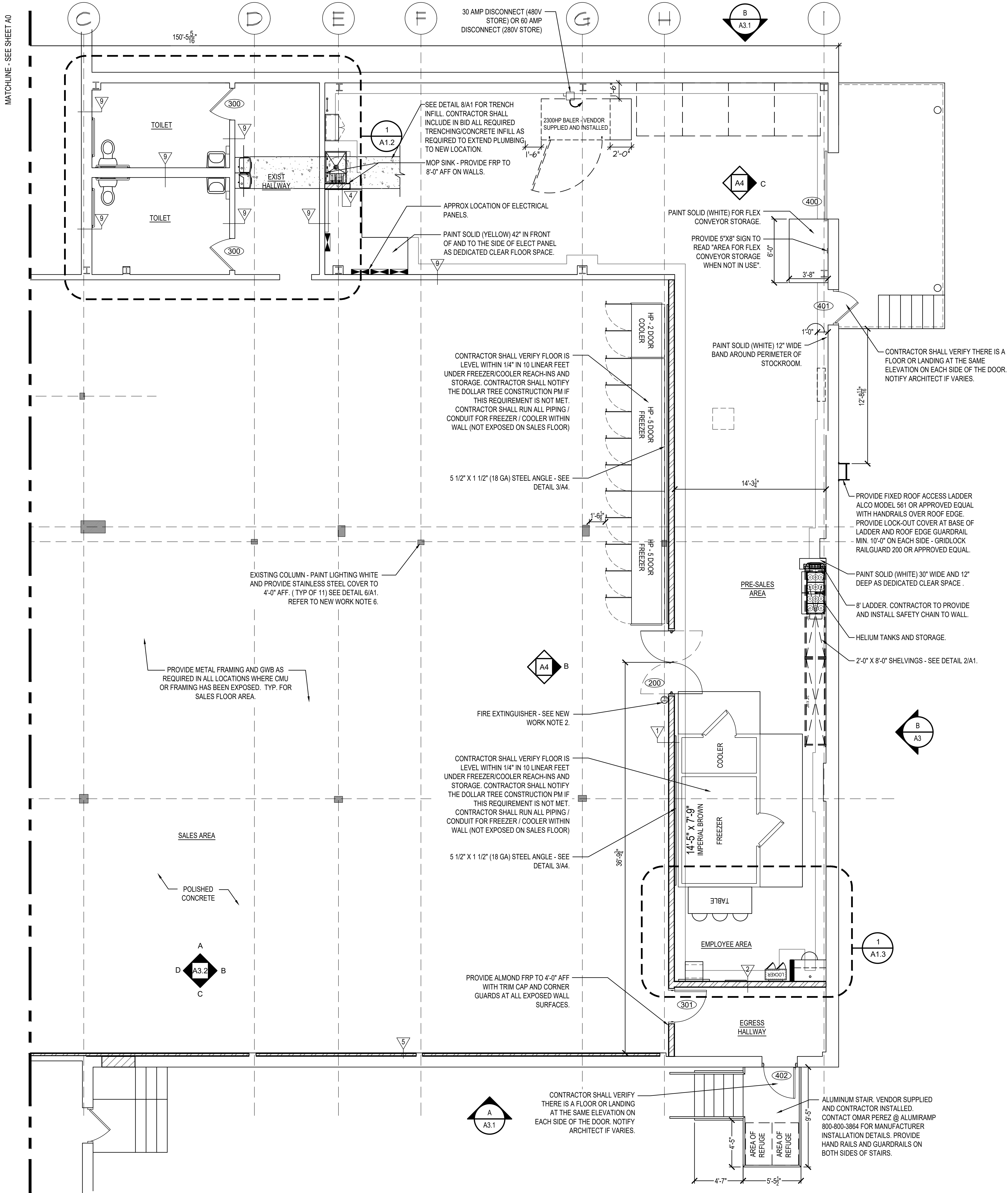
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DOLLAR TREE
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STONY POINT, NY 10980
PARTIAL FLOOR PLAN AND WALL CONSTRUCTION TYPES

project
drawing

sheet

A0



WALL CONSTRUCTION TYPES

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- 3 NOT USED
- 4 PLUMBING PARTITION: 6" (20 GA) METAL STUDS @ 16" OC WITH ONE LAYER 5/8" GWB EACH EXPOSED SIDE TO FINISHED CEILING OR UNDERSIDE OF DECK. PLUMBING WALLS SHALL HAVE WATER RESISTANT GWB. FINISH PER FINISH SCHEDULE, SHEET A4.
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- 6 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 4/A1.1. 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 EXPOSED SIDE TO 6" ABOVE FINISH CEILING. FINISH PER FINISH SCHEDULE SHEET A4.
- 8 PARTITION WALL: 3 5/8" (20 GA) METAL STUDS @ 16" OC WITH ONE LAYER 5/8" GWB EACH EXPOSED SIDE TO FINISHED HARD CEILING OR 6" ABOVE SUSPENDED CEILING. PROVIDE VENT AND OPAQUE FILM ON INTERIOR OF STOREFRONT GLASS. SEE DETAIL 3/A4.1. FINISH PER FINISH SCHEDULE, SHEET A4.
- 9 TENANT DEMISING WALL: EXISTING METAL STUDS AND GWB. PATCH AND REPAIR AS REQUIRED. PROVIDE FIRE TAPED GWB ON EXISTING STUDS WHERE WALL CAVITY HAS BEEN EXPOSED. FINISH PER FINISH SCHEDULE, SHEET A4.

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description
by
date
mark
revisions

06/15/2022	DESIGNED	PGS	JMG
2022/7/10/21/19	PROJECT	RJD	
	DATE		
	CHECKED		
	DRAWN		
	DESIGNED		
	PROJECT		
	DATE		

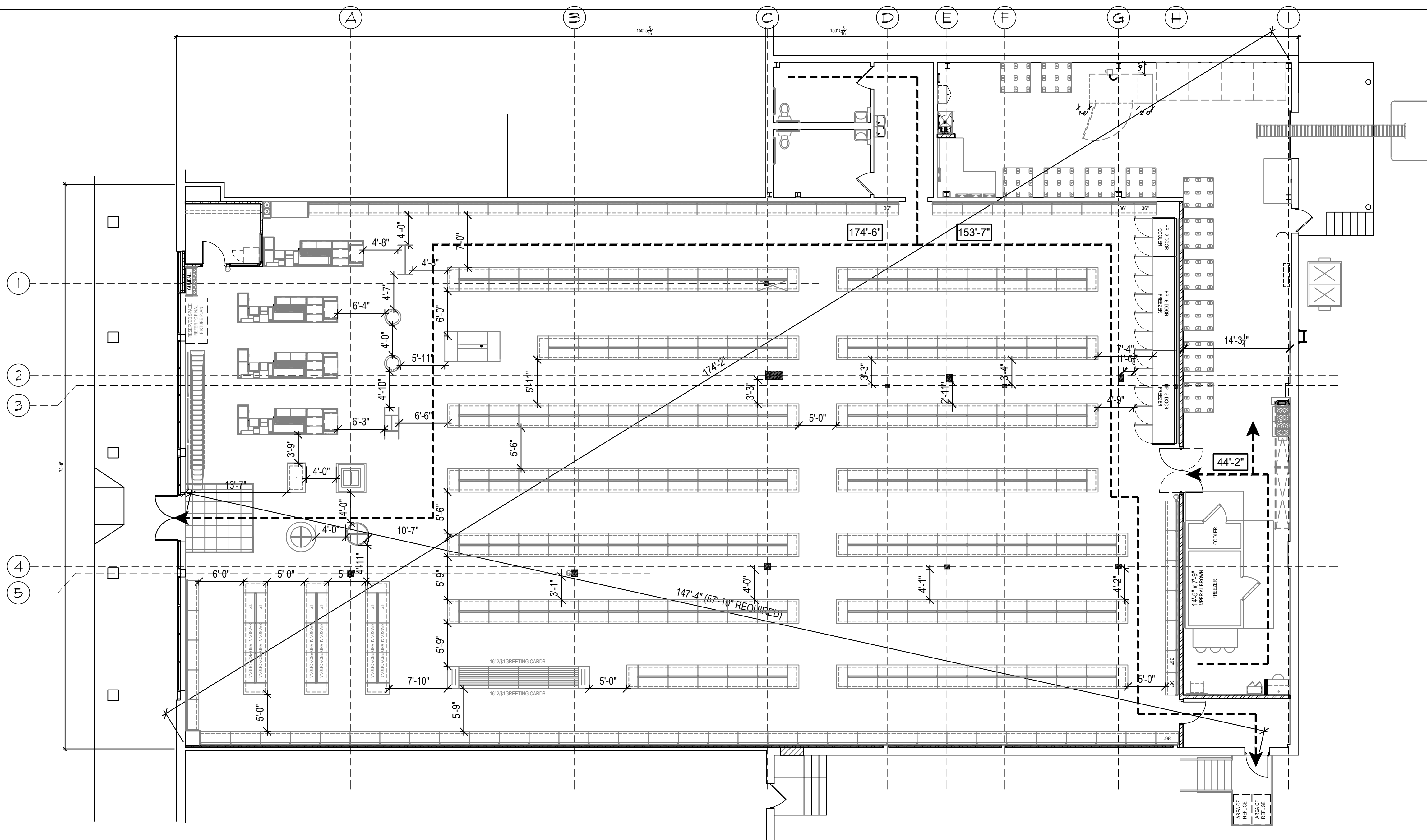
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DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980
PARTIAL FLOOR PLAN AND WALL CONSTRUCTION TYPES

project
drawing
sheet

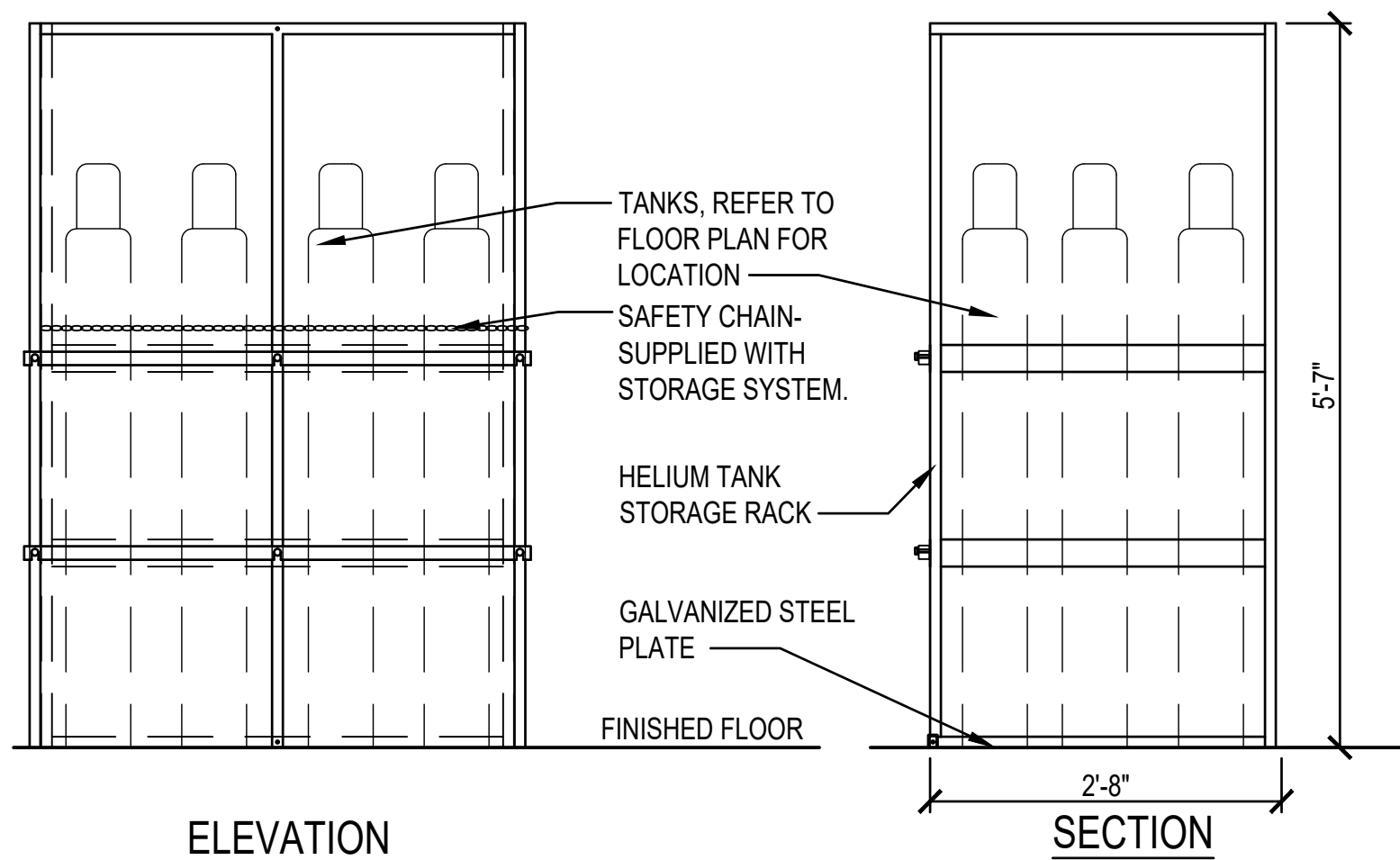
A0.1

1 PARTIAL FLOOR PLAN
A0.1 1/4" = 1'-0"



4
A1
FIXTURE / EGRESS PLAN
SCALE: 1/8" = 1'-0"

- NOTE:
1. TENANT SUPPLIED / CONTRACTOR INSTALLED.
 2. SECURE TO WALL AND FLOOR PER MANUFACTURES STANDARDS. (IF REQUIRED)

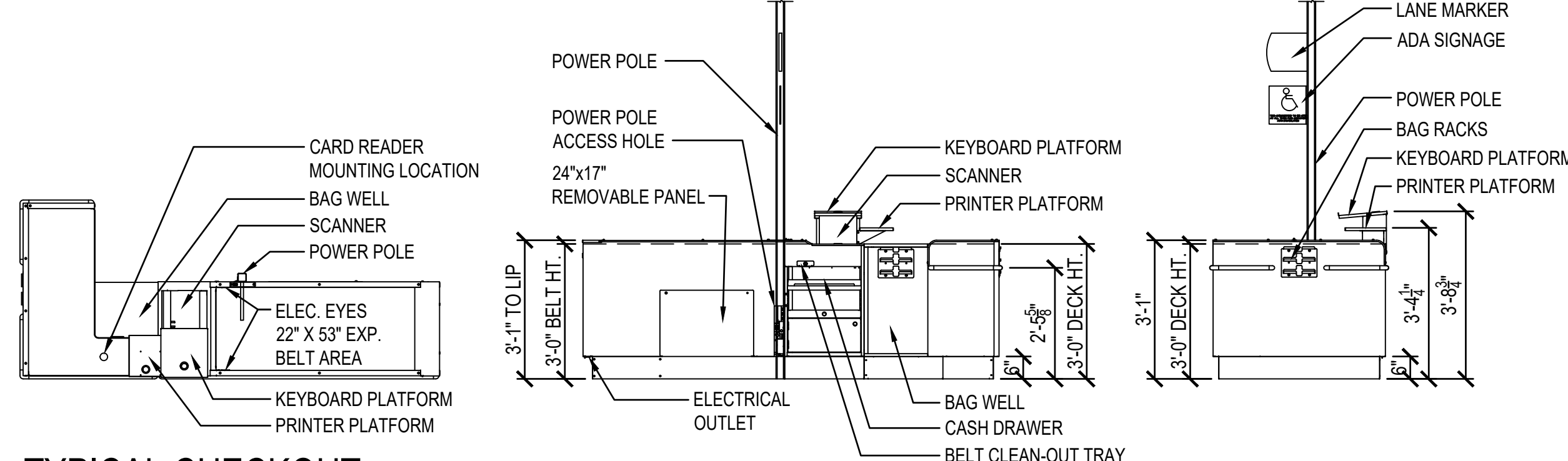


ELEVATION

SECTION

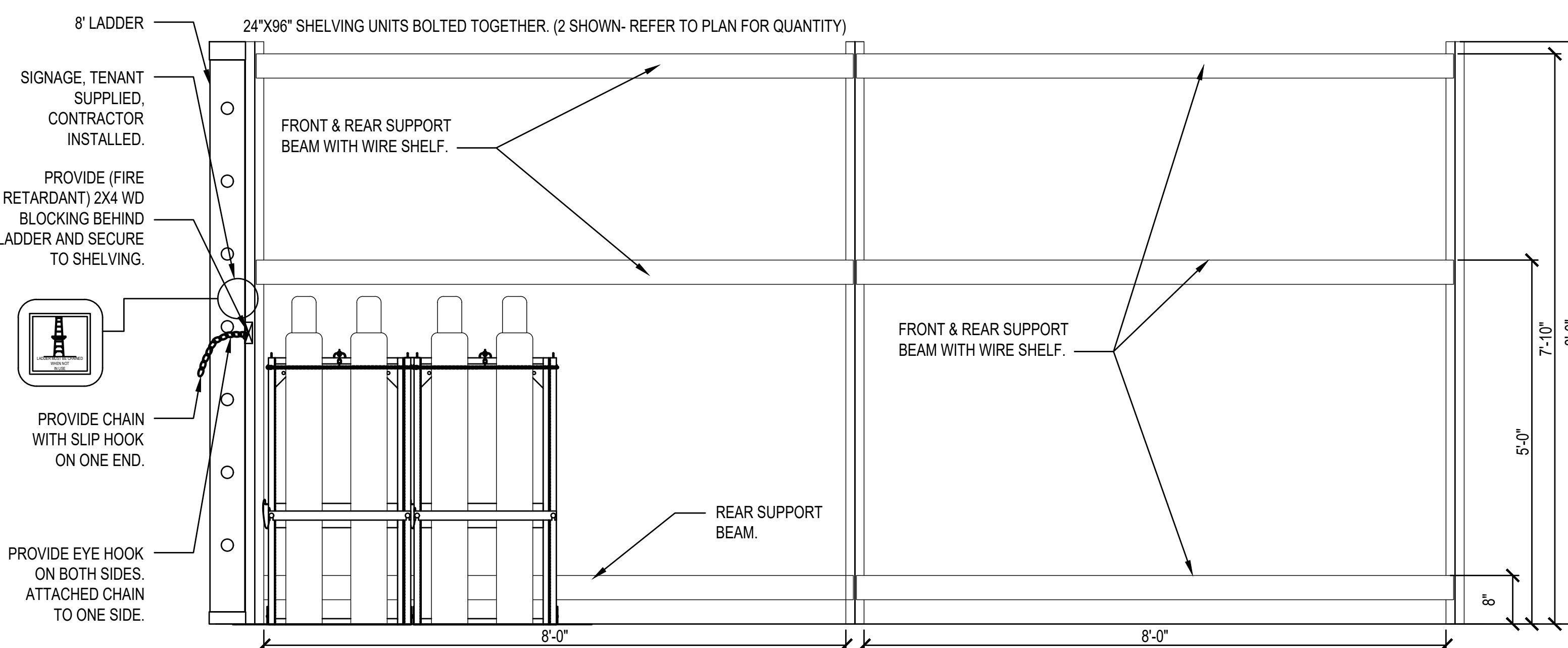
7
A1
HELIUM TANK STORAGE RACK
SCALE: 3/4" = 1'-0"

- NOTE:
1. CHECKOUTS AND POWER POLES ARE TENANT SUPPLIED / CONTRACTOR INSTALLED.
 2. CHECKOUT AISLES SHALL COMPLY WITH 2018 INTERNATIONAL 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.



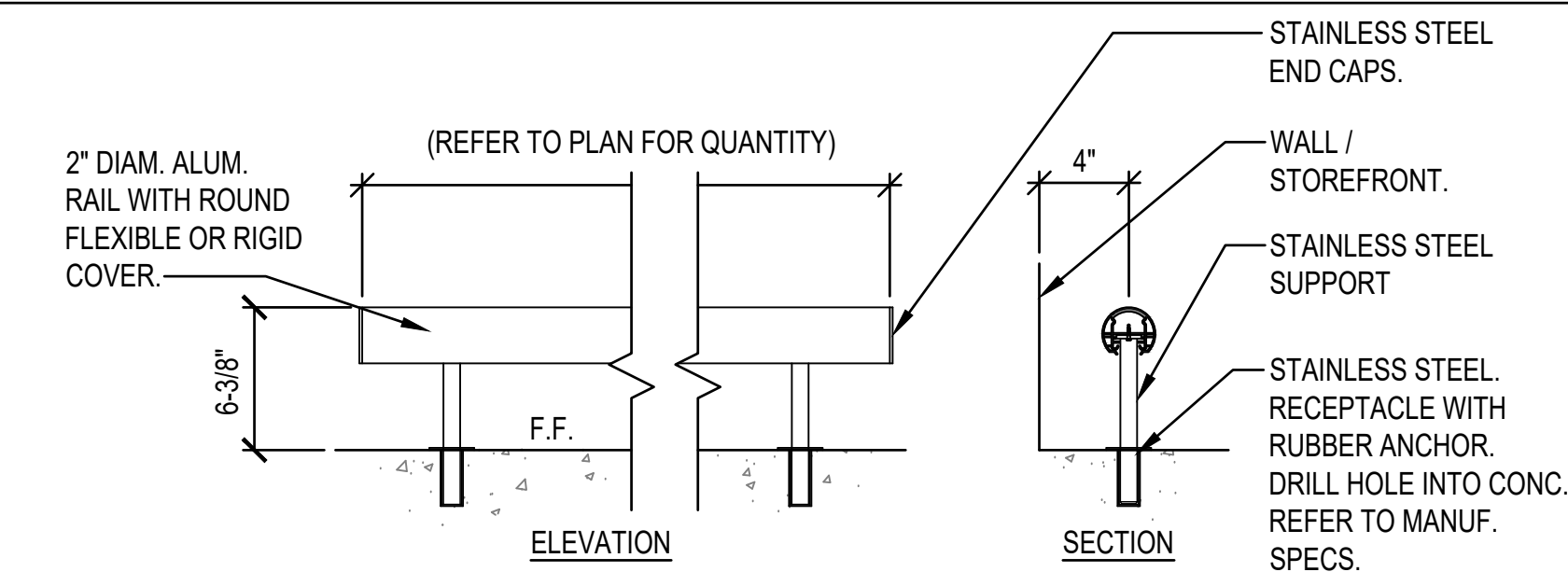
5
A1
TYPICAL CHECKOUT
SCALE: NTS

- NOTES:
1. NO GONDOLA UNITS, FIXTURES, OR PALLETS SHALL BE OVER 8'-0" AFF.
 2. FIXTURE PLAN IS "FOR REFERENCE ONLY." CONTRACTOR SHALL CONTACT DOLLAR TREE FOR FINAL APPROVED LAYOUT
 3. MAXIMUM TRAVEL DISTANCE SHALL BE 250'-0". ACTUAL TRAVEL DISTANCE AS SHOWN.
 4. CHECKOUTS ARE NOT ATTACHED TO FLOOR.

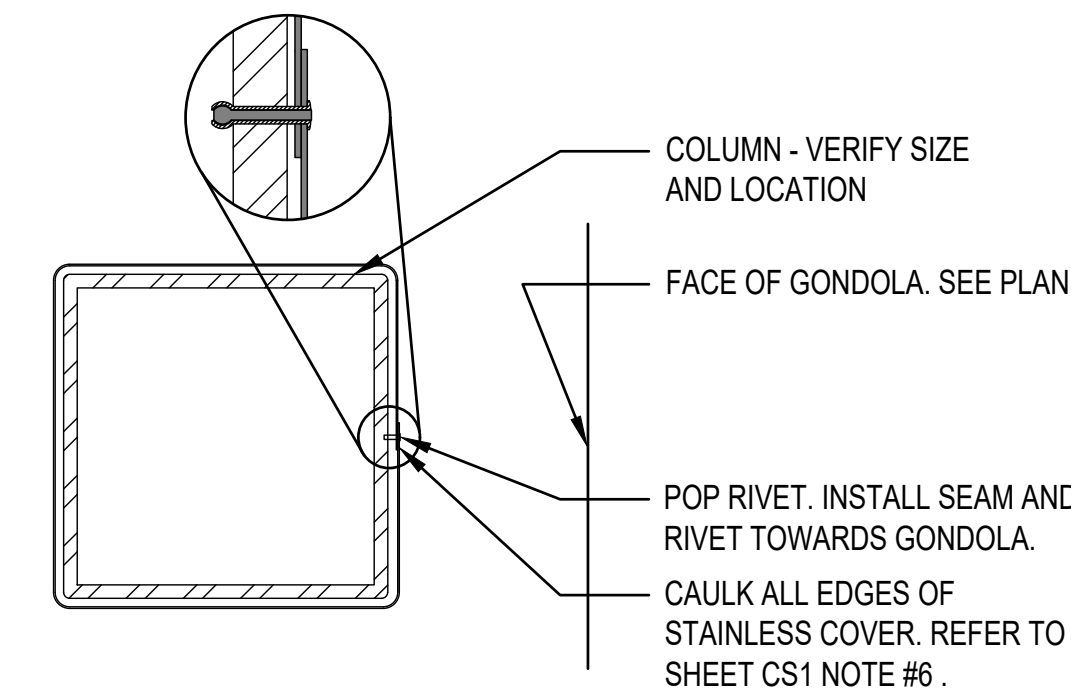


2
A1
METAL SHELVING AND TANK STORAGE
SCALE: 3/4" = 1'-0"

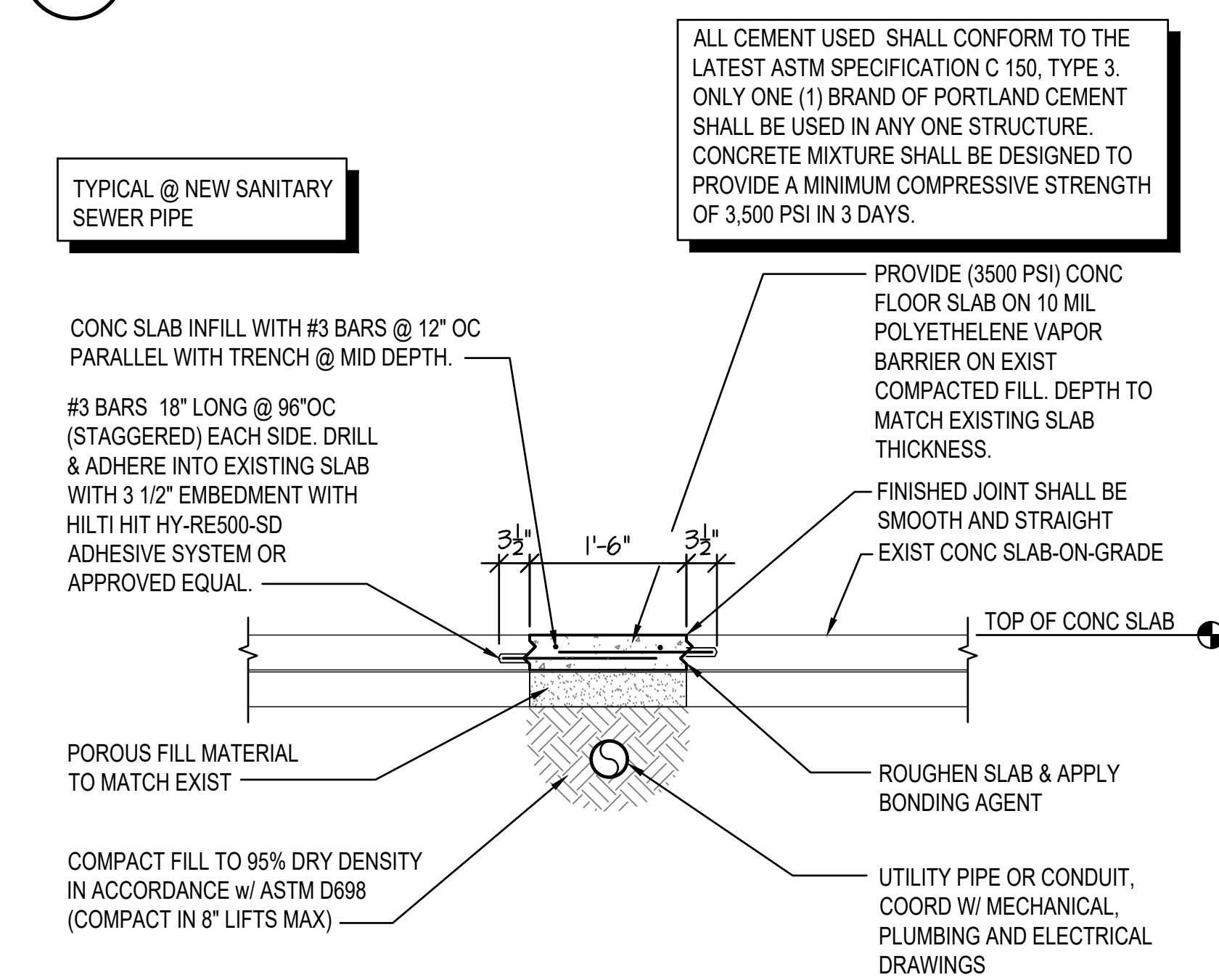
- NOTE:
1. REFER TO PLAN FOR QUANTITY AND SIZE.
 2. TENANT SUPPLIED. CONTRACTOR INSTALLED.
 3. SECURE TO FLOOR PER MANUFACTURES SPECIFICATIONS.



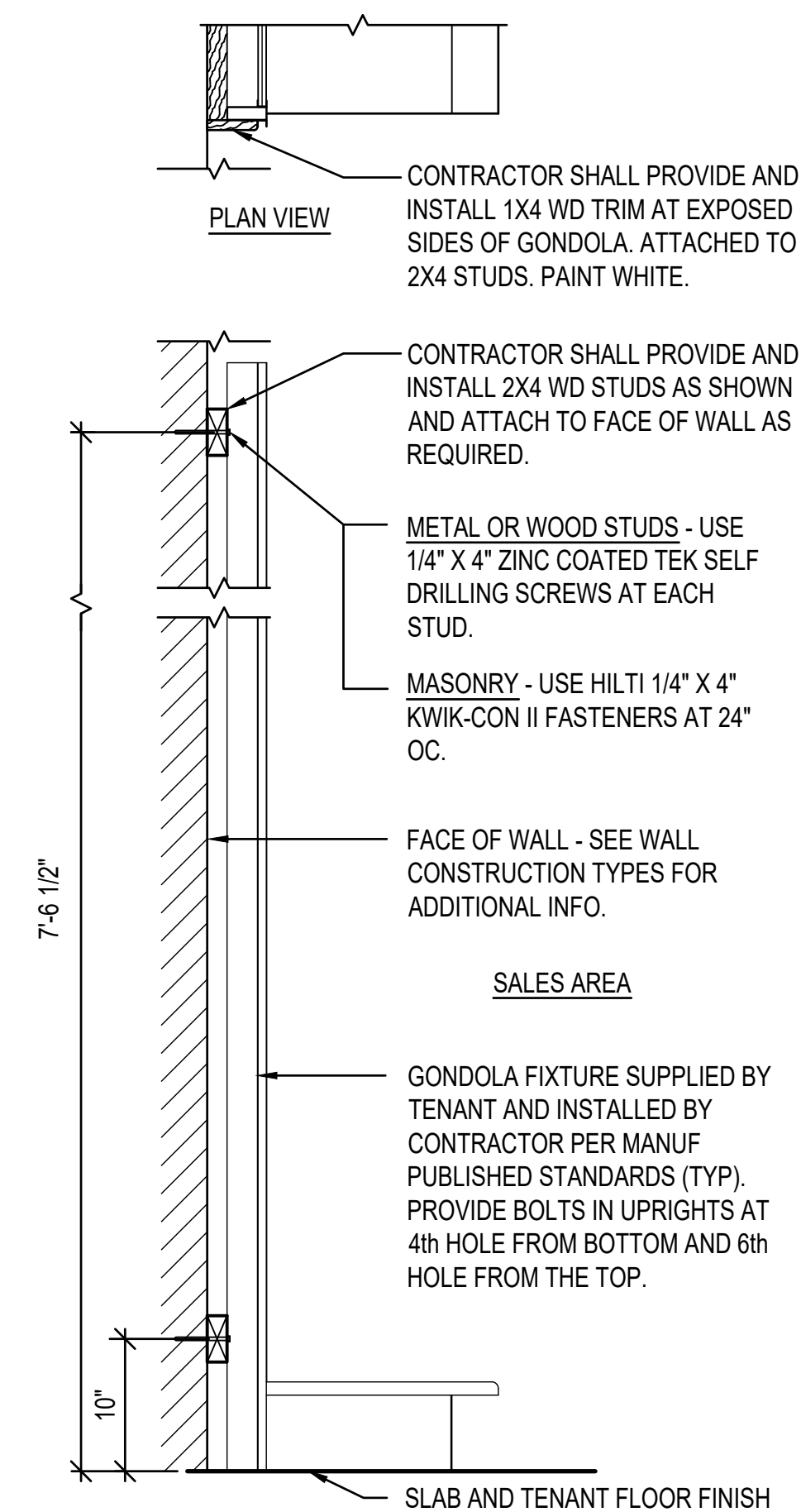
1
A1
SHOPPING CART BUMPER DETAIL
SCALE: 1 1/2" = 1'-0"



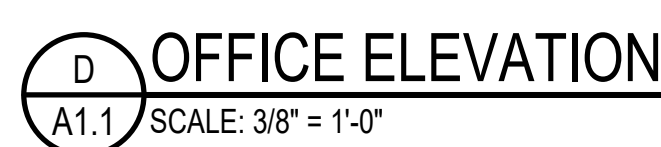
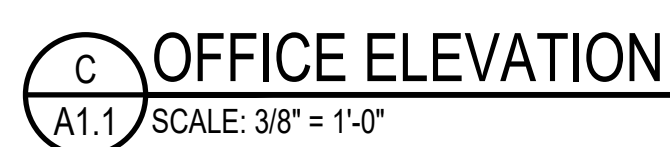
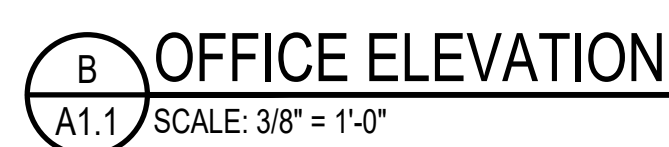
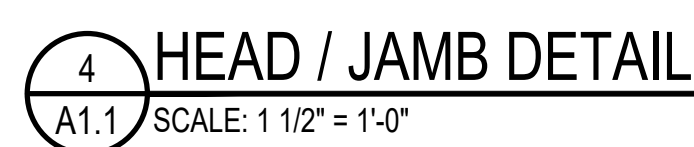
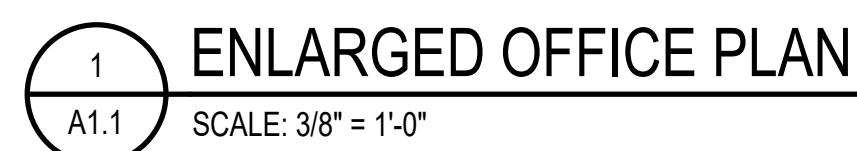
6
A1
COLUMN DETAIL
SCALE: 1 1/2" = 1'-0"



8
A1
SLAB IN-FILL DETAIL
SCALE: 3/4" = 1'-0"



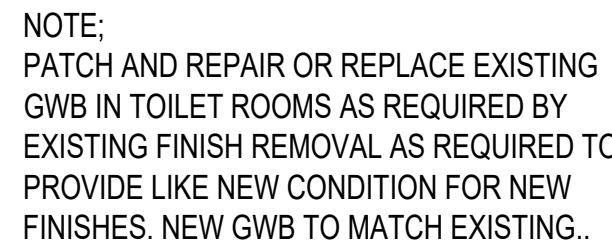
3
A1
TYPICAL FIXTURE ATTACHMENT DETAIL
SCALE: 1" = 1'-0"



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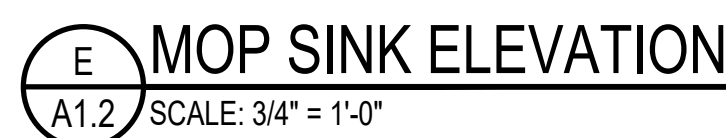
ALL-GENDER
RESTROOM



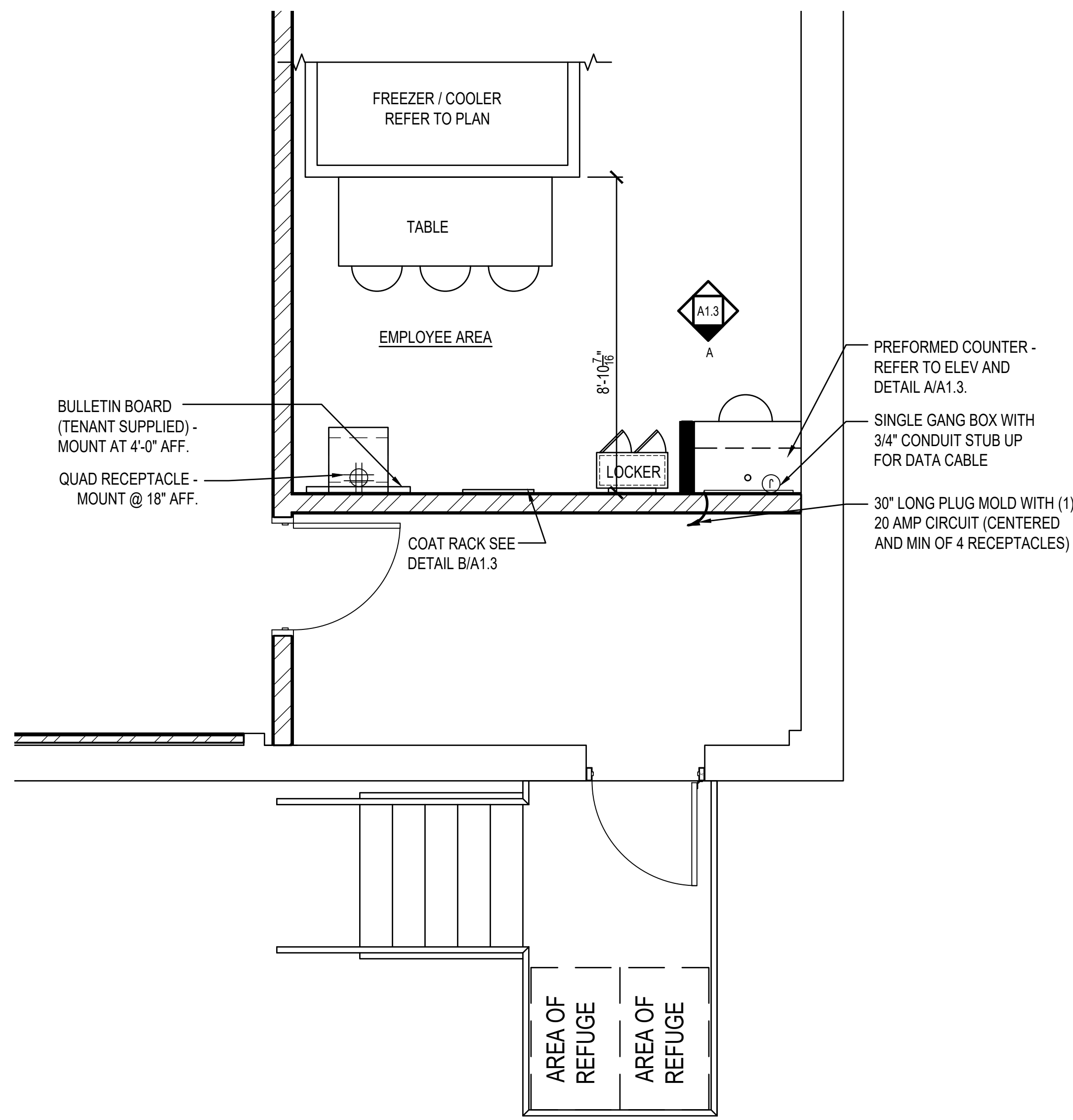
CONTRACTOR SHALL FIELD VERIFY ALL EXIST PLUMBING FIXTURES AND EXIST ACCESSORIES (INCLUDING LANDLORD INSTALLED PLUMBING FIXTURES AND ACCESSORIES) COMPLY WITH PLANS AND HANDICAPPED CODES AND LAWS. CONTRACTOR SHALL VERIFY COMPLIANCE TO FLOOR PLAN, ENLARGED PLANS AND ELEVATIONS THIS SET. NOTIFY CONSTRUCTION PM WITH ANY DISCREPANCIES.



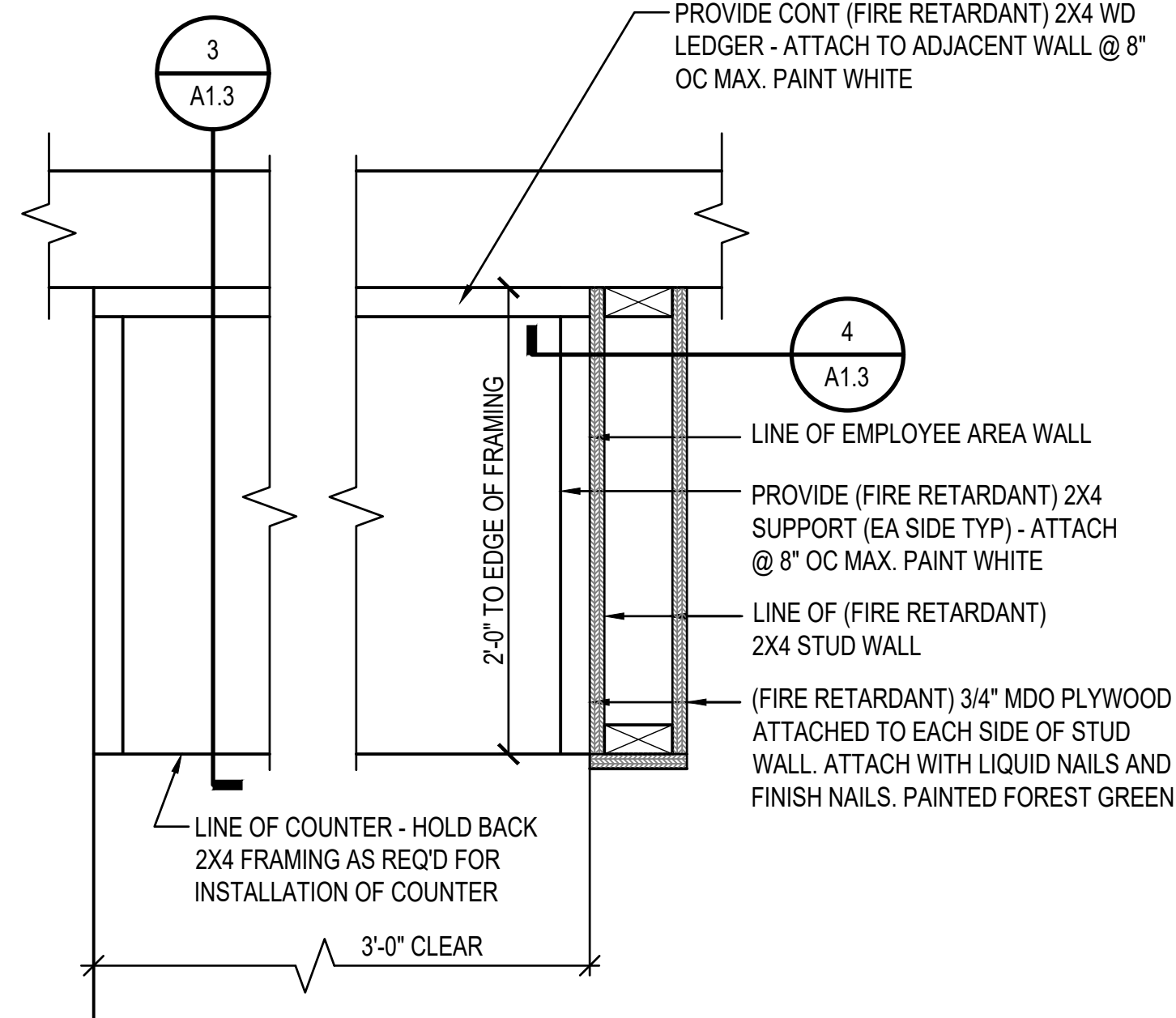
PLAN VIEW OF WATER HEATER BRACKET



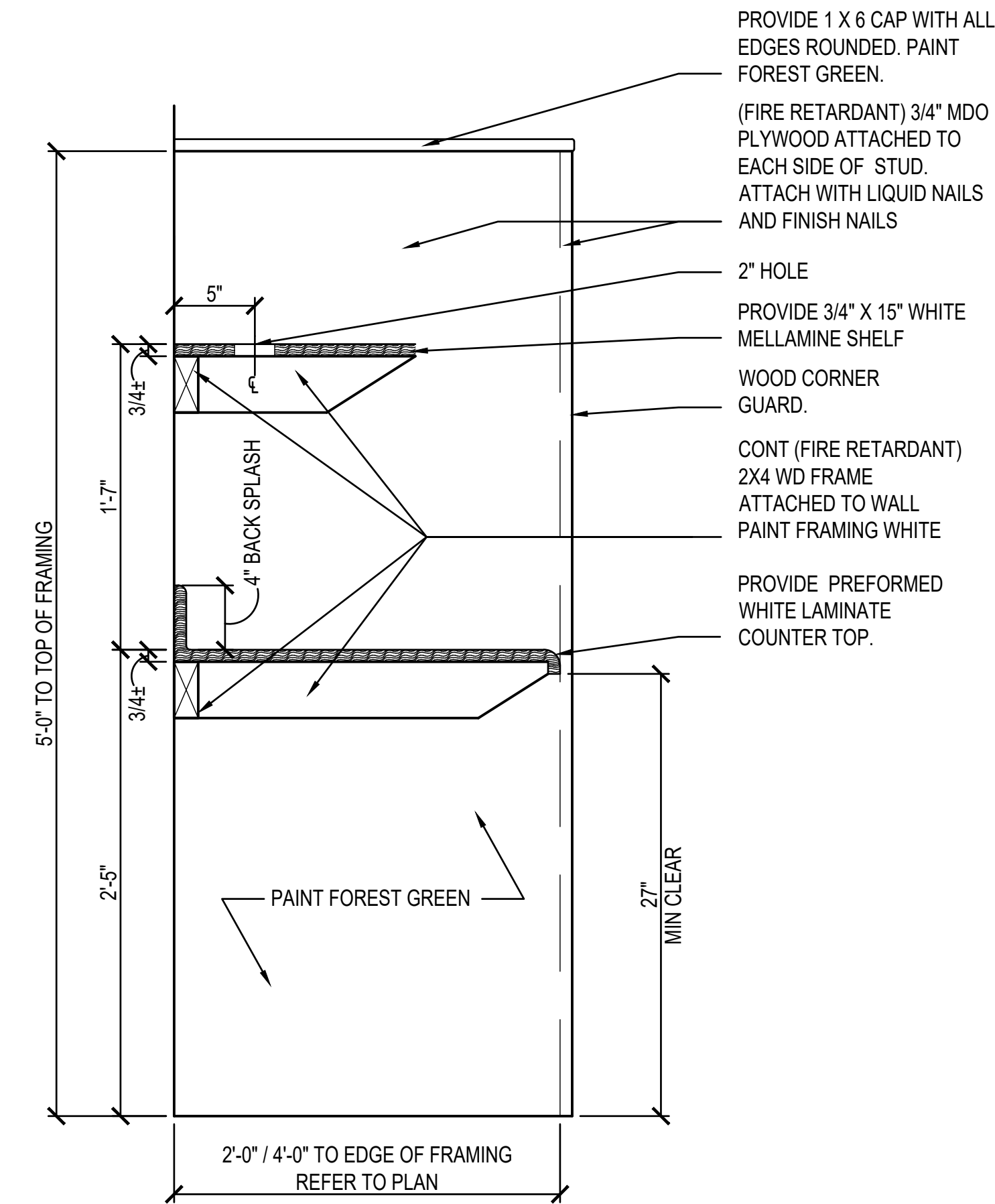
A1.2



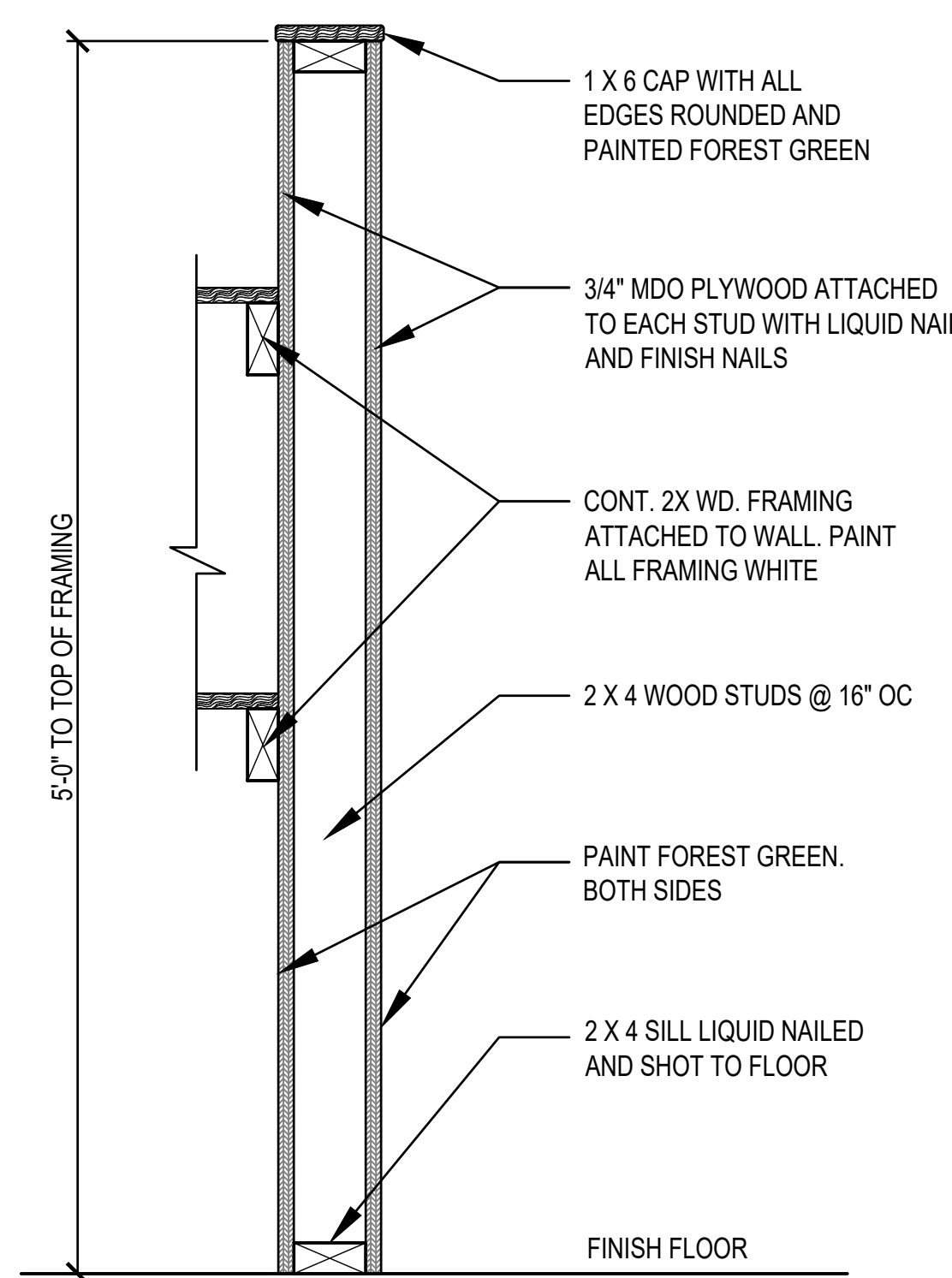
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A1.3
ENLARGED EMPLOYEE PLAN
SCALE: 3/8" = 1'-0"



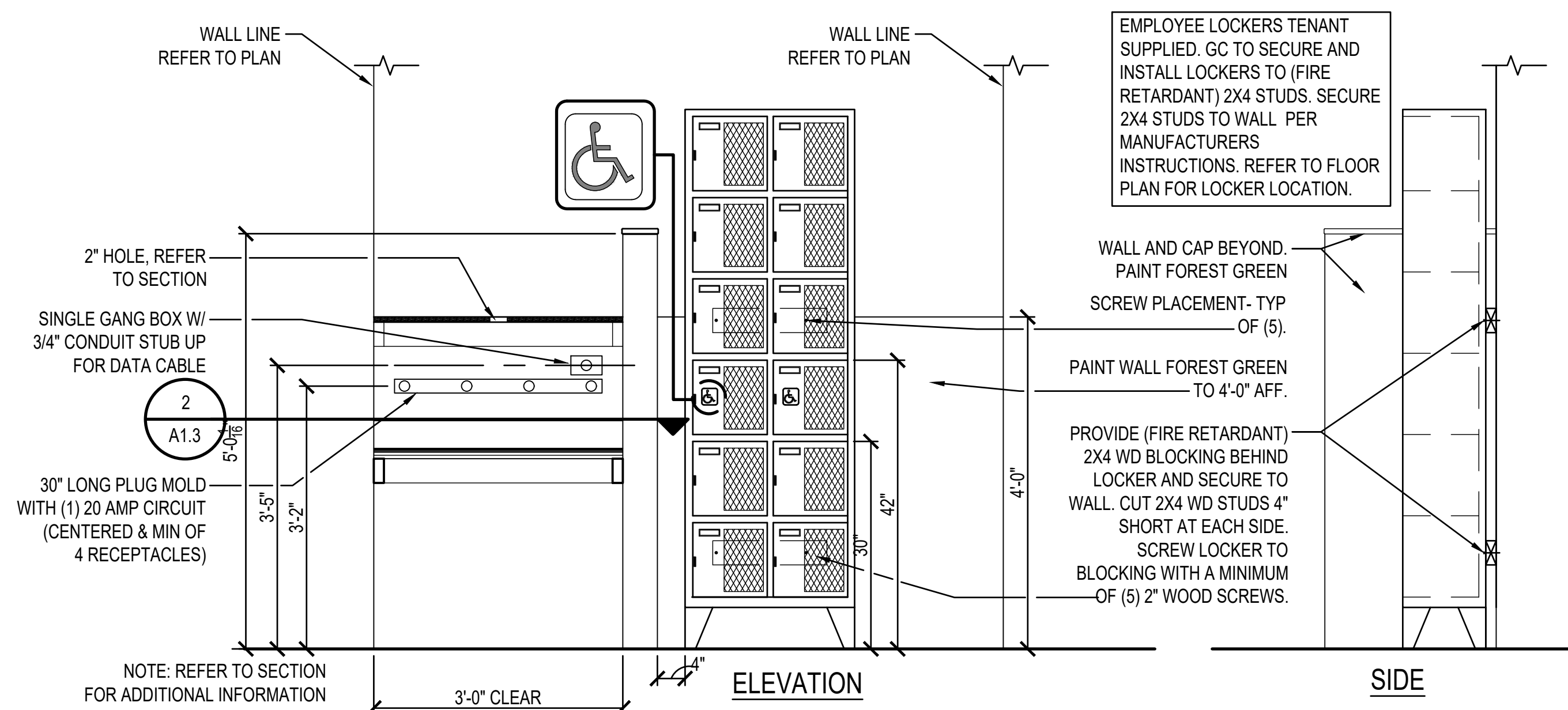
2
A1.3
DETAIL
SCALE: 1 1/2" = 1'-0"



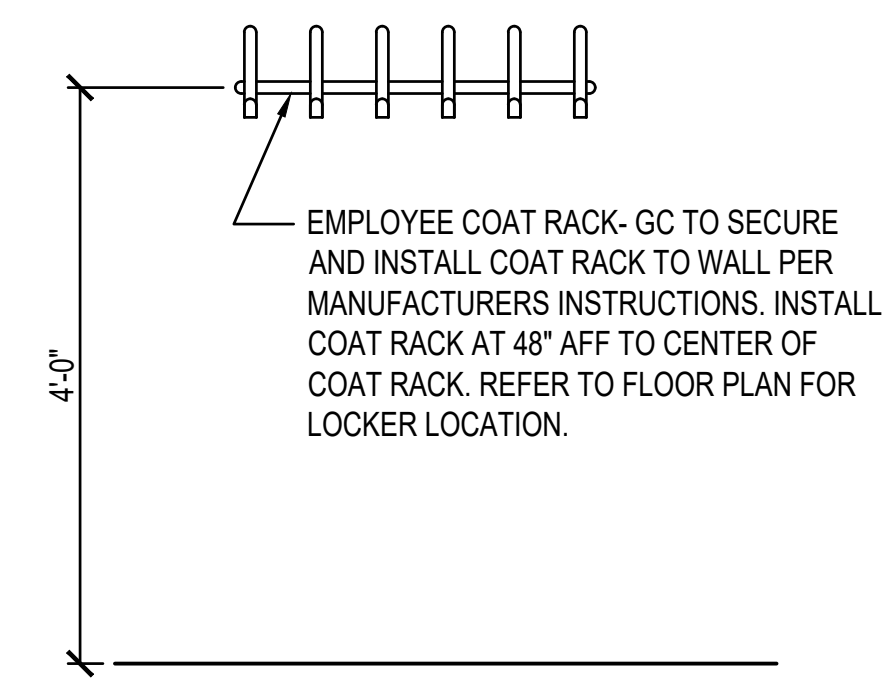
3
A1.3
DETAIL
SCALE: 1 1/2" = 1'-0"



4
A1.3
EMPLOYEE AREA SECTION
SCALE: 1 1/2" = 1'-0"



A
A1.3
LOCKER AND TRAINING DESK ELEVATION
SCALE: 3/4" = 1'-0"



B
A1.3
EMPLOYEE COAT RACK ELEVATION
SCALE: 3/4" = 1'-0"

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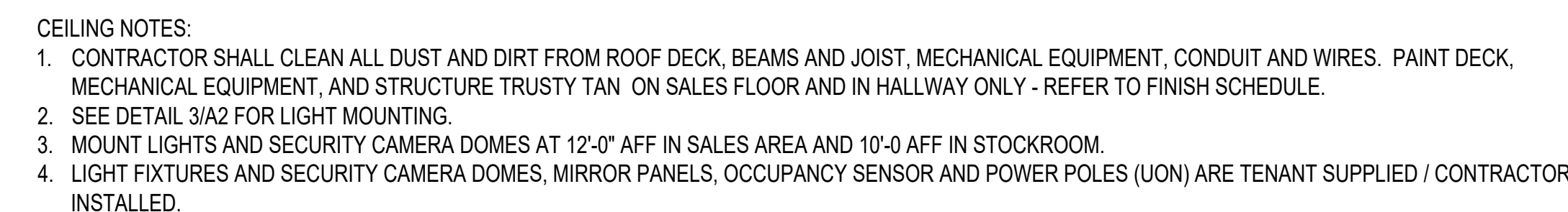
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DOLLAR TREE
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STONY POINT, NY 10980
ENLARGED PLANS, DETAILS, SECTIONS AND ELEVATIONS

project drawing

sheet
A1.3



NOTE

1. MAINTAIN MIN. 18" CLEAR BETWEEN SPRINKLERS AND ANY LIGHT OR OTHER OBSTRUCTION. NOTIFY FIRE PROTECTION ENGINEER AND ARCHITECT OF ANY ISSUES MEETING CLEARANCE REQUIREMENTS.

EXISTING STRUCTURAL DECK.

HANGER WIRES. INSTALL PER MANUF SPECS.

2X4' ACCOUSTICAL CEILING TILES AND GRID
INSTALL PER MANUF SPECS. REFER TO REFLECTED
CEILING PLAN FOR GRID LAYOUT. SEE DETAIL 1/A2.

8'-0" AFF

8'-0" AFF

ATTACHED WITH (2)-#12
TEK SCREWS AT EACH STUD.

GWB ON METAL STUDS. REFER TO
SHEET A1 FOR WALL TYPES.

HILT X-U (157° Ø) SHOT PINS
W/ 1 1/4" EMBED INTO THE SLAB
@ 4' OC & 4" OFF EACH END OF
INDIVIDUAL PIECE OF TRACK, TYP.

TOILET

HALLWAY

BASE. REFER TO FINISH
SCHEDULE, SHEET A4 (TYP.)

FINISHED FLOOR

NOTE:
1. REFER TO FINISH SCHEDULE FOR ALL FINISHES. SHEET A4

Diagram illustrating the assembly of a lighting fixture using a chain and unistrut.

Labels and Callouts:

- UNISTRUT- PAINT TO MATCH ROOF STRUCTURE
- ATTACH CHAIN TO UNISTRUT. SUPPORT UNISTRUT ON THE BOTTOM CHORD OF JOISTS AS REQUIRED.
- JOIST HEIGHT VARIES
- LENGTH OF CHAIN VARIES (CUT TO LENGTH)
- UNPAINTED (12 GAGE) CHAIN (WHITE, CHROME OR SILVER)
- REFER TO ELECTRICAL PLANS FOR HEIGHT
- CHAIN- ATTACH TO LIGHTS AND UNISTRUT. ATTACH AT 48" O.C. OR AS REQUIRED BY CODE.
- LIGHT FIXTURE

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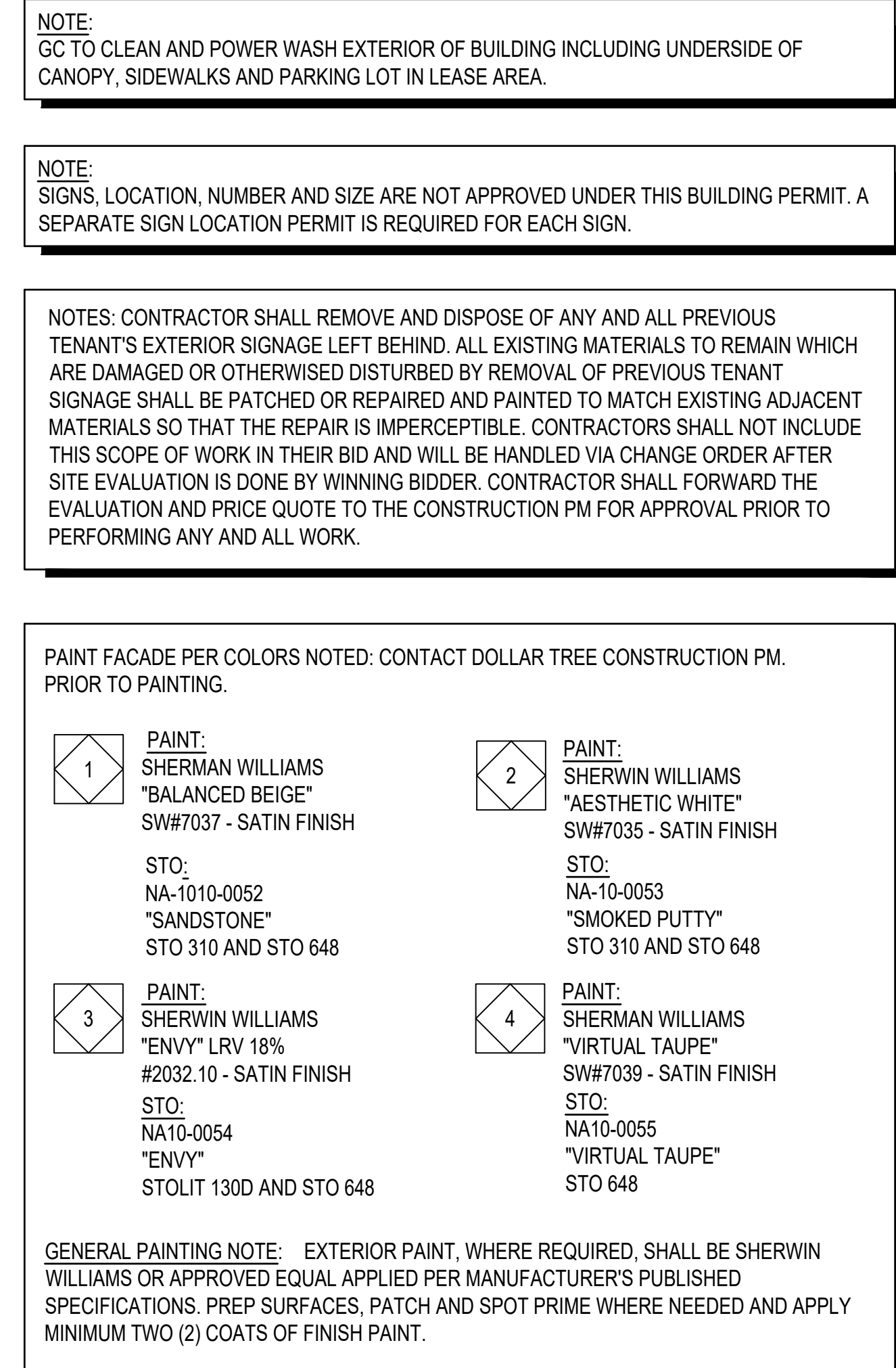
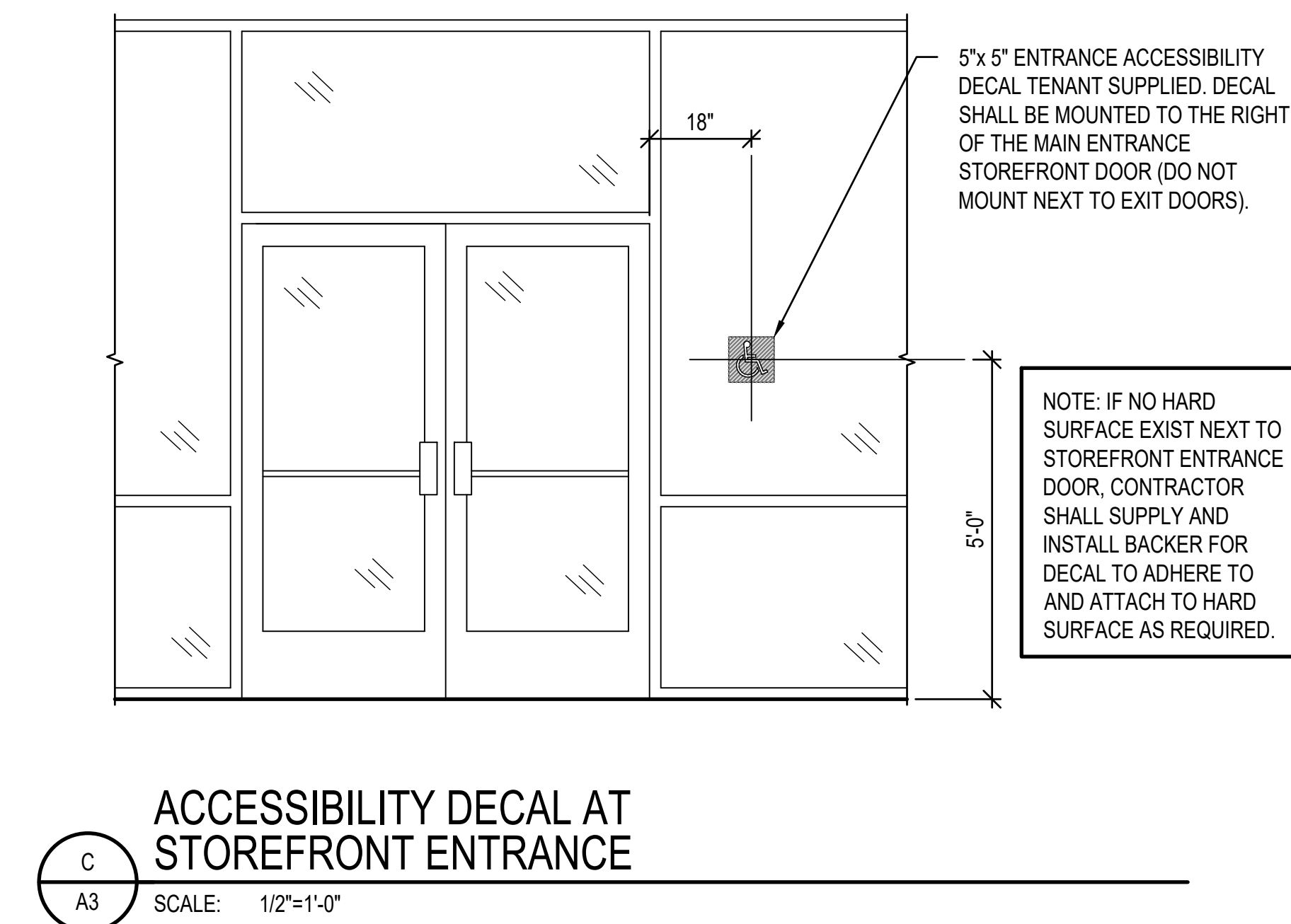


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166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NJ 10886
REFLECTED CEILING PLAN AND LEGEND



ALL PLANS, SPECIFICATIONS AND REPORTS TO WHICH THE SEAL OF AN ARCHITECT HAS BEEN APPLIED THERE SHALL ALSO BE SUBMITTED WITHIN A REASONABLE WORKING HOURS OF THE DAY FOLLOWING THE EXPIRATION OF HIS LICENSE TO THE BOARD OF ARCHITECTURE OF A LICENSED ARCHITECT TO TESTER IN ANY MANNER BY WHICH THE SEAL OF AN ARCHITECT IS ALTERED. THE ALTERING ARCHITECT SHALL AFFIX TO HIS SEAL AND NOTATION "ALTERED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION," AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

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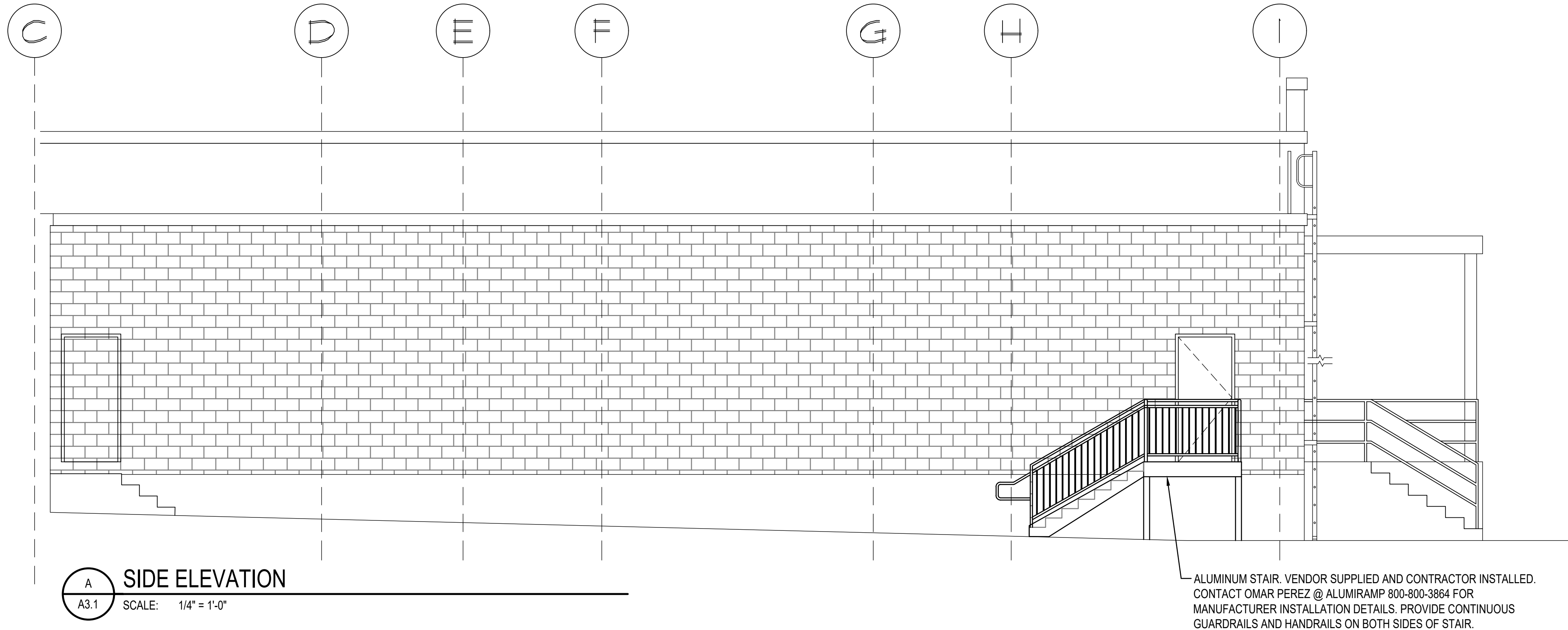
7 Kimball Lane Suite E6
Lynnfield MA 01940
p: 781.397.8092 f: 781.397.8094
www.deanassoc.com

DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980
EXTERIOR ELEVATIONS

drawing
project

sheer

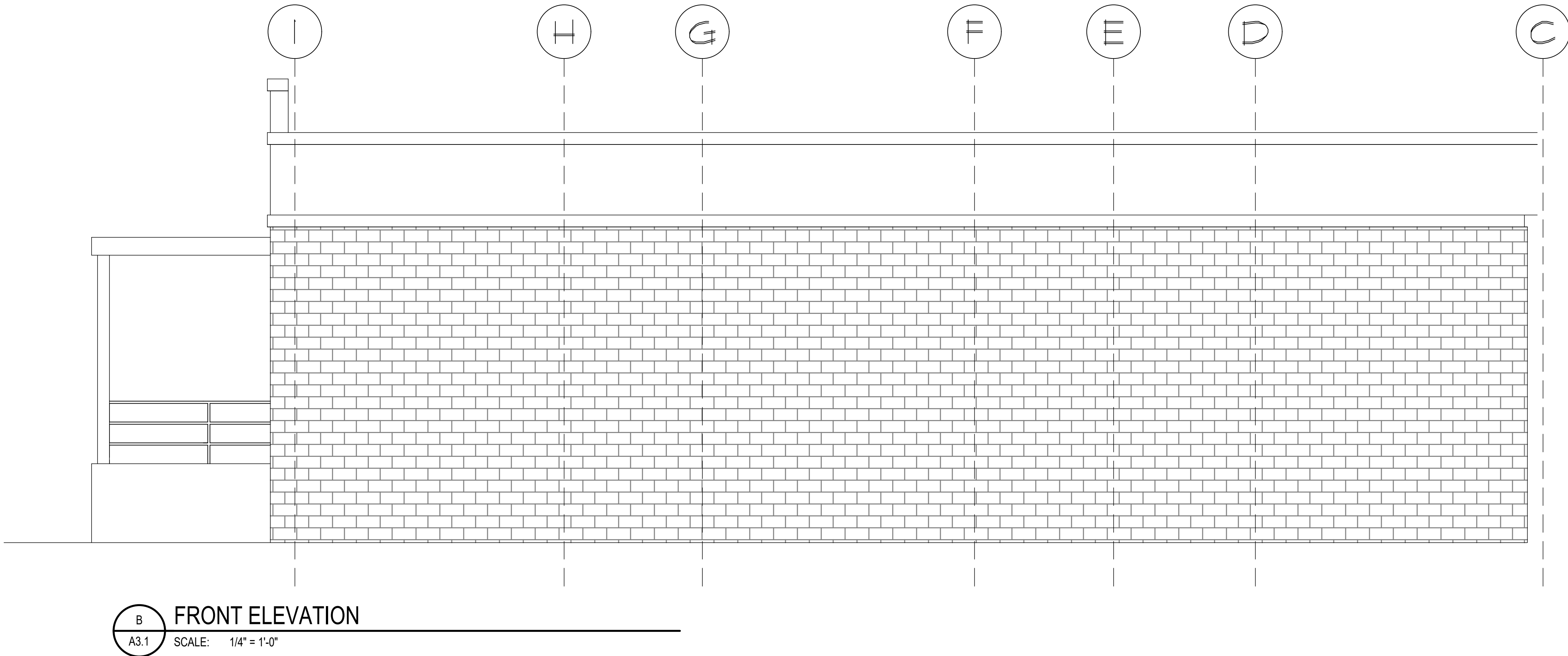
A3



A
A3.1

SIDE ELEVATION
SCALE: 1/4" = 1'-0"

ALUMINUM STAIR- VENDOR SUPPLIED AND CONTRACTOR INSTALLED.
CONTACT OMAR PEREZ @ ALUMIRAMP 800-800-3864 FOR
MANUFACTURER INSTALLATION DETAILS. PROVIDE CONTINUOUS
GUARDRAILS AND HANDRAILS ON BOTH SIDES OF STAIR.



B
A3.1

FRONT ELEVATION
SCALE: 1/4" = 1'-0"

NOTE:
GC TO CLEAN AND POWER WASH EXTERIOR OF BUILDING INCLUDING UNDERSIDE OF
CANOPY, SIDEWALKS AND PARKING LOT IN LEASE AREA.

NOTE:
SIGNS, LOCATION, NUMBER AND SIZE ARE NOT APPROVED UNDER THIS BUILDING PERMIT. A
SEPARATE SIGN LOCATION PERMIT IS REQUIRED FOR EACH SIGN.

NOTES: CONTRACTOR SHALL REMOVE AND DISPOSE OF ANY AND ALL PREVIOUS
TENANT'S EXTERIOR SIGNAGE LEFT BEHIND. ALL EXISTING MATERIALS TO REMAIN WHICH
ARE DAMAGED OR OTHERWISE DISTURBED BY REMOVAL OF PREVIOUS TENANT
SIGNAGE SHALL BE PATCHED OR REPAIRED AND PAINTED TO MATCH EXISTING ADJACENT
MATERIALS SO THAT THE REPAIR IS IMPERCEPTIBLE. CONTRACTORS SHALL NOT INCLUDE
THIS SCOPE OF WORK IN THEIR BID AND WILL BE HANDLED VIA CHANGE ORDER AFTER
SITE EVALUATION IS DONE BY WINNING BIDDER. CONTRACTOR SHALL FORWARD THE
EVALUATION AND PRICE QUOTE TO THE CONSTRUCTION PM FOR APPROVAL PRIOR TO
PERFORMING ANY AND ALL WORK.

ALL PLANS, SPECIFICATIONS AND RECORDS ARE SUBJECT TO THE SEAL OF AN ARCHITECT HAS BEEN
APPLIED. THESE SHALL ALSO BE APPLIED A STAMP WITH APPROPRIATE WORKING WARNING
THAT IT IS A VIOLATION OF THE LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION
OF A LICENSED ARCHITECT TO REPRODUCE OR ALTER IN ANY MANNER ANY PART OF THE SEAL OR
OF ANY ARCHITECT'S WORK. THE SEAL OF AN ARCHITECT SHALL BE USED TO SIGN AND
DATE ANY ALTERATION TO THE SEAL. THE SEAL OF AN ARCHITECT SHALL BE USED TO SIGN AND
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revisions

08/15/2022
2022/7/10/21/6
date
project
designed
drawn
checked
RJD
PGS
JWG

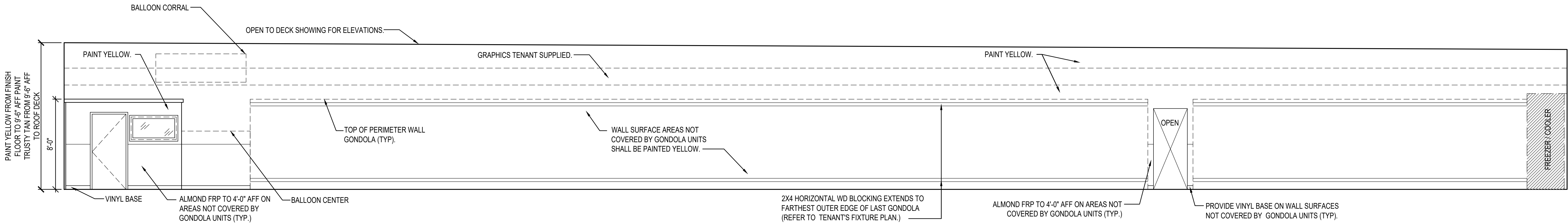
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166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
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EXTERIOR ELEVATIONS

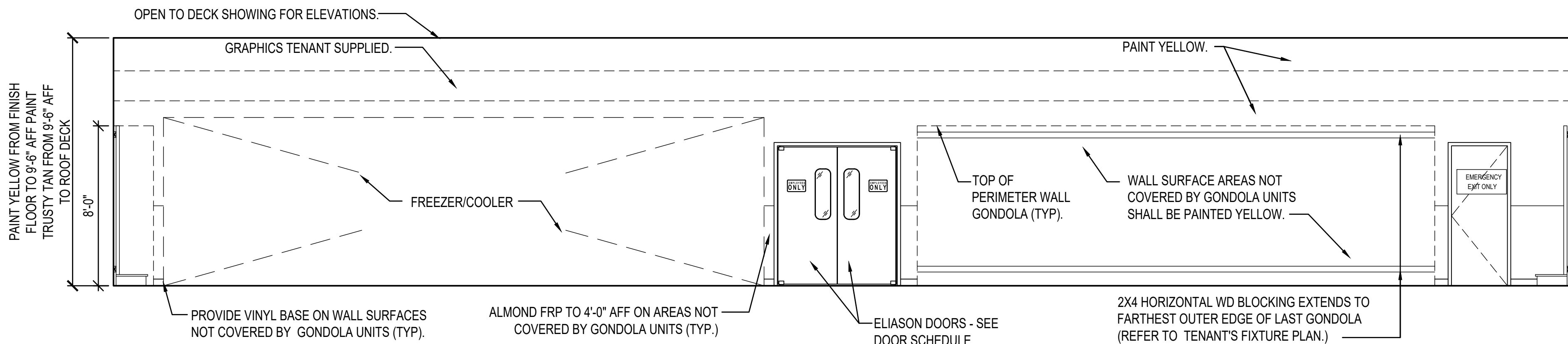
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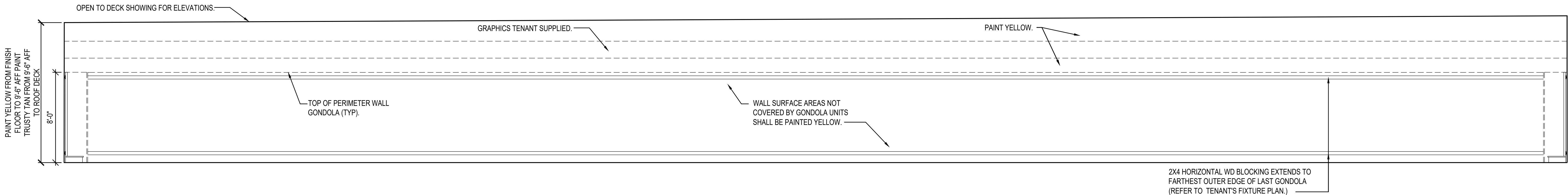
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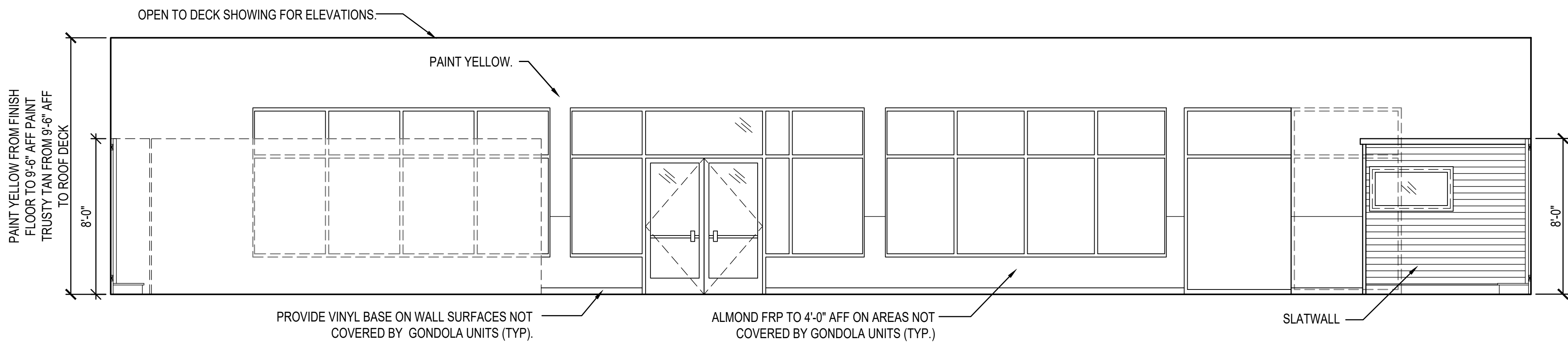
A
A3.2
SCALE: 1/4" = 1'-0"



B
A3.2
SCALE: 1/4" = 1'-0"



C
A3.2
SCALE: 1/4" = 1'-0"



D
A3.2
SCALE: 1/4" = 1'-0"

ALL PLANS, SPECIFICATIONS AND RECORDS TO WHICH THE SEAL OF AN ARCHITECT HAS BEEN APPLIED, THERE SHALL ALSO BE APPLIED A STAMP WITH APPROPRIATE WORKING WARNING THAT IT IS A VIOLATION OF THE LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF AN ARCHITECT TO REPRODUCE, COPY, REPRODUCE, OR OTHERWISE REPRODUCE ANY PART OF THE SAME FOR ANY PURPOSE, WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT. THE SEAL OF AN ARCHITECT SHALL BE APPLIED TO THE SEAL OF THE ALTERNATION, ALTERED BY FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

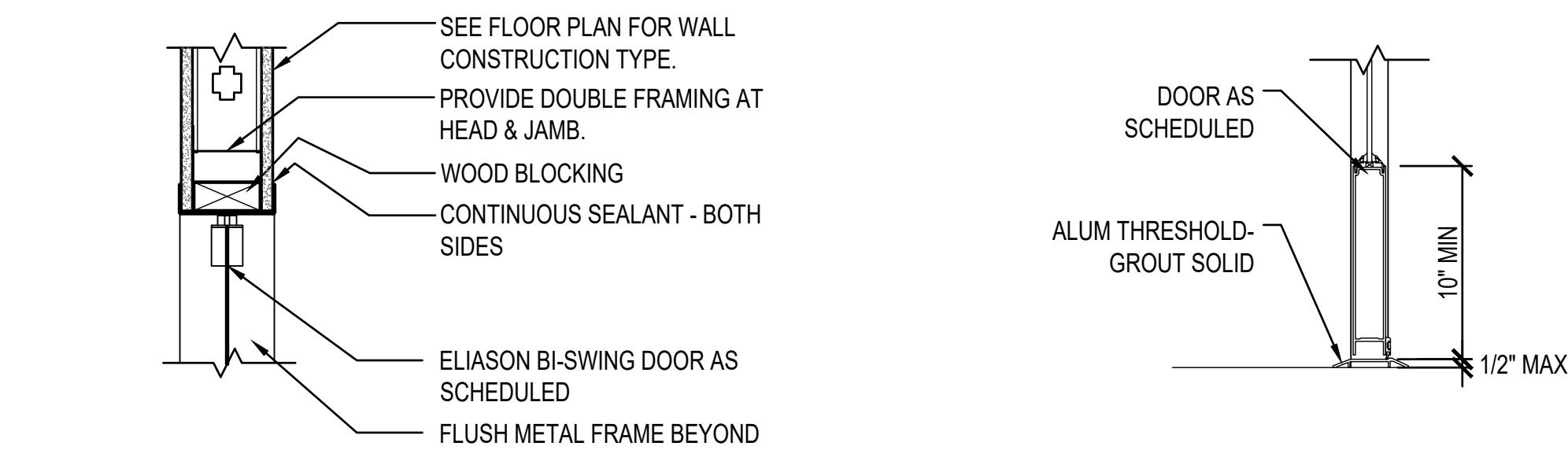
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mark	revisions	by	date	description



DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980
INTERIOR ELEVATIONS

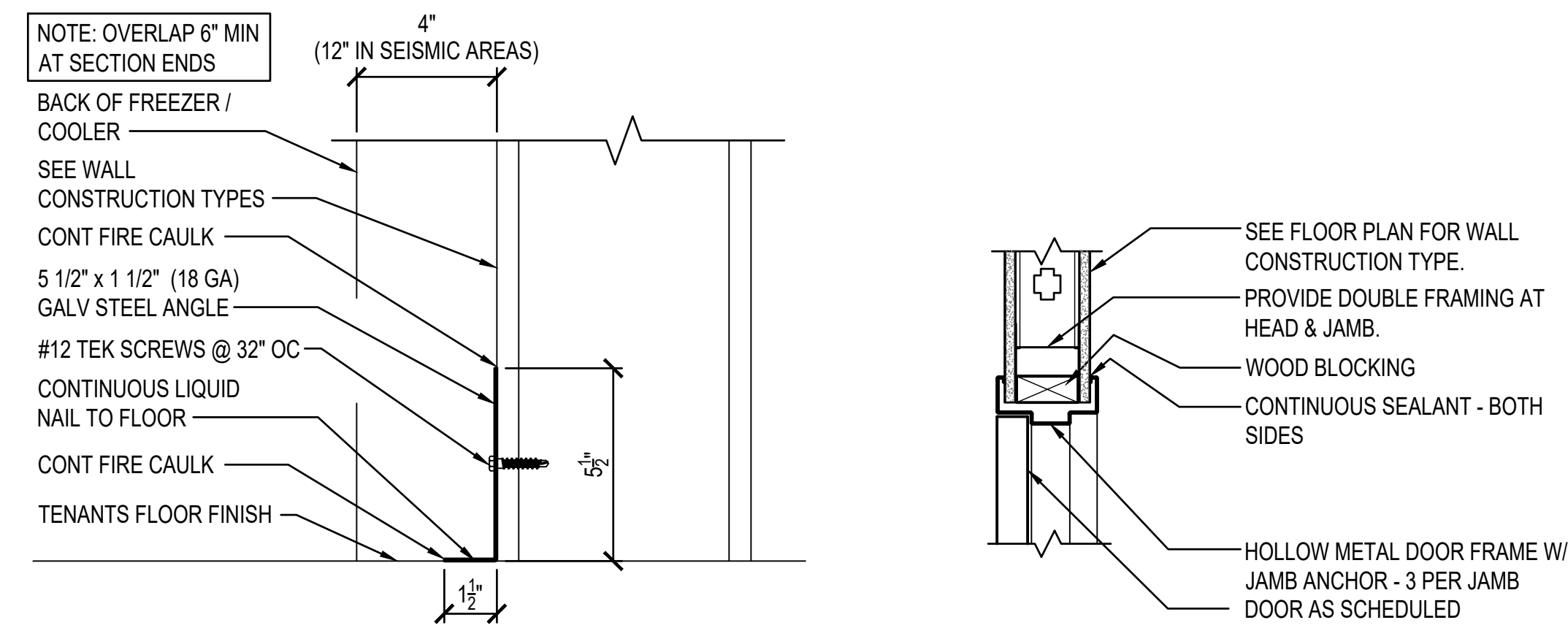
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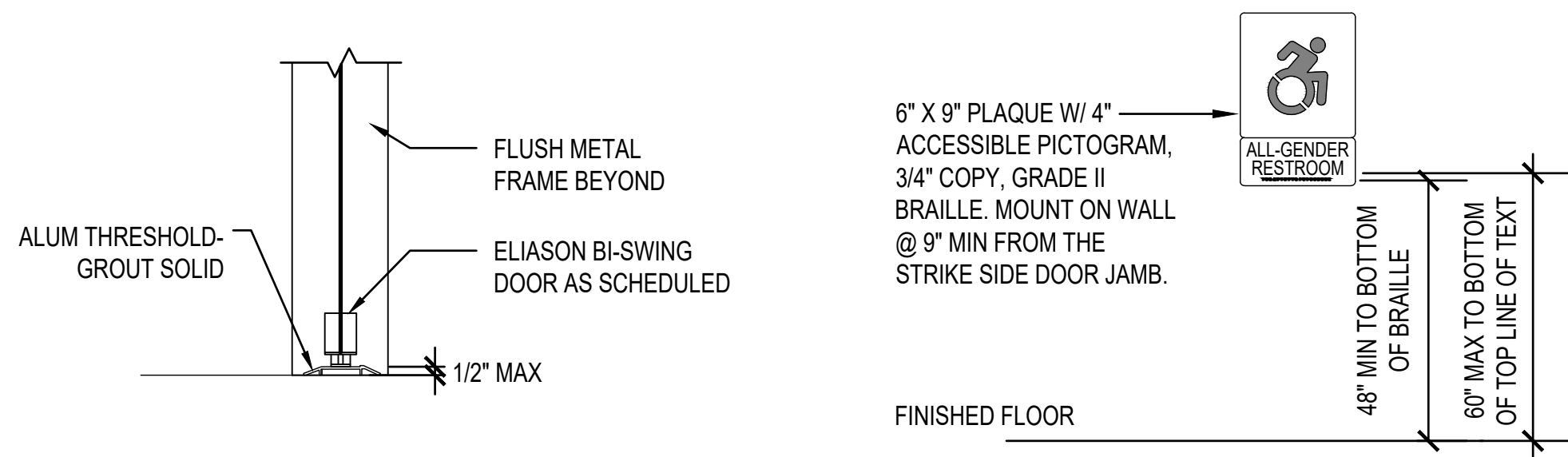
1 HEAD / JAMB DETAIL
SCALE: 1 1/2" = 1'-0"

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



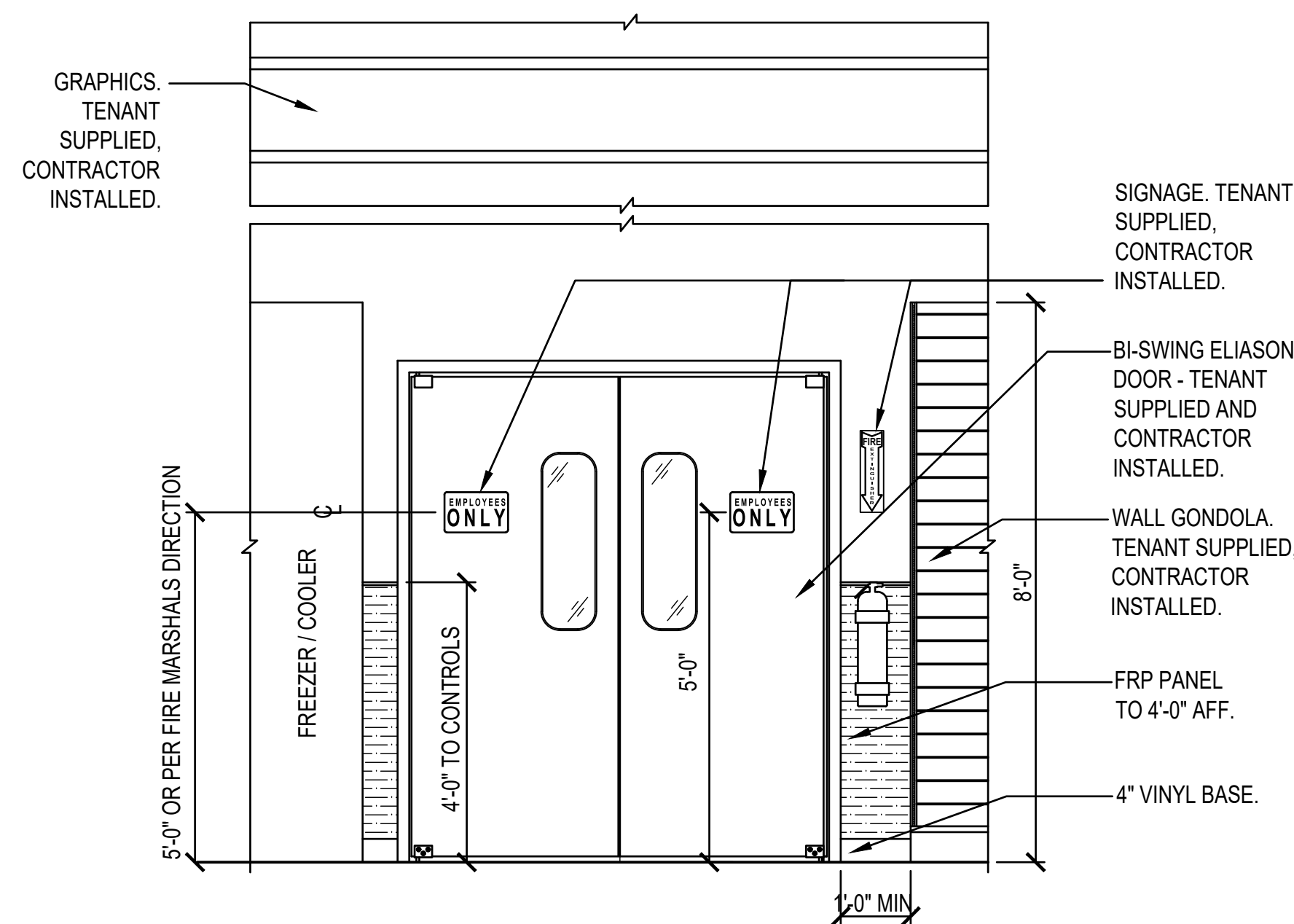
3 DETAIL
SCALE: 3" = 1'-0"

4 HEAD / JAMB DETAIL
SCALE: 1 1/2" = 1'-0"

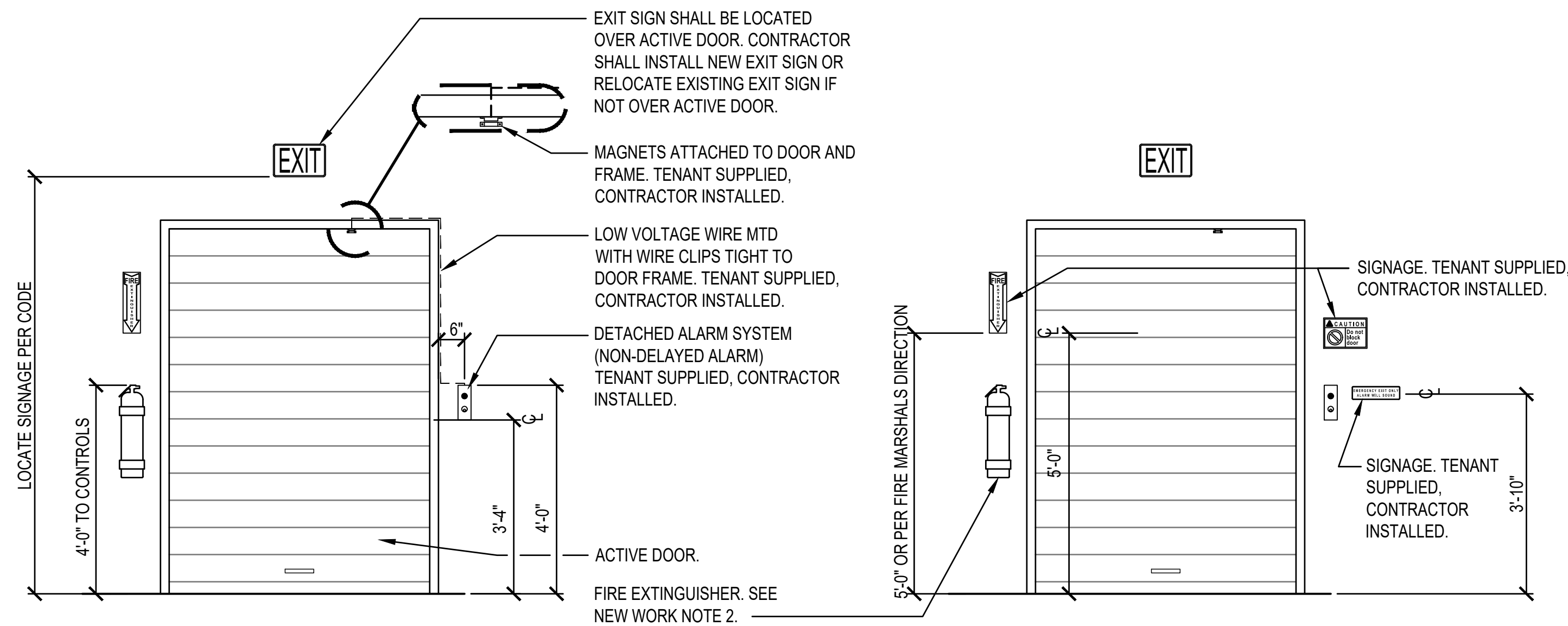


5 SILL DETAIL
SCALE: 1 1/2" = 1'-0"

A SIGNAGE ELEVATION
SCALE: NTS



B SALES / PRE-SALES DOOR ELEVATION
SCALE: 1/2" = 1'-0"



C ROLL-UP DOOR ELEVATION
SCALE: 1/2" = 1'-0"

FINISH SCHEDULE					
SPACES	FLOORS	BASES	WALLS	CEILING	NOTES
SALES	ENTRY CARPET TILE / POLISHED CONC	4" VINYL	GWB-PAINT YELLOW / PAINT YELLOW / FRP	---	1,2,5,6,9,11,12,14
PRE-SALES	CONCRETE	-	EXISTING	---	2,8,11,15
EMPLOYEE AREA	CONCRETE	-	GWB / PLYWOOD	---	2, 6,13
OFFICE	POLISHED CONC	4" VINYL	GWB-PAINT WHITE	---	2,5,6,9,10,12
TOILET	SHEET VINYL	6" SHEET VINYL	FRP	GWB	3,6,7,11
HALLWAY	POLISHED CONC	4" VINYL	GWB-PAINT WHITE / FRP	ACT	2,4,6,11,12

- FINISH NOTES
- CARPET TILE: MANUFACTURED BY INTERFACE FLOORING SYSTEMS AND TENANT SUPPLIED. INSTALL TILES QUARTER TURNED AND PER TENANT'S CRITERIA.
ENTRY TILE: DECO RIB, STYLE #678009900.
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 PRE-SALES AT MOP SINK AND CABINET ONLY UON.
 - SHEET VINYL: CLASSIC CORLON SERIES
MANUFACTURED BY ARMSTRONG - CONNECTION CORLON "PORCELAIN" #88724 OR EQUAL.
SHEET VINYL BASE: BY INTREGAL, 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/ 5-1 PER GALLON.
YELLOW - BENJAMIN MOORE PRODUCT 274 "LEMON SORBET" #2019-60 (EGGSHELL FINISH)
FOREST GREEN - BENJAMIN MOORE PRODUCT 274 "FOREST GREEN" #2047-10 (EGGSHELL FINISH)

TRUSTY TAN - "TRUSTY TAN" #SW6087 LRV 37% SHERWIN WILLIAMS (SATIN FINISH)
 - PAINT TOILET ROOM EXTERIOR WALLS WHITE.
EXIST CONCRETE FLOOR TO REMAIN. PATCH AND REPAIR AS REQUIRED TO PROVIDE SMOOTH SURFACE.
 - SLATWALL TENANT SUPPLIED SHALL BE INSTALLED BY THE CONTRACTOR. ALL OTHER FINISHES SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR.
 - PROVIDE PREFORMED COUNTER WITH WHITE HIGH PRESSURE LAMINATE FINISH. MOUNT TO WALLS. FILING CABINETS PROVIDED BY TENANT. SEE ENLARGED OFFICE PLAN AND OFFICE ELEVATION.
 - F R P (FIBERGLASS REINFORCED PANEL): IN TOILET ROOM FROM FLOOR TO 8'-3" AFF VIF SHALL BE WHITE" COLOR (IN PRE-SALES BEHIND MOP SINK ONLY, IN HALLWAY BEHIND DRINKING FOUNTAIN ONLY.) FRP ON SALES FLOOR (WHERE NOTED ON PLANS/ELEVATIONS) SHALL BE ALMOND COLOR WITH "J" CHANNEL TRIM CAP AND "H" CHANNEL PANEL CONNECTORS.
 - POLISHED CONCRETE FLOOR ON SALES FLOOR AND OFFICE. COORDINATE WITH TENANT.
 - PAINT EMPLOYEE AREA WALLS TO 4'-0" AFF "FOREST GREEN".
 - 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.
 - PAINT 6" WIDE BAND ON CONCRETE FLOOR AROUND PERIMETER OF PRE-SALES 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.
- A. EXPOSED CMU WALLS IN THE SALES AREA SHALL HAVE ONE COAT OF PRIMER AND A MINIMUM OF ONE COAT OF YELLOW PAINT.
- B. EXPOSED ROOF DECK, ROOF STRUCTURE, DUCTWORK, PIPING, ETC. SHALL BE PAINTED TRUSTY TAN. REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION. CONTRACTOR SHALL CONFIRM WITH LOCAL FIRE DEPARTMENT IF FIRE LINES ARE TO BE PAINTED RED. THIS ONLY APPLIES IN SPACES THAT ARE SPRINKLERED.

GENERAL FINISH NOTES

- PROVIDE ALUMINUM TRANSITION STRIP OR THRESHOLD AT ALL CHANGES IN FLOORING MATERIALS.

DOOR SCHEDULE										
DOORS					DETAILS			FR	HDW	DOOR NOTES
#	W	H	T	MATERIAL	HEAD	JAMB	SILL			
100	3'-0"	6'-8"	1 3/4"	SOLID CORE WD	4/A4	4/A4	-		100A	5
200	PR 3'-0"	7'-0"	.063"	TEMP. ALUM ALLOY	1/A4	1/A4	2/A4		200A	2,7,11
300	3'-0"	6'-8"	1 3/4"	EXIST SOLID CORE WD	-	-	-		300C	3,5,6
301	3'-0"	6'-8"	1 3/4"	SOLID CORE WD	4/A4	4/A4	-		300D	5,10
400	-	-	-	EX. ROLL-UP O.H.	-	-	-		400A	13
401	3'-0"	7'-0"	1 3/4"	EXISTING HOLLOW METAL	-	-	-		400C	1,3,4,5,8,10
500	PR 3'-0"	7'-0"	1 3/4"	STOREFRONT	-	-	2/A4		500A	1,8

- 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 SHALL BE IN LETTERS 1" HIGH ON A CONTRASTING BACKGROUND.
 - NEW DOORS - SUPPLIED BY TENANT W/ PRE-INSTALLED BRUSHED ALUM COVER PLATE ON SALES AREA SIDE OF THE DOOR. EXIST DOORS - INSTALL ALUM COVER PLATE (SUPPLIED BY TENANT) ON EXIST DOORS TO REMAIN.
 - DOOR, FRAME AND HINGES ARE EXISTING. 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 A/A4.
 - REINFORCE JAMBS WITH WOOD BLOCKING.
 - CONTRACTOR TO PROVIDE AND INSTALL DOOR SWEEP ON ALL EXTERIOR DOORS TO PREVENT WATER, WIND AND DEBRIS INFILTRATION.
 - PROVIDE STOREFRONT DOORS, TRANSOM AND THRESHOLD TO MATCH EXIST. PROVIDE SHOP DRAWINGS TO LANDLORD FOR APPROVAL PRIOR TO INSTALLATION.
 - PROVIDE SIGNAGE THAT READS "EMERGENCY EXIT ONLY."
 - PROVIDE SIGNAGE THAT READS "EMPLOYEES ONLY."
 - REMOVE PULL HANDLES AND HARDWARE ON EXTERIOR SIDE OF DOOR. PROVIDE COVER PLATES TO MATCH FOR ALL HOLES IN DOOR AND FRAME.
 - EXISTING OVERHEAD DOOR - PROVIDE HASP FOR TENANT'S LOCK.
- HARDWARE NOTES
- HDW # 100A
- 1 1/2 PAIR HINGES: STANDARD WEIGHT
 - MECHANICAL PUSH BUTTON LOCKSET WITH LEVER HANDLE
 - CLOSER
 - 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
- EXIST 1 1/2 PAIR HINGES: STANDARD WEIGHT
 - EXIST 1 PRIVACY SET WITH LEVER HANDLE
 - EXIST 1 CLOSER
 - EXIST FLOOR/WALL STOP
- HDW # 300D
- 1 1/2 PAIR HINGES: STANDARD WEIGHT
 - PASSAGE SET W/ LEVER HANDLE
 - CLOSER
 - (FLOOR/WALL STOP IF SHIPPED WITH HARDWARE)
 - INSTALL STAND ALONE ALARM - REFER TO DOOR ALARM MOUNTING DETAIL.
- HDW # 400A
- EXIST ROLL-UP DOOR RAILS AND HARDWARE
 - EXIST LATCH
 - INSTALL HASP FOR LOCK
 - INSTALL STAND ALONE ALARM
- 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 ADA COMPLIANT DEADLOCK W/ 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.

- 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.

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description
by
mark
date
revisions

08/15/2022
2022/7/10 12:16
project
designed
drawn
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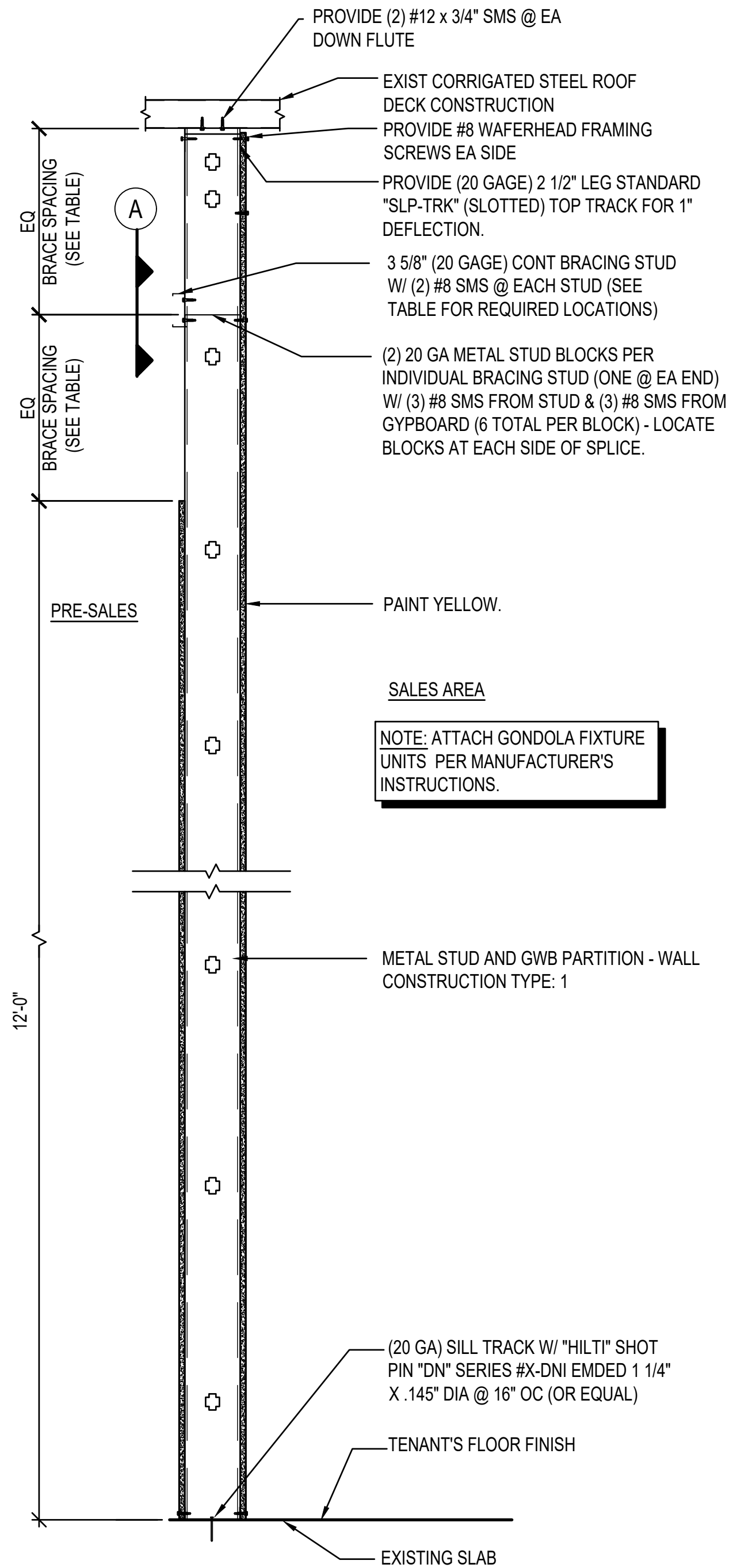
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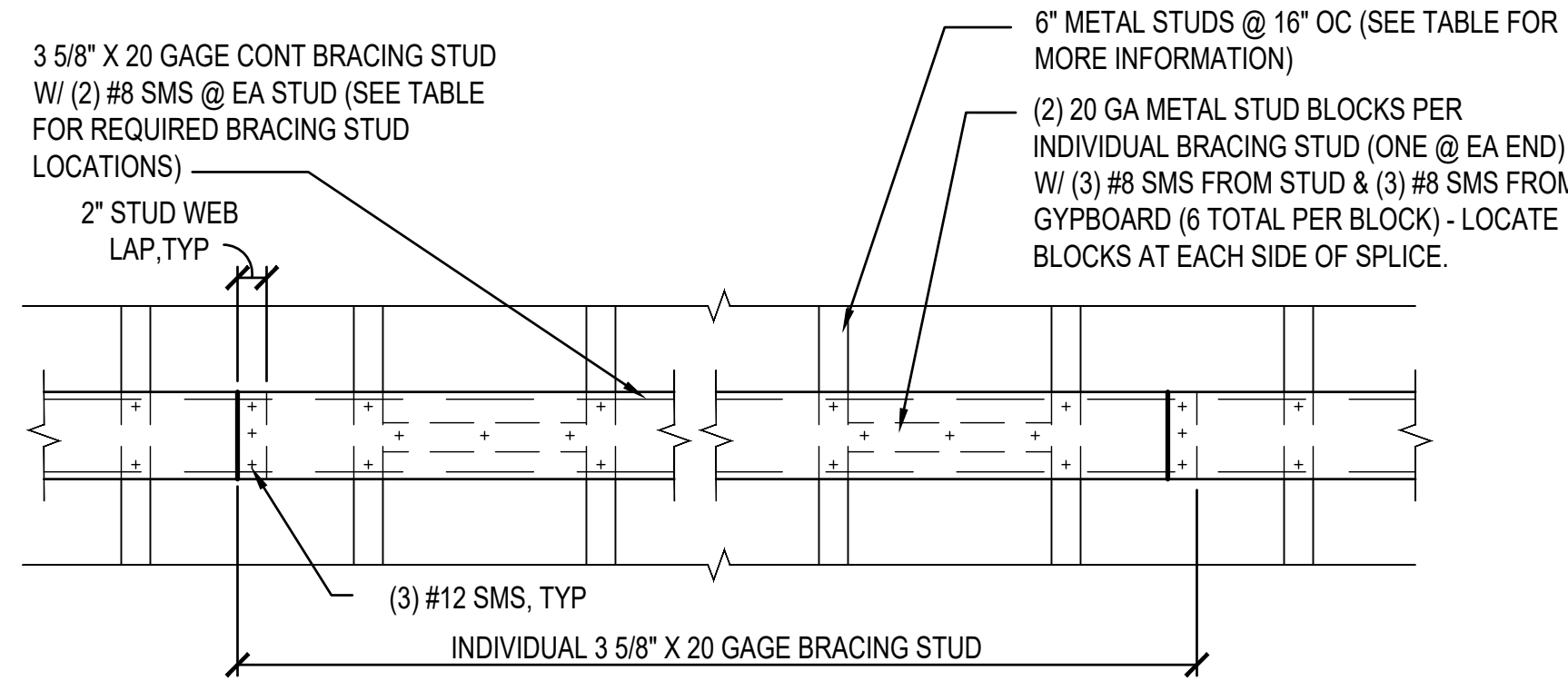
DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980
DETAILS, ELEVATIONS AND SCHEDULES

project
drawing
sheet

A4

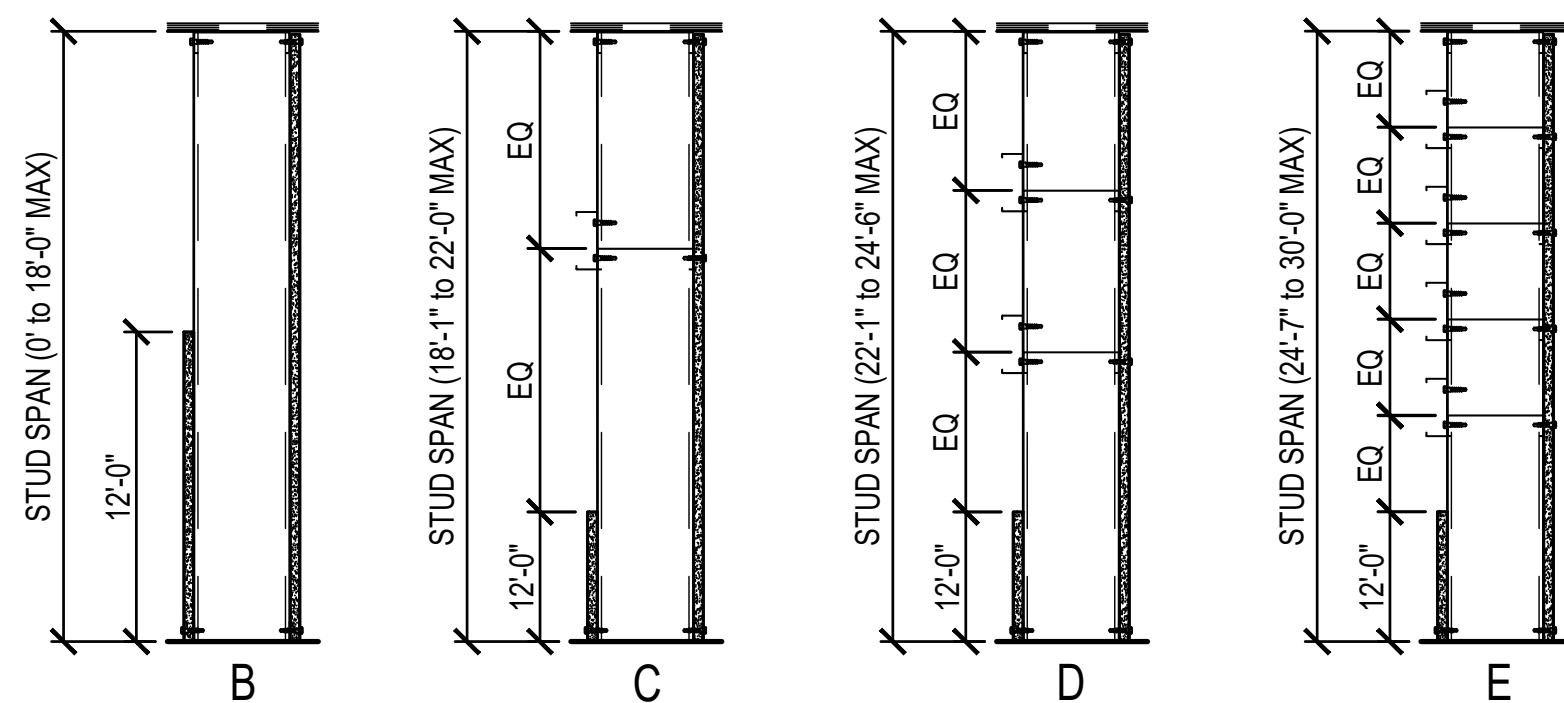


1
A4.1
WALL SECTION -
CONSTRUCTION TYPE: 1
SCALE: 1" = 1'-0"



DETAIL

SCALE: 1" = 1'-0"

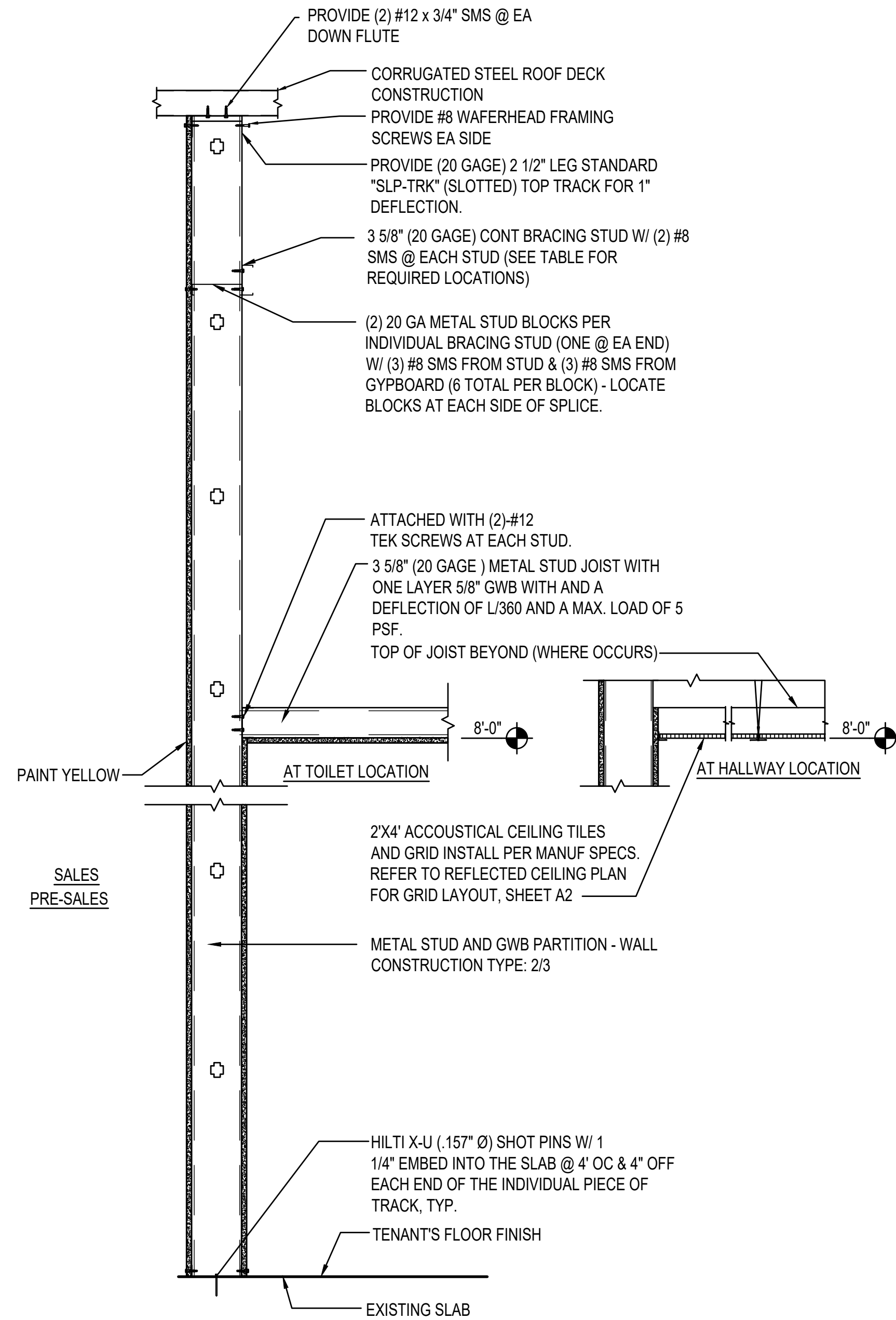


BRACING LOCATION SECTION

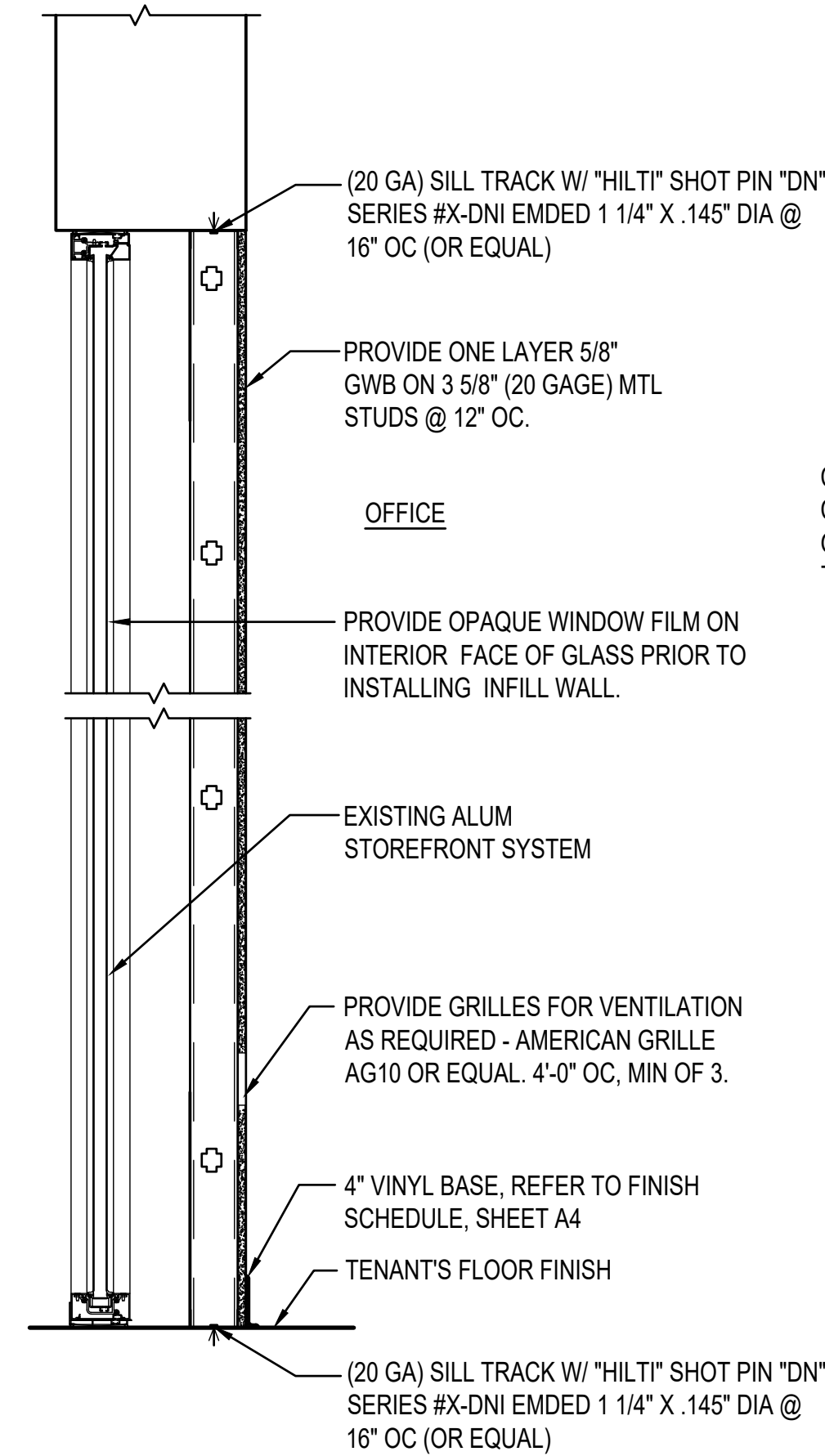
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STUD SPAN	STUD GAGE	BRACE SPACING	BRACING LOCATION SECTION
18'	20 (600S125-33)	NO BRACING REQUIRED	B
22'	20 (600S125-33)	5' OC (MAX)	C
24'-6"	20 (600S125-33)	4'-2" OC (MAX)	D
30'-0"	18 (600S125-43)	3'-7" OC (MAX)	E

STUDS MUST MEET MINIMUM SSMA SPECIFICATIONS FOR 600S125 Fy=33 KSI STUDS OF THE SPECIFIED GAGE.



2
A4.1
WALL SECTION -
CONSTRUCTION TYPE: 2
SCALE: 1" = 1'-0"



3
A4.1
WALL SECTION TYPE 8
SCALE: 1" = 1'-0"

CONTACT TENANT'S
CONSTRUCTION PM FOR
GRAPHICS INFORMATION PRIOR
TO INSTALLING INFILL WALL.

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by
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08/15/2022
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project
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date
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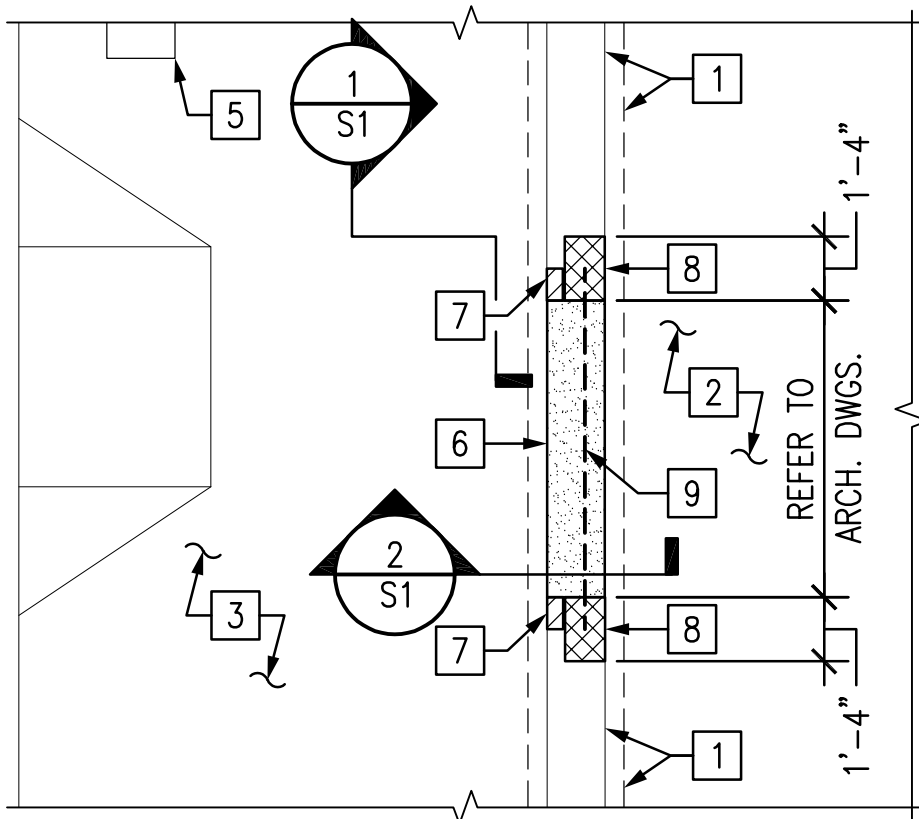
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STONY POINT, NY 10980
DETAILS, ELEVATIONS AND SCHEDULES

project
drawing

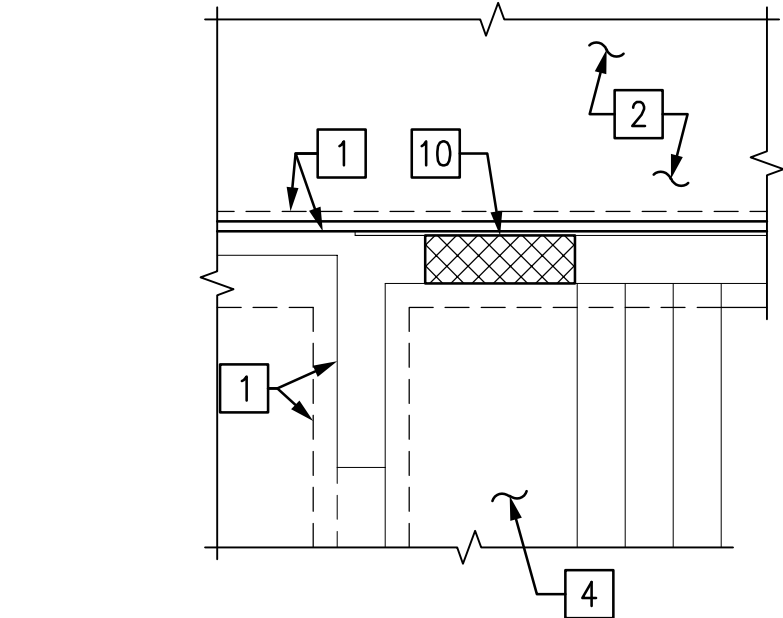
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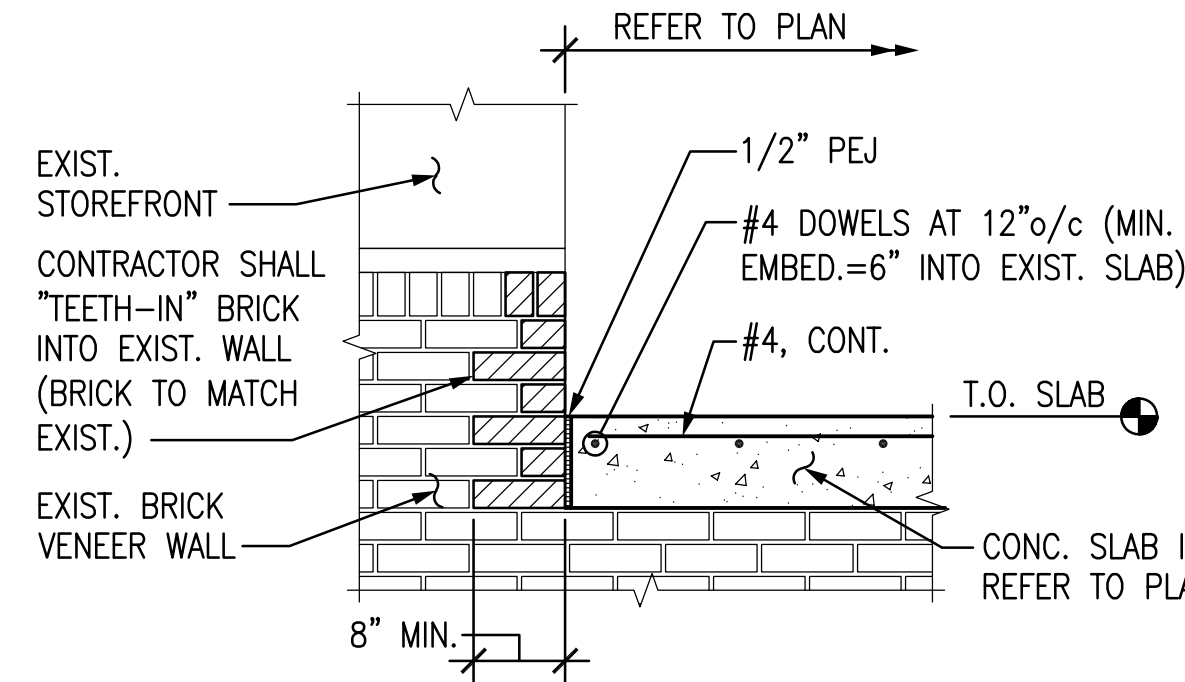
PARTIAL FOUNDATION PLAN

1/4" = 1'-0"



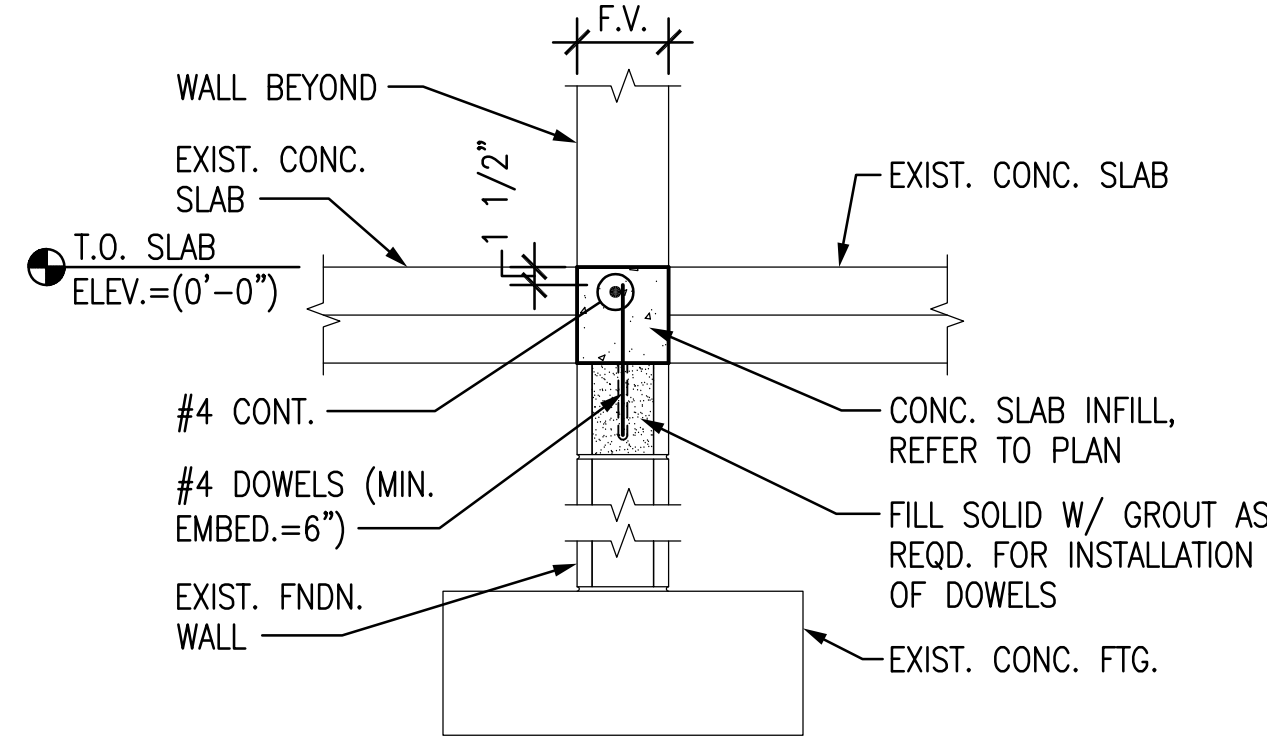
PARTIAL FOUNDATION PLAN

1/4" = 1'-0"



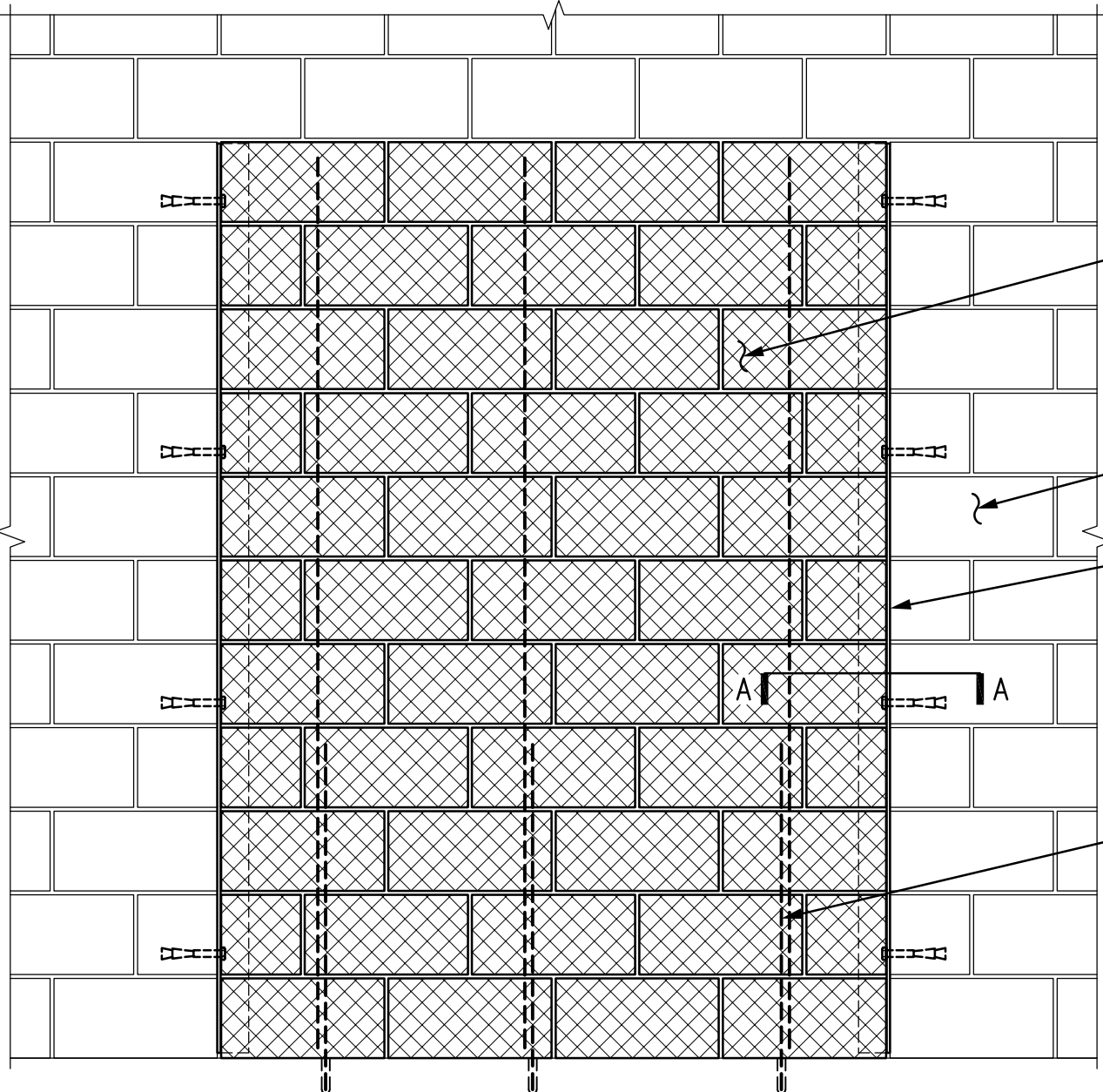
SECTION

3/4" = 1'-0"



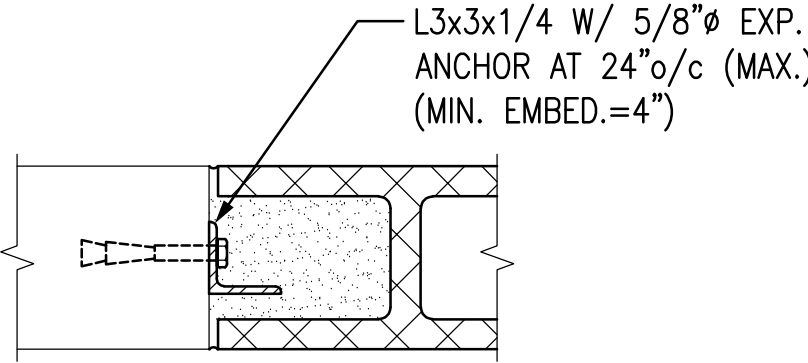
SECTION

3/4" = 1'-0"



TYPICAL MASONRY WALL INFILL ELEVATION

NOT TO SCALE



SECTION A-A

PLAN NOTES:

1. ALL WORK SHOWN IS NEW WORK UNLESS DENOTED AS EXISTING. ALL EXISTING ITEMS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO STARTING CONSTRUCTION.
2. TOP OF EXISTING INTERIOR SLAB ELEVATION EQUALS REFERENCE ELEVATION 0'-0". ALL ELEVATIONS ARE BASED UPON THIS REFERENCE ELEVATION.
3. REFER TO THE ARCHITECTURAL DRAWINGS FOR DEMOLITION NOT NOTED.
4. CONTRACTOR SHALL COORDINATE DIMENSIONS NOT NOTED WITH THE ARCHITECTURAL DRAWINGS.
5. 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.
6. CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING, GUYING, AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK HAS BEEN COMPLETED. THE DESIGN OF SHORING, GUYING, AND BRACING IS THE RESPONSIBILITY OF THE CONTRACTOR.

KEY NOTES:

- 1 EXISTING FOUNDATION AND FOUNDATION WALL.
- 2 EXISTING CONCRETE SLAB-ON-GRADE.
- 3 EXISTING CONCRETE SIDEWALK.
- 4 EXISTING CONCRETE LANDING AND STAIRS.
- 5 EXISTING COLUMN.
- 6 CONTRACTOR SHALL DEMOLISH EXISTING BRICK VENEER AND FOUNDATION WALL DENOTED ON PLAN (-0'-8") BELOW FINISHED FLOOR ELEVATION. PROVIDE NEW CONCRETE SLAB IN-FILL, 8" DEEP (MINIMUM) BY WIDTH OF WALL (FIELD VERIFY), REINFORCED AS SHOWN IN SECTION 2 ON THIS SHEET. REMOVE EXISTING SLAB AS REQUIRED TO REMOVE THE WALL.
- 7 PROVIDE BRICK VENEER TO MATCH EXISTING. "TEETH-IN" BRICK (8" MINIMUM) INTO EXISTING MASONRY WALL WHERE APPLICABLE.
- 8 PROVIDE CMU TO MATCH EXISTING. "TEETH-IN" CMU (16" MINIMUM) INTO EXISTING MASONRY WALL WHERE APPLICABLE. GROUT ALL CMU CELLS SOLID, UNLESS OTHERWISE NOTED.
- 9 W8x21 STEEL BEAM LINTEL ABOVE WITH 3/8" THICK x CONTINUOUS STEEL PLATE (PLATE WIDTH SHALL EQUAL WALL WIDTH, MINUS 1").
- 10 CMU INFILL AT EXISTING OPENING. REFER TO TYPICAL MASONRY WALL INFILL ELEVATION ON THIS SHEET.

GENERAL NOTES:

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 ARCHITECT.
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 SLEEVES, ANCHORS, CHASES, INSERTS, HANGERS, HOLES, ETC. TO BE PLACED IN THE STRUCTURAL WORK.
5. THE STRUCTURE WAS DESIGNED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. THE FOLLOWING LOADS IN ADDITION TO THE LOADS OF THE PERMANENT MATERIALS AND CONSTRUCTION, WERE USED:

GROUND SNOW LOAD : 30 PSF
ROOF LOAD : 20 PSF
GROUND FLOOR : 100 PSF
WIND SPEED : 114 MPH
RISK CATEGORY : II
EXPOSURE CATEGORY : B
FROST DEPTH : 48"
6. CONTRACTOR SHALL PROTECT EXISTING BUILDING ELEMENTS TO REMAIN. ANY DAMAGE DONE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

CAST IN PLACE CONCRETE NOTES:

1. CAST-IN-PLACE CONCRETE FOR THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) : ACI 318 AND ACI 318R "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND COMMENTARY".
2. CONCRETE SHALL BE NORMAL WEIGHT AND SHALL OBTAIN 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI. ALL FLOOR SLAB CONCRETE SHALL BE AIR ENTRAINED WITH 3.5% TO 6.5% AIR.
3. REINFORCING MATERIALS SHALL BE AS FOLLOWS:
A) REINFORCING BARS - ASTM A615, GRADE 60, DEFORMED.
B) WELDED WIRE REINFORCEMENT - ASTM A185, WELDED STEEL WIRE REINFORCEMENT. PROVIDE SHEET TYPE, ROLL TYPE NOT ACCEPTABLE.
4. ALL REINFORCING STEEL AND EMBEDDED ITEMS SUCH AS ANCHOR BOLTS AND WELD PLATES SHALL BE ACCURATELY PLACED IN THE POSITIONS SHOWN AND ADEQUATELY TIED AND SUPPORTED BEFORE CONCRETE IS PLACED TO PREVENT DISPLACEMENT BEYOND PERMITTED TOLERANCES.
5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS INDICATED ON THE DRAWINGS SHALL GOVERN WHEN IN CONFLICT WITH ACI 318.

MASONRY NOTES:

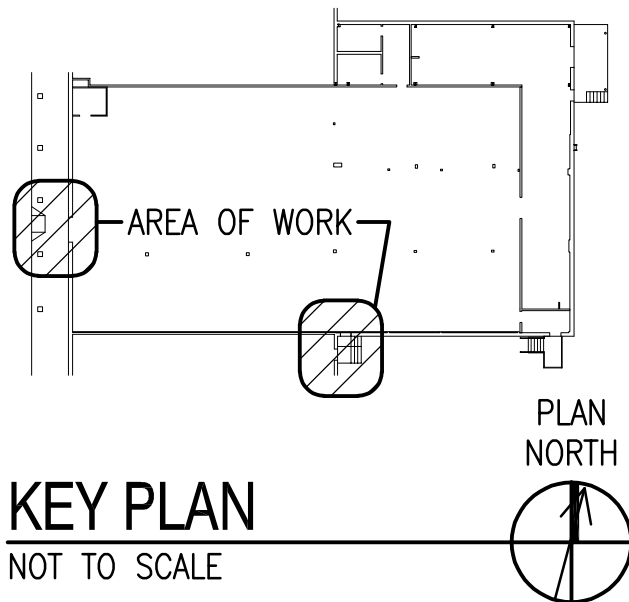
1. ALL MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) : ACI 530, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" AND ACI 530.1, "SPECIFICATIONS FOR MASONRY STRUCTURES."
2. ALL CONCRETE MASONRY UNITS SHALL BE IN ACCORDANCE WITH ASTM C-90 "SPECIFICATIONS FOR HOLLOW LOAD-BEARING UNITS" AND SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF F'M=1,500 PSI.
3. ALL MORTAR FOR USE IN ENGINEERED MASONRY BEARING WALLS SHALL BE IN ACCORDANCE WITH ASTM C-270 TYPE "S" MORTAR. ALL MASONRY GROUT SHALL BE IN ACCORDANCE WITH ASTM C476 AND SHALL OBTAIN A 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
4. ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 60 DEFORMED BARS. CENTER REINFORCING BARS IN BLOCK CELLS UNLESS OTHERWISE NOTED.
5. THE MASONRY CONTRACTOR SHALL BUILD, REINFORCE, AND GROUT THE WALLS IN NO GREATER THAN 4'-0" LIFTS, VIBRATING GROUT IMMEDIATELY AFTER EACH LIFT.
6. PROVIDE GALVANIZED HORIZONTAL LADDER (EXTERIOR CONDITION)/TRUSS (INTERIOR CONDITION) TYPE JOINT REINFORCING WITH NO. 9 GAGE CROSS RODS AT 16" ON CENTER ON ALL WALLS.
7. DIMENSIONS SHOWN FOR CMU WALLS ARE NOMINAL BLOCK. HOLD DIMENSIONS TO OUTSIDE FACE OF CMU.

STRUCTURAL STEEL NOTES:

1. ALL STRUCTURAL WIDE FLANGE SHAPES SHALL BE IN ACCORDANCE WITH ASTM A992, GRADE 50 KSI SPECIFICATIONS. ALL STEEL ANGLES, PLATES AND MISCELLANEOUS MEMBERS SHALL BE IN ACCORDANCE WITH ASTM A36 GRADE 36 KSI SPECIFICATIONS. STRUCTURAL PIPING SHALL BE IN ACCORDANCE WITH ASTM A53, GRADE B.
2. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE FOURTEENTH EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
3. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1.
4. STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE PAINTED WITH TNE MEC HI-BUILD EPOXOLINE, SERIES 66, PRIME AND INTERMEDIATE COATS AND ENDURA-SHIELD II, SERIES 1074, FINISH COAT. TOTAL PAINT THICKNESS SHALL NOT BE LESS THAN 10 MILS. ALL PAINTING SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTION.

STRUCTURAL ABBREVIATIONS LIST

ADDIT.	ADDITION/ADDITIONAL	MECH.	MECHANICAL
ARCH.	ARCHITECTURAL	MPH	MILES PER HOUR
B.O.	BOTTOM OF	MTL	METAL
CMU	CONCRETE MASONRY UNIT	o/c	ON CENTER
CONC.	CONCRETE	O.H.	OPPOSITE HAND
CONT.	CONTINUE/CONTINUOUS	OPNG.	OPENING
COORD.	COORDINATE	OPP.	OPPOSITE
Ø	DIAMETER	PEJ	PREMOLDED EXPANSION JOINT
DIAG.	DIAGONAL	PLF	POUNDS PER LINEAR FOOT
DWGS.	DRAWINGS	PSF	POUNDS PER SQUARE FOOT
EA.	EACH	PSI	POUNDS PER SQUARE INCH
ELEV.	ELEVATION	REINF.	REINFORCED/REINFORCING
EMBED.	EMBEDDED/EMBEDMENT	REQD.	REQUIRED
EQUIP.	EQUIPMENT	RTU	ROOT TOP UNIT
EXIST.	EXISTING	SIM.	SIMILAR
FNDN.	FOUNDATION	STL.	STEEL
FTG.	FOOTING	STRUCT.	STRUCTURE/STRUCTURAL
F.V.	FIELD VERIFY	THK.	THICK/THICKNESS
K	KIP (1,000 POUNDS)	T.O.	TOP OF
KSI	KIPS PER SQUARE INCH	TYP.	TYPICAL
LBS	POUND/POUNDS	U.O.N.	UNLESS OTHERWISE NOTED
LLV	LONG LEG VERTICAL	VERT.	VERTICAL
MAS.	MASONRY	W/	WITH
MAX.	MAXIMUM	WT.	WEIGHT
MIN.	MINIMUM		

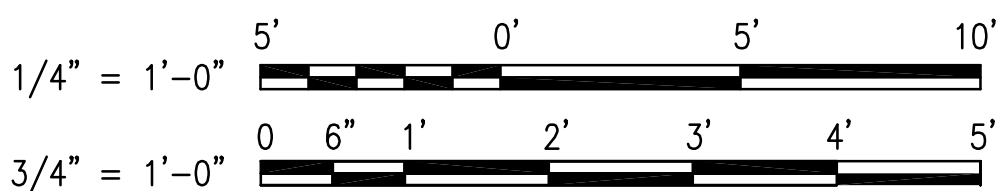


KEY PLAN

NOT TO SCALE

NOTE:
IF THIS DRAWING IS A REDUCTION, GRAPHIC SCALE
MUST BE USED.

GRAPHIC SCALE:



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ALL PLANS, SPECIFICATIONS AND RECORDS TO WHICH THE SEAL OF AN ARCHITECT HAS BEEN APPLIED, THERE SHALL ALSO BE APPLIED A STAMP WITH APPROPRIATE WORKING WARNING THAT IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF AN ARCHITECT, TO REPRODUCE, COPY, ALTER, REVERSE, REPRODUCE, OR OTHERWISE USE OR REPRODUCE ANY PART OF THE SAME. THE SEAL OF THE ARCHITECT SHALL BE PLACED ON THE DRAWING, AND THE SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

description
by
date
mark
revisions

08/15/2022
2022.27 D13216
date
project
designed
drawn
checked

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08/15/22

DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980
PARTIAL FOUNDATION PLANS, NOTES, AND DETAILS

project
drawing

sheet

S1

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 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 CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

GENERAL DEMO PLUMBING NOTES

- A. 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.
- B. 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.
- C. 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

- P01 EXTEND AND CONNECT MOP SINK VENT TO EXISTING VENT PIPING.
- P02 EXTEND AND CONNECT DOMESTIC WATER TO EXISTING 1" WATER PIPING. INSULATE ENTIRE LINE WITHIN BUILDING. FIELD VERIFY EXACT LOCATION OF EXISTING DOMESTIC WATER PRIOR TO INSTALLING ANY PIPING. REPORT DIFFERENCES TO ENGINEER. FAILURE TO DO SO MAY RESULT IN CONTRACTOR REPLACING PIPING AT NO ADDITIONAL COST TO TENANT.
- P03 CONNECT NEW MOP SINK 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.
- P04 PROVIDE ELECTRIC HOT WATER HEATER ABOVE MOP SINK WITH 68" CLEAR TO BOTTOM OF WATER HEATER SUPPORT PLATFORM. PROVIDE EXPANSION TANK, ANTR03, 37-G.
- P06 CONTRACTOR SHALL OBTAIN A COPY OF ALL PLUMBING FIXTURE SPEC. SHEETS PRIOR TO INSTALLATION OF ANY PIPING. CONTRACTOR SHALL DOUGH IN PLUMBING BASED ON THE FIXTURE INSTALLATION INSTRUCTIONS.
- P09 EXTEND AND CONNECT HOT WATER PIPE TO EXISTING HOT WATER SUPPLY PIPE. FIELD VERIFY EXACT LOCATION.
- P10 EXTEND AND CONNECT HOT WATER RETURN PIPE TO EXISTING HOT WATER PIPE WITHIN 2 FEET OF FURTHEST HOT WATER FIXTURE.

KLH

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MECHANICAL/ELECTRICAL ENGINEERS

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description

by

date

mark
revisions

06/15/2022
project
2022.27 / D13216
KLH
CAF
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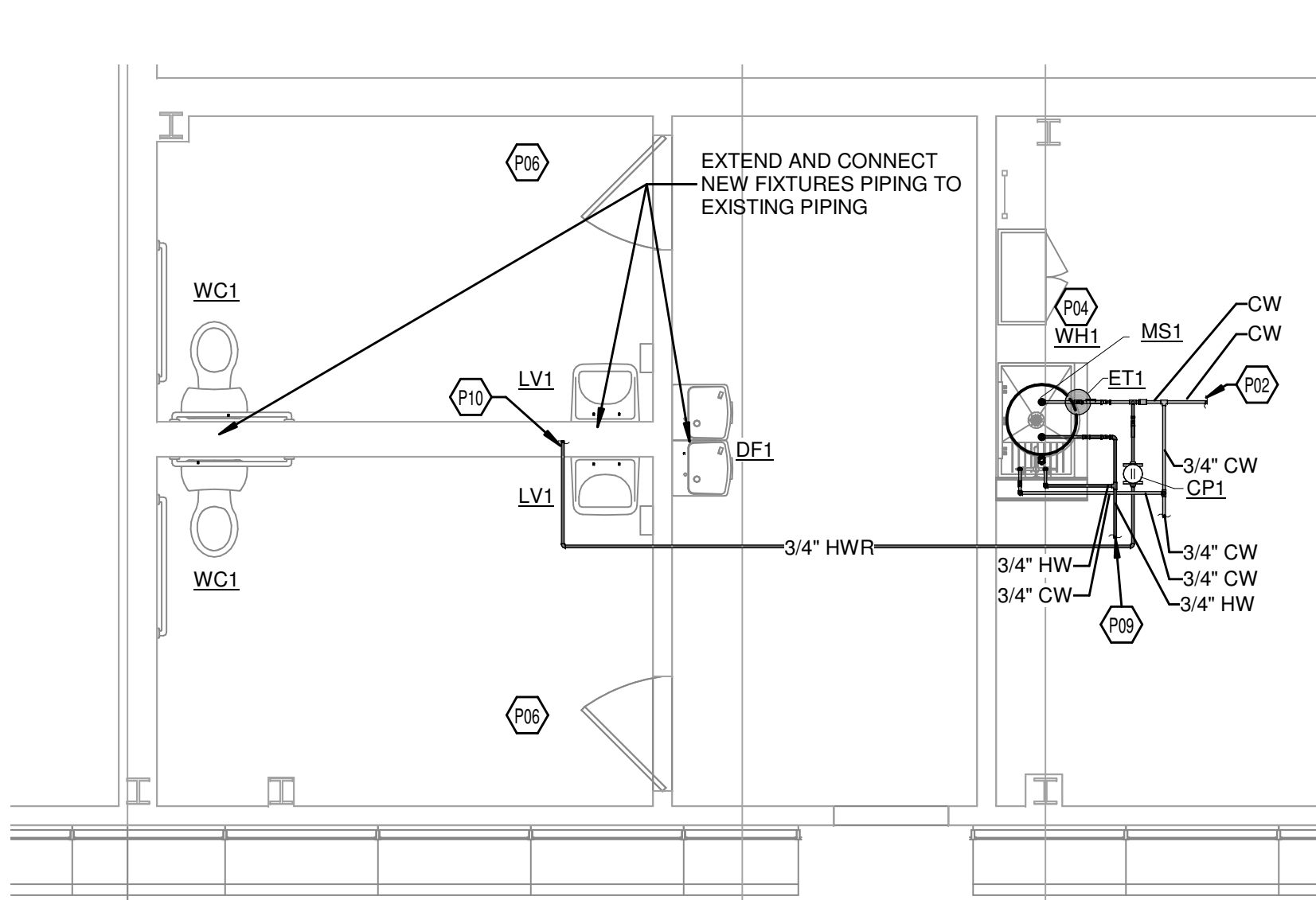
DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980
PLUMBING FLOOR PLAN

project
drawing

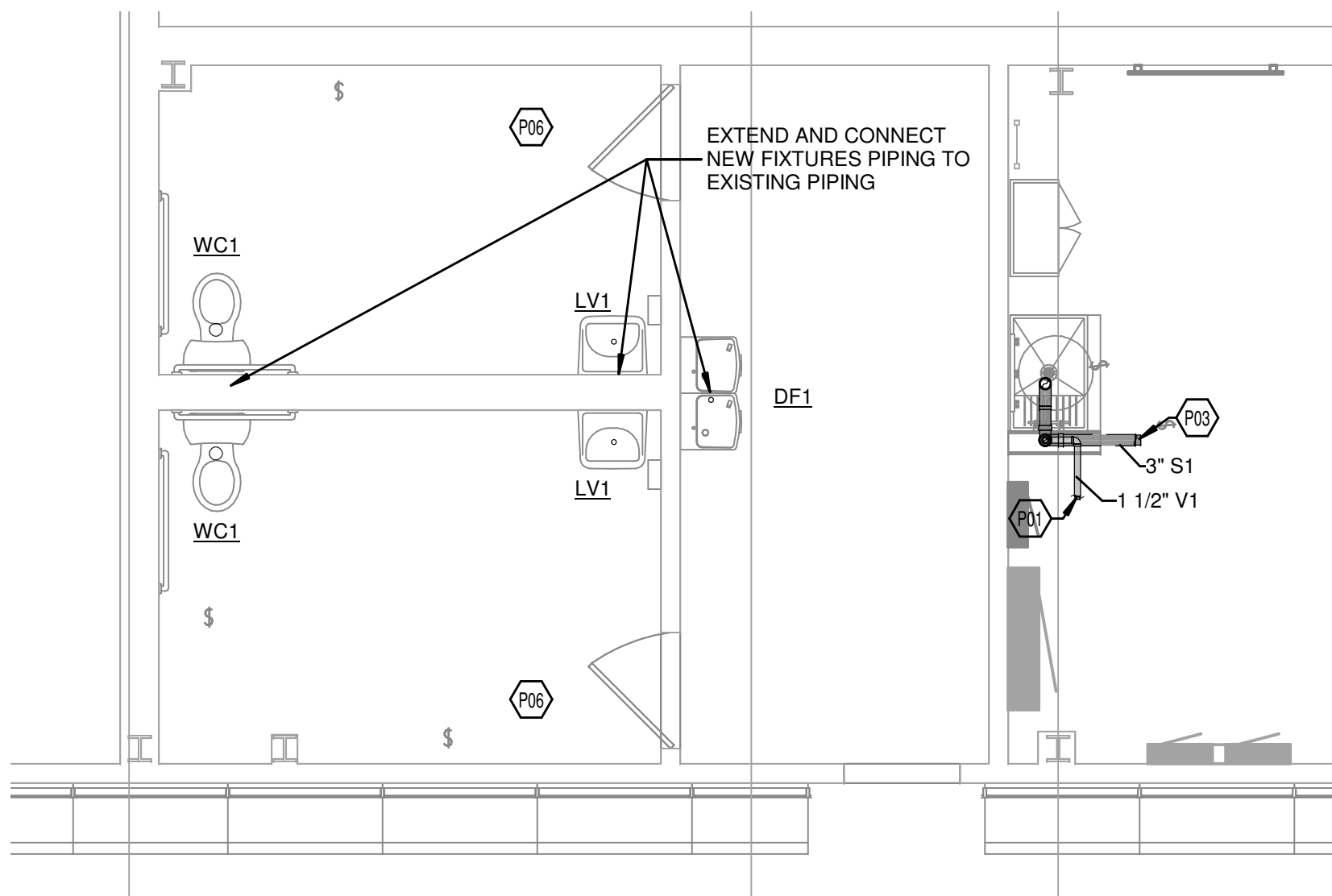
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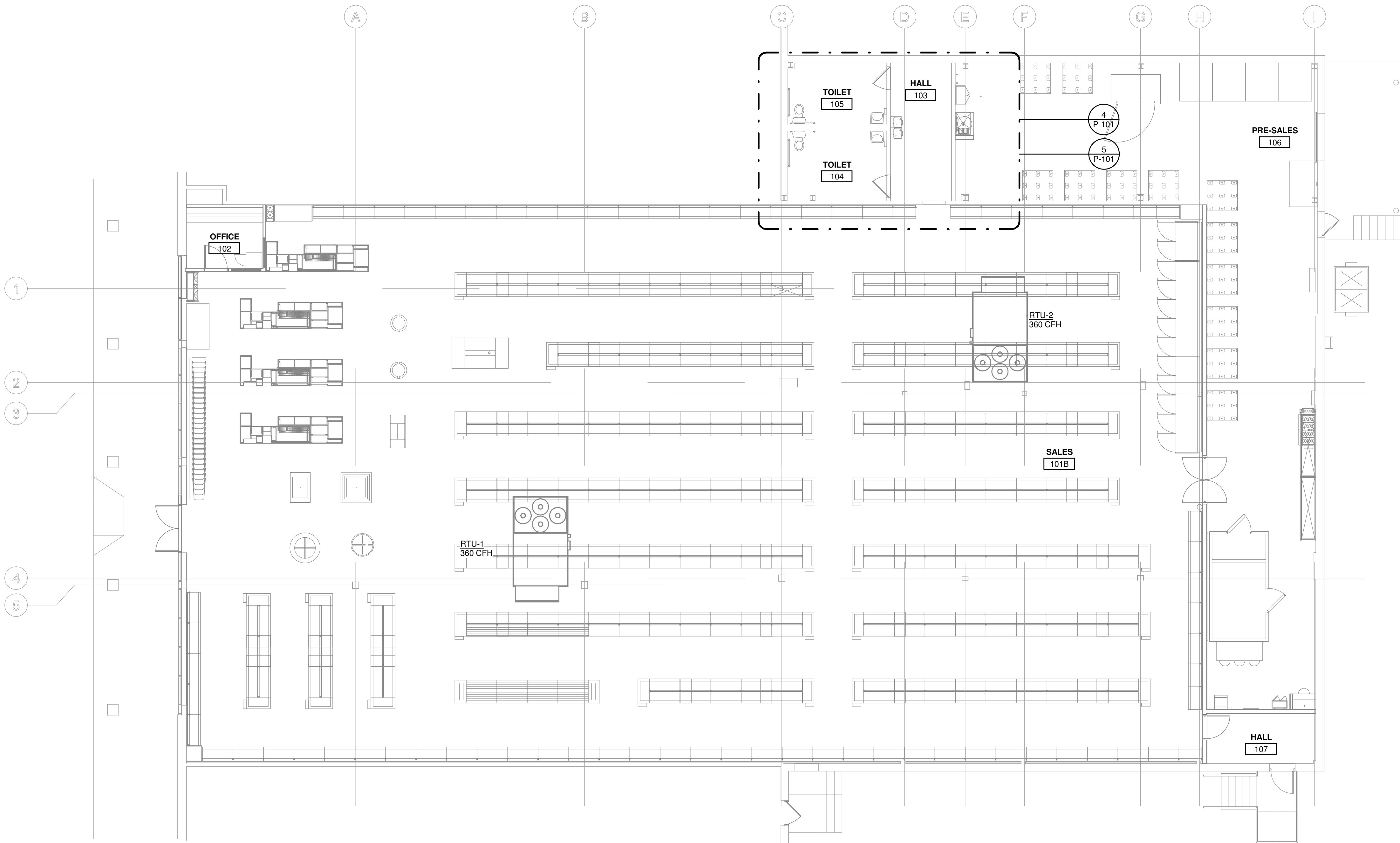
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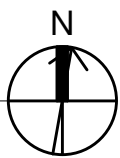
4 PLUMBING SUPPLY PLAN - ENLARGED
1/4" = 1'-0"



5 PLUMBING SANITARY AND VENT PLAN - ENLARGED
1/4" = 1'-0"



1 PLUMBING FLOOR PLAN
1/8" = 1'-0"



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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	
	SANITARY WASTE PIPING
	SANITARY VENT PIPING
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING (120°F)
	NATURAL GAS PIPING
PLUMBING ACCESSORIES	
	PIPE CAP
	WCO - CLEANOUT, EQ - FLOOR CLEANOUT, GCO - GRADE CLEANOUT, WCO - WALL CLEANOUT
	FLOOR DRAIN
	EXPANSION TANK
PIPE VALVES	
	CONTROL VALVE , SHUT-OFF VALVE
	CHECK VALVE
	THERMOSTATIC MIXING VALVE
	PRESSURE REGULATOR VALVE
	BACKFLOW PREVENTER
	TRAP PRIMER VALVE
PLUMBING SYMBOLS	
	PIPE UP
	PIPE DOWN
	PIPE TEE DOWN
	PIPE TEE UP
	PIPE CONTINUATION
	CONNECT TO EXISTING (FIELD VERIFY EXISTING UTILITY SERVICE TYPE, PRIOR TO MAKING CONNECTION)
	VENT THROUGH ROOF

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

DOLLAR TREE PLUMBING ELECTRICAL COORDINATON SCHEDULE																									
ABBREVIATIONS		CONTRACTOR TYPE					MOTOR CONTROL TYPE										CONTROL TYPE								
DC	LOCAL DISCONNECT	EC	ELECTRICAL CONTRACTOR	CS	COMBINATION STARTER	TS	TIMECLOCK	CPT	CONTROL POWER TRANSFORMER	BAS	BUILDING AUTOMATION SYSTEM	LOW	LOW VOLTAGE CONTROLS	LINE	LINE VOLTAGE CONTROLS	RLNE	REVERSE ACTING LINE VOLTAGE THERMOSTAT	MAN	MANUAL	FA	FIRE ALARM	CO	CARBON MONOXIDE SENSOR	INT	INTEGRAL TO EQUIPMENT
MC	MOTOR CONTROL (POWER)	EX	EXISTING	MCC	MOTOR CONTROL STARTER	MG	MAGNETIC STARTER OR CONTACT	MS	MANUAL STARTER	VFD	VARIABLE FREQUENCY DRIVE	MSR	MANUAL STARTER W/ CONTROL RELAY	OV	OVERCURRENT PROTECTION										
SD	DUST SMOKE DETECTOR	PC	FIRE PROTECTION CONTRACTOR	GC	GENERAL CONTRACTOR	HC	HVAC CONTRACTOR	MFR	MANUFACTURER	PC	PLUMBING CONTRACTOR	OR	OWNER OR OTHERS												
CN	CONTROLS																								
TS	TOGGLE SWITCH																								
ICB	HACR CIRCUIT BREAKER AT SOURCE PANELBOARD																								
FUSE	FUSE AT LOCAL DISCONNECT (VERIFY FIELD RATING)																								
FLA	FULL LOAD AMPS																								
MCA	MINIMUM CIRCUIT AMPACITY																								
CP	CORD AND PLUG CONNECTION																								
EQUIPMENT MARK		DESCRIPTION		VOLTS (V)	PHASE	EMERGENCY	BHP (HP)	HP (HP)	HTG KW (kW)	WATTS (W)	FLA (A)	MCA (A)	OCF (A)	DC TYPE	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE
CP1		HOT WATER RECIRCULATING PUMP	120	1				1/40			52				EC	EC	EC	MG	MFR	MFR	MFR	LINE	PC	PC	PC
DF1		DOMESTIC ELECTRIC WATER COOLER	120	1											EC	EC	EC	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR
WH1		DOMESTIC ELECTRIC TANK-TYPE WATER HEATER	120	1				2							EC	EC	EC	---	---	---	---	INT	MFR	MFR	MFR

DOLLAR TREE PLUMBING FIXTURE SCHEDULE												
MARK	DESCRIPTION	MANUFACTURER	MODEL	VALVE/FAUCET MFR	VALVE/FAUCET MODEL	CW SIZE (in)	HW SIZE (in)	SAN SIZE (in)	VENT SIZE (in)	TRAP SIZE (in)	INT TRAP	ACCESSORIES
DF1	DOMESTIC ELECTRIC WATER COOLER	MURDOCK	A172-UG-BF			1/2		1-1/2	1-1/2	---	NO	FURNISH STD. CABINET FINISH FOUNTAIN, SUPPLY STOP & TUBE, DRAIN KIT, AND WALL HANGER KIT
ET1	EXPANSION TANK	WATTS	PLT-5			3/4						FDA APPROVED, POTABLE WATER EXPANSION TANK, 2.1 GALLON ACCEPTANCE.
LV1	LAVATORY	ZURN	ZS344	ZURN	ZB6500-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, PROVIDE ASSE 1070 VALVES.
MS1	MOP SINK	ZURN	Z1996-36	ZURN	ZB43MI	1/2	1/2	3	1-1/2	3	NO	FURNISH VACUUM BREAKER, HOSE AND BRACKET, MOP HANGER, AND DRAIN KIT.
WC1	TANK WATER CLOSET	ZURN	ZS660			1/2	---	3	2	---	YES	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 SIDE OF THE WC (SIDE OPPOSITE THE WALL).

DOLLAR TREE PLUMBING WATER HEATER SCHEDULE													
MARK	DESCRIPTION	MANUFACTURER	MODEL	EFFICIENCY	EWT (DEG F)	LWT (DEG F)	STORAGE (GAL)	FUEL	HTG KW	VOLTS	PHASE	WEIGHT	ACCESS
WH1	DOMESTIC ELECTRIC TANK-TYPE WATER HEATER	BRADFORD	RE110U6	98	56	140	10	ELECTRIC	2	120	1	30	PROVIDE WITH T & P RELIEF VALVE AND INTEGRAL HEAT TRAPS

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06/15/2022
2022.27 / D13216
date project
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drawn
checked
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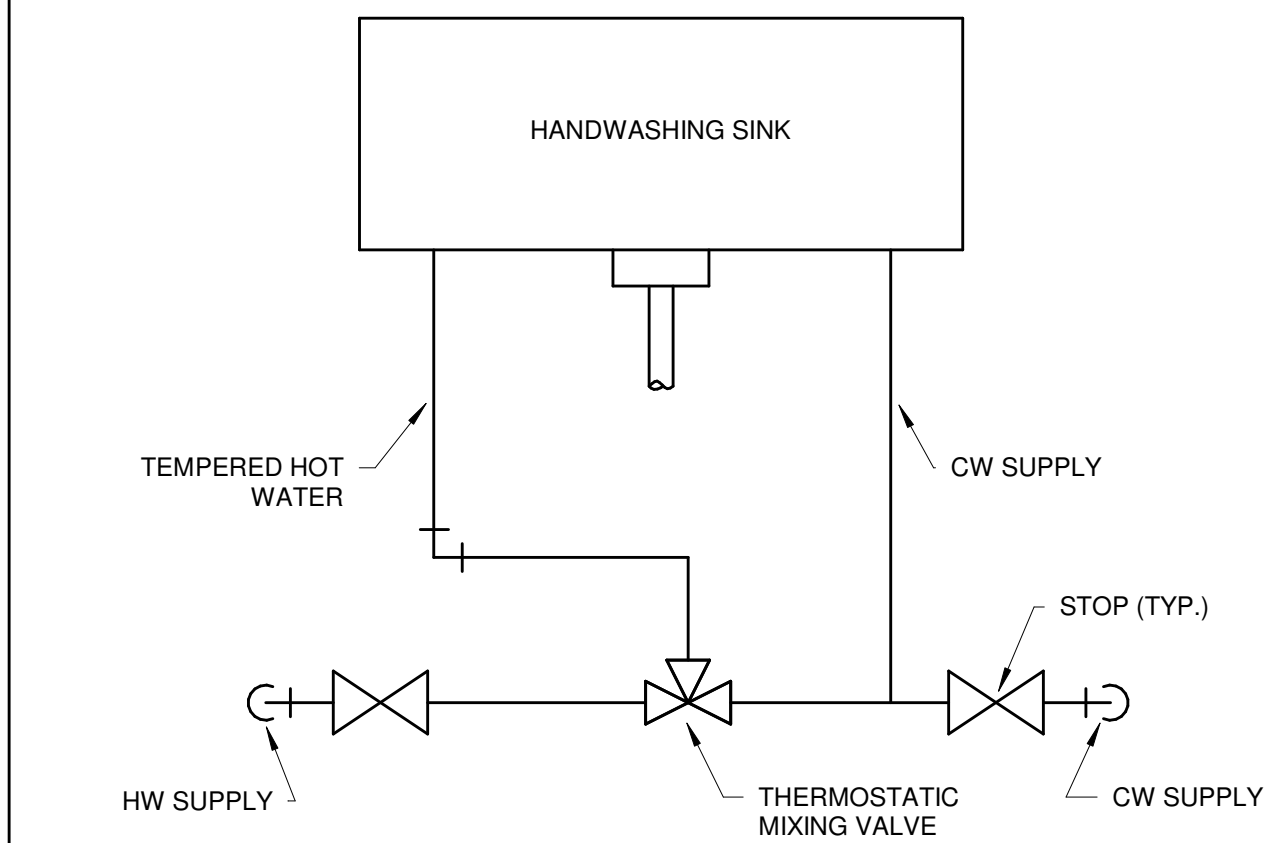


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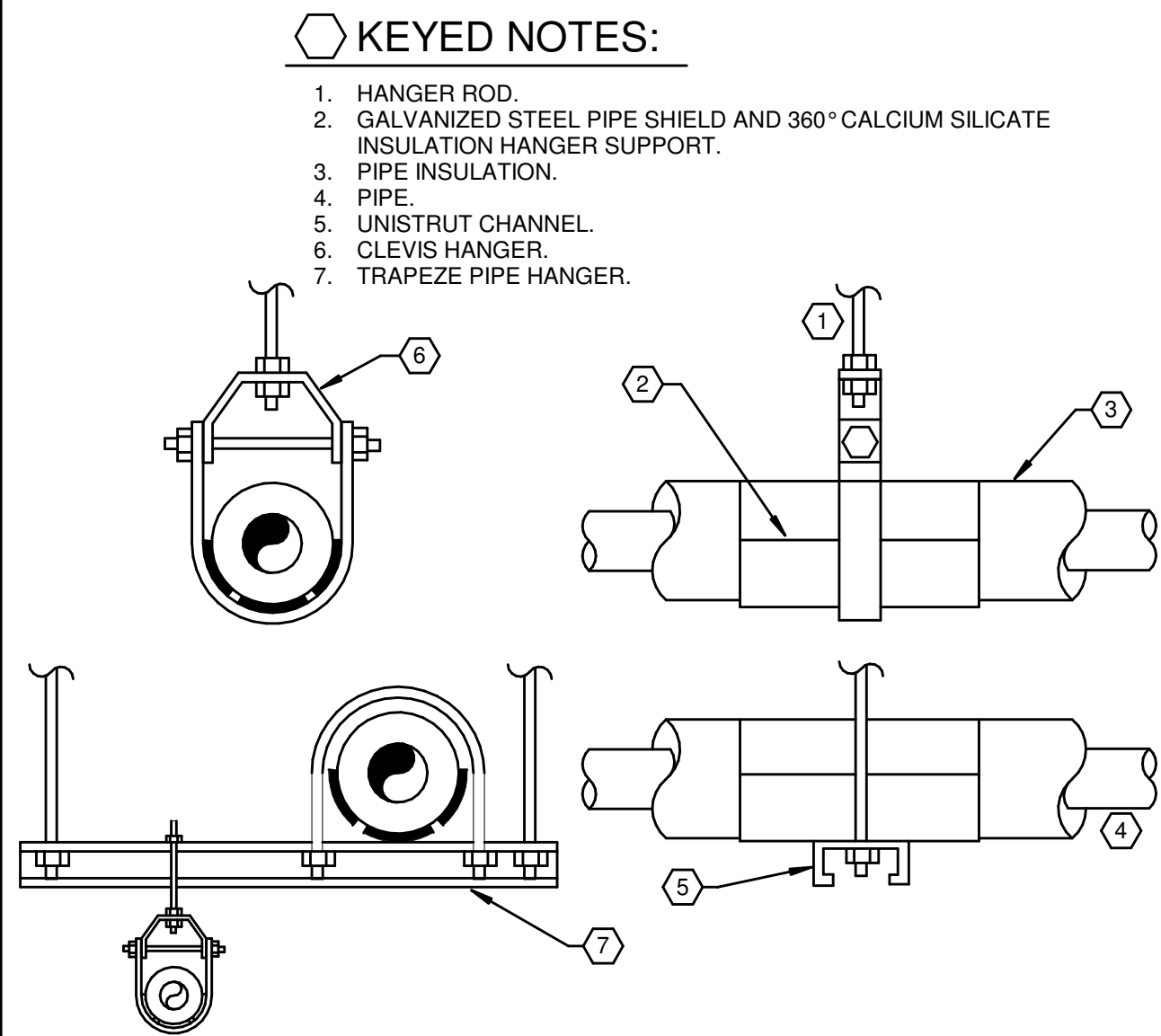


DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980
PLUMBING SCHEDULES



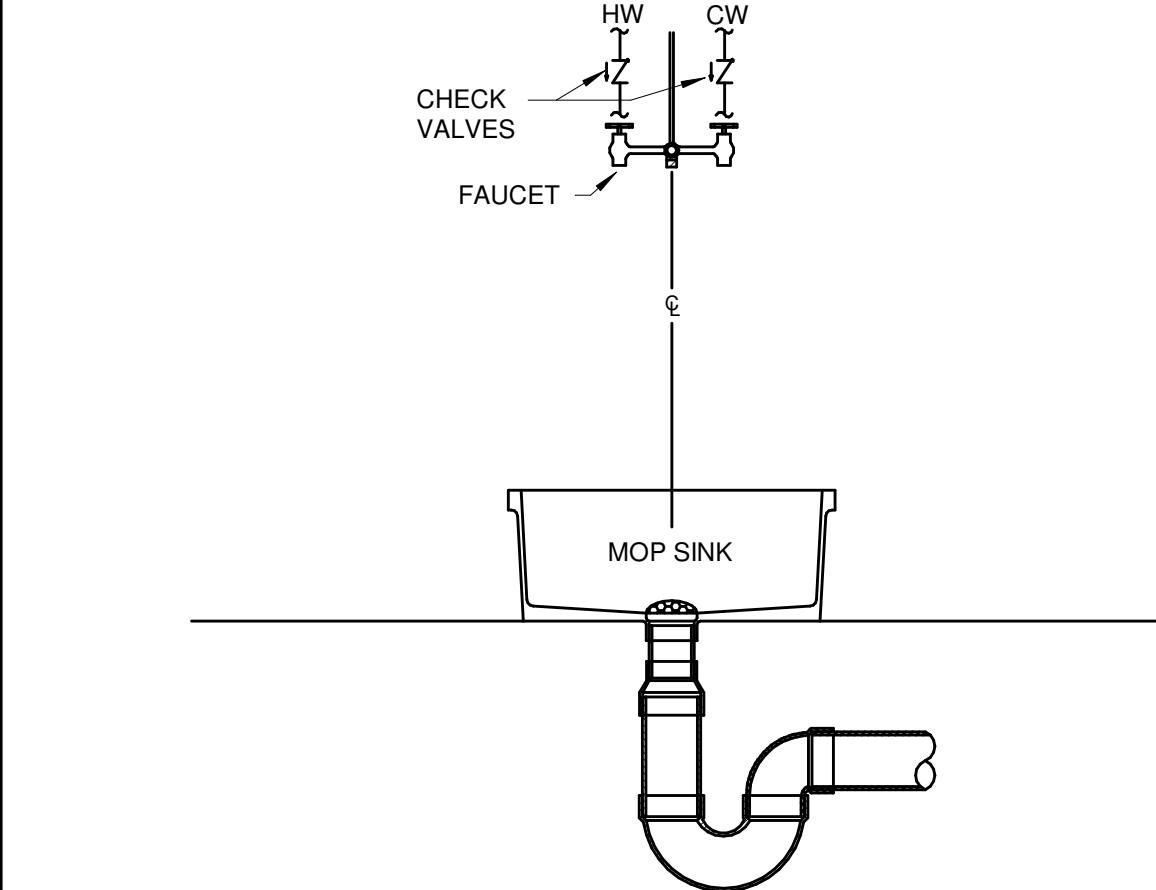
223001.00-01 - THERMOSTATIC MIXING VALVE TMV DETAIL

SCALE: NONE



220529.00-01 - PLUMBING PIPE HANGER INSTALLATION

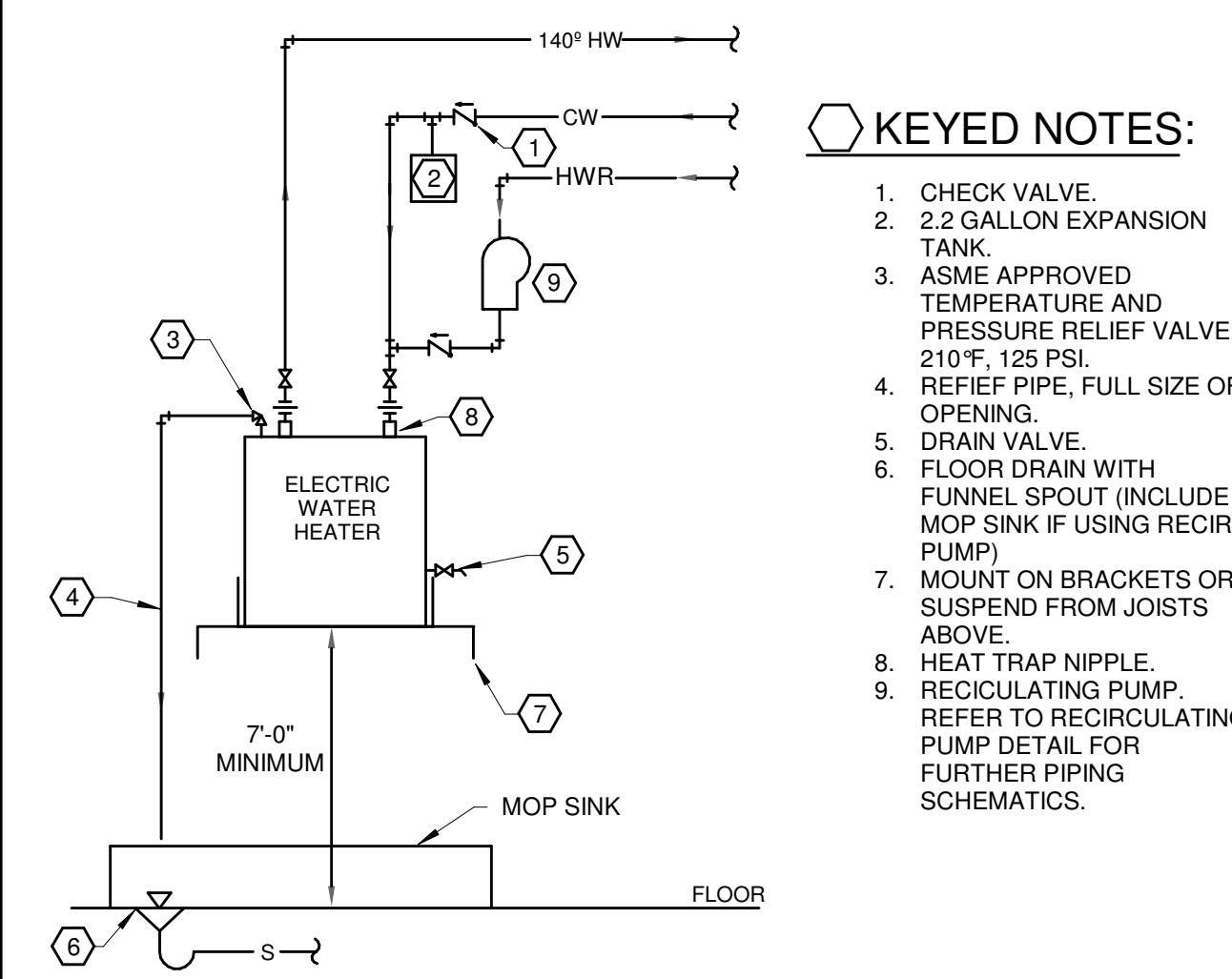
SCALE: NONE



- NOTES:**
1. SEAL TOP OF SINK TO WALL USING A CONTINUOUS BEAD OF SILICONE CAULKING, WHEREVER SINK ABUTS WALL.
 2. FOR EXTERIOR MASONRY AND SOLID WALLS APPLICATION PROVIDE SURFACE MOUNT WATER SUPPLY LINES. WHEN POSSIBLE ROUTE WATER SUPPLY LINES INSIDE INTERIOR STUD WALLS.
 3. INCLUDE MOP HANGER, HOSE & HOSE BRACKET, WALL AND BUMPER GUARDS.

224000.00-02 - MOP SINK DETAIL

SCALE: NONE



223300.00-01 - SHELF - MOUNTED ELECTRIC WATER HEATER

SCALE: NONE



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DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980

project
drawing

22 **05 03.00 - SUBMITTALS FOR PLUMBING**

Submittals in accordance with the Contract Documents, including the General Conditions, is advised to review and comply with the requirements articulated within each Division and within each section of the Division.

Some Divisions may include a Division-specific "Submittal Requirements for . . ." section. Where this section exists, it articulates additional requirements for submittals that are necessary to comply with the Division's specific requirements.

The following requirements help to identify track and keep the project organized for all parties involved. They are necessary to ensure that the submittal process follows appropriate technical review. Submittals that do not conform to the administrative requirements are rejected and returned, without technical review.

Submittals that are not in accordance with the requirements shall be rejected. Submittals shall be supplied on a section-by-section and type-by-type basis. For example, independent product data submittals shall be submitted for each section and type of equipment submittals. Independent shop drawing submittals shall be furnished for each section that requires shop drawings.

Submittals shall be submitted in accordance with each section, for each submittal type. Each PDF shall represent a single standalone submittal.

Include a transmittal. Transmittals shall enumerate each submittal by section, type, and each type and location. Include cover sheet / title page. The cover sheet shall include the information identified in the contract documents.

The submittal shall include a copy of each of each electronic and/or hardcopy document-based submittal. An editable and printable PDF form created with editable fields for the contractor's use is also acceptable (available from KLH upon request). It may also be downloadable from the KLH website at www.klhengr.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 submittal. Where checklists are not included, complete the submittal for each type are required. Partial submittals will be rejected. Where a section requires a submittal, the submittal shall be complete and that section shall be supplied together, one time, as one complete submittal. When resubmittal is required (e.g. Revise and Resubmit) the revised submittal shall be more complete, and shall be submitted as a separate submittal to the project predecessor. The submittal number (for each section and type) shall increment for each subsequent submittal.

Resubmission, 02 – Second Resubmission, etc.

22 05 23.00 GENERAL DUTY VALVES
Subtotal **Requirements**
 Product Description For each type of product indicated.
GENERAL
 Provide stops or isolation valves on domestic water supply and isolation of cold and hot water to each fixture including all equipment and equipment provided by others. Access shall be provided to all valves. Provide fire-rated (1/2" panel) to maintain full access to concealed valves.
 Ball valves - 2 inch and smaller: Lead-Free, 150 psi up to 100°F, 1/2" and smaller, stainless steel, cast bronze body, non-leak, drop-proof stem.
 Butterfly Valves - 3" and up: Ductile Iron Butterfly Valve, 150 WOG, Lug Body, Level Disc, Cast Bronze, 150 psi up to 100°F, Approved Manufacturer: Milwaukee Valve, NIBCO, and Watts Water Technologies Co.
 Valves to conform to: MSS SP-110 Type 1 / MSS-SP-67
 Check valves - to same size as system piping it accompanies. Lead-free, bronze body, 250 WOG, non-leaking, drop-proof stem.
 Approved Manufacturer: Milwaukee Valve, NIBCO, and Watts Water Technologies Co.
 (sds): MSS-SP-80, 1/2" NANSI/ANSI-61/372

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 loads up to 4 inches of insulation.
- Vertical-Piping Clamps: Provide extension pipe or riser Clamps (MSS Type 8) for support of pipe risers.

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 loads up to 4 inches of insulation.
- Vertical-Piping Clamps: Provide extension pipe or riser Clamps (MSS Type 8) for support of pipe risers.
- Horizontal-Piping Clamps: Provide Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3) for suspension of pipes requiring clamp loads up to 4 inches of insulation.
- Vertical-Piping Clamps: Provide extension pipe or riser Clamps (MSS Type 8) for support of pipe risers.

22 07 10-0 PLUMBING SYSTEM INSULATION
GENERAL
 Installation 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 and irregularities; and of proper length of piping including fittings, valves, and specialties.
 Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect adhesion.
PIPING SYSTEMS REQUIRING INSULATION
 Insulate domestic cold water piping, associated fittings and valves with flexible elastomeric, 1/2" wall thickness insulation.
 Insulate domestic hot water piping, associated fittings and valves with 1" thick flexible elastomeric, 1-1/2" thick fiberglass insulation or per local energy code, whichever is more restrictive.
 Insulate domestic hot water return piping, associated fittings and valves with 1" wall thickness insulation or per local energy code, whichever greater.
 Insulate water supply piping, associated fittings and valves with 1/2" wall thickness insulation.

22.11 16.00 DOMESTIC WATER PIPING

Submittals

Product data for each type of product indicated.

GENERAL

Install piping concealed from view unless otherwise specified.

Do not solder. Do not enclose, cover, or wrap piping into operation until it has been inspected and approved by authorities having jurisdiction. Clean and flush piping before use.

Observe and follow all applicable approved procedures by authorities having jurisdiction or AWWA C581, whichever is more rigorous.

Do not use pipe or fittings that are prohibited unless otherwise shown. Install piping above accessible ceiling to allow sufficient space for ceiling panel removal.

Coordinate all piping with other trades.

Provide water pressure regulators where necessary to limit the incoming water pressure to 80 psi inside the building.

DOMESTIC WATER PIPING ABOVE GROUND:

Hard copper tube, ASTM B 88, Type I; wrought-copper solder-joint fittings, as soldered joints.

Solder-free pipe and fittings: brass-free alloys.

Flue: ASTM B 813, ASTM A578.

Type 1, type 3, pressure-seal joint; and pressure-seal, pressure-seal joint.

CATHODIC PROTECTION

Provide dielectric insulation at points where copper or steel pipe or fittings contact with ferrous piping.

Reinforcing steel or other dissimilar metal in structure,

[illegible]

22 33 00 00 - COMMERCIAL ELECTRIC, DOMESTIC WATER HEATERS

Product Data: For each type of product indicated.

TANK TYPE

Provide commercial electric tank type water heater as scheduled. Comply with UL 1453 Standard.

Provide corrosion resistant metal drain pan with raised curb at the base of the water heater and include drain outlet.

Provide field fabricated piping heat trap arrangement including venting and vent termination as indicated.

Provide combination temperature and pressure relief valve, ASME rated and stamped with relieving capacity at least 150% of the rated capacity of the tank 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.

Provide steel pressure-rated thermal expansion tank constructed with welded joints and factory-installed safety valves to maintain minimum system operating pressure at tank.

Manufacturers: Subject to compliance with requirements, manufacturers of equipment proposed for purchase may be incorporated into the work include, and are limited to, the following:

Best Water Heaters, Bradford White Corp., Lochwinor Corp., State Industries.

22 40 00.00 - PLUMBING FIXTURES
Submittal Requirements
 Product Data: For each type of product indicated.
GENERAL
 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 following:
 American Standard, Kohler Co., Zurn Industries, LLC.

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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 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 CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

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 DTD 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 CONTROL SYSTEM AND TEMPERATURE AND CO2 SENSOR LOCATIONS PRIOR TO THE INSTALLATION OF ALL RELATED ITEMS

KEYED NOTES

- M02 TENANTS CONTRACTOR SHALL INSTALL TENANT VENDOR PROVIDED CO2 SENSOR 7'-0" A.F.F. THESE SENSOR SHALL CONTROL SALES RTUS.
- M04 CONTRACTOR SHALL LOCATE BOTTOM OF STOCK ROOM DUCTWORK ABOVE LIGHTING BID 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.
- M05 PROVIDE 1" AIRSPACE BETWEEN BOTTOM OF DOOR AND FINISHED FLOOR FOR AIRFLOW.
- M06 COVER OPEN END OF RETURN DUCT WITH 1" MESH HARDWARE CLOTH IN A REMOVABLE METAL FRAME.
- M09 EXISTING HVAC UNIT TO REMAIN. CONTRACTOR SHALL SERVICE HVAC COMPONENTS AND PROVIDE AND INSTALL NEW ACCESSORIES AND CONTROLS AS INDICATED ON PLANS, SCHEDULE, NOTES, AND AS REQUIRED TO MEET THE SEQUENCE OF OPERATIONS OUTLINED IN THE PROJECT SPECIFICATIONS. CONNECT NEW DUCTS TO DUCT DROPS FROM EXISTING ROOFTOP UNITS PROVIDED BY OTHERS WITH TRANSITION FITTINGS.
- M10 FURNISH AND INSTALL SMOKE DUCT DETECTOR (SYSTEM SENSOR #04120) IN RETURN AIR DROP FROM UNIT. WIRE SMOKE DUCT DETECTOR TO BUILDING FIRE ALARM CONTROL PANEL OR FURNISH AND INSTALL A REMOTE AUDIBLE/VISUAL ALARM DEVICE WITH A REMOTE TEST SWITCH (SYSTEM SENSOR #RTS2-A05) LOCATED IN AN APPROVED LOCATION. FIELD VERIFY EXACT REQUIREMENTS. CONTRACTOR SHALL TEST SYSTEM TO ENSURE PROPER FUNCTION PRIOR TO TENANT OCCUPANCY SPACE.
- M11 PROVIDE NEW ROOF MOUNTED EXHAUST FAN AND BALANCE TO THE SCHEDULED AIR FLOW. MAINTAIN A MINIMUM OF 100" FROM ANY BUILDING INTAKE. ALL ROOF WORK TO BE DONE BY LANDLORD APPROVED ROOFING CONTRACTOR AT THE GENERAL CONTRACTORS EXPENSE.
- M12 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.
- M13 MOUNT TRANSFER GRILLES AS HIGH AS POSSIBLE.

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FORT THOMAS, KENTUCKY

description

by

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06/15/2022

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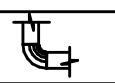


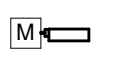
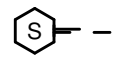





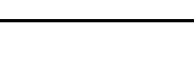
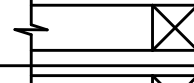
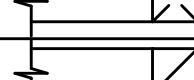
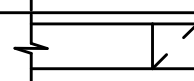
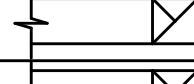
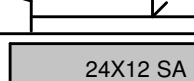
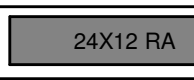
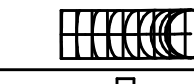


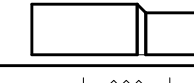
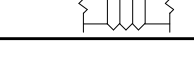
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2022.27 / D13216

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MECHANICAL LEGEND	
SYMBOL	DESCRIPTION
TO BETTER COMMUNICATE SCOPE TO PERMIT AGENCIES AND CONTRACTORS, EACH DRAWING IN THIS DRAWING SET HAS BEEN CREATED IN BOTH "COLOR" AND "BLACK AND WHITE". THERE EXISTS A COLOR LAYER WITHIN EACH DRAWING WHERE VISIBILITY IS CONTROLLED THROUGH THE PDF LAYER MANAGER. THIS LAYER VISIBILITY CAN BE TOGGLED DISPLAYING EITHER "COLOR" OR "BLACK AND WHITE". TO MAINTAIN SCOPE BASED SHADING WHEN PRINTING TO PAPER, BLACK AND WHITE NEEDS TO BE VISIBLE FOR FURTHER INSTRUCTIONS. REFER TO CONTRACTOR RESOURCES ON OUR WEBSITE AND DOWNLOAD "DRAWING COLOR INSTRUCTIONS". WWW.KLHENGRS.COM - CONTRACTOR RESOURCES (RIGHT HAND SIDE OF PAGE).	
MECHANICAL STATS & SENSORS	
	CARBON DIOXIDE SENSOR
MECHANICAL DUCTWORK ACCESSORIES	
	ROUND ELBOW WITH TURNING VANES
	DUCT WITH MANUAL VOLUME DAMPER
	ELBOW WITH TURNING VANES
	MOTOR OPERATED DAMPER - LOW VOLTAGE
	DUCT MOUNTED SMOKE DETECTOR (HARD WIRE INTERLOCK TO FAN MOTOR BY E.C.) FURNISHED BY E.C., INSTALLED BY M.C.
MECHANICAL AIR DEVICES	
	SUPPLY REGISTER
	RETURN REGISTER
	EXHAUST REGISTER
	SUPPLY GRILLE
	RETURN GRILLE
	CEILING DIFFUSER
CD-10"0	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
MECHANICAL DUCTWORK	
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
24X12 SA	SUPPLY DUCT
24X12 RA	RETURN DUCT
24X12 EA	EXHAUST DUCT
	FLEXIBLE DUCTWORK CONNECTION
	BRANCH TAKEOFF
24"112" RA	OVAL DUCT
	REDUCER, CONCENTRIC
	REDUCER, NONCONCENTRIC
	DUCT FLEX CONNECTOR

STANDARD HVAC ABBREVIATIONS			
AAV ACCESS AD AFF AMP AP APD ARI ASME BAS BD BHP BTU BTUH CD CFM CHWR CHWS CI CO CO2 COP CV CWR CWS DB DC DDC DEG DIA DIW DP DX EB EAT EER EG EMERG EWI EX F&T FA FD FLA FPM FPS FT FURN GA GAL GPM	AUTOMATIC AIR VENT ACCESSORIES ACCESS DOOR ABOVE FINISHED FLOOR AMPERE ACCESS PANEL AIR PRESSURE DROP AIR CONDITIONING AND REFRIGERATION INSTITUTE BRAKE HORSEPOWER BRITISH THERMAL UNIT BRITISH THERMAL UNIT PER HOUR CEILING DIFFUSER CUBIC FEET PER HOUR CUBIC FEET PER MINUTE CHILLED WATER RETURN CHILLED WATER SUPPLY CAST IRON COOLING CARBON MONOXIDE CARBON DIOXIDE COEFFICIENT OF PERFORMANCE CONSTANT VOLUME CONDENSER WATER RETURN CONDENSER WATER SUPPLY DECIBELS DRY-BULB TEMPERATURE DISCONNECT DIRECT DIGITAL CONTROLS DEGREE DELTA (CHANGE IN TEMPERATURE) DIAMETER DEIONIZED WATER DEW POINT TEMPERATURE DIRECT EXPANSION EXHAUST AIR ENTERING AIR TEMPERATURE ENERGY EFFICIENCY RATIO EXHAUST GRILLE EMERGENCY POWER EXTERNAL STATIC PRESSURE ENTERING WATER TEMPERATURE EXISTING FAHRENHEIT FLOAT AND THERMOSTATIC FREE AREA FIRE DAMPER FULL LOAD AMPERES FOOT PER MINUTE FOOT PER SECOND FEET FURNISHED RAT GAUGE GALLONS GALLONS PER MINUTE	HD HOA HP HPR HSTAT HTG HWR HWS HZ IO IAC IN HG IN WC IN WG IPV INST KW KWH LAT LBS/HR LF LPR LPS LWT MAX MBH MCA MERV MIN MOD MPR MPS MRI MVD NA NC NC NO NTS OA OCP PD PPM PRS PRV PSI PSIA PSIG RA RAT RH RL RLA	HEAD HAND OFF/AUTOMATIC REFRIGERANT SUCTION HIGH PRESSURE RETURN (STEAM CONDENSATE) HUMIDISTAT HEATING HEATING HOT WATER RETURN HEATING HOT WATER SUPPLY SMOKE DETECTOR SENS STATIC PRESSURE SP TAB TDH TDS TSP TSTAT UL UNDERWRITERS LABORATORY VAV VFD VARIABLE FREQUENCY DRIVE WET-BULB (TEMPERATURE) WATER GAGE WATER SIDE PRESSURE DROP WIRED

ABBREVIATIONS										CONTRACTOR TYPE										MOTOR CONTROL TYPE										CONTROL TYPE									
DC	LOCAL DISCONNECT	EC	ELECTRICAL CONTRACTOR	GC	COMBINATION STARTER	TC	TIMECLOCK	MC	MOTOR CONTROL (POWER)	EX	EXISTING	MCC	MOTOR CONTROL STARTER	CPT	CONTROL POWER TRANSFORMER	MC	MAGNETIC STARTER OR CONTACT	CPT	CONTROL POWER TRANSFORMER	MC	MAGNETIC STARTER OR CONTACT	MC	MAGNETIC STARTER OR CONTACT	MC	MAGNETIC STARTER OR CONTACT	MC	MAGNETIC STARTER OR CONTACT	MC	MAGNETIC STARTER OR CONTACT	MC	MAGNETIC STARTER OR CONTACT	MC	MAGNETIC STARTER OR CONTACT	MC	MAGNETIC STARTER OR CONTACT	MC	MAGNETIC STARTER OR CONTACT	MC	MAGNETIC STARTER OR CONTACT
SD	DUCT SMOKE DETECTOR	PC	FIRE PROTECTION CONTRACTOR	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER
CN	CONTROLS	HC	HVAC CONTRACTOR	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER
TS	TOGGLE SWITCH	MFR	MANUFACTURER	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER
C/B	H.A.C.R. CIRCUIT BREAKER AT SOURCE PANELBOARD	PC	FIRE PROTECTION CONTRACTOR	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER
FLA	FUSE AT LOCAL DISCONNECT (VERIFY FIELD RATING)	PC	FIRE PROTECTION CONTRACTOR	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER
FLA	OPERATING FULL LOAD AMPS	PC	FIRE PROTECTION CONTRACTOR	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER
MCA	MINIMUM CIRCUIT AMPACITY	PC	FIRE PROTECTION CONTRACTOR	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER
CP	CORD AND PLUG CONNECTION	OR	OWNER OR OTHERS	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER	MS	MANUAL STARTER

ROOFTOP UNITS SCHEDULE																															
Equipment must be braced and labeled by the equipment manufacturer to withstand the minimum scheduled available fault current value for listed equipment.																															
EQUIPMENT MARK	DESCRIPTION	VOLTAGE	PHASE	EMERGENCY	HP	WATTS	HTG KW	FLA	MCA	OCF	FED FROM	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	FA SHUTDOWN	AVAILABLE FAULT CURRENT	ACCESSORIES						
HTU-1	PACKAGED ROOFTOP UNIT, GAS HEAT	EXISTING	2500 b	CARRIER	48TMD025	12.0	7305	0.5	6.5 hp(l)	1505	681	133mm	20	55 °F	83	69	240	176	55	55	39 °F	181	81.00 %	360	275	3.50 InH2O	13.00 InH2O	NO	RTU-2(A), 124 MCA, 150A OCF, (RTU-2) A	0	20.22
RTU-2	PACKAGED ROOFTOP UNIT, GAS HEAT	EXISTING	2500 b	CARRIER	48TMD025	12.0	6750	0.5	6.5 hp(l)	1505	688	133mm	20	55 °F	83	69	216	162	55	55	39 °F	215	81.00 %	360	275	3.50 InH2O	13.00 InH2O	NO	RTU-2(A), 124 MCA, 150A OCF, (RTU-2) A	0	20.22

ROOFTOP UNITS SCHEDULE

Equipment shall be braced and labeled by the equipment manufacturer to withstand the minimum scheduled available fault current value for listed equipment.

EQUIPMENT MARK	DESCRIPTION	STATUS	WEIGHT (lbs)	MANUFACTURER	MODEL	MIN EER	CFM (cfm)	ESP (in WC)	BHP (hp)	OACFM (cfm)	CO2 CFM (cfm)	NOMINAL TONS	OA EAT WB (Deg F)	MAT CLG DB (Deg F)	MAT CLG WB (Deg F)	CLG MBH (mbh)	CLG SENS (mbh)	LAT DB (Deg F)	LAT CLG WB (Deg F)	MAT HTG (Deg F)	HTG MBH (mbh)	MIN HTG AFUE	GAS HTG IN (mbh)	GAS HTG OUT (mbh)	MIN GAS PRESSURE (in WC)	MAX GAS PRESSURE (in WC)	EMERGENCY	ELECTRIC CONNECTION SUMMARY	AVAILABLE FAULT CURRENT	ACCESSORIES
RTU-1	PACKAGED ROOFTOP UNIT, GAS HEAT	EXISTING	2500 lb	CARRIER	48TMD025	12.0	7205	0.5	6.5 hp(0)	1657	681 ft3/min	20	55 °F	83	69	240	176	55	55	39 °F	181	81.00 %	360	275	3.50 inH2O	13.00 inH2O	NO	(RTU-1) A - 208V/3PH, 124 MCA, 150A OCP	0	20.22
RTU-2	PACKAGED ROOFTOP UNIT, GAS HEAT	EXISTING	2500 lb	CARRIER	48TMD025	12.0	6750	0.5	6.5 hp(0)	1505	688 ft3/min	20	55 °F	83	69	216	162	55	55	39 °F	215	81.00 %	360	275	3.50 inH2O	13.00 inH2O	NO	(RTU-2) A - 208V/3PH, 124 MCA, 150A OCP	0	20.22

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
101A	SALES	5629 SF	85	7.5	0.12	4465	7200	1632	1632	7200	223	0	Neutral	0	
101B	SALES	4017 SF	61	7.5	0.12	3095	5500	1226	1226	5500	0	20.8	Neutral	0	
102	OFFICE	80 SF	1	5	0.06	105	105	24	24	105	0	11.7	Neutral	0	
103	HALL	144 SF	0	0	0.06	55	60	13	60	0	0	18	Neutral	0	
104	TOILET	118 SF	0	0	0	40	50	11	11	0	100	0	Negative	0	
105	TOILET	103 SF	0	0	0	45	50	11	11	0	100	0	Negative	0	
106	PRE SALES	1804 SF	0	0	0.12	7155	10400	228	232	10400	0	26	Neutral	0	
107	HALL	93 SF	0	0	0.06	35	50	11	11	50	0	13.9	Neutral	0	
TOTAL		11988 SF													

LOAD SCHEDULE

THE HEATING AND COOLING LOAD CALCULATIONS ARE BASED ON THE CLTD/CLF (COOLING LOAD TEMPERATURE DIFFERENCE/COOLING LOAD FACTOR) METHOD. ASSUMPTIONS AND EXECUTION OF THESE METHODS ARE PER ASHRAE 183-2007 STANDARD FOR PEAK COOLING AND HEATING LOAD CALCULATIONS IN BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS.

COOLING LOAD BREAKDOWN										HEATING LOAD BREAKDOWN									
CPROOF	SENSIBLE HEAT GAIN FROM ROOF	CSSENS	TOTAL SENSIBLE HEAT GAIN TO SPACE	CFAN	SENSIBLE HEAT GAIN FROM AIR HANDLER FAN	HWALL	HEAT LOSS FROM EXTERIOR WALLS	HPART	HEAT LOSS FROM PARTITIONS	HGLASS	HEAT LOSS FROM GLAZING	HSLAB	HEAT LOSS FROM SLAB	HSPACE	TOTAL HEAT LOSS FROM SPACE	HOA	HEAT LOSS FROM OUTDOOR VENTILATION AIR	HTOT	TOTAL HEAT LOSS
CWALL	SENSIBLE HEAT GAIN FROM EXTERIOR WALLS	COAS	SENSIBLE HEAT GAIN FROM OUTDOOR VENTILATION AIR	CTSENS	SENSIBLE HEAT GAIN FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE
CPART	SENSIBLE HEAT GAIN FROM PARTITIONS	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING
CSOLAR	SENSIBLE HEAT GAIN FROM SOLAR GAIN THROUGH GLAZING	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING
CLIGHTS	SENSIBLE HEAT GAIN FROM INTERIOR LIGHTING	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING
CEQUIP	SENSIBLE HEAT GAIN FROM PLUG LOADS, COMPUTERS, ETC	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING
CPSENS	SENSIBLE HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING	CSLAT	LATENT HEAT GAIN FROM PEOPLE	CHLASS	HEAT LOSS FROM GLAZING

EQUIPMENT MARK	CRDOOF	CWALL	CPART	CGLASS	CSOLAR	CLIGHTS	CEQUIP	CPSENS	CSSENS	CFAN	COAS	CTSENS	CPLAT	COAL	CTLAT	CTOT	HRDOOF	HWALL	HPART	HGLASS	HSPACE	HSLAB	HOA	HTOT
RTU-1	13.57	0.83	0.07	3.12	2.87	62.36	28.88	34.52	149.87	1.83	24.65	176.35	17.2	45.98	63.18	239.53	28.14	2.93	0.18	19.95	180.92	20.54	109.18	180.92
RTU-2	15.07	2.91	0.03	0	0	61.76	31.11	27.1	137.99	1.69	22.38	162.06	12.2	41.76	53.96	216.01	32.48	12.85	0.06	0	215.02	70.45	96.15	215.02

AIR CURTAINS SCHEDULE

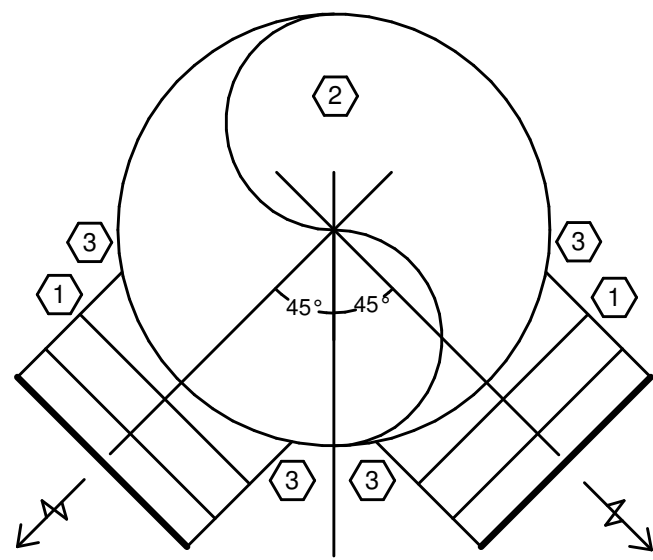
Equipment shall be braced and labeled by the equipment manufacturer to withstand the minimum scheduled available fault current value for listed equipment.

EQUIPMENT MARK	DESCRIPTION	LOCATION	STATUS	WEIGHT (lbs)	MANUFACTURER	MODEL	CFM (cfm)	EMERGENCY	ELECTRIC CONNECTION SUMMARY	AVAILABLE FAULT CURRENT
AC-1	AIR CURTAIN W/NO HEAT	SALES 101A	NEW	130 lb	POWERED AIR	ETA-2-72	2832	NO	(AC-1) A - 120V/1PH, 16 MCA	1044

FANS SCHEDULE

Equipment 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	STATUS	MANUFACTURER	MODEL	CFM (cfm)	
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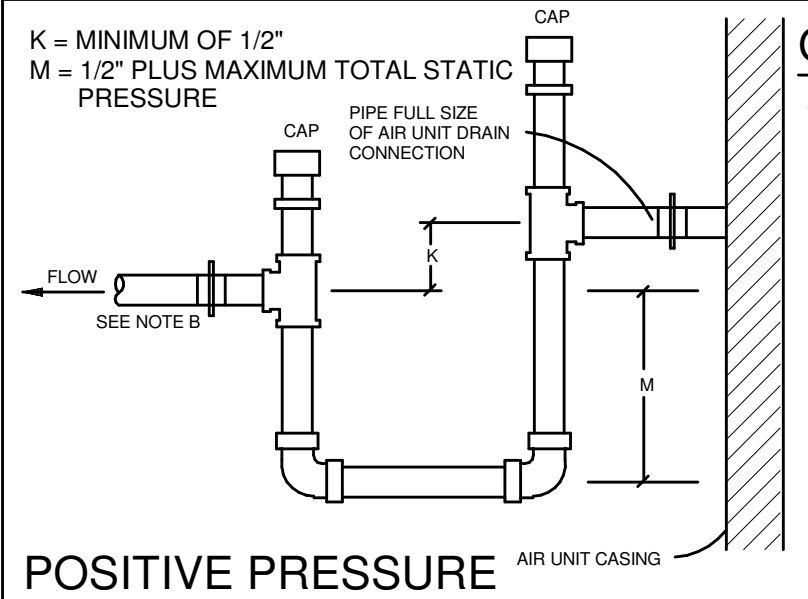


KEYED NOTES:

1. REGISTER WITH 0 DEGREE DEFLECTION BLADE DAMPER (TO BE SIZED AS SHOWN ON PLAN)
2. SUPPLY DUCT
3. SEAL JOINTS BETWEEN COLLAR AND MAIN DUCT

233713.00-02 - ANGLED REGISTER INSTALLATION

SCALE: NONE



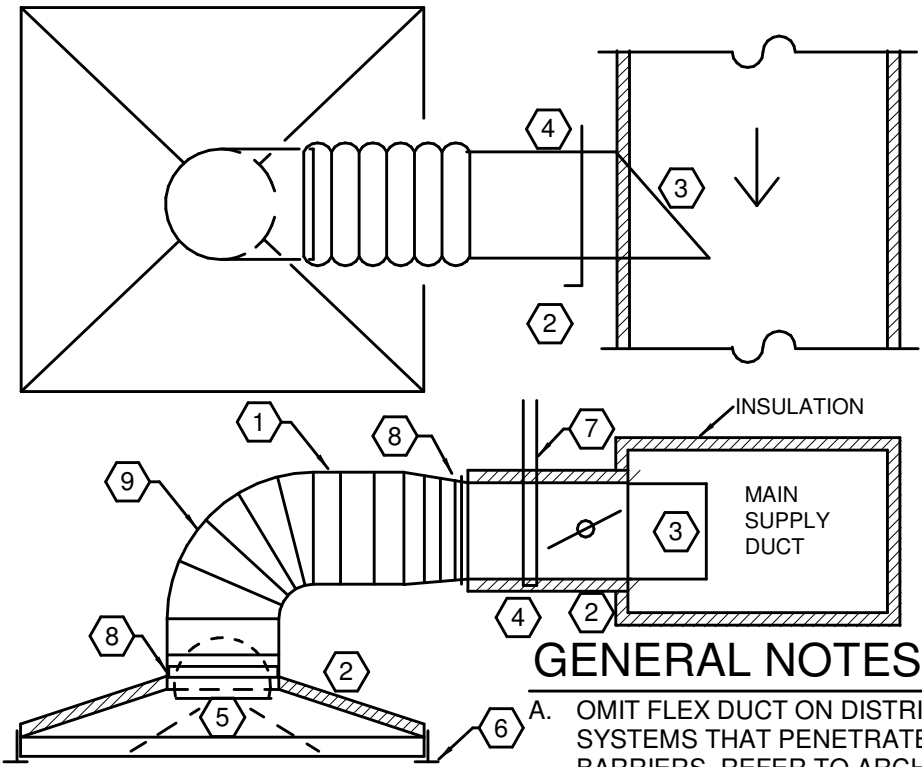
POSITIVE PRESSURE

NEGATIVE PRESSURE

NOTE: OUTDOOR UNITS AND UNITS LOCATED IN UNCONDITIONED SPACES WHICH PROVIDE COOLING IN THE WINTER MUST HAVE HEAT TRACE ON THE CONDENSATE PIPING.

232113.23-05 - CONDENSATE DRAIN TRAP POSITIVE & NEGATIVE

SCALE: NONE



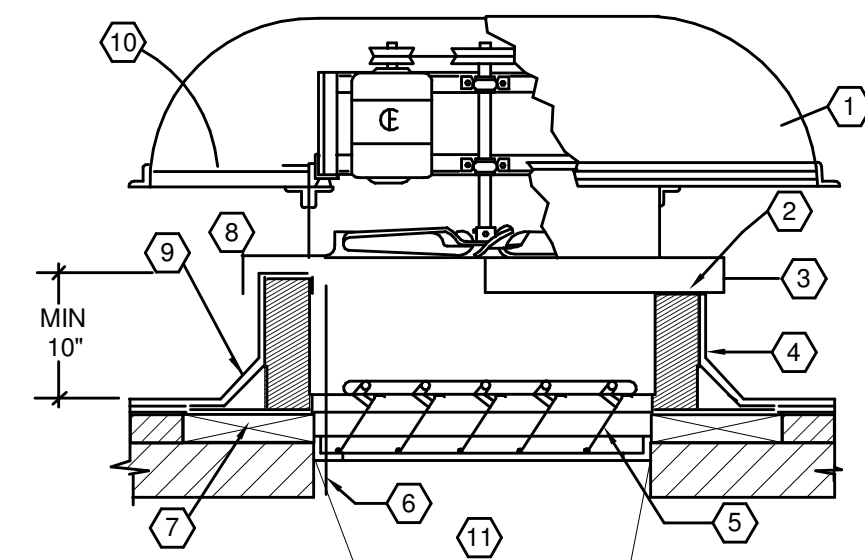
GENERAL NOTES:

KEYED NOTES:

1. MAXIMUM LENGTH OF INSUL. FLEX DUCT EQUALS 5 FEET. FLEX NOT PERMITTED IN INACCESSIBLE CEILINGS
2. INSULATED DUCT, COLLAR AND DIFFUSER BY HVAC CONTRACTOR
3. SCOOP
4. SPIN IN FITTING WITH MANUAL VOLUME DAMPER
5. INTERNAL BUTTERFLY DAMPER FOR DRYWALL APPLICATIONS ONLY. (PROVIDE KEY FOR ADJUSTMENT)
6. SECURE TO CEILING PER MANUFACTURER'S RECOMMENDATIONS AND PER CEILING FINISH. PROVIDE GRID CLIPS PER MFG'R REQUIREMENTS. PROVIDE FRAMING FOR DRYWALL INSTALLATION.
7. HANGER, SECURE TO STRUCTURE AND DUCTWORK
8. PEEL BACK INSULATION AND PROVIDE STRAPPING AND SHEET METAL SCREWS AT FLEX CONNECTION TO DUCT. THEN PROVIDE STRAPPING AROUND INSULATION
9. SUPPORT FLEX TO PREVENT COLLAPSING

233713.00-04 - DIFFUSER INSTALLATION TYPICAL

SCALE: NONE



KEYED NOTES:

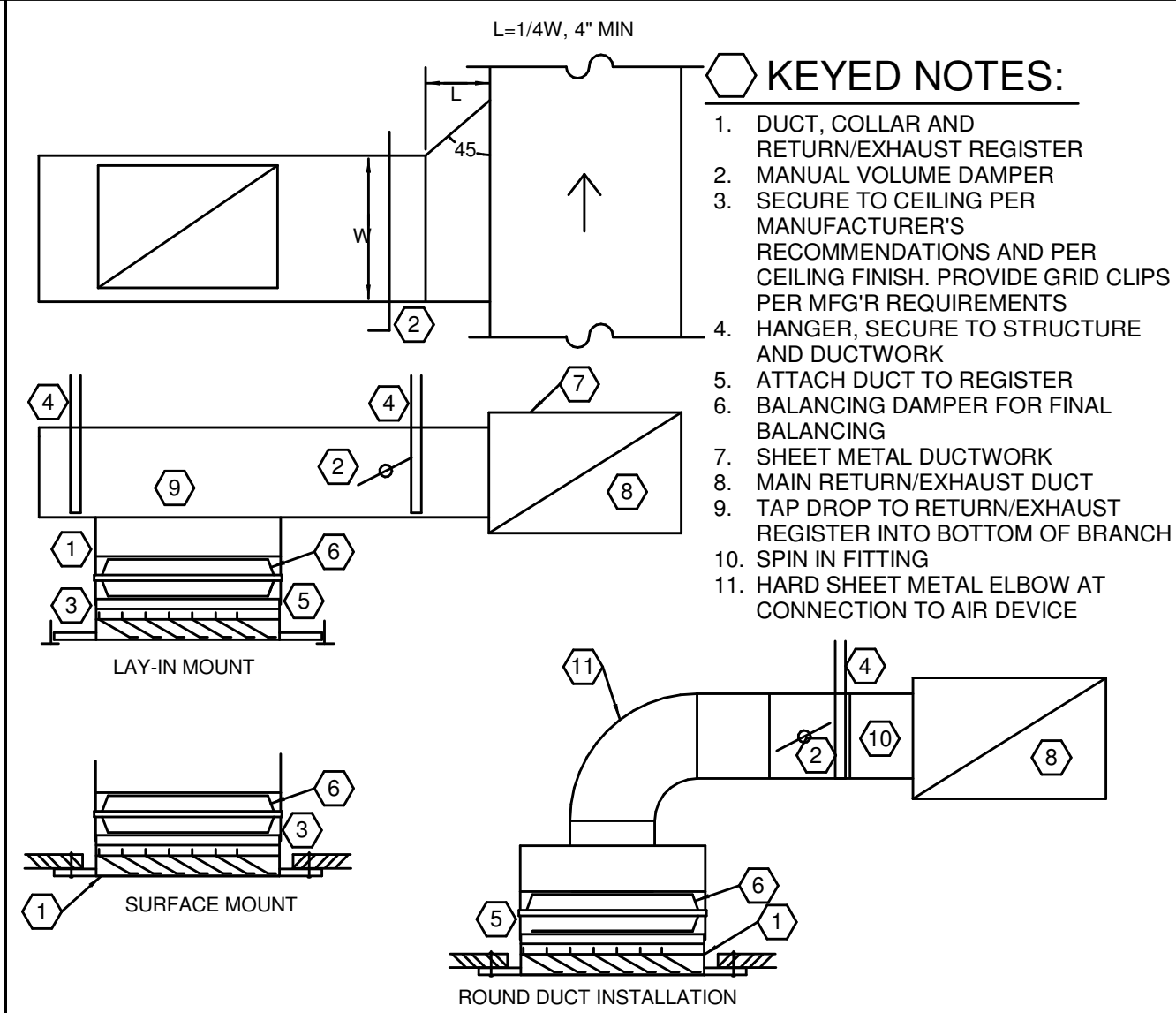
1. PROPELLOR ROOF FAN
2. WOOD NAILER
3. ANCHOR ALL FOUR SIDES WITH SCREWS 12" O.C.
4. PREFABRICATED INSULATED CURB
5. MOTOR, OPER. DAMPER INTERFACED WITH EXHAUST FAN WIRING/STARTER
6. CONDUIT HOLE
7. ANCHOR TO ROOF DECK AS REQUIRED
8. RUBBER HASKET APPLIED TO TOP OF CURB
9. ROOFING UP UNDER FLASHING, PROVIDE CURB TYPE AND FLASHING PER ROOFING MANUFACTURER'S REQUIREMENTS
10. BIRD SCREEN
11. CENTER TRANSITION TO DUCTWORK FROM DAMPER OR CURB, PROVIDE 3x DIAMETER STRAIGHT RUN MINIMUM.

GENERAL NOTES:

- A. DELETE CANT FOR SINGLE MEMBRANE ROOFS
- B. TOP OF CURB MUST BE LEVEL. FABRICATE PITCH IN CURB IF NECESSARY
- C. CONTRACTOR HAS THE OPTION TO INCREASE THE HEIGHT OF THE CURB OR ADD BLOCKING TO THE CURB. THE ADDITIONAL HEIGHT REQUIRED SHALL EQUAL THE ROOF ASSEMBLY THICKNESS. THE CURB INTAKE OPENING SHALL BE AT A MINIMUM OF 12" ABOVE FINISHED ROOF.
- D. LOCATE A MINIMUM OF 10'-0" FROM EDGE OF ROOF, INTAKES, AND ROOF HATCH.

233423.00-05 - EXHAUST FAN

SCALE: NONE



KEYED NOTES:

1. DUCT, COLLAR AND RETURN/EXHAUST REGISTER
2. MANUAL VOLUME DAMPER
3. SECURE TO CEILING PER MANUFACTURER'S RECOMMENDATIONS AND PER CEILING FINISH. PROVIDE GRID CLIPS PER MFG'R REQUIREMENTS
4. HANGER, SECURE TO STRUCTURE AND DUCTWORK
5. ATTACH DUCT TO REGISTER
6. BALANCING DAMPER FOR FINAL BALANCING
7. SHEET METAL DUCTWORK
8. MAIN RETURN/EXHAUST DUCT
9. TAP DROP TO RETURN/EXHAUST REGISTER INTO BOTTOM OF BRANCH
10. SPIN IN FITTING
11. HARD SHEET METAL ELBOW AT CONNECTION TO AIR DEVICE

233713.00-21 - RETURN/EXHAUST REGISTER INSTALLATION

SCALE: NONE

date	project	designed	drawn	checked
06/15/2022	2022.27 / D13216	KLH	CAF	JDB

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DOLLAR TREE
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STONY POINT, NY 10980
MECHANICAL DETAILS

project
sheet
drawing
M-301
KLH PROJECT 24211

sheet

E-001

KLH PROJECT 24211

573projectsheetE-00KLH PROJECT

DOLLAR TREE ELECTRIC LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	VOLTAGE	LOAD	LAMP QTY	LAMP BASE	HOUSING / MOUNTING	COMMENTS
F8	8'-0" STRIP LIGHT						
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 (2) 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. 3 VA	FURNISHED W/ FIXTURE	CEILING	L.E.D. SINGLE/DOUBLE FACE EXIT SIGN W/EMERG. BAT.

ENERGY MANAGEMENT SYSTEM (EMS) SCHEDULE

NOTES:

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.
3) PROVIDE NORMALLY OPEN RELAYS UNLESS OTHERWISE NOTED.

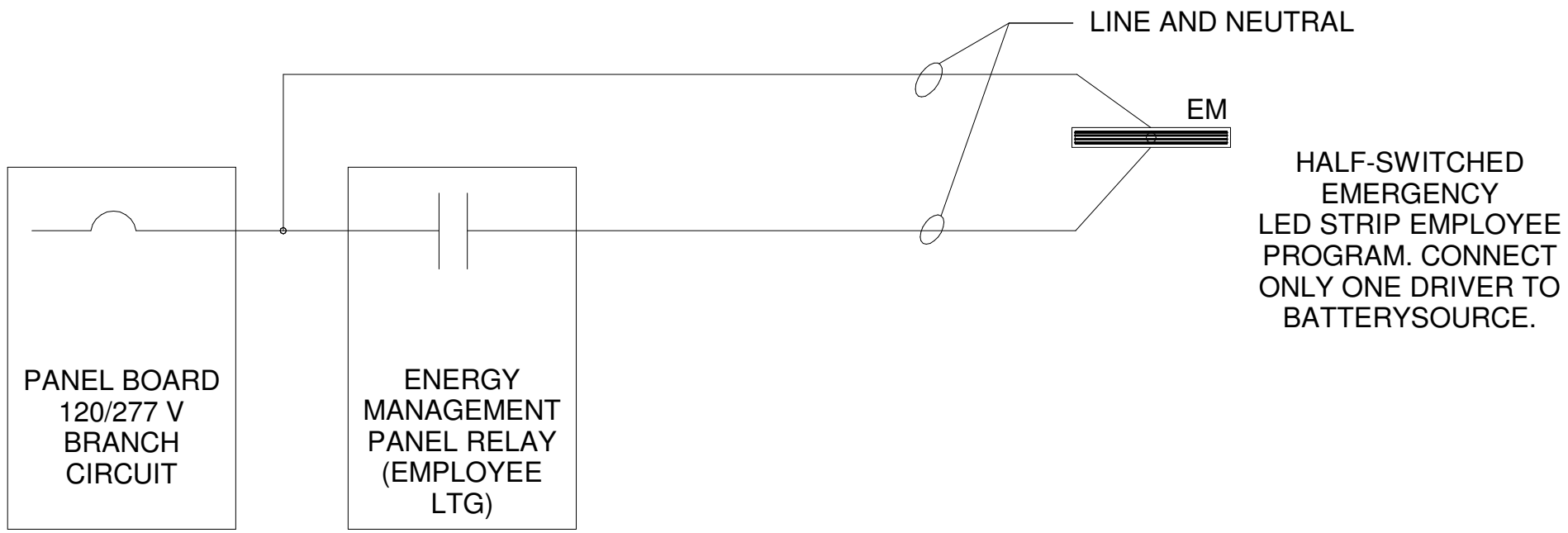
LIGHTING CONTROL ZONING SCHEDULE:

(EMPLOYEE) - EMPLOYEE WORK LIGHTING
(CUSTOMER) - CUSTOMER LIGHTING
(SIGNAGE) - SIGN AND SITE LIGHTING

SUPPLY	CIRCUIT NUMBER	NUMBER OF POLES	CURRENT	LOAD NAME
CUSTOMER				
LP1	1	1	5 A	(#) LTG 102.101A
LP1	5	1	5 A	(#) LTG SALES 101A
LP1	9	1	5 A	(#) LTG 101A.101B
LP1	13	1	2 A	(#) LTG SALES 101B
EMPLOYEE				
LP1	3	1	5 A	(#) LTG SALES 101A
LP1	7	1	5 A	(#) LTG SALES 101A
LP1	11	1	5 A	(#) LTG SALES 101B
LP1	15	1	2 A	(#) LTG SALES 101B
EXTERIOR				
LP1	23	1	10 A	(#) SIGNAGE

LIGHTING DEVICE SCHEDULE

FAMILY AND TYPE	SWITCH TAG	COMMENTS
Lighting Switches: Switch	a	MOMENTARY SWITCH. CONFIGURE LIGHTING IN THIS AREA TO BE MANUAL ON AND AUTO OFF.
Occ Sensor - Wall: Switched	b	CONFIGURE LIGHTING TO BE AUTO ON AND AUTO OFF. REFER TO DETAIL NUMBER 5 ON SHEET E201 FOR OCCUPANCY SENSOR. SET TIME DELAY TO 5 MINUTES.
Occ Sensor - Ceiling: Occ Sensor - Ceiling	c	DUAL TECHNOLOGY OCCUPANCY SENSOR. MOUNT AT SAME HEIGHT AS LUMINAIRES IN THIS ROOM. SET TIME DELAY TO 20 MINUTES.
Lighting Switches: Switch	EMS	ENERGY MANAGEMENT SYSTEM LOW VOLTAGE CONTROL STATION



2 EMERGENCY LIGHTING SCHEMATIC DIAGRAM
SCALE: NONE

LIGHT FIXTURE SCHEDULE
GENERAL NOTES

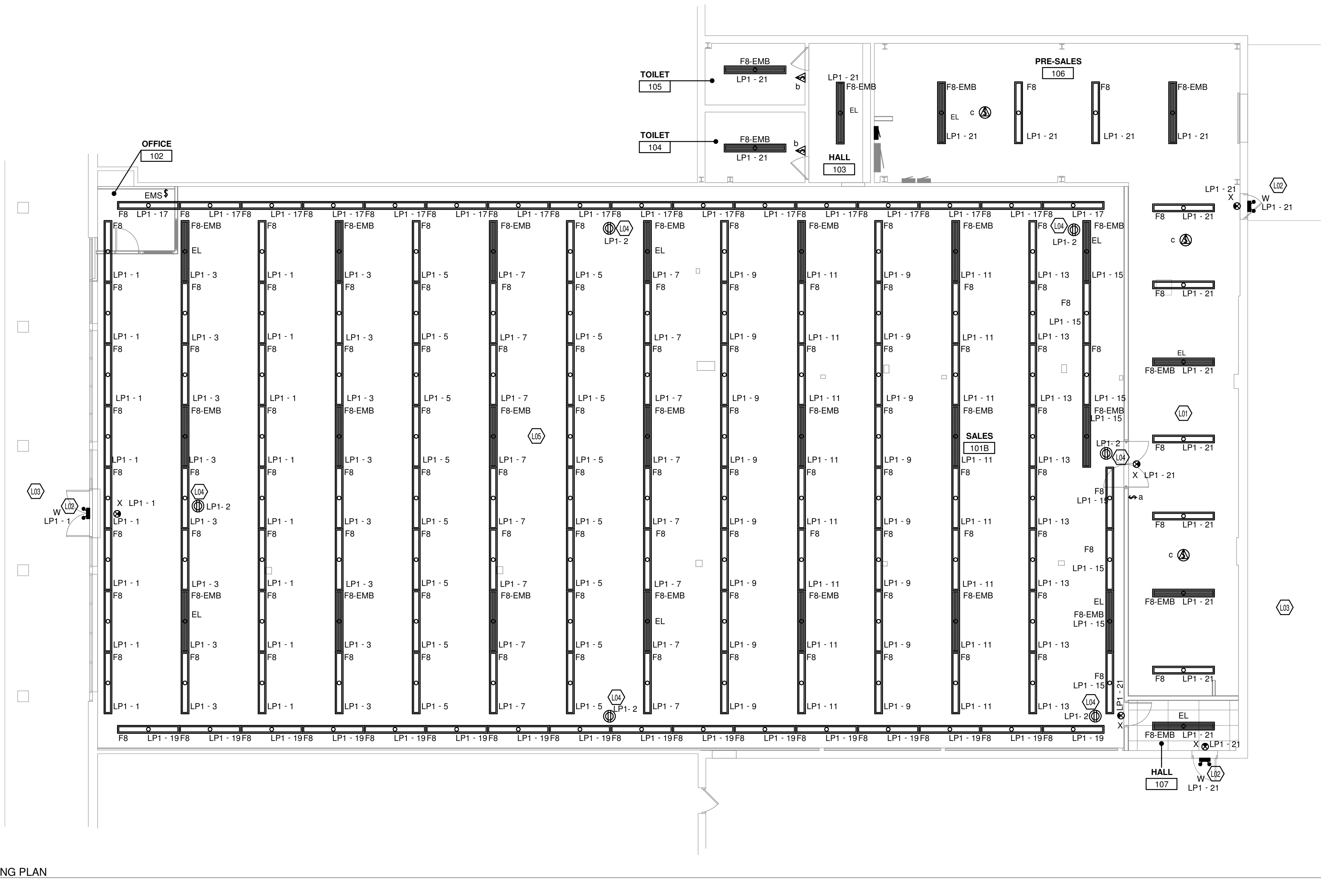
- DESIGNATED FIXTURE SHALL HAVE LED LAMPS 48" LED T8 LAMPS WITH 4 WIRE HARNESS AND DISCONNECT.
- CUT INSULATION (WHEN BATTERY TYPE IS USED) OR PROVIDE SHIELD AROUND FIXTURE (WHEN BLOWN-IN IS USED) TO KEEP INSULATION A MINIMUM OF 3" AWAY FROM RECESSED FIXTURE. ATTACH FIXTURE TO T-BAR PER NEC 410.36 WHERE APPLICABLE. PROVIDE "CADDY" CLIP #C40-DS 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 210.45. 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 11' ABOVE THE DOOR OPENING. IN SALES AREA, MOUNT ON CEILING 1'0" FROM THE WALL.
- "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 9'-0" CLEAR AFF. PROVIDE MATERIALS AS REQUIRED.
- MOUNT EMERGENCY FIXTURE ABOVE DOOR 10'-0" A.F.F. 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 SURFACE MOUNTED FROM BOTTOM OF EXISTING STRUCTURE. COORDINATE LOCATIONS WITH TENANT PRIOR TO ROUGH-IN.
- CONTRACTOR SHALL SUSPEND LIGHTING IN THIS AREA FROM THE BOTTOM OF EXISTING STRUCTURE. SUSPEND LIGHTING AT 9'-0" CLEAR AFF.



1 ELECTRIC LIGHTING PLAN
1/8" = 1'-0"

KLH

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description

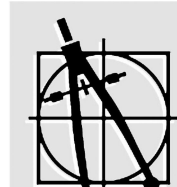
by

mark

date

revisions

06/15/2022
2022.27 / D13216
KLH
RNC
LGF
date
project
designed
drawn
checked



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DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 09880
ELECTRIC LIGHTING PLAN

project
drawing

sheet

E-101

KLH PROJECT 24211

ELECTRICAL COORDINATION SCHEDULE																																		
									CONTRACTOR TYPE						MOTOR CONTROL TYPE							CONTROL TYPE												
DC		LOCAL DISCONNECT	EC		ELECTRICAL CONTRACTOR	CS		COMBINATION STARTER	TC		TIMECLOCK																							
MC		MOTOR CONTROL (POWER)	EX		EXISTING	MC2		MOTOR CONTROL STARTER	CPT		CONTROL POWER TRANSFORMER																							
SD		DUCT SMOKE DETECTOR	FP		FIRE PROTECTION CONTRACTOR	MS		MAGNETIC STARTER OR CONTACT	BAS		BUILDING AUTOMATION SYSTEM																							
IS		INTERLOCKS	GC		GENERAL CONTRACTOR	MS		MANUAL STARTER	LWS		LOW VOLTAGE CONTROLS																							
TN		TOGGLE SWITCH	HC		HVAC CONTRACTOR	VFD		VARIABLE FREQUENCY DRIVE	LINE		LINE VOLTAGE CONTROLS																							
SF		S.F. O.C. BREAKER AT SOURCE PANEL BOARD	PLF		PANEL FACTORY	MR		MANUAL STARTER IN MANUAL RELAY	RLINE		REVERSE ACTION LINE VOLTAGE THERMOSTAT																							
FUSE		FUSE AT LOCAL DISCONNECT (VERIFY FUSE RATING)	PC		PLUMBING CONTRACTOR	OSR		OVERCURRENT PROTECT	MAN		MANUAL																							
FUSE		OPERATING FULL LOAD AMPS	OW		OWNER OR OTHERS				CO		FIRE ALARM																							
MCA		MINIMUM CIRCUIT CAPACITY									CARBON MONOXIDE SENSOR																							
CP		CORD AND PLUG CONNECTION							INT		INTEGRAL TO EQUIPMENT																							
									ASS		AREA SMOKE DETECTOR																							
									DST		DUCT SMOKE DETECTOR																							
EQUIPMENT MARK	DESCRIPTION	VOLTAGE	PHASE	EMERGENCY	HP	WATTS	HTG KW	FLA	MCA	OCP	FED FROM	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	FA SHUTDOWN	AVAILABLE FAULT CURRENT										
ACT-1-A	Air Curtain w/ No Heat	120 V	1					16												HC	EC	EC	NA	1044										
BEF-1-A	HVAC Fan	120 V	1		0.25			120				EC	EC	EC	MG	MFR	MFR	MFR	MAN	EC	EC	NA	2791											
RTU-1-A	Packaged Rooftop Unit, Gas Heat	208 V	3					124	150					EX	EX	EX	EX	MFR	BAS	OR	OR	OR	0											
RTU-2-A	Packaged Rooftop Unit, Gas Heat	208 V	3					124	150					EX	EX	EX	EX	EX	BAS	OR	OR	OR	NA	0										
WH-1-A	Electric Unit Heater	120 V	1				1.5	12.5				EC	EC	EC	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	NA	1301										
WH-2-A	Electric Unit Heater	120 V	1				1.5	12.5				EC	EC	EC	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	NA	1301										

ABBREVIATIONS		CONTRACTOR TYPE		MOTOR CONTROL TYPE										CONTROL TYPE											
DC	LOCAL DISCONNECT	EC	ELECTRICAL CONTRACTOR	CS	COMBINATION STARTER	TC	TIMELock	CPT	CONTROL POWER TRANSFORMER	BUL	BULB IN COMBINATION SYSTEM	LOW	LOW VOLTAGE CONTROLS	FL	LINE VOLTAGE CONTROLS	FLNE	REVERSE ACTING LINE VOLTAGE THERMOSTAT	FA	FIRE ALARM	CA	CARBON MONOXIDE SENSOR	INT	INTEGRAL TO EQUIPMENT		
MC	MOTOR CONTROL (POWER)	EX	EXISTING	MCC	MOTOR CONTROL STARTER	MG	MAGNETIC STARTER OR CONTACT	LOW	LOW VOLTAGE CONTROLS	FL	LINE VOLTAGE CONTROLS	FLNE	REVERSE ACTING LINE VOLTAGE THERMOSTAT	FA	FIRE ALARM	CA	CARBON MONOXIDE SENSOR	INT	INTEGRAL TO EQUIPMENT						
SD	DIAGNOSTIC DETECTOR	FC	FIRE PROTECTION CONTRACTOR	MS	MANUAL STARTER	MG	MAGNETIC STARTER OR CONTACT	LOW	LOW VOLTAGE CONTROLS	FL	LINE VOLTAGE CONTROLS	FLNE	REVERSE ACTING LINE VOLTAGE THERMOSTAT	FA	FIRE ALARM	CA	CARBON MONOXIDE SENSOR	INT	INTEGRAL TO EQUIPMENT						
CN	CONTROL	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	MG	MAGNETIC STARTER OR CONTACT	LOW	LOW VOLTAGE CONTROLS	FL	LINE VOLTAGE CONTROLS	FLNE	REVERSE ACTING LINE VOLTAGE THERMOSTAT	FA	FIRE ALARM	CA	CARBON MONOXIDE SENSOR	INT	INTEGRAL TO EQUIPMENT						
TS	TRIP SENSITIVE SWITCH	HVC	HVAC CONTRACTOR	MS	MANUAL STARTER	MG	MAGNETIC STARTER OR CONTACT	LOW	LOW VOLTAGE CONTROLS	FL	LINE VOLTAGE CONTROLS	FLNE	REVERSE ACTING LINE VOLTAGE THERMOSTAT	FA	FIRE ALARM	CA	CARBON MONOXIDE SENSOR	INT	INTEGRAL TO EQUIPMENT						
CBE	H.A.C.R. CIRCUIT BREAKER AT SOURCE PANELBOARD	MFR	MANUFACTURER	MSR	MANUAL STARTER WITH MOTOR RELAY	MG	MAGNETIC STARTER OR CONTACT	LOW	LOW VOLTAGE CONTROLS	FL	LINE VOLTAGE CONTROLS	FLNE	REVERSE ACTING LINE VOLTAGE THERMOSTAT	FA	FIRE ALARM	CA	CARBON MONOXIDE SENSOR	INT	INTEGRAL TO EQUIPMENT						
FLUSE	OPERATING FULL LOAD AMPERS (VERIFIED FIELD RATING)	PC	PLUMBING CONTRACTOR	MSR	MANUAL STARTER WITH MOTOR RELAY	MG	MAGNETIC STARTER OR CONTACT	LOW	LOW VOLTAGE CONTROLS	FL	LINE VOLTAGE CONTROLS	FLNE	REVERSE ACTING LINE VOLTAGE THERMOSTAT	FA	FIRE ALARM	CA	CARBON MONOXIDE SENSOR	INT	INTEGRAL TO EQUIPMENT						
MIN	MINIMUM CIRCUIT CAPACITY	OW	OWNER OR OTHERS	MSR	MANUAL STARTER WITH MOTOR RELAY	MG	MAGNETIC STARTER OR CONTACT	LOW	LOW VOLTAGE CONTROLS	FL	LINE VOLTAGE CONTROLS	FLNE	REVERSE ACTING LINE VOLTAGE THERMOSTAT	FA	FIRE ALARM	CA	CARBON MONOXIDE SENSOR	INT	INTEGRAL TO EQUIPMENT						
CP	CORD AND PLUG CONNECTION			MSR	MANUAL STARTER WITH MOTOR RELAY	MG	MAGNETIC STARTER OR CONTACT	LOW	LOW VOLTAGE CONTROLS	FL	LINE VOLTAGE CONTROLS	FLNE	REVERSE ACTING LINE VOLTAGE THERMOSTAT	FA	FIRE ALARM	CA	CARBON MONOXIDE SENSOR	INT	INTEGRAL TO EQUIPMENT						
EQUIPMENT MARK		DESCRIPTION		VOLTS (V)	PHASE	EMERGENCY	BHP (HP)	HP (HP)	HTG KW (KW)	WATTS (W)	FLA (A)	MCA (A)	QCP (A)	DC TYPE	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	LINE	CN FURN	CN INST	CN WIRE
CP1	HOT WATER REGULATING PUMP	120	1		1/40					52					EC	EC	EC	MG	MFR	MFR	MFR	LINE	PC	PC	PC
CP1	DOMESTIC ELECTRIC WATER COOLER	120	1											EC	EC	EC	MG	MFR	MFR	MFR	LINE	PC	PC	PC	
CP1	DOMESTIC ELECTRIC TANK WATER HEATER	120	1											EC	EC	EC	MG	MFR	MFR	MFR	LINE	PC	PC	PC	

FIXTURE ID	DESCRIPTION	LOAD	POLES	VOLTAGE	OCF	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 THE 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	1549 VA	1	120 V	20	REFER TO FREEZER COMMENTS.
20DC 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.
5DRF	REACH-IN 5-DR FREEZER	6240 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.
5DRF	REACH-IN 5-DR FREEZER	6240 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.

EQUIPMENT MARK	SUPPLY FROM	CKT	EMERG.	LOAD (KVA)	AVAILABLE FAULT CURRENT	VOLTS	POLE	HTG KW	WATT	HP	FLA (A)	MCA (A)	RGD OCP (A)	BREAKER RATING (A)
AC-1-A	LP2	13		1.73	1044	120 V	1				16			20
EF-1-A	LP1	21		0.70	2791	120 V	1			0.25				20
WH-1-A	LP2	9		1.50	1331	120 V	1	1.5			12.5			20
WH-2-A	LP2	7		1.50	2125	120 V	1	1.5			12.5			20

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, CONDUIT, AND THE LOCATION OF ALL CONDUCTORS, SWITCH GEAR, METERING, CABLE CHARGES ETC., WHETHER SHOWN ON DRAWINGS OR NOT BUT REQUIRED BY SERVICE AUTHORITY TO MAKE VISIBLE. THE CONTRACTOR SHALL VERIFY SERVICE WITHOUT ADDITIONAL COST TO THE TENANT, VERIFY SERVICES AND CHARGES WITH POWER AND TELEPHONE COMPANIES. CONTRACTORS SHALL VERIFY ALL ELECTRICAL AND TELEPHONE EQUIPMENT WITH MECHANICAL DRAWINGS AND SPECIFICATIONS, AND SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED BY THE CONTRACTOR TO COMPLETE INSTALLATION.

D. VERIFY LOCATION AND REQUIREMENTS OF MECHANICAL EQUIPMENT WITH CONTRACTOR, (DOOR HEATERS, UNIT HEATERS, ROOF TOP UNITS, SMOKE EXHAUST FANS, ETC.)

E. 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 APPLY.

F. ALL CONDUCTORS SHALL BE # 12 AWG COPPER, EXCEPT AS OTHERWISE NOTED AS REQUIRED FOR SERVICE. (SEE SPECIFICATIONS). ALL CONDUIT SHALL BE 1/2" MINIMUM EXCEPT AS OTHERWISE NOTED OR AS REQUIRED FOR CONDUCTORS.

G. TELCO OR ELECTRICAL COMPANY SHALL BE RELOCATED AS REQUIRED TO MINIMIZE LENGTH OF CONDUIT/CONDUCTOR BETWEEN SERVICE DISCONNECT SWITCH AND PANEL, "M.P.O." OBTAIN APPROVAL. CONTRACTORS ARE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LOCATION PRIOR TO INSTALLATION, COST CLAIMS FOR CONDUIT/CONDUCTOR IN EXCESS OF BASE BID WILL NOT BE CONSIDERED IF PANEL LOCATION IS NOT PROPOSED TO MINIMIZE THESE COSTS PRIOR TO INSTALLATION.

H. TELEPHONE: FURNISH AND INSTALL ALL NECESSARY CONDUIT, DEVICE AND MATERIALS FOR TELEPHONE SERVICE.

I. NEW TELEPHONE SERVICE TO TENANT'S SPACE, NEW TELEPHONE EQUIPMENT BOARD, COORDINATE WITH LANDLORD AND TELEPHONE COMPANY REQUIRED FOR SERVICE.

J. FURNISH AND INSTALL 3/4" CONDUIT FROM EACH TELEPHONE OUTLET 1' TO INCE CEILING GARY, OR TO JOIST WHERE NO CEILING IS INSTALLED.

K. FIRE ALARM SYSTEM:

a. IF THERE IS NO EXISTING FIRE ALARM SYSTEM AND THE CONTRACTOR, NATIONAL, STATE, OR LOCAL CODES, ENGINEERING AGENCY OR AUTHORITY HAVING JURISDICTION NOW REQUIRES A FIRE ALARM SYSTEM, FURNISH AND INSTALL DEVICES, COMPONENTS, ETC. AS REQUIRED BY THE ENGINEERING AGENCY OR AUTHORITY.

b. CONNECT ALARM CONTACT(S) OF SPRINKLER SYSTEM FLOW SWITCH AND SUPERVISED VALVE AND AIR PUMP DETECTORS TO FIRE ALARM DEVICES. IF REQUIRED, CONNECT FIRE ALARM DEVICES AIR PUMP DETECTORS, ETC. AND ANY OTHER ASSOCIATED EQUIPMENT TO FIRE ALARM DEVICES.

c. PROVIDE LOCAL STATUS INDICATOR AND ALARM FOR FIRE ALARM DEVICES WHERE NOT CONNECTED TO FIRE ALARM SYSTEM.

d. VERIFY ALL REQUIREMENTS AND FURNISH AND INSTALL IN ACCORDANCE WITH NFPA, NATIONAL, STATE, LOCAL CODES, ENGINEERING AGENCY OR AUTHORITY HAVING JURISDICTION AND LANDLORD REQUIREMENTS.

[illegible]

E3 CONTRACTOR SHALL REFER TO EMB SHEETS FOR INSTRUCTION AND RESPONSIBILITIES FOR INSTALLING TENANT SUPPLIED ENERGY MANAGEMENT SYSTEM (EMS) TO BIDDING AND INSTALLATION. PROVIDE HIGH QUALITY SIGN VENDOR. PROVIDE SIGNAGE WHERE APPLICABLE. FINAL CONNECTIONS WILL BE FURNISHED AND INSTALLED BY TENANT'S SIGN CONTRACTOR. FURNISH AND INSTALL DISCONNECT SWITCHES IN SIGN BOXES AND IN TENANT'S SIGNAGE. PROVIDE CEILING, WHERE INSTALLED OUTDOORS PROVIDE WEATHERPROOF, INSULATED JUNCTION BOX AND WEATHERPROOF DISCONNECT. PROVIDE INSULATED JUNCTION BOX AND WEATHERPROOF DISCONNECT BOX LOCATION WITH SIGN VENDOR. JUNCTION BOXES NEED TO BE WITHIN 5 FEET OF SIGN FOR SIGN VENDOR TO MAKE FINAL ELECTRICAL CONNECTIONS. IF STOCKED SIGNAGE IS USED, THE CONTRACTOR SHALL COORDINATE WITH THE SIGN VENDOR FOR ANY ADDITIONAL EXTERIOR SIGNAGE AND THE ASSOCIATED ELECTRICAL CONNECTIONS. AFTER THE SIGNAGE INSTALLATION IS COMPLETE, IT MAY BE DETERMINED THAT CERTAIN SITES REQUIRE SIDE OR REAR SIGNAGE.

E6 DO NOT CONNECT "ISOLATED" GROUND WIRE TO RACEWAY OR BOX. CONDUIT AND BOX SHALL BE EMB AND METAL TO METAL. CONNECTORS SHALL BE USED TO CONNECT CONDUIT TO EMB/SH. PROVIDE 1/2" REX FOR BOX AND RACEWAY. PROVIDE 1/2" REX FOR CIRCUITS WITH CASH REGISTER OR COMPUTER (IGI) CIRCUITS. CASH REGISTER DATA SYSTEM CABLE SHALL BE FURNISHED AND INSTALLED BY OTHERS. THE NORMAL TELEPHONE CABLE SHALL BE FURNISHED BY OTHERS. 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 TO THIS RECEPTACLE).

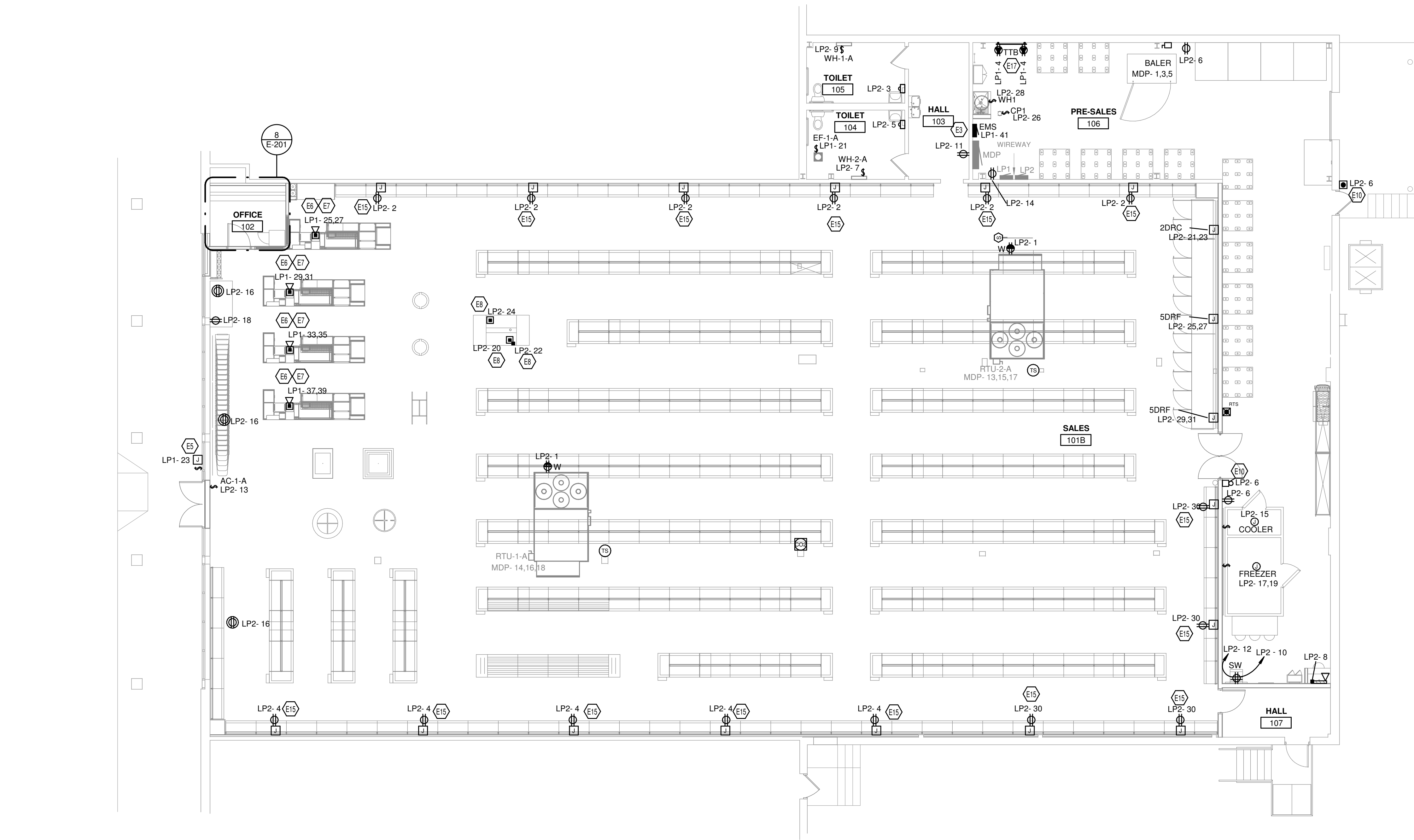
E8 POWER POLES ARE OWNER FURNISHED AND CONTRACTOR INSTALLED. PROVIDE ALL NECESSARY MATERIAL TO PROVIDE A COMPLETE INSTALLATION. CONTRACTOR SHALL REFER TO FINAL FIXTURE PLAN FOR LOCATION OF CHECKOUT AREA. CONTRACTOR SHALL PROVIDE THE POWER PRIOR TO INSTALLING ELECTRICAL AND DATA.

E10 SIGNAL SYSTEMS: REAR DOOR BELL AND PUSH-BUTTON: FURNISH AND INSTALL AN EDWARDS RE55-635, 24V AC "ADAPT-A-BELL" ABOVE CEILING WITH WEATHERPROOF BOX. PROVIDE BELL AND PUSH-BUTTON AT SWITCH BOX. AT TENANT SPACE BACK DOOR, CONNECT SO THAT BELL SOUNDS WHEN PUSH-BUTTON IS PRESSED.

E15 MOUNT ON FLOOR AND MAKE NO CONNECTION TO DUPLEX RECEPTACLE. INSTALL 1/2" REX FOR WIRE KICK PLATE. ASSEMBLY JUNCTION BOX AROUND INSTALLED FIXTURE.

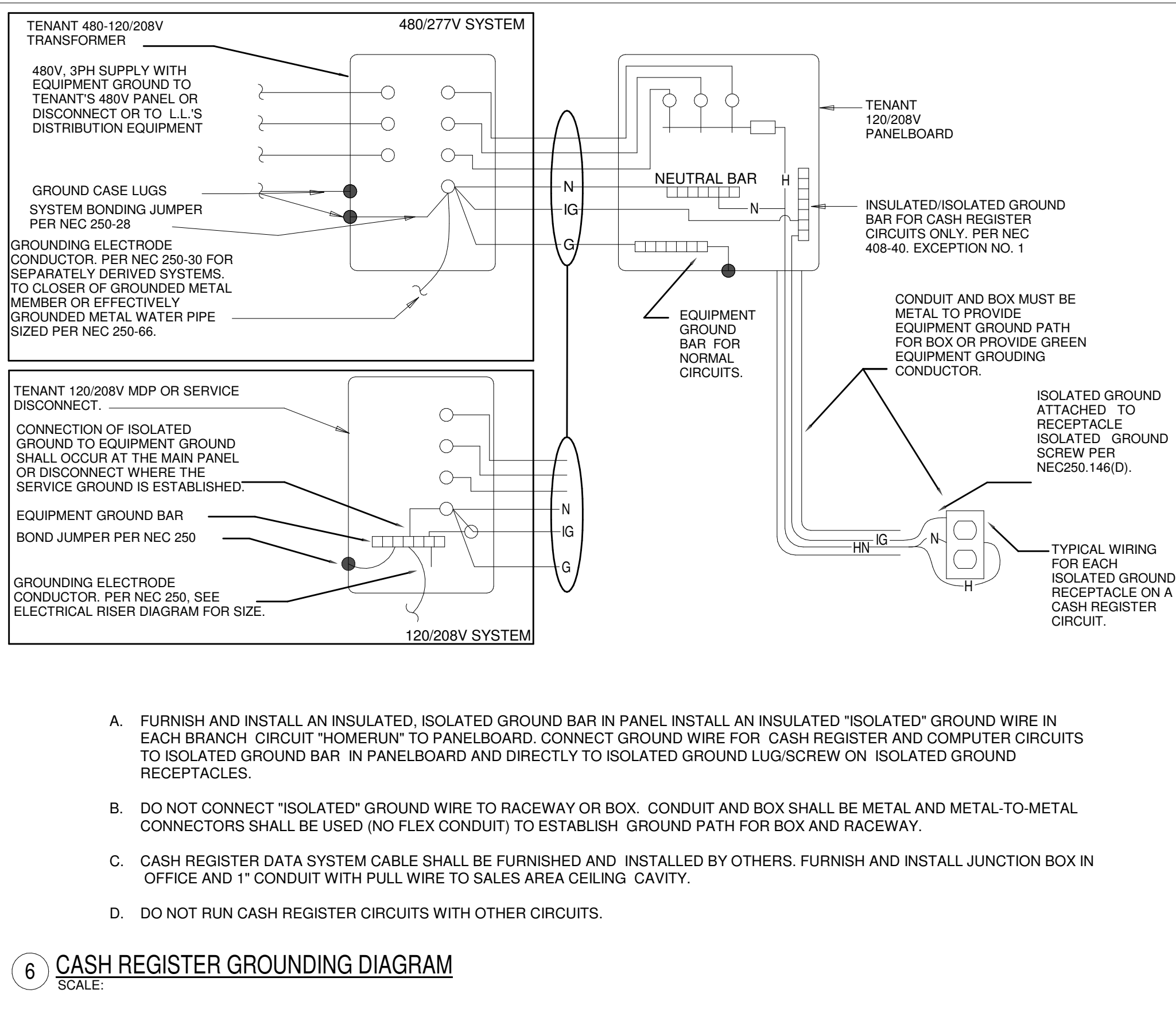
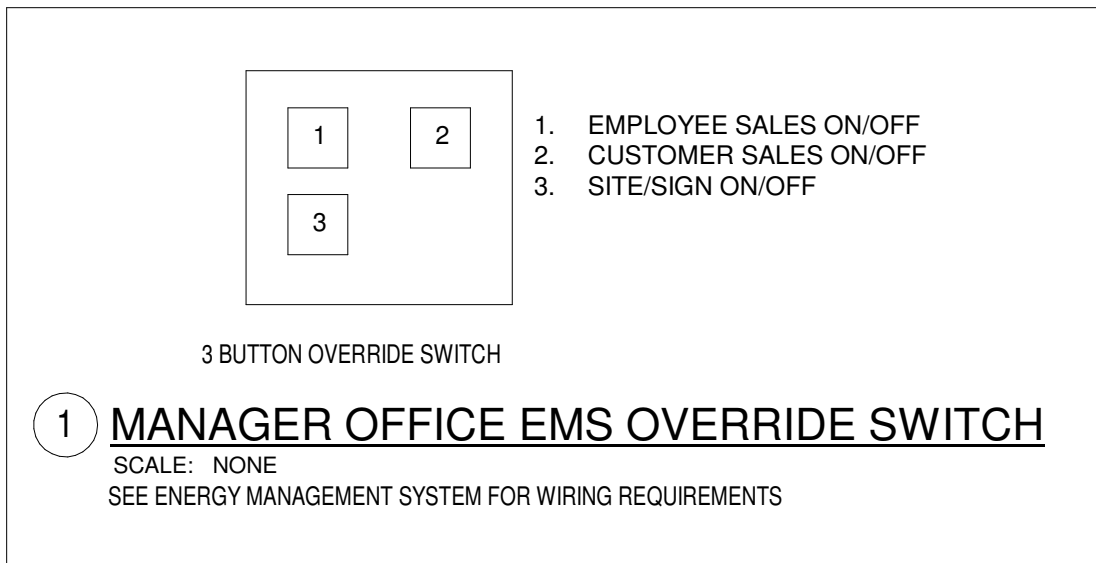
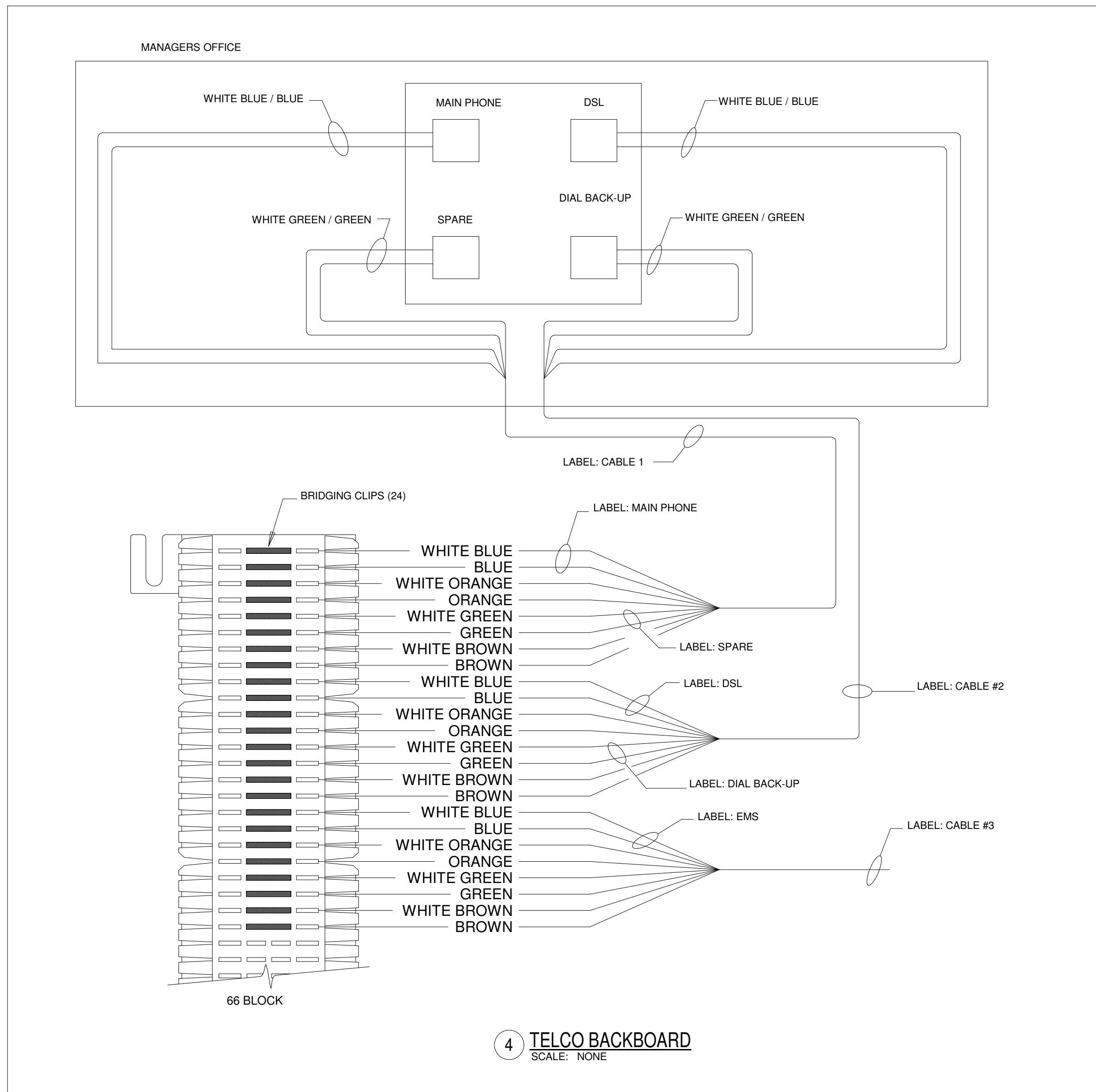
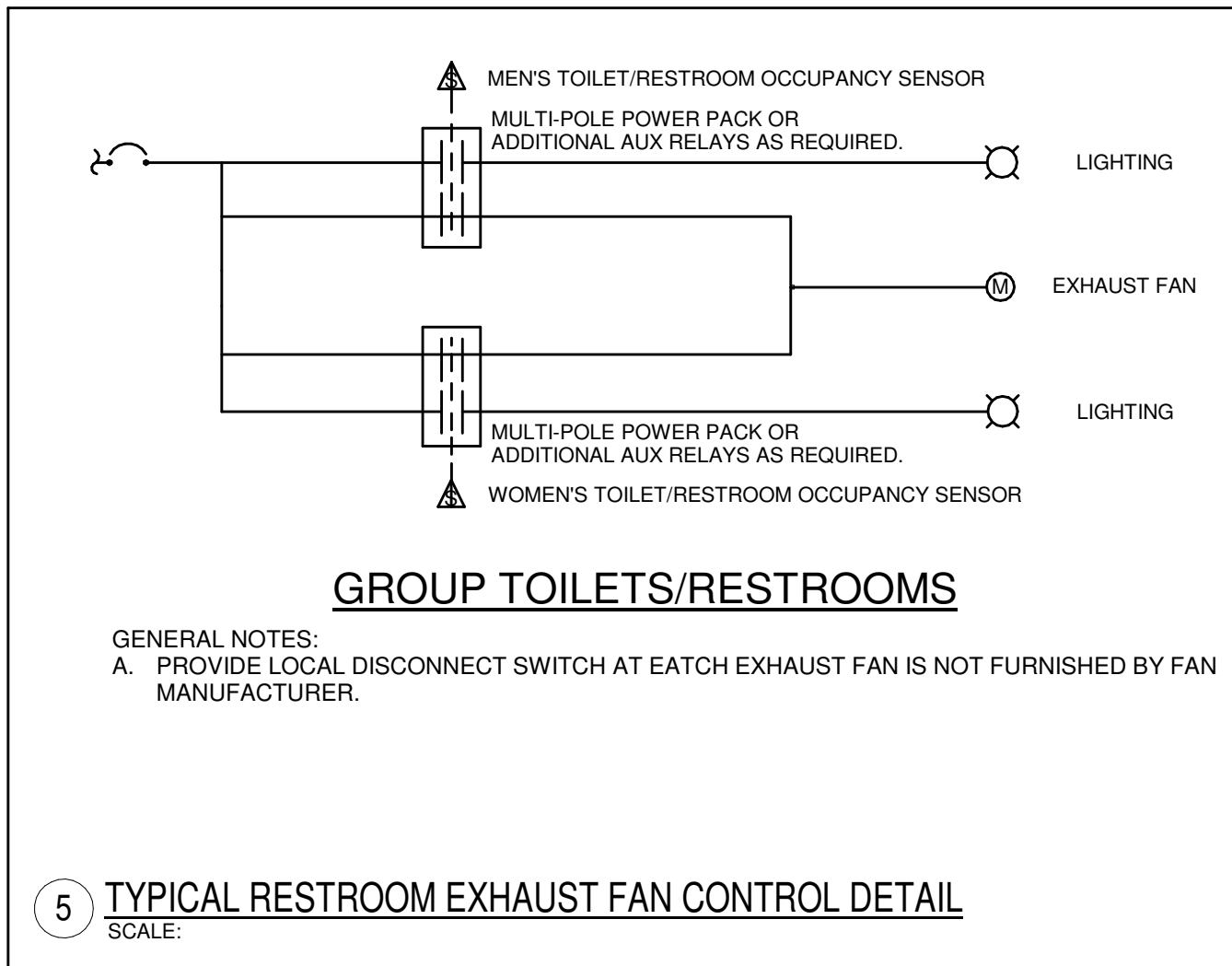
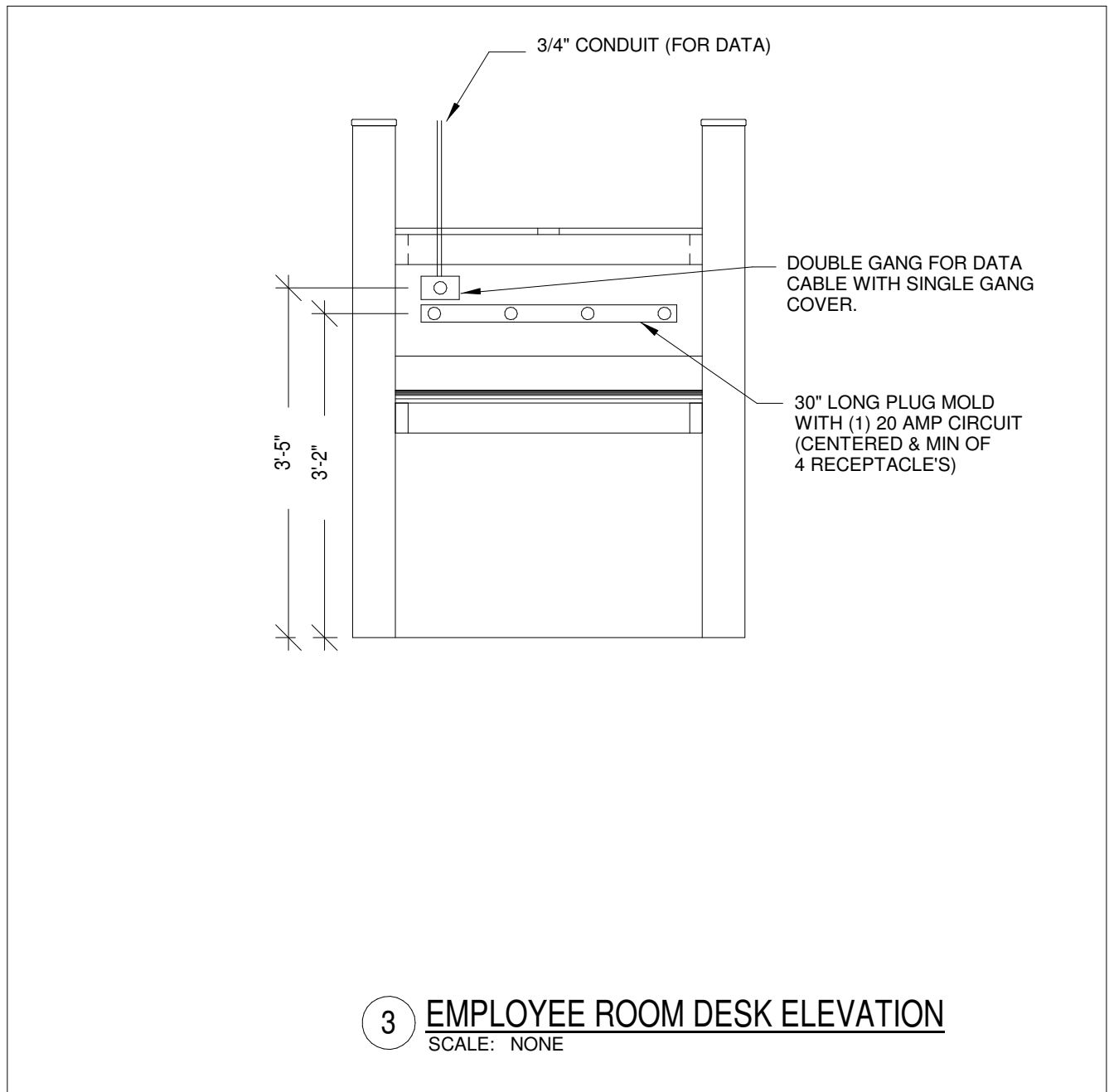
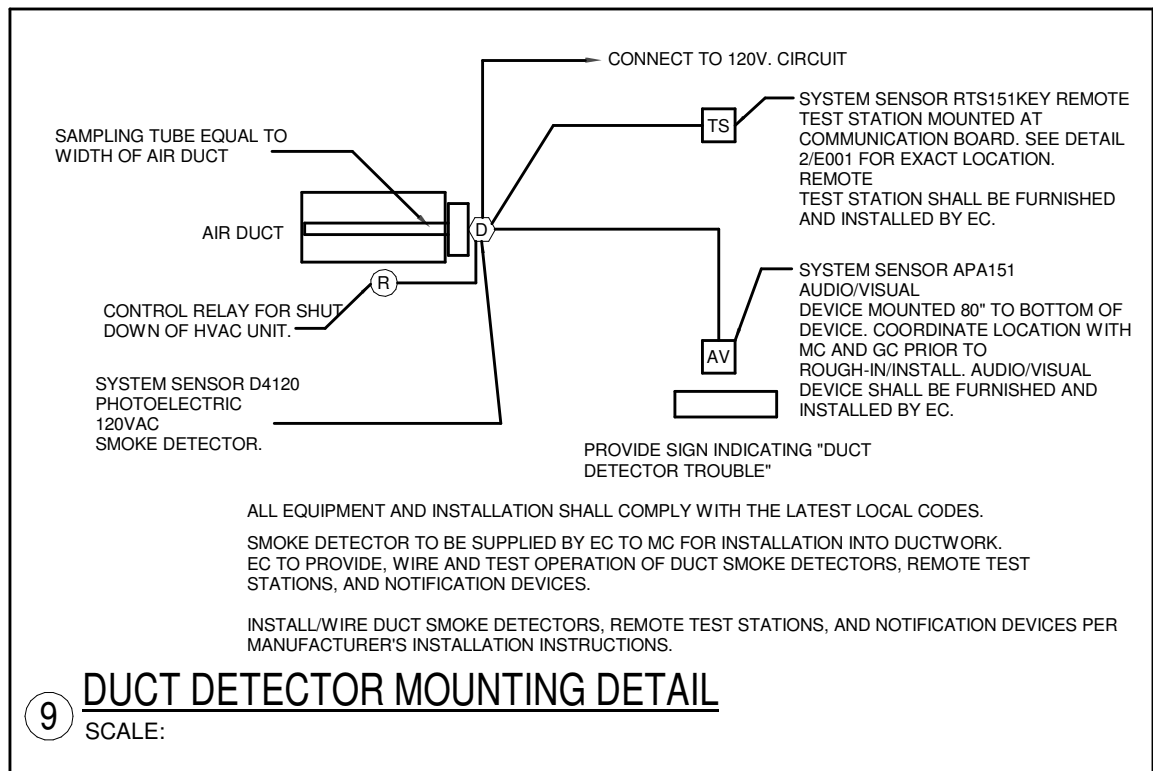
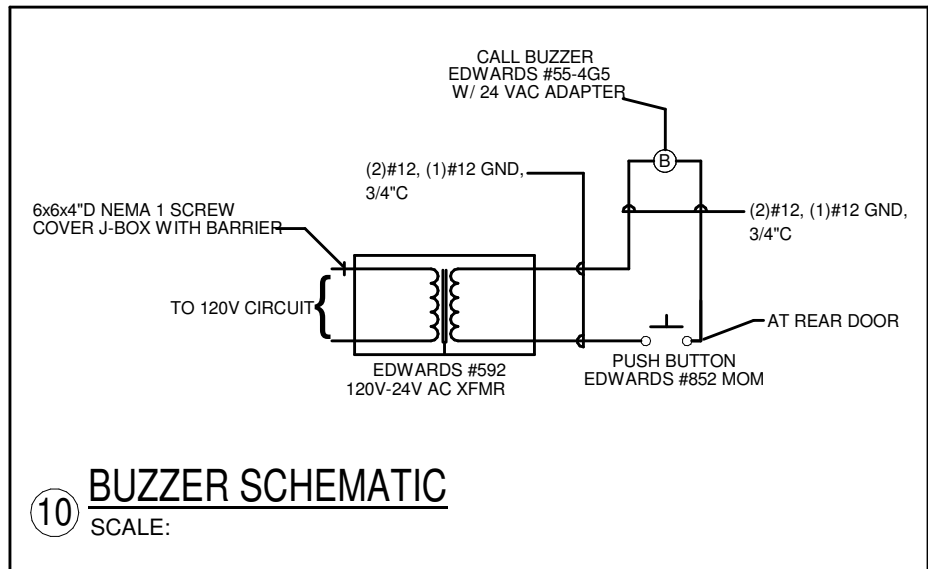
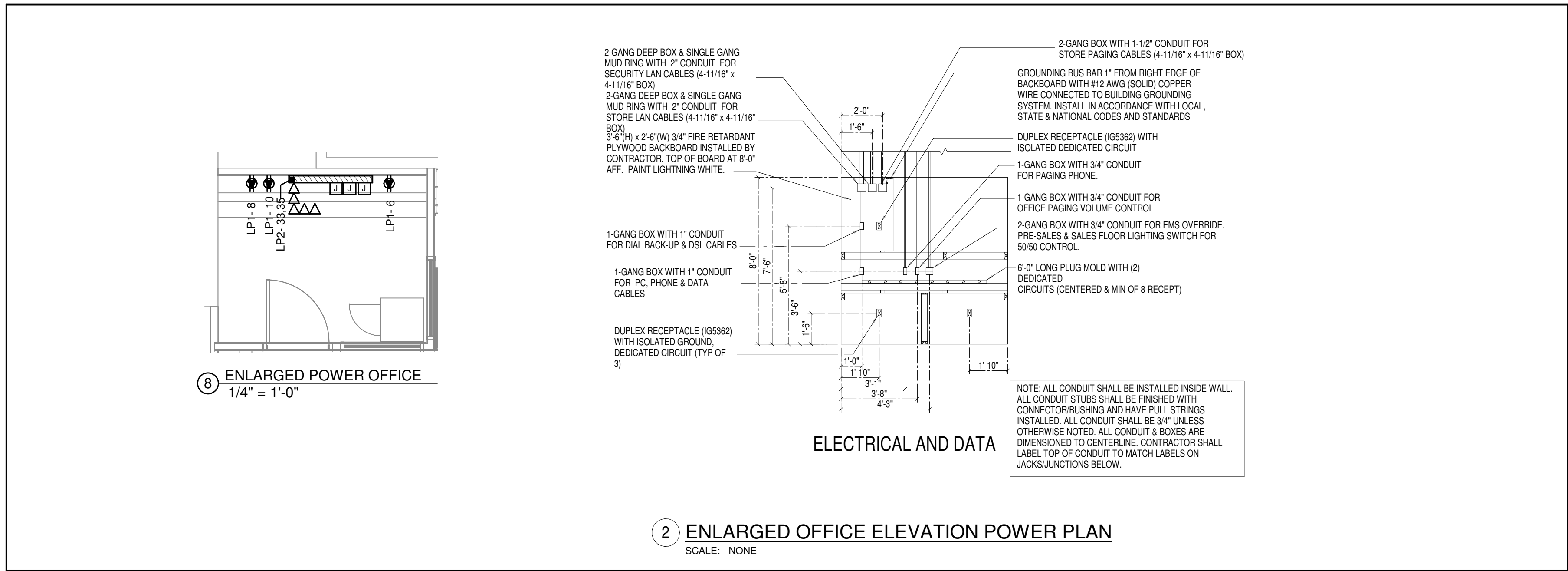
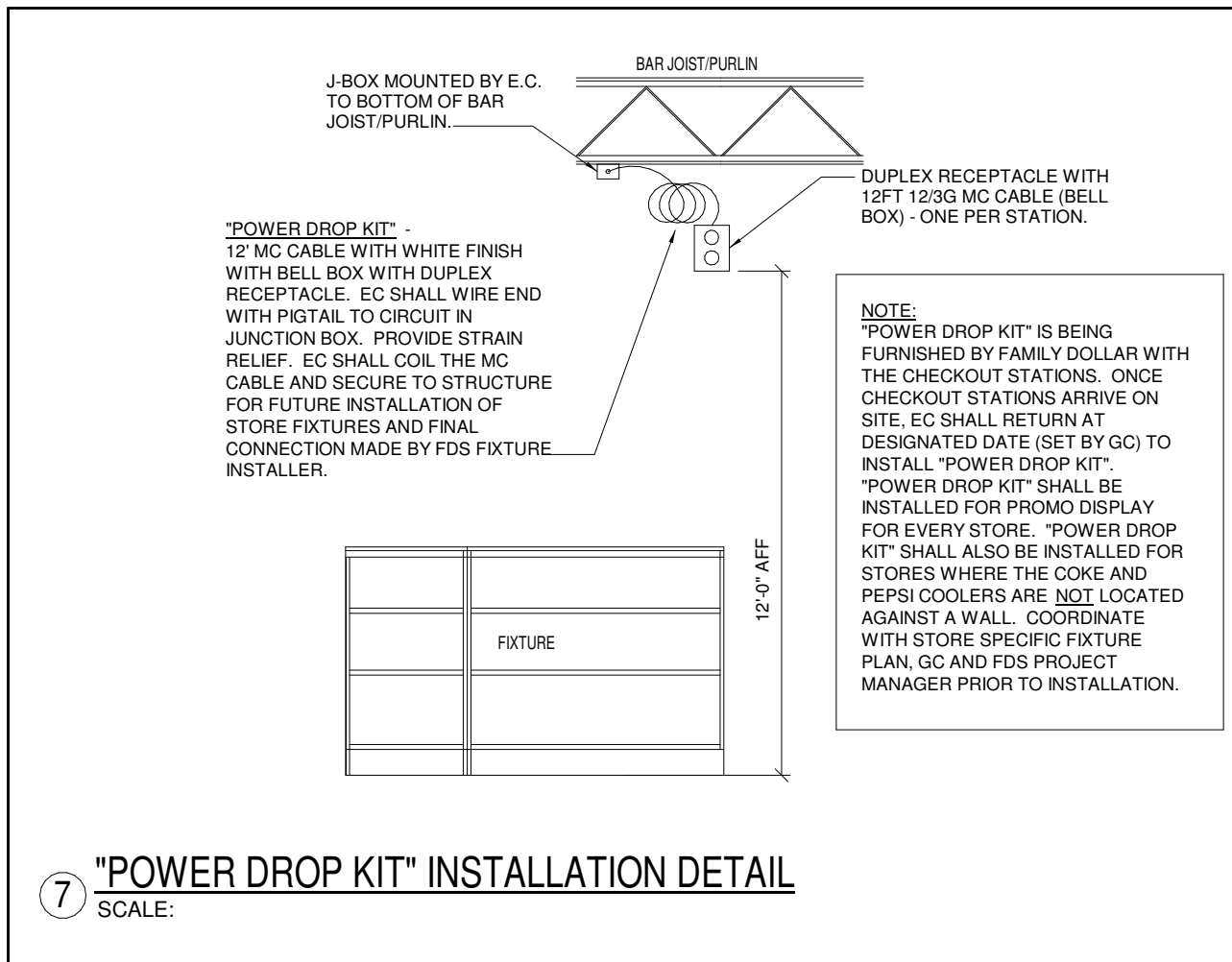
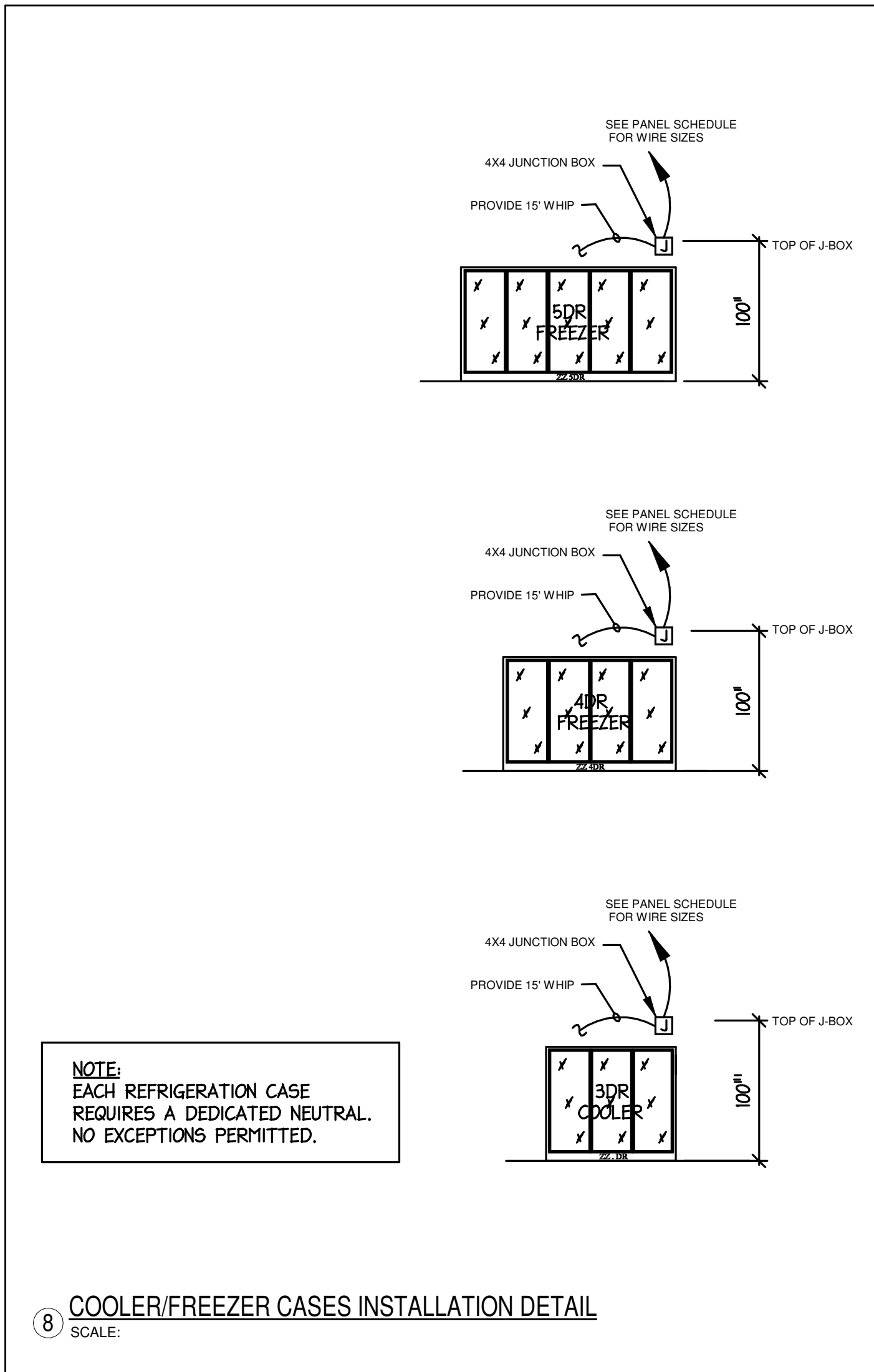
E17 CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH LAST PARTY TO OCCUPY THE SPACE PRIOR TO THE CONTRACTOR BRINGING A COMPLETE TELEPHONE SERVICE INTO TENANT SPACE.

PROVIDE ITEMIZED BID ALTERNATE FOR REMOVING THE FEEDER BETWEEN DISCONNECT D2 AND THE WIREWAY AND RE-FEEDING THE WIREWAY FROM A NEW 200A/3P BREAKER IN PANEL MDP.



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date	project	designed	drawn	checked	mark	revisions
06/15/2022	2022.27 / D13216	KLH	RNK	LOF		

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DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 09801
ELECTRICAL DETAILS

- I. **GENERAL CONTRACTOR'S RESPONSIBILITIES:**
- a. Read Cylon Retail Solutions (CRS) / Dollar Tree (DT) Documentation Package.
- b. Review all DT drawings.
- c. Contact Cylon Retail Solutions Inc. at (888) 211-6789 and submit a fully completed EMS Installation Survey.
- d. Confirm CRS Survey Form is fully completed and EMAILED to CRS National Account Team at Surveys@Cylon.com or FAXED to (855) 224-0879, 24 Hours Prior to scheduling the EMS Commissioning.
- e. EMS Commissioning dates cannot be scheduled until fully completed EMS Installation Surveys have been received and approved by the CRS National Deployment Team.
- f. Schedule remote EMS commissioning 24 hours prior to the requested commissioning date.

II. **ELECTRICAL RESPONSIBILITIES:**

Power to all EMS equipment and devices must be OFF while terminations are made.

- a. Provide all labor and installation material, as required, for a complete and operational EMS for this DT store location.
- b. Receive and store all CRS material in a dry and secure place until the EMS installation is completed.
- c. The EMS equipment will be supplied by CRS and installed by an approved DT contractor.
- d. Review the entire set of plans, perform a job site survey and inventory the CRS equipment to ensure the proper equipment has been ordered and received for a complete and operational CRS EMS.
- e. If any material is missing or additional equipment is required, immediately call CRS at (888) 211-6789 to request an order.
- f. Approved Contractor shall verify number of controlled lighting circuits against the design, report discrepancies, which cannot be resolved in the field, to the CRS National Account Support Team at (888) 211-6789 and wait for resolution instructions.
- g. Coordinate the EMS installation with the Mechanical Contractor to avoid any interference that may delay progress during construction.
- h. Perform all work in accordance with all National, State and Local Codes for this project.
- i. All EMS cables are to be installed per National and Local Codes. It is the Electrical Contractor's responsibility to determine if National and Local Codes permit Class 2 cables to be installed exposed within the building structure or if a full conduit system is required.
- j. EMT connectors and bushings are to be installed at the top of every conduit sleeve and threaded connector to protect EMS cables from abrasions.
- k. All cables are to be clearly and distinctly labeled within one foot of both ends.
- l. Furnish and install all required conduit, boxes, wire ways, fittings, straps, hangers and wiring for a complete and operational EMS as required.
- m. Furnish and install a dedicated 120 VAC circuit with breaker lock for the EMS Panel.
- i. Label breaker: DO NOT TURN OFF / EMS
- ii. Confirm wiring is completed as per this documentation package before applying power. Improper wiring will cause damage to equipment.
- n. Mount the EMS Panel adjacent to the electrical panels.
- o. Install an Ethernet cable run from the eSCI RJ-45 jack located in the EMS Panel to the network switch specified by the DT networking team.
- p. Call CRS at 888.211.6789 to verify Network Connectivity before proceeding with the EMS installation.
- q. Install and terminate the CRS BACnet communication trunk, in a daisy chain fashion, from the EMS Panel to each of the Thermostat Controls and all other BACnet devices. (see this documentation package for requirements)
- r. When applicable, mount the Auxiliary I/O Panel adjacent to the EMS Panel and ensure both panels are connected to the same Earth Ground.
- s. When applicable, ensure the Auxiliary I/O panel is connected in series with the other BACnet devices on the BACnet communications trunk.
- t. Mount and terminate the Outdoor Sensor Assembly (OSA) on the HVAC unit that resides closest to the EMS Panel. When installing, make sure OSA enclosure is:
- i. Mounted on a 1" rigid riser with an "LB" secured to the back of the OSA (Refer to OTS/OLS Detail as shown on EM-4)
- ii. Mounted 3 feet above the HVAC unit
- iii. Mounted facing north, away from the combustion heat blower and condenser fan
- iv. Weather-proofed
- v. Mounted with the white PVC sensor pointed downward
- vi. Positioned to allow the Outdoor Light Sensor exposure to full ambient daylight but is not shadowed or exposed to any artificial illumination
- u. When applicable, mount and terminate the CO2 Sensor as per the location specified by the DT drawings and this documentation package.
- v. Mount and terminate the Override Button assembly as per the location specified by the DT drawings and this documentation package.
- w. Do not adjust the DIP Switches for the EMS Override Buttons. They are factory preset for:
- i. MSTP Address = 35
- ii. Baud Rate = 19200
- iii. Network Termination = Off
- x. When applicable, mount and terminate the Indoor Ambient Light Sensor(s) as per the location specified by the DT drawings and the Special Instructions in this documentation package.
- y. Install and wire load sides of lighting contactors for designated lighting loads and zones as required by DT and this documentation package
- i. Employee Zone = 40% of Sales floor and 100% of all Stockroom areas
- ii. Customer Zone = Remaining 60% of Sales Floor
- iii. Exterior Zone = Building Exterior and Parking lights
- iv. When applicable, Daylight Zone = First two (2) rows of lights along the store-front windows.
- z. Furnish and install a 3-pole, 20-amp breaker/disconnect at the Main Electrical Distribution Panel (MDP) for the Phase Loss Power Monitor and Energy Meter.
- aa. When applicable, furnish and install a 3-pole, 20-amp breaker/disconnect at each Electrical Distribution Panel for each additional Phase Loss Power Monitor
- bb. Terminate wiring as specified in this documentation package.
- i. Label Main Electrical Distribution Panel breaker/disconnect: DO NOT TURN OFF / PHASE FAILURE & ENERGY METER
- ii. When applicable, label auxiliary Electrical Distribution Panel breaker/disconnect: DO NOT TURN OFF / PHASE FAILURE
- iii. Confirm wiring is completed as per this documentation package before applying power. Improper wiring will cause damage to equipment.
- cc. Install and terminate the CRS Modbus communication trunk from the eSCI Controller to the Energy Meter. (Refer to OEM instructions and this documentation package for requirements)
- dd. Permanently mount the Electrical Meter in close proximity to the main utility power feed.
- ee. Permanently mount the 3 Current Sensors, one each, around the 3 phases of the main utility feed.
- ff. Terminate the 3 Current Sensors to the Energy Meter, correctly maintaining Electrical Phase and Meter Input relationships.
- gg. Using the OEM Instructions, configure the EMS Energy Meter for:
- i. Proper Current Transformer (CT) Ratio - Current Sensor Primary (Ct) = 400 - 1500 Amp
- ii. Nominal Line to Line Voltage = 480 Vac
- iii. Baud Rate = 19200
- iv. Address = 1
- v. Voltage Input Mode = True 3 Phase
- vi. CT Auto Rotation = Auto Rotate

Note: The EMS is designed to monitor a single primary 3 phase power feed. Contact CRS for support when attempting to monitor multiple power feeds

- hh. Provide a technician, on site, for an approximate 2-hour remote telephone checkout with CRS.
- ii. Coordinate with the Mechanical Contractor to verify HVAC control during the CRS remote telephone checkout.
- jj. Prior to scheduling the Remote Commissioning Checkout, the Electrical Contractor will:
- i. Confirm CRS Survey Form is completed and EMAILED to CRS National Account Team at Surveys@Cylon.com or FAXED to (855) 224-0879, 24 Hours Prior to scheduling the EMS Commissioning.
- ii. Confirm the Mechanical Contractor will be present during the CRS Remote Commissioning Checkout.
- iii. Contact CRS to schedule the EMS Commissioning, 24 hours prior at (888) 211-6789.


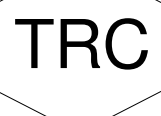




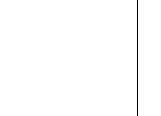
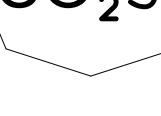

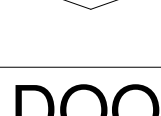






III. **MECHANICAL RESPONSIBILITIES:**


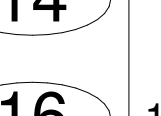
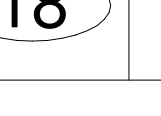


Power to all EMS equipment and devices must be OFF while terminations are made.

- a. Provide labor and installation material, as required, for a complete and operational EMS for this DT store location.
- b. Verify number and type of HVAC units against the design, report discrepancies, which cannot be resolved in the field, to the CRS National Account Support Team at (888) 211-6789 and wait for resolution instructions.
- c. Perform all work in accordance with all National, State and Local Codes for this project.
- d. Mount and terminate the SimpleSTAT module(s) as per the location(s) specified by the DT drawings and this documentation package.
- e. Utilizing 18/8 cable between the SimpleSTAT module and HVAC unit.
- i. Terminate C, R, G, Y1, Y2, W1 and W2 on the HVAC unit for control of fan, cooling and heating.
- ii. Terminate the communications cables to the SimpleSTAT(s) as shown in this documentation package.
- f. Set address on the SimpleSTAT module, as shown in the SimpleSTAT installation instructions. When communications to the EMS is in a failed state, the SimpleSTAT will operate 24/7 as a stand-alone STAT using the following temperature setpoints:
- i. Default Cooling Setpoint = 72.0 °F
- ii. Default Heating Setpoint = 68.0 °F
- g. Utilizing the Downrods and associated hardware, specified by the DT drawings and the "Special Instructions" section of this documentation package, mount and terminate the Remote Space Temperature Sensor(s) as per the location(s) specified by the DT drawings.
- i. In close proximity to the zone return air grille and away from supply air drafts.
- ii. Install and secure the Remote Temperature Sensor wire to the Thermostat Controller.
- h. Mount the Supply Duct Temperature sensor of each HVAC unit.
- i. The remote Supply Duct Temperature Sensor should be mounted in the main Supply Air Duct on the interior side of the HVAC unit's building penetration.
- ii. Utilizing 18/2 wire, terminate the supply duct temperature sensor wire to the Thermostat module as shown in this documentation package.
- j. Provide Electrical Contractor with roof plan layout, showing location of HVAC Units on the roof.
- k. Provide a technician, on site, for an approximate 2-hour remote telephone checkout with CRS.
- k. Coordinate with the Electrical Contractor to verify proper HVAC control during the CRS Remote Commissioning Checkout.

IV. **CYLON RETAIL SOLUTIONS RESPONSIBILITIES:**

- a. The following services will be supplied by CRS:
- i. Shipping of all contracted EMS components for the job.
- ii. Programming and downloading of CRS equipment and software.
- iii. Provide telephone technical support at (888) 211-6789.
- iv. Remote system checkout with installing contractor
- b. Verification of proper operation of the following items by exercising the controlled load:
- i. Timed operation of all applicable EMS lighting loads - Interior and Exterior.
- ii. Outside light level control of all applicable EMS lighting loads - Interior and Exterior.
- iii. Operation of HVAC heating stages, as indoor environment allows.
- iv. Operation of HVAC cooling stages, as indoor and outdoor environments allow.
- v. Verification of HVAC unit sensor readings - space and supply temperatures.
- c. If any 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 EMS.
- d. CRS will issue an "EMS Check-Out Number" once all store systems are verified as operational.

SYMBOL	DEVICE LEGEND DESCRIPTION
	HVAC UNIT CONTROLLER (SIMPLESTAT)
	HVAC UNIT CONTROLLER (TRC)
	DUCT TEMPERATURE SENSOR
	SPACE TEMPERATURE SENSOR
	OUTDOOR LIGHT SENSOR
 	OUTDOOR TEMPERATURE & RELATIVE HUMIDITY SENSORS
	REMOTE TEMPERATURE SENSOR
	INDOOR CO ₂ SENSOR
	INDOOR RELATIVE HUMIDITY SENSOR
	INDOOR LIGHT SENSOR
	O/H DOOR SENSOR
	SECURITY INTERFACE DEVICE
	eBUILDING SYSTEM CONTROLLER
	REMOTE OVERRIDE SWITCH
	OCCUPANCY SENSOR

CABLE LEGEND				
KEY	SIZE	TYPE	MFG.	MFG. PART #
	18/2	SHIELDED PLENUM	WINDY CITY	# 002320-S
	18/4	SHIELDED PLENUM	WINDY CITY	# 002340-S
	18/8	NON SHIELDED PLENUM	WINDY CITY	# 002392-S
	18/10	NON SHIELDED PLENUM	WINDY CITY	# 002393-S
	24/8	CAT5 E PLENUM	WINDY CITY	# 5556140-S



25 Sundial Ave - Suite 310 W
Manchester, NH 03103

DOLLAR TREE
DRAWING NOTES
(FOR REFERENCE ONLY)

REVISION: 1	
DATE: 06/05/20	ECN#: 2390
LOOSE DT OPTION	
REVISION:	
DATE:	ECN#:
REVISION:	
DATE:	ECN#:
DRAWN: WPC	ENGINEER: CGP
PART #: 94-402	OPTION: P

ENERGY
MANAGEMENT
PLAN

EM-1 of 4



KLH
Professional
Engineers, PSC PC
MECHANICAL/ELECTRICAL ENGINEERS
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PELHAM, NY 11003
609-442-6500
PELHAM, NEW YORK
FORT THOMAS, KENTUCKY

description	
by	
mark	date
revisions	

06/15/2022	project	2022.27 / 1013216	KLH	RNK	LGK
date	designed	drawn	checked		



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06/27/2022

DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980
EMS DETAILS

project

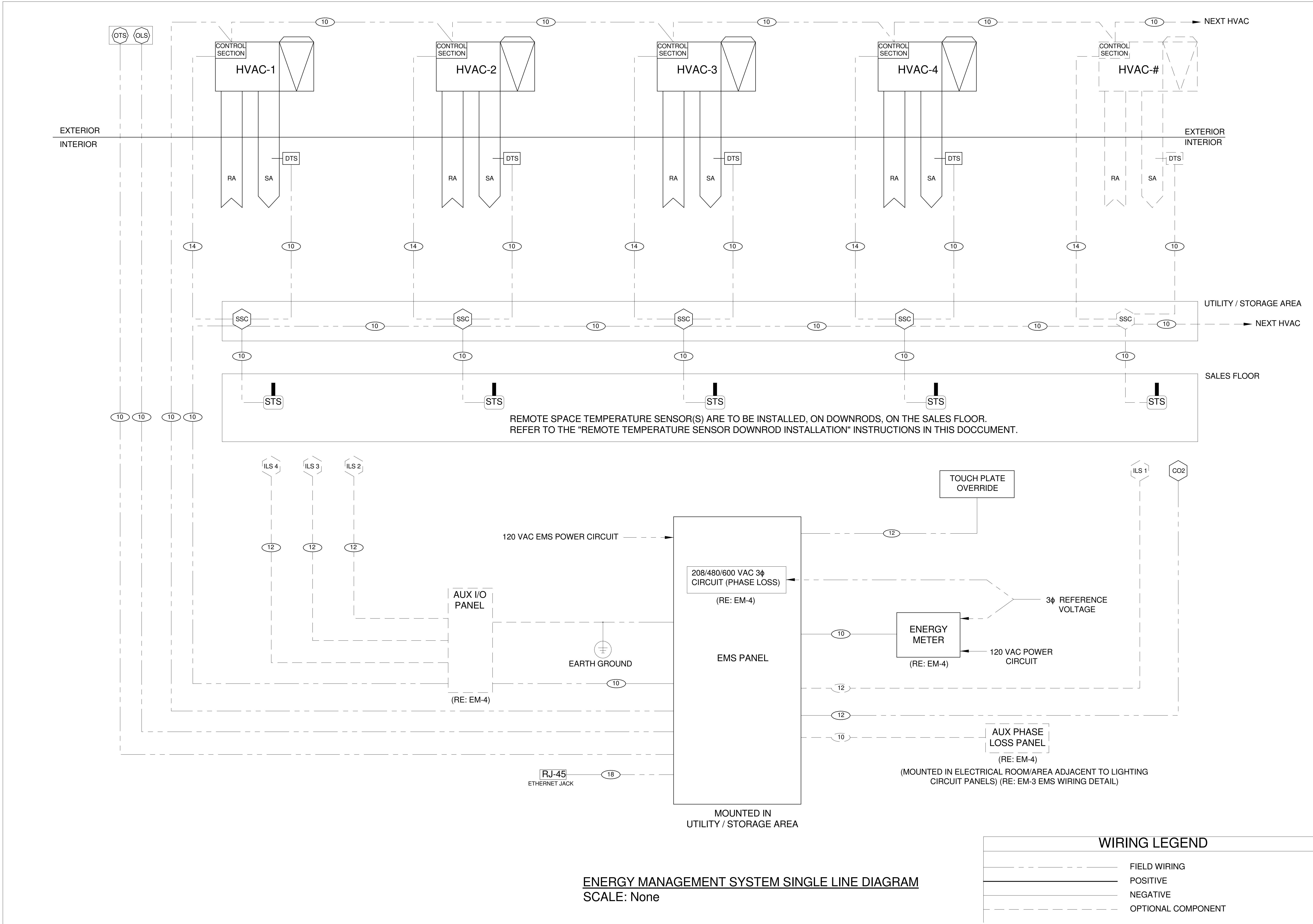
drawing

sheet

EM-101

KLH PROJECT 24211

OWNERSHIP OF INSTRUMENTS OF SERVICE
All reports, plans, specifications, computer files, field data, notes and other documents 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 herein.



ENERGY MANAGEMENT SYSTEM SINGLE LINE DIAGRAM
SCALE: None



25 Sundial Ave - Suite 310 W
Manchester, NH 03103

DOLLAR TREE LINE DIAGRAM (FOR REFERENCE ONLY NOT TO SCALE)

REVISION: 1	
DATE: 06/05/20	ECN#: 2390
LOOSE DT OPTION	
REVISION: ----	
DATE: ----	ECN#: ----
REVISION: ----	
DATE: ----	ECN#: ----
REVISION: ----	
DATE: ----	ECN#: ----
DRAWN: WPC	CHECKED: CGP
PART #: 94-402	OPTION: P

ENERGY MANAGEMENT PLAN

EM-2 of 4



description
by
mark
revisions

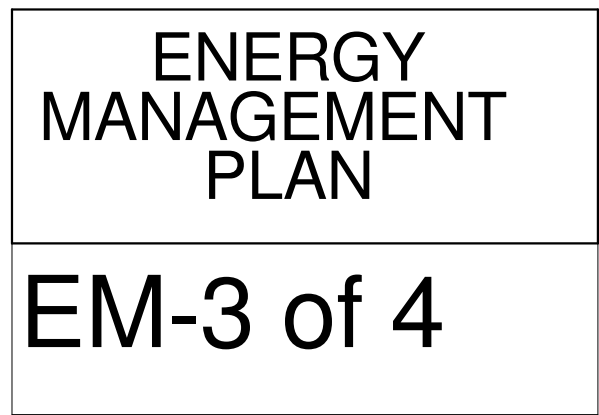
06/15/2022	06/15/2022	KLH	RNK	LG
date	project	designed	drawn	checked



DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980
EMS DETAILS

project
drawing

EM-102





Energy Code: 2020 NYStretch Energy Code - 2018 IECC
Project Title: 166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
Project Type: Alteration

Construction Site: _____ Owner/Agent: _____ Designer/Contractor: _____

A	B	C	D
Free Oxygen	Free Area	Alloyed	Alloyed Metals

5-HALL 107 (Common Space Types Corridor/Transition <8 ft wide)	93	0.58	54
6-OFFICE 102 (Common Space Types Office - Enclosed)	80	0.85	68
7-SALES 101B (Retail Sales Area)	3272	1.06	3468
4-PRE-SALES 106 (Common Space Types Storage)	1804	0.63	1136
1-TOLLET 103 (Common Space Types Restrooms)	103	0.75	77
3-TOLLET 104 (Common Space Types Restrooms)	116	0.75	87
1-TOLLET 105 (Common Space Types Restrooms)	144	0.58	84
8-SALES 101A (Retail Sales Area)	6374	1.06	6757
Total Allowed Watts =			11733

A

Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast

Fixture ID : Description / Lamp / Wattage / Per Lamp / Ballast	Fixture	Fixture	Watt.	(L x W x H)
HALL 107 (Common Space Types:Corridor/Transition cft 8 ft wide 93 sq ft.) F8-BM-F8-E8-M-07 STRIP LIGHT EMERGENCY LUG Other:	2	1	36	36
OFFICE 102 (Common Space Types:Office - Enclosed 80 sq ft.) F8-F8-F8-07 STRIP LIGHT Other:	2	1	36	36
SALES 101B (Retail/Sales Area 3272 sq ft.) F8-F8-F8-07 STRIP LIGHT Other:	2	46	36	1656
F8-BM-F8-E8-M-07 STRIP LIGHT EMERGENCY LUG Other:	2	6	36	216
PRE-SALES 106 (Common Space Types:Space 1804 sq ft.) F8-F8-F8-07 STRIP LIGHT Other:	2	7	36	252
F8-BM-F8-E8-M-07 STRIP LIGHT EMERGENCY LUG Other:	2	4	36	144
TOILET 105 (Common Space Types:Restrooms 103 sq ft.) F8-BM-F8-E8-M-07 STRIP LIGHT EMERGENCY LUG Other:	2	1	36	36
TOILET 104 (Common Space Types:Restrooms 118 sq ft.) F8-BM-F8-E8-M-07 STRIP LIGHT EMERGENCY LUG Other:	2	1	36	36
HALL 103 (Common Space Types:Corridor/Transition cft 8 ft wide 144 sq ft.)				

Project Title: 166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573 Report date: 06/14/2018
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Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3 C405.2.3 1. C405.2.3 2 (EL23)	Daylight zones provided with individual controls that control the lighting independent of general area lighting within daylight zones in the following spaces: 1. Spaces with a total of more than 100 watts of general lighting within sidelight zones complying with Section C405.2.3.2. General lighting does not include lighting that is required to have specific application control in accordance with Section C405.2.4. 2. Spaces with a total of more than 100 watts of general lighting within toplight zones complying with Section C405.2.3.3. See code section C405.2.3.1 Daylight responsive control function and section	<input type="checkbox"/> Complies <input checked="" type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Sidelight zones on first floor in Group A-2 and M occupancies.
C406.2 (EL26)	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input checked="" type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.4 (EL27)	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input checked="" type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.3 (EL47)	Exit signs do not exceed 5 watts per face.	<input type="checkbox"/> Complies <input checked="" type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C406.2 (EL26)	Low-voltage dry-type distribution electrical transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input checked="" type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.7 (EL27)	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input checked="" type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.8.2 (EL28)	Calculators and moving carts comply with ASME A17.1/JCSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/JCSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input checked="" type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.9 (EL29)	Total voltage drop across the combination of feeders and branch circuits ≤ 5%.	<input type="checkbox"/> Complies <input checked="" type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Project Title: 166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573 Report date: 06/14/2018
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A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
F8-EMB: F8-EMB: 80" STRIP LIGHT EMERGENCY LIG: Other:	2	1	36	36
SALES 101A (Retail Sales Area 6374 sq.ft.)				
F8-EMB: F8-EMB: 80" STRIP LIGHT: Other:	2	82	36	2952
F8-EMB: F8-EMB: 80" STRIP LIGHT: Other:	2	1	36	36
F8-EMB: F8-EMB: 80" STRIP LIGHT EMERGENCY LIG: Other:	2	8	36	288
		Total Proposed Watts =	5724	

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2020 NYStretch Energy Code - 2018 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____

Project Title: 166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573 Report date: 06/14/2018
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Section # & Req. ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5, F1717	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input checked="" type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.4.1, F1818	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.	<input type="checkbox"/> Complies <input checked="" type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Interior Lighting fixture schedule for values.
C408.1.1, F1571	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input checked="" type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.3, F1337	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input checked="" type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Project Title: 166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573 Report date: 06/14/22
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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	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input checked="" type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.10 [PR3]¹	New parking garages and new parking lots powered by the energy services for a building, and with 10 or greater parking spaces, provide either: 1. Panel capacity and conduit for the future installation of minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces; or 2. Minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input checked="" type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Project Title: 166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573 Report date: 06/14/22
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Data\Energy\Compliance\ELECTRICAL 2020 NYStretch - 2018 IECC.cck

Section # & Req. ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2 [EL22]?	Spaces required to have light- ing controls that have a manual control that allows the occupant to reduce connected lighting load to a reasonably uniform illumination pattern = 50 percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Lighting that is related to means of egress in stairways, ramps, corridors, or emergency routes.
C405.2.1. [EL18]?	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, corridor/transition areas, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sq ft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.3.3 for open plan office spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.1. [EL19]?	Occupancy sensors control function in warehouses. In warehouses, the lighting in aislesways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupancy sensor controls lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.2.1. [EL20]?	Occupant sensor control function in open plan office areas. Occupant sensor controls in open office spaces => 300 sq.ft. have controls 1) configured so that general lighting is controlled separately in control zones with floor areas <= 600 sq.ft. within the space. 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space. 3) are configured so that general lighting power in each control zone is reduced by = 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.2. [EL21]?	Each area not served by occupancy sensors (per C405.2.1) have time- switch controls and functions detailed in sections C405.2.1.3 and C405.2.2.2	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Project Title: 166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573 Report date: 06/14/22
Data filename: \\klhfs01.klhengrs.com\g\24000-24999\24200-24299\24211\Project Page 4 of 8
Data\Energy\Compliance\ELECTRICAL 2020 NYStretch - 2018 IECC.cck

KLH
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PELHAM, NY 10603
859-442-8050
PELHAM, NEW YORK
FORT THOMAS, KENTUCKY

mark	date	by	description

date	06/15/2022
project	2022.27 / D13216
designed	KLH
drawn	RNK
checked	LGF



DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONEY POINT, NY 10980
ELECTRICAL COMPLIANCE

project
drawing

sheet

EN-101

KLH PROJECT 24211

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.



COMcheck Software Version 4.1.5.3
Mechanical Compliance Certificate

Project Information

Energy Code: 2020 NYStretch Energy Code - 2018 IECC
Project Title: Dollar Tree
Location: Stony Point (Rockland), New York
Climate Zone: 5a
Project Type: Alteration

Construction Site: 166 S. Liberty Drive
Stony Point, NY 10980
Owner/Agent:
Designer/Contractor: KLH Engineers
1538 Alexandria Pike
Suite 11
Fort Thomas, KY 41075

Mechanical Systems List

Quantity System Type & Description

1 Water Heater
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)

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2020 NYStretch Energy Code - 2018 IECC requirements in COMcheck Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

Project Title: Dollar Tree Report date: 06/21/22
Data filename: G:\24000-24999\24200-24299\24211\Project Data\Energy\Compliance\Mechanical 2020 NYStretch - 2018 IECC.cck Page 1 of 7

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.6 [EL26] ¹	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.7 [EL27] ¹	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.8.2 [EL28] ¹	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.9 [EL29] ¹	Total voltage drop across the combination of feeders and branch circuits <= 5%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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: Dollar Tree Report date: 06/21/22
Data filename: G:\24000-24999\24200-24299\24211\Project Data\Energy\Compliance\Mechanical 2020 NYStretch - 2018 IECC.cck Page 5 of 7



COMcheck Software Version 4.1.5.3
Inspection Checklist
Energy Code: 2020 NYStretch Energy Code - 2018 IECC

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 [P63] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.11 [PR38] ¹	New parking garages and new parking lots powered by the energy services for a building, and with 10 or greater parking spaces, provide either: 1. Panel capacity and conduit for the future installation of minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces; or 2. Minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
Project Title: Dollar Tree Report date: 06/21/22
Data filename: G:\24000-24999\24200-24299\24211\Project Data\Energy\Compliance\Mechanical 2020 NYStretch - 2018 IECC.cck Page 2 of 7

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C404.3 [F11] ¹	Heat traps installed on supply and discharge piping of non-circulating systems.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C404.4 [F125] ¹	All piping insulated in accordance with section details and Table C403.11.3.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C404.6.1 [F12] ¹	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.1.1 [F157] ¹	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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: Dollar Tree Report date: 06/21/22
Data filename: G:\24000-24999\24200-24299\24211\Project Data\Energy\Compliance\Mechanical 2020 NYStretch - 2018 IECC.cck Page 6 of 7

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6] ¹	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C404.6.1, C404.6.2 [PL3] ¹	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C404.6.3 [PL7] ¹	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C404.7 [PL8] ¹	Demand recirculation water systems 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 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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: Dollar Tree Report date: 06/21/22
Data filename: G:\24000-24999\24200-24299\24211\Project Data\Energy\Compliance\Mechanical 2020 NYStretch - 2018 IECC.cck Page 3 of 7

Project Title: Dollar Tree Report date: 06/21/22
Data filename: G:\24000-24999\24200-24299\24211\Project Data\Energy\Compliance\Mechanical 2020 NYStretch - 2018 IECC.cck Page 7 of 7

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41] ¹	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.8.1.1 [ME36] ¹	New traction elevators with a rise of 75 feet or more have a power conversion system that complies as follows: C405.8.1.1.1 Induction motors with a Class IE2 efficiency ratings are be used. C405.8.1.1.2 Transmissions do not reduce the efficiency of the combined motor/transmission below that shown for the Class IE2 motor for elevators with capacities below 4,000 lbs. C405.8.1.1.3 Potential energy released during motion recovered with a regenerative drive that supplies electrical energy to the building electrical system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.10 [ME37] ¹	Commercial kitchen equipment shall comply with the minimum efficiency requirements of Tables C405.9(1) through Table C405.9(5).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.7.2 [ME115] ¹	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.7.5 [ME116] ¹	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria. See section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.4.1.4 [ME63] ¹	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 43°F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60°F and cooling setpoint >= 85°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.10, C403.10.1 [ME123] ¹	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.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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: Dollar Tree Report date: 06/21/22
Data filename: G:\24000-24999\24200-24299\24211\Project Data\Energy\Compliance\Mechanical 2020 NYStretch - 2018 IECC.cck Page 4 of 7



description
by
date
mark
revisions

06/15/2022
project
designed
drawn
checked
date
project
designed
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checked
JDB

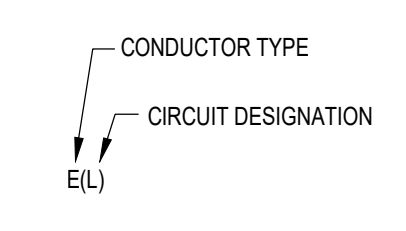



DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980
MECHANICAL COMPLIANCE

project
sheet
drawing
EN-102
KLH PROJECT 24211

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


WIRING LEGEND	
CONDUCTOR TYPE: E = 18/2 TP FPL	CIRCUIT DESIGNATION: L = INITIATION DATA CIRCUIT
	
SHOULD MANUFACTURER OF FIRE ALARM EQUIPMENT REQUIRE A DIFFERENT TYPE OR SIZE OF CABLE THAN HEREIN SPECIFIED, THE LARGER OR MORE STRINGENT TYPE OF CABLE SHALL BE USED.	











- FIRE ALARM EXISTING TO REMAIN KEYED NOTES (DENOTED AS )**
- THE EXISTING FIRE ALARM CONTROL PANEL AND ASSOCIATED EQUIPMENT LOCATED OUTSIDE THE DOLLAR TREE SPACE SHALL REMAIN AS CURRENTLY CONFIGURED. ALL NEW FIRE ALARM DEVICES WITHIN THE DOLLAR TREE SPACE SHALL BE CONNECTED DIRECTLY TO THE FIRE ALARM CONTROL PANEL. THE FIRE ALARM CONTROL PANEL SHALL TRANSMIT FIRE ALARM, SUPERVISORY, AND TROUBLE SIGNALS OFF-SITE AS CURRENTLY CONFIGURED.
 - THE EXISTING FIRE SPRINKLER RISER SERVING THE DOLLAR TREE SPACE IS CURRENTLY BEING ELECTRONICALLY MONITORED BY THE LANDLORD'S 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 DUCT SMOKE DETECTORS AND ASSOCIATED CABLING/CONDUIT SHALL REMAIN AS CURRENTLY CONFIGURED. FIELD VERIFY THE EXISTING DUCT SMOKE DETECTORS ARE IN GOOD WORKING CONDITION, OPERATIONAL, AND SUPERVISED BY THE FIRE ALARM SYSTEM. IF THE EXISTING DUCT SMOKE DETECTORS ARE NOT IN GOOD WORKING CONDITION, REPLACE THE EXISTING DUCT SMOKE DETECTOR. IF THE EXISTING DUCT SMOKE DETECTORS ARE NOT SUPERVISED BY THE FIRE ALARM SYSTEM, PROVIDE ADDRESSABLE INPUT MODULE TO INDIVIDUALLY MONITOR EACH EXISTING DUCT DETECTOR. PROVIDE NEW FIRE ALARM CABLING/CONDUIT AS NEEDED.

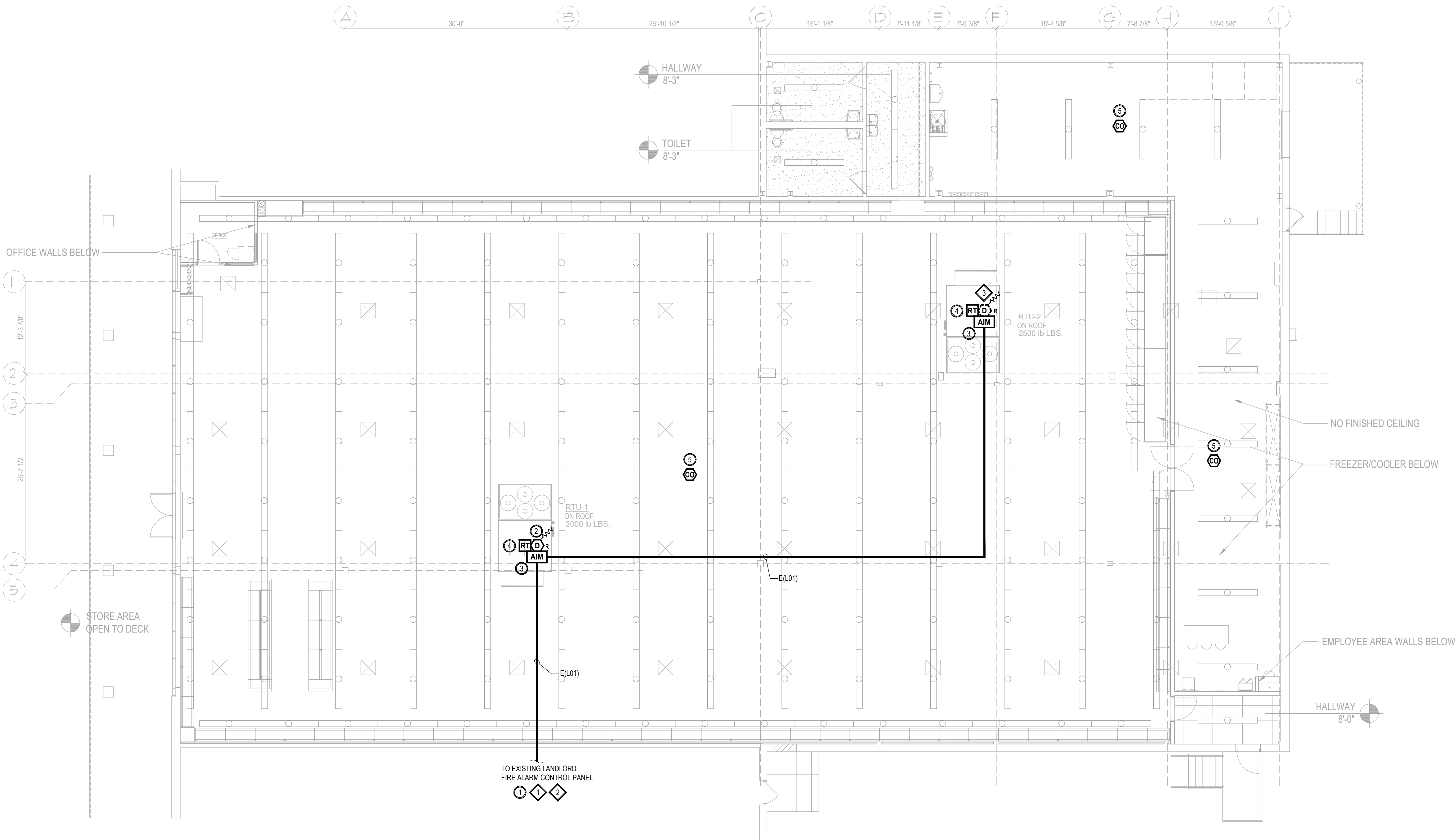
PROJECT INFORMATION	
PROJECT NAME:	DOLLAR TREE - STONY POINT, NY
LOCATION:	166 S LIBERTY DRIVE STONY POINT, NY 10980
FIRE PROTECTION:	100% SPRINKLERED
OCCUPANCY:	MERCANTILE (EXISTING)

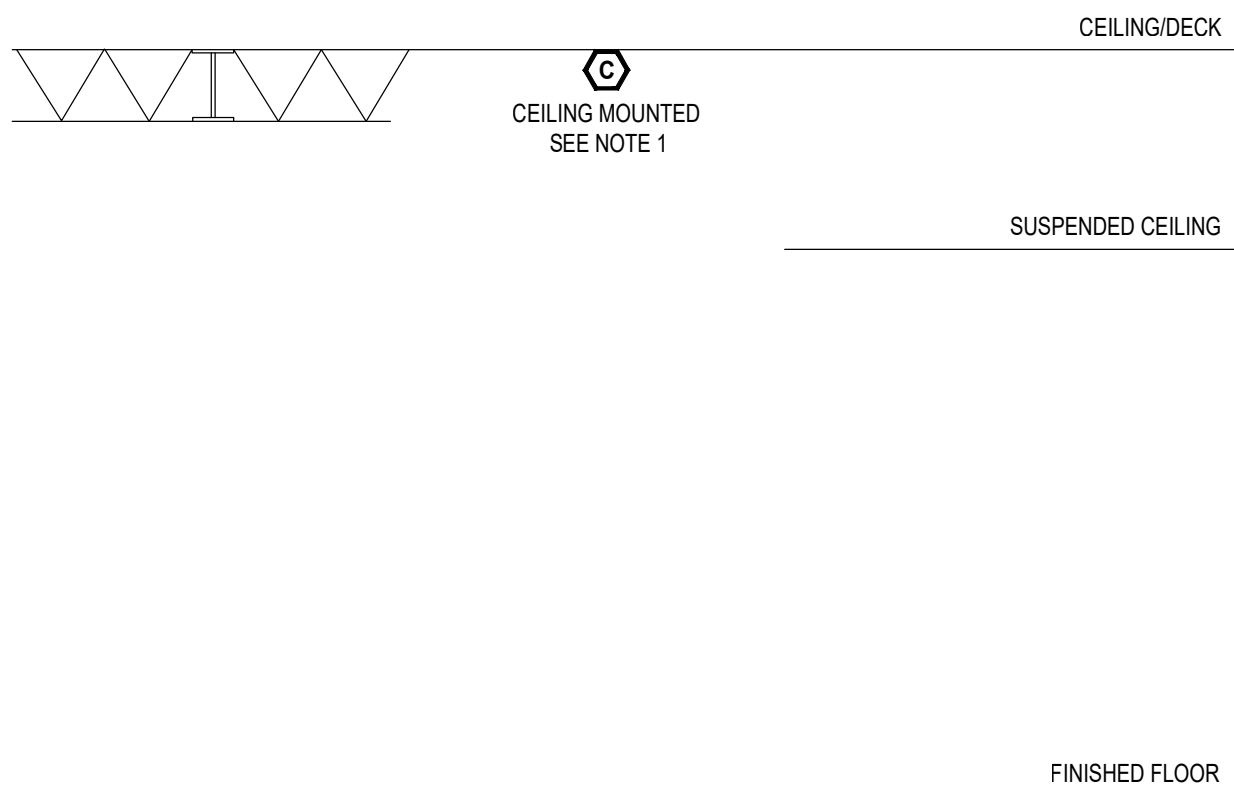
- SCOPE OF WORK**
- THE FIRE ALARM SYSTEM WITHIN THE FUTURE DOLLAR TREE SHALL UTILIZE THE EXISTING FIRE ALARM EQUIPMENT AS NEEDED.
 - THE EXISTING FIRE ALARM CONTROL PANEL SHALL REPORT ALL ALARM, SUPERVISORY, AND TROUBLE SIGNAL OFF-SITE AS CURRENTLY CONFIGURED.
 - THE NEW SCOPE OF WORK ON THE EXISTING FIRE ALARM SYSTEM SHALL CONSIST OF THE FOLLOWING:
 - NEW DUCT SMOKE DETECTOR ON THE RETURN SIDE
 - NEW STAND ALONE CARBON MONOXIDE ALARMS
 - POWER LIMITED FIRE ALARM CABLING SHALL BE PROVIDED

APPLICABLE CODES	
ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REFERENCED DESIGN STANDARDS.	
2020 NEW YORK STATE BUILDING CODE	
2020 NEW YORK STATE FIRE CODE	
2020 NEW YORK STATE MECHANICAL CODE	
2017 NATIONAL ELECTRICAL CODE	
2016 EDITION NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE	
CONFLICTS BETWEEN THE REFERENCE NFPA STANDARDS, FEDERAL OR STATE CODES, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF ENGINEER OF RECORD (CCJ) FOR RESOLUTION.	

- FIRE ALARM KEYED NOTES (DENOTED AS )**
- FIELD VERIFY EXISTING FIRE ALARM CONTROL PANEL (FACP) HAS SUFFICIENT STANDBY SECONDARY BATTERY CAPACITY TO ACCOMMODATE THE NEW FIRE ALARM EQUIPMENT. IF ADEQUATE SECONDARY BATTERY CAPACITY IS NOT PROVIDED, LARGER BATTERIES SHALL BE PROVIDED TO MEET THE SECONDARY BATTERY CAPACITY REQUIREMENTS IN NFPA 72. PROVIDE ALL CHARGING CABLES AND BATTERY CABINET AS NECESSARY. ENSURE THE NEW BATTERIES DO NOT EXCEED CHARGING CAPABILITIES OF EXISTING EQUIPMENT.
 - PROVIDE CONVENTIONAL DUCT SMOKE DETECTION ON THE RETURN SIDE OF ALL AIR HANDLING UNITS (AHU) WITH A DESIGN CAPACITY GREATER THAN 2,000 CFM. DUCT SMOKE DETECTORS SHALL BE INSTALLED BY THE MECHANICAL CONTRACTOR. CONFIGURE THE DUCT SMOKE DETECTOR TO UTILIZE THE AUXILIARY ALARM CONTACTS OF THE DUCT SMOKE DETECTOR TO SHUTDOWN THE RTU THROUGH THE INDIVIDUAL RTU CONTROLLER. PROVIDE ANY REQUIRED INTERMEDIATE RELAYS FOR CONNECTIONS TO HVAC CONTROLS. PROVIDE CABLING AND WIRING CONNECTIONS TO HVAC CONTROLS AND DUCT DETECTOR POWER. FINAL TERMINATIONS TO HVAC CONTROLS AND DUCT DETECTOR POWER ARE BY MECHANICAL OR CONTROLS CONTRACTOR. COORDINATE ALL EQUIPMENT INSTALLATION, POWER, AND INTERFACE CONNECTIONS WITH THE ELECTRICAL, MECHANICAL, AND TEMPERATURE CONTROLS CONTRACTORS.
 - PROVIDE AN ADDRESSABLE INPUT MODULE (AIM) FOR MONITORING OF THE RETURN DUCT SMOKE DETECTORS. PROVIDE CONNECTIONS TO THE ALARM AND TROUBLE CONTACTS TO INITIATE WITHOUT BEING AFFECTED BY THE STATUS OF THE TROUBLE CONTACTS. ROUTE CABLING TO DUCT SMOKE DETECTOR THROUGH THE ROOF UTILIZING THE CONDUIT TO THE RTU (PROVIDED BY ELECTRICAL CONTRACTOR). COORDINATE LOCATION OF THE CONDUIT WITH THE ELECTRICAL CONTRACTOR.
 - PROVIDE A REMOTE TEST STATION/ANNUNCIATOR FOR EACH DUCT SMOKE DETECTOR. PROVIDE ANY REQUIRED POWER CABLING CONNECTIONS TO DETECTORS AND REMOTE TEST STATION/ANNUNCIATOR. MOUNT THE REMOTE TEST STATION/ANNUNCIATOR ON THE COLUMN NEAREST TO THE RTU. COORDINATE EXACT MOUNTING LOCATIONS WITH THE GENERAL CONTRACTOR, OWNER, AND THE AHU PRIOR TO INSTALLATION.
 - PROVIDE A BATTERY POWERED CARBON MONOXIDE ALARM, AS OUTLINED IN THE DRAWINGS AND SPECIFICATIONS. THE CARBON MONOXIDE ALARM SHALL ACTIVATE AND SOUND A TEMPORAL 4 PATTERN, AS REQUIRED BY NFPA 72 / 720 AND THE NEW YORK STATE BUILDING CODE. CARBON MONOXIDE ALARMS ARE NOT REQUIRED TO BE INTERCONNECTED BETWEEN THE DETECTION ZONE OR WITHIN OTHER DETECTION ZONES. MOUNT CARBON MONOXIDE ALARM ON THE BOTTOM OF THE DECK (NOT ON THE BOTTOM OF STRUCTURAL MEMBERS) OR SUSPENDED CEILING AND LOCATED MORE THAN THREE (3) FEET FROM ANY MECHANICAL DIFFUSERS, AS INDICATED IN NFPA 72 / 720. THE CARBON MONOXIDE ALARM AND CABLING SHALL BE INSTALLED AND SUPPORTED A MINIMUM 1-1/2 INCHES FROM THE LOWEST SURFACE OF THE ROOF DECKING IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.

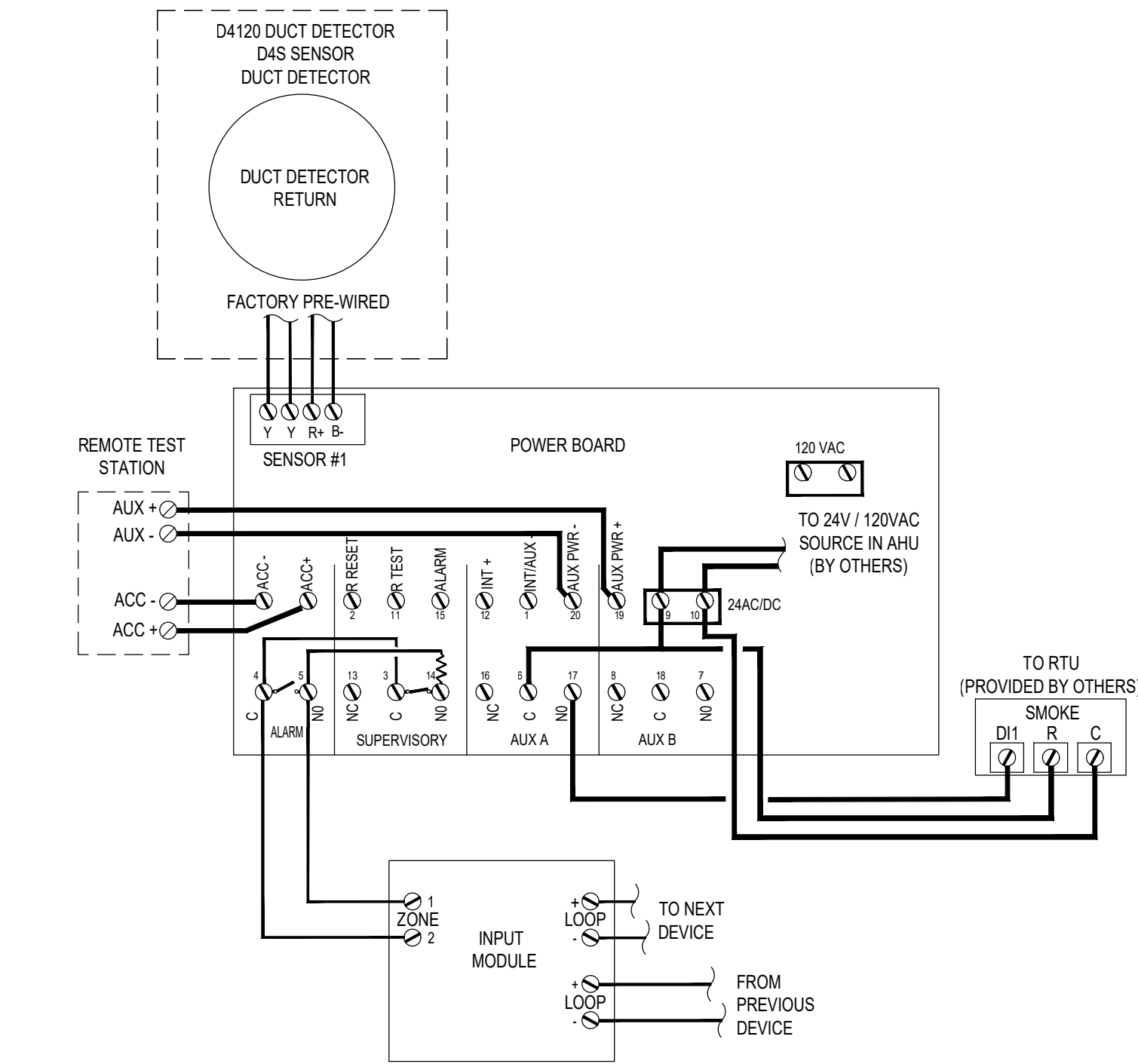
FIRE ALARM SYMBOL KEY	
	EXISTING STAND ALONE CEILING MOUNTED VISUAL APPLIANCE TO BE DISCONNECTED AND REMOVED (NOT CONNECTED TO FACP)
	EXISTING STAND ALONE COMBINATION CEILING MOUNTED AUDIBLE/VISUAL APPLIANCE & SMOKE ALARM - TO BE DISCONNECTED AND REMOVED (NOT CONNECTED TO FACP)
	EXISTING DUCT TYPE SMOKE DETECTOR TO REMAIN (R = RETURN SIDE)
	DUCT-TYPE PHOTOELECTRIC SMOKE DETECTOR (CONVENTIONAL) (POWERED BY RTU) (R = RETURN SIDE)
	STAND ALONE CARBON MONOXIDE ALARM (10 YEAR BATTERY OPERATED)
	NEW ADDRESSABLE INPUT MODULE (COMPATIBLE WITH EXISTING FACP)
	REMOTE TEST STATION / ANNUNCIATOR (SYSTEM SENSOR RTS15 KEY)
	FIRE ALARM PLENUM RATED CONDUCTORS (RED IN COLOR)
	JUNCTION BOX
	END OF LINE RESISTOR





- NOTES:
- WHERE INDICATED ON THE DRAWINGS - LOCATE CEILING MOUNTED CARBON ALARMS DETECTORS ON THE BOTTOM OF DECK (NOT ON BOTTOM OF STRUCTURAL MEMBERS), AND AS INDICATED IN NFPA 72 AND 720.

1
FA2
TYPICAL MOUNTING HEIGHT DETAIL
NOT TO SCALE



- NOTES:
- DUCT SMOKE DETECTORS SHALL BE POWERED FROM THE ASSOCIATED AIR HANDLING UNIT (AHU) AND MONITORED BY THE FIRE ALARM CONTROL PANEL (FACP).
 - THE FACP SHALL SUPERVISE ALL POWER CONNECTIONS AND TROUBLE CONDITIONS.
 - LOSS OF POWER TO A DUCT DETECTOR (AHU SUPPLIED POWER) SHALL TRANSMIT A TROUBLE CONDITION TO THE FACP.
 - CONFIGURE THE DUCT SMOKE DETECTOR TO UTILIZE THE AUXILIARY ALARM CONTACTS OF THE DUCT SMOKE DETECTOR TO SHUTDOWN THE RTU THROUGH THE INDIVIDUAL RTU CONTROLLER. PROVIDE ANY REQUIRED INTERMEDIATE RELAYS FOR CONNECTIONS TO HVAC CONTROLS. PROVIDE CABLING AND WIRING CONNECTIONS TO HVAC CONTROLS. FINAL TERMINATIONS TO HVAC CONTROLS ARE BY MECHANICAL OR CONTROLS CONTRACTOR.

2
FA2
DUCT DETECTOR WIRING DETAIL
NOT TO SCALE

FIRE ALARM MATRIX

EXISTING INITIATING DEVICES	ACTIVATES OUTPUT FUNCTIONS AS CURRENTLY CONFIGURED	ACTIVATES ALARM CONDITION AT THE EXISTING FIRE ALARM CONTROL PANEL(S) CURRENTLY CONFIGURED	TRANSMITS ALARM SIGNAL TO AN APPROVED MONITORING STATION AS CURRENTLY CONFIGURED	ACTIVATES SUPERVISOR CONDITION AT THE EXISTING FIRE ALARM CONTROL PANEL(S) CURRENTLY CONFIGURED	TRANSMITS SUPERVISOR SIGNAL TO AN APPROVED MONITORING STATION AS CURRENTLY CONFIGURED	ACTIVATES TROUBLE CONDITION AT THE EXISTING FIRE ALARM CONTROL PANEL(S) CURRENTLY CONFIGURED	TRANSMITS TROUBLE SIGNAL TO AN APPROVED MONITORING STATION AS CURRENTLY CONFIGURED	SHUTS DOWN HVAC EFFECTED UNIT	ACTIVATES INTERIOR MULTIBUS SIGNAL NOTIFICATION PLANES (TEMPORAL)	ACTIVATES TEMPORAL NOTIFICATION THROUGH EFFECTED ALARM	ACTIVATES EXTERIOR INTERCOM BEL NOTIFICATION APPLIANCE
FIRE SPRINKLER SYSTEMS											
- WATERFLOW SWITCH											
- CONTROL VALVE TAMPER SWITCH											
MANUAL PULL STATIONS											
SMOKE DETECTION DEVICES											
- SPOT TYPE											
- AIR HANDLING UNIT - RETURN SIDE											
CARBON MONOXIDE DETECTION DEVICES											
- SPOT TYPE (STAND ALONE BATTERY OPERATED)											
LOSS OF PRIMARY POWER AT THE FACP											
ABNORMAL CIRCUIT (OPEN, GROUND FAULT, SHORT) OR DEVICE											
NOTE:											
1. THIS MATRIX ONLY INCLUDES THE ITEMS WITHIN THIS SCOPE OF WORK.											
2. ALL EXISTING INITIATION DEVICES SHALL REMAIN AS CURRENTLY CONFIGURED.											
3. ALL EXISTING OUTPUT FUNCTIONS SHALL REMAIN AS CURRENTLY CONFIGURED. THE NEW OUTPUT FUNCTIONS DESCRIBED ABOVE IN THE FIRE ALARM MATRIX ARE FOR THE NEW FIRE ALARM EQUIPMENT LOCATED IN THE DOLLAR TREE SPACE.											

- ### INSTALLATION NOTES
- ALL WORK SHALL BE IN ACCORDANCE WITH NFPA STANDARDS AND ALL LOCAL ADOPTED CODES.
 - FIRE ALARM CABLING SHALL BE ACCEPTABLE TO THE FIRE ALARM EQUIPMENT MANUFACTURER FOR THE INTENDED PURPOSE. SHOULD MANUFACTURER OF FIRE ALARM EQUIPMENT REQUIRE DIFFERENT TYPE OR SIZE OF CABLE THAN HEREIN SPECIFIED, THE LARGER OR MORE STRINGENT TYPE OF CABLE SHALL BE USED.
 - ALL FIRE ALARM CABLING SHALL BE FIRE POWER LIMITED TYPE FPL, FPLR, OR FPLP AS REQUIRED BY THE NATIONAL ELECTRICAL CODE. SEE WIRING LEGEND FOR CABLE TYPES AND SIZES.
 - PROVIDE ALL REQUIRED CONDUIT, BACKBOXES, AND FITTINGS FOR THE FIRE ALARM SYSTEM CABLING.
 - FIRE ALARM CABLING SHALL BE RED IN COLOR.
 - FIRE ALARM CABLING SHALL NOT BE PAINTED.
 - CABLE ROUTING SHOWN ON DRAWINGS IS FOR INTENT. EXACT ROUTING SHALL BE COORDINATED WITH OTHER TRADES IN THE FIELD. SEE DRAWING NOTES AND DETAILS FOR ACCEPTABLE INSTALLATION METHODS.
 - ALL CABLE RUNS SHALL BE NEATLY BUNDLED, WRAPPED TIGHT AND PROPERLY SECURED. ANY CABLING NOT INSTALLED IN A NEAT AND PROFESSIONAL MANNER SHALL BE PULLED OUT AND RE-RUN BY INSTALLER AT NO ADDITIONAL COST TO OWNER.
 - CONTRACTOR RUNNING CABLING MUST MARK BOTH ENDS OF CABLING, PROVIDE A WIRE LEGEND FOR ALL LOCATIONS, AND PROVIDE A CONTINUITY TEST LOG FOR EACH CABLE.
 - EXPOSED CABLING SHALL BE RUN PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE. EXPOSED CABLING SHALL NOT BE RUN IN A 'SPAN' FASHION BETWEEN BAR JOISTS OR BEAMS (I.E.: CABLING SHALL BE ROUTED ALONG PATH OF JOISTS AND BEAMS). ALL CABLING SHALL BE SECURED TO THE STRUCTURAL CEILING BETWEEN JOISTS OR BEAMS.
 - ALL CABLING SHALL BE SUPPORTED FROM BUILDING STRUCTURE AND NOT FROM GRID, TILES OR SUPPORT WIRES. EXPOSED CABLING SHALL BE SUPPORTED BY BUILDING STRUCTURE AT NO MORE THAN FIVE (5) FOOT INTERVALS USING APPROVED "O" RINGS AND "J" HOOKS.
 - ALL FIRE ALARM CABLING BELOW THE STRUCTURE, IN ELECTRICAL AND MECHANICAL ROOMS (SUBJECT TO PHYSICAL DAMAGE), CONCEALED ABOVE CEILING OR IN PARTITIONS (SUBJECT TO PHYSICAL DAMAGE) SHALL BE INSTALLED IN METALLIC CONDUIT.
 - ALL POWER LIMITED FIRE ALARM CABLING ABOVE THE STRUCTURE, ABOVE LAY-IN CEILING, OR CONCEALED ABOVE CEILING OR IN PARTITIONS (NOT SUBJECT TO PHYSICAL DAMAGE) ARE NOT REQUIRED TO BE INSTALLED IN CONDUIT.
 - ALL NON-POWER LIMITED FIRE ALARM CABLING FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN CONDUIT.
 - ALL CONDUIT SHALL BE TERMINATED AT THE BAR JOIST LEVEL WITH SOME FORM OF GROMMET OR BOX CONNECTOR.
 - ALL CONDUIT LOCATED IN DRYWALL SHALL BE TERMINATED NO LESS THAN SIX (6) INCHES ABOVE THE CEILING TILE.
 - FOR DRYWALL APPLICATIONS, ALL CONDUIT AND BACKBOXES SHALL BE RECESSED INSIDE THE WALL.
 - ALL FIRE ALARM CABLING IN FINISHED AREAS SHALL BE CONCEALED.
 - COORDINATE DRILLING OF ANY HOLES (I.E. COLUMN PENETRATIONS) WITH THE OWNER'S REPRESENTATIVE AND ALL OTHER TRADES PRIOR TO INSTALLATION.
 - ALL FIRE ALARM DEVICES AND APPLIANCES SHALL BE INSTALLED IN OR ON A PROPER BACKBOX. NO DEVICES OR APPLIANCE SHALL BE INSTALLED WITHOUT A BACKBOX.
 - ALL CABLING, CONDUIT, AND BACKBOXES SHALL BE PROPERLY SUPPORTED AND SEISMICALLY BRACED, AS REQUIRED BY ALL APPLICABLE CODES AND THE LOCAL JURISDICTION.
 - ALL WIRING CONDUCTORS ENTERING FIRE ALARM PANEL(S) SHALL BE IN CONDUIT AND ENTER FROM THE SIDE OF THE FIRE ALARM PANEL(S).
 - CONDUIT FILL SHALL NOT EXCEED 40%.
 - ALL FIRE ALARM JUNCTION BOXES SHALL BE RED IN COLOR.
 - ALL FIRE ALARM CABLING RISERS SHALL BE INSTALLED IN EMT CONDUIT.

- ### GENERAL PROGRAMMING NOTES
- COORDINATE SPECIFIC ALPHANUMERIC DESCRIPTIONS WITH THE OWNER PRIOR TO SYSTEM PROGRAMMING.
- ### FIRESTOP NOTES
- ALL THROUGH-PENETRATIONS OF FIRE-RATED WALLS AND FLOORS SHALL BE FIRE-STOPPED.
 - FIRE-RATED GYPSUM BOARD WALLS CONSTRUCTED AS DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGNS IN THE U.L. FIRE RESISTANCE DIRECTORY (GENERALLY DOUBLE THICKNESS WALLBOARD) SHALL BE FIRE-STOPPED WITH U.L. SYSTEMS.
 - ALL REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOORS OR WALLS, AND ALL U.L. CLASSIFIED CONCRETE BLOCK WALLS SHALL BE FIRE-STOPPED WITH U.L. SYSTEMS.

- ### GENERAL NOTES
- THE FIRE ALARM SYSTEM SHALL OPERATE AS A CONTINUATION OF THE LANDLORD FIRE ALARM CONTROL PANEL. ALL NEW FIRE ALARM DEVICES WITHIN THE DOLLAR TREE SPACE SHALL BE CONNECTED DIRECTLY TO THE EXISTING FIRE ALARM CONTROL PANEL. THE FIRE ALARM CONTROL PANEL SHALL TRANSMIT FIRE ALARM, SUPERVISORY, AND TROUBLE SIGNALS OFF-SITE AS CURRENTLY CONFIGURED.
 - EXISTING FIRE ALARM CIRCUITS SHALL REMAIN AS CURRENTLY CONFIGURED. NEW FIRE ALARM CIRCUITS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
 - SUPERVISORY CIRCUITS - CLASS B
 - SIGNALING LINE CIRCUITS (SLC) - CLASS B
 - AUXILIARY CIRCUITS - CLASS B
 - NOTIFICATION APPLIANCE CIRCUITS (NAC) - CLASS B
 - CIRCUITS FOR RELAY COIL OPERATION SHALL BE 24 VDC MAXIMUM WITH A SEPARATE OR INTEGRAL FIELD COLLAPSING DIODE.
 - THE EXISTING FIRE ALARM CONTROL PANEL (FACP) AND ASSOCIATED EQUIPMENT LOCATED OUTSIDE THE DOLLAR TREE SPACE SHALL REMAIN AS CURRENTLY CONFIGURED. FIELD VERIFY THAT ALL CABINETS HAVE A HINGED DOOR KEYS IN COMMON WITH ALL OTHER KEYED DEVICES THROUGHOUT THE SYSTEM.
 - THE EXISTING SPRINKLER WATERFLOW AND CONTROL VALVE TAMPER SWITCHES SERVING DOLLAR TREE SPACE ARE LOCATED IN THE COMMON SPRINKLER RISER ROOM AND SHALL REMAIN AS CURRENTLY CONFIGURED.
 - THE INSTALLING FIRE ALARM CONTRACTOR SHALL FIELD VERIFY EXISTING FIRE ALARM CONTROL PANEL (FACP) HAS SUFFICIENT STANDBY SECONDARY BATTERY CAPACITY TO ACCOMMODATE THE NEW FIRE ALARM EQUIPMENT. IF ADEQUATE SECONDARY BATTERY CAPACITY IS NOT PROVIDED, CONTRACTOR SHALL PROVIDE LARGER BATTERIES WITHOUT EXCEEDING EXISTING FACP MANUFACTURERS CHARGING CAPABILITIES. BATTERY CABINET SHALL BE PROVIDED AS NEEDED.
 - UPON LOSS OF BUILDING POWER, THE ENTIRE SYSTEM SHALL TRANSFER TO SECONDARY POWER WITHIN TEN (10) SECONDS, AND WITHOUT LOSS OF SIGNALS. THE SYSTEM SHALL OPERATE UNDER SECONDARY POWER IN NORMAL OR TROUBLE CONDITIONS FOR TWENTY-FOUR (24) HOURS AND HAVE SUFFICIENT POWER TO SUPPORT COMPLETE ALARM CONDITION OPERATION FOR A SUBSEQUENT FIVE (5) MINUTES AT MAXIMUM CONNECTED LOAD.
 - DEVICES AND APPLIANCE LOCATIONS AS SHOWN ON THE FIRE ALARM PLANS ARE NOT DIMENSIONED FOR EXACT INSTALLATION. COORDINATE EXACT PLACEMENT OF ALL DEVICES AND APPLIANCES WITH THE ARCHITECTURAL PLANS AND GENERAL CONTRACTOR PRIOR TO INSTALLATION.
 - ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO THE PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES AND QUANTITIES OF OTHER TRADES WORK.
 - ALL THROUGH-PENETRATIONS OF FIRE-RATED WALLS AND FLOORS SHALL BE FIRE-STOPPED.
 - ALL JUNCTION BOXES SHALL BE ACCESSIBLE FOR SERVICE. PROVIDE ANY REQUIRED ACCESS PANELS.
 - ALL SIGNALING LINE CIRCUITS, INITIATING DEVICE CIRCUITS, AND NOTIFICATION APPLIANCE CIRCUITS SHALL BE SUPERVISED IN ACCORDANCE WITH NFPA 72.
 - PROVIDE ANY REQUIRED SEISMIC BRACING FOR ALL FIRE ALARM SYSTEM DEVICES, CONDUIT AND BACKBOXES.
 - PROVIDE A PRINTED LABEL FOR EACH INITIATING DEVICE INDICATING THE SPECIFIC ADDRESS FOR THAT DEVICE. THE LABEL SHALL INCLUDE THE PROGRAMMING ADDRESS AND DEVICE NUMBER. THE LABEL SHALL BE LOCATED ON THE BASE OF ALL DETECTORS AND THE COVER PLATES OF EACH ADDRESSABLE DEVICE.

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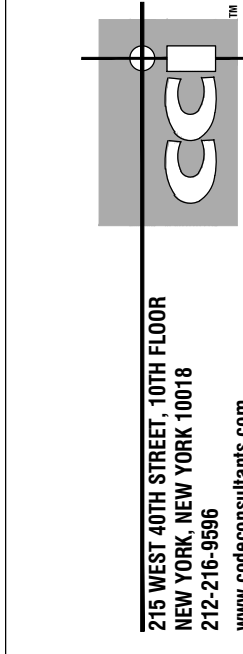
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FIRE ALARM NOTES, CALCULATIONS AND MATRIX

SECTION 16720/28311 - FIRE ALARM SYSTEMS	
PART 1 — GENERAL	
1.01 RELATED DOCUMENTS	
A. CONDITIONS OF THE CONTRACT, DRAWINGS, GENERAL REQUIREMENTS CONDITIONS AND DIVISION 1 SPECIFICATION APPLY TO THE WORK OF THIS SECTION.	
1.02 SUMMARY	
A. PROVIDE ALL REQUIRED LABOR, WARRANTY LABOR, MATERIALS, EQUIPMENT, SYSTEM PROGRAMMING, TESTING, SUBMITTALS AND SERVICES NECESSARY FOR A COMPLETE AND OPERATIONAL FIRE ALARM SYSTEM AS HEREINAFTER DESCRIBED, AND AS SHOWN ON THE ENGINEERING DRAWINGS.	
B. WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:	
1. CONNECTIONS TO EXISTING FACP	
2. DATA CIRCUITS	
3. INITIATION CIRCUITS	
4. HVAC SHUTDOWN	
5. DETECTION DEVICES	
6. CARBON MONOXIDE ALARMS	
C. PROVIDE A MINIMUM OF ONE (1) HOUR TRAINING, FOR STAFF PERSONNEL, IN THE OPERATION AND USE OF THE SYSTEM.	
D. IT IS INTENDED THAT THE ENGINEERING DRAWINGS AND SPECIFICATIONS 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 DEFINITIONS	
A. DEFINITIONS REFERENCED IN THESE SPECIFICATIONS ARE AS FOLLOWS:	
1. AHJ: AUTHORITY HAVING JURISDICTION	
2. FACP: FIRE ALARM CONTROL PANEL	
3. UL: UNDERWRITERS LABORATORIES, INC.	
4. LED: LIGHT-EMITTING DIODE	
5. NICET: NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES	
6. NFPA: NATIONAL FIRE PROTECTION ASSOCIATION	
7. FAEM: FIRE ALARM EQUIPMENT MANUFACTURER	
8. NRTL: NATIONALLY RECOGNIZED TESTING LABORATORY	
1.04 REFERENCES	
A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REFERENCED DESIGN STANDARDS.	
B. IF THERE IS A CONFLICT BETWEEN THE APPLICABLE CODES, REFERENCED DESIGN STANDARDS, OR LOCAL AMENDMENTS AND THIS SPECIFICATION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY BRING THE CONFLICT TO THE ENGINEER FOR RESOLUTION.	
1.05 SYSTEM DESCRIPTION	
A. THE SYSTEM SHALL CONTINUE TO OPERATE AS A LOW VOLTAGE FIRE ALARM SYSTEM AND SUPERVISED FIRE ALARM SYSTEM AS HEREINAFTER SPECIFIED. THE EXISTING FIRE ALARM CONTROL PANEL AND DEVICES SHALL REMAIN AND BE REUSED AS CURRENTLY CONFIGURED. NEW INITIATING DEVICE CIRCUITS SHALL MEET THE MINIMUM REQUIREMENTS OF CLASS B. NEW NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE MINIMUM REQUIREMENTS OF CLASS B. NEW SIGNALING LINE CIRCUITS SHALL MEET THE MINIMUM REQUIREMENTS OF CLASS B. CIRCUITS FOR RELAY COIL OPERATION SHALL BE A VOLT MAXIMUM WITH A SEPARATE OR INTEGRAL FIELD COLLAPSING DIODE.	
B. UPON LOSS OF BUILDING POWER, THE ENTIRE SYSTEM SHALL TRANSFER TO WITHIN TEN (10) SECONDS, AND WITHOUT LOSS OF SIGNALS. THE SYSTEM SHALL OPERATE UNDER SECONDARY POWER IN NORMAL OR TROUBLE CONDITIONS FOR TWENTY-FOUR (24) HOURS AND HAVE SUFFICIENT POWER TO SUPPORT COMPLETE ALARM CONDITION OPERATION FOR A SUBSEQUENT FIVE (5) MINUTES.	
C. SYSTEM OPERATION SHALL BE AS FOLLOWS:	
1. ABNORMAL CIRCUIT CONDITIONS OR DEVICES, AS REQUIRED FOR THE CLASS OF THE CIRCUIT, SHALL INITIATE A "TROUBLE" CONDITION AT THE CONTROL PANEL FOR THAT SPECIFIC CIRCUIT OR DEVICE. THE "TROUBLE" INDICATION SHALL DESCRIBE THE NATURE OF THE CONDITION ON THE AFFECTED CIRCUIT OR DEVICE. THE FIRE ALARM SYSTEM SHALL TRANSMIT A "TROUBLE" CONDITION OFF-SITE AS CURRENTLY CONFIGURED.	
2. ACTIVATION OF ANY SUPERVISORY DEVICE AS INDICATED ON THE ENGINEERING DRAWINGS SHALL INITIATE A "SUPERVISORY" CONDITION AT THE CONTROL PANEL FOR THAT SPECIFIC DEVICE. THE "SUPERVISORY" INDICATION SHALL DESCRIBE THE NATURE OF THE CONDITION AND SPECIFIC ADDRESS AND ALPHANUMERIC DESCRIPTION OF THE DEVICE AFFECTED. THE FIRE ALARM SYSTEM SHALL TRANSMIT A "SUPERVISORY" CONDITION OFF-SITE AS CURRENTLY CONFIGURED.	
3. ACTIVATION OF ANY ALARM DEVICE AS INDICATED ON THE ENGINEERING DRAWINGS SHALL INITIATE AN "ALARM" CONDITION AT THE CONTROL PANEL FOR THAT SPECIFIC DEVICE. THE "ALARM" INDICATION SHALL DESCRIBE THE NATURE OF THE CONDITION AND SPECIFIC ADDRESS AND ALPHANUMERIC DESCRIPTION OF THE DEVICE AFFECTED. THE FIRE ALARM SYSTEM SHALL TRANSMIT AN "ALARM" CONDITION OFF-SITE AS CURRENTLY CONFIGURED.	
4. INITIATION OF AN "ALARM" CONDITION SHALL RESULT IN THE FOLLOWING FUNCTIONS TO BE PERFORMED BY THE SYSTEM:	
a. INITIATE AN ALARM INDICATION ON THE CONTROL PANEL, BY TONE AND ILLUMINATE THE CORRESPONDING DEVICE SPECIFIC ALPHANUMERIC LCD DESCRIPTION, MANUALLY ACTIVATING THE "ALARM SILENCE" SHALL SILENCE THE TONE AT THE PANEL. THE ALARM ALPHANUMERIC DISPLAY SHALL REMAIN "ON" AT THE CONTROL PANEL UNTIL THE CONDITION CAUSING THE ALARM HAS BEEN CLEARED AND RESET. AN ADDITIONAL ALARM REPORTED TO THE PANEL SUBSEQUENT TO ACTIVATING THE "ALARM SILENCE" SHALL REACTIVATE THE CONTROL PANEL TONE.	
b. THE EXISTING FIRE ALARM CONTROL PANEL SHALL TRANSMIT AN "ALARM" SIGNAL APPROVED OFF-SITE MONITORING FACILITY.	
5. ACTIVATION OF ALARM NOTIFICATION APPLIANCES, FIRE SAFETY FUNCTIONS, AND ANNUNCIATION AT THE PROTECTED PREMISES SHALL OCCUR WITHIN TEN (10) SECONDS AFTER THE ACTIVATION OF AN INITIATING DEVICE.	
1.06 QUALITY ASSURANCE	
A. ALL WORK SHALL MEET THE REQUIREMENTS OF THE OWNER, ARCHITECT, ENGINEER AND AUTHORITY HAVING JURISDICTION (AHJ).	
B. ALL EQUIPMENT AND COMPONENTS SHALL BE UL LISTED, FOR THE ACTUAL INTENDED USE, UNLESS HEREINAFTER SPECIFICALLY EXCLUDED FROM SUCH A LISTING.	
C. INSTALLATION AND SUPERVISION OF INSTALLATION SHALL BE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE REGULATIONS, LICENSES, AND PERMITS FOR FIRE ALARM SYSTEM INSTALLERS IN THIS JURISDICTION.	
D. INSTALLER MUST HAVE BEEN ACTIVELY ENGAGED IN THE BUSINESS OF SELLING, INSTALLING, AND SERVICING FIRE ALARM SYSTEMS FOR AT LEAST FIVE (5) YEARS.	
E. INSTALLER MUST BE AN AUTHORIZED REPRESENTATIVE OF THE FIRE ALARM EQUIPMENT MANUFACTURER (FAEM) AND HAVE TECHNICAL FACTORY TRAINING SPECIFICALLY FOR THE SYSTEM PROPOSED.	
F. THE FAEM SHALL HAVE A REPRESENTATIVE SUPERVISE THE FINAL CONNECTION OF DEVICES, WIRING, AND PROGRAMMING OF THE CONTROL PANELS. THE FAEM REPRESENTATIVE SHALL BE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET) CERTIFIED AS LEVEL II OR HIGHER FIRE ALARM PROTECTION / FIRE ALARM SYSTEMS ENGINEERING TECHNICIAN.	
1.07 REGULATORY REQUIREMENTS	
A. ALL WORK SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE CODES AND REFERENCED DESIGN STANDARDS.	
B. NO APPROVALS OR INTERPRETATIONS OF THE DESIGN DOCUMENTS SHALL BE PURSUED EXCEPT THROUGH THE ENGINEER.	
C. ANY WORK PERFORMED PRIOR TO THE SATISFACTORY REVIEW OF THE SHOP DRAWINGS BY THE ENGINEER, APPROVAL BY THE AHJ, AND DETERMINED TO BE NONCOMPLIANT WITH THE CONTRACT DOCUMENTS OR APPLICABLE CODES BY THE OWNER OR AHJ WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.	
D. THE SYSTEM WILL NOT BE ACCEPTABLE UNTIL FINAL TESTING AND RECEIPT OF THE INSPECTION AND TESTING FORM HAS BEEN OBTAINED.	
1.08 SUBMITTALS	
A. THE ENGINEERING DRAWINGS HAVE BEEN PREPARED USING AUTOCAD. THESE DOCUMENTS WILL BE MADE AVAILABLE EITHER IN ELECTRONIC OR HARD COPY FORM. UTILIZATION OF THESE DOCUMENTS FOR THE DEVELOPMENT OF SHOP DRAWINGS AND SUBMITTALS DOES NOT RELIEVE THE CONTRACTOR FROM ANY RESPONSIBILITIES REQUIRED HEREIN.	
B. IN THE SUBMITTALS, THE CONTRACTOR MUST CLEARLY IDENTIFY ALL AREAS AND SECTIONS OF THIS SPECIFICATION TO WHICH THEY TAKE EXCEPTION OR ARE NOT CAPABLE OF PROVIDING.	
C. SUBMITTALS WILL BE DISAPPROVED UNLESS REQUIRED EQUIPMENT LITERATURE, CALCULATIONS, AND COMPLETE SHOP DRAWINGS ARE SUBMITTED TOGETHER AS ONE PACKAGE FOR REVIEW.	
D. THE ENGINEER SHALL REVIEW THE CONTRACTOR'S SUBMITTALS TO VERIFY CONFORMANCE TO THE PROJECT SPECIFICATIONS AND DESIGN CONCEPTS EXPRESSED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ALLOW SUFFICIENT TIME TO PERMIT ADEQUATE REVIEW. REVIEW OF SUCH SUBMITTALS IS NOT CONDUCTED FOR THE PURPOSE OF DETERMINING THE ACCURACY AND COMPLETENESS OF DETAILS AND DIMENSIONS, OR SUBSTANTIATING INSTALLATION OR PERFORMANCE OF EQUIPMENT AND SYSTEMS DESIGNED BY THE CONTRACTOR, ALL OF WHICH REMAIN THE CONTRACTOR'S RESPONSIBILITY TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW SHALL NOT CONSTITUTE APPROVAL OF SAFETY PRECAUTIONS OF CONSTRUCTION, MEANS, METHODS, TECHNIQUES, SEQUENCES OF PROCEDURES, OR APPROVAL OF A SPECIFIC ASSEMBLY.	
E. PRIOR TO RELEASE OF EQUIPMENT FOR SHIPMENT OR INSTALLATION, SUBMIT TO THE ENGINEER THE FOLLOWING:	
1. SHOP DRAWINGS. THE SPECIFIC QUANTITY TO BE SUBMITTED SHALL BE CONFIRMED WITH THE GENERAL CONTRACTOR AND OWNER. ELECTRONIC SUBMITTALS ARE ACCEPTABLE. SUBMITTALS MUST BE COMPREHENSIVE OF THE ENTIRE PROJECT, COMPLETE IN ALL DETAIL, AND INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:	
2.01 CONTROL PANELS	
A. THE EXISTING LANDLORD FIRE ALARM CONTROL PANEL PRELITE SERVICING THE DOLLAR TREE SPACE IS EXISTING TO REMAIN.	
2.02 ADDRESSABLE MONITOR MODULES	
A. PROVIDE ADDRESSABLE MONITOR MODULES WHERE REQUIRED TO INTERFACE WITH CONTACT ALARM DEVICES, OR TO CONNECT A SUPERVISED ZONE OF CONVENTIONAL INITIATING DEVICES (ANY NORMALLY OPEN DRY CONTACT DEVICE) TO AN INTELLIGENT SLC LOOP.	
B. PROVIDE ADDRESS-SETTING MEANS AND STORE AN INTERNAL IDENTIFICATION CODE WHICH THE CONTROL PANEL SHALL USE TO IDENTIFY THE TYPE OF DEVICE. FLASH STATUS/POWER LED UNDER NORMAL CONDITIONS, INDICATING THAT THE MONITOR MODULE IS OPERATIONAL AND IN REGULAR COMMUNICATION WITH THE CONTROL PANEL.	
THE LED MAY BE PLACED INTO STEADY ILLUMINATION BY THE CONTROL PANEL, INDICATING THAT AN ALARM CONDITION HAS BEEN DETECTED, WHERE STATUS LED IS PROVIDED, MANUFACTURER PROVIDED COVER PLATE WITH VIEWING HOLE SHALL BE PROVIDED.	
C. PROVIDE AN AUTOMATIC TEST FEATURE TO PERMIT FUNCTIONAL TESTING OF THE DEVICE FROM THE MAIN CONTROL PANEL. INDICATE RESULTS OF THE TEST ON THE LCD DISPLAY AT THE CONTROL PANEL.	
D. MONITOR MODULES WITH MULTIPLE INPUT CONTACT CONNECTIONS ARE ACCEPTABLE IF EACH INPUT IS CAPABLE OF INDEPENDENT PROGRAMMING AND FUNCTIONAL OPERATION.	
E. COMPATIBLE WITH THE LANDLORD FIRE ALARM CONTROL PANEL.	
2.03 REMOTE TEST STATIONS	
A. PROVIDE A REMOTE TEST STATION WITH TEST SWITCH AND INDICATING LED LIGHTS FOR EACH DUOT DETECTOR. LOCATE KEY TEST STATIONS IN PAIR VIEW ON WALLS SO THAT THEY CAN BE OBSERVED AND OPERATED FROM A NORMAL STANDING POSITION.	
B. REMOTE TEST STATIONS, WHERE INDICATED ON THE PLANS, SHALL CONSIST OF A KEY OPERATED SWITCH AND INDICATING LED. THE REMOTE TEST STATION SHALL BE LISTED FOR USE WITH THE DUCT SMOKE DETECTOR.	
C. COMPATIBLE WITH THE LANDLORD FIRE ALARM CONTROL PANEL. ACCEPTABLE MANUFACTURE IS SYSTEM SENSORS REMOTE TEST STATION (RTS-15KEY).	
2.04 CONVENTIONAL PHOTOELECTRIC SMOKE DETECTORS FOR DUCT APPLICATIONS	
A. PROVIDE CONVENTIONAL TYPE PHOTOELECTRIC SMOKE DETECTORS FOR DUCT APPLICATIONS WITH THE ABILITY TO BE MONITORED BY THE CONTROL PANEL.	
B. PROVIDE DETECTORS OPERATING IN AIR VELOCITIES OF ONE HUNDRED (100) FPM TO FOUR THOUSAND (4,000) FPM WITHOUT ADVERSE EFFECTS ON DETECTOR SENSITIVITY.	
C. PROVIDE A FIELD TEST METHOD TO DETERMINE THE SENSITIVITY OF THE DETECTOR.	
D. PROVIDE MULTI-FUNCTION ALARM/POWER STATUS LED. FLASH STATUS LED UNDER NORMAL CONDITIONS, INDICATING THAT THE DETECTOR IS OPERATIONAL, AND IN REGULAR COMMUNICATION WITH THE CONTROL PANEL. THE LED MAY BE PLACED INTO STEADY ILLUMINATION, INDICATING THAT AN ALARM CONDITION HAS BEEN DETECTED AND VERIFIED.	
E. PROVIDE CAPABILITY TO CONNECT A REMOTE LED ANNUNCIATOR.	
F. PROVIDE A MOLDED PLASTIC ENCLOSURE WITH INTEGRAL CONDUIT KNOCKOUTS. PROVIDE HOUSING WITH GASKET SEALS TO INSURE PROPER SEATING OF THE HOUSING TO THE ASSOCIATED DUCTWORK. PROVIDE SAMPLING TUBES THAT EXTEND ACROSS THE WIDTH OF THE DUCT AND IN COMPLIANCE WITH THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS.	
G. PROVIDE A SEPARATE SELF-CONTAINED RELAY FOR ANY ASSOCIATED CONTROL FUNCTIONS. MINIMUM RATING OF FORM C CONTACTS SHALL BE TWO (2) AMPERES AT 24 VOLTS AND ONE HALF (0.5) AMPERES AT 120 VOLTS AC.	
H. REMOTE TEST STATIONS, WHERE INDICATED ON THE ENGINEERING DRAWINGS, SHALL CONSIST OF A KEY OPERATED SWITCH AND INDICATING LED. THE REMOTE TEST STATION SHALL BE LISTED FOR USE WITH THE DUCT SMOKE DETECTOR.	
I. COMPATIBLE WITH LANDLORD FIRE ALARM SYSTEM.	
2.05 BATTERY-OPERATED CARBON MONOXIDE ALARMS	
A. CO ALARM SHALL MEET UL STANDARDS 2034.	
B. CO ALARM SHALL BE POWERED BY A SEALED LITHIUM BATTERY.	
C. UNIT SHALL BE EQUIPPED WITH STATUS LEADS THAT INDICATE NORMAL ALARM CONDITION AND DETECTOR END OF LIFE.	
D. INTEGRAL ALARM HORN SHALL BE RATED AT 85 DECIBELS AT 10 FEET.	
E. AUDIBLE ALARM SIGNAL SHALL PRODUCE A TEMPORAL A PATTERN.	
F. UNIT SHALL PRODUCE AN AUDIBLE WARNING SIGNAL AT 10-YEAR PRODUCT END-OF-LIFE.	
2.06 CONDUCTORS	
A. INITIATION, NOTIFICATION AND AUXILIARY DEVICE CIRCUIT CONDUCTORS FOR POWER LIMITED CIRCUITS SHALL BE TYPE FPL, FPLP, OR FPLR, WHERE CONDUCTORS ARE INSTALLED IN COMPLETE RACEWAY SYSTEMS. TYPE THHN OR THHN MAY BE USED IF APPROVED BY THE MANUFACTURER WHERE THE SIZE OR TYPE OF CONDUCTOR HEREINAFTER SPECIFIED COMPLIES WITH THE FAEM'S REQUIREMENTS, THE LARGER SIZE OR MORE SPECIALIZED CONDUCTOR TYPE WILL BE USED.	
B. CONDUCTORS FOR ANY NON-POWER LIMITED CIRCUITS SHALL BE TYPE NPLF, NPLPF, NPLFR OR THHN.	
C. CONDUCTORS FOR WET LOCATIONS SHALL BE AS FOLLOWS:	
1. TYPES RHW, TW, THW, THHW, THWN, XHHW OR OTHER TYPE LISTED FOR USE IN WET LOCATIONS.	
2. TYPE LISTED FOR DIRECT BURIAL.	
3. ALL ELECTRICAL CHARACTERISTICS (CONDUCTOR-TO-CONDUCTOR CAPACITANCE, DC RESISTANCE, ETC.) OF THE FIRE ALARM CONDUCTORS SHALL MEET THE REQUIREMENTS OF THE SELECTED FAEM FOR THE INTENDED APPLICATION.	
E. ALL FIRE ALARM CONDUCTORS SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 760 OF THE NATIONAL ELECTRICAL CODE, AND ALL LOCAL CODES AND STANDARDS.	
2.07 RACEWAY	
A. THE FOLLOWING RACEWAY TYPES SHALL BE PERMITTED:	
1. EMT CONDUIT (3/4 INCH MINIMUM).	
2. RIGID CONDUIT (3/4 INCH MINIMUM).	
3. NON-METALLIC CONDUIT FOR WET LOCATIONS (3/4 INCH MINIMUM).	
4. SURFACE MOUNTED METALLIC RACEWAY WITH A MINIMUM SIZE EQUIVALENT TO THREE QUARTER (3/4) INCH NOMINAL CONDUIT.	
B. ALL RACEWAY TYPES SHALL BE NEW. INSTALLING USED RACEWAY IS UNACCEPTABLE.	
C. USING EXISTING RACEWAY IS UNACCEPTABLE WITHOUT PRIOR WRITTEN PERMISSION OF THE ENGINEER OR OWNER'S REPRESENTATIVE.	
D. BOXES, SUPPORTS, AND OTHER ACCESSORIES FOR THE RACEWAY INSTALLATION SHALL BE LISTED FOR THE INTENDED APPLICATION.	
PART 3 — EXECUTION	
3.01 COORDINATION WITH OTHER TRADES	
A. COORDINATE CLOSELY WITH ALL OTHER TRADES TO EXPEDITE CONSTRUCTION, ACCURATELY INTERFACE WITH RELATED SYSTEMS AND AVOID INTERFERENCES.	
3.02 INSTALLATION / APPLICATION	
A. FURNISH AND INSTALL ALL CONTROL WIRING, RACEWAY AND OUTLET BOXES FOR THE FIRE ALARM SYSTEM.	
B. FURNISH AND INSTALL ALL BACKBOXES, EQUIPMENT AND DEVICES FOR THE FIRE ALARM SYSTEM.	
1. BACKBOXES SHALL BE OF THE EXACT TYPE RECOMMENDED BY THE FAEM AS SHOWN ON THE EQUIPMENT AND DEVICE SUBMITTALS.	
2. BACKBOXES SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS.	
3. DEVICES AND EQUIPMENT MUST BE INSTALLED BY PERSONNEL LEGALLY PERMITTED AND CURRENTLY LICENSED TO INSTALL THE DEVICES AND EQUIPMENT. THE COST OF INSTALLATION, WARRANTY OF INSTALLATION AND EQUIPMENT, COORDINATION OF THE INSTALLATION, AND SUPERVISION OF THE INSTALLATION ARE RESPONSIBILITIES OF THE CONTRACTOR.	
C. ALL FIRE ALARM CONDUIT, JUNCTION BOXES, PULL BOXES, CABLE SPLICES AND TERMINAL CABINETS SHALL BE ACCESSIBLE, PAINTED RED OR CLEARLY MARKED "FIRE ALARM."	
THE CONTRACTOR SHALL COMPLY WITH ANY LOCAL CODES OR AHJ REQUIREMENTS FOR CIRCUIT IDENTIFICATION, ANY ACCESS PANELS REQUIRED FOR THE ACCESSIBILITY TO THE JUNCTION BOXES, PULL BOXES, CABLE SPLICES AND TERMINAL CABINETS SHALL BE THE RESPONSIBILITY OF THE FIRE ALARM CONTRACTOR.	
D. ALL WIRING CONDUCTORS AND CONDUITS SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER AT RIGHT ANGLES TO THE BUILDING WALLS, FLOORS AND CEILINGS, AND SUPPORTED FROM THE BUILDING STRUCTURE AT INTERVALS COMPLIANT WITH NEC REQUIREMENTS.	
E. ALL POWER LIMITED WIRING CONDUCTORS FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN CONDUIT IN THE FOLLOWING LOCATIONS:	
1. SEVEN (7) FEET OR LESS ABOVE THE FINISHED FLOOR.	
2. ELECTRICAL AND MECHANICAL ROOMS.	
3. ELEVATOR HOISTWAYS AND ELEVATOR MACHINE ROOMS.	
4. CONCEALED ABOVE CEILINGS OR IN PARTITIONS.	
5. AREAS SUBJECT TO PHYSICAL DAMAGE.	
6. WHERE REQUIRED BY APPLICABLE CODES.	
7. WIRING CONDUCTORS IN FINISHED AREAS THAT CANNOT BE CONCEALED ARE ALLOWED TO BE INSTALLED IN SURFACE-MOUNTED METALLIC RACEWAY ONLY UPON APPROVAL OF THE OWNER'S REPRESENTATIVE.	
F. ALL NON-POWER LIMITED WIRING CONDUCTORS FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN CONDUIT.	
G. POWER LIMITED WIRING CONDUCTORS FOR THE FIRE ALARM SYSTEM ARE NOT REQUIRED TO BE INSTALLED IN CONDUIT IN THE FOLLOWING LOCATIONS:	
1. MORE THAN SEVEN (7) FEET ABOVE THE FINISHED FLOOR.	
2. ABOVE LAY-IN CEILINGS.	
3. CONCEALED IN CEILINGS OR PARTITIONS NOT SUBJECT TO DAMAGE.	
H. EXPOSED WIRING CONDUCTORS AND CONDUITS SHALL BE CONCEALED FROM PUBLIC VIEW AT ALL LOCATIONS BY ROUTING ON THE INSIDE OF JOISTS, ABOVE LAY-IN CEILINGS, OVER GRIDERS, WITHIN PARTITIONS OR IN ANY OTHER MANNER ACCEPTABLE TO THE OWNER'S REPRESENTATIVE.	
I. WIRING CONDUCTORS AND CONDUITS INSTALLED ABOVE LAY-IN CEILINGS SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE AND SHALL NOT BE PERMITTED LESS THAN NINE (9) INCHES ABOVE OR BEHIND REMOVABLE PANELS OR CEILING TILES.	
J. EXPOSED WIRING CONDUCTORS SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE AT INTERVALS OF NO MORE THAN FIVE (5) FEET.	
K. ALL WIRING CONDUCTORS SHALL BE TAGGED AT ALL JUNCTION POINTS AND SHALL TEST FREE FROM GROUNDS OR CROSSES BETWEEN CONDUCTORS.	
L. POWER-LIMITED WIRING CONDUCTORS SHALL NOT BE INSTALLED IN CONDUITS WITH ELECTRIC LIGHT, POWER CLASS 1, NON-POWER LIMITED FIRE ALARM AND MEDIUM POWER NETWORK-POWERED BROADBAND COMMUNICATIONS CIRCUITS.	
M. FINAL CONNECTIONS BETWEEN EQUIPMENT AND THE WIRING SYSTEM SHALL BE MADE UNDER DIRECT SUPERVISION OF A REPRESENTATIVE OF THE FAEM. IF OTHER PERSONNEL ARE REQUIRED BY THE AHJ TO BE PRESENT DURING FINAL CONNECTIONS, THIS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF PROVIDING A REPRESENTATIVE OF THE FAEM FOR DIRECT SUPERVISION.	
N. FIRE ALARM CABLING SHALL NOT BE PAINTED.	
O. CONDUITS SHALL ENTER THE CONTROL PANEL ENCLOSURES ONLY IN THE APPROVED LOCATIONS, AS IDENTIFIED IN THE FAEM INSTALLATION INSTRUCTIONS.	
P. INSTALL ALL HANGERS, CLAMPS, CONDUIT, AND BACKBOXES FOR THE FIRE ALARM SYSTEM PRIOR TO THE APPLICATION OF FIREPROOFING ON STRUCTURAL MEMBERS. THE HANGERS, CLAMPS, CONDUIT, AND BACKBOXES FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED ON THE EDGE OF ANY BEAM REQUIRING FIREPROOFING. BACKBOXES SHALL BE FASTENED TO THE FLANGE OF THE BEAM UTILIZING BEAM CLAMPS AND SHALL NOT BE ATTACHED DIRECTLY TO THE BEAM. VERIFY THE LOCATIONS OF ALL FIREPROOFING, PRIOR TO THE INSTALLATION OF ANY FIRE ALARM CONDUIT OR BACKBOXES.	
Q. ANY DAMAGE TO FIREPROOFING ON THE BUILDING STRUCTURE AS A RESULT OF THE FIRE ALARM SYSTEM INSTALLATION SHALL BE REPAIRED BY A QUALIFIED FIREPROOFING CONTRACTOR. ALL DAMAGED AND REPAIR OF FIREPROOFING SHALL BE REPORTED TO AND COORDINATED THROUGH THE GENERAL CONTRACTOR. THE FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIREPROOFING REPAIRS AT NO ADDITIONAL COST TO THE OWNER.	
3.03 EQUIPMENT MOUNTING	
A. COMPLY WITH NFPA 72 FOR INSTALLATION OF FIRE ALARM EQUIPMENT.	
B. CARBON MONOXIDE ALARMS DUOT SMOKE DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER THE CONSTRUCTION CLEAN-UP OF ALL TRADES IS COMPLETE AND FINAL DETECTORS THAT HAVE BEEN INSTALLED PRIOR TO FINAL CLEAN-UP BY ALL TRADES SHALL BE CLEARED OR REPLACED IN ACCORDANCE WITH NFPA 72.	
C. REMOTE TEST STATIONS, WHERE REQUIRED, SHALL BE MOUNTED IN PROXIMITY OF THE ASSOCIATED DEVICE OR UNIT, WHERE VISIBLE IN NORMALLY OCCUPIED AREAS, NOT HIGHER THAN SEVENTY-TWO (72) INCHES ABOVE THE FINISHED FLOOR AND WITH THE FINAL LOCATIONS ACCEPTABLE TO THE AHJ.	
D. DEVICES AND APPLIANCES SHALL NOT BE SUPPORTED BY CEILING TILES. DEVICES AND APPLIANCES MUST BE ATTACHED TO BACKBOX SUPPORTED BY THE CEILING GRID.	
E. ALL INITIATING DEVICES SHALL BE MOUNTED IN A LOCATION ACCESSIBLE FOR TESTING AND MAINTENANCE.	
F. PROVIDE A PRINTED LABEL FOR EACH INITIATING DEVICE INDICATING THE SPECIFIC ADDRESS FOR THAT DEVICE. THE LABEL SHALL INCLUDE THE PROGRAMMING ADDRESS AND DEVICE NUMBER. THE LABEL SHALL BE LOCATED ON THE BASE OF ALL DETECTORS AND THE COVER PLATES OF EACH ADDRESSABLE DEVICE.	
3.04 RESTORATION OF SITE	
A. WHERE SIDEWALKS, CURBS, AND LAWNS ARE EXCAVATED BY THE FIRE ALARM CONTRACTOR, THESE AREAS SHALL BE BACKFILLED AND REPLACED TO THE ORIGINAL CONDITION AND TO THE SATISFACTION OF THE OWNER, ARCHITECT AND AHJ.	
3.05 PAINTING AND PATCHING	
A. ALL FIRE ALARM CONDUIT SHALL BE THOROUGHLY CLEANED, REMOVING ALL DIRT, OIL, ETC. AND MADE READY TO RECEIVE PAINT.	
B. HOLES IN WALLS OR FLOORS CUT DURING THE PERFORMANCE OF THIS WORK SHALL BE PATCHED OR COVERED WITH STANDARD ESCUTCHEON PLATES SO AS TO COMPLETELY CONCEAL THE CUTS WHERE THEY WOULD OTHERWISE BE EXPOSED TO VIEW.	
C. HOLES IN WALLS AND CEILINGS CREATED BY THE REMOVAL OF FIRE ALARM EQUIPMENT NO LONGER USED SHALL BE PATCHED AND PAINTED TO MATCH THE EXISTING WALLS AND CEILINGS OR COVERED WITH STANDARD ESCUTCHEON PLATES SO AS TO COMPLETELY CONCEAL THE "HOLES" WHERE THEY WOULD OTHERWISE BE EXPOSED TO VIEW.	
D. ALL PENETRATIONS OF FIRE RATED ASSEMBLIES (WALL OR FLOOR CONSTRUCTION) SHALL BE FIRE STOPPED TO PRESERVE THE ORIGINAL FIRE RESISTANCE AND SMOKE TIGHT INTEGRITY OF THE ASSEMBLY. ALL FIRESTOPPING MATERIALS SHALL BE UL LISTED THROUGH PENETRATION FIRESTOP SYSTEMS OR OTHERWISE APPROVED BY THE OWNER, ARCHITECT, ENGINEER, AND AHJ. SPECIFIC FIRESTOP ASSEMBLY SHALL BE IDENTIFIED AT THE PENETRATION LOCATION WITH A STICKER OR OTHER APPROVED IDENTIFICATION MEANS.	
3.06 SYSTEM TESTS	
A. ALL TEST AND INSPECTIONS SPECIFIED IN THIS SECTION SHALL BE REPORTED IN WRITING AND SUBMITTED IN ACCORDANCE WITH THIS SPECIFICATION SECTION.	
B. THE SYSTEM SHALL MEET ALL THE REQUIREMENTS OF THE LISTED APPLICABLE CODES AND THE REQUIREMENTS OF THE AHJ. THE SYSTEM TESTS AND TEST DOCUMENTS, INCLUDING THOSE REQUIRED FOR AND BY THE APPROVED REMOTE MONITORING STATION, SHALL MEET THE REQUIREMENTS OF THE AHJ.	
C. PROVIDE ONE HUNDRED (100) PERCENT INITIAL ACCEPTANCE TESTING OF THE ENTIRE FIRE ALARM SYSTEM PRIOR TO THE REQUIRED AHJ ACCEPTANCE TESTING. BEFORE REQUESTING THE AHJ ACCEPTANCE TESTING, FURNISH A WRITTEN STATEMENT TO THE OWNER'S REPRESENTATIVE INDICATING THAT THE SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED DOCUMENTS AND TESTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND THE APPLICABLE NFPA REQUIREMENTS. THE RECORD OF COMPLETION SHALL BE COMPLETED AND SUBMITTED AS PART OF THE WRITTEN STATEMENT.	
D. ALL TESTING, INSPECTION AND RETESTING REQUIRED FOR CERTIFICATION AND REQUIRED FOR ALL WARRANTY WORK OR REPLACEMENTS SHALL MEET THE REQUIREMENTS OF THE AHJ. THIS CERTIFICATION, INSPECTION, OR TESTING SHALL BE COMPLETED AT NO ADDITIONAL COST TO THE OWNER.	
E. PROVIDE THE TESTING DATE IN WRITING TO THE OWNER A MINIMUM OF TWO (2) WEEKS BEFORE THE DATE. THE OWNER MAY ELECT TO HAVE A REPRESENTATIVE PRESENT FOR TESTING.	
F. THE FIRE ALARM SYSTEM WILL NOT BE ACCEPTABLE UNTIL FINAL TESTING AND RECEIPT OF THE TESTING CERTIFICATES HAVE BEEN OBTAINED.	
G. A PROPOSAL TO PERFORM ANNUAL TESTING AND/OR INSPECTION SERVICES SHALL BE SUBMITTED TO THE OWNER A MINIMUM OF THREE (3) WEEKS BEFORE THE DATE OF INITIAL ACCEPTANCE TESTING. THE PROPOSAL SHALL INCLUDE ALL TESTING AND/OR INSPECTION SERVICES REQUIRED BY THE AHJ FOR THE TWO (2) YEAR PERIOD BEGINNING AT FINAL ACCEPTANCE OF THE SYSTEM. THE OWNER HAS THE OPTION TO ACCEPT OR REJECT THE PROPOSAL.	
END OF SECTION 16720/28311	



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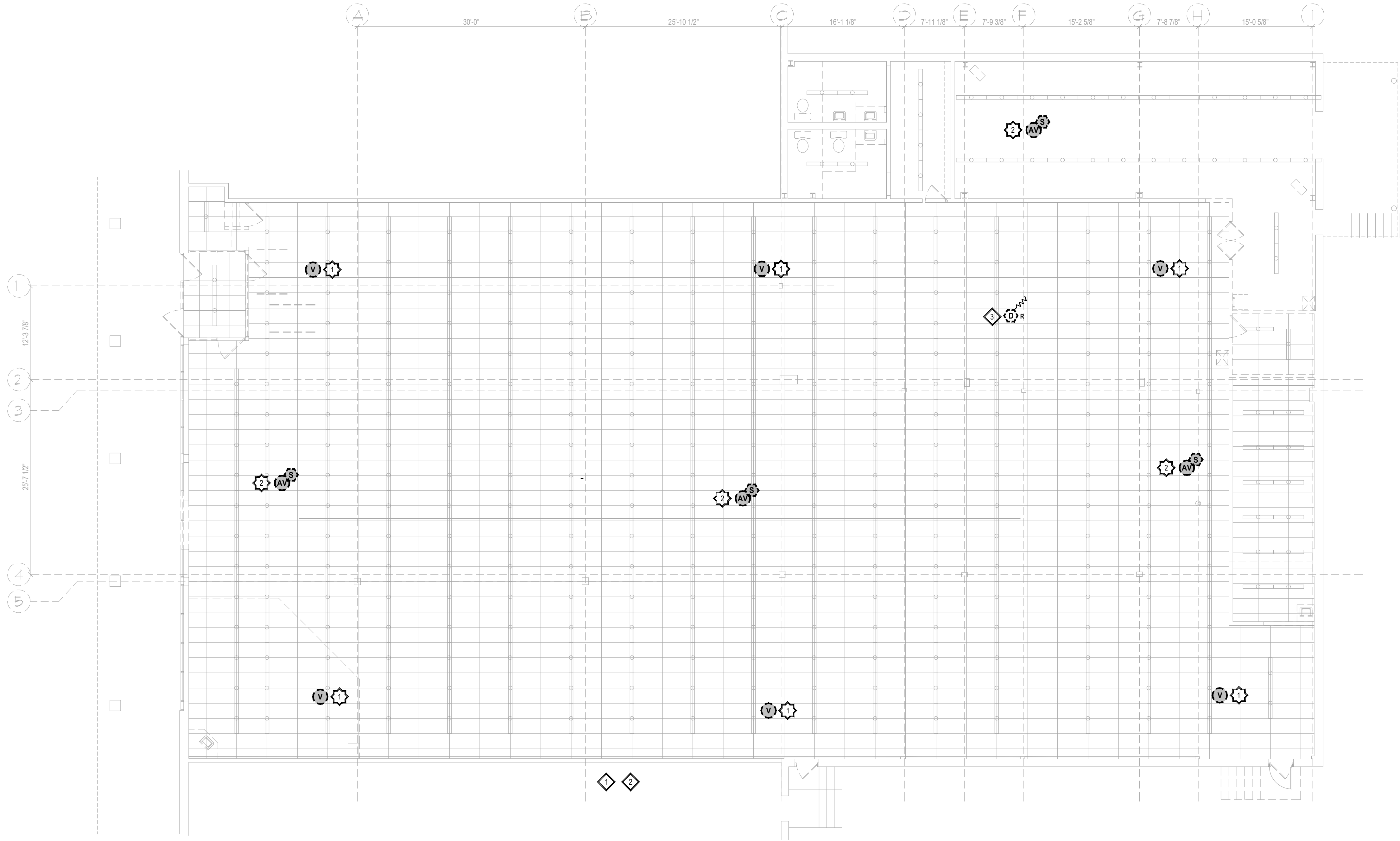
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FIRE ALARM PLAN - DEMOLITION WORK

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

- FIRE ALARM DEMOLITION KEYED NOTES (DENOTED AS ⚙)
1. THE EXISTING STAND ALONE OCCUPANT NOTIFICATION APPLIANCE AND THE ASSOCIATED CABLING/CONDUIT SHALL BE DEMOLISHED AND BE COMPLETELY REMOVED FROM THE FUTURE DOLLAR TREE SPACE. PROPERLY DISPOSE OF THE OCCUPANT NOTIFICATION APPLIANCE. EXISTING OCCUPANT NOTIFICATION APPLIANCE IS NOT CONNECTED TO THE FIRE ALARM SYSTEM.
 2. THE EXISTING STAND ALONE COMBINATION SMOKE / OCCUPANT NOTIFICATION APPLIANCE AND THE ASSOCIATED CABLING/CONDUIT SHALL BE DEMOLISHED AND BE COMPLETELY REMOVED FROM THE FUTURE DOLLAR TREE SPACE. PROPERLY DISPOSE OF THE SMOKE / OCCUPANT NOTIFICATION APPLIANCE. EXISTING COMBINATION SMOKE / OCCUPANT NOTIFICATION APPLIANCE IS NOT CONNECTED TO THE FIRE ALARM SYSTEM.

- FIRE ALARM EXISTING TO REMAIN KEYED NOTES (DENOTED AS ◇)
1. THE EXISTING FIRE ALARM CONTROL PANEL AND ASSOCIATED EQUIPMENT LOCATED OUTSIDE THE DOLLAR TREE SPACE SHALL REMAIN AS CURRENTLY CONFIGURED. THE FIRE ALARM CONTROL PANEL SHALL TRANSMIT FIRE ALARM, SUPERVISORY, AND TROUBLE SIGNALS OFF-SITE AS CURRENTLY CONFIGURED.
 2. THE EXISTING FIRE SPRINKLER RISER SERVING THE DOLLAR TREE SPACE IS CURRENTLY LOCATED OUTSIDE OF THE PROPOSED DOLLAR TREE SPACE. ELECTRONICALLY MONITORED BY THE LANDLORDS FIRE ALARM CONTROL PANEL AND SHALL REMAIN AS CURRENTLY CONFIGURED.
 3. THE EXISTING DUCT SMOKE DETECTORS ARE ELECTRONICALLY SUPERVISED BY THE FIRE ALARM SYSTEM. THE ADDRESSABLE INPUT MODULES AND ASSOCIATED CABLING/CONDUIT SHALL REMAIN AS CURRENTLY CONFIGURED.

FIRE ALARM SYMBOL KEY	
	EXISTING STAND ALONE CEILING MOUNTED VISUAL APPLIANCE TO BE DISCONNECTED AND REMOVED (NOT CONNECTED TO FACP)
	EXISTING STAND ALONE COMBINATION CEILING MOUNTED AUDIBLE/VISUAL APPLIANCE & SMOKE ALARM - TO BE DISCONNECTED AND REMOVED (NOT CONNECTED TO FACP)
	EXISTING DUCT TYPE SMOKE DETECTOR TO REMAIN (R = RETURN SIDE)
	DUCT-TYPE PHOTOELECTRIC SMOKE DETECTOR (CONVENTIONAL) (POWERED BY RTU) (R = RETURN SIDE)
	STAND ALONE CARBON MONOXIDE ALARM (10 YEAR BATTERY OPERATED)
	NEW ADDRESSABLE INPUT MODULE (COMPATIBLE WITH EXISTING FACP)
	REMOTE TEST STATION / ANNUNCIATOR (SYSTEM SENSOR RTS1515KEY)
	FIRE ALARM PLENUM RATED CONDUCTORS (RED IN COLOR)
	JUNCTION BOX
	END OF LINE RESISTOR

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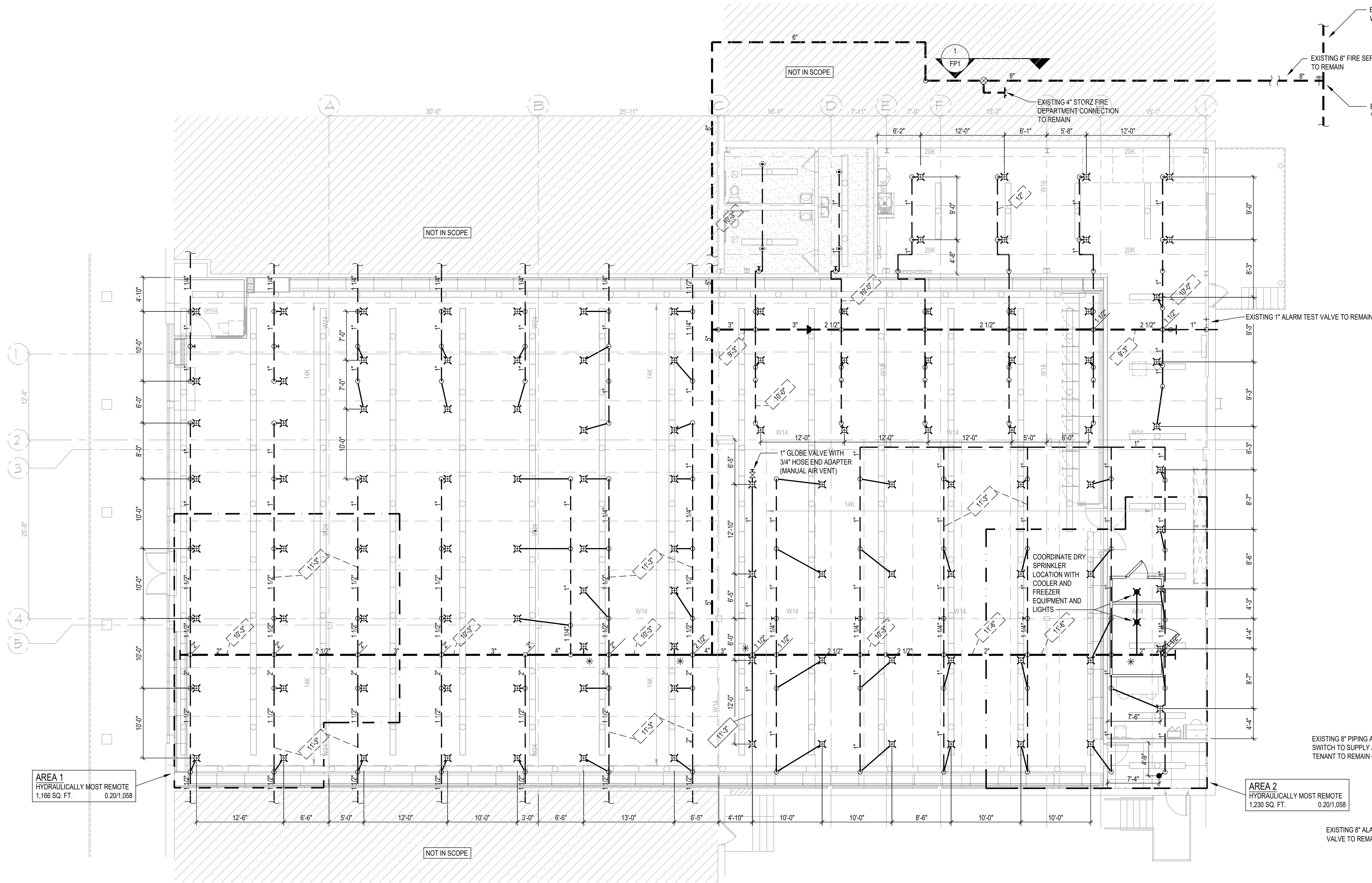
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FIRE ALARM PLAN - DEMOLITION WORK

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UNDERGROUND PIPING NOTE
ALL UNDERGROUND PIPING, VALVES, FITTINGS, DIMENSIONS, ETC. ARE SHOWN FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR EXACT LOCATIONS, TYPES, AND SIZES OF ALL COMPONENTS IN ADDITION TO DETAILS OF CONSTRUCTION.

SYMBOL KEY	
	EXISTING PIPING TO REMAIN
	EXISTING PIPING TO BE REMOVED
	NEW PIPING
	1" ARM-OVER TO NEW SPRINKLER FROM EXISTING 1" OUTLET
	CONNECT TO EXISTING PIPE AND/OR FITTING
	EXISTING SPRINKLER AND ARM-OVER TO BE DEMOLISHED BACK TO OUTLET ON BRANCH LINE UNLESS SHOWN OTHERWISE
	ORD/5.6/SR
	ORD/5.6/SR
	ORD/5.6/QR
	INT/5.6/QR
	APPROXIMATE CENTER LINE ELEVATION OF EXISTING PIPE ABOVE FINISHED FLOOR
	RECOMMENDED CENTER LINE ELEVATION OF NEW PIPE ABOVE FINISHED FLOOR
	RISE FROM LEFT TO RIGHT AND DROP FROM RIGHT TO LEFT
	NOT IN SCOPE

SEE SHEET FP2 FOR NOTES, DETAILS, AND SPECIFICATION

ALL ARM-OVERS TO NEW SPRINKLERS ARE 1" DIAMETER

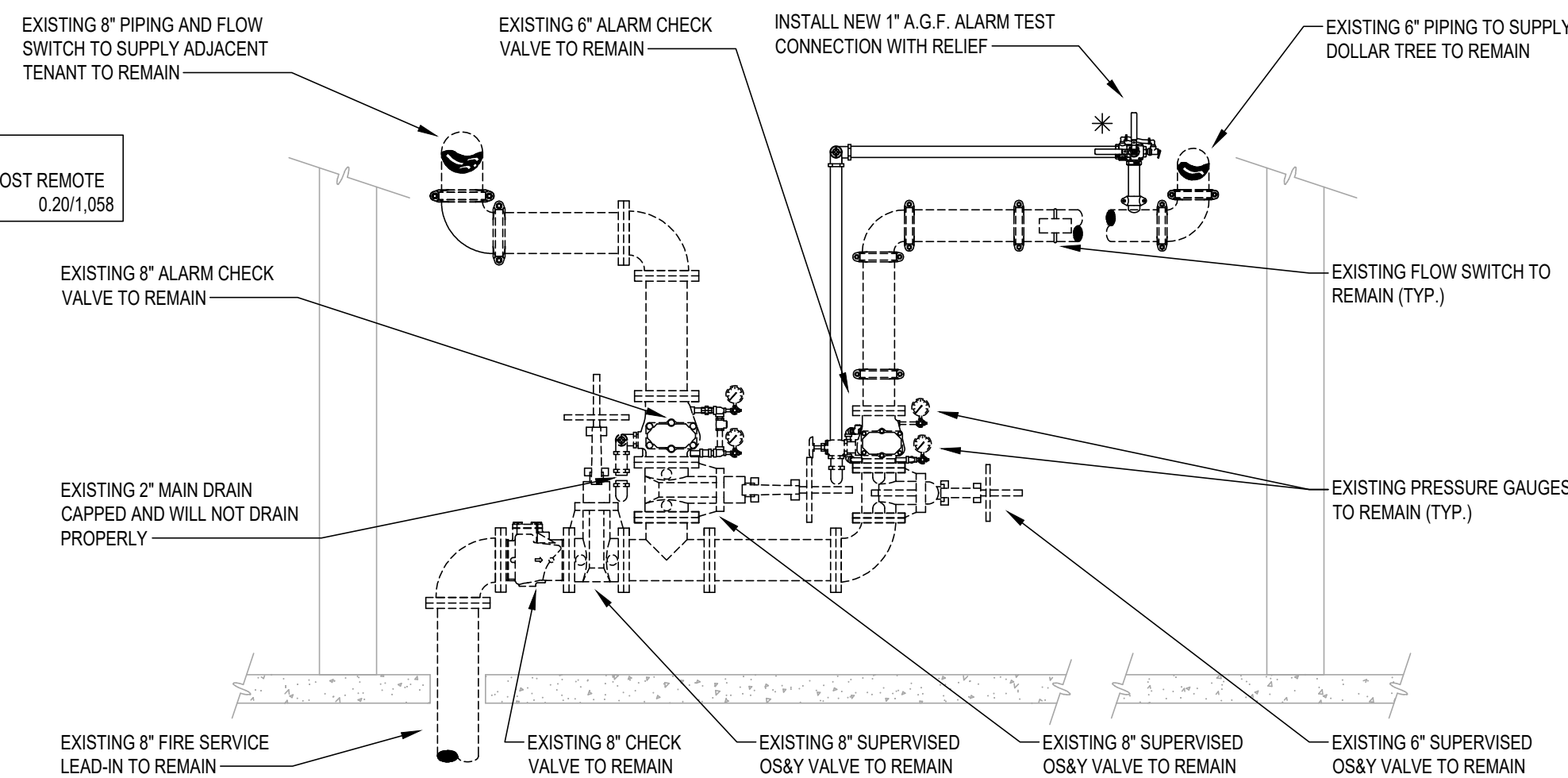
AREA 1
HYDRAULICALLY MOST REMOTE
1,166 SQ. FT.
0.201/058

AREA 2
HYDRAULICALLY MOST REMOTE
1,220 SQ. FT.
0.201/058

FIRE SPRINKLER PLAN - NEW WORK

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

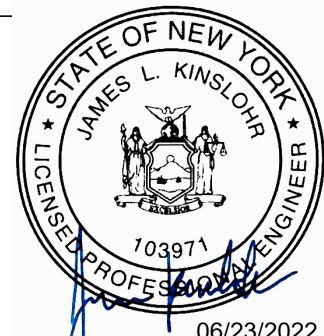
FIN. FLOOR ELEV. = 100'-0"



ELEVATION AT EXISTING BUILDING FIRE SPRINKLER RISER

(FOR REFERENCE ONLY)

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SECTION 15300 - FIRE SPRINKLER SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

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

1.02 DESCRIPTION OF WORK

- 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 FIRE SPRINKLER SYSTEM AND SHALL INCLUDE THE FOLLOWING:

1. REMODELED WET PIPE FIRE SPRINKLER SYSTEM FOR PROPOSED DOLLAR TREE.
2. COORDINATION OF WORK AND SCHEDULES WITH OTHER TRADES.

- C. INTERIOR WORK - PROVIDE THE FOLLOWING:

1. OVERHEAD PIPE, FITTINGS, HANGERS AND SPRINKLERS.
2. 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 REFERENCES

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

1. NEW YORK STATE BUILDING CODE - 2020 EDITION
2. NEW YORK STATE FIRE CODE - 2020 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.

- D. OFFICE AREAS (LIGHT HAZARD WET PIPE FIRE SPRINKLER SYSTEM):

- DENSITY - 0.10 GPM/SQ FT
- OPERATING AREA - 1,058 SQ FT
- TEMP. CLASSIFICATION / NOMINAL K-FACTOR / RESPONSE TYPE - ORD / 5.6 / OR
- HOSE STREAM ALLOWANCE - 100 GPM
- DURATION - 0.30 HR

- E. SALES AREA (ORDINARY HAZARD GROUP 2 WET PIPE FIRE SPRINKLER SYSTEM):

- DENSITY - 0.20 GPM/SQ FT
- OPERATING AREA - 1,058 SQ FT
- TEMP. CLASSIFICATION / NOMINAL K-FACTOR / RESPONSE TYPE - ORD / 5.6 / OR
- 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 - 1,058 SQ FT
- TEMP. CLASSIFICATION / NOMINAL K-FACTOR / RESPONSE TYPE - ORD / 5.6 / OR
- HOSE STREAM ALLOWANCE - 250 GPM
- DURATION - 1.0 HR

- G. WATER SUPPLY:

THE SUCCESSFUL FIRE SPRINKLER CONTRACTOR SHALL PERFORM A WATERFLOW TEST AND FORWARD A REPORT OF THE TEST RESULTS TO DOLLAR TREE AND CODE CONSULTANTS, INC. SPRINKLER CONTRACTOR SHALL PROVIDE HYDRAULIC REINFORCEMENT AS REQUIRED TO PROVIDE A REMODELED FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13. A SAFETY FACTOR OF A MINIMUM 10% OF THE STATIC PRESSURE SHALL BE APPLIED TO BOTH THE STATIC AND RESIDUAL PRESSURES FOR THE PURPOSE OF HYDRAULIC CALCULATION. PROVIDE LOCATION AND ELEVATION DIFFERENCES BETWEEN THE FLOW TEST AND THE FINISHED FLOOR OF DOLLAR TREE SPACE.

- H. EXISTING FIRE DEPARTMENT CONNECTION SHALL REMAIN.

- I. 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.

- 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.

1.05 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.

1.06 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.

1.07 REGULATORY REQUIREMENTS

- 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.

- C. 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.

1.08 SUBMITTALS

- 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. HYDRAULIC CALCULATIONS: SUBMIT IN PDF FORMAT OR TWO (2) HARD COPIES OR EACH CALCULATION. CALCULATIONS WILL BE RETURNED IN THE SAME FORMAT RECEIVED. CALCULATIONS SHALL INCLUDE PEAKING INFORMATION.
3. 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.

1.09 AS-BUILT DRAWINGS

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

1.10 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.

1.11 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 PIPING

- 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 PIPE FOR ACCEPTABLE MANUFACTURERS, SIZES, AND JOINING METHODS.

- C. ALL WET PIPE SYSTEM RISERS, FEED AND CROSS MAINS SHALL HAVE HYDRAULIC 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.

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 NFPA 13 AND THE PIPING MANUFACTURER'S SPECIFICATIONS.

- D. THE SECTION MODULUS REQUIRED BY NFPA 13 SHALL BE PROVIDED FOR ALL TRAPEZE MEMBERS SUPPORTING PIPING.

2.04 VALVES

- A. INTERIOR VALVES:

1. GLOBE VALVE: BRONZE THREADED; RENEWABLE COMPOSITION DISC; 175 PSI RATED WORKING PRESSURE.

- a. ACCEPTABLE MANUFACTURERS: CRANE, MILWAUKEE, NIBCO, STOCKHAM OR APPROVED EQUAL.

2.05 SPRINKLERS

- A. TYPES:

1. CHROME PENDENT - GLASS BULB QUICK RESPONSE PENDENT SPRINKLER WITH POLISHED CHROME 2-PIECE TELESCOPING ESCUTCHEON.
2. BRASS UPRIGHT - GLASS BULB QUICK RESPONSE UPRIGHT SPRINKLER.
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, VICTALUC AND VIKING.

- C. ONLY SPRINKLERS MANUFACTURED AFTER JANUARY 1, 2021 WILL BE ACCEPTED FOR USE.

- D. ONLY SPRINKLERS MANUFACTURED UTILIZING BELLVILLE SPRING SEALS WILL BE ACCEPTABLE FOR USE.

- E. PROVIDE AT THE RISER ONE (1) TWELVE (12) HEAD SPARE SPRINKLER CABINET STOCKED WITH SPRINKLERS AND ESCUTCHEON ASSEMBLIES PROPORTIONATE TO THOSE PROVIDED IN THE BUILDING AND ALL NECESSARY SPRINKLER WRENCHES.

2.06 SIGNS

- A. APPROVED ENAMELED METAL SIGNS SHALL BE SECURELY ATTACHED AT ALL MAIN DRAINS, AUXILIARY DRAINS, ALARM TEST CONNECTIONS AND CONTROL VALVES. (SIGNS SHALL INDICATE WHICH ZONE THEY SERVE.)

- B. PROVIDE A PERMANENTLY ATTACHED PLACARD INDICATING GENERAL INFORMATION IN ACCORDANCE WITH NFPA 13 AND PLACED AT THE EXISTING RISER. A MOCK-UP OF PLACARD SHALL BE INCLUDED WITH EQUIPMENT LITERATURE.

- C. PROVIDE AT THE EXISTING RISER THE LOCATION OF THE 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.

2.07 DRAIN CONNECTIONS

- A. AUXILIARY DRAINS CONSISTING OF PLUGS, OR GLOBE VALVES AND PLUGS WHERE CAPACITY OF TRAPPED PIPE SECTION EXCEEDS 5 GALLONS, SHALL BE PROVIDED TO DRAIN ALL POINTS IN THE SYSTEM THAT CANNOT BE DRAINED BACK TO MAIN RISER.

PART 3 - EXECUTION

3.01 COORDINATION WITH OTHER TRADES

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

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

- A. HYDROSTATICALLY TEST ENTIRE SYSTEM IN ACCORDANCE WITH NFPA 13.

- B. TEST SHALL BE WITNESSED BY THE AUTHORITY HAVING JURISDICTION AND OWNER'S AUTHORIZED AGENT.

- C. 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 ACCEPTANCE MAY BE GIVEN.

- E. 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.

HANGER NOTES

1. 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 NFPA 13.

CONSTRUCTION NOTES

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

2. COORDINATE REQUIRED SHUT-DOWN OF THE EXISTING SYSTEMS WITH THE OWNER, INSURANCE UNDERWRITER, AND FIRE DEPARTMENT.

3. PROVIDE TEMPORARY PIPING, VALVES, AND FITTINGS AS REQUIRED TO MAINTAIN SERVICE TO FIRE SPRINKLER SYSTEMS DURING CONSTRUCTION.

4. COORDINATE CONSTRUCTION PHASES WITH OWNER AND GENERAL CONTRACTOR.

GENERAL NOTES

1. PROVIDE ALL NECESSARY OFFSETS, RAISES OR DROPS IN PIPING AND AUXILIARY DRAINS REQUIRED BY BUILDING CONDITIONS WHETHER OR NOT SHOWN ON THE DRAWINGS.

2. EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS, CLEARANCES, PIPE SIZES, ETC.

3. ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO THE PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES, AND QUANTITIES OF OTHER TRADES' WORK.

4. 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 HARD COPY.

5. SUPPLY ONLY ONE (1) SPRINKLER FROM A SINGLE BRANCH LINE OUTLET. PROVIDE NEW BRANCH LINES AS REQUIRED.

6. SPRINKLERS NEAR A HEAT SOURCE (UNIT HEATERS, DIFFUSERS, STEAM MAINS, SKIDUANTS, ETC.) SHALL HAVE TEMPERATURE RATINGS IN ACCORDANCE WITH NFPA 13.

7. ALL UNUSED OUTLETS ON EXISTING BRANCH LINES SHALL BE PLUGGED.

MAXIMUM HANGER SPACING

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

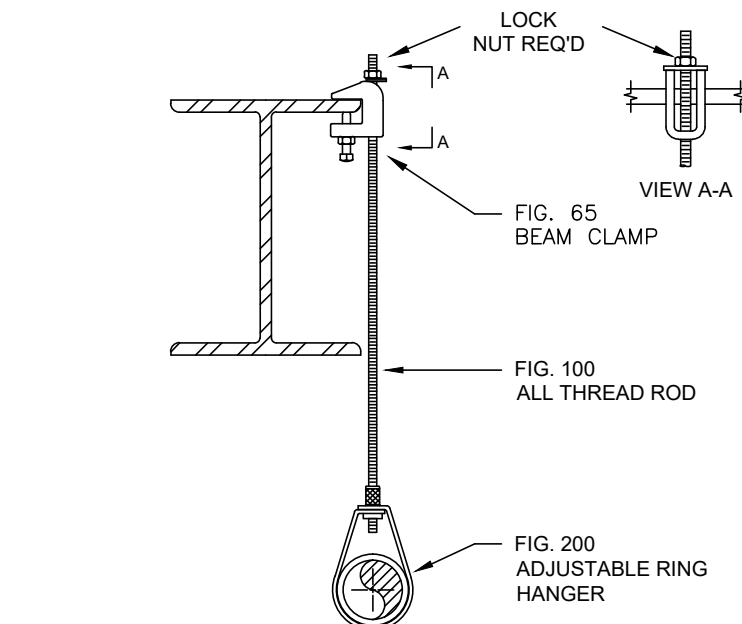
1 1/2" - 3" BLACK STEEL PIPE - 15 FT MAXIMUM HANGER SPACING

SPRINKLER NOTES

1. ALL SPRINKLERS ARE AS NOTED.

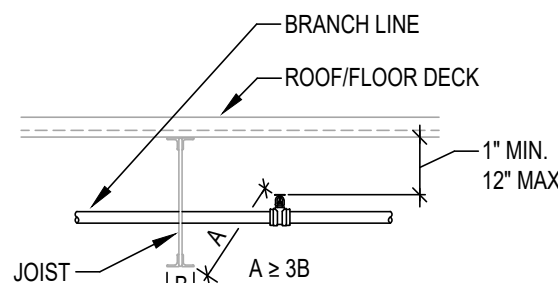
2. SPRINKLER SPACING IN LIGHT HAZARD AREAS - MAX 225 SQ FT PER SPRINKLER AND MAX 15 FT BETWEEN SPRINKLERS.

3. SPRINKLER SPACING IN ORDINARY HAZARD AREAS (STANDARD COVERAGE SPRINKLERS) - MAX 130 SQ FT PER SPRINKLER & MAX 15 FT BETWEEN SPRINKLERS



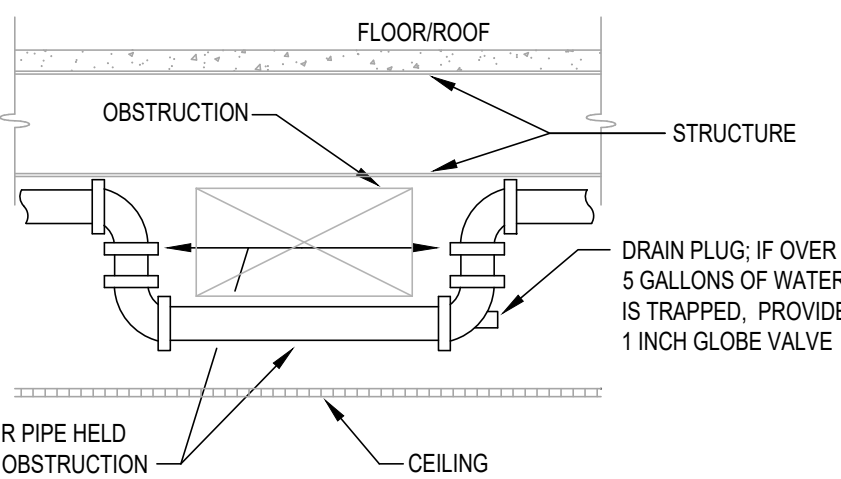
TOP BEAM CLAMP, ROD AND RING

NOT TO SCALE



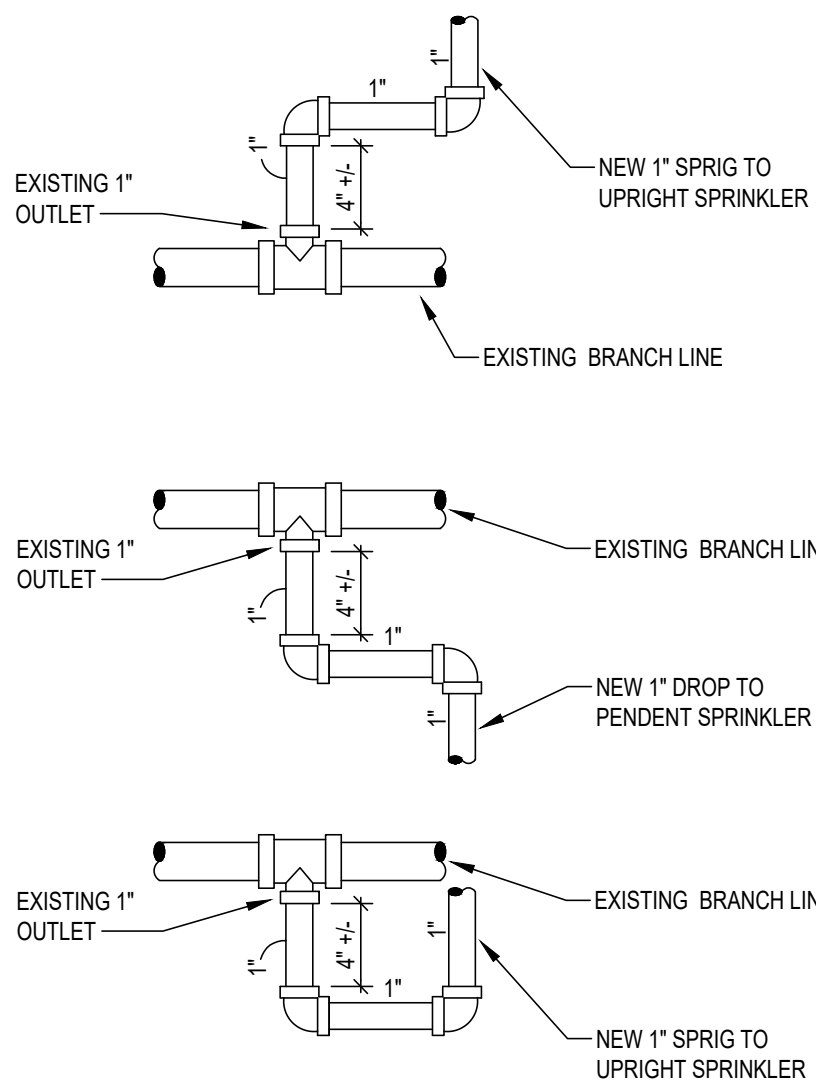
TYPICAL JOIST CLEARANCE REQUIREMENTS FOR UPRIGHT SPRINKLERS

NOT TO SCALE



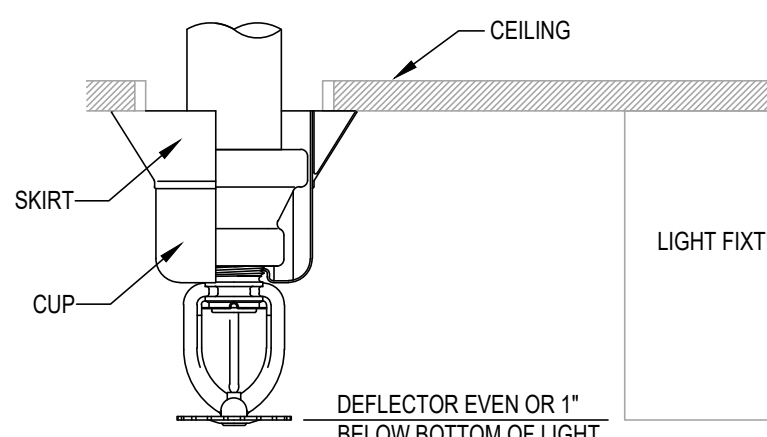
TYPICAL OFFSET AT OBSTRUCTION

NOT TO SCALE



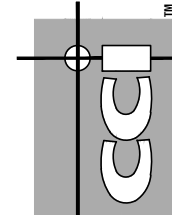
TYPICAL BRANCH LINE OUTLET DETAIL

NOT TO SCALE



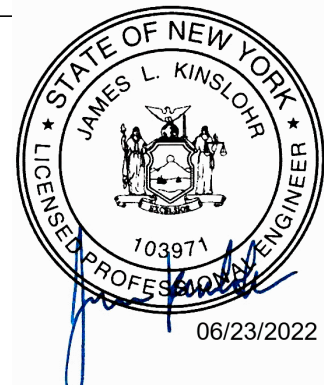
2 PIECE TELESCOPING ESCUTCHEON DETAIL

NOT TO SCALE



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CORPORATE CERTIFICATE OF AUTHORITY
NO. 41403

WARNING: IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 140, SECTION 7204 FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY.

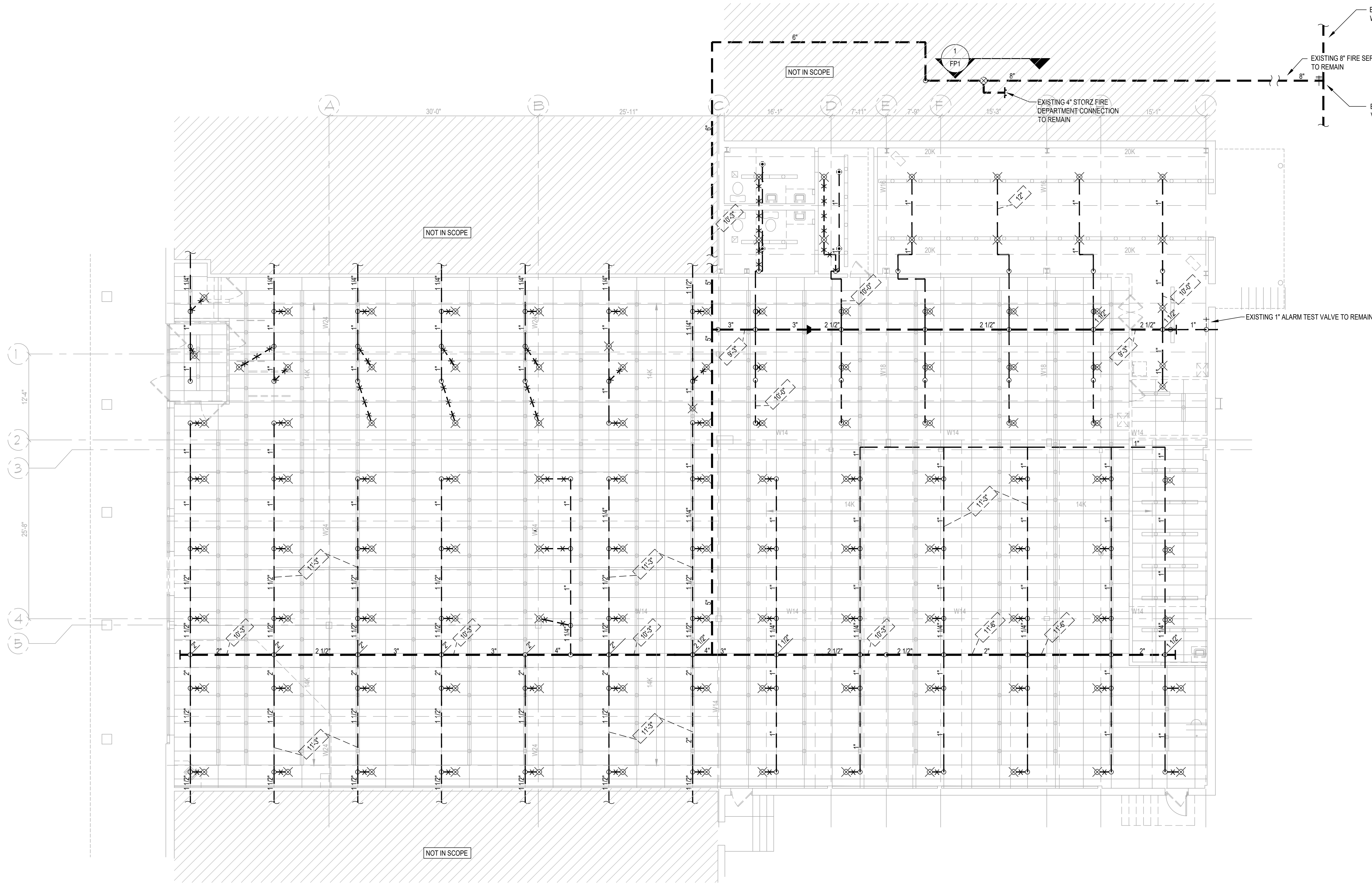
DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980
FIRE SPRINKLER SPECIFICATION, NOTES AND DETAILS

project

drawing

sheet

FP2



UNDERGROUND PIPING NOTE
ALL UNDERGROUND PIPING, VALVES, FITTINGS, DIMENSIONS, ETC. ARE SHOWN FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR EXACT LOCATIONS, TYPES, AND SIZES OF ALL COMPONENTS IN ADDITION TO DETAILS OF CONSTRUCTION.

SYMBOL KEY	
	EXISTING PIPING TO REMAIN
	EXISTING PIPING TO BE REMOVED
	NEW PIPING
	1" ARM-OVER TO NEW SPRINKLER FROM EXISTING 1" OUTLET
	CONNECT TO EXISTING PIPE AND/OR FITTING
	EXISTING SPRINKLER AND ARM-OVER TO BE DEMOLISHED BACK TO OUTLET ON BRANCH LINE UNLESS SHOWN OTHERWISE
	EXISTING CHROME RECESSED ORDI5.6/SR
	NEW BRASS UPRIGHT ON 1" SPRIG ORDI5.6/SR
	NEW CHROME PENDENT ON 2-PIECE TELESOPING ESCUTCHEON ORDI5.6/QR
	NEW DRY CHROME PENDENT ON 2-PIECE TELESOPING ESCUTCHEON WITH FREEZER BOOT INT5.6/QR
	APPROXIMATE CENTER LINE ELEVATION OF EXISTING PIPE ABOVE FINISHED FLOOR
	RECOMMENDED CENTER LINE ELEVATION OF NEW PIPE ABOVE FINISHED FLOOR
	RISE FROM LEFT TO RIGHT AND DROP FROM RIGHT TO LEFT
	NOT IN SCOPE

SEE SHEET FP2 FOR NOTES, DETAILS, AND SPECIFICATION

ALL ARM-OVERS TO NEW SPRINKLERS ARE 1" DIAMETER

- FIRE SPRINKLER DEMOLITION NOTES**
- FIRE SPRINKLER CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE:
 - SHUT DOWN AND DRAINING OF EXISTING SYSTEM.
 - DISCONNECTION AND DEMOLITION OF ALL SPRINKLERS THROUGHOUT THE PROPOSED DOLLAR TREE SPACE.
 - DEMOLITION OF EXISTING 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.

FIRE SPRINKLER PLAN - DEMOLITION WORK
SCALE: 1/8" = 1'-0"
FIN. FLOOR ELEV. = 100'-0"

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description

by

date

mark

revisions

09/15/2022
2022/7/1/2026
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DOLLAR TREE
166 S. LIBERTY DRIVE - DEAL #13216 / STORE #2573
STONY POINT, NY 10980
FIRE SPRINKLER PLAN - DEMOLITION WORK

project
drawing
sheet

FPD1

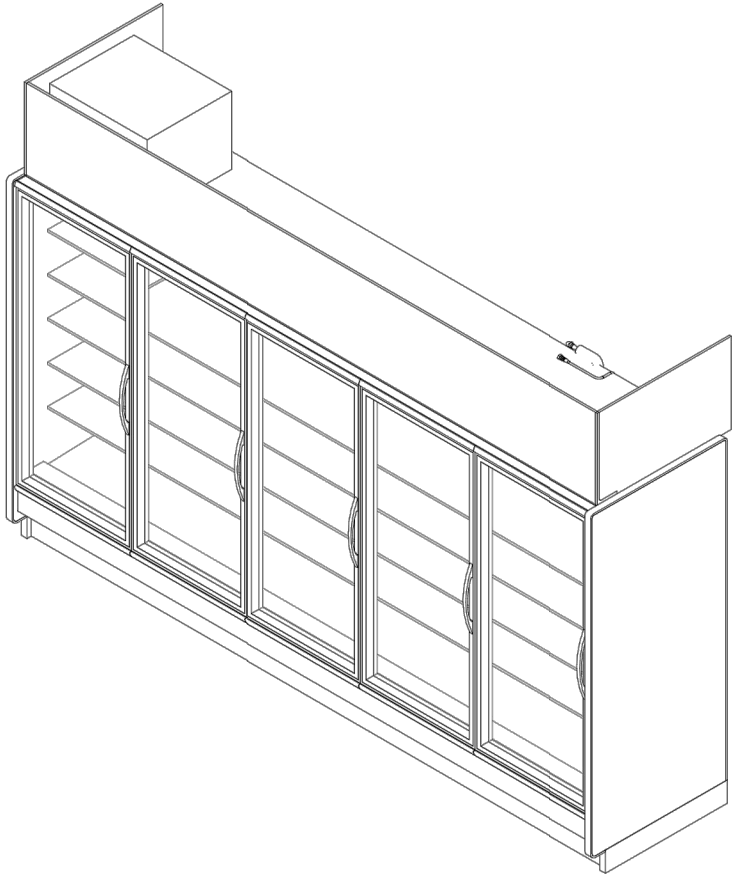
REACH-IN FREEZER/COOLER UNIT

JNRBHSA

High Narrow Reach-In Self Contained Merchandiser
1, 2, 3, 4, 5 Door & 4' (Dairy/Deli/Beverage)

GENERAL NOTES:

- Lighting Controls and Anti Sweat Heat Controls are Required
- Option 1: OEM Provided:
Occupancy Sensor Based Lighting Controls (On/Off) & Hilphoenix provided embedded Anti Sweat Controls are standard, unless otherwise specified
- Option 2: End User Provided:
Lighting Controls should be Occupancy Sensor Based or on a minimum 8 Hour Off Schedule. Customer provided A/S Heat Controls should be set to 30% minimum off time at 75°F/55%RH
- 1 Door & 4' case lengths available in 120V R448A/R448A condensing unit configuration.
- 2,3,4 & 5 door lengths available in 208V R404A/R448A condensing unit configuration.



SHIPPING WEIGHT	
Case	Weight
JNRBHSA	---



JNRBHSA

Rev. Date	Rev. #	Rev. Title
10-16-19	11	DATA UPDATE
10-16-19	10	ENDVIEW UPDATE



REACH-IN FREEZER/COOLER SHEET 1 OF 8

JNRBHSA (R404A)

High Narrow Reach-In Self Contained Merchandiser
1, 2, 3, 4, 5 Door & 4' (Dairy/Deli/Beverage)

SYSTEM REQUIREMENT (R-404A REFRIGERANT)

Case Length	Volts	Phase	Frequency	Minimum Circuit Ampacity (MCA)	Maximum Overcurrent Protection (MOP)
2 Door	208	1	60	16.3	20
3 Door	208	1	60	16.5	20
4 Door	208	1	60	16.6	20
5 Door	208	1	60	18.4	20

*. 24 Hour Energy values includes evaporator fans, standard LEDs, anti-condensate heat & condensing unit

GUIDELINES AND CONTROL SETTINGS (R-404A REFRIGERANT)

Case Length	Application	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Set Point Differential (°F)	Discharge Air Velocity (FPM)
2 - 5 Door	Beverage	6 - 8	35	6	230
2 - 5 Door	Dairy	6 - 8	30	6	230
2 - 5 Door	Deli	6 - 8	29	6	230

CONDENSING UNIT DATA (R-404A REFRIGERANT)

Case Length	Volts	Phase	Frequency	Horsepower	Running Load Amps (RLA) (Amps)	Locked Rotor Amps (LRA) (Amps)	Refrigerant	Lbs. of Refrigerant
2 Door	208	1	60	1/3	4.2	16.8	R404A	2.2
3 Door	208	1	60	1/3	4.2	16.8	R404A	2.6
4 Door	208	1	60	1/3	4.2	16.8	R404A	3.0
5 Door	208	1	60	1/2	5.3	26.5	R404A	3.5

DEFROST CONTROLS (R-404A REFRIGERANT)

Case Length	Defrosts Per Day	Run-Off Time (Min)	Fail-Safe (Min)	Termination Temp (°F)
2 - 5 Door	2	0	46	44

DEFROST SCHEDULE (R-404A REFRIGERANT)

Defrosts Per Day	Time
2	12 a.m. - 12 p.m.

NOTES:

- "-,-" indicates that this feature is not an option on this case model.
- Listed discharge air velocity represents the average velocity at the peak of defrost.
- Temperature and defrost settings listed below are recommended start-up settings. Final operational settings may need to be adjusted for the store conditions in which the case operates.
- The recommended evaporator temperatures may need to be adjusted based on system setup, store conditions, etc. The minimum recommended evaporator temperature is 4°F below the listed evaporator temperature.
- The 24 Hour Energy Value is based upon AHRI 1200 test conditions with Hilphoenix provided Lights, occupancy sensor based (on/off) lighting control and dew point based anti sweat heat controller.



JNRBHSA (R404A)

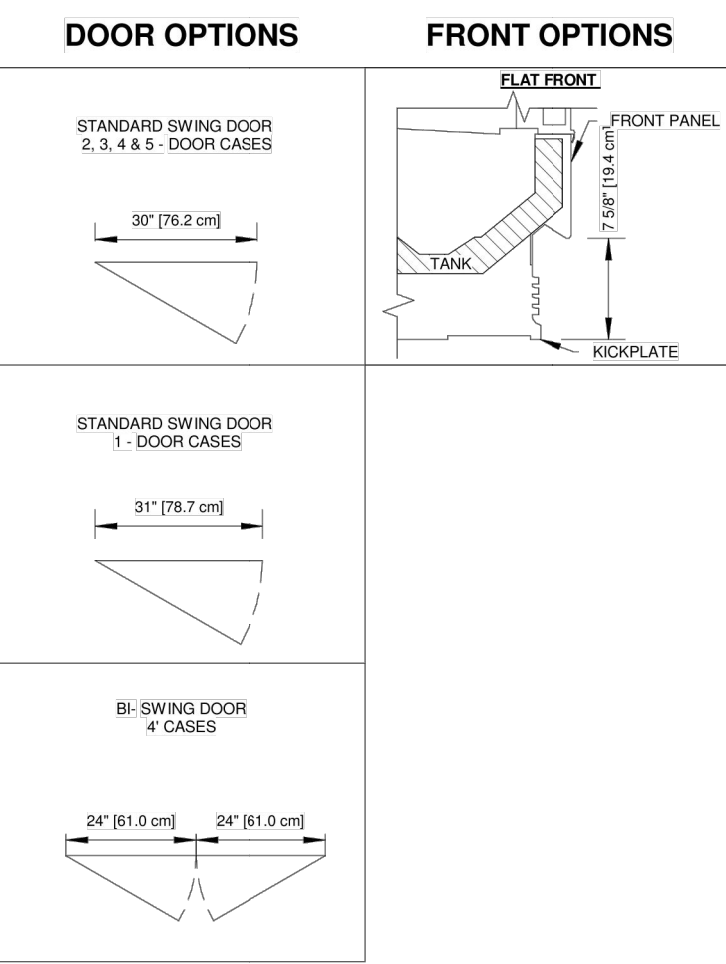
Rev. Date	Rev. #	Rev. Title
10-16-19	11	DATA UPDATE
10-16-19	10	ENDVIEW UPDATE



REACH-IN FREEZER/COOLER SHEET 2 OF 8

JNRBHSA

High Narrow Reach-In Self Contained Merchandiser
1, 2, 3, 4, 5 Door & 4' (Dairy/Deli/Beverage)



JNRBHSA

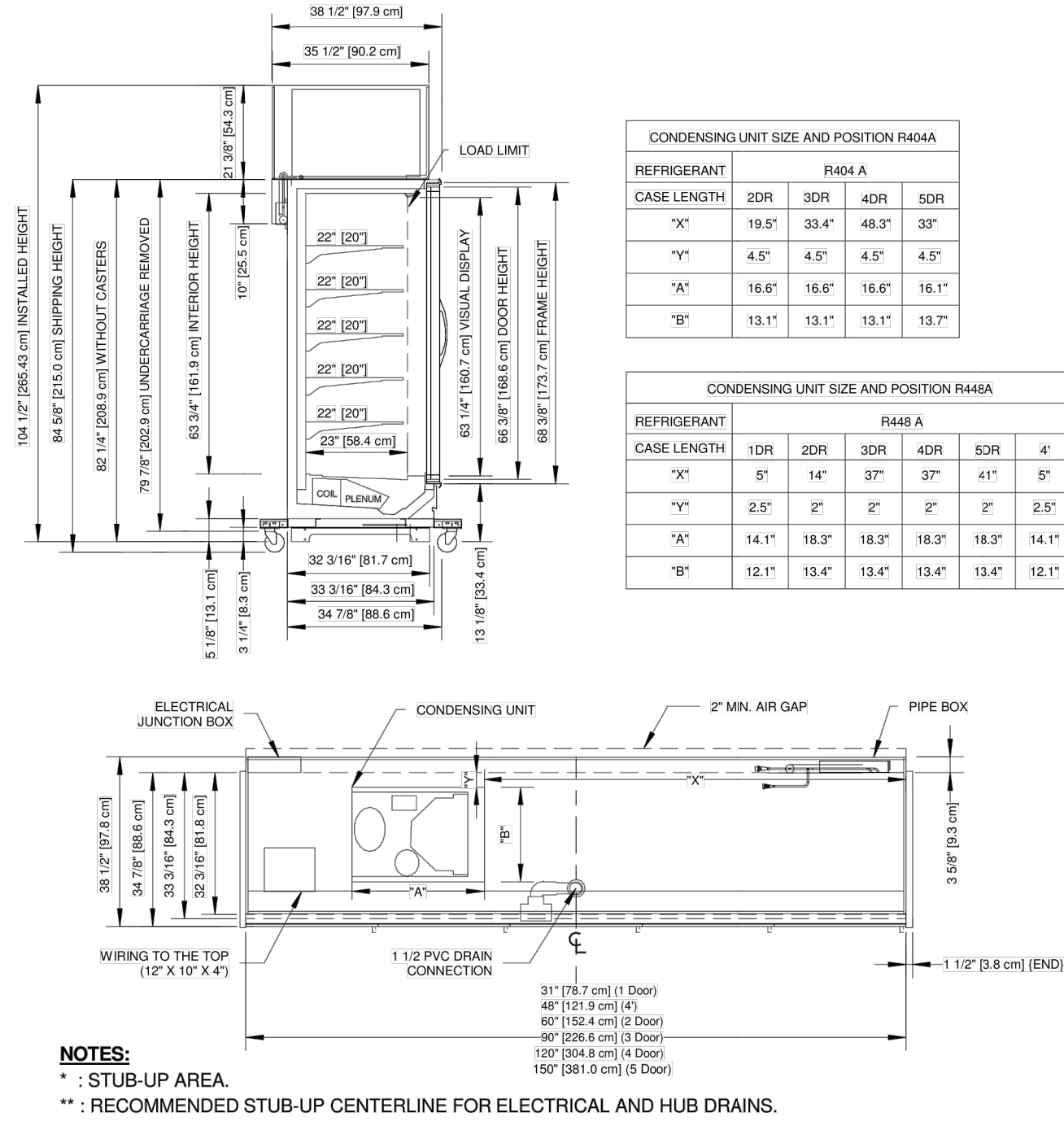
Rev. Date	Rev. #	Rev. Title
10-16-19	11	DATA UPDATE
10-16-19	10	ENDVIEW UPDATE



REACH-IN FREEZER/COOLER SHEET 3 OF 8

JNRBHSA

High Narrow Reach-In Self Contained Merchandiser
1, 2, 3, 4, 5 Door & 4' (Dairy/Deli/Beverage)



NOTES:

- "-,-" : STUB-UP AREA
- "-,-" : RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS.
- Specialized Base Frame:
- Case fits through 80" doorway with shipping undercarriage removed.
- 2" lifting brackets (installed) & 3.25" ship lose risers combine for 5" baseframe once installed.
- Drain traps ship loose.
- Ends add approximately 1" to case height, 1/2" to the back & 1" to the front.



JNRBHSA

Rev. Date	Rev. #	Rev. Title
10-16-19	11	DATA UPDATE
10-16-19	10	ENDVIEW UPDATE



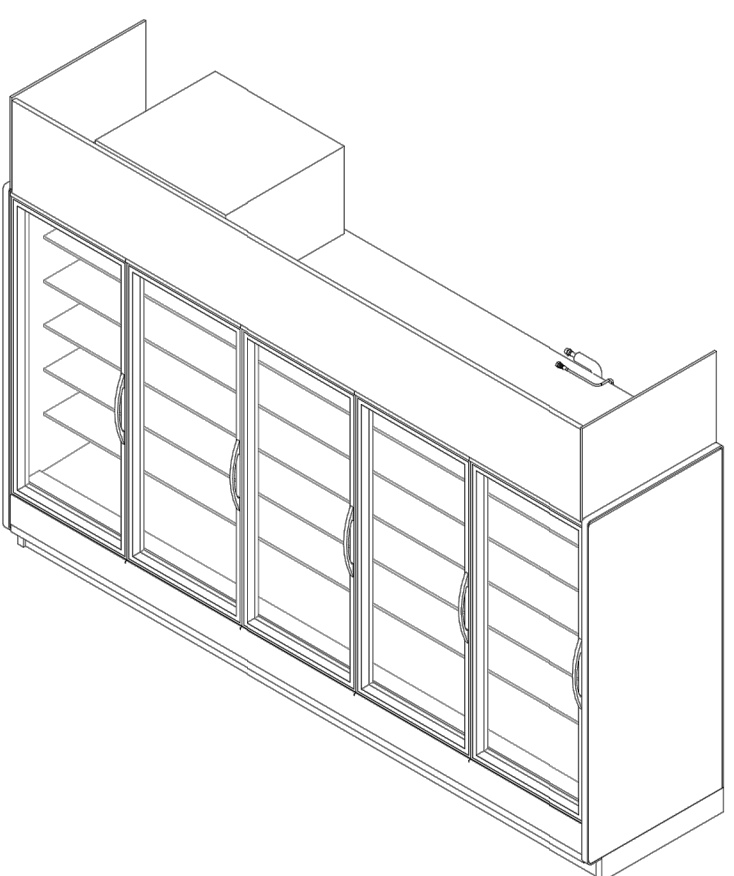
REACH-IN FREEZER/COOLER SHEET 4 OF 6

JNRZHS

High Narrow Reach-In Self Contained Merchandiser
2, 3, 4 & 5 Door (Frozen Food)

GENERAL NOTES:

- Lighting Controls and Anti Sweat Heat Controls are Required
- Option 1: OEM Provided:
Occupancy Sensor Based Lighting Controls (On/Off) & Hilphoenix provided embedded Anti Sweat Controls are standard, unless otherwise specified
- Option 2: End User Provided:
Lighting Controls should be Occupancy Sensor Based or on a minimum 8 Hour Off Schedule. Customer provided A/S Heat Controls should be set to 30% minimum off time at 75°F/55%RH
- 2,3,4, & 5 door case lengths are available in 208V R404A / R448A Condensing Unit Configuration



SHIPPING WEIGHT	
Case	Weight
JNRZHS	---



JNRZHS

Rev. Date	Rev. #	Rev. Title
10-17-19	7	ENDVIEW UPDATE
9-12-19	6	DATA UPDATE



2 REACH-IN FREEZER/COOLER SHEET 5 OF 8

JNRZHS (R404A)

High Narrow Reach-In Self Contained Merchandiser
2, 3, 4 & 5 Door (Frozen Food)

SYSTEM REQUIREMENT (R404A)

Case Length	Volts	Phase	Frequency	Minimum Circuit Ampacity (MCA)	Maximum Overcurrent Protection (MOP)
2 Door	208	1	60	24.1	30.0
3 Door	208	1	60	24.9	30.0
4 Door	208	1	60	29.8	30.0
5 Door	208	1	60	30.0	30.0

*. 24 Hour Energy values includes evaporator fans, standard LEDs, anti-condensate heat & condensing unit

GUIDELINES AND CONTROL SETTINGS (R404A)

Case Length	Superheat Set Point @ Bulb (°F)	Set Point Differential (°F)	Discharge Air (°F)	Discharge Air Velocity (FPM)
2 Door	3 - 5	6	-9	300
3 Door	3 - 5	6	-9	300
4 Door	3 - 5	6	-9	300
5 Door	3 - 5	6	-9	300

CONDENSING UNIT DATA (R404A)

Case Length	Volts	Phase	Frequency	Horsepower	Running Load Amps (RLA) (Amps)	Locked Rotor Amps (LRA) (Amps)	Refrigerant	Lbs. of Refrigerant
2 Door	208	1	60	3/4	9.0	43.0	R404A	2.8
3 Door	208	1	60	1	9.3	46.0	R404A	3.4
4 Door	208	1	60	1 1/4	12.6	55.0	R404A	3.7
5 Door	208	1	60	2	12.0	56.0	R404A	6.2

DEFROST CONTROLS (R404A)

Electric Defrost				
Defrosts Per Day	Run Off Time (Min) Electric	Fail-Safe (Min)	Termination Temp (°F)	
1	0	46	46	

DEFROST SCHEDULE (R404A)

Defrosts Per Day	Time
1	12 midnight

NOTES:

- "-,-" indicates that this feature is not an option on this case model.
- Listed discharge air velocity represents the average velocity at the peak of defrost.
- Temperature and defrost settings listed below are recommended start-up settings. Final operational settings may need to be adjusted for the store conditions in which the case operates.
- The recommended evaporator temperatures may need to be adjusted based on system setup, store conditions, etc. The minimum recommended evaporator temperature is 4°F below the listed evaporator temperature.
- The 24 Hour Energy Value is based upon AHRI 1200 test conditions with Hilphoenix provided Lights, occupancy sensor based (on/off) lighting control and dew point based anti sweat heat controller.



JNRZHS (R404A)

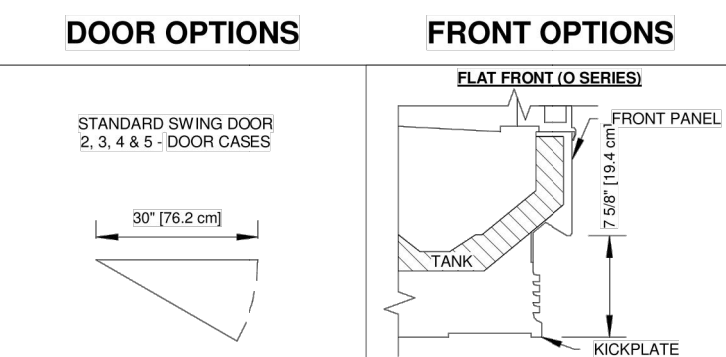
Rev. Date	Rev. #	Rev. Title
10-17-19	7	ENDVIEW UPDATE
9-12-19	6	DATA UPDATE



REACH-IN FREEZER/COOLER SHEET 6 OF 8

JNRZHS

High Narrow Reach-In Self Contained Merchandiser
2, 3, 4 & 5 Door (Frozen Food)



JNRZHS

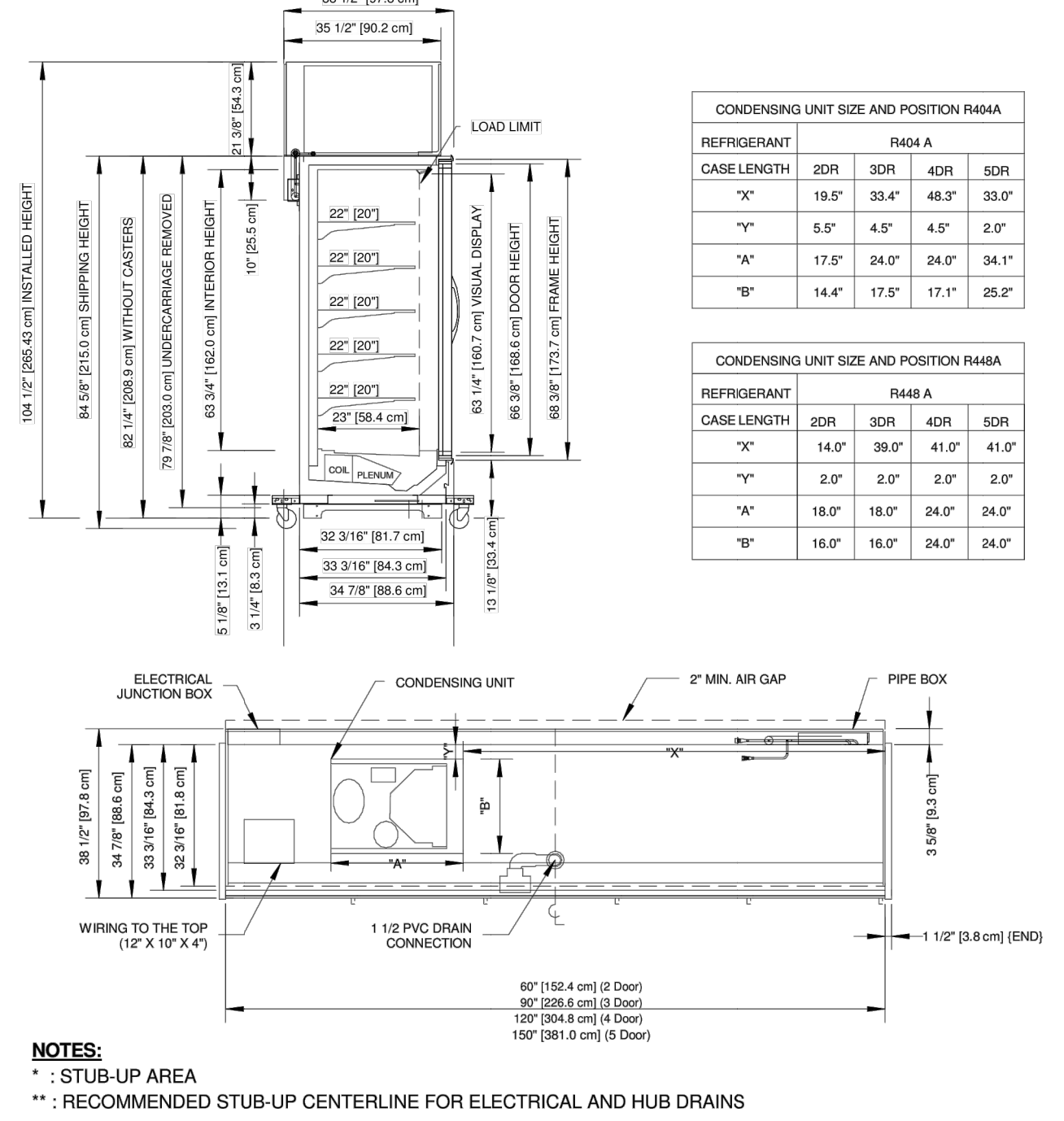
Rev. Date	Rev. #	Rev. Title
10-17-19	7	ENDVIEW UPDATE
9-12-19	6	DATA UPDATE



REACH-IN FREEZER/COOLER SHEET 7 OF 8

JNRZHS

High Narrow Reach-In Self Contained Merchandiser
2, 3, 4 & 5 Door (Frozen Food)



NOTES:

- "-,-" : STUB-UP AREA
- "-,-" : RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS
- Specialized Base Frame.
- Case fits through 80" doorway with shipping undercarriage removed.
- 2" fitting brackets (installed) & 3.25" ship lose risers combine for 5" baseframe once installed.
- Drain traps ship loose.
- Ends add approximately 1" to case height, 1/2" to the back & 1" to the front.



JNRZHS

Rev. Date	Rev. #	Rev. Title
10-17-19	7	ENDVIEW UPDATE
9-12-19	6	DATA UPDATE



REACH-IN FREEZER/COOLER SHEET 8 OF 8

description

by

mark

date

revisions

xx/xx/xx
52xxx

date
project
designed
drawn
checked

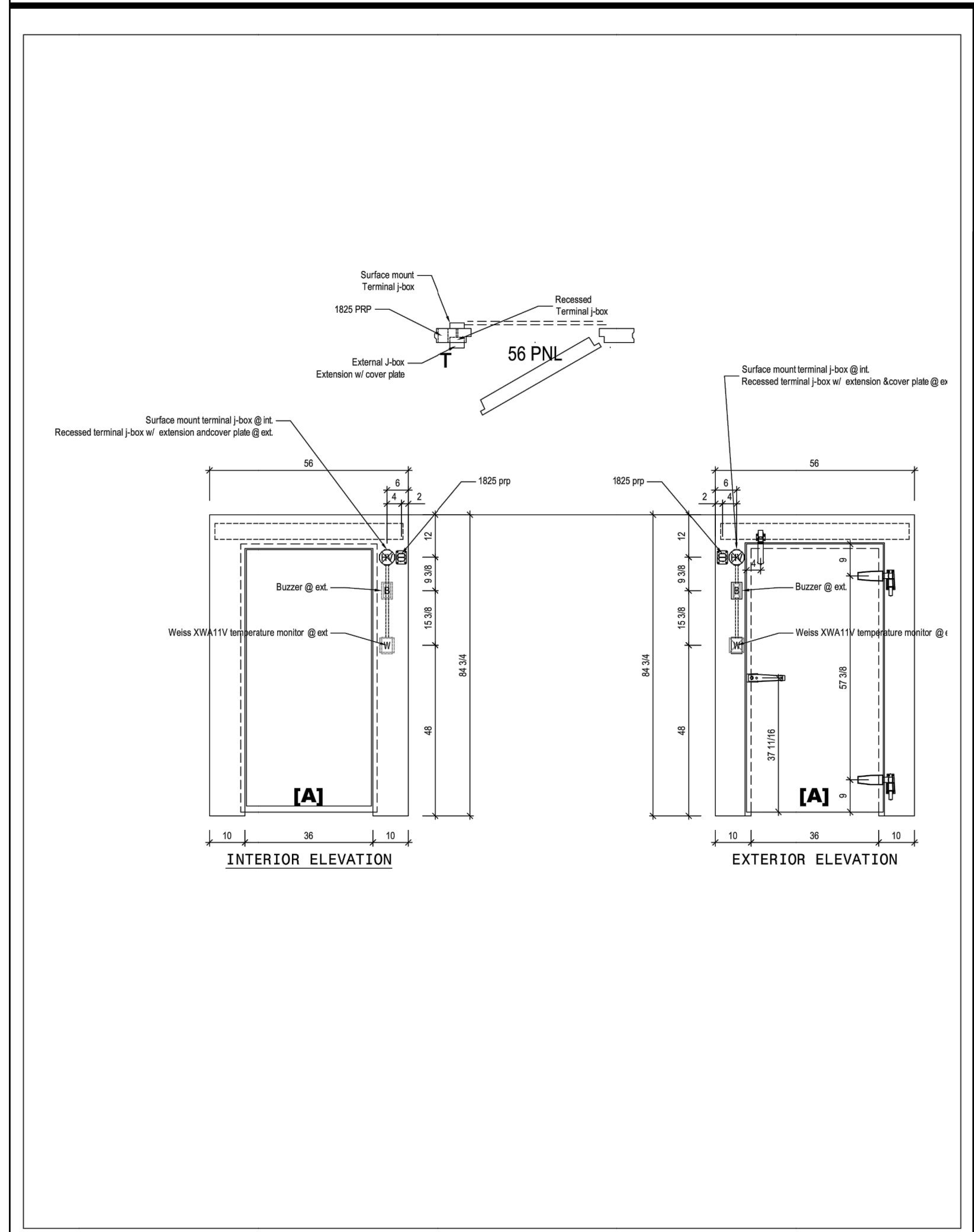
PROFESSIONAL OF RECORD

PK2NE_314-821-1100

project
drawing
DOLLAR TREE
SHOPPING CENTER NAME
ADDRESS
REACH-IN UNITS DETAILS AND SPECIFICATIONS

DS1

FOR REFERENCE ONLY



Serial # Mfg. Date
19-IB-31168-01A **7/22/2019**

DOOR PANEL ASSEMBLY
(Electrical Components)
Model #: FL-4-11.6W
120 VAC - 60Hz -1.04 A

This door is designed and certified for use in walk-in freezer applications (#SW1-L4.0-036x075-2000011.B)

WARNING: Cancer and Reproductive Harm
www.P65Warnings.ca.gov

For installation manuals, warranty information and other resources regarding this product, just snap the QR Code or visit:
www.imperialbrown.com

MANUFACTURED BY
IMPERIAL BROWN (Mid-West Division)
2115 West Main Street - Prague, OK 74864
405-567-1860

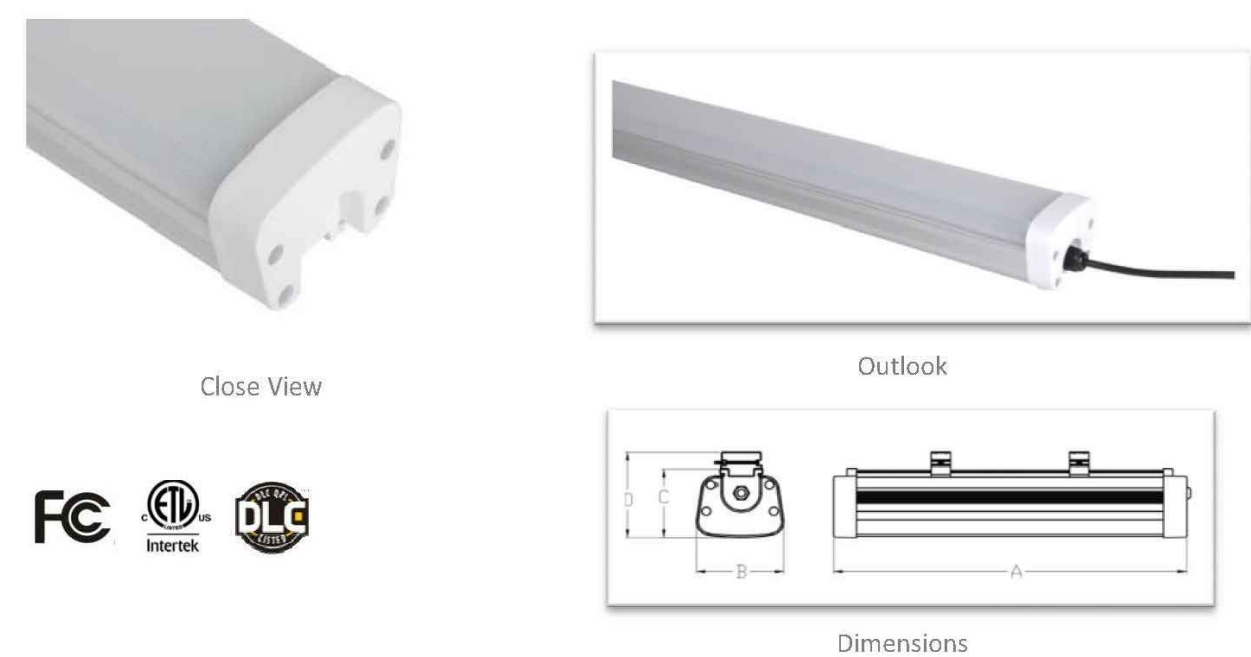
- GENERAL NOTES:
- THE PROPOSED FREEZER/COOLER UNIT SIZE IS INDICATED ON FLOOR PLAN.
 - ALL WALK-IN & MERCHANDISING UNITS ARE SELF-CONTAINED AND DO NOT REQUIRE A FLOOR DRAIN.
 - INSTALLATION OF THESE NSF, ETL & UL LISTED UNITS SHALL COMPLY WITH ALL STATE AND LOCAL CODES PER APPROVED PLANS.
 - ALL PANELS ARE LISTED UNDER LARK #25184
- REFER TO SPECIFICATIONS

Guangzhou LEDIA Lighting Technology Co., Ltd.
Tel: +86 (20) 3770 6055 E-mail: sales@ledialighting.com
Factory address: No.1 Xian Ke 3rd road, Huadong Town, Huadu Dist., Guangzhou, China
www.ledialighting.com

Specification

LED Vapor Tight Light	
Item No.	LD-TL-B024 LD-TL-B030 LD-TL-B040 LD-TL-B050 LD-TL-B060

- NOTES:
- This specification for our regular product specifications.
 - The right of final interpretation of this specification to Guangzhou LEDIA Lighting Technology Co., Ltd.



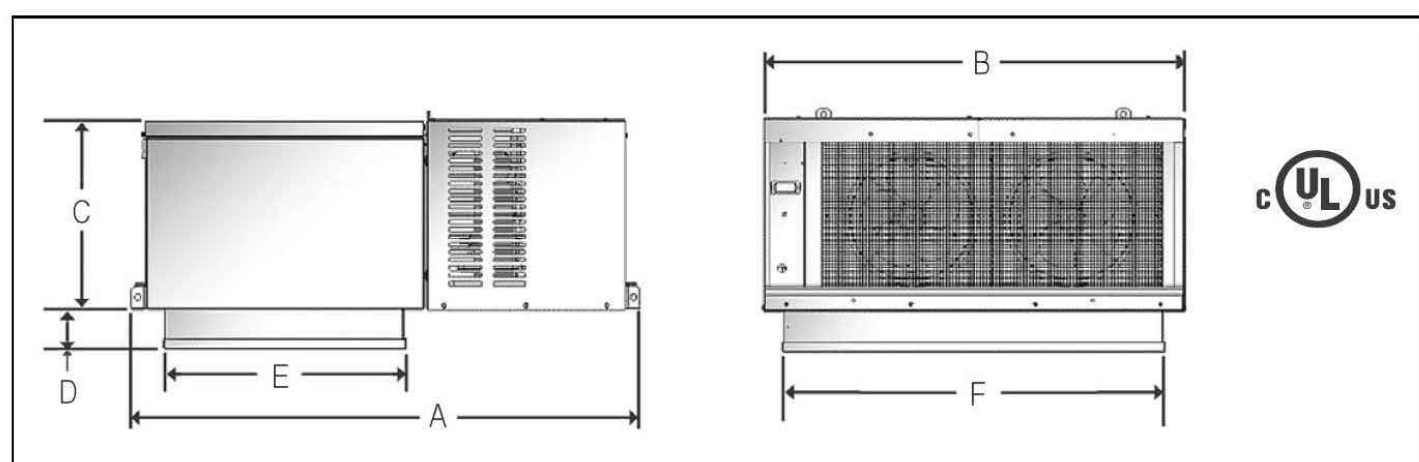
Guangzhou LEDIA Lighting Technology Co., Ltd.
Tel: +86 (20) 3770 6055 E-mail: sales@ledialighting.com
Factory address: No.1 Xian Ke 3rd road, Huadong Town, Huadu Dist., Guangzhou, China
www.ledialighting.com

PRODUCT DESCRIPTION	FEATURES	COMPONENTS	DIMMING
• LED Tri-proof light or LED Tight Vapor Light • Even light distribution, no glare • Waterproof, dustproof and corrosion-proof, can be applied in tough industrial environment that is corrosive, dusted, damp or rainy. • Perfect to apply in: supermarkets, warehouses, parking lots, bus stops, power plants, steel plants, petroleum plants, ship yards, subways, etc.	• 120° wide beam angle • High efficacy • Frosted cover: 100lm/W • Clear cover: 115lm/W • IP65 • High lumen maintenance: 80% @36,000 hours • Aluminum main part, good for heat dissipation • Flexible installation: suspended or surface mounted	• LEDs: SMD2835 (M80) • 6063 Aluminum heat sink, housing and side caps • Polycarbonate cover (Frosted/Clear) • Flaming rating of polycarbonate cover: UL94-V2 • Internal isolated driver	• Protocol of PWM • 0-10V dimming (optional)

Specification		12-TL-1624-RV/50-100V	12-TL-1624-RV/50-100V	12-TL-1624-RV/50-100V	12-TL-1624-RV/50-100V	12-TL-1624-RV/50-100V
General performance	Lumen	2400/2760	3000/3450	4000/4600	5000/5760	6000/6900
	Output(In)/Frosted/Clear					
	Efficiency (lm/W)/Frosted/Clear	100/115	100/115	100/115	100/115	100/115
	Color Temperature (CCT)	2800-3500K/3500-4500K/5000-6500K				
Electrical	Lumen Maintenance (L70)	≥50,000 hours				
	Color Rendering Index (CRI)	≥80				
	Beam Angle	120°				
	Power Consumption	24W	30W	40W	50W	60W
Packing info	Power Factor	≥0.9				
	Input Voltage (V)	120/277V/100-240VAC				
	Product Dimension(mm)	600x96x33mm (23 1/2" x 3 3/4" x 1 1/4")				
	Net Weight/PCS	1.3	1.3	2.1	2.1	2.1
Others	Package Dimension(mm)	712x427x367				
	Qty/Carton	6pcs/CTN				
	Gross Weight/Carton	8				
	Material	Aluminum + Polycarbonate				
Others	Operating Temperature	-20°C to 40°C				
	Humidity	10% - 90% RH, non condensing				
	Installation	1) Suspended 2) Surface mounted				
		3) Suspended 2) Surface mounted				

A Brand of Heatcraft Refrigeration Products		PTN052L6BE
2175 West Park Place Boulevard Stone Mountain, GA 30087 800.537.7775 www.larkinproducts.com		
Project: Dollar Tree Stores	QUOTATION:	
Location: Various	Submitted by: Mike S. Jarrell	
Customer:	DATE: 7/9/2015	
Identity #:	<input checked="" type="checkbox"/> For Record By: _____	
Tag: Freezer	<input type="checkbox"/> For Approval Date: _____	

PHYSICAL & ELECTRICAL & CAPACITY DATA							
REFRIGERANT	EVAPORATOR CFM	POWER SUPPLY Volts / Ph / Hz	MCA†	MOP†	Unit Amps	NEMA Receptacle	APPROX. NET WEIGHT
R404A	900	208-230/1/60	18.1	20	15.3	6-20R	275
†MCA=Minimum Circuit Ampacity †MOP = Maximum Overcurrent Protection							
CAPACITY (BTUH)							
+35°F Room	+38°F Room	0°F Room	-10°F Room	-20°F Room	AMBIENT TEMP CAPACITY (BTUH) at 95°F Ambient		
0	0	7000	5360	3910			



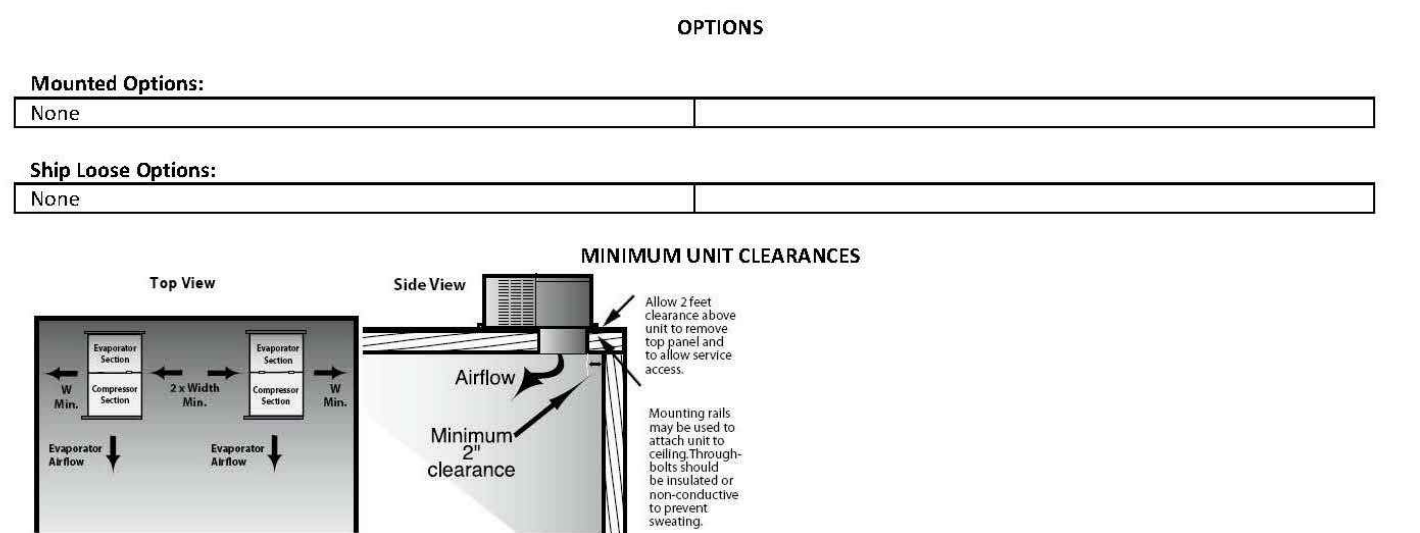
DIMENSIONS (inches)										
A	B	C	D	E	F	G	H	J	K	
52	42	19	4	24.75	38.25					

DIMENSIONS (inches)										
L	M	N	P	R	S	T	U	V	W	

SST = Saturated Suction Temperature

A Brand of Heatcraft Refrigeration Products		PTN052L6BE
2175 West Park Place Boulevard Stone Mountain, GA 30087 800.537.7775 www.larkinproducts.com		
Project: Dollar Tree Stores	QUOTATION:	
Location: Various	Submitted by: Mike S. Jarrell	
Customer:	DATE: 7/9/2015	
Identity #:	<input checked="" type="checkbox"/> For Record By: _____	
Tag: Freezer	<input type="checkbox"/> For Approval Date: _____	

- STANDARD FEATURES**
- Cabinet & Construction:
 - Top mount design with evaporator grill flush to ceiling
 - Electronic controls for accurate temperature control
 - Liquid-line drier on medium and large cabinet models
 - System is factory assembled, evacuated, charged, run tested and wired - no piping or loose components to install
 - Cabinet panels are fabricated from heavy gauge aluminum
 - 2-year product warranty
 - Fans:
 - Direct drive fan motors
 - PSC fan motor in condensing unit section
 - EC evaporator fan motor.
 - Labeling:
 - Condensate evaporation pan - no drain line
 - Outdoor models:
 - Weather hood
 - Crankcase heater
 - Drain line heater
 - Fan cycling



Mounted Options:	
Name:	
Ship Loose Options:	
Name:	

project description
drawing by
mark date
revisions

FOR INFORMATION ONLY

REFRIGERATION SPECIFICATIONS
WALK-IN SPECIFICATIONS