TREANORHL

THE MEDICAL CENTER AURORA

CONSTRUCTION DOCUMENTS

12/22/2023

OWNER

HCA Healthcare
One Park Plaza Bldg 2-3E
Nashville, TN 37203
(p) 615.344.2646

FACILITY

The Medical Center of Aurora
1501 S. Potomac Street
Aurora, CO 80012
(p) 303.873.4895

ARCHITECT

TreanorHL, Inc.
1755 Blake Street, Suite 400
Denver, Co. 80202
(p) 303.298.4700

MEP

Salas O'Brien
9250 E. Coastilla Ave., Ste. 220
Greenwood Village, CO 80112
(p) 303.225.6320

ABV	ABOVE	PR	PAIR
AC	ABOVE COUNTER	PSF	POUNDS PER SQUARE FOOT
ADA	AMERICANS WITH DISABILITIES ACT	PSI	POUNDS PER SQUARE INCH
ADJ	ADJUSTABLE	PT	PAINT, PAINTED
AFF	ABOVE FINISHED FLOOR	PTR	PAPER TOWEL RECEPTOR
AHU	AIR HANDLING UNIT	PVC	POLYVINYL CHLORIDE
AL	ALUMINUM	PVMT	PAVEMENT
AP	ACCESS PANEL	QTY	QUANTITY
APC	ACOUSTICAL PANEL CEILING	R	RADIUS OR RISER
APX	APPROXIMATE	RA	RETURN AIR
ARCH	ARCHITECT(URAL)	RB	RUBBER BASE
AUTO	AUTOMATIC	RCP	REFLECTED CEILING PLAN
BD	BOARD	RE	REFERENCE
BO	BOTTOM OF	REF	REFERENCE
BOD	BASIS OF DESIGN	REFR	REFRIGERATOR
CCTV	CLOSED CIRCUIT TELEVISION	REG	REGISTER
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	REINF	REINFORCED(ING)
CG	CORNER GUARD	REQ	REQUIRE(D)
CIP	CAST IN PLACE	REV	REVISION
CJ	CONTROL JOINT	RM	ROOM
CL	CENTER LINE	RO	ROUGH OPENING
CLG	CEILING	RTU	ROOF TOP UNIT
CLR	CLEAR	S	SOUTH
CO	CLEAN OUT	SA	SUPPLY AIR
COL	COLUMN	SAN	SANITARY
CONC	CONCRETE	SCHED	SCHEDULE
CONST	CONSTRUCTION	SF	SQUARE FEET
CONT	CONTINUOUS, CONTINUE	SIM	SIMILAR
CORR	CORRIDOR	SND	SANITARY NAPKIN DISPENSER
CR	CARD READER	SNR	SANITARY NAPKIN RECEPTACLE
CTSK	COUNTERSUNK	SPEC	SPECIFICATION(S)
CW	COLD WATER	SS	SOLID SURFACE
D	DEEP/DEPTH	SST	STAINLESS STEEL
DBL	DOUBLE	STD	STANDARD
DF	DRINKING FOUNTAIN	STL	STEEL
DIA	DIAMETER	STRUCT	STRUCTURAL
DIM	DIMENSION	SUSP	SUSPENDED
DIV	DIVISION	SY	SQUARE YARD
DN	DOWN	SYM	SYMMETRICAL
DPR	DISPENSER	SYS	SYSTEM
DTL	DETAIL	T	TREAD
DWG	DRAWING	T&G	TONGUE AND GROOVE
E	EAST	TBD	TO BE DETERMINED
EA	EACH	TD	TRENCH DRAIN
EJ	EXPANSION JOINT	TEL	TELEPHONE
EL	ELEVATION	THK	THICK(NESS)
ELEC	ELECTRIC(AL)	THRU	THROUGH
ELEV	ELEVATION	TLT	TOILET
EQ	EQUAL	TO	TOP OF
EQUIP	EQUIPMENT	TOC	TOP OF CONCRETE
ETR	EXISTING TO REMAIN	TOS	TOP OF STEEL, TOP OF SLAB
EXP	EXPANSION	TOW	TOP OF WALL
EXT	EXTERIOR	TPD	TOILET PAPER DISPENSER
FAAP	FIRE ALARM ANNUNCIATOR PANEL	TPTN	TOILET PARTITION
FACP	FIRE ALARM CONTROL PANEL	TS	TUBE STEEL
FD	FLOOR DRAIN	TYP	TYPICAL
FDC	FIRE DEPARTMENT CONECTION	TZ	TERRAZZO
FE	FIRE EXTINGUISHER	UC	UNDER CONTRACT
FEB	FIRE EXTINGUISHER BRACKET	UNF	UNFINISHED
FEC	FIRE EXTINGUISHER CABINET	UNO	UNLESS NOTED OTHERWISE
FF	FINISH FLOOR	UR	URINAL
FFE	FINISHED FLOOR ELEVATION	US	URINAL SCREEN
FR	FIRE RATED	VB	VAPOR BARRIER
FRP	FIBERGLASS REINFORCED PLASTIC	VCT	VINYL COMPOSITE TILE
FS	FLOOR SINK	VERT	VERTICAL
FT	FEET	VEST	VESTIBULE
FTG	FOOTING	VFCI	VENDOR FURNISHED CONTRACTOR INSTALLED
FUR	FURRING	VFOI	VENDOR FURNISHED OWNER INSTALLED
FUT	FUTURE	VFVI	VENDOR FURNISHED VENDOR INSTALLED
GA	GAUGE	VIF	VERIFY IN FIELD
GALV	GALVANIZED	W	WIDE/WIDTH
GB	GRAB BAR	W/	WITH
GC	GENERAL CONTRACTOR	W/O	WITHOUT
GYP	GYPSUM	WC	WATER CLOSET
GYP BD	GYPSUM BOARD	WD	WOOD
H	HIGH/HEIGHT	WDB	WOOD BASE
HM	HOLLOW METAL	WDO	WINDOW
HVAC	HEATING/VENTILATING/AIR CONDITIONING	WG	WIRE GLASS
ID	INSIDE DIAMETER	WO	WHERE OCCURS
IN	INCHES	WPG	WATERPROOFING
INCL	INCLUDE(D), (ING)	WS	WRITABLE SURFACE
INSUL	INSULATION, INSULATING	WS	WATERSTOP
INT	INTERIOR	WSCT	WAINSCOT
JB	JUNCTION BOX	WT	WEIGHT
L	LONG/LENGTH	WTW	WALL TO WALL
LAV	LAVATORY	WWF	WELDED WIRE FABRIC
LTL	LINTEL		
LW	LIGHT WEIGHT		
LWC	LIGHT WEIGHT CONCRETE		
LWCMU	LIGHT WEIGHT CONCRETE MASONRY UNIT		
M	METER(S)		
MAT	MATERIAL(S)		
MAX	MAXIMUM		
MDF	MEDIUM DENSITY FIBERBOARD		
MECH	MECHANICAL		
MFR	MANUFACTURE/MANUFACTURER		
MHO	MAGNETIC HOLD OPEN		
MIN	MINIMUM		
MIR	MIRROR		
MISC	MISCELLANEOUS		
N	NORTH		
NIC	NOT IN CONTRACT		
NO	NUMBER		
NR	NOISE REDUCTION		
NRC	NOISE REDUCTION COEFFICIENT		
NTS	NOT TO SCALE		
OC	ON CENTER		
OD	OUTSIDE DIAMETER (or) OVERFLOW DRAIN		
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED		
OFOI	OWNER FURNISHED OWNER INSTALLED		
OFVI	OWNER FURNISHED VENDOR INSTALLED		
OH	OVERHEAD		
OTS	OPEN TO STRUCTURE		
PLAM	PLASTIC LAMINATE		
PLAS	PLASTER		
PLBG	PLUMBING		
PLWD	PLYWOOD		
PNL	PANEL		

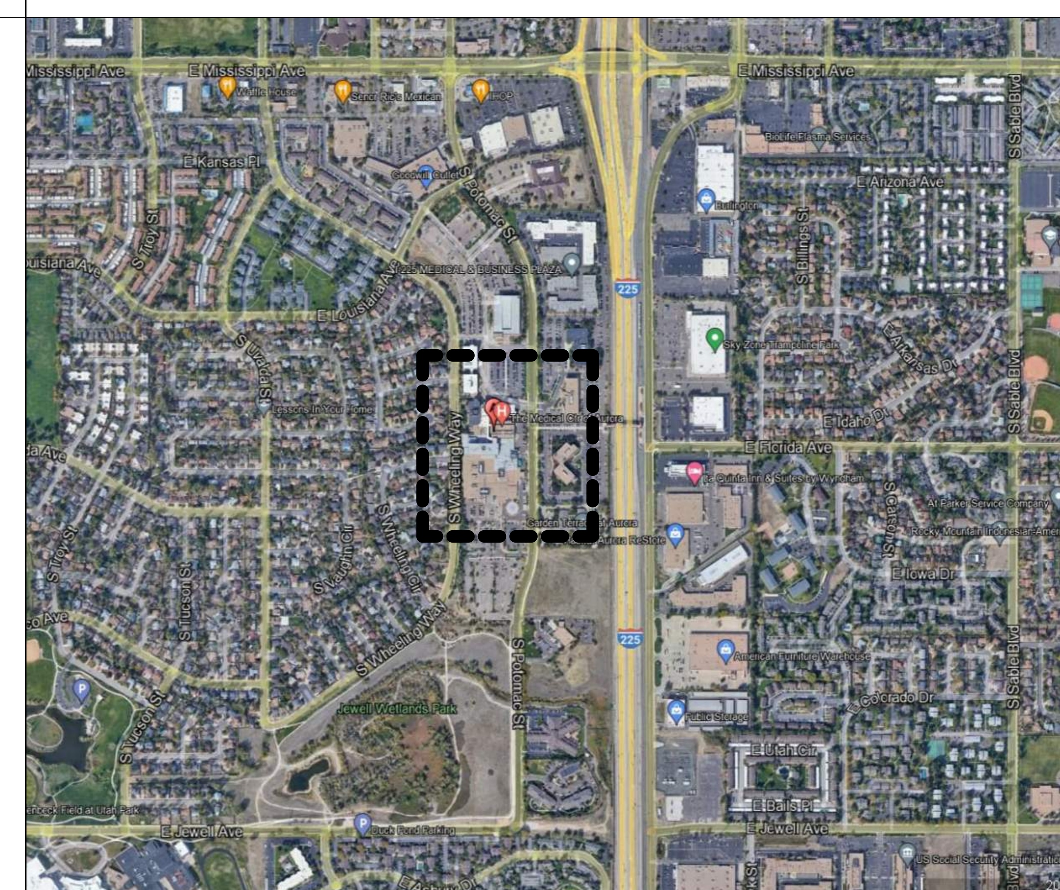
SEPARATE FIRE ALARM PERMIT REQUIRED:
Due to the proposed work the general contractor is required to obtain the services of a fire alarm contractor to determine if a separate alarm permit is required. If it is determined that the spacing of the fire alarm devices is not in compliance, then a separate fire alarm permit is required. Approval of the documents is required prior to system installation or any request for inspection. A certificate of occupancy or final approval cannot be issued by the Building Division without this fire protection system. **2021 IFC, Section 105.6.6.**

SEPARATE FIRE SPRINKLER PERMIT REQUIRED:
Due to the proposed work the general contractor is required to obtain the services of a fire sprinkler contractor to determine if a separate sprinkler permit is required. If it is determined if a separate sprinkler permit is required. If it is determined that the spacing of the fire sprinkler heads is not in compliance, then a separate fire sprinkler permit is required. Approval of the documents is required prior to system installation or any requires for inspection. A Certificate of Occupancy or final approval cannot be issued by the Building Division without this fire protection system. **2021 IFC, Section 105.6.1**

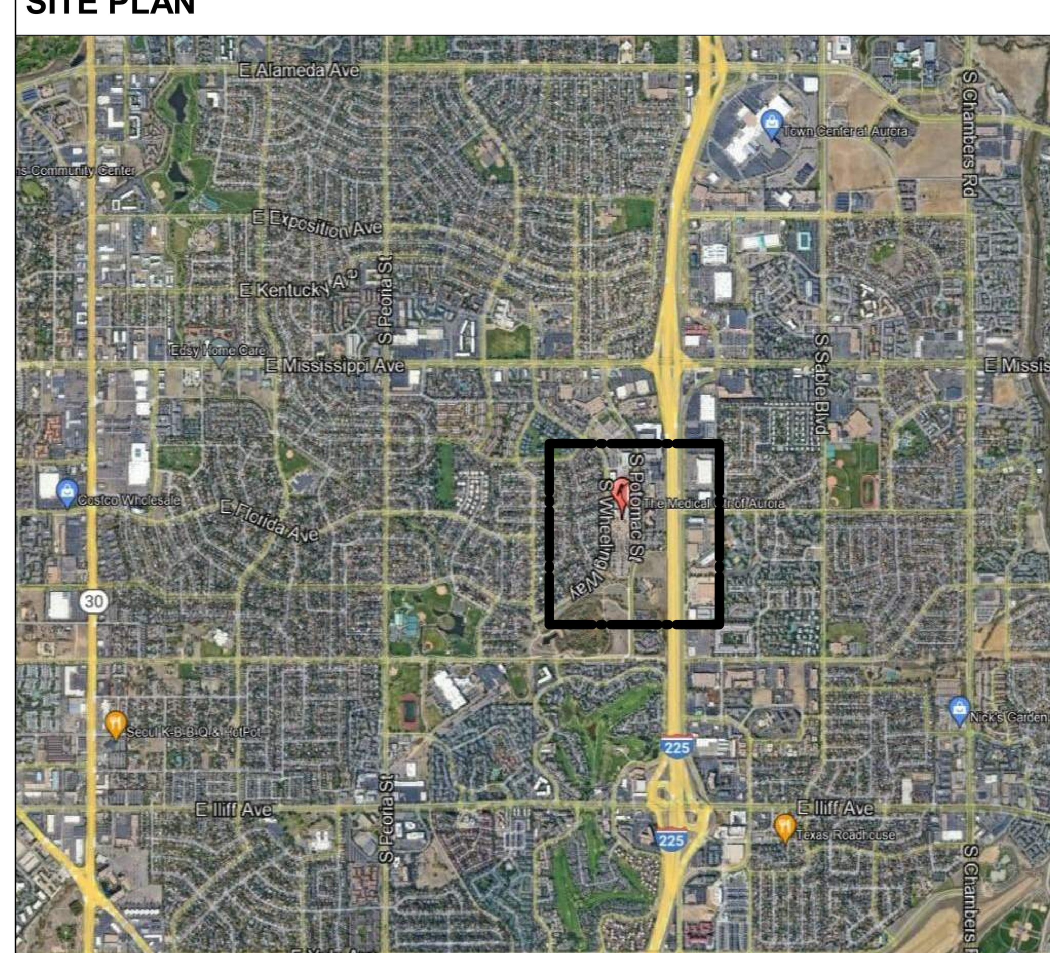
GENERAL NOTES

1. GENERAL NOTES APPLY TO WORK OF THIS PROJECT, INCLUDING CHANGES TO THE WORK APPROVED BY THE OWNER.
2. VISIT SITE AND BECOME FAMILIAR WITH LOCAL CONDITIONS. CORRELATE PERSONAL OBSERVATIONS WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS.
3. CONTRACT DOCUMENTS INDICATE THE DESIGN INTENT. PROVIDE MINOR MODIFICATIONS NECESSARY TO SUIT JOB CONDITIONS AS PART OF THE WORK, WITH ARCHITECT'S DIRECTION.
4. CONTRACT DOCUMENTS ARE COMPLEMENTARY. BEFORE STARTING EACH PORTION OF THE WORK, STUDY AND COMPARE THE CONTRACT DOCUMENTS RELATIVE TO THAT PORTION OF THE WORK, TAKE FIELD MEASUREMENTS OF EXISTING CONDITIONS RELATED TO THAT PORTION OF THE WORK, AND OBSERVE CONDITIONS AT THE SITE AFFECTING IT, TO FACILITATE COORDINATION AND CONSTRUCTION. REPORT ERRORS, OMISSIONS AND INCONSISTENCIES IMMEDIATELY TO THE ARCHITECT.
5. FEES, TAXES, PERMITS, APPLICATIONS, CERTIFICATES OF INSPECTION, AND THE FILING OF WORK WITH GOVERNMENTAL AGENCIES, ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, U.N.O.
6. COMPLY WITH APPLICABLE CODES, ORDINANCES, REGULATIONS, AND AUTHORITIES HAVING JURISDICTION, AS A MINIMUM STANDARD.
7. COOPERATE WITH AUTHORITIES HAVING JURISDICTION AND SPECIAL INSPECTORS. PROVIDE TIMELY NOTIFICATION IN ADVANCE OF INSPECTIONS, AND ASSISTANCE AND FACILITIES TO ACCOMMODATE INSPECTIONS.
8. DO NOT PERFORM CHANGES TO THE WORK AFFECTING THE CONTRACT SUM OR CONTRACT TIME WITHOUT WRITTEN AUTHORIZATION FROM THE ARCHITECT.
9. MINIMIZE INTERFERENCE WITH USE OF PUBLIC WAYS AND ADJACENT FACILITIES. DO NOT CLOSE, BLOCK OR OTHERWISE OBSTRUCT USE OF PUBLIC WAYS OR FACILITIES WITHOUT CONSENT OF OWNER AND/OR AUTHORITIES HAVING JURISDICTION.
10. PROTECT EXISTING UTILITIES INDICATED TO REMAIN IN SERVICE.
11. DO NOT INTERRUPT EXISTING UTILITIES UNLESS AUTHORIZED BY OWNER AND/OR AUTHORITIES HAVING JURISDICTION. WHEN REQUIRED, PROVIDE ALTERNATE TEMPORARY SERVICES ACCEPTABLE TO GOVERNING AUTHORITIES.
12. PROVIDE WORK TO MEET OR EXCEED THE LEVEL OR STANDARD OF QUALITY INDICATED ON THE CONSTRUCTION DOCUMENTS.
13. INSTALL MANUFACTURED ITEMS, MATERIALS AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS, U.N.O.
14. WHERE A MANUFACTURER IS SPECIFIED, THE NAME OR PRODUCT LISTED IS A BASIS OF DESIGN. WHERE THE TERM "OR APPROVED EQUAL" OR "OR EQUIVALENT" IS USED, THE ARCHITECT SHALL DETERMINE EQUIVALENCE AND ACCEPTABILITY BASED UPON THE INFORMATION SUBMITTED, PRIOR TO USE.
15. WHERE PRODUCTS ARE INDICATED, NOTED, NAMED, DESCRIBED, OR REFERENCED IN THE PROJECT DOCUMENTS BUT NOT FULLY DETAILED OR FULLY SPECIFIED, PROVIDE SUCH PRODUCT, INSTALLED IN ACCORDANCE WITH CURRENT (1) REFERENCED BUILDING CODES, ORDINANCES, AND REGULATIONS, (2) PRODUCT MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS, (3) GENERALLY ACCEPTED GOOD CONSTRUCTION PRACTICE STANDARDS, WITH PRECEDENCE IN THAT ORDER. PROVIDE SUCH PRODUCTS COMPLETE WITH HARDWARE, ACCESSORIES, ATTACHMENTS, CONTROLS AND OTHER DEVICES REQUIRED FOR THE PROPER INSTALLATION TO PROVIDE A COMPLETE OPERATIONAL SYSTEM WITH THE QUALITY OF WORKMANSHIP NOT LESS THAN INDUSTRY-ACCEPTED STANDARDS OF THAT TRADE.
16. INSTALL PLUMBING, MECHANICAL AND ELECTRICAL EQUIPMENT TO OPERATE QUIETLY AND WITH MINIMAL VIBRATION.
17. KEEP THE WORK FREE OF ACCUMULATIONS OF WASTE MATERIALS AND DEBRIS. USE METHODS AGREEABLE TO THE OWNER FOR WASTE REMOVAL.
18. ARCHITECTURAL DIMENSIONS ARE TO FACE OF CONCRETE, FACE OF MASONRY, FACE OR CENTERLINE OF STUD, OR STRUCTURAL GRID LINE, U.N.O. MASONRY DIMENSIONS ARE NOMINAL, U.N.O. ALIGN FACE OF MASONRY WITH FACE OF CONCRETE WALLS, COLUMNS OR PILASTERS WHERE APPLICABLE. "CLEAR" DENOTES MINIMUM FINISH-TO-FINISH DIMENSION.
19. FIELD-VERIFY GRADES, LINES, LEVELS AND DIMENSIONS SHOWN ON THE DRAWINGS.
20. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS SHALL GOVERN. DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS; LARGE SCALE DETAILS SHALL GOVERN OVER SMALL SCALE DETAILS.
21. PROTECT EXISTING PROPERTY AND WORK FROM DAMAGE. REPAIR OR REPLACE ITEMS DAMAGED BY CONSTRUCTION ACTIVITY TO MATCH CONDITIONS PRIOR TO START OF WORK.
22. PROTECT THE WORK FROM WEATHER-RELATED DAMAGE.
23. PROVIDE LINTELS AT OPENINGS, RECESSES AND NICHES IN MASONRY WALLS AND PARTITIONS. REFERENCE LINTEL SCHEDULE FOR REQUIREMENTS.
24. PROVIDE CAST-IN-PLACE CONCRETE BASES FOR FLOOR-MOUNTED MECHANICAL AND ELECTRICAL EQUIPMENT. VERIFY SIZE AND LOCATION OF BASES WITH MECHANICAL AND ELECTRICAL CONTRACTORS.
25. PROVIDE 3-1/2" HIGH, CAST-IN-PLACE RECTANGULAR CONCRETE PADS WHERE ELECTRICAL CONDUITS PENETRATE FLOORS AND ARE EXPOSED TO VIEW. EXTEND PADS LATERALLY 4" MIN. FROM CONDUITS.
26. PROVIDE (FIRE-RETARDANT TREATED, WHERE REQUIRED) WOOD BLOCKING FOR SUPPORT OF CASEWORK, GRAB BARS, TOILET, BATH AND CLOSET ACCESSORIES, VISUAL DISPLAY SURFACES AND EQUIPMENT, DOOR STOPS, FIXTURES AND SPECIALTY ITEMS. KERF BLOCKING TO FIT SNUGLY BETWEEN STUDS AND TO FIT TIGHTLY AGAINST BACK OF GYPSUM BOARD. BLOCK CONTINUOUSLY AT TOP AND BOTTOM OF BASE, WALL AND TALL CABINETS.
27. PROVIDE METAL BLOCKING FOR SUPPORT OF CASEWORK, GRAB BARS, TOILET, BATH AND CLOSET ACCESSORIES, VISUAL DISPLAY SURFACES AND EQUIPMENT, DOOR STOPS, FIXTURES AND SPECIALTY ITEMS. INSTALL BLOCKING TO FIT SNUGLY BETWEEN STUDS AND TO FIT TIGHTLY AGAINST BACK OF GYPSUM BOARD. BLOCK CONTINUOUSLY AT TOP AND BOTTOM OF BASE, WALL AND TALL CABINETS.
28. INSTALL TOP OF FLOOR DRAINS 1/2" BELOW FINISH FLOOR ELEVATION, U.N.O. PROVIDE POSITIVE SLOPE TO DRAINS FROM ALL DIRECTIONS, SO THAT WATER DOES NOT POND ON FLOOR AWAY FROM DRAINS.
29. PROTECT EXISTING CONSTRUCTION, MATERIALS AND FINISHES WITH ENCLOSURES AND OTHER SUITABLE MEASURES. COMPLY WITH GOVERNING REGULATIONS REGARDING ENVIRONMENTAL PROTECTION. REPAIR ANY DAMAGE TO MATCH CONDITIONS PRIOR TO START OF WORK.
30. PROVIDE SHORING AS NECESSARY DURING DEMOLITION AND CONSTRUCTION TO ENSURE STABILITY OF BUILDING STRUCTURE AND ELEMENTS TO REMAIN.
31. REMOVE EXISTING ITEMS NOT SHOWN TO REMAIN, AND AS REQUIRED TO ACCOMMODATE NEW WORK. SALVAGE ITEMS WHERE INDICATED.
32. INFILL OR PATCH UNUSED OPENINGS IN FLOOR, WALL, CEILING AND ROOF ASSEMBLIES, AS REQUIRED TO MAINTAIN SMOKE, FIRE OR SOUND RATING, AND /OR STRUCTURAL CAPACITY. MATCH TEXTURE, COLOR AND FINISH OF ADJACENT SURFACE WHERE EXPOSED TO VIEW.

VICINITY MAP



SITE PLAN



GOVERNING CODES

- **CITY OF AURORA:**
  2021 INTERNATIONAL BUILDING CODE (IBC)
  2021 INTERNATIONAL MECHANICAL CODE (IMC)
  2021 INTERNATIONAL FUEL GAS CODE (IFGC)
  2021 INTERNATIONAL FIRE CODE (IFC)
  2021 INTERNATIONAL PLUMBING CODE (IPC)
  2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
  2021 INTERNATIONAL ENGERGY CONSERVATION CODE (IECC)
  2023 NATIONAL ELECTRICAL CODE (NEC)
- **STATE OF COLORADO**
  NFPA 101 LIFE SAFET Y CODE - 2012 EDITION
  NFPA 101A GUIDE ON ALTERNATIVE APPROACHES TO LIFE SAFETY - 2013 EDITION
  NFPA 99 HEALTH CARE FACILITIES CODE - 2012 EDITION
  NFPA 3 STANDARD FOR COMMISSIONING OF FIRE PROTECTION AND LIFE SAFETY SYSTEMS - 2015 EDITION
  NFPA 4 STANDARD FOR INTEGRATED FIRE PROTECTIONS AND LIFE SAFETY SYSTEM TESTING - 2015 EDITION
  NFPA 170 STANDARD FOR FIRE SAFETY AND EMERGENCY SYMBOLS - 2021 EDITION
  2021 INTERNATIONAL CODE SERIES

  2018 FACILITY GUIDELINES INSTITUTE
- **FEDERAL**
  2010 AMERICANS WITH DISABILITIES ACT GUIDELINES
  2017 ICC / ANSI A117.1 ACCESSIBILITY CODE

SYMBOLS

DETAIL SECTION (DETAIL NUMBER 1 / SHEET NUMBER A101)	ELEVATION LEVEL (NAME / ELEVATION)
BUILDING SECTION (DETAIL NUMBER 1 / SHEET NUMBER A101)	CEILING TAG W/ HEIGHT/MATERIAL (1'-0" HEIGHT ABOVE FINISH FLOOR, UNO; APC1 CEILING TYPE)
WALL SECTION (DETAIL NUMBER 1 / SHEET NUMBER A101)	DOOR TAG (201A: UNIQUE ID, ROOM NUMBER)
BUILDING ELEVATION / INTERIOR ELEVATION (DETAIL NUMBER 1 / SHEET NUMBER A101)	WINDOW TAGS (AA, 3'-0" AFF (WIN. SILL))
PLAN DETAIL (DETAIL NUMBER 1 / SHEET NUMBER A101)	GRAPHIC SCALE (0, 4', 8', 16')
GRID LINE - NEW (0); GRID LINE - EXISTING (0)	PLAN NOTE & DEMO NOTE (P01)
NORTH ARROW	REVISION TAG (999 REVISION NUMBER)
PARTITION TYPE INDICATOR (A3z1: PARTITION TYPE, DIMENSIONAL MODIFIER, TYPE MODIFIER, RATING - WHERE APPLIES; PARTITION)	ROOM TAG (ROOM NAME, 101 ROOM NUMBER); ROOM TAG W/ AREA (ROOM NAME, 101 ROOM NUMBER, 150 SF ROOM SF)
CASEWORK TAG (# AWI # or PRODUCT #, 12" WIDTH, 12" DEPTH)	SPECIALTY EQUIPMTNT TAG (1i)

PROJECT DESCRIPTION

RENOVATION WITHIN THE EXISTING MEDICAL CENTER OF AURORA HOSPITAL SOUTH CAMPUS. THIS PROJECT INCLUDES HEAVY RENOVATION OF THE AMBULATORY EMERGENCY DEPARTMENT ENTRY VESTIBULE, SECURITY / POLICE STATION, RECEPTION DESK, CENTRAL STAFF WORK AREA, REGISTRATION AND TWO RESTROOMS. LIGHT RENOVATION WILL TAKE PLACE IN THE ELEVEN EXAM / TRIAGE ROOMS AND ONE STAFF WORK AREA. PROJECT SCOPE IS APPROXIMATELY 4500 SF AND INCLUDES LIGHTING, PLUMBING AND HVAC UPGRADES WHERE AFFECTED BY THE RENOVATION SCOPE. NO CHANGE IN USE OR OCCUPANCY WILL OCCUR.

BUILDING INFORMATION

- **OCCUPANCY CLASSIFICATION:**
  2021 IBC - GROUP 1-2 (SECTION 308.4)
  2012 NFPA 101 - EXISTING HEALTHCARE OCCUPANCY (CHAPTER 19)
- **PRINCIPAL OCCUPANCY TYPE:** 1-2
- **CONSTRUCTION TYPE:** ← UBC TYPE I-FR SPK

EXISTING: SBC - TYPE 1-A, UNRESTRAINED, FULLY SPRINKLERED

NEW: 2021 IBC - TYPE 1-A, FULLY SPRINKLERED
2012 NFPA 220 - TYPE 1 (332)

This plan is reviewed to **IBC** but the existing building is NOT converted to **IBC**. The construction type listed is **UBC.** Occupancy group is **IBC.**

This plan was reviewed for adopted codes and **NOT** for compliance with **ADA** or **FHA** accessibility requirements. Contact **800-949-4232** (**ADA**) and **303-894-7822** x **325** (**FHA**) for federal accessibility requirements that apply to your project.

Structural plan review is limited to a general survey for code compliance. No review is implied nor was undertaken to verify structural adequacy.

Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation.

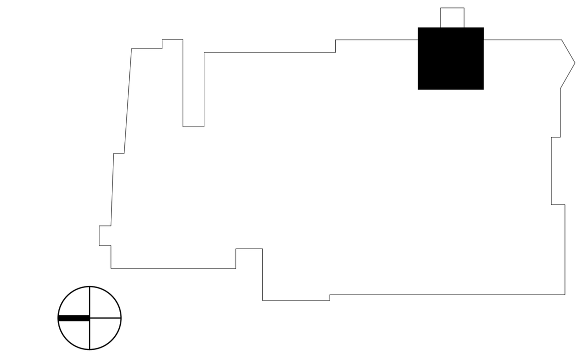
PROVIDE A FULL-SIZE SET OF LEGIBLE APPROVED CONSTRUCTION DOCUMENTS **PRINTED IN COLOR** FOR REVIEW BY INSPECTOR

Sheet Number	Sheet Name	CD - 12/22/2023
GENERAL		
G000	COVERSHEET	•
G101	CODE PLAN	•
DEMOLITION		
AD101	DEMOLITION PLAN - LEVEL 1	•
AD151	DEMOLITION REFLECTED CEILING PLAN	•
STRUCTURAL		
S001	GENERAL NOTES, STATEMENT OF SPECIAL INSPECTIONS, AND SCHEDULES	•
S101	PLANS AND DETAILS	•
ARCHITECTURE		
A005	PARTITION DETAILS AND NOTES	•
A101	LEVEL 1 - FLOOR PLAN	•
A151	LEVEL 1 - REFLECTED CEILING PLAN	•
A211	EQUIPMENT PLAN	•
A411	ENLARGED RESTROOM PLANS AND ELEVATIONS	•
A601	DOOR AND WINDOW SCHEDULES AND DETAILS	•
A721	INTERIOR ELEVATIONS	•
A722	INTERIOR ELEVATIONS	•
A751	CASEWORK DETAILS	•
A752	INTERIOR DETAILS	•
INTERIOR		
I100	FINISH LEGEND AND DETAILS	•
I101	FINISH PLAN	•
MECHANICAL		
M000	MECHANICAL SYMBOLS, ABBREVIATIONS AND NOTES	•
M001	MECHANICAL SCHEDULES AND DETAILS	•
M002	MECHANICAL SPECIFICATIONS	•
MD101	LEVEL 01 MECHANICAL DEMOLITION PLAN	•
M101	LEVEL 01 MECHANICAL PLAN	•
PLUMBING		
P000	PLUMBING SYMBOLS, ABBREVIATIONS AND NOTES	•
P001	PLUMBING SPECIFICATIONS	•
P002	PLUMBING PIPING DIAGRAMS AND DETAILS	•
PD101	UNDERGROUND PLUMBING DEMOLITION PLAN	•
PD201	LEVEL 01 PLUMBING DEMOLITION PLAN	•
P101	UNDERGROUND PLUMBING PLAN	•
P201	LEVEL 01 PLUMBING PLAN	•
ELECTRICAL		
E000	ELECTRICAL SYMBOLS, ABBREVIATIONS & NOTES	•
E001	ELECTRICAL SPECIFICATIONS	•
E002	ELECTRICAL PARTIAL ONE-LINE DIAGRAM	•
E003	ELECTRICAL SCHEDULES	•
E004	ELECTRICAL ENERGY COMPLIANCE	•
ED101	LEVEL 01 ELECTRICAL POWER DEMOLITION PLAN	•
ED201	LEVEL 01 ELECTRICAL LIGHTING DEMOLITION PLAN	•
E100	ELECTRICAL OVERALL PLAN	•
E101	LEVEL 1 ELECTRICAL POWER PLAN	•
E201	LEVEL 1 ELECTRICAL LIGHTING PLAN	•

City of Aurora Building Division
Project: *TMCA ED ENTRY AND TRIAGE REN*
Address: *1501 S POTOMAC ST*
Occupancy Group: *IBC I-2*
Construction Type: *UBC TYPE I-FR SPK*
RSN: *1771774*
Permit: *23-2406108 -LT*

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Y. Munoz*
Date: *Jan 04, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

KEY PLAN



COLORADO LICENSED ARCHITECT MICHAEL HAGAN 403945 12/22/2023

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TREANORHL
THE MEDICAL CENTER AURORA
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Issued For:	CONSTRUCTION DOCUMENTS
Date:	12/22/2023

REVISIONS

NO	DESCRIPTION	DATE

G000

COVERSHEET

TreanorHL NO. HC16222.2301.00

NOTE: IF THIS SHEET IS NOT VIEWED IN COLOR, VITAL DATA IS MISSING AND MAY BE MISUNDERSTOOD.

NO CHANGES TO SUITE BOUNDARIES, SMOKE COMPARTMENT BOUNDARIES, RATED WALLS, OCCUPANCY TYPE OR OCCUPANT LOAD. SHOWN AS REFERENCE ONLY.

LEVEL 1 - CODE PLAN A1

1/4" = 1'-0"

CODE COMPLIANCE GENERAL NOTES

1. EXISTING WALLS SHOWN WITH LIFE SAFETY RATINGS ARE TO BE MAINTAINED AND REPAIRED DURING CONSTRUCTION ACTIVITIES.
2. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL FIRE SAFETY DEVICES.
3. DOORS IN CORRIDOR PARTITIONS TO RESIST THE PASSAGE OF SMOKE.
4. PROVIDE LABELS AT ALL NEW FIRE STOP PENETRATIONS. LABELS ARE TO INCLUDE THE MANUFACTURER, UL LISTING AND THE INSTALLER'S NAME.

BUILDING INFORMATION

- **OCCUPANCY CLASSIFICATION:**
  2021 IBC - GROUP 1-2 (SECTION 308.4)
  2012 NFPA 101 - EXISTING HEALTHCARE OCCUPANCY (CHAPTER 19)
- **PRINCIPAL OCCUPANCY TYPE:** I-2
- **CONSTRUCTION TYPE:**

  EXISTING: SBC - TYPE 1-A, UNRESTRAINED, FULLY SPRINKLERED

  NEW: 2021 IBC - TYPE 1-A, FULLY SPRINKLERED
  2012 NFPA 220 - TYPE 1 (332)

LIFE SAFETY CALCULATIONS

- **SMOKE COMPARTMENT 1A**
  11, 964 SF
  MAX TRAVEL DISTANCE: 200 FT
  ACTUAL LONGEST TRAVEL DISTANCE: 178' 11"
- **OCCUPANT LOAD**
  AREA OF RENOVATION: 4500 SF
  PRIMARY OCCUPANCY: INSTITUTIONAL, OUTPATIENT
  OCCUPANT LOAD FACTOR: 100 SF GROSS
  OCCUPANT LOAD: 45 OCCUPANTS
- **EGRESS WDITH**
  OCCUPANT LOAD CALCULATIONS RESULT IN WIDTH LESS THAN MINIMUM WIDTHS AS NECCESSITATED OTHERWISE

  PROVIDE 42.5" CLR IN I-2 WHERE MOVEMENT OF BEDS MAY BE REQUIRED

LIFE SAFETY LEGEND

LIFE SAFETY FIRE WALL GRAPHICS

- 0 HR FRR "RESISTS THE PASSAGE OF SMOKE"
- 1 HR FRR "FIRE BARRIER"
- 1 HR FRR "SMOKE BARRIER"
- 2 HR FRR "FIRE BARRIER"
- 2 HR FRR "FIRE WALL"
- 2 HR FRR "SMOKE BARRIER"
- 3 HR FRR "FIRE BARRIER"
- 3 HR FRR "FIRE WALL"

FEC	FIRE EXTINGUISHER AND CABINET
MHO	MAGNETIC HOLD OPEN
CR	CARD READER
PP	PUSH PLATE

EGRESS CAPACITY

X" EGRESS WIDTH

EGRESS COMPONENT CAPACITY

LONGEST ROUTE TO AN EXIT PATH

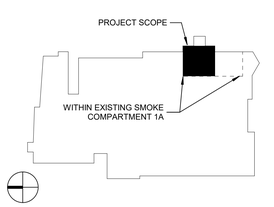
OUT OF SCOPE

EXIT SIGN, RE: ELECTRICAL HALFTONED IF EXISTING

AT ALL TIMES DURING CONSTRUCTION, MAINTAIN REQUIRED EXITS, EXISTING STRUCTURAL ELEMENTS, FIRE PROTECTION AND SANITARY GUARDS PER **2021 IBC 3302.1**

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Y. Munoz*
Date: *Jan 04, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

CODE KEY PLAN



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COLORADO LICENSED MICHAEL HAGAN 403945 12/22/2023 ARCHITECT

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1501 S POTOMAC ST., AURORA, CO 80012

Health ONE

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REVISIONS

NO	DESCRIPTION	DATE

G101

CODE PLAN

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OVERALL DEMO PLAN - MAIN LEVEL A1

1/4" = 1'-0"

0 2' 4' 8'

EXISTING CONDITIONS NOTES

A. COORDINATE ALL FLOOR CORE DRILLING WITH EXISTING STRUCTURE.
B. PATCH AND LEVEL FLOOR SUBSTRATES TO RECEIVE NEW WORK AS SCHEDULED.
C. PATCH AND REPAIR CEILING AS REQUIRED FOR NEW LAYOUT. CONTRACTOR TO REPAIR ALL CEILINGS TO MATCH EXISTING WHERE PARTITIONS HAVE BEEN DEMOLISHED AND EXISTING CEILING IS TO REMAIN.
D. PATCH WALLS AT REMOVED RECEPTACLE OPENINGS SO AS TO RECEIVE SUBSEQUENT WORK.
E. PATCH EXISTING FIRE-RATED WALLS, FLOORS, CEILINGS, ETC. SO AS TO MAINTAIN THE FIRE-RATING. ADD FIRE-SMOKE DAMPERS WHERE NEW DUCTS CROSS. ADD FIRE STOP AT ALL PENETRATIONS.
F. PATCH EXISTING CONSTRUCTION SCHEDULED TO REMAIN. REPAIRED SURFACES TO BE FLUSH WITH ADJACENT FINISH SURFACES. PATCH, SAND, AND TEXTURE EXISTING SURFACES TO SAME QUALITY AS NEW CONSTRUCTION PRIOR TO INSTALLING NEW FINISHES. REFER TO THE FINISH MANUFACTURER'S GUIDELINES FOR INSTALLATION.

DEMOLITION PLAN LEGEND

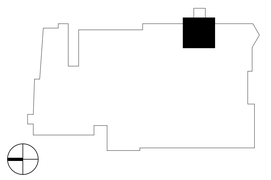
- REMOVE WALL
- EXISTING TO REMAIN
- REMOVE ELEMENT
- REMOVE FINISH FLOORING, SLAB TO REMAIN
  REMOVE WALL FINISH (TILE, WALL PROTECTION)
- SAW CUT AND REMOVE SLAB FOR BELOW GRADE PLUMBING DEMOLITION AND NEW LINES, RE: PLUMBING

DEMOLITION PLAN NOTES

D01	SALVAGE AND RETAIN DOOR REMOTE RELEASE FOR REINSTALLATION.
D02	PROTECT EXISTING FLOORING TO REMAIN.
D03	DEMOLISH COUNTER AND BASE CABINET, WATER BOX RE: PLUMBING.
D04	OPENING IN EXISTING MASONRY WALL, RE: STRUCTURAL FOR ADDITIONAL DETAILS AND TO ACCOMMODATE REINFORCING OF REMAINING MASONRY. RETAIN EXISTING BRICK, CLEANED FOR REUSE AT INFILL EDGES OF FUTURE OPENINGS.
D05	PNEUMATIC TUBE SYSTEM TO REMAIN, PROTECT DURING CONTRUCTION.
D06	METAL DETECTION, RETAIN AND RETURN TO OWNER FOR RE-INSTALLATION OR REPLACEMENT.
D07	KEVLAR PARTITION SYSTEM TO BE REMOVED.
D08	PARTIAL HEIGHT PARTITION AND GLAZING SYSTEM TO BE REMOVED.
D09	EXISTING FIRE EXTINGUISHER, SALVAGE AND RETURN TO OWNER.
D10	REMOVE SOLID SURFACE SILL AND PREPARE FOR REPLACEMENT.
D11	SALVAGE AND PROTECT OWNER SIGNAGE AND HARDWARE FOR REINSTALLATION.
D12	DEMOLISH ARCHED OPENINGS AND FRAMES.

This sheet of drawings has not been reviewed for code compliance.

KEY PLAN



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DEMOLITION PLAN - LEVEL 1

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EXISTING CONDITIONS NOTES

A. COORDINATE ALL FLOOR CORE DRILLING WITH EXISTING STRUCTURE
B. PATCH AND LEVEL FLOOR SUBSTRATES TO RECEIVE NEW WORK AS SCHEDULED.
C. PATCH AND REPAIR CEILING AS REQUIRED FOR NEW LAYOUT. CONTRACTOR TO REPAIR ALL CEILINGS TO MATCH EXISTING WHERE PARTITIONS HAVE BEEN DEMOLISHED AND EXISTING CEILING IS TO REMAIN.
D. PATCH WALLS AT REMOVED RECEPTACLE OPENINGS SO AS TO RECEIVE SUBSEQUENT WORK.
E. PATCH EXISTING FIRE-RATED WALLS, FLOORS, CEILINGS, ETC. SO AS TO MAINTAIN THE FIRE-RATING. ADD FIRE-SMOKE DAMPERS WHERE NEW DUCTS CROSS. ADD FIRE STOP AT ALL PENETRATIONS.
F. PATCH EXISTING CONSTRUCTION SCHEDULED TO REMAIN. REPAIRED SURFACES TO BE FLUSH WITH ADJACENT FINISH SURFACES. PATCH, SAND, AND TEXTURE EXISTING SURFACES TO SAME QUALITY AS NEW CONSTRUCTION PRIOR TO INSTALLING NEW FINISHES. REFER TO THE FINISH MANUFACTURER'S GUIDELINES FOR INSTALLATION.

DEMOLITION PLAN LEGEND

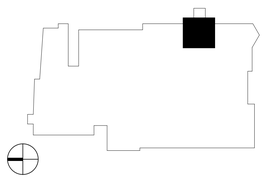
- REMOVE WALL
- EXISTING TO REMAIN
- REMOVE ELEMENT
- REMOVE FINISH FLOORING, SLAB TO REMAIN
  REMOVE WALL FINISH (TILE, WALL PROTECTION)
- SAW CUT AND REMOVE SLAB FOR BELOW GRADE PLUMBING DEMOLITION AND NEW LINES, RE: PLUMBING

DEMOLITION CEILING PLAN NOTES

D20	REMOVE AND SALVAGE CEILING ART, RETURN TO FACILITY.
D21	REMOVE AND SALVAGE CEILING TILES AS REQUIRED FOR CONSTRUCTION. REMOVE PORTION OF CEILING GRID AS REQUIRED TO INSTALL WALL.
D22	REMOVE VANITY LIGHT AND PROTECT FOR REINSTALLATION.
D23	MAINTAIN AND PROTECT EXISTING GYP HEADERS OR SOFFITS TO REMAIN.

This sheet of drawings has not been reviewed for code compliance.

KEY PLAN



DEMOLITION RCP A1
1/4" = 1'-0"
0 2' 4' 8'

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MICHAEL HAGAN
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12/22/2023
ARCHITECT

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NO	DESCRIPTION	DATE

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DEMOLITION REFLECTED CEILING PLAN

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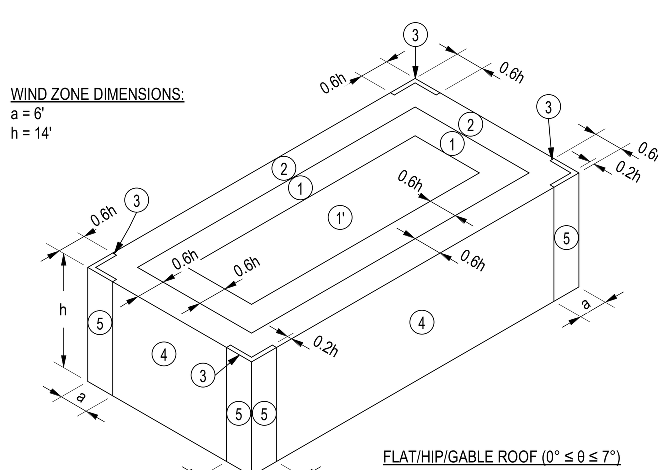
STRUCTURAL GENERAL NOTES

DESIGN LOADS:
1. DESIGN LOADS: 2021 INTERNATIONAL BUILDING CODE WITH CITY OF AURORA, CO AMENDMENTS, ASCE 7-16
2. RISK CATEGORY: IV ESSENTIAL FACILITY
3. ROOFS:
   - A. ROOF DEAD LOAD 30 PSF
   - B. ROOF LIVE LOAD 20 PSF, 300 LBS
   - C. GROUND SNOW LOAD, Pg 40 PSF
   - D. FLAT-ROOF SNOW LOAD, Pf 38 PSF
   - E. SNOW EXPOSURE FACTOR, Ce 1.0
   - F. SNOW IMPORTANCE FACTOR, Is 1.35
   - G. THERMAL FACTOR, Ct 1.0
4. WIND:
   - A. BASIC DESIGN WIND SPEED, V, (3-SECOND GUST) 117 MPH
   - B. ALLOWABLE STRESS DESIGN WIND SPEED, V_{ASD}, (3-SECOND GUST) 91 MPH
   - C. INTERNAL PRESSURE COEFFICIENT 0.18 (ENCLOSED)
   - D. WIND EXPOSURE C
   - E. GROUND ELEVATION FACTOR 0.82
5. SEISMIC:
   - A. SPECTRAL RESPONSE ACCELERATION PARAMETERS
     1. SHORT PERIOD
        - a. S_S 0.199g
        - b. S_{DS} 0.212g
     2. ONE SECOND
        - a. S_1 0.056g
        - b. S_{D1} 0.090g
   - B. SOILS SITE CLASS D
   - C. SEISMIC IMPORTANCE FACTOR 1.5
   - D. SEISMIC DESIGN CATEGORY C

COMPONENTS AND CLADDING:
1. PRESSURES SHOWN ARE APPLIED NORMAL TO THE SURFACE.
2. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM SURFACES, RESPECTIVELY.
3. FOR EFFECTIVE WIND AREAS BETWEEN THOSE GIVEN, VALUES MAY BE INTERPOLATED; OTHERWISE USE THE VALUE ASSOCIATED WITH THE LOWER EFFECTIVE WIND AREA.
4. IF OVERHANGS EXIST, THE LESSER HORIZONTAL DIMENSION OF THE BUILDING SHALL NOT INCLUDE ANY OVERHANG DIMENSION, BUT THE EDGE DISTANCE, '0.6h', SHALL BE MEASURED FROM THE OUTSIDE EDGES OF THE OVERHANG.

h = MEAN ROOF HEIGHT, IN FT.
- STRAIGHT LINE INTERPOLATION MA Y BE USED FOR EFFECTIVE AREAS BETWEEN AREAS NOTED ABOVE

WIND ZONE DIMENSIONS:
a = 6'
h = 14'



FLAT/HIP/GABLE ROOF (0° ≤ θ ≤ 7°)

COMPONENT AND CLADDING ULTIMATE WIND PRESSURE - FLAT ROOF		
ROOF (EFFECTIVE WIND AREA)	ROOF SURFACE PRESSURE (psf)	
	10 sf	100 sf
Negative Zone 1	-38.8	-30.3
Negative Zone 1'	-22.3	-22.3
Negative Zone 2	-51.2	-40.3
Negative Zone 3	-69.8	-47.9
Positive Zone 1 & 1'	16.0	16.0
Postive Zone 2 & 3	16.0	16.0
Overhang Zone 1 & 1'	-35.1	-33.0
Overhang Zone 2	-47.5	-32.9
Overhang Zone 3	-66.1	-40.5

WALL (EFFECTIVE WIND AREA)	WALL SURFACE PRESSURE (psf)	
	10 sf	100 sf
Negative Zone 4	-24.2	-20.9
Negative Zone 5	-29.7	-23.2
Positive Zone 4 & 5	22.3	19.0

REINFORCED CONCRETE:
1. DESIGN IS BASED ON ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE."
2. CONCRETE WORK SHALL CONFORM TO ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE."
3. STRUCTURAL CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:

INTENDED USE	EXPOSURE CLASS	f'c, PSI 28 DAYS	MAX W/CM RATIO	MAXIMUM AGGREGATE	SLUMP, INCHES (+/- 1")	AIR CONTENT PERCENT (+/- 1.5%)	CEMENT TYPE	ADMIXTURES / COMMENTS
STEM WALL INFILL	F2-S0-W0-C1	4500	0.45	3/4" STONE	4	6%	ASTM C150 I/II OR ASTM C595 IL	

4. CONCRETE MIX TABLE NOTES:
   - A. CONCRETE MIX SUBMITTAL SHALL INCLUDE A SINGLE PAGE LIST OF MIXES, IN TABULAR FORMAT, WITH KEY MIX REQUIREMENTS.
   - B. SLUMP VALUES INDICATED ARE SUGGESTED BASED ON USE AND TYPICAL PLACEMENT METHODS. CONTRACTOR MAY ADJUST SLUMP AS NECESSARY FOR FIELD CONDITIONS AND INSTALLATION METHOD USED PROVIDED REMAINING REQUIREMENTS ARE MET.
5. DETAILING, FABRICATION, AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT."
6. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT BARS SHOWN TO BE FIELD-BENT SHALL BE ASTM A706, GRADE 60.
7. EXCEPT AS NOTED ON THE DRAWINGS, CONCRETE PROTECTION FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:
   - A. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
   - B. EXPOSED TO EARTH OR WEATHER:
     1. #6 THROUGH #18 BARS 2"
     2. #5 BAR, W31 OR D31 WIRE, AND SMALLER 1-1/2"

POST-INSTALLED ANCHORS
1. ALL CAST-IN-PLACE ANCHORS DESIGNED IN ACCORDANCE WITH ACI 318.
2. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
3. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. EXISTING REINFORCING BARS SHALL NOT BE CUT UNLESS APPROVED BY THE EOR.
4. ALL ANCHORS MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INFORMATION (MPII) IN CONJUNCTION WITH EDGE DISTANCE, SPACING, AND EMBEDMENT DEPTH AS INDICATED ON THE DRAWINGS. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MPII.
5. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER-OF-RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER; REGISTRATION MUST BE IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
6. THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED, PRIOR TO THE ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND MADE AVAILABLE TO THE EOR/ SPECIAL INSPECTOR AS REQUESTED.
7. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION THAT SUPPORT SUSTAINED TENSION LOADS SHALL BE DONE BY A CERTIFIED ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI/CRSI (ACI 318-11 D 9.2.2, ACI 318-14 17.8.2.2). PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE EOR FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
8. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS (ACI 318-11 D 2.2, ACI 318-14 17.1.2)
9. ALL POST-INSTALLED ANCHORS SHALL BE INSTALLED IN DRY HOLES THAT HAVE BEEN DRILLED, CLEANED, AND PREPARED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INFORMATION AND THE RESPECTIVE ICC-ES EVALUATION REPORTS.
10. PROVIDE SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE BUILDING CODE AND PER THE CURRENT ICC-ES REPORT (IBC TABLE 1705.3 NOTE B).

CONCRETE POST-INSTALLED ANCHORS			
ANCHOR TYPE	DEWALT	HILTI	SIMPSON
EXPANSION	POWER-STUD+ SD2 (ICC ESR-2502)	KWIK BOLT TZ2 (ICC ESR-4266)	STRONG-BOLT 2 (ICC ESR-3037)
SCREW	SCREW-BOLT+ (ICC ESR-3889)	KWIK HUS-EZ (ICC ESR-3027)	TITEN HD (ICC ESR-2713)
ADHESIVE	AC200+ (ICC ESR-4027)	HIT HY-200 V3 (ICC ESR-4868)	AT-XP (UES ER-263)

LOOSE LINTELS:
1. UNLESS NOTED OTHERWISE PROVIDE LOOSE LINTELS AS FOLLOWS:

LOOSE LINTEL SCHEDULE		
SPAN	SIZE	MIN END BEARING
UP TO 4'-0	L3-1/2 x 3-1/2 x 1/4	4"
4'-1 TO 5'-4	L5 x 3-1/2 x 1/4 (LLV)	4"
5'-5 TO 10'-0	L6 x 3-1/2 x 5/16 (LLV)	8"

2. ONE ANGLE FOR EACH 4" OF WALL THICKNESS.

STRUCTURAL STEEL:
1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC 360) AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (AISC 303) BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
2. PLATES, CHANNELS, AND ANGLES SHALL CONFORM TO ASTM A36, 36 KSI YIELD.
3. HOLLOW STRUCTURAL SECTION (HSS) RECTANGULAR SHAPES SHALL CONFORM TO ASTM A500, GRADE C, 50 KSI YIELD.
4. WELDING SHALL BE DONE BY A CERTIFIED WELDER IN ACCORDANCE WITH THE AISC DOCUMENTS LISTED ABOVE, THE AMERICAN WELDING SOCIETY (AWS) D1.1: STRUCTURAL WELDING CODE, AND THE RECOMMENDATIONS FOR USE OF WELD E70 ELECTRODES. WHERE NOT SPECIFICALLY NOTED, MINIMUM WELD SHALL BE 3/16" FILLET BY LENGTH OF CONTACT EDGE.

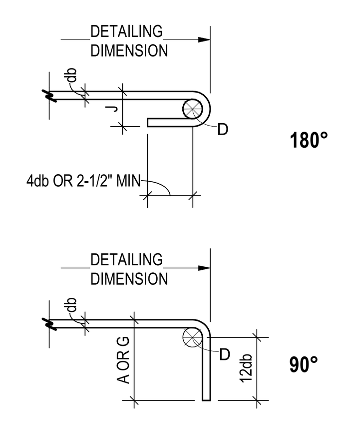
SHOP DRAWINGS:
1. THE STRUCTURAL DRAWINGS ARE COPYRIGHTED AND SHALL NOT BE COPIED FOR USE AS ERECTION PLANS OR SHOP DETAILS. USE OF JVA'S ELECTRONIC FILES AS THE BASIS FOR SHOP DRAWINGS REQUIRES PRIOR APPROVAL BY JVA, A SIGNED RELEASE OF LIABILITY BY THE GENERAL CONTRACTOR AND/OR HIS SUBCONTRACTORS, AND DELETION OF JVA'S NAME AND LOGO FROM ALL SHEETS SO USED.
2. THE GENERAL CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE STRUCTURAL DRAWINGS OR PROJECT SPECIFICATIONS.
3. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED (AFTER HAVING BEEN CHECKED) BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR STRUCTURAL ENGINEER'S REVIEW; SHOP DRAWING SUBMITTALS NOT CHECKED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION TO THE STRUCTURAL ENGINEER WILL BE RETURNED WITHOUT REVIEW.
4. FURNISH ELECTRONIC VERSION (PDF) OF SHOP AND ERECTION DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION FOR:
   - A. CONCRETE MIX DESIGNS
   - B. CONCRETE REINFORCING STEEL
   - C. STRUCTURAL STEEL
5. SUBMIT IN A TIMELY MANNER TO PERMIT 10 WORKING DAYS FOR REVIEW BY THE STRUCTURAL ENGINEER.
6. SHOP DRAWINGS SUBMITTED FOR REVIEW DO NOT CONSTITUTE "REQUEST FOR CHANGE IN WRITING" UNLESS SPECIFIC SUGGESTED CHANGES ARE CLEARLY MARKED. IN ANY EVENT, CHANGES MADE BY MEANS OF THE SHOP DRAWING SUBMITTAL PROCESS BECOME THE RESPONSIBILITY OF THE ONE INITIATING THE CHANGE.

FIELD VERIFICATION OF EXISTING CONDITIONS:
1. THE GENERAL CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY THE EXISTING STRUCTURE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS.
2. THE GENERAL CONTRACTOR SHALL REPORT ANY VARIATIONS OR DISCREPANCIES TO THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING.

STRUCTURAL ERECTION AND BRACING REQUIREMENTS:
1. THE STRUCTURAL DRAWINGS ILLUSTRATE AND DESCRIBE THE COMPLETED STRUCTURE WITH ELEMENTS IN THEIR FINAL POSITIONS, PROPERLY SUPPORTED, CONNECTED, AND/OR BRACED.
2. THE STRUCTURAL DRAWINGS ILLUSTRATE TYPICAL AND REPRESENTATIVE DETAILS TO ASSIST THE GENERAL CONTRACTOR. DETAILS SHOWN APPLY AT ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED. ALTHOUGH DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT EVERY DETAIL IS ILLUSTRATED AND NOT EVERY EXCEPTIONAL CONDITION IS ADDRESSED.
3. ALL PROPRIETARY CONNECTIONS AND ELEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.
4. ALL WORK SHALL BE ACCOMPLISHED IN A WORKMANLIKE MANNER AND IN ACCORDANCE WITH THE APPLICABLE CODES AND LOCAL ORDINANCES.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL WORK, INCLUDING LAYOUT AND DIMENSION VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF SUBCONTRACTORS. ANY DISCREPANCIES OR OMISSIONS DISCOVERED IN THE COURSE OF THE WORK SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR RESOLUTION.
6. CONTINUATION OF WORK WITHOUT NOTIFICATION OF DISCREPANCIES RELIEVES THE ARCHITECT AND STRUCTURAL ENGINEER FROM ALL CONSEQUENCES.
7. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE STRUCTURAL DRAWINGS DO NOT DESCRIBE METHODS OF CONSTRUCTION.
8. THE GENERAL CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO TEMPORARY BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
9. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL SUPPORTING ELEMENTS ARE IN PLACE.
10. THE ARCHITECT AND STRUCTURAL ENGINEER BEAR NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTIONS OF THESE ITEMS.

SPECIAL INSPECTIONS:
1. THE FOLLOWING SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED BY A QUALIFIED SPECIAL INSPECTOR, RETAINED BY THE OWNER, IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF IBC CHAPTER 17:
   - A. SECTION 1704 SPECIAL INSPECTIONS, CONTRACTOR RESPONSIBILITY, AND STRUCTURAL OBSERVATIONS AND THE FOLLOWING SUB-SECTIONS:
     1. 1704.2 SPECIAL INSPECTIONS AND TESTS
     2. 1704.3 STATEMENT OF SPECIAL INSPECTIONS
   - B. SECTION 1705 REQUIRED VERIFICATION AND INSPECTION AND THE FOLLOWING SUB-SECTIONS:
     1. 1705.2 STEEL CONSTRUCTION
2. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. THE APPROVED INSPECTOR MUST BE INDEPENDENT FROM THE CONTRACTOR RESPONSIBLE FOR THE WORK BEING INSPECTED.
3. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO INSPECT AND/OR TEST THE WORK OUTLINED ABOVE AND WITHIN THE STATEMENT OF SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
4. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
5. PER SECTION 1704.2.4 THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, CORRECTION OF PREVIOUSLY REPORTED DEFICIENCIES, AND CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE STRUCTURAL ENGINEER OF RECORD.
6. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN 10 DAYS OF THE FINAL SPECIAL INSPECTION STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
7. EXCEPT AS NOTED, THE SPECIAL INSPECTIONS OUTLINED ABOVE ARE IN ADDITION TO, AND BEYOND THE SCOPE OF, PERIODIC STRUCTURAL OBSERVATIONS AS DEFINED IN SECTION 1704.6. STRUCTURAL OBSERVATIONS ARE INCLUDED IN THE STRUCTURAL ENGINEERING DESIGN AND CONSTRUCTION ADMINISTRATION SERVICES PROVIDED BY THE STRUCTURAL ENGINEER.

STANDARD HOOKS

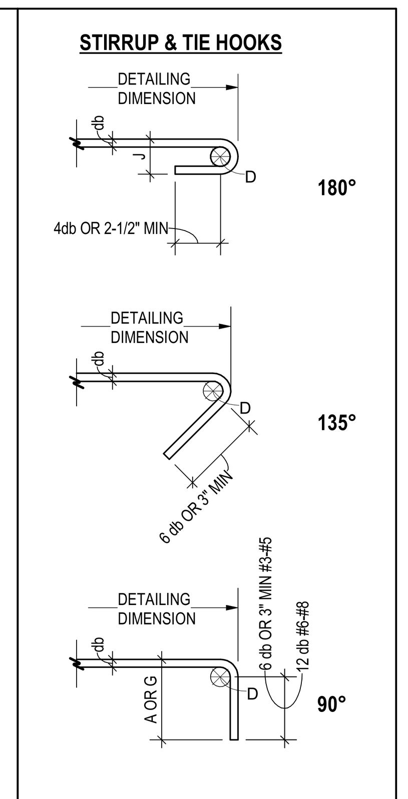


MIN D = 6 db FOR #3 THROUGH #8
MIN D = 8 db FOR #9, #10, AND #11

BAR SIZE	STANDARD HOOKS 180° (J)	STANDARD HOOKS 90° (A OR G)	STIRRUPS & TIE HOOKS 180° (J)	STIRRUPS & TIE HOOKS 90° (A OR G)
#3	3"	6"	2 1/4"	4 1/8"
#4	4"	8"	3"	4 1/2"
#5	5"	10"	3 3/4"	5 5/8"
#6	6"	1'-0	6"	1'-0
#7	7"	1'-2	7"	1'-2
#8	8"	1'-4	8"	1'-4
#9	11 3/4"	1'-7		
#10	1'-1 1/4	1'-10		
#11	1'-2 3/4	2'-0		

ALL GRADES OF STEEL
D = FINISHED INSIDE BEND DIAMETER
db = NOMINAL BAR DIAMETER

STIRRUP & TIE HOOKS



MIN D = 4 db FOR #3 THROUGH #5
MIN D = 6 db FOR #6 THROUGH #8

TYP CONC HOOKS & STIRRUPS

NO SCALE

STATEMENT OF SPECIAL INSPECTIONS

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspection Coordinator and the identity of other approved agencies to be retained for conducting these inspections and tests. This *Statement of Special Inspections* encompass the following disciplines: Structural

The Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Building Official and the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge.
Interim Report Frequency: Within 48 hours of inspection, unless indicated otherwise.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the Contractor.

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

STEEL SPECIAL INSPECTION (IBC 1705.2, 1705.12.3 & 1705.13.1)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
FABRICATORS			(IBC 1704.2.5 & 1705.11)
In-plant Inspection	AWS/AISC-SSI ICC-SWSI		Required unless Fabricator is approved and follows procedures of 1704.2.5.1
PRIOR TO WELDING			(TABLE N5.4-1, AISC 360-16)
Verify welding procedures (WPS) and consumable certificates	AWS-CWI ASNT	Continuous	
Material identification	AWS-CWI ASNT	Periodic	Verify type and grade of material.
Welder identification	AWS-CWI ASNT	Periodic	A system shall be maintained by which a welder who has welded a joint or member can be identified.
Fit-up groove welds	AWS-CWI ASNT	Periodic	Verify joint preparation, dimensions, cleanliness, tacking, and backing.
Fit-up CJP groove welds of HSS joints without backing	AWS-CWI ASNT	Periodic	Verify joint preparation, dimensions, cleanliness, and tacking
Access holes	AWS-CWI ASNT	Periodic	Verify configuration and finish.
Fit-up of fillet welds	AWS-CWI ASNT	Periodic	Verify alignment, gaps at root, cleanliness of steel surfaces, and tack weld quality and location.
DURING WELDING			(TABLE N5.4-2, AISC 360-16)
Use of qualified welders	AWS-CWI ASNT	Periodic	Verify that welders are appropriately qualified.
Control and handling of welding consumables	AWS-CWI ASNT	Periodic	Verify packaging and exposure control.
Cracked tack welds	AWS-CWI ASNT	Periodic	Verify that welding does not occur over cracked tack welds.
Environmental conditions	AWS-CWI ASNT	Periodic	Verify wind speed is within limits as well as precipitation and temperature.
WPS followed	AWS-CWI ASNT	Periodic	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position.
Welding techniques	AWS-CWI ASNT	Periodic	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass.
AFTER WELDING			(TABLE N5.4-3, AISC 360-10)
Welds cleaned	AWS-CWI ASNT	Periodic	Verify that welds have been properly cleaned.
Size, length, and location of welds	AWS-CWI ASNT	Continuous	
Welds meet visual acceptance criteria	AWS-CWI ASNT	Continuous	
Arc strikes	AWS-CWI ASNT	Continuous	
k-area	AWS-CWI ASNT	Continuous	
Weld access holes in heavy shapes	AWS-CWI ASNT	Continuous	
Backing & weld tabs removed	AWS-CWI ASNT	Continuous	
Repair activities	AWS-CWI ASNT	Continuous	
Document acceptance or rejection of welded joint/member	AWS-CWI ASNT	Continuous	
NONDESTRUCTIVE TESTING			(SECTION N5.5, AISC 360-10)
CJP welds (Risk Cat. III or IV)	AWS-CWI ASNT	Continuous	Ultrasonic testing shall be performed on 100% of CJP groove welds in butt, T- and corner joints subject to transversely applied tension loading in materials 5/16-inch thick or greater. A reduction in the rate of ultrasonic testing is allowed per Section N5.5e.
Access holes (flange > 2")	AWS-CWI ASNT	Continuous	
Welded joints subject to fatigue	AWS-CWI ASNT	Continuous	
OTHER STEEL INSPECTIONS			(SECTION N5.7, AISC 360-16; Tables J8-1 & J10-1, AISC 341-16)
Structural steel details	PE/SE	Periodic	All fabricated steel or steel frames shall be inspected to verify compliance with the details shown in the construction documents, such as braces, stiffeners, member locations, and proper application of joint details at each connection.
Anchor rods and other embedments supporting structural steel	ACI-CCI	Periodic	Shall be on the premises during the placement of anchor rods and other embedments supporting structural steel for compliance with construction documents. Verify the diameter, grade, type, and length of the anchor rod or embedded item, and the extent or depth of embedment prior to placement of concrete.

SPECIAL INSPECTIONS REQUIREMENTS - 2021 IBC 1704
Prior to the start of construction, the owner or owner's authorized agent shall employ one or more approved agencies to provide special inspections and tests during construction as required by the structural engineer in their statement of special inspections. The special inspector's qualifications and written reports shall be reviewed by the engineer of record and made available to the building inspector on the jobsite. The building division will only issue a certificate of occupancy after all special inspection reports, and the final special inspection report, have been submitted and accepted.

Structural plan review is limited to a general survey for code compliance. No review is implied nor was undertaken to verify structural adequacy.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: D Anderson
Date: Dec 27, 2023
2021 INTERNATIONAL CODES & 2023 NEC

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HealthONE

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REVISIONS		
NO	DESCRIPTION	DATE

S001

GENERAL NOTES, STATEMENT OF SPECIAL INSPECTION, AND SCHEDULES

TreanorHL NO. HC16222.2301.00

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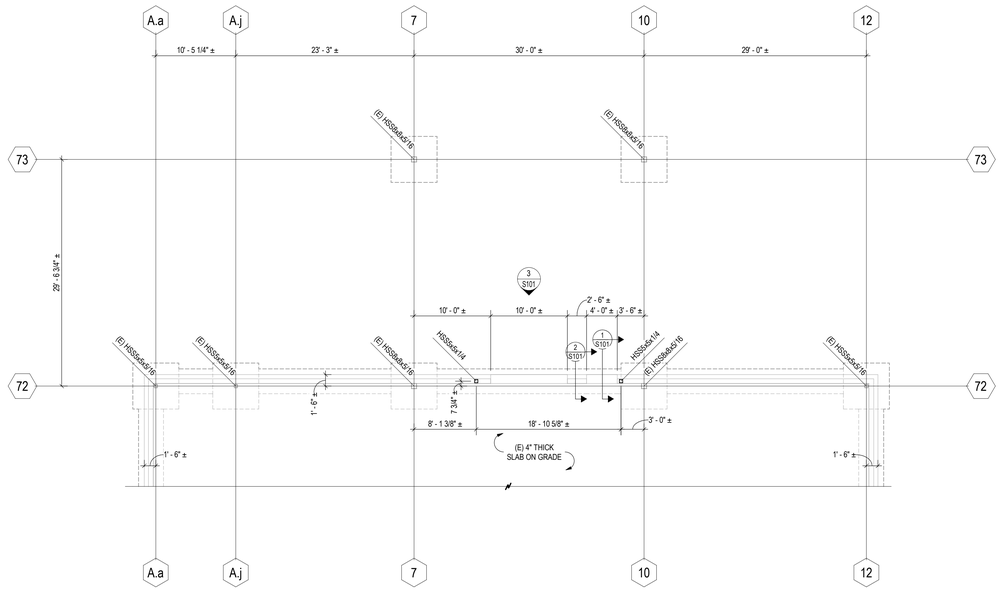


LEVEL 1 FOUNDATION PLAN

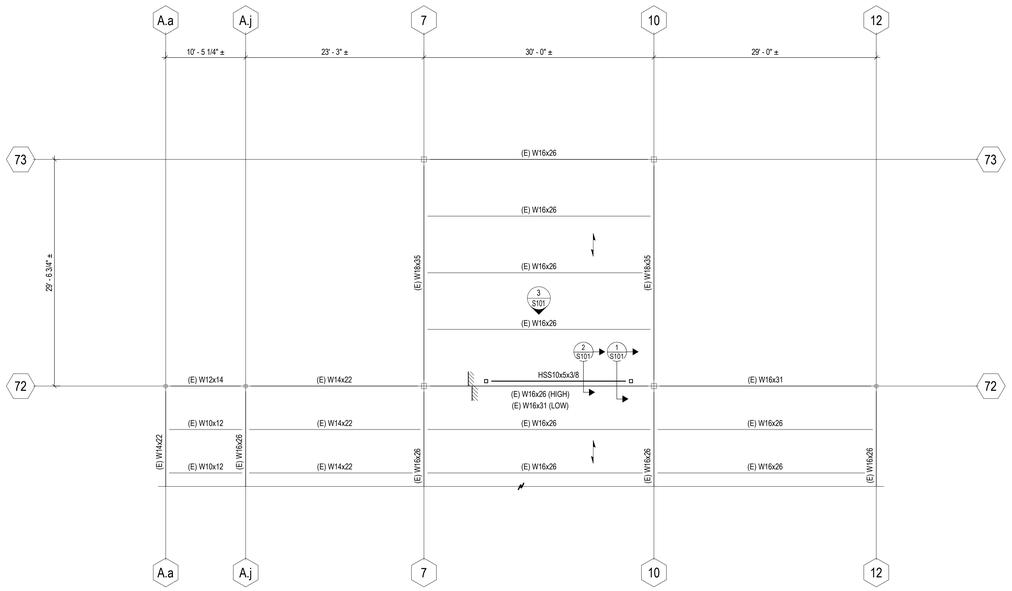
1/8" = 1'-0"

NORTH

0 2' 4' 8' 16'

- TOP OF INTERIOR FLOOR SLAB ELEVATION = 0'-0"± UNLESS NOTED THUS: XXX'-X"
- TOP OF FOOTING ELEVATION = -2'-0"± UNLESS NOTED THUS: (XXX'-X")
- TOP OF PIER AND VENEER LEDGE ELEVATION = -0'-8"± UNLESS NOTED THUS: XXX'-X"
- (E) INDICATES EXISTING CONSTRUCTION TO REMAIN
- (R) INDICATES EXISTING CONSTRUCTION TO BE REMOVED

FIELD VERIFICATION:
- ALL DIMENSIONS AND CONDITIONS SHALL BE FIELD VERIFIED BY CONTRACTOR
- IF DIMENSIONS AND CONDITIONS DIFFER THAN THOSE SHOWN ON DRAWINGS, NOTIFY ARCHITECT AND ENGINEER
- SEE EARLY RELEASE PACK. NO. 2 DRAWINGS DATED 8/26/97 AND SUBSEQUENT ADDENDUMS BY GRESHAM, SMITH AND PARTNERS FOR INFORMATION ABOUT THE EXISTING STRUCTURE



ROOF FRAMING PLAN

1/8" = 1'-0"

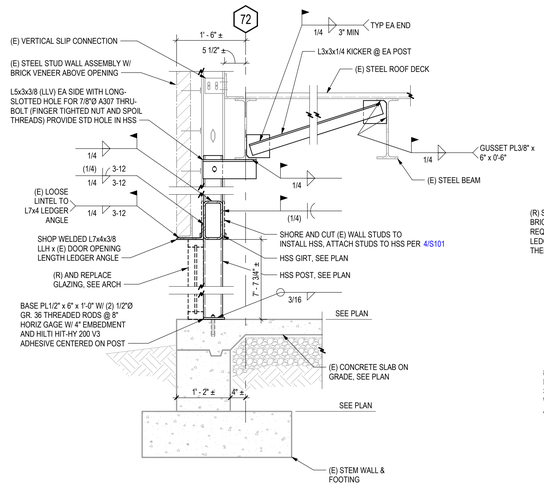
NORTH

0 2' 4' 8' 16'

- CANOPY ROOF BOTTOM OF DECK ELEVATION = TOP OF STEEL BEAM ELEVATION = +18'-1 1/2"± UNLESS NOTED THUS: (XXX'-X")
- ROOF BOTTOM OF DECK ELEVATION = TOP OF STEEL BEAM ELEVATION = +14'-0"± UNLESS NOTED THUS: (XXX'-X")
- BEAMS ARE EQUALLY SPACED PER BAY. TYPICAL U.N.O.
- (E) INDICATES EXISTING CONSTRUCTION TO REMAIN
- (R) INDICATES EXISTING CONSTRUCTION TO BE REMOVED

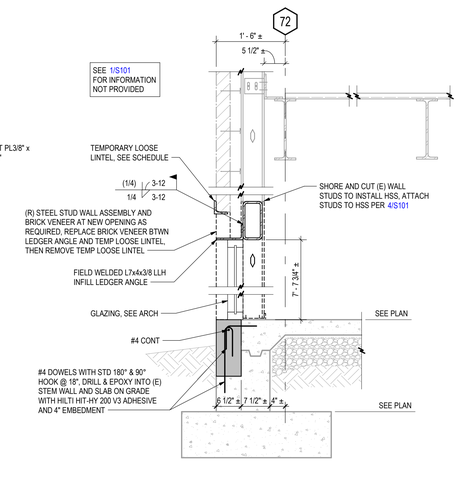
TYPICAL EXISTING ROOF DECK:
1 1/2" DEEP x 22 GAGE TYPE "B" GALVANIZED STEEL DECK
: INDICATES DIRECTION OF DECK SPAN

FIELD VERIFICATION:
- ALL DIMENSIONS AND CONDITIONS SHALL BE FIELD VERIFIED BY CONTRACTOR
- IF DIMENSIONS AND CONDITIONS DIFFER THAN THOSE SHOWN ON DRAWINGS, NOTIFY ARCHITECT AND ENGINEER.
- SEE EARLY RELEASE PACK. NO. 2 DRAWINGS DATED 8/26/97 AND SUBSEQUENT ADDENDUMS BY GRESHAM, SMITH AND PARTNERS FOR INFORMATION ABOUT THE EXISTING STRUCTURE



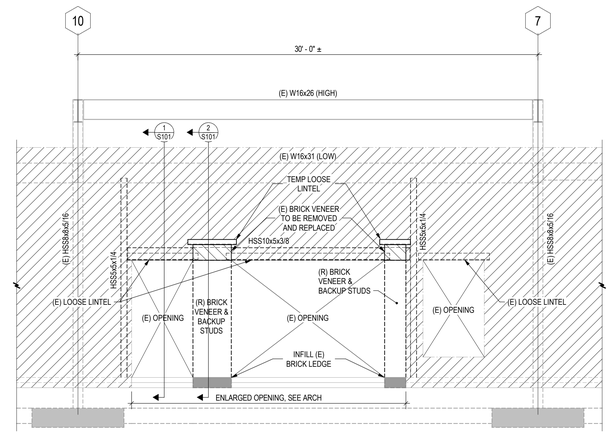
1 / S101 SECTION AT EXISTING WALL OPENING

3/4" = 1'-0"



2 / S101 SECTION AT EXISTING BRICK VENEER

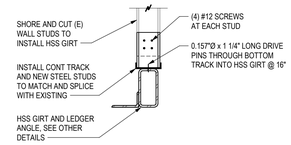
3/4" = 1'-0"



RECOMMENDED SEQUENCE OF CONSTRUCTION:
1. INSTALL NEW HSS POSTS.
2. SHORE AND CUT (E) STEEL BACKUP STUDS. INSTALL NEW HSS GIRT WITH SHOP WELDED LEDGER ANGLES AT (E) OPENINGS, SEE 1/S101. ATTACH (E) STEEL BACKUP STUDS ABOVE ENLARGED OPENING TO HSS PER 4/S101.
3. SAWCUT SLOT FOR TEMPORARY LOOSE LINTELS AT BRICK VENEER TO BE REMOVED AND INSTALL LOOSE LINTELS.
4. (R) BRICK VENEER AND STEEL BACKUP STUDS BELOW TEMPORARY LOOSE LINTELS.
5. FIELD WELD INFILL LEDGER ANGLES TO NEW HSS GIRT, SEE 2/S101.
6. REPLACE (E) BRICK VENEER BETWEEN TEMPORARY LOOSE LINTELS AND INFILL LEDGER ANGLES.
7. REMOVE TEMPORARY LOOSE LINTELS AND FILL SLOTS WITH MORTAR.

3 / S101 ELEVATION

1/4" = 1'-0"



4 / S101 DETAIL

3/4" = 1'-0"

Structural plan review is limited to a general survey for code compliance. No review is implied nor was undertaken to verify structural adequacy.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: D Anderson
Date: Dec 27, 2023
2021 INTERNATIONAL CODES & 2023 NEC

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Issued For:	CONSTRUCTION DOCUMENTS
Date:	12/22/2023

REVISIONS

NO	DESCRIPTION	DATE

S101

PLANS AND DETAILS

TreanorHL NO. HC16222.2301.00

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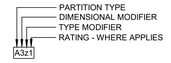
RSN: 1771774 | PERMIT# 23-2406108 -LT

PARTITION NOTES

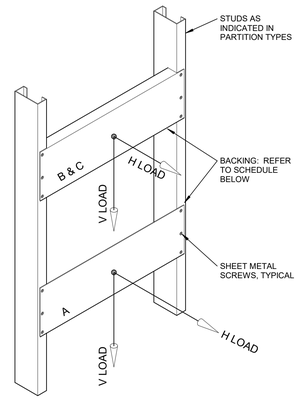
A. STUD SPACING IS 16 INCHES ON CENTER MAX.
B. REFER TO THE ARCHITECTURAL FLOOR PLANS (A100 SHEETS)
C. REFER TO THE DASHED LINES ON THE CODE PLANS (G101) FOR THE FIRE RATING LOCATIONS. PARTITIONS MUST CONFORM TO TESTED, RATED ASSEMBLIES WHEN THEY ARE INDICATED TO BE RATED ON THE ARCHITECTURAL CODE PLANS. WHEN NO RATING IS INDICATED, CONSTRUCT THE PARTITION PER THE INDICATED TYPE AS A NON-RATED ASSEMBLY.
D. LABEL FIRE AND SMOKE WALLS AS FOLLOWS: LABEL BOTH SIDES; LABEL ALL SECTIONS; USE 4" HIGH STENCILS; USE FLUORESCENT ORANGE PAINT; LOCATE ABOUT 12" ABOVE THE FINISHED CEILING; SPACE STENCILS 10 FEET OC MAX; SPECIFIC LABELS TO READ "1HR", "2HR", "1HR SMOKE", "2HR SMOKE", "SMOKE", ETC AS IDENTIFIED IN THE LIFE SAFETY PLANS.
E. PROVIDE STENCIL WITH THE LABEL "SOUND" AS DESCRIBED IN NOTE 3 ON ALL SOUND RATED WALLS IDENTIFIED BY A "#" SUFFIX AND THAT GO TO STRUCTURE.
F. PROVIDE FIRE STOP & SMOKE STOP SYSTEMS PER SPECIFICATION AT ALL PENETRATIONS & OPENINGS (INCLUDING THE PERIMETER) THROUGH FIRE RATED WALLS.
G. SEAL ALL PENETRATIONS & OPENINGS (INCLUDING THE PERIMETER) PER SPECIFICATIONS IN ALL SOUND RATED WALLS INDICATED BY A "#" SUFFIX.
H. THE PARTITION TYPES INDICATE THE BASIC WALL CONSTRUCTION ONLY. REFER TO ALL OF THE CONSTRUCTION DOCUMENTS FOR OTHER REQUIREMENTS INCLUDING: MECHANICAL, ELECTRICAL, PLUMBING, BLOCKING & BACKING, WALL BASE, WALL FINISH, AND RECESSED & SURFACE MOUNTED EQUIPMENT.
I. PROVIDE TESTED, RATED ASSEMBLIES AT THE TOP OF ALL PARTITIONS INDICATED TO BE FIRE OR SMOKE RATED THAT EXTEND TO THE BOTTOM OF STRUCTURE OR DECK ABOVE. ALL ASSEMBLIES SHALL BE TESTED BY UNDERWRITERS LABORATORY OR OTHER TESTING FACILITY ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION. PROVIDE A FIRE AND SMOKE RATING CONSISTENT WITH THE PARTITION. THE ASSEMBLY SHALL ALLOW VERTICAL MOVEMENT PER THE SLIP SPACE SCHEDULE.
J. WHEN WALLS CONTINUE PAST INTERMEDIATE STRUCTURE, FOR EXAMPLE IN MULTI-STORY STAIR ENCLOSURES, ATTACHMENT TO INTERMEDIATE STRUCTURE SHALL BE WITH A SLOTTED CONNECTION OR OTHER MEANS SO THAT STRUCTURAL DEFLECTION WILL NOT TRANSFER LOADS TO WALL FRAMING.
K. WHERE METAL DECK ASSEMBLIES AND FIRE RATED WALLS MEET, THE CONTRACTOR MAY INSTALL FIRE RATED MINERAL BATT INSULATION WITH FIRE CAULKING OR USE THE HEAD OF DETAIL SHOWN BELOW THE SLIP SPACE SCHEDULE ON THIS SHEET TO COMPLETE THE UL LISTED ASSEMBLY.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Y. Munoz*
Date: *Jan 04, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

PARTITION TAG



BACKING PLATE DETAIL:



BACKING PLATE SCHEDULE

CONDITION		A	B	C
MAX LOADS IN LBS	H	10	100	270
	V	100	490	760
MINIMUM STUD GAUGE		20	20	16
BACKING DESCRIPTION		6" HIGH SHT MTL X 16 GA	6" MTL STUD X 16 GA	6" MTL STUD X 14 GA
SHT MTL SCREW SIZE		#10	#10	#10

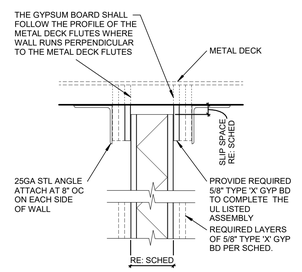
1. PROVIDE BACKING PLATE AT ALL TOILET ACCESSORIES AND WALL MOUNTED EQUIPMENT. PROVIDE TYPE OF BACKING BASED ON SIZE AND WEIGHT OF MOUNTED ITEM, INCLUDE ANTICIPATED IMPOSED LOAD ON ITEM (IE GRAB BARS AND CABINETS).
2. EXTEND BACKING PLATE TO NEXT STUDS BEYOND SIDES OF MOUNTED ITEM.
3. PROVIDE METAL SLEEVES THROUGH GYPSUM BOARD AND WALL FINISH AT FIXTURE AND EQUIPMENT FASTENING.
4. MAXIMUM LOADS SHOWN ARE MAXIMUM ALLOWABLE LOADS FOR THE DIRECTION SHOWN FOR EACH CONDITION.

SLIP SPACE SCHEDULE

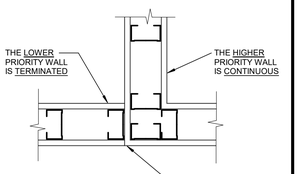
HORIZONTAL SPAN OF FLOOR BETWEEN BEAMS	OTHER FLOORS	ROOF
UP TO 30 FEET	1.5 INCH	2 INCH
31 TO 50 FEET	2.5 INCHES	3.3 INCHES
51 TO 60 FEET	3 INCHES	4 INCHES
61 TO 70 FEET	3.5 INCHES	4.7 INCHES

1. REFER TO STRUCTURAL DRAWINGS FOR BEAM SPANS.
2. SLIP SPACES GREATER THAN 1 1/2" SHALL USE PROPRIETARY DEEP LEG DEFLECTION TRACK.

OPTIONAL HEAD OF DETAIL

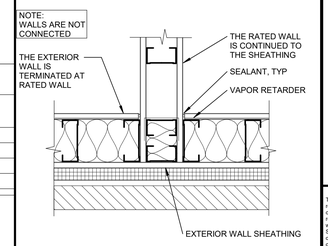


PARTITION PRIORITY

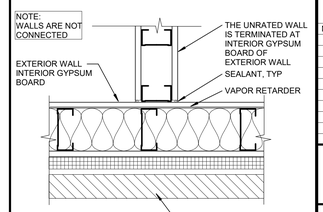


PARTITION TYPE	PRIORITY
3 HOUR FIRE	1 - HIGHEST
2 HOUR SHAFT	2
2 HOUR FIRE	3
1 HOUR SHAFT	4
1 HOUR	5
SMOKE	6
ACOUSTIC	7
NO FIRE OR ACOUSTIC RATING	8 - LOWEST

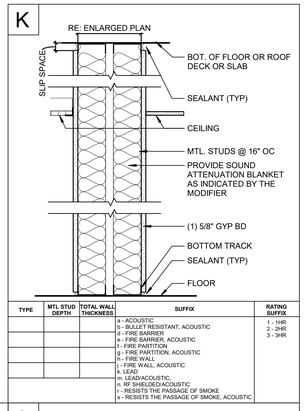
PARTITION TERMINATIONS AT EXTERIOR WALL:



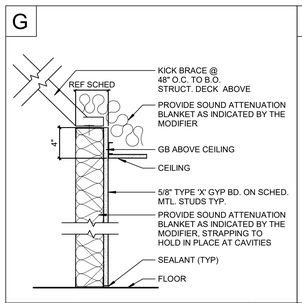
RATED INTERIOR PARTITION



UNRATED INTERIOR PARTITION



TYPE	MTL STUD DEPTH	TOTAL WALL THICKNESS	SUFFIX	RATING SUFFIX
			a - ACOUSTIC b - BULLET RESISTANT, ACOUSTIC d - FIRE BARRIER e - FIRE BARRIER, ACOUSTIC f - FIRE PARTITION g - FIRE PARTITION, ACOUSTIC i - FIRE WALL j - FIRE WALL, ACOUSTIC k. LEAD m. LEAD/ACOUSTIC, n. RF SHIELDED/ACOUSTIC r - RESISTS THE PASSAGE OF SMOKE s - RESISTS THE PASSAGE OF SMOKE, ACOUSTIC	1 - 1HR 2 - 2HR 3 - 3HR



TYPE	MTL STUD DEPTH	TOTAL WALL THICKNESS	SUFFIX	RATING SUFFIX
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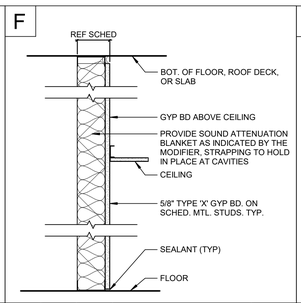
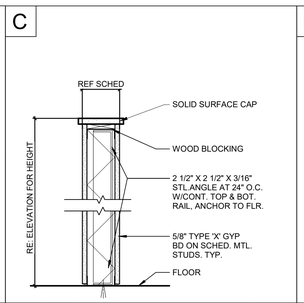
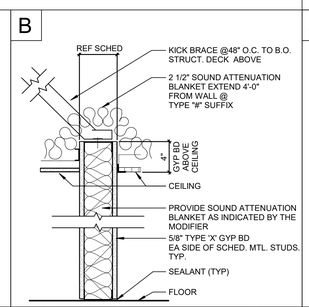


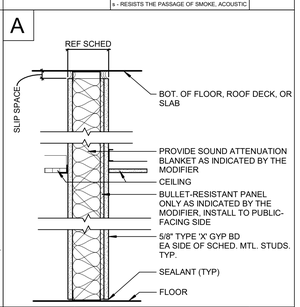
TYPE	MTL STUD DEPTH	TOTAL WALL THICKNESS	SUFFIX	RATING SUFFIX
			a - ACOUSTIC b - BULLET RESISTANT, ACOUSTIC d - FIRE BARRIER e - FIRE BARRIER, ACOUSTIC f - FIRE PARTITION g - FIRE PARTITION, ACOUSTIC i - FIRE WALL j - FIRE WALL, ACOUSTIC k. LEAD m. LEAD/ACOUSTIC, n. RF SHIELDED/ACOUSTIC r - RESISTS THE PASSAGE OF SMOKE s - RESISTS THE PASSAGE OF SMOKE, ACOUSTIC	1 - 1HR 2 - 2HR 3 - 3HR



TYPE	MTL STUD DEPTH	TOTAL WALL THICKNESS	SUFFIX	RATING SUFFIX
C2		3 3/4"	a - ACOUSTIC b - BULLET RESISTANT, ACOUSTIC d - FIRE BARRIER e - FIRE BARRIER, ACOUSTIC f - FIRE PARTITION g - FIRE PARTITION, ACOUSTIC i - FIRE WALL j - FIRE WALL, ACOUSTIC k. LEAD m. LEAD/ACOUSTIC, n. RF SHIELDED/ACOUSTIC r - RESISTS THE PASSAGE OF SMOKE s - RESISTS THE PASSAGE OF SMOKE, ACOUSTIC	1 - 1HR 2 - 2HR 3 - 3HR
C3		4 7/8"		
C6		7 1/4"		



TYPE	MTL STUD DEPTH	TOTAL WALL THICKNESS	SUFFIX	RATING SUFFIX
B2		3 3/4"	a - ACOUSTIC b - BULLET RESISTANT, ACOUSTIC d - FIRE BARRIER e - FIRE BARRIER, ACOUSTIC f - FIRE PARTITION g - FIRE PARTITION, ACOUSTIC i - FIRE WALL j - FIRE WALL, ACOUSTIC k. LEAD m. LEAD/ACOUSTIC, n. RF SHIELDED/ACOUSTIC r - RESISTS THE PASSAGE OF SMOKE s - RESISTS THE PASSAGE OF SMOKE, ACOUSTIC	1 - 1HR 2 - 2HR 3 - 3HR
B3		4 7/8"		
B6		7 1/4"		



TYPE	MTL STUD DEPTH	TOTAL WALL THICKNESS	SUFFIX	RATING SUFFIX
A2		3 3/4"	a - ACOUSTIC b - BULLET RESISTANT, ACOUSTIC d - FIRE BARRIER e - FIRE BARRIER, ACOUSTIC f - FIRE PARTITION g - FIRE PARTITION, ACOUSTIC i - FIRE WALL j - FIRE WALL, ACOUSTIC k. LEAD m. LEAD/ACOUSTIC, n. RF SHIELDED/ACOUSTIC r - RESISTS THE PASSAGE OF SMOKE s - RESISTS THE PASSAGE OF SMOKE, ACOUSTIC	1 - 1HR 2 - 2HR 3 - 3HR
A3		4 7/8"		
A6		7 1/4"		

1 HR: WHERE INDICATED
UL FILE # U494 STC 45

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MICHAEL HAGAN
403945
12/22/2023
ARCHITECT

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PARTITION DETAILS AND NOTES

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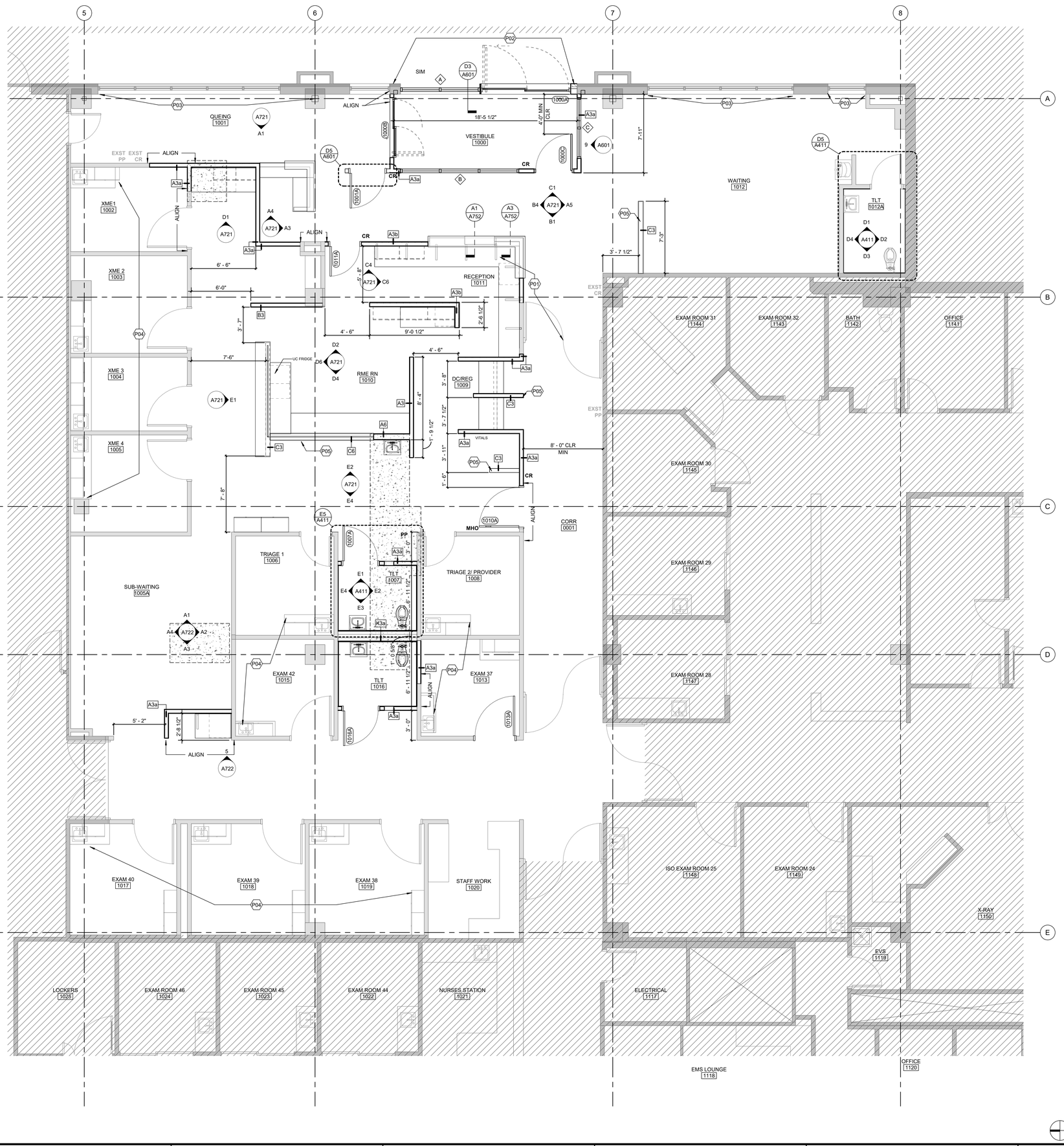

FLOOR PLAN GENERAL NOTES

A. DO NOT SCALE DRAWINGS.
B. IN ROOMS WITH FLOOR DRAINS, SLOPE CONCRETE SURFACE WITHIN 18" RADIUS AT 1/4" PER FOOT TOWARD FLOOR DRAIN, UNLESS OTHERWISE INDICATED.
C. ALL ANGLES SHOWN ON THE FLOOR PLAN ARE 90 DEGREES UNLESS OTHERWISE NOTED.
D. ALL DIMENSIONS ARE TO GRID LINE, FACE OF CONCRETE, OR MASONRY, OR FACE OF GYP AT INTERIOR PARTITIONS, UNLESS OTHERWISE NOTED. DIMENSIONS TO LOCATE EXTERIOR WALL IS TO BACK OF STUD.
E. ALL FLOOR PLAN DIMENSIONS TO MASONRY ARE NOMINAL DIMENSIONS, UNLESS NOTED AS ACTUAL.
F. REFER TO DRAWING SHEET A004 FOR SPECIFIC ROOFING & EXTERIOR WALL CONSTRUCTION DETAILS & NOTES.
G. REFER TO DRAWING SHEET SERIES AS6 FOR DOOR SCHEDULE AND EXTERIOR WINDOW TYPES.
H. REFER TO MECHANICAL AND ELECTRICAL PLANS FOR MORE INFORMATION. COORDINATE AS REQUIRED.
I. REFER TO THE LIFE SAFETY PLANS FOR FIRE RATING LOCATIONS. PARTITIONS MUST CONFORM TO TESTED ASSEMBLIES WHEN THEY ARE INDICATED TO BE RATED ON THE ARCHITECTURAL FLOOR PLANS. WHEN NO RATING IS INDICATED, CONSTRUCT THE PARTITION PER THE INDICATED TYPE AS NON-RATED ASSEMBLY.
J. PROVIDE FIRE STOP AND SMOKE STOP SYSTEMS PER SPECIFICATIONS AT ALL PENETRATIONS AND OPENINGS (INCLUDING THE PERIMETER) THROUGH FIRE RATED WALLS.
K. REFER TO EXTERIOR ELEVATIONS AND WALL SECTIONS FOR FULL EXTENT OF EXTERIOR WALL SYSTEMS AND COLORS.
L. FURNISHINGS (SHOWN DASHED) ARE SHOWN FOR GENERAL COORDINATION, REFER TO INTERIORS DRAWINGS FOR COMPLETE SCOPE OF WORK.
M. EQUIPMENT (SHOWN DASHED) SHOWN FOR COORDINATION ONLY. REFER TO EQUIPMENT DRAWINGS FOR DIMENSIONS. VERIFY EQUIPMENT ROUGH-IN DIMENSIONS WITH MANUFACTURER

EXISTING CONDITIONS NOTES

A. COORDINATE ALL FLOOR CORE DRILLING WITH EXISTING STRUCTURE.
B. PATCH AND LEVEL FLOOR SUBSTRATES TO RECEIVE NEW WORK AS SCHEDULED.
C. PATCH AND REPAIR CEILING AS REQUIRED FOR NEW LAYOUT. CONTRACTOR TO REPAIR ALL CEILINGS TO MATCH EXISTING WHERE PARTITIONS HAVE BEEN DEMOLISHED AND EXISTING CEILING IS TO REMAIN.
D. PATCH WALLS AT REMOVED RECEPTACLE OPENINGS SO AS TO RECEIVE SUBSEQUENT WORK.
E. PATCH EXISTING FIRE-RATED WALLS, FLOORS, CEILINGS, ETC. SO AS TO MAINTAIN THE FIRE-RATING. ADD FIRE-SMOKE DAMPERS WHERE NEW DUCTS CROSS. ADD FIRE STOP AT ALL PENETRATIONS.
F. PATCH EXISTING CONSTRUCTION SCHEDULED TO REMAIN. REPAIRED SURFACES TO BE FLUSH WITH ADJACENT FINISH SURFACES, PATCH, SAND, AND TEXTURE EXISTING SURFACES TO SAME QUALITY AS NEW CONSTRUCTION PRIOR TO INSTALLING NEW FINISHES. REFER TO THE FINISH MANUFACTURER'S GUIDELINES FOR INSTALLATION.

FLOOR PLAN LEGEND

NOT IN SCOPE OF WORK

FEC — FIRE EXTINGUISHER AND CABINET

INFILL SLAB TO MATCH EXISTING THICKNESS, MINIMUM 4". PROVIDE 6 X 6 - W2.9 X W2.9 W.W.F. REINFORCING WITH 2 1/2" CLR FROM BOTTOM. DRILL 5/8" DIAMETER HOLE IN EXIST SLAB ON GRADE FOR 5/8" DIAMETER X 1'-0" SMOOTH ROD @ 1'-0" O.C., GREASE ONE END

PLAN NOTES

P01	REINSTALL SALVAGED DOOR REMOTE RELEASE.
P02	PROVIDE CLEANED BRICK INFILL AND NEW GROUT, TO MATCH EXISTING, AT NEW OPENINGS.
P03	PROVIDE SS1 1/2" THICK SILL WITH 1/4" OVERHANG.
P04	ALL CASEWORK THIS ROOM IS EXISTING TO REMAIN. REMOVE SCREWS AND PROVIDE COLOR MATCH REPAIR TO LAMINATE. INSTALL NEW CODE LOCKS TO ALL DRAWERS AND CABINETS. INSTALL NEW SELF, SOFT-CLOSE FULLY CONCEALED HINGES TO CABINETS.
P05	PROVIDE SS1 1/2" THICK PONY WALL CAP WITH 1/4" OVERHANG.

LEVEL 1 - FLOOR PLAN A1
1/4" = 1'-0"

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City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Y. Munoz*
Date: *Jan 04, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

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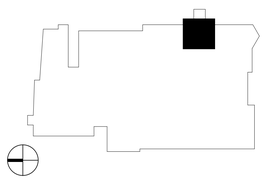
NO	DESCRIPTION	DATE

KEY PLAN



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LEVEL 1 - FLOOR PLAN

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RCP GENERAL NOTES

A. REFER TO FIRE PROTECTION DRAWINGS FOR LOCATIONS OF FIRE SPRINKLER HEADS. CENTER FIRE SPRINKLER HEADS BOTH DIRECTIONS IN CEILING TILES.
B. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR MOUNTING LOCATIONS OF ITEMS WHERE NO CEILING IS REQUIRED OR INDICATED.
C. CENTER LIGHTS, DIFFUSERS, EXIT SIGNS, SMOKE DETECTORS, AND FIREALARM SPEAKER/STROBES THE CEILING PANEL IN WHICH THEY OCCUR, UNLESS NOTED OTHERWISE.
D. CENTER LIGHTS IN GYPSUM BOARD CEILINGS UNLESS NOTED OTHERWISE.
E. CENTER ALL CEILING GRIDS IN EACH ROOM OR SPACE UNLESS OTHERWISE INDICATED WITH A GRID ORIGIN OR DIMENSION.
F. WHERE ACCENT PAINT IS INDICATED AT SOFFITS, PAINT EXPOSED HORIZONTAL AND VERTICAL FACES OF SOFFIT ACCENT COLOR UNLESS OTHERWISE NOTED.

RCP LEGEND

- ACOUSTICAL PANEL CEILING (APC1) 2' x 2' PATTERN
- ACOUSTICAL PANEL CEILING (EXST) 2' x 4' PATTERN
- GYPSUM BOARD CEILING ON METAL STUDS
- RECESSED CAN LIGHT
- RECESSED LIGHT
- DIFFUSER-SUPPLY
- DIFFUSER-RETURN
- DIFFUSER-EXHAUST
- CEILING ACCESS PANEL
- NOT IN SCOPE OF WORK

RCP NOTES

P20	PROVIDE FIRE-PROOFING PATCH ABOVE CEILING WHERE IMPACTED BY CONSTRUCTION ACTIVITIES THROUGHOUT PROJECT SCOPE.
P21	MATCH ELEVATION OF ADJACENT HEADER TO REMAIN.

City of Aurora Building Division
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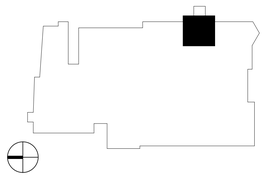
KEY PLAN



LEVEL 1 - REFLECTED CEILING PLAN A1
1/4" = 1'-0"
0 2' 4' 8'

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THE MEDICAL CENTER AURORA

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LEVEL 1 - REFLECTED CEILING PLAN

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EQUIPMENT PLAN GENERAL NOTES

1. FURNITURE ITEMS SHOWN FOR COORDINATION AND LAYOUT PURPOSES ONLY. TO BE PROVIDED BY OWNER.
2. CONTRACTOR TO CONFIRM EQUIPMENT CLEARANCES IN CASEWORK AND FRAMED ALCOVES.
3. SEE A4XX SERIES FOR MORE INFORMATION ON TOILET ACCESSORIES
4. SEE IXXX SERIES FOR MORE INFORMATION ON FINISHES.

EQUIPMENT PLAN LEGEND

- OWNER FURNISHED, OWNER INSTALLED (OFOI)
- OWNER FURNISHED, CONTRACTOR INSTALLED (OFCI)
- CONTRACTOR FURNISHED, CONTRACTOR INSTALLED (CFCI)

EQUIPMENT SCHEDULE

MARK	DESCRIPTION	F/I
EQ01	DESK PHONE	OFOI
EQ02	DUAL MONITOR WORKSTATION	OFOI
EQ03	WASTE/RECYCLING CONTAINER	OFOI
EQ04	ICE AND WATER MACHINE	OFOI
EQ05	CUP/LID/STRAW STORAGE	OFOI
EQ06	SCALE	OFOI
EQ07	SUTURE CART	OFOI
EQ08	GLOVE BOX HOLDER	OFCI
EQ09	SINGLE MONITOR WORKSTATION	OFOI
EQ10	PYXIS MACHINE	OFOI
EQ11	UNDERCOUNTER REFRIGERATOR, LOCKING	OFOI
EQ12	SHARPS DISPOSAL CONTAINER	OFCI
EQ13	CACTUS SINK, MEDICINE WASTE DISPOSAL	OFCI
EQ14	MULTI-FUNCTION PRINTER, COUNTER	OFOI
EQ15	MULTI-FUNCTION PRINTER, FLOOR	OFOI
EQ16	METAL DETECTION	OFOI
EQ17	WHEELCHAIR	OFOI
EQ18	WALL-MOUNTED PHONE	OFCI
EQ19	VENDING MACHINE	OFOI
EQ20	MONITOR AND BRACKET	OFCI
EQ21	IV START CART	OFOI
EQ22	MAYO STAND	OFOI
EQ23	CRASH CART	OFOI
EQ24	BLANKET WARMER, COUNTER	OFOI
EQ25	PASS THRU	OFCI
EQ26	MONITOR AND BRACKET	OFCI
EQ27	SHRED BIN	OFOI
EQ28	RETRACTABLE STANCHION	OFOI
GB-A	ADA WATER CLOSET GRAB BARS	CFCI
HS-1	HAND SANITIZER DISPENSER	OFCI
M-1	MIRROR, 24"W X 36"H	CFCI
PTD-1	PAPER TOWEL DISPENSER	OFCI
SD-A	SOAP DISPENSER, ADULT MOUNTING HEIGHT	OFCI
SD-C	SOAP DISPENSER, CHILD MOUNTING HEIGHT	OFCI
SND-1	SANITARY NAPKIN DISPOSAL	CFCI
TSC-1	TOILET SEAT COVER DISPENSER	OFCI
TTD-1	TOILET TISSUE DISPENSER, SINGLE ROLL	OFCI

LEVEL 1 - EQUIPMENT PLAN A1
1/4" = 1'-0"
0 2' 4' 8'

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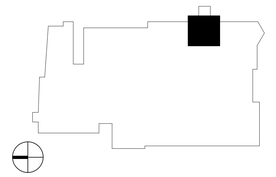

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EQUIPMENT PLAN

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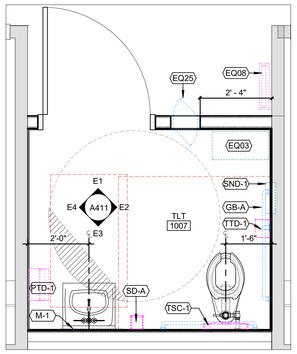
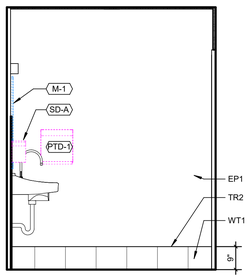
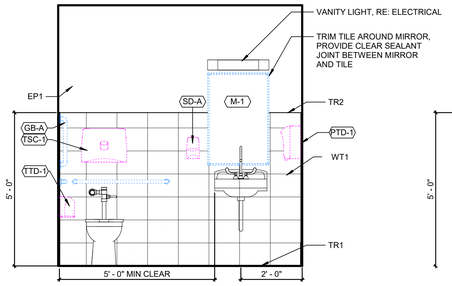


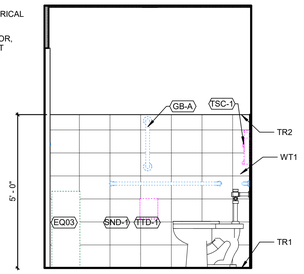
ENLARGED PLAN - TOILET TYP E5
1/2" = 1'-0"



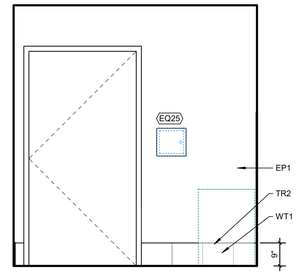
TYP TOILET - W E4
1/2" = 1'-0"



TYP TOILET - S E3
1/2" = 1'-0"



TYP TOILET - E E2
1/2" = 1'-0"



TYP TOILET - N E1
1/2" = 1'-0"

ENLARGED RESTROOM NOTES

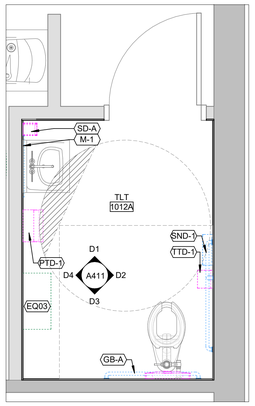
A. ALL DIMENSIONS ARE TO GRID LINE, FACE OF CONCRETE OR MASONRY, OF GYP. UNLESS OTHERWISE NOTED.
B. ALL FLOOR PLAN DIMENSIONS TO MASONRY ARE NOMINAL DIMENSIONS, UNLESS NOTED AS ACTUAL.
C. ALL ANGLES SHOWN ON THE FLOOR PLANS ARE 90 DEGREES UNLESS OTHERWISE NOTED.
D. ALL MOUNTING HEIGHTS ARE TO COMPLY WITH THOSE NOTED ON **THIS SHEET**
E. WHERE ADA CLEARANCES ARE INDICATED, DIMENSIONS SHALL COMPLY WITH THOSE INDICATED ON **THIS SHEET**
F. FURNISHINGS (SHOWN DASHED) ARE SHOWN FOR GENERAL COORDINATION, REFER TO 'I' SERIES FOR COMPLETE SCOPE OF WORK.
G. EQUIPMENT (SHOWN DASHED) SHOWN FOR COORDINATION ONLY. REFER TO EQUIPMENT DRAWINGS FOR DIMENSIONS. VERIFY EQUIPMENT ROUGH-IN DIMENSIONS WITH MANUFACTURER AND/OR WITH REUSED OR EXISTING EQUIPMENT.
H. IN ROOMS WITH FLOOR DRAINS, SLOPE CONCRETE SURFACE WITHIN 18" RADIUS AT 1/4" PER FOOT TOWARD FLOOR DRAIN, UNLESS OTHERWISE INDICATED.
I. DO NOT SCALE DRAWINGS.
J. COORDINATE ALL FLOOR CORE DRILLING WITH EXISTING STRUCTURE
K. PATCH AND LEVEL FLOOR SUBSTRATES TO RECEIVE NEW WORK AS SCHEDULED.
L. PATCH AND REPAIR CEILING AS REQUIRED FOR NEW LAYOUT. CONTRACTOR TO REPAIR ALL CEILINGS TO MATCH EXISTING WHERE PARTITIONS HAVE BEEN DEMOLISHED AND EXISTING CEILING IS TO REMAIN.
M. PATCH WALLS AT REMOVED RECEPTACLE OPENINGS SO AS TO RECEIVE SUBSEQUENT WORK.
N. PATCH EXISTING FIRE-RATED WALLS, FLOORS, CEILINGS, ETC. SO AS TO MAINTAIN THE FIRE-RATING. ADD FIRE-SMOKE DAMPERS WHERE NEW DUCTS CROSS. ADD FIRE STOP AT ALL PENETRATIONS.
O. PATCH EXISTING CONSTRUCTION SCHEDULED TO REMAIN. REPAIRED SURFACES TO BE FLUSH WITH ADJACENT FINISH SURFACES. PATCH, SAND, AND TEXTURE EXISTING SURFACES TO SAME QUALITY AS NEW CONSTRUCTION PRIOR TO INSTALLING NEW FINISHES. REFER TO THE FINISH MANUFACTURER'S GUIDELINES FOR INSTALLATION.

EQUIPMENT SCHEDULE

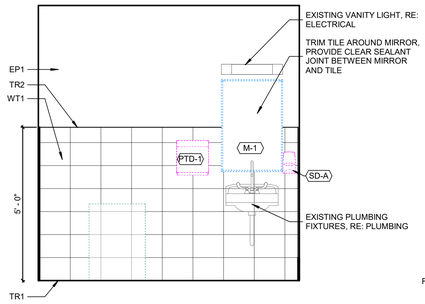
MARK	DESCRIPTION	F/I
EQ03	WASTE/RECYCLING CONTAINER	OFOI
EQ08	GLOVE BOX HOLDER	OFCI
EQ19	VENDING MACHINE	OFOI
EQ20	MONITOR AND BRACKET	OFCI
EQ25	PASS THRU	CFCI
GB-A	ADA WATER CLOSET GRAB BARS	CFCI
M-1	MIRROR, 24"W X 36"H	CFCI
PTD-1	PAPER TOWEL DISPENSER	OFCI
SD-A	SOAP DISPENSER, ADULT MOUNTING HEIGHT	OFCI
SD-C	SOAP DISPENSER, CHILD MOUNTING HEIGHT	OFCI
SND-1	SANITARY NAPKIN DISPOSAL	CFCI
TSC-1	TOILET SEAT COVER DISPENSER	OFCI
TTD-1	TOILET TISSUE DISPENSER, SINGLE ROLL	OFCI

EQUIPMENT LEGEND

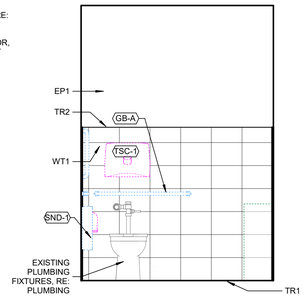
OWNER FURNISHED, OWNER INSTALLED (OFOI)
OWNER FURNISHED, CONTRACTOR INSTALLED (OFCI)
CONTRACTOR FURNISHED, CONTRACTOR INSTALLED (CFCI)



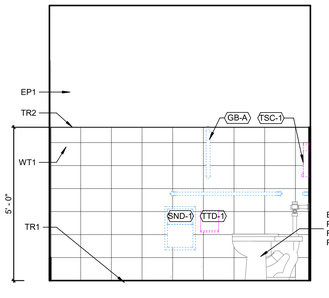
ENLARGED PLAN - TOILET EXST D5
1/2" = 1'-0"



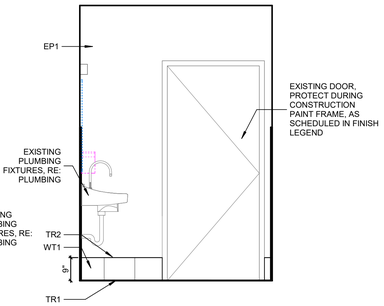
EXST TOILET - W D4
1/2" = 1'-0"



EXST TOILET - S D3
1/2" = 1'-0"



EXST TOILET - E D2
1/2" = 1'-0"



EXST TOILET - N D1
1/2" = 1'-0"

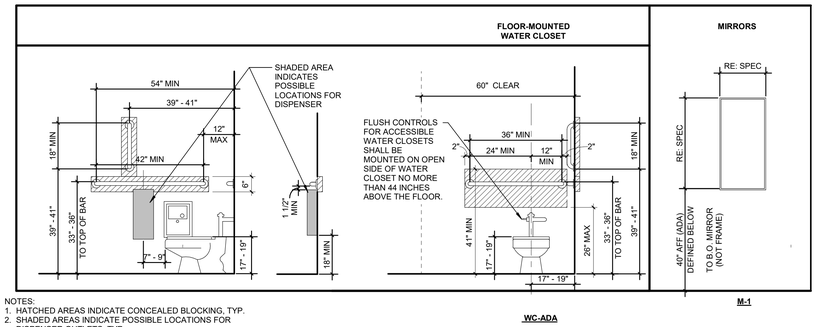
Install plumbing fixtures and toilet accessories **per Chp. 6 ICC/ANSI A117.1 - 2017**

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Y. Munoz*
Date: *Jan 04, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

ALL MOUNTING HEIGHTS PER ANSI 117.1-2017

GENERAL SUFFIXES

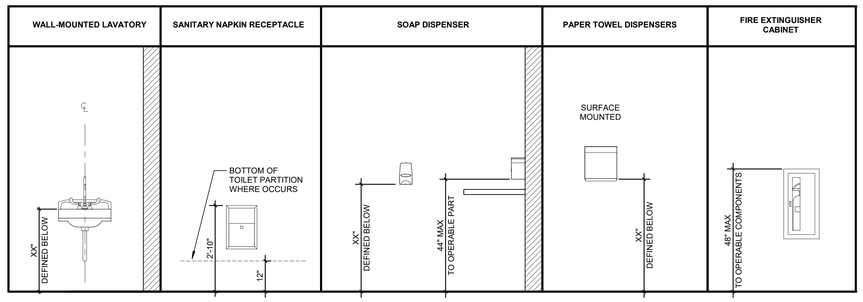
ADA - ADA COMPLIANT
R - RECESSED / SEMI-RECESSED
S - SURFACE-MOUNTED



NOTES:
1. HATCHED AREAS INDICATE CONCEALED BLOCKING, TYP.
2. SHADED AREAS INDICATE POSSIBLE LOCATIONS FOR DISPENSER OUTLETS, TYP.

WC-ADA

M-1



WL-A - 36" AFF
WL-ADA - 34" AFF
WL-C - 30" AFF
WL-P - 24" AFF

SND-1

SD-1 - 46" AFF
HS-1 - 46" AFF

PTD-1 - 42" AFF (TYPICAL)

FEC

TREANORHL
1501 S Potomac, Suite #400
Denver, CO 80202
Office: 303.298.4700
www.treanorhl.com

COLORADO LICENSED MICHAEL HAGMAN 403945 12/22/2023 ARCHITECT

THE MEDICAL CENTER AURORA

1501 S POTOMAC ST., AURORA, CO 80012

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Issued For:	CONSTRUCTION DOCUMENTS
Date:	11/10/2023

REVISIONS

NO	DESCRIPTION	DATE

A411

ENLARGED RESTROOM PLANS AND ELEVATIONS

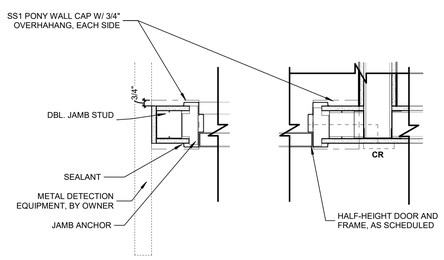
TreanorHL NO. HC16222.2301.00

Autodesk Docs://HC16222 TMCA Master Files/HC16222.2301.00 TMCA ED_ARCH_R23.rvt
12/23/2023 12:55:08 AM

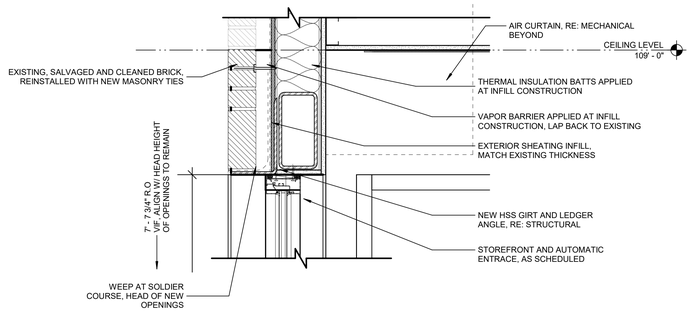
DOOR AND FRAME SCHEDULE

To Room: Number	DOOR NO.	S/P/R	DIMENSIONS WIDTH	DIMENSIONS HEIGHT	DOOR TYPE	DOOR MAT	DOOR FINISH	FRAME TYPE	FRAME MAT	FRAME FINISH	GLASS TYPE	DETAIL JAMB	DETAIL HEAD	DETAIL SILL	FIRE RATING	HDWR GROUP	REMARKS
1000	1000A	PR	9' - 0"	7' - 7 1/2"	MFR	AL	BRNZ	MFR	AL	BRNZ	IG-1	MFR	D3/A601	MFR	-	SL01	VESTIBULE, AUTOMATIC SLIDING DOORS
1000	1000B	PR	6' - 0"	7' - 0"	MFR	AL	BRNZ	MFR	AL	BRNZ	IG-1	MFR	MFR	MFR	-	SL01	VESTIBULE, AUTOMATIC SLIDING DOORS
1000	1000C	S	3' - 8"	7' - 5 3/4"	DG	AL	BRNZ	MFR	AL	BRNZ	IG-1	MFR	MFR	MFR	-	AL01	VESTIBULE, CARD READER
1001	1001A	S	3' - 6"	3' - 6"	F	WD	ACR1	S2	HM	PNT	-	D5/A601	-	-	-	05	SECURITY, CARD READER, PROVIDE 4" UNDERCUT TO DOOR
1007	1007A	S	3' - 6"	7' - 0"	F	SC	ACR1	S2	HM	PNT	-	D1/A601	D1/A601	-	-	02	TLT
1010	1010A	S	4' - 0"	7' - 0"	N	SC	ACR1	S2	HM	PNT	GL-1	D1/A601	D1/A601	-	-	03	RME/RN, CARD READER, MHO,
1011	1011A	S	3' - 0"	7' - 0"	F	SC	ACR1	S2	HM	PNT	-	D1/A601	D1/A601	-	-	04	RECEPTION, CARD READER
1013	1013A	S	4' - 0"	7' - 0"	F	SC	ACR2	S2	HM	PNT	-	D1/A601	D1/A601	-	-	01	EXAM RM 37
1016	1016A	S	3' - 6"	7' - 0"	F	SC	ACR2	S2	HM	PNT	-	D1/A601	D1/A601	-	-	02	TLT

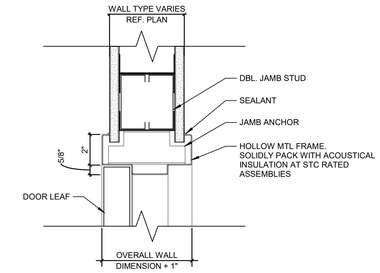
Provide lever or other approved hardware on all new and relocated doors. **2017 ICC/ANSI 117.7 309.4**



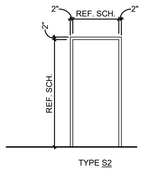
PLAN DETAIL @ HALF HEIGHT DOOR - N D5
1 1/2" = 1'-0"



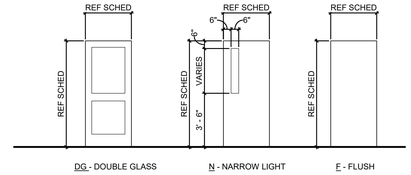
SECTION DETAIL @ NEW OPENING HEADER D3
1 1/2" = 1'-0"



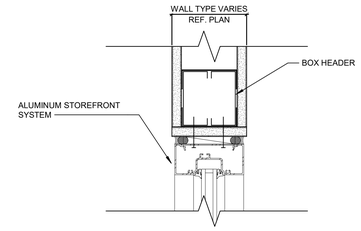
HM DOOR HEAD (JAMB SIM) - STUD WALL D1
3" = 1'-0"



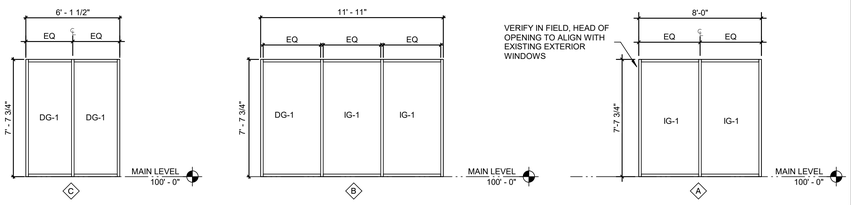
FRAME TYPES



DOOR TYPES



INTERIOR STOREFRONT HEAD (JAMB & SILL SIM) 3
3" = 1'-0"



WINDOW TYPES

DOOR SCHEDULE GENERAL NOTES

1. REFER TO SPECIFICATION SECTION 08 7100 FOR DOOR HARDWARE.
2. PROVIDE FIRE-RATING GLAZING IN DOORS TO MEET THE FIRE RATING REQUIREMENT OF THE DOORS IN WHICH IT IS INSTALLED.
3. WHERE DOORS ARE INSTALLED IN ACOUSTIC PARTITIONS, PROVIDE STC 40 MIN.
4. REFER TO "I" SERIES FOR ADDITIONAL FINISH INFORMATION.

DOOR SCHEDULE ABBREVIATIONS

PR - PAIR
S - SINGLE
MFR - MANUFACTURER
AL - ALUMINUM
HM - HOLLOW METAL
BRNZ - BRONZED ALUMINUM
PNT - PAINT, SEE FINISH LEGEND
ACR - HIGH IMPACT CLADDING, SEE FINISH LEGEND

GLAZING LEGEND

RE: SPECIFICATIONS
EXTERIOR USE INSULATED GLAZING UNITS
IG-1: VISION, TEMPERED

INTERIOR USE INSULATED GLAZING UNITS
IG-1: VISION, TEMPERED

INTERIOR USE MONOLITHIC GLAZING
GL-1: MONOLITHIC GLAZING, VISION, LAMINATED
DG-1: MONOLITHIC GLAZING, VISION, LAMINATED

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Y. Munoz*
Date: *Jan 04, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

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COLORADO LICENSED
MICHAEL HAGMAN
403945
12/22/2023
ARCHITECT

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Date: 11/10/2023

REVISIONS

NO	DESCRIPTION	DATE

A601

DOOR AND WINDOW SCHEDULES AND DETAILS

TreanorHL NO. HC16222.2301.00

Autodesk Docs://HC16222 TMCA Master Files/HC16222.2301.00 TMCA ED_ARCH_R23.rvt
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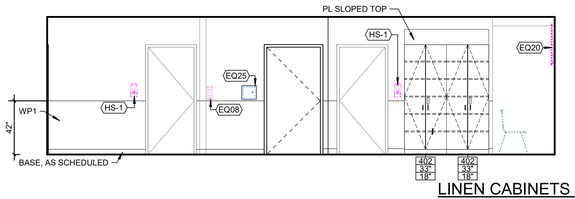
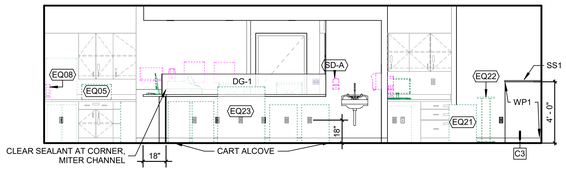
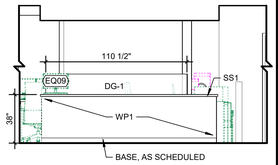


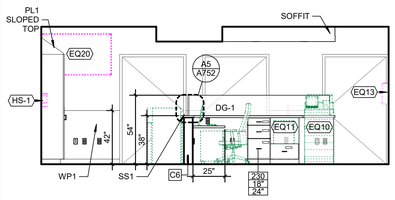
LINEN CABINETS - S E4
1/4" = 1'-0"



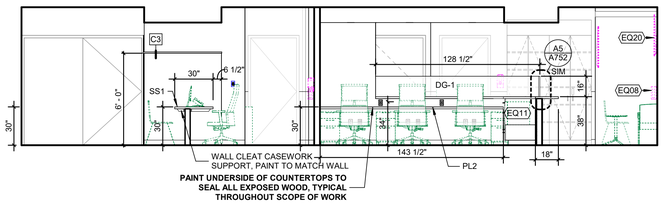
EQUIPMENT ALCOVE - N E2
1/4" = 1'-0"



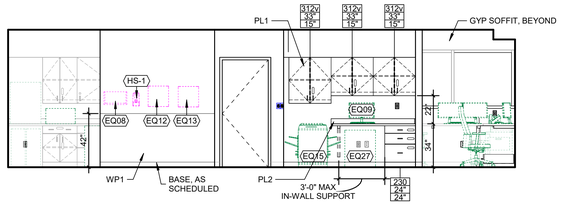
STANDING STAFF WORK - E E1
1/4" = 1'-0"



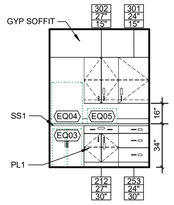
STAFF WORK - WEST D6
1/4" = 1'-0"



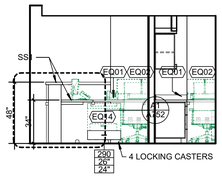
STAFF WORK - SOUTH D4
1/4" = 1'-0"



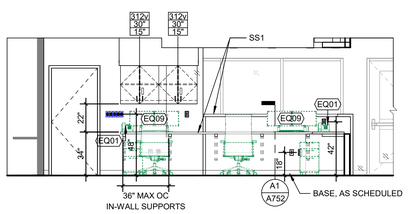
STAFF WORK - NORTH D2
1/4" = 1'-0"



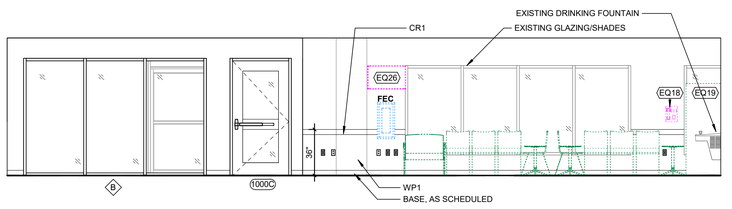
WATER / ICE - NORTH D1
1/4" = 1'-0"



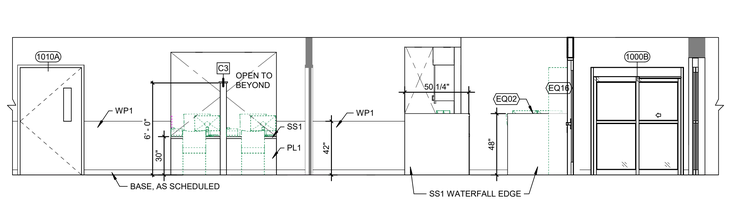
RECEPTION - EAST C6
1/4" = 1'-0"



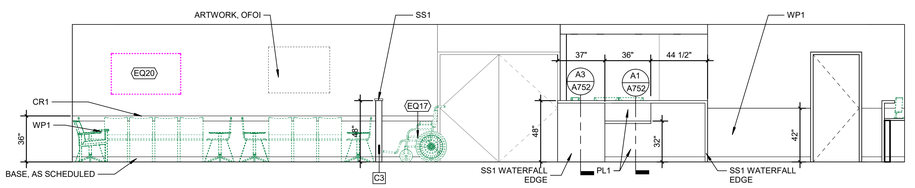
RECEPTION - NORTH C4
1/4" = 1'-0"



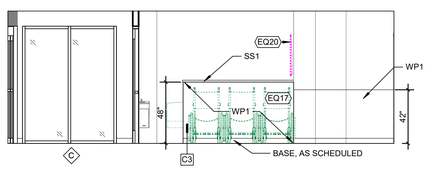
WAITING - NORTH C1
1/4" = 1'-0"



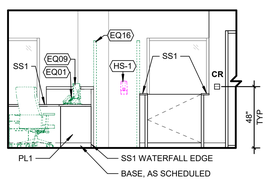
WAITING - WEST B4
1/4" = 1'-0"



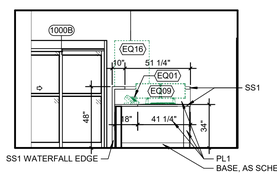
WAITING - SOUTH B1
1/4" = 1'-0"



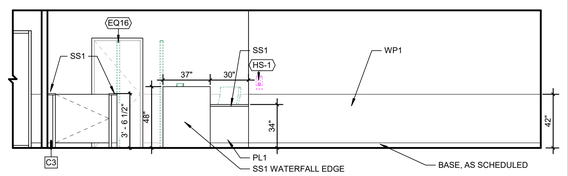
WAITING - EAST A5
1/4" = 1'-0"



SECURITY / PD - N A4
1/4" = 1'-0"



SECURITY - E A3
1/4" = 1'-0"



QUEING AND SECURITY- S A1
1/4" = 1'-0"

EQUIPMENT LEGEND

- OWNER FURNISHED, OWNER INSTALLED (OFOI)
- OWNER FURNISHED, CONTRACTOR INSTALLED (OFCI)
- CONTRACTOR FURNISHED, CONTRACTOR INSTALLED (CFCI)

INTERIOR ELEVATION GENERAL NOTES

A. ALL DIMENSIONS ARE TO GRID LINE, FACE OF CONCRETE OR MASONRY, OR FINISH FACE, UNLESS OTHERWISE NOTED.
B. ALL ANGLES SHOWN ON THE FLOOR PLANS ARE 90 DEGREES UNLESS OTHERWISE NOTED.
C. REFER TO 'I' SERIES FOR FURTHER FINISH MATERIALS INFORMATION.
D. FURNISHINGS (SHOWN DASHED) ARE SHOWN FOR GENERAL COORDINATION.
E. EQUIPMENT (SHOWN DASHED) SHOWN FOR COORDINATION ONLY. REFER TO EQUIPMENT DRAWINGS FOR ADDITIONAL INFORMATION. VERIFY EQUIPMENT ROUGH-IN DIMENSIONS WITH MANUFACTURER AND/OR WITH REUSED OR EXISTING EQUIPMENT.
F. DO NOT SCALE DRAWINGS.
G. POWER AND DATA LOCATIONS SHOWN FOR COORDINATION ONLY. REFER TO ELECTRICAL AND TECHNOLOGY FOR FULL SCOPE OF WORK.
H. REFER TO FINISH PLANS FOR BASE TREATMENT OF ROOM.
I. CASEWORK FINISHES ARE TYPICAL FINISHES PER FINISH SCHEDULE UNLESS NOTED OTHERWISE.
J. PATCH EXISTING FIRE-RATED ASSEMBLIES TO MAINTAIN THE FIRE-RATING. ADD FIRE STOP AT ALL PENETRATIONS.
K. PATCH EXISTING CONSTRUCTION SCHEDULED TO REMAIN. REPAIRED SURFACES TO BE FLUSH WITH ADJACENT FINISH SURFACES. PATCH, SAND, AND TEXTURE EXISTING SURFACES TO SAME QUALITY AS NEW CONSTRUCTION PRIOR TO INSTALLING NEW FINISHES. REFER TO THE FINISH MANUFACTURER'S GUIDELINES FOR INSTALLATION.
L. VIEWS ARE LABELED PER PLAN ORIENTATION (I.E. PLAN NORTH, PLAN EAST, PLAN SOUTH, PLAN WEST).

EQUIPMENT SCHEDULE

MARK	DESCRIPTION	F/I
EQ01	DESK PHONE	OFOI
EQ02	DUAL MONITOR WORKSTATION	OFOI
EQ03	WASTE/RECYCLING CONTAINER	OFOI
EQ04	ICE AND WATER MACHINE	OFOI
EQ05	CUP/LID/STRAW STORAGE	OFOI
EQ06	SCALE	OFOI
EQ07	SUTURE CART	OFOI
EQ08	GLOVE BOX HOLDER	OFCI
EQ09	SINGLE MONITOR WORKSTATION	OFOI
EQ10	PYXIS MACHINE	OFOI
EQ11	UNDERCOUNTER REFRIGERATOR, LOCKING	OFOI
EQ12	SHARPS DISPOSAL CONTAINER	OFCI
EQ13	CACTUS SINK, MEDICINE WASTE DISPOSAL	OFCI
EQ14	MULTI-FUNCTION PRINTER, COUNTER	OFOI
EQ15	MULTI-FUNCTION PRINTER, FLOOR	OFOI
EQ16	METAL DETECTION	OFOI
EQ17	WHEELCHAIR	OFCI
EQ18	WALL-MOUNTED PHONE	OFCI
EQ19	VENDING MACHINE	OFCI
EQ20	MONITOR AND BRACKET	OFCI
EQ21	IV START CART	OFOI
EQ22	MAYO STAND	OFOI
EQ23	CRASH CART	OFOI
EQ24	BLANKET WARMER, COUNTER	OFOI
EQ25	PASS THRU	CFCI
EQ26	MONITOR AND BRACKET	OFCI
EQ27	SHRED BIN	OFOI
EQ28	RETRACTABLE STANCHION	OFOI
GB-A	ADA WATER CLOSET GRAB BARS	CFCI
HS-1	HAND SANITIZER DISPENSER	OFCI
M-1	MIRROR, 24"W X 36"H	CFCI
PTD-1	PAPER TOWEL DISPENSER	OFCI
SD-A	SOAP DISPENSER, ADULT MOUNTING HEIGHT	OFCI
SD-C	SOAP DISPENSER, CHILD MOUNTING HEIGHT	OFCI
SND-1	SANITARY NAPKIN DISPOSAL	CFCI
TSC-1	TOILET SEAT COVER DISPENSER	OFCI
TTD-1	TOILET TISSUE DISPENSER, SINGLE ROLL	OFCI

City of Aurora Building Division
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THE MEDICAL CENTER AURORA

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INTERIOR ELEVATIONS

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INTERIOR ELEVATION GENERAL NOTES

A. ALL DIMENSIONS ARE TO GRID LINE, FACE OF CONCRETE OR MASONRY, OR FINISH FACE, UNLESS OTHERWISE NOTED.
B. ALL ANGLES SHOWN ON THE FLOOR PLANS ARE 90 DEGREES UNLESS OTHERWISE NOTED.
C. REFER TO 'I' SERIES FOR FURTHER FINISH MATERIALS INFORMATION.
D. FURNISHINGS (SHOWN DASHED) ARE SHOWN FOR GENERAL COORDINATION.
E. EQUIPMENT (SHOWN DASHED) SHOWN FOR COORDINATION ONLY. REFER TO EQUIPMENT DRAWINGS FOR ADDITIONAL INFORMATION. VERIFY EQUIPMENT ROUGH-IN DIMENSIONS WITH MANUFACTURER AND/OR WITH REUSED OR EXISTING EQUIPMENT.
F. DO NOT SCALE DRAWINGS.
G. POWER AND DATA LOCATIONS SHOWN FOR COORDINATION ONLY. REFER TO ELECTRICAL AND TECHNOLOGY FOR FULL SCOPE OF WORK.
H. REFER TO FINISH PLANS FOR BASE TREATMENT OF ROOM.
I. CASEWORK FINISHES ARE TYPICAL FINISHES PER FINISH SCHEDULE UNLESS NOTED OTHERWISE.
J. PATCH EXISTING FIRE-RATED ASSEMBLIES TO MAINTAIN THE FIRE-RATING. ADD FIRE STOP AT ALL PENETRATIONS.
K. PATCH EXISTING CONSTRUCTION SCHEDULED TO REMAIN. REPAIRED SURFACES TO BE FLUSH WITH ADJACENT FINISH SURFACES. PATCH, SAND, AND TEXTURE EXISTING SURFACES TO SAME QUALITY AS NEW CONSTRUCTION PRIOR TO INSTALLING NEW FINISHES. REFER TO THE FINISH MANUFACTURER'S GUIDELINES FOR INSTALLATION.
L. VIEWS ARE LABELED PER PLAN ORIENTATION (I.E. PLAN NORTH, PLAN EAST, PLAN SOUTH, PLAN WEST).

EQUIPMENT SCHEDULE

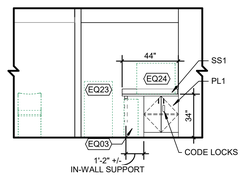
MARK	DESCRIPTION	F/I
EQ03	WASTE/RECYCLING CONTAINER	OFOI
EQ20	MONITOR AND BRACKET	OFCI
EQ23	CRASH CART	OFOI
EQ24	BLANKET WARMER, COUNTER	OFOI

EQUIPMENT LEGEND

OWNER FURNISHED, OWNER INSTALLED (OFOI)

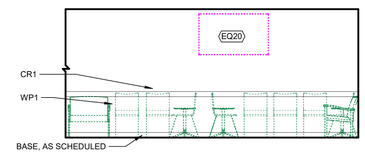
OWNER FURNISHED, CONTRACTOR INSTALLED (OFCI)

CONTRACTOR FURNISHED, CONTRACTOR INSTALLED (CFCI)

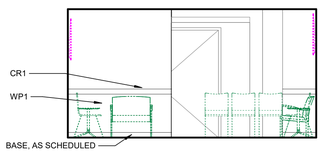


CRASH CART / BLANKET WARMER - N
1/4" = 1'-0"

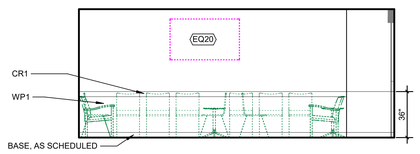
5



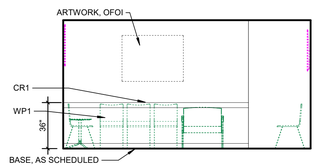
SUB-WAITING - W A4
1/4" = 1'-0"



SUB-WAITING - S A3
1/4" = 1'-0"



SUB-WAITING - EAST A2
1/4" = 1'-0"



SUB-WAITING - NORTH A1
1/4" = 1'-0"

City of Aurora Building Division
Reviewed for Code Compliance
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2021 INTERNATIONAL CODES & 2023 NEC

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INTERIOR ELEVATIONS

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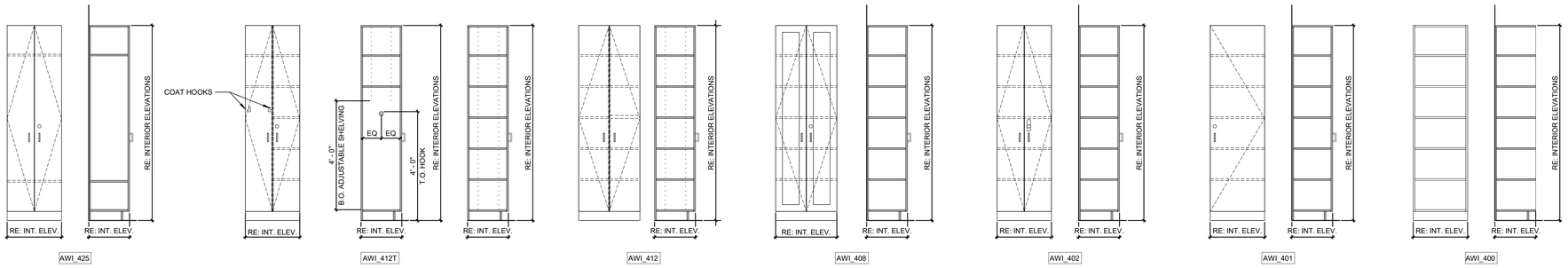
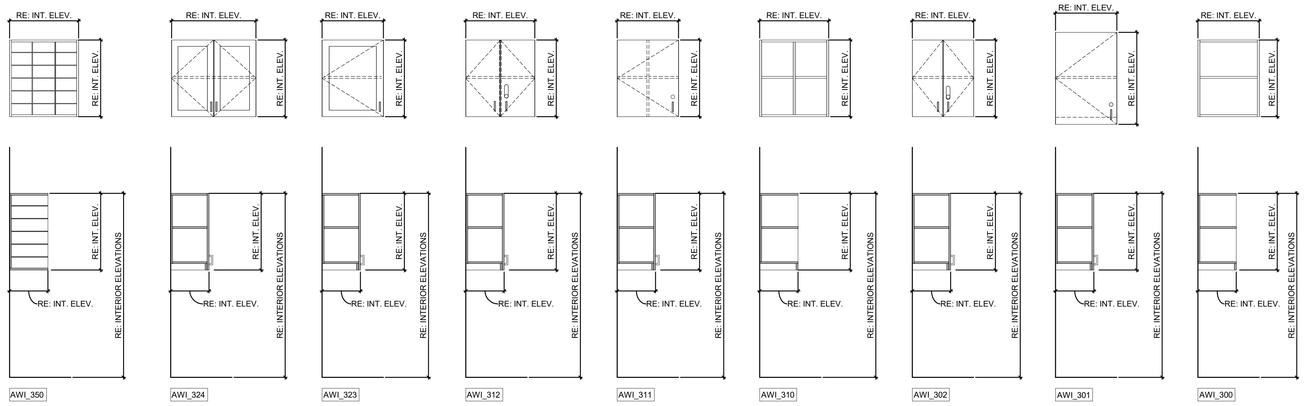
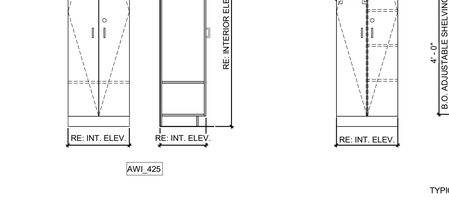


TYPICAL TEACHER CASEWORK



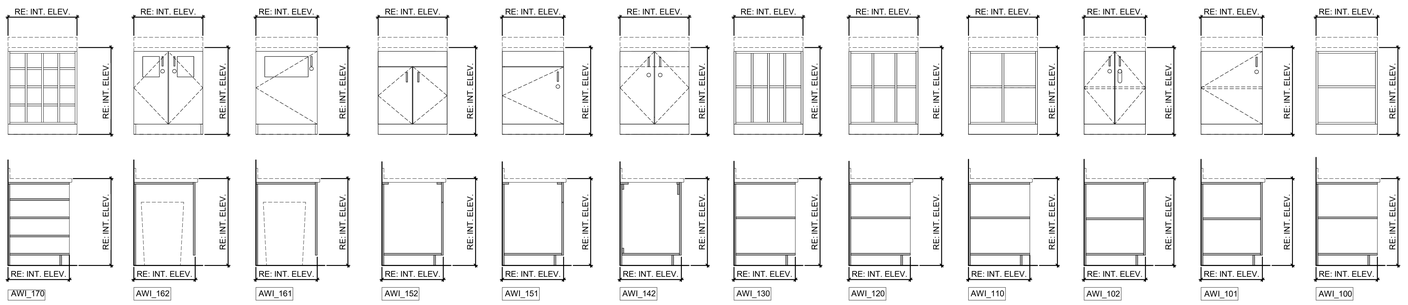


AP3	USED AT SINK LOCATIONS WITH A GARBAGE DISPOSAL
xx	
xx	

AP2
xx
xx

AP1
xx
xx

CLOSET SHELF AND POLE
CLOSET SHELF 18" DEEP WITH CLOAK POLE



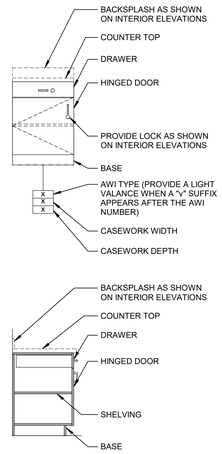
75-Casework Details-AWI

1/2" = 1'-0"

CASEWORK GENERAL NOTES

1. LOCK TYPES AND LOCATIONS AS INDICATED IN ELEVATIONS, RE: SPECIFICATIONS FOR MORE INFORMATION

AWI CASEWORK LEGEND



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CASEWORK DETAILS

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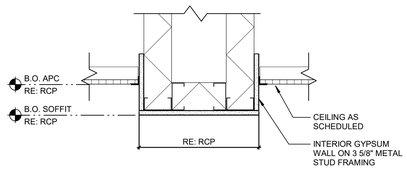
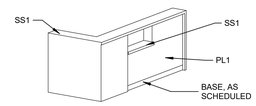
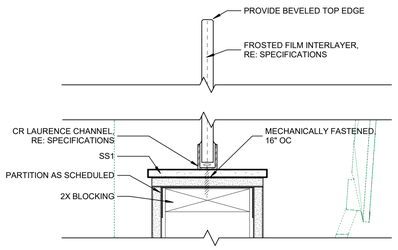


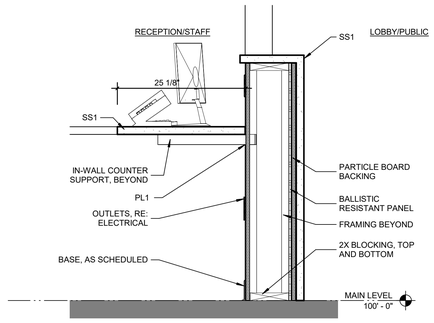
CEILING HEADER DETAIL C1
1 1/2" = 1'-0"



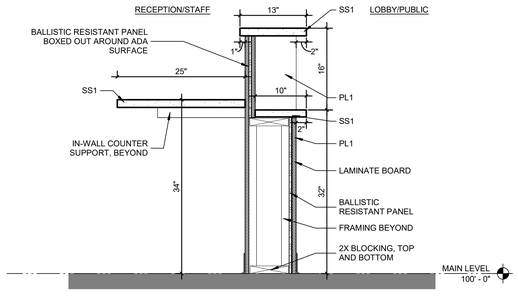
RECEPTION DESK - DIAGRAM B1



SECTION DETAIL @ RME/RN - DG1 A5
3" = 1'-0"



SECTION @ RECEPTION DESK - TRANSACTION SURFACE A3
1" = 1'-0"



SECTION @ RECEPTION DESK - ADA SURFACE A1
1" = 1'-0"

City of Aurora Building Division
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INTERIOR DETAILS

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FINISH LEGEND

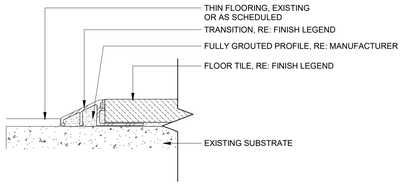
KEY NAME	FINISH	MANUFACTURER	STYLE / COLOR / SIZE	COMMENTS
RESILIENT / RESINOUS FLOORING				
LVT1	LUXURY VINYL TILE	MANNINGTON	SPACIA, LINEAR STONE SHALE, 12" X 18" X 0.096" THICK	RUNNING BOND 1/2 OFFSET INSTALLATION PATTERN
BASE FINISH				
RB1	RUBBER BASE	MANNINGTON	EDGE EFFECTS, SCULPTED WALL BASE IN ETCHED, CLAY 527	MITER CORNERS, DO NOT USE PREMOLDED OUTSIDE CORNERS
PAINT				
EP1	PAINT, EPOXY, FIELD COLOR WHERE INDICATED	SHERWIN WILLIAMS	DOVER WHITE SW 6385, SEMI GLOSS	
ME	PAINT, MATCH EXISTING FIELD	SHERWIN WILLIAMS	KILIM BEIGE, SW 6106, SEMI GLOSS	VERIFY COLOR MATCH IN FIELD
PT1	PAINT, FIELD COLOR WHERE INDICATED	SHERWIN WILLIAMS	DOVER WHITE SW 6385, SEMI GLOSS	
PT2	PAINT, ACCENT	SHERWIN WILLIAMS	OYSTER BAY SW 6206, SEMI GLOSS	
PT3	PAINT, ACCENT	SHERWIN WILLIAMS	WORLDLY GRAY SW 7043, SEMI GLOSS	
PT4	PAINT, ACCENT	SHERWIN WILLIAMS	PEARL GRAY SW 0052, SEMI GLOSS	
PT5	PAINT, ACCENT	SHERWIN WILLIAMS	SLATE TILE, SW 7624, SEMI GLOSS	
PT6	PAINT, ACCENT	SHERWIN WILLIAMS	GREEN EARTH, SW 7748, SEMI GLOSS	
PT7	PAINT, HOLLOW METAL DOOR AND WINDOW FRAMES	SHERWIN WILLIAMS	TONY TAUPE SW 7038, SEMI GLOSS	
WALL PROTECTION				
CG1	SINGLE CORNER GUARD WALL PROTECTION	ACROVYN	SM-20N, (1) 3 X 3 X MATCH ADJACENT SHEET HEIGHT, SLATE 209	WHERE "*" IS INDICATED IN PLAN, PROVIDE HEIGHT 8" BELOW CEILING. PROVIDE ANGLED CORNER GUARDS IN COMPLEMENTARY STYLE WHERE REQUIRED.
CG2	DOUBLE CORNER GUARD WALL PROTECTION	ACROVYN	SSM-20	
WP1	RIGID SHEET WALL PROTECTION	ACROVYN	4' X 10' X 0.060" THICK, SLATE 209	CLEAR SEALANT BUTT JOINTS BETWEEN PANELS, MANUFACTURER TRIM PIECES AT INSIDE/OUTSIDE CORNERS AND TOP
MILLWORK FINISHES				
PL1	PLASTIC LAMINATE	WILSONART	SHAKER CHERRY 7935K-07, TEXTURED GLOSS	TYPICAL VERTICAL SURFACES
PL2	PLASTIC LAMINATE	WILSONART	PEARL SOAPSTONE, FINE VELVENT FINISH	TYPICAL HORIZONTAL SURFACES, PROVIDE PVC EDGE BANDING TO MATCH
SS1	SOLID SURFACE	CORIAN	RAIN CLOUD, 1/2" THICK	TYPICAL COUNTER AT WET LOCATIONS, AND WHERE INDICATED RE: ELEVATIONS
TILE				
FT1	FLOOR TILE	DALTILE	PARKWAY, BEIGE PK96, 12" X 12"	GROUT TO BE SELECTED VIA SUBMITTAL FROM MANUFACTURER'S FULL RANGE OF STANDARD OFFERINGS
TR1	WALL TILE TO FLOOR TILE	SCHLUTER	DILEX-AHK, AE SATIN ANODIZED ALUMINUM	INSTALLER TO DETERMINE SIZE SUCH THAT TILE SITS FLUSH WITH PROFILE HEIGHT/DEPTH PER MANUFACTURER'S DESIGN
TR2	WALL TILE TO GWB	SCHLUTER	JOLLY, AE SATIN ANODIZED ALUMINUM	INSTALLER TO DETERMINE SIZE SUCH THAT TILE SITS FLUSH WITH PROFILE HEIGHT/DEPTH PER MANUFACTURER'S DESIGN
TR3	FLOOR TILE TO SV/LVT	SCHLUTER	RENO-K, AE SATINANODIZED ALUMINUM	INSTALLER TO DETERMINE SIZE SUCH THAT TILE SITS FLUSH WITH PROFILE HEIGHT/DEPTH PER MANUFACTURER'S DESIGN. PROFILE MUST BE FULLY FILLED WITH GROUT WHEN SETTING
WT1	WALL TILE	DALTILE	PARKWAY, BEIGE PK96, 9" X 12"	GROUT TO BE SELECTED VIA SUBMITTAL FROM MANUFACTURER'S FULL RANGE OF STANDARD OFFERINGS
CEILING FINISHES				
APC1	ACOUSTIC PANEL CEILING	ARMSTRONG COMMERCIAL	2 X 4 X 5/8, DUNE SECOND LOOK, MODEL 2712, COLOR WHITE, GRID 15/16" PRELUDE, COLOR WHITE	SEE CEILING PLAN A151 FOR LOCATIONS
GYP	PAINTED FINISH	SHERWIN WILLIAMS	DOVER WHITE SW 6385, EGGSHELL	SEE CEILING PLAN A151 FOR LOCATIONS, TYPICAL UNDERSIDE SOFFIT FINISH
MISC. FINISHES				
ACR1	DOOR FINISH, WHERE INDICATED	ACROVYN	SHAKER CHERRY 380	WITH STAINLESS STEEL EDGE PROTECTION
ACR2	DOOR FINISH, WHERE INDICATED	ACROVYN	NORTHERN OAK 376	WITH STAINLESS STEEL EDGE PROTECTION
CR1	CHAIR RAIL, WAITING AREAS	TARKETT	RAMPART CHR-XX-C, 4" H, 80 FAWN	
EM1	ENTRY MAT FLOORING	MANNINGTON	RUFFIAN II, EBONY EARTH 1506, 24" X 24"	INSTALLATION: MONOLITHIC

FINISHES GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR MORE INFORMATION.

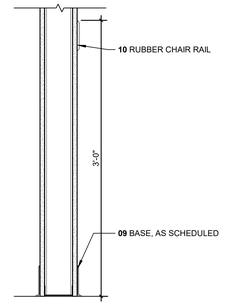
2. INSTALL ALL MATERIALS PER MANUFACTURER'S INSTRUCTIONS, WITH MANUFACTURER'S RECOMMENDED ACCESSORIES, UNLESS NOTED OTHERS.

3. HEIGHTS AND LOCATIONS OF MATERIALS ADDITIONAL DESIGNATED ON INTERIOR ELEVATIONS.



TR3 - TILE TO THIN FLOORING 1

12" = 1'-0"



CR1 - WALL PROTECTION SECTION A1

1 1/2" = 1'-0"

City of Aurora Building Division
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FINISH LEGEND AND DETAILS

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LEVEL 1 - FLOOR PLAN Copy 1

1/4" = 1'-0"

1

FINISH PLAN GENERAL NOTES

1. DIMENSIONS ARE TO GRID LINE, FACE OF CONCRETE OR MASONRY, OR FACE OF FINISH, UNLESS OTHERWISE NOTED.
2. WHERE PATCHING PAINT, REPAINT FULL SURFACE TO THE NEAREST CHANGE IN PLANE.
3. (ME) MATCH EXISTING
4. (E) EXISTING

FINISH PLAN LEGEND

Name	
101	FINISHES TAG
WF	WALL FINISH
BF	BASE FINISH
FF	FLOOR FINISH
CPT2 / LVT1	FLOOR FINISH (TRANSITION) FLOOR FINISH
PT2	WALL ACCENT PAINT ACCENT EXTENT
WT-E	WALL ACCENT MATERIAL ACCENT EXTENT
	FLOOR FINISH DIRECTION
CG1	CORNER GUARD
	PROVIDE INFILL FLOORING THIS AREA TO MATCH ADJACENT EXISTING

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FINISH PLAN

TreanorHL NO. HC16222.2301.00

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RSN: 1771774 | PERMIT# 23-2406108 -LT

MECHANICAL ABBREVIATIONS

AC	AIR CONDITIONING UNIT OR AIR COMPRESSOR
ACH	AIR CHANGES PER HOUR
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALUM	ALUMINUM
AMP	AMPERE
AMS	AIR FLOW MEASURING STATION
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARCH	ARCHITECT/ARCHITECTURAL
AVG	AVERAGE
BAS	BUILDING AUTOMATION SYSTEM
BD	BALANCING DAMPER
BDD	BACK-DRAFT DAMPER
BI	BLACK IRON (KITCHEN GREASE DUCTWORK)
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTUH	BRITISH THERMAL UNIT PER HOUR
CC	COOLING COIL
CF	CUBIC FEET
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CO	CLEAN OUT OR CARBON MONOXIDE
CONT	CONTINUOUS, CONTINUATION
CU	CONDENSING/ER UNIT
CU FT	CUBIC FEET
CV	CONSTANT AIR VOLUME
CW	COLD WATER
DB	DRY BULB TEMPERATURE
DBA	DECIBEL LEVEL
DDC	DIRECT DIGITAL CONTROL
DE	DRYER EXHAUST
DEG.F	DEGREE FAHRENHEIGHT
DG	DOOR GRILLE
DIA	DIAMETER
DN	DOWN
DP	DIFFERENTIAL PRESSURE
DWG	DRAWING
DX	DIRECT EXPANSION
E	EXHAUST
(E)	EXISTING
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECM	ELECTRONICALLY COMMUTATED MOTOR
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
EG	ETHYLENE GLYCOL SOLUTION (% BY VOLUME)
EL/ELEV	ELEVATION
ELEC	ELECTRIC/ELECTRICAL
ENT	ENTERING
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXIST	EXISTING
°F	DEGREE FAHRENHEIGHT
FA	FREE AREA
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET OR FLASH TANK
FV	FACE VELOCITY
GA	GAUGE
GAL	GALLON
GC	GENERAL CONTRACTOR
GD	GRAVITY DAMPER
GE	GENERAL EXHAUST
GEN	GENERAL
GER	GENERAL EXHAUST RISER
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HC	HEATING COIL
HORIZ	HORIZONTAL
HP	HORSEPOWER OR HEAT PUMP
HR	HOUR
HTG	HEATING
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HZ	HERTZ

ID	INSIDE DIAMETER
IN OR "	INCH
IN W.C.	INCHES IN WATER COLUMN
IN W.G.	INCHES IN WATER GAUGE
KE	KITCHEN EXHAUST
KW	KILOWATT
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LL	LOW LIMIT OR LANDLORD
LRA	LOCKED ROTOR AMPERES
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MD	MOTORIZED DAMPER
MIN	MINIMUM OR MINUTE(S)
NC	NORMALLY CLOSE OR NOISE CRITERIA
NIC	NOT IN CONTACT
NK	NECK
NO	NORMALLY OPEN
NO OR #	NUMBER
NR	NOT REQUIRED
NTS	NOT TO SCALE
NV	NATURAL VENTILATION
OA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIAMETER
P	PUMP
PBLG	PLUMBING
PC	PLUMBING CONTRACTOR
PG	PROPYLENE GLYCOL SOLUTION (% BY VOLUME)
PRV	PRESSURE REDUCING VALVE
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
R	RETURN
RA	RETURN AIR
REQ'D	REQUIRED
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RO	RELIEF OPENING
RPM	REVOLUTIONS PER MINUTE
S	SUPPLY
SA	SOUND ATTENUATOR
SF	SUPPLY FAN OR SQUARE FEET
SL	SENSIBLE LOAD
SP	STATIC PRESSURE
SPECS	SPECIFICATIONS
SQ	SQUARE
SQ.FT.	SQUARE FEET
SS	STAINLESS STEEL
STD	STANDARD
STRUCT	STRUCTURE/STRUCTURAL
TD	TEMPERATURE DIFFERENCE OR TRANSFER DUCT
TE	TOILET EXHAUST
TEMP	TEMPERATURE
TO	TRANSFER OPENING
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UC	UNDER-CUT (DOOR)
UON	UNLESS OTHERWISE NOTED
V	VENT
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W	WATT
W/	WITH
WC	WATER COLUMN
WPD	WATER PRESSURE DROP
WMS	WIRE MESH SCREEN
WT	WEIGHT

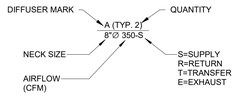
GRAPHIC LINESTYLES

- THICK, DARK SOLID LINES INDICATE NEW OR RELOCATED ITEMS
- THIN, LIGHT SOLID LINES INDICATE EXISTING ITEMS TO REMAIN IN PLACE AND BE REUSED
- THICK, SHORT DASHED LINES INDICATE EXISTING ITEMS TO BE REMOVED
- THICK, SHORT DASHED LINES WITH DIAGONAL PATTERN INDICATE EXISTING ITEMS TO BE REMOVED

IDENTIFICATION SYMBOLS

- POINT OF NEW TO EXISTING CONNECTION
- POINT OF DISCONNECT FROM EXISTING TO DEMOLISHED ITEM
- X — KEYED NOTE TAG
- X / X — EQUIPMENT TAG / EQUIPMENT TAG NO.
- X / M-X — SECTION NUMBER / DRAWING ON WHICH SECTION IS SHOWN

AIR DEVICES DATA TAG



SENSOR SYMBOLS

- T — THERMOSTAT
- TC — COMBINATION: THERMOSTAT, HUMIDISTAT, CO2
- H — HUMIDISTAT
- CO — CARBON MONOXIDE DETECTOR
- CD — CARBON DIOXIDE DETECTOR
- SD — DUCT SMOKE DETECTOR

PIPING SYSTEMS

HWS	HEATING HOT WATER SUPPLY
HWR	HEATING HOT WATER RETURN
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CTWS	COOLING TOWER WATER SUPPLY
CTWR	COOLING TOWER WATER RETURN
GWS	GEOTHERMAL WATER SUPPLY
GWR	GEOTHERMAL WATER RETURN
LPS	LOW PRESSURE STEAM
LPC	LOW PRESSURE STEAM CONDENSATE
MPS	MEDIUM PRESSURE STEAM
MPC	MEDIUM PRESSURE STEAM CONDENSATE
LPG	LOW PRESSURE NATURAL GAS
MPG	MEDIUM PRESSURE NATURAL GAS
CD	COOLING COIL CONDENSATE

DUCTWORK SYMBOLS

- SUPPLY AIR DUCT
- RETURN AIR DUCT
- EXHAUST AIR DUCT
- 24X12 — RECTANGULAR DUCT SIZE
- 24Ø — ROUND DUCT SIZE
- 24/12 — FLAT OVAL DUCT SIZE
- ELBOW TURNED DOWN
- ELBOW TURNED UP
- DUCT TRANSITION
- DUCT END CAP
- CEILING SUPPLY DIFFUSERS
- CEILING RETURN / EXHAUST DIFFUSER
- FLEXIBLE DUCT
- FD — FIRE DAMPER
- SD — SMOKE DAMPER
- FSD — COMBINATION FIRE/SMOKE DAMPER
- MD — MOTORIZED DAMPER
- MANUAL BALANCING DAMPER
- CLEAN OUT
- FLEXIBLE DUCT CONNECTION
- UC/DG — DG: DOOR GRILLE; UC: DOOR UNDERCUT

MECHANICAL CODE REFERENCE

2021 CITY OF AURORA BUILDING CODES AND AMENDMENTS
2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
2021 INTERNATIONAL BUILDING CODE (IBC)
2021 INTERNATIONAL MECHANICAL CODE (IMC)
2021 INTERNATIONAL PLUMBING CODE (IPC)
2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

PIPING SYMBOLS

- ELBOW TURNED UP
- ELBOW TURNED DOWN
- TEE TURNED UP
- TEE TURNED DOWN
- DIRECTION OF FLOW ARROW
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER, FLAT ON BOTTOM
- ECCENTRIC REDUCER, FLAT ON TOP
- FLANGE
- FLEXIBLE CONNECTOR
- EXPANSION COMPENSATOR
- ANCHOR
- GUIDE
- CAPPED END
- CONTINUATION
- FM — FLOW METER (REFER TO SPECS FOR TYPE)
- M — METER
- SIGHT GLASS
- PIPE UNION
- T — STEAM TRAP (REFER TO SPECS FOR TYPE)
- STRAINER
- STRAINER WITH BLOWDOWN
- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- FLOW SWITCH
- DP — DIFFERENTIAL PRESSURE SWITCH
- INSTRUMENT WELL
- TEMPERATURE/PRESSURE PORT (PETE'S PLUG)
- PRESSURE GAUGE WITH SHUTOFF
- THERMOMETER
- VACUUM BREAKER
- PRESSURE RELIEF VALVE
- PIPE PITCH DIRECTION
- ISOLATION VALVE (REFER TO SPECS FOR TYPE)
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- GLOBE VALVE
- TRIPLE DUTY VALVE
- BALANCING VALVE
- PRESSURE REDUCING VALVE
- DRAIN VALVE
- M — MOTORIZED, 2-WAY VALVE
- M — MOTORIZED, 3-WAY VALVE
- PNEUMATIC, 2-WAY VALVE
- S — SOLENOID, 2-WAY VALVE

This sheet of drawings has not been reviewed for code compliance.

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12/22/2023

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REVISIONS

NO	DESCRIPTION	DATE

M000

MECHANICAL SYMBOLS, ABBREVIATIONS AND NOTES

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HOT WATER BLOWER COIL UNIT SCHEDULE (BCU)

TAG	LOCATION	TYPE	FAN DATA				CHILLED WATER COOLING COIL DATA								HOT WATER HEATING COIL DATA								MANUFACTURER	MODEL	REMARKS
			CFM	ESP (IN.)	HP PER FAN	VOLTS/PH/HZ	TOTAL MBH	SENS. MBH	ROWS	EAT DB °F	EAT WB °F	EWT °F	LWT °F	GPM	PD (FT.)	SENS. MBH	ROWS	EAT DB °F	LAT DB °F	EWT °F	LWT °F	GPM	PD (FT.)			
BCU-1	ED RECEPTION/WAITING AREA	HORIZONTAL DIRECT DRIVE	1900	2.3	2 @ 1 HP	460/3/60	72.3	43	4	80	67	42	56	10.3	7.77	78.2	2	55	100.1	140	120	7.9	7.05	JOHNSON CONTROLS	HORIZONTAL DIRECT DRIVE, UNIT SIZE 30	ALL

REMARKS:

1. OA FRACTION OF BCU-1 TO BE SET TO 20%.
2. THERMOSTAT TO BE FIELD MOUNTED BY CONTROLS CONTRACTOR WITHIN THE RECEPTION AREA AT INDICATED LOCATION.
3. PROVIDE BLOWER COIL UNIT WITH BACNET CAPABILITY.
4. PROVIDE DRIP PAN SIZED FOR UNIT DIMENSIONS UNDERNEATH NEW…
5. UNIT TO BE INTEGRATED INTO EXISTING JCI BAS VIA BACNET IP BY CONTROLS CONTRACTOR. EXTEND AND CONNECT EXISTING FCU-1 BACNET TRUNK TO NEW BCU-1.
6. BCU-1 TO BE BALANCED BY BALANCING CONTRACTOR TO PROVIDE AIRFLOWS INDICATED FOR THE QUEUEING AND WAITING ROOM SPACES IN THE ASHRAE 170 VENTILATION SCHEDULE.

VARIABLE AIR VOLUME BOX WITH HOT WATER REHEAT SCHEDULE (VAV)

TAG	LOCATION	INLET	CFM	MIN CFM	HEATING CFM	HEATING COIL DATA								MANUFACTURER	MODEL	REMARKS
						COIL MBH	MINIMUM ROWS	EAT DB °F	LAT DB °F	EWT °F	LWT °F	GPM	UNIT MAX PD (FT.)			
VAV-A09	ED TRIAGE 2 - ROOM 1008	8	570	230	230	8.0	2	55	95	140	120	0.8	0.17	JCI	VRU	ALL

REMARKS:

1. PROVIDE PRESSURE INDEPENDENT CONTROL.
2. PROVIDE ACCESS DOOR ON BOTTOM OF UNIT AND AT HEATING COIL.
3. PROVIDE DUST TIGHT CONSTRUCTION.
4. PROVIDE DRIP PAN SIZED FOR UNIT DIMENSIONS UNDERNEATH NEW…
5. PROVIDE FACTORY MOUNTED CONTROLLER.
6. UNIT TO BE INTEGRATED INTO EXISTING JCI BAS VIA BACNET IP BY CONTROLS CONTRACTOR. EXTEND AND CONNECT EXISTING VAV-A09 TRUNK TO NEW VAV.
7. MAXIMUM UNIT NC AT 3" S.P. TO BE 26.
8. NEW VAV-09A TO BE BALANCED BY BALANCING CONTRACTOR TO PROVIDE AIRFLOWS INDICATED FOR THE EXAM AND TRIAGE ROOM SPACES IN THE ASHRAE 170 VENTILATION SCHEDULE.

AIR CURTAIN SCHEDULE (AD)

TAG	LOCATION	TYPE	NOZZLE WIDTH (IN)	FAN DATA				HEATING COIL DATA						HEATING WATER CONNECTION SIZES	NET UNIT WEIGHT (LBS)	MANUFACTURER	MODEL	REMARKS
				CFM	POWER RATING (KW)	HP PER FAN	VOLTS/PH/HZ	MBH	AIR TEMP RISE °F	EWT °F	LWT °F	GPM	MAX PD (FT.)					
AD-EDV	ED VESTIBULE	HOT WATER HEATED	66	2258	0.89	2 FANS @ 0.5	208/1/60	62.8	25	180	164	8	2.1	1"	219	BERNER	ARD12-2060W	ALL

REMARKS:

1. UNIT TO BE TOP MOUNTED AND ANCHORED TO EXISTING STRUCTURE.
2. UNIT TO BE MOUNTED AT A HEIGHT OF 9 FEET, RECESSED IN CEILING. EXACT LOCATION TO BE COORDINATED WITH ARCHITECT.
5. PROVIDE INTEGRAL BUILT-IN TEMPERATURE PROBE AND OPTIONAL EXTERNAL TEMPERATURE SENSOR. CONTROLS CONTRACTOR TO FIELD MOUNT EXTERNAL TEMPERATURE SENSOR AT A LOCATION AWAY FROM AIR CURTAIN AND EXTERIOR DOOR.
6. PROVIDE DISCONNECT SWITCH.
7. PROVIDE MAGNETIC DOOR SWITCH. DOOR SWITCH TO BE FIELD MOUNTED AND CONNECTED TO UNIT BY CONTROLS CONTRACTOR.
8. PROVIDE UNIT WITH BERNER AIR SMART CONTROLLER INCLUDING BACNET.
9. UNIT TO BE INTEGRATED INTO EXISTING JCI BAS VIA BACKNET IP BY CONTROLS CONTRACTOR. EXTEND EXISTING AD-1 BACNET TRUNK TO NEW AD-EDV AND CONNECT UNIT TO BAS.

FAN SCHEDULE

TAG	LOCATION	SERVICE	TYPE	CFM	ESP (IN. W.C.)	DRIVE	RPM	BHP	HP	VOLTS/PH/HZ	MANUFACTURER	MODEL	REMARKS
EF-1	ROOF ABOVE ED WAITING	BCU-1	CENTRIFUGAL - DOWNBLAST	395	0.1	DIRECT	1050	0.02	1/40	115/1/60	GREENHECK	G-090-E	ALL

REMARKS:

1. PROVIDE DISCONNECT SWITCH.
2. PROVIDE 14" ROOF CURB.
3. PROVIDE SPRING VIBRATION ISOLATION HANGERS.
4. PROVIDE RUBBER-IN-SHEAR VIBRATION ISOLATORS.
5. PROVIDE SOLID-STATE SPEED CONTROLLER.
6. PROVIDE BIRD SCREEN.
7. PROVIDE GRAVITY BACKDRAFT DAMPER.
8. PROVIDE HINGED ACCESS DOOR.
9. FAN TO RUN CONTINUOUSLY.

GRILLE, REGISTER, AND DIFFUSER SCHEDULE (GRD)

TAG	SERVICE	TYPE	INLET SIZE (IN.)	FACE SIZE (IN.)	INTEGRAL DAMPER	MATERIAL / FINISH	MANUFACTURER	MODEL	REMARKS
A	SUPPLY	PLAQUE FACE DIFFUSER	SEE REMARK 2	24 X 24	NO	STEEL/WHITE	TITUS	OMNI	1,2
B	RETURN	SURFACE MOUNT RETURN GRILLE	SEE REMARK 3	24 X 24	NO	STEEL/WHITE	TITUS	350RL	1,3
C	EXHAUST	SURFACE MOUNT RETURN GRILLE	SEE REMARK 3	6 X 6	NO	STEEL/WHITE	TITUS	350RL	1,3

REMARKS:

1. PROVIDE ACCESSORIES FOR HARD CEILING MOUNTING, AS REQUIRED.
2.

MARK "A"	
ROUND NECK SIZE (IN.)	MAX CFM
6	196
8	314
10	436
12	550
14	748
15	859

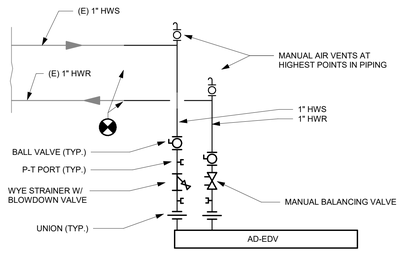
3.

MARK "B" & "C"	
NECK SIZE (IN.)	MAX CFM
6X6	133
8X8	222
10X10	354
12X12	528
14X14	732
16X16	972

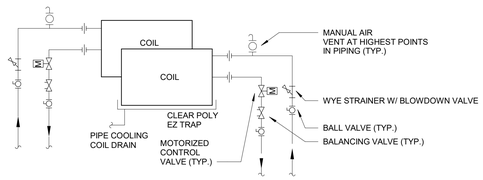
VENTILATION SCHEDULE - AREAS SERVED BY BCU-1 & VAV-09 ONLY

ROOM NAME	AHU SERVING SPACE	ROOM CLASSIFICATION	FLOOR AREA SQ. FT.	CELING HEIGHT FT.	SPACE VOLUME CU FT	GOVERNING TABLE	ASHRAE 170								DESIGN MINIMUM AIRFLOWS TO BE PROVIDED					
							PRESSURE RELATION	MINIMUM OUTSIDE ACH	MINIMUM TOTAL ACH	ALL ROOM AIR EXHAUSTED	RM UNIT RECIRC. ALLOWED	REQ DESIGN RH (%)	REQ DESIGN TEMP. (°F)	REQUIRED TOTAL AIR CFM	REQUIRED OUTSIDE AIR CFM	PROVIDED SUPPLY AIR CFM	DESIGN RETURN AIR CFM	DESIGN OUTDOOR AIR CFM	EXISTING EXHAUST AIR CFM	DESIGN OA ACH	DESIGN TOTAL ACH
WAITING - 1012	N/A	EMERGENCY DEPT PUBLIC WAITING AREA	510	9	4590	ASHRAE 170	NEGATIVE	2	12	YES	NR	MAX 65	70-75	918	153	1075	1120	215	395	2.8	19.2
QUEING - 1001	N/A	EMERGENCY DEPT PUBLIC WAITING AREA	315	9	2835	ASHRAE 170	NEGATIVE	2	12	YES	NR	MAX 65	70-75	567	95	720	760	95	0	2.0	15.2
TRIAGE 1 - 1006	AHU AH-A	TRIAGE - HOSPITAL SPACES	100	8.5	850	ASHRAE 170	NEGATIVE	2	12	YES	NR	MAX 60	70-75	170	28	170	220	35	0	2.5	12.0
TRIAGE 2 - 1008	AHU AH-A	TRIAGE - HOSPITAL SPACES	99	8.5	842	ASHRAE 170	NEGATIVE	2	12	YES	NR	MAX 60	70-75	168	28	170	220	35	0	2.5	12.1
EXAM 42 - 1015	AHU AH-A	EMERGENCY DEPT EXAM/TREAMENT ROOM	96	8.5	816	ASHRAE 170	NR	2	6	NR	NR	MAX 60	70-75	82	27	115	115	35	0	2.6	8.5
EXAM 37 - 1013	AHU AH-A	EMERGENCY DEPT EXAM/TREAMENT ROOM	97	8.5	825	ASHRAE 170	NR	2	6	NR	NR	MAX 60	70-75	82	27	115	115	35	0	2.5	8.4

NOTES
1. ASSUME MIN. OUTDOOR AIR PERCENTAGE OF AHU AH-A TO BE 30%.



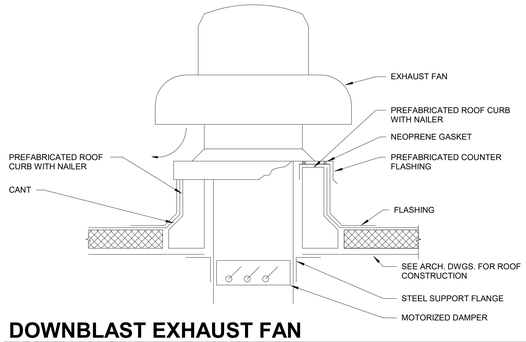
1 AIR CURTAIN PIPING DETAIL
NTS



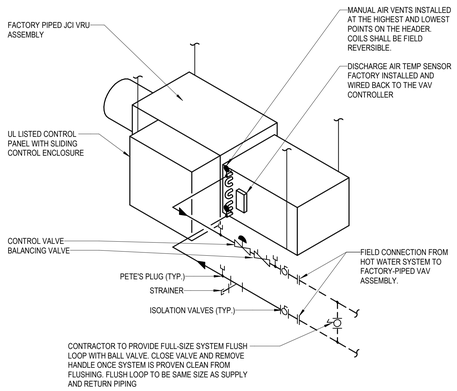
NOTE:

ALL VALVES AND FITTINGS SHOWN ABOVE MUST FIT WITHIN THE BLOWER COIL ENCLOSURE. UNINSULATED PIPE AND VALVES SHALL BE OVER EXTENDED DRAIN PAN

2 BLOWER COIL UNIT PIPING DETAIL
NOT TO SCALE



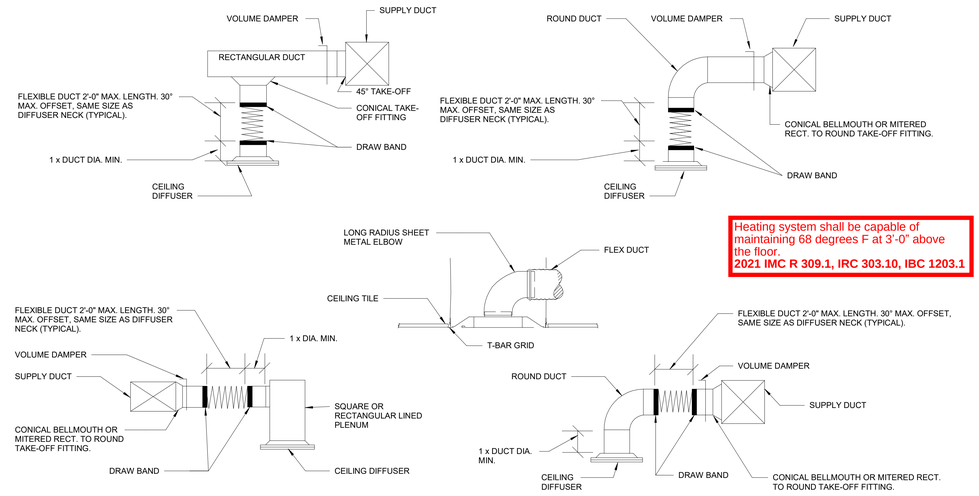
5 DOWNBLAST EXHAUST FAN
1/8" = 1'-0"



NOTES:

1. CONTRACTOR TO PROVIDE PIPING THE SAME FOR HEATING COIL IN HOT WATER REHEAT AIR TERMINAL AND FOR DUCT MOUNTED HOT WATER HEATING COILS.
2. MAINTAIN HOT WATER RETURN PIPING ELEVATION BELOW ELEVATION OF AIR VENT.

3 VAV COIL PIPING DETAIL
NOT TO SCALE



NOTES:

1. SPIN COLLARS SHALL NOT BE PERMITED.
2. SPECIAL CONDITIONS THAT CAN NOT MEET ONE OF THESE STANDARDS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION ON A CASE BY CASE BASIS.
3. DETAILS ILLUSTRATE INSTALLATION WITH ROUND NECK DIFFUSERS AND DUCTS. SQUARE OR RECTANGULAR NECK DIFFUSERS AND DUCTS SHALL BE SIMILAR.

4 TYPICAL DIFFUSER INSTALLATION DETAIL
1/8" = 1'-0"

Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation.

Heating system shall be capable of maintaining 68 degrees F at 3'-0" above the floor.
2021 IMC R 309.1, IRC 303.10, IBC 1203.1

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Y. Munoz*
Date: *Jan 04, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

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12/22/2023

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REVISIONS

NO	DESCRIPTION	DATE

M001

MECHNICAL SCHEDULES AND DETAILS

TreanorHL NO. HC16222.2301.00

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MECHANICAL SPECIFICATIONS

GENERAL REQUIREMENTS

1. WORK UNDER THIS SECTION IS SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, INCLUDING THE DRAWINGS, GENERAL AND SUPPLEMENTARY CONDITIONS OF THE ARCHITECTURAL SPECIFICATIONS.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL GOVERNING CODES, LAWS, AND REGULATIONS. NOTHING IN THESE SPECIFICATIONS IS TO BE CONSTRUED AS INTENDING TO SUPERSEDE SUCH REQUIREMENTS.
3. THE DRAWINGS AND SPECIFICATIONS SHALL BE UNDERSTOOD TO COVER SYSTEMS OF HEATING, VENTILATION AND AIR CONDITIONING, INSULATION, BUILDING AUTOMATION SYSTEMS AND TEMPERATURE CONTROL, AND TESTING AND BALANCING. THE DRAWINGS AND SPECIFICATIONS ARE TO BE TAKEN TOGETHER. WORK SPECIFIED AND NOT SHOWN, OR WORK SHOWN AND NOT SPECIFIED, SHALL BE AS BINDING AS THOUGH REQUIRED BY BOTH, THE DRAWINGS AND SPECIFICATIONS.
4. MINOR ITEMS AND ACCESSORIES OR DEVICES REASONABLY INFERABLE AS NECESSARY TO THE COMPLETE AND PROPER OPERATION OF ANY SYSTEM SHALL BE PROVIDED FOR SUCH SYSTEMS, WHETHER OR NOT THEY ARE SPECIFICALLY CALLED FOR BY THE SPECIFICATIONS OR THE DRAWINGS.
5. THE CONTRACTOR SHALL GUARANTEE ALL WORK TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR IN ACCORDANCE WITH THE GENERAL CONDITIONS, UNLESS A LONGER PERIOD IS STIPULATED UNDER SPECIFIED HEADINGS. HE SHALL REPAIR OR REPLACE, AT NO ADDITIONAL COST TO THE OWNER, ANY MATERIAL OR EQUIPMENT DEVELOPING DEFECTS. REPAIRS OR REPLACEMENTS SHALL BEAR AN ADDITIONAL TWELVE (12) MONTHS GUARANTEE FROM TIME REPAIR OR REPLACEMENT IS COMPLETE. THIS REQUIREMENT SHALL BE BINDING, EVEN THOUGH IT WILL EXCEED PRODUCT GUARANTEES NORMALLY FURNISHED BY SOME MANUFACTURERS.
6. THE CONTRACTOR SHALL SUBMIT HIS OWN AND EACH MANUFACTURERS' WRITTEN CERTIFICATES AND WARRANTIES WHICH INDICATE THAT EACH ITEM OF EQUIPMENT FURNISHED, COMPLIES WITH ALL REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. GUARANTEES AND WARRANTIES SHALL COMMENCE FROM THE DATE OF THE SIGNED ACCEPTANCE BY THE OWNER OF A PARTICULAR ITEM OF EQUIPMENT OR A PARTICULAR DEFINED PORTION OF THE WORK.
7. ALL WORKMANSHIP SHALL BE FIRST CLASS IN EVERY RESPECT AND SHALL BE PREFORMED ONLY BY SKILLED MECHANICS, RECOGNIZED AS SUCH IN THEIR RESPECTIVE TRADES.
8. ALL WORK SHALL BE INSTALLED IN CONFORMITY WITH ALL GOVERNMENTAL JURISDICTIONAL AUTHORITIES REGULATIONS, LAWS, RULES, OR ORDINANCES IN EFFECT AND GOVERNING SAME; SUCH RULES AND REGULATIONS AND LOCAL ORDINANCES TO BE CONSIDERED PART OF SPECIFICATIONS. MECHANICAL CONTRACTOR SHALL BE HELD STRICTLY RESPONSIBLE FOR ANY VIOLATION OF SAME AND SHALL CHANGE HIS WORK TO CONFORM WITHOUT ADDITIONAL COST TO OWNER.
9. ALL WORK SHALL ALSO CONFORM TO THE PUBLISHED STANDARDS OF THE NATIONAL FIRE PROTECTION ASSOCIATION, AND ELECTRICAL WORK AND EQUIPMENT SHALL CONFORM TO REQUIREMENTS OF THE CURRENT ISSUE OF THE NATIONAL ELECTRICAL CODE. ALL MATERIALS, IN GENERAL, SHALL BE UNDERWRITERS' LABORATORIES LISTED AND SHALL BEAR UL LABEL WHERE LABELING SERVICE IS AVAILABLE.
10. INCLUDE IN BID ALL LABOR, MATERIAL, & MISCELLANEOUS COSTS REQUIRED TO CONSTRUCT NEW SYSTEMS AND REMODEL EXISTING SYSTEMS TO CREATE COMPLETE & PROPERLY FUNCTIONING SYSTEMS. INCLUDE ALL ITEMS REASONABLY INFERABLE AS NECESSARY FOR THE PROPER OPERATION OF THE SYSTEMS, WHETHER EXPLICITLY SHOWN ON THE DRAWINGS OR NOT.
11. IF THE MECHANICAL CONTRACTOR PROPOSES TO USE THE PRODUCT OF A MANUFACTURER OTHER THAN THE ONE NAMED IN THE DOCUMENTS HE SHALL BE RESPONSIBLE FOR THAT ITEM OF EQUIPMENT FITTING IN PLACE WITH ADEQUATE CLEARANCES. FURTHER, IF DIFFERENT CONNECTIONS OR PROVISIONS ARE REQUIRED TO BE FURNISHED BY OTHER TRADES FROM THE PRODUCT NAMED IN THE DOCUMENTS. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OTHER TRADES OF ANY CHANGES AND IF ADDITIONAL COSTS ARE REQUIRED BY THE OTHER TRADES HE SHALL PAY SUCH COSTS.
12. IF ALTERNATE MANUFACTURERS OTHER THAN THOSE NAMED IN THE EQUIPMENT SCHEDULES ARE PROPOSED TO BE USED, THE BIDDER SHALL LIST SUCH OTHER ALTERNATE MANUFACTURERS ALONG WITH ANY COST ADDITIONS OR DEDUCTIONS FROM THE BASE BID PROPOSAL. IF THE OWNER ACCEPTS THE ALTERNATE MANUFACTURER THE CONTRACT WILL SO STATE. IF THE CONTRACT DOES NOT CONTAIN THE NAMES OF ALTERNATE MANUFACTURERS THE CONTRACTOR SHALL SUBMIT ONLY MANUFACTURERS NAMED IN THE DOCUMENTS.
13. THE ENGINEER HAS NO CONTRACTUAL RESPONSIBILITY IN CONNECTION WITH JOB SITE SAFETY MEASURES OR PRECAUTIONS AS RELATED TO MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES IN THAT REGARD. THE MECHANICAL CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE ARCHITECT/ENGINEER'S OBSERVATIONS OF THE MECHANICAL CONTRACTOR'S PERFORMANCE ARE NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE MECHANICAL CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE. IT SHALL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION", VOLUME 36, NO.75, PART II OF THE FEDERAL REGISTER BY THE U.S. DEPARTMENT OF LABOR. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SUCH SAFETY MEASURES AND SHALL CONSULT WITH THE STATE OR FEDERAL SAFETY INSPECTOR FOR INTERPRETATION WHENEVER IN DOUBT AS TO WHETHER SAFE CONDITIONS DO OR DO NOT EXIST; OR WHETHER HE IS OR IS NOT IN COMPLIANCE WITH STATE OR FEDERAL REGULATIONS.
14. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXACT LOCATIONS & FINAL COORDINATION AND SHALL PROVIDE NECESSARY OFFSETS AND ELBOWS FOR PLACEMENT OF WORK AT NO ADDITIONAL CHARGE. CONTRACTOR RESPONSIBLE FOR COORDINATING DIFFUSER LOCATION WITH ARCHITECTURAL REFLECTED CEILING PLANS. DIFFUSER LOCATIONS ON SHOP DRAWINGS ARE SUBJECT TO APPROVAL BY ARCHITECT/ENGINEER.
15. VISIT JOB SITE TO DETERMINE EXISTING CONDITIONS. FIELD VERIFY EXACT LOCATION AND SIZE OF ALL DUCTWORK, PIPING, EQUIPMENT, ETC., BEFORE BEGINNING WORK. NO EXTRA WILL BE ALLOWED FOR WORK FORESEEABLE BY JOB SITE VISIT.
16. PRIOR TO RELOCATION OF EXISTING EQUIPMENT, VERIFY THE OPERATION AND WORKING CONDITION.
17. FURNISH NECESSARY SCAFFOLDING, STAGING OR CRIBBING REQUIRED FOR THE COMPLETION OF THE WORK. SUCH SCAFFOLDING, ETC., SHALL BE REMOVED FROM THE PREMISES WHEN ITS USE IS NO LONGER REQUIRED ON THE JOB.
18. ALL SUBMITTALS FOR NEW EQUIPMENT SHALL BE APPROVED BY THE ENGINEER, PROVIDE SUBMITTALS FOR REVIEW PRIOR TO ORDERING.
19. ALL DETAILS OF CONSTRUCTION FOR DUCT LAYOUTS AND EQUIPMENT AND ASSOCIATED WIRING DIAGRAMS TO BE FURNISHED. USE BUILDING STANDARDS WHERE APPLICABLE. REVIEW BUILDING STANDARDS WITH BUILDING ENGINEER.
20. SUBMIT COORDINATED SHOP DRAWINGS BY THE ENGINEER PRIOR TO FABRICATION AND INSTALLATION. THE SHOP DRAWINGS SHALL INDICATE EQUIPMENT, PIPING, DUCT, TERMINAL UNITS, ACCESS, DIFFUSERS, VALVES, ACTUATORS, ETC. AND THERMOSTAT LOCATIONS. REVIEW OF THE SHOP DRAWINGS IS RENDERED AS A SERVICE ONLY AND SHALL NOT BE CONSIDERED AS A GUARANTEE OF MEASUREMENTS OR OF BUILDING CONDITIONS; NOR SHALL IT BE CONSTRUED AS RELIEVING THE MECHANICAL CONTRACTOR OF BASIC RESPONSIBILITIES UNDER HIS CONTRACT.
21. BEFORE MAKING ANY INSTALLATION, THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS WHOSE WORK MAY AFFECT THE WORK UNDER THEIR SECTIONS AND MAKE THE NECESSARY CHANGES TO AVOID INTERFERENCES OR IMPROPER EFFECT ON WORK TO BE PERFORMED BY ALL OTHER TRADES. IN THE EVENT THAT INTERFERENCES DEVELOP, THE ARCHITECT'S DECISION WILL BE FINAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR MOVING OF MISPLACED PIPING, DUCTS, CONDUIT AND/OR EQUIPMENT.
22. ADJUST BELTS, SHEAVES, AND VFD'S AS REQUIRED TO MEETS SPECIFIED AIR VOLUMES FOR SYSTEMS SERVING SPACES WITHIN CONSTRUCTION LIMIT LINE.
23. PERFORM ALL CONTROL WORK. COORDINATE WITH ELECTRICAL CONTRACTOR & BASE BUILDING CONTROLS VENDOR.
24. ALL MATERIALS AND/OR EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS. INSPECT AND TEST ALL WORK BEFORE PLACING INTO OPERATION.
25. MATERIALS SHALL BE OF THE BEST QUALITY OF THEIR RESPECTIVE KINDS; BE MANUFACTURED BY REPUTABLE MANUFACTURERS WHO HAVE BEEN PRODUCING THIS TYPE OF MATERIAL TO BE SOLD IN MAJOR CITIES IN THE UNITED STATES FOR A PERIOD OF AT LEAST FIVE (5) YEARS, UNLESS OTHERWISE NOTED HEREIN.
26. EACH MAJOR COMPONENT OF THE EQUIPMENT SHALL HAVE THE MANUFACTURER'S NAME, ADDRESS, MODEL NUMBER AND RATING ON A PLATE SECURELY AFFIXED IN A CONSPICUOUS PLACE. THE NAMEPLATE OF A DISTRIBUTING AGENT IS NOT ACCEPTABLE. ASME CODE RATINGS, OR OTHER DATA WHICH IS DIE-STAMPED INTO THE SURFACE OF THE EQUIPMENT SHALL BE IN A VISIBLE LOCATION.
27. THE INSTALLATION OF ANY ACCESS PANEL IS STRICTLY LIMITED TO ONLY COORDINATED LOCATIONS AS INDICATED ON THE ARCHITECTURAL DRAWINGS.
28. DUCTWORK BEHIND THE GRILLES, REGISTERS, DIFFUSERS, ETC. WHICH IS EXPOSED TO VIEW THROUGH THE UNITS, SHALL BE GIVE ONE (1) COAT OF PRIMER AND A FINISH COAT OF FLAT BLACK PAINT
29. WHERE WORK REQUIRED IS OUTSIDE THE NORMAL AREA OF EXPERTISE OF THE CONTRACTOR INVOLVED, HE SHALL HIRE QUALIFIED SUBCONTRACTORS TO PERFORM THAT WORK UNDER HIS DIRECT SUPERVISION AND RESPONSIBILITY.
30. NEW OR MODIFIED DUCTWORK, DUCT AND PIPE INSULATION, COVERINGS, LININGS, ADHESIVES, ETC. SHALL HAVE A SMOKE DEVELOPED RATING NO MORE THAN 50 AND A FLAME SPREAD RATING NO MORE THAN 25, WHEN TESTED IN ACCORDANCE WITH ASTM E 84 AND ASTM C 411 AS REQUIRED BY AUTHORITY HAVING JURISDICTION.
31. CONTRACTOR SHALL PROVIDE FIRE STOPPING AT ALL DUCT AND PIPE PENETRATIONS THRU RATED ENCLOSURES IN FLOOR AND FIRE RATED WALL/PARTITION PENETRATIONS. (UL LISTED FS SYSTEM) ANNULAR SPACE BETWEEN SLEEVE AND DUCT OR PIPE SHOULD BE PACKED WITH APPROVED INSULATION AND SEALED ON BOTH SIDES WITH FS SEALANT AND SHALL BE SMOKE TIGHT. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED DIRECTIONS AND PER FIRE TESTED DESIGNS THAT HAVE BEEN ACCEPTED BY THE APPROPRIATE CODE AUTHORITY HAVING JURISDICTION.
32. OPENINGS MADE IN FIRE RATED WALL, CEILING OR FLOOR SHALL BE EFFECTIVELY CLOSED AND REPAIRED SO THE FIRE RATED IS MAINTAINED.
33. PROVIDE FIRE DAMPERS WHERE SHOWN ON THE DRAWING AND WHERE REQUIRED TO MAINTAIN FIRE RATING OF WALLS. CONTRACTOR SHALL TEST AND CLEAN ALL EXISTING FIRE DAMPERS WITHIN CONSTRUCTION LIMIT LINE.
34. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED BY HIS WORK.
35. REPLACE FILTERS, OUTLET FITTINGS AND DEVICES, INSPECT FINISH, REMOVE BURRS, DIRT AND CONSTRUCTION DEBRIS. FLUSH PIPING WITH CLEAN WATER, REMOVE, CLEAN AND REPLACE FILTER SCREENS. PIPING SHALL BE FLUSHED AND CLEANED BY BASE BUILDING CHEMICAL TREATMENT CONTRACTOR PRIOR TO RELEASING WATER INTO TENANT SPACE. CLEAN COOLING COILS, AND INSPECT FAN SHAFT BEARINGS FOR ALL SYSTEMS SERVING SPACES WITHIN THE CONSTRUCTION LIMIT LINE. REPLACE FILTERS AS REQUIRED DURING CONSTRUCTION PERIOD AND PROVIDE NEW SETS OF FILTERS AFTER COMPLETION OF WORK. KEEP DUCT OPENINGS COVERED DURING CONSTRUCTION TO PROTECT FROM DUST.
36. UNDER NO CIRCUMSTANCES SHALL ANY EQUIPMENT BE OPERATED FOR TEMPORARY HEAT OR VENTILATION WITHOUT FILTERS IN PLACE. IF THE EQUIPMENT IS USED BEFORE CONSTRUCTION IS COMPLETED, THE FILTERS SHALL BE REPLACED BEFORE THE SPACE IS ACCEPTED BY THE OWNER. THIS SET OF FILTERS SHALL NOT BE CONSIDERED AS THE SPARE SET OF FILTERS HEREINAFTER SPECIFIED.
37. AT COMPLETION OF THE PROJECT, ALL CHANGES AND DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE RECORDED BY THE MECHANICAL CONTRACTOR ON AS-BUILT DRAWINGS.
38. FURNISH COMPLETE PACKAGES TO THE OWNER'S REPRESENTATIVE, CONTAINING AS-BUILT SHOP DRAWINGS, TEST AND BALANCE REPORTS, OPERATING INSTRUCTIONS, WARRANTIES, PARTS LISTS, WIRING DIAGRAMS, ETC., ON ALL EQUIPMENT FURNISHED UNDER THIS CONTRACTOR.
39. THE CONTRACTOR SHALL FURNISH A COMPETENT INSTRUCTOR TO ADVISE THE OWNER'S OPERATING PERSONNEL AS TO THE PROPER OPERATION, SERVICING, ETC., OF ALL NEW INSTALLED EQUIPMENT, SYSTEMS AND CONTROLS. INSTRUCTION TO BE A MINIMUM OF 4 HOURS AND RECORDED.

OWNER REQUIREMENTS

1. INNOVATION MEMORANDUM #7: ALL PIPING RELATED ITEMS ARE TO BE PURCHASED THROUGH FERGUSON ENTERPRISE. (BETTINA DAWSON, 615-316-1920, BETTINA.DAWSON@FERGUSON.COM). PIPING RELATED ITEMS INCLUDED IN PURCHASING AGREEMENT:
   - A. VALVES, PIPE, AND FITTINGS FOR PLUMBING SYSTEMS
   - B. PIPE AND FITTINGS FOR MEDICAL GAS SYSTEMS
   - C. PIPE AND FITTINGS FOR ACID WASTE SYSTEMS (INCLUDING ACID DILUTION TANK)
   - D. VALVES, PIPE, AND FITTINGS FOR DE-IONIZED WATER SYSTEMS (INCLUDING BACKFLOW PREVENTER)
   - E. VALVES, PIPE, AND FITTINGS FOR HVAC SYSTEMS
   - F. VALVES, PIPE, AND FITTINGS FOR STEAM AND CONDENSATE SYSTEMS
2. A METHOD OF PROCEDURE (MOP) IS REQUIRED FOR ANY SHUTDOWN OF BUILDING INFRASTRUCTURE SYSTEMS WHICH MAY AFFECT BUSINIESS OPERATIONS AT LEAST 2 EEKS AHEAD OF SHUTDOWN.

HVAC SYSTEM:

1. THESE SPECIFICATIONS AND ACCOMPANYING DRAWINGS ARE TO COVER THE FURNISHINGS OF ALL LABOR, MATERIALS, EQUIPMENT, APPARATUS, SERVICE PERMANENT AND TEMPORARY FACILITIES AS NECESSARY TO THE HEATING AND AIR CONDITIONING WORK INVOLVED IN THE FURNISHINGS, INSTALLING, TESTING, ADJUSTING, RETESTING, READJUSTMENT AS REQUIRED AND DIRECTED AND PLACING INTO APPROVED SATISFACTORY OPERATION THE COMPLETE RESPECTIVE SYSTEMS AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATION, AND AS REQUIRED BY THE JOB CONDITIONS.
2. FURNISH AND INSTALL A COMPLETE AND OPERABLE SYSTEM FOR VENTILATING, HEATING AND AIR CONDITIONING CONSISTING OF, BUT NOT LIMITED TO:
   - A. TERMINAL UNITS
   - B. SUPPLY, RETURN, AND EXHAUST DUCT SYSTEMS
   - C. HYDRONIC PIPING
   - D. GRILLES, REGISTERS, AND DIFFUSERS, FLEXIBLE DUCTS
   - E. MANUAL DAMPERS
   - F. TEMPERATURE CONTROLS SYSTEM
   - G. TESTING AND BALANCING
3. FURNISH AND INSTALL ALL INSULATION HEREINAFTER SPECIFIED.
4. FURNISH CUTTING AND CORING FOR INSTALLATION OF DUCTS AND EQUIPMENT.
5. THE WORK UNDER THIS SECTION SHALL COMPLY WITH THE LATEST EDITION OF THE APPLICABLE STANDARDS AND CODES OF THE FOLLOWING:
   - A. CITY OF AURORA BUILDING CODES
   - B. ASME - AMERICAN SOCIETY OF MECHANICAL ENGINEERS
   - C. ASHRAE - AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
   - D. ARI - AIR CONDITIONING AND REFRIGERATION INSTITUTE
   - E. ASTM - AMERICAN SOCIETY FOR TESTING MATERIALS
   - F. AABC - ASSOCIATED AIR BALANCE COUNCIL
   - G. NFPA - NATIONAL FIRE PROTECTION ASSOCIATION
   - H. SMACNA - SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION

EXERCISE CARE IN TRANSPORTING AND HANDLING TO AVOID DAMAGE TO FIXTURES, EQUIPMENT AND MATERIALS

1.
2. STORE MATERIALS ON THE SITE SO AS TO PREVENT DAMAGE.
3. KEEP EQUIPMENT AND MATERIALS CLEAN, DRY AND FREE FROM DELETERIOUS CONDITIONS
4. FOR ALL OPERABLE DEVICES IN WALLS OR ABOVE INACCESSIBLE SUSUPENDED CEILING, PROVIDE 18"X18" MILCOR ACCESS DOORS WITH SAME KEYED LOCKS AND CONCEALED HINGES. LAY IN CEILINGS ARE CONSIDERED ACCESSIBLE.
   - A. STYLE DW IN DRYWALL NO. 16 GA. FRAME NO. 14 GA. PANEL
   - B. STYLE AP IN PLASTER NO. 16 GA. FRAME NO. 14 GA. PANEL
   - C. STYLE M IN MASONRY NO. 16 GA. FRAME NO. 14 GA. PANEL
5. PROVIDE AN ADJUSTABLE BUTTERFLY OR OPPOSED MULTI BLADE VOLUME DAMPER IN DUCTWORK AT EVERY DUCT JUNCTION ON ALL SUPPLY, RETURN AND EXHAUST AIR DUCTWORK. DAMPERS SHALL BE CONSTRUCTED OF GALVANIZED SHEET STEEL 2 GAGES HEAVIER THAN DUCT IN WHICH THE DAMPER IS INSTALLED. EACH DAMPER SHALL BE PROVIDED WITH DAMPER ROD HELD IN PLACE WITH A CLAMPING DEVICE. VISIBLE END OF THE DAMPER RODS SHALL BE FILE MARKED WITH MARKS PARALLEL TO THE BLADES.
6. FIRE DAMPERS SHALL BE COMPLETE WITH WALL FRAME, SLEEVES, ANGLE IRON STOPS, LATCHES, SPRINGS AND FUSIBLE LINK, ETC. AND SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS AND ELSEWHERE AS REQUIRED IN ACCORDANCE WITH NATIONAL BUREAU OF FIRE UNDERWRITER REGULATION BULLETIN 90-A. THE FIRE DAMPERS SHALL BEAR UL LABEL. FIRE DAMPERS SHALL BE 98% FREE AREA, AND BE OF THE LOW RESISTANCE TYPE WITH 1-1/2 HOURS OR 3 HOUR RATING AS MANUFACTURED BY PHILLIPS-AIRE, AMERICAN BALANCE, INC. OR RUSKIN MANUFACTURING.
7. ALL SUPPLY AND RETURN AIR OUTLETS SHALL BE MOUNTED TIGHTLY WITH RUBBER GASKETS TO PREVENT AIR LEAKAGE.
8. OUTLETS SHALL BE SELECTED AND GUARANTEED BY THE MANUFACTURER TO HANDLE THE AIR QUANTITIES AS SHOWN ON THE DRAWINGS WITH MAXIMUM PRESSURE DROP THROUGH THE OULET NOT EXCEEDING 0.10 IN OF WATER
9. UNLESS OTHERWISE NOTED, DIFFUSERS, REGISTERS OR GRILLES SHALL BE FABRICATED FROM PRIME STEEL AND SHALL BE PROVIDED WITH A FINISH COST OF WHITE BAKED ENAMEL PAINT, UNLESS NOTED OTHERWISE. DIFFUSERS, REGISTERS AND GRILLES SHALL BE MANUFACTURED BY TITUS, OR APPROVED EQUAL.
10. DRILLED-IN THREADED INSERTS: PHILLIPS "REDHEAD" DRILLED-IN THREADED INSERTS SHALL BE PROVIDED. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
11. PROVIDE ANCHOR BOLTS, NUTS, SLEEVES FOR ANCHORING FANS, MOTORS AND ANY OTHER POWER-OPERATED EQUIPMENT.

DEMOLITION:

1. REMOVE ALL EXISTING MECHANICAL WORK AS REQUIRED FOR INSTALLATION OF NEW WORK.
2. COORDINATE DEMOLITION WORK WITH THE WORK OF ALL TRADES AND WITH OWNER REQUIREMENTS.
3. WHEREVER REMOVING ITEMS, CAP REMAINING PIPING, DUCTWORK, ETC., SO AS TO RENDER REMAINING WORK HARMLESS AND WITHOUT NUISANCE.
4. TAKE REMOVED ITEMS FROM THE PROPERTY AND DISPOSE OF IN AN APPROVED MANNER OR TURN OVER TO OWNER OR TENANT, AS REQUESTED.

DUCTWORK

1. DUCTWORK SHALL BE G90 GALVANIZED STEEL CONSTRUCTED & INSTALLED IN ACCORDANCE WITH THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION HVAC DUCT CONSTRUCTION STANDARDS, LATEST EDITION
2. SEAL ALL JOINTS OF NEW DUCTWORK, INSPECT EXISTING DUCTWORK FOR LEAKS AND REPORT RESULTS BEFORE CONNECTING NEW DUCTWORK. ADDITIONALLY, SEAL SEAMS OF NEW DUCTWORK UPSTREAM OF BOXES. INSPECT EXISTING DUCTWORK FOR LEAKS AND REPORT RESULTS BEFORE CONNECTING NEW DUCTWORK. ALL DUCTWORK WITHIN THE CONSTRUCTION LIMIT LINE IS SUBJECT TO LEAK TESTS, AS REQUIRED. DUCT SEALANT SHALL BE WATER-BASED. PRESSURE SENSITIVE TAPE IS UNACCEPTABLE. GASKETED FLANGES SHALL BE SEALED WITH A MASTIC.
   - A. MEDIUM PRESSURE SUPPLY DUCT (>2IN, <3IN)
     - a. (UPSTREAM OF TERMINAL UNITS) SEAL CLASS A.
   - B. LOW PRESSURE SUPPLY DUCT (<1 IN)
     - a. (DOWNSTREAM OF TERMINAL UNITS): SEAL CLASS A.
3. DUCTWORK THICKNESS SHALL BE 22 GAUGE MINIMUM EXCEPT FOR THE FOLLOWING:
   - A. WHERE ANY WELDING OTHER THAN LONGITUDINAL SEAM IS PERFORMED, THE THICKNESS SHALL BE 18 GAUGE MINIMUM.
4. PROVIDE THE DUCTWORK SHAPE ACCORDING TO THE FOLLOWING SCHEDULE AND THE FLOOR PLANS:
   - A. EXPOSED-ROUND OR FLAT OVAL
   - B. CONCEALED ABOVE CEILING-ROUND OR RECTANGULAR
5. ROUND AND FLAT OVAL:
   - A. ROUND DUCTWORK SHALL BE SPIRAL SELF SEALING W/EPDM GASKET. SNAPLOCK SEAMS ARE NOT PERMITTED.
   - B. PROVIDE FLAT OVAL DUCTWORK PER ONE OF THE FOLLOWING TWO OPTIONS:
     - a. SINGLE WALL SPIRAL WITH PREFABRICATED CONNECTION SYSTEMS CONSISTING OF TWO FLANGES AND ONE SYNTHETIC RUBBER GASKET. SNAPLOCK SEAMS ARE NOT PERMITTED.
     - b. DOUBLE WALL SPIRAL WITH 1" ANNULAR SPACE AND PREFABRICATED CONNECTION SYSTEMS CONSISTING OF TWO FLANGES AND ONE SYNTHETIC RUBBER GASKET. SNAPLOCK SEAMS ARE NOT PERMITTED.
   - C. CRIMP JOINTS ARE NOT PERMITTED.
   - D. PLEATED ELBOWS ARE NOT PERMITTED.
   - E. ADJUSTABLE ELBOWS ARE NOT PERMITTED.
   - F. MITERED ELBOWS WITH TURNING VANES ARE NOT PERMITTED. USE RADIUS ELBOWS WITH CENTERLINE RADIUS AT LEAST AS GREAT AS THE DUCT WIDTH.
6. RECTANGULAR:
   - A. BUTTON PUNCH SNAPLOCK SEAMS ARE NOT PERMITTED.
   - B. TRANSVERSE (GIRTH) JOINTS T-4, 9, 17, 18, 20, AND 23 ARE NOT PERMITTED.
   - C. MITERED ELBOWS WITH TURNING VANES ARE NOT PERMITTED UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS. USE RADIUS ELBOWS WITH CENTERLINE RADIUS AT LEAST AS GREAT AS THE DUCT WIDTH.
7. EXPOSED DUCTWORK AND DUCTWORK CONNECTION ACCESSORIES THAT ARE NOT EXTERNALLY INSULATED TO BE PAINTABLE. COORDINATE WITH ARCHITECT FOR FINISH.
8. COORDINATE WITH ARCHITECT FOR AREAS WITH NO CEILING.
9. FOR FINAL CONNECTIONS TO DIFFUSERS AND VAV BOXES, FLEXIBLE DUCTS EQUAL TO WIREMOLD TYPE WG MAY BE USED FOR A MAXIMUM OF 2'-0" FEET. FLEXIBLE DUCTS SHALL BE U.L. LISTED, WITH 1" THICK FIBERGLASS INSULATION W/ VAPOR BARRIER. INSTALL FULLY EXTENDED W/ MINIMUM CHANGES OF DIRECTION, IN LENGTHS NO GREATER THAN NECESSARY. USE GENEROUS RADIUS TURNS AND SUPPORT AS REQUIRED TO PREVENT EXCESSIVE SAGGING. FLEXIBLE ELBOWS AT THE DIFFUSER INLET IS NOT PERMITTED.
10. SIZES OF NEW DUCT SHOWN ON DRAWINGS ARE FREE AIRWAYS SIZES, NOT OUTSIDE DIMENSIONS.
11. PROVIDE ADJUSTABLE OPPOSED BLADE OR BUTTERFLY DAMPERS FOR ALL NEW LOW PRESSURE SUPPLY & RETURN BRANCHES. EXTRACTORS AND SPLITTER DAMPERS ARE NOT PERMITTED.
12. PROVIDE DOUBLE THICKNESS TURNING VANES AT 90° ELBOWS. RADIUSED ELBOWS SHALL HAVE CENTERLINE RADIUS AT LEAST AS GREAT AS THE DUCT WIDTH.
13. DUCT CONNECTIONS TO MEDIUM PRESSURE MAINS SHALL BE PROVIDED WITH BELLMOUTH CONICAL FITTINGS.
14. PROTECT NEW & EXISTING DUCT OPENINGS FROM DUST & DIRT. CLEAN INSIDE & OUTSIDE OF NEW & EXISTING DUCTWORK IN AREA OF NEW WORK. REPLACE FILTERS AS REQUIRED DURING CONSTRUCTION PERIOD AND PROVIDE NEW SETS OF FILTERS AFTER COMPLETION OF WORK.

PIPING

1. ALL PIPING RELATED ITEMS ARE TO BE PURCHASED THROUGH FERGUSON ENTERPRISE (ALTON LASSITER - 615-316-1848, ALTON.LASSITER@FERGUSON.COM).
2. PIPING APPLICATIONS
   - A. OVERFLOW AND DRAIN PIPING SHALL BE TYPE L DRAWN TEMPER COPPER TUBING WITH SOLDERED JOINTS.
   - B. CHILLED WATER AND HEATING HOT WATER MAY BE ALL STANDARD WEIGHT BLACK STEEL OR A MIXTURE OF TYPE L HARD COPPER FOR PIPING 1" AND LESS, STEEL OR COPPER PIPE FROM 1-1/4" TO 2", AND STEEL FOR PIPING 2-1/2" AND LARGER.
3. BLACK STEEL PIPE: ASTM A53, BLACK STEEL, SCHEDULE 40, TYPE E OR S, GRADE B.
   - A. MALLEABLE IRON THREADED FITTINGS: ASTM B16.3,, CLASS 150, STANDARD PATTERN
   - B. WROUGHT-STEEL WELDING FITTINGS: ASTM A 234/A 234M FOR BUTT WELDING AND SOCKET WELDING
   - C. UNIONS: ASME B16.39, CLASS 150, MALLEABLE IRON WITH BRASS TO IRON SEAT, GROUND JOINT, AND THREADED ENDS
   - D. FORGED-STEEL FLANGES AND FLANGED FITTINGS: ASME B16.5, MINIMUM CLASS 150 INCLUDING BOLTS, NUTS, AND GASKETS OF THE FOLLOWING MATERIAL GROUP, END CONNECTIONS, AND FACINGS:
     - a. MATERIAL GROUP: 1.1
     - b. END CONNECTIONS: THREADED OR BUTT WELDING TO MATCH PIPE
     - c. LAPPED FACE: NOT PERMITTED UNDERGROUND
     - d. BOLTS AND NUTS: ASME B18.2.1, CARBON STEEL ABOVEGROUND AND STAINLESS STEEL UNDERGROUND
     - e. GASKET MATERIALS: ASME B16.20, METALLIC, FLAT, ASBESTOS FREE ALUMINUM O-RINGS, AND SPIRAL-WOUND METAL GASKETS
4. COPPER TUBING: ASTM B88, TYPE K, L
   - A. FITTINGS: ASME B16.22, WROUGHT COPPER.
   - B. JOINTS: SOLDER, LEAD FREE. ASTM B32, 95-5 TIN-ANTIMONY, OR TIN AND SILVER.
   - C. PRESS FITTINGS OF ANY KIND ARE UNACCEPTABLE.
5. BUTTERFLY VALVES
   - A. FERROUS-ALLOY, MSS SP-67, TYPE I, FOR TIGHT SHUTOFF, WITH DISC AND LINING SUITABLE FOR POTABLE WATER UNLESS OTHERWISE INDICATED
6. STRAINERS
   - A. Y-PATTERN, CAST-IRON BODY, ASTM A278, CLASS 30, GRADE 18-8 STAINLESS STEEL SCREEN, 20 MESH FOR 2" AND SMALLER AND MANUFACTURER RECOMMENDED PERFORATIONS FOR 2-1/2" AND LARGER, TAPPED BLOW-OFF PLUG.
7. BALL VALVES
   - A. VALVES SHALL HAVE CAST BRONZE BODIES, FULLY PORTED, REPLACEABLE TEFLON SEATS, FULL PORT, BLOWOUT-PROOF STEM, ADJUSTABLE PACKING GLAND, CHROME PLATED BALL AND THREADED ENDS. TO BE PROVIDED WITH BRASS UNION ON DISCHARGE SIDE OF VALVE.
8. CIRCUIT SETTERS
   - A. BELL & GOSSETT CIRCUIT SETTER PLUS CALIBRATED BALANCING VALVES, BALL TYPE TRIPLE PURPOSE BALANCING INSTRUMENT, VARIABLE ORIFICE FLOW METER AND POSITIVE SHUT OFF VALVE WITH CALIBRATED NAMEPLATE AND MEMORY INDICATOR.
9. PRESSURE GAUGES
   - A. PRESSURE GAUGE SHALL BE BOURDON TUBE SPRING TYPE WITH DIALS NOT SMALLER THAN 6" DIAMETER AND WITH RECALIBRATING ADJUSTMENT IN DIAL FACE. GAUGES SHALL BE PRESSURE COMPOUND OR VACUUM TYPE AS REQUIRED WITH PROPER RANGE FOR SERVICE. PROVIDE A SHUT-OFF VALVE OR COCK FOR EACH GAUGE.
10. THERMOMETERS
    - A. THERMOSTATS SHALL BE WEISS SOLAR DIGITAL THERMOSTAT.
11. PRESSURE TESTING OF PIPING (150 PSI FOR 24 HR) PRIOR TO OPENING VALVES AND RELEASING WATER INTO TENANT SYSTEM. COORDINATE DATE/TIME WITH ENGINEER AND PROVIDE RESULTS
12. PIPING SHALL BE FLUSHED AND CLEANED BY BASE BUILDING CHEMICAL TREATMENT CONTRACTOR PRIOR TO RELEASING WATER INTO TENANT SPACE
13. PIPING AND VALVES SHALL BE RATED FOR 150 PSI WORKING PRESSURE, GATE VALES 125 PSI.
14. PROVIDE DIELECTRIC UNIONS WHEN CONNECTING STEEL TO COPPER PIPE.
15. FOR EXISTING BUILDINGS, BUILDING ENGINEER ONLY SHALL OPEN VALVES TO CONNECT NEW PIPING TO SYSTEM.
16. PROVIDE VENTS WITH BALL VALVES ON HIGH POINTS & DRAINS WITH BALL VALVES ON LOW POINTS.
17. PIPE REDUCING FITTINGS TO BE ECCENTRIC FITTINGS.
18. LABEL ALL PIPING AND INDICATE DIRECTION OF FLOW PER ANSI/ASME A 13.1 PIPE MARKING GUIDE.
19. PROVIDE A CLEAN OUT AT EACH CONDENSATE PIPE CHANGE IN DIRECTION.
20. CONDENSATE DRAIN PIPING: PROVIDE DEEP TRAPS W/CLEANOUTS AT CONNECTIONS TO EQUIPMENT. PITCH PIPING 1/4" PER FT TO DRAIN. PROVIDE CLEANOUT AT EACH CHANGE OF DIRECTION. INSULATE PIPING, FITTINGS AND VALVE WITH 1/2" THICK ARMAFLE
21. PROVIDE SLEEVES FOR PIPES PASSING THROUGH WALLS OR FLOORS SIZED 1" LARGER THAN PIPE O.D., INCLUDING INSULATION WHERE USED, AND CAULKED WATER TIGHT.
22. INSTALL PIPING WITH ELBOWS AND OFFSETS AS REQUIRED TO PROVIDE FLEXIBILITY FOR PIPE EXPANSION AND CONTRACTION.
23. REMOVE ALL BURRS AND BLOW PIPING CLEAR OF CHIPS BEFORE INSTALLING PIPING. CLEAN ALL PIPING BEFORE PUTTING INTO SERVICE.
24. PROVIDE DIELECTRIC FITTINGS WHEREVER CONNECTING DISSIMILAR METALS.

INSULATION

1. WORK INCLUDED: ALL INSULATION, MASTICS AND COVERINGS SHALL MEET 25/50 FLAME SPREAD AND SMOKE DEVELOPED RATINGS.
2. PRODUCTS
   - A. PIPE INSULATION:
     - a. CONENSATE DRAIN PIPNIG, BELOW 60 DEG F (NPS 1 AND SMALLER): 1 INCH
     - b. CHILLED WATER SUPPLY AND RETURN, ABOVE 40 DEG F (NPS 1 AND SMALLER): 1 INCH
     - c. HOT WATER SUPPLY AND RETURN, BELOW 200 DEG F (NPS 1 AND SMALLER): 1-1/2 INCH
     - d. ALL INDOOR AND OUTDOOR CHILLED WATER PIPING SHALL BE CLOSED-CELL TYPE INSULATION INCLUDING CELLULAR GLASS OR PHENOLIC. USE ALL SERVICE JACKET (ASJ) ON ALL INSULATION, UNLESS NOTED OTHERWISE. DO NOT USE FACTORY PRE-APPLIED ASJ ON FOAM GLASS. THE PRE-APPLIED JACKET PREVENTS APPLICATION OF MASTIC ON THE LONGITUDINAL AND CIRCUMFERENTIAL JOINTS.
     - e. ALL HOT WATER, STEAM AND STEAM CONDENSATE PIPING SHALL BE INSULATED WITH MOLDED FIBERGLASS PIPE INSULATION HAVING ASJ FINISH. DO NOT USE CALCIUM SILICATE INSULATION. ON PIPING LARGER THAN 2″ DIAMETER SUPPORT PIPING WITH HIGH DENSITY INSULATION INSERTS (SPECIFICALLY MANUFACTURED FOR SUPPORTING PIPING) TO PREVENT CRUSHING OF INSULATION. DO NOT ALLOW WOOD BLOCKS TO BE USED AS PIPING SUPPORTS DUE TO MICROBIAL GROWTH RISK. LENGTH OF PIPING SUPPORT INSERTS, SPACING BETWEEN SUPPORTS AND THE LENGTHS AND GAUGE OF SHIELDS SHALL BE PER INSULATION INSERT MANUFACTURER'S INSTALLATION INSTRUCTIONS.
     - f. FITTINGS ON FIBERGLASS PIPE INSULATION SHALL BE MITERED INSULATION UP TO 2″ DIAMETER AND MOLDED FITTINGS FOR 2½″ AND LARGER. ALL INDOOR FITTING INSULATION SHALL BE COVERED WITH A TIGHT FITTING PVC JACKET.
     - g. FITTINGS ON FOAM GLASS INSULATION SHALL BE MADE UP OF MITERED SECTIONS OF FOAM GLASS.
     - h. PHENOLIC INSULATION AS PRODUCED BY RESOLCO, INC. IS AN ACCEPTABLE SUBSTITUTE FOR ALL PIPE INSULATION.
   - B. DUCT INSULATION:
     - a. SUPPLY-AIR DUCT: 1-1/2 INCH THICK AND 0.75-LB/CU. FT. NOMINAL DENSITY
     - b. DUCT INSULATION SHALL BE FLEXIBLE FIBER-GLASS BLANKET TYPE WITH ALUMINUM FOIL FACING, WHERE DUCTWORK IS INSTALLED IN CONCEALED LOCATIONS (E.G. WITHIN SHAFTS AND ABOVE CEILINGS). THE INSULATION IS TO BE SECURED USING OUTWARD CLINCHING STAPLES ON DUCTWORK UP TO 36″ WIDE AND STICK PINS ABOVE 36″ WIDE. SEAL STAPLES AND PINS WITH MASTIC, NOT SELF-SEALED TAPE.
     - c. WITHIN BUILDING ENVELOPE, RETURN DUCT-WORK WITHIN THE FACILITY DOES NOT NEED TO BE INSULATED.
     - d. INTERNAL LINING OF DUCTWORK IS UNACCEPTABLE.

1. EXECUTION
   - A. INSULATION ON STEAM CONTROL VALVES, PRESSURE REDUCING VALVES, CALIBRATED BALANCE VALVES AND TRIPLE DUTY VALVES SHALL BE PROVIDED WITH A MANUFACTURED REMOVABLE INSULATION COVER. INSULATED COVERS SHALL BE HEAVY CANVAS TYPE, FILLED WITH INSULATING MATERIAL AND LEATHER LACES OR STRAPS TO SECURE COVER AROUND VALVE OR FITTING.

HANGERS AND SUPPORTS

1. DUCTWORK
   - A. THREADED INSERTS SHALL BE PROVIDED. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
   - B. PROVIDE ANCHOR BOLTS, NUTS SLEEVES FOR ANCHORING FANS, MOTORS AND ANY OTHER POWER-OPERATED EQUIPMENT.
2. PIPING
   - A. ALL HANGERS, SUPPORTS, AND ACCESSORIES INSTALLED IN AREAS WITH NO CEILING SHALL BE PAINTABLE.
   - B. INSTALL THE FOLLOWING PIPE ATTACHMENTS:
     - a. ADJUSTABLE STEEL CLEVIS HANGERS FOR INDIVIDUAL HORIZONTAL RUNS LESS THAN 20 FEET IN LENGTH.
     - b. ADJUSTABLE ROLLER HANGERS AND SPRING HANGERS FOR INDIVIDUAL HORIZONTAL RUNS 20 FEET OR LONGER.
     - c. PIPE ROLLER: MSS SP-58, TYPE 44 FOR MULTIPLE HORIZONTAL RUNS 20 FEET OR LONGER, SUPPORTED ON A TRAPEZE.
     - d. SPRING HANGERS TO SUPPORT VERTICAL RUNS.

TEMPERATURE CONTROLS:

1. DIRECT DIGITAL CONTROLS (DDC)
   - A. BCU-1
     - a. FURNISH AND INSTALL A COMPLETE AND OPERABLE TEMPERATURE CONTROL SYSTEM. THE TEMPERATURE CONTROL SYSTEM SHALL UTILIZE ELECTRONIC CONTROLS. TC CONTRACTOR SHALL INCLUDE ALL LOW VOLTAGE AND POWER WIRING AND RACEWAY NECESSARY FOR THE INSTALLATION OF HIS WORK.
   - B. VAV BOXES WITH HOT WATER REHEAT
     - a. CONNECT TO EXISTING TEMPERATURE CONTROL SYSTEM, PROVIDE NEW THERMOSTATS AS REQUIRED. THE TEMPERATURE CONTROL SYSTEM SHALL UTILIZE DDC CONTROLS. TC CONTRACTOR SHALL INCLUDE ALL LOW VOLTAGE AND POWER WIRING AND RACEWAY NECESSARY FOR THE INSTALLATION OF HIS WORK.
   - C. AIR CURTAIN
     - a. FURNISH AND INSTALL A COMPLETE AND OPERABLE TEMPERATURE CONTROL SYSTEM. THE TEMPERATURE CONTROL SYSTEM SHALL UTILIZE ELECTRONIC CONTROLS. TC CONTRACTOR SHALL INCLUDE ALL LOW VOLTAGE AND POWER WIRING AND RACEWAY NECESSARY FOR THE INSTALLATION OF HIS WORK.
   - D. COORDINATE ALL POWER CIRCUITS REQUIRED WITH ELECTRICAL CONTRACTOR. CONTROL CONTRACTOR SHALL TERMINATE ALL POWER AND CONTROL WIRING TO CONTROL DEVICES.
   - E. ROOM TEMPERATURE THERMOSTATS SHALL BE MOUNTED TO ALIGN WITH ELECTRICAL LIGHT SWITCHES. THERMOSTATS SHALL BE BASE BUILDING STANDARD WITH ADJUSTABLE SET POINT.
   - F. TIE ALL NEW CONTROLS INTO BASE BUILDING BAS SYSTEM BY JOHNSON CONTROLS.

BALANCING

1. TESTING AND BALANCING OF AIR SYSTEMS SHALL BE PERFORMED BY AN INDEPENDENT SUB-CONTRACTOR SPECIALIZING IN SUCH WORK AND IS A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL.
2. A QUALIFIED AND CERTIFIED MEMBER OF AABC OR NEBB SHALL COMPLETELY BALANCE AIR SYSTEMS AS REQUIRED. CONTRACTOR SHALL SUBMIT A BALANCE REPORT TO THE ARCHITECT FOR REVIEW BY THE ENGINEER. TESTING AND BALANCING SHALL BE PERFORMED IN COMPLETE ACCORDANCE WITH THE SMACNA MANUAL OR THE AABC NATIONAL STANDARDS FOR FIELD MEASUREMENT AND INSTRUMENTATION.
3. AFTER COMPLETION OF ALL REQUIRED WORK, THE CONTRACTOR SHALL OPERATE AND MAKE ANY REQUIRED ADJUSTMENTS TO EQUIPMENT, DUCTWORK, ETC., AS MAY BE NECESSARY TO PUT THE SYSTEMS IN PROPER OPERATING CONDITION. AFTER ALL ADJUSTMENTS HAVE BEEN COMPLETED, THE CONTRACTOR SHALL BALANCE EACH DEVICE TO WITHIN 10% OF VALUE SHOWN ON DRAWINGS.
4. CONTRACTOR SHALL SUBMIT FOUR (4) COPIES OF CERTIFIED BALANCE REPORTS TO THE ARCHITECT FOR REVIEW BY THE ENGINEER. SUBMIT AS-BUILT DRAWINGS INDICATING A NUMBERING SYSTEM WHICH CORRELATED ITEMS ON THE PLAN WITH THE BALANCE REPORT. PROVIDE THE LANDLORD WITH A COPY OF THE BALANCE REPORTS.
5. ADJUST MANUAL VOLUME DAMPERS, SPLITTER DAMPERS, & AIR EXTRACTORS AT BRANCH TAKEOFFS TO ACCOMPLISH BALANCING. VOLUME DAMPERS ON DIFFUSERS & REGISTERS SHALL BE USED FOR FINAL ADJUSTMENT ONLY.
6. CALIBRATE FLOW SENSORS OF PRESSURE-INDEPENDENT TERMINAL BOX CONTROLS. COORDINATE WITH CONTROLS CONTRACTOR. SET TERMINAL BOXES BY MEASURING ACTUAL AIRFLOWS.
7. SET VARIABLE AIR VOLUME DEVICES TO MAXIMUM SETPOINT WHILE BALANCING SYSTEM.
8. PREVIOUS TO STARTING MECHANICAL WORK THE TESTING AND BALANCING CONTRACTOR SHALL PROVIDE COMPLETE REPORTS VERIFYING THE OPERATION OF THE EXISTING AIR HANDLING EQUIPMENT SERVING THE TENANT SPACE. THE EQUIPMENT SHALL BE RUN THROUGH ALL SEQUENCES AND THE WORKING CONDITION OF ALL ASSOCIATED DEVICES SHALL BE CHECKED AND REPORTED ON.
9. THE CONTRACTOR PRIOR TO TAB WORK SHALL SUBMIT THE FOLLOWING DATA FOR OWNER REVIEW:
   - A. TAB PERSONNEL QUALIFICATIONS AND CERTIFICATION REPORTS.
   - B. TEST PROCEDURES.
   - C. TAB FORMS.
10. CLEAN COILS & CHECK FILTERS BEFORE BEGINNING. DO NOT RUN UNITS AT ANY TIME WITHOUT FILTERS.
11. UNDER NO CIRCUMSTANCES SHALL ANY ITEMS OF NEW AIR HANDLING EQUIPMENT BE OPERATED FOR TEMPORARY HEAT OR VENTILATION WITHOUT FILTERS IN PLACE. IF THE UNIT IS USED BEFORE CONSTRUCTION IS COMPLETED, THE FILTERS SHALL BE REPLACED BEFORE THE BUILDING IS ACCEPTED BY THE OWNER. THIS SET OF FILTERS SHALL NOT BE CONSIDERED AS THE SPARE SET OF FILTERS HEREINAFTER SPECIFIED.
12. BALANCE AND TESTING SHALL NOT BEGIN UNTIL EACH SYSTEM HAS BEEN COMPLETED AND IS IN FULL WORKING ORDER. CONTRACTORS SHALL PUT ALL THEIR EQUIPMENT INTO FULL OPERATION AT HIS EXPENSE FOR THE LENGTH OF TIME NECESSARY TO PROPERLY VERIFY THEIR COMPLETION AND READINESS FOR TAB.

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12/22/2023

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M002

MECHNICAL SPECIFICATIONS

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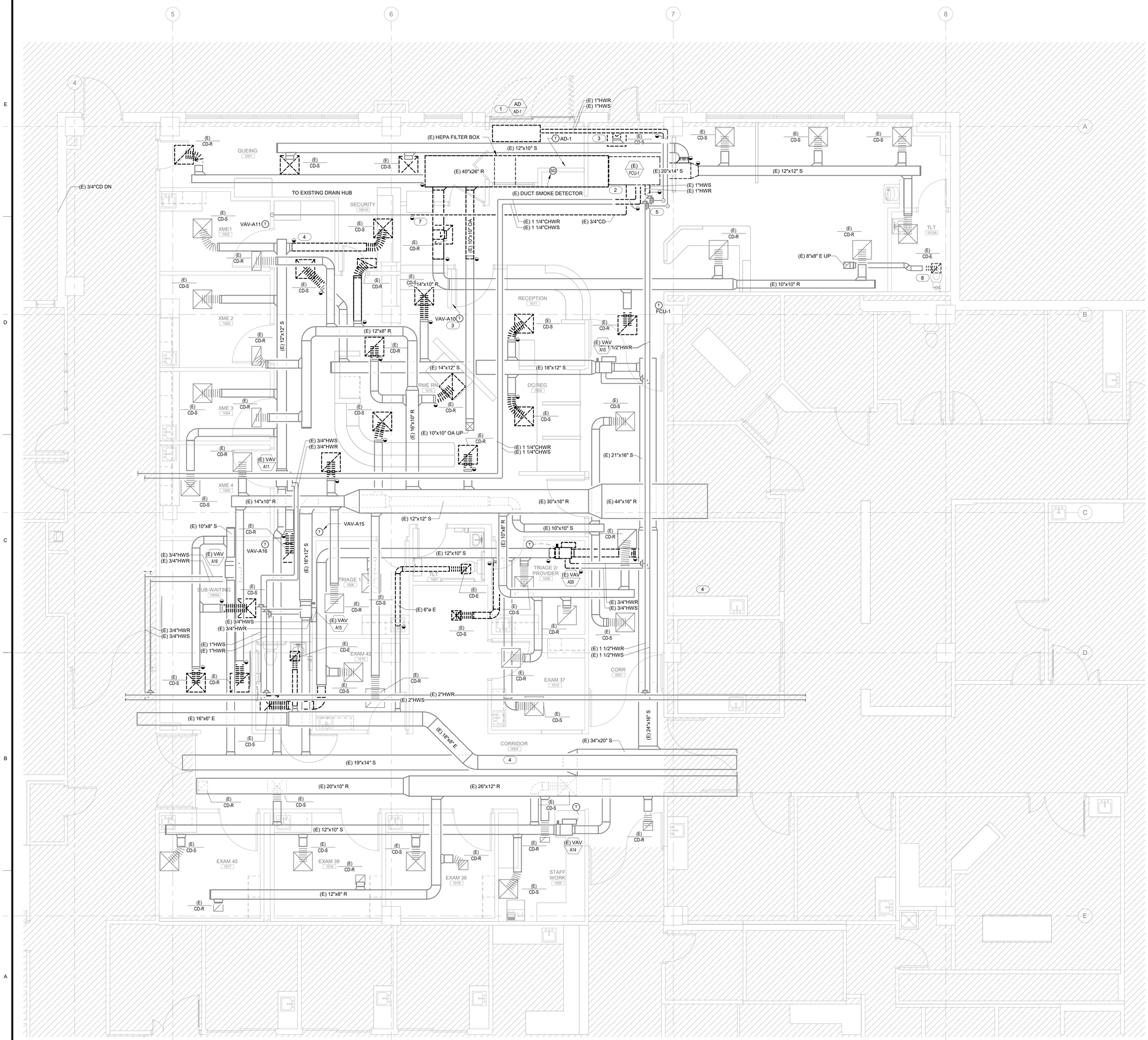

1 LEVEL 01 MECHANICAL DEMOLITION PLAN

1/4" = 1'-0"

DEMOLITION GENERAL NOTES

1. EXISTING SUPPLY AND RETURN DIFFUSERS TO REMAIN, UNLESS INDICATED OTHERWISE.

2. THERMOSTAT LOCATIONS TO REMAIN, UNLESS NOTED OTHERWISE.

3. BACNET TRUNKS SERVING EXISTING EQUIPMENT TO BE REMOVED SHALL BE MAINTAINED AND USED FOR CONNECTION TO NEW EQUIPMENT.

(XX) **DEMOLITION KEYED NOTES**

1. DEMOLISH EXISTING AIR CURTAIN (AD-1) AND ALL ASSOCIATED ACCESSORIES. DEMOLISH HWS/HWR PIPING BACK TO INDICATED LOCATION.

2. DEMOLISH EXISTING FAN COIL UNIT (FCU-1) AND ALL ASSOCIATED ACCESSORIES, INCLUDING THERMOSTAT. DEMOLISH DUCTWORK AND PIPING BACK TO INDICATED LOCATIONS. SALVAGE EXISTING DUCT SMOKE DETECTOR FOR USE WITH NEW BCU-1.

3. THERMOSTAT ASSOCIATED WITH VAV-A10 TO BE RELOCATED. SEE M100 FOR NEW LOCATION COORDINATED WITH ARCHITECTURAL CHANGES.

4. DEMOLISH EXISTING DIFFUSER AND BRANCH DUCTWORK AND CAP AS CLOSE AS POSSIBLE TO MAIN.

5. DEMOLISH EXISTING HWS/HWR PIPING BACK TO NEAREST SHUT OFF VALVE.

6. DEMOLISH EXISTING CHWS/CHWR PIPING BACK TO NEAREST SHUT OFF VALVE.

7. DEMOLISH EXISTING CD PIPING BACK TO LOCATION WHICH ALLOWS INSTALLATION OF NEW BLOWER COIL UNIT AND ALL ASSOCIATD DUCTWORK.

8. FIELD VERIFY WHETHER EXISTING EXHAUST GRILLE BLADES CAN BE ADJUSTED SUCH THAT THEY ARE ALL ORIENTED IN THE SAME DIRECTION. IF SO, EXISTING EXHAUST GRILLE TO REMAIN AND BE CLEANED. IF GRILLE IS DAMAGED AND BLADE ORIENTATION CANNOT BE CORRECTED, DEMOLISH EXISTING EXHAUST GRILLE.

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MD101

LEVEL 01 MECHANICAL DEMOLITION PLAN

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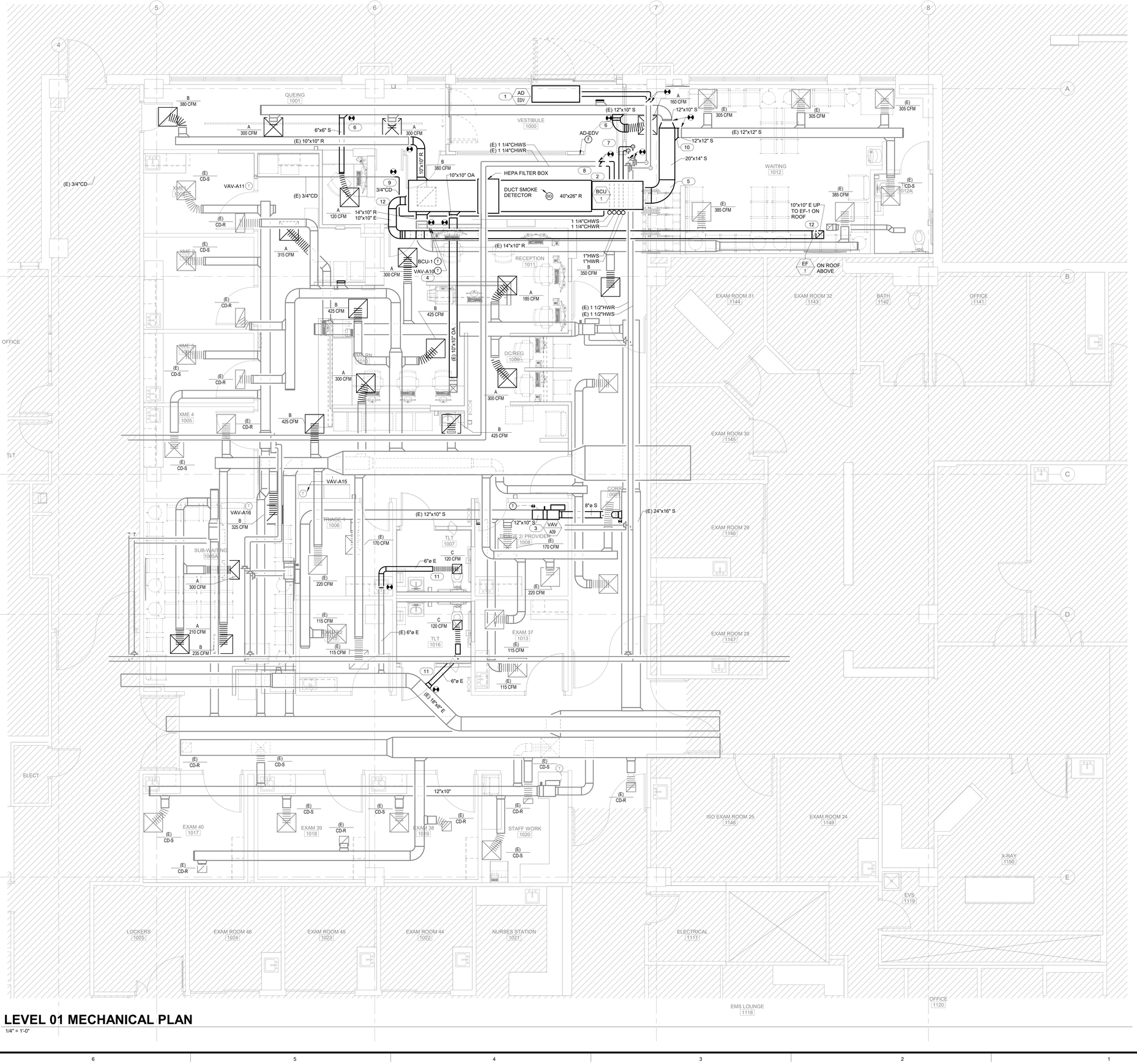

1 LEVEL 01 MECHANICAL PLAN

1/4" = 1'-0"

NEW CONSTRUCTION GENERAL NOTES

1. PROVIDE NEW DIFFUSERS AS INDICATED. REFER TO GRD SCHEDULE ON M001 FOR ADDITIONAL INFORMATION. DIFFUSERS INDICATED AS EXISTING ARE TO REMAIN.

2. REBALANCE ALL DIFFUSERS TO INDICATED AIRFLOWS. USE EXISTING BALANCING DAMPER IF ONE EXISTS. IF BALANCING DAMPER DOES NOT EXIST, PROVIDE ONE FOR EACH DIFFUSER/GRILLE BRANCH.

3. ALL DIFFUSERS SHALL BE CLEANED PRIOR TO PROJECT COMPLETION.

(XX) **NEW CONSTRUCTION KEYED NOTES**

1. PROVIDE AND INSTALL NEW AIR CURTAIN (AD-EDV) AND ALL HWS/HWR PIPING AS SHOWN. SEE 1-M001 FOR PIPING CONNECTION DETAILS.

2. PROVIDE AND INSTALL NEW BLOWER COIL UNIT (BCU-1) AND ASSOCIATED PIPING/DUCTWORK AS SHOWN. SEE 2-M001 FOR PIPING CONNECTION DETAILS. PROVIDE BALANCING DAMPER FOR OA INTAKE DUCT AS CLOSE TO RETURN MAIN AS POSSIBLE. PROVIDE HEPA FILTER BOX ON RETURN SIDE OF BCU-1. CONTROLS CONTRACTOR TO INSTALL SALVAGED DUCT SMOKE DETECTOR AT INDICATED LOCATION AND TIE INTO EXISTING JCI BAS.

3. PROVIDE AND INSTALL NEW VAV BOX AND ALL PIPING AS SHOWN. PROVIDE ASSOCIATED NEW DUCTWORK AND TIE INTO EXISTING SUPPLY MAIN AND BRANCH AS SHOWN. SEE 3-M001 FOR PIPING CONNECTION DETAILS.

4. THERMOSTATS FOR BCU-1 AND VAV-A10 TO BE MOUNTED AT INDICATED LOCATION WITHIN RECEPTION AREA. NEW THERMOSTATS SHOULD BE ACCESSIBLE BY HOSPITAL STAFF AND INACCESSIBLE BY PATIENTS.

5. PROVIDE ELBOW WITH TURNING VANES.

6. PROVIDE NEW SUPPLY DIFFUSER AND ASSOCIATED DUCTWORK AS INDICATED. TIE NEW BRANCH INTO EXISTING SUPPLY MAIN. PROVIDE BRANCH BALANCING DAMPER AS CLOSE TO THE MAIN AS POSSIBLE. PROVIDE HIGH EFFICIENCY BEVELED TAP FOR NEW BRANCH DUCT CONNECTION.

7. PROVIDE NEW 1 1/2" HWS/HWR PIPING AND SHUT OFF VALVES AT CONNECTION TO EXISTING 1 1/2" HWS/HWR MAINS. EXISTING SHUT OFF VALVES TO BE LEFT IN OPEN POSITION AND HANDLE REMOVED FOLLOWING SYSTEM START UP.

8. PROVIDE NEW 1 1/4" CHWS/CHWR PIPING AND SHUT OFF VALVES AT CONNECTION TO EXISTING 1 1/4" CHWS/CHWR MAINS. EXISTING SHUT OFF VALVES TO BE LEFT IN OPEN POSITION AND HANDLE REMOVED FOLLOW SYSTEM START UP.

9. PROVIDE NEW CWR PIPING AND CONNECT TO EXISTING 3/4" CWR PIPE.

10. PROVIDE HIGH EFFICIENCY BEVELED TAP FOR NEW DUCT CONNECTION TO EXISTING 12" X 12" SUPPLY BRANCH.

11. PROVIDE NEW EXHAUST GRILLE AND ASSOCIATED DUCTWORK AND CONNECT TO EXISTING EXHAUST MAIN/BRANCH. EXHAUST GRILLES SHALL BE LOCATED OVER TOILET.

12. PROVIDE AND INSTALL NEW 10" X 10" EXHAUST AIR DUCT AND ROUTE TO ROOF MOUNTED DOWNBLAST EXHAUST FAN EF-1 ON ROOF ABOVE ED WAITING ROOM. FIELD VERIFY EXACT DUCT ROUTING AND LOCATION OF EXHAUST FAN.

Provide proof of a flame spread less than 26 and a smoke development less than 50 for any material used in a plenum. 2021 IMC 602.2.1

Plastic fire sprinkler piping exposed within a plenum shall be used only in wet pipe systems and shall have a maximum: peak optical density of 0.50; average optical density of 0.15; flame spread of 5 feet in accordance with UL 1887. Piping shall be listed and labeled. 2021 IMC 602.2.1.2

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Y. Munoz*
Date: *Jan 04, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

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LEVEL 01 MECHANICAL PLAN

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PLUMBING SYMBOL LIST

SYMBOL	DESCRIPTION
UNDERGROUND PIPING	
SAN	SANITARY SEWER
ST	STORM SEWER
OW	OIL WASTE
KW	KITCHEN (GREASE) WASTE
AW	ACID WASTE
SUSPENDED PIPING	
SAN	SANITARY SEWER
ST	STORM SEWER
KW	KITCHEN (GREASE) WASTE
OW	OIL WASTE
AW	ACID WASTE
V	VENT
OV	OIL VENT
AV	ACID VENT
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
HW	DOMESTIC HOT WATER RETURN
TW	TEMPERED WATER
NP	NON-POTABLE WATER
VALVES	
	SHUT OFF VALVE
	CHECK VALVE
	CIRCUIT SETTER / BALANCING COCK
	HOT WATER RETURN BALANCING VALVE ASSEMBLY
	GAS COCK
	SOLENOID VALVE
	PRESSURE REDUCING VALVE/PRESSURE BLENDING VALVE
	BUTTERFLY VALVE
	PRESSURE & TEMPERATURE RELIEF VALVE
	(ANGLE) DRAIN VALVE
	VACUUM RELIEF VALVE
GENERAL	
	BACKFLOW PREVENTER
M	WATER METER
	TEE (TOP)
	TEE (BOTTOM)
	90 DEGREE ELL TURNED DOWN
	90 DEGREE ELL TURNED UP (OR RISER UP AND DOWN)
	WASTE PIPE WITH TRAP
	GRADE/FLOOR CLEANOUT
	SUSPENDED CLEANOUT
	CAP
	HOSE BIBB
	NON-FREEZE WALL HYDRANT
	RECESSED NON-FREEZE WALL HYDRANT IN BOX
	VENT THROUGH ROOF
	ROOF DRAIN
	FLOOR DRAIN/GARAGE DRAIN/AREA DRAIN
	FLOOR SINK
	TRENCH DRAIN
	OSD/HD
	UNION
	ALIGNMENT GUIDE
	ANCHOR
	SLEEVE THROUGH WALL
	THERMOMETER
	PRESSURE GAUGE
	EXPANSION LOOP
PITCH	PIPE PITCHES DOWN
	DIRECTION OF FLOW
	POINT OF NEW CONNECTION
	NEW PIPE
	EXISTING PIPE
	EXISTING PIPE TO BE REMOVED
	EXISTING FIXTURE/EQUIPMENT TO BE REMOVED

NOTE: DISREGARD SYMBOLS THAT DO NOT APPLY TO THIS PROJECT.

PLUMBING ABBREVIATION LIST

ABBREVIATION	DESCRIPTION
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AG	AIR GAP
AP	ACCESS PANEL
AV	ACID VENT
AW	ACID WASTE
BD	BIDET
BRT	BREAK TANK
BT	BATHTUB
BWV	BACKWATER VALVE
CB	CATCH BASIN
CLG	CEILING
CFU	COLD WATER FIXTURE UNIT
CI	CAST IRON
CO	CLEANOUT
CONN.	CONNECTION
CW	DOMESTIC COLD WATER
D	DISPOSER
DCV	DOUBLE CHECK VALVE
DD	DECK DRAIN
DF	DRINKING FOUNTAIN
DIA.	DIAMETER
DN	DOWN
DS	DOWNSPOUT
DT	DRAIN TILE
DW	DISHWASHER
DWBP	DOMESTIC WATER BOOSTER PUMP
EL (ELEV)	ELEVATION
EMSH	EMERGENCY SHOWER
EW	EYEWASH
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
ET	EXPANSION TANK
EXIST. (E)	EXISTING
FBO	FURNISHED BY OTHERS
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FIN.	FINISHED
FS	FLOOR SINK
G	GAS
GC	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GD	GARAGE DRAIN
GG	GARBAGE GRINDER
GGB	GUY GRAY BOX
GH	GROUND HYDRANT
GPF	GALLONS PER FLUSH
GPM	GALLONS PER MINUTE
GS	GREASE SEPARATOR
GWH	GAS WATER HEATER
HB	HOSE BIB
HD	HUB DRAIN
HFU	HOT WATER FIXTURE UNIT
HP	HOUSE PUMP
HT	HYDROPNEUMATIC TANK
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
IE	INVERT ELEVATION
IM	ICE MAKER
IW	INDIRECT WASTE
KS	KITCHEN SINK
KW	KITCHEN WASTE
L (LAV)	LAVATORY
LS	LAUNDRY STACK
LT	LAUNDRY TRAY
LW	LAUNDRY WASTE
M	WATER METER
MB	MUD BASIN
MH	MANHOLE
MR	MOP RECEPTOR
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NFPH	NON-FREEZE POST HYDRANT
NFRH	NON-FREEZE ROOF HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
NIC	NOT IN CONTRACT
NP	NON-POTABLE WATER
NTS	NOT TO SCALE
OSD	OPEN SITE DRAIN
OV	OIL VENT
OVTR	OIL VENT THRU ROOF
OW	OIL WASTE
PC	PLUMBING CONTRACTOR
PD	PLANTER DRAIN
PP	ELEVATOR PIT PUMP
PBV	PRESSURE BLENDING VALVE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PS	PLUMBING STACK
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REF	REFRIGERATOR
RL	RAIN LEADER
ROB	ROD OUT BASIN
RP	RECIRCULATING PUMP
RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR
S	SOIL
SAN	SANITARY PIPE
SB	SETTLING BASIN
SE	SEWAGE EJECTOR
SH	SHOWER
SK	SINK
SL	SLOPE
SLV	WALL SLEEVE
SP	SUMP PUMP
SS	SERVICE SINK
ST	STORM PIPE
TD	TRENCH DRAIN
TMV	THERMOSTATIC MIXING VALVE
TOB	TRIPLE OIL BASIN
TP	TRAP PRIMER
TYP.	TYPICAL
UG	UNDERGROUND
UR	URINAL
V	VENT
VB	VACUUM BREAKER
VIF	VERIFY IN FIELD
VR	VACUUM RELIEF VALVE
VTR	VENT THROUGH ROOF
W	WASTE
WB	WATER BOX
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WS	WALL SPOUT
WSS	WATER SOFTENER SYSTEM
WSFU	WATER SUPPLY FIXTURE UNIT
WM	WASHING MACHINE
WV	WATER VALVE BOX

NOTE: DISREGARD ABBREVIATIONS THAT DO NOT APPLY TO THIS PROJECT.

PLUMBING FIXTURE SCHEDULE

WC-1 WATER CLOSET

WATER CLOSET - PUBLIC, FLOOR MOUNTED, BARRIER-FREE, 1.28 GALLON:
ZURN Z5665-BWL1 FLOOR MT WATER CLOSET 1.28GPF BOWL
ZURN Z-6000-AV-HET 1.28GPF FLUSH VALVE
PROFLO PFTSCOF2000WH COMM ELONGATED OPEN FRONT CLOSET SEAT

L-1 LAVATORY

ZURN Z5344 WHITE 20X18 4CC WALL MOUNT LAVATORY; ZURN Z812A4-XL-FC-05 GOOSENECK, WRIST BLADES
WILKINS ZW3870XLT4PC 3/8" POINT OF USE THERM MIXING VALVE 4-PORT
PROFLO PFGD100 1-1/4X6GP 17GA GRID DRAIN
PROFLO PFPTB400 1-1/4" 17GA P TRAP, PROFLO PFXQAC32C ¼ TURN ANGLE STOP (2),
PROFLO PFX146324 20" FLEX SS RISER (2), PROFLO PFE7 1/2" CP ESCUTCHEON (2)
PROFLO PF202WH TRAP WRAP KIT, ZURN ZZ1231 WALL CARRIER

SK-1 SINK

LAVATORY, WALL HUNG, PATIENT, BARRIER-FREE, GOOSENECK:
ZURN Z5344 WHITE 20X18 4CC WALL MOUNT LAVATORY
ZURN Z812A4-XL-FC1.5 CP 1.5GPM, ON WRIST BLADE HDL, PLAIN END SPOUT
ZW3870XLT4PC 3/8" POINT OF USE THERM MIXING VALVE 4-PORT
PROFLO PFGD101 1-1/4X6 CP 17GA OFFSET GRID DRAIN
PROFLO PFPTB400 1-1/4" 17GA P TRAP PROFLO PFXQAC32C ¼ TURN ANGLE STOP (2)
PROFLO PFX146324 20" FLEX SS RISER (2) PROFLO PFE7 ½" CP ESCUTCHEON (2)
PROFLO PF203WH TRAP WRAP KIT ZURN ZZ1231 WALL CARRIER

FD-1 FLOOR DRAIN

ZURN MODEL NO. ZN-415-P-Y (TYPE B) DUCO CAST IRON BODY & FLASHING COLLAR WITH VANDAL PROOF 6" DIA. NICKEL BRONZE ADJUSTABLE STRAINER HEAD, TRAP PRIMER CONNECTION AND SEDIMENT BUCKET.

NOTE: PROVIDE WITH ASSE 1072 LISTED TRAP GUARD FOR EACH DRAIN.

TP-1 TRAP PRIMER

PRECISION PLUMBING PRODUCTS P2-500 AUTOMATIC TRAP PRIMER WITH MULTI-PORT DISTRIBUTION UNIT. ASSE 1072 LISTED.
NOTE: LOCATE TRAP PRIMER ABOVE CEILING WITH ISOLATION VALVE. PIPE COPPER LEADER FROM DISTRIBUTION UNIT TO EACH FLOOR DRAIN.

ICE MACHINE/ VENDING CONNECTION WITHE DRAIN

IPS CORP 88436 METAL DRAIN BOX WITH METAL FACE PLATE.
BOX WITH 3/8" SUPPLY VALVE AND WATER HAMMER ARRESTOR.

PLUMBING GENERAL DEMOLITION NOTES

1. CONTRACTOR SHALL VISIT SITE AND COORDINATE EXACT EXTENT OF PLUMBING DEMOLITION REQUIRED.
2. COORDINATE WITH ALL RESPECTIVE TRADES FOR REMOVAL OF PLUMBING DEVICES AND EQUIPMENTS FOR THE PROPER DISCONNECTION AS REQUIRED.
3. PROTECT EXISTING BUILDING ELEMENTS FROM DAMAGE DURING DEMOLITION. PROVIDE ALL NECESSARY PROTECTIVE MEASURES. ANY DAMAGE THAT OCCURS IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR BACK TO ORIGINAL CONDITIONS.
4. ARRANGE FOR OPENING OF CEILINGS, CHASES, SHAFTS, ETC. WITH THE GENERAL CONTRACTOR FOR REMOVAL OF PLUMBING.
5. REMOVE EXISTING BUILDING PLUMBING SYSTEMS NOT TO BE REUSED IN THEIR ENTIRETY.
6. REMOVE ALL EXISTING PIPING BACK TO ACTIVE SOURCE LEAVING NO DEAD END RUNS. CAP AND ARRANGE WASTE AND VENT PIPING FOR FUTURE EXTENSION. VALVE AND CAP EXISTING WATER FOR FUTURE EXTENSION.
7. REMOVAL OF PIPING SHALL INCLUDE ALL INSULATION, HANGERS & SUPPORTS, ANCHORS, ETC.
8. REMOVE ALL PLUMBING FIXTURES, TRIM, AND ALL RELATED DEVICES INCLUDING SUPPORTS, BRACKETS, WASTES, TRAPS, STOPS, SUPPLIES, ETC.
9. REMOVE ALL EXISTING WATER HEATERS, TANKS, PUMPS AND RELATED EQUIPMENT AND DEVICES.
10. DISPOSE OF ALL MATERIALS IN ACCORDANCE TO CODE AND CITY REQUIREMENTS.

CODE REFERENCES

CITY OF AURORA, CO LOCAL AMENDMENTS
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL MECHANICAL CODE
2021 INTERNATIONAL PLUMBING CODE
2021 INTERNATIONAL ENERGY CONSERVATION CODE
2018 FGI GUIDELINES FOR HOSPITALS

PLUMBING MATERIAL LIST

SERVICE DESCRIPTIOIN	MATERIAL
WASTE AND VENT (BELOW GROUND)	SCHEDULE 40 SOLID WALL POLYVINYL CHLORIDE (PVC) PLASTIC PIPE AND FITTINGS CONFORMING TO ASTM D 2665, WITH SOLVENT CEMENTED JOINTS. ASTM 2665; ASTM D2855; ASTM F656; ASTM D2564.
WASTE AND VENT (ABOVE GROUND)	HUBLESS, CAST-IRON SOIL PIPE AND FITTINGS, CISPI-301 WITH EXTRA HEAVY HUBLESS COUPLINGS.
DOMESTIC WATER (3" AND SMALLER)	HARD TEMPERED, SEAMLESS COPPER TUBING, TYPE 'L' CONFIRMING TO ASSE STANDARD B-88. FITTINGS TO BE SOLDER JOINT WITH LEAD-FREE SOLDER.

FIRE PROTECTION GENERAL NOTE

THE FIRE PROTECTION SCOPE IS DESIGN BUILD BY THE FIRE PROTECTION CONTRACTOR, AND THE FIRE PROTECTION CONTRACTOR SHALL BE THE ENGINEER OF RECORD.

MODIFY THE EXISTING SPRINKLER PIPING AND SPRINKLER COVERAGE TO SUPPORT PROPOSED WORK INCLUDING RELOCATION OF PIPING TO SUPPORT PROPOSED CEILING STRUCTURE AND SYSTEMS. IT IS THE RESPONSIBILITY OF THE FIRE PROTECTION CONTRACTOR TO VERIFY EXACT SCOPE IN FIELD, CONFIRM EXISTING BUILDING CONDITIONS, CONFIRM FACILITY STANDARDS AND COORDINATE WITH ARCHITECTURAL DRAWINGS AS IT PERTAINS TO PROPOSED WORK. SPRINKLER COVERAGE AND INSTALLATIONS SHALL BE IN STRICT ACCORDANCE TO NFPA 13 LOCAL AUTHORITY REQUIREMENTS AND ALL FACILITY STANDARDS.

PROVIDE TEMPORARY SPRINKLER COVERAGE DURING CONSTRUCTION AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE LOCAL FIRE DEPARTMENT.

PROVIDE SPRINKLER HEADS TO MATCH BUILDING STANDARD.

PROVIDE FIRE EXTINGUISHERS AND FIRE EXTINGUISHER CABINETS WHERE IDENTIFIED ON THE ARCHITECTURAL DRAWINGS. COORDINATE STYLE WITH FACILITY STANDARD AND INSTALLATION WITH WALL DEPTH. WHERE FACILITY STANDARDS REQUIRE ADDITIONAL WALL DEPTH, COORDINATE LOCATIONS WITH THE ARCHITECT.

WHERE CEILING MODIFICATIONS ARE REQUIRED TO ACCESS THE SPRINKLER PIPING, COORDINATE REQUIREMENTS WITH ARCHITECT.

PLUMBING DRAWING LIST

P000	PLUMBING SYMBOLS, ABBREVIATIONS AND NOTES	NO SCALE
P001	PLUMBING SPECIFICATIONS	NO SCALE
P002	PLUMBING PIPING DIAGRAMS AND DETAILS	NO SCALE
PD101	UNDERGROUND PLUMBING DEMOLITION PLAN	1/4"=1'-0"
PD201	LEVEL 01 PLUMBING DEMOLITION PLAN	1/4"=1'-0"
P101	UNDERGROUND PLUMBING PLAN	1/4"=1'-0"
P201	LEVEL 01 PLUMBING PLAN	1/4"=1'-0"

Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Y. Munoz*
Date: *Jan 04, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

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JONATHAN T. GRAY
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PROFESSIONAL ENGINEER
12/22/2023

TREANORHL
THE MEDICAL CENTER AURORA
1501 S POTOMAC ST., AURORA, CO 80012

Health ONE

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Issued For:	CONSTRUCTION DOCUMENTS
Date:	12/22/2023

REVISIONS

NO	DESCRIPTION	DATE

P000

PLUMBING SYMBOLS AND ABBREVIATIONS

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PLUMBING SPECIFICATIONS

PART 1 – BASIC REQUIREMENT

1.01 RELATED REQUIREMENTS

A. THIS SPECIFICATION SHALL CONTROL ALL LABOR, SERVICES, MATERIALS AND EQUIPMENT AND PERFORMANCE OF ALL WORK REQUIRED FOR THE INSTALLATION OF ALL PLUMBING AND MEDICAL GAS WORK AS SPECIFIED IN THE FOLLOWING.

B. DEFINITIONS:

1. "PIPING" INCLUDES, IN ADDITION TO PIPE, ALL FITTINGS, VALVES, PIPE COVERING, HANGERS, AND OTHER SUPPORTS AND ACCESSORIES RELATED TO SUCH PIPING.
2. CONCEALED MEANS HIDDEN FROM SIGHT IN CHASES, FURRED SPACES, SHAFTS, HUNG CEILINGS, EMBEDDED IN CONSTRUCTION, IN CRAWL SPACES OR BURIED.
3. "EXPOSED" MEANS NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.
4. "INVERT ELEVATIONS" MEANS THE ELEVATION OF THE INSIDE BOTTOM OF PIPE, OR RELATED DEVICE.
5. "PROVIDE" MEANS TO FURNISH AND INSTALL COMPLETE.

1.02 GENERAL REQUIREMENTS

A. ALL PLUMBING WORK SHALL BE INSTALLED IN STRICT CONFORMANCE TO CITY OF AURORA, COLORADO MUNICIPAL CODE, 2021 INTERNATIONAL BUILDING CODE, 2021 INTERNATIONAL PLUMBING CODE, 2021 INTERNATIONAL ENERGY CODE AND 2018 FGI GUIDELINES FOR HOSPITALS

B. MEDICAL GAS WORK TO COMPLY WITH 2012 EDITION OF NFPA #99 STANDARDS AND SMC/HCA FACILITY STANDARDS.

C. ALL PLUMBING PRODUCTS, AS APPLICABLE, SHALL MEET NATIONAL STANDARD S.3874, REDUCTION OF LEAD IN DRINKING WATER ACT, AND NSF STANDARD 372.

D. CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING BID TO VERIFY SCOPE OF WORK.

E. ALL PRODUCTS AND EQUIPMENT SHALL BE UL LISTED AND APPROVED BY SMC.

F. EACH MAJOR COMPONENT OR PIECE OF EQUIPMENT TO HAVE THE MANUFACTURER'S NAME, ADDRESS, MODEL NUMBER AND RATING ON A PLATE SECURELY AFFIXED IN A CONSPICUOUS PLACE.

G. CODE RATINGS, LABELS OR OTHER DATA WHICH ARE DIE–STAMPED OR OTHERWISE AFFIXED TO THE SURFACE OF THE EQUIPMENT SHALL BE IN VISIBLE LOCATION.

H. CONTRACTOR SHALL COORDINATE PROPOSED WORK WITH EXISTING FIELD CONDITIONS INCLUDING ARCHITECTURAL BUILDING ELEMENTS, STRUCTURAL CONDITIONS, AND EXISTING MECHANICAL AND ELECTRICAL CONDITIONS.

I. CONTRACTOR SHALL ADHERE TO ALL BASE BUILDING AND CURRENT FACILITY STANDARDS AND REQUIREMENTS. SHUT–DOWN OF EXISTING BUILDING SYSTEMS FOR NEW PLUMBING CONNECTIONS SHALL BE AUTHORIZED, SCHEDULED AND PERFORMED IN ACCORDANCE TO BUILDING MANAGEMENT REQUIREMENTS. BUILDING SHALL BE NOTIFIED NO LESS THAN 72 HOURS PRIOR TO ANY SHUT–DOWNS. ACCESS TO AREAS OUTSIDE WORKS SPACES, SUCH AS ADJOINING SPACES AND SPACES IMMEDIATELY BELOW, SHALL BE PERFORMED IN ACCORDANCE TO BUILDING MANAGEMENT REQUIREMENTS.

1.03 WORK INCLUDED

A. INCLUDE ALL COSTS RELATED TO PROVIDE ALL PERMITS, LICENSES, INSPECTIONS, APPROVALS AND OTHER ARRANGEMENTS FOR WORK.

B. PROVIDE DEMOLITION OF EXISTING PLUMBING AND MEDICAL GAS INCLUDING REMOVAL OF ALL DEBRIS. COORDINATE WITH BUILDING MANAGEMENT EXISTING EQUIPMENT, FIXTURES OR DEVICES THAT SHALL BE RETAINED, CAREFULLY REMOVE AND TURN OVER TO OWNER. REMOVE ALL PIPING BACK TO ACTIVE SOURCE AND CAP LEAVING NO DEAD ENDS.

C. PRIOR TO DEMOLITION OF EQUIPMENT, FIXTURES OR TRIM, COORDINATE WITH OWNER ANY ITEMS TO BE RETAINED. CAREFULLY REMOVE SUCH ITEMS AND TURN OVER TO OWNER.

D. PROVIDE PLUMBING FIXTURES AS INDICATED ON PLUMBING AND ARCHITECTURAL DRAWINGS. FOR EXACT LOCATION OF PLUMBING FIXTURES, REFER TO ALL ARCHITECTURAL AND CONSULTANT PLANS AND ELEVATIONS.

E. PROVIDE ALL WASTES, TRAPS AND SUPPLIES WITH STOPS. MAKE ALL FINAL CONNECTIONS TO EACH FIXTURE, FAUCET, TAILPIECE, SINK FRAMES, ETC. FOR ALL FIXTURES.

E. MAKE NEW CONNECTIONS TO EXISTING BRANCH PIPING AS INDICATED ON PLANS AND RISER DIAGRAMS, AND AS NECESSARY TO COMPLETE THE WORK.

F. INSTALL PIPING WITH ADEQUATE PROVISIONS TO CONTROL EXPANSION AND CONTRACTION.

G. PROVIDE AND SET SLEEVES FOR ALL PIPING SYSTEMS PASSING THROUGH WALLS, FLOORS, PARTITIONS, ETC. SLEEVES SHALL BE SIZED AT LEAST TWO PIPE DIAMETERS LARGER THAN PIPING, OR OUTSIDE DIAMETER OF INSULATED PIPING.

H. ARRANGE FOR POWER TO SUPPORT ALL ELECTRICAL RELATED EQUIPMENT AND DEVICES.

I. PROVIDE ROUGH–IN AND FINAL CONNECTIONS TO ALL APPLIANCES AND EQUIPMENTS FURNISHED BY OTHERS, INCLUDING ALL REQUIRED DEVICES.

J. PROVIDE ALL CUTTING AND PATCHING OF BUILDING ELEMENTS AS REQUIRED FOR INSTALLATION OF WORK HERE IN SPECIFIED. ALL WORK SHALL BE COORDINATED AND APPROVED BY BUILDING AND ARCHITECTURAL FIELD REPRESENTATIVE PRIOR TO ANY WORK BEING PERFORMED.

K. PROVIDE FIRE–STOP AT ALL FLOOR AND WALL PENETRATIONS AS REQUIRED BY PROJECT PARAMETERS AND LOCAL CODE AUTHORITY.

L. PROVIDE ALL ACCESS PANELS. PLUMBING CONTRACTOR TO GIVE ALL LOCATIONS AND DIMENSIONS OF ALL REQUIRED ACCESS PANELS TO GENERAL CONTRACTOR. GENERAL CONTRACTOR WILL SUBMIT TO ARCHITECT FOR APPROVAL AND FINISH REQUIREMENTS PRIOR TO INSTALLATION.

M. COORDINATE PROPOSED WORK WITH ADDITIONAL TRADES AND OTHERS INVOLVED PRIOR TO ANY INSTALLATION WORK.

N. PROVIDE PIPING IDENTIFICATION FOR ALL PIPING SYSTEMS.

O. PROVIDE VALVE TAGS FOR ALL VALVES.

P. PROVIDE AS–BUILT DRAWINGS IN AUTOCAD 2014 FORMAT AT COMPLETION OF PROJECT.

Q. PROVIDE TWO COPIES OF OWNER'S OPERATION AND MAINTENANCE MANUALS WITH ALL PLUMBING EQUIPMENT, FIXTURES, TRIM AND DEVICES, MANUFACTURER'S MAINTENANCE INSTRUCTIONS AND MANUALS.

1.04 CLEANING

A. COORDINATE GENERAL CLEANUP WITH BUILDING MANAGEMENT.

B. PROVIDE ALL NECESSARY MEANS FOR ADEQUATE CLEANING, FLUSHING AND DRAINING TO PERMIT THOROUGH FLUSHING OF ALL THE PIPING SYSTEMS, INCLUDING BOTH WATER AND DRAINAGE.

C. PROVIDE DISINFECTION OF ALL DOMESTIC WATER PIPING IN ACCORDANCE WITH CODE, HEALTH DEPARTMENT AND APPLICABLE STANDARDS.

D. TESTING AND RESULTS SHALL BE PERFORMED AND DOCUMENTED BY A LABORATORY CERTIFIED IN ACCORDANCE TO PLUMBING CODE. IF RESULTS OBTAINED DO NOT MEET STANDARDS, DISINFECTION PROCEDURES SHALL BE REPEATED.

E. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR PERMIT THE USE OF ANY PORTION OF DOMESTIC WATER SYSTEMS UNTIL SUCH SYSTEM HAS BEEN PROPERLY DISINFECTED, FLUSHED AND CERTIFIED.

1.05 FIELD TESTING

A. TESTING SHALL BE IN STRICT COMPLIANCE TO THE PLUMBING CODE AND NFPA.

B. NO WORK SHALL BE ENCLOSED, CONCEALED, COVERED UP OR USED UNTIL THE SYSTEMS HAVE BEEN INSPECTED AND APPROVED BY THE CODE OFFICIALS AND ARCHITECTURAL FIELD REPRESENTATIVE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALL NECESSARY ARRANGEMENTS FOR INSPECTIONS.

C. EACH SYSTEM SHALL BE TESTED FOR A MINIMUM OF 4 HOURS AT 1–1/2 TIMES IT'S DESIGN PRESSURE, OR GREATER WHERE INDICATED. WATER SYSTEMS SHALL BE TESTED AT 125 PSI MINIMUM FOR AT LEAST 4 HOURS. DRAINAGE WASTE AND VENT SYSTEMS SHALL BE TESTED AT 10 FOOT HEAD OF WATER OR 5 PSI AIR PRESSURE FOR AT LEAST 4 HOURS. SYSTEMS MAY BE TESTED IN SECTIONS.

D. LEAKING JOINTS DISCOVERED DURING TESTING SHALL BE REPLACED AND REMADE. ENTIRE SYSTEM OR PORTION SHALL BE RETESTED ACCORDINGLY.

E. FIXTURES AND EQUIPMENT SHALL BE TESTED IN ACCORDANCE TO MANUFACTURER'S INSTRUCTIONS.

F. MEDICAL GAS SHALL BE TESTED AND CERTIFIED IN ACCORDANCE TO CURRENT NFPA #99 STANDARDS.

PART 2 – BASIC MATERIALS

2.01 PIPES AND FITTINGS

A. BELOW GROUND WASTE AND VENT PIPING IN ALL SIZES SHALL BE SCHEDULE 40 SOLID CORE PVC PIPE AND FITTINGS IN ACCORDANCE TO ANSI/ASTM 2665 AND ASTM D1785. JOINTS SHALL BE PRIMED AND SOLVENT WELDED IN ACCORDANCE TO ANSI/ASTM D2564. ALL PIPE, FITTINGS AND JOINING MATERIAL SHALL BE PROVIDED FROM ONE MANUFACTURER. HANGERS SHALL BE NON–ABRASIVE AND SPACED IN ACCORDANCE TO THE MANUFACTURER'S INSTRUCTIONS.

B. ABOVE GROUND DRAINAGE AND VENT PIPING: SERVICE WEIGHT HUBLESS CAST IRON PIPE, THOROUGHLY COATED WITH COAL TAR INSIDE AND OUTSIDE, CONFORMING TO ASTM A74 AND CAST IRON SOIL INSTITUTE STANDARD 301. FITTINGS SHALL BE HUBLESS CAST IRON SOIL FITTINGS OF THE SAME GRADE AND COATED IN THE SAME MANNER. MAKE ALL JUNCTIONS WITH COMBINATION "Y" AND 1/8 BEND FITTINGS. JOINTS SHALL BE MADE WITH EXTRA HEAVY DUTY HUBLESS COUPLINGS HAVING A STAINLESS STEEL CLAMPS AND SHIELD WITH A MINIMUM OF 4 CLAMPS FOR 4 INCH AND SMALLER PIPING AND 6 CLAMPS FOR 5 INCH AND LARGER PIPING SIMILAR TO HUSKY SERIES 4000.

C. COPPER WATER PIPE AND FITTINGS – 3 INCH AND SMALLER: PIPE SHALL BE HARD TEMPERED, SEAMLESS COPPER TUBING, TYPE "L" CONFORMING TO ASST. STANDARD B–88. FITTINGS IN COPPER TUBING 2–1/2 INCH AND SMALLER SHALL BE WROUGHT SWEAT TYPE FITTINGS MANUFACTURED OF SEAMLESS TUBING FORGED BRONZE OR BRASS ROD TO MEET SAME STANDARD B16.22. ALL FITTINGS IN COPPER TUBING 3–INCH AND LARGER MAY BE CAST RED BRONZE SOLDER TYPE FITTINGS MEETING ASST. STANDARD B16.18. IN ALL CASES WHERE COPPER PIPE CONNECTIONS ARE MADE TO PIPING OR AN ITEM OF EQUIPMENT OF A DISSIMILAR METAL, PROVIDE SOLID BRASS THREADED TRANSITION PIECES IF CONNECTION WILL BE CONCEALED. IF NOT CONCEALED, USE DIELECTRIC UNIONS. ALL JOINTS SHALL BE SOLDERED IN ACCORDANCE WITH THE COPPER DEVELOPMENT ASSOCIATION COPPER TUBE HANDBOOK USING LEAD–FREE SOLDER.

2.02 INSULATION

A. INSULATION SHALL COMPLY WITH APPLICABLE ENERGY CODE.

B. INSULATION SHALL BE TYPE I GRADE A GLASS FIBER PREFORMED PIPE INSULATION IN ACCORDANCE TO ASTM C 547 WITH FACTORY APPLIED VAPOR BARRIER ALUMINUM BACKING IN ACCORDANCE TO ASST. C 1136. FITTINGS SHALL BE FIELD INSULATED AND COVERED WITH PREFORMED PVC JACKETS. SEALANT AND ADHESIVES SHALL BE IN ACCORDANCE TO MANUFACTURER'S INSTRUCTIONS.

C. INSULATION THICKNESS:
1. HOT WATER AND HOT CIRCULATING WATER PIPING 1–1/2 INCH AND LARGER: 1–1/2 INCH THICK.
2. HOT WATER AND HOT CIRCULATING WATER PIPING 1–1/4 INCH AND SMALLER: 1 INCH THICK.
3. COLD WATER AND CONDENSATE, ALL SIZES: 1 INCH THICK.
4. STORM DRAINAGE ALL SIZES: 1 INCH THICK.

D. INSULATION SHALL RUN UNINTERRUPTED. PROVIDE OVERSIZED HANGERS AND INSULATION SADDLES FOR ALL INSULATED PIPING.

E. ALL PLUMBING PIPING & INSULATION EXPOSED SHALL BE PRIMED AND PAINTED WITH COLOR IDENTIFICATION AS REQUIRED BY TMCA/HCA FACILITY STANDARDS. COORDINATE LATEST COLORING SCHEMES WITH FACILITY STANDARDS.

2.03 VALVES

A. PROVIDE VALVES FOR ALL PIPING SYSTEMS FOR PROPER CONTROL AND ISOLATION OF EQUIPMENT, FIXTURES AND DEVICES. PROVIDE VALVES FOR PROPER OPERATION OF EQUIPMENT.

B. APPROVED VALVES SHALL BE AS MANUFACTURED BY NIBCO AND APOLLO–CONBRACO. ALL VALVES SHALL BE LEAD FREE NSF61 LISTED FOR POTABLE PLUMBING APPLICATIONS.

C. SHUT OFF VALVES SHALL BE PROVIDED AT CONNECTION AND EXTENSION FROM EXISTING SYSTEMS, OUTSIDE EACH ROOM WHERE PLUMBING OCCURS, AND TO ISOLATE EACH ITEM OF EQUIPMENT, APPLIANCE AND FIXTURE.

D. BALL VALVES 2 INCH AND SMALLER: TWO–PIECE LEAD–FREE BRONZE BODY ASTM B 584, FULL PORT, 600 PSIG CWP, BLOW–OUT PROOF STEM, CHROME PLATED BALL, LEVER HANDLE AND THREADED CONNECTIONS, EQUAL TO CONBRACO MODEL NO. 82–20.

E. CHECK VALVES 2 INCH AND SMALLER SHALL BE: CLASS 125, BRONZE SWING CHECK VALVE WITH BRONZE DISC ASTM B 62, 200 PSIG CWP, Y–PATTERN HORIZONTAL FLOW, AND THREADED CONNECTIONS EQUAL TO NIBCO MODEL NO. T–413–B.

2.04 SUPPORTS AND HANGERS

A. PROVIDE ALL NECESSARY HANGERS, SUPPORTS, BUILDING ATTACHMENTS, SUPPLEMENTAL STEEL, ANCHORS, INSERTS, ETC., AS REQUIRED TO INSTALL THE PLUMBING WORK. HANGERS AND SUPPORTS SHALL BE CAPABLE OF SUPPORTING PIPE LOADS AND FULL CONTENTS WITH ALL RELATED DEVICES, PUMPS, ETC.

B. PIPE SHALL BE SUPPORTED IN ACCORDANCE TO CODE, MANUFACTURER REQUIREMENTS, MSS STANDARDS AND CONTRACT DOCUMENTS.

C. HANGERS, SUPPORTS AND RELATED ITEMS SHALL HAVE FACTORY COATED FINISHES THAT WILL NOT PROMOTE GALVANIC OR CORROSION ACTION. RODS, NUTS AND MISCELLANEOUS FASTENERS SHALL BE GALVANIZED.

D. ADDITIONAL HANGERS MUST BE PROVIDED AT ALL VALVE ASSEMBLIES, AUTOMATIC VALVES, BY–PASSES, OR ELSEWHERE, WHERE REQUIRED TO PROPERLY SUPPORT ANY ADDITIONAL PIPE LOADINGS.

E. MAXIMUM SPACING FOR HANGERS SHALL BE IN ACCORDANCE TO CODE. MSS STANDARDS AND PIPE MANUFACTURER INSTRUCTIONS. HANGERS SUPPORTING CAST IRON PIPE OF THE HUB AND SPIGOT TYPE IN 60 INCHES LENGTHS SHALL BE 60 INCHES O.C. HANGERS SHALL BE LOCATED AT THE PIPE HUB CONNECTIONS AND AT EACH FITTING.

F. REGARDLESS OF ANY OF THE ABOVE LISTED HANGER SPACING, PROVIDE A HANGER NOT MORE THAN 12 INCHES FROM EACH CHANGE IN DIRECTION OF PIP

2.05 IDENTIFICATION

A. PROVIDE ALL NEW AND MODIFIED PIPING STYSTEMS AND VALVES WITH IDENTIFICATION.

B. IDENTIFICATION AND COLOR CODING SHALL BE IN ACCORDANCE TO CURRENT FACILITY STANDARDS, NFPA STANDARDS AND ANSI/ASME STANDARDS.

C. PIPE SHALL BE IDENTIFIED ABOVE EACH ROOM, SPACE AND SPACING SHALL NOT EXCEED 20 FEET.

D. VALVE TAGS SHALL BE 1–1/2" DIAMETER BRASS, LABELED IN SEQUENCE TO CURRENT FACILITY STANDARDS.

PART 3 – BASIC EXECUTION

3.01 DOMESTIC WATER

A. PROVIDE NEW DOMESTIC WATER PIPING SYSTEMS COMPLETE TO SUPPORT PROPOSED WORK.

B. PROVIDE ALL VALVES IN THE DOMESTIC WATER SYSTEMS WHERE REQUIRED BY CODE AND AS INDICATED ON THE PLANS FOR PROPER CONTROL AND SERVICING OF THE PIPING SYSTEMS.

C. INSTALL WATER PIPING WITHIN HEATED AREAS OF THE BUILDING ONLY AND NOT IN AREAS SUBJECT TO FREEZING.

D. INSTALL WATER PIPING WITH PITCH TO DRAIN TOWARDS FIXTURE OR EQUIPMENTS SERVED.

E. PROVIDE DI–ELECTRIC UNIONS OR FITTINGS WHERE CONNECTIONS OCCUR BETWEEN DISSIMILAR MATERIALS.

F. INSULATE ALL DOMESTIC WATER SYSTEMS INCLUDING CONCEALED PIPING WITHIN WALLS AND CHASES.

PART 4 – EQUIPMENT, FIXTURES AND DEVICES

4.01 GENERAL

A. INSTALL ALL ITEMS IN ACCORDANCE TO MANUFACTURER'S INSTRUCTIONS. PROVIDE ALL REQUIRED FACTORY AUTHORIZED START–UP SERVICES WHERE REQUIRED.

B. ITEMS SHALL BE SET, LEVELED, FASTENED AND CONNECTED COMPLETE WITH ALL REQUIRED TRIM, SUPPORTS, ETC. ALL FIXTURES SHALL BE PERFECT IN FINISH AND COLOR, SHALL BE SQUARE WITH RELATION TO FINISHED INTERIOR AND LOCATED AS INDICATED ON THE DRAWINGS.

C. ALL ITEMS SHALL BE PROVIDED WITH PROPER SUPPORT. PROVIDE AND ARRANGE FOR ALL NECESSARY WALL FRAMING AND BLOCKING.

D. AFTER WORK HAS BEEN COMPLETED, ALL ITEMS AND TRIM SHALL BE THOROUGHLY CLEANED.

E. PROVIDE ALL MEDICAL GAS EQUIPMENT AND DEVICES AS SPECIFIED. EQUIPMENT DEVICES, VALVES AND RELATED COMPONENTS SHALL BE FROM AMICO AND IN ACCORDANCE TO 2012 NFPA #99 STANDARDS.

This sheet of drawings has not been reviewed for code compliance.

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12/22/2023

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P001

PLUMBING SPECIFICATIONS

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12/21/2023 11:14:17 AM

RSN: 1771774 | PERMIT# 23-2406108 -LT

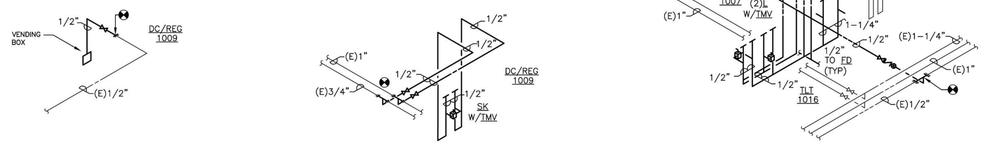
WATER HAMMER ARRESTOR SPECIFICATIONS:

1. WATER HAMMERS TO BE BASED ON PRECISION PLUMBING PRODUCTS (PPP) SC-500A THROUGH SC-2000F SERIES ARRESTORS.
2. ARRESTORS TO BE LEAD-FREE NSF-61 CERTIFIED AND ANSI/ASSE 1010 LISTED.
3. ARRESTORS TO BE MAINTENANCE FREE.
4. ARRESTORS SHALL BE FABRICATED OF TYPE L COPPER OR STAINLESS STEEL.
5. ARRESTORS SHALL BE DESIGNED TO OPERATE AT 80 PSI, CAPABLE OF A MAXIMUM STATIC PRESSURE OF 250 PSI.
6. ARRESTORS TO BE SIZED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND PDI APPLICABLE FIXTURE UNIT STANDARDS.
7. ARRESTORS SHALL BE SUITABLE FOR VERTICAL OR HORIZONTAL INSTALLATION.
8. PROVIDE ARRESTORS ON ALL FIXTURE BRANCH PIPING.
9. INSTALL ARRESTORS ABOVE CEILINGS OR CONCEALLED WITHIN PLUMBING WALLS WHERE ALLOWABLE BY CODE AND AS ALLOWABLE BY MANUFACTURER WHEN DEVICES ARE NOT REQUIRED TO BE MAINTAINED.
10. PROVIDE ARRESTORS ON ALL SUPPLY LINES TO FIXTURES, EQUIPMENT AND APPLIANCES HAVING SOLENOID VALVES.

PDI SIZING AND SELECTION TABLE

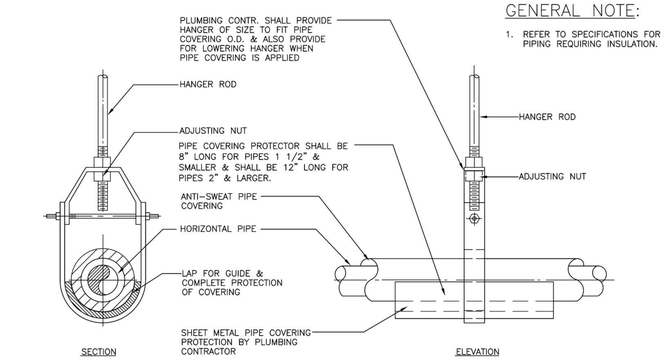
PIPE SIZE	FIXTURE UNITS	CROSS REF. PDI
1/2"	1-11	A
3/4"	12-32	B
1"	33-60	C
1 1/4"	61-113	D
1 1/2"	114-154	E
2"	155-330	F

Extract from: PDI WH201



1 PLUMBING WATER PIPING ISOMETRIC DIAGRAM

NOT TO SCALE



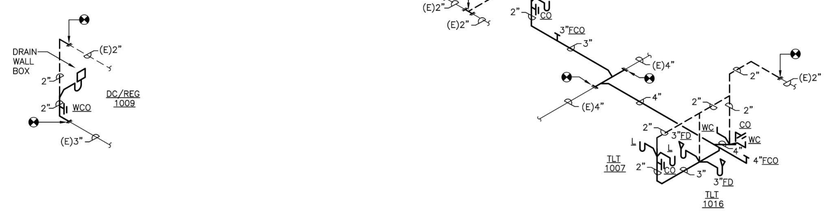
GENERAL NOTE:

1. REFER TO SPECIFICATIONS FOR PIPING REQUIRING INSULATION.

TYPICAL DETAIL OF PIPE COVERING PROTECTOR FOR HORIZONTAL PIPING

NOT TO SCALE

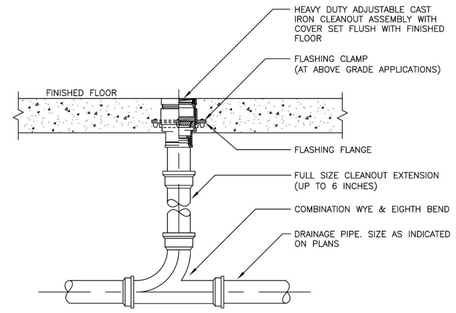
The dry vent must rise 6" vertically above the flood level rim of the highest trapped fixture being vented. **2021 IPC 905.4**



Provide drains no smaller than allowed by **2021 IPC 709.1 and 710.1(1)**

2 PLUMBING DRAINAGE AND VENT ISOMETRIC DIAGRAM

NOT TO SCALE



GENERAL NOTES:

1. CLEANOUTS SHALL BE FULL SIZE OF DRAINAGE PIPING UP TO 6 INCHES.
2. PROVIDE CLEANOUT WITH CAST IRON SPIGOT FERRULE WITH CAST BRONZE TAPERED THREAD CLOSURE PLUG SEALED WITH NON-HARDENING PIPE JOINT COMPOUND.
3. PROVIDE WITH FLASHING CLAMP IN ADDITION TO FLANGE FOR WATERPROOF FLOOR APPLICATIONS.
4. REFER TO SPECIFICATIONS FOR FINISHED COVER TYPES. REFER TO ARCHITECTURAL DOCUMENTS FOR FINISHED FLOOR TYPES.

DIAGRAM OF FLOOR CLEANOUT

NOT TO SCALE

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Y. Munoz*
Date: *Jan 04, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

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LUMBING PIPING DIAGRAMS AND DETAILS

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1 UNDERGROUND PLUMBING DEMOLITION PLAN

1/4" = 1'-0"

DEMOLITION KEY NOTES:

D1 REMOVE PLUMBING BACK TO ACTIVE SOURCE AND CAP AT MAINS LEAVING NO ABANDONED PLUMBING OR DEAD END RUNS.

D2 REMOVE EXISTING PIPING TO POINT AND PREPARE TO CONNECT WITH NEW. REFER TO NEW WORK PLANS FOR NEW PIPING.

This sheet of drawings has not been reviewed for code compliance.

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UNDERGROUND PLUMBING DEMOLITION PLAN

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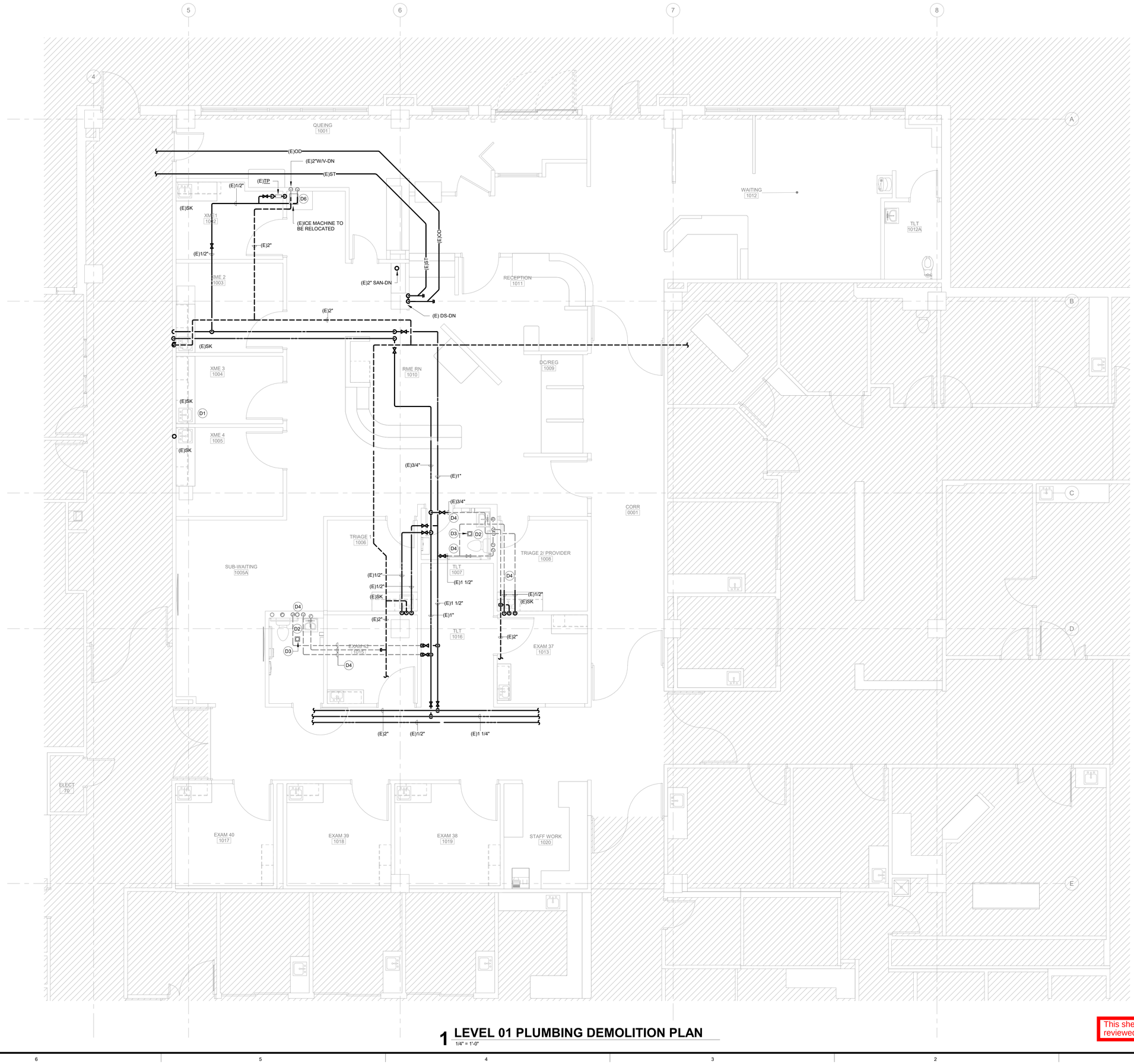

1 LEVEL 01 PLUMBING DEMOLITION PLAN

1/4" = 1'-0"

DEMOLITION KEY NOTES:

D1 CAREFULLY REMOVE EXISTING FAUCET AND ALL RELATED DEVISES. MODIFY PLUMBING ROUGH-INS AS REQUIRED TO SUPPORT NEW FAUCET AND WRISTBLADE CONTROLS.

D2 REMOVE EXISTING PLUMBING FIXTURE AND TRIM WITH ALL RELATED PLUMBING, INCLUDING PIPING, HANGERS, SUPPORTS, AND ASSOCIATED ITEMS.

D3 REMOVE EXISTING FLOOR DRAIN AND ALL ASSOCIATED PIPING BACK TO ACTIVE SOURCES AND CAP LEAVING NO DEAD ENDS.

D4 REMOVE EXISTING PIPING TO POINT AND PREPARE TO CONNECT WITH NEW. REFER TO NEW WORK PLANS FOR NEW PIPING.

D5 REMOVE ALL PLUMBING PIPING BACK TO ACTIVE SOURCES AND VALVE/CAP LEAVING NO DEAD ENDS.

D6 CAREFULLY DISCONNECT AND REMOVE EXISTING WATER SUPPLY, BACKFLOW DEVICE, WATER FILTER, HAMMER ARRESTOR ETC., AND REMOVE EXISTING ICE MAKER/VENDING BOX. FOR REINSTALLATION IN NEW LOCATION. REMOVE EXISTING PIPING TO POINT AND PREPARE TO CONNECT WITH NEW. REFER TO NEW WORK PLANS FOR NEW PIPING.

This sheet of drawings has not been reviewed for code compliance.

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LEVEL 01 PLUMBING DEMOLITION PLAN

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1 UNDERGROUND PLUMBING PLAN

1/4" = 1'-0"

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Y. Munoz*
Date: *Jan 04, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

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UNDERGROUND PLUMBING PLAN

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KEY NOTES:

1. REPLACE EXISTING FAUCET WITH NEW FAUCET AND WRISTBLADE CONTROLS - ZURN Z812AA-XL-FC-05 GOOSENECK, WRIST BLADES.
2. PROVIDE RELOCATION OF PLUMBING TO SUPPORT NEW LOCATION ICE MACHINE.
3. PROVIDE NEW FIRE RATED ICEMAKER OUTLET/VENDING BOX AND FIRE RATED DRAIN BOX.
4. NEW BOXES IN CORRIDOR WALL TO BE FIRE RATED TYPE ASSEMBLIES.

FIRE PROTECTION KEY NOTES:

FP1 PROVIDE RELOCATION OF SPRINKLERS AND ASSOCIATED SPRINKLER BRANCH PIPING TO SUPPORT PROPOSED WORK. NEW WORK AND SPRINKLER SPACING SHALL BE IN COMPLIANCE WITH NFPA STANDARDS AND APPLICABLE CODES. NEW SPRINKLER LOCATIONS TO BE COORDINATED WITH OTHER CEILING ELEMENTS AND DEVICES, AND BE CENTERED WITHIN CEILING TILES. SPRINKLER RELOCATIONS TO TAKE INTO ACCOUNT ABOVE CEILING WORK INCLUDING NEW EQUIPMENT STRUCTURAL ELEMENTS AND MODIFICATIONS FOR OTHER MEP SYSTEMS AS RELATED TO PROJECT SCOPE. COORDINATE FINAL PLACEMENT WITH ARCHITECT.

1 LEVEL 01 PLUMBING PLAN

1/4" = 1'-0"

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Y. Munoz*
Date: *Jan 04, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

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LEVEL 01 PLUMBING PLAN

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GENERAL ELECTRICAL SYMBOLS

	CONDUIT RUN CONCEALED IN CEILING OR WALL
	CONDUIT RUN CONCEALED IN OR BELOW FLOOR
	CONDUIT RUN EXPOSED ON CEILING OR WALL

ARROWHEAD DENOTES HOMERUN TO PANELBOARD. SLASH LINES INDICATE QUANTITY OF WIRE; NEUTRAL WIRE SHOWN AS A LONG LINE, PHASE WIRES AND SWITCH LEGS SHOWN AS SHORT LINES, AND GROUND WIRE SHOWN AS A LONG LINE WITH A DOT.

X	CONDUIT, WHERE "X" IS THE TYPE OR FUNCTION OF CONDUIT.

"C"	INDICATES CLOCK	"S"	INDICATES SOUND
"CO"	INDICATES CONDUIT ONLY	"T"	INDICATES TELEPHONE
"CTV"	INDICATES CCTV	"TVA"	INDICATES TELEVISION ANTENNA
"D"	INDICATES DATA	"TVC"	INDICATES CABLE TELEVISION
"FA"	INDICATES FIRE ALARM		
"I"	INDICATES INTERCOM		
"LV"	INDICATES LOW VOLTAGE		
"NC"	INDICATES NURSE CALL		

	CONDUIT STUBBED UP
	CONDUIT STUBBED DOWN
	FLEXIBLE CONDUIT
XX	CONDUIT TERMINATION:

"CS"	INDICATES CAP AND STAKE
"GB"	INDICATES GROUNDING BUSHING
"IB"	INDICATES INSULATING BUSHING
"TB"	INDICATES TERMINAL BUSHING

	CONDUIT SEAL
	MULTI-OUTLET ASSEMBLY
W W	WIREWAY
CT CT	CABLE TRAY
B B	BUSWAY (BUSDUCT)

	UNDERFLOOR DUCT SYSTEM:

- - - -	INDICATES POWER DUCT
– – – –	INDICATES TELEPHONE DUCT
- - - -	INDICATES SYSTEM DUCT

	VARIOUS SYMBOLS IDENTIFY LOCATION OF DIFFERENT TYPES OF OUTLETS OR CONNECTIONS TO UNDERFLOOR DUCT SYSTEM.
PB	PULL BOX
	JUNCTION BOX- EXPOSED OR IN CEILING
	JUNCTION BOX - WALL MOUNTED
HD	JUNCTION BOX FOR HAND DRYER CONNECTION - WALL MOUNTED
	JUNCTION BOX WITH FLEXIBLE CONDUIT AND FINAL CONNECTION TO EQUIPMENT.
PDQ 13	EQUIPMENT IDENTIFICATION TAG

FIRE ALARM SYMBOLS

S	FIRE ALARM MANUAL PULL STATION
SD	SMOKE DETECTOR
D	HEAT DETECTOR
	VOICE SPEAKER
SV	VOICE SPEAKER WITH VISUAL ALARM
V	VISUAL STROBE
AV	AUDIBLE GENERAL ALARM WITH VISUAL STROBE
RA	REMOTE INDICATOR LIGHT FOR SMOKE DETECTOR
A	AUDIBLE GENERAL ALARM
DGP	FIRE ALARM TRANSPONDER PANEL
FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL
MD	MAGNETIC DOOR HOLDER

POWER DEVICE SYMBOLS

WALL	FLOOR BOX	POKE-THROUGH	
			DUPLEX RECEPTACLE
			DOUBLE DUPLEX RECEPTACLE
			DUPLEX RECEPTACLE - SPLIT WIRED
			SINGLE RECEPTACLE
			COMBINATION DUPLEX RECEPTACLE TELEPHONE/ DATA SYSTEMS OUTLET
			COMBINATION DOUBLE DUPLEX RECEPTACLE TELEPHONE/ DATA SYSTEMS OUTLET
			SPECIAL RECEPTACLE - NEMA TYPE AS INDICATED
P	P	P	JUNCTION BOX WITH FLEXIBLE CONDUIT AND FINAL EQUIPMENT OR FURNITURE SYSTEM POWER CONNECTION

WP XX	ADJACENT LETTERS IN THE SYMBOLS ABOVE INDICATE THE FOLLOWING:

"CR"	INDICATES CHILD RESISTANT (SAFETY TYPE)
"E"	INDICATES RECEPTACLE FED BY EMERGENCY CIRCUIT
"EP"	INDICATES RECEPTACLE IS EXPLOSION PROOF
"GFI"	INDICATES RECEPTACLE HAS GROUND FAULT CIRCUIT INTERRUPTER
"IG"	INDICATES RECEPTACLE HAS ISOLATED GROUND
"TVS"	INDICATES RECEPTACLE HAS TRANSIENT VOLTAGE SURGE SUPPRESSION
"WP"	INDICATES RECEPTACLE HAS WATERPROOF COVER
"XX"	INDICATES RECEPTACLE CIRCUIT NUMBER

	DUPLEX RECEPTACLE - CEILING MOUNTED
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP
	CLOCK OUTLET RECEPTACLE
	CLOCK OUTLET AND CLOCK FOR INTEGRATED CLOCK SYSTEM.
USB	DUPLEX RECEPTACLE WITH (2) USB PORTS
USB	OUTLET WITH (4) USB PORTS
TC	TIME CLOCK
PC	PHOTOCELL
OS XX	CEILING OR WALL MOUNTED OCCUPANCY SENSOR
DM XX	WALL MOUNTED DIMMABLE SWITCH

POWER EQUIPMENT SYMBOLS

	SURFACE MOUNTED DISTRIBUTION PANELBOARD
	SURFACE MOUNTED BRANCH CIRCUIT PANELBOARD
	RECESSED MOUNTED BRANCH CIRCUIT PANELBOARD
1-HDP-1	SWITCHBOARDS, DISTRIBUTION PANELBOARDS, MOTOR CONTROL CENTERS, PANELBOARDS, CABINETS, AND RELATED EQUIPMENT

INDICATES LEVEL ON WHICH PANEL IS LOCATED - G, B, 1, 2, ETC.
INDICATES TYPE, CODED AS FOLLOWS:
INDICATES PANEL NUMBER

1 HDP 1

"C"	CRITICAL OR COMPUTER	"L"	208/120V, OR 208V
"D"	DISTRIBUTION	"MCC"	MOTOR CONTROL CENTER
"E"	EMERGENCY	"P"	POWER
"H"	480/277V, OR 480V	"Q"	EQUIPMENT
"ISP"	ISOLATION	"R"	RECEPTACLE
"K"	KITCHEN	"S"	STANDBY
"L"	LIGHTING	"SWBD"	SWITCHBOARD
		"XR"	X-RAY

AS	NON-FUSED DISCONNECT SWITCH, "AS" INDICATES AMPERE RATING OF SWITCH
AS/AF	FUSED DISCONNECT SWITCH, "AS" INDICATES AMPERE RATING OF SWITCH AND "AF" INDICATES AMPERE RATING OF FUSE
	MAGNETIC MOTOR STARTER - NEMA SIZE AS INDICATED
AS	COMBINATION MOTOR STARTER AND NON-FUSED DISCONNECT, "AS" INDICATES AMPERE RATING OF SWITCH
M	UTILITY METER
T	TRANSFORMER
BGB	BUILDING GROUND BOX
ST	SHUNT TRIP
SPD	SURGE PROTECTION DEVICE
CM	CUSTOMER METER
EPO	EMERGENCY POWER OFF MUSHROOM PUSHBUTTON CONTROL STATION

SECURITY SYMBOLS

	PUSH-BUTTON STATION

"DB" DOORBELL
"DR" DOOR RELEASE

	BUZZER
	BELL
CH	CHIME
T TH	LOW VOLTAGE TRANSFORMER WITHIN PLENUM BOX
CCTV	CLOSED CIRCUIT TELEVISION CAMERA
CR	CARD READER
ES	ELECTRIC STRIKE
DC	DOOR CONTACT
MS	MOTION SENSOR

COMMUNICATIONS SYMBOLS

TTC	TELEPHONE TERMINAL CABINET

WALL	FLOOR BOX	POKE-THROUGH	
			TELEPHONE OUTLET
			DUPLEX TELEPHONE OUTLET
			DATA SYSTEMS OUTLET
			DUPLEX DATA SYSTEMS OUTLET
			COMBINATION TELEPHONE/ DATA SYSTEMS OUTLET
T	T/D	D	JUNCTION BOX WITH FLEXIBLE CONDUIT AND FINAL EQUIPMENT OR FURNITURE SYSTEM CONNECTION. SUBSCRIPTS INDICATE THE FOLLOWING: "T" - TELEPHONE "D" - DATA SYSTEMS "T/D" - COMBINATION TELEPHONE/ DATA SYSTEMS

SUBSCRIPT INDICATES THE FOLLOWING FOR BELOW WALL MOUNTED OUTLETS, (U.N.O.):

"H"	HANDICAP MOUNTED AT 48" A.F.F.
"P"	PAY PHONE MOUNTED AT 54" A.F.F.
"W"	WALL MOUNTED AT 54" A.F.F.

I	INTERCOM, WALL OR CEILING MOUNTED
S	SPEAKER, WALL OR CEILING MOUNTED

HEALTHCARE CALL SYMBOLS

2	STAFF/ EMERGENCY STATION
3	PATIENT CALL STATION
4	SINGLE CORRIDOR DOME ZONE LIGHT
7	MULTIPLE CORRIDOR DOME ZONE LIGHT
8	DUTY STATION
9	STAFF DUTY STATION
23	CODE BLUE STATION

This sheet of drawings has not been reviewed for code compliance.

Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation.

LIGHTING SYMBOLS

F1 1a	2' X 4' LIGHTING FIXTURE.
F1 1a	2' X 2' LIGHTING FIXTURE.
F1 1a	1' X 4' LIGHTING FIXTURE.
F1 1a	LINEAR LIGHTING FIXTURE- LENGTH AS INDICATED.
F1 1a	WALL MOUNTED LINEAR LIGHTING FIXTURE- LENGTH AS INDICATED.
F1 1a F1 1a	INCANDESCENT, HID, OR LED LIGHTING FIXTURE.
F1 1a F1 1a	WALL MOUNTED INCANDESCENT, HID, OR LED LIGHTING FIXTURE
F1 E1	2' X 4' LIGHTING FIXTURE CONNECTED TO EMERGENCY CIRCUIT.
F1 E1	LINEAR LIGHTING FIXTURE CONNECTED TO EMERGENCY CIRCUIT.
F1 E1 F1 E1	INCANDESCENT, HID, OR LED LIGHTING FIXTURE CONNECTED TO EMERGENCY CIRCUIT.

LIGHTING FIXTURES: "F1" INDICATES LIGHTING FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION AND MOUNTING. "1" INDICATES CIRCUIT NUMBER "a" INDICATES SWITCH CONTROL. SHADING OF LIGHTING FIXTURE OR "E" INDICATES LIGHTING FIXTURE CONNECTED TO EMERGENCY CIRCUIT.

F1 E2	BATTERY PACK, EMERGENCY LIGHTING UNIT
	REMOTE HEAD CONNECTED TO BATTERY PACK.
	TRACK LIGHTING

NEW #3 E3	"#X" INDICATES INSCRIPTION, ARROWS, AND SINGLE OR DOUBLE FACED, AS SHOWN BELOW. SHADED QUADRANTS INDICATES DIRECTION OF LIGHTED FACES.
NEW #21 E5	
NEW #3N E3	
NEW #21N E5	
EXISTING #3E E3	
EXISTING #21E E5	

"#1"	FIRE ESCAPE	"#14"	TRIANGLE
"#2A"	STAIRS	"#15"	ELEVATOR
"#3"	EXIT	"#16"	FIRE ESCAPE
"#4"	FIRE ESCAPE →	"#17A"	STAIRS
"#5A"	STAIRS →	"#18"	EXIT
"#6"	EXIT →	"#19"	FIRE ESCAPE
"#7"	FIRE ESCAPE ←	"#20A"	STAIRS
"#8A"	STAIRS ←	"#21"	EXIT
"#9"	EXIT ←	"#22"	FIRE ESCAPE
"#10"	FIRE ESCAPE ←→	"#23A"	STAIRS
"#11A"	STAIRS ←→	"#24"	EXIT
"#12"	EXIT ←→		
"#13"	EXIT - RECESSED		

3W XXa	LIGHT SWITCH, SINGLE POLE UNLESS NOTED OTHERWISE:

"a"	INDICATES LIGHTS CONTROLLED
"D"	INDICATES DIMMER SWITCH
"K"	INDICATES KEY OPERATED
"LV"	INDICATES LOW VOLTAGE
"MC"	INDICATES MOMENTARY CONTACT
"P"	INDICATES PILOT LIGHT
"TH"	INDICATES THERMAL OVERLOAD PROTECTION
"XX"	INDICATES CIRCUIT NUMBER
"WP"	INDICATES WEATHERPROOF
"2P"	INDICATES 2 POLE
"3P"	INDICATES THREE POLE
"3W"	INDICATES THREE-WAY
"4W"	INDICATES FOUR-WAY

GENERAL NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF LIGHTING AND CONTROLS, RECEPTACLES, COMMUNICATIONS DEVICES, FIRE ALARM DEVICES, AND LIFE SAFETY DEVICES.

2. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF HVAC, PLUMBING, AND FIRE PROTECTION EQUIPMENT.

3. REFER TO PANEL DIVISION LINES FOR BRANCH CIRCUIT HOMERUN PANELBOARD DEMARCATION LINES, UNLESS NOTED OTHERWISE.

4. BRANCH CIRCUIT WIRING FOR 120 VOLT 20 AMP CIRCUITS WIRED TO 208Y/120V SYSTEMS SHALL BE AS FOLLOWS: A. GENERAL RECEPTACLES AND LIGHTING LOADS: UP TO 100 FEET IN LENGTH: 3#12, 1#12N, 1#12G -3/4"C. OVER 100 FEET IN LENGTH: 3# 10, 1#10N, 1#10G -3/4"C.

5. BRANCH CIRCUIT WIRING FOR 277 VOLT 20 AMP CIRCUITS WIRED TO 480Y/277V SYSTEMS SHALL BE AS FOLLOWS: A. LIGHTING LOADS: UP TO 150 FEET IN LENGTH: 3# 12, 1#10N, 1#12G -3/4"C. OVER 150 FEET IN LENGTH: 3#10, 1#8N, 1#10G -3/4"C.

6. DISTANCES FOR BRANCH CIRCUIT WIRING, AS INDICATED IN NOTES 4 & 5 ABOVE, SHALL BE MEASURED FROM THE FINAL OCPD TO THE CENTER OF THE BRANCH CIRCUIT LOAD. SIZES ARE A MINIMUM AND CONTRACTOR MAY BE REQUIRED TO UP-SIZE TO ACCOUNT FOR VOLTAGE DROP.

7. BRANCH CIRCUIT CONDUCTORS SIZED AS INDICATED IN NOTES 4 & 5 ABOVE AND/OR ON PLAN SHALL BE ROUTED TO EACH ELECTRIC DEVICE CONNECTED TO THE INDICATED BRANCH CIRCUIT. PROVIDE WIRENUTS AND PIGTAILS SIZED TO MATCH THE CORRESPONDING OCPD LISTED IN THE BRANCH CIRCUIT WIRING SCHEDULE FOR ELECTRICAL DEVICE TERMINATIONS WHERE THE ELECTRICAL DEVICE LUGS CANNOT ACCOMMODATE THE INCREASED CONDUCTOR SIZE INDICATED ABOVE, U.N.O.

8. REFER TO THE BRANCH CIRCUIT WIRING SCHEDULE FOR MINIMUM INSTALLATION CRITERIA. BRANCH CIRCUIT WIRING SPECIFIED IN NOTES AND/OR ON PLAN OR OTHER SCHEDULES SHALL TAKE PRECEDENCE OVER THE INFORMATION PROVIDED IN THE SCHEDULE.

9. PROVIDE AN EQUIPMENT GROUNDING SCREW WITHIN THE RECEPTACLE OUTLET BOX FOR RECEPTACLES WITHOUT A SIDE-MOUNTED GROUNDING SCREW FOR TERMINATION OF THE BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR.

10. ELECTRICAL DEVICE BRANCH CIRCUIT WIRING LEGEND:

L6-30R — NEMA RECEPTACLE TYPE
1-LP-1; 1,3 — PANELBOARD; CIRCUITS

11. MOUNTING HEIGHTS OF ELECTRICAL ITEMS SHALL BE AS LISTED BELOW ABOVE FINISHED FLOOR TO CENTERLINE, UNLESS NOTED OTHERWISE ON ARCHITECTURAL DRAWINGS OR AS REQUIRED BY CODE:

A. GENERAL RECEPTACLES	18"
B. PATIENT RECEPTACLES	18"
C. GENERAL TELE AND DATA OUTLETS	18"
D. PATIENT TELE AND DATA OUTLETS	18"
E. GENERAL TOGGLE SWITCHES	48"
F. FIRE ALARM PULL STATIONS	48"
G. SECURITY CALL STATIONS	48"
H. CLOCK AND PAGING SPEAKER OUTLETS	84"
I. FIRE ALARM AUDIO VISUAL DEVICES	80"
J. GENERAL WALL MOUNTED LIGHTS	90"
K. CORRIDOR WALL SCONCES (>4" DEEP)	66"
L. EXIT SIGNS	90"
M. INDIVIDUAL DISCONNECTS AND STARTERS	60"
N. GROUPED DISCONNECTS AND STARTERS	> 12" < 72"
O. PANELBOARD OVERCURRENT DEVICES	> 12" < 72"

13. CABLING AND OUTLETS SHALL BE FURNISHED AND INSTALLED BY THE OWNER'S COMMUNICATIONS CONTRACTOR . COORDINATE RACEWAY REQUIREMENTS WITH COMMUNICATIONS CONTRACTOR.

14. TELECOMMUNICATIONS CABLING, OUTLETS, AND OVERHEAD PAGING EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE HOSPITAL COMMUNICATIONS CONTRACTOR, NNSI, UNDER CONTRACT TO THE GC. PROVIDE SEPARATE LINE ITEM IN BID FORM FOR NNSI. EC SHALL COORDINATE RACEWAY REQUIREMENTS WITH COMMUNICATIONS CONTRACTOR.

15. FIRE ALARM DEVICES AND PROGRAMMING SHALL BE PROVIDED BY THE HOSPITAL FIRE ALARM MAINTENANCE CONTRACTOR, HONEYWELL, UNDER CONTRACT TO THE EC. PROVIDE A SEPARATE LINE ITEM IN BID FORM FOR JCI/SIMPLEX.

16. PROVIDE NEW NURSE CALL DEVICES AS INDICATED IN THE DOCUMENTS. NEW DEVICES SHALL BE PRODUCTS OF THE EXISTING NURSE CALL SYSTEM MANUFACTURER, RAULAND RESPONDER IV. MODIFICATIONS TO THE NUSE CALL SYSTEM SHALL BE PERFORMED BY THE HOSPITAL PAGING SYSTEM MAINTENANCE CONTRACTOR, BEACON COMMUNICATIONS. CONTACT ANDREAS KACZANOWSKI -303-750-6500.

17. PROVIDE EMPTY RACEWAY FOR PATIENT MONITORING SYSTEM. PATIENT MONITORING CABLING AND OUTLETS SHALL BE FURNISHED AND INSTALLED BY THE OWNER'S PATIENT MONITORING VENDOR, GE, UNDER SEPARATE CONTRACT. COORDINATE RACEWAY REQUIREMENTS WITH PATIENT MONITORING VENDOR.

CODES AND STANDARDS

DESIGNED UNDER THE FOLLOWING CODES AND STANDARDS:
2023 NATIONAL ELECTRICAL CODE
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL ENERGY CONSERVATION CODE
2021 INTERNATIONAL FIRE CODE
2009 ANSI A117.1, ACCESSIBILITY REQUIREMENTS
ANSI/ASME A17.1, SAFETY CODE FOR ELEVATORS
NFPA 72 NATIONAL FIRE ALARM CODE

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: R. Lowman
Date: Dec 29, 2023
2021 INTERNATIONAL CODES & 2023 NEC

RSN: 1771774
Permit #: 23-2406108-LT

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12/22/2023

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Health ONE

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Issued For:	CONSTRUCTION DOCUMENTS
Date:	12/22/2023

REVISIONS

NO	DESCRIPTION	DATE

E000

ELECTRICAL SYMBOLS , ABBREVIATIONS & NOTES

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RSN: 1771774 | PERMIT# 23-2406108 -LT

This sheet of drawings has not been reviewed for code compliance.

SPECIFICATIONS

DIVISION 16000 - ELECTRICAL

1. GENERAL

A. Requirements

1. Products and execution shall be provided for a complete and fully operational electrical system throughout the extent of the project, in conformance with applicable codes, laws, ordinances and agency standards of governing bodies having jurisdiction, and in strict accordance with the contract documents, and building standards.

2. Products, including equipment, devices, fixtures, and materials shall be new unless noted otherwise, UL listed, and bear appropriate label.

3. Execution, including preparation, installation, starting, and testing shall be performed by skilled trades personnel, in compliance with the associated manufacturers recommendations, and coordinated with the other construction trades.

B. Applicable Codes

1. National Electrical Code	NEC
2. International Building Code	IBC
3. International Energy Conservation Code	IECC

C. Applicable Laws and Agency Standards

1. American National Standards Institute	ANSI
2. American Society for Testing and Materials	ASTM
3. Americans with Disabilities Act	ADA
4. Association of Edison Illuminating Companies	AEIC
5. Certified Ballast Manufacturers	CBM
6. Electrical Testing Laboratories	ETL
7. Electronic/Telecommunications Industries Association	EIA/TIA
8. Energy Policy Act of 1992	EPACT
9. Federal Aviation Administration	FAA
10. Illuminating Engineering Society of North America	IESNA
11. Institute of Electrical and Electronics Engineers	IEEE
12. Insulated Cable Engineers Association	ICEA
13. National Electrical Manufacturers Association	NEMA
14. National Fire Protection Association	NFPA
15. Underwriters' Laboratories	UL

D. Approvals

1. Fire Alarm and Life Safety Documents shall be prepared and submitted to the Local Fire Department for their approval of system expansion, layout, circuiting, equipment and device type. The base building fire alarm and life safety system manufacturer/installer shall be retained to produce or update the building fire alarm and life safety documents, and to make final connections and alterations to the existing system. Approved drawings shall be submitted for review prior to construction.

E. Submittals

1. Product Data shall be prepared and submitted for review prior to construction for the following products: cabinets, access panels, supports, wire, fuses, circuit breakers, receptacles, toggle switches, disconnect switches, motor starters, contactors, lighting fixtures, ballasts, lamps, controls, fire alarm devices and life safety devices.

2. Shop Drawings shall be prepared and submitted for review prior to construction for the following products: distribution panelboards, branch panelboards, transformers.

3. Manufacturers Instructions shall be prepared and submitted prior to construction including installation manuals with application conditions and limitations for electrical apparatus use, storage, handling, protection, examination, preparation, installation, and starting.

4. Project Record Documents shall be prepared using AutoCAD or equivalent CAD package. Project Record Documents shall be submitted on reproducible media prior to project completion for electrical systems. Record actual location of equipment, devices, fixtures, etc. Record actual routing of overhead feeders. Record actual routing of feeders below slab and branch circuits within or below slab.

5. Maintenance Data shall be prepared and submitted prior to project completion for electrical apparatus including operation manuals and maintenance manuals.

F. Coordination

1. Electrical Engineer: Notify the Engineer of any conflicting design information or any design intentions which are not readily interpreted from the contract documents prior to any product selection or execution of work. Notify the Engineer of any products which are damaged, unsuitable, incompatible, or non-compliant with any applicable codes or ordinances of any governing bodies having lawful jurisdiction.

2. Construction Trades: Coordinate work with other construction trades.

3. Building Management: Meet on site with the building engineer to become familiar with building standards. Normal building working hours shall be recognized. After-hours work or temporary services shall be with prior written approval from building management. Enclose construction area from other areas to prevent transmission of dust, dirt and noise into other existing tenant areas. Product and waste transfer shall be coordinated with building management for scheduling of the elevators, deliveries, and waste removal.

4. Existing Building Systems: Review building standards with the building engineer. Perform a site visit to verify the existing site conditions. Costs associated with unforseen conditions as result of not performing a site visit shall not be an entitlement for an increase to the contract. Construction shall be performed without interruption to the building power, communications, security, fire alarm and life safety systems, or interference to common areas, corridors, exits or existing tenants. Where any construction would interfere with the daily operations of the building or other tenants, after-hours work or temporary services shall be provided at no increase to the contract.

G. Warrantee and Guarantee

1. Provide warrantee and manufacturers certificate for each product, minimum of one year or longer as specified, from the date of occupancy. Repair and/or replace any equipment, devices, fixtures, materials, etc. with defect as required at no increase to the contract.

2. Provide guarantee of installation for a period of one year from the date of occupancy. Repair and/or reinstall any work with defect as required at no increase to the contract. Provide guarantee of rework for a period of one year from the completion of repair or reinstallation.

3. Damage caused to finishes, surfaces, ceiling tiles, equipment, etc. shall be repaired and/or replaced to match the pre-existing condition at no increase to the contract.

H. Pay fees and other charges incidental to the electrical work and obtain and pay for required liability and casualty insurance, permits, licenses, inspections, taxes, etc.

I. Construction shall be done during regular working hours and days, unless otherwise specified. Work required to be performed during overtime hours or days shall be as indicated.

J. Allow for 8 man-hours of training to the Owners staff for the operation of the electrical systems.

K. Substitutions are not acceptable.

2. PRODUCTS

A. Cabinets, enclosures and access panels shall be code gage steel with baked enamel finish and flangeless hinges and fasteners. Equipment bases shall be 3 inch high concrete, steel braced and reinforced with 1/4 inch chamfer, and shall extend a minimum of 2 inches around base of equipment. Vibration isolation shall be spring elements in suspended rods and isolation pads below equipment, electrical connections shall be flexible conduit.

B. Conduits shall be hot-dipped galvanized or electro-galvanized steel, minimum size shall be 3/4 inch, except power branch circuits may be 1/2 inch (unless noted otherwise) and flexible connections to recessed lighting fixtures which may be 3/8 inch. Flexible steel conduit shall be galvanized steel, with UL listed liquid tight jacket as required, for final connections to motors, recessed lighting fixtures, and life safety devices. Supports, including channels, angles, rods, and fasteners shall be hot-dipped galvanized steel. Manufacturer shall be Allied, LTV/Republic, Steelduct, or Wheatland.

C. Conduit fittings shall be steel, die cast fittings of pot metal are not acceptable. Electrical metallic tubing (EMT) fittings shall be compression type with insulated throats; set screw fittings are not acceptable. Intermediate metal conduit (IMC) and heavy wall conduit (HWG) fittings shall be of threaded joints; set screw and compression fittings are not acceptable. Manufacturer shall be Appleton, Crouse Hinds/Midwest, OZ/GGedney, Raco, Steel City, or T&B.

D. HCF-MC cable is acceptable for branch circuit wiring to feed new devices in existing walls. MC cable shall be terminated in a junction box in an accessible ceiling cavity within 24" of leaving the wall cavity. MC cable is not acceptable where not permitted per code, for feeders, or to feed mechanical equipment.

E. Outlet boxes for all toggle switches, receptacles, communications devices, fire alarm devices, and life safety devices shall include plaster rings, device plates, and cover plates where required. Provide boxes suitable for plenum, wet, or hazardous locations as required. Device cover plates shall be stainless steel painted to match finish. Multi-gang outlet boxes shall include suitable one-piece device cover plate. Outlets located on opposite sides of a partition shall be staggered by 12 inches, minimum. Manufacturer shall be Appleton, Raco, or Steel City.

F. Distribution panelboards shall be fully rated with copper phase, neutral, and ground bus, braced at 65,000 AIC for 480Y/277 Volt systems and 42,000 AIC for 208Y/120 Volt systems, or more to be greater than the available short circuit current. Isolated ground bus shall be as required. Overcurrent protection shall be fusible switches. Manufacturers shall be Cutler-Hammer, Siemens/ITE, or Square D.

G. Branch panelboards shall be fully rated with copper phase, neutral, and ground d at 14,000 AIC for 480Y/277 Volt systems and 10,000 AIC for 208Y/120 Volt systems, or more to be greater than the available short circuit current. Neutral bus shall be rated at 200 percent within panels serving non-linear loads. Isolated ground bus shall be as required. Overcurrent protection shall be Cutler-Hammer, Siemens/ITE, or Square D.

H. Individual motor starters shall include two sets of normally open contacts, one set of normally closed contacts, three overload relays, individually fused control transformer, hand-off-auto selector switch for automatic start, and pilot light(s) as required. Combination starter disconnects shall include fusible switches. Contactors shall be NEMA type, with replaceable coil and contact tips. Manufacturer shall be Cutler-Hammer, Siemens/ITE, or Square D.

I. Local disconnect switches for electrically operated equipment shall be heavy duty within enclosure suitable for the location. Fusible disconnect switches 800 Amps and larger shall be bolted pressure, load-break type. Fusible and non-fusible disconnect switches 600 Amps and smaller shall be quick-make, quick-break type. Manufacturer shall be Cutler-Hammer, Siemens/ITE, or Square D.

J. Overcurrent and short circuit protection within fusible switches shall be Class L current limiting time delay fuses for switches rated 800 Amps and larger, and Class RK-1 current limiting time delay fuses for switches rated 600 Amps and smaller. Manufacturer shall be Bussmann.

K. Transformers shall be copper wound, dry type ventilated, 115°C rise with NEMA standard voltage taps and sound ratings. Transformers serving non-linear loads shall be K-13 rated or better for the order and magnitude of harmonic content. Transformers serving isolated ground distribution systems shall be shielded isolation type. Manufacturer shall be Magnetek/Jefferson, Sola/Heavy Duty, Square D/Sorgel.

L. Grounding system, including service and equipment grounding and bonding, shall be in accordance with code and shall connect all electrically operated equipment. Provide a separate green ground wire for each branch circuit and feeder.

M. Receptacles shall be duplex NEMA 5-20R, back and side wired, specification grade, unless noted otherwise. Special receptacle configurations, duplex isolated ground receptacles, and duplex ground fault interrupter receptacles shall be as required or as indicated on the contract documents. General receptacle color shall be white and IG receptacle color shall be orange unless specified otherwise, verify color with Architect. Manufacturer shall be Bryant, Hubbell, Leviton, or Pass & Seymour.

N. Toggle switches shall be single pole 20 Amp, 120-277 Volt, back and side wired, specification grade, unless noted otherwise. Special switches, including 3-way, pilot light and momentary contact, shall be as required or as indicated on the contract documents. Color shall be white unless specified otherwise, verify color with Architect. Manufacturer shall be Bryant, Hubbell, Leviton, or Pass & Seymour.

O. Lighting contactors shall be enclosed and mechanically held, and shall include all required control modules, timeclocks, and remote photocells. Main contactors for panelboard feeders shall match the panel ratings. Multiple pole contactors for branch circuits shall be rated at 20 Amps, or more, as required for the specific load type. Manufacturer shall be ASCO 920 & 917 or Zenith MVP & MMC.

P. Lighting fixtures shall include all appropriate accessories, mounting frame and trim for ceiling type. Fluorescent fixtures shall include rapid-start standard-output electronic ballasts with ninety percent (90%) ballast factor and total harmonic distortion of (10%) or less, type or appropriate compact type lamps. Lighting fixtures shall include coordinated air handling capability, plenum rating, damp label, wet label, and shall be explosion proof where required. Lighting fixtures recessed within grid type ceilings shall include securing clips as required by the local authority. Fixture manufacturer shall be as indicated; Electronic ballast manufacturer shall be Advance, Motorola, or MagneTek with minimum 3 year warrantee; Lamp manufacturer shall Osram Sylvania, General Electric, or Phillips.

Q. New fire alarm devices provided within existing systems shall match existing device manufacturer and type. Strobes shall meet ADA guidlines for the application and shall be rated 75cd, except in sleeping areas which shall be rated 110cd. Strobes rated 15/75cd with 75cd on axis are not acceptable except in small conference rooms. Existing fire alarm devices shall be extended as required. Existing fire alarm equipment shall be expanded as required with any additional components for proper operation of new devices on existing equipment.

3. EXECUTION

A. Penetrations and channels in floors and walls shall be via cutting and coring as required for the size of product, only in accordance with the Architect and Engineer recommendations, and as scheduled with the building management. Patch and fill sleeves, inserts, penetrations, and channels with appropriate code approved fire safing or filling to match or restore the original fire rating of the construction.

B. Install 3 inch concrete pad below floor mounted equipment including distribution panelboards, transformers, etc.

C. Make final connections to vibrating equipment, fixtures, and devices with flexible metal conduit or liquid tight flexible metal conduit as required. Extend ground wire through flexible connections.

D. Install conduit, fittings, supports, etc. in accordance with codes, standards, and manufacturers recommendations. The voltages identified in the following schedules are line-to-line or line-to-neutral. Interior concealed locations are those locations which are above ceilings, within walls, within floor slabs, and within dedicated electrical rooms. Conduit installation shall be as follows unless noted otherwise:

Voltage Location	0V thru 50V	Above 50V thru 250V	Above 250V thru 600V	Above 600V
Interior Concealed	EMT Concealed	EMT	< 2"EMT > 2 1/1"IMC	HWG
Interior Exposed	EMT	< 2"EMT > 2 1/2"IMC	IMC	HWG
Exterior and Hazardous Locations	IMC	IMC	HWG	HWG

E. Installations within air handling spaces, including plenum ceilings and built up air handling systems shall be approved for plenum installation and shall be in strict accordance with all applicable codes.

F. Installations within hazardous locations shall be listed for the Classification and Division of hazard. Install wiring and conduit complete with seals and explosion proof fittings in strict accordance with all applicable codes.

G. Communications raceway shall include square outlet box and single or double gang flush wall opening as required for each telephone/data device. Conduits shall include pull strings and wide radius bends. Conduit stubs shall include insulating bushings. Conduit from outlet box shall be 1 inch minimum.

H. Install pull boxes, junction boxes, and outlet boxes in accordance with codes, standards, and manufacturers recommendations. Boxes shall include accessible covers, shall be fabricated of heavy gage galvanized steel, and shall be sized in accordance with code to adequately facilitate pulling and connecting the quantity and size of wires, cables, and feeders contained. Conduit terminations shall be made with bushings and locknuts. Supports for conduits and boxes shall be suspended directly to the building structural components and in no case shall they be attached to suspended ceiling grid, ductwork, or piping components.

I. Install feeders and branch circuit wiring in accordance with codes, standards, and manufacturers recommendations. Install normal power, emergency power, fire alarm, and life safety systems within continuous metal raceways. Install concealed security and communications wiring within continuous metal raceways. Separate each system into independent raceways. Provide cable supports as required. Terminate cables per code and manufacturers recommendations. Provide (2) hole lugs for cables 250 kcmil and larger. Power wiring insulation shall be as follows unless noted otherwise:

Wire Location	300 kcmil and smaller	350 kcmil and larger	Environmental Conditions
Interior Locations	THHN/THWN	XHHW	dry
Exterior Locations	THHN/THWN THHN/THWN	XHHW XHHW-2	damp wet

J. Install electrical distribution equipment and devices, including distribution panelboards, branch panelboards, motor starters, local disconnect switches, overcurrent protection, transformers, main contactors, receptacles, etc. in accordance with codes, standards, and manufacturers recommendations.

K. Install grounding systems in accordance with codes, standards, and manufacturers recommendations. Provide a #6 AWG bare copper conductor routed in 3/4" conduit to the building ground from a lug mounted on the communication equipment mounting board.

L. Install lighting and associated controls, including fixtures, ballasts, lamps, toggle switches, lighting contactors, etc in accordance with codes, standards, and manufacturers recommendations.

M. Install single and multiple device cover plates as required. Extend existing devices to finished surface as required.

N. Install fire alarm and other life safety systems in accordance with codes, standards, and manufacturers recommendations.

O. Install inscription plates and identification markings for products and wiring including the same inscriptions where indicated on the contract documents. Install plastic laminate nameplates on enclosures for each device within metering equipment, distribution panelboards, branch panelboards, motor starters, disconnect switches, transformers, and contactors. Nameplates shall be white with black core, 1-1/4 inches by 3 inches minimum, with 3/16 inch lettering, secured to equipment with two machine screws. Prepare and install type-written panel directory within each branch panel. Device plates shall be engraved for toggle switches and other devices whose function is not readily apparent. Markers shall be self-sticking for each wire and cable at terminations and at each accessible point in equipment and raceway.

P. Clean electrical apparatus prior to completion of construction. Keep work areas clean at all times.

Q. Alterations and Demolition of existing systems shall be as follows:

1. Provide all alterations and demolition of the existing electrical installation as required, including any incidental materials to execute all removal, rerouting, relocation, and any other modifications for proper accommodation of all new construction as indicated on the contract documents. All alterations and demolition shall be as indicated on the contract documents or as required, including any modifications not specifically identified on any contract documents but required to complete all new construction.

2. Provide all modifications to existing equipment as required or as indicated on the contract documents in strict accordance with the existing product manufacturers recommendations.

3. Existing raceway, wire and cable extending through the construction area but serving areas outside the contract shall be rerouted and reconnected as required. All modifications shall be without any interruption to the building power, communications, security, fire alarm and life safety systems, or interference to other areas or tenants. Where any modifications would interfere with the daily operations of the building or other tenants, after-hours work or temporary services shall be provided with prior written approval from the building.

4. Existing conduit, wire, cable, supports, hangers, and other electrical installation which is removed, shall be completely removed, back to the first device or that equipment which is unaffected by the modifications. Conduit which is buried in concrete or otherwise inaccessible may be abandoned and capped at each end. All wire and cable shall be removed from any abandoned conduit.

5. Existing electrical materials and equipment, including lighting fixtures, switches, receptacles, speakers, conduit, outlet boxes, fittings, wire, cable, and other equipment and devices which are removed shall remain the property of the Owner and shall be stored or discarded as directed.

6. Reuse existing electrical products as indicated on the contract documents only as is found practical. Examine the condition of all such products, determine suitability for re-use, and periodically notify the Architect/Engineer of findings for final acceptance of re-use. Wire and cable for new construction or extension of an existing installation shall be new, in no case shall existing wire and cable be reused.

RSN: 1771774
Permit #: 23-2406108-LT

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REVISIONS

NO	DESCRIPTION	DATE

E001

ELECTRICAL SPECIFICATIONS

TreanorHL NO. HC16222.2301.00

Autodesk Docs://HC16222 TMCA Master Files/2023-02243-00_MEPFP_R23.rvt
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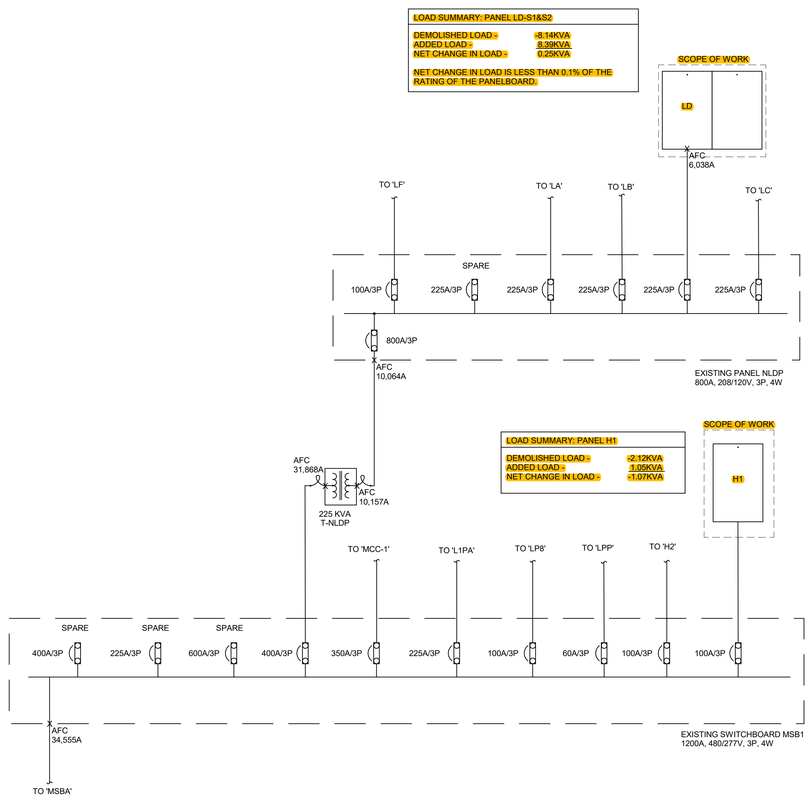
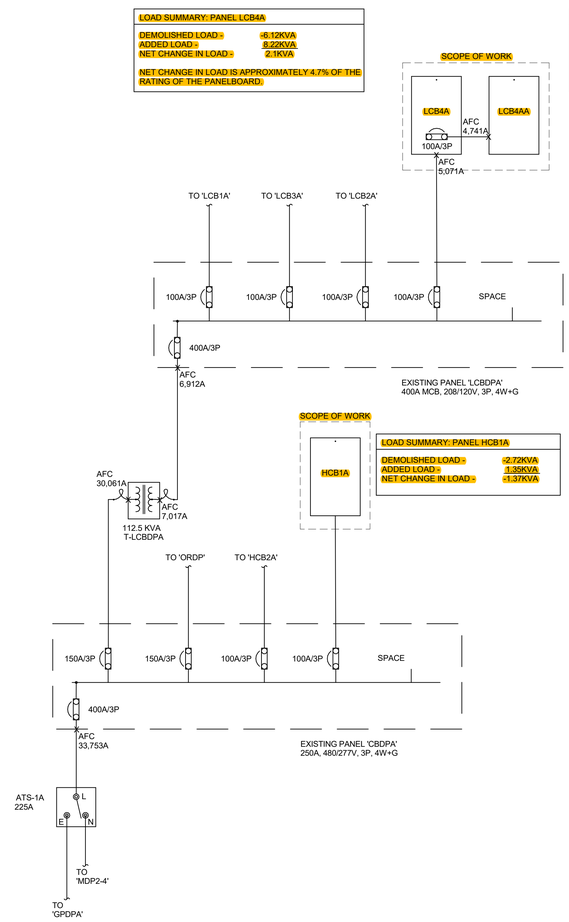
GENERAL NOTES:

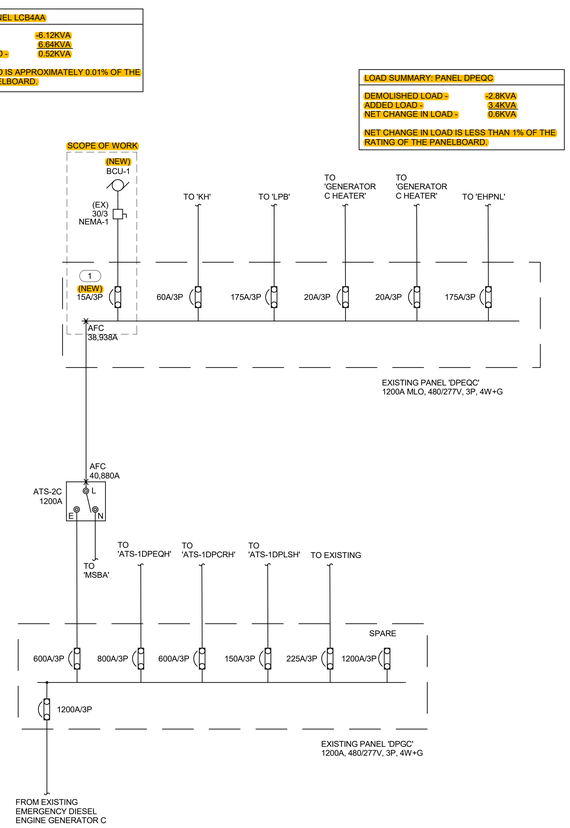
1. REFER TO ELECTRICAL SYMBOL LIST AND GENERAL NOTES ON SHEET E000.
2. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E001.
3. ELECTRICAL DISTRIBUTION IS EXISTING TO REMAIN, UNO.

KEYED NOTES: (#)

1. REPLACE EXISTING 20A/3P CB WITH NEW 15A/3P CB TO FEED BCU-1 WHICH REPLACES THE EXISTING FAN COIL UNIT. REFER TO SHEETS ED101 AND E101.







1 ELECTRICAL PARTIAL ONE-LINE DIAGRAM

NOT TO SCALE

Locate the required overcurrent Protection per 2023 NEC 240.21

110.14. Identify disconnects per 2023 NEC 110.22 and provide working space and egress to and around electrical equipment per 2023 NEC 110.26

Service Equipment shall be permanently And legibly marked to show the available Fault current and date. 2023 NEC 110.24(A)(B)

Provide a Grounding Electrode System bonded To the service equipment enclosure, grounded Conductors, and grounded electrode conductors Per 2023 NEC 250.50 and 250.104

Every circuit and circuit modification shall be provided with a legible and permanent description that complies with all of the following conditions as applicable (see 1-6). 2023 NEC 408.4

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: R. Lowman
Date: Dec 29, 2023
2021 INTERNATIONAL CODES & 2023 NEC

RSN: 1771774
Permit #: 23-2406108-LT

TREANORHL
1700 Blake Street, Suite #400
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Salas O'Brien
Engineered for Impact™

HCAI #: 123456789

12/22/2023

TREANORHL
THE MEDICAL CENTER AURORA
1501 S POTOMAC ST., AURORA, CO 80012

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Issued For:	CONSTRUCTION DOCUMENTS
Date:	12/22/23

REVISIONS

NO	DESCRIPTION	DATE

E002

ELECTRICAL PARTIAL ONE-LINE DIAGRAM

TreanorHL NO. HC16222.2301.00

Autodesk Docs://HC16222 TMCA Master Files/2023-02/240-00_MEPFP_R23.rvt
12/21/2023 4:33:40 PM

PANEL DESIGNATION: H1 (EX) — LOCATION: — MOUNTING: **SURFACE** — **FAULT DUTY: 14,000**

MLO: **X** — MAIN: — BUS: 125A — VOLTS: **480/277** — PHASE: **3** — WIRE: 4

EQUIPMENT DESCRIPTION	DMD	WATTS A	WATTS B	WATTS C	BRKR SIZE			BRKR SIZE	WATTS A	WATTS B	WATTS C	DMD	EQUIPMENT DESCRIPTION
LTG E CORR. OFFICES(EX)	G				20/1	1	2	20/1				G	LOWER LTG STAIRWELL(EX)
SPARE	G				20/1	3	4	20/1				G	SPARE
LTG OR LOCKERS(EX)	G				20/1	5	6	20/1				G	SPARE
LTG DR DINING & MED(EX)	G				20/1	7	8	20/1				G	SPARE
SPARE	G				20/1	9	10	20/1				G	SPARE
LTG ED	L			1050	20/1	11	12	20/1				G	SPARE
SPARE	G				20/1	13	14	20/1				G	SPARE
SPARE	G				20/1	15	16	20/1				G	SPARE
SPARE	G				20/1	17	18	20/1				G	SPARE
SPARE	G				20/1	19	20	20/1				G	SPARE
SPARE	G				20/1	21	22	20/1				G	SPARE
SPACE						23	24						SPACE

TOTAL "A"	0		0	0	1.1 CONN.KVA
TOTAL "B"		0	0	0	1.3 CONN. AMPS
TOTAL "C"		1050	1050	0	1.1 DEMAND KVA
TOTAL "A,B,C "			1050 CONN.		1.3 DEMAND AMPS
			1050 DEMAND		1.3 DESIGN KVA
			1313 DESIGN		1.6 DESIGN AMPS

NOTES:
1. LOADS SHOWN REPRESENT NEW LOAD ONLY.
2. ALL DEMOLISHED CIRCUITS SHALL BE MARKED AS SPARE AND BREAKER SWITCHED TO 'OFF' POSITION.
* PROVIDE NEW CIRCUIT BREAKER THAT MATCHES EXISTING BREAKER MANUFACTURER AND AIC RATING.

PANEL DESIGNATION: HCB1A (EX) — LOCATION: — MOUNTING: **SURFACE** — **FAULT DUTY: 14,000**

MLO: **X** — MAIN: — BUS: 125A — VOLTS: **480/277** — PHASE: **3** — WIRE: 4

EQUIPMENT DESCRIPTION	DMD	WATTS A	WATTS B	WATTS C	BRKR SIZE			BRKR SIZE	WATTS A	WATTS B	WATTS C	DMD	EQUIPMENT DESCRIPTION
LTG SURGERY(EX)	G				20/1	1	2	20/1				G	SPARE
LTG ED	L		596		20/1	3	4	20/1				G	SPARE
LTG ED	L			751	20/1	5	6	20/1				G	SPARE
SPARE	G				80/3	7	8	20/1				G	LTG DR LOUNGE(EX)
	G					9	10	20/1				G	SPARE
	G					11	12	20/1				G	SPARE
SPACE	G				20/1	13	14	20/1				G	SPACE
SPACE	G				20/1	15	16	20/1				G	SPACE
SPACE	G				20/1	17	18	20/1				G	SPACE
SPACE	G				20/1	19	20	20/1				G	SPACE
SPACE	G				20/1	21	22	20/1				G	SPACE
SPACE	G				20/1	23	24	20/1				G	SPACE

TOTAL "A"	0		0	0	1.3 CONN.KVA
TOTAL "B"		596	596	0	1.6 CONN. AMPS
TOTAL "C"		751	751	0	1.3 DEMAND KVA
TOTAL "A,B,C "			1347 CONN.		1.6 DEMAND AMPS
			1347 DEMAND		1.7 DESIGN KVA
			1684 DESIGN		2.0 DESIGN AMPS

NOTES:
1. LOADS SHOWN REPRESENT NEW LOAD ONLY.
2. ALL DEMOLISHED CIRCUITS SHALL BE MARKED AS SPARE AND BREAKER SWITCHED TO 'OFF' POSITION.
* PROVIDE NEW CIRCUIT BREAKER THAT MATCHES EXISTING BREAKER MANUFACTURER AND AIC RATING.

PANEL DESIGNATION: LCB4A (EX) — LOCATION: — MOUNTING: **SURFACE** — **FAULT DUTY: 10,000**

MLO: **X** — MAIN: — BUS: 125A — VOLTS: **208/120** — PHASE: **3** — WIRE: 4

EQUIPMENT DESCRIPTION	DMD	WATTS A	WATTS B	WATTS C	BRKR SIZE			BRKR SIZE	WATTS A	WATTS B	WATTS C	DMD	EQUIPMENT DESCRIPTION
RCPT RM-1738 (EX)	G				20/1	1	2	20/1				G	RCPT RM 1737 (EX)
RCPT RM-1738 (EX)	G				20/1	3	4	20/1				G	RCPT RM 1736 (EX)
RCPT RM-1735 (EX)	G				20/1	5	6	20/1				G	RCTP RM 1735, 1736 (EX)
HELIPAD LTG(EX)	G				20/1	7	8	20/1				G	RCPT RM 1745 (EX)
EM LTG (EX)	G				20/1	9	10	20/1				G	RCPT RM 1746 (EX)
RED CONE LTG (EX)	G				20/1	11	12	20/1				G	RCPT RM 1733 (EX)
RCPT 1733 (EX)	G				20/1	13	14	20/1				G	RCPT RM 1744, 1743 (EX)
RCPT 1744 (EX)	G				20/1	15	16	20/1				G	RCPT RM 1713 (EX)
RCPT 1725 (EX)	G				20/1	17	18	20/1				G	RCPT RM 1735 (EX)
RCPT 1731 (EX)	G				20/1	19	20	20/1				G	RCPT RM 1731 (EX)
RCPT 1729 (EX)	G				20/1	21	22	20/1				G	RCPT RM 1728 (EX)
RCPT RM 1727,1723 (EX)	G				20/1	23	24	20/1				G	RCPT RM 1727 (EX)
HALL RCPT RME 39 (EX)	G				20/1	25	26	20/1				G	RCPT RM 1720 (EX)
RCPT RM 1721 (EX)	G				20/1	27	28	20/1				G	RCPT RM 1740 (EX)
RCPT RM 1723 (EX)	G				20/1	29	30	20/1				G	RCPT RM 38 (EX)
NURSE STATION ED (EX)	G				20/1	31	32	20/1				G	RCPT NE NURSE (EX)
EM LTG (EX)	G				20/1	33	34	20/1				G	IT CLOSET (EX)
EM LTG (EX)	G				20/1	35	36	20/1				G	PACU IT CLOSET (EX)
HELIPAD WALL PACK LTG (EX)	G				20/1	37	38		1620			G	
CRASH CART	G		500		20/1	39	40	100/3		2820		G	LCB4AA (EX)
PLUGMOLD	G			1080	20/1	41	42				2200	G	

TOTAL "A"	0			1620	1620			8.2 CONN.KVA
TOTAL "B"		500		3320		2820		22.8 CONN. AMPS
TOTAL "C"			1080	3280			2200	8.2 DEMAND KVA
TOTAL "A,B,C "				8220 CONN.				22.8 DEMAND AMPS
				8220 DEMAND				8.2 DESIGN KVA
				8220 DESIGN				22.8 DESIGN AMPS

NOTES:
1. LOADS SHOWN REPRESENT NEW LOAD ONLY.
2. ALL DEMOLISHED CIRCUITS SHALL BE MARKED AS SPARE AND BREAKER SWITCHED TO 'OFF' POSITION.
* PROVIDE NEW CIRCUIT BREAKER THAT MATCHES EXISTING BREAKER MANUFACTURER AND AIC RATING.

PANEL DESIGNATION: LCB4AA (EX) — LOCATION: — MOUNTING: **SURFACE** — **FAULT DUTY: 10,000**

MLO: **X** — MAIN: — BUS: 125A — VOLTS: **208/120** — PHASE: **3** — WIRE: 4

EQUIPMENT DESCRIPTION	DMD	WATTS A	WATTS B	WATTS C	BRKR SIZE			BRKR SIZE	WATTS A	WATTS B	WATTS C	DMD	EQUIPMENT DESCRIPTION
RCPT RM 1718 (EX)	G				20/1	1	2	20/1				G	RCPT RM 1718 (EX)
RME 39 RCPT (EX)	G				20/1	3	4	20/1				G	RCPT RM 1716 (EX)
RME 39 RCPT (EX)	G				20/1	5	6	20/1			360	G	RME 35,40 RCPT (EX)
RME 35 RCPT (EX)	G				20/1	7	8	20/1				G	RME 40 RCPT (EX)
ED RCPTS	G		720		20/1	9	10	20/1		720		G	RME RN DESK RCPT
TRIAGE DISCHARGE DESK (EX)	G				20/1	11	12	20/1			540	G	RME RN DESK RCPT
TRIAGE KEYPAD (EX)	G				20/1	13	14	20/1	720			G	ED FRONT DESK
EM TRIAGE (EX)	G		180		20/1	15	16	20/1				G	UNDER CNTR LTG (EX)
EM TRIAGE LTG (EX)	G				20/1	17	18	30/2				G	PACU IT (EX)
RME RN/ RECEPTION RCPT	G	900			20/1	19	20					G	
ORANGE FALL HALL RCPT(EX)	G				20/1	21	22	20/1		600		G	COPY/PRINT*
LTG UNDER COUNTER (EX)	G				20/1	23	24	20/1			800	G	BLANKET WARMER*
RCPT RM 1733 (EX)	G				20/1	25	26	20/1				G	ER EXTERIOR LIGHT(EX)
RCPT RM 1733 (EX)	G				20/1	27	28	20/1				G	ER SIGN EAST (EX)
RCPT RM 1733 (EX)	G				20/1	29	30	20/1				G	PATHE SPEED CR (EX)
SECURITY DESK RCPT (EX)	G				20/1	31	32	20/1				G	X-RAY DEVELOPER (EX)
TIME CONTROL PANEL (EX)	G				20/1	33	34	20/1				G	CT INJECTOR ED (EX)
RME RN RCPTS	G			500	20/1	35	36	20/1				G	PACU WOMEN RM (EX)
DESK FRONT LOBBY RME (EX)	G				20/1	37	38	20/1				G	EXISTING LOAD
TRIAGE 1,2,3 (EX)	G				20/1	39	40	20/1		600		G	PYXIS*
TRIAGE 2,3, RCPT FRNT DSK(EX)	G				20/1	41	42	20/1				G	NURSE CALL CABINET (EX)

TOTAL "A"	900		1620	720			6.6 CONN.KVA
TOTAL "B"		900	2820		1920		18.4 CONN. AMPS
TOTAL "C"			2200			1700	6.6 DEMAND KVA
TOTAL "A,B,C "			6640 CONN.				18.4 DEMAND AMPS
			6640 DEMAND				6.6 DESIGN KVA
			6640 DESIGN				18.4 DESIGN AMPS

NOTES:
1. LOADS SHOWN REPRESENT NEW LOAD ONLY.
2. ALL DEMOLISHED CIRCUITS SHALL BE MARKED AS SPARE AND BREAKER SWITCHED TO 'OFF' POSITION.
* PROVIDE NEW CIRCUIT BREAKER THAT MATCHES EXISTING BREAKER MANUFACTURER AND AIC RATING.

PANEL DESIGNATION: LD-S1 (EX) — LOCATION: — MOUNTING: **SURFACE** — **FAULT DUTY: 10,000**

MLO: **X** — MAIN: — BUS: 225A — VOLTS: **208/120** — PHASE: **3** — WIRE: 4

EQUIPMENT DESCRIPTION	DMD	WATTS A	WATTS B	WATTS C	BRKR SIZE			BRKR SIZE	WATTS A	WATTS B	WATTS C	DMD	EQUIPMENT DESCRIPTION
SUB-WAITING (EX)	G				20/1	1	2	20/1				G	ED REG. HALL RCPT (EX)
SPARE	G				20/1	3	4	20/1				G	TRIAGE WAITING RCPT (EX)
SPARE	G				20/1	5	6	20/1				G	TRIAGE WAITING RCPT(EX)
ED REG. DESK RCPT	G	540			20/1	7	8	20/1				G	RME 4 RCPT(EX)
SPARE	G				20/1	9	10	20/1		180		G	RME 5 RCPT (EX)
SPARE	G				20/1	11	12	20/1				G	ROOF RCPT(EX)
EXAM 5 EXHAUST FAN (EX)	G				20/1	13	14	20/1				G	ED HALL RCPT(EX)
SUB-WAITING/ TLT RCPT	G		900		20/1	15	16	20/1		540		G	RME RN RCPT
SUB-WAITING RCPT	G			720	20/1	17	18	20/1			500	G	RME RN RCPT
RME RN RCPT	G	900			20/1	19	20	20/1				G	SPARE
WAITNG RCPT	G		900		20/1	21	22	20/1		180		G	XME-1 RCPT
SPARE	G				20/1	23	24	20/1			350	G	ICE MACHINE
PACU IT CLOSET (EX)	G				30/2	25	26	20/1	180			G	COUNTER RCPT TRIAGE (EX)
	G					27	28	20/1		180		G	ED SECURITY RCPT (EX)
SPARE	G				20/2	29	30	20/1				G	TRIAGE 2 RCPT (EX)
	G					31	32	20/1				G	TRIAGE 3, RME 2, RME 3 (EX)
SPARE	G				20/1	33	34	20/1				G	POLICE DESK RCPT (EX)
SPARE	G				20/1	35	36	20/1				G	ED WAITING LTG & RCPT(EX)
SPARE	G				20/1	37	38	20/1				G	SPARE
AD-EDV*	G		894		15/2	39	40	20/1				G	SPARE
	G			894		41	42	20/1				G	SPARE

TOTAL "A"	1440		1620	180			7.9 CONN.KVA
TOTAL "B"		2694	3774		1080		21.8 CONN. AMPS
TOTAL "C"		1614	2464			850	7.9 DEMAND KVA
TOTAL "A,B,C "			7858 CONN.				21.8 DEMAND AMPS
			7858 DEMAND				7.9 DESIGN KVA
			7858 DESIGN				21.8 DESIGN AMPS

NOTES:
1. LOADS SHOWN REPRESENT NEW LOAD ONLY.
2. ALL DEMOLISHED CIRCUITS SHALL BE MARKED AS SPARE AND BREAKER SWITCHED TO 'OFF' POSITION.
* PROVIDE NEW CIRCUIT BREAKER THAT MATCHES EXISTING BREAKER MANUFACTURER AND AIC RATING.

PANEL DESIGNATION: LD-S2 (EX) — LOCATION: — MOUNTING: **SURFACE** — **FAULT DUTY: 10,000**

MLO: **X** — MAIN: — BUS: 225A — VOLTS: **208/120** — PHASE: **3** — WIRE: 4

EQUIPMENT DESCRIPTION	DMD	WATTS A	WATTS B	WATTS C	BRKR SIZE			BRKR SIZE	WATTS A	WATTS B	WATTS C	DMD	EQUIPMENT DESCRIPTION
ED RCPT (EX)	G				20/1	43	44	20/1	36			L	UC ED LTG
ED RM 46,47 RCPT(EX)	G				20/1	45	46	20/1				G	SPARE
ED RM 44, 45 RCPT (EX)	G				20/1	47	48	20/1				G	SPARE
ED RM 38,39,40 RCPT (EX)	G				20/1	49	50	20/1				G	SPARE
SPARE	G				15/1	51	52	20/1				G	SPARE
VENDING MACHINE	G			500	20/1	53	54	20/1				G	RCPT WALL BOILER RM (EX)
VENDING MACHINE (EX)	G				20/1	55	56	20/1				G	SPARE
VENDING MACHINE (EX)	G				20/1	57	58	20/1				G	SPARE
VENDING MACHINE (EX)	G				20/1	59	60	20/1				G	SPARE
VENDING MACHINE (EX)	G				20/1	61	62	20/1				G	SPARE
SPARE	G				20/1	63	64	20/1				G	SPARE
SPARE	G				20/1	65	66	20/1				G	SPARE
SPARE	G				20/1	67	68	20/1				G	SPARE
HEATER FAN (EX)	G				20/1	69	70	20/1				G	SPARE
SPARE	G				20/1	71	72	20/1				G	SPARE
MAG HOLD ED HALL (EX)	G				20/1	73	74	20/1				G	ED RM 48,49 RCPT(EX)
SPARE	G				20/1	75	76	20/1				G	ED RM 53,54 RCPT (EX)
SPACE						77	78	20/1				G	ED RM 51,53 RCPT (EX)
SPACE						79	80						
SPACE						81	82						
SPACE						83	84						

TOTAL "A"	0		36	36			0.5 CONN.KVA
TOTAL "B"		0	0		0		1.5 CONN. AMPS
TOTAL "C"			500			0	0.5 DEMAND KVA
TOTAL "A,B,C "			536 CONN.				1.5 DEMAND AMPS
			536 DEMAND				0.5 DESIGN KVA
			545 DESIGN				1.5 DESIGN AMPS

NOTES:
1. LOADS SHOWN REPRESENT NEW LOAD ONLY.
2. ALL DEMOLISHED CIRCUITS SHALL BE MARKED AS SPARE AND BREAKER SWITCHED TO 'OFF' POSITION.
* PROVIDE NEW CIRCUIT BREAKER THAT MATCHES EXISTING BREAKER MANUFACTURER AND AIC RATING.

LIGHTING FIXTURE SCHEDULE

TAG	DESCRIPTION	LAMP TYPE/CRI-CT	FIXTURE VOLT	FIXTURE WATTS	MANUFACTURER	ITEM NUMBER	REMARKS
L1	2X2 RECESSED LED	LED-80-4000K	120/277	30	LITHONIA	EPANL-2X2-3400LM-80CRI-40K-MIN1-EZT-MVOLT	NOTES-1,2,3,4
L2	2X4 RECESSED LED	LED-80-4000K	120/277	38	LITHONIA	EPANL-2X4-4000LM-80CRI-40K-MIN1-EZT-MVOLT	NOTES-1,2,3,4
L3	6" ROUND HEALTHCARE DOWNLIGHT	LED-80-4000K	120/277	19.7	GOTHAM	EVO6P-40-20-DFR-SOL-MVOLT-EZ1	NOTES-1,2,3,4
L4	VANITY LIGHT	LED-90-3000K	120/277	20	WAC	WS-180327-30-BN	NOTES-1,2,3,4
L5	2FT UNDER CABINET LIGHT	LED-80-3500K	120	8.9	LITHONIA	RLNK-L24-120-35K-80CRI-M4	NOTES-1,2,3,4
X1	EXIT SIGN - CEILING	LED	120/277	4.5	LITHONIA	EDG-EDGR SERIES	NOTES-1,2,3,4,5

NOTES:
1. MANUFACTURERS' CATALOG NUMBERS ARE INTENTIONALLY INCOMPLETE; COORDINATE REQUIRED TRIM KITS, MOUNTING BRACKETS, LAMPS, FINISHES, ETC. WITH THE ARCHITECT, CONTRACT
2. VERIFY TYPE OF CEILING OR WALL FOR MOUNTING OF LIGHTING FIXTURES PRIOR TO ORDERING.
3. COORDINATE LAMP COLOR TEMPERATURES WITH ARCHITECT/LIGHTING DESIGNER.
4. SEE ELECTRICAL AND ARCHITECTURAL PLANS/ DETAILS FOR ALL LIGHT FIXTURE QUANTITIES.
5. PROVIDE DIRECTIONAL CHEVRONS/ ARROWS AS INDICATED ON PLANS.

Locate the required overcurrent Protection per 2023 NEC 240.21

110.14. Identify disconnects per 2023 NEC 110.22 and provide working space and egress to and around electrical equipment per 2023 NEC 110.26

Every circuit and circuit modification shall be provided with a legible and permanent description that complies with all of the following conditions as applicable (see 1-6). 2023 NEC 408.4

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: R. Lowman
Date: Dec 29, 2023
2021 INTERNATIONAL CODES & 2023 NEC

RSN: 1771774
Permit #: 23-2406108-LT

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COLORADO LICENSED JONATHAN GRAY 48502 PROFESSIONAL ENGINEER
12/22/2023

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THE MEDICAL CENTER AURORA
1501 S POTOMAC ST., AURORA, CO 80012

Health ONE

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Issued For:	CONSTRUCTION DOCUMENTS
Date:	12/22/2023

REVISIONS

NO	DESCRIPTION	DATE

E003

ELECTRICAL SCHEDULES

TreanorHL NO. HC16222.2301.00

Autodesk Docs://HC16222 TMCA Master Files/2023-02/243-00_MEPFP_R23.rvt
12/21/2023 4:33:52 PM

COM*check* Software Version COMcheckWeb
Interior Lighting Compliance Certificate

Project Information

Energy Code:	2021 IECC
Project Title:	TMCA ED Renovation
Project Type:	Alteration

Construction Site:	Owner/Agent:	Designer/Contractor:
1501 S Potomac St Aurora, Colorado 80012		SALAS O'BRIEN 9250 E COSTILLA AVE. GREENWOOD VILLAGE, Colorado 80112

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Reception/RME RN (Healthcare Facility:Nurses Station)	610	1.17	714
2-Patient Exam Rooms (Healthcare Facility:Exam/Treatment)	1235	1.40	1729
3-Restrooms (Common Space Types:Restrooms)	105	0.63	66
4-Queing/Vestibule (Healthcare Facility:Corridor/Transition <8 ft wide)	1214	0.71	862
5-Waiting Rooms (Common Space Types:General Seating Area)	759	0.23	175
6-TLT 1012A (Common Space Types:Restrooms)	53	0.63	33
		Total Allowed Watts =	3579

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Reception/RME RN (Healthcare Facility: Nurses Station, 610 sq.ft.)				
LED: L1: 2X2 Panel: Other:	1	10	30	300
LED: L2: 2X4 Panel: Other:	1	2	38	76
LED: L3: Downlight: Other:	1	11	20	217
LED: L5: Undercabinet Light: Other:	1	4	9	36
Patient Exam Rooms (Healthcare Facility: Exam/Treatment, 1235 sq.ft.)				
LED: L1: 2X2 Panel: Other:	1	14	30	420
LED: L2: 2X4 Panel: Other:	1	8	38	304
Restrooms (Common Space Types: Restrooms, 105 sq.ft.)				
LED: L3: Downlight: Other:	1	4	20	79
LED: L4: Other:	1	2	20	40
Queing/Vestibule (Healthcare Facility: Corridor/Transition <8 ft wide, 1214 sq.ft.)				
LED: L1: 2X2 Panel: Other:	1	20	30	600
LED: L3: Downlight: Other:	1	4	20	79
Waiting Rooms (Common Space Types: General Seating Area, 759 sq.ft.)				
LED: L1: 2X2 Panel: Other:	1	13	30	390
TLT 1012A (Common Space Types: Restrooms, 53 sq.ft.)				

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
LED: Other:	1	2	20	39
			Total Proposed Watts =	2579

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jonathan Grant, P.E. — Signature — 12/22/2023
Name - Title Signature Date

COLORADO LICENSED JONATHAN GRANT 48502 PROFESSIONAL ENGINEER

COM*check* Software Version COMcheckWeb
Inspection Checklist

Energy Code: 2021 IECC

Requirements: 0.0% were addressed directly in the COM*check* software

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

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3.1 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, corridors, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more within 20 minutes of when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor. Lights not turned off by occupant sensors is done so by time-switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.3 [EL20][1]	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 can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) general lighting in each zone permitted to turn on upon occupancy in control zone, 3) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 4) 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.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2, C405.2.2.1 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1.1) have time-switch controls and functions detailed in sections C405.2.2.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

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

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.4, C405.2.4.1, C405.2.4.2 [EL23][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.5 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.7 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8 [EL27][2]	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).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9.1, C405.9.2 [EL28][2]	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.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.10 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.1.1 [EL30][2]	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.11, C405.11.1 [EL31][2]	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.1.1 [FI57][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.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.5 [FI16][3]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

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Permit #: *23-2406108-LT*

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12/22/2023

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E004

ELECTRICAL ENERGY COMPLIANCE

TreanorHL NO. HC16222.2301.00

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1 Level 01 - ELECTRICAL DEMOLITION PLAN

1/4" = 1'-0"

GENERAL NOTES:

1. REFER TO ELECTRICAL SYMBOL LIST AND GENERAL NOTES ON SHEET E000.
2. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E001.
3. REMOVE EXISTING CEILING MOUNTED FIRE ALARM DEVICES TO ACCOMMODATE RENOVATION AND RE-INSTALL IN NEW CEILING.
4. REMOVE EXISTING CEILING MOUNTED SECURITY AND LOW-VOLTAGE DEVICES AND RE-INSTALL IN NEW CEILING, UNO.
5. SALVAGE NURSE CALL DEVICES AND RE-INSTALL IN NEW LOCATION AS INDICATED.
6. SALVAGE BRANCH CIRCUIT HOMERUNS FOR EXTENSION TO NEW DEVICES WHERE PRACTICABLE.

KEYED NOTES: #

1. SALVAGE BRANCH CIRCUIT SERVING POWERED DOOR FOR RE-USE.
2. DEMOLISH EXISTING 20A/3P CIRCUIT BREAKER IN PANEL DPEQC-1 SERVING 'FCU-1' AND SALVAGE ASSOCIATED BRANCH CIRCUIT FOR RE-USE.
3. DEMOLISH EXISTING 20A/2P CIRCUIT BREAKER IN PANEL LD-39/41 SERVING 'AD-1' AND SALVAGE ASSOCIATED BRANCH CIRCUIT FOR RE-USE.
4. SALVAGE BRANCH CIRCUIT SERVING METAL DETECTOR FOR RE-USE.

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Permit #: 23-2406108-LT

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ED101

LEVEL 01 ELECTRICAL POWER DEMOLITION PLAN

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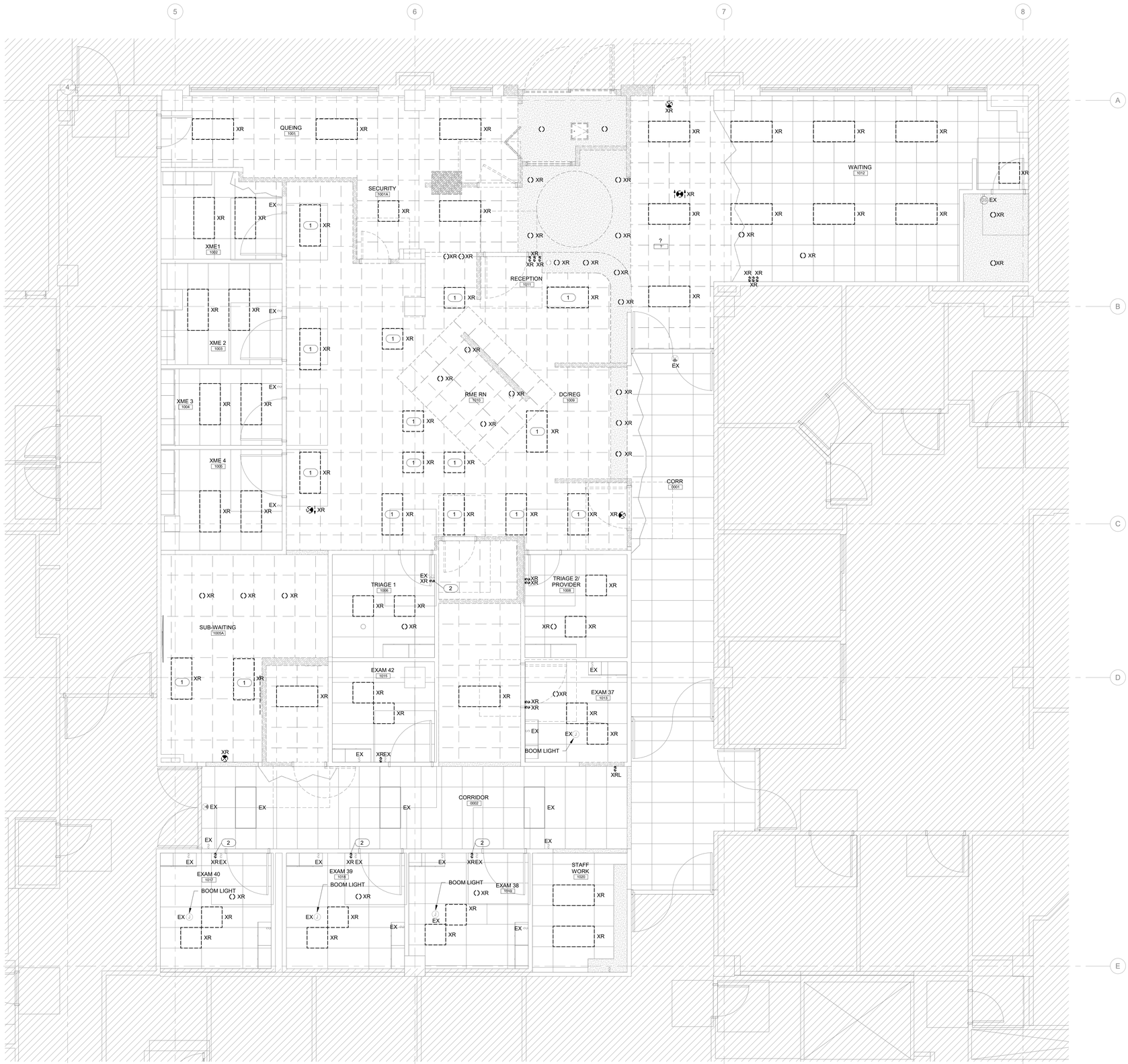

1 Level 01 - ELECTRICAL LIGHTING DEMOLITION PLAN

1/4" = 1'-0"

GENERAL NOTES:

1. REFER TO ELECTRICAL SYMBOL LIST AND GENERAL NOTES ON SHEET E000.
2. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E001.
3. SALVAGE LIGHTING BRANCH CIRCUIT HOMERUNS FOR EXTENSION TO NEW FIXTURES WHERE PRACTICABLE.

KEYED NOTES: (#)

1. LED LIGHT FIXTURE TO BE SALVAGED AND RETURNED TO OWNER FOR ATTIC STOCK.
2. DEMOLISH SWITCH AND ALL WIRING ASSOCIATED WITH DOWNLIGHT. PROVIDE AND INSTALL BLANK COVERPLATE. REPLACE CEILING TILE.

This sheet of drawings has not been reviewed for code compliance.

RSN: *1771774*
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LEVEL 01 ELECTRICAL LIGHTING DEMOLITION PLAN

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1 OVERALL ELECTRICAL POWER PLAN

3/16" = 1'-0"

GENERAL NOTES:

1. REFER TO ELECTRICAL SYMBOL LIST AND GENERAL NOTES ON SHEET E000.
2. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E001.
3. REFER TO PARTIAL ONE-LINE ON SHEET E002.

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E100

ELECTRICAL OVERALL PLAN

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1 Level 01 - ELECTRICAL POWER PLAN

1/4" = 1'-0"

GENERAL NOTES:

1. REFER TO ELECTRICAL SYMBOL LIST AND GENERAL NOTES ON SHEET E000.
2. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E001.
3. REFER TO PARTIAL ONE-LINE ON SHEET E002.
4. REMOVE EXISTING CEILING MOUNTED FIRE ALARM DEVICES, "ED SAFE" LIGHT FIXTURES, AND SECURITY CAMERAS TO ACCOMMODATE RENOVATION AND RE-INSTALL IN NEW CEILING.
5. SALVAGE NURSE CALL DEVICES AND RE-INSTALL IN NEW LOCATION AS INDICATED. MODIFY EXISTING RACEWAY AND PROVIDE NEW CABLING. COORDINATE REQUIREMENTS WITH NURSE CALL SYSTEM VENDOR.
6. WIRE NEW ELECTRICAL DEVICES TO PANELBOARD 'LD', UNO.
7. BRANCH CIRCUIT DESIGNATIONS ARE BASED ON EXISTING CIRCUITS NOTED ON WALL PLATES AND PANEL DIRECTORIES AND INDICATE DESIGN INTENT ONLY. UTILIZE EXISTING BRANCH CIRCUITS SERVING AREA WHERE PRACTICABLE. PROVIDE NEW BRANCH CIRCUITS FROM EXISTING PANELBOARDS AS REQUIRED AND CONFIRM AVAILABLE CIRCUITS IN FIELD.

KEYED NOTES: (#)

1. EXTEND EXISTING BRANCH CIRCUIT SERVING METAL DETECTOR TO NEW LOCATION. COORDINATE WIRING REQUIREMENTS WITH INSTALLED EQUIPMENT TO BE RELOCATED.
2. EXTEND EXISTING BRANCH CIRCUIT SERVING POWER-OPERATED DOOR TO ELECTROMAGNETIC DOORHOLDER. WIRE VIA FIRE RELAY TO DE-ENERGIZE AND RELEASE DOOR UPON ACTIVATION OF AREA SMOKE DETECTION AND GENERAL FIRE ALARM.
3. EXTEND EXISTING BRANCH CIRCUIT SERVING POWER-OPERATED DOOR TO NEW LOCATION. COORDINATE WIRING REQUIREMENTS AND INTERFACE WITH ACCESS CONTROLS WITH DOOR MANUFACTURER AND SECURITY CONTRACTOR.
4. PROVIDE SINGLE CIRCUIT STEEL PLUGMOLD EQUAL TO WIREMOLD G2000 SERIES WITH RECEPTACLES EVERY 18 INCHES ON CENTER AND CIRCUITED TO LCB4A-41.
5. EXTEND EXISTING BRANCH CIRCUIT FEEDING EXISTING VAV CONTROL POWER TO NEW VAV.
6. PROVIDE NEW 15A/3P CIRCUIT BREAKER IN PANEL DPEQC-1 AND EXTEND BRANCH CIRCUIT PREVIOUSLY FEEDING 'FCU-1' TO NEW 'BCU-1'. RE-USE EXISTING DISCONNECT SWITCH AS PRACTICABLE. REFER TO ONE-LINE ON SHEET E002 AND MECHANICAL DRAWINGS FOR MORE INFORMATION.
7. PROVIDE NEW 15A/2P CIRCUIT BREAKER IN PANEL LD-39/41 AND EXTEND BRANCH CIRCUIT TO NEW 'AD-EDV'. PROVIDE NEW NEMA 1 - 240V, 30A/3P DISCONNECT. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
8. EXTEND EXISTING BRANCH CIRCUIT FEEDING EXISTING ROOF MOUNTED EXAUST FAN SERVING TLT-1012A TO NEW ROOF MOUNTED EF-1. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.

110.14. Identify disconnects per 2023 NEC 110.22 and provide working space and egress to and around electrical equipment per 2023 NEC 110.26

Every circuit and circuit modification shall be provided with a legible and permanent description that complies with all of the following conditions as applicable (see 1-6). 2023 NEC 408.4

210.8(B) Other Than Dwelling Units. All 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less, installed in the locations specified in 210.8(B)(1) through (B)(12) shall have ground-fault circuit-interrupter protection for personnel.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: R. Lowman
Date: Dec 29, 2023
2021 INTERNATIONAL CODES & 2023 NEC

RSN: 1771774
Permit #: 23-2406108-LT

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LEVEL 01 ELECTRICAL POWER PLAN

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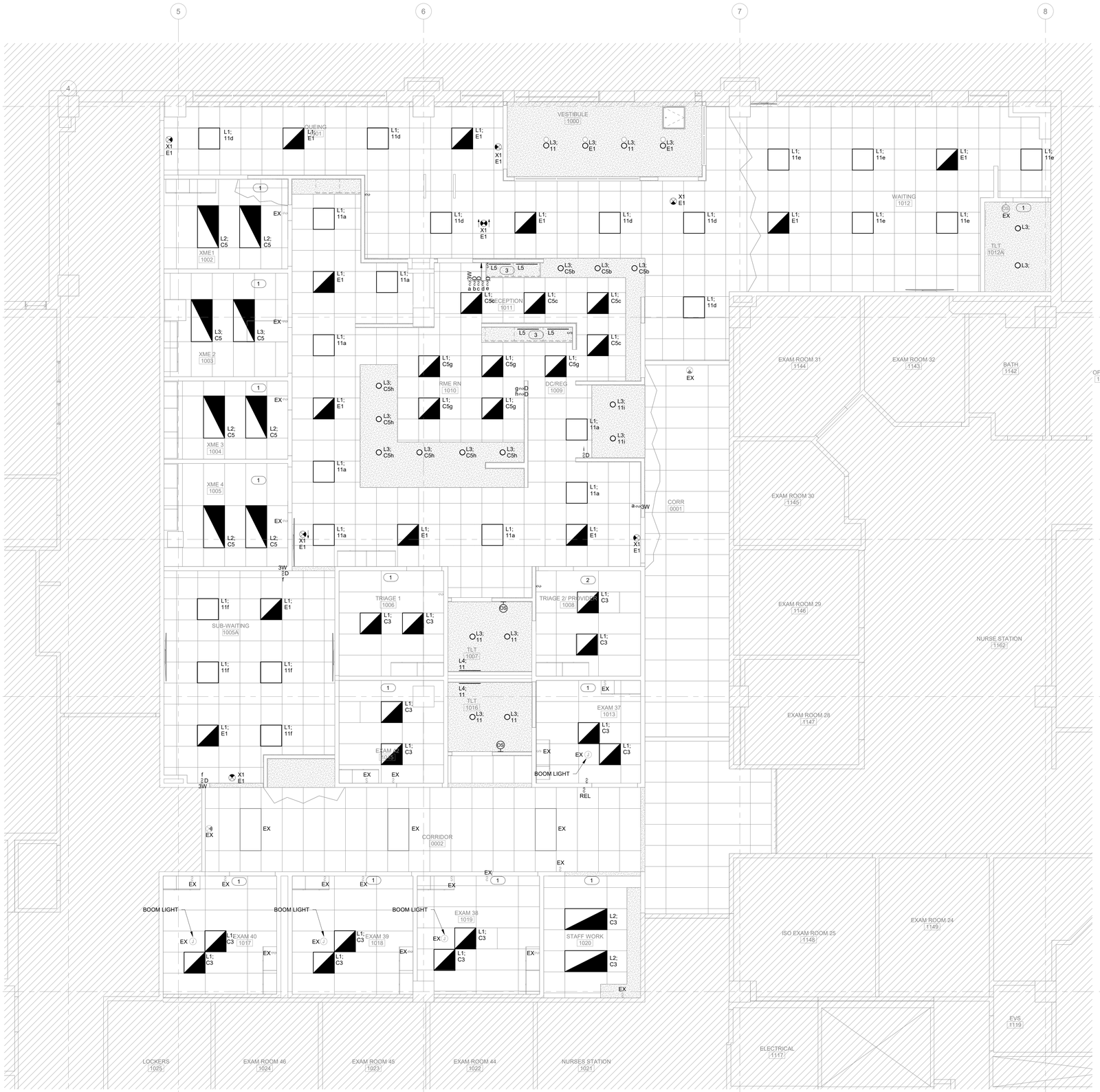

1 Level 01 - ELECTRICAL LIGHTING PLAN

1/4" = 1'-0"

GENERAL NOTES:

1. REFER TO ELECTRICAL SYMBOL LIST AND GENERAL NOTES ON SHEET E000.
2. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E001.
3. REFER TO LIGHT FIXTURE SCHEDULE ON SHEET E003.
4. UTILIZE SALVAGED LIGHTING FIXTURES WHERE PRACTICABLE, NOTED AS 'REL'.
5. WIRE NORMAL POWERED LIGHTING FIXTURES FROM PANEL H1, UNO.
6. WIRE CRITICAL LIGHTING FIXTURES, DENOTED WITH 'Cxx', FROM PANEL HCB1A, UNO.
7. WIRE LIFE SAFETY LIGHTING FIXTURES AND EXIT SIGNS, DENOTED WITH 'E1', FROM LIFE SAFETY BRANCH CIRCUIT FEEDING THE AREA.
8. BRANCH CIRCUIT DESIGNATIONS ARE BASED ON EXISTING CIRCUITS NOTED ON WALL PLATES AND PANEL DIRECTORIES AND INDICATE DESIGN INTENT ONLY. UTILIZE EXISTING BRANCH CIRCUITS SERVING AREA WHERE PRACTICABLE. PROVIDE NEW BRANCH CIRCUITS FROM EXISTING PANELBOARDS AS REQUIRED AND CONFIRM AVAILABLE CIRCUITS IN FIELD.

KEYED NOTES: (#)

1. WIRE NEW LIGHTING VIA EXISTING CONTROL AND BRANCH CIRCUIT SERVING THE ROOM.
2. RELOCATE CEILING MOUNTED FIXTURE/ DEVICE TO NEAREST AVAILABLE SPACE TO ACCOMMODATE NEW LIGHTING LAYOUT. CEILING MODIFICATIONS MAY BE REQUIRED.
3. WIRE NEW UNDER CABINET LIGHTING TO PANEL LD - 44.

Provide Emergency Illumination that complies with 2023 NEC 700.16

Suspended Ceiling Systems and the Luminaires They support shall meet the requirements of 410.36(B) 2023 NEC

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: R. Lowman
Date: Dec 29, 2023
2021 INTERNATIONAL CODES & 2023 NEC

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