RSN#1312716
PERMIT# 2018-1509651-LT

THE MEDICAL CENTER OF AURORA

NUCLEAR MEDICINE EQUIPMENT UPGRADE

1444 SOUTH POTOMAC ST., SUITE 310 AURORA CO 80012

PROJECT TEAM

OWNER:

MEDICAL CENTER OF AURORA
1501 S. POTOMAC STREET
AURORA, CO 80012

CONTACT:
TROY DUGAN
720.474.3577
troy.dugan@healthonecares.com

ARCHITECT:

TOM THOMPSON ARCHITECT
2510 SOUTH OSCEOLA STREET
DENVER, COLORADO 80219

CONTACT:
TOM THOMPSON
720.989.6084
TomThompsonArchitect@gmail.com

DESIGNER / DRAFTSMAN:

THE DESIGN PLOT
PARKER, COLORADO 80138

CONTACT:
THOMAS HECKER
303.565.7282 CELL
303.338.7869
thomas.hecker@healthonecares.com

MEP ENGINEER:

WSP USA
5613 DTC PARKWAY, SUITE 500
GREENWOOD VILLAGE, CO 80111

CONTACT:
JON SHEPARD, P.E.
303.694.4755 OFFICE
303.720.626.7582 CELL
jonathon.shepard@wsp.com

STRUCTURAL

NEXT LEVEL
MATT NICHOLS
PRINCIPAL

303.260.9456 OFFICE
matt@nlengineers.com

EQUIPMENT VENDOR

GE HEALTHCARE
TONY SCHRADER
PROJECT MANAGER

800.568.0329 OFFICE
720.467.4290 CELL
tony.schrader@ge.com

CONTRACTOR:

THE TKM GROUP
ARVADA, CO 80007

CONTACT:
TODD KOECHLEIN
303.715.8526
todd.koechlein@tkmgroupllc.com

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN STRICT CONFORMANCE WITH ALL LOCAL LAWS, ORDINANCES, RULES, REGULATIONS AND CODES OF THE GOVERNMENT AUTHORITIES HAVING JURISDICTION.
2. DIMENSIONS ARE TO FINISHED FACE OF GYPSUM WALL BOARD OR FACE OF EXISTING BASE BUILDING CONSTRUCTION, UNLESS NOTED OTHERWISE.
3. VERIFY ALL ROUGH-IN DIMENSIONS AND ELECTRICAL REQUIREMENTS FOR EQUIPMENT. COORDINATE OUTLET PLACEMENT WITH CASEWORK.
4. CONTRACTOR SHALL NOTIFY OWNER BEFORE COMMENCING WORK ON ANY ITEMS NOT CLEARLY DEFINED.
5. CHANGES OR DEVIATIONS FROM THE PLANS MADE WITHOUT THE CONSENT OF OWNER ARE UNAUTHORIZED.
6. G.C. TO PROVIDE SEALANT AROUND ALL PLUMBING FIXTURES, PIPING AND EQUIPMENT ABUTTING OR PENETRATING A WALL OR PARTITION. COLOR TO MATCH.
7. INSTALL FIRE-SAFING INSULATION, PUTTY OR FIRE-RATED INTUMESCENT-TYPE SEALANT (INCLUDING PIPE-SLEEVES, DAMMING BOARDS AND ACCESSORIES) AROUND ALL PENETRATIONS THROUGH FIRE-RATED PARTITIONS, FLOORS AND WALLS PER MANUFACTURER'S TESTED INSTALLATION FOR APPLICATION AND REQUIRED RATING.
8. ALL ELECTRICAL AND MECHANICAL DEVICES OR APPLIANCES INSTALLED ON THIS PROJECT SHALL BE UL LISTED.
9. WHERE REMODELING IS TO OCCUR, THE CONTRACTOR SHALL PRESENT A WORKABLE PHASING PLAN TO THE OWNER PRIOR TO COMMENCEMENT OF WORK WITHIN THE AFFECTED AREA. CONTRACTOR SHALL ALSO KEEP THE OWNER APPRISED OF ANY VARIATIONS IN PHASING PLAN THAT WILL AFFECT THE OPERATION OF THE OWNER'S BUSINESS.
10. CONTRACTOR SHALL PRESENT A WORKABLE PLAN TO MAINTAIN SECURITY AND SAFETY OF THE OWNER'S BUSINESS FOR AREAS AFFECTED BY CONSTRUCTION DURING THE ENTIRE PHASE OF CONSTRUCTION.
11. CONTRACTOR SHALL MINIMIZE DISRUPTION BY CONSTRUCTION WORK TO THE ONGOING BUSINESSES AND TRAFFIC IN THE VICINITY. CONSTRUCTION AREA SHALL BE ENCLOSED TO KEEP OTHER AREAS FREE OF DUST, DEBRIS & NOISE.
12. EMPLOYEES OR SUBCONTRACTORS OF THE GENERAL CONTRACTOR SHALL REFRAIN FROM PROFANE OR OFFENSIVE LANGUAGE WHILE ON THE PROJECT SITE AND SHALL REFRAIN FROM USING LOUD RADIOS OR OTHER MUSIC PLAYERS WHILE OWNERS AND/OR DESIGN TEAM IS ONSITE.
13. GENERAL CONTRACTOR SHALL COORDINATE APPROPRIATE PARKING ACCOMMODATIONS FOR EMPLOYEE AND SUBCONTRACTOR VEHICLES WITH OWNER PRIOR TO COMMENCEMENT OF WORK.
14. G.C. SHALL COORDINATE APPROPRIATE CONSTRUCTION STAGING AREAS AND TRASH REMOVAL. G.C. WILL BE RESPONSIBLE FOR OBTAINING A DUMPSTER AND TRASH PICKUP FROM JOB SITE ON A REGULAR BASIS.
15. SUBSTITUTIONS OF SPECIFIED PRODUCTS MAY NOT OCCUR UNLESS SPECIFICALLY NOTED ON DRAWINGS THAT "OR EQUAL" IS ACCEPTABLE. OWNER APPROVAL IS REQUIRED FOR ALL SUBSTITUTIONS CONSIDERED BY G.C. TO MEET "OR EQUAL" REQUIREMENTS PRIOR TO BID SUBMISSION/INSTALLATION.
16. APPROVAL OF SHOP DRAWINGS DOES NOT IMPLY APPROVAL OF A SUBSTITUTED COLOR, SIZE OR FUNCTION OF AN ITEM SPECIFIED ON THESE CONTRACT DOCUMENTS UNLESS ATTENTION IS SPECIFICALLY CALLED TO THE REVISION AND APPROVAL IS GIVEN.
17. G.C. SHALL KEEP TOILET FACILITIES ON SITE CLEAN AND USABLE.
18. NO PLUMBING CLEAN-OUTS SHALL EXTEND INTO ROOM MORE THAN IS MINIMALLY REQUIRED. NO PIPE SHALL BE EXPOSED AND THERE SHALL BE ESCUTCHEON PLATES AT ALL GYPSUM WALL BOARD PENETRATIONS.
19. MULTIPLE SWITCHES SHALL BE GANGED IN SINGLE BOXES WITH COVER PLATE COLORS/ DEVICES TO BE WHITE, SWITCH PLATES SHALL ALIGN. .
20. GENERAL CONTRACTOR SHALL PROVIDE FIRE SPRINKLER DESIGN/BUILD AS PART OF SCOPE OF WORK. ALL SPRINKLER HEADS SHALL BE FLUSH MOUNTED CONCEALED STYLE TO MATCH HOSPITAL STANDARDS. SPRINKLER HEADS SHALL BE PLACED IN CENTER OF AFFECTED CEILING TILE.

DRAWING INDEX

ARCHITECTURAL

A0.0 COVER
A0.1 CODE COMPLIANCE PLAN
A1.0 DEMOLITION PLAN / EXTERIOR WALL DETAIL
A1.1 DIMENSION / TAG / FINISHES PLAN

STRUCTURAL

SX SOFFIT STUD REMOVAL & REPLACEMENT

ELECTRICAL & MECHANICAL

P0.1 PLUMBING LEGENDS AND NOTES
P1.1 PLUMBING ISOMETRIC, FLOOR PLAN & SCHEDULE
E0.1 ELECTRICAL LEGENDS AND NOTES
E0.2 ELECTRICAL SPECIFICATIONS
E2.1 ELECTRICAL POWER & SPECIAL SYSTEMS PLAN
E3.1 ELECTRICAL ONE-LINE & SCHEDULES
ED2.1 ELECTRICAL DEMO POWER & SPECIAL SYSTEMS PLAN

GE SITE SPECIFIC PLANS

01 COVER SHEET
02 EQUIPMENT LAYOUT
03 STRUCTURAL-ELECTRICAL LAYOUT
04 STRUCTURAL DETAILS
05 POWER / NETWORK - POWER DISTRIBUTION
06 ENVIRONMENT - DELIVERY - INTERCONNECTIONS
07 EQUIPMENT DIMENSIONS
08 HVAC
09 DISCLAIMER - SITE READINESS

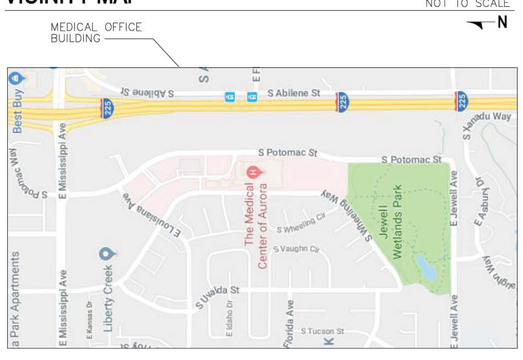
This plan was reviewed for adopted codes and **NOT** for compliance with **ADA** or **FHA** accessibility requirements. Contact 800-949-4232 (**ADA**) and 303-894-7822 x 325 (**FHA**) for federal accessibility requirements that apply to your project.

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. 2015 IBC 105.4.

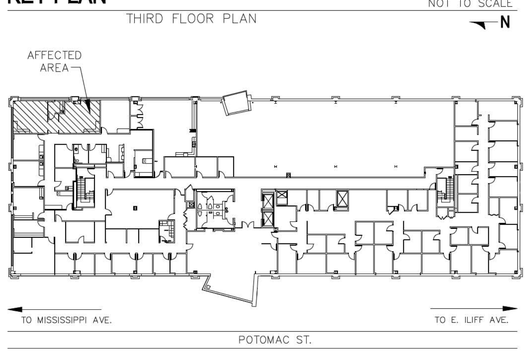
VICINITY MAP

NOT TO SCALE



KEY PLAN

NOT TO SCALE



VENDOR LIST

LOW VOLTAGE & DATA

GUARANTEE SYSTEMS
21250 EAST 31ST CIRCLE
AURORA, CO 80011
CONTACT: DARRIN MARTIN
303.618.8085

CODE INFORMATION SUMMARY

PROJECT NAME:	NUCLEAR MEDICINE CAMERA UPGRADE
PROJECT ADDRESS:	1444 S. POTOMAC ST., SUITE #310 AURORA, CO 80012
CONSTRUCTION TYPE:	II-B (IBC) NFPA: TYPE II (000)
OCCUPANCY CLASSIFICATION:	GROUP B (BUSINESS)
PROJECT SQUARE FOOTAGE:	LIMITS OF AFFECTED AREA: 690 SF
OCCUPANT LOAD FACTOR:	100 SF/OCC (BUSINESS)
OCCUPANT LOAD:	690 SF/100 = 7 OCCUPANTS (MAXIMUM)
APPLICABLE CODES:	2015 INTERNATIONAL BUILDING CODE (IBC) 2015 INTERNATIONAL MECHANICAL CODE (IMC) 2015 INTERNAMTIONAL FUEL GAS CODE (IFGC) 2015 INTERNATIONAL FIRE CODE (IFC) 2015 INTERNATIONAL PLUMBING CODE (IPC) 2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC) 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) 2017 NATIONAL ELECTRICAL CODE (NEC) 2009 ICC/ANSI A117.1 CHAPTER 22 BUILDINGS & REGULATIONS (AURORA BUILDING & ZONING CODES) CHAPTER 66 FIRE PREVENTION & PROTECTION (AURORA BUILDING & ZONING CODES) 2012 NFPA 101 LIFE SAFETY CODES 2009 CDPHE LICENSING REQUIREMENTS
EXITS:	2 EXITS, 3RD FLOOR. MAXIMUM DISTANCE - 116'-10"
FIRE PROTECTION:	EXISTING BUILDING IS FULLY SPRINKLED WITH COMPLETE SMOKE DETECTION. NO SYSTEMS WILL BE AFFECTED IN SCOPE OF PROJECT. FIRE RATED WALL ASSEMBLIES WILL NOT BE MODIFIED.

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

City of Aurora Building Division
Project: ***NUCLEAR MEDICINE EQUIP***
Address: ***1444 S POTOMAC ST Unit 310***
Occupancy Group: ***IBC TYPE II-B SPK***
Construction Type: ***IBC B***
RSN: ***1312716***
Permit: ***2018-1509651 -LT***

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: **Y. Munoz**
Date: **Aug 27, 2018**
2015 INTERNATIONAL CODES & 2017 NEC

The Medical Center of Aurora
Health ONE

NUCLEAR MED EQUIPMENT UPGRADE

MEDICAL CENTER OF AURORA

1444 S. POTOMAC ST. #310
AURORA, COLORADO 80012

TOM THOMPSON ARCHITECT
2510 SOUTH OSCEOLA STREET
DENVER, COLORADO 80219
720.989.6084
TomThompsonArchitect@gmail.com

ASSOCIATIONS

DESIGN PLOT
dpteam@thedesignplot.com
(303) 565-7282

All drawings and written material appearing herein constitute the original and unpublished work of Tom Thompson, Architect. These documents are strictly proprietary and confidential. They are not to be disclosed to third parties, distributed or reproduced without the express written permission of Tom Thompson, Architect.

STATE OF COLORADO
TOM THOMPSON
305692
01.25.18
LICENSED ARCHITECT

PROJECT NO.: 18-13

DRAWN BY: TH, BEPS
CHECKED BY: TT
SCALE: N/A
DATE: 07.25.2018
ISSUED FOR: CONSTRUCTION
REVISIONS:

SHEET TITLE:
COVER SHEET

SHEET NO.:
A0.0

DWG FILENAME: SUITE 310 NUC MED

RSN#1312716
PERMIT# 2018-1509651-LT

LIFE SAFETY GENERAL NOTES

A. HVAC SYSTEM WILL BE ISOLATED TO PREVENT CONTAMINATION OF DUCT SYSTEM DURING CONSTRUCTION.
B. NO EGRESS PATHWAY WILL BE OBSTRUCTED DURING CONSTRUCTION.
C. NO ADJACENT TENANT SPACES WILL BE AFFECTED DURING THE COURSE OF CONSTRUCTION.
D. CONTRACTOR TO PERFORM FIRE WATCH THROUGHOUT THE COURSE OF CONSTRUCTION.
E. A CONTRACTOR PROVIDED, CERTIFIED FIRE EXTINGUISHER WILL BE REQUIRED ON SITE, INSIDE CONTAINMENT.
F. EXISTING SHAFTS, STAIRS, AND ELEVATORS ARE TO REMAIN WITHOUT MODIFICATION.

AT ALL TIMES DURING CONSTRUCTION, MAINTAIN REQUIRED EXITS, EXISTING STRUCTURAL ELEMENTS, FIRE PROTECTION AND SANITARY GUARDS PER 2015 IBC 3302.1

LEGEND

EXISTING 1 HR FIRE/SMOKE WALL (45 MIN DOORS)

EXISTING 1 HOUR SHAFT WALL

EXISTING 2 HOUR FIRE/SMOKE WALL

EXISTING EMERGENCY EXIT SIGNS

FEC — EXISTING FIRE EXTINGUISHER CABINET

UNOBSTRUCTED COURSE & TRAVEL DISTANCE OF THE MOST REMOTE LOCATION TO THE NEAREST EXIT ACCESS - 85'-10" (EXISTING).

TO THE NEAREST EXIT - 116'-10" (EXISTING)

CODE INFORMATION SUMMARY

PROJECT NAME: NUCLEAR MEDICINE CAMERA UPGRADE
PROJECT ADDRESS: 1444 S. POTOMAC ST., SUITE #310 AURORA, CO 80012
CONSTRUCTION TYPE: II-B (IBC) NFPA: TYPE II (000)
OCCUPANCY CLASSIFICATION: GROUP B (BUSINESS)
PROJECT SQUARE FOOTAGE: LIMITS OF AFFECTED AREA: 690 SF
OCCUPANT LOAD FACTOR: 100 SF/OCC (BUSINESS)
OCCUPANT LOAD: 690 SF/100 = 7 OCCUPANTS (MAXIMUM)

APPLICABLE CODES:
2015 INTERNATIONAL BUILDING CODE (IBC)
2015 INTERNATIONAL MECHANICAL CODE (IMC)
2015 INTERNAMTIONAL FUEL GAS CODE (IFGC)
2015 INTERNATIONAL FIRE CODE (IFC)
2015 INTERNATIONAL PLUMBING CODE (IPC)
2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
2017 NATIONAL ELECTRICAL CODE (NEC)

2009 ICC/ANSI A117.1

CHAPTER 22 BUILDINGS & REGULATIONS (AURORA BUILDING & ZONING CODES)
CHAPTER 66 FIRE PREVENTION & PROTECTION (AURORA BUILDING & ZONING CODES)

2012 NFPA 101 LIFE SAFETY CODES

2009 CDPHE LICENSING REQUIREMENTS

EXITS: 2 EXITS, 3RD FLOOR. MAXIMUM DISTANCE - 116'-10"

FIRE PROTECTION: EXISTING BUILDING IS FULLY SPRINKLED WITH COMPLETE SMOKE DETECTION. NO SYSTEMS WILL BE AFFECTED IN SCOPE OF PROJECT. FIRE RATED WALL ASSEMBLIES WILL NOT BE MODIFIED.

CODE NOTES

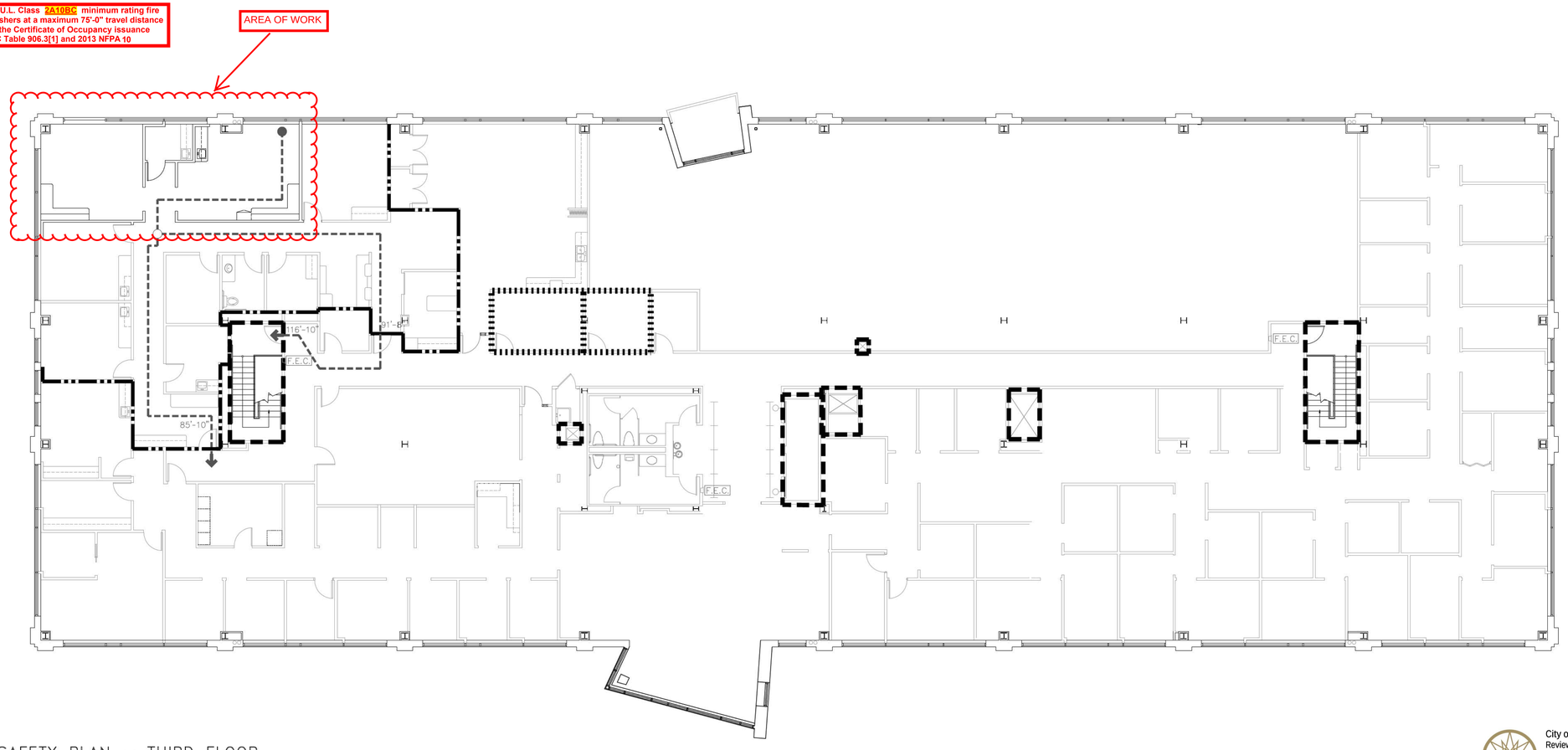
A. EXISTING SHAFTS, STAIRS, AND ELEVATORS ARE TO REMAIN WITHOUT MODIFICATION.
B. FIRE ALARM SYSTEMS WILL NOT BE MODIFIED.
C. FIRE RATED WALL ASSEMBLIES WILL BE NOT BE MODIFIED.

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 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 request for inspection. A certificate of occupancy or final approval cannot be issued by the Building Division without this fire protection system. **2015 IFC, Section 105.7.1.**

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. **2015 IFC, Section 105.7.6.**

Provide U.L. Class 2A10BC minimum rating fire extinguishers at a maximum 75'-0" travel distance prior to the Certificate of Occupancy issuance 2015 IFC Table 906.3[1] and 2013 NFPA 10

AREA OF WORK



NORTH

LIFE SAFETY PLAN – THIRD FLOOR
SCALE: 1"=10'-0"

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: Y. Munoz
Date: Aug 27, 2018
2015 INTERNATIONAL CODES & 2017 NEC

DWG FILENAME: SUITE 310 NUC MED

The Medical Center of Aurora
Health ONE

NUCLEAR MED EQUIPMENT UPDATE

MEDICAL CENTER OF AURORA
1444 S. POTOMAC ST. #310
AURORA, COLORADO 80012

TOM THOMPSON ARCHITECT
2510 SOUTH OSCEOLA STREET
DENVER, COLORADO 80219
720.989.6084
TomThompsonArchitect@gmail.com

ASSOCIATIONS

DESIGN LOT
dpteam@thedesignplot.com
(303) 565-7282

All drawings and written material appearing herein constitute the original and unpublished work of Tom Thompson, Architect. These documents are strictly proprietary and confidential. They are not to be disclosed to third parties, distributed or reproduced without the express written permission of Tom Thompson, Architect.

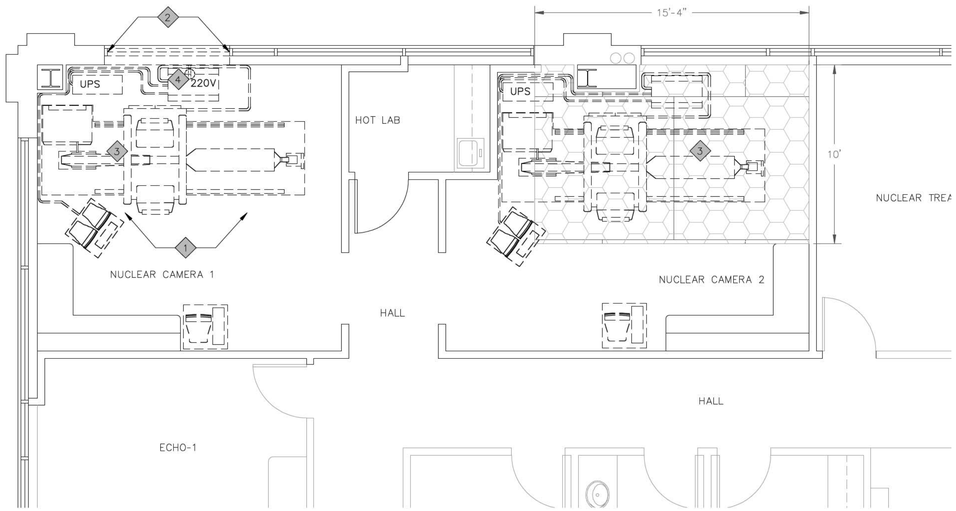
STATE OF COLORADO
TOM THOMPSON
305692
07.25.18
LICENSED ARCHITECT

PROJECT NO.: 18-13
DRAWN BY: TH, BEPS
CHECKED BY: TT
SCALE: NTS
DATE: 07.25.2018
ISSUED FOR: CONSTRUCTION
REVISIONS:

SHEET TITLE:
LIFE SAFETY PLAN

SHEET NO.:
A0.1

RSN#1312716
PERMIT# 2018-1509651-LT

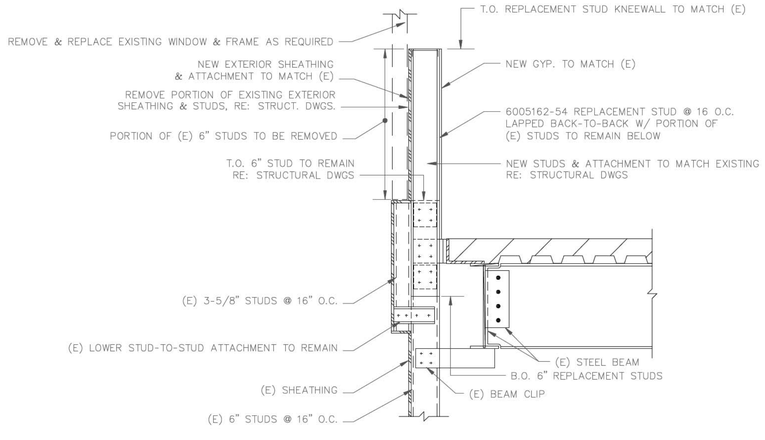


NORTH

DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

DEMOLITION LEGEND	
	REMOVE FIXED ELEMENT OR EQUIPMENT AS INDICATED BY DASHED LINE
	EXISTING ELEMENT TO REMAIN
	EXISTING POWER OUTLET TO BE TERMINATED, SAFED-OFF AND/OR PREPPED FOR NEW LOCATION
	EXISTING POWER OUTLET TO REMAIN
	REMOVE EXISTING DATA/PHONE; TERMINATE, SAFE-OFF AND/OR PREP FOR NEW LOCATION
	EXISTING DATA/PHONE OUTLET TO REMAIN
	REMOVE EXISTING FLOORING AS INDICATED BY HATCH PATTERN, PREP SURFACE FOR NEW FLOORING
	OUT OF SCOPE

KEY NOTES	
1	CONTRACTOR TO REPLACE DAMAGED OR MISSING VCT FLOORING TILE AS A RESULT OF EXISTING EQUIPMENT REMOVAL.
2	REMOVE EXISTING 7'-0" WIDE X 5'-0" HIGH INSIDE GLAZED TEMPERED GLASS VISION PANEL & WALL SECTION BELOW TO PROVIDE ACCESS FOR NEW EQUIPMENT DELIVERY. SALVAGE FOR REINSTALLATION, RE: STRUCTURAL DETAIL FOR WALL SECTION REMOVAL AND REPLACEMENT.
3	EXISTING EQUIPMENT TO BE REMOVED BY LOCAL VENDOR. RE: ELECTRICAL FOR SAFE-OFF REQUIREMENTS AND/OR PRESERVATION OF FEEDS FOR NEW EQUIPMENT.
4	REFER TO ELECTRICAL PLANS REGARDING EXISTING ELECTRICAL IN WALL SECTION TO BE REMOVED.



EXTERIOR WALL DETAIL
SCALE: NTS

DEMOLITION GENERAL NOTES	
A.	REPLACE OR REPAIR ANY EXISTING SURFACES WHICH ARE DAMAGED DURING DEMOLITION (I.E. - CEILING GRID, CEILING TILE, WALL COVERING, FLOOR COVERINGS, ETC.).
B.	SALVAGE EXISTING WINDOW TREATMENTS & HARDWARE FOR REINSTALLATION UPON COMPLETION.
C.	CONTRACTOR TO VERIFY ALL ASPECTS OF THE SITE CONFIGURATION BEFORE CONSTRUCTION IS STARTED.
D.	NO CEILING WORK REQUIRED FOR SCOPE OF THE PROJECT.
E.	REFER TO MEP SET FOR DEMOLITION OF ELECTRICAL & MECHANICAL.
F.	WHERE POWER OUTLETS ARE SHOWN TO BE REMOVED, TERMINATE & SAFE-OFF CONNECTION AS REQUIRED BY CODE. PATCH & PREP WALL FOR PAINT.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: Y. Munoz
Date: Aug 27, 2018
2015 INTERNATIONAL CODES & 2017 NEC

The Medical Center of Aurora
Health ONE

NUCLEAR MED EQUIPMENT UPGRADE

MEDICAL CENTER OF AURORA

1444 S. POTOMAC ST. #310
AURORA, COLORADO 80012

TOM THOMPSON ARCHITECT
2510 SOUTH OSCEOLA STREET
DENVER, COLORADO 80219
720.989.6084
TomThompsonArchitect@gmail.com

ASSOCIATIONS

DESIGN LOT
dpteam@thedesignplot.com
(303) 565-7282

All drawings and written material appearing herein constitute the original and unpublished work of Tom Thompson, Architect. These documents are strictly proprietary and confidential. They are not to be disclosed to third parties, distributed or reproduced without the express written permission of Tom Thompson, Architect.

STATE OF COLORADO
TOM THOMPSON
305692
07.25.18
LICENSED ARCHITECT

PROJECT NO.: 18-13

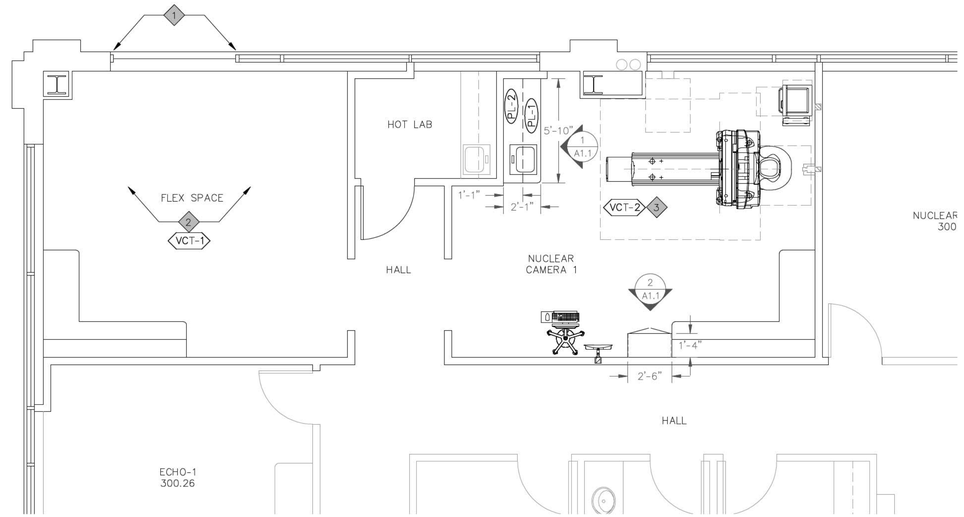
DRAWN BY: TH, BEPS
CHECKED BY: TT
SCALE: 1/4" = 1'-0"
DATE: 07.25.2018
ISSUED FOR: CONSTRUCTION
REVISIONS:

SHEET TITLE:
DEMOLITION PLAN
EXTERIOR WALL DETAIL

SHEET NO.:
A1.0

DWG FILENAME: SUITE 310 NUC MED

RSN#1312716
PERMIT# 2018-1509651-LT



NORTH

DIM/TAG/SCHEDULE PLAN
SCALE: 1/4" = 1'-0"

FINISH SPECIFICATIONS:

FLOORING:
VCT-1: MANNINGTON 12"x12" VCT TILE, STYLE: BRUSHWORK, COLOR: #717 VENETIAN SILK
VCT-2: ARMSTRONG 12"x12" VCT TILE, STYLE SDT STATIC DISSIPATIVE TILE, COLOR: 51955 MOSS GREEN

BASE:
RB-1: 4" RUBBER COVE BASE, MANUF: ROPPE, COLOR: #p140 FAWN

PAINT:
P-1: PAINT TO MATCH, MANUF: SHERWIN WILLIAMS, COLOR: #SW7037 BALANCED BEIGE
P-2: PAINT TO MATCH, MANUF: SHERWIN WILLIAMS, COLOR: #SW7039 VIRTUAL TAUPE

LAMINATE:
PL-1: WILSONART PLASTIC LAMINATE, COLOR: #1794-07 AMBER FUSION
PL-2: WILSONART PLASTIC LAMINATE, COLOR: #D485-07 PEARL BISQUE LS

CEILING TILE :
ACT-1: ACOUSTICAL CEILING TILE, MANUF: ARMSTRONG, STYLE: DUNE SECOND LOOK, 2'x4' #1777 COLOR: WHITE, BEVELED TEGULAR TILE

LEGEND:

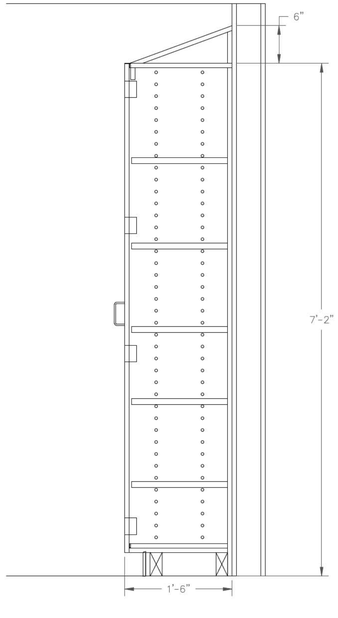
XX-1	FLOORING FINISHES TAG
XX-1	FINISHES TAG
	OUT OF SCOPE

KEY NOTES

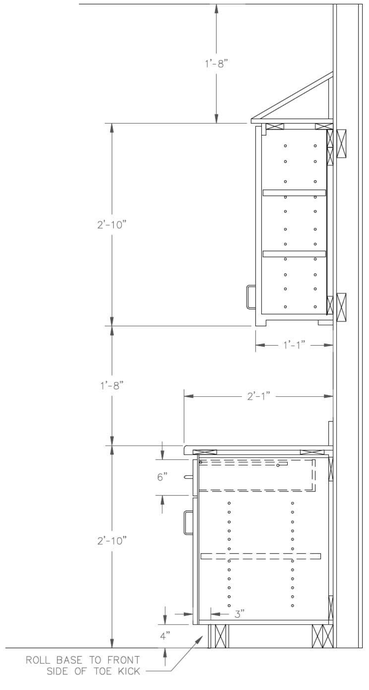
1	REINSTALL 7'-0" WIDE X 5'-0" HIGH INSIDE GLAZED TEMPERED GLASS VISION PANEL AND SECTION OF WALL BELOW. RE: STRUCTURAL DETAIL FOR ASSEMBLY INFORMATION.
2	INSTALL VCT FLOORING & WALL BASE WHERE TILES ARE MISSING DUE TO EQUIPMENT REMOVAL.
3	INSTALL ARMSTRONG STATIC DISSIPATIVE TILE ACCORDING TO SPECIFICATION SHEET WITH REQUIRED MATERIALS.

GENERAL NOTES

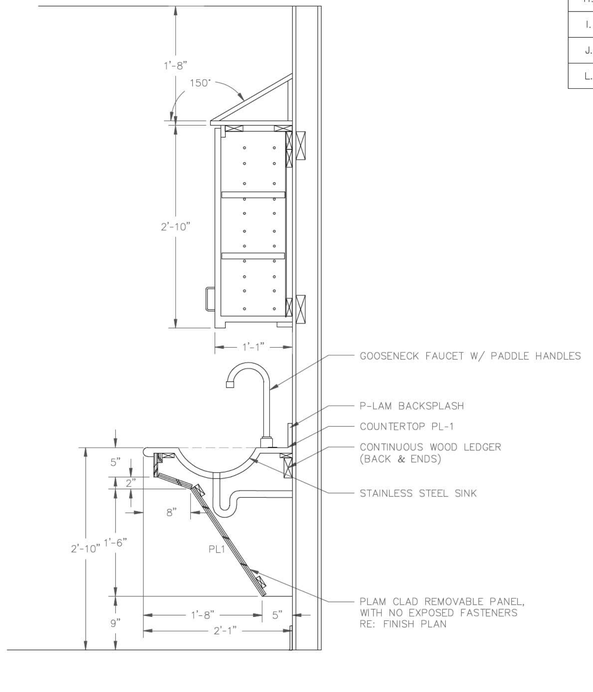
A.	PATCH WALLS WHERE NECESSARY & APPLY PAINT TO MATCH EXISTING.
B.	INSTALL 4" BACKSPLASH OF LIKE COUNTERTOP MATERIAL WHERE ALL COUNTERS MEET WALLS.
C.	INSTALL SPECIFIED WALL BASE ALONG FRONT SIDE OF ALL CASEWORK, VERTICAL TOE-KICK PANELS.
D.	APPLY 3mm RUBBER EDGES TO ALL NEW PLASTIC LAMINATE COUNTERTOPS, DRAWERS, AND DOORS.
E.	OWNER VENDOR TO INSTALL ALL LOW VOLTAGE CABLING.
F.	CONFIRM SCHEDULED FINISHES MATCH EXISTING ROOM FINISHES.
G.	REPLACE DAMAGED OR DIRTY CEILING TILES AS NEEDED IN ORDER TO LOOK LIKE NEW CONDITION.
H.	CONTRACTOR TO VERIFY FLOOR LEVEL & FLATNESS MEETS GE SPECIFICATIONS. SEE GE NOTES ON PAGE 4 OF SITE SPECIFIC PLANS.
I.	PAINT SPECIFICATION NOTE FOR ONLY THOSE AREAS THAT NEED PATCHING OR REPAIR TO MATCH EXISTING ROOM STANDARDS.
J.	REVIEW & INCLUDE ALL NOTES FROM THE GE SITE SPECIFIC PLANS ATTACHED TO THIS CONSTRUCTION DOCUMENT SET AS PART OF CONSTRUCTION.
L.	REFERENCE GE'S PRE-INSTALLATION MANUAL IN CONJUNCTION WITH DRAWINGS & SPECIFICATIONS FOR COMPLETE INFORMATION.



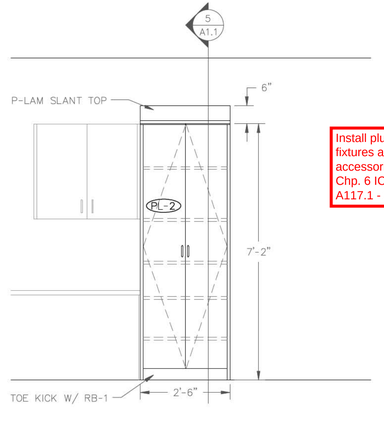
5 A1.1 NUCLEAR MEDICINE
SCALE: 1/2" = 1'



4 A1.1 NUCLEAR MEDICINE
SCALE: 1/2" = 1'

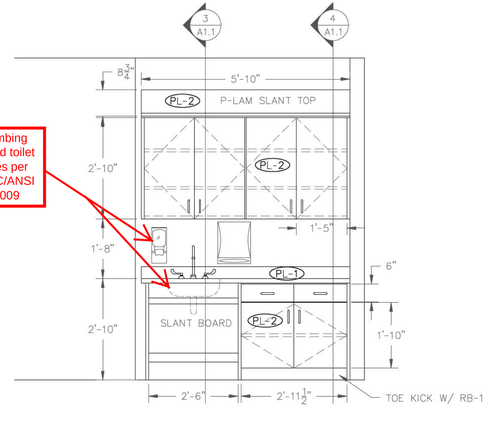


3 A1.1 NUCLEAR MEDICINE
SCALE: 1/2" = 1'



2 A1.1 NUCLEAR MEDICINE
SCALE: 1/2" = 1'

Install plumbing fixtures and toilet accessories per Chp. 6 ICC/ANSI A117.1 - 2009



1 A1.1 NUCLEAR MEDICINE
SCALE: 1/2" = 1'

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: Y. Munoz
Date: Aug 27, 2018
2015 INTERNATIONAL CODES & 2017 NEC

DWG FILENAME: SUITE 310 NUC MED

The Medical Center of Aurora
Health ONE

NUCLEAR MED EQUIPMENT UPGRADE

MEDICAL CENTER OF AURORA

1444 S. POTOMAC ST. #310
AURORA, COLORADO 80012

TOM THOMPSON ARCHITECT
2510 SOUTH OSCEOLA STREET
DENVER, COLORADO 80219
720.989.6084
TomThompsonArchitect@gmail.com

ASSOCIATIONS

DESIGN PLOT
dptecm@thedesignplot.com
(303) 565-7282

All drawings and written material appearing herein constitute the original and unpublished work of Tom Thompson, Architect. These documents are strictly proprietary and confidential. They are not to be disclosed to third parties, distributed or reproduced without the express written permission of Tom Thompson, Architect.

STATE OF COLORADO
TOM THOMPSON
305692
07.25.18
LICENSED ARCHITECT

PROJECT NO.: 18-13

DRAWN BY: TH, BEPS
CHECKED BY: TT
SCALE: 1/4"=1'-0"
DATE: 07.25.2018
ISSUED FOR: CONSTRUCTION
REVISIONS:

SHEET TITLE:
DIMENSION / TAG FINISHES PLAN

SHEET NO.:
A1.1

RSN#1312716
PERMIT# 2018-1509651-LT

GENERAL NOTES - PLUMBING

A. ALL MECHANICAL, ELECTRICAL, AND PLUMBING WORK SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING CODES. REFER TO SPECIFICATIONS FOR MATERIALS AND METHODS FOR MECHANICAL AND PLUMBING CONSTRUCTION

B. INDICATED LOCATIONS ARE APPROXIMATE.

C. COORDINATE WITH OWNER AND PERSONNEL THE SHUT-DOWN OF THE EXISTING SITE UTILITIES.

D. ROUTE ALL PLUMBING PIPING AS TIGHT AS POSSIBLE TO STRUCTURE. PIPING SHALL BE INSTALLED PARALLEL/PERPENDICULAR TO WALLS AND COLUMN LINES.

E. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED FOR A COMPLETE WORKING AND COORDINATED SYSTEM.

F. COORDINATE THE EXACT LOCATION OF MECHANICAL, PLUMBING, AND FIRE PROTECTION EQUIPMENT WITH THE LOCATIONS OF LIGHT FIXTURES, PIPING, CONDUIT, AND OTHER CONSTRUCTION, TO ALLOW FOR PROPER ACCESS TO SERVICE EQUIPMENT.

G. COORDINATE ALL NEW WORK WITH ALL TRADES. WORK SHOWN ON THESE DRAWINGS ARE INTENDED TO PROVIDE THE OVERALL ENGINEERING DESIGN CONCEPT AND DOES NOT PROVIDE FOR RELOCATIONS, OFFSETS, ETC., THAT ARE REQUIRED BY THE COORDINATION OF TRADES. THIS ADDITIONAL WORK SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

H. IT IS THE REQUIREMENT OF THESE DOCUMENTS TO ALLOW ALL CEILING CONSTRUCTION AND HEIGHTS TO BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS. COORDINATE THE LOCATION OF PIPING AND PROVIDE OFFSETS IN PIPING AS REQUIRED TO MEET THIS REQUIREMENT.

I. CONDUIT, PIPING, AND DUCTWORK SHALL BE INDEPENDENTLY SUPPORTED, AND EACH SUPPORT SHALL BE INDEPENDENT OF PARTITION AND CEILING SYSTEM SUPPORTS. WHERE INDEPENDENT SUPPORT IS NOT POSSIBLE AN ENGINEERED SUPPORT SYSTEM SHALL BE UTILIZED

J. INSTALL ALL FLOOR MOUNTED EQUIPMENT ON CONCRETE HOUSEKEEPING PADS. GENERAL CONTRACTOR SHALL PROVIDE HOUSEKEEPING PADS, COORDINATE REQUIREMENTS WITH GENERAL CONTRACTOR.

K. ALL WORK SHALL BE SCHEDULED AND PERFORMED IN STRICT COORDINATION WITH ARCHITECTURAL PHASING PLANS. CONTRACTOR SHALL SCHEDULE AND PERFORM WORK IN SEQUENCE WITH THE PHASING PLAN.

L. PROTECT EQUIPMENT AND WORK FROM DAMAGE DURING HANDLING AND INSTALLATION UNTIL COMPLETION OF CONSTRUCTION.

M. REMOVE ALL EXCESS MATERIAL AND DEBRIS AND CLEAN ALL EQUIPMENT UPON COMPLETION OF WORK. TOUCH UP WITH PAINT WHERE REQUIRED.

N. ALL CONNECTIONS BETWEEN PIPES OF DISSIMILAR MATERIALS SHALL BE MADE WITH DIELECTRIC UNIONS.

O. LOCATE ISOLATION VALVES FOR EQUIPMENT AS CLOSE TO THE MAIN AS POSSIBLE.

P. PROVIDE CLEANOUTS AT THE BASE OF ALL STORM AND SANITARY STACKS.

Q. ALL SANITARY SEWER AND STORM DRAIN SYSTEM WALL CLEANOUTS SHALL BE PLACED AT 18" AFF UNLESS OTHERWISE NOTED.

R. COORDINATE ALL FIRE PROTECTION SPRINKLER LOCATIONS AND MOUNTING STYLES WITH LIGHTING PLANS AND ARCHITECTURAL REFLECTED CEILING PLANS.

S. DO NOT ROUTE PIPING INSIDE ELECTRICAL AND COMMUNICATION ROOMS. IN UNAVOIDABLE INSTANCES, ALL EQUIPMENT SHALL BE PROTECTED FROM OVERHEAD PIPING WITH DRAIN PANS. ROUTE DRAIN FROM DRAIN PANS TO NEAREST FLOOR DRAIN IN MECHANICAL AREAS, WHERE NO FLOOR DRAIN IS ACCESSIBLE ROUTE AS INDIRECT WASTE TO PLUMBING FIXTURE AS INDICATED ON CONTRACT DRAWINGS, OR NEAREST LAVATORY TAILPIECE. PROVIDE SENSOR IN DRAIN PAN TO SEND ALARM TO BAS IN CASE OF LEAKAGE INTO PAN.

T. EACH SUBCONTRACTOR SHALL PROVIDE ADEQUATELY SIZED ACCESS DOORS TO PROVIDE REQUIRED ACCESS THROUGH HARD SURFACES TO THEIR WORK REQUIRING ACCESS (ANY FLOW DEVICES, VALVES, ETC.). SUBCONTRACTOR IS ALSO REQUIRED TO PROVIDE ADEQUATE LOCATION INFORMATION SO ACCESS CAN BE INSTALLED BY INTERIORS SUBCONTRACTOR.

U. REFER TO ARCHITECTURAL DRAWINGS FOR RATED WALL TYPES.

V. ALL PLUMBING PIPING SHALL BE IDENTIFIED IN ACCORDANCE WITH THE SPECIFICATIONS.

W. SLOPE AND ARRANGE WATER PIPING SYSTEMS TO ESTABLISH HIGH POINTS FOR AIR ELIMINATION AND LOW POINTS TO PERMIT PROPER DRAINING OF EACH LINE.

X. COORDINATE ALL PIPING FLOOR PENETRATIONS WITH STRUCTURAL.

Y. SPACE LOCATIONS FOR MATERIALS, EQUIPMENT AND FIXTURES HAVE BEEN MADE ON THE BASIS OF PRESENT AND KNOWN FUTURE REQUIREMENTS AND THE DIMENSIONS OF ITEMS OF EQUIPMENT OR FIXTURES OF A PARTICULAR MANUFACTURER WHETHER INDICATED OR NOT. THE CONTRACTOR SHALL VERIFY THAT ALL MATERIALS, EQUIPMENT AND FIXTURES PROPOSED FOR USE ON THIS PROJECT ARE WITHIN THE CONSTRAINTS OF THE ALLOCATED SPACE.

Z. PIPE PENETRATIONS THROUGH WALLS SHALL MAINTAIN THE CONSTRUCTION'FIRE RATING OF THE WALL.

AA. SPACE LOCATIONS FOR MATERIALS, EQUIPMENT AND FIXTURES HAVE BEEN MADE ON THE BASIS OF PRESENT AND KNOWN FUTURE EQUIREMENTS AND THE DIMENSIONS OF ITEMS OF EQUIPMENT OR FIXTURES OF A PARTICULAR MANUFACTURER WHETHER INDICATED OR NOT. THE CONTRACTOR SHALL VERIFY THAT ALL MATERIALS, EQUIPMENT AND FIXTURES PROPOSED FOR USE ON THIS PROJECT ARE WITHIN THE CONSTRAINTS OF THE ALLOCATED SPACE.

AB. PIPE PENETRATIONS THROUGH WALLS SHALL MAINTAIN THE CONSTRUCTION'FIRE RATING OF THE WALL.

AC. REFER TO STRUCTURAL ENGINEER FOR METHOD OF PIPE PENETRATIONS THROUGH STRUCTURAL MEMBERS (BEAMS, JOISTS, ..). COORDINATE ALL PENETRATIONS THROUGH STRUCTURAL MEMBERS WITH STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

AD. INSULATE THE FIRST 20 FEET OF CONNECTED DRAIN PIPING RECEIVING CONDENSATE AND/OR ICE MACHINE WASTE.

AE. COORDINATE VTR, MAL AND MVE LOCATIONS WITH AIR INTAKE/EXHAUST LOCATIONS. THERE SHALL BE AT LEAST 25 FEET DISTANCE BETWEEN INTAKE AND EXHAUST LOCATIONS.

AF. PROVIDE TRAP PRIMER FOR ALL FLOOR DRAINS AND FLOOR SINKS, UNLESS OTHERWISE NOTED.

AG. PROVIDE SHOCK ARRESTORS AT ENDS OF DCW & DHW PIPING RUNS, AT ALL QUICK-CLOSING FIXTURES SUCH AS FLUSH VALVES AND ELECTRONIC/INFRARED FAUCETS, AND FOR GROUP OF FIXTURES. SHOCK ARRESTORS SHALL BE PLACED AS CLOSE AS POSSIBLE TO THE LAST FIXTURE SERVED ON THE PIPING RUN. COORDINATE LOCATION OF SHOCK ARRESTORS WITH ARCHITECTURAL DRAWINGS.

AH. PROVIDE HEAT TRACING FOR ALL PLUMBING PIPING LOCATED IN EXTERIOR WALLS.

AI. PROVIDE OFFSETS OR EXPANSION LOOPS IN DHW/DHWR LINES IF STRAIGHT LENGTH EXCEEDS 100' IN LENGTH.

AJ. PROVIDE BALL AND FLOAT BACKWATER VALVES FOR ALL OPEN SITE DRAINS.

AK. PROVIDE ISOLATION VALVES AT EACH BRANCH TIE IN TO MAIN PLUMBING LINES, AT EACH PIECE OF EQUIPMENT, AT EACH TOILET ROOM GROUP OF FIXTURES, OR AT OTHER ROOMS THAT MAY HAVE MULTIPLE FIXTURES.

AL. REFER TO STRUCTURAL DRAWINGS FOR REQUIREMENTS OF ALL FLOOR PENETRATIONS.

FIRE PROTECTION NOTES

A. FIRE PROTECTION CONTRACTOR SHALL REFER TO THE PLUMBING DRAWINGS FOR SCOPE OF WORK INCLUDING THE GENERAL NOTES ON THIS SHEET.

B. THE BUILDING'S FIRE PROTECTION SYSTEM MUST REMAIN IN SERVICE DURING CONSTRUCTION. FIRE PROTECTION ENGINEER IS RESPONSIBLE FOR EXTENT OF DEMOLITION, RELOCATION, AND RENOVATION OF THE FIRE PROTECTION SYSTEM.

C. RENOVATION AND DEMOLITION SCOPE OF WORK FOR FIRE PROTECTION SYSTEM IS THE RESPONSIBILITY OF THE FIRE PROTECTION ENGINEER.

D. DESIGN OF THE SPRINKLER SYSTEM SHALL BE UNDER DIRECT SUPERVISION OF AN RME (RESPONSIBLE MANAGING EMPLOYEE) EXPERIENCED IN DESIGN OF THIS WORK AND LICENSED IN THE STATE OF COLORADO. ALL DESIGN SUBMITTAL DOCUMENTS SHALL BEAR THE RME'S SIGNED AND DATED REGISTRATION NUMBER. THE SYSTEM SHALL BE INSTALLED BY A FIRM HAVING MINIMUM THREE YEARS EXPERIENCE REGULARLY ENGAGED IN THE DESIGN AND INSTALLATION OF AUTOMATIC FIRE PROTECTION SYSTEMS IN ACCORDANCE WITH REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION AND THE STATE OF COLORADO FIRE MARSHALL'S OFFICE. EVIDENCE TO SUPPORT THE ABOVE REQUIREMENTS SHALL BE SUBMITTED WITH SHOP DRAWINGS. WORKING PLANS SHALL BE SEALED BY AN ENGINEER REGISTERED BY THE COLORADO STATE BOARD FOR PROFESSIONAL ENGINEERS IN THE FIRE PROTECTION SPECIALTY.

E. DEMOLISH/RELOCATE/PROVIDE NEW SPRINKLER HEADS AS REQUIRED BY THE RENOVATION/EXPANSION SPACE FLOOR PLANS. FIRE PROTECTION SYSTEM FOR THE BUILDING MUST REMAIN IN SERVICE DURING CONSTRUCTION.

F. PROVIDE STANDARD QUICK RESPONSE SPRINKLER HEADS FOR ALL AREAS, UNLESS OTHERWISE NOTED.

G. COORDINATE SPRINKLER AND FIRE MAIN LOCATIONS WITH ALL TRADES.

H. COORDINATE ALL FIRE PROTECTION SPRINKLER LOCATIONS AND MOUNTING STYLES WITH LIGHTING PLANS AND ARCHITECTURAL REFLECTED CEILING PLANS.

I. SPRINKLER HEADS IN LOBBIES, ELEVATOR LOBBIES, WAITING ROOMS, OPERATING AND DELIVERY ROOMS, IMAGING, ICU/CCU, CATH LAB, CRITICAL CARE, INTENSIVE CARE, SPECIAL PROCEDURE, ANGIO, CENTRAL STERILE CLEAN ROOMS/CLEAN PROCESSING AND STERILE COMPOUNDING AREAS SHALL BE CONCEALED.

J. SPRINKLER HEADS IN FIRE/SMOKE COMPARTMENTS WITH PATIENT SLEEPING SHALL BE RECESSED, QUICK RESPONSE TYPE.

CITY OF AURORA, CO CURRENTLY ENFORCED CODES

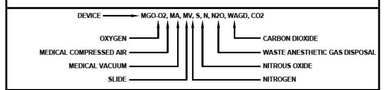
2015 International Building Code
2015 International Fuel Gas Code
2015 International Residential Code
2015 International Existing Building Code
2015 International Mechanical Code
2017 National Electrical Code
2015 International Plumbing Code
2015 International Energy Conservation Code
2015 International Fire Code
2009 ICC/ANSI A117.1 Accessible Usable Buildings and Facilities
2015 Pool Code
COA Amendments

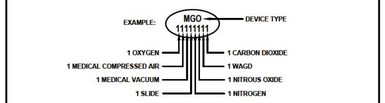
MEDICAL GAS SYMBOLS

SYMBOL	DESCRIPTION
O2	MEDICAL OXYGEN PIPING
MA	MEDICAL AIR PIPING
MV	MEDICAL VACUUM PIPING
WAGD	WASTE ANESTHETIC GAS DISPOSAL PIPING
N	MEDICAL NITROGEN PIPING
N2O	MEDICAL NITROUS OXIDE PIPING
CO2	CARBON DIOXIDE PIPING
	MEDICAL GAS PIPING DROPS IN WALL FULL SIZE
MGO	MEDICAL GAS OUTLETS
AA	AREA ALARM
MA	MASTER ALARM
ZVB	ZONE VALVE BOX
	MASTER ALARM SENSOR
S	AREA ALARM SENSOR
	LOCKABLE TYPE BALL VALVE

MEDICAL GAS LEGEND

MAP = MASTER ALARM PANEL
MGB = MEDICAL GAS CEILING BOOM
MGC = MEDICAL GAS CEILING COLUMN
MGD = MEDICAL GAS DROP
MGH = MEDICAL GAS HEADWALL
MGO = MEDICAL GAS WALL OUTLET
MGP = MEDICAL GAS PEDESTAL
MVE = MEDICAL GAS VACUUM EXHAUST
ME = MEDICAL EQUIPMENT
COMPRESSED AIR (FOR BRAKES ON MEDICAL BOOMS)
MED AIR = MEDICAL COMPRESSED AIR
MV = MEDICAL VACUUM
02 = OXYGEN
S = SLIDE
AAP = AREA ALARM PANEL
ZVB = ZONE VALVE BOX
NCP = NITROGEN CONTROL PANEL
N = NITROGEN
N20 = NITROUS OXIDE GAS
CO2 = CARBON DIOXIDE GAS
WAGD = WASTE ANESTHETIC GAS DISPOSAL





MEDICAL GAS NOTES:

A. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF MEDICAL GAS OUTLETS, ZONE VALVE BOXES AND ALARM PANELS.

B. NOT ALL GASES ARE TO BE USED AT EACH LOCATION. THE GAS ORDER SHOWN IN THE EXAMPLE IS TYPICAL FOR ALL OUTLETS.

C. COORDINATE MEDICAL GAS PIPE ROUTINGS WITH ALL OTHER TRADES BEFORE INSTALLATION.

TYPICAL MOUNTING HEIGHTS FOR MEDICAL GAS DEVICES*:

WALL OUTLETS:	5'-0" (60 INCHES) TO THE CENTER OF THE OUTLET
ZONE VALVE BOX:	5'-6" (66 INCHES) TO THE TOP OF THE ZONE VALVE BOX
AGS & ALARM:	5'-4" (64 INCHES) TO THE TOP OF THE ALARM
MASTER ALARM:	5'-6" (66 INCHES) TO THE TOP OF THE ALARM
NITROGEN CONTROL CABINET:	5'-2" (62 INCHES) TO THE BOTTOM OF THE PANEL
FIXED CEILING COLUMN:	5'-3" (63 INCHES) TO THE BOTTOM OF THE COLUMN
RETRACTABLE CEILING COLUMN:	5'-10" (70 INCHES) TO THE BOTTOM OF THE COLUMN
CEILING HOSE DROP:	6'-4" (76 INCHES) TO THE BOTTOM OF THE HOSE
ASSEMBLY CEILING ARMS/BOOMS:	CONSULT MANUFACTURERS RECOMMENDATIONS

* ALL DIMENSION HEIGHTS SHALL BE COORDINATED WITH ARCHITECTURAL ELEVATION.

PLUMBING SYMBOLS

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATICALLY AND MAY NOT BE TO SCALE.

SYMBOL	DESCRIPTION
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER (TEMP. AS NOTED)
	DOMESTIC HOT WATER RETURN (TEMP. AS NOTED)
HP	HIGH PRESSURE COLD WATER
	COLD OR HOT REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER (RPZ)
	DOUBLE CHECK VALVE ASSEMBLY (DCVA) WITH OS & Y VALVES SUPERVISED
	OS & Y VALVE SUPERVISED (HORIZ. POSITION/VERT. POSITION)
	EXISTING PIPING TO BE REMOVED
	PIPING TO BE ELECTRICALLY HEAT TRACED
CW	COLD WATER PIPING
SS	SANITARY SEWER PIPING (SOIL OR WASTE)
GW	GREASY WASTE SEWER PIPING
	SANITARY VENT PIPING
SSD	SUB-SOIL DRAIN PIPING, FOOTING DRAIN PIPING
AW	ACID WASTE PIPING
AV	ACID VENT PIPING
IW	INDIRECT WASTE
SED	SEWAGE EJECTOR DISCHARGE PIPING (PUMPED SANITARY)
CD	CONDENSATE DRAIN PIPING
D	DRAIN PIPING
	CONNECT NEW TO EXISTING
	POINT OF DISCONNECT
SD	STORM DRAIN PIPING
OD	STORM OVERFLOW DRAIN PIPING
CA	COMPRESSED AIR PIPING
SPD	SUMP PUMP DISCHARGE PIPING (PUMPED STORM WATER)
LP/MP/G	NATURAL GAS PIPING (LOW PRESSURE GAS/MEDIUM PRESSURE GAS)
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
	GATE VALVE
	BALANCING VALVE
	BUTTERFLY VALVE
	BALL VALVE
	GLOBE VALVE
	TEMPERATURE AND PRESSURE RELIEF VALVE
	GAS COCK / PLUG VALVE
	SOLENOID VALVE
	PRESSURE REGULATION VALVE (PRV)
AQS	AQUASTAT
	CHECK VALVE
	CHECK VALVE WITH AUTOMATIC BALL DRIP
	VALVE IN VERTICAL
R	GAS PRESSURE REGULATOR VALVE
	BALANCING VALVE
	STRAINER WITH BLOW-OFF VALVE
	STRAINER
SA A	SHOCK ARRESTOR SA-(A)
V	VACCUUM BREAKER
HD	HUB DRAIN
FD	FLOOR DRAIN
FS	FLOOR SINK
	2 WAY CLEANOUT (GRADE) (GCO)
	PRESSURE GAUGE WITH GAUGE COCK
	THERMOMETER WITH SHUT-OFF COCK
	HOSE BIBB (HB) OR WALL HYDRANT (WH)
	YARD HYDRANT
	SLEEVE THRU WALL
	EXPANSION LOOP

SYMBOL	DESCRIPTION
FCO GCO	FLOOR CLEANOUT OR GRADE CLEANOUT
RD	ROOF DRAIN
OD	OVERFLOW ROOF DRAIN
	DOWNSPOUT NOZZLE (18"A.F.F.)
WCO	WALL CLEANOUT
CO	CLEANOUT PLUG
	DIRECTION OF SLOPE
	DIRECTION OF FLOW
	CAP OUTLET OR PLUGGED OUTLET
	UNION
	CAP SANITARY SEWER OR STORM PIPING

FIRE PROTECTION SYMBOLS

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATICALLY AND MAY NOT BE TO SCALE.

F	FIRE PROTECTION (STANDPIPE, SPRINKLER, SERVICE)
SP	SPRINKLER PIPING (SPRK.)
DSP	DRY SPRINKLER PIPING
PASP	PRE-ACTION SPRINKLER PIPING
FCA	SPRINKLER SYSTEM FLOOR CONTROL VALVE ASSEMBLY (FCVA)
	HOSE VALVE IN CABINET
S	FLOW SWITCH
TS	TAMPER SWITCH VALVE
	FIRE HOSE VALVE
	SIAMESE FIRE DEPARTMENT CONNECTION (FLUSH MOUNTED)
	SIAMESE FIRE DEPARTMENT CONNECTION (EXPOSED)
	ROOF MANIFOLD
	WET SPRINKLER ALARM VALVE
	DRY SPRINKLER ALARM VALVE
	AUTOMATIC SPRINKLER RISER

PLUMBING ABBREVIATIONS

ABV	ABOVE	MH	MANHOLE
AFF	ABOVE FINISH FLOOR	MS	MOP/SINK
AFG	ABOVE FINISH GRADE	NPW	NON-POTABLE/DOWNSTREAM OF A BACKFLOW PREVENTER
AIC	ABOVE CEILING	NC	NORMALLY CLOSED
AP	ACCESS PANEL OR DOOR	NO	NORMALLY OPEN
AC	AIR CHAMBER	OD	OVERFLOW DRAIN
AD	AREA DRAIN	P-COND	PUMPED CONDENSATE
AW	ACID WASTE	PD	PLANTER DRAIN
BT	BATHTUB	PRV	PRESSURE REDUCING VALVE
BFF	BELOW FINISH FLOOR	PW	PURIFIED WATER
BF	BELOW FLOOR	PWC	PURIFIED WATER RECIRC
BG	BELOW GRADE	R/ & C	ROUGH IN AND CONNECT
ADV	AUTOMATIC BALANCING VALVE	ROR	REVERSE OSMOSIS RETURN WATER
CCP	COIL CONDENSATE PUMP	ROS	REVERSE OSMOSIS SUPPLY WATER
CS	CLINICAL SINK	RPPBP	DOMESTIC COLD WATER REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER.
CW	DOMESTIC COLD WATER	SH	SHOWER
HW	DOMESTIC HOT WATER	SK	SINK
HWR	DOMESTIC HOT WATER RETURN	SMS	SNOW MELT RETURN
DS	DOWNSPOUT	SMS	SNOW MELT SUPPLY
DF	DRINKING FOUNTAIN	S.O.	STORM OVERFLOW
E	EXISTING	SS	SANITARY SEWER
EOSC	EMERGENCY OXYGEN SUPPLY CONNECTION	SS-a	SERVICE SINK DESIGNATOR WITH NUMBER
EWC	ELECTRIC WATER COOLER	SV	SANITARY VENT
EWH	ELECTRIC WATER HEATER	TP	TRAP PRIMER
FCA	FIRE SPRINKLER CONTROL VALVE ASSEMBLY	TW	TEMPERED WATER
FCO	FLOOR CLEANOUT	V	VENT
FD	FLOOR DRAIN	VTR	VENT THROUGH ROOF
FDC	FIRE DEPARTMENT CONNECTION	W	SANITARY WASTE
FDV	FIRE DEPARTMENT VALVE	WC	WATERCLOSET
FF	FINISH FLOOR	WCO	WALL CLEANOUT
FFD	FUNNEL FLOOR DRAIN	YCO	YARD CLEANOUT
FFE	FINISH FLOOR ELEVATION	COND	CONDENSATE
FHC	FIRE HOSE CABINET	FOO	FUEL OIL ?
FLR	FLOOR	FOR	FOEL OIL RETURN
FRS	FLUSH/RIM RIM SINK	FOS	FUEL OIL SUPPLY
FS	FIRE SPRINKLER		
GC	GENERAL CONTRACTOR		
GCO	GRADE CLEANOUT		
IE	INVERT ELEVATION		
INV	INVERT		
IW	INDIRECT WASTE PIPING		
LCW	LAB COLD WATER		
LHW/SOLAR	LAB HOT WATER		
LV	LAVATORY		

PIPE MATERIALS LEGEND

SYMBOL	DESCRIPTION	PIPING MATERIAL
SD / OD	STORM DRAIN AND OVERFLOW DRAIN PIPING	UNDERSLAB: SERVICE CLASS CAST-IRON SOIL PIPE AND FITTINGS, GASKETS AND GASKETED JOINTS - HUB AND SPIGOT PIPE AND FITTINGS WITH NEOPRENE COMPRESSION GASKET JOINTS. ABOVE GROUND STORM DRAIN: SERVICE CLASS CAST-IRON SOIL PIPE AND FITTINGS, GASKETS AND GASKETED JOINTS - HUBLESS PIPE AND FITTINGS WITH HEAVY DUTY SS COUPLINGS. ABOVE GROUND OVERFLOW DRAIN: ASTM D 2665 SCHEDULE 40 PVC PIPE AND FITTINGS, GASKETS AND GASKETED JOINTS.
F / FS	FIRE PROTECTION PIPING	UNDERGROUND SERVICE PIPING: DUCTILE IRON, GROOVED END PIPE WITH CORROSION PROTECTIVE ENCASEMENT. STANDPIPE SYSTEM: STANDARD WEIGHT BLACK OR GALVANIZED STEEL THREADED, WELDED OR GROOVED-END PIPING. SPRINKLER SYSTEM: 2" AND SMALLER SHALL BE STANDARD WEIGHT STEEL THREADED PIPE; 2 1/2" AND LARGER STANDARD WEIGHT STEEL THREADED, WELDED OR GROOVED-END PIPING.
SS	SANITARY SEWER PIPING	UNDERSLAB: ASTM D 2665 SCHEDULE 40 PVC PIPE AND FITTINGS, GASKETS AND GASKETED JOINTS. ABOVE GROUND: SERVICE CLASS CAST-IRON SOIL PIPE AND FITTINGS, GASKETS AND GASKETED JOINTS - HUBLESS PIPE AND FITTINGS WITH HEAVY DUTY SS COUPLINGS.
	SANITARY VENT PIPING	UNDERSLAB: ASTM D 2665 SCHEDULE 40 PVC PIPE AND FITTINGS, GASKETS AND GASKETED JOINTS. ABOVE GROUND: SERVICE CLASS CAST IRON SOIL PIPE AND FITTINGS, GASKETS AND GASKETED JOINTS - HUBLESS PIPE AND FITTINGS WITH HEAVY DUTY SS COUPLINGS. AT CONTRACTORS OPTION FOR VENT PIPING IN CEILING SPACES WITH DUCTED RETURN ONLY, PVC WITH SOLVENT JOINTS MAY BE INSTALLED.
	DOMESTIC COLD WATER PIPING	TYPE "L" HARD DRAWN COPPER PIPING - COPPER PRESSURE FITTINGS AND SOLDERED JOINTS.
	DOMESTIC HOT WATER PIPING	TYPE "L" HARD DRAWN COPPER PIPING - COPPER PRESSURE FITTINGS AND SOLDERED JOINTS
	DOMESTIC HOT WATER RETURN PIPING	TYPE "L" HARD DRAWN COPPER PIPING - COPPER PRESSURE FITTINGS AND SOLDERED JOINTS.
XX	MEDICAL GASES	TYPE "L" COPPER MEDICAL GAS TUBE - WROUGHT COPPER FITTINGS AND BRAZED JOINTS.
	EQUIPMENT OR DRAIN PAN PIPING	TYPE "L" HARD DRAWN COPPER PIPING - COPPER PRESSURE FITTINGS AND SOLDERED JOINTS.
	NATURAL GAS PIPING / FUEL OIL PIPING	UNDERGROUND SERVICE PIPING (OUTDOOR): STANDARD WEIGHT BLACK STEEL PIPE WITH WROUGHT STEEL FITTINGS AND WELDED JOINTS, OR MECHANICAL COUPLINGS. WITH PROTECTIVE COATING. PROTECTIVE COATING SHALL CONSIST OF FACTORY APPLIED, THREE LAYER COATING OF EPOXY, ADHESIVE, AND PE. ABOVEGROUND SERVICE PIPING (OUTDOOR): STANDARD WEIGHT BLACK STEEL PIPE WITH WROUGHT STEEL FITTINGS AND WELDED JOINTS, OR MECHANICAL COUPLINGS. PIPE SHALL BE PAINTED WITH RUST RESISTANT YELLOW PAINT ABOVEGROUND (INDOOR): 2" AND SMALLER SHALL BE STANDARD WEIGHT STEEL THREADED PIPE; 2 1/2" AND LARGER STANDARD WEIGHT STEEL WELDED OR GROOVED-END PIPING.
ROS/ROR	REVERSE OSMOSIS SUPPLY/RETURN PIPING	SCHEDULE 40 CPVC PIPE AND FITTINGS WITH SOLVENT CEMENTED JOINTS

PROJECT DESIGN CRITERIA

AURORA

LOCATION:
CITY/STATE: ~~BOULDER~~ COLORADO

DESIGN COOLING TEMP: ~~95° DB/67° WB 0.4%~~
DESIGN HEATING TEMP: ~~DB: -4.8°F~~

APPLICABLE CODES:

BUILDING	~~2012 IBC~~
MECHANICAL	~~2012 IMC~~
PLUMBING	~~2012 IPC~~
ENERGY	CITY OF BOULDER ENERGY CODE
ELECTRICAL	~~2012 NEC~~
FIRE	2012 IFC

LATITUDE:
DEG. N. LAT. ~~40.01~~

ELEVATION:
FT. ABOVE SEA LEVEL ~~5,430~~

BUILDING REVIEW DONE UNER BUILDING CODES NOTED ON THIS PAGE

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: Y. Munoz
Date: Aug 27, 2018
2015 INTERNATIONAL CODES & 2017 NEC

The Medical Center of Aurora
Health ONE

NUCLEAR MED EQUIPMENT UPGRADE

MEDICAL CENTER OF AURORA

1444 S. POTOMAC ST. #310
AURORA, COLORADO 80012

TOM THOMPSON ARCHITECT
2510 SOUTH OSCEOLA STREET
DENVER, COLORADO 80219
720.989.6084
TomThompsonArchitect@gmail.com

ASSOCIATIONS

WSP

DESIGN PLOT
dpteam@thedesignplot.com
(303) 565-7282

All drawings and written material appearing herein constitute the original and unpublished work of Tom Thompson, Architect. These documents are strictly proprietary and confidential. They are not to be disclosed to third parties, distributed or reproduced without the express written permission of Tom Thompson, Architect.

COLORADO REGISTERED PROFESSIONAL ENGINEER
JOHN LEE HUNT
43240
12/31
PROFESSIONAL ENGINEER

PROJECT NO.: 18-13
DRAWN BY: JF
CHECKED BY: JS
SCALE: -
DATE: 07.26.2018
ISSUED FOR: 100% CDS
REVISIONS:
1 . .
2 . .
3 . .
4 . .
5 . .

SHEET TITLE:
PLUMBING LEGENDS AND NOTES

SHEET NO.:
P0.1

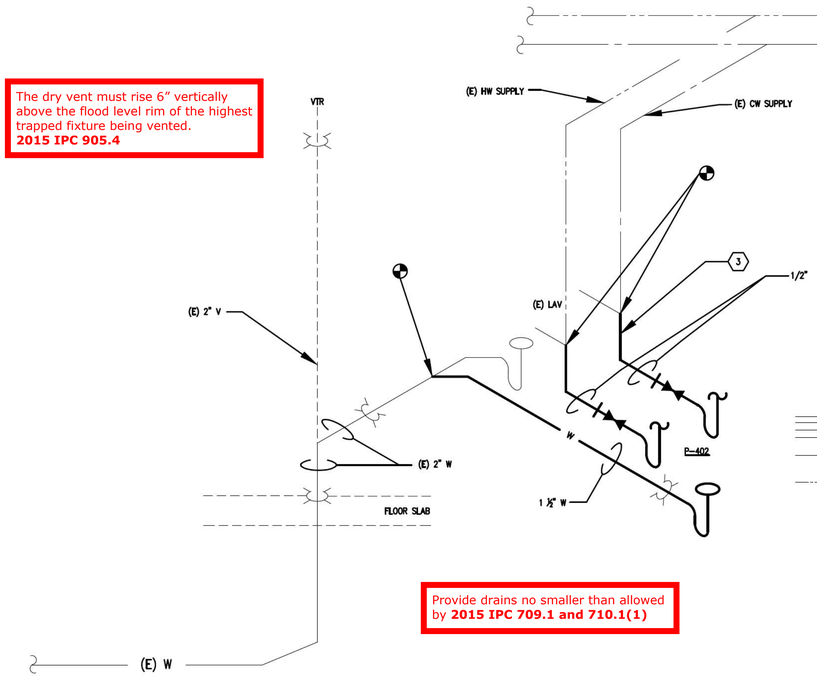
DWG FILENAME: SUITE 310 NUC MED

RSN#1312716
PERMIT# 2018-1509651-LT

LEGEND NOTES

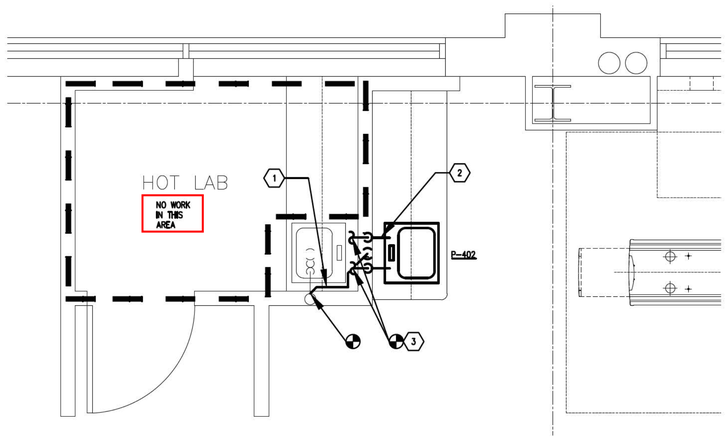
1. CONNECT 1 ½" IN. WASTE TO EXISTING VENTED 2 IN. WASTE.
2. NEW (PEX) ½ IN. HOT AND COLD WATER SUPPLY. INSTALL AND CONNECT TO HARD PIPE ROUGH-INS FROM HOT AND COLD SUPPLY IN WALL. PROVIDE HOT AND COLD (SHARK BITE TYPE OR EQUIVALENT) SHUT OFF VALVES.
3. CUT GYPSUM AT WALL TO ACCESS AND CONNECT NEW HOT AND COLD WATER. PATCH WALL TO MATCH EXISTING. COORDINATE PATCH WORK WITH G.C.
4. COORDINATE OUTAGE OF EXISTING HOT ROOM SINK WITH G.C. TO COMPLETE NEW WASTE CONNECTION.

The dry vent must rise 6" vertically above the flood level rim of the highest trapped fixture being vented.
2015 IPC 905.4



Provide drains no smaller than allowed by **2015 IPC 709.1 and 710.1(1)**

01 HOT AND COLD WATER SUPPLY AND WASTE AND VENT ISOMETRIC
NTS



02 PLUMBING FLOOR PLAN
SCALE: 1/2" = 1'-0"

PLUMBING FIXTURE SCHEDULE

FIXTURE TAG	FIXTURE TYPE	ROUGH-IN CONNECTION SIZE				NOTES:
		SAN. SEWER	VENT	COLD WATER	HOT WATER	
P-402	SINK SINGLE COMPARTMENT ADA COMPLIANT	2"	2"	1/2"	1/2"	SINK: ELKAY MODEL LRAD-1919 TYPE 304 NICKEL BEARING STAINLESS STEEL, SELF RIMMING. 19-1/2" X 19" X 5-1/2" DEPTH ADA COMPLIANT WITH OFF-CENTERED OUTLET TO THE REAR. BOWL SIZE 16"x 13-1/2". 3-1/2" DRAIN AND "SOUND GUARD" UNDERCOATING. FAUCET: ZURN MODEL No. Z831-B4-XL-FC, 8" FIXED CENTERS RIGID OR SWING GOOSENECK SPOUT, WITH 2.0 GPM FLOW CONTROL IN BASE OF SPOUT AND WITH 4" WRISTBLADE HANDLES. STRAINER/TAILPIECE: ZURN MODEL No. Z8739 CHROME PLATED BRASS 4" WIDE STRAINER WITH 1-1/2" 20 GAUGE TAILPIECE. P-TRAP: ZURN MODEL No. Z8702 CAST BODY ADJUSTABLE P-TRAP WITH 1-1/2" TUBULAR WALL BEND AND FLANGE. STOPS AND RISERS: ZH8824-XL-LR LEAD FREE CHROME PLATED SOLID BRASS HEAVY DUTY ANGLE STOPS WITH ROUND WHEEL HANDLES OR LOOSE KEY, TWO FLEXIBLE CHROME PLATED COPPER LAVATORY RISERS COMPLETE WITH TWO CHROME PLATED STEEL FLANGES.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: Y. Munoz
Date: Aug 27, 2018
2015 INTERNATIONAL CODES & 2017 NEC

The Medical Center of Aurora
Health ONE

NUCLEAR MED EQUIPMENT UPGRADE

MEDICAL CENTER OF AURORA

1444 S. POTOMAC ST. #310
AURORA, COLORADO 80012

TOM THOMPSON ARCHITECT
2510 SOUTH OSCEOLA STREET
DENVER, COLORADO 80219
720.989.6084
TomThompsonArchitect@gmail.com

ASSOCIATIONS

wsp

DESIGN
dp LOT
dpteam@thedesignplot.com
(303) 565-7282

All drawings and written material appearing herein constitute the original and unpublished work of Tom Thompson, Architect. These documents are strictly proprietary and confidential. They are not to be disclosed to third parties, distributed or reproduced without the express written permission of Tom Thompson, Architect.

COLORADO JAMES LEE SEITZ 37240 PROFESSIONAL ENGINEER 7/24/18

PROJECT NO.: 18-13

DRAWN BY: JF
CHECKED BY: JS
SCALE: 1/2"=1'-0"
DATE: 07.26.2018
ISSUED FOR: 100% CDS
REVISIONS:
1 .
2 .
3 .
4 .
5 .

SHEET TITLE:
PLUMBING ISOMETRIC, FLOOR PLAN, & SCHEDULE

SHEET NO.:
P1.1

DWG FILENAME: SUITE 310 NUC MED

RSN#1312716
PERMIT# 2018-1509651-LT

GENERAL NOTES

SUPPLEMENTAL GENERAL CONDITIONS

1. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND IT IS THE INTENT AND MEANING OF THE CONTRACT DOCUMENTS THAT THE CONTRACTOR SHALL PROVIDE AN ELECTRICAL INSTALLATION THAT IS COMPLETE WITH ALL ITEMS AND APPURTENANCES NECESSARY, REASONABLE INCIDENTAL TO AND/OR CUSTOMARILY INCLUDED, EVEN THOUGH EACH AND EVERY ITEM IS NOT SPECIFICALLY CALLED OUT OR SHOWN. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIALS, LABOR, SUPERVISION AND SERVICE NECESSARY SO AS TO PROVIDE A COMPLETE, FUNCTIONING ELECTRICAL SYSTEM IN SAFE WORKING ORDER.
2. SYMBOLS FOR VARIOUS ELEMENTS AND SYSTEMS ARE SHOWN ON THE DRAWINGS. SHOULD THERE BE ANY DOUBT REGARDING THE MEANING OR INTENT OF THE SYMBOLS USED, AND INTERPRETATION SHALL BE OBTAINED FROM THE ARCHITECT IN WRITING. THE DECISION OF THE ARCHITECT SHALL BE FINAL.
3. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO EXAMINE THE CONTRACT DOCUMENTS CAREFULLY BEFORE SUBMITTING THEIR BID, WITH PARTICULAR ATTENTION TO ERRORS, OMISSIONS, CONFLICTS WITH PROVISIONS OF LAWS AND CODES HAVING JURISDICTION, CONFLICTS BETWEEN DRAWINGS OR DRAWINGS AND SPECIFICATIONS, AND AMBIGUOUS DEFINITION OF THE EXTENT OF COVERAGE BETWEEN CONTRACTS. ANY SUCH DISCREPANCY SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ARCHITECT FOR CORRECTION. SHOULD ANY OF THESE ERRORS, OMISSIONS, CONFLICTS, OR AMBIGUITIES EXIST, THE CONTRACTOR SHALL HAVE THEM EXPLAINED AND ADJUSTED IN WRITING BEFORE SIGNING THE CONTRACT OR PROCEEDING WITH THE WORK; OTHERWISE, THE CONTRACTOR SHALL, AT THEIR OWN EXPENSE, SUPPLY THE PROPER MATERIALS AND LABOR TO MAKE GOOD ANY DAMAGE OR DEFECTS IN THEIR WORK OR THE RESULTS OBTAINED THEREFROM, CAUSED BY SUCH DISCREPANCY.
4. WHEREVER CONFLICTS OCCUR BETWEEN DIFFERENT PARTS OF THE CONTRACT DOCUMENTS, THE GREATER QUANTITY, THE BETTER QUALITY, OR LARGER SIZE SHALL PREVAIL UNLESS THE ARCHITECT INFORMS THE CONTRACTOR OTHERWISE IN WRITING.
5. THE SCALE OF EACH DRAWING IS RELATIVELY ACCURATE; ANY DIMENSIONS SHOWN ARE APPROXIMATE TO THE CENTERLINE FROM ASSUMED BUILDING PERIMETER. THE CONTRACTOR SHALL OBTAIN THE NECESSARY DIMENSIONS FOR ANY EXACT TAKEOFFS FROM THE ARCHITECT. NO ADDITIONAL COST TO THE OWNER WILL BE CONSIDERED FOR FAILURE TO OBTAIN EXACT DIMENSIONS WHERE NOT CLEAR OR IN ERROR ON THE DRAWINGS. ANY DEVICE OR FIXTURE ROUGHED IN IMPROPERLY AND NOT POSITIONED ON IMPLIED CENTER-LINES OR AS REQUIRED BY GOOD PRACTICE MUST BE REPOSITIONED AT NO COST TO THE OWNER.
6. THE CONTRACTOR IS RESPONSIBLE FOR FILING AND PAYING ALL FEES AND OBTAINING NECESSARY PERMITS AND CERTIFICATES OF INSPECTION. THE CONTRACTOR SHALL DELIVER ALL CERTIFICATES OF INSPECTION TO OWNER/CONSTRUCTION MANAGER INCLUDING COPIES WITH MAINTENANCE MANUALS.
7. ONLY EXPERIENCE CRAFTSMEN KNOWLEDGEABLE IN THEIR RESPECTIVE TRADE SHALL PERFORM THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS.
8. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADDITION OF NFPA STANDARD 70 (NATIONAL ELECTRICAL CODE). CONTRACTOR SHALL ALSO CONFORM TO ALL APPLICABLE LOCAL CODES AND AMENDMENTS.
9. UNLESS OTHERWISE INDICATED, ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND SHALL MEET NEMA AND ANSI STANDARDS. THEY SHALL ALSO BE LISTED/LABELED BY A NATIONALLY RECOGNIZED LABORATORY IN ACCORDANCE WITH NFPA 70. ALL EQUIPMENT AND MATERIALS PROVIDED SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND WITHIN THEIR LISTING/LABELING REQUIREMENTS AND RESTRICTIONS.
10. PROVIDE SHOP DRAWINGS FOR ENGINEER'S REVIEW FOR ALL ELECTRICAL EQUIPMENT, DEVICES, AND MATERIALS PROPOSED TO BE PROVIDED UNDER THIS CONTRACT. ANY DEVIATIONS FROM ITEMS SPECIFIED SHALL BE CLEARLY IDENTIFIED AND SEPARATELY SUBMITTED WITH A FORMAL SUBSTITUTION REQUEST. REFER TO SPECIFICATIONS (PROJECT MANUAL) FOR REQUIREMENTS.
11. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL PENETRATIONS OF EXISTING STRUCTURAL ELEMENTS WITH ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO PERFORMING ANY WORK. PERFORM ALL WORK AS DIRECTED BY ARCHITECT AND/OR STRUCTURAL ENGINEER. CONTRACTOR SHALL NOT MAKE ANY PENETRATIONS WITHOUT PROPER AUTHORIZATION OF PROJECT ARCHITECT AND/OR STRUCTURAL ENGINEER.

ELECTRICAL EQUIPMENT

1. PROVIDE AND IDENTIFICATION NAMEPLATE FOR EACH ELECTRICAL EQUIPMENT OR APPURTENANCE DEPICTING THE DESIGNATION INDICATED ON THE DRAWINGS. REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.
2. WEATHERPROOF ENCLOSURES SHALL BE PROVIDED FOR ALL ELECTRICAL EQUIPMENT, DEVICES AND APPURTENANCES (ALL SYSTEMS) INSTALLED OUTDOORS EXPOSED TO WEATHER.
3. COORDINATE AND SCHEDULE ALL POWER OUTAGES WITH BUILDING OWNER OR AUTHORIZED REPRESENTATIVE. REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.
4. SPACE ALLOCATIONS FOR MATERIALS, EQUIPMENT AND DEVICES HAVE BEEN MADE ON THE BASIS OF PRESENT AND KNOWN FUTURE REQUIREMENTS AND THE DIMENSIONS OF ITEMS OF EQUIPMENT OR DEVICES OF A PARTICULAR MANUFACTURER. THE CONTRACTOR SHALL VERIFY THAT ALL MATERIALS, EQUIPMENT AND DEVICES PROPOSED FOR USE ON THIS PROJECT ARE WITHIN THE CONSTRAINTS OF THE ALLOCATED SPACE.
5. DO NOT USE PERMANENT INK WHEN MAKING FIELD MARKINGS OR TEMPORARY CIRCUIT LABELS ON PANELS. CONTRACTOR SHALL USE REMOVABLE TAPE/TAGS FOR ALL TEMPORARY MARKINGS AND SHALL REMOVE THESE TEMPORARY MARKINGS AT THE CONCLUSTION OF THIS PROJECT.

CONDUIT & RACEWAY

1. ALL WORK SHALL BE COORDINATED SO THAT INTERFERENCES ARE AVOIDED. PROVIDE ALL NECESSARY OFFSETS IN CONDUITS, RACEWAYS, ETC., REQUIRED TO PROPERLY INSTALL THE WORK. EXPOSED WORK MUST BE KEPT AS CLOSE AS POSSIBLE TO WALLS, CEILINGS, COLUMNS, ETC., SO AS TO TAKE UP A MINIMUM AMOUNT OF SPACE; ALL OFFSETS, FITTINGS, ETC., REQUIRED SHALL BE PROVIDED WITHOUT ADDITIONAL EXPENSE TO THE OWNER. WORK SHALL BE COORDINATED WITH OTHER TRADES.
2. CONDUIT RUNS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR SIZING AND LOCATING PULL BOXES PER NFPA 70 AND FOR COORDINATION WITH OTHER DISCIPLINES.
3. PENETRATIONS OF WALLS, FLOORS, AND ROOFS FOR THE PASSAGE OF ELECTRICAL RACEWAYS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO THE COMMENCEMENT OF WORK. ALL SUCH PENETRATIONS SHALL BE PROPERLY SEALED OFF AFTER INSTALLATION OF RACEWAY SO AS TO MAINTAIN THE STRUCTURAL, WATER PROOF, AND FIRE PROOF INTEGRITY OF THE WALL, FLOOR, OR ROOF SYSTEM PENETRATED.
4. SEAL ALL CONDUITS THAT PENETRATE THE FLOOR SLAB TO MAKE THEM WATER TIGHT. THE CONDUITS SHALL BE DRIED PRIOR TO INSTALLATION OF WIRE/CABLE AND SHALL BE SEALED AT TERMINATIONS.
5. ALL PENETRATIONS THROUGH FIRE RATED WALLS OR PARTITIONS SHALL BE MADE IN ACCORDANCE WITH U.L. "FIRE RESISTANCE DIRECTORY". PENETRATIONS SHALL BE SLEEVED AND SEALED WITH A U.L. APPROVED FIRE RATED SEALANT. REFER TO ARCHITECTURAL PLANS FOR FIRE RATED WALLS.
6. ALL EMPTY CONDUIT SYSTEMS SHALL CONTAIN A PULL WIRE FOR FUTURE PULLING OF CONDUCTORS.

BRANCH CIRCUITS AND FEEDERS

1. CIRCUITING IS SHOWN DIAGRAMMATICALLY. HOMERUNS SHALL BE COMBINED WHERE POSSIBLE IN ACCORDANCE TO NFPA 70.
2. UNLESS OTHERWISE INDICATED, ALL CIRCUITS 100' OR LESS SHALL BE MINIMUM 12 AWG WIRE SIZE. CIRCUITS OVER 100' BUT LESS THAN 200' SHALL BE MINIMUM 10 AWG WIRE SIZE. CIRCUITS OVER 200' BUT LESS THAN 300' SHALL BE MINIMUM 8 AWG WIRE SIZE.
3. UNLESS OTHERWISE INDICATED, ALL CONDUCTORS SHALL BE COPPER, 98% CONDUCTIVITY CONTINUOUS FROM OUTLET TO OUTLET.
4. UNLESS OTHERWISE INDICATED, CONDUCTOR SIZES 12 AWG AND 10 AWG SHALL BE SOLID. CONDUCTOR SIZES 8 AWG AND LARGER MAY BE STRANDED.
5. A SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE PULLED WITH THE CIRCUIT CONDUCTORS FOR GROUNDING WHETHER OR NOT INDICATED ON THE DRAWINGS. METAL RACEWAY, OR A CABLE ARMOR OR SHEATH SHALL NOT BE USED AS THE ONLY EQUIPMENT GROUNDING CONDUCTOR.

WIRING DEVICES

1. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LOCATION AND MOUNTING HEIGHT OF ALL WALL AND FLOOR MOUNTED ELEMENTS (OUTLETS, LIGHT SWITCHES, CONTROLLERS, POKE-THRU, ETC). ALL WALL/FLOOR MOUNTED ITEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL DIMENSIONED DRAWINGS. IF LOCATION FOR AN ITEM IS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS, VERIFY THE EXACT LOCATION OF THE ITEM WITH THE ARCHITECT PRIOR TO INSTALLATION. THESE REQUIREMENTS APPLY TO ALL WALL/FLOOR TYPES IN ALL AREAS. DO NOT SCALE OR DIMENSION LOCATIONS FROM THESE DRAWINGS.
2. COORDINATE THE LOCATION AND INSTALLATION DETAIL OF OUTLETS IN MILLWORK WITH ARCHITECTURAL DRAWINGS (WALL ELEVATIONS, MILLWORK DETAILS, ETC.) AND WITH MILLWORK MANUFACTURER PRIOR TO ELECTRICAL ROUGH-IN.
3. WALL AND FLOOR MOUNTED POWER RECEPTACLES SHOWN NEAR DATA OUTLETS SHALL BE LOCATED WITHIN SIX (6) INCHES OF THE DATA OUTLET. LOCATE AT SAME MOUNTING HEIGHT UNLESS NOTED OTHERWISE.
4. VERIFY THE EXACT POWER CONNECTION TYPE AND NEMA CONFIGURATION OF RECEPTACLES FOR EQUIPMENT FURNISHED BY THE OWNER, OTHER TRADES, OR UNDER A SEPARATE SECTION OF THIS CONTRACT PRIOR TO ELECTRICAL ROUGH-IN.
5. ALL GFCI RECEPTACLES SHALL BE CONNECTED SO THAT ALL DEVICES ON THE SAME CIRCUIT AS THE GFCI RECEPTACLE DO NOT DE-ENERGIZE UPON TRIPPING. ALL GFCI RECEPTACLES SHALL INCLUDE A LOCK-OUT FUNCTION TO PROTECT AGAINST THE USE OF MISWIRED DEVICES OR DEVICES THAT HAVE BEEN DAMAGED DUE TO DISABLING SURGES.
6. ATTACHMENT SCREWS FOR ALL DEVICES AND COVERPLATES FOR ALL SWITCHES, RECEPTACLES AND OTHER DEVICES IN ALL PATIENT-ACCESSIBLE AREAS SHALL BE TAMPER-PROOF TYPE ONLY. STANDARD TYPE ATTACHMENT SCREWS AND COVERPLATES MAY ONLY BE USED IN SECURE STAFF-ONLY AREAS.

LIGHTING SYSTEM

1. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LOCATION OF ALL CEILING ELEMENTS (LIGHTS, SPRINKLERS, DIFFUSERS, ETC). ALL CEILING MOUNTED ITEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL DIMENSIONED DRAWINGS. IF LOCATION FOR AN ITEM IS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS, VERIFY THE EXACT LOCATION OF THE ITEM WITH THE ARCHITECT PRIOR TO INSTALLATION. THESE REQUIREMENTS APPLY TO ALL CEILING TYPES IN ALL AREAS. DO NOT SCALE OR DIMENSION LOCATIONS FROM THESE DRAWINGS.
2. PROVIDE AND INSTALL ALL SUPPORTS FOR LIGHT FIXTURES. SUPPORTS SHALL BE INDEPENDENT OF THE CEILING GRID SUPPORT SYSTEM.
3. LIGHT SWITCHES / OCCUPANCY SENSORS LOCATED IN A ROOM SHALL CONTROL ALL THE FIXTURES IN THAT ROOM UNLESS NOTED OTHERWISE. CONTRACTOR SHALL GANG TOGETHER ALL SWITCHES/DIMMERS UNDER A SINGLE COVERPLATE IN ALL AREAS THAT REQUIRE MORE THAN ONE SWITCH TO CONTROL ELECTRICAL DEVICES.

MECHANICAL & PLUMBING COORDINATION

1. REFERENCE THE MECHANICAL AND PLUMBING DRAWINGS FOR ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. MAKE ALL CONNECTIONS AND PROVIDE APPROPRIATE WIRE, CONDUIT, AND OVERCURRENT PROTECTION PER EQUIPMENT MANUFACTURER NAMEPLATE FOR ALL EQUIPMENT.
2. VERIFY EXACT LOCATION OF ALL POWER CONNECTIONS AND CONTROL DEVICES WITH OTHER TRADES AND MANUFACTURERS SHOP DRAWINGS BEFORE CONSTRUCTION. COORDINATE ALL REQUIRED ENERGY MANAGEMENT SYSTEM POINTS AND CONTACT CONNECTIONS TO ENSURE THE COMPLETE AND PROPER OPERATION OF ALL SYSTEMS.
3. ALL FUSED SWITCH AND/OR CIRCUIT BREAKERS SERVING EQUIPMENT SHALL HAVE PROVISIONS FOR HANDLE LOCKS. PROVIDE FUSES PER EQUIPMENT MANUFACTURER NAMEPLATE DATA.
4. ALL CIRCUIT BREAKERS SERVING MECHANICAL EQUIPMENT SHALL BEAR A 'HACR' RATING.
5. COORDINATE BETWEEN TRADES AND PROVIDE CONTROL POWER FOR ALL VAV BOXES/DAMPERS/ETC, AS REQUIRED TO ENSURE A COMPLETE, FULLY FUNCTIONAL HVAC SYSTEM. SHOULD AN EXACT CIRCUIT NUMBER NOT BE INDICATED ON ELECTRICAL DRAWINGS, CONTRACTOR SHALL UTILIZE AVAILABLE 20A/1P SPACE FROM THE NEAREST 208Y/120V THAT COMPLIES WITH NFPA 70 OR FROM BUILDING CONTROL POWER DISTRIBUTION SYSTEM.

SPECIAL SYSTEMS (I.E. DATA/PHONE/SECURITY/CAT V)

1. CONTRACTOR SHALL PROVIDE AND INSTALL AN EMPTY CONDUIT RACEWAY AND BACKBOX SYSTEM FOR OWNERS SPECIAL SYSTEMS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FROM OWNERS SELECTED SYSTEMS VENDORS SHOP DRAWINGS FROM EACH VENDOR/INSTALLER PRIOR TO ELECTRICAL ROUGH-IN. CONTRACTOR SHALL COORDINATE BACKBOX AND RACEWAY SIZING REQUIREMENTS, LOCATIONS, ELEVATIONS, ETC., AND PROVIDE AND INSTALL ALL REQUIRED RACEWAYS AND DEVICE BACK BOXES AS REQUIRED BY VENDOR SHOP DRAWINGS. CONTRACTOR SHALL PROVIDE A EPANATE LINE ITEM ALLOWANCE IN BID AS NECESSARY TO COVER THIS SCOPE.

DEMOLITION GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE TO VISIT THE JOBSITE AND DETERMINE ALL EXISTING CONDITIONS PRIOR TO BID. CONTRACTOR SHALL BE RESPONSIBLE TO THOROUGHLY REVIEW THE PROJECT DOCUMENTS AND DETERMINE THEREFROM THE REQUIRED SCOPE OF THE DEMOLITION WORK REQUIRED. INCLUDE SUFFICIENT ALLOWANCE AND/OR SEPARATE LINE ITEM PRICING FOR ALL DEMOLITION WORK REQUIRED. COORDINATE ALL SCOPE OF WORK WITH GENERAL CONTRACTOR PRIOR TO BID AND PERFORM ALL WORK AS DIRECTED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
2. THE NATURE OF THIS REMODEL PROJECT MAY REQUIRE EXTENSIVE SERVICE MODIFICATIONS THAT MAY REQUIRE SERVICE SHUTDOWN AND VARIOUS PORTIONS OF THE BUILDING/COMPLEX TO BE WITHOUT POWER AT VARYING TIMES DUE TO THE EXTENT OF THE RECONFIGURATION OF THE EXISTING ELECTRICAL DISTRIBUTION SYSTEM. CONTRACTOR SHALL ADVISE BUILDING OWNER OR OWNERS AUTHORIZED REPRESENTATIVE PRIOR TO ANY POWER OUTAGES. REFER TO ED SERIES SHEETS & E-SERIES SHEETS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
3. COORDINATE ALL DEMOLITION WORK WITH GENERAL CONTRACTOR AND PROVIDE ALL SUPPORT AS DIRECTED TO SAFETY-OFF ALL ELECTRICAL SYSTEMS AND EQUIPMENT TO BE DEMOLISHED. INCLUDE ALL LABOR AND MATERIALS REQUIRED FOR ALL ELECTRICAL DEMOLITION SCOPE OF WORK AS DIRECTED BY THE GENERAL CONTRACTOR.
4. COORDINATE WITH GENERAL CONTRACTOR FOR PROPER HAZARDOUS MATERIALS DISPOSAL FOR ALL FLUORESCENT LAMPS AND BALLASTS REMOVED. INCLUDE PROPER DISPOSAL FEES FOR ALL HAZARDOUS MATERIALS AND PROVIDE WRITTEN DOCUMENTATIONS OF PROPER DISPOSAL TO OWNERS AUTHORIZED REPRESENTATIVE FOR ALL HAZARDOUS MATERIALS REMOVED FROM THE BUILDING.
5. DESIGNATION 'EX' REPRESENTS EXISTING DEVICE OR LIGHT FIXTURE TO REMAIN AS CIRCUITED AND SWITCHED UNLESS NOTED OTHERWISE. EXISTING LIGHT FIXTURES SHALL BE CLEANED AND REPAIRED AS REQUIRED.
6. WHERE EXISTING WALLS ARE DEMOLISHED, REMOVE ALL EXISTING ELECTRICAL DEVICES AND THEIR ASSOCIATED CONDUITS AND WIRING BACK TO THE POINT OF ORIGINATION. ENERGIZE ALL EXISTING DEVICES THAT WERE INTERRUPTED DURING DEMOLITION. WHERE ENTIRE CIRCUITS ARE REMOVED, TURN THE CIRCUIT BREAKER OFF AND LABEL AS "SPARE". PROVIDE UPDATED, TYPE-WRITTEN PANEL DIRECTORY OF ALL CORRECT CIRCUITS WITH LOAD DEFINITIONS FOR EACH PANEL BOARD. DIRECTORY SHALL BE LOCATED INSIDE PANEL DOOR.
7. IF DEMOLITION IS REQUIRED TO INSTALL AN ITEM, THE CONTRACTOR SHALL RESTORE THE AREA TO PREVIOUS CONDITION, OR REPLACE DAMAGED ITEMS WITH NEW ITEMS TO MATCH EXISTING.
8. WHERE EXISTING MECHANICAL/PLUMBING EQUIPMENT IS DEMOLISHED, REMOVE ALL RELATED ELECTRICAL FEEDS TO THE EQUIPMENT AND THEIR ASSOCIATED CONDUITS BACK TO THE POINT OF ORIGINATION.
9. SPACE ALLOCATIONS FOR MATERIALS, EQUIPMENT AND DEVICES HAVE BEEN MADE ON THE BASIS OF PRESENT AND KNOWN FUTURE REQUIREMENTS AND THE DIMENSIONS OF ITEMS OF EQUIPMENT OR DEVICES OF A PARTICULAR MANUFACTURER, WHETHER INDICATED OR NOT. THE CONTRACTOR SHALL VERIFY THAT ALL MATERIALS, EQUIPMENT AND DEVICES PROPOSED FOR USE ON THIS PROJECT ARE WITHIN THE CONSTRAINTS OF THE ALLOCATED SPACE.
10. ALL RECEPTACLES WITHIN THE PROJECT SCOPE SHALL BE HOSPITAL GRADE TYPE. IF A DEVICE IS INDICATED AS EXISTING TO REMAIN AND IS NOT A HOSPITAL GRADE RECEPTACLE, REPLACE THE EXISTING DEVICE WITH A HOSPITAL GRADE RECEPTACLE AND RECONNECT TO EXISTING CIRCUIT.
11. ALL LIGHT FIXTURES DEMOLISHED UNDER THESE DRAWINGS SHALL BE RETURNED TO THE OWNER.

ELECTRICAL ABBREVIATIONS

AAP	AREA ALARM PANEL	MH	MANHOLE
AFC	ABOVE FINISHED COUNTER	MLO	MAIN LUGS ONLY
AFF	ABOVE FINISHED FLOOR	MTD	MOUNT OR MOUNTED
ATS	AUTOMATIC TRANSFER SWITCH	N	NEW DEVICE
BFC	BELOW FINISHED CEILING	NC (N.C.)	NORMALLY CLOSED
BOF	BOTTOM OF FIXTURE	NEC	NATIONAL ELECTRIC CODE
C	CONDUIT	NF	NONFUSED
CB,C/B OR CKT BKR	CIRCUIT BREAKER	NIC	NOT IN CONTRACT
CKT	CIRCUIT	NL	NIGHT LIGHT
CCTV	CLOSED CIRCUIT T.V.	NO (N.O.)	NORMALLY OPEN
CLG	CEILING	PB	PULL BOX
CUH	CABINET HEATER	PNL	PANEL
EC	EMPTY CONDUIT	PWR	POWER
ELEC	ELECTRIC	R	REMOVE DEVICES
E	EMERGENCY	RL	RELOCATED DEVICE
EMS	ENERGY MANAGEMENT SYSTEM	RCPT(S) OR RECEPT	RECEPTACLE(S)
EP	EXPLOSION PROOF	RF	RETURN AIR FAN
EWC	ELECTRIC WATER COOLER	SEF	SMOKE EXHAUST FAN
EX	EXISTING	SF	SUPPLY AIR FAN
F	FUSE	SO (S.O.)	SPACE ONLY
FA	FIRE ALARM	SP	SPARE
FACP, FAP	FIRE ALARM CONTROL PANEL	ST (S.T.)	SHUNT TRIP
FCU	FAN COIL UNIT	SW	SWITCH
FIXT	FIXTURE	TEL	TELEPHONE
FLR	FLOOR	TF	TRANSFER FAN
FLUOR	FLUORESCENT	TP	TAMPER PROOF
FTP, FTS	FAN TERMINAL UNIT	TV	TELEVISION
FTU	FAN TERMINAL UNIT	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
FUT	FUTURE	UF	UNDERFLOOR
G, GND	GROUND (EQUIPMENT)	UG	UNDERGROUND
GEF	GENERAL EXHAUST FAN	UH	UNIT HEATER
GEN	GENERATOR	UNO (U.N.O.)	UNLESS NOTED OR INDICATED OTHERWISE
GFCI, GFI	GROUND FAULT CIRCUIT INTERRUPTER	V	VOLTAGE
HP	HORSE POWER	VFD	VARIABLE FREQUENCY DRIVE
HV	HIGH VOLTAGE	VP	VAPOR PROOF
HWAT	HEAT TRACE	VV	VARIABLE VOLUME UNIT
IC	INTERRUPTING CAPACITY	W	WIRE
ICAND	INCANDESCENT	W/	WITH
IG	ISOLATED GROUND	WG	WIRE GUARD
JB	JUNCTION BOX	WP	WEATHER PROOF
KEF	KITCHEN EXHAUST FAN	WT	WATER TIGHT
LTG	LIGHTING	XFMR	TRANSFORMER
LTS	LIGHTS	+xx	MOUNTING HEIGHT IN INCHES. AFF UNO.
LV	LOW VOLTAGE		
MATV	MASTER ANTENNA		
MCB	MAIN CIRCUIT BREAKER		
MCC	MOTOR CONTROL CENTER		
MDP	MAIN DISTRIBUTION PANEL		

KEY TO GENERAL NOTATIONS AND MOUNTING HEIGHTS

46" AFF INDICATES TO TOP OF DEVICE;
18" AFF INDICATES TO CENTER OF DEVICE;
60" AFF INDICATES TO BOTTOM OF DEVICE;
80" AFF INDICATES TO BOTTOM OF DEVICE;
ALL OTHER MOUNTING HEIGHTS REFER TO CENTERLINE OF DEVICE.

⬡ LEGEND NOTES: DENOTES "SEE LEGEND NOTE NO. 2"

REF: 02/E.202- DENOTES: REFERENCE 2 IN DRAWING (SHEET) E-202

20.4 – FEEDER TAG. FEEDER SIZES ARE DETERMINED BY THE FEEDER SCHEDULE

PROJECT DESIGN CRITERIA

LOCATION	
CITY/STATE	AUROA, CO
APPLICABLE CODES	
BUILDING	2015 IBC
MECHANICAL	2015 IMC
PLUMBING	2015 IPC
ENERGY	2015 IECC
ELECTRICAL	2017 NEC
FIRE	2017 IFC
LATITUDE	
DEG. N. LAT.	39°41' N
ELEVATION	
FT. ABOVE SEA LEVEL	5470

RECEPTACLE SYMBOLS LEGEND

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.

SYMBOL	DESCRIPTION	MNTG. HT. UNO
	SINGLE RECEPTACLE - 20A/125V/2P/3W/G NEMA 5-20R	18" AFF
	DUPLEX RECEPTACLE - 20A/125V/2P/3W/G NEMA 5-20R	18" AFF
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTERTOP	8" AFC OR 42" AFF
	QUADRAPLEX RECEPTACLE (TWO DUPLEX RECEPTACLES UNDER ONE COVERPLATE)	18" AFF
	QUADRAPLEX RECEPTACLE MOUNTED ABOVE COUNTERTOP (TWO DUPLEX RECEPTACLES UNDER ONE COVERPLATE)	8" AFC OR 42" AFF
	SPECIAL PURPOSE RECEPTACLE (NEMA NO. AS INDICATED)	18" AFF
	FLOOR MOUNTED RECEPTACLE IN FLOOR BOX OR POKE-THRU DEVICE - FLUSH MOUNTED, UNO	18" AFF
	CEILING MOUNTED RECEPTACLE - CONFIGURATION UNO	FLUSH W/ CLG SURFACE
J KO	JUNCTION BOX - SIZE & MOUNTING AS REQUIRED	AS REQUIRED
KO DT	WALL MOUNTED JUNCTION BOX FOR DATA/TELEPHONE - SIZE & MOUNTING AS REQUIRED	AS REQUIRED

RECEPTACLE TAG LEGEND

E - DEVICE ON EMERGENCY CIRCUIT
GFI - GROUND FAULT INTERRUPTING DEVICE
H - DEVICE MOUNTED HORIZONTALLY
TP - TAMPER PROOF DEVICE WITH TAMPER RESISTANT MOUNTING SCREWS
WP - GROUND FAULT INTERRUPTING, TAMPER RESISTANT, WEATHER RESISTANT DEVICE LOCATED IN A "WEATHER PROOF IN USE" ENCLOSURE.

POWER SYMBOLS LEGEND

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.

SYMBOL	DESCRIPTION	MNTG. HT. UNO
X/Y/Z X-Z CB X/Z	DISCONNECT SWITCH FUSED - X/Y/Z (X=FRAME SIZE, Y=FUSE SIZE, Z=NUMBER OF POLES) NON-FUSED - X/-Z(X=FRAME SIZE, Z=NUMBER OF POLES) CIRCUIT BREAKER - CB X/Y/Z (X=FRAME SIZE, Z=NUMBER OF POLES)	AS REQUIRED
$M	MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD AND PILOT LIGHT	AS REQUIRED
	EMERGENCY POWER OFF BUTTON - WALL MOUNTED	AS REQUIRED
	CIRCUIT HOMERUN TO PANELBOARD (2#12, 1#12G, 3/4"C. 20A/1P CB UNO)	--
X,X,X	THREE SINGLE POLE DEVICE CIRCUIT NUMBERS	--
X/X/X	MULTI-POLE DEVICE CIRCUIT NUMBERS	--
	208Y/120V PANELBOARD	--
	480Y/277V PANELBOARD	--
	208Y/120V DISTRIBUTION PANELBOARD	--
	480Y/277V DISTRIBUTION PANELBOARD	--
	ISOLATION PANEL	--
	SWITCHBOARD	--
T	STEP-DOWN TRANSFORMER	--
	AUTOMATIC TRANSFER SWITCH	--
	BY-PASS / ISOLATION AUTOMATIC TRANSFER SWITCH	--
	GROUND BAR	--
GAP	GENERATOR ANNUNCIATOR PANEL	AS REQUIRED
ATSA	AUTOMATIC TRANSFER SWITCH ANNUNCIATOR PANEL	AS REQUIRED
SPD	TRANSIENT VOLTAGE AND SURGE SUPPRESSOR DEVICE	AS REQUIRED
AAP	AREA ALARM PANEL	AS REQUIRED
FOAP	FUEL OIL ALARM PANEL	AS REQUIRED
MGAP	MEDICAL GAS ALARM PANEL - PANEL PROVIDED UNDER DIV 22	AS REQUIRED
DHTA	DECONTAMINATION HOLDING TANK ALARM - PANEL PROVIDED UNDER OTHER DIVISION	AS REQUIRED

FIRE ALARM SYMBOLS LEGEND

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.

SYMBOL	DESCRIPTION	MNTG. HT. UNO
F	FIRE ALARM PULL STATION WALL MOUNTED	48" AFF
F	FIRE ALARM AUDIBLE VISUAL SIGNAL WALL MOUNTED	48" AFF
F	FIRE ALARM AUDIBLE SIGNAL WALL MOUNTED	48" AFF
F	FIRE ALARM VISUAL SIGNAL WALL MOUNTED	48" AFF
FS	FIRE ALARM SPRINKLER FLOW SWITCH	--
TS	FIRE ALARM SPRINKLER TAMPER SWITCH	--
PS	FIRE ALARM SPRINKLER PRESSURE SWITCH	--
	SMOKE DETECTOR WALL MOUNTED	9" BFC
	SMOKE DETECTOR CEILING MOUNTED	--
	HEAT DETECTOR WALL MOUNTED	9" BFC
	HEAT DETECTOR CEILING MOUNTED	--
	ELECTRO-MAGNETIC DOOR HOLDER	AS REQUIRED
	ELECTRO-MAGNETIC SMOKE DOOR HOLDER (INTERFACED WITH FIRE ALARM SYSTEM. DC POWER PROVIDED BY FIRE ALARM WIRING	AS REQUIRED
FACP	FIRE ALARM CONTROL PANEL	REFER TO ARCH. ELEV.
FAAP	FIRE ALARM ANNUNCIATOR PANEL	REFER TO ARCH. ELEV.
FP	TELEPHONE JACK FOR FIREMAN'S PHONE (BY FIRE ALARM CONTRACTOR)	48" AFF

LIGHT SWITCH SYMBOLS LEGEND

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.

SYMBOL	DESCRIPTION	MNTG. HT. UNO (SEE NOTE 1)
$	WALL SWITCH, 20A, 120/277V	48" AFF
$3	3-WAY WALL SWITCH, 20A, 120/277V	48" AFF
$4	4-WAY WALL SWITCH, 20A, 120/277V	48" AFF
$D	WALL DIMMER SWITCH	48" AFF
$K	KEY OPERATED WALL SWITCH	48" AFF
$3D	3-WAY DIMMER WALL SWITCH, 20A, 120/277V	48" AFF
$3K	3-WAY KEY OPERATED WALL SWITCH, 20A, 120/277V	48" AFF
$M

RSN#1312716
PERMIT# 2018-1509651-LT

I GENERAL CONDITIONS

A. THE SCOPE OF THE WORK SHALL INCLUDE THE FURNISHING AND INSTALLATION OF THE NECESSARY MATERIAL AND LABOR TO ACCOMPLISH THE WORK INDICATED BY THE DRAWINGS AND HEREIN SPECIFIED. ALL WORK BY THIS CONTRACTOR SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES.

B. THE CONTRACT DOCUMENTS DO NOT PROPOSE TO SHOW ALL EXISTING SYSTEMS, EQUIPMENT OR MATERIAL. CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THE EXISTING CONDITIONS AT THE JOB SITE BEFORE SUBMITTING PROPOSALS. SUBMISSION OF PROPOSALS SHALL BE TAKEN AS EVIDENCE THAT SUCH INSPECTION HAS TAKEN PLACE. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE COMPLETE SET OF CONSTRUCTION DOCUMENTS, AND THE LACK OF SPECIFIC INFORMATION ON THE DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY.

C. MATERIALS AND EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND SHALL BEAR THE U.L. LABEL WHERE APPLICABLE, UNLESS NOTED OTHERWISE. ALL WORK SHALL BE GUARANTEED AGAINST DEFECTIVE MATERIALS AND WORKMANSHIP FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR AFTER COMPLETION AND ACCEPTANCE BY THE OWNER.

D. CONTRACTOR SHALL INSTALL ELECTRICAL SYSTEMS WITHOUT INTERFERENCE AND IN STRICT COORDINATION WITH OTHER TRADES.

E. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE CONTRACT DOCUMENTS AND APPLICABLE CODES AND STANDARDS. IN CASE OF DIFFERENCE BETWEEN APPLICABLE CODES AND STANDARDS AND THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF SUCH DIFFERENCE. SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF APPLICABLE CODES AND STANDARDS, HE SHALL BEAR ALL COSTS ARISING IN CORRECTING SUCH DEFECTS. APPLICABLE CODES AND STANDARDS SHALL INCLUDE ALL ORDINANCES, UTILITY COMPANY REGULATIONS, AND APPLICABLE REQUIREMENTS OF NATIONALLY ACCEPTED CODES AND STANDARDS. SHOULD THE CONTRACTOR SUPPLY EQUIPMENT DIFFERING FROM THE SPECIFIED ITEMS IN THE CONTRACT DOCUMENTS WITHOUT NOTIFICATION TO THE ENGINEER, HE SHALL BEAR ALL COSTS TO UPGRADE DEFICIENCIES ARISING FROM SUCH.

F. WHERE ONLY ONE MANUFACTURER'S NAME IS LISTED IN THE EQUIPMENT SPECIFICATION, OTHER MANUFACTURERS OF SIMILAR CHARACTERISTICS AND OF EQUAL OR BETTER PERFORMANCE CAPACITIES MAY BE CONSIDERED FOR "OR EQUAL" ACCEPTANCE BY THE ENGINEER. SUBSTITUTION REQUESTS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL. WHERE MORE THAN ONE MANUFACTURER IS LISTED IN THE NOTES AND EQUIPMENT SPECIFICATIONS, ONLY THOSE NAMED MANUFACTURERS WILL BE CONSIDERED FOR ACCEPTANCE. SHOULD A SUBSTITUTION BE ACCEPTED, AND SHOULD THE SUBSTITUTE MATERIAL PROVE DEFECTIVE, OR OTHERWISE UNSATISFACTORY FOR THE SERVICE INTENDED WITHIN THE GUARANTEE PERIOD, THIS MATERIAL OR EQUIPMENT SHALL BE REPLACED WITH THE MATERIAL OR EQUIPMENT SPECIFIED AT NO COST TO THE OWNER.

G. PROVIDE ACCESS, INCLUDING NECESSARY ACCESS DOORS, FOR NEW AND EXISTING EQUIPMENT REQUIRING OPERATION AND/OR MAINTENANCE. RELOCATE EXISTING AND LOCATE ALL NEW EQUIPMENT SUCH THAT OPERATION OR MAINTENANCE IS NOT RESTRICTED.

H. INSTALL EQUIPMENT WITH WORKING CLEARANCES COMPLYING WITH NEC 110-16 AND 110-34.

II PRODUCTS

A. CONDUIT

1. ELECTRIC METALLIC TUBING (EMT): OF HIGH GRADE STEEL MANUFACTURED SPECIFICALLY TO STANDARDS ASSURING MAXIMUM WELDING CHARACTERISTICS AND DUCTILITY, AND SHALL CONFORM TO FED. SPEC. WW-T-806b.

2. FLEXIBLE METAL CONDUIT: MANUFACTURED OF MILD STEEL STRIP MATERIAL HAVING A HOT-DIP GALVANIZED COATING AND MEETING REQUIREMENTS OF FED. SPEC. WW-C-566b.

3. LIQUIDTIGHT FLEXIBLE CONDUIT: FLEXIBLE METAL CONDUIT AS SPECIFIED HEREIN WITH A COPPER GROUNDING STRAND AND FACTORY-APPLIED NEOPRENE JACKET. LIQUID TIGHT FLEXIBLE CONDUIT SHALL BE UL LISTED, EQUIVALENT TO ANACONDA "SEALTITE", TYPE UA.

4. HOSPITAL GRADE METAL-CLAD CABLE MAY BE USED. TYPE HCF-MC METAL CLAD CABLE SHALL CONSIST OF FACTORY ASSEMBLED INSULATED CONDUCTORS ENCLOSED IN A METALLIC SHEATH OF INTERLOCKED GALVANIZED STEEL STRIP MANUFACTURED IN ACCORDANCE WITH UL 5169. THE CONDUCTORS SHALL HAVE AN OPERATING TEMPERATURE OF 90 DEGREE C AND SHALL BE COVERED BY A HIGH DIELECTRIC STRENGTH ASSEMBLY TAPE. TYPE HCF-MC CABLE SHALL BE AS MANUFACTURED BY AFC OR EQUAL.

B. COUPLINGS AND TERMINATORS

1. FOR ELECTRICAL METALLIC TUBING: STEEL SET SCREW COUPLINGS; STEEL SET SCREW BOX CONNECTORS WITH NYLON INSULATED THROAT AND LOCKNUTS AT ALL BOXES AND CABINET TERMINATIONS OR NON-INSULATED BOX CONNECTOR, LOCKNUT AND NYLON-INSULATED GROUNDING BUSHING ON ALL TUBING WHERE GROUNDING BUSHINGS ARE REQUIRED.

2. FOR FLEXIBLE METAL CONDUIT: COUPLINGS AT CONNECTIONS BETWEEN FLEXIBLE CONDUIT AND EMT, AND NYLON INSULATED THROAT STEEL CONNECTORS AT BOX OR CABINET TERMINATIONS.

C. JUNCTION AND PULL BOXES

1. SIZE BOXES IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC. BOXES SHALL BE NO SMALLER THAN 4 INCHES SQUARE BY 1-1/2 INCHES DEEP WITH COVERS ACCESSIBLE AT ALL TIMES. SET BOXES ON CONCEALED CONDUITS WITH COVERS FLUSH WITH THE FINISHED WALL OR CEILING LINE. PROVIDE JUNCTION AND PULL BOXES OF APPROPRIATE DIMENSIONS FOR CONDUITS AND CONDUCTORS NOTED, WHERE SHOWN AND WHERE NECESSARY FOR THE INSTALLATION AND PULLING OF CABLES AND WIRES. INSTALL COVERS ON JUNCTION BOXES AND CONDULETS AFTER WIRING AND CONNECTIONS ARE COMPLETED.

D. OUTLET BOXES

1. OUTLET BOXES SHALL BE UL LISTED, AND OF SIZES AND TYPES REQUIRED FOR THE APPLICATION. OUTLET BOXES SHALL BE SHEET STEEL, NO LIGHTER THAN 14 GAUGE, GALVANIZED AFTER FABRICATION. SET BOX SO FACE OF BOX WILL FINISH FLUSH WITH BUILDING SURFACE.

a. FOR LIGHTING FIXTURE OUTLETS: 4 INCH SQUARE BY 1-1/2 INCHES DEEP WITH RAISED FIXTURE RING.

b. FOR WALL SWITCHES, RECEPTACLES, AND COMMUNICATION USE: 4 INCH SQUARE, BY 1-1/2 INCHES DEEP. USE BOXES WITH PLASTER RINGS IN ALL PLASTERED WALLS WHERE WALL THICKNESS PERMITS. USE BOXES LESS THAN 1-1/2 INCH DEEP ONLY IN LOCATIONS WHERE DEEP BOXES CANNOT BE ACCOMMODATED BY CONSTRUCTION.

E. WIREWAY

1. UL LISTED; SIZED INDICATED OR REQUIRED; HINGED COVER, SECURED WITH CAPTIVE SCREWS; COMPLETE WITH ALL REQUIRED FITTINGS, COUPLINGS, HANGERS AND ACCESSORIES.

2. CORROSION RESISTANT PRIMER AND ANSI GRAY EPOXY PAINT FINISH. CORROSION RESISTANT BOLTS OR SCREWS. SCREWS OR BOLTS INSTALLED TOWARD THE INSIDE FITTED WITH SPRING NUTS OR OTHERWISE PREVENTED FROM DAMAGING CONDUCTOR INSULATION.

F. PULL CORDS

1. PROVIDE A NYLON POLYETHYLENE CORD, WITH A TENSILE STRENGTH OF NOT LESS THAN 200 POUNDS, IN EACH EMPTY CONDUIT TO FACILITATE THE FUTURE INSTALLATION OF CONDUCTORS. INCORPORATE PLASTIC TAGS FOR IDENTIFICATION.

G. CONDUCTORS

1. CONDUCTORS SHALL BE 98% CONDUCTIVITY SOFT DRAWN ANNEALED COPPER, 600 VOLT, THHN/THWN INSULATION, #10 AND SMALLER - SOLID, #8 AND LARGER - STRANDED.

2. NO CONDUCTORS SHALL BE SMALLER THAN NO. 12, EXCEPT FOR SIGNAL OR CONTROL CIRCUITS AND FOR INDIVIDUAL LIGHTING FIXTURE TAPS AS PERMITTED BY NEC.

3. FOR HOME RUNS ON 120-VOLT, 20-AMPERE BRANCH CIRCUITS, WHERE LENGTH OF RUN FROM PANELBOARD TO FIRST OUTLET EXCEEDS 100 LINEAR FEET, USE NO. 10 CONDUCTORS. WHERE LENGTH OF RUN IS 100 LINEAR FEET OR LESS, USE NO. 12 CONDUCTORS.

H. WIRING DEVICES, COVER PLATES AND ACCESSORIES

1. PROVIDE WIRING DEVICES AND ASSOCIATED ACCESSORIES OF SPECIFICATION GRADE. DEVICES OF LEVITON, HUBBELL OR PASS & SEYMORE ARE ACCEPTABLE. SUBMIT FOR REVIEW A COMPLETE LIST OF ANY SUBSTITUTES OFFERED FROM THOSE SPECIFIED.

2. COLOR OF WALL SWITCHES, RECEPTACLES AND FACEPLATES: AS SPECIFIED OR SELECTED BY ARCHITECT.

3. WHERE LIGHTING CIRCUITS ARE SHOWN TO BE LINE VOLTAGE SWITCHED, PROVIDE WITH SPECIFICATION GRADE, HORSEPOWER RATED, UL LISTED, BACK- AND SIDE-WIRED, TOGGLE SWITCHES RATED 20-AMP, 120 VOLTS OR 277 VOLTS. SWITCHES SHALL BE SPST, DPST, 3-WAY OR 4-WAY, WITH OR WITHOUT PILOT LIGHT, AS INDICATED ON THE DRAWINGS.

4. RECEPTACLES

a. STANDARD WALL RECEPTACLES SHALL BE SPECIFICATION GRADE, RATED 20-AMP, 120-VOLT, 2 POLE, 3-WIRE, GROUNDING TYPE, SIDE-WIRED, NEMA 5-20R.

b. SPECIAL PURPOSE RECEPTACLES SHALL BE SPECIFICATION GRADE DEVICES FOR THE NEMA CONFIGURATIONS SCHEDULED OR INDICATED ON THE DRAWINGS.

c. GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLES SHALL BE 20 AMP, 120 VOLT, 2 POLE, 3-WIRE, NEMA 5-20R.

d. ISOLATED GROUND RECEPTACLES SHALL BE 20A, 120 VOLT, 2 POLE, 3-WIRE, NEMA IG5-20R.

5. MAINTAIN GROUNDING CONTINUITY BETWEEN DEVICES AND METALLIC RACEWAY SYSTEM IN ADDITION TO PROVIDING A GREEN EQUIPMENT GROUNDING CONDUCTOR RUN WITH ALL CIRCUIT CONDUCTORS AS INDICATED ON THE DRAWINGS. EXCEPT, CARE SHALL BE TAKEN WHEN INSTALLING RECEPTACLES HAVING ISOLATED GROUND POLE SO AS TO NOT BOND THE EQUIPMENT GROUND CONDUCTOR TO THE CONDUIT SYSTEM.

I. OVERCURRENT PROTECTIVE DEVICES

1. MOLDED CASE CIRCUIT BREAKERS

a. AS MANUFACTURED BY THE MANUFACTURER OF THE PANELBOARD IN WHICH INSTALLED.

b. ONE, TWO OR THREE POLE WITH RATINGS INDICATED ON THE DRAWINGS; (STANDARD) OR (HIGH INTERRUPTING) CONSTRUCTION AS REQUIRED BY THE SHORT CIRCUIT RATINGS INDICATED ON THE DRAWINGS.

c. QUICK-MAKE, QUICK-BREAK, CALIBRATED FOR OPERATION IN AN AMBIENT TEMPERATURE OF 40°C. TRIP INDICATION BY HANDLE POSITION, TRIP-FREE. TWO AND THREE POLE BREAKERS: COMMON TRIP WITH SINGLE OPERATING HANDLE WITHOUT HANDLE TIES, PERMANENT TRIP UNIT CONTAINING INDIVIDUAL THERMAL AND MAGNETIC TRIP ELEMENTS IN EACH POLE. FRAME SIZES GREATER THAN 100 AMPERES: VARIABLE MAGNETIC TRIP ELEMENTS WHICH ARE SET BY A SINGLE ADJUSTMENT.

d. REMOVABLE LUGS, UL LISTED FOR COPPER AND ALUMINUM CONDUCTORS. LISTED FOR INSTALLATION OF MECHANICAL OR COMPRESSION TYPE LUGS.

J. DISCONNECT SWITCHES

1. AS MANUFACTURED BY SQUARE D, GENERAL ELECTRIC, CUTLER-HAMMER OR SIEMENS.

2. FUSIBLE/NON-FUSIBLE SWITCHES

a. ALL SWITCHES: HEAVY DUTY TYPE; UL LISTED AND MEET LATEST NEMA STANDARDS KS-1; HORSEPOWER RATED; QUICK-MAKE, QUICK-BREAK; VISIBLE BLADES IN "OFF" POSITION; REMOVABLE ARC SUPPRESSORS; LUGS FRONT REMOVABLE AND UL LISTED FOR 75°C ALUMINUM OR COPPER WIRE; OPERATING HANDLE IN CONTROL OF SWITCH WITH DOOR OPEN AND CLOSED; HANDLE POSITION CLEARLY INDICATE "ON" AND "OFF" POSITIONS; PROVISIONS FOR PADLOCKING IN "OFF" POSITION; SAFETY INTERLOCKS TO PREVENT THE ENCLOSURE DOOR FROM BEING OPENED WHILE THE HANDLE IS IN THE "ON" POSITION AND TO PREVENT THE HANDLE FROM BEING TURNED TO THE "ON" POSITION WHILE THE ENCLOSURE DOOR IS OPEN; MEANS TO PERMIT AUTHORIZED PERSONNEL TO RELEASE THE SAFETY INTERLOCKS FOR MAINTENANCE OR INSPECTION; AUXILIARY POLES, AS REQUIRED, TO DISCONNECT CONTROL VOLTAGE(S) WHEN POWER VOLTAGE IS DISCONNECTED.

b. ENCLOSURES: NEMA 1 OR NEMA 3R, AS INDICATED ON DRAWINGS; CLEAN STEEL, GALVANIZED AFTER FORMING, PRIMED AND GREY BAKED ENAMEL FINISHED; NEMA 1 COVERS ON PIN TYPE HINGES; NEMA 3R COVERS SECURABLE IN THE OPEN POSITION. INTERCHANGEABLE BOLT-ON THREADED HUBS ON NEMA 3R SWITCHES THRU 200 AMPERE.

c. FUSIBLE SWITCHES: FOR 600 AMPERE AND SMALLER SWITCHES, PROVIDE UL LISTED REJECTION CLIPS TO REJECT ALL FUSES EXCEPT CLASS R; FOR 800 AMPERE AND LARGER SWITCHES, PROVIDE FUSE CLIPS FOR CLASS L FUSES. ALL SWITCHES UL LISTED SHORT CIRCUIT RATING OF 200,00 AMPERES RMS SYMMETRICAL

3. ENCLOSED CIRCUIT BREAKER

a. ENCLOSURES: NEMA 1 OR NEMA 3R AS INDICATED ON THE DRAWINGS. NEMA 1 ENCLOSURES: FURNISHED WITH KNOCKOUTS WHERE PRACTICAL; FABRICATED FROM SHEET STEEL, GALVANIZED AFTER FORMING; ELECTRODEPOSITED, GRAY BAKED ENAMEL FINISH. PROVIDE PADLOCKING PROVISIONS TO ALLOW LOCKING THE CIRCUIT BREAKER IN THE "OFF" POSITION. NEMA 3R ENCLOSURES FOR CIRCUIT BREAKERS RATED THRU THE 225 AMPERE FRAME SIZE FURNISHED WITH PROVISIONS FOR INTERCHANGEABLE, BOLT-ON HUBS. NEMA 3R ENCLOSURE COVERS SECURABLE IN THE OPEN POSITION. PROVIDE PADLOCKING PROVISIONS TO ALLOW LOCKING THE ENCLOSURE COVER CLOSED.

K. TELEPHONE/DATA SYSTEM

1. AT ALL WALL DATA/VOICE OUTLET LOCATIONS, PROVIDE BACK BOXES AND 3/4" EMPTY CONDUIT WITH PULL CORD TO ABOVE CEILING.

III EXECUTION

A. INSTALLATION OF BUILDING CONDUIT

1. ALL INTERIOR RACEWAYS SHALL BE EMT. RACEWAYS IN DAMP OR WET LOCATIONS, OR IN HAZARDOUS LOCATIONS, SHALL BE GRC OR IMC.

2. CONDUITS SHALL BE OF SUCH SIZE AND SO INSTALLED THAT THE CONDUCTORS MAY BE DRAWN THROUGH WITHOUT INJURY OR EXCESSIVE STRAIN, SHALL BE SECURED AT CABINETS AND BOXES WITH GALVANIZED LOCKNUTS, BOTH INSIDE AND OUTSIDE, AND SHALL HAVE APPROPRIATE BUSHINGS INSIDE. BUSHINGS SHALL BE INSULATING TYPE WITH BOND GROUND CLAMPS.

3. USE LENGTHS OF FLEXIBLE METAL CONDUIT NOT LESS THAN 12 INCHES LONG AT FINAL CONNECTIONS TO ALL MOTORS, TRANSFORMERS AND SIMILAR DEVICES SUBJECT TO MOVEMENT BECAUSE OF OPERATION OR MECHANICAL ADJUSTMENT. USE FLEXIBLE METAL CONDUITS TO EFFECT FINAL CONNECTIONS TO RECESSED LIGHTING FIXTURES. USE LIQUID TIGHT FLEXIBLE METAL CONDUIT, WITH APPROPRIATE CONNECTIONS, IN DAMP OR WET LOCATIONS, AT MOTOR OR EQUIPMENT LOCATIONS IN MECHANICAL EQUIPMENT ROOMS, AT OR NEAR PUMPS, AND WHEN INSTALLED OUTDOORS.

4. GROUND METALLIC CONDUITS AS REQUIRED BY NEC.

5. INSTALL RACEWAYS CONTINUOUS FROM OUTLET TO OUTLET BOX, OR CABINET, WITH A MAXIMUM OF 150 FEET BETWEEN PULLS. IN AREAS WHERE THERE ARE NO SUSPENDED CEILINGS, RUN ALL CONDUITS PARALLEL/PERPENDICULAR TO BUILDING SURFACE PLANES.

6. IN SYSTEMS OPERATING AT MORE THAN 300 VOLTS BETWEEN PHASE CONDUCTORS, AND WHERE DIFFERENT PHASE CONDUCTORS ARE TO BE RUN TO A COMMON GANG WALL SWITCH BOX, PROVIDE SUBSTANTIAL BARRIERS BETWEEN ADJACENT SWITCHES IN THE BOX SO THAT TWO DIFFERENT PHASE WIRES WILL NOT BE IN THE SAME COMPARTMENT.

7. WHEREVER RACEWAYS PASS THROUGH FLOORS, WALLS, PENETRATIONS, OR OTHER PARTITIONS, CAREFULLY FILL ANY SPACE BETWEEN THE OUTSIDE OF THE RACEWAY AND THE BUILDING MATERIAL TO PREVENT PASSAGE OF AIR, WATER, SMOKE, AND FUMES. FILLING MATERIAL SHALL BE A UL LISTED, INTUMESCENT SEALING HAVING FIRE/SMOKE RESISTIVE RATING EQUAL TO THE BUILDING MATERIAL PENETRATED.

8. TYPE HCF-MC METAL CLAD CABLES SHALL BE ACCEPTABLE TO BE INSTALLED IN WALLS AND CEILINGS IN CONFORMANCE WITH THE REQUIREMENTS OF NEC 334. TYPE MC CABLE SHALL BE USED ONLY FOR BRANCH CIRCUITS FOR LIGHTING AND SPECIFIC AND GENERAL PURPOSE RECEPTACLES. TYPE MC CABLE SHALL NOT BE USED FOR FEEDERS OR MULTIPLE BRANCH CIRCUIT HOMERUNS, AND MORE SPECIFICALLY, SHALL NOT BE USED FOR HVAC, AND KITCHEN EQUIPMENT BRANCH CIRCUITS. TYPE MC CABLE SHALL NOT BE UTILIZED WITHIN ELECTRICAL EQUIPMENT ROOMS. CABLE SHALL TRANSITION TO A RIGID TYPE CONDUIT PRIOR TO ENTERING ELECTRICAL EQUIPMENT ROOMS.

9. CONDUITS UTILIZED THROUGHOUT THE PROJECT SHALL NOT BE SMALLER THAN 3/4 INCH FOR FEEDERS, MULTIPLE BRANCH CIRCUIT HOMERUNS AND HOMERUNS OF CONDUCTORS LARGER THAN NO. 12. INDIVIDUAL BRANCH CIRCUIT WIRING FOR NO. 12 CONDUCTORS SHALL BE ACCEPTABLE IN 1/2" CONDUIT, I.E. 2#12, 1#12G, 1/2"C.

B. INSTALLATION OF PULL AND JUNCTION BOXES

1. FASTEN ALL BOXES SECURELY TO THE BUILDING CONSTRUCTION, INDEPENDENT OF CONDUIT SYSTEMS.

2. ON CONCEALED CONDUIT SYSTEMS WHERE BOXES ARE NOT OTHERWISE ACCESSIBLE, SET BOXES FLUSH WITH FINISHED SURFACES FOR ACCESS, AND PROVIDE OVERLAPPING COVERS.

C. INSTALLATION OF OUTLET BOXES

1. TERMINATE CONDUITS AT A METAL OUTLET BOX AT EACH OUTLET OR DEVICE. ALL BOXES SHALL CONFORM TO THE NEC.

2. OUTLET BOXES SHALL BE SUPPORTED INDEPENDENT OF THE CONDUIT SYSTEM.

D. INSTALLATION OF CONDUIT HANGERS AND SUPPORTS

1. FURNISH AND INSTALL ALL HANGERS AND SUPPORTS REQUIRED BY RACEWAY SYSTEMS.

2. SUPPORT ALL ABOVE-GROUND ELECTRICAL CONDUITS FROM THE BUILDING STRUCTURE/CONSTRUCTION. SUPPORT CONDUITS RUNNING VERTICALLY OR HORIZONTALLY ALONG WALLS WITH GALVANIZED MALLEABLE IRON ONE-HOLE CLAMPS. CARRY INDIVIDUALLY SUPPORTED HORIZONTAL CONDUITS 1-1/4 INCH AND LARGER ON SUITABLE HANGERS.

3. LOCATE HANGERS AND TRAPEZES TO SUPPORT HORIZONTAL RACEWAYS WITHOUT APPRECIABLE SAGGING. HANGER SPACING SHALL NOT EXCEED NEC REQUIREMENTS, OR RECOMMENDATIONS OF THE NECA "STANDARD OF INSTALLATION".

4. WHERE CONDUITS SMALLER THAN 1-1/4 INCH ARE INSTALLED ABOVE REMOVABLE TYPE DRY CEILINGS, SUPPORT THEM ON SUITABLE HANGER RODS WITH METAL CLIPS AT A DISTANCE ABOVE THE CEILING SUFFICIENT TO PERMIT REMOVAL OF CEILING PANELS AND LAY-IN LIGHT FIXTURES. LOCATE SUCH CONDUITS SO AS NOT TO HINDER ACCESS TO MECHANICAL EQUIPMENT THROUGH CEILING PANELS.

E. INSTALLATION OF CONDUCTORS

1. PULL NO CONDUCTORS INTO CONDUITS UNTIL ALL WORK OF A NATURE WHICH MAY CAUSE INJURY TO CONDUCTORS IS COMPLETED.

2. RUN FEEDERS IN CONTINUOUS PIECES, WITHOUT JOINTS OR SPLICES, INSOFAR AS PRACTICABLE.

3. RUN CONDUITS FOR EMERGENCY POWER CONDUCTORS SEPARATE FROM ALL OTHER WIRING.

F. SEGREGATION OF WIRING SYSTEMS

1. SEGREGATION OF WIRING SYSTEMS SHALL NOT BE COMPROMISED BY THE USE OF COMMON PULLBOXES, WIREWAYS, CABINETS OR ANY OTHER TYPE OF ENCLOSURE.

2. THE RACEWAY SYSTEM FOR EACH FEEDER SHALL BE A SEPARATE SYSTEM COMPLETELY FAULT ISOLATED FROM ALL OTHER RACEWAY SYSTEMS.

3. THE RACEWAY SYSTEM FOR THE BRANCH CIRCUITS OF EACH PANELBOARD SHALL BE A SEPARATE SYSTEM COMPLETELY FAULT ISOLATED FROM ALL OTHER RACEWAY SYSTEMS.

G. EQUIPMENT CONNECTIONS AND CONTROL WIRING

1. THE FURNISHING AND INSTALLATION OF CONTROL POWER WIRING REQUIRED FOR EQUIPMENT FURNISHED UNDER DIVISION 15 AND NOT SHOWN ON THE ELECTRICAL DRAWINGS SHALL BE FURNISHED UNDER DIVISION 15. CONTROL POWER WIRING IS DEFINED AS THE LINE VOLTAGE (120V) POWER WIRING FOR EQUIPMENT CONTROL CABINETS, TEMPERATURE CONTROL, ENERGY MANAGEMENT, OR BUILDING AUTOMATION SYSTEM PANELS AND LINE VOLTAGE SMOKE/FIRE DAMPERS.

2. THE FURNISHING AND INSTALLATION OF THE TEMPERATURE CONTROL WIRING, ENERGY MANAGEMENT SYSTEM OR BUILDING AUTOMATION WIRING NOT SHOWN ON THE ELECTRICAL DRAWINGS SHALL BE FURNISHED UNDER DIVISION 15. TEMPERATURE CONTROL, ENERGY MANAGEMENT SYSTEM AND BUILDING AUTOMATION SYSTEM WIRING IS DEFINED AS THE INTERLOCK OR INTERCONNECTING WIRING REQUIRED BETWEEN SYSTEM CONTROL DEVICES, APPURTENANCES AND CONTROL PANELS TO ALLOW THE SYSTEM TO FUNCTION AUTOMATICALLY. THIS INCLUDES WIRING BETWEEN THE FIRE ALARM SYSTEM, SMOKE EXHAUST SYSTEMS, DOOR ENTRY SYSTEMS AND ANY OTHER SYSTEM REQUIRING INTERFACE WITH THE TEMPERATURE CONTROL, ENERGY MANAGEMENT AND BUILDING AUTOMATION SYSTEMS.

3. PROVIDE POWER WIRING TO EACH MOTOR-DRIVEN AND/OR ELECTRICALLY-OPERATED SYSTEM OR UNIT OF EQUIPMENT. THE WIRING SHALL ALLOW THE MOTOR(S) OR EQUIPMENT TO OPERATE IN A MANUAL MODE.

4. CONTROL WIRING WILL, UNLESS SPECIFICALLY NOTED OTHERWISE, WILL BE FURNISHED AND INSTALLED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS.

5. EXCEPT FOR ITEMS THAT ARE FURNISHED WITH FACTORY-INSTALLED, INTEGRAL MOTORS, AN ELECTRIC MOTOR OF REQUIRED SIZE AND ELECTRICAL CHARACTERISTICS WILL BE PROVIDED AND INSTALLED UNDER OTHER DIVISIONS FOR EACH ITEM OF MOTOR-DRIVEN EQUIPMENT. COMPLETE THE ELECTRICAL INSTALLATION OF THESE MOTORS IN ACCORDANCE WITH APPROVED WIRING DIAGRAMS AND INSTRUCTIONS.

6. WHERE DISCONNECT SWITCHES OR CIRCUIT BREAKERS ARE NOT PROVIDED INTEGRAL WITH CONTROL EQUIPMENT FOR MOTORS AND OTHER ELECTRICAL APPURTENANCES, PROVIDE AND INSTALL ALL DISCONNECT SWITCHES REQUIRED BY THE NATIONAL ELECTRICAL CODE AND/OR INDICATED.

7. WHERE POSSIBLE, TERMINATE CONDUITS IN CONDUIT BOXES ON MOTORS. WHERE MOTORS ARE NOT PROVIDED WITH CONDUIT BOXES, TERMINATE THE CONDUITS IN CONDUIT FITTINGS AT THE MOTORS.

H. EXISTING SYSTEMS TO REMAIN

1. THE CONTRACT DOCUMENTS DO NOT PROPOSE TO SHOW ALL EXISTING SYSTEMS, MATERIAL OR EQUIPMENT. OBTAIN DATA RELATED TO EXISTING CONDITIONS FROM EXISTING DOCUMENTS, MEASUREMENTS, NOTATIONS, PHOTOGRAPHS, SURVEYS AND OTHER OBSERVATIONS AT THE SITE.

2. REMOVE EXISTING WIRE, CONDUIT, EQUIPMENT, FIXTURES AND OTHER ITEMS TO PROVIDE ACCESS FOR WORK IN EXISTING FACILITIES. REINSTALL AND REFINISH ITEMS REMOVED, OR OTHERWISE DAMAGED, TO MATCH EXISTING ADJACENT SURFACED UPON COMPLETION OF THE WORK.

3. WHERE EXISTING FUNCTIONS TO REMAIN IN USE ARE DISRUPTED, THEY SHALL BE FULLY RESTORED AFTER DISRUPTION, IN FULL COMPLIANCE WITH THIS DIVISION OF THE SPECIFICATIONS FOR NEW WORK.

4. MODIFY, REMOVE OR RELOCATE MATERIALS AND ITEMS INDICATED ON THE DRAWINGS OR REQUIRED BY THE INSTALLATION OF NEW WORK.

5. WORKING JOINTLY WITH THE ARCHITECT, ESTABLISH AND MARK SALVAGE AND DEMOLITION ITEMS BEFORE COMMENCING WORK; REPORT ITEMS SCHEDULE FOR RELOCATION, REINSTALLATION OR REUSE. WHICH ARE FOUND TO BE IN DAMAGED CONDITION; AWAIT FURTHER INSTRUCTIONS FROM THE ARCHITECT BEFORE COMMENCING WITH WORK.

6. DEMOLITION EQUIPMENT, DEVICES AND MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR. SALVAGED EQUIPMENT AND DEVICES SHALL BE THE PROPERTY OF THE CONTRACTOR UNLESS NOTED OTHERWISE.

7. MAKE MINOR RELOCATIONS NECESSITATED BY THE CONDITIONS AT THE SITE OR AS DIRECTED BY THE ARCHITECT, WITHOUT ADDITIONAL COST TO THE OWNER. REPAIR AND RESTORE TO GOOD FUNCTIONAL CONDITION, EQUIPMENT, MATERIALS AND ITEMS SCHEDULED FOR RELOCATION, WHICH ARE DAMAGED DURING DISMANTLING OR REASSEMBLY OPERATIONS. NEW MATERIALS AND ITEMS OF SIMILAR DESIGN AND QUALITY MAY BE SUBSTITUTED FOR MATERIALS AND ITEMS INDICATED TO BE RELOCATED UPON APPROVAL OF SHOP DRAWINGS, PRODUCT DATA AND SAMPLES. REMOVE CAREFULLY, IN REVERSE ORDER TO ORIGINAL ASSEMBLY OR PLACEMENT, ITEMS WHICH ARE TO BE RELOCATED. PROTECT ITEMS UNTIL RELOCATION IS COMPLETE. CLEAN AND REPAIR ITEMS TO BE RELOCATED, AND PROVIDE NEW MATERIALS, FITTINGS AND APPURTENANCES REQUIRED TO COMPLETE THE RELOCATIONS AND TO RESTORE TO GOOD OPERATING ORDER. PERFORM THE RELOCATION WORK IN ACCORDANCE WITH APPLICABLE PORTIONS OF THESE SPECIFICATIONS, UTILIZING SKILLED WORKERS.

8. RELOCATING DEVICES: REMOVE AND REINSTALL IN LOCATIONS DESIGNATED BY THE ARCHITECT TEMPERATURE CONTROL SYSTEM DEVICES, RELAYS, WIRE, CONDUIT, FIXTURES, EQUIPMENT AND OTHER DEVICES REQUIRED FOR THE OPERATION OF THE VARIOUS SYSTEMS THAT ARE INSTALLED IN EXISTING-TO-BE-REMOVED CONSTRUCTION.

I. CONTRACTOR SHALL KEEP A CLEAN SET OF DRAWINGS ON THE JOB, NOTING DAILY ALL CHANGES MADE IN THESE DRAWINGS IN CONNECTION WITH THE FINAL INSTALLATION INCLUDING EXACT DIMENSIONED LOCATIONS OF ALL NEW AND UNCOVERED EXISTING UTILITIES AND SHALL, WITH HIS REQUEST FOR FINAL PAYMENT, TURN OVER A CLEAN, NEATLY MARKED SET OF PDF'S SHOWING "AS INSTALLED" WORK TO THE ARCHITECT FOR SUBSEQUENT REVIEW AND TRANSMITTAL TO THE OWNER. CONTRACTOR SHALL NOTE ALL CONSTRUCTION CHANGES, DATE EACH SHEET AND LABEL "AS-BUILTS" IN THE REVISION BLOCK ON THE DRAWINGS.

J. IN ADDITION TO THE ABOVE, CONTRACTOR SHALL ACCUMULATE DURING THE JOB'S PROGRESS, THE FOLLOWING DATA PREPARED IN PDF AND TURNED OVER TO THE ARCHITECT FOR REVIEW AND SUBSEQUENT DELIVERY TO THE OWNER.

1. ALL WARRANTIES AND GUARANTEES AND MANUFACTURER'S DIRECTIONS ON EQUIPMENT AND MATERIAL COVERED BY THE CONTRACT INCLUDING THE NAMES, ADDRESSES AND TELEPHONE NUMBERS OF THE MANUFACTURER'S REPRESENTATIVE.

2. APPROVED FIXTURE BROCHURES, WIRING DIAGRAMS AND CONTROL DIAGRAMS (ORIGINAL DATA, NO COPIES).

3. COPIES OF APPROVED SHOP DRAWINGS.

4. OPERATING INSTRUCTIONS FOR ALL ELECTRICAL SYSTEM EQUIPMENT. OPERATING INSTRUCTIONS SHALL ALSO INCLUDE RECOMMENDED MAINTENANCE PROCEDURES.

5. TEST REPORTS REQUIRED BY THESE SPECIFICATIONS.

6. ANY AND ALL OTHER DATA AND/OR DRAWINGS REQUIRED DURING CONSTRUCTION.

7. REPAIR PARTS LISTS OF ALL MAJOR ITEMS OF EQUIPMENT INCLUDING NAME, ADDRESS AND TELEPHONE NUMBERS OF LOCAL SUPPLIER OR AGENT.

K. ALL OF THE ABOVE DATA SHALL BE SUBMITTED TO THE ENGINEER FOR HIS REVIEW AT SUCH TIME AS THE CONTRACTOR SUBMITS HIS LAST ESTIMATE PRIOR TO HIS FINAL PAYMENT, BUT IN NO CASE, LESS THAN TWO WEEKS BEFORE FINAL INSPECTION.

Field Inspection consultation is available upon request. Call 303-739-7420 to request a consultation

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: Erick B.
Date: Aug 17, 2018
2015 IN

RSN#1312716
PERMIT# 2018-1509651-LT

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

Field Inspection consultation is available upon request. Call 303-739-7420 to request a consultation

GENERAL NOTES

A. REFER TO SHEET E0.1 FOR LEGENDS, NOTES, AND ABBREVIATIONS.

IMAGING GENERAL NOTES

A. ELECTRICAL CONTRACTOR SHALL REFER TO IMAGING VENDOR INSTALLATION DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS FOR INSTALLATION OF IMAGING EQUIPMENT. PLACEMENT OF EQUIPMENT AND SUPPORT SYSTEMS SHOWN ON THIS DRAWING ARE NOT INDICATIVE OF THE EXACT PLACEMENTS OF THE SYSTEM. ELECTRICAL CONTRACTOR MUST COORDINATE WITH THE IMAGING VENDOR INSTALLATION DRAWINGS FOR EXACT PLACEMENT AND SIZING OF THE SYSTEMS. SEE VENDOR INSTALLATION DRAWINGS FOR COMPLETE DETAILS.

B. ADDITIONAL INTERCONNECTING CONDUITS AND WIRING FOR EQUIPMENT TO BE PROVIDED BY ELECTRICAL CONTRACTOR ARE SHOWN ON IMAGING VENDOR INSTALLATION DRAWINGS. REFER TO THE IMAGING VENDOR INSTALLATION FOR ADDITIONAL CONDUITS, RACEWAY, AND WIRING REQUIREMENTS FOR INSTALLATION.

C. ELECTRICAL CONTRACTOR IS REQUIRED TO PROVIDE AND INSTALL ALL CONTRACTOR/OWNER PROVIDED EQUIPMENT, CONDUITS, AND WIRING INDICATED ON VENDOR DRAWINGS.

D. ALL CONDUIT SHALL BE UNDERFLOOR, WITHIN PARTITION, OR ABOVE THE CEILING. THERE SHALL BE NO EXPOSED CONDUIT EXCEPT OVERHEAD CONDUIT IN ROOMS WITHOUT CEILINGS.

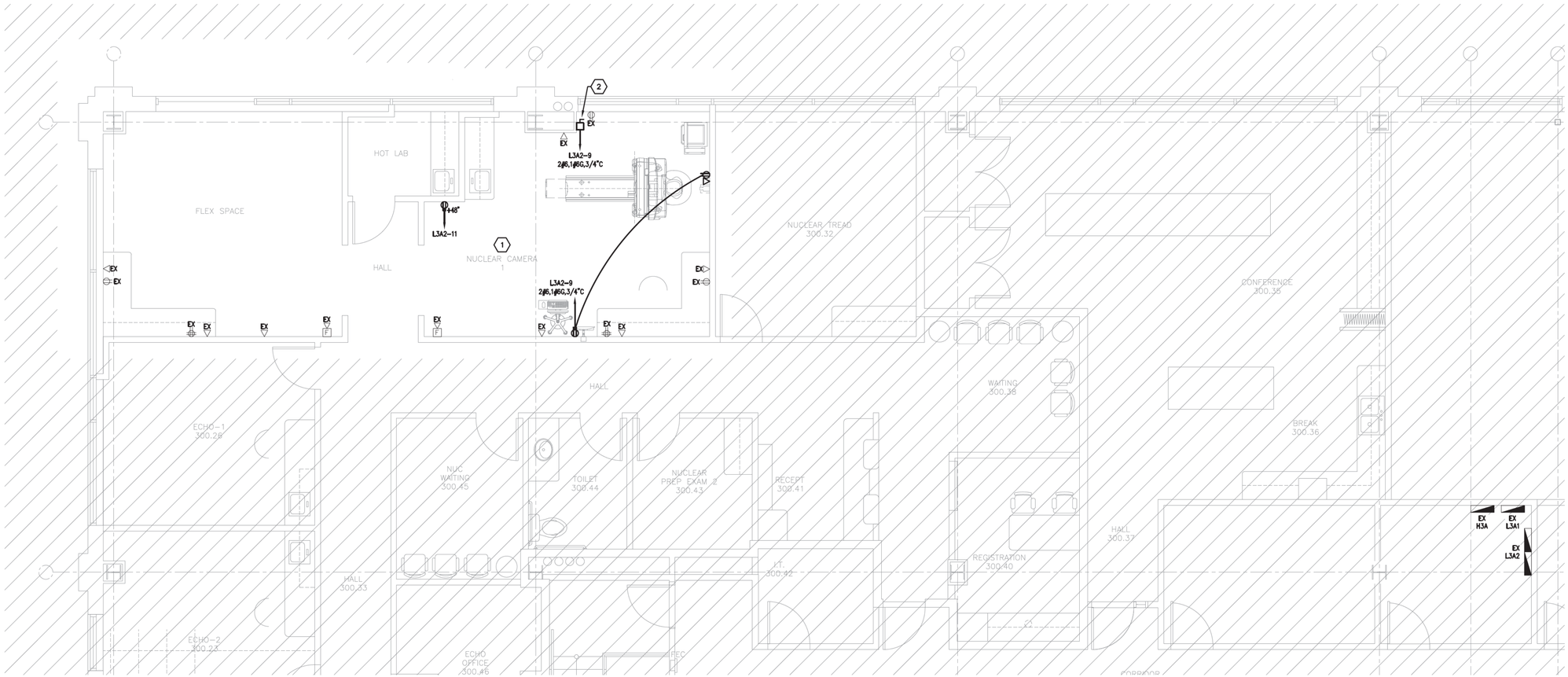
E. PROVIDE A PULL STRING IN ALL EMPTY CONDUITS.

Indoor installations shall comply with 110.26(E)(1)(a) through (E)(1)(d) of The 2017 NEC.

Install electrical connections per 2017 NEC 110.14, identify disconnects per 2017 NEC 110.22 and provide working space around electrical equipment per 2017 NEC 110.26.

LEGEND NOTES

1. REFER TO NUC MED VENDOR DRAWINGS FOR ALL VENDOR REQUIRED RACEWAYS, CONDUCTORS, AND ROUGH-IN REQUIREMENTS ASSOCIATED WITH THE NEW EQUIPMENT. EXISTING RACEWAY SHALL NOT BE UTILIZED.
2. NUC MED MAIN DISCONNECT PANEL. PROVIDE ENCLOSED SINGLE POLE 20A CIRCUIT BREAKER WITH LOCK-OUT PROVISIONS. COORDINATE ADDITIONAL REQUIREMENTS WITH EQUIPMENT VENDOR. PROVIDE 2#10,1#10G,3/4" FEED TO POWER SUPPLY JUNCTION BOX.



NORTH

ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: Erick B.
Date: Aug 17, 2018
2015 INTERNATIONAL CODES & 2017 NEC

RSN: 1312716
Permit #: 18-1509651

DWG FILENAME: SUITE 310 NUC MED

The Medical Center of Aurora
Health ONE

NUCLEAR MED EQUIPMENT UPGRADE

MEDICAL CENTER OF AURORA

1444 S. POTOMAC ST. #310
AURORA, COLORADO 80012

TOM THOMPSON ARCHITECT
2510 SOUTH OSCEOLA STREET
DENVER, COLORADO 80219
720.989.6084
TomThompsonArchitect@gmail.com

ASSOCIATIONS

wsp

DESIGN dp LOT
dpteam@thedesignplot.com
(303) 565-7282

All drawings and written material appearing herein constitute the original and unpublished work of Tom Thompson, Architect. These documents are strictly proprietary and confidential. They are not to be disclosed to third parties, distributed or reproduced without the express written permission of Tom Thompson, Architect.

REGISTERED PROFESSIONAL ENGINEER 43240 7/25/18

PROJECT NO.: 18-13

DRAWN BY: CL
CHECKED BY: TF
SCALE: 1/4" = 1'-0"
DATE: 7.26.2018
ISSUED FOR: 100% CDS
REVISIONS:
1 .
2 .
3 .
4 .
5 .

SHEET TITLE:
ELECTRICAL POWER AND SPECIAL SYSTEMS PLAN

SHEET NO.:
E2.1

RSN#1312716
PERMIT# 2018-1509651-LT

AVAILABLE FAULT CURRENT CALCULATIONS

UTILITY CONTRIBUTION

Utility Fault Current	33900 Amperes	kVA	=	1500
		E	=	480
I = (kVAx1000)/(Ex1.732) = trans FLA		trans FLA	=	1804.273

FAULT CURRENT FROM . . UTILITY TO MDP

Feeder: 6 sets 4 # 500
Conductor (Copper/Aluminum): Copper
Raceway (Steel/Aluminum): PVC
Voltage: 480

Conductor Length (distance)	L	=	240
ASC	ISCA	=	33,900
# conductors per phase	N	=	6
Phase conductor constant	C	=	26706
Voltage L-L	EL-L	=	480
f = (1.732xLxISCA)/(NxCxEL-L)	f	=	0.183
M = 1/(1+f)	M	=	0.845
ISCA = ISCA x M	ISCA	=	28,651

FAULT CURRENT FROM . . PANEL MDP TO PANEL H3A

Feeder: 1 sets 4 # 500
Conductor (Copper/Aluminum): Copper
Raceway (Steel/Aluminum): Steel
Voltage: 480

Conductor Length (distance)	L	=	40
ASC	ISCA	=	28,651
# conductors per phase	N	=	1
Phase conductor constant	C	=	22185
Voltage L-L	EL-L	=	480
f = (1.732xLxISCA)/(NxCxEL-L)	f	=	0.186
M = 1/(1+f)	M	=	0.843
ISCA = ISCA x M	ISCA	=	24,149

FAULT CURRENT FROM . . PANEL H3A TO PANEL T-L3A1 PRIMARY

Feeder: 1 sets 3 # 4/0
Conductor (Copper/Aluminum): Copper
Raceway (Steel/Aluminum): Steel
Voltage: 480

Conductor Length (distance)	L	=	10
ASC	ISCA	=	24,149
# conductors per phase	N	=	1
Phase conductor constant	C	=	15082
Voltage L-L	EL-L	=	480
f = (1.732xLxISCA)/(NxCxEL-L)	f	=	0.058
M = 1/(1+f)	M	=	0.945
ISCA = ISCA x M	ISCA	=	22,830

FAULT CURRENT FROM . . TFMR T-L3A1 PRIMARY TO TFMR T-L3A1 SECONDARY

ASC	ISCA(P)	=	22,830
transformer kva	KVA	=	112.5
transformer impedance	%Z	=	3.5
Voltage Primary	VP	=	480
Voltage Secondary	VS	=	208
f = (ISCA(P)xVPx1.732x%Z)/(100,000xKVA)	f	=	5.905
M = 1/(1+f)	M	=	0.145
ISCA(S) = VP/VS x M x ISCA(P)	ISCA(S)	=	3,306

FAULT CURRENT FROM . . T-L3A1 SECONDARY TO PANEL L3A1

Feeder: 2 sets 4 # 250
Conductor (Copper/Aluminum): Copper
Raceway (Steel/Aluminum): Steel
Voltage: 208

Conductor Length (distance)	L	=	5
ASC	ISCA	=	3,306
# conductors per phase	N	=	2
Phase conductor constant	C	=	16483
Voltage L-L	EL-L	=	208
f = (1.732xLxISCA)/(NxCxEL-L)	f	=	0.004
M = 1/(1+f)	M	=	0.996
ISCA = ISCA x M	ISCA	=	3,293

FAULT CURRENT FROM . . PANEL L3A1 TO PANEL L3A2

Feeder: 1 sets 4 # 4/0
Conductor (Copper/Aluminum): Copper
Raceway (Steel/Aluminum): Steel
Voltage: 208

Conductor Length (distance)	L	=	10
ASC	ISCA	=	3,293
# conductors per phase	N	=	1
Phase conductor constant	C	=	15082
Voltage L-L	EL-L	=	208
f = (1.732xLxISCA)/(NxCxEL-L)	f	=	0.018
M = 1/(1+f)	M	=	0.982
ISCA = ISCA x M	ISCA	=	3,234

EXISTING PANEL: L3A2

NORMAL

LOCATION: 3RD FLR ELEC RM
MAIN BUS: 225A
MCB: N/A
VOLTAGE: 208/120
AIC: 10,000A

FED FROM: L3A1
WIRES: 4W + G
ENCLOSURE: NEMA 1
BUS TYPE: Copper
MOUNTING: Surface
PANEL LUGS: Main Lugs Only

NEUTRAL BUS: Yes
GROUND BUS: Yes
ISOLATED GROUND BUS: No
200% NEUTRAL: No
FEED THROUGH LUGS: Yes

CKT NO.	DESCRIPTION	TOTAL LOAD (VA)	CIRCUIT BREAKER AMPS.	CIRCUIT BREAKER POLES	PHASE	CIRCUIT BREAKER AMPS.	CIRCUIT BREAKER POLES	TOTAL LOAD (VA)	DESCRIPTION	CKT NO
1	EXISTING LOAD	–	30	2	A	20	1	–	EXISTING LOAD	2
3	–––	–	–	–	B	20	1	–	EXISTING LOAD	4
5	EXISTING LOAD	–	20	1	C	20	1	–	EXISTING LOAD	6
7	EXISTING LOAD	–	20	1	A	20	1	–	EXISTING LOAD	8
9	**+NUC MED #2**	**1900**	**20**	**1**	B	20	1	–	EXISTING LOAD	10
11	**+BLANKET WARMER**	**840**	**20**	**1**	C	20	1	–	EXISTING LOAD	12
13	EXISTING LOAD	–	20	1	A	20	1	–	EXISTING LOAD	14
15	EXISTING LOAD	–	20	1	B	20	1	–	EXISTING LOAD	16
17	EXISTING LOAD	–	20	2	C	20	1	–	EXISTING LOAD	18
19	–––	–	–	–	A	20	1	–	EXISTING LOAD	20
21	EXISTING LOAD	–	20	1	B	20	1	–	EXISTING LOAD	22
23	EXISTING LOAD	–	20	1	C	20	1	–	EXISTING LOAD	24
25	EXISTING LOAD	–	20	1	A	20	1	–	EXISTING LOAD	26
27	EXISTING LOAD	–	20	1	B	20	1	–	EXISTING LOAD	28
29	EXISTING LOAD	–	20	1	C	20	1	–	EXISTING LOAD	30
31	EXISTING LOAD	–	20	1	A	20	1	–	EXISTING LOAD	32
33	EXISTING LOAD	–	20	1	B	20	1	–	EXISTING LOAD	34
35	EXISTING LOAD	–	20	1	C	20	1	–	EXISTING LOAD	36
37	EXISTING LOAD	–	20	1	A	20	1	–	EXISTING LOAD	38
39	EXISTING LOAD	–	20	1	B	20	1	–	EXISTING LOAD	40
41	EXISTING LOAD	–	20	1	C	20	1	–	EXISTING LOAD	42

NOTES:
+INDICATES CIRCUIT RECOVERED DUE TO DEMOLITION.

EXISTING PANEL: L3A2 (SECTION 2)

NORMAL

LOCATION: 3RD FLR ELEC RM
MAIN BUS: 225A
MCB: N/A
VOLTAGE: 208/120
AIC: 10,000A

WIRES: 4W + G
ENCLOSURE: NEMA 1
BUS TYPE: Copper
MOUNTING: Surface
PANEL LUGS: Main Lugs Only

NEUTRAL BUS: Yes
GROUND BUS: Yes
ISOLATED GROUND BUS: No
200% NEUTRAL: No
FEED THROUGH LUGS: No

CKT NO.	DESCRIPTION	TOTAL LOAD (VA)	CIRCUIT BREAKER AMPS.	CIRCUIT BREAKER POLES	PHASE	CIRCUIT BREAKER AMPS.	CIRCUIT BREAKER POLES	TOTAL LOAD (VA)	DESCRIPTION	CKT NO
43	EXISTING LOAD	–	20	1	A	20	1	–	EXISTING LOAD	44
45	EXISTING LOAD	–	20	1	B	20	1	–	EXISTING LOAD	46
47	EXISTING LOAD	–	20	1	C	20	1	–	EXISTING LOAD	48
49	EXISTING LOAD	–	20	1	A	20	1	–	EXISTING LOAD	50
51	EXISTING LOAD	–	20	1	B	20	1	–	EXISTING LOAD	52
53	EXISTING LOAD	–	20	1	C	20	1	–	EXISTING LOAD	54
55	EXISTING LOAD	–	20	1	A	20	1	–	EXISTING LOAD	56
57	EXISTING LOAD	–	20	1	B	20	2	–	EXISTING LOAD	58
59	EXISTING LOAD	–	20	1	C	–	–	–	–––	60
61	EXISTING LOAD	–	20	1	A	20	2	–	EXISTING LOAD	62
63	EXISTING LOAD	–	20	1	B	–	–	–	–––	64
65	EXISTING LOAD	–	20	1	C	20	1	–	EXISTING LOAD	66
67	EXISTING LOAD	–	20	1	A	20	1	–	EXISTING LOAD	68
69	EXISTING LOAD	–	20	2	B	20	1	–	EXISTING LOAD	70
71	–––	–	–	–	C	20	1	–	EXISTING LOAD	72
73	EXISTING LOAD	–	20	2	A	20	1	–	EXISTING LOAD	74
75	–––	–	–	–	B	20	1	–	EXISTING LOAD	76
77	EXISTING LOAD	–	20	2	C	20	1	–	EXISTING LOAD	78
79	–––	–	–	–	A	**20**	**1**	**360**	***RCPT – NUC MED #2**	**80**
81	EXISTING LOAD	–	20	2	B	20	1	–	SPARE	82
83	–––	–	–	–	C	20	1	–	SPARE	84

NOTES:
* INDICATES LOAD ADDED TO EXISTING SPARE BREAKER

'L3A2' LOAD SUMMARY

	LTS	RCPTS	X-RAY	MISC	TOTAL (KVA)	TOTAL (AMPS)
TOTAL CONNECTED LOAD	0.0	0.4	1.9	0.8	3.1	8.6
DEMAND FACTOR	SEE DEMAND FACTOR TABLE					
TOTAL DEMAND LOAD	0.0	0.4	1.9	0.8	3.1	8.6
CONTINUOUS (DESIGN) FACTOR	1.25	1.00	1.00	1.00		
TOTAL DESIGN LOAD	0.0	0.4	1.9	0.8	3.1	8.6

Service Equipment shall be permanently and legibly marked to show the available fault current and date the calculation was performed. 2017 NEC 110.24(A)(B).

Every circuit and circuit modification shall be legibly identified as to it's clear, evident and specific purpose or use. The identification shall include an approved degree of detail that allows each circuit to be distinguished from all others. 2017 NEC 408.4

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

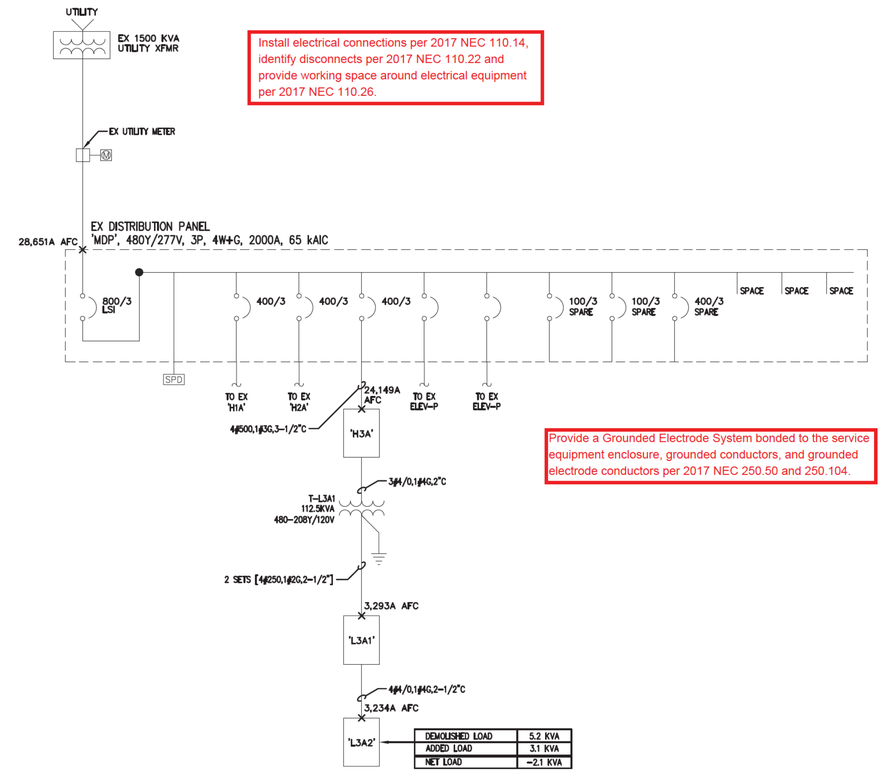
Field Inspection consultation is available upon request. Call 303-739-7420 to request a consultation

GENERAL NOTES

A. REFER TO SHEET E0.1 FOR LEGENDS, GENERAL NOTES AND ABBREVIATIONS.
B. ALL NEW BREAKERS ADDED TO EXISTING PANELS ARE REQUIRED TO MEET OR EXCEED THE AVAILABLE FAULT CURRENT. IF THE EXISTING PANEL CANNOT ACCEPT A NEW BREAKER WITH THE REQUIRED AIC RATING, A NEW PANEL SHALL BE PROVIDED.

LEGEND NOTES

(1) ADDED LOAD IS LESS THAN 5% OF THE PANELBOARD/ SWITCHBOARD,S RATED CAPACITY. THEREFORE, METERING IS NOT REQUIRED.



Install electrical connections per 2017 NEC 110.14, identify disconnects per 2017 NEC 110.22 and provide working space around electrical equipment per 2017 NEC 110.26.

Provide a Grounded Electrode System bonded to the service equipment enclosure, grounded conductors, and grounded electrode conductors per 2017 NEC 250.50 and 250.104.

01 PARTIAL ONE-LINE DIAGRAM

SCALE: NTS

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: Erick B.
Date: Aug 17, 2018
2015 INTERNATIONAL CODES & 2017 NEC

RSN: 1312716
Permit #: 18-1509651

The Medical Center of Aurora
Health ONE

NUCLEAR MED EQUIPMENT UPGRADE

MEDICAL CENTER OF AURORA

1444 S. POTOMAC ST. #310
AURORA, COLORADO 80012

TOM THOMPSON ARCHITECT
2510 SOUTH OSCEOLA STREET
DENVER, COLORADO 80219
720.989.6084
TomThompsonArchitect@gmail.com

ASSOCIATIONS

WSP

DESIGN PLOT
dpteam@thedesignplot.com
(303) 565-7282

All drawings and written material appearing herein constitute the original and unpublished work of Tom Thompson, Architect. These documents are strictly proprietary and confidential. They are not to be disclosed to third parties, distributed or reproduced without the express written permission of Tom Thompson, Architect.

COLORADO LICENSED 43240 PROFESSIONAL ENGINEER 7/24/18

PROJECT NO.: 18-13
DRAWN BY: CL
CHECKED BY: TF
SCALE: N/A
DATE: 7.26.2018
ISSUED FOR: 100% CDS
REVISIONS:
1 .
2 .
3 .
4 .
5 .

SHEET TITLE:
ELECTRICAL 1-LINE AND SCHEDULES

SHEET NO.:
E3.1

DWG FILENAME: SUITE 310 NUC MED

RSN#1312716
PERMIT# 2018-1509651-LT

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

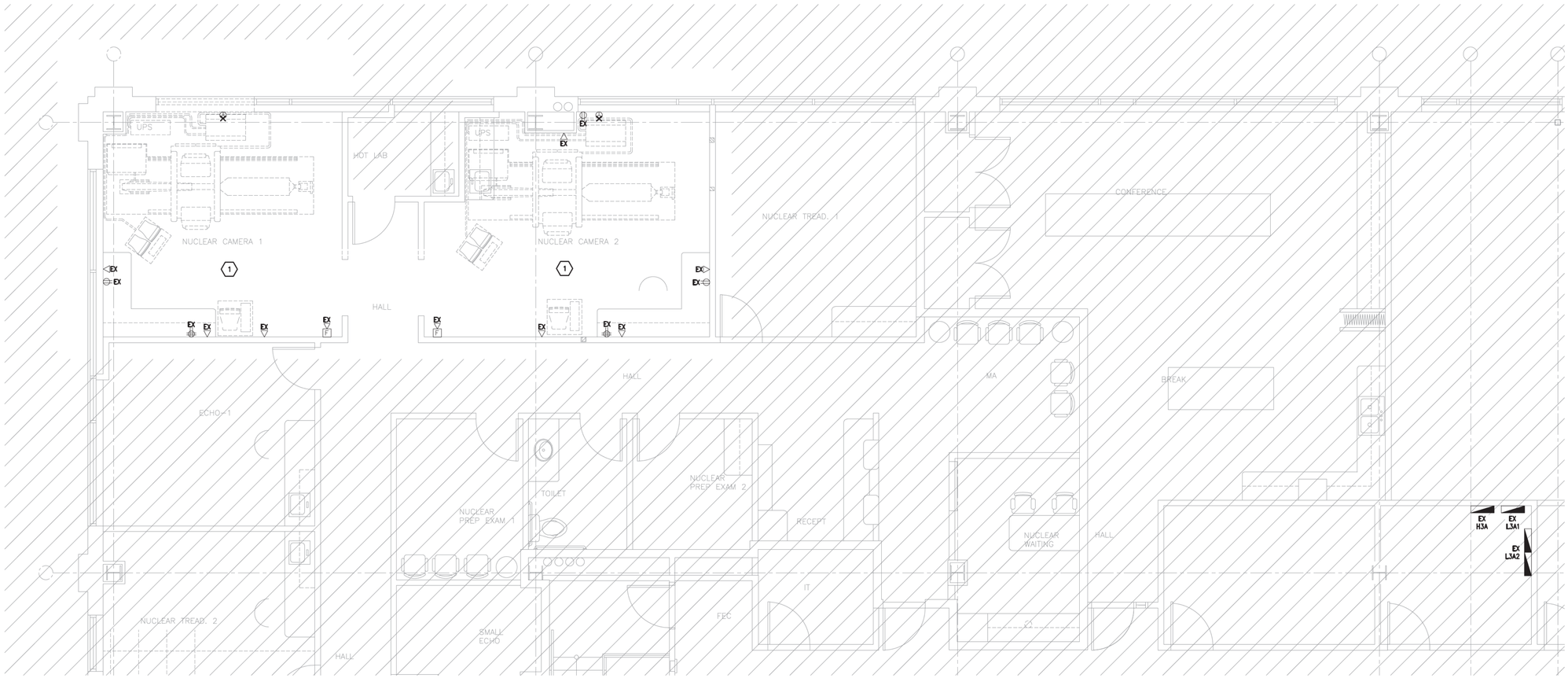
Field Inspection consultation is available upon request. Call 303-739-7420 to request a consultation

GENERAL NOTES

A. REFER TO SHEET E0.1 FOR LEGENDS, NOTES, AND ABBREVIATIONS.

LEGEND NOTES

1. ALL EXISTING LIGHTING AND CONTROLS WITHIN THIS SPACE SHALL BE EXISTING TO REMAIN, UNO.



NORTH

ELECTRICAL DEMO PLAN
SCALE: 1/4" = 1'-0"

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: Erick B.
Date: Aug 17, 2018
2015 INTERNATIONAL CODES & 2017 NEC

RSN: 1312716
Permit #: 18-1509651

DWG FILENAME: SUITE 310 NUC MED

The Medical Center of Aurora
Health ONE

NUCLEAR MED EQUIPMENT UPGRADE

MEDICAL CENTER OF AURORA

1444 S. POTOMAC ST. #310
AURORA, COLORADO 80012

TOM THOMPSON ARCHITECT
2510 SOUTH OSCEOLA STREET
DENVER, COLORADO 80219
720.989.6084
TomThompsonArchitect@gmail.com

ASSOCIATIONS

wsp

DESIGN LOT
dpteam@thedesignlot.com
(303) 565-7282

All drawings and written material appearing herein constitute the original and unpublished work of Tom Thompson, Architect. These documents are strictly proprietary and confidential. They are not to be disclosed to third parties, distributed or reproduced without the express written permission of Tom Thompson, Architect.

COLORADO REGISTERED PROFESSIONAL ENGINEER 43240 7/26/18

PROJECT NO.: 18-13

DRAWN BY: CL
CHECKED BY: TF
SCALE: 1/4" = 1'-0"
DATE: 7.26.2018
ISSUED FOR: 100% CDS
REVISIONS:

SHEET TITLE:
ELECTRICAL DEMO POWER AND SPECIAL SYSTEMS PLAN

SHEET NO.:
ED2.1