S.U.N.Y. ORANGE
NEWBURGH CAMPUS

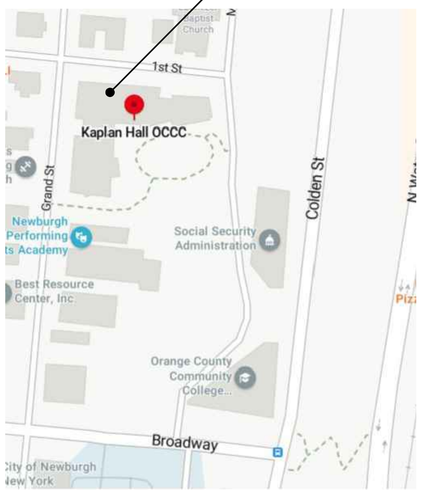
1 WASHINGTON CENTER, NEWBURGH, NY

RAD-TECH / DIAGNOSTIC IMAGING EXPANSION PROJECT

NEWBURGH, NY

COUNTY JOB NUMBER: ITB-OCCC-2026-27
RADIOLOGIC TECHNOLOGY (RADTECH) PROJECT

LOCATION MAP



CAMPUS MAP

DRAWING LIST

PAGE	DWG. #	DRAWING TITLE
1	TS	TITLE SHEET (ALL CONTRACTS)
2	S-101	STRUCTURAL: FRAMING PLANS (C)
3	A-001	ARCHITECTURAL: SYMBOLS, NOTES, ABBREVIATIONS & SCHEDULES (C)
4	AD/A-101	ARCHITECTURAL: DEMO & NEW 2ND FLOOR PLANS (C)
5	AD/A-201	ARCHITECTURAL: DEMO & NEW 2ND FLOOR REFLECTIVE CLG PLANS (C)
6	A-701	ARCHITECTURAL: SECTIONS & DETAILS (C)
7	A-702	ARCHITECTURAL: WALL TYPES (C)
8	BMI-001	X-RAY EQUIPMENT: FLOOR MOUNTED EQUIPMENT DETAILS (C & E)
9	BMI-002	X-RAY EQUIPMENT: FLOOR MOUNTED EQUIPMENT DETAILS (C & E)
10	BMI-003	X-RAY EQUIPMENT: CEILING MOUNTED EQUIPMENT DETAILS (C & E)
11	BMI-004	X-RAY EQUIPMENT: CEILING MOUNTED EQUIPMENT DETAILS (C & E)
12	BMI-005	X-RAY EQUIPMENT: CEILING MOUNTED EQUIPMENT DETAILS (C & E)
13	H-001	HVAC: SYMBOLS, NOTES & ABBREVIATIONS (H)
14	HD/H-101	HVAC: DEMO & NEW 2ND FLOOR DUCTWORK PLANS (H)
15	P-001	PLUMBING: SYMBOLS, NOTES & ABBREVIATIONS (P)
16	P-101	PLUMBING: PLAZA & 2ND FLOOR SANITARY PLANS (P)
17	P-102	PLUMBING: SECOND FLOOR DOMESTIC PLAN (P)
18	FP-001	FIRE PROTECTION: SYMBOLS, NOTES & ABBREVIATIONS (P)
19	FPD/FP-101	FIRE PROTECTION: DEMO & NEW 2ND FLOOR SPRINKLER PLANS (P)
20	E-001	ELECTRICAL: SYMBOLS, NOTES & ABBREVIATIONS (E)
21	E-100	ELECTRICAL: CAMPUS & PLAZA LEVEL AND 2ND FLR PARTIAL POWER PLANS (E)
22	ED/E-101	ELECTRICAL: DEMO & NEW 2ND FLOOR POWER PLANS (E)
23	ED/E-201	ELECTRICAL: DEMO & NEW 2ND FLOOR LIGHTING PLANS (E)
24	E-601	ELECTRICAL: ONE-LINE DIAGRAM (E)
25	E-701	ELECTRICAL: DETAILS (E)

CONTRACTS

ITB-OCCC-2027-27-C – GENERAL CONSTRUCTION WORK.

ITB-OCCC-2027-27-H – HVAC WORK.

ITB-OCCC-2027-27-P – PLUMBING & FIRE PROTECTION WORK.

ITB-OCCC-2027-27-E – ELECTRICAL & FIRE ALARM WORK.

1

SEQUENCE & TIME FRAME OF WORK

NOTICE OF AWARD ON OR AROUND JULY 6, 2026.

SUBMITTALS START ON JULY 6, 2026. ALL NEW WORK MUST HAVE APPROVED SUBMITTALS PRIOR TO INSTALLATION.

WORK TO BEGIN ON OR AROUND JULY 6, 2026.

- THE COLLEGE WILL NOT BE IN SESSION FROM MAY 15, 2026 TO AUGUST 21, 2026. IT IS THE INTENT OF THE PROJECT TO:
  - PERFORM AS MUCH OF THE PROJECT AS POSSIBLE IN THE ABOVE PERIOD OF TIME.
  - THE WORK PERFORMED DURING THIS TIME FRAME MUST BE COMPLETE ENOUGH FOR SAFE OCCUPANCY OF THE AREA BY AUGUST 24, 2026. SO CLASSES MAY RESUME IN THE AREA.
  - WORK HOURS ARE 7:00 AM TO 4:00 PM MONDAY THROUGH FRIDAY. SATURDAY WORK MAY BE PERFORMED WITH PERMISSION OF THE COLLEGE.
- THE COLLEGE WILL BE IN SESSION FROM AUGUST 24, 2026 TO DECEMBER 11, 2026. NO CONSTRUCTION SHALL OCCUR DURING THIS TIME.
- THE COLLEGE WILL NOT BE IN SESSION FROM DECEMBER 12, 2026 TO JANUARY 16, 2027. IT IS THE INTENT OF THE PROJECT TO:
  - PERFORM AND COMPLETE ALL CONTRACT CONSTRUCTION WORK BY JANUARY 15, 2027, WITH THE EXCEPTION OF FINAL CONNECTION OF X-RAY EQUIPMENT,
- FROM MAY 24, 2027 TO JUNE 4, 2027, X-RAY EQUIPMENT SHALL BE INSTALLED AND COMMISSIONED BY COLLEGE RETAINED EQUIPMENT CONTRACTOR. DURING THIS TIME, FINAL CONNECTION OF THE EQUIPMENT SHALL BE PERFORMED BY CONTRACTOR IN COORDINATION WITH THE COLLEGE EQUIPMENT CONTRACTOR.
- FROM JUNE 7, 2027 TO JUNE 11, 2027, PROJECT CLOSEOUT SHALL OCCUR. ALL WORK SHALL BE COMPLETED BY JUNE 11, 2027, INCLUDING TESTING BY OWNER RETAINED PHYSICIST. ANY AND ALL REMEDIAL WORK, REQUIRED AFTER TESTING, MUST BE COMPLETED BY JUNE 11, 2027.

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:
1	6-16-26	RE-BID			

⅛" ¼" ½" 0 1" 2"
REFERENCE SCALE

UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING A LICENSED PROFESSIONAL ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2 OF THE N.Y. STATE EDUCATION LAW. FELLENZER ENGINEERING, LLP
CERTIFICATE OF AUTHORIZATION #: 0017795

FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1 ISSUED 1995; EXP. 8/25

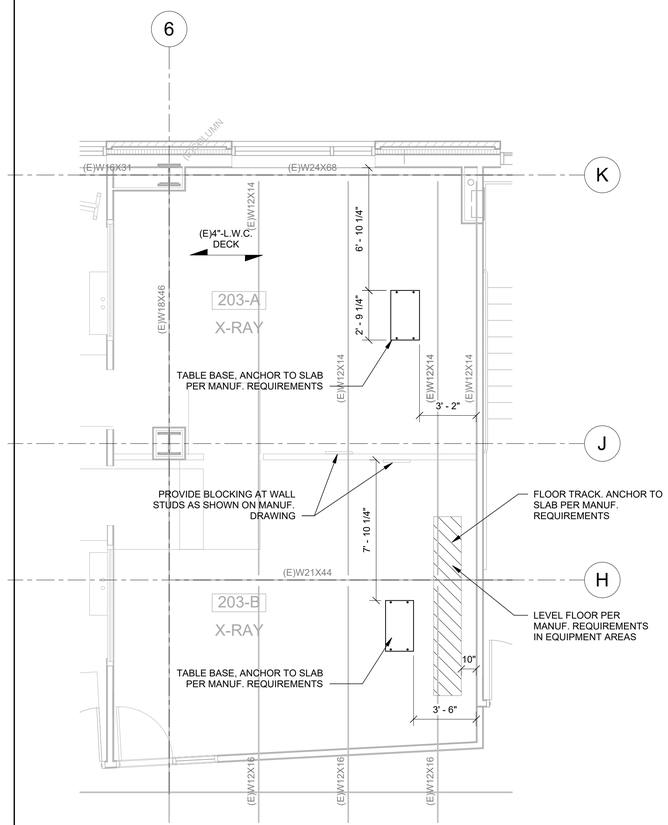
ISSUED 6/18/26 FOR BID

PROJECT TITLE: RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE: TITLE SHEET

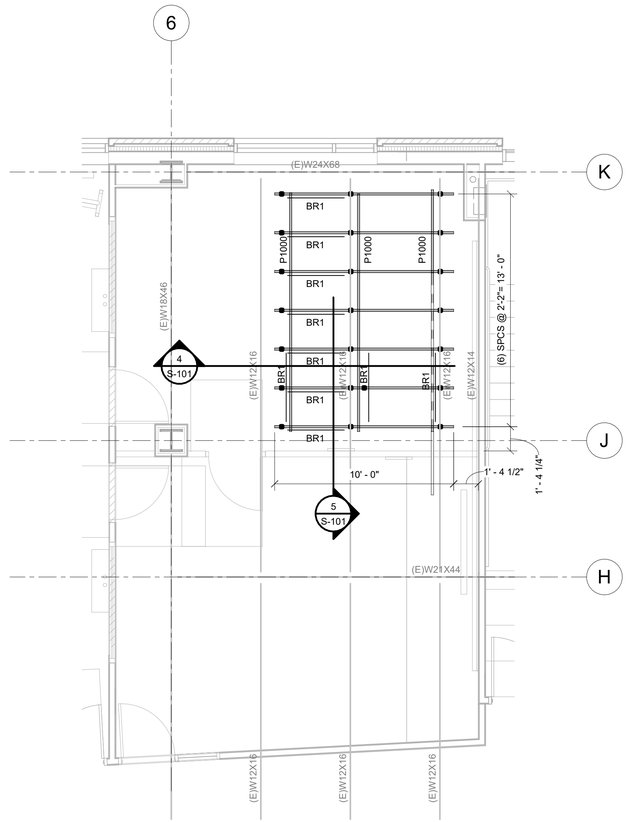
DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
SBL	WPB	EDF	MDF	TS
DATE: 5-8-26	SCALE: AS SHOWN	FE PROJECT #: 23-197		PAGE 1 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(1)TS.dwg (Layout: TS)
Date: Thu, Jun 18, 2026 - 9:44 AM (Name: wpb)

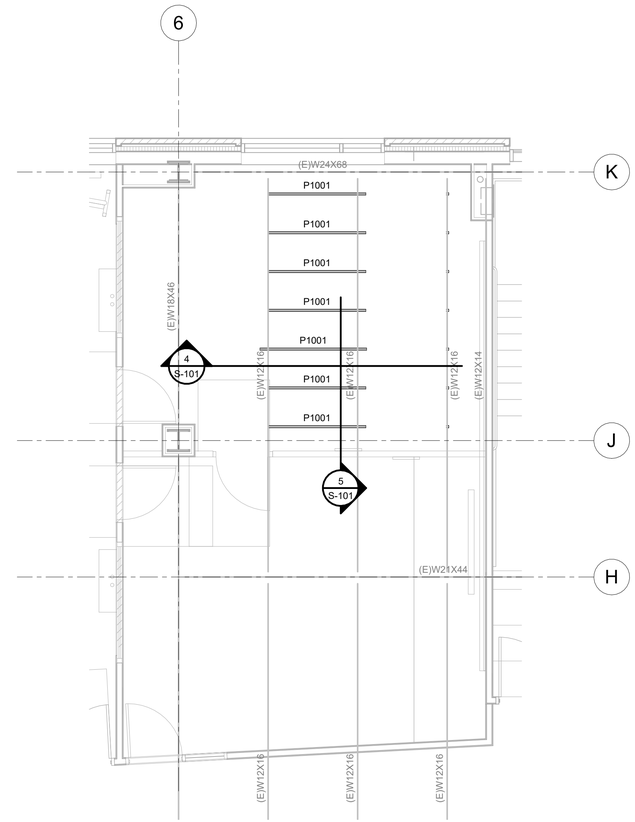


1. TOP OF LEVEL 2 FLOOR SLAB IS DATUM ELEVATION = 0'-0."
2. FIELD VERIFY ALL ELEVATIONS, DIMENSIONS & CONDITIONS, TYP.
3. COORDINATE ALL DIMENSIONS W/ CARESTREAM, TYP.

1 S-101 PLAN-PARTIAL LEVEL 2 FLOOR PLAN
1/4" = 1'-0"



3 S-101 PLAN - EQUIPMENT SUPPORT FRAMING
1/4" = 1'-0"



2 S-101 PLAN - UPPER EQUIPMENT SUPPORT FRAMING
1/4" = 1'-0"

BR1 INDICATES P1000 DIAGONAL BRACE

■ INDICATES VERTICAL P1000 SUPPORT

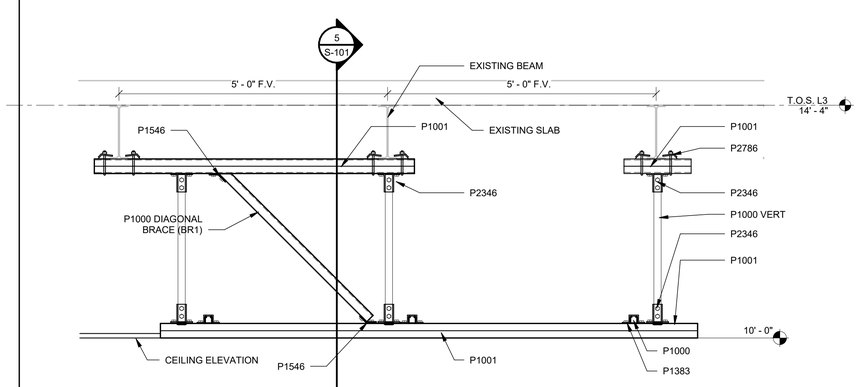
1. "PXXXX" INDICATES STRUT FRAMING, AS MANUFACTURED BY UNISTRUT
2. ALL BOTTOM OF STRUT ELEVATIONS ARE REFERENCED FROM THE ELEVATION 10'-0"
3. FIELD VERIFY ALL ELEVATIONS, DIMENSIONS & CONDITIONS, TYP.
4. COORDINATE ALL DIMENSIONS W/ CARESTREAM.

STEEL CONSTRUCTION

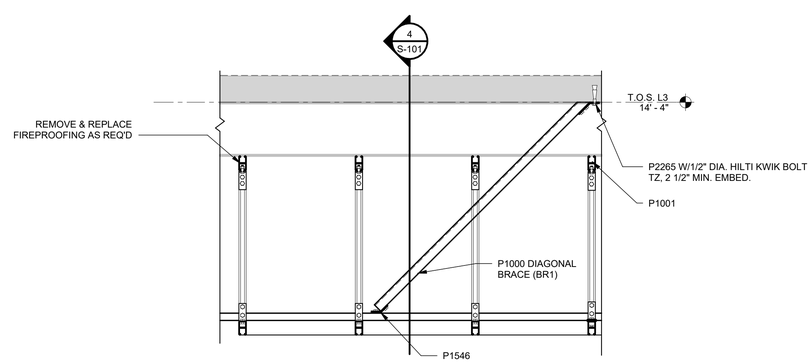
1. ALL PLATE STEEL, CHANNELS, AND ANGLES TO BE A.S.T.M. A-36, Fy = 36,000 PSI
2. ALL STEEL W-SHAPES SHALL BE A.S.T.M. A-992, Fy = 50,000 PSI
3. ALL BOLTING SHALL BE ACCOMPLISHED BY USING A.S.T.M. A-325, 3/4 INCH DIAMETER HIGH-STRENGTH BEARING-TYPE BOLTS WITH HARDENED WASHERS, UNLESS NOTED OTHERWISE.
4. ALL WELDING SHALL BE DONE BY A RECENTLY CERTIFIED WELDER USING TYPE E70XX ELECTRODES AND SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY.
5. ALL STRUT FRAMING AND ACCESORIES SHALL BE MANUFACTURED BY "UNISTRUT CORPORATION" OR APPROVED EQUAL.

GENERAL

1. ALL NEW CONSTRUCTION SHALL COMPLY WITH THE CONTRACT DOCUMENTS AND THE BUILDING CODE.
2. DRAWINGS ARE NOT TO BE SCALED.
3. THE CONTRACTOR SHALL CAREFULLY REVIEW THE DRAWINGS TO IDENTIFY THE SCOPE OF WORK REQUIRED, VISIT THE SITE TO RELATE THE SCOPE OF WORK TO EXISTING CONDITIONS AND DETERMINE THE EXTENT TO WHICH THOSE CONDITIONS AND PHYSICAL SURROUNDINGS WILL IMPACT THE WORK.
4. EXISTING CONDITIONS AS SHOWN ON THESE PLANS ARE FOR REFERENCE ONLY. CONTRACTOR IS REQUIRED TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL RESOLVE ANY CONFLICTS ON THE DRAWINGS OR IN THE SPECIFICATIONS WITH THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
6. ANY DEVIATION, MODIFICATION, OR SUBSTITUTION FROM THE APPROVED SET OF STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE OWNER, ARCHITECT, AND ENGINEER FOR REVIEW/APPROVAL PRIOR TO ITS USE OR INCLUSION ON THE SHOP DRAWINGS.
7. CONTRACTOR SHALL VERIFY ALL DIMENSIONS W/ EQUIPMENT MANUFACTURER PRIOR TO ORDERING OR FABRICATING MATERIALS
8. CONTRACTOR SHALL VERFIY ALL EXISTING DIMENSIONS PRIOR TO ORDERING OR FABRICATING MATERIALS
9. ALL SPRAY ON FIREPROOFING THAT IS REMOVED TO INSTALL STEEL FRAMING SHALL BE REPLACED.



4 S-101 SECTION - STRUT SUPPORT FRAMING
3/4" = 1'-0"



5 S-101 SECTION - DIAGONAL BRACE
3/4" = 1'-0"

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

1/8" 1/4" 1/2" 0 1" 2"
REFERENCE SCALE

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FELLENZER
ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986
181 Church St., Suite 100,
Poughkeepsie, NY 12601
t 845-454-9704 fx 855-320-8735

Project Title
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE: FRAMING PLANS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING NUMBER
VAG	AY	VAG	VAG	S-101
DATE:	SCALE: As indicated	PROJECT NUMBER: 23-197		PAGE OF

DOOR SCHEDULE

BASIS OF DESIGN: VT INDUSTRIES, NELCO

DOOR NO.	LOCATION	DOOR SIZE	DOOR TYPE	THICK-NESS	MATERIAL	FINISH	FIRE RATING	SMOKE CONTROL	GLAZING	DOOR FRAME MAT	DOOR FRAME ELEV	DOOR FRAME HEAD	DOOR FRAME JAMB	HARD. SET	REMARKS	NOTES
203A	X-RAY ROOM	3'-0" x 7'-0"	V	1¾"	SOLID CORE WOOD	FACTORY MATCH EXISTING	--	--	LEAD LINED	HM	F1	MTL	MTL	1	PREP FOR CYLINDRICAL LOCK AND REGULAR ARM CLOSER	1,2,5,6
203B	X-RAY ROOM	3'-0" x 7'-0"	V				--	--	LEAD LINED	HM	F1	MTL	MTL	1	PREP FOR CYLINDRICAL LOCK AND REGULAR ARM CLOSER	1,2,5,6
203AB	PASS THROUGH	3'-0" x 7'-0"	V		MTL	FACTORY MATCH WALL	--	--	LEAD LINED	HM	F1	MTL	MTL	1	PREP FOR CYLINDRICAL LOCK AND REGULAR ARM CLOSER	2,4,5,7
204B	CLASSROOM 204B	3'-0" x 7'-0"	F		--	--	--	--	--	HM	F2	MTL	MTL	EXIST	EXISTING DOOR, FRAME & TRANSOM RE-USED	1,3
205A	X-RAY DEMONSTRATION ROOM	3'-0" x 7'-0"	V		SOLID CORE WOOD	FACTORY MATCH EXISTING	--	--	D-H-20	HM	F1	MTL	MTL	2	PREP FOR CYLINDRICAL LOCK AND PARALLEL ARM CLOSER	1,2,5
205B	PATIENT CARE ROOM	3'-0" x 7'-0"	V				--	--	D-H-20	HM	F1	MTL	MTL	2	PREP FOR CYLINDRICAL LOCK AND PARALLEL ARM CLOSER	2,4,5
205AB	PASS THROUGH	3'-0" x 7'-0"	V				--	--	D-H-20	HM	F1	MTL	MTL	2	PREP FOR CYLINDRICAL LOCK AND PARALLEL ARM CLOSER	2,4,5
210A	RECORDS STORAGE	3'-0" x 7'-0"	F				--	--	--	HM	F1	MTL	MTL	3	PREP FOR CYLINDRICAL LOCK AND REGULAR ARM CLOSER	1,2,5

DOOR SCHEDULE NOTES:

1. DOORS TO HAVE SS HINGES, CLOSERS, SILENCERS, FLOOR STOPS.
2. NEW DOORS TO MATCH EXISTING COLOR AND FINISH.
3. EXISTING DOOR, TRANSOM, FRAME, LOCKSET, ACCESS AND CLOSER TO BE STORED, CLEANED AND RE-INSTALLED IN NEW LOCATION.
4. DOORS TO HAVE SS HINGES, CLOSERS, SILENCERS, WALL STOPS.
5. CONTRACTOR TO PROVIDE ALL HARDWARE TEMPLATES TO DOOR MANUFACTURER.
6. DOOR, WINDOW AND FRAME TO BE 1/16" LEAD LINED WITH CONTINUOUS HINGE.
7. DOOR AND FRAME THICKNESS MIN. .5 MM EACH SIDE

LOCKSET SCHEDULE

BASIS OF DESIGN: CORBIN RUSSWIN

HARDWARE SET	ITEM NUMBER	REMARKS
1	CLX3361 XRAY ACCESS CONTROL	OFFICE/ENTRY/ELECTRIFIED/LL
2	CLX3361	OFFICE/ENTRY
3	CLX3359	STORAGE

GENERAL NOTES:

1. FINAL LOCKSET SELECTION SHALL BE BY FACILITY.
2. INCLUDE ADA COMPLIANT LEVER AND ROSE.
3. CORE SHALL MATCH EXISTING BEST LOCKSET AND KEYING, 6, 7 OR OTHER PIN COUNT.
4. FINISH US26D SATIN CHROME PLATED.
5. M28 LEAD WRAPPING OPTION ON HARDWARE SET 1.
6. HARDWARE SET 1 SHALL COMMUNICATE WITH X-RAY EQUIPMENT.
7. ALL HARDWARE IN LEAD LINED DOORS SHALL HAVE LEAD LINING.

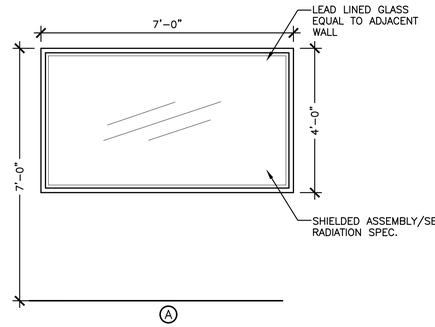
SHIELDED INTERIOR WINDOW SCHEDULE

BASIS OF DEISGN: NELCO BURLINGTON, MA, OR APPROVED EQUIV.

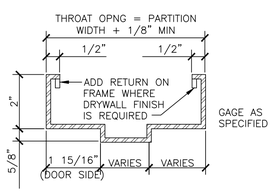
TYPE MARK	DESCRIPTION	WIDTH	HEIGHT	FRAME MATERIAL	FRAME FINISH INT/EXT	GLAZING	REMARKS
A	FIXED	7'-0"	4'-0"	ALUM. LEAD LINED	ALUM., ANODIZED	LEAD LINED	PROVIDE RS-1 ON CONTROL ROOM SIDE. GLAZING AND FRAME PROTECTION MUST OVERLAP.

GENERAL NOTES:

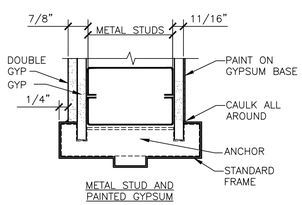
1. CONTRACTOR TO V.I.F. ALL DIMENSIONS IN FIELD.
2. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. WINDOW SHALL BE SHIELDED WITH MIN. SAME EQUIVALENCE AS THE WALL IT IS LOCATED IN, SEE RADIATION SPECIFICATIONS.
4. NL = NO LEAD REQUIRED



4 WINDOW ELEVATIONS
SCALE: 1/2" = 1'-0"

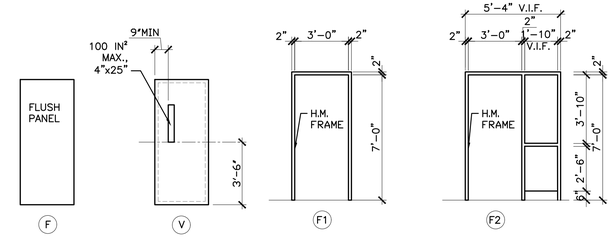


STANDARD DOOR FRAME



FRAMES WITH METAL STUD AND GYPSUM

1 DOOR FRAME INSTALLATION DETAILS
N.T.S.



2 DOOR ELEVATIONS
N.T.S.

3 FRAME TYPES
N.T.S.

GENERAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL DIMENSIONS ON THESE PLANS AGAINST FIELD CONDITION PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ENGINEER. ALL DIMENSIONS AND LOCATIONS AS-INDICATED ON THE DRAWINGS SHALL BE CONSIDERED AS REASONABLY CORRECT BUT IT SHALL BE UNDERSTOOD THAT THEY ARE SUBJECT TO MODIFICATION AS MAY BE NECESSARY OR DESIRABLE AT THE TIME OF INSTALLATION TO MEET ANY UNFORESEEN OR OTHER CONDITION.
2. ALL WORK PERFORMED SHALL COMPLY WITH BUILDING AND ZONING ORDINANCE OF THE LOCAL AUTHORITY HAVING JURISDICTION, AND THE NYS (IBC) BUILDING AND ENERGY CODES.
3. CONTRACTOR OR ANY SUBCONTRACTOR DOING ANY WORK UNDER THIS CONTRACT SHALL CARRY LIABILITY AND PROPERTY DAMAGE INSURANCE AGAINST ACCIDENTS OF ALL KINDS AND SHALL FURNISH OWNER WITH CERTIFICATES OF INSURANCE.
4. NEW WALL AND CEILING FINISHES SHALL HAVE A FLAME-SPREAD INDEX OF 76-200 (CLASS C) IN CORRIDORS AND EXIT ENCLOSURES, 76-200 (CLASS C) IN ROOMS AND ENCLOSED SPACES.
5. NEW FLOOR FINISHES SHALL NOT BE LESS THAN CLASS II, GREATER THAN OR EQUAL TO .22 WATTS/CM² (MIN. CRITICAL RADIANT FLUX) IN EXIT ENCLOSURES, PASSAGEWAYS, CORRIDORS AND ROOMS NOT SEPARATED FROM CORRIDORS.
6. CONTRACTOR SHALL PROVIDE AND INSTALL ALL COMPONENTS INDICATED ON DETAIL SHEETS, PLANS, SPECIFICATIONS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE AND WORKABLE SYSTEM.
7. CONTRACTOR SHALL PROTECT THE PUBLIC AND STRUCTURE DURING CONSTRUCTION WITH TEMPORARY FENCING AND BRACING.
8. CONTRACT CLOSE OUT: IN THE PRESENCE OF THE OWNER, ENGINEER OR ARCHITECT; DEMONSTRATING OPERATION OF SYSTEMS AND THAT ALL SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF ALL PARTIES.
9. IT IS THE INTENTION THAT THESE SPECIFICATIONS, AND DRAWINGS ACCOMPANYING SAME, SHALL PROVIDE FOR THE FURNISHING AND INSTALLING OF THE BUILDING CONSTRUCTION COMPLETE AS SPECIFIED AND SHOWN. ANY WORK SHOWN ON THE DRAWINGS AND NOT PARTICULARLY DESCRIBED IN THE SPECIFICATIONS OR VICE VERSA, OR ANY WORK CHANGES WHICH MAY BE EVIDENTLY NECESSARY TO COMPLETE THE INSTALLATION SHALL BE FURNISHED BY THIS CONTRACTOR.
10. IT IS THE INTENT AND PURPOSE OF THESE SPECIFICATIONS AND DRAWINGS TO INCLUDE AND PROVIDE FOR ALL MATERIALS, APPLIANCES AND LABOR TO PROPERLY COMPLETE AND LEAVE IN PERFECT WORKING CONDITION THE ENTIRE SYSTEM HEREINAFTER SPECIFIED. ANY MATERIAL, LABOR OR APPLIANCE NOT SPECIFICALLY MENTIONED IN THESE SPECIFICATIONS OR SHOWN ON THE DRAWINGS, BUT NECESSARY FOR A COMPLETE INSTALLATION MUST BE FURNISHED BY THIS CONTRACTOR.
11. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE ALTERATIONS AND/OR NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE NEW SYSTEMS IN EVERY RESPECT, CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.

ABBREVIATIONS

AC	AIR CONDITIONING UNIT
ACT	ACOUSTIC CEILING TILE
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
A.F.F.	ABOVE FINISHED FLOOR
AL	ALUMINUM
CAT.	CATALOG
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
C.J.	CEILING JOIST
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
DF	DRINKING FOUNTAIN
DIV	DIVISION
DN.	DOWN
DWG	DRAWING
EA	EACH
E.C.	ELECTRICAL CONTRACTOR
ELEC.	ELECTRICAL
ELEV	ELEVATOR
EQUIP.	EQUIPMENT
EXIST	EXISTING
FBO	FURNISHED BY OWNER
F.J.	FLOOR JOIST
FLR	FLOOR
FT	FEET OR FOOT
FTG	FOOTING
G.C.	GENERAL CONTRACTOR
GYB	GYPSUM BOARD
H.C.	HVAC CONTRACTOR
HDR	HEADER
LF	LINEAR FEET
LVL	LAMINATED VENEER LUMBER
MAX.	MAXIMUM
M.E.R.	MECHANICAL EQUIPMENT ROOM
MIN.	MINIMUM
MTD	MOUNTED
MTG	MOUNTING
N.I.C.	NOT IN CONTRACT
NOM.	NOMINAL
NTS	NOT TO SCALE
O.C.	ON CENTER
P.C.	PLUMBING CONTRACTOR
PSF	POUNDS PER SQUARE FT.
PSI	POUNDS PER SQUARE IN.
P.T.	PRESSURE TREATED
REQ.	REQUIRED
RM.	ROOM
R.O.	ROUGH OPENING
R.R.	ROOF RAFTER
SAFB	SOUND ATTENUATING FIBERGLASS BATT
SCHED.	SCHEDULE
SECT.	SECTION
SPEC.	SPECIFICATION
SPF	SPRUCE PINE FIR
S.S.	SOLID STUDS
SYS.	SYSTEM
TEL.	TELEPHONE
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD

GENERAL SYMBOLS

- POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
- POINT OF DISCONNECT
- X / XX — INDICATES SECTION LETTER / INDICATES DRAWING NUMBER WHERE LOCATED
- X — WINDOW TAG
- X — DOOR TAG
- X — WALL TAG
- 1 HOUR FIRERATED WALL

ARCHITECTURAL LINE TYPES

EXISTING TO BE REMOVED	-/-/-/-/-/-/- or ----------
EXISTING TO REMAIN	
NEW WALL	
NEW FOOTING	
NEW BEAM	
NEW CONCRETE	
NEW MILLWORK	

SECOND LEVEL INFORMATION

B OCCUPANCY

AREA: 26,174 SQUARE FEET, 46,500 PERMITTED
NUMBER OF OCCUPANTS: CLASSROOMS AND LABS 276, GENERAL SPACE 133, TOTAL: 409
NUMBER OF EXITS: 2 REQUIRED, 2 PROVIDED
NUMBER OF WATER CLOSETS/URINALS: 4.6 (MEN), 4.6 (WOMEN). 9.2 TOTAL REQUIRED
NUMBER OF LAVATORIES: 2.7 (MEN), 2.7 (WOMEN). 5.4 TOTAL REQUIRED
NUMBER OF DRINKING FOUNTAINS: 4.1 REQUIRED

THIRD FLOOR OCCUPANT LOAD

TOTAL OCCUPANCY LOAD: 409
EXIT CAPACITY: 492

ROOM FINISH SCHEDULE

ROOM NAME	FLOOR FINISH	WALL BASE FINISH	WALL FINISH	CLG MATERIAL	CLG HEIGHT	COMMENTS
203A&B X-RAY	VCT-1	VB-1	GWB/ P-1	ACT-1	10'-2"	WINDOWS TO RECEIVE RS-1 & RS-2
204A&B CLASSROOMS	VCT-1	VB-1	GWB/ P-1	ACT-1	10'-2"	
205A X-RAY DEMONSTRATION	VCT-1	VB-1	GWB/ P-1	ACT-1	10'-2"	WINDOWS TO RECEIVE RS-1 & RS-2
205B PATIENT CARE	VCT-1	VB-1	GWB/ P-1	ACT-1	10'-2"	
210A&B STORAGE	VCT-2	VB-1	GWB/ P-1	ACT-1/GWB	10'-2"/10-0"	HARD CEILING AREA P-2

FINISH MATERIAL SCHEDULE

SYMBOL	ITEM	MAUFACTURER	NO.	NAME	REMARKS
ACT-1	CEILING TILE	ARMSTRONG	1910	ULTIMA LAY-IN	24"x24"x¾"
LVT-1	AMTICO SIGNATURE ABSTRACT	MANNINGTON	AROAET11	ETCH EPHEMERAL	18"x18" TILE
LVT-2	AMTICO SIGNATURE ABSTRACT	MANNINGTON	AROADF39	DIFFUSION CHAMBRAY	18"x18" TILE
P-1	INTERIOR PAINT	SHERWIN WILLIAMS	SW6219	RAIN	GENERAL WALLS - EGGSHELL FINISH
P-2	INTERIOR PAINT	SHERWIN WILLIAMS	SW7007	CEILING BRIGHT WHITE	MATTE FINISH
PL-1	LAMINATE	WILSONART	D427-60	LINEN	MATTE FINISH
RS-1	MANUAL SPRING ROLLER SHADE	DRAPER, INC.	SHEERWEAVE SW7001	BIRCH/OFF-WHITE	OPAQUE MANUAL BLACKOUT SHADE WITH MICROBANE, ENDCAP, ENDCAP COVER, FASCIA AND CLOSED ELLIPICAL SLAT, SIZE PER SHADE HEIGHT - RECESSED
RS-2	MANUAL SPRING ROLLER SHADE	DRAPER, INC.	SHEERWEAVE SW7001	BIRCH/OFF-WHITE	OPAQUE MANUAL BLACKOUT SHADE WITH MICROBANE, ENDCAP, ENDCAP COVER, FASCIA AND CLOSED ELLIPICAL SLAT, SIZE PER SHADE HEIGHT - SURFACE MOUNT
SS-1	SOLID SURFACE	WILSONART	RESIN	CHICORY CREAM MELANGE 9847ML	
VB-1	TYPE TP/TV	MANNINGTON	209	GRAY BEIGE	4" VINYL COVE WALL BASE

FINISH SCHEDULE NOTES:

1. 15/16" PRELUDE XL GRID SUSPENSION SYSTEM FOR ACT CEILING.
2. INSTALL ALL FINISHES PER MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE REQUIRED PROTECTION IN ANY LEAD LINED WALL PENETRATIONS.

LEGEND:

GWB	GYPSUM WALL BOARD TYPE 'X'
VCT	VINYL COMPOSITION TILE
ACT	ACCOUSTICAL CEILING TILE
P	PAINT

CONSTRUCTION SAFEGUARDS

1. CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE STORED AND PLACED SO AS NOT TO ENDANGER THE PUBLIC, THE WORKERS OR ADJOINING PROPERTY FOR THE DURATION OF THE CONSTRUCTION PROJECT.
2. REQUIRED EXITS, EXISTING STRUCTURAL ELEMENTS, FIRE PROTECTION DEVICES AND SANITARY SAFEGUARDS SHALL BE MAINTAINED AT ALL TIMES DURING ALTERATIONS, REPAIRS OR ADDITIONS TO ANY BUILDING OR STRUCTURE.
3. WASTE MATERIALS SHALL BE REMOVED IN A MANNER THAT PREVENTS INJURY OR DAMAGE TO PERSONS, ADJOINING PROPERTIES AND PUBLIC RIGHTS-OF-WAY.
4. FIRE SAFETY DURING DEMOLITION AND CONSTRUCTION SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE 2020 NYS BUILDING CODE AND THE APPLICABLE PROVISIONS OF THE 2020 FIRE CODE OF NEW YORK STATE.
5. THE OWNER SHALL BE RESPONSIBLE FOR THE DEVELOPMENT, IMPLEMENTATION AND MAINTENANCE OF A WRITTEN PLAN ESTABLISHING A FIRE PREVENTION PROGRAM AT THE PROJECT SITE APPLICABLE THROUGHOUT ALL PHASES OF THE CONSTRUCTION, REPAIR, ALTERATION OR DEMOLITION WORK.
6. THE CONTRACTOR SHALL COMPLY WITH ALL REGULATIONS CONCERNING OSHA STANDARD 29 CFR 1926 "SAFETY & HEALTH REGULATIONS FOR CONSTRUCTION", SPECIFICALLY PART 1926.62 AS PER THE DESIGN REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR ALL SAFE GUARDS DURING CONSTRUCTION.

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

1/8" 1/4" 1/2" 0 1" 2"
REFERENCE SCALE

UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING A LICENSED PROFESSIONAL ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2 OF THE N.Y. STATE EDUCATION LAW. FELLENZER ENGINEERING, LLP CERTIFICATE OF AUTHORIZATION #: 0017795

FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1 ISSUED 1995; EXP. 8/25

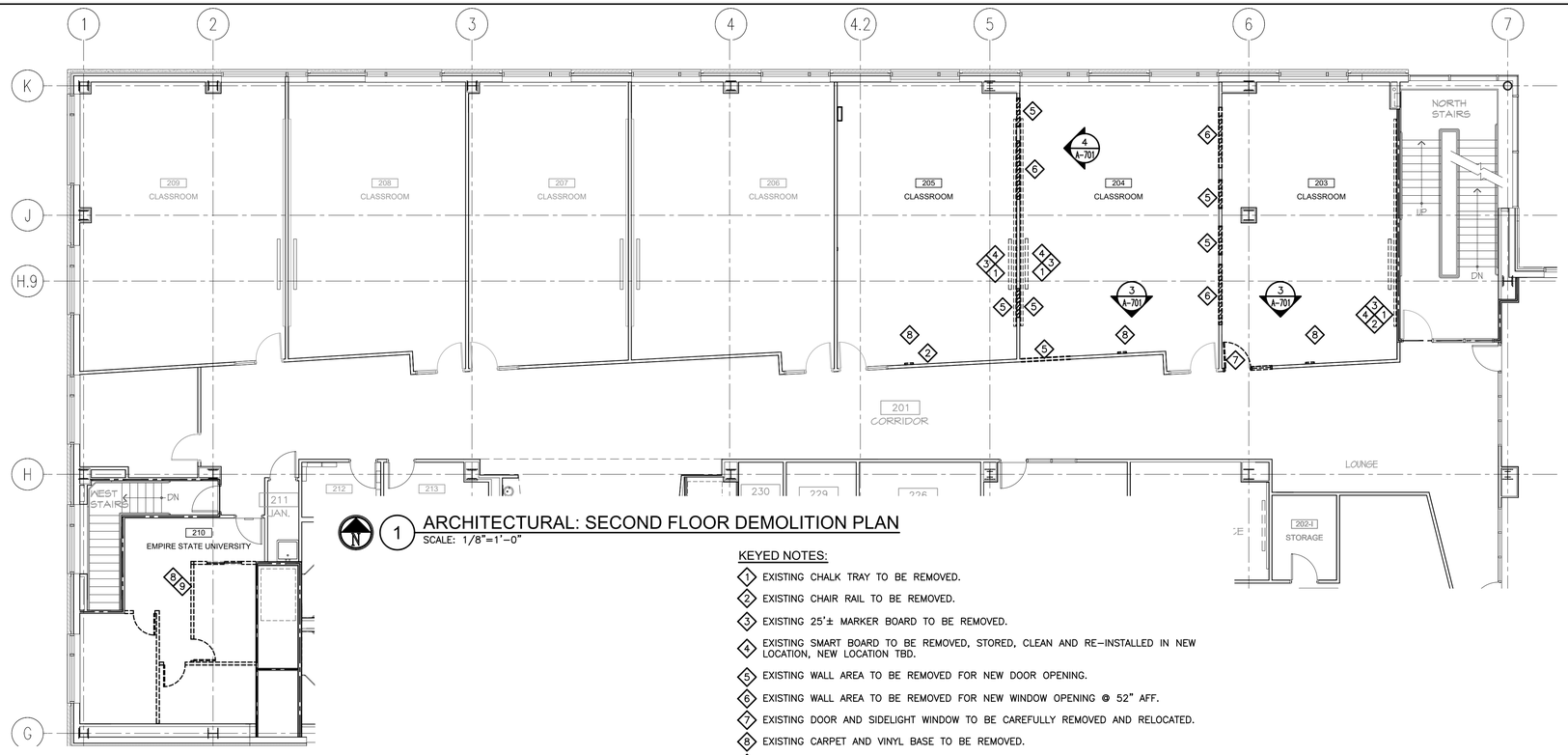
ISSUED 6/17/26 FOR BID

PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
ARCHITECTURAL: SYMBOLS, NOTES, ABBREVIATIONS & SCHEDULES

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	SL		EDF	A-001
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 3 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(3) A-001.dwg (Layout: A-001)
Date: Wed, Jun 17, 2026 - 8:11 AM (Name: wpb)

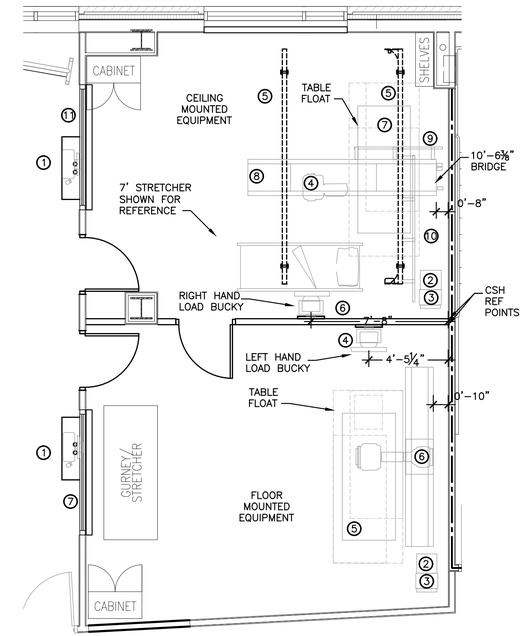


1 ARCHITECTURAL: SECOND FLOOR DEMOLITION PLAN

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

KEYED NOTES:

1. EXISTING CHALK TRAY TO BE REMOVED.
2. EXISTING CHAIR RAIL TO BE REMOVED.
3. EXISTING 25'± MARKER BOARD TO BE REMOVED.
4. EXISTING SMART BOARD TO BE REMOVED, STORED, CLEAN AND RE-INSTALLED IN NEW LOCATION, NEW LOCATION TBD.
5. EXISTING WALL AREA TO BE REMOVED FOR NEW DOOR OPENING.
6. EXISTING WALL AREA TO BE REMOVED FOR NEW WINDOW OPENING @ 52" AFF.
7. EXISTING DOOR AND SIDELIGHT WINDOW TO BE CAREFULLY REMOVED AND RELOCATED.
8. EXISTING CARPET AND VINYL BASE TO BE REMOVED.
9. EXISTING PARTITIONS THIS AREA TO BE REMOVED.



3 CLASSROOM 203A/B ENLARGED EQUIP. PLAN.

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

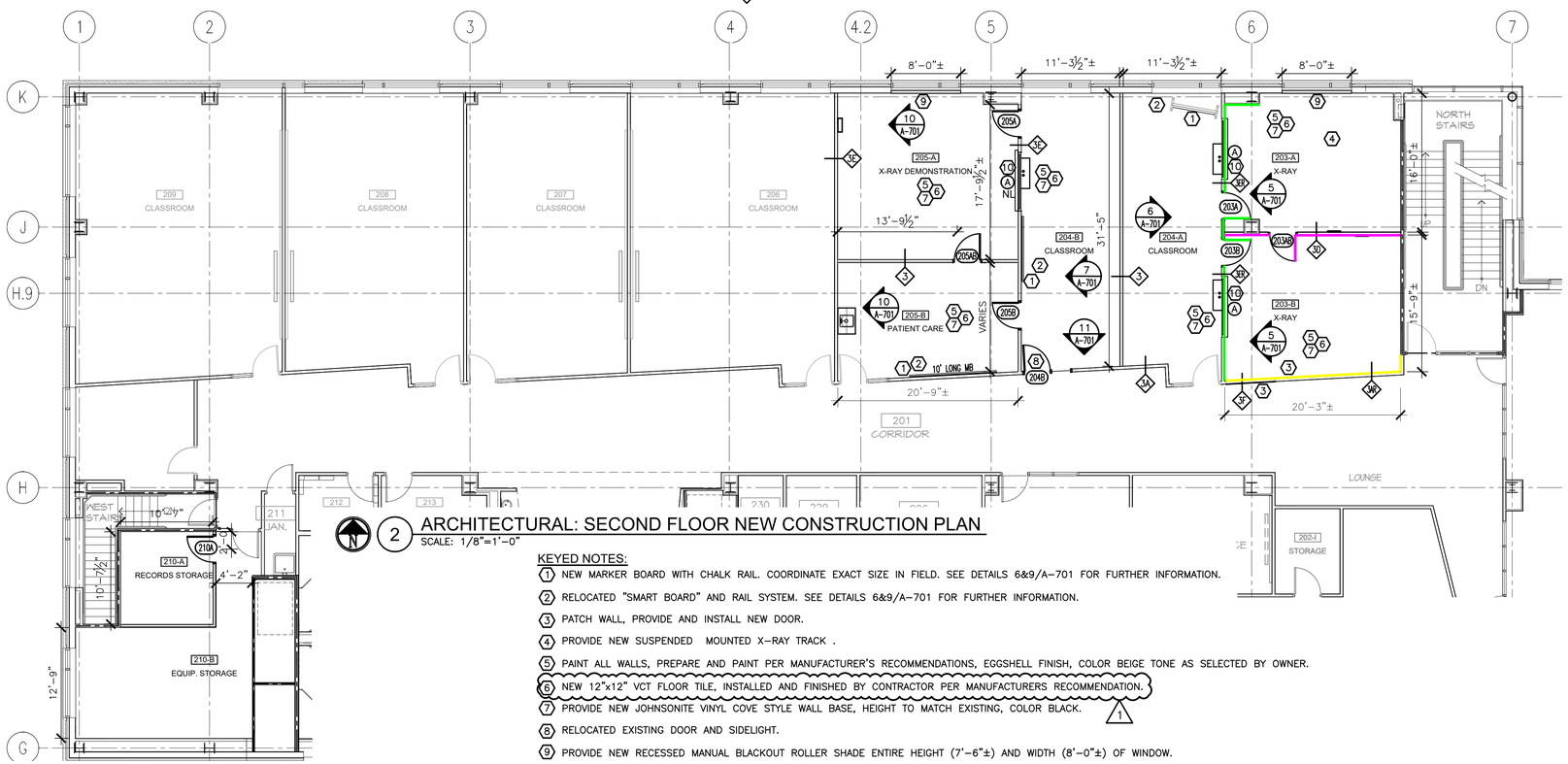
EQUIPMENT LEGEND

ITEM	SUPPLIED/INSTALLED BY CARESTREAM HEALTH	BTU/hr lb
1	COMPUTER- HP ENGAGE FLEX PRO WITH HP E230T DISPLAY	--
2	CARESTREAM GENERATOR 2.0	1000
3	PDU- POWER DISTRIBUTION UNIT	--
4	DTC TUBE/COLLIMATOR ASSY	700
5	4M LONGITUDINAL RAIL	--
6	WALL STAND MANUAL NON TILT	70
7	QT-750 ELEVATING TABLE	400
8	DTC BRIDGE 3.2M	--
9	BRIDGE CABLE RAIL	--
10	LONGITUDINAL CABLE RAIL	--
ITEM	SUPPLIED/INSTALLED BY CONTRACTOR	
11	WINDOW - GLASS, LEAD LINED	

NOTE: DTC WEIGHT WITH RAILS IS APPROXIMATELY 992 lbs

EQUIPMENT LEGEND

ITEM	SUPPLIED/INSTALLED BY CARESTREAM HEALTH
1	COMPUTER- HP ENGAGE FLEX PRO WITH HP E230T DISPLAY
2	CARESTREAM GENERATOR
3	PDU- POWER DISTRIBUTION UNIT
4	WALL STAND MANUAL NON TILT
5	QT-750 ELEVATING TABLE
6	TUBE STAND W/ 10' TRACK
ITEM	SUPPLIED/INSTALLED BY CONTRACTOR
7	WINDOW - GLASS, LEAD LINED



2 ARCHITECTURAL: SECOND FLOOR NEW CONSTRUCTION PLAN

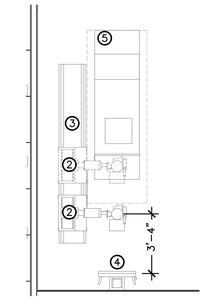
SCALE: 1/8"=1'-0"

KEYED NOTES:

1. NEW MARKER BOARD WITH CHALK RAIL. COORDINATE EXACT SIZE IN FIELD. SEE DETAILS 6&9/A-701 FOR FURTHER INFORMATION.
2. RELOCATED "SMART BOARD" AND RAIL SYSTEM. SEE DETAILS 6&9/A-701 FOR FURTHER INFORMATION.
3. PATCH WALL, PROVIDE AND INSTALL NEW DOOR.
4. PROVIDE NEW SUSPENDED MOUNTED X-RAY TRACK .
5. PAINT ALL WALLS, PREPARE AND PAINT PER MANUFACTURER'S RECOMMENDATIONS, EGGSHELL FINISH, COLOR BEIGE TONE AS SELECTED BY OWNER.
6. NEW 12"x12" VCT FLOOR TILE, INSTALLED AND FINISHED BY CONTRACTOR PER MANUFACTURERS RECOMMENDATION. 1
7. PROVIDE NEW JOHNSONITE VINYL COVE STYLE WALL BASE, HEIGHT TO MATCH EXISTING, COLOR BLACK.
8. RELOCATED EXISTING DOOR AND SIDELIGHT.
9. PROVIDE NEW RECESSED MANUAL BLACKOUT ROLLER SHADE ENTIRE HEIGHT (7'-6"±) AND WIDTH (8'-0"±) OF WINDOW.
10. PROVIDE NEW SURFACE MOUNTED MANUAL ROLLER SHADE ENTIRE HEIGHT (4'-6"±) AND WIDTH (7'-6"±) OF WINDOW. MAINTAIN LEAD PROTECTION.

LEGEND:

- EXISTING WALL
- DEMO WALL
- NEW WALL
- EXISTING RATED WALL
- 1/64" LEAD PROTECTION
- 1/32" LEAD PROTECTION
- 1/16" LEAD PROTECTION



EQUIPMENT LEGEND

ITEM	SUPPLIED/ INSTALLED BY BMI
1 CNTRL	CONTROL CONSOLE
2 TS	SUMMIT J700D
3 RAIL	SUMMIT J700D FLOOR RAILS
4 WSTAND	SUMMIT JI000
5 TBL	SUMMIT TABLE
6 DR	WORKSTATION

4 CLASSROOM 205A ENLARGED EQUIP. PLAN.

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

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:
1	6-16-26	RE-BID			

⅛" ¼" ½" 0 1" 2"
REFERENCE SCALE

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FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1 ISSUED 1995; EXP. 8/25

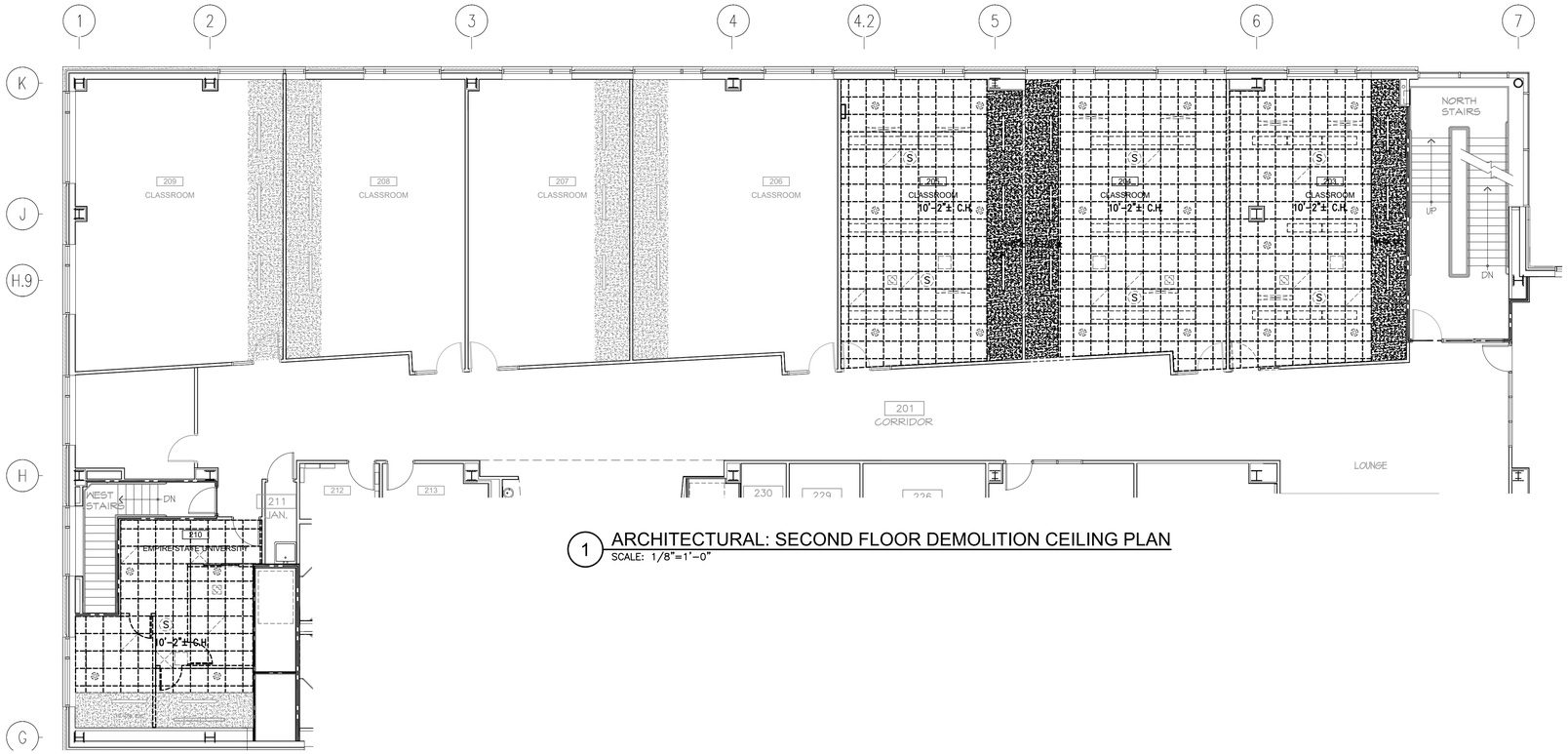
ISSUED 6/17/26 FOR BID

PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
ARCHITECTURAL: DEMO & NEW 2ND FLOOR PLANS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	WPB		EDF	AD/A-101
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 4 OF 25

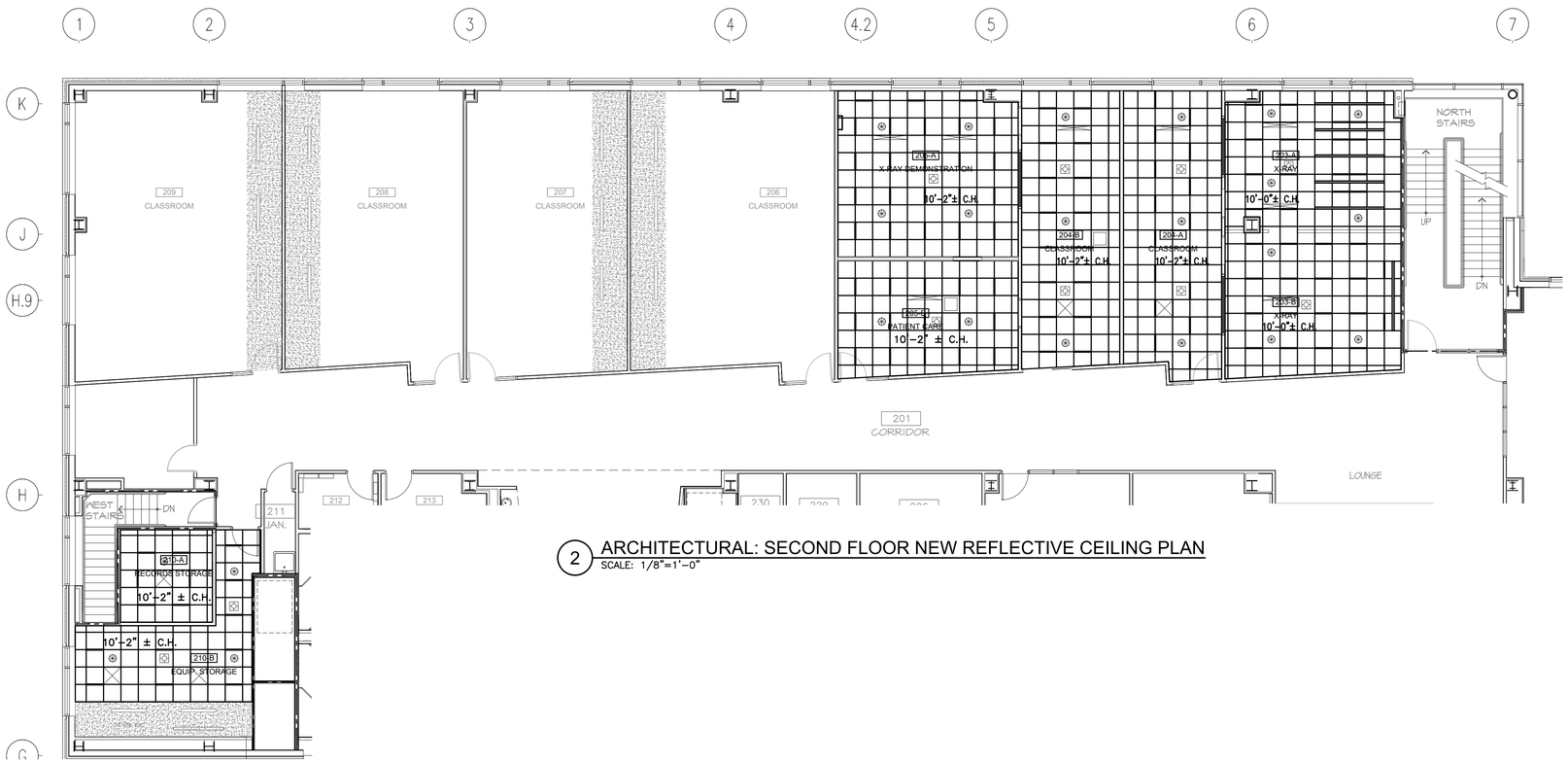
File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(4) A-101.dwg (Layout: A-101 OPT 2)
Date: Wed, Jun 17, 2026 - 8:11 AM (Name: wpb)



1 ARCHITECTURAL: SECOND FLOOR DEMOLITION CEILING PLAN
SCALE: 1/8"=1'-0"

LEGEND:

- EXISTING WALL
- NEW WALL
- DEMO CEILING GRID & TILE
- DEMO HARD CEILING
- NEW CEILING GRID
- EXISTING RATED WALL



2 ARCHITECTURAL: SECOND FLOOR NEW REFLECTIVE CEILING PLAN
SCALE: 1/8"=1'-0"

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

⅛" ¼" ½" 0 1" 2"
REFERENCE SCALE

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www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

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PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
ARCHITECTURAL: DEMO & NEW 2ND FLR REFLECTIVE CLG PLANS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	SL		EDF	AD/A-201
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 5 OF 25

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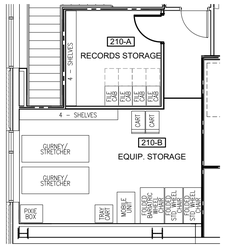
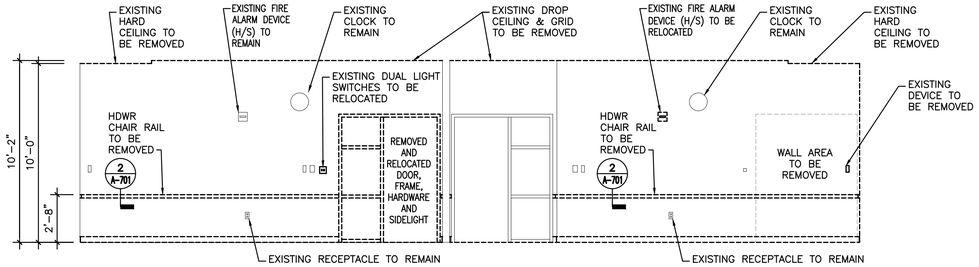


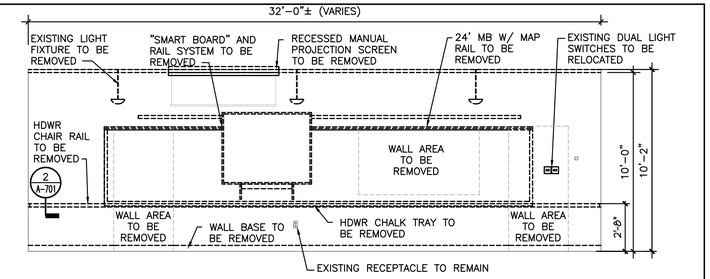
FURNITURE NOTES:

1. FURNITURE TO BE FURNISHED BY OWNER, INSTALLED BY CONTRACTOR.

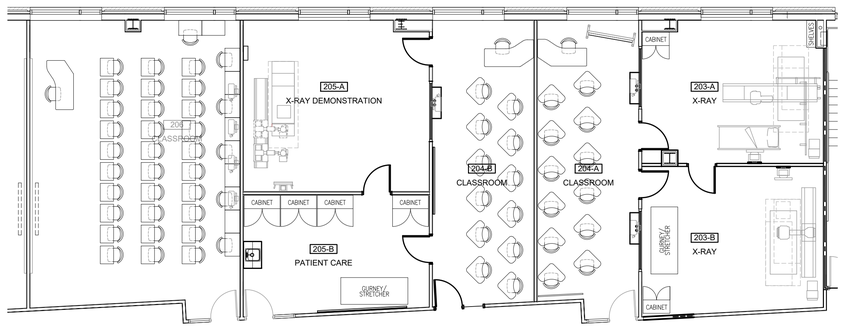
1 EQUIP. STORAGE/ RECORDS RM FURNITURE LAYOUT
SCALE: 1/8" = 1'-0"



3 TYPICAL CLASSROOM ELEVATION -CORRIDOR WALL - DEMO
SCALE: 1/4" = 1'-0"



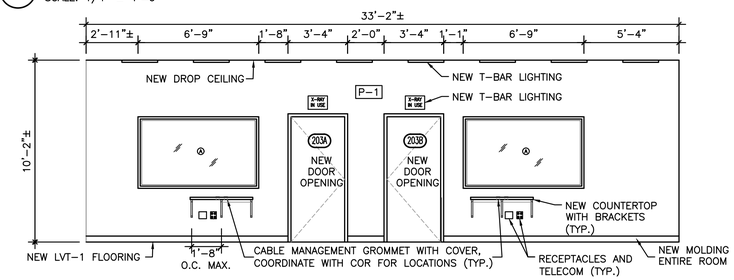
4 TYPICAL CLASSROOM ELEVATION -TEACHING WALL - DEMO
SCALE: 1/4" = 1'-0"



2 CLASSROOM FURNITURE LAYOUT
SCALE: 1/8" = 1'-0"

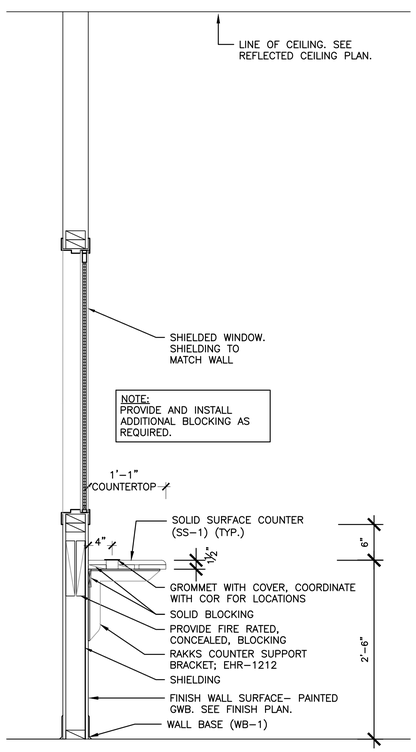
FURNITURE NOTES:

1. FURNITURE TO BE FURNISHED BY OWNER, INSTALLED BY CONTRACTOR.
2. MILLWORK TO BE PROVIDED AND INSTALLED BY G.C.
3. X-RAY EQUIPMENT TO BE INSTALLED BY OWNER'S REPRESENTATIVE, ENERGIZED BY CONTRACTOR. COORDINATE PLACEMENT WITH G.C., EQUIPMENT CONTRACTOR AND E.C.

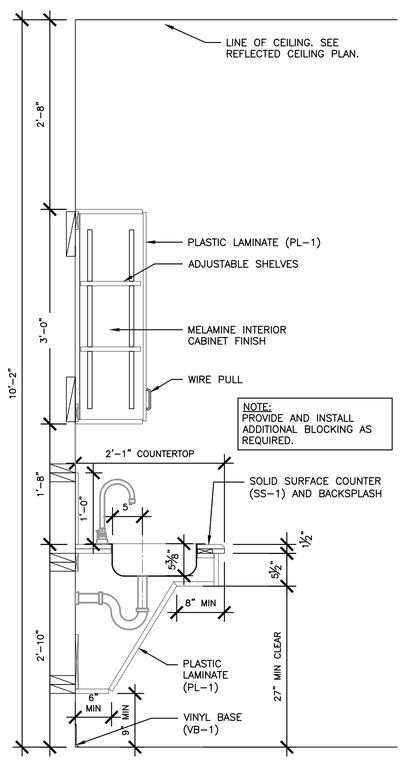


5 CLASSROOM 203-A & 203-B WEST ELEVATION -NEW CONSTRUCTION
SCALE: 1/4" = 1'-0"

6 CLASSROOM 204-A EAST ELEVATION - NEW CONSTRUCTION
SCALE: 1/4" = 1'-0"



8 SECTION/DETAIL @ WINDOW
SCALE: 1" = 1'-0"



9 SECTION/DETAIL @ CLINICAL SINK
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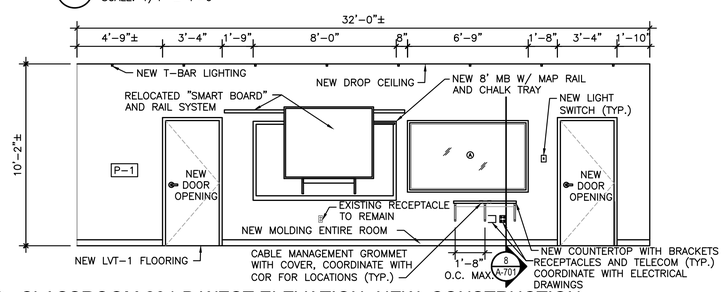

7 CLASSROOM 204-B WEST ELEVATION -NEW CONSTRUCTION
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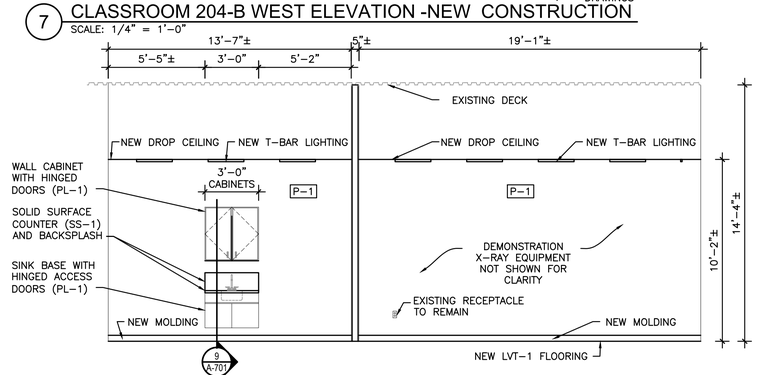
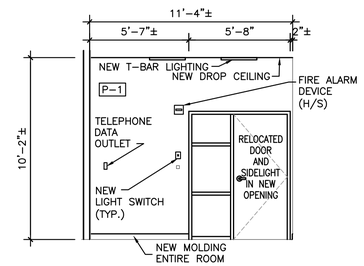


10 CLASSROOM 205-A & 205-B WEST ELEVATION -NEW CONSTRUCTION
SCALE: 1/4" = 1'-0"



11 CLASSROOM 204-B SOUTH ELEVATION -NEW
SCALE: 1/4" = 1'-0"

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

⅛" ¼" ½" 0 1" 2"
REFERENCE SCALE

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22 Mulberry St., Suite 2A,
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PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
ARCHITECTURAL: SECTIONS AND DETAILS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	LC		EDF	A-701
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 6 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(6&7) A-701 & A-702.dwg (Layout: A-701)
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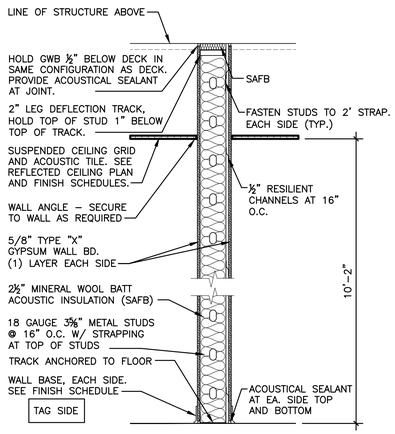
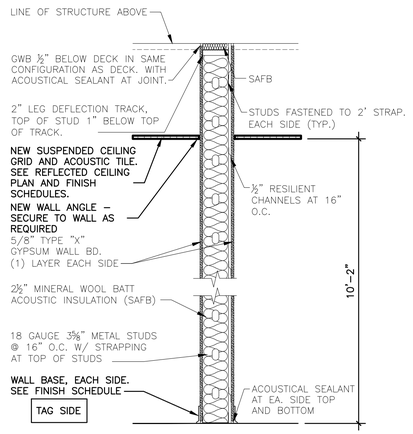


NON-RATED INTERIOR PARTITION

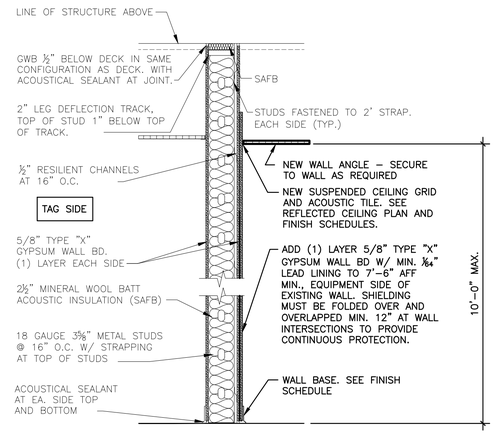
* MOISTURE RESISTANT GYPSUM WALL BOARD AT WET LOCATIONS

3



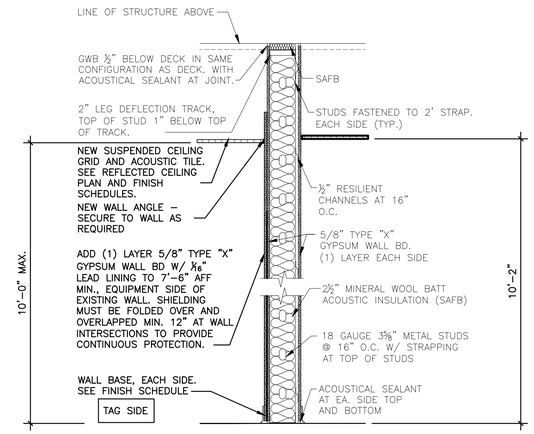
NON-RATED INTERIOR PARTITION

3E
3A W/ ABUSE RESISTANT GYPSUM WALL BOARD. NEW CEILING AND WALL BASE ROOM SIDE ONLY



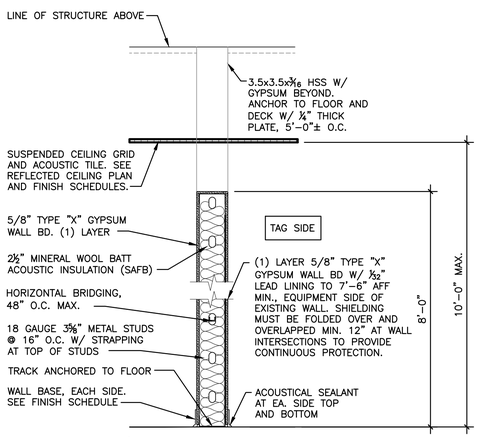
LEAD LINED INTERIOR PARTITION

3AR W/ ABUSE RESISTANT GYPSUM WALL BOARD. NEW CEILING AND WALL BASE ROOM SIDE ONLY



LEAD LINED INTERIOR PARTITION

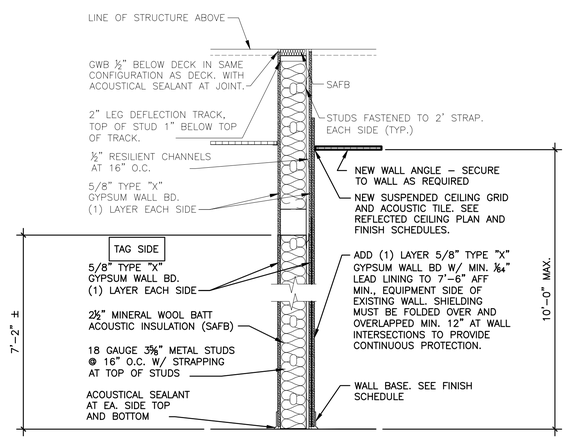
JER



* ALIGN WALL W/ EXISTING COLUMN TO PROVIDE LEVEL TRANSITION

LEAD LINED INTERIOR PARTITION

3D



LEAD LINED INTERIOR PARTITION

3F

1 PARTITION TYPES
SCALE: N.T.S.

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

1/8" 1/4" 1/2" 0 1" 2"
REFERENCE SCALE

UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING A LICENSED PROFESSIONAL ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2 OF THE N.Y. STATE EDUCATION LAW. FELLENZER ENGINEERING, LLP CERTIFICATE OF AUTHORIZATION #: 0017795

FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1 ISSUED 1995; EXP. 8/25

ISSUED 6/17/26 FOR BID

PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
ARCHITECTURAL: WALL TYPES

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	LC		EDF	A-702
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 7 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(6&7) A-701 & A-702.dwg (Layout: A-702)
Date: Wed, Jun 17, 2026 - 8:12 AM (Name: wpb)

SHEET LEGEND

SHEET NUMBER	SHEET DESCRIPTION
C-1	SHEET LEGEND, DENOTED REVISIONS, GENERAL NOTES
A-1	ARCHITECTURAL NOTES, GENERAL NOTES
A-2	EQUIPMENT PLAN, EQUIPMENT LEGEND
E-1	ELECTRICAL PLAN, ELECTRICAL LEGEND
E-2	ISOMETRIC THROUGH RISER DIAGRAM
E-3	ELECTRICAL DETAILS, ELECTRICAL NOTES
S-1	STRUCTURAL FLOOR, WALL STAND BLOCKING OTC CABLE BOX BLOCKING

REVISIONS

DWG	REV	REVISION DESCRIPTION	REP	DATE

GENERAL NOTES:

1. THIS DRAWING IS NOT FOR PERMITTING AND IS TO BE USED FOR THE PURPOSE OF A LAYOUT PLAN ONLY- NOT FOR CONSTRUCTION. BROWN'S MEDICAL IMAGING- NEW YORK IMAGING SERVICE, INC.-(BMI) OR THEIR DESIGNER ARE NOT RESPONSIBLE OR LIABLE FOR ANY ERRORS OR OMISSIONS.
2. THIS DRAWING IS FOR THE BENEFIT OF PURCHASER'S ARCHITECT OF CHOICE OR PROJECT MANAGER WHO SHALL ENSURE THAT ALL CONSTRUCTION COMPLIES WITH BUILDING CODES AND REGULATIONS THAT HAVE JURISDICTION. THOSE MAKING USE OF OR RELYING ON THIS MATERIAL ASSUMES ALL RISKS AND LIABILITY ARISING FROM SUCH USE OR RELIANCE.
3. ALL CONSTRUCTION AND SITE PREPARATION SHALL BE DONE BY LICENSED CONTRACTORS IN COMPLIANCE WITH ALL GOVERNING CODES.
4. IF CONDITIONS CAUSED BY TRADE DISPUTES OR UNION JURISDICTIONAL DISPUTES PREVENT INSTALLATION OF X-RAY AND RELATED EQUIPMENT BY PERSONNEL OF BMI. CUSTOMER SHALE MAKE ARRANGEMENT TO PERMIT COMPLETION OF INSTALLATION BY OTHERS, SUPERVISED BY BMI. ALL ADDITIONAL COST WILL BE BORNE BY OWNER.
5. THE FLOOR PLAN WAS SCALED FROM PRINTS DRAWN BY OTHERS. ALL CONSTRUCTION PARTICIPANTS SHALL VERIFY AND ADJUST DIMENSIONS. CRITICAL DIMENSIONAL RELATIONSHIPS HAVE BEEN SUPPLIED. IT IS THE RESPONSIBILITY OF ALL CONSTRUCTION PARTICIPANTS TO ADHERE TO THESE DISTANCES. ALL DIMENSIONS ARE FROM FINISHED SURFACES UNLESS OTHERWISE NOTED. ARCHITECT SHALL VERIFY THAT ALL DOOR AND PASSAGEWAY SIZES ARE ADEQUATE FOR TRANSPORTING EQUIPMENT FROM EXTERIOR OF BUILDING INTO RESPECTIVE ROOMS. RECOMMEND COVERING OR REMOVING THRESHOLDS.
6. ALL WORK, EXCEPT INSTALLATION OF IMAGING EQUIPMENT, IS TO BE DONE BY THOSE OTHER THAN BMI.
7. ARCHITECT SHALL FURNISH BMI ONE COPY OF EACH SHEET OF ACCEPTED PLAN FOR RADIOLOGY.
8. SOME CONVENIENCES MAY BE REQUIRED BY CODE OR DESIRED BY CUSTOMER IN EACH RESPECTIVE ROOM (E.G., STORAGE, CABINETS, SINKS, AND COUNTERS, ETC.) PROJECT MANAGER SHALL CONSULT WITH FACILITY REGARDING DESIRED CONVENIENCES.
9. THE EQUIPMENT SHOWN IN THIS DRAWING HAS SPECIFIC REQUIREMENTS WITH REGARD TO SPACE/ DIMENSIONS AND CEILING HEIGHTS.
10. NO ATTENTION HAS BEEN GIVEN TO SPECIFIC BUILDING STRUCTURAL INTEGRITY. A PROFESSIONAL STRUCTURAL ENGINEER SHALL INSPECT FILED CONDITIONS TO ENSURE THAT THE FACILITY SUPPORT STRUCTURE (E.G., WALLS, FLOORS, CEILINGS) CAN PROVIDE ADEQUATE SUPPORT FOR THE IMAGING EQUIPMENT DESCRIBED IN THE 'EQUIPMENT LEGEND'. STRUCTURAL ENGINEERING DRAWINGS TO BE DONE BY OTHERS.
11. BMI MUST APPROVE DEVIATION FROM THESE PLANS IN WRITING PRIOR TO ANY CHANGES.

THIS DRAWING AND ITS SPECIFICATIONS ARE THE PROPERTY OF BROWN'S MEDICAL IMAGING- NEW YORK IMAGING SERVICE, INC.-(BMI) AND IS TO BE USED ONLY FOR PURPOSES AGREED UPON BETWEEN BMI AND CUSTOMER. CONSTRUCTION PER THIS DRAWING ONLY WITH ARCHITECT AND/ OR GENERAL CONTRACTOR APPROVAL. ANY CONSTRUCTION CHANGES OF THIS DRAWING MUST BE APPROVED BY BMI.

BROWN'S MEDICAL IMAGING
8416 LAUREL FAIR CIR STE 100
TAMPA, FL 33610
CHRIS YARGEAU
SERVICE DIRECTOR
(904) 708-7616
ALYSSA BOOTH
SALES ASSOCIATES
484-844-1555 (CELL)

BROWN'S MEDICAL IMAGING

CUSTOMER:	OCCC 1 WASHINGTON CENTER NEWBURGH, NY 12550
DRAWING:	2026-543-F
SCALE:	
REVISION:	
SHEET:	C-1
DATE:	3/20/2026
DRAWN BY:	ANDERSON J.

ARCHITECTURAL NOTES:

1. BROWN'S MEDICAL IMAGING DRAWING'S ARE INTENDED TO PROVIDE THE CONSTRUCTION PARTICIPANTS WITH SPECIFICATION AND CONCEPTUAL INFORMATION ONLY. EVERY EFFORT HAS BEEN MADE TO CONFORM DETAILS TO THE ACTUAL EQUIPMENT EXPECTED TO BE INSTALLED. THE DESIGN TEAM SHALL EXTRAPOLATE PERTINENT INFORMATION FROM THIS LAYOUT AND INCORPORATE INTO A WORKING SET OF CONSTRUCTION DRAWINGS OBSERVING ALL PREVAILING CODES.
2. ARCHITECT AND ENGINEERS SHALL USE EXISTING ELECTRICAL AND STRUCTURAL ITEMS WHEN FEASIBLE
3. THE SUPPLY VOLTAGE MUST REMAIN RELATIVELY STABLE. ELECTRICAL POWER FOR X-RAY EQUIPMENT REQUIRES VERY LARGE CURRENTS FOR EXTREMELY SHORT TIMES. REFER TO ELECTRICAL NOTES. GROUNDING MUST CONFORM TO THE CURRENT CODE REQUIREMENTS.
4. NO ATTENTION HAS BEEN GIVEN TO SPECIFIC PLUMBING OR HVAC CONSIDERATIONS AFFECTED BY THE SCOPE OF THIS WORK. MECHANICAL ENGINEERING DRAWINGS TO BE DONE BY OTHERS.
5. ELECTRICAL AND MECHANICAL DESIGNERS SHALL BE REQUIRED TO REVIEW THESE DRAWINGS TO HELP THEM GAIN AND UNDERSTANDING OF THE CONCEPT OF THIS WORK AND TO HELP MINIMIZE CONFLICTING CONSTRUCTION EFFORTS. ELECTRICAL ENGINEERING DRAWINGS TO BE DONE BY OTHER.
6. NO ATTENTION HAS BEEN GIVEN TO SPECIFIC SEISMIC ANCHORAGE CONSIDERATIONS AFFECTED BY THE SCOPE OF THIS WORK. ALL EXPENSES ASSOCIATED WITH SEISMIC TESTING AND COMPLIANCE SHALL BE THE RESPONSIBILITY OF THE FACILITY (END USER) OR THEIR RESPECTIVE CONTRACTORS OF CHOICE. IT IS STRONGLY RECOMMENDED THAT THE CUSTOMER CONSULTS WITH A PROFESSIONAL STRUCTURAL ENGINEERING FAMILIAR WITH ALL PREVAILING SEISMIC REQUIREMENTS. SEISMIC ENGINEERING DRAWINGS TO BE DONE BY OTHERS.
7. PURCHASER, AT HIS EXPENSE, SHALL PROVIDE COMPLETE INSTALLATION SITE PREPARATION WITH NECESSARY ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING AND RADIATION SHIELDING TO FACILITATE SATISFACTORY INSTALLATION OF X-RAY SYSTEM.
8. RADIATION SHIELDING REQUIREMENTS FOR EACH X-RAY ROOM SHALL BE DETERMINED BY THE PURCHASER, AT HIS EXPENSE. GENERAL CONTRACTOR SHALL FURNISH AND INSTALL SPECIFIED RADIATION SHIELDING MATERIAL.
9. SITE PREPARATION MUST BE COMPLETED BEFORE X-RAY EQUIPMENT WILL BE INSTALLED, INCLUDING FLOORS, WALLS, CEILING, LIGHTING, PERMANENT POWER, AIR CONDITIONING, PLUMBING & SECURITY.
10. PAINT ALL EXPOSED ELECTRICAL COMPONENTS AND STRUCTURES, TO MATCH.
11. ANY REVISION OF OR DEVIATION FROM THE INSTALLATION DETAILS ON THIS PLAN MUST HAVE PRIOR APPROVAL BY BMI.

GENERAL NOTES:

AT THEIR EXPENSE, THE CUSTOMER AND/OR THE CONTRACTOR WILL BE EXPECTED TO PROVIDE THE FOLLOWING (IF REQUIRED) PRIOR TO X-RAY EQUIPMENT DELIVERY AND INSTALLATION

1. ANY ROOM REMODELING AND CONSTRUCTION-FLOOR CEILING AND WALLS MUST BE FINISHED BEFORE EQUIPMENT INSTALLATION CAN BEGIN.
2. INSTALLATION OF PROPER SPECIFIED POWER.
3. INSTALLATION OF LOAD CENTERS, BRANCH PANELS, CIRCUIT BREAKERS, JUNCTION BOXES, CONDUIT AND CABLE TRAYS AS SPECIFIED.
4. INTERCONNECTING WIRE AND CABLE AS SPECIFIED.
5. INSTALLATION OF WALL AND CEILING SUPPORT AND SUSPENSION FRAME WORK AS SPECIFIED.
6. FOR THE MOST PART CONVENIENCE OUTLETS ARE TO BE SPECIFIED BY OTHERS. OUTLETS REQUIRED BY EQUIPMENT WILL BE SPECIFIED. FOR EASE IN EQUIPMENT SERVICE, A MINIMUM NUMBER OF OUTLETS WILL BE DEPICTED.
7. ANY CEILING MOUNTED LIGHT FIXTURES, DIFFUSERS, VENTS, SMOKE/FIRE DETECTORS, SPRINKLER HEADS, HALON NOZZLES, ETC. SHALL NOT EXTEND BELOW THE FINISHED CEILING.
8. INSTALLATION OF OPTIONAL WARNING LIGHT AND/OR DOOR INTERLOCK SWITCH AT ENTRANCE DOORS OF X-RAY ROOM TO BE COORDINATED WITH FACILITY, EQUIPMENT INSTALLERS, AND DESIGN TEAM.
9. RADIATION PROTECTION REQUIREMENTS:
   THESE MUST BE SPECIFIED BY A QUALIFIED RADIATION PHYSICIST.
10. SHIELDING TESTING (LEAD OR EQUIVALENT):
    AFTER X-RAY EQUIPMENT HAS BEEN INSTALLED AND PLACED IN OPERATING CONDITION, THE SHIELDING SHALL BE TESTED, AT THE OWNER'S EXPENSE, BY A CERTIFIED HEALTH PHYSICIST.
11. THE DECISION OF ACCEPTABILITY BY A HEALTH PHYSICIST SHALL BE THE RESPONSIBILITY OR THE CONTRACTOR. THEREFORE, THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF REPLACEMENT OF ALL DEFECTIVE WORK (INCLUDING WORK SUBSEQUENTLY AFFECTED) AND ADDITIONAL TESTS REQUIRED TO MEET THE SATISFACTION OF THE HEALTH PHYSICIST.
12. LIABILITY:
    THE EQUIPMENT REPRESENTATIVES OR THEIR PLANNER ASSUME NO RESPONSIBILITY FOR ANY CONSTRUCTION COSTS, WHETHER OR NOT RELATED TO THE INSTALLATION OF X-RAY EQUIPMENT OR SITE PLANNING DOCUMENTS. NO WORK MAY BE PERFORMED OR MATERIALS FURNISHED AT THEIR EXPENSE UNLESS AUTHORIZED BY A SIGNED, FORMAL PURCHASE ORDER. ADDITIONALLY , A SITE INSPECTION SHALL BE CONDUCTED BY THE EQUIPMENT REPRESENTATIVES TO CONFIRM THE SITE'S READINESS PRIOR TO X-RAY EQUIPMENT DELIVERY. THIS INSPECTION SHALL BE PREFORMED WHEN NOTIFIED OF THE CONSTRUCTION'S COMPLETION.

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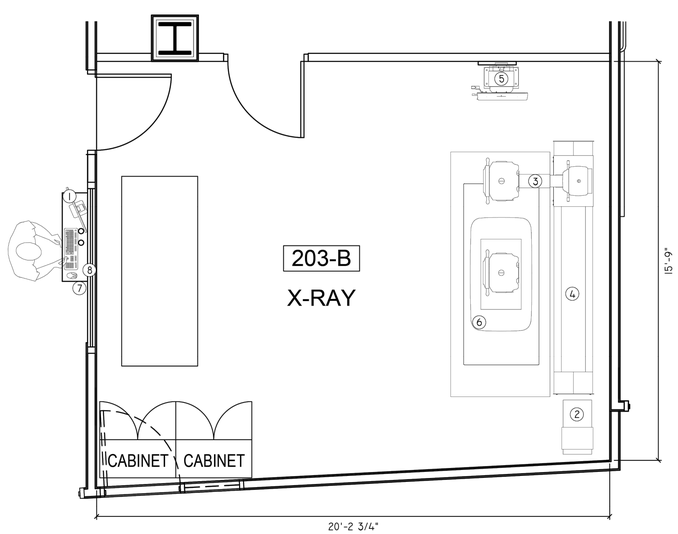
8416 LAUREL FAIR CIR STE 100
TAMPA, FL 33610
CHRIS YARGEAU
SERVICE DIRECTOR
(904) 708-7616
ALYSSA BOOTH
SALES ASSOCIATES
484-844-1555 (CELL)

BROWN'S MEDICAL IMAGING

CUSTOMER: OCCC, 1 WASHINGTON CENTER, NEWBURGH, NY 12550
DRAWING: 2026-543-F
SCALE:
REVISION:
SHEET: A-1
DATE: 3/20/2026
DRAWN BY: ANDERSON J.

EQUIPMENT PLAN



EQUIPMENT LEGEND

ITEM	SUPPLIED BY CUSTOMER/ INSTALLED BY PMI	BTU/HR	WT LB	D IN	L IN	H IN
1 CNTRL	X-RAY CONTROL	—	TYP	—	—	—
2 GEN	CARESTREAM COMPASS GENERATOR	1000	174	13.5	25.6	24.1
3 TS	TUBE STAND W/ 10' TRACK	—	—	120	53	90.3
4 RAIL	QUANTUM COMPASS 10' FLOOR RAIL	—	—	—	—	—
5 WSTAND	COMPASS WALL-STAND	—	459	—	—	89
6 TBL	COMPASS TABLE	400	500	86	35.8	32.5
	SUPPLIED/ INSTALLED BY CUSTOMER OR CONTRACTOR					
7	COUNTER (EXISTING)	—	—	—	—	—
8 LED	WINDOW-GLASS, LEAD LINED (EXISTING)	—	—	—	—	—

MINIMUM CEILING HEIGHT: 8'-3"
THIS CEILING HEIGHT RANGE PROVIDES FULL FUNCTIONALITY OF THE X-RAY SYSTEM. ANY DEVIATION MUST BE DISCUSSED WITH (PMI-NYIS) SITE PLANNER.

NOTES:

CUSTOMER:	OCCC 1 WASHINGTON CENTER NEWBURGH, NY 12550	DRAWING: 2026-543-F	SHEET: A-2
		DATE: 3/20/2026	
DRAWN BY: ANDERSON J.	REVISION:	SCALE: N.T.S.	

BROWN'S MEDICAL IMAGING

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

⅛" ¼" ½" 0 1" 2"
REFERENCE SCALE

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CERTIFICATE OF AUTHORIZATION #: 0017795

FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1 ISSUED 1995; EXP. 8/25

ISSUED 6/17/26 FOR BID

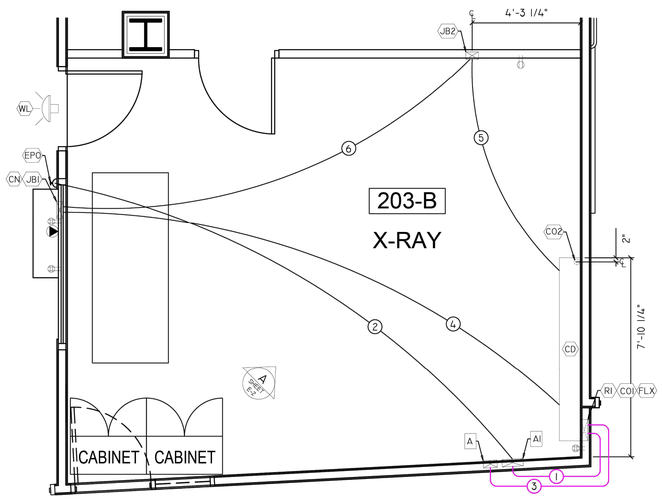
PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
BMI X-RAY EQUIPMENT: FLOOR MOUNTED EQUIPMENT DETAILS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	LC		EDF	BMI-001
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 8 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(8-12) BMI-001 -BMI-005.dwg (Layout: BMI-001)
Date: Wed, Jun 17, 2026 - 8:12 AM (Name: wpb)

ELECTRICAL PLAN



ELECTRICAL LEGEND
(ALL WORK SUPPLIED AND INSTALLED BY CONTRACTOR)

SYM.	ITEMS NOT SUPPLIED/INSTALLED BY BMI SUPPLIED/INSTALLED BY CUSTOMER/CONTRACTOR
AI	DEDICATED CIRCUIT BREAKER FLUSH MT. (SEE SHEET E-3 FOR SPECS.) INCLUDE 8' PIGTAIL AT "CO1" - VIA "RI". LOCATE PER LOCAL CODES/ OTHERS. (PANEL MUST MEET ALL FEDERAL, STATE AND LOCAL CODES)
A	DEDICATED CIRCUIT BREAKER PANEL WITH (2) 120VAC 15 AMP, 1 PHASE, WIRES TO "CO1"- VIA "RI". LOCATE PER LOCAL CODES/OTHERS. (PANEL MUST MEET ALL FEDERAL, STATE AND LOCAL CODES)
CD	CEILING DUCT, 10" X 3.5", SURFACE MOUNTED ABOVE FINISHED CEILING, WITH REMOVABLE COVERS FACING UP, (2) DIVIDER THROUGHOUT. DUCT MUST HAVE ACCESS OPENING TO RISER "RI".CONTRACTOR MUST SUPPLY CONDUIT FITTINGS FOR CONDUIT CONNECTS.
RI	RISER DUCT, 10" X 3.5", FROM FINISHED FLOOR TO "CD". FLUSH MOUNT WITH FINISHED WALL, RISER MUST HAVE ACCESS OPENING TO CEILING DUCT "CD". DUCT MUST HAVE REMOVABLE COVERS AND CONTRACTOR MUST SUPPLY CONDUIT FITTINGS FOR CONDUIT CONNECTIONS. MIN. 2 DIVIDERS THROUGH-OUT.
JB1	8" x 8" x 4" JB- BOTTOM OF BOX 12" A.F.F. FLUSHED MTD. PROVIDE (1) - 1 1/2" CHASE NIPPLE IN REMOVABLE COVER PLATE.LOCATED PER LOCAL CODE/ OTHERS. (LEAVE PULL LINE)
JB2	6" X 6" X 4" JB- BOTTOM OF BOX 90" A.F.F. FLUSHED MTD. PROVIDE (1) - 1 1/2" CHASE NIPPLE IN REMOVABLE COVER PLATE. LOCATED PER LOCAL CODE/ OTHERS. (LEAVE PULL LINE)
JB3	6" X 6" X 4" JB- TOP OF BOX FLUSH MOUNTED WITH FINISHED FLOOR. PROVIDE (1) - 1 1/2" CHASE NIPPLE IN REMOVABLE COVER PLATE. LOCATED PER LOCAL CODE/ OTHERS. (LEAVE PULL LINE)
CO1	CUT OUT- ACCESS ON FACE OF RISER "RI". FOR GENERATOR POWER AND EQUIPMENT CABLES. FIELD VERIFY SIZE OF CUT-OUT AND LOCATION PRIOR TO EQUIPMENT INSTALLATION.
CO2	CUT OUT- ACCESS ON BOTTOM OF CEILING DUCT "CD" FOR OVERHEAD TUBE CABLES. FIELD VERIFY SIZE OF CUT-OUT AND LOCATION PRIOR TO EQUIPMENT INSTALLATION.
WL	WARNING LIGHT- "X-RAY IN USE" LIGHT PER CODE, CUSTOMER TO PROVIDE FIXTURE AND POWER REQ.
EPO	EMERGENCY POWER OFF- SWITCH TO CUSTOMER SHUNT BREAKER IN MAIN DISCONNECT (AI), EXACT LOCATION PER LOCAL CODE OR BY CUSTOMER. (CONDUIT SIZE AS NEEDED)
FLX	CUSTOMER PROVIDED 1.25" Ø SEAL-TIGHT. INCLUDE FITTINGS FOR MAIN POWER TO GENERATOR, WIP LENGTH PER LOCAL CODE, INSTALLED BY CUSTOMER/ELECTRICIAN
	120 VAC DUPLEX OUTLET, EXACT LOCATION PER CUSTOMER
	120 VAC QUAD OUTLET, EXACT LOCATION PER CUSTOMER
▼	NETWORK DROP/RECEPTACLE- MINIMUM 2 CAT 5 CABLES TO NETWORK CLOSET/ CABINET.

CONDUIT LEGEND
(ALL WORK SUPPLIED AND INSTALLED BY CONTRACTOR)

INDEX	FROM	TO	QUANTITY/SIZE	ROUTE	DESCRIPTION	MAX COND LENGTH
1	AI	RI	PER LOCAL CODE	OH	PWR / GEN	AS NEEDED
2	AI	EPO	PER LOCAL CODE	OH	EPO	AS NEEDED
3	A	RI	PER LOCAL CODE	OH	PWR / GEN	AS NEEDED
4	CD	JB1	(1) 2" CONDUIT	OH	GEN / CONTROL	40 FEET
5	CD	JB2	(1) 2.5" CONDUIT	OH	GEN / CHEST	15 FEET
6	JB1	JB2	(1) 2" CONDUIT	OH	CONTROL /CHEST	40 FEET

UF - UNDER FLOOR IW - IN WALL OH- OVER HEAD

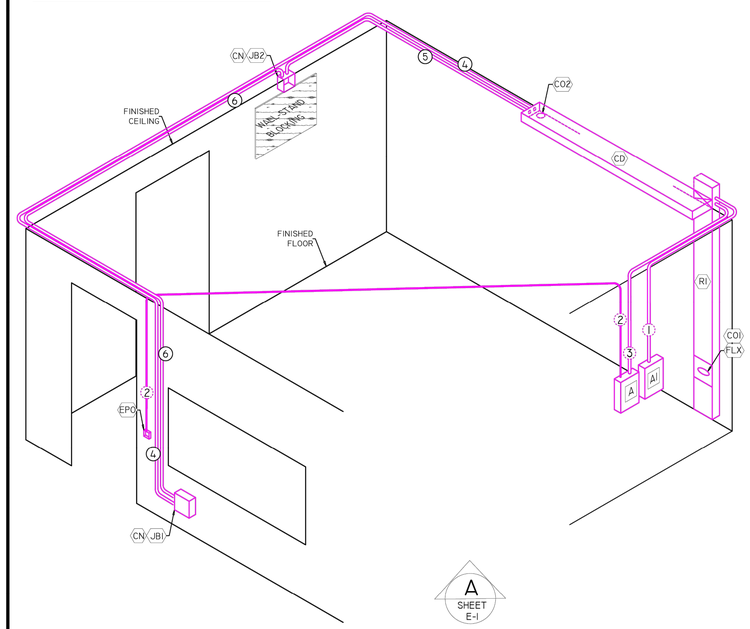
PRIOR TO INSTALLING DRYWALL, THE GC/EC MUST ARRANGE A SITE VISIT WITH BMI TO CONFIRM THE PLACEMENT AND INSTALLATION OF ELECTRICAL ITEMS. FOLLOWING COMPLETION OF CONSTRUCTION, A SECOND SITE VISIT IS REQUIRED TO CONFIRM SITE READINESS FOR INSTALLATION.

CUSTOMER:	DRAWING:	SHEET:
OCCC 1 WASHINGTON CENTER NEWBURGH, NY 12550	2026-543-F DATE: 3/20/2026	E-1
DRAWN BY: ANDERSON J.	REVISION:	SCALE: N.T.S.

BROWN'S MEDICAL IMAGING

NOTE:ALL ELECTRICAL DUCTS AND CONNECTIONS MUST CONFORM TO THE N.E.C. CODES. IN ADDITION TO STATE AND LOCAL REGULATIONS FOR THE COUNTRY OR LOCALITY IN WHICH THE EQUIPMENT IS INSTALLED. SITE IS RESPONSIBLE TO DETERMINE ELECTRICAL DESIGN INCLUDING NUMBER OF DIVIDERS IN CABLE TROUGH PER CODE

ISOMETRIC PLAN



ELECTRICAL LEGEND
(ALL WORK SUPPLIED AND INSTALLED BY CONTRACTOR)

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JB2	6" X 6" X 4" JB- BOTTOM OF BOX 90" A.F.F. FLUSHED MTD. PROVIDE (1) - 1 1/2" CHASE NIPPLE IN REMOVABLE COVER PLATE. LOCATED PER LOCAL CODE/ OTHERS. (LEAVE PULL LINE)
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FLX	CUSTOMER PROVIDED 1.25" Ø SEAL-TIGHT. INCLUDE FITTINGS FOR MAIN POWER TO GENERATOR, WIP LENGTH PER LOCAL CODE, INSTALLED BY CUSTOMER/ELECTRICIAN
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▼	NETWORK DROP/RECEPTACLE- MINIMUM 2 CAT 5 CABLES TO NETWORK CLOSET/ CABINET.

CONDUIT LEGEND
(ALL WORK SUPPLIED AND INSTALLED BY CONTRACTOR)

INDEX	FROM	TO	QUANTITY/SIZE	ROUTE	DESCRIPTION	MAX COND LENGTH
1	AI	RI	PER LOCAL CODE	OH	PWR / GEN	AS NEEDED
2	AI	EPO	PER LOCAL CODE	OH	EPO	AS NEEDED
3	A	RI	PER LOCAL CODE	OH	PWR / GEN	AS NEEDED
4	CD	JB1	(1) 2" CONDUIT	OH	GEN / CONTROL	40 FEET
5	CD	JB2	(1) 2.5" CONDUIT	OH	GEN / CHEST	15 FEET
6	JB1	JB2	(1) 2" CONDUIT	OH	CONTROL /CHEST	40 FEET

UF - UNDER FLOOR IW - IN WALL OH- OVER HEAD

PRIOR TO INSTALLING DRYWALL, THE GC/EC MUST ARRANGE A SITE VISIT WITH BMI TO CONFIRM THE PLACEMENT AND INSTALLATION OF ELECTRICAL ITEMS. FOLLOWING COMPLETION OF CONSTRUCTION, A SECOND SITE VISIT IS REQUIRED TO CONFIRM SITE READINESS FOR INSTALLATION.

NOTES:
CONTACT EOR FOR ANY DISCREPANCIES BETWEEN BMI DRAWINGS AND ELECTRICAL DRAWINGS.

CUSTOMER:	DRAWING:	SHEET:
OCCC 1 WASHINGTON CENTER NEWBURGH, NY 12550	2026-543-F DATE: 3/20/2026	E-2
DRAWN BY: ANDERSON J.	REVISION:	SCALE: NO TO SCALE

BROWN'S MEDICAL IMAGING

NOTE:ALL ELECTRICAL DUCTS AND CONNECTIONS MUST CONFORM TO THE N.E.C. CODES. IN ADDITION TO STATE AND LOCAL REGULATIONS FOR THE COUNTRY OR LOCALITY IN WHICH THE EQUIPMENT IS INSTALLED. SITE IS RESPONSIBLE TO DETERMINE ELECTRICAL DESIGN INCLUDING NUMBER OF DIVIDERS IN CABLE TROUGH PER CODE

ELECTRICAL POWER REQUIREMENTS

MAIN POWER REQUIREMENTS

THE FOLLOWING TABLE DEFINES THE INPUT POWER REQUIREMENTS FOR THE:
200VAC SINGLE PHASE, 50/60 HZ SERIES GENERATOR

ELECTRICAL POWER REQUIREMENTS

SYM	GENERATOR MODEL NO.	NOMINAL LINE VOLTAGE (VAC)	RECOMMENDED WIRE SIZE FROM DISTRIBUTION TRANSFORMER TO DISCONNECT (AWG)				DISCONNECT TO GENERATOR 15' (5M) MAX. (AWG)	SERVICE RATING (AMPS)	RECOMMENDED DISTRIBUTION TRANSFORMER CAPACITY (KVA)	MOMENTARY LINE CURRENT (AMPS)
			50 FT (15M)	100 FT (15M)	150 FT (15M)	200 FT (15M)				
GEN	CARESTREAM 40KW	200	WIRE SIZE CALCULATED PER CODE BY CUSTOMER/ CONTRACTOR				#1	150	55	300

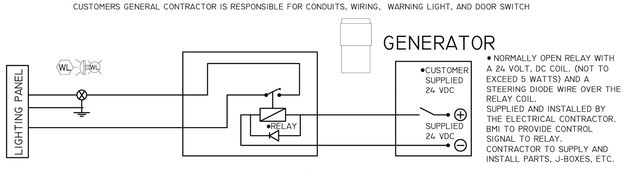
NOTES: ALL INSTALLATIONS MUST MEET THE REQUIREMENTS OF LOCAL ELECTRICAL CODES

DESCRIPTION: SUPPLIED AND INSTALLED BY CUSTOMER CONTRACTOR

1. ALL WIRING AND GROUNDING MUST BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE OR LOCAL ELECTRICAL CODES
2. LINE REGULATION: 5% AT FULL LOAD

DOOR INTERLOCK/ X-RAY WARNING LIGHT

CUSTOMERS GENERAL CONTRACTOR IS RESPONSIBLE FOR CONDUITS, WIRING, WARNING LIGHT, AND DOOR SWITCH



WARNING LIGHT / DOOR SWITCH NOTES:

(WL) PROVIDE AND INSTALL FIXTURE, RELAY AND ENCLOSURE FOR CEILING MOUNT OR WALL MOUNT OUTSIDE X-RAY ROOM DOOR. AN "X-RAY IN USE" LIGHT FIXTURE WIRED PER CODE. PLEASE PROVIDE WIRES (PER DIAGRAM) IN SERIES TO GENERATOR- PER CODE

(DS) WHEN DOOR CLOSES, SWITCH CLOSE. PLEASE PROVIDE (2) #14 WIRES- IN SERIES TO GENERATOR- PER CODE

BROWN'S MEDICAL IMAGING

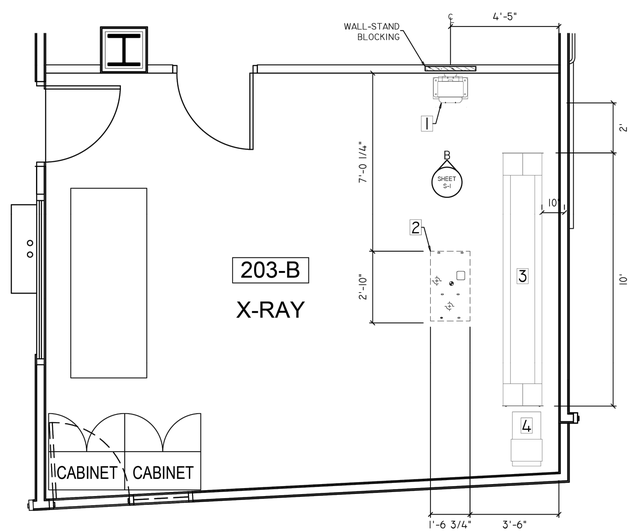
ELECTRICAL NOTES

1. ELECTRICAL CONTRACTOR SHALL UNDER CONTRACT WITH OWNER, SUPPLY AND INSTALL ALL MAIN SWITCHES, LOAD CENTERS, PANELS, JUNCTION BOXES, CONDUIT, WIRE, TROUGHS, WIRE AND NECESSARY WIRING DEVICES AS SPECIFIED BY BMI. AND IS IN COMPLIANCE WITH ALL COVERING CODES AND REGULATIONS.
2. ELECTRICAL CONTRACTOR SHALL FURNISH SEAL TIGHT FLEXIBLE CONDUIT TO CONNECT JUNCTION BOXES TO X-RAY SYSTEM COMPONENTS AS REQUIRED BY LOCAL CODES.
3. ALL LOAD CENTERS, PANEL BOARDS, SWITCHES AND JUNCTION BOXES SHALL BE FLUSH MOUNTED UNLESS SPECIFIED OTHERWISE PROVIDE FLUSH BOX COVERS AND SPECIFIED CHASE NIPPLES. ALL REQUIRED KNOCK-OUT AND/ OR DUCT ACCESS WILL BE LOCATED BY BMI INSTALLING ENGINEER.
4. ALL CONDUIT RUNS TO SHORTEST POSSIBLE. MAXIMUM OF THREE (3) LONG RADIUS "L "S" PER RUN.
5. POWER LINE VOLTAGE AND FULL LOAD REGULATION IS CRITICAL AS EFFECTED BY RESERVE KVA CAPACITY OF DISTRIBUTION TRANSFORMER, FEEDER SIZE AND LENGTH FROM DISTRIBUTION TRANSFORMER TO X-RAY GENERATOR.
6. ALL WIRE SHALL BE AWG STRANDED COPPER, THHN INSULATED COLOR CODED OR NUMBERED. IDENTIFY DESTINATION OF EACH CONDUIT IN EACH BOX.
7. ALL SPECIFIED WIRE SHALL BE SUPPLIED AS SPECIFIED AND PULLED BY ELECTRICAL CONTRACTOR. PROVIDE 5' TAILS ON ALL WIRE EXCEPT AS REQUIRED BY NOTE 3 OR 4. PROVIDE INSULATED BUSHINGS ON ALL CONDUIT PROVIDE PULL WIRE IN ALL EMPTY CONDUITS.
8. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING INTEGRITY OF RADIATION SHIELDING EFFECTED BY HIS WORK.
9. PROVIDE AND INDEPENDENT DRIVEN OR STRUCTURAL GROUND OF STRANDED COPPER EQUAL IN SIZE TO MAIN FEEDERS AND BONDED TO ELECTRICAL SYSTEM GROUNDING ELECTRODE.
10. ELECTRICAL CONTRACTOR SHALL BRING ALL EXISTING WIRING, CONDUIT, SWITCH JUNCTION BOXES UP TO CURRENT STANDARD. REMOVE AND REPLACE AS SPECIFIED ALL EXISTING WIRE. REPLACE ALL BOX COVER PLATES.
11. X-RAY EQUIPMENT INSTALLATION OR USE SHALL NOT BE EFFECTED BY FIXTURE SPRINKLER HEADS OR OTHER PROJECTION FORM CEILING.
12. LIGHTING RECOMMENDATIONS:
    X-RAY PROCEDURE ROOM- PROVIDE ILLUMINATION RANGE FORM 50 LUX TO 750 LUX BY DIMMER CONTROLLED LIGHTING OR A CONTROL BOOTH / TECH WORK AREA- PROVIDE ILLUMINATION RANGE FROM 50 LUX TO 750 LUX BY DIMMER CONTROLLED LIGHTING OR A COMBINATION OF FIXED AND/OR DIMMER CONTROLLED LIGHTING. MOTION SENSOR FOR CONTROLLING LIGHTING- AS A MINIMUM-MUST HAVE AN MANUAL OVERRIDE SO THAT LIGHTING WILL REMAIN ON WHEN NO MOTION IS SENSED.

NOTE:ALL ELECTRICAL DUCTS AND CONNECTIONS MUST CONFORM TO THE N.E.C. CODES. IN ADDITION TO STATE AND LOCAL REGULATIONS FOR THE COUNTRY OR LOCALITY IN WHICH THE EQUIPMENT IS INSTALLED. SITE IS RESPONSIBLE TO DETERMINE ELECTRICAL DESIGN INCLUDING NUMBER OF DIVIDERS IN CABLE TROUGH PER CODE

CUSTOMER:	DRAWING:	SHEET:
OCCC 1 WASHINGTON CENTER NEWBURGH, NY 12550	2026-543-F DATE: 3/20/2026	E-3
DRAWN BY: ANDERSON J.	REVISION:	SCALE: N.T.S.

STRUCTURAL PLAN



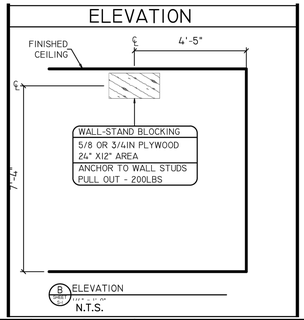
STRUCTURAL LEGEND

ITEM	COMPONENT DESCRIPTION: SUPPLIED AND INSTALLED BY BMI
1	WALL STAND BASE PLATE
2	TABLE BASE PLATE
3	TUBE STAND FLOOR TRACK
4	GENERATOR

CRITICAL TO FUNCTION FOR ITEMS 2 & 3
FLOOR UNDER TABLE BASE PLATE AND TUBE STAND FLOOR TRACK TO BE FLAT AND LEVEL WITH A TOTAL TOLERANCE OF 1/8"

CUSTOMER:	DRAWING:	SHEET:
OCCC 1 WASHINGTON CENTER NEWBURGH, NY 12550	2026-543-F DATE: 3/20/2026	S-1
DRAWN BY: ANDERSON J.	REVISION:	SCALE: N.T.S.

ELEVATION



REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

1/8" 1/4" 1/2" 0 1" 2"
REFERENCE SCALE

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CERTIFICATE OF AUTHORIZATION #: 0017795

FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1 ISSUED 1995, EXP. 8/25

ISSUED 6 / 17 / 26 FOR BID

PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
BMI X-RAY EQUIPMENT: FLOOR MOUNTED EQUIPMENT DETAILS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	LC		EDF	BMI-002
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 9 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(6-12) BMI-001 -BMI-005.dwg (Layout: BMI-002)
Date: Wed, Jun 17, 2026 - 8:12 AM (Name: wpb)

SHEET LEGEND

SHEET NUMBER	SHEET DESCRIPTION
C-1	SHEET LEGEND, DENOTED REVISIONS, GENERAL NOTES
A-1	ARCHITECTURAL NOTES, GENERAL NOTES
A-2	EQUIPMENT PLAN, EQUIPMENT LEGEND
E-1	ELECTRICAL PLAN, ELECTRICAL LEGEND
E-2	ISOMETRIC THROUGH RISER DIAGRAM
E-3	ELECTRICAL DETAILS, ELECTRICAL NOTES
S-1	UNISTRUT PLAN
S-2	CEILING PLAN
S-3	STRUCTURAL FLOOR, WALL STAND BLOCKING OTC CABLE BOX BLOCKING

REVISIONS

DWG	REV	REVISION DESCRIPTION	REP	DATE

GENERAL NOTES:

1. THIS DRAWING IS NOT FOR PERMITTING AND IS TO BE USED FOR THE PURPOSE OF A LAYOUT PLAN ONLY- NOT FOR CONSTRUCTION. BROWN'S MEDICAL IMAGING- NEW YORK IMAGING SERVICE, INC.-(BMI) OR THEIR DESIGNER ARE NOT RESPONSIBLE OR LIABLE FOR ANY ERRORS OR OMISSIONS.
2. THIS DRAWING IS FOR THE BENEFIT OF PURCHASER'S ARCHITECT OF CHOICE OR PROJECT MANAGER WHO SHALL ENSURE THAT ALL CONSTRUCTION COMPLIES WITH BUILDING CODES AND REGULATIONS THAT HAVE JURISDICTION. THOSE MAKING USE OF OR RELYING ON THIS MATERIAL ASSUMES ALL RISKS AND LIABILITY ARISING FROM SUCH USE OR RELIANCE.
3. ALL CONSTRUCTION AND SITE PREPARATION SHALL BE DONE BY LICENSED CONTRACTORS IN COMPLIANCE WITH ALL GOVERNING CODES.
4. IF CONDITIONS CAUSED BY TRADE DISPUTES OR UNION JURISDICTIONAL DISPUTES PREVENT INSTALLATION OF X-RAY AND RELATED EQUIPMENT BY PERSONNEL OF BMI. CUSTOMER SHALE MAKE ARRANGEMENT TO PERMIT COMPLETION OF INSTALLATION BY OTHERS, SUPERVISED BY BMI. ALL ADDITIONAL COST WILL BE BORNE BY OWNER.
5. THE FLOOR PLAN WAS SCALED FROM PRINTS DRAWN BY OTHERS. ALL CONSTRUCTION PARTICIPANTS SHALL VERIFY AND ADJUST DIMENSIONS. CRITICAL DIMENSIONAL RELATIONSHIPS HAVE BEEN SUPPLIED. IT IS THE RESPONSIBILITY OF ALL CONSTRUCTION PARTICIPANTS TO ADHERE TO THESE DISTANCES. ALL DIMENSIONS ARE FROM FINISHED SURFACES UNLESS OTHERWISE NOTED. ARCHITECT SHALL VERIFY THAT ALL DOOR AND PASSAGEWAY SIZES ARE ADEQUATE FOR TRANSPORTING EQUIPMENT FROM EXTERIOR OF BUILDING INTO RESPECTIVE ROOMS. RECOMMEND COVERING OR REMOVING THRESHOLDS.
6. ALL WORK, EXCEPT INSTALLATION OF IMAGING EQUIPMENT, IS TO BE DONE BY THOSE OTHER THAN BMI.
7. ARCHITECT SHALL FURNISH BMI ONE COPY OF EACH SHEET OF ACCEPTED PLAN FOR RADIOLOGY.
8. SOME CONVENIENCES MAY BE REQUIRED BY CODE OR DESIRED BY CUSTOMER IN EACH RESPECTIVE ROOM (E.G., STORAGE, CABINETS, SINKS, AND COUNTERS, ETC.) PROJECT MANAGER SHALL CONSULT WITH FACILITY REGARDING DESIRED CONVENIENCES.
9. THE EQUIPMENT SHOWN IN THIS DRAWING HAS SPECIFIC REQUIREMENTS WITH REGARD TO SPACE/ DIMENSIONS AND CEILING HEIGHTS.
10. NO ATTENTION HAS BEEN GIVEN TO SPECIFIC BUILDING STRUCTURAL INTEGRITY. A PROFESSIONAL STRUCTURAL ENGINEER SHALL INSPECT FILED CONDITIONS TO ENSURE THAT THE FACILITY SUPPORT STRUCTURE (E.G., WALLS, FLOORS, CEILINGS) CAN PROVIDE ADEQUATE SUPPORT FOR THE IMAGING EQUIPMENT DESCRIBED IN THE 'EQUIPMENT LEGEND'. STRUCTURAL ENGINEERING DRAWINGS TO BE DONE BY OTHERS.
11. BMI MUST APPROVE DEVIATION FROM THESE PLANS IN WRITING PRIOR TO ANY CHANGES.

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BROWN'S MEDICAL IMAGING
8416 LAUREL FAIR CIR STE 100
TAMPA, FL 33610
CHRIS YARGEAU
SERVICE DIRECTOR
(904) 708-7616
ALYSSA BOOTH
SALES ASSOCIATES
484-844-1555 (CELL)

BROWN'S MEDICAL IMAGING

CUSTOMER:
OCCC
1 WASHINGTON CENTER
NEWBURGH, NY 12550

DRAWING: 2026-543-F	SCALE: N.T.S.
REVISION:	SHEET: C-1
DATE: 3/20/2026	
DRAWN BY: ANDERSON J.	

ARCHITECTURAL NOTES:

1. BROWN'S MEDICAL IMAGING DRAWING'S ARE INTENDED TO PROVIDE THE CONSTRUCTION PARTICIPANTS WITH SPECIFICATION AND CONCEPTUAL INFORMATION ONLY. EVERY EFFORT HAS BEEN MADE TO CONFORM DETAILS TO THE ACTUAL EQUIPMENT EXPECTED TO BE INSTALLED. THE DESIGN TEAM SHALL EXTRAPOLATE PERTINENT INFORMATION FROM THIS LAYOUT AND INCORPORATE INTO A WORKING SET OF CONSTRUCTION DRAWINGS OBSERVING ALL PREVAILING CODES.
2. ARCHITECT AND ENGINEERS SHALL USE EXISTING ELECTRICAL AND STRUCTURAL ITEMS WHEN FEASIBLE
3. THE SUPPLY VOLTAGE MUST REMAIN RELATIVELY STABLE. ELECTRICAL POWER FOR X-RAY EQUIPMENT REQUIRES VERY LARGE CURRENTS FOR EXTREMELY SHORT TIMES. REFER TO ELECTRICAL NOTES. GROUNDING MUST CONFORM TO THE CURRENT CODE REQUIREMENTS.
4. NO ATTENTION HAS BEEN GIVEN TO SPECIFIC PLUMBING OR HVAC CONSIDERATIONS AFFECTED BY THE SCOPE OF THIS WORK. MECHANICAL ENGINEERING DRAWINGS TO BE DONE BY OTHERS.
5. ELECTRICAL AND MECHANICAL DESIGNERS SHALL BE REQUIRED TO REVIEW THESE DRAWINGS TO HELP THEM GAIN AND UNDERSTANDING OF THE CONCEPT OF THIS WORK AND TO HELP MINIMIZE CONFLICTING CONSTRUCTION EFFORTS. ELECTRICAL ENGINEERING DRAWINGS TO BE DONE BY OTHER.
6. NO ATTENTION HAS BEEN GIVEN TO SPECIFIC SEISMIC ANCHORAGE CONSIDERATIONS AFFECTED BY THE SCOPE OF THIS WORK. ALL EXPENSES ASSOCIATED WITH SEISMIC TESTING AND COMPLIANCE SHALL BE THE RESPONSIBILITY OF THE FACILITY (END USER) OR THEIR RESPECTIVE CONTRACTORS OF CHOICE. IT IS STRONGLY RECOMMENDED THAT THE CUSTOMER CONSULTS WITH A PROFESSIONAL STRUCTURAL ENGINEERING FAMILIAR WITH ALL PREVAILING SEISMIC REQUIREMENTS. SEISMIC ENGINEERING DRAWINGS TO BE DONE BY OTHERS.
7. PURCHASER, AT HIS EXPENSE, SHALL PROVIDE COMPLETE INSTALLATION SITE PREPARATION WITH NECESSARY ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING AND RADIATION SHIELDING TO FACILITATE SATISFACTORY INSTALLATION OF X-RAY SYSTEM.
8. RADIATION SHIELDING REQUIREMENTS FOR EACH X-RAY ROOM SHALL BE DETERMINED BY THE PURCHASER, AT HIS EXPENSE. GENERAL CONTRACTOR SHALL FURNISH AND INSTALL SPECIFIED RADIATION SHIELDING MATERIAL.
9. SITE PREPARATION MUST BE COMPLETED BEFORE X-RAY EQUIPMENT WILL BE INSTALLED, INCLUDING FLOORS, WALLS, CEILING, LIGHTING, PERMANENT POWER, AIR CONDITIONING, PLUMBING & SECURITY.
10. PAINT ALL EXPOSED ELECTRICAL COMPONENTS AND STRUCTURES, TO MATCH.
11. ANY REVISION OF OR DEVIATION FROM THE INSTALLATION DETAILS ON THIS PLAN MUST HAVE PRIOR APPROVAL BY BMI.

GENERAL NOTES:

AT THEIR EXPENSE, THE CUSTOMER AND/OR THE CONTRACTOR WILL BE EXPECTED TO PROVIDE THE FOLLOWING (IF REQUIRED) PRIOR TO X-RAY EQUIPMENT DELIVERY AND INSTALLATION

1. ANY ROOM REMODELING AND CONSTRUCTION-FLOOR CEILING AND WALLS MUST BE FINISHED BEFORE EQUIPMENT INSTALLATION CAN BEGIN.
2. INSTALLATION OF PROPER SPECIFIED POWER.
3. INSTALLATION OF LOAD CENTERS, BRANCH PANELS, CIRCUIT BREAKERS, JUNCTION BOXES, CONDUIT AND CABLE TRAYS AS SPECIFIED.
4. INTERCONNECTING WIRE AND CABLE AS SPECIFIED.
5. INSTALLATION OF WALL AND CEILING SUPPORT AND SUSPENSION FRAME WORK AS SPECIFIED.
6. FOR THE MOST PART CONVENIENCE OUTLETS ARE TO BE SPECIFIED BY OTHERS. OUTLETS REQUIRED BY EQUIPMENT WILL BE SPECIFIED. FOR EASE IN EQUIPMENT SERVICE, A MINIMUM NUMBER OF OUTLETS WILL BE DEPICTED.
7. ANY CEILING MOUNTED LIGHT FIXTURES, DIFFUSERS, VENTS, SMOKE/FIRE DETECTORS. SPRINKLER HEADS, HALON NOZZLES, ETC. SHALL NOT EXTEND BELOW THE FINISHED CEILING.
8. INSTALLATION OF OPTIONAL WARNING LIGHT AND/OR DOOR INTERLOCK SWITCH AT ENTRANCE DOORS OF X-RAY ROOM TO BE COORDINATED WITH FACILITY, EQUIPMENT INSTALLERS, AND DESIGN TEAM.
9. RADIATION PROTECTION REQUIREMENTS:
   THESE MUST BE SPECIFIED BY A QUALIFIED RADIATION PHYSICIST.
10. SHIELDING TESTING (LEAD OR EQUIVALENT):
    AFTER X-RAY EQUIPMENT HAS BEEN INSTALLED AND PLACED IN OPERATING CONDITION, THE SHIELDING SHALL BE TESTED, AT THE OWNER'S EXPENSE, BY A CERTIFIED HEALTH PHYSICIST.
11. THE DECISION OF ACCEPTABILITY BY A HEALTH PHYSICIST SHALL BE THE RESPONSIBILITY OR THE CONTRACTOR. THEREFORE, THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF REPLACEMENT OF ALL DEFECTIVE WORK (INCLUDING WORK SUBSEQUENTLY AFFECTED) AND ADDITIONAL TESTS REQUIRED TO MEET THE SATISFACTION OF THE HEALTH PHYSICIST.
12. LIABILITY:
    THE EQUIPMENT REPRESENTATIVES OR THEIR PLANNER ASSUME NO RESPONSIBILITY FOR ANY CONSTRUCTION COSTS, WHETHER OR NOT RELATED TO THE INSTALLATION OF X-RAY EQUIPMENT OR SITE PLANNING DOCUMENTS. NO WORK MAY BE PERFORMED OR MATERIALS FURNISHED AT THEIR EXPENSE UNLESS AUTHORIZED BY A SIGNED, FORMAL PURCHASE ORDER. ADDITIONALLY , A SITE INSPECTION SHALL BE CONDUCTED BY THE EQUIPMENT REPRESENTATIVES TO CONFIRM THE SITE'S READINESS PRIOR TO X-RAY EQUIPMENT DELIVERY. THIS INSPECTION SHALL BE PREFORMED WHEN NOTIFIED OF THE CONSTRUCTION'S COMPLETION.

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BROWN'S MEDICAL IMAGING
8416 LAUREL FAIR CIR STE 100
TAMPA, FL 33610
CHRIS YARGEAU
SERVICE DIRECTOR
(904) 708-7616
ALYSSA BOOTH
SALES ASSOCIATES
484-844-1555 (CELL)

BROWN'S MEDICAL IMAGING

CUSTOMER:
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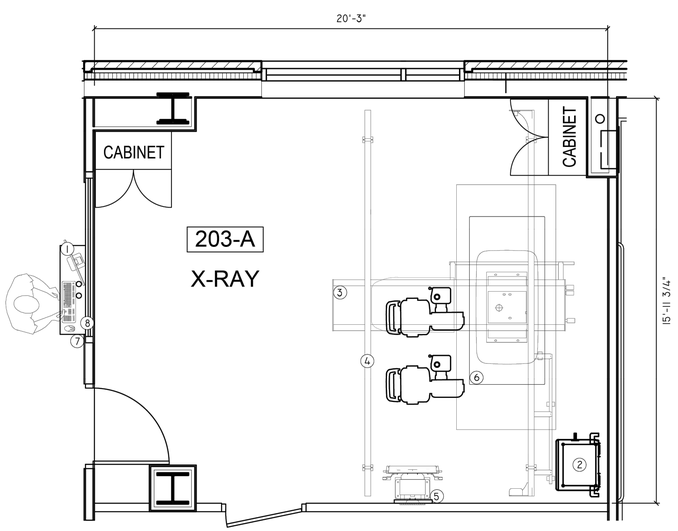
1 WASHINGTON CENTER
NEWBURGH, NY 12550

DRAWING: 2026-543-F	SCALE: N.T.S.
REVISION:	SHEET: A-1
DATE: 3/20/2026	
DRAWN BY: ANDERSON J.	

EQUIPMENT PLAN



EQUIPMENT LEGEND

ITEM	SUPPLIED/ INSTALLED BY PMI	BTU/HR	WT LB	W IN	L IN	H IN
1 CNTRL	X-RAY CONTROL	130	45	8.5	20	15
2 GEN	CARESTREAM GENERATOR	1000	174	13.5	25.6	24.1
3 OTC	CARESTREAM COMPASS DRX (2.8M BRIDGE)	—	661	—	—	—
4 RAIL	CARESTREAM CMT (4M RAILS)	—	121	6.7	—	6.7
5 WSTAND	CARESTREAM WALLSTAND	—	415	—	—	89
6 TBL	CARESTREAM ELEVATING TABLE	668	500	86	35.8	32.5
	SUPPLIED/ INSTALLED BY CUSTOMER OR CONTRACTOR					
7	COUNTER (EXISTING)	—	—	—	—	—
8 LED	WINDOW-GLASS, LEAD LINED (EXISTING)	—	—	—	—	—

RECOMMENDED CEILING HEIGHT: 9'-3"
CEILING HEIGHT RANGE: MINIMUM 8'-10" MAX 10'-0" A.F.F.
THIS CEILING HEIGHT RANGE PROVIDES FULL FUNCTIONALITY OF THE X-RAY SYSTEM. ANY DEVIATION MUST BE DISCUSSED WITH (PMI-NYIS) SITE PLANNER.

NOTES:

CUSTOMER:
OCCC
1 WASHINGTON CENTER
NEWBURGH, NY 12550

DRAWING: 2026-543-F		SHEET: A-2
DATE: 3/20/2026		
DRAWN BY: ANDERSON J.	REVISION:	SCALE: N.T.S.

BROWN'S MEDICAL IMAGING

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

⅛" ¼" ½" 0 1" 2"
REFERENCE SCALE

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CERTIFICATE OF AUTHORIZATION #: 0017795

FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1 ISSUED 1995; EXP. 8/25

ISSUED 6/17/26 FOR BID

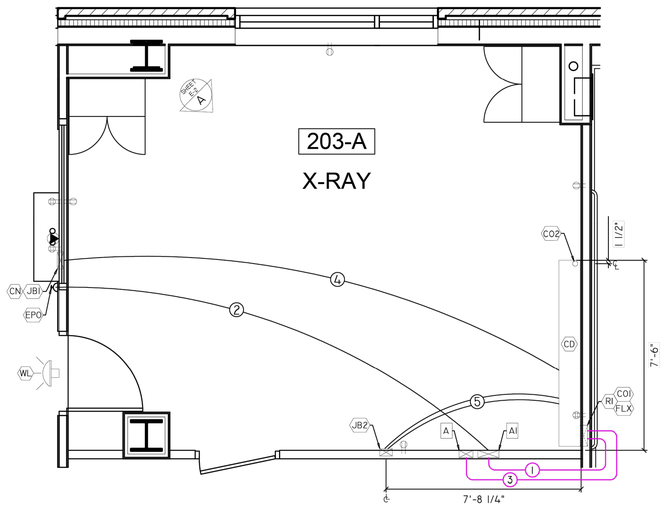
PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
BMI X-RAY EQUIPMENT: CEILING MOUNTED EQUIPMENT DETAILS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	LC		EDF	BMI-003
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(8-12) BMI-001 -BMI-005.dwg (Layout: BMI-003)
Date: Wed, Jun 17, 2026 - 8:12 AM (Name: wpb)

ELECTRICAL PLAN



ELECTRICAL LEGEND
(ALL WORK SUPPLIED AND INSTALLED BY CONTRACTOR)

SYM.	ITEMS NOT SUPPLIED/INSTALLED BY BMI SUPPLIED/INSTALLED BY CUSTOMER/CONTRACTOR
AI	DEDICATED CIRCUIT BREAKER FLUSH MT. INCLUDE 8' PIGTAIL AT "COI" VIA "RI". LOCATE PER LOCAL CODES/ OTHERS. (PANEL MUST MEET ALL FEDERAL, STATE AND LOCAL CODES) (SEE SHEET E-3 FOR GEN SPECS.)
A	DEDICATED CIRCUIT BREAKER PANEL WITH (1) 120VAC 20 AMP, 1 PHASE, WIRES TO "COI". VIA "RI". LOCATE PER LOCAL CODES/OTHERS. (PANEL MUST MEET ALL FEDERAL, STATE AND LOCAL CODES)
CD	CEILING DUCT, 10" X 3.5", SURFACE MOUNTED ABOVE FINISHED CEILING LINE, DUCT MUST HAVE REMOVABLE COVERS AND MIN. (1) DIVIDER THROUGHOUT. DUCT MUST HAVE ACCESS OPENING TO RISER "RI". CONTRACTOR MUST SUPPLY CONDUIT FITTINGS FOR CONDUIT CONNECTS.
RI	RISER DUCT, 10" X 3.5", FROM FINISHED FLOOR TO ABOVE FINISHED CEILING. FLUSH MOUNT WITH FINISHED WALL, RISER MUST HAVE ACCESS OPENING TO CEILING DUCT "CD". DUCT MUST HAVE REMOVABLE COVERS AND CONTRACTOR MUST SUPPLY CONDUIT FITTINGS FOR CONDUIT CONNECTIONS. MIN. 3 DIVIDERS THROUGH-OUT. PROVIDE (2) 1 1/2" GROMMET IN REMOVABLE COVER PLATE "COI" 12" C.A.F.F.
JBI	8" x 8" x 4" JB- BOTTOM OF BOX 12" A.F.F. FLUSHED MTD. LOCATED PER LOCAL CODE/ OTHERS. PROVIDE (1) - 1 1/2" CHASE NIPPLE IN REMOVABLE COVER PLATE. (LEAVE PULL LINE)
JB2	6" x 6" x 4" JB- BOTTOM OF BOX 90" A.F.F. FLUSHED MTD. LOCATED PER LOCAL CODE/ OTHERS. PROVIDE (1) - 1 1/2" CHASE NIPPLE IN REMOVABLE COVER PLATE. (LEAVE PULL LINE)
COI	CUT OUT- ACCESS ON FACE OF RISER "RI". FOR GENERATOR POWER AND EQUIPMENT CABLES. FIELD VERIFY SIZE OF CUT-OUT AND LOCATION PRIOR TO EQUIPMENT INSTALLATION.
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WL	WARNING LIGHT- "X-RAY IN USE" LIGHT PER CODE, CUSTOMER TO PROVIDE FIXTURE AND POWER REQ.
EPO	EMERGENCY POWER OFF- SWITCH TO CUSTOMER SHUNT BREAKER IN MAIN DISCONNECT (AI). EXACT LOCATION PER LOCAL CODE OR BY CUSTOMER. (CONDUIT SIZE AS NEEDED)
FLX	CUSTOMER PROVIDED 1.25" Ø SEAL-TIGHT. INCLUDE FITTINGS FOR MAIN POWER TO GENERATOR, W/P LENGTH PER LOCAL CODE, INSTALLED BY CUSTOMER/ELECTRICIAN
	120 VAC DUPLEX OUTLET, EXACT LOCATION PER CUSTOMER
	120 VAC QUAD OUTLET, EXACT LOCATION PER CUSTOMER
▼	NETWORK DROP/RECEPTACLE- MINIMUM 2 CAT 5 CABLES TO NETWORK CLOSET/ CABINET.

CONDUIT LEGEND
(ALL WORK SUPPLIED AND INSTALLED BY CONTRACTOR)

INDEX	FROM	TO	QUANTITY/SIZE	ROUTE	DESCRIPTION	MAX COND LENGTH
1	AI	RI	PER LOCAL CODE	IW	PWR / GEN	PER CODE
2	AI	EPO	PER LOCAL CODE	OH	EPO	PER CODE
3	A	RI	PER LOCAL CODE	IW	PWR / GEN	25 FEET
4	CD	JBI	(1) 2" CONDUIT	OH	GEN / CONTROL	40 FEET
5	CD	JB2	(2) 2" CONDUIT	OH	GEN / CHEST	15 FEET

UF - UNDER FLOOR IW - IN WALL OH- OVER HEAD

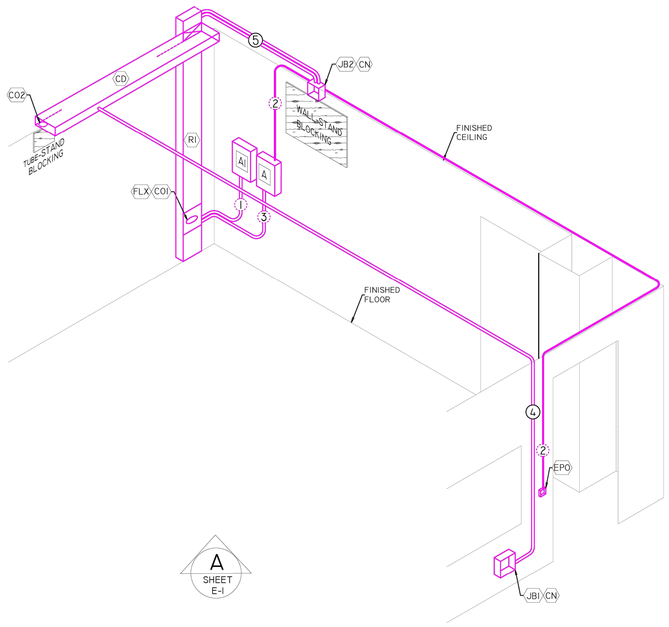
PRIOR TO INSTALLING DRYWALL, THE GC/EC MUST ARRANGE A SITE VISIT WITH BMI TO CONFIRM THE PLACEMENT AND INSTALLATION OF ELECTRICAL ITEMS. FOLLOWING COMPLETION OF CONSTRUCTION, A SECOND SITE VISIT IS REQUIRED TO CONFIRM SITE READINESS FOR INSTALLATION.

CUSTOMER:	DRAWING:	SHEET:
OCCC 1 WASHINGTON CENTER NEWBURGH, NY 12550	2026-543-F DATE: 3/20/2026	E-1
DRAWN BY: ANDERSON J.	REVISION: / SCALE: N.T.S.	

BROWN'S MEDICAL IMAGING

NOTE:ALL ELECTRICAL DUCTS AND CONNECTIONS MUST CONFORM TO THE N.E.C. CODES. IN ADDITION TO STATE AND LOCAL REGULATIONS FOR THE COUNTRY OR LOCALITY IN WHICH THE EQUIPMENT IS INSTALLED. SITE IS RESPONSIBLE TO DETERMINE ELECTRICAL DESIGN INCLUDING NUMBER OF DIVIDERS IN CABLE TROUGH PER CODE

ISOMETRIC PLAN



ELECTRICAL LEGEND
(ALL WORK SUPPLIED AND INSTALLED BY CONTRACTOR)

SYM.	ITEMS NOT SUPPLIED/INSTALLED BY BMI SUPPLIED/INSTALLED BY CUSTOMER/CONTRACTOR
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(ALL WORK SUPPLIED AND INSTALLED BY CONTRACTOR)

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CUSTOMER:	DRAWING:	SHEET:
OCCC 1 WASHINGTON CENTER NEWBURGH, NY 12550	2026-543-F DATE: 3/20/2026	E-2
DRAWN BY: ANDERSON J.	REVISION: / SCALE: N.T.S.	

BROWN'S MEDICAL IMAGING

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ELECTRICAL POWER REQUIREMENTS

MAIN POWER REQUIREMENTS

THE FOLLOWING TABLE DEFINES THE INPUT POWER REQUIREMENTS FOR THE:
208VAC SINGLE PHASE, 50/60 HZ SERIES GENERATOR

ELECTRICAL POWER REQUIREMENTS

SYM	GENERATOR MODEL NO.	NOMINAL LINE VOLTAGE (VAC)	RECOMMENDED WIRE SIZE FROM DISTRIBUTION TRANSFORMER TO DISCONNECT (AWG)				DISCONNECT TO GENERATOR 15' (5M) MAX. (AWG)	SERVICE RATING (AMPS)	RECOMMENDED DISTRIBUTION TRANSFORMER CAPACITY (KVA)	INPUT LINE RESISTANCE (AT FULL-LOAD RMS)
			50 FT (15M)	100 FT (15M)	150 FT (15M)	200 FT (15M)				
GEN	QG-40G 40KW	208	2/0	4/0	—	400 MCM	#1	120	50	0.04Ω

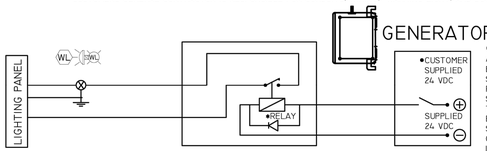
NOTES: ALL INSTALLATIONS MUST MEET THE REQUIREMENTS OF LOCAL ELECTRICAL CODES

DESCRIPTION: SUPPLIED AND INSTALLED BY CUSTOMER CONTRACTOR

1. ALL WIRING AND GROUNDING MUST BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE OR LOCAL ELECTRICAL CODES
2. LINE REGULATION: 5% AT FULL LOAD

DOOR INTERLOCK/ X-RAY WARNING LIGHT

CUSTOMERS GENERAL CONTRACTOR IS RESPONSIBLE FOR CONDUITS, WIRING, WARNING LIGHT, AND DOOR SWITCH



• NORMALLY OPEN RELAY WITH A 24 VOLT, DC COIL. (NOT TO EXCEED 5 WATTS) AND A STEERING DIODE WIRE OVER THE RELAY COIL. SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. BMI TO PROVIDE CONTROL SIGNAL TO RELAY. CONTRACTOR TO SUPPLY AND INSTALL PARTS, J-BOXES, ETC.

WARNING LIGHT / DOOR SWITCH NOTES:

WL DWL PROVIDE AND INSTALL FIXTURE, RELAY AND ENCLOSURE FOR CEILING MOUNT OR WALL MOUNT OUTSIDE X-RAY ROOM DOOR. AN "X-RAY IN USE" LIGHT FIXTURE WIRED PER CODE. PLEASE PROVIDE WIRES (PER DIAGRAM) IN SERIES TO GENERATOR- PER CODE

DS WHEN DOOR CLOSES, SWITCH CLOSE. PLEASE PROVIDE (2) #14 WIRES- IN SERIES TO GENERATOR- PER CODE

ELECTRICAL NOTES

1. ELECTRICAL CONTRACTOR SHALL UNDER CONTRACT WITH OWNER, SUPPLY AND INSTALL ALL MAIN SWITCHES, LOAD CENTERS, PANELS, JUNCTION BOXES, CONDUIT, WIRE, TROUGHS, WIRE AND NECESSARY WIRING DEVICES AS SPECIFIED BY BMI, AND IS IN COMPLIANCE WITH ALL COVERING CODES AND REGULATIONS.
2. ELECTRICAL CONTRACTOR SHALL FURNISH SEAL TIGHT FLEXIBLE CONDUIT TO CONNECT JUNCTION BOXES TO X-RAY SYSTEM COMPONENTS AS REQUIRED BY LOCAL CODES.
3. ALL LOAD CENTERS, PANEL BOARDS, SWITCHES AND JUNCTION BOXES SHALL BE FLUSH MOUNTED UNLESS SPECIFIED OTHERWISE PROVIDE FLUSH BOX COVERS AND SPECIFIED CHASE NIPPLES. ALL REQUIRED KNOCK OUT AND/ OR DUCT ACCESS WILL BE LOCATED BY BMI INSTALLING ENGINEER.
4. ALL CONDUIT RUNS TO SHORTEST POSSIBLE. MAXIMUM OF THREE (3) LONG RADIUS "L 'S" PER RUN.
5. POWER LINE VOLTAGE AND FULL LOAD REGULATION IS CRITICAL AS EFFECTED BY RESERVE KVA CAPACITY OF DISTRIBUTION TRANSFORMER, FEEDER SIZE AND LENGTH FROM DISTRIBUTION TRANSFORMER TO X-RAY GENERATOR.
6. ALL WIRE SHALL BE AWG STRANDED COPPER, THHN INSULATED COLOR CODED OR NUMBERED. IDENTIFY DESTINATION OF EACH CONDUIT IN EACH BOX.
7. ALL SPECIFIED WIRE SHALL BE SUPPLIED AS SPECIFIED AND PULLED BY ELECTRICAL CONTRACTOR. PROVIDE 5' TAILS ON ALL WIRE EXCEPT AS REQUIRED BY NOTE 3 OR 4. PROVIDE INSULATED BUSHINGS ON ALL CONDUIT PROVIDE PULL WIRE IN ALL EMPTY CONDUITS.
8. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING INTEGRITY OF RADIATION SHIELDING EFFECTED BY HIS WORK.
9. PROVIDE AND INDEPENDENT DRIVEN OR STRUCTURAL GROUND OF STRANDED COPPER EQUAL IN SIZE TO MAIN FEEDERS AND BONDED TO ELECTRICAL SYSTEM GROUNDING ELECTRODE.
10. ELECTRICAL CONTRACTOR SHALL BRING ALL EXISTING WIRING, CONDUIT, SWITCH JUNCTION BOXES UP TO CURRENT STANDARD. REMOVE AND REPLACE AS SPECIFIED ALL EXISTING WIRE. REPLACE ALL BOX COVER PLATES.
11. X-RAY EQUIPMENT INSTALLATION OR USE SHALL NOT BE EFFECTED BY FIXTURE SPRINKLER HEADS OR OTHER PROJECTION FORM CEILING.
12. LIGHTING RECOMMENDATIONS:
    X-RAY PROCEDURE ROOM- PROVIDE ILLUMINATION RANGE FORM 50 LUX TO 750 LUX BY DIMMER CONTROLLED LIGHTING OR A
    CONTROL BOOTH / TECH WORK AREA- PROVIDE ILLUMINATION RANGE FROM 50 LUX TO 750 LUX BY DIMMER CONTROLLED LIGHTING OR A COMBINATION OF FIXED AND/OR DIMMER CONTROLLED LIGHTING.
    MOTION SENSOR FOR CONTROLLING LIGHTING- AS A MINIMUM MUST HAVE AN MANUAL OVERRIDE SO THAT LIGHTING WILL REMAIN ON WHEN NO MOTION IS SENSED.

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CUSTOMER:	DRAWING:	SHEET:
OCCC 1 WASHINGTON CENTER NEWBURGH, NY 12550	2026-543-F DATE: 3/20/2026	E-3
DRAWN BY: ANDERSON J.	REVISION: / SCALE: N.T.S.	

BROWN'S MEDICAL IMAGING

NOTES:
CONTACT EOR FOR ANY DISCREPANCIES BETWEEN BMI DRAWINGS AND ELECTRICAL DRAWINGS.

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

⅛" ¼" ½" 0 1" 2"
REFERENCE SCALE

UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING A LICENSED PROFESSIONAL ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2 OF THE N.Y. STATE EDUCATION LAW. FELLENZER ENGINEERING, LLP CERTIFICATE OF AUTHORIZATION #: 0017795

FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1 ISSUED 1995; EXP. 8/25

ISSUED 6 / 17 / 26 FOR BID

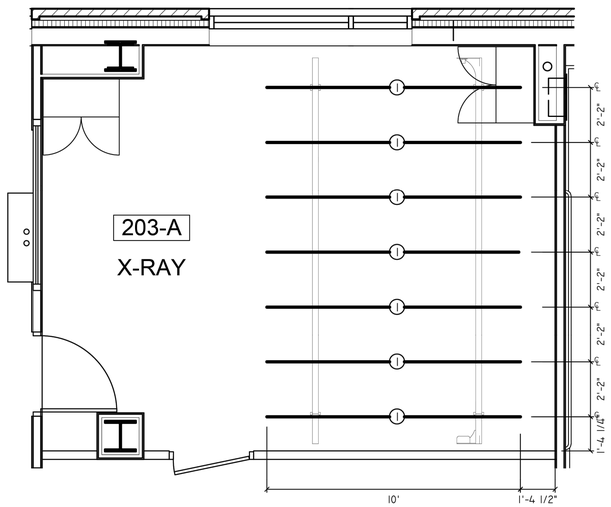
PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
BMI X-RAY EQUIPMENT: CEILING MOUNTED EQUIPMENT DETAILS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	LC		EDF	BMI-004
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(6-12) BMI-001 -BMI-005.dwg (Layout: BMI-004)
Date: Wed, Jun 17, 2026 - 8:12 AM (Name: wpb)

UNISTRUT PLAN



STRUCTURAL LEGEND

ITEM	COMPONENT DESCRIPTION: SUPPLIED AND INSTALLED BY CUSTOMER/CONTRACTOR
1	NEW UNISTRUT: FLUSH MOUNTED WITH FINISHED CEILING. UNISTRUT P1000 SERIES OR EQUIVALENT REQUIRED.

GENERAL NOTES

1. CEILING TILES MUST BE FLUSH WITH UNDERSIDE OF UNISTRUT.

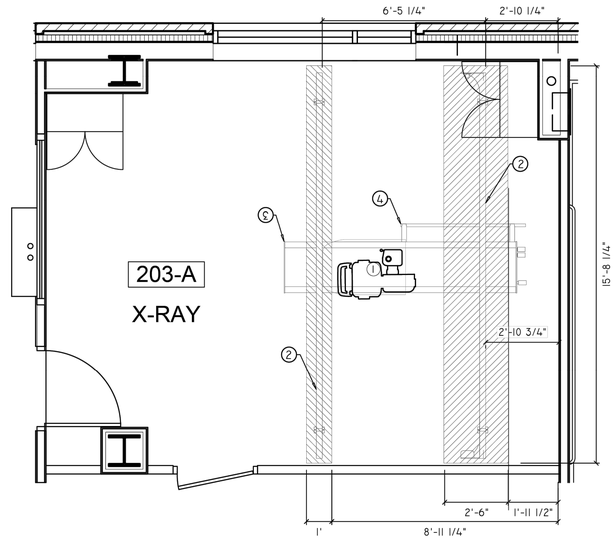
STRUCTURAL NOTES

1. THE FACILITY STRUCTURE SUPPORTING ALL EQUIPMENT LOADS MUST BE VERIFIED BY CUSTOMER'S STRUCTURAL ENGINEER OF RECORD. THIS INCLUDES LOADS FOR WALL, CEILING AND FLOOR.
2. SUPPORT STRUCTURE/UNISTRUT MUST BE LEVELED AT FINISHED CEILING HEIGHT WITHIN 0.039 INCH (1.000 MM).
3. RECOMMENDED CEILING SUPPORT LOADING WEIGHT IS 2204 LBS
4. SEE SPECIFICATION AK0249 FOR ADDITIONAL STRUCTURAL INFORMATION.

CUSTOMER:	DRAWING:	SHEET:
OCCC 1 WASHINGTON CENTER NEWBURGH, NY 12550	2026-543-F	S-1
DRAWN BY: ANDERSON J.	DATE: 3/20/2026	
REVISION:	SCALE: N.T.S.	

BROWN'S MEDICAL IMAGING

CEILING PLAN



STRUCTURAL LEGEND

ITEM	SUPPLIED/INSTALLED BY BROWN'S MEDICAL IMAGING
1	CARESTREAM FIT OTC TUBE
2	OTC CEILING RAIL
3	OTC BRIDGE
4	BRIDGE CABLE RAIL
	RESTRICTED CEILING AREA FOR CARESTREAM EQUIPMENT. NO CEILING MOUNTED FIXTURES. INCLUDING HVAC, LIGHTING AND SPRINKLERS.

GENERAL NOTES

1. REFLECTED CEILING PLAN REFERENCES LOCATION OF THE CARESTREAM FIT CEILING MOUNTED EQUIPMENT NOT TO INTERFERE WITH LIGHT, DIFFUSERS AND SPRINKLER HEADS

CUSTOMER:	DRAWING:	SHEET:
OCCC 1 WASHINGTON CENTER NEWBURGH, NY 12550	2026-543-F	S-2
DRAWN BY: ANDERSON J.	DATE: 3/20/2026	
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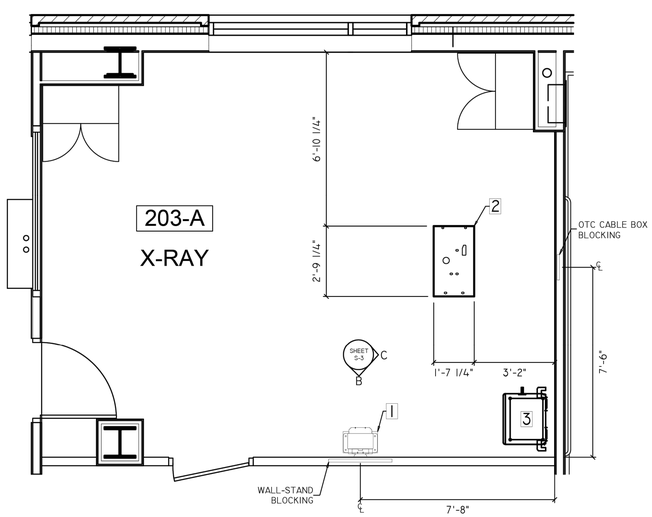
BROWN'S MEDICAL IMAGING

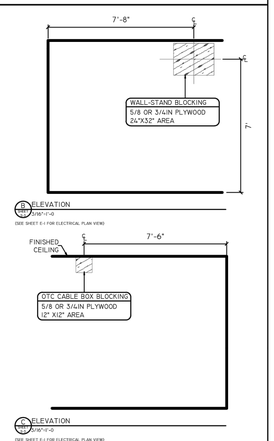
STRUCTURAL PLAN



STRUCTURAL LEGEND

ITEM	COMPONENT DESCRIPTION: SUPPLIED AND INSTALLED BY BMI
1	WALL-STAND BASE
2	TABLE BASE
3	GENERATOR

ELEVATIONS



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OCCC 1 WASHINGTON CENTER NEWBURGH, NY 12550	2026-543-F	S-3
DRAWN BY: ANDERSON J.	DATE: 3/20/2026	
REVISION:	SCALE: N.T.S.	

BROWN'S MEDICAL IMAGING

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

1/8" 1/4" 1/2" 0 1" 2"
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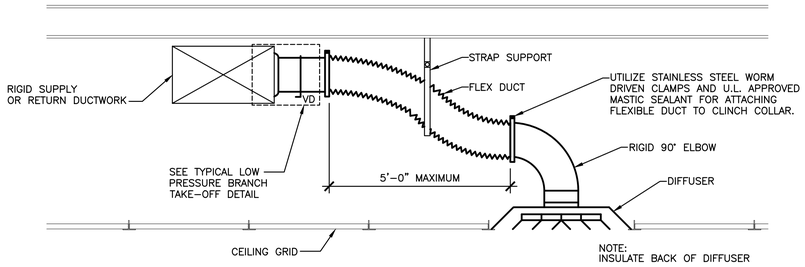
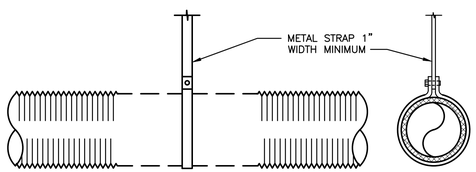
DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	LC		EDF	BMI-005
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(8-12) BMI-001 -BMI-005.dwg (Layout: BMI-005)
Date: Wed, Jun 17, 2026 - 8:12 AM (Name: wpb)



1 DIFFUSER AND FLEX DUCT DETAIL
N.T.S.



NOTES:

1. DUCT SHOULD EXTEND STRAIGHT FOR A MINIMUM OF 3 DUCT DIAMETERS BEFORE BENDING.
2. SUPPORT SYSTEM MUST NOT BEND DUCT OR CAUSE OUT OF ROUND SHAPE.
3. MAXIMUM SAG 1/2" PER FOOT OR SUPPORT SPACING.
4. 5'-0" MAXIMUM FLEX DUCT LENGTH.

2 FLEX DUCT SUPPORT
N.T.S.

INSULATION SCHEDULE
"KNAUF" AS STANDARD OR APPROVED EQUAL

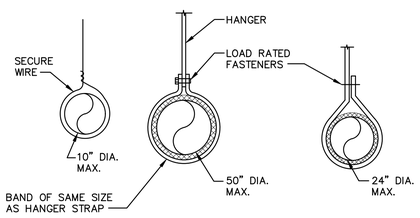
INSIDE BUILDING THERMAL ENVELOPE	FIBERGLASS FLEXIBLE BLANKET, 1.0 LB/CF R=6.0 (INSTALLED @ 25% COMPRESSION)	
SERVICE	FACING	MINIMUM THICKNESS TO MEET REQUIREMENTS
SUPPLY/RETURN AIR	FSK	2"
OUTDOOR AIR	FSK	2"
EXHAUST AIR	FSK	2"

NOTES:

1. ALL EDGES SHALL BE CLEAN CUT.
2. ALL SEAMS AND BUTT JOINTS SHALL BE ADHERED AND SEALED USING ARMAFLEX 520 ADHESIVE. HORIZONTAL JOINTS SHALL BE AT BOTTOM OF DUCTS & PIPES.
3. ALL EXPOSED END CUTS SHALL BE COATED WITH ARMAFLEX 520 ADHESIVE.

LOW PRESSURE — **DUCT GAUGE SCHEDULE** — 2000 FPM

FLAT OVAL DUCT DIM. OF MAJOR AXIS	ROUND DUCT	RECTANGULAR DUCT GREATEST DIMENSION	GAUGE GALVANIZED STEEL
————	3" TO 8"	UP TO 12"	26
UP TO 24"	9" TO 14"	13" TO 30"	24
25" TO 48"	15" TO 36"	31" TO 54"	22
49" TO 70"	————	55" TO 84"	20



NOTE:
HANGERS MUST NOT DEFORM DUCT SHAPE.

3 ROUND DUCT HANGING DETAIL
N.T.S.

MINIMUM DUCT INSULATION

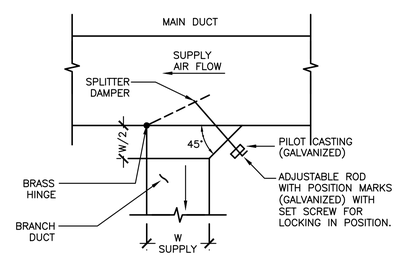
COMMERCIAL

ALL SUPPLY, RETURN AND EXHAUST AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R–6 INSULATION WHEN LOCATED IN UNCONDITIONED SPACES AND WITH A MINIMUM OF R–12 INSULATION WHEN LOCATED OUTSIDE THE BUILDING ENVELOPE. WHEN LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY A MINIMUM OF R–12 INSULATION.

EXCEPTIONS:

1. WHEN LOCATED WITHIN EQUIPMENT.
2. WHEN THE DESIGN TEMPERATURE DIFFERENCE BETWEEN THE INTERIOR AND EXTERIOR OF THE DUCT OR PLENUM DOES NOT EXCEED 15°F (8°C).

ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK, SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC–PLUS– EMBEDDED FABRIC SYSTEMS OR TAPES. TAPES AND MASTICS USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. UNLISTED DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS.



4 TYPICAL LOW PRESSURE BRANCH TAKE-OFF DETAIL
N.T.S.

HVAC DEMOLITION NOTES:

1. COORDINATE WITH ARCHITECTURAL PLANS FOR EXACT AREAS TO BE DEMOLISHED.
2. REMOVE ALL EQUIPMENT, DUCTWORK AND PIPING AS INDICATED ON PLAN. REMOVALS SHALL INCLUDE ALL SUPPORTS AND HANGERS, HOUSEKEEPING PADS, DAMPERS, VALVES, FITTINGS, CONTROLS AND ASSOCIATED LOW VOLTAGE WIRING, AND ANY OTHER ASSOCIATED ACCESSORIES WHICH PERTAIN TO THE EQUIPMENT TO BE REMOVED.
3. REMOVAL OF ALL POWER CONNECTIONS TO DEMOLITION ITEMS SHALL BE BY THE E.C.
4. ANY DISCREPANCIES BETWEEN THE DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER. ANY DEMOLITION WORK WHICH MAY BE QUESTIONABLE DUE TO UNFORESEEN FIELD CONDITIONS SHALL NOT BE REMOVED UNTIL REVIEWED BY THE ARCHITECT, ENGINEER OR BUILDING FACILITIES MANAGER.
5. DEMOLITION WORK SHALL INCLUDE THE PREPARATION OF EXISTING EQUIPMENT FOR CONNECTION TO NEW EQUIPMENT. COORDINATE DEMOLITION WORK WITH THE CONSTRUCTION PLANS.
6. ALL EQUIPMENT REMOVALS SHALL BECOME THE PROPERTY OF THIS CONTRACTOR. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REMOVAL AND DISPOSAL OF DEMOLITION ITEMS OFF–SITE, UNLESS OTHERWISE NOTED.
7. ALL CUTTING AND PATCHING NECESSARY FOR THE DEMOLITION WORK SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
8. IT SHALL BE THE OWNER'S RESPONSIBILITY TO REMOVE ANY LOOSE EQUIPMENT, FURNITURE, SUPPLIES, ETC. THAT MAY BE LOCATED IN THE AREA OF WORK.
9. THE PLANS ARE INTENDED TO CONVEY THE EXTENT AND SCOPE OF THE DEMOLITION WORK. EVERY ITEM INTENDED FOR REMOVAL MAY NOT BE SHOWN. THE CONTRACTOR IS ADVISED TO SURVEY THE PROJECT SITE BEFORE SUBMITTING A BID FOR DEMOLITION WORK.

GENERAL NOTES:

1. THE DRAWINGS ON THESE PLANS ARE DIAGRAMMATIC. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL HVAC WORK WITH OTHER TRADES AND THE BUILDING STRUCTURE. NO EXTRA PAYMENTS WILL BE AUTHORIZED FOR REROUTING OR REMOVAL OF INSTALLED WORK DUE TO LACK OF COORDINATION WITH OTHER SYSTEMS.
2. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF WALLS, FLOORS AND CEILINGS AS REQUIRED FOR INSTALLATION OF HIS WORK.
3. ACCESS PANELS SHALL BE PROVIDED IN CEILINGS, WALLS, FLOORS, ETC., AS REQUIRED TO MAINTAIN ACCESSIBILITY TO VALVES, DAMPERS, TRAPS, COILS, ETC.
4. PROVIDE DUCT ACCESS DOORS AT ALL MOTORIZED DAMPERS, FIRE DAMPERS, AND SMOKE DAMPERS.
5. ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.
6. ALL DUCTWORK PASSING THROUGH A FIRE RATED PARTITION SHALL BE PROVIDED WITH A FIRE DAMPER TO MAINTAIN THE FIRE RATING OF THE PARTITION.
7. LOCATIONS OF DIFFUSERS AND GRILLES ARE APPROXIMATE. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS.
8. ALL BRANCHES AND TAKE–OFFS SHALL BE EQUIPPED WITH VOLUME CONTROL DAMPERS. DAMPERS TO BE OPPOSED BLADE TYPE, 4" MAX. BLADE HEIGHT. VOLUME DAMPERS TO BE LOCATED AS NEAR TO THE POINT OF TAKE–OFF AS PRACTICAL.
9. FLEXIBLE DUCT CONNECTIONS SHALL BE LIMITED TO A MAXIMUM LENGTH OF FIVE (5) FEET AND SUPPORTED AT MID–POINT.
10. ALL SUPPLY & RETURN AIR DUCTWORK SHALL BE INSULATED.
11. PROVIDE SHUT–OFF VALVES AT ALL PIPING BRANCH TAKE–OFFS AND AT ALL CONNECTIONS TO EQUIPMENT.
12. COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL CONTRACTOR.
13. ALL MOTOR STARTERS SHALL BE FURNISHED BY THE HVAC CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
14. ALL REQUIRED CONTROL EQUIPMENT AND WIRING SHALL BE FURNISHED & INSTALLED BY THE HVAC CONTRACTOR.
15. THE TERMS "PROVIDE" OR "FURNISH", AS USED ON THESE PLANS, INDICATE THAT THE CONTRACTOR IS TO FURNISH AND INSTALL THE REFERENCED EQUIPMENT OR SYSTEMS IN THEIR ENTIRETY AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
16. CONTRACTOR SHALL PROVIDE AND INSTALL ALL COMPONENTS INDICATED ON DETAIL SHEETS, PLANS, SPECIFICATIONS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE AND WORKABLE SYSTEM.
17. CONTRACT CLOSE OUT: IN THE PRESENCE OF THE OWNER, ENGINEER OR ARCHITECT; DEMONSTRATING OPERATION OF SYSTEMS AND THAT ALL SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF ALL PARTIES.
18. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE ALTERATIONS AND/OR NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE NEW SYSTEMS IN EVERY RESPECT, CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.

HVAC LINE TYPES

- –/–/– or ---- EXISTING EQUIPMENT/DUCT TO BE REMOVED
- EXISTING EQUIPMENT/DUCT TO REMAIN
- NEW EQUIPMENT / DUCT

DUCTWORK SYMBOLS

- AxB — DUCTWORK DOUBLE LINE REPRESENTATION: "A" INDICATES DUCT WIDTH; "B" INDICATES DUCT DEPTH.
- AxB — DUCTWORK SINGLE LINE REPRESENTATION: "A" INDICATES DUCT WIDTH; "B" INDICATES DUCT DEPTH.
- SUPPLY AIR DUCT UP
- SUPPLY AIR DUCT DOWN
- RETURN AIR DUCT UP
- RETURN AIR DUCT DOWN
- EXHAUST AIR DUCT UP
- EXHAUST AIR DUCT DOWN
- FLEXIBLE DUCTWORK
- SUPPLY AIR FLOW
- RETURN/EXHAUST AIR FLOW
- VOLUME DAMPER
- MOTORIZED DAMPER w/ ACCESS DOOR
- FIRE DAMPER W/ ACCESS DOOR
- SUPPLY AIR TERMINAL
- RETURN/EXHAUST AIR TERMINAL
- EXHAUST AIR TERMINAL
- —D— DROP DUCT
- —R— RISE DUCT

GENERAL SYMBOLS

- POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
- POINT OF DISCONNECT
- X — INDICATES SECTION LETTER
- XX — INDICATES DRAWING NUMBER WHERE LOCATED
- XXX — INDICATES TYPE OF AIR OUTLET
- XXX — INDICATES AIR FLOW REQUIREMENTS
- T^A — WALL MOUNT THERMOSTAT 'A' DESIGNATES COMPONENT SERVED
- C — WALL MOUNT CARBON DIOXIDE SENSOR

ABBREVIATIONS

AC	AIR CONDITIONING UNIT
ACT	ACOUSTIC CEILING TILE
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AF	AFTER FILTER
AFF	ABOVE FINISHED FLOOR
AFM	AIR FLOW MEASURING DEVICE
AHU	AIR HANDLING UNIT
A.L.D.	AUTOMATIC LOUVER DAMPER (PNEUMATIC)
AP	ACCESS PANEL
BDD	BACK DRAFT DAMPER
BG	BOTTOM GRILLE (WALL TYPE)
BR	BOTTOM REGISTER (WALL TYPE)
BTUH	BRITISH THERMAL UNITS/HOUR
CC	COOLING COIL
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
CLG	CEILING
CO	CLEAN OUT
CP	CONDENSATE PUMP
CR	CEILING REGISTER
CUH	CABINET UNIT HEATER
CW	COLD WATER
D	DRAIN
Db	DRY BULB TEMPERATURE, °F
dB	DECIBELS
DN	DOWN
DP	DIFFERENTIAL PRESSURE
Dp	DEW POINT TEMPERATURE, °F
DS	DUCT SMOKE DETECTOR
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMP
E.C.	ELECTRICAL CONTRACTOR
ECC	ENGINEERING CONTROL CENTER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EGW	ETHYLENE GLYCOL–WATER SOLUTION
EMD	END OF MAIN DRIP (STEAM)
ERC	ENERGY RECOVERY COIL
ERP	ELECTRIC RADIANT CEILING PANEL
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EXIST	EXISTING
F.A.I.	FRESH AIR INTAKE
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FLR	FLOOR
F.O.R.	FUEL OIL RETURN
F.O.S.	FUEL OIL SUPPLY
FPC	FIRE PROTECTION CONTRACTOR
F/SD	COMBINATION FIRE/SMOKE DAMPER
FTR	FIN TUBE RADIATION
G	NATURAL GAS PIPE
G.C.	GENERAL CONTRACTOR
GH	GRAVITY HOOD
GPM	GALLONS PER MINUTE
H.C.	HVAC CONTRACTOR
HF	HEPA FILTER
HP	HORSEPOWER
HRP	HYDRONIC RADIANT CEILING PANEL
HV	HEATING AND VENTILATING UNIT
IV	INLET VANES
LCD	LINEAR CEILING DIFFUSER
LFD	LAMINAR FLOW DIFFUSER
LF	LINEAR FEET
LPG	LP GAS PIPING
LPR	LOW PRESSURE STEAM CONDENSATE
LPS	LOW PRESSURE STEAM
LBS/HR	POUNDS PER HOUR
MA	MIXED AIR
MB	MIXING BOX
MD	MOTORIZED DAMPER
MER	MECHANICAL EQUIPMENT ROOM
MAX.	MAXIMUM
MBH	ONE THOUSAND BTUH
MIN.	MINIMUM
NOM.	NOMINAL
OA	OUTSIDE AIR
P	PUMP
P.C.	PLUMBING CONTRACTOR
PD	PRESSURE DROP (FEET OF WATER)
PF	PRE–FILTER
PGW	PROPYLENE GLYCOL–WATER SOLUTION
PH	PREHEAT
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE IN.
RA	RETURN AIR
RF	RETURN FAN
RHC	REHEAT COIL
Rh	RELATIVE HUMIDITY
RPZ	REDUCED PRESSURE ZONE
SA	SUPPLY AIR
SD	SMOKE DAMPER
Sp. Gr.	SPECIFIC GRAVITY
SH	STEAM HUMIDIFIER
SP	STATIC PRESSURE
SPD	SPLITTER DAMPER
SPS	STATIC PRESSURE SENSOR
S.S.	STAINLESS STEEL
TG	TOP GRILLE (WALL TYPE)
TR	TOP REGISTER (WALL TYPE)
TWU	THRU WALL UNIT
UH	UNIT HEATER
U.N.O.	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATOR
V	VALVE
VD	VOLUME DAMPER
VE	VOLUME EXTRACTOR
VI	VIBRATION ISOLATOR
VIF	VERIFY IN FIELD
Wb	WET BULB TEMPERATURE, °F
WFM	WATER FLOW MEASURING DEVICE
WMS	WIRE MESH SCREEN

ENERGY CODE STATEMENT:

TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2025 ENERGY CODE.

UNIFORM CODE STATEMENT:

TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2025 UNIFORM CODE.

AIR OUTLETS SCHEDULE
MANUFACTURER LISTED AS STANDARD OR APPROVED EQUAL

SYMBOL	TAG	PANEL/FACE SIZE (IN)	FRAME TYPE	CFM RANGE	NECK SIZE/NOMINAL SIZE (IN)	APPLICATION	THROW PATTERN / BLADE DEFLECTION	MANUFACTURER	MODEL NO.	COLOR	REMARKS
	SD-1	24" x 24	LAY-IN	125-150	8" Ø	SQUARE LINEAR SUPPLY AIR DIFFUSER	2 SLOTS, 4-WAY DIRECTIONAL	KRUEGER	1900SQS	WHITE	SEE NOTES
	TG-1	16-1/2" x 16-1/2"	DOUBLE SIDED FRAME	375-400	14" x 14"	TRANSFER GRILLE	V-SHAPED DEFLECTION VANES	KRUEGER	5600A	WHITE	SEE NOTES

NOTES:

1. PROVIDE AIR OUTLETS WITH AIRFLOW VOLUME DAMPER, BALANCE TO AIRFLOW SHOWN ON DRAWINGS.
2. ALL AIR OUTLETS SHALL BE HEAVY DUTY CONSTRUCTION.
3. ALL CEILING DIFFUSERS ARE 4 WAY DIRECTIONAL FLOW UNLESS OTHERWISE INDICATED.
4. ALL CEILING DIFFUSERS TO BE SUPPORTED FROM STRUCTURE ABOVE AS PER MANUFACTURER'S RECOMMENDATIONS AND SMACNA STANDARDS.
5. INSULATE THE BACK OF ALL CEILING DIFFUSERS.
6. CEILING DIFFUSER AND GRILLE SIZES THAT ARE NOT INDICATED ON THIS SCHEDULE ARE SHOWN ON THE FLOOR PLANS.
7. ROUND NECK AIR OUTLETS SHALL BE PROVIDED WITH MAXIMUM 5' OF FLEXIBLE DUCTWORK.

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

⅛" ¼" ½" 0 1" 2"
REFERENCE SCALE

UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING A LICENSED PROFESSIONAL ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209, SUB–DIVISION 2 OF THE N.Y. STATE EDUCATION LAW. FELLENZER ENGINEERING, LLP CERTIFICATE OF AUTHORIZATION #: 0017795

FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084–1 ISSUED 1995; EXP. 8/25

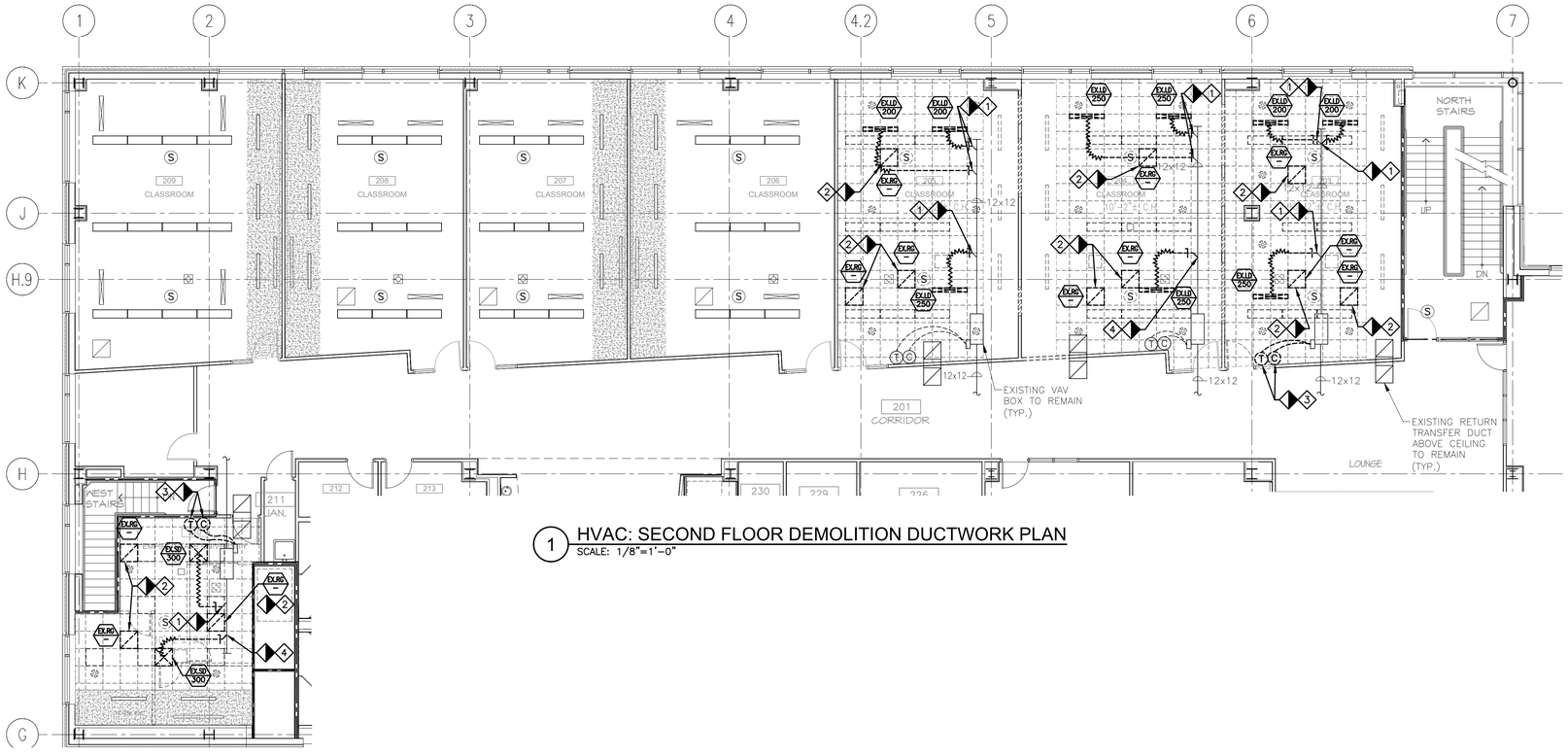
ISSUED 6/17/26 FOR BID

PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

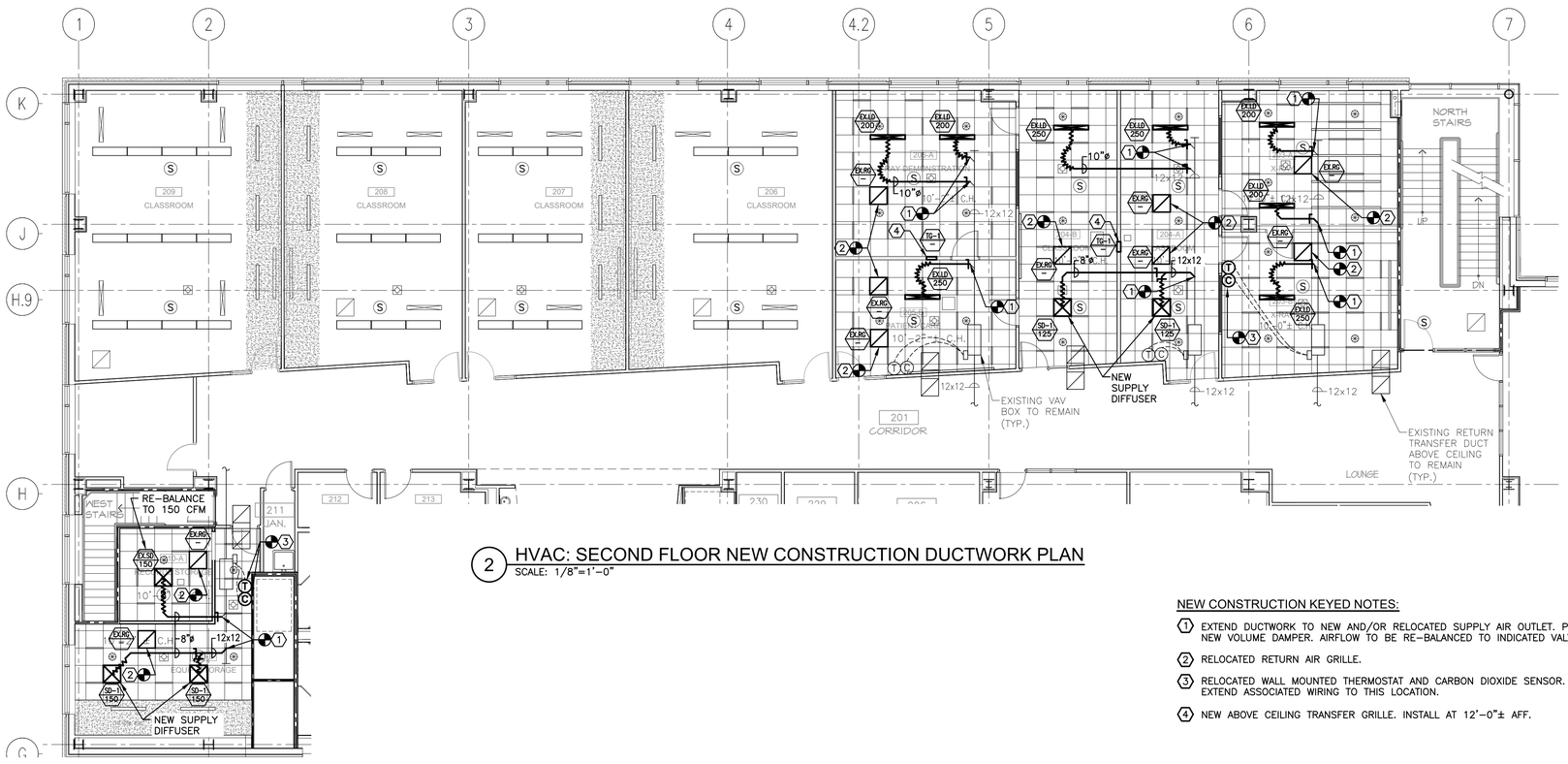
DRAWING TITLE:
HVAC: SYMBOLS, NOTES & ABBREVIATIONS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	SL		EDF	H-001
DATE: 5–8–26	SCALE: AS SHOWN		FE PROJECT #: 23–197	PAGE 13 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(13) H-001.dwg (Layout: H-001)
Date: Wed, Jun 17, 2026 - 8:12 AM (Name: wpb)



1 HVAC: SECOND FLOOR DEMOLITION DUCTWORK PLAN
SCALE: 1/8"=1'-0"



2 HVAC: SECOND FLOOR NEW CONSTRUCTION DUCTWORK PLAN
SCALE: 1/8"=1'-0"

DEMOLITION KEYED NOTES:

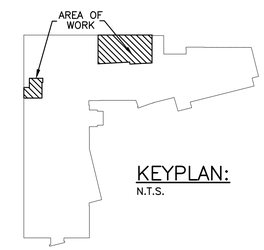
1. EXISTING SUPPLY AIR OUTLET TO BE REMOVED FOR RELOCATION TO NEW CEILING GRID. DISCONNECT AND DEMOLISH DUCTWORK BACK TO POINT INDICATED. PREPARE TO EXTEND TO NEW AIR OUTLET LOCATION.
2. EXISTING CEILING RETURN AIR GRILLE TO BE REMOVED FOR RELOCATION TO NEW CEILING GRID.
3. EXISTING WALL MOUNTED THERMOSTAT AND CARBON DIOXIDE SENSOR TO BE REMOVED AND RELOCATED. PREPARE TO EXTEND WIRING TO NEW LOCATION.
4. EXISTING SUPPLY AIR OUTLET TO BE DEMOLISHED. DISCONNECT AND DEMOLISH DUCTWORK BACK TO POINT INDICATED. PREPARE TO EXTEND TO NEW AIR OUTLET.

DEMOLITION GENERAL NOTES:

1. ITEMS SHOWN ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED FOR DEMOLITION.
2. PATCH AND REPAIR ALL SURFACES AS A RESULT OF DEMOLITION. FINISH TO MATCH EXISTING.
3. EXISTING DUCTWORK SHOWN APPROXIMATELY. VERIFY IN FIELD AS NECESSARY.

NEW CONSTRUCTION KEYED NOTES:

1. EXTEND DUCTWORK TO NEW AND/OR RELOCATED SUPPLY AIR OUTLET. PROVIDE NEW VOLUME DAMPER. AIRFLOW TO BE RE-BALANCED TO INDICATED VALVE.
2. RELOCATED RETURN AIR GRILLE.
3. RELOCATED WALL MOUNTED THERMOSTAT AND CARBON DIOXIDE SENSOR. EXTEND ASSOCIATED WIRING TO THIS LOCATION.
4. NEW ABOVE CEILING TRANSFER GRILLE. INSTALL AT 12'-0"± AFF.



KEYPLAN:
N.T.S.

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

⅛" ¼" ½" 0 1" 2"
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www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1 ISSUED 1995; EXP. 8/25

ISSUED 6/17/26 FOR BID

PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
HVAC: DEMO & NEW 2ND FLOOR DUCTWORK PLANS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	SL		EDF	HD/H-101
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 14 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(14) H-101.dwg (Layout: H-101)
Date: Wed, Jun 17, 2026 - 8:12 AM (Name: wpb)

GENERAL NOTES:

1. THE DRAWINGS ON THESE PLANS ARE DIAGRAMMATIC. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH OTHER TRADES AND THE BUILDING STRUCTURE. NO EXTRA PAYMENTS WILL BE AUTHORIZED FOR REROUTING OR REMOVAL OF INSTALLED WORK DUE TO LACK OF COORDINATION WITH OTHER SYSTEMS.
2. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF WALLS, FLOORS AND CEILINGS AS REQUIRED FOR INSTALLATION OF HIS WORK.
3. THIS CONTRACTOR SHALL FURNISH AND INSTALL ACCESS PANELS AS REQUIRED WHERE ACCESSIBILITY TO COMPONENTS (VALVES, TRAPS, CLEANOUTS, ETC.) IS REQUIRED FOR MAINTENANCE AND/OR SYSTEM OPERATION.
4. ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.
5. ALL PENETRATIONS THROUGH FOUNDATIONS AND EXTERIOR WALLS SHALL BE SEALED WITH EDPM OR EDPM RUBBER GASKET AND SEALED WITH A WATERPROOF, NON–HARDENING SEALANT.
6. FURNISH AND INSTALL UNDER SINK PROTECTIVE PIPE COVER KITS ON EXPOSED PIPING AT ALL ADA ACCESSIBLE SINKS AND LAVATORIES.
7. COORDINATE FIXTURE ROUGH–INS AND INSTALLATIONS WITH THE ARCHITECTURAL PLANS.
8. ALL EXPOSED DOMESTIC WATER DISTRIBUTION PIPING IS TO BE INSULATED.
9. PROVIDE SHUT–OFF VALVES AT ALL BRANCH PIPING TAKE–OFFS AND AT ALL CONNECTIONS TO EQUIPMENT. PROVIDE UNIONS AT ALL EQUIPMENT CONNECTIONS.
10. THE TERMS "PROVIDE" OR "FURNISH", AS USED ON THESE PLANS, INDICATE THAT THE CONTRACTOR IS TO FURNISH AND INSTALL THE REFERENCED EQUIPMENT OR SYSTEMS IN THEIR ENTIRETY AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
11. CONTRACTOR SHALL PROVIDE ALL COMPONENTS INDICATED ON DETAIL SHEETS, PLANS, SPECIFICATIONS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE AND WORKABLE SYSTEM.
12. CONTRACT CLOSE OUT: IN THE PRESENCE OF THE OWNER, ENGINEER OR ARCHITECT; DEMONSTRATING OPERATION OF SYSTEMS AND THAT ALL SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF ALL PARTIES.
13. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE ALTERATIONS AND/OR NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE NEW SYSTEMS IN EVERY RESPECT, CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.

GENERAL PLUMBING NOTES:

1. DRAIN PIPING SHOWN ON PLANS SHALL BE INSTALLED BELOW THE FLOOR SHOWN (BELOW SLAB OR ABOVE CEILING OF LOWER FLOOR AS APPROPRIATE) UNLESS OTHERWISE NOTED.
2. ALL PLUMBING SUPPLY & VENT PIPING SHOWN SHALL BE INSTALLED IN THE CEILING OF THE FLOOR PLAN SHOWN, UNLESS OTHERWISE NOTED.
3. PLUMBING CONTRACTOR IS RESPONSIBLE FOR OWN CUTTING & PATCHING AS REQUIRED. FINISHING SHALL BE BY GENERAL CONTRACTOR.
4. INSTALL SECTIONALIZING VALVES AT ALL MAIN 'T' ON DOMESTIC HOT & COLD WATER SERVICE.
5. HOT & HOT WATER RETURN PIPING SHALL BE INSULATED PER WRITTEN SPECIFICATIONS AND NYS ENERGY CONSERVATION CONSTRUCTION CODE.
6. UNLESS OTHERWISE NOTED, ALL VALVES 2"ø & SMALLER SHALL BE QUARTER–TURN BALL VALVES AND ALL VALVES 2½" & LARGER SHALL BE GATE VALVES. ALL VALVES SHALL BE OF FULL–PORT DESIGN.
7. PLUMBING CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED & PAY ALL FEES.
8. ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.

PLUMBING DEMOLITION NOTES:

1. COORDINATE WITH ARCHITECTURAL PLANS FOR EXACT AREAS TO BE DEMOLISHED.
2. REMOVE ALL EQUIPMENT AND PIPING AS INDICATED ON PLAN. REMOVALS SHALL INCLUDE ALL FITTINGS, SUPPORTS AND HANGERS.
3. ANY DISCREPANCIES BETWEEN THE DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER. ANY DEMOLITION WORK WHICH MAY BE QUESTIONABLE DUE TO UNFORESEEN FIELD CONDITIONS SHALL NOT BE REMOVED UNTIL REVIEWED BY THE ARCHITECT, ENGINEER OR BUILDING FACILITIES MANAGER.
4. DEMOLITION WORK SHALL INCLUDE THE PREPARATION OF EXISTING EQUIPMENT OR PIPING FOR CONNECTION TO NEW WORK. COORDINATE DEMOLITION WORK WITH THE CONSTRUCTION PLANS.
5. ALL EQUIPMENT REMOVALS SHALL BECOME THE PROPERTY OF THIS CONTRACTOR. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REMOVAL AND DISPOSAL OF DEMOLITION ITEMS OFF–SITE, UNLESS OTHERWISE NOTED.
6. ALL CUTTING AND PATCHING NECESSARY FOR THE DEMOLITION WORK SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
7. IT SHALL BE THE OWNER'S RESPONSIBILITY TO REMOVE ANY LOOSE EQUIPMENT, FURNITURE, SUPPLIES, ETC. THAT MAY BE LOCATED IN THE AREA OF WORK.
8. THE PLANS ARE INTENDED TO CONVEY THE EXTENT AND SCOPE OF THE DEMOLITION WORK. EVERY ITEM INTENDED FOR REMOVAL MAY NOT BE SHOWN. THE CONTRACTOR IS ADVISED TO SURVEY THE PROJECT SITE BEFORE SUBMITTING A BID FOR DEMOLITION WORK.

PIPING SYMBOLS

- DIRECTION OF FLOW
- ANCHOR
- PIPE GUIDE
- REDUCER OR INCREASER
- ECCENTRIC REDUCER
- TOP CONNECTION, 45° OR 90°
- BOTTOM CONNECTION, 45° OR 90°
- SIDE CONNECTION
- CAPPED OUTLET
- PIPE DOWN TURN
- PIPE RISE
- UNION
- DIRECTION OF PIPE PITCH (DOWN)

PLUMBING LINE TYPES

- EXISTING TO BE REMOVED
- EXISTING TO REMAIN
- COLD WATER SUPPLY
- HOT WATER SUPPLY
- HOT WATER RETURN
- SAN — SANITARY LINE
- VENT PIPE

GENERAL SYMBOLS

- POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
- POINT OF DISCONNECT
- X — INDICATES SECTION LETTER
- XX — INDICATES DRAWING NUMBER WHERE LOCATED
- PUMP

VALVE SYMBOLS

- OR OR — GATE VALVE – THREADED/FLANGED
- GATE VALVE WITH 3/4" HOSE ADAPTER
- OR OR — GLOBE VALVE – THREADED/FLANGED
- OR OR — CHECK VALVE
- OR OR — STRAINER
- WYE STRAINER (WITH BALL VALVE & HOSE CONNECTION)
- STRAINER WITH VALVED DRAIN AND QUICK–COUPLE HOSE CONNECTOR
- OR — FLEXIBLE CONNECTION
- ANGLE GLOBE VALVE
- OR OR — BUTTERFLY VALVE
- OR OR — BALL VALVE
- CONTROL VALVE (CV) – FLOAT–OPERATED
- OR OR — MODULATING CONTROL VALVE
- MODULATING CONTROL BUTTERFLY VALVE
- TWO POSITION CONTROL VALVE
- OR OR — THREE–WAY MODULATING CONTROL VALVE
- THREE–WAY TWO POSITION CONTROL VALVE
- OR OR — PRESSURE REGULATING VALVE
- OR OR — PRESSURE REDUCING VALVE (PRV)
- OR OR — TEMPERATURE & PRESSURE RELIEF VALVE
- SAFETY OR PRESSURE RELIEF VALVE
- OR OR — AUTOMATIC BALANCING CONTROL VALVE
- WATER BALANCE DEVICE
- WATER FLOW MEASURING DEVICE
- OR OR — CIRCUIT SETTER VALVE
- GATE VALVE WITH GLOBE–VALVED BYPASS
- OR OR — TRIPLE DUTY VALVE
- LC — WATER LEVEL CONTROLLER
- OR M — FLOW METER
- OR — COMBINATION BALANCING AND SHUT–OFF VALVE
- MANUAL AIR VENT
- TEST PLUG (PRESSURE/TEMPERATURE)
- OR — PLUG VALVE
- LUBRICATED PLUG VALVE

ABBREVIATIONS

A	MEDICAL AIR
ACT	ACOUSTIC CEILING TILE
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
AW	ACID WASTE PIPE
BTUH	BRITISH THERMAL UNITS/HOUR
CLG	CEILING
CO	CLEAN OUT
CP	CONDENSATE PUMP
CW	DOMESTIC COLD WATER
DIA	DIAMETER
D	DRAIN
DN	DOWN
DP	DIFFERENTIAL PRESSURE
E.C.	ELECTRICAL CONTRACTOR
ECC	ENGINEERING CONTROL CENTER
EMD	END OF MAIN DRIP (STEAM)
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EXIST	EXISTING
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FLR.	FLOOR
FPC	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
G.SAN	"GREASE LADEN" SANITARY DRAINAGE PIPE
H.C.	HVAC CONTRACTOR
HP	HORSE POWER
HTWR	HIGH TEMP. HOT WATER RETURN PIPE (140°F)
HTWS	HIGH TEMP. HOT WATER PIPE (140°F)
HW	DOMESTIC HOT WATER PIPE (120°F)
HWR	DOMESTIC HOT WATER RETURN PIPE (120°F)
LBS/HR	POUNDS PER HOUR
LF	LINEAR FEET
MAX.	MAXIMUM
MBH	ONE THOUSAND BTUH
MER	MECHANICAL EQUIPMENT ROOM
MIN.	MINIMUM
MV	MEDICAL VACUUM
NOM.	NOMINAL
O	OXYGEN
P	PUMP
P.C.	PLUMBING CONTRACTOR
PD	PRESSURE DROP (FEET OF WATER)
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE IN.
SAN	SANITARY DRAINAGE PIPE
S.S.	STAINLESS STEEL
ST	STORM DRAINAGE PIPE
UH	UNIT HEATER
U.N.O.	UNLESS NOTED OTHERWISE
V	VENT PIPE
VI	VIBRATION ISOLATOR
VIF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
WCO	WALL CLEAN OUT
WF	WATER FILTER
WFM	WATER FLOW MEASURING DEVICE
WH	WATER HEATER

2025 ENERGY CONSERVATION CONSTRUCTION CODE OF NYS
TABLE C403.13.3(1)
MINIMUM PIPE INSULATION THICKNESS (IN INCHES OR R-VALUE)[a,c]

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)					
	CONDUCTIVITY (BTUxIN)/(HxFT²x°F)[b]	MEAN RATING TEMPERATURE (°F)	INCHES OR R-VALUE	<1"	1 TO <1½"	1½" TO <4"	4" TO <8"	8"
				MINIMUM INSULATION THICKNESS (INCHES)				
> 350	0.32–0.34	250	INCHES	4.5	5.0	5.0	5.0	5.0
			R–VALUE	R–32	R–36	R–34	R–26	R–21
251–350	0.29–0.32	200	INCHES	3.0	4.0	4.5	4.5	4.5
			R–VALUE	R–20	R–29	R–32	R–24	R–20
201–250	0.27–0.30	150	INCHES	2.5	2.5	2.5	3.0	3.0
			R–VALUE	R–17	R–17	R–17	R–15	R–13
141–200	0.25–0.29	125	INCHES	1.5	1.5	2.0	2.0	2.0
			R–VALUE	R–9	R–9	R–11	R–10	R–9
105–140	0.21–0.28	100	INCHES	1.0	1.0	1.5	1.5	1.5
			R–VALUE	R–5	R–9	R–8	R–8	R–7
40–60	0.21–0.27	75	INCHES	0.5	0.5	1.0	1.0	1.0
			R–VALUE	R–2	R–2	R–5	R–5	R–4
< 40	0.20–0.26	50	INCHES	0.5	1.0	1.0	1.0	1.5
			R–VALUE	R–6	R–9	R–9	R–8	R–7

FOR SI: 1" = 25.4mm, °C = (°F–32)/1.8

a. FOR PIPING SMALLER THAN 1½" AND LOCATED IN PARTITIONS WITHIN CONDITIONED SPACES, REDUCTION OF THESE THICKNESSES BY 1" SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE B) BUT NOT TO A THICKNESS LESS THAN 1".

b. FOR INSULATION OUTSIDE THE STATED CONDUCTIVITY RANGE, THE MINIMUM THICKNESS (T) SHALL BE DETERMINED AS FOLLOWS:

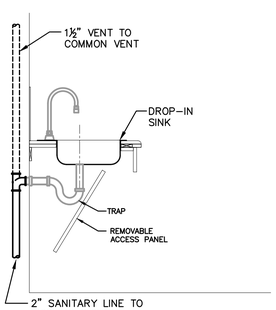
$$T=r[(1+t/R)^{K/k}-1]$$

WHERE:
T = MINIMUM INSULATION THICKNESS
r = ACTUAL OUTSIDE RADIUS OF PIPE
t = INSULATION THICKNESS LISTED IN THE TABLE APPLICABLE FLUID TEMPERATURE AND PIPE SIZE
K = CONDUCTIVITY OF ALTERNATE MATERIAL AT MEAN RATING TEMPERATURE INDICATED FOR THE APPLICABLE FLUID TEMPERATURE [(BTUxIN)/HxFT²x°F)]
k = THE UPPER VALUE OF THE CONDUCTIVITY RANGE LISTED IN THE TABLE FOR THE APPLICABLE FLUID TEMPERATURE

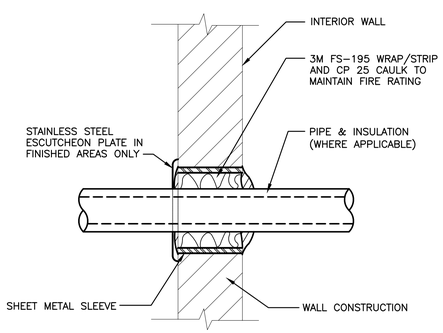
c. FOR DIRECT–BURIED HEATING AND HOT WATER SYSTEM PIPING, REDUCTION OF THESE THICKNESSES BY 1½" (38mm) SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE B BUT NOT TO THICKNESSES LESS THAN 1".

PLUMBING FIXTURE SCHEDULE

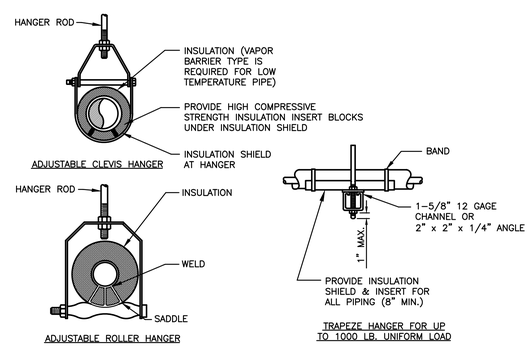
TAG	MANUFACTURER	MODEL #	LOCATION	MOUNTING HEIGHT	MAXIMUM FLOW RATE	DESCRIPTION
SK-1	ELKAY	LRAD172055	205-B PATIENT CARE	COORDINATE WITH CASEWORK	0.5	"LUSTERTONE" STAINLESS STEEL DROP-IN 17"x20" SINGLE BASIN SINK, 2 FAUCET HOLES 4" ON CENTER. SUPPLY WITH 0.5 GPM AMERICAN STANDARD GOOSENECK FAUCET MODEL #7500175.002, 4" CENTERS, 5" SPOUT REACH. INCLUDE BASKET STRAINER, TAILPIECE, AND SUPPLY STOPS & HOSES SIZED PER DRAWINGS. INSTALL WITH P-TRAP. INCLUDE ALL NECESSARY HARDWARE FOR A COMPLETE INSTALLATION, AND INSTALL PER ADA REQUIREMENTS.



1 SINK DRAINAGE / VENT DETAIL
N.T.S.



2 RATED WALL PENETRATION DETAIL
N.T.S.



INDIVIDUAL PIPE HANGER ROD & SPACING SCHEDULE

NOMINAL PIPE DIAMETER (IN.)	3/4	1	1 1/2	2	2 1/2	3	4	5	6	–
HANGER ROD SIZE (IN.)	3/8	3/8	3/8	3/8	1/2	1/2	5/8	5/8	7/8	–
MAXIMUM SUPPORT SPACING (FT.)										
STEEL PIPE	6	7	9	10	11	12	14	16	17	–
COPPER TUBE	6	6	8	9	10	10	12	14	14	–

NOTE: TRAPEZE HANGER SPACING SHALL BE BASED ON SPACING OF SMALLEST PIPE ON TRAPEZE. TRAPEZE SHALL BE DESIGNED WITH A FACTOR OF SAFETY OF 5 FOR CENTER OF SPAN CONCENTRATED LOAD

3 TYPICAL PIPE HANGERS
N.T.S.

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⅛" ¼" ½" 0 1" 2"
REFERENCE SCALE

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FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073064–1 ISSUED 1995; EXP. 8/25

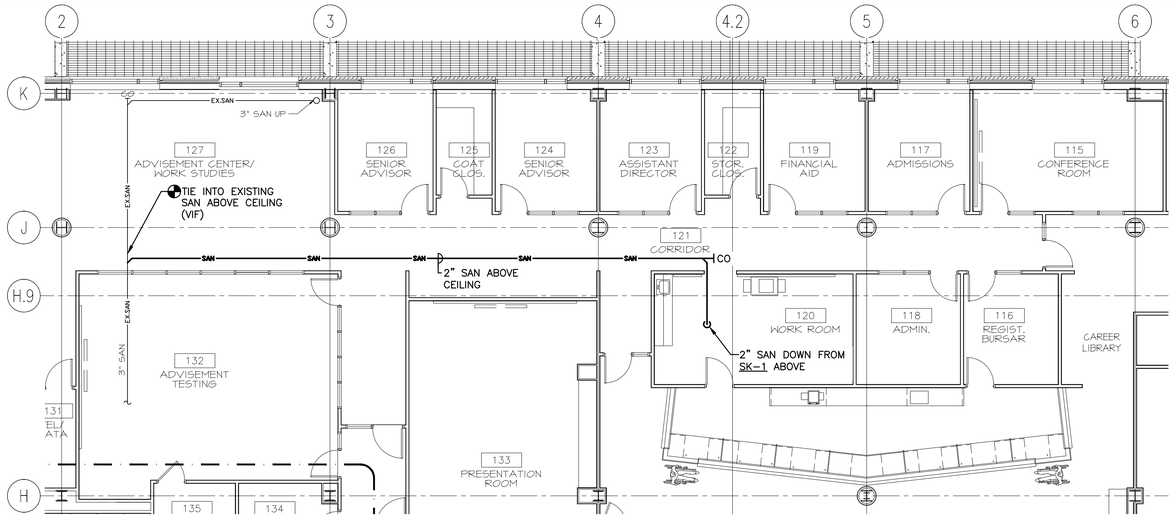
ISSUED 6/17/26 FOR BID

PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
PLUMBING: SYMBOLS, NOTES & ABBREVIATIONS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	SL		EDF	P-001
DATE: 5–8–26	SCALE: AS SHOWN		FE PROJECT #: 23–197	

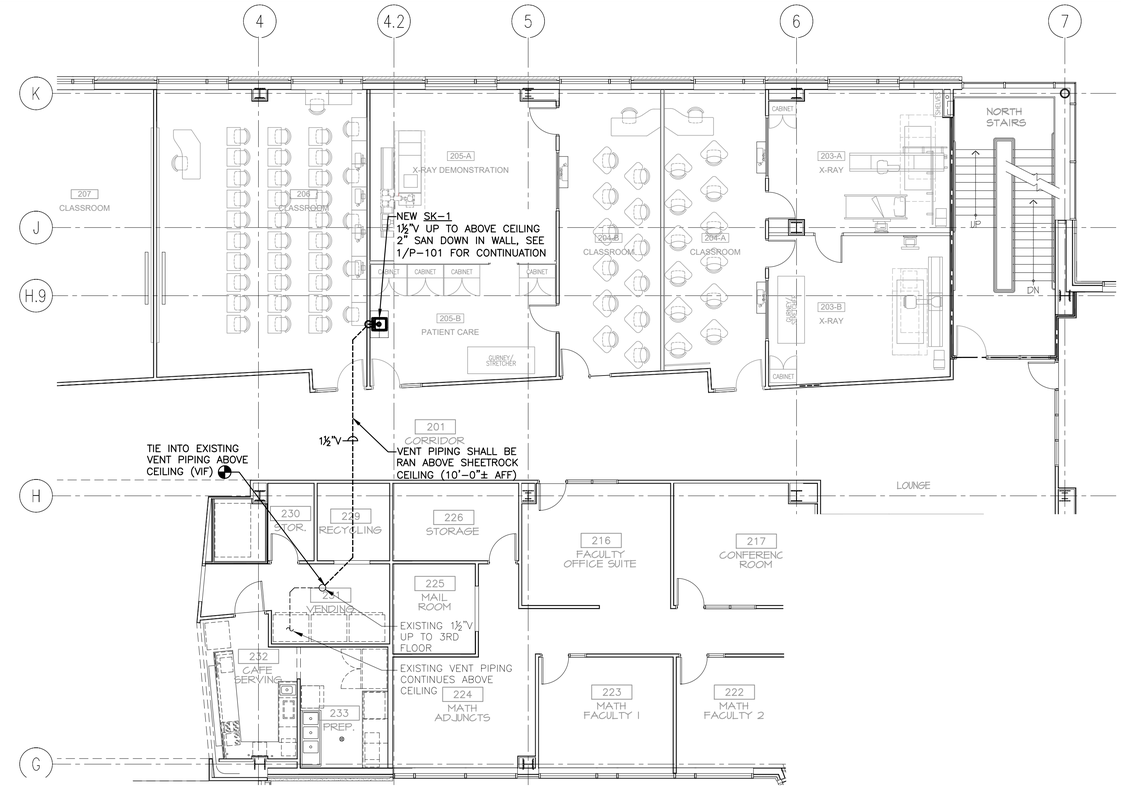
File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(15) P-001.dwg (Layout: P-001)
Date: Wed, Jun 17, 2026 - 8:12 AM (Name: wpb)



PLUMBING: PLAZA LEVEL (FIRST FLOOR)

1 NEW CONSTRUCTION SANITARY PLAN

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



PLUMBING: SECOND FLOOR

2 NEW CONSTRUCTION SANITARY PLAN

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

GENERAL NOTES:

1. LOCATIONS OF EXISTING PIPING IS SHOWN APPROXIMATELY. VERIFY IN FIELD AS NECESSARY.
2. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES ARE TO BE APPROPRIATELY FIRESTOPPED TO MAINTAIN EXISTING FIRE RATING.

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

⅛" ¼" ½" 0 1" 2"

REFERENCE SCALE

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FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.

NY PROFESSIONAL ENGINEER
NO. 073084-1
ISSUED 1995; EXP. 8/25

ISSUED
6/17/26
FOR BID

PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
PLUMBING: PLAZA & 2ND FLOOR SANITARY PLANS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	SL		EDF	P-101
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 16 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(16) P-101.dwg (Layout: P-101)
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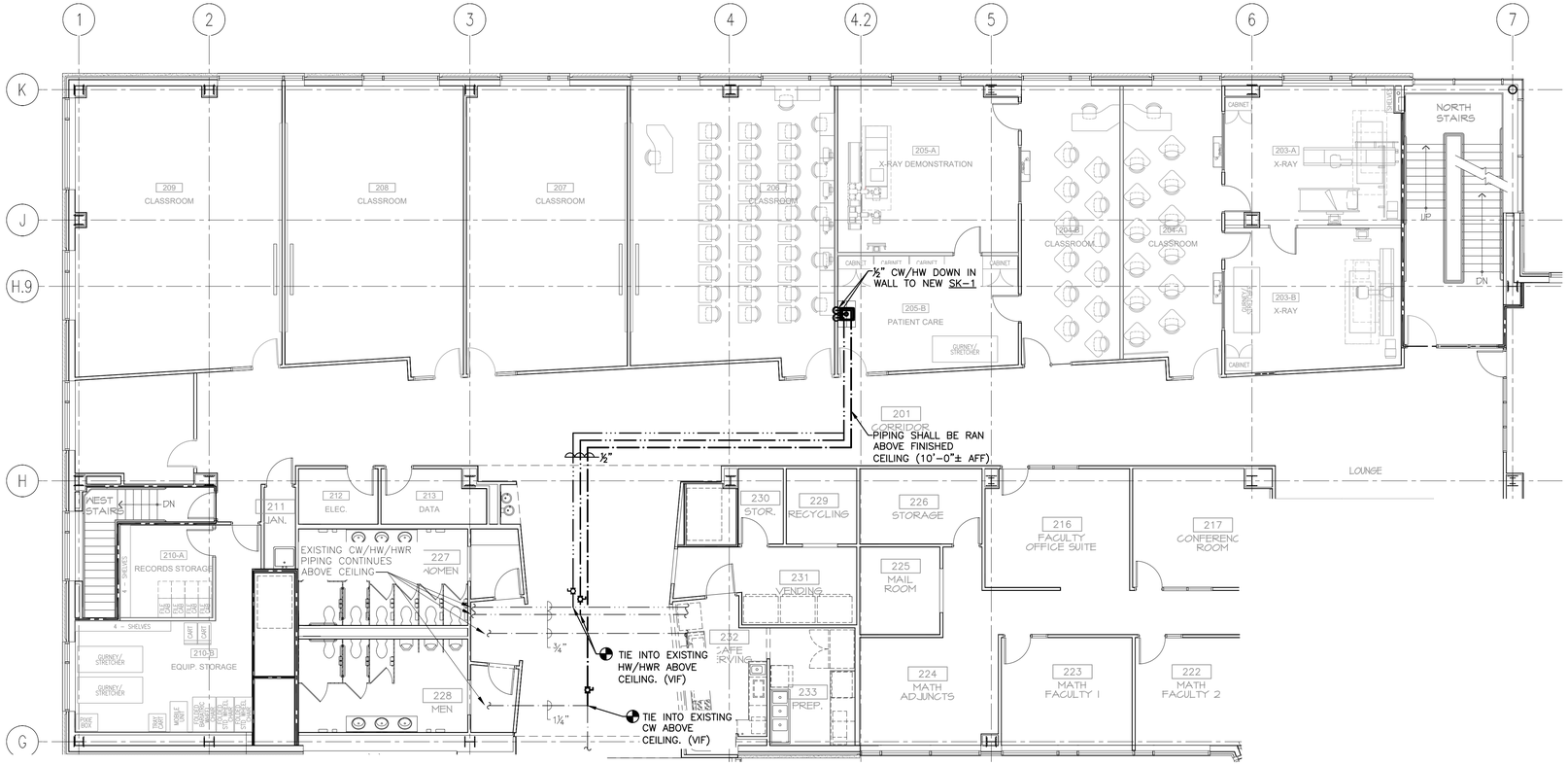

PLUMBING: SECOND FLOOR
NEW CONSTRUCTION DOMESTIC PLAN

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

GENERAL NOTES:

1. LOCATIONS OF EXISTING PIPING IS SHOWN APPROXIMATELY. VERIFY IN FIELD AS NECESSARY.
2. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES ARE TO BE APPROPRIATELY FIRESTOPPED TO MAINTAIN EXISTING FIRE RATING.

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

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REFERENCE SCALE

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t 845-343-1481 fx 845-343-4986

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PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
PLUMBING: SECOND FLOOR DOMESTIC PLAN

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	SL		EDF	P-102
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 17 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(17) P-102.dwg (Layout: P-102)
Date: Wed, Jun 17, 2026 - 8:12 AM (Name: wpb)

SPRINKLER DEMOLITION NOTES:

1. COORDINATE WITH ARCHITECTURAL PLANS FOR EXACT AREAS TO BE DEMOLISHED.
2. REMOVE ALL EQUIPMENT AND PIPING AS INDICATED ON PLAN. REMOVALS SHALL INCLUDE ALL FITTINGS, SUPPORTS AND HANGERS.
3. ANY DISCREPANCIES BETWEEN THE DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER. ANY DEMOLITION WORK WHICH MAY BE QUESTIONABLE DUE TO UNFORESEEN FIELD CONDITIONS SHALL NOT BE REMOVED UNTIL REVIEWED BY THE ARCHITECT, ENGINEER OR BUILDING FACILITIES MANAGER.
4. DEMOLITION WORK SHALL INCLUDE THE PREPARATION OF EXISTING EQUIPMENT OR PIPING FOR CONNECTION TO NEW WORK. COORDINATE DEMOLITION WORK WITH THE CONSTRUCTION PLANS.
5. ALL EQUIPMENT REMOVALS SHALL BECOME THE PROPERTY OF THIS CONTRACTOR. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REMOVAL AND DISPOSAL OF DEMOLITION ITEMS OFF–SITE, UNLESS OTHERWISE NOTED.
6. ALL CUTTING AND PATCHING NECESSARY FOR THE DEMOLITION WORK SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
7. IT SHALL BE THE OWNER'S RESPONSIBILITY TO REMOVE ANY LOOSE EQUIPMENT, FURNITURE, SUPPLIES, ETC. THAT MAY BE LOCATED IN THE AREA OF WORK.
8. THE PLANS ARE INTENDED TO CONVEY THE EXTENT AND SCOPE OF THE DEMOLITION WORK. EVERY ITEM INTENDED FOR REMOVAL MAY NOT BE SHOWN. THE CONTRACTOR IS ADVISED TO SURVEY THE PROJECT SITE BEFORE SUBMITTING A BID FOR DEMOLITION WORK.

FIRE PROTECTION SYSTEM NOTES:

1. THE INTENT OF THESE DRAWINGS IS TO PROVIDE A COMPLETE & OPERATIVE SPRINKLER SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES AS REQUIRED. THIS CONTRACTOR SHALL MEET THE INTENT OF THE PLANS & SPECIFICATIONS AS WELL AS THE ACCOMPANYING DOCUMENTS. THIS CONTRACTOR SHALL PROVIDE ANY ADDITIONAL MATERIAL & LABOR NOT SPECIFICALLY LISTED OR DIRECTED WHICH MAY BE REQUIRED TO MEET THE INTENT OF THE PLANS & SPECIFICATIONS FOR A COMPLETE AND OPERABLE SYSTEM.
2. IT IS THIS CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE ALL CUTTING, PATCHING, BOXING, PRIME AND FINISH WORK REQUIRED TO COMPLETE THE INSTALLATION. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
   - A. WATER FLOW & PRESSURE TESTING OF AVAILABLE WATER SUPPLY SYSTEM.
   - B. PIPE SIZING VIA THE HYDRAULIC PIPE SIZE METHOD PER NFPA–13.
   - C. THE INSTALLATION OF ALL PIPING AND COORDINATION OF WORK WITH OTHER SUB–CONTRACTORS.
   - D. INSPECTION & TESTING OF ALL PIPING & DEVICES, OBTAINING APPROVALS & PAYING OF ALL FEES AS REQUIRED FOR THE SYSTEM INSTALLATION & APPROVALS.
   - E. ONE YEAR GUARANTEE ON MATERIAL & WORKMANSHIP. COMPLETE OPERATING INSTRUCTIONS INCLUDING MAINTENANCE & TESTING INSTRUCTIONS (POSTED IN SPRINKLER CONTROL AREA).
3. DO NOT PIERCE ANY STRUCTURAL MEMBER.
4. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL PIPING WITH THE BUILDING STRUCTURE, AS WELL AS WITH OTHER TRADES DURING CONSTRUCTION. SEE PLANS FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL OBTAIN APPROVAL & COORDINATE WITH THE LOCAL AUTHORITY HAVING JURISDICTION.
5. THE SPRINKLER SYSTEM SUB–CONTRACTOR AND THE FIRE ALARM SYSTEM SUB–CONTRACTOR SHALL COORDINATE THE SYSTEM WITH THE FIRE DEPARTMENT AND OBTAIN ALL APPROVALS AND PAY ALL FEES.
6. SUPERVISORY SWITCHES AND FLOW SWITCHES TO BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. CONNECTIONS TO BUILDING FIRE ALARM SYSTEM BY FIRE ALARM CONTRACTOR.
7. SPRINKLER CONTRACTOR SHALL PROVIDE ENGINEER WITH SIGNED & SEALED HYDRAULIC CALCULATIONS AND PIPE LAYOUT FOR REVIEW AND APPROVAL.
8. CONTRACTOR SHALL SEAL ALL PIPE PENETRATIONS THROUGH RATED WALLS AND CEILINGS WITH INTUMESCEANT TYPE FIRE SEALANT CAULK. PROVIDE ESCUTCHEONS AT ALL PENETRATIONS IN FINISHED AREAS.
9. IN GENERAL, SPRINKLERS SHALL BE ARRANGED FOR A MAXIMUM COVERAGE AS SHOWN ON PLANS WHILE AVOIDING LIGHTS, DIFFUSERS, ETC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE HIS PIPING AND SPRINKLERS FOR PROPER COVERAGE IN EACH AREA. ADD SPRINKLERS AS REQUIRED FOR PROPER COVERAGE AS DICTATED BY ACTUAL FIELD CONDITIONS.
10. ALL FIRE PROTECTION SYSTEMS PROVIDED SHALL BE U.L. LISTED AND F.M. APPROVED AS APPLICABLE.
11. CONTRACTOR SHALL PROVIDE AND INSTALL ALL COMPONENTS INDICATED ON DETAIL SHEETS, PLANS, SPECIFICATIONS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE AND WORKABLE SYSTEM.
12. CONTRACT CLOSE OUT: IN THE PRESENCE OF THE OWNER, ENGINEER OR ARCHITECT; DEMONSTRATING OPERATION OF SYSTEMS AND THAT ALL SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF ALL PARTIES.
13. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE ALTERATIONS AND/OR NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE NEW SYSTEMS IN EVERY RESPECT, CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.

PIPING SYMBOLS

- ANCHOR
- PIPE GUIDE
- REDUCER OR INCREASER
- TOP CONNECTION, 45° OR 90°
- BOTTOM CONNECTION, 45° OR 90°
- SIDE CONNECTION
- CAPPED OUTLET
- RISE OR DROP IN PIPE

GENERAL SYMBOLS

- POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
- POINT OF DISCONNECT
- X — INDICATES SECTION LETTER
- XX — INDICATES DRAWING NUMBER WHERE LOCATED
- PENDANT SPRINKLER HEAD

SPRINKLER LEGEND

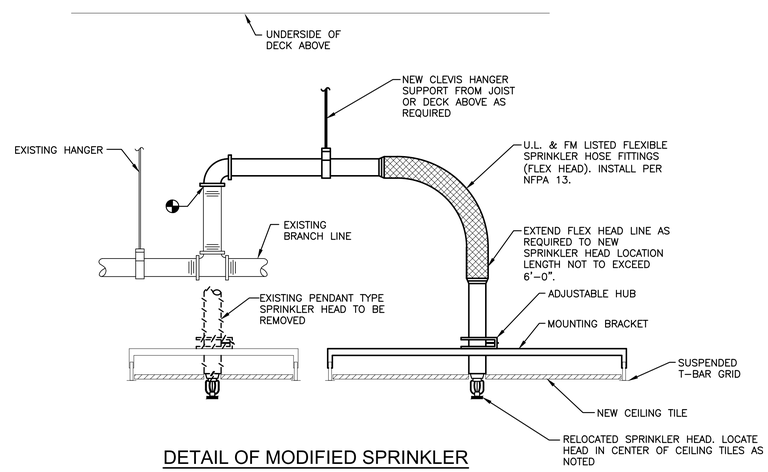
- EXISTING SPRINKLER TO BE REMOVED
- ETR — EXISTING SPRINKLER TO REMAIN
- RR — EXISTING SPRINKLER TO BE REMOVED & RELOCATED (NEW LOCATION AS SHOWN)
- N — NEW SPRINKLER

ABBREVIATIONS

ACT	ACOUSTIC CEILING TILE
AFF	ABOVE FINISHED FLOOR
DIA	DIAMETER
DN	DOWN
EC	ELECTRICAL CONTRACTOR
ETR	EXISTING TO REMAIN
EXIST.	EXISTING
FD	FLOOR DRAIN
FLR.	FLOOR
FPC	FIRE PROTECTION CONTRACTOR
GC	GENERAL CONTRACTOR
HC	HVAC CONTRACTOR
MAX.	MAXIMUM
MER	MECHANICAL EQUIPMENT ROOM
MIN.	MINIMUM
N	NEW
NOM.	NOMINAL
PC	PLUMBING CONTRACTOR
RR	REMOVE & RELOCATE
U.N.O.	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD

FIRE PROTECTION LINE TYPES

- EXISTING SPRINKLER PIPE TO BE REMOVED
- EXISTING SPRINKLER PIPE TO REMAIN
- NEW SPRINKLER PIPE



1 DETAIL OF MODIFIED SPRINKLER HEAD CONNECTION TO NEW CEILING
N.T.S.

ENERGY CODE STATEMENT:

TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2025 ENERGY CODE.

UNIFORM CODE STATEMENT:

TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2025 UNIFORM CODE.

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www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084–1 ISSUED 1995; EXP. 8/25

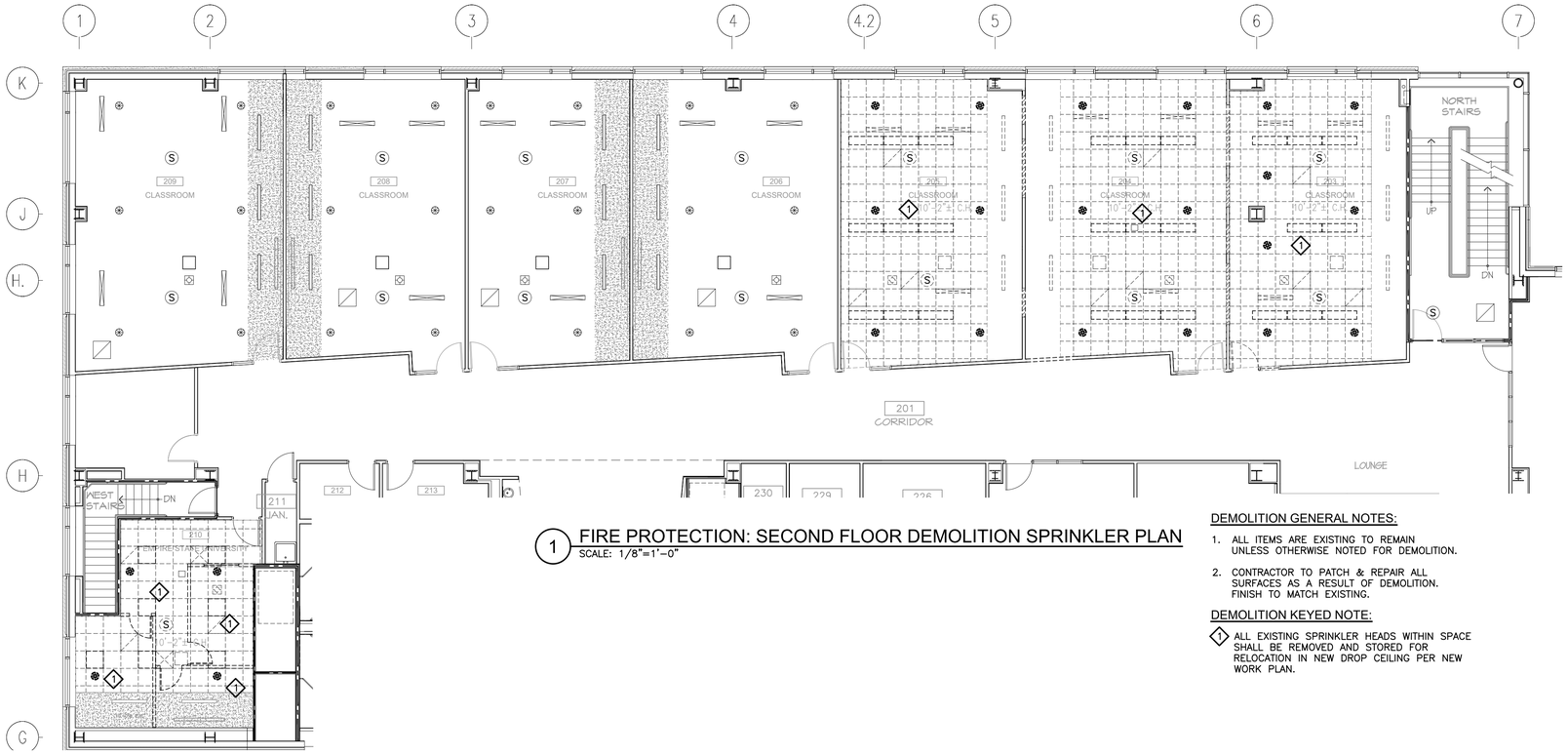
ISSUED 6/17/26 FOR BID

PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
FIRE PROTECTION: SYMBOLS, NOTES & ABBREVIATIONS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	SL		EDF	FP-001
DATE: 5–8–26	SCALE: AS SHOWN		FE PROJECT #: 23–197	PAGE 18 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(18) FP-001.dwg (Layout: FP-001)
Date: Wed, Jun 17, 2026 - 8:12 AM (Name: wpb)



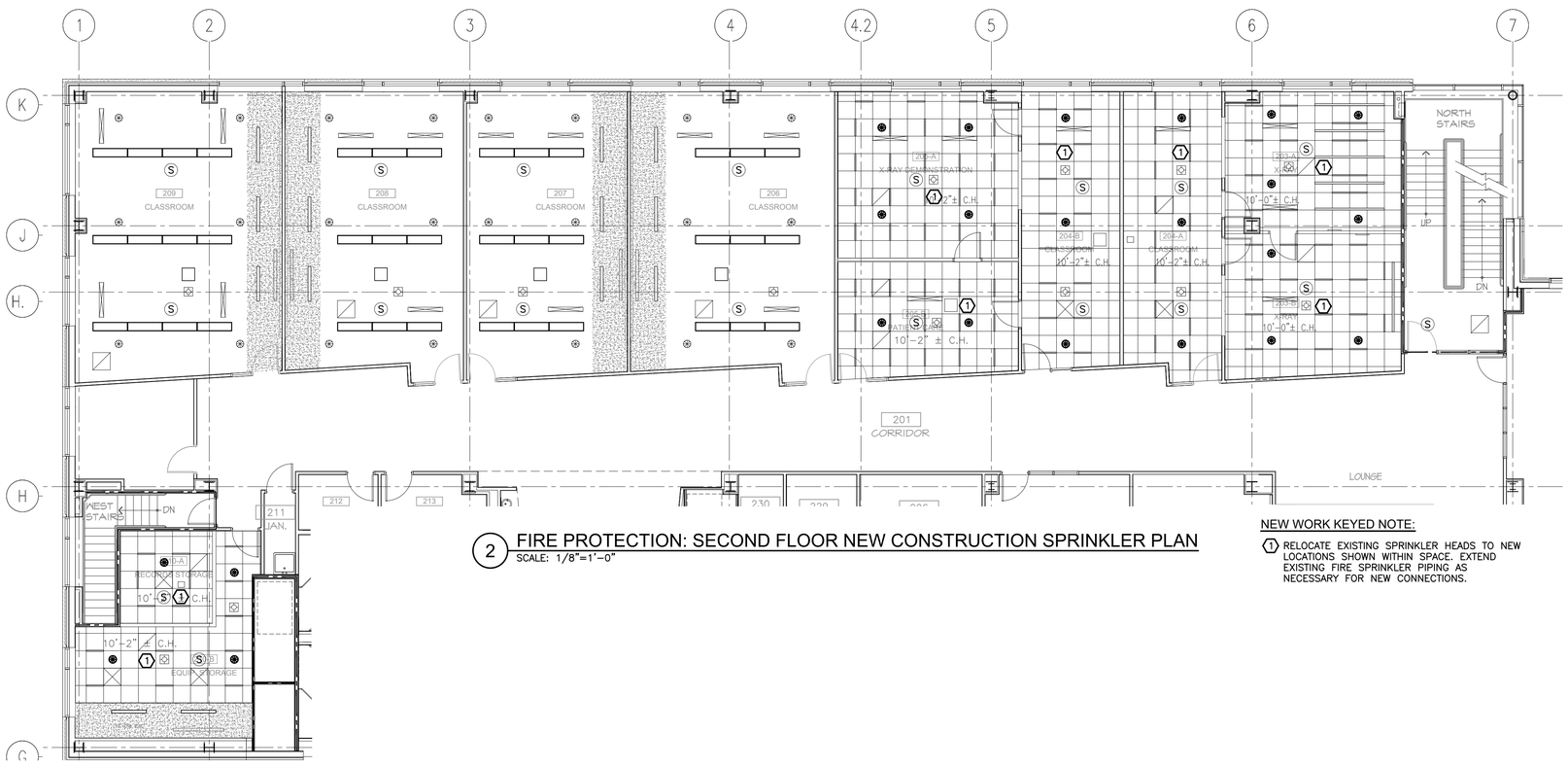
1 FIRE PROTECTION: SECOND FLOOR DEMOLITION SPRINKLER PLAN
SCALE: 1/8"=1'-0"

DEMOLITION GENERAL NOTES:

1. ALL ITEMS ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED FOR DEMOLITION.
2. CONTRACTOR TO PATCH & REPAIR ALL SURFACES AS A RESULT OF DEMOLITION. FINISH TO MATCH EXISTING.

DEMOLITION KEYED NOTE:

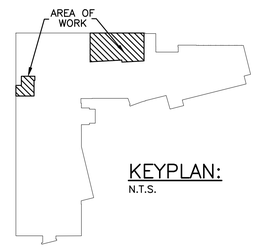
1. ALL EXISTING SPRINKLER HEADS WITHIN SPACE SHALL BE REMOVED AND STORED FOR RELOCATION IN NEW DROP CEILING PER NEW WORK PLAN.



2 FIRE PROTECTION: SECOND FLOOR NEW CONSTRUCTION SPRINKLER PLAN
SCALE: 1/8"=1'-0"

NEW WORK KEYED NOTE:

1. RELOCATE EXISTING SPRINKLER HEADS TO NEW LOCATIONS SHOWN WITHIN SPACE. EXTEND EXISTING FIRE SPRINKLER PIPING AS NECESSARY FOR NEW CONNECTIONS.



KEYPLAN:
N.T.S.

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

1/8" 1/4" 1/2" 0 1" 2"
REFERENCE SCALE

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FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

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RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
FIRE PROTECTION: DEMO & NEW 2ND FLOOR SPRINKLER PLANS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	SL		EDF	FPD/FP-101
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 19 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(19) FP-101.dwg (Layout: FP-101)
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GENERAL NOTES:

1. ALL CONDUITS ARE SHOWN DIAGRAMMATICALLY, EXACT RUNS SHALL BE DETERMINED IN FIELD EXCEPT WHERE SPECIFICALLY DIMENSIONED ON CONDUIT LAYOUTS. CONTRACTOR SHALL FOLLOW MINIMUM SPACING REQUIREMENTS TO REDUCE ELECTROMAGNETIC INTERFERENCE. COORDINATE CONDUIT ROUTING WITH ALL OTHER TRADES.
2. ALL EXPOSED CONDUIT SHALL BE RUN PARALLEL TO BUILDING WALLS AND BEAMS EXCEPT WHERE OTHERWISE SHOWN. CONTRACTOR SHALL INSTALL CONDUIT IN SUCH A MANNER TO AVOID ALL INTERFERENCES.
3. DEFLECTION/EXPANSION FITTINGS SHALL BE PROVIDED WHERE RIGID METAL CONDUIT CROSSES STRUCTURAL EXPANSION JOINTS.
4. EXPOSED CONDUIT SHALL BE SUPPORTED ON WALLS OR CEILINGS BY APPROVED HANGERS OF ANGLE OR CHANNEL CONSTRUCTION. CONDUITS SHALL BE SUPPORTED AT LEAST EVERY EIGHT (8) FEET.
5. ALL SPARE CONDUITS SHALL BE TERMINATED AS SHOWN ON CONDUIT LAYOUTS AND SHALL BE CAPPED 3" ABOVE FINISHED FLOOR.
6. NO CONDUIT SHALL BE SMALLER THAN ¾" UNLESS NOTED OTHERWISE ON PLANS.
7. EXACT CONDUIT STUB-UP LOCATIONS ARE TO BE DETERMINED BY THE ELECTRICAL CONTRACTOR BASED ON CERTIFIED MANUFACTURER'S DRAWINGS OF THE RESPECTIVE EQUIPMENT. CONDUIT SHALL BE INSTALLED TO AGREE WITH EQUIPMENT FURNISHED.
8. ALL LIGHTING WIRING SHALL BE #12AWG. UNLESS OTHERWISE NOTED. THE NUMBER OF WIRES SHOWN ON THE DRAWINGS IS NOT NECESSARILY THE CORRECT NUMBER REQUIRED. THE CONTRACTOR SHALL INSTALL AS MANY AS ARE NECESSARY FOR PROVIDING A COMPLETE ELECTRICAL SYSTEM IN EACH CASE.
9. CONDUITS PASSING THROUGH BUILDING FLOORS OR WALLS BELOW GRADE ARE TO BE INSTALLED WITH WATERTIGHT THRU WALL CONDUIT SEAL FITTINGS.
10. EQUIPMENT FURNISHED BY OTHERS SHALL BE INSTALLED & ENERGIZED BY THE ELECTRICAL CONTRACTOR.
11. ONLY CONDUITS HAVING OUTSIDE DIAMETERS NO LARGER THAN ONE-THIRD OF THE THICKNESS OF SLAB MAY BE INSTALLED WITHIN THE CONCRETE SLABS.
12. CONDUITS IN STRUCTURAL SLABS ARE TO BE SPACED SO AS TO PROVIDE NO LESS THAN THREE CONDUIT DIAMETERS, CENTER TO CENTER, WHEREVER POSSIBLE. LARGER SPACING IS PREFERRED.
13. CONTINUOUS ROWS OF CONDUITS ARE NOT TO BE PLACED IMMEDIATELY ALONG BEARING ENDS OF SLABS.
14. THE ELECTRICAL CONTRACTOR SHALL NOT ENDANGER THE STABILITY OF THE STRUCTURE OR ANY PART THEREOF BY CUTTING, DRILLING OR OTHERWISE, AND SHALL NOT IN ANY WAY CUT OR ALTER THE WORK OF ANY OTHER CONTRACTOR, EXCEPT WITH THE WRITTEN CONSENT OF AND UNDER THE DIRECTION OF THE ARCHITECT AND/OR GENERAL CONTRACTOR.
15. THE ELECTRICAL CONTRACTOR SHALL SECURE ALL APPROVALS AND CERTIFICATES AND PAY ALL FEES FOR ALL THE WORK INSTALLED. CERTIFICATES SHALL BE DELIVERED TO THE GENERAL CONTRACTOR BEFORE FINAL PAYMENT WILL BE MADE.
16. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST APPLICABLE VERSION OF THE NEC AS WELL AS ALL STATE AND LOCAL CODES.
17. THE DRAWINGS INDICATE AND THE SPECIFICATIONS DESCRIBE THE GENERAL ARRANGEMENTS AND LOCATION OF OUTLET BOXES, ETC. THE CONTRACTOR SHALL, WITHOUT EXTRA COST TO THE OWNER, MAKE ALL REASONABLE MODIFICATIONS IN THE WORK AS MAY BE REQUIRED TO PREVENT CONFLICT WITH EXISTING CONDITIONS, THE WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF THE WORK.
18. PRIOR TO SUBMISSION OF BID PROPOSAL, THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE CAREFULLY THE EXISTING CONDITIONS AND THE DIFFICULTIES THAT WILL BE INCURRED DURING THE PERFORMANCE OF HIS WORK.
    - A. VERIFY & COORDINATE CONDUIT ROUTING.
    - B. VERIFY & COORDINATE SCOPE OF DEMOLITION WORK.
    - C. VERIFY & COORDINATE SCOPE OF WORK INVOLVING CONNECTIONS TO EXISTING BASE BUILDING SYSTEMS.
    - D. VERIFY SCOPE OF WORK THAT HAS TO BE DONE WITH EXISTING FIRE ALARM SYSTEM AS REQUIRED TO ACCOMMODATE ALL ADDED DEVICES.
    - E. VERIFY WITH GENERAL CONTRACTOR SCOPE OF WORK ASSOCIATED WITH RIGGING OF EQUIPMENT TO BE PREPURCHASED.
    - F. COORDINATE WITH THE BUILDING ENGINEER AND GENERAL CONTRACTOR SHUT DOWNS OF EXISTING FACILITIES.
19. ARRANGE FOR SITE VISIT WITH THE BLDG. OWNER REPRESENTATIVE AND GENERAL CONTRACTOR.
20. CLAIMS FOR ADDITIONAL COMPENSATION ARISING DUE TO THE FAILURE OF THE CONTRACTOR TO FULLY UNDERSTAND THE SITE CONDITIONS SHALL NOT BE PAID FOR BY ANY OTHER PARTY.
21. CONNECTIONS TO EXISTING WORK:
    - A. INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES.
    - B. TEMPORARY SHUTDOWNS OF EXISTING SERVICES:
        - a. AT NO ADDITIONAL CHARGES.
        - b. AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING SERVICES.
        - c. ONLY WITH WRITTEN CONSENT OF THE GENERAL CONTRACTOR AND/OR BUILDING OWNERS REPRESENTATIVE.
    - C. ALARM AND EMERGENCY SYSTEMS: NOT TO BE INTERRUPTED.
    - D. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK.
    - E. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.
    - F. PRIOR TO DEMOLITION OF AN EXISTING POWER PANEL, THE CONTRACTOR SHALL SEARCH OUT ALL EXISTING CIRCUITS FED FROM THE PANEL TO PREVENT ANY ACCIDENTAL SERVICE INTERRUPTIONS.
22. LEAVE WIRE SUFFICIENTLY LONG TO PERMIT MAKING FINAL CONNECTIONS. CONDUIT OVER 10 FEET IN WHICH WIRING IS NOT INSTALLED-FURNISH PULL STRING.
23. DO NOT PULL THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32 DEG F (0 DEG C). PROVIDE CABLE SUPPORTS FOR WIRE IN RISER CONDUITS AS REQUIRED BY CODE.
24. LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS AT OR NEAR DOORS. INSTALL SWITCH ON SIDE OPPOSITE HINGE; VERIFY FINAL DOOR HINGE LOCATION IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.
25. JUNCTION & PULL BOXES: DO NOT LOCATE EXPOSED IN FINISH SPACES UNLESS REQUIRED BY NEC. WHERE NECESSARY, REROUTE CONDUIT OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT. PROVIDE PULL BOXES AS INDICATED AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE AND COORDINATE LOCATIONS WITH OTHER TRADES. COVERS OF JUNCTION AND PULL BOXES SHALL BE ACCESSIBLE. FOR EMPTY CONDUITS, INSTALL PULL BOXES EVERY 100 FEET AND AS INDICATED. COORDINATE LOCATIONS WITH OTHER TRADES.
26. SUPPORT PANEL, JUNCTION & PULL BOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON CONDUIT.
27. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
28. FOR EACH LOCATION OF OTHER TRADES EQUIPMENT, SEE RESPECTIVE TRADE DRAWINGS.
29. FOR RECEPTACLE & OUTLETS MOUNTING HEIGHTS AND POSITION (HORIZONTAL, VERTICAL), COORDINATE WITH ARCHITECT, OWNER, REPRESENTATIVE & DATA/ COMMUNICATION CONSULTANT.
30. CONTRACTOR SHALL PROVIDE AND INSTALL ALL COMPONENTS INDICATED ON DETAILS SHEETS, PLANS, SPECIFICATIONS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE WORKABLE SYSTEM.
31. USE OF ISOLATED TYPE GROUNDING CONDUCTOR FOR IG TYPE RECEPTACLES, PLUG MOLDS & EQUIPMENT DOES NOT RELIEVE REQUIREMENT FOR GROUNDING CONDUIT SYSTEM, DEVICES AND EQUIPMENT AS REQUIRED BY ALL APPLICABLE CODES. PROVIDE AND INSTALL GROUNDING FITTING, EQUIPMENT GROUND WIRING ETC. AS REQUIRED.
32. ALL CONDUITS, TRANSFORMERS ETC. SHALL BE SUPPORTED FROM STRUCTURAL STEEL ONLY. COORDINATE WITH GENERAL CONTRACTOR.
33. ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT IN ELECTRICAL AND SERVICE SWITCHBOARD ROOM SHALL BE INSTALLED ON 4" CONCRETE PAD AS REQUIRED TO SUPPORT EACH SECTION OF EQUIPMENT. COORDINATE WITH GENERAL CONTRACTOR.
34. PROVIDE BARRIERS IN ALL PULL BOXES FOR CONDUIT SETS.
35. PAINT AND RUST PROOF ALL HARDWARE & CONDUITS ON ROOF AND IN EXPOSED AREAS AS DIRECTED BY GENERAL CONTRACTOR.
36. NUMBER SHOWN ADJACENT TO LIGHTING FIXTURES, RECEPTACLES, OUTLETS, JUNCTION BOXES ETC. INDICATES CIRCUIT NUMBER.
37. ALL GROUND CONNECTIONS TO THE BUILDING STEEL SHALL BE EXOTHERMIC WELDED.
38. FOR RAISED FLOOR SYSTEMS, THE ELECTRICAL CONTRACTOR SHALL DRILL HOLE IN THE FLOOR TILE FOR TRANSITION FROM BELOW FLOOR TO DEVICE SERVED.
39. FLEXIBLE CONNECTIONS IN EXPOSED AREAS SHALL NOT EXCEED 18" MAXIMUM.
40. ALL EQUIPMENT DEVICES, WIRING, ETC. SHOWN ON THE DRAWINGS IS NEW UNLESS OTHERWISE NOTED.
41. ELECTRICAL CONTRACTOR SHALL PROVIDE SLEEVES/ OPENINGS FOR ALL CONDUIT RISERS PENETRATING WALLS, ROOF & FLOOR SLABS. ALL ROOF AND MECH. ROOMS SLAB PENETRATIONS SHALL BE WATERPROOF. METHOD OF PENETRATIONS & FIRE/WATER WATER PROOFING SHALL BE APPROVED BY ARCHITECT AND STRUCTURAL ENGINEER, COORDINATE WITH GENERAL CONTRACTOR.
42. ELECTRICAL CONTRACTOR SHALL BECOME FAMILIAR AND COMPLY WITH OWNERS BUILDING STANDARDS FOR CONSTRUCTION.
43. ALL FINAL CONNECTIONS TO VIBRATING EQUIPMENT (MOTORS, GENERATORS ETC.) SHALL BE THROUGH A LIQUID TIGHT FLEXIBLE METAL CONDUIT.
44. LOCATION OF ALL SLAB PENETRATIONS FOR SLEEVES & CONDUITS SHALL BE REVIEWED & APPROVED BY STRUCTURAL ENGINEER & ARCHITECT.
45. CONTRACTOR SHALL WIRE NO MORE THAN EIGHT CONVENIENCE RECEPTACLES TO A 20A SINGLE POLE CIRCUIT; UTILIZE 2-#12&1 #12 GND IN ¾" CONDUIT & 1-20A SINGLE POLE CIRCUIT BREAKER FOR EACH CIRCUIT. INSTALL ADDITIONAL CIRCUIT AS NECESSARY TO MEET THIS REQUIREMENT.
46. ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.
47. ALL WIRING IN PATIENT CARE AREAS SHALL BR PROVIDED WITH AN INSULATED COPPER EQUIPMENT GROUNDING CONDUCTOR AND SHALL BE INSTALLED IN A METALLIC RACEWAY SYSTEM LISTED AS AN EQUIPMENT GROUNDING CONDUCTOR.
48. THE TERMS "PROVIDE" OR "FURNISH", AS USED ON THESE PLANS, INDICATE THAT THE CONTRACTOR IS TO FURNISH AND INSTALL THE REFERENCED EQUIPMENT OR SYSTEMS IN THEIR ENTIRETY AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
49. CONTRACT CLOSE OUT: IN THE PRESENCE OF THE OWNER, ENGINEER OR ARCHITECT; DEMONSTRATING OPERATION OF SYSTEMS AND THAT ALL SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF ALL PARTIES.
50. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE ALTERATIONS AND/OR NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE NEW SYSTEMS IN EVERY RESPECT, CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.

ELECTRICAL DEMOLITION NOTES:

1. COORDINATE WITH ARCHITECTURAL PLANS FOR EXACT AREAS TO BE DEMOLISHED.
2. DISCONNECT AND REMOVE ALL DEVICES, FIXTURES, FIRE ALARM DEVICES, DATA/TEL. OUTLETS, POWER CONNECTIONS TO HVAC EQUIPMENT AND DISCONNECT SWITCHES, CONDUIT & WIRING FROM ALL WALLS/CEILINGS BEING REMOVED, WITHIN THIS AREA BACK TO POWER PANEL OF ORIGIN. ALL EXISTING CIRCUIT BREAKERS SHALL REMAIN IN PLACE AND LABELED AS "SPARE".
3. ALL EXISTING DEVICES SCHEDULED TO REMAIN SHALL BE EXTENDED/RE-CIRCUITED TO MAINTAIN CONTINUITY OF CIRCUIT/DEVICES.
4. REMOVALS SHALL INCLUDE, BUT NOT BE LIMITED TO DEVICES, FIXTURES, FIRE ALARM DEVICES, DATA/TEL. OUTLETS, POWER CONNECTIONS TO HVAC EQUIPMENT AND DISCONNECT SWITCHES, CONDUIT & WIRING.
5. ELECTRICAL CONTRACTOR TO PROVIDE ALL NECESSARY TEMPORARY WORK AND/OR MATERIALS TO RENDER EXISTING SYSTEM OPERATIONAL DURING ALL PHASES OF CONSTRUCTION IN ALL OCCUPIED SPACES. INCLUDING BUT NOT LIMITED TO, POWER, DATA, LIGHTING, EMERGENCY COMPONENTS & ALARMS. COORDINATE WITH ALL TRADES, OWNER AND OVERALL CONSTRUCTION PHASING SCHEDULE.
6. ALL CUTTING AND PATCHING NECESSARY FOR THE DEMOLITION WORK SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
7. IT SHALL BE THE OWNER'S RESPONSIBILITY TO REMOVE ANY LOOSE EQUIPMENT, FURNITURE, SUPPLIES, ETC. THAT MAY BE LOCATED IN THE AREA OF WORK.
8. THE PLANS ARE INTENDED TO CONVEY THE EXTENT AND SCOPE OF THE DEMOLITION WORK. EVERY ITEM INTENDED FOR REMOVAL MAY NOT BE SHOWN. THE CONTRACTOR IS ADVISED TO SURVEY THE PROJECT SITE BEFORE SUBMITTING A BID FOR DEMOLITION WORK.

LIGHTING SYMBOLS

- PENDANT LIGHTING FIXTURE TO BE REMOVED
- EXISTING CEILING MOUNTED VACANCY SENSOR
- $3 — EXISTING 1P, 20A, TOGGLE SWITCH, "3" INDICATES 3-WAY WIRED.
- EXISTING CEILING MOUNTED PROJECTOR

POWER SYMBOLS

- SPEC GRADE NEMA 5-20R RECEPTACLE. -GFI INDICATES GROUND FAULT INTERRUPTION -WP INDICATES WEATHER PROOF ENCLOSURE
- CONDUIT HOME RUN TO DESIGNATED PANEL. REFER TO PANEL SCHEDULE FOR CONDUIT & CABLE QUANTITY AND SIZE.
- SPECIAL PURPOSE CONNECTION.

FIRE ALARM SYMBOLS

- (S) EXISTING SMOKE DETECTOR
- EXISTING FIRE ALARM HORN/STROBE
- (S) NEW SMOKE DETECTOR. A=AUXILIARY CONTACTS.

COMMUNICATION SYMBOLS

- COMBINATION TELEPHONE/DATA OUTLET. PROVIDE & INSTALL (2) CAT. 6 CABLES FROM OUTLET LOCATION TO ABOVE CEILING EACH IN ¾" CONDUIT. MOUNT 18" AFF UNLESS OTHERWISE NOTED.
- ∇_W TELEPHONE WALL OUTLET. PROVIDE & INSTALL CAT 6 CABLE FROM OUTLET LOCATION TO ABOVE CEILING IN ¾" CONDUIT. MOUNT OUTLET 48" AFF UNLESS OTHERWISE NOTED.
- DATA OUTLET. PROVIDE & INSTALL CAT. 6 CABLE FROM OUTLET LOCATION TO ABOVE CEILING EACH IN ¾" CONDUIT. MOUNT 18" AFF UNLESS OTHERWISE NOTED.

LEGEND AND SCHEDULE OF LIGHTING CONTROLS

MANUFACTURER LISTED AS STANDARD OR APPROVED EQUAL

SYMBOL	MANUFACTURER	MODEL #	DESCRIPTION
A	JLC-TECH	TBSL-MN-2-24-B2-U-W	T-BAR LED FIXTURE, 2' LENGTH, 4000K, 15/16" GRID TYPE, BLOCK FROSTED DIFFUSING LENS, UNIVERSAL MOUNTING CLIPS, WHITE COLOR. FIXTURE SHALL BE DIMMABLE. 1172 LUMEN OUTPUT, 16W.
B	JLC-TECH	TBSL-MN-2-24-DW-U-W	T-BAR LED FIXTURE, 2' LENGTH, 4000K, 15/16" GRID TYPE, DIFFUSED WHITE LENS, UNIVERSAL MOUNTING CLIPS, WHITE COLOR. FIXTURE SHALL BE DIMMABLE. 1064 LUMEN OUTPUT, 16W.
C	JLC-TECH	TBSL-MS-4-24-DW-U-W	T-BAR LED FIXTURE, 4' LENGTH, 4000K, 15/16" GRID TYPE, DIFFUSED WHITE LENS, UNIVERSAL MOUNTING CLIPS, WHITE COLOR. FIXTURE SHALL BE DIMMABLE. 2128 LUMEN OUTPUT, 32W.
D	ALW	RLP2C-S2-MED/90/4000K-V00-LENS-SW-UNV	2' HORIZONTAL CENTRAL CANOPY SURFACE MOUNT LED FIXTURE. FIXTURE SHALL BE DIMMABLE. 1470 LUMEN OUTPUT, 19.2W.
RC-1	WATTSTOPPER	LMRC-212	DLM ON/OFF 2 RELAY ROOM CONTROLLER, MOUNT ABOVE FINISHED CEILING. SET TO MANUAL-ON OPERATION.
DLM	WATTSTOPPER	LMDC-100	DLM DUAL TECH CEILING MOUNT SENSOR.
$DLM	WATTSTOPPER	LMSW-211	DLM WALL SWITCH, 1 RELAY, 0-10V DIMMING CONTROL.
DLM	WATTSTOPPER	DW-311	PUSH-BUTTON WALL SWITCH INTEGRAL DUAL-TECHNOLOGY VACANCY SENSOR WITH 0-10V DIMMING DRIVER. PROVIDE WITH MATCHING FACE PLATE, COLOR BY ARCHITECT.

ABBREVIATIONS

A	AMPERE	JB	JUNCTION BOX
ACT	ACOUSTIC CEILING TILE	KV	KILO VOLT
AD	AUTOMATIC DAMPER	KVA	KILO VOLT AMP
AF	AMPERE FRAME	KW	KILO WATT
AFF	ABOVE FINISHED FLOOR	LED	LIGHT-EMITTING DIODE
AIC	AMPERE INTERRUPTING CAPACITY	LP	LIGHTING PANEL
AL	ALUMINUM	LTG	LIGHTING
ATS	AUTOMATIC TRANSFER SWITCH	M.C.	MECHANICAL CONTRACTOR
AUTO	AUTOMATIC	MCM	THOUSAND CIRCULAR MILS
AWG	AMERICAN WIRE GAUGE	MCB	MAIN CIRCUIT BREAKER
BCW	BARE COPPER WIRE	MECH	MECHANICAL
C	CONDUIT	MDP	MAIN DISTRIBUTION PANEL
CAT	CATALOG	MLO	MAIN LUGS ONLY
CB	CIRCUIT BREAKER	MTD	MOUNTED
CKT	CIRCUIT	MTG	MOUNTING
CLG	CEILING	MTS	MANUAL TRANSFER SWITCH
CT	CURRENT TRANSFORMER	N	NEUTRAL
CU	COPPER	NIC	NOT IN CONTRACT
DP	DISTRIBUTION PANEL	NEC	NATIONAL ELECTRIC CODE
DF	DRINKING FOUNTAIN	NTS	NOT TO SCALE
DIV	DIVISION	NM	NON-METALLIC CONDUIT
DS	DISCONNECT (LOCKOUT) SWITCH	P	POLE
DWG	DRAWING	PB	PULL BOX
EA	EACH	ø	PHASE
E.C.	ELECTRICAL CONTRACTOR	PWR	POWER
ELEC.	ELECTRICAL	RECEPT.	RECEPTACLE
ELEV	ELEVATOR	REQ.	REQUIRED
E.P.O.	EMERGENCY POWER OFF	RGS	RIGID GALVANIZED STEEL
EQUIP.	EQUIPMENT	RM	ROOM
EMT	ELECTRICAL METALLIC TUBING	SCHED.	SCHEDULE
FA	FIRE ALARM	SECT.	SECTION
FAP	FIRE ALARM PANEL	SPEC.	SPECIFICATION
FL	FLOOR	SPKR.	SPEAKER
FLEX	FLEXIBLE	SV	SOLENOID VALVE
FT	FEET OR FOOT	SW	SWITCH
FLUOR.	FLUORESCENT	SWBD	SWITCH BOARD
F.W.E.	FURNISHED WITH EQUIPMENT	SYS	SYSTEM
G, GND	GROUND	TEL	TELEPHONE
GEN.	GENERATOR	TC	TIME CLOCK
GFI	GROUND FAULT INTERRUPTER	TYP	TYPICAL
G.C.	GENERAL CONTRACTOR	U.N.O.	UNLESS NOTED OTHERWISE
HH	HAND HOLE	UPS	UN-INTERRUPTABLE POWER SUPPLY
HP	HORSEPOWER	VFC	VARIABLE FREQUENCY CONTROLLER
HS	HAND SWITCH	VIF	VERIFY IN FIELD
HVAC	HEATING, VENTILATING & AIR CONDITIONING	VSD	VARIABLE SPEED DRIVE
HZ	HERTZ	WP	WEATHER PROOF
IC	INTERRUPTING CAPACITY	W	WATT
IG, I	ISOLATED GROUND	XFMR/ TRANSF.	TRANSFORMER
IMC	INTERMEDIATE METAL CONDUIT		

ELECTRICAL LINE TYPES

- -/-/-/- or ------ EXISTING TO BE REMOVED
- EXISTING TO REMAIN
- NEW DEVICE
- NEW WIRING
- NEW FIXTURE

GENERAL SYMBOLS

- POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
- POINT OF DISCONNECT
- X — INDICATES SECTION LETTER
- XX — INDICATES DRAWING NUMBER WHERE LOCATED

CONTROLLED RECEPTACLE EQUIPMENT SCHEDULE

SYMBOL	MANUFACTURER	MODEL NUMBER	DESCRIPTION
CR OR CR OR CR	WAVELINX	WR-20	NEMA 5-20R DUPLEX RECEPTACLE WITH (1) CONTROLLED AND (1) UNCONTROLLED OUTLET WITH WIRELESS COMMUNICATION TO OCCUPANCY SENSOR. PROVIDE (2) DEVICES AT LOCATION INDICATED FOR QUAD RECEPTACLES
	WAVELINX	WTE	CEILING-MOUNTED OCCUPANCY SENSOR, WIRELESS-COMMUNICATION-CAPABLE. PROVIDE WITH POWER SUPPLY AS NEEDED.

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⅛" ¼" ½" 0 1" 2"
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FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

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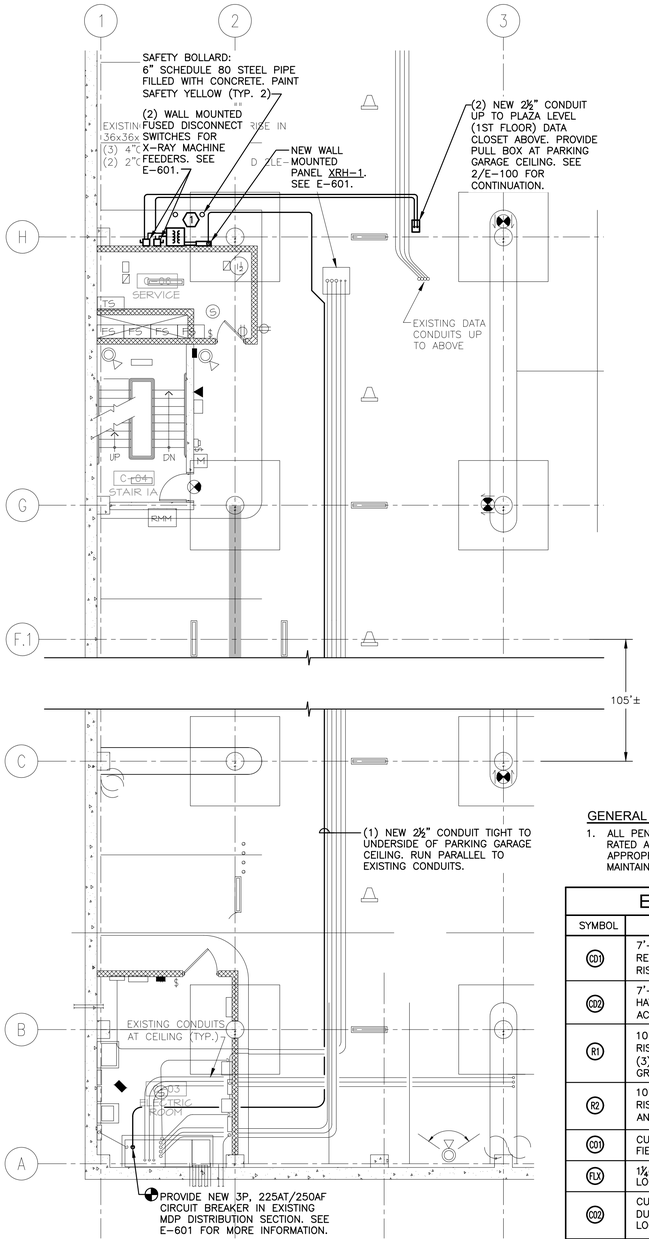
DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	SL		EDF	E-001
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 20 OF 25

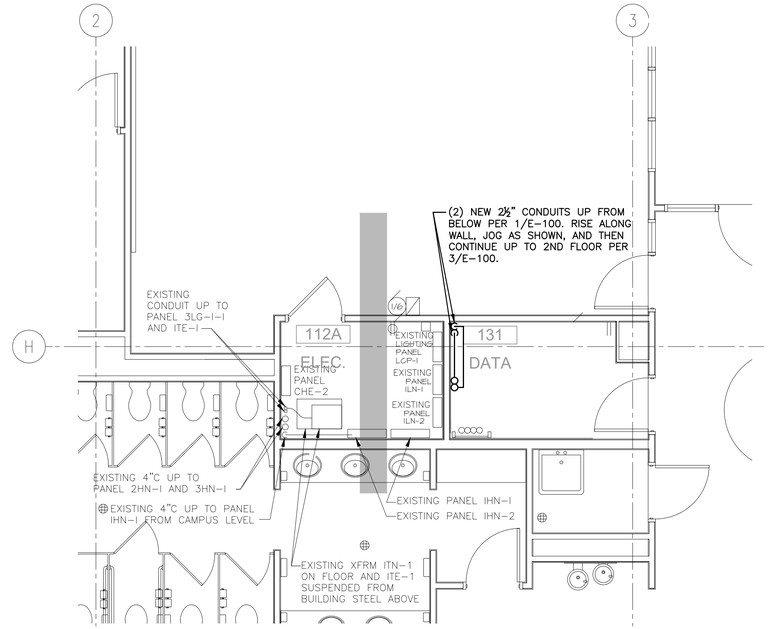
File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(20) E-001.dwg (Layout: E-001)
Date: Wed, Jun 17, 2026 - 8:13 AM (Name: wpb)



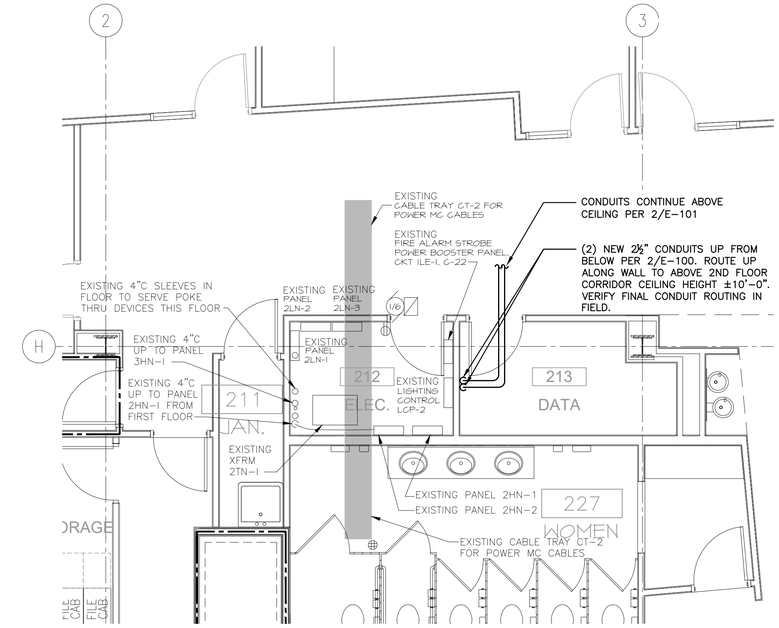
1 ELECTRICAL: CAMPUS LEVEL PART PLAN
SCALE: 1/8"=1'-0"

KEYED NOTE:

1. (2) NEW STEP DOWN DRY-TYPE TRANSFORMERS 480V, 1P:208V, 1P, 50KVA (TOP), 75KVA (BOTTOM). TRANSFORMERS TO BE STACKED VERTICALLY. PROVIDE (4) UNISTRUT POSTS, FLOOR TO CEILING, WITH BASES. PROVIDE CROSS PIECES FOR TRANSFORMER MOUNTING. 75 KVA (BOTTOM) TRANSFORMER MOUNTED AT 30" A.F.F. TRANSFORMERS SHALL NOT BE WALL MOUNTED. INSTALL ON 4" CONCRETE PAD.



2 ELECTRICAL: ELECTRIC CLOSET PLAZA LEVEL (1ST FLOOR) PART PLAN
SCALE: 1/4"=1'-0"



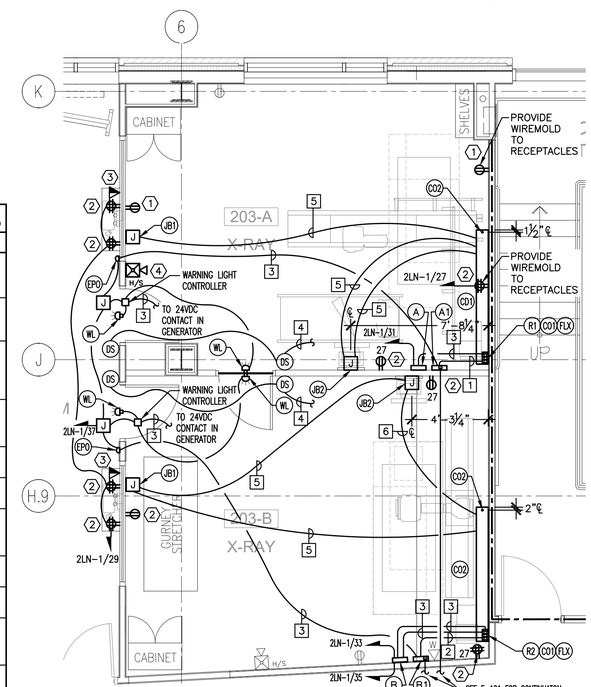
3 ELECTRICAL: ELECTRIC CLOSET SECOND FLOOR PART PLAN
SCALE: 1/4"=1'-0"

GENERAL NOTE:

1. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES ARE TO BE APPROPRIATELY FIRESTOPPED TO MAINTAIN EXISTING FIRE RATING.

ELECTRICAL LEGEND - 203-A & 203-B X-RAY ROOMS (ALL WORK SUPPLIED AND INSTALLED BY CONTRACTOR)

SYMBOL	DESCRIPTION
CD1	7'-6"x 10" x 3.5" CEILING DUCT, SURFACE MOUNTED ABOVE FINISHED CEILING. DUCT MUST HAVE REMOVABLE COVERS AND MIN. (1) DIVIDER THROUGHOUT. DUCT MUST HAVE ACCESS OPENING TO RISER "R1". PROVIDE CONDUIT FITTINGS FOR CONDUIT CONNECTIONS.
CD2	7'-10 ¼" x 10" x 3.5" CEILING DUCT, SURFACE MOUNTED ABOVE FINISHED CEILING. DUCT MUST HAVE REMOVABLE COVERS FACING UP AND MIN. (2) DIVIDERS THROUGHOUT. DUCT MUST HAVE ACCESS OPENING TO RISER "R2". PROVIDE CONDUIT FITTINGS FOR CONDUIT CONNECTIONS.
R1	10" x 3.5" RISER DUCT FROM FINISHED FLOOR TO FINISHED CEILING. SURFACE MOUNT ON FINISHED WALL. RISER MUST HAVE ACCESS OPENING TO CEILING DUCT "CD1". DUCT MUST HAVE REMOVABLE COVERS AND MIN. (3) DIVIDERS THROUGHOUT. PROVIDE CONDUIT FITTINGS FOR CONDUIT CONNECTIONS. PROVIDE (2) 1½" GROMMET IN REMOVABLE COVER PLATE "CO1" 12" C.A.F.F.
R2	10" x 3.5" RISER DUCT FROM FINISHED FLOOR TO "CD2". SURFACE MOUNT ON FINISHED WALL. RISER MUST HAVE ACCESS OPENING TO CEILING DUCT "CD2". DUCT MUST HAVE REMOVABLE COVERS AND MIN (2) DIVIDERS THROUGHOUT. PROVIDE CONDUIT FITTINGS FOR CONDUIT CONNECTIONS.
CO1	CUT OUT- ACCESS ON FACE OF RISER "R1"/"R2", FOR GENERATOR POWER AND EQUIPMENT CABLES. FIELD VERIFY SIZE OF CUT-OUT AND LOCATION PRIOR TO EQUIPMENT INSTALLATION.
FLX	1¼- Ø SEAL-TIGHT CONDUIT. INCLUDE FITTINGS FOR MAIN POWER TO GENERATOR, WIP LENGTH PER LOCAL CODE.
CO2	CUT OUT-ACCESS ON FACE OF CEILING DUCT "CD1"/ CUT-OUT ACCESS ON BOTTOM OF CEILING DUCT "CD2". TO BE USED FOR OVERHEAD TUBE CABLES. FIELD VERIFY SIZE OF CUT-OUT AND LOCATION PRIOR TO EQUIPMENT INSTALLATION.
EPO	EMERGENCY POWER OFF – SWITCH TO SHUNT BREAKER IN MAIN DISCONNECT "A1"/"B1".
JB1	8" x 8" x 4" JUNCTION BOX. BOTTOM OF BOX 12" A.F.F. SURFACE MOUNT ON FINISHED WALL. PROVIDE (1) 1½" CHASE NIPPLE IN REMOVABLE COVER PLATE. LEAVE PULL LINE.
JB2	6" x 6" x 4" JUNCTION BOX. BOTTOM OF BOX 90" A.F.F. SURFACE MOUNT ON FINISHED WALL. PROVIDE (1) 1½" CHASE NIPPLE IN REMOVABLE COVER PLATE. LEAVE PULL LINE.
WL	"X-RAY IN USE" 120V LED WARNING LIGHT SIGN MOUNTED ABOVE DOORWAY. FURNISH WITH WARNING LIGHT CONTROLLER (NORMALLY OPEN RELAY WITH A 24 VOLT DC COIL). PROVIDE (2) #12 WIRES WITH GROUND TO SIGN FROM RELAY. EQUIPMENT PROVIDER SHALL PROVIDE CONTROL SIGNAL TO RELAY FROM X-RAY MACHINE GENERATOR. SEE DETAIL 5/E-701.
A1	ENCLOSED MAIN CIRCUIT BREAKER WITH SHUNT TRIP CONTROL. SURFACE MOUNTED. INCLUDE 8' PIGTAIL AT "CO1" VIA "R1". LOCATE PER LOCAL CODES. SEE E-601.
A	ENCLOSED CIRCUIT BREAKER, SURFACE MOUNTED. (1) 120VAC, 20AMP, 1 PHASE. WIRES TO "CO1" VIA "R1". LOCATE PER LOCAL CODES. PROVIDE 120V CIRCUIT FROM PANEL 2LN-1 IN CORRIDOR ELECTRICAL CLOSET. SEE E-601.
B1	ENCLOSED MAIN CIRCUIT BREAKER WITH SHUNT TRIP CONTROL. SURFACE MOUNTED. INCLUDE 8' PIGTAIL AT "CO1" VIA "R2". LOCATE PER LOCAL CODES. SEE E-601.
B	ENCLOSED CIRCUIT BREAKERS, SURFACE MOUNTED. (2) 120VAC, 15AMP, 1 PHASE. WIRES TO "CO1" VIA "R2". LOCATE PER LOCAL CODES. PROVIDE 120V CIRCUIT FROM PANEL 2LN-1 IN CORRIDOR ELECTRICAL CLOSET. SEE E-601.
DS	DOOR SWITCH INTERLOCKED WITH X-RAY MACHINE GENERATOR. WHEN DOOR CLOSES, SWITCH CLOSES.



4 ELECTRICAL: SECOND FLOOR X-RAY ROOMS 203-A &203-B POWER PART PLAN
SCALE: 1/4"=1'-0"

KEYED NOTES:

1. RELOCATED EXISTING RECEPTACLE PER 1/E-101, EXTEND WIRING/CONDUIT TO THIS LOCATION. PROVIDE NEW JUNCTION BOXES AND FACEPLATE AS NECESSARY.
2. NEW RECEPTACLE. EXTEND POWER FROM LOCAL RECEPTACLE CIRCUIT. IF INDICATED, POWER VIA NEW CIRCUIT SHOWN.
3. NEW TELEPHONE/DATA OUTLET. EXTEND WIRING/CONDUIT TO THIS LOCATION.
4. NEW HORN/STROBE. EXTEND WIRING/CONDUIT TO THIS LOCATION, FIRE ALARM SYSTEM TO BE TESTED UPON INSTALLATION.

WIRE AND CONDUIT SCHEDULE

TAG	WIRE AND CONDUIT
1	(2)#1, #6 GND (1) 1¼" CONDUIT
2	(2)#1/0, #6 GND (1) 1¼" CONDUIT
3	(2)#12, #12 GND (1) ¾" CONDUIT
4	(2)#14, WITH GND IN SERIES TO GENERATOR (1) ¾" CONDUIT
5	(1) 2" CONDUIT
6	(1) 2½" CONDUIT

X-RAY EQUIPMENT POWER NOTE:

1. ENTIRE ELECTRICAL INSTALLATION FOR X-RAY EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS LISTED ON THE ELECTRICAL PLANS PRODUCED BY BROWN'S MEDICAL IMAGING.

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

⅛" ¼" ½" 0 1" 2"
REFERENCE SCALE

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FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073064-1 ISSUED 1995; EXP. 8/25

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PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
ELECTRICAL: CAMPUS & PLAZA LEVEL AND 2ND FLR PARTIAL POWER PLANS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
NTD	SL	EDF	MDF	E-100
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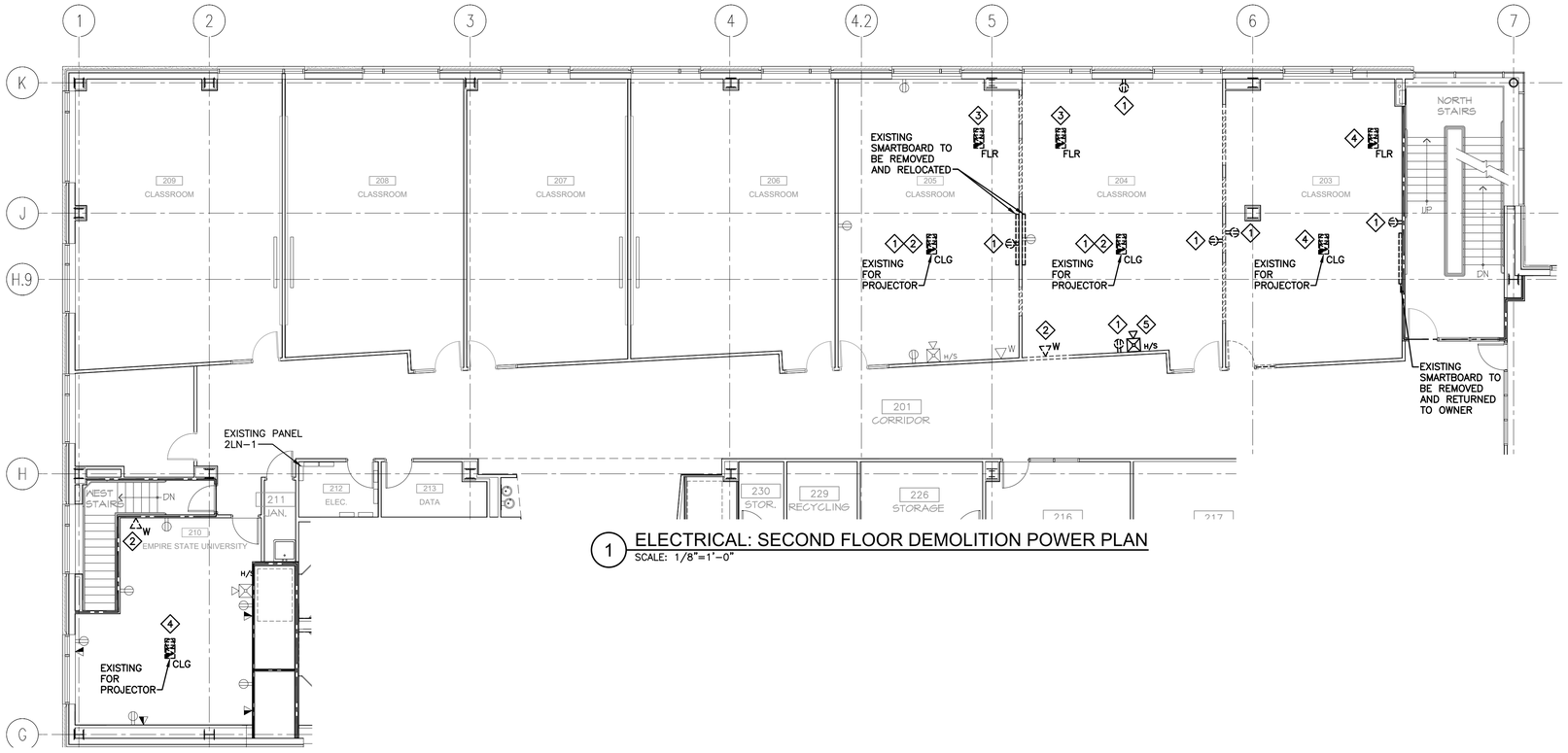
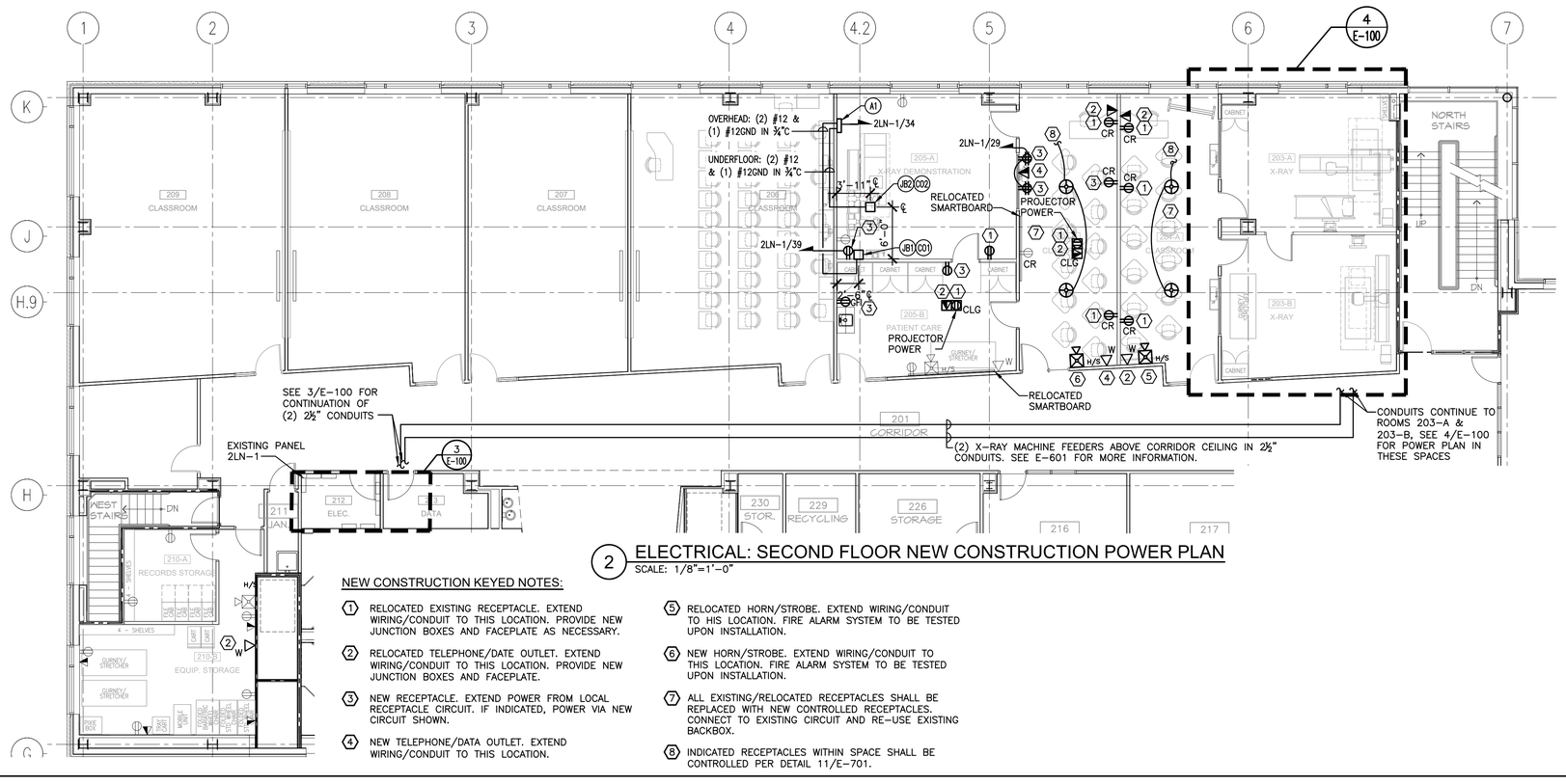


1 ELECTRICAL: SECOND FLOOR DEMOLITION POWER PLAN
SCALE: 1/8"=1'-0"



2 ELECTRICAL: SECOND FLOOR NEW CONSTRUCTION POWER PLAN
SCALE: 1/8"=1'-0"

NEW CONSTRUCTION KEYED NOTES:

1. RELOCATED EXISTING RECEPTACLE. EXTEND WIRING/CONDUIT TO THIS LOCATION. PROVIDE NEW JUNCTION BOXES AND FACEPLATE AS NECESSARY.
2. RELOCATED TELEPHONE/DATE OUTLET. EXTEND WIRING/CONDUIT TO THIS LOCATION. PROVIDE NEW JUNCTION BOXES AND FACEPLATE.
3. NEW RECEPTACLE. EXTEND POWER FROM LOCAL RECEPTACLE CIRCUIT. IF INDICATED, POWER VIA NEW CIRCUIT SHOWN.
4. NEW TELEPHONE/DATA OUTLET. EXTEND WIRING/CONDUIT TO THIS LOCATION.
5. RELOCATED HORN/STROBE. EXTEND WIRING/CONDUIT TO HIS LOCATION. FIRE ALARM SYSTEM TO BE TESTED UPON INSTALLATION.
6. NEW HORN/STROBE. EXTEND WIRING/CONDUIT TO THIS LOCATION. FIRE ALARM SYSTEM TO BE TESTED UPON INSTALLATION.
7. ALL EXISTING/RELOCATED RECEPTACLES SHALL BE REPLACED WITH NEW CONTROLLED RECEPTACLES. CONNECT TO EXISTING CIRCUIT AND RE-USE EXISTING BACKBOX.
8. INDICATED RECEPTACLES WITHIN SPACE SHALL BE CONTROLLED PER DETAIL 11/E-701.

DEMOLITION KEYED NOTES:

1. EXISTING RECEPTACLE TO BE REMOVED AND RELOCATED. WIRING/CONDUIT TO BE CUT BACK TO ABOVE CEILING. PREPARE TO EXTEND TO NEW LOCATION.
2. EXISTING TELEPHONE/DATA OUTLET TO BE REMOVED AND RELOCATED. WIRING/CONDUIT TO BE CUT BACK TO ABOVE CEILING. PREPARE TO EXTEND TO NEW LOCATION.
3. EXISTING RECESSED FLOOR BOX WITH DUPLEX RECEPTACLE, (2) TELEPHONE OUTLETS AND (2) DATA OUTLETS TO BE REMOVED. FLOOR PENETRATION TO BE REPAIRED. RECEPTACLE AND ALL OUTLETS TO BE RELOCATED. WIRING/CONDUIT TO BE REMOVED BENEATH FLOOR AND CUT BACK TO ABOVE 2ND FLOOR CEILING. PREPARE TO EXTEND TO NEW LOCATION.
4. EXISTING RECEPTACLE AND COMBINATION TELEPHONE/DATA OUTLET TO BE DEMOLISHED.
   - WHERE INDICATED IN FLOOR – FLOOR BOX SHALL BE REMOVED AND FLOOR PENETRATION REPAIRED. WIRING/CONDUIT TO BE REMOVED BENEATH FLOOR AND CUT BACK TO ABOVE 2ND FLOOR CEILING
   - WHERE INDICATED ABOVE CEILING – CUT BACK WIRE/CONDUIT FOR RE-USE
5. EXISTING HORN/STROBE TO BE REMOVED AND RELOCATED. WIRING/CONDUIT TO BE CUT BACK TO ABOVE CEILING. PREPARE TO EXTEND TO NEW LOCATION.

DEMOLITION GENERAL NOTES:

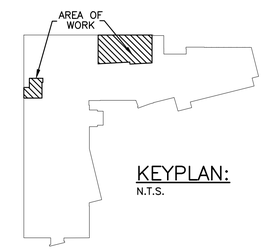
1. ITEMS SHOWN ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED FOR DEMOLITION.
2. PATCH AND REPAIR ALL SURFACES AS A RESULT OF DEMOLITION. FINISH TO MATCH EXISTING.
3. VERIFY ALL EXISTING DEVICE CIRCUITING AND CONDUIT ROUTING IN FIELD PRIOR TO DEMOLITION.
4. MAINTAIN CONTINUITY OF CIRCUITING TO ALL DEVICES SCHEDULED TO REMAIN.

ELECTRICAL LEGEND – 205-A X-RAY DEMONSTRATION ROOM (ALL WORK SUPPLIED AND INSTALLED BY CONTRACTOR)

SYMBOL	DESCRIPTION
A1	DEDICATED CIRCUIT BREAKER PANEL, SURFACE MOUNTED WITH (1) 120VAC, 20AMP, 1 PHASE. LOCATE PER LOCAL CODES.
JB1	6" X 6" X 4" JUNCTION BOX. BOTTOM OF BOX 36" A.F.F. SURFACE MOUNT ON FINISHED WALL. PROVIDE (1) 1 ½" CHASE NIPPLE IN REMOVABLE COVER PLATE. LEAVE PULL LINE.
JB2	6" X 6" X 4" JUNCTION BOX. TOP OF BOX FLUSH MOUNTED WITH FINISHED FLOOR. PROVIDE (1) 1 ½" CHASE NIPPLE IN REMOVABLE COVER PLATE. LEAVE PULL LINE.
CO1	CUT OUT – ACCESS ON FACE OF "JB1", FOR WALL-STAND POWER AND EQUIPMENT CABLES. FIELD VERIFY SIZE OF CUT-OUT AND LOCATION PRIOR TO EQUIPMENT INSTALLATION.
CO2	CUT OUT – ACCESS ON FACE OF "JB2", FOR TABLE POWER AND EQUIPMENT CABLES. FIELD VERIFY SIZE OF CUT-OUT AND LOCATION PRIOR TO EQUIPMENT INSTALLATION.

X-RAY EQUIPMENT POWER NOTE:

1. ENTIRE ELECTRICAL INSTALLATION FOR X-RAY EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS LISTED ON THE ELECTRICAL PLANS PRODUCED BY BROWN'S MEDICAL IMAGING.



KEYPLAN:
N.T.S.

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⅛" ¼" ½" 0 1" 2"
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FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1 ISSUED 1995; EXP. 8/25

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PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
ELECTRICAL: DEMO & NEW 2ND FLOOR POWER PLANS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
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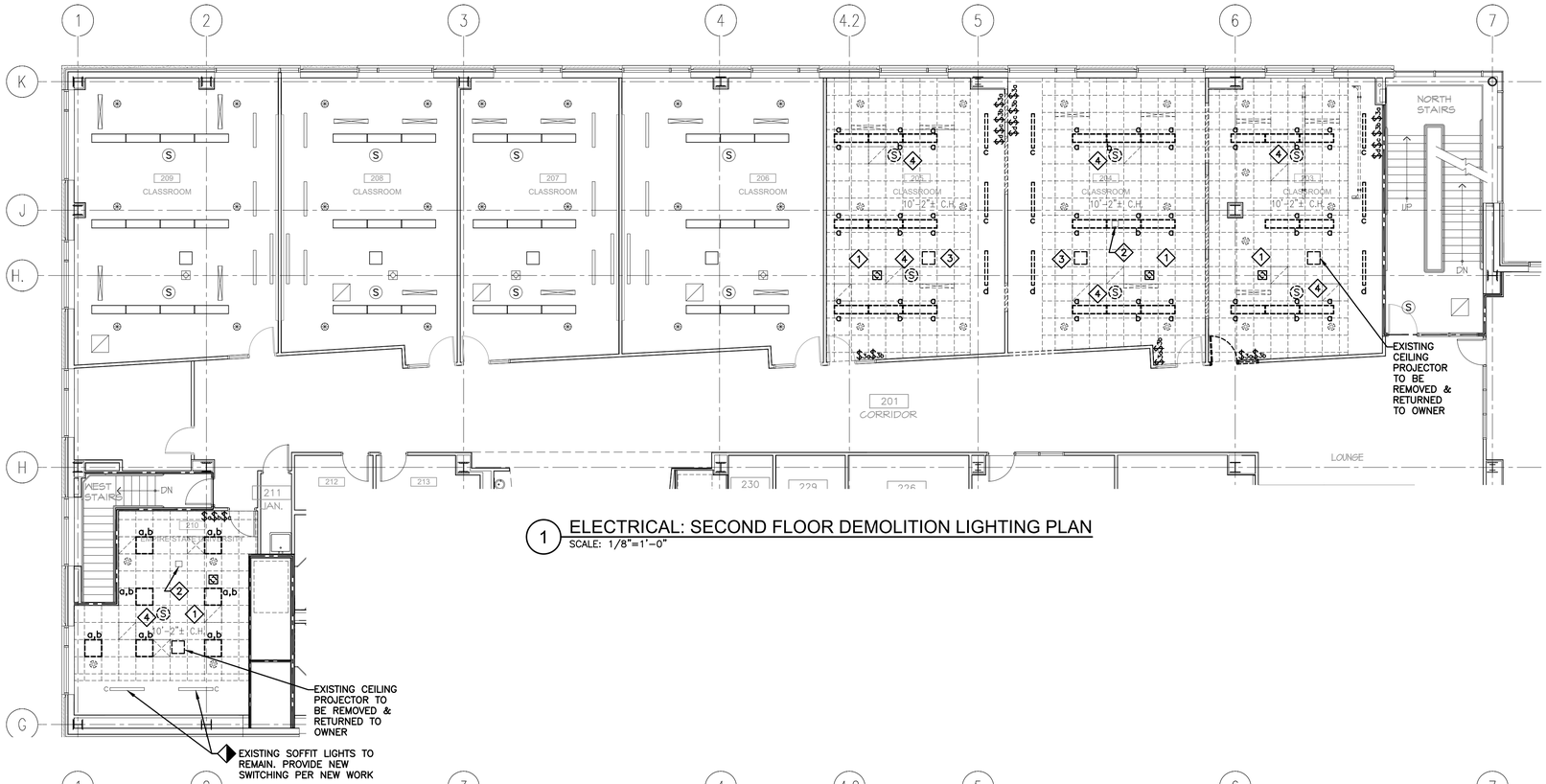


1 ELECTRICAL: SECOND FLOOR DEMOLITION LIGHTING PLAN
SCALE: 1/8"=1'-0"

DEMOLITION GENERAL NOTES:

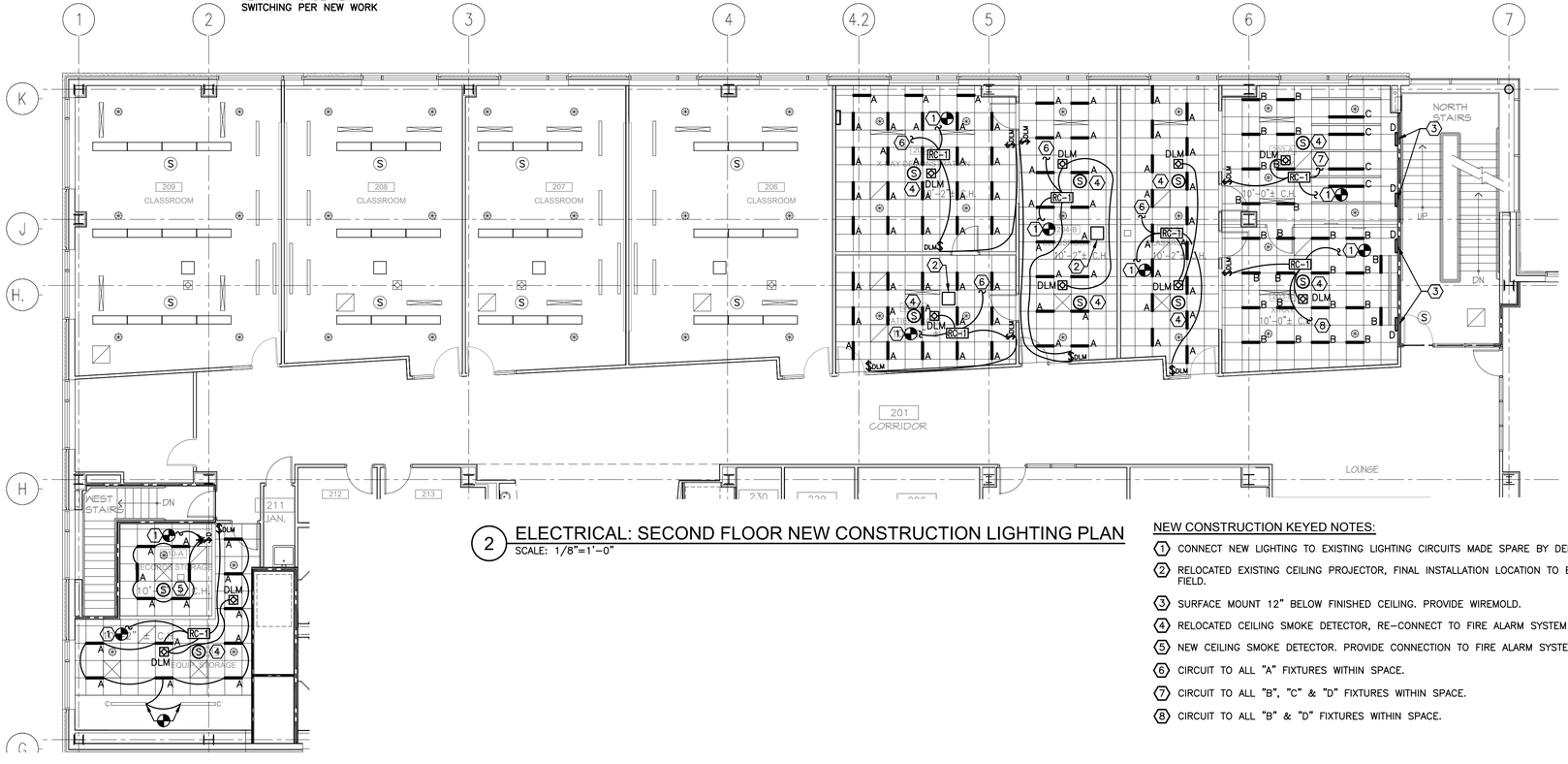
1. ITEMS SHOWN ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED FOR DEMOLITION.
2. PATCH AND REPAIR ALL SURFACES AS A RESULT OF DEMOLITION. FINISH TO MATCH EXISTING.
3. VERIFY ALL EXISTING DEVICE CIRCUITING AND CONDUIT ROUTING IN FIELD PRIOR TO DEMOLITION.
4. MAINTAIN CONTINUITY OF CIRCUITING TO ALL DEVICES SCHEDULED TO REMAIN.

DEMOLITION KEYED NOTES:

1. ALL EXISTING LIGHT FIXTURES, WALL SWITCHES, OCCUPANCY SENSORS, AND ASSOCIATED WIRING WITHIN SPACE TO BE DEMOLISHED UNLESS OTHERWISE NOTED TO REMAIN. EXISTING LIGHTING CIRCUIT TO BE RE-USED FOR NEW LIGHTING.
2. EXISTING CEILING MOUNTED NETWORKING DEVICE TO BE DISCONNECTED & TEMPORARILY RE-LOCATED DURING CONSTRUCTION. AFTER INSTALLATION OF NEW CEILING GRID, NETWORKING DEVICE SHALL BE RE-INSTALLED. COORDINATE WITH FACILITY IT DEPARTMENT.
3. EXISTING CEILING PROJECTOR TO BE REMOVED & RELOCATED.
4. EXISTING CEILING SMOKE DETECTOR TO BE REMOVED & RE-INSTALLED IN NEW CEILING.

GENERAL NOTE:

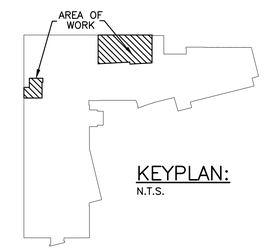
1. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES ARE TO BE APPROPRIATELY FIRESTOPPED TO MAINTAIN EXISTING FIRE RATING.



2 ELECTRICAL: SECOND FLOOR NEW CONSTRUCTION LIGHTING PLAN
SCALE: 1/8"=1'-0"

NEW CONSTRUCTION KEYED NOTES:

1. CONNECT NEW LIGHTING TO EXISTING LIGHTING CIRCUITS MADE SPARE BY DEMOLITION WORK.
2. RELOCATED EXISTING CEILING PROJECTOR, FINAL INSTALLATION LOCATION TO BE VERIFIED IN FIELD.
3. SURFACE MOUNT 12" BELOW FINISHED CEILING. PROVIDE WIREMOLD.
4. RELOCATED CEILING SMOKE DETECTOR, RE-CONNECT TO FIRE ALARM SYSTEM & TEXT.
5. NEW CEILING SMOKE DETECTOR. PROVIDE CONNECTION TO FIRE ALARM SYSTEM & TEST.
6. CIRCUIT TO ALL "A" FIXTURES WITHIN SPACE.
7. CIRCUIT TO ALL "B", "C" & "D" FIXTURES WITHIN SPACE.
8. CIRCUIT TO ALL "B" & "D" FIXTURES WITHIN SPACE.



KEYPLAN:
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ELECTRICAL: DEMO & NEW 2ND FLOOR LIGHTING PLANS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	SL		EDF	ED/E-201
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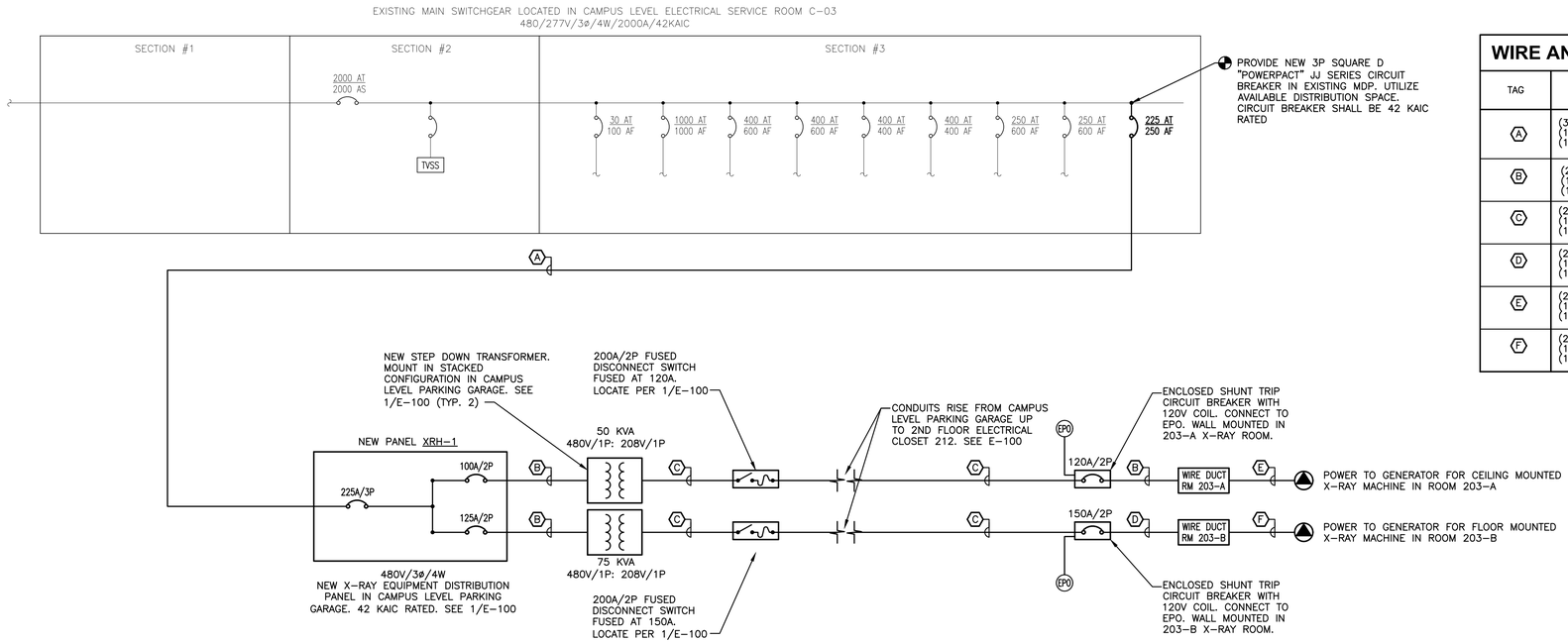


1 ELECTRIC ONE-LINE DIAGRAM
N.T.S.

WIRE AND CONDUIT SCHEDULE

TAG	WIRE AND CONDUIT
A	(3) 4/0 CU, (1) #4 GND. (1) 2½" CONDUIT
B	(2) #1 CU, (1) #6 GND, (1) 1¼" CONDUIT
C	(2) 400 MCM CU, (1) #1 GND. (1) 2½" CONDUIT
D	(2) #1/0 CU, (1) #6 GND. (1) 1¼" CONDUIT
E	(2) #1 CU, (1) #6 GND. (1) 1¼" SEAL-TIGHT CONDUIT
F	(2) 1/0 CU, (1) #6 GND. (1) 1¼" SEAL-TIGHT CONDUIT

JOB NAME: 23-197 SUNY NEWBURGH XRAY
RATING: 208/120V, 4W, 3PH, 400A

2LN-1
(EXISTING)

LOCATION: 212 - ELECTRICAL CLOSET

CKT. NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT. NO.
1	CLASSROOM 210	1		20	EXISTING CIRCUIT	0.0			EXISTING CIRCUIT	20		1	CLASSROOM 209	2
3	CLASSROOM 208	1		20	EXISTING CIRCUIT		0.0		EXISTING CIRCUIT	20		1	CLASSROOM 207	4
5	CLASSROOM 206	1		20	EXISTING CIRCUIT			0.0	EXISTING CIRCUIT	20		1	CLASSROOM 205	6
7	CLASSROOM 204	1		20	EXISTING CIRCUIT	0.0			EXISTING CIRCUIT	20		1	CLASSROOM 202	8
9	LAV FAUCET	1		20	EXISTING CIRCUIT		0.0		EXISTING CIRCUIT	20		1	CORRIDOR	10
11	CLASSROOM 211	1		20	EXISTING CIRCUIT			0.0	EXISTING CIRCUIT	20		1	VENDING 231	12
13	TOILET ROOM	1		20	EXISTING CIRCUIT	0.0			EXISTING CIRCUIT	20		1	CLASSROOM 202	14
15	DRINKING FOUNTAIN	1		20	EXISTING CIRCUIT		0.0		EXISTING CIRCUIT	20		1	VENDING 231	16
17	MAIL 225	1		20	EXISTING CIRCUIT			0.0	EXISTING CIRCUIT	20		1	VENDING 231	18
19	MAIL 225	1		20	EXISTING CIRCUIT	0.0			EXISTING CIRCUIT	20		1	ADJUNCTS 224	20
21	SECOND FLOOR DATA CLOSET	1		20	EXISTING CIRCUIT		0.0		EXISTING CIRCUIT	20		1	ADJUNCTS 224	22
23	SPARE	1		20	-			0.0	EXISTING CIRCUIT	20		1	FACULTY 222,223	24
25	EF-12'S	1		20	EXISTING CIRCUIT	0.0			EXISTING CIRCUIT	20		1	CONFERENCE 217	26
27	**XRAY RMS 203A/203B RCPTS[5]**	**1**		**20**	**2#12 & 1#12G IN 3/4"C[3]**		0.0		EXISTING CIRCUIT	20		1	ADJUNCTS 219	28
29	**XRAY WORK STATIONS - 204A&B[5]**	**1**		**20**	**2#12 & 1#12G IN 3/4"C[3]**			0.0	EXISTING CIRCUIT	20		1	ADJUNCTS 219	30
31	**XRAY RM 203A[5]**	**1**		**20**	**2#12 & 1#12G IN 3/4"C[3]**	0.0			EXISTING CIRCUIT	20		1	FACULTY 220,221	32
33	**XRAY RM 203B[5]**	**1**		**20**	**2#12 & 1#12G IN 3/4"C[3]**		0.0		**2#12 & 1#12G IN 3/4"C[4]**	**20**		**1**	**XRAY DEMO RM 205-A[5]**	**34**
35	**XRAY RM 203B[5]**	**1**		**20**	**2#12 & 1#12G IN 3/4"C[3]**			0.0	-	20		1	SPARE	36
37	**XRAY RMS EPO'S & WL'S[5]**	**1**		**20**	**2#12 & 1#12G IN 3/4"C[3]**	0.0			EXISTING CIRCUIT	20		1	WIRELESS ACCESS POINTS	38
39	**XRAY DEMO RM 205-A[5]**	**1**		**20**	**2#12 & 1#12G IN 3/4"C[3]**		0.0		-	20		1	SPARE	40
41	FIRE SMOKE DAMPERS	1		20	EXISTING CIRCUIT			0.0	-	20		1	SPARE	42
					TOTAL (PHASE):	0.0	0.0	0.0						

MANUFACTURER: SQUARE D
ENCLOSURE: NEMA 1
MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 400A
INTERRUPTING RATING: 10KA SYM.
FED FROM: BOTTOM

TOTAL CONN.:	0.0	KVA
TOT. CONN. + SPARE:	0.0	KVA
DEMAND:	0.0	KVA
DEMAND:	0.0	AMPS

SPARE CAPACITY 0 %
DEMAND FACTOR 100 %

NOTES
1. ALL BUSING TO BE COPPER
2. BOLT ON BREAKERS ONLY
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING AT THE UTILITY TRANSFORMER AND NOTIFY THE ENGINEER PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. UTILIZE EXISTING 20A/1P SPARE BREAKER FOR NEW CIRCUIT SHOWN. VERIFY SPARE BEFORE USE. UPDATE PANEL DIRECTORY AS SHOWN.
6. CONDUIT FOR ALL NEW 120V CIRCUITS SHALL BE MEDICAL GRADE MC CABLE.

1

JOB NAME: 23-197 SUNY NEWBURGH X-RAY
RATING: 480/277V, 4W, 3PH, 225A

XRH-1
(NEW)

LOCATION: CAMPUS LVL PARK. GARAGE

CKT. NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT. NO.
1	50KVA XFMR - CEILING XRAY	2	25.0	100	2#1 & 1#6G IN 1-1/4"C	25.0			-	ST		-	SPACE	2
3			25.0				25.0							4
5	75KVA XFMR - FLOOR XRAY	2	37.5	125	2#1 & 1#6G IN 1-1/4"C			37.5						6
7			37.5			37.5								8
9	SPACE	-		ST	-		0.0							10
11								0.0						12
					TOTAL (PHASE):	62.5	25.0	37.5						

MANUFACTURER: SQUARE D
ENCLOSURE: NEMA 1
MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 225A
INTERRUPTING RATING: 42KA SYM.
FED FROM: TOP

TOTAL CONN.:	125.0	KVA
TOT. CONN. + SPARE:	125.0	KVA
DEMAND:	125.0	KVA
DEMAND:	150.5	AMPS

SPARE CAPACITY 0 %
DEMAND FACTOR 100 %

NOTES
1. ALL BUSING TO BE COPPER
2. BOLT ON BREAKERS ONLY
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING AT THE UTILITY TRANSFORMER AND NOTIFY THE ENGINEER PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:
1	6/4/26	XRH-1 REVISION			

⅛" ¼" ½" 0 1" 2"
REFERENCE SCALE

UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING A LICENSED PROFESSIONAL ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2 OF THE N.Y. STATE EDUCATION LAW. FELLENZER ENGINEERING, LLP CERTIFICATE OF AUTHORIZATION #: 0017795

FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1 ISSUED 1995; EXP. 8/25

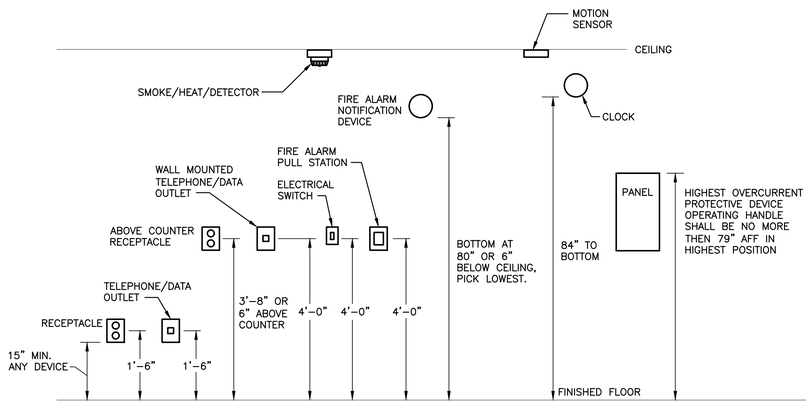
ISSUED 6/17/26 FOR BID

PROJECT TITLE:
RAD-TECH/DIAGNOSTIC IMAGING EXPANSION PROJECT
SUNY ORANGE NEWBURGH CAMPUS
ONE WASHINGTON CENTER, NEWBURGH, NY

DRAWING TITLE:
ELECTRICAL: ONE-LINE DIAGRAM

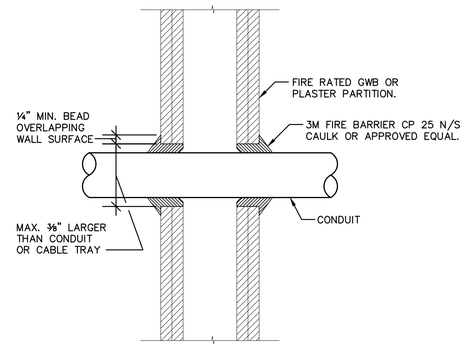
DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	WPB		EDF	E-601
DATE: 5-8-26	SCALE: AS SHOWN		FE PROJECT #: 23-197	PAGE 24 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(24) E-601.dwg (Layout: E-601)
Date: Wed, Jun 17, 2026 - 8:13 AM (Name: wpb)

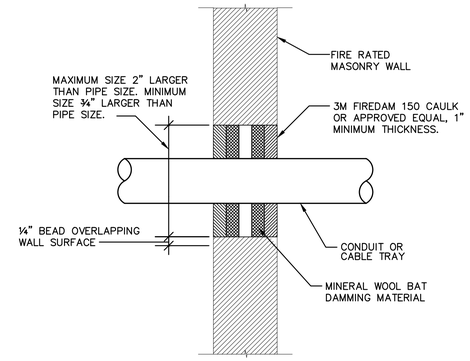


IN GENERAL, UNLESS NOTED OTHERWISE, THE FOLLOWING MOUNTING DIMENSIONS ABOVE FINISHED FLOOR SHALL BE ADHERED TO:
- –RECEPTACLES – 1'–6"
- –LIGHTING SWITCHES AND MANUAL MOTOR STARTER – 4'–0"
- –MOTION SENSORS – 8'–0"

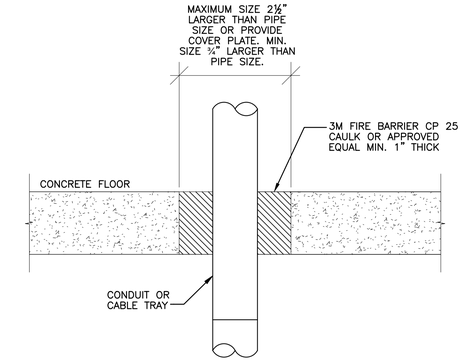
1 MOUNTING HEIGHTS OF ELECTRICAL DEVICES
N.T.S.



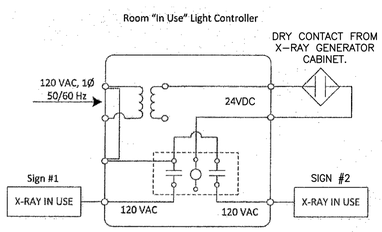
2 CONDUIT PENETRATION IN FIRE RATED GWB OR PLASTER PARTITION
N.T.S.



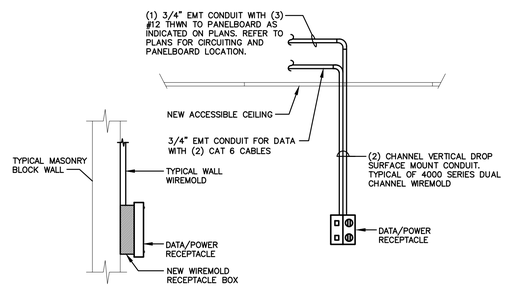
3 CONDUIT PENETRATION IN FIRE RATED MASONRY PARTITION
N.T.S.



4 CONDUIT PENETRATION IN FIRE RATED CONCRETE FLOOR
N.T.S.

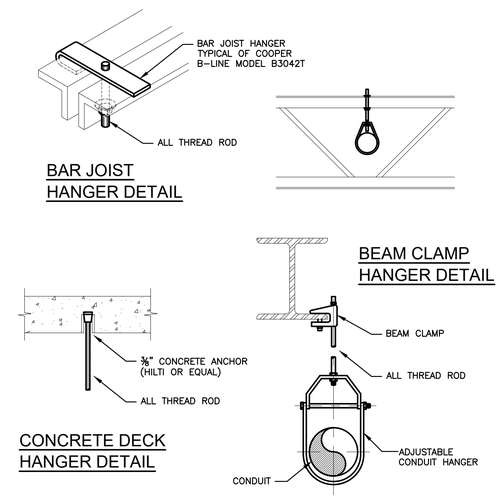


5 X-RAY WARNING LIGHT CONTROLLER APPLICATION DIAGRAM
N.T.S.

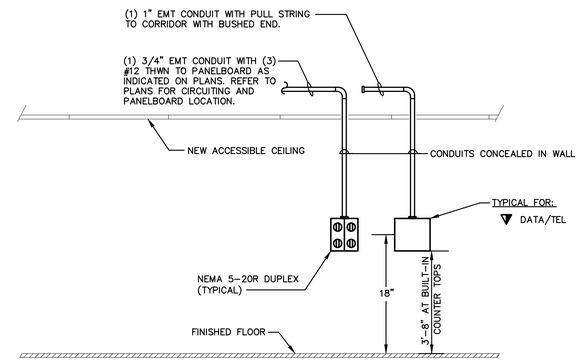


NOTES:
1. UTILIZE CONDUIT CONCEALED IN WALL WHENEVER POSSIBLE. INSTALL WIREMOLD ONLY WITH PERMISSION OF OWNER.
2. INSTALL WIREMOLD RECEPTACLE BOX ON WALL IN AN APPROVED MANNER.
3. THIS DETAIL PERTAINS TO NEW CONSTRUCTION ONLY. WHEN NEW DEVICES ARE BEING INSTALLED WHERE JUNCTION BOXES EXIST ALREADY, UTILIZE THE JUNCTION BOX.

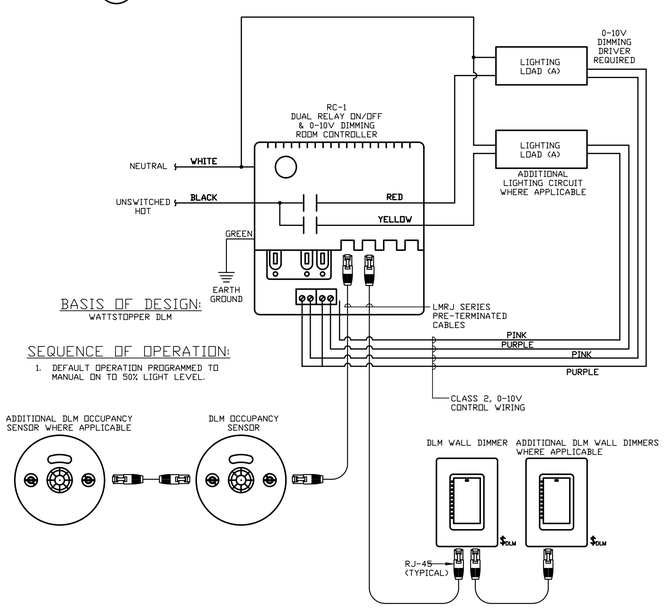
6 SURFACE MOUNT DATA/POWER RECEPTACLE
N.T.S.



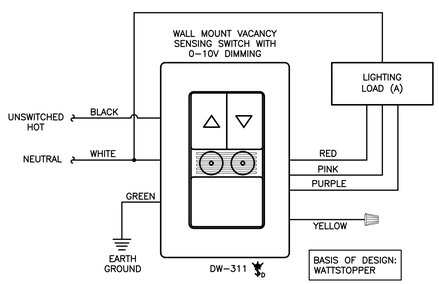
7 TYPICAL CONDUIT HANGER DETAIL
N.T.S.



8 DATA DROP
N.T.S.

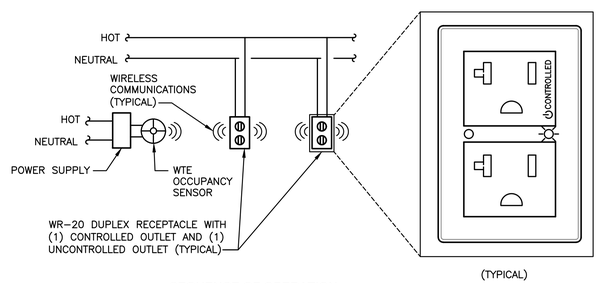


9 TYPICAL SINGLE ZONE DIMMING ROOM CONTROLLER WITH VACANCY SENSOR
N.T.S.



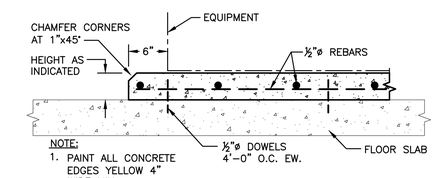
SEQUENCE OF OPERATION:
1. ON/OFF/DIMMING CONTROL OF ONE ZONE.
2. SET TO MANUAL ON TO 50% LIGHT LEVEL

10 TYPICAL WALL MOUNT VACANCY SENSOR SWITCH WITH 0-10V DIMMING DETAIL
N.T.S.



SEQUENCE OF OPERATION:
- UNCONTROLLED OUTLETS SHALL BE ENERGIZED AT ALL TIMES, INDEPENDENT OF OCCUPANCY SENSOR.
- WHEN OCCUPANCY SENSOR DETECTS OCCUPANCY IN SPACE, CONTROLLED RECEPTACLES SHALL BE ENERGIZED.
- WHEN OCCUPANCY SENSOR DOES NOT DETECT OCCUPANCY IN SPACE, CONTROLLED RECEPTACLES SHALL BE DE–ENERGIZED AFTER A TIME DELAY OF 20 MINUTES.

11 SWITCHED RECEPTACLE CONTROL DETAIL
N.T.S.



NOTE:
1. PAINT ALL CONCRETE EDGES YELLOW 4" WIDE MIN.

12 CONCRETE PAD DETAIL
N.T.S.

REV #	DATE	REMARKS:	ISSUE #	DATE	ISSUED FOR:

⅛" ¼" ½" 0 1" 2"
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FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 845-343-4986

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DRAWING TITLE:
ELECTRICAL: DETAILS

DESIGNED BY:	DRAWN BY:	APPROVED BY PM:	APPROVED BY PIC:	DRAWING #:
EDF	SL		EDF	E-701
DATE: 5–8–26	SCALE: AS SHOWN	FE PROJECT #: 23–197		PAGE 25 OF 25

File Name: F:\2023\23-197 Design for New X-RAY Suite, SUNY Orange Newburgh Campus\(25) E-701.dwg (Layout: E-701)
Date: Wed, Jun 17, 2026 - 8:13 AM (Name: wpb)