

Development Services

From Concept to Construction

Phone: 503-823-7300 Email: bds@portlandoregon.gov 1900 SW 4th Ave, Portland, OR 97201

More Contact Info (<http://www.portlandoregon.gov/bds/article/519984>)



APPEAL SUMMARY

Status: Decision Rendered - Held over from ID 27496 (2/9/22) for additional information

| | |
|--|---|
| Appeal ID: 27529 | Project Address: 2910 N Kerby Ave |
| Hearing Date: 2/23/22 | Appellant Name: Allison Titus de Boer |
| Case No.: B-005 | Appellant Phone: 503-863-2255 |
| Appeal Type: Building | Plans Examiner/Inspector: Jeffrey Rago |
| Project Type: commercial | Stories: 4 Occupancy: B, S-2, A-3 Construction Type: I-A |
| Building/Business Name: | Fire Sprinklers: Yes - throughout ceiling |
| Appeal Involves: Alteration of an existing structure, Reconsideration of appeal | LUR or Permit Application No.: 21-112054-CO |
| Plan Submitted Option: pdf [File 1] [File 2] | Proposed use: Common areas of elevator lobbies, corridors, vestibules and stairs |

APPEAL INFORMATION SHEET

Appeal item 1

| | |
|---|--|
| Code Section | Table 716.1(2) |
| Requires | Table 716.1(2) identifies the required ratings of Fire Door and Fire Shutter Assemblies in Fire barriers. |
| Code Modification or Alternate Requested | <p>Appeal requests determination of compliance regarding US Smoke & Fire model SD60GS product.</p> <p>RECONSIDERATION Appeal requests determination of compliance regarding US Smoke & Fire model Hosestream 120 First Responder product.</p> |
| Proposed Design | <p>The smoke curtain product US Smoke & Fire model SD60GS would be used in a 1 hour rating location that separates an existing atrium from a new one story corridor. US Smoke & Fire model SD60GS is tested to UL10D for 30 minutes, as well as tested to UL10B and to UL10C both for 20 minutes without the hose stream test. Attached PDF "20220202_LEW_PSSmokeCurtainProduct" provided originally.</p> <p>RECONSIDERATION US Smoke & Fire model Hosestream 120 First Responder is tested to UL10B and ASTM E2226 (Hose Stream Test) for 90 minutes. Attached PDF "20220215_LEW_PSSmokeCurtainProduct" provided for reconsideration.</p> |
| Reason for alternative | Code section 716.4 has been developed and voted to be included in the 2021 edition of the IBC. It will require Fire protective curtain assemblies constructed of materials tested without hose stream in accordance with UL 10D. US Smoke & Fire model SD60GS aligns with this IBC 2021 definition and would provide equivalent fire protection to meet the expected 2021 IBC requirements. |

RECONSIDERATION Revised US Smoke & Fire model Hosestream 120 First Responder product exceeds the one hour rated condition that separates the Atrium from the corridor.

APPEAL DECISION

Use of fire shutter activated by fire alarm system to provide a minimum of 1 hour fire separation between atrium and one story corridor: Granted as proposed.

The Administrative Appeal Board finds that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 90 calendar days of the date this decision is published. For information on the appeals process, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.



PARTIAL PUBLIC SPACES LEGACY EMANUEL WEST

2910 N. Kerby Ave
Portland, OR 97227
PERMIT SET
09-23-2021

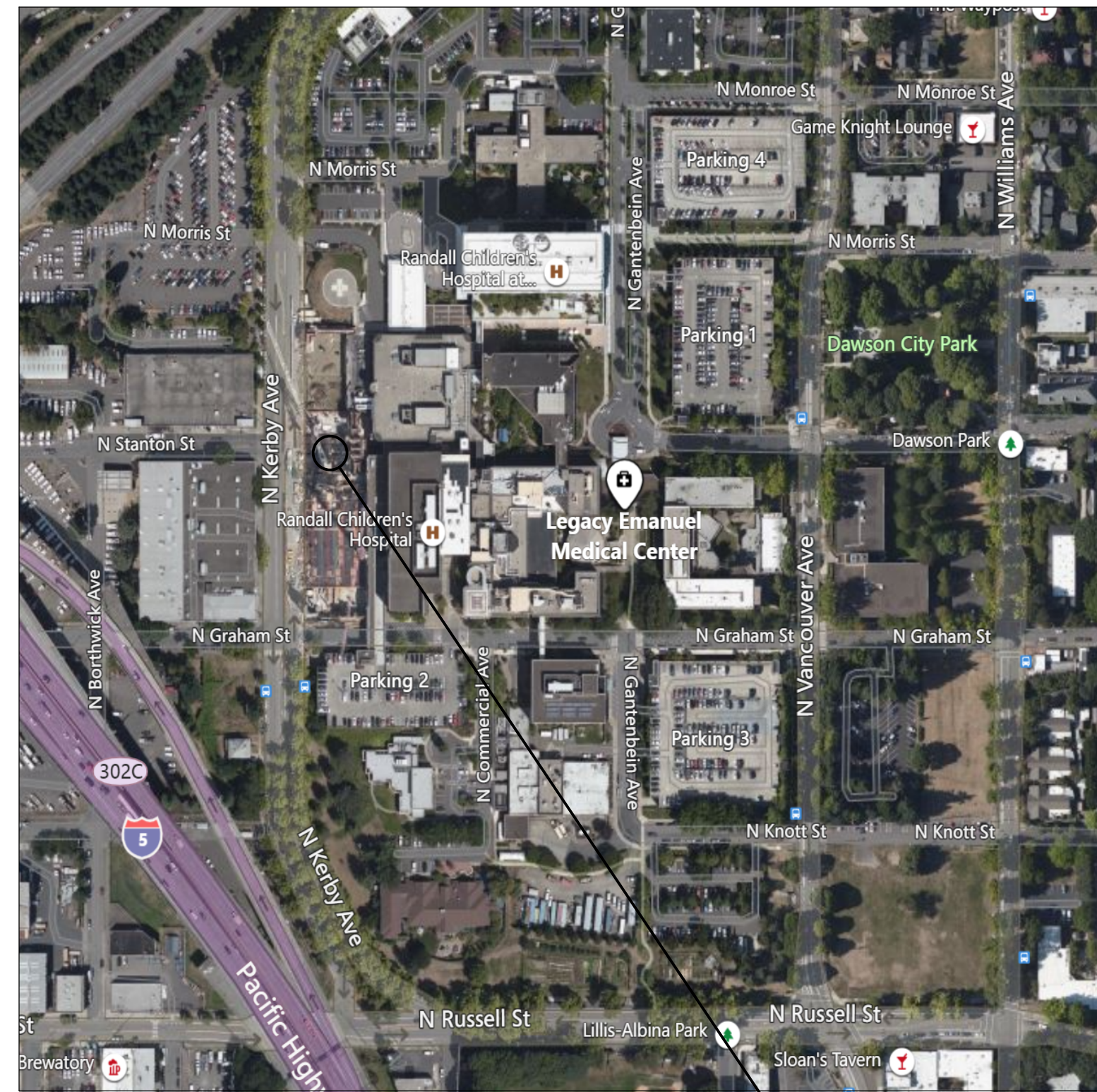
THE GENERAL CONTRACTOR SHALL SCHEDULE A FIRESTOPPING MEETING WITH THE BUILDING INSPECTOR AND ALL SUBCONTRACTORS THAT WILL BE INSTALLING FIRESTOPPING MATERIALS. EACH SUBCONTRACTOR WILL PROVIDE A LIST OF FIRESTOP MATERIALS/ ASSEMBLIES WHICH WILL BE USED AND THEIR LISTING AND APPROVED INFORMATION (I.E. UL, UCC OR OTHER APPROVED REPORTS/LISTING NUMBERS). THIS INFORMATION MUST BE SUBMITTED TO, AND APPROVED BY, THE BUILDING INSPECTOR PRIOR TO ANY INSTALLATION.

PROJECT INFORMATION

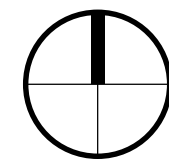
BUILDING: LEGACY EMANUEL WEST, BUILDING HEIGHT FOUR STORIES AND TWO LEVELS OF PARKING AND MECHANICAL PENTHOUSE
PROJECT ADDRESS: 2910 N. KERBY AVE
PORTLAND, OR 97227
PROJECT AREA: PARKING 2 (P2), PARKING 1 (P1), LOWER LEVEL, LEVEL 1
PROJECT SUMMARY: THE PARTIAL PUBLIC SPACES PROJECT WILL COMPLETE INTERIOR BUILD OUT OF A PUBLIC STAIR, ELEVATOR LOBBIES AND CONNECTING CORRIDOR SPACES ON THE PARKING LEVEL 2, PARKING LEVEL 1, AND LEVEL 1 OF THE EXISTING EMANUEL WEST TOWER. THE PROJECT STAIR WILL BE COMPLETED TO PASS THROUGH THE LOWER LEVEL, WITH NO SCOPE TO CONNECT TO THE UNOCCUPIED, UNFINISHED LOWER LEVEL SPACE.
APPLICABLE CODES: 2019 OREGON STRUCTURAL SPECIALTY CODE
2019 OREGON FIRE CODE
2019 OREGON MECHANICAL SPECIALTY CODE
2021 OREGON ELECTRICAL SPECIALTY CODE
2021 OREGON PLUMBING SPECIALTY CODE
2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE
CONSTRUCTION TYPE: IA
OCCUPANCY: B, S-2, A-3
FIRE PROTECTION: AUTOMATIC FIRE SPRINKLER AND FIRE ALARM COVERAGE PROVIDED THROUGHOUT UNDER SEPARATE PERMIT. PRESSURIZED ELEVATOR HOISTWAY PROVIDED AT WEST TOWER INSTEAD OF ENCLOSED ELEVATOR LOBBIES.
FACILITY PERMIT PROGRAM: 21-090450 FC
OREGON HEALTH AUTHORITY: PRM21-126

NOTE: GENERAL CONTRACTOR TO OBTAIN SEPARATE PERMIT FOR SPRINKLER AND FIRE ALARM SYSTEM MODIFICATION FROM FIRE MARSHAL'S OFFICE

VICINITY MAP



PROJECT LOCATION



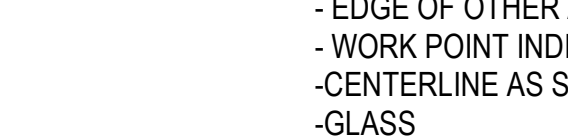
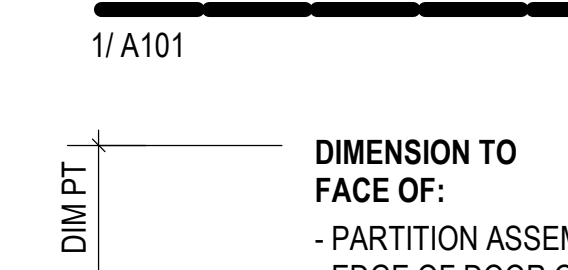
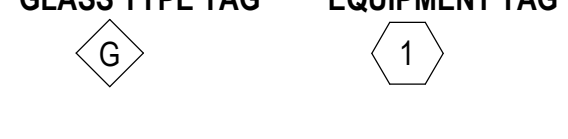
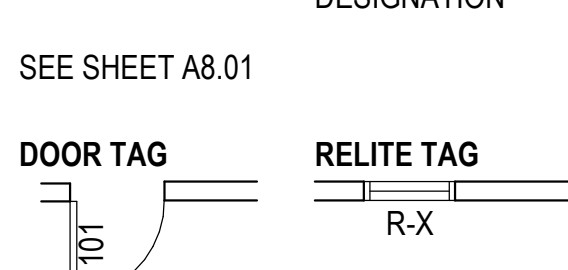
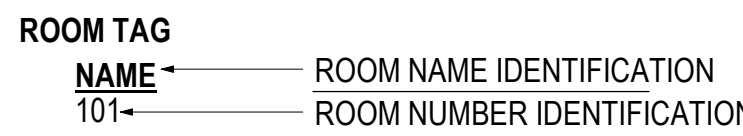
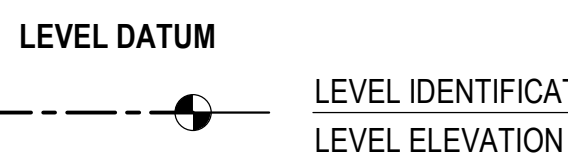
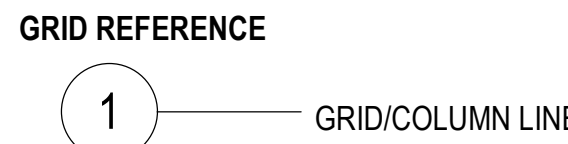
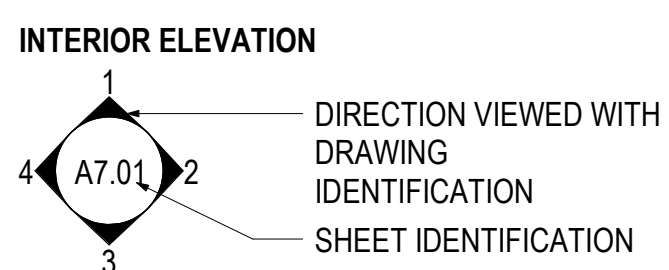
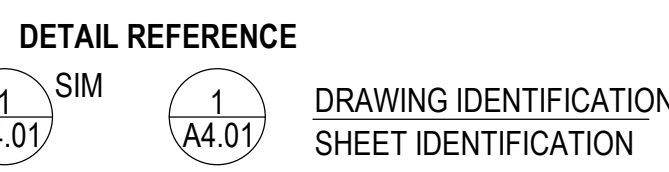
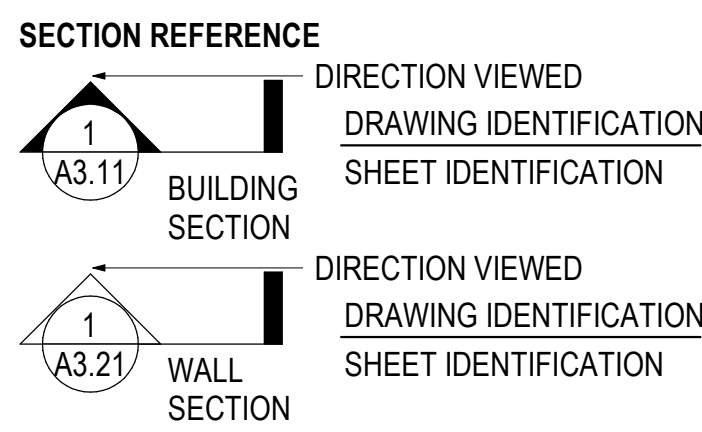
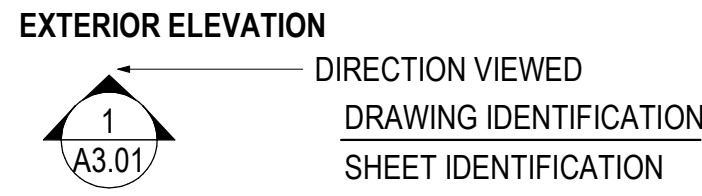
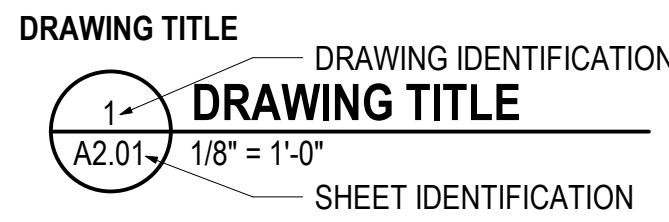
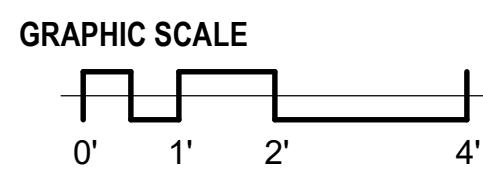
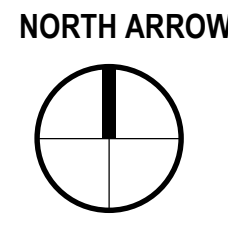
PROJECT TEAM

OWNER
LEGACY HEALTH
1120 NW 20TH AVENUE
PORTLAND, OR 97209
CONTACT: ALI SADRI
TELEPHONE: 503.413.2455
EMAIL: asadri@lhc.org
DESIGN BUILD GENERAL CONTRACTOR
ANDERSEN CONSTRUCTION
6712 NORTH OUTER CIRCLE
PORTLAND, OR 97217
CONTACT: TONY CARLSON
TELEPHONE: 503.224.3860
EMAIL: tcarlson@andersen-const.com
ARCHITECT
ZGF ARCHITECTS, LLP
1223 SW WASHINGTON ST., SUITE 200
PORTLAND, OR 97205
CONTACT: ALLISON TITUS DE BOER
TELEPHONE: 503.224.3860
EMAIL: allison.deboer@zgf.com

DRAWING INDEX

ARCHITECTURAL
A0.00 PROJECT INFORMATION
A0.10 LEGACY EMANUEL WEST PROJECTS ORIENTATION DIAGRAM
A0.20 PLAN, LIFE SAFETY - P2 & P1
A0.21 PLAN, LIFE SAFETY - LOWER LEVEL
A0.22 PLAN, LIFE SAFETY - LEVEL 1
A1.00 PLAN, DEMOLITION FLOOR - P2 & P1
A1.01 PLAN, DEMOLITION FLOOR - LOWER LEVEL & LEVEL 1
A2.00 PLAN, ENLARGED FLOOR - LEVEL P2 & P1
A2.01 PLAN, ENLARGED FLOOR - LOWER LEVEL & LEVEL 1
A3.00 PLAN, REFLECTED CEILING - P2, P1
A3.01 PLAN, REFLECTED CEILING - LEVEL 1
A5.00 SECTIONS, ELEVATION, PLANS, STAIRS
A5.01 DETAILS, STAIRS
A5.02 DETAILS, STAIR AND RAMP
A5.03 DETAILS, STAIRS
A5.04 DETAILS, STAIRS
A7.01 ELEVATIONS, INTERIOR - LEVEL P2
A7.02 ELEVATIONS, INTERIOR - LEVEL P1, LOWER LEVEL
A7.03 ELEVATIONS, INTERIOR - LEVEL 1
A8.01 SCHEDULE, PARTITION
A8.02 DETAILS, INTERIOR - PARTITION
A8.03 DETAILS, INTERIOR - PARTITION
A8.04 DETAILS, INTERIOR
A8.05 DETAILS, INTERIOR
A8.06 DETAILS, INTERIOR
A8.07 DETAILS, INTERIOR
A8.08 DETAILS, INTERIOR
A8.09 DOOR & RELITE TYPES, DETAILS, SCHEDULE
A8.10 DOOR & RELITE TYPES, DETAILS, SCHEDULE
A8.11 DETAILS, INTERIOR WINDOW
A8.61 DETAILS, INTERIOR CEILING
A8.62 DETAILS, INTERIOR CEILING

SYMBOLS



ABBREVIATIONS

& @ ADJ AESS AFF ALUM APPROX ARCH
BD BLDG B.O.
C CENTERLINE
CJ CONTRACTOR FURNISHED / OWNER INSTALLED
CL CONTROL JOINT
CLR CEILING
CG CORNER GUARD
CMU CONCRETE MASONRY UNIT
COL COLUMN
CONC CONCRETE
CONT CONTINUOUS
COORD COORDINATE
CUH CABINET UNIT HEATER
DET DETAIL
DF DRINKING FOUNTAIN
DIA DIAMETER
DIM DIMENSION
DN DOWN
DWG DRAWING
EA EACH
EL ELEVATION
ELEC ELECTRICAL
EJ EXPANSION JOINT
ELEV ELEVATOR
EQ EQUAL
EQUIP EQUIPMENT
EXIST EXISTING
EXT EXTERIOR
FD FLOOR DRAIN
FE FIRE EXTINGUISHER
FEC FIRE EXTINGUISHER CABINET
FF FINISH FLOOR
FH FIRE HOSE CABINET
FIN FINISH
FLR FLOOR
F.O. FACE OF
FT FEET/FOOT
GA GAUGE
GALV GALVANIZED
GL GLAZING
GYP GYPSUM
HM HOLLOW METAL
HORIZ HORIZONTAL
HR HOUR
HT HEIGHT
INCL INCLUDED
INSUL INSULATION
INT INTERIOR
JT JOINT
LAV LAVATORY
MAX MAXIMUM
MECH MECHANICAL
MFR MANUFACTURER
MIN MINIMUM
MISC MISCELLANEOUS
MO MASONRY OPENING
MTD MOUNTED
MTL METAL
NIC NOT IN CONTRACT
NO NUMBER
NOM NOMINAL
NTS NOT TO SCALE
OC ON CENTER
OD OVERFLOW DRAIN
OF/OI OWNER FURNISHED / CONTRACTOR INSTALLED
OF/OI OWNER FURNISHED / OWNER INSTALLED
OH OVERHEAD
OPP OPPOSITE
PTD PAINTED
R RADIUS
RCP REFLECTED CEILING PLAN
ROF ROOF DRAIN
REINF REINFORCING
REQD REQUIRED
RM ROOM
RO ROUGH OPENING
SCHED SCHEDULE
SF SQUARE FOOT
SIM SIMILAR
SPEC SPECIFICATIONS
SQ SQUARE
SS STAINLESS STEEL
STL STEEL
STRUCT STRUCTURAL
T.O. TOP OF
TYP TYPICAL
UNO UNLESS NOTED OTHERWISE
UL UNDERWRITERS LABORATORIES
VERT VERTICAL
VIF VERIFY IN FIELD
W WITH
W/O WITHOUT
WD WOOD

PROJECT GENERAL NOTES

- REVIEW ALL DRAWINGS AND COMPARE THEM TO FIELD CONDITIONS PRIOR TO PROCEEDING WITH THE WORK. IMMEDIATELY REPORT ANY CONFLICTS, DISCREPANCIES OR OMISSIONS TO THE ARCHITECT AND OWNER.
- REFER TO BUILDING STANDARDS OR SPECIFIC WORK REQUIREMENTS AND DETAILING ESTABLISHED BY THE OWNER FOR THIS PROJECT.
- ALL WORK, BOTH NEW AND IN PLACE, IS TO MEET THE REQUIREMENTS OF APPLICABLE CODES, REGULATIONS AND AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO THE OREGON STRUCTURAL SPECIALTY CODE (ALSO REFERRED TO AS IBC) AND THE AMERICANS WITH DISABILITIES ACT. MEET THE FIRE PROTECTION AND LIFE SAFETY REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
- EXCEPT AS OTHERWISE SPECIFIED HEREINAFTER, ALL WORK IS TO MEET HIGHEST QUALITY STANDARD OF EACH TRADE INDICATED.
- PREPARE SUBSTRATES FOR FINISH MATERIALS IN ACCORDANCE WITH FINISH MANUFACTURERS' SPECIFICATIONS AND INSTALLATION INSTRUCTIONS. VERIFY FINISH MATERIALS ARE FREE FROM DEFECTS UPON RECEIPT. INSTALL FINISH MATERIALS IN ACCORDANCE WITH FINISH MANUFACTURERS' SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.
- MECHANICAL AND ELECTRICAL WORK OF THIS PROJECT ARE CONTRACTOR-DESIGNED. THIS INCLUDES BUT IS NOT LIMITED TO HVAC, PLUMBING, FIRE PROTECTION, CONTROLS, LIFE SAFETY, LIGHTING AND POWER AND PROVISIONS FOR COMMUNICATIONS AS ESTABLISHED BY THE OWNER. OBTAIN AND PAY FOR ANY ASSOCIATED PERMITS AND INSPECTIONS. BY COMMENCING THE WORK, THE CONTRACTOR WARRANTS THAT ALL TRADES HAVE REVIEWED THE DRAWINGS AND WILL PROVIDE WORK COORDINATED WITH THE ARCHITECTURAL DRAWINGS, THE WORK OF OTHER TRADES, AND WITH FIELD CONDITIONS.
- MAINTAIN OR ADD EMERGENCY EGRESS LIGHTING IN AREA OF WORK AT LOCATIONS AS APPROVED BY AUTHORITIES HAVING JURISDICTION.
- PROVIDE AND INSTALL FIRE LIFE SAFETY DEVICES, INCLUDING SMOKE DETECTION AND ANNUNCIATION, IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL CONFIRM FINAL LOCATIONS WITH ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
- PROVIDE AUDIBLE AND VISUAL ALARMS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL CONFIRM FINAL LOCATIONS WITH ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
- ALL GLASS SHALL COMPLY WITH OSGC CHAPTER 24 AS INTERPRETED BY THE AUTHORITY HAVING JURISDICTION.
- ALL EGRESS PATHWAYS SHALL BE MINIMUM 44" WIDE CLEAR AND SHALL HAVE GREATER CLEARANCES AS INDICATED.
- MAINTAIN REQUIRED EXITING, FIRE PROTECTION AND LIFE SAFETY AT ALL TIMES FOR DURATION OF PROJECT, AS APPROVED BY AUTHORITIES HAVING JURISDICTION.
- COORDINATE SCHEDULING OF ALL WORK WITH THE OWNER, INCLUDING BUT NOT LIMITED TO THE MOVEMENT OF PERSONNEL AND MATERIALS WITHIN PUBLIC CORRIDORS, ELEVATORS AND SIMILAR AREAS. SCHEDULE ACTIVITIES SO THEY ARE NOT DISRUPTIVE TO OCCUPANTS OF THE BUILDING.
- SUBMITTALS REQUIRED FOR THE PROJECT MUST BE REVIEWED AND APPROVED BY THE CONTRACTOR PRIOR TO FORWARDING TO THE OWNER AND ARCHITECT. PROVIDE SUBMITTALS INCLUDING, BUT NOT LIMITED TO: FABRICATION SHOP DRAWINGS FOR STAIR RAIL AND RAMP, SHOP DRAWINGS FOR GLASS DOORS AND RELITES, SHOP DRAWINGS FOR ARCHITECTURAL WOODWORK, LAYOUT DRAWINGS FOR FLOOR FINISHES, PRODUCT DATA FOR WOOD DOOR HARDWARE, PRODUCT DATA FOR GLASS DOOR HARDWARE, PRODUCT DATA FOR ARCHITECTURAL WOODWORK HARDWARE, FINISH SYSTEM DESCRIPTION FOR WOOD PANELING, SAMPLES OF WOOD PANELING AND WOOD TRIM, AND SAMPLES OF PAINT, SAMPLES OF EACH FINISH PRIOR TO ORDERING FINISH MATERIALS, SAMPLES OF CEILING SYSTEMS AND FINISHES, FLOORING INSTALLATION LAYOUT, PRODUCT DATA FOR LIFE SAFETY SYSTEMS, PROVIDE (3) OF COPIES OF EACH SUBMITTAL FOR REVIEW WITH ARCHITECT AND OWNER.
- MAINTAIN FIRE RESISTIVE RATINGS OF WALLS AND OPENINGS. RESTORE ANY BUILDING ELEMENT TO THE REQUIRED RATING WHERE THEY HAVE BEEN COMPROMISED IN THE COURSE OF CONSTRUCTION.
- THE CONTRACTOR WILL PROVIDE FREQUENT DEBRIS REMOVAL AND CLEAN UP OCCUPIED WORK AREAS THROUGHOUT THE PROJECT. ALL AREAS TO BE LEFT TIDY AT END OF EACH DAY.
- DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS SHALL GOVERN. WHERE WRITTEN DIMENSIONS ARE NOT INDICATED OR CANNOT BE DISCERNED FROM THE DRAWINGS, CONTACT THE ARCHITECT FOR CLARIFICATION.
- FURNITURE AND EQUIPMENT ARE SHOWN FOR INFORMATION ONLY TO ASSIST IN COORDINATION. THEY ARE NOT INCLUDED IN THE SCOPE OF WORK UNLESS NOTED OTHERWISE. FURNITURE AND EQUIPMENT ARE SHOWN SCREENED.
- PROVIDE AND INSTALL FIRE LIFE SAFETY DEVICES AS SHOWN AND PER THE DIRECTION OF THE LOCAL FIRE MARSHAL. ARCHITECT TO APPROVE FINAL LOCATION PRIOR TO INSTALLATION. ALL DOORS TO HAVE A MINIMUM CLEAR 32" WIDE OPENING.
- ALL MECHANICAL ZONES MUST HAVE HEATING AND COOLING. CONFIRM LOCATION OF THERMOSTATS WITH ARCHITECT PRIOR TO CONSTRUCTION.
- PROVIDE ALL WORK ITEMS REQUIRED FOR A COMPLETE INSTALLATION WHETHER OR NOT SHOWN OR DESCRIBED.

DEFERRED SUBMITTALS

DESIGN, ENGINEERING, DOCUMENTATION AND SUBMITTAL OF DEFERRED SUBMITTALS WILL BE COMPLETED BY CONTRACTOR.

FIRE STOPPING
FIRE DETECTION AND ALARM SYSTEM
MECHANICAL, SEISMIC RESTRAINTS DESIGN SHOP DRAWINGS
SEISMIC ANCHORAGE AND BRACING OF CEILINGS
SEISMIC ANCHORAGE AND BRACING OF EQUIPMENT & DISTRIBUTION SPRINKLERS

ZGF
ZIMMER UNSUL FRASCA ARCHITECTS LLP

PORTLAND
SEATTLE
LOS ANGELES
WASHINGTON DC
NEW YORK
VANCOUVER BC

1223 SW Washington Street
Suite 200
Portland, OR 97205
T 503 224 3860
www.zgf.com

Consultants

STRUCTURAL ENGINEER

CATENA ENGINEERS
1500 NE IRVING ST. SUITE 412
PORTLAND, OR 97232
T 503.467.4980

MECHANICAL/PLUMBING

MAZZETTI
121 SW SALMON ST. SUITE 1000
PORTLAND, OR 97204
T 503.601.5972

ELECTRICAL

STANTEC
601 SW 2ND AVE. SUITE 1400
PORTLAND, OR 97204
T 503.226.7377

Revisions

1 Addendum 1 10-07-21
2 Addendum 2 11-19-21



EMANUEL
MEDICAL CENTER

EMANUEL WEST BUILDING Partial Public Spaces

2910 N. Kerby Ave
Portland, OR 97227

Drawing Title

PROJECT INFORMATION

Date: 09-23-2021
Job No: 25799-ewpp
Drawn By: Author
Checked By: Checker

Drawing No.

A0.00

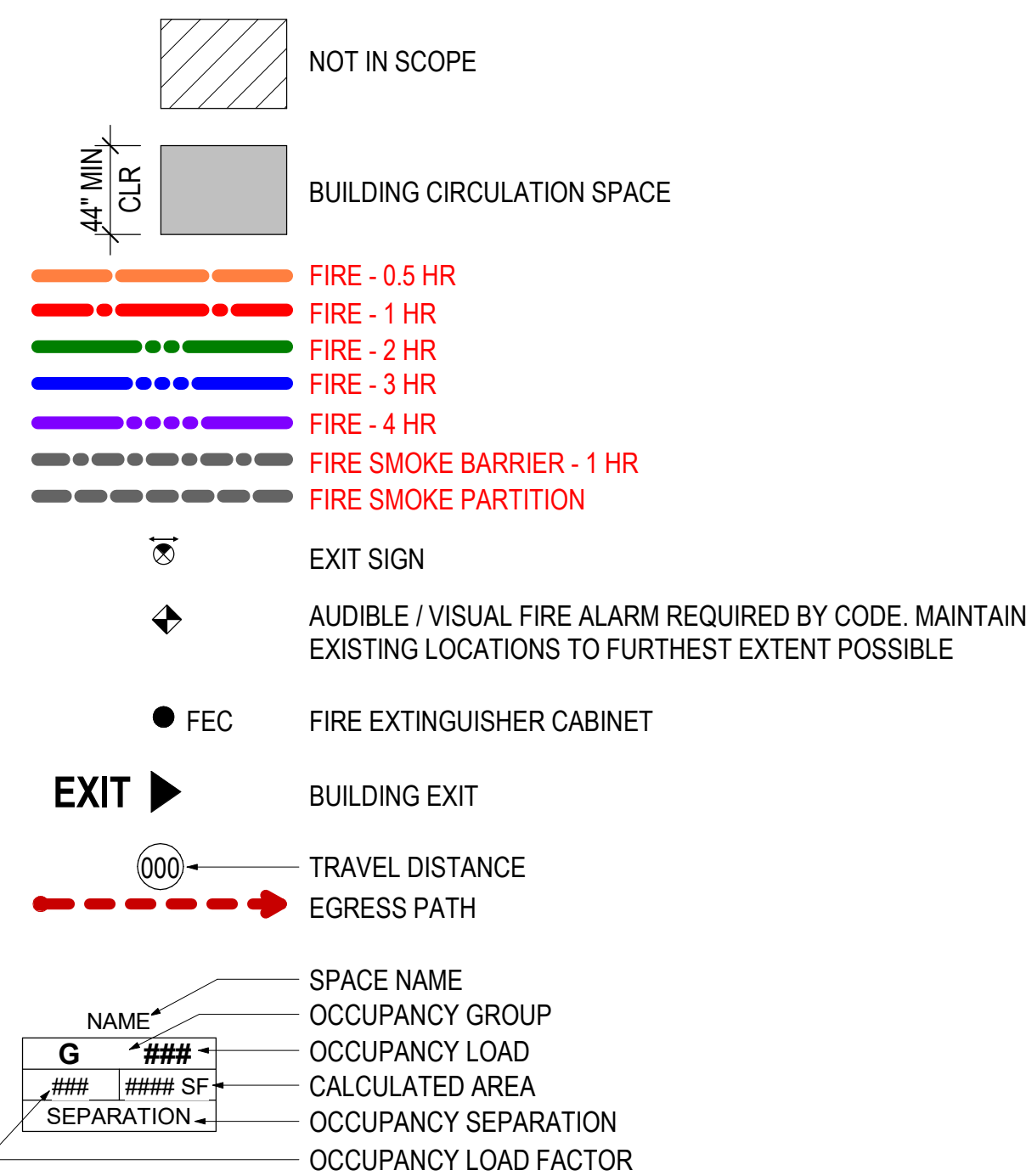
PERMIT SET

Page 1 of 21

GENERAL NOTES - LIFE SAFETY PLAN

1. COMPLY WITH ALL REGULATIONS, CODES, AND AUTHORITIES HAVING JURISDICTION INCLUDING THE ADA/ABAAS, ANSI A117.1, OREGON STRUCTURAL SPECIALTY CODE, NEC, NFPA, AND CITY OF PORTLAND BUREAU OF DEVELOPMENT SERVICES AND CITY OF PORTLAND FIRE AND RESCUE.
2. PROVIDE AUDIBLE AND VISUAL ALARMS AS INDICATED. CONFIRM REQUIRED LOCATIONS WITH CITY OF PORTLAND BUREAU OF FIRE. SUBMIT LOCATIONS TO ARCHITECT FOR APPROVAL OF DESIGN INTENT PRIOR TO SUBMISSION TO THE AUTHORITIES HAVING JURISDICTION.
3. ALL EGRESS PATHWAYS SHALL BE A MINIMUM OF 44 INCHES WIDE CLEAR; MAINTAIN GREATER WIDTH WHERE SO DIMENSIONED. EACH DOOR OPENING SHALL PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES.
4. PROVIDE EMERGENCY LIGHTING DELIVERING A MINIMUM AVERAGE OF 1 FT CANDLE AND AT LEAST .1 FOOTCANDLE ALONG EGRESS PATH. EMERGENCY LIGHTING IS POWERED BY EXISTING EMERGENCY GENERATOR
5. PROVIDE FIRE EXTINGUISHERS PER LOCAL JURISDICTION'S REQUIREMENTS. BUILDING STANDARD FIRE EXTINGUISHERS SHALL BE LOCATED AT A MINIMUM OF 1 FIRE EXTINGUISHER PER EVERY 3000 SF WITH NO MORE THAN 75 FEET OF TRAVEL DISTANCE FROM ANY POINT IN THE TENANT AREA. CONTRACTOR TO VERIFY LOCATIONS AND TYPES OF EXISTING FIRE EXTINGUISHERS AND PROTECT THEM DURING THE WORK. CONFIRM LOCATIONS OF EXISTING AND NEW FIRE EXTINGUISHERS WITH ARCHITECT PRIOR TO INSTALLATION.

LEGEND - FIRE AND LIFE SAFETY PLAN



Revisions

2 Addendum 2

11-19-21

EMANUEL
MEDICAL CENTEREMANUEL WEST
BUILDINGPartial Public
Spaces2910 N. Kerby Ave
Portland, OR 97227

Drawing Title

PLAN, LIFE SAFETY -
LEVEL 1

Date: 09-23-2021

Job No: 25799-ewpp

Drawn By: Author

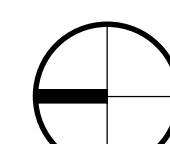
Checked By: Checker

Drawing No.

A0.22

PERMIT SET

Page 2 of 21

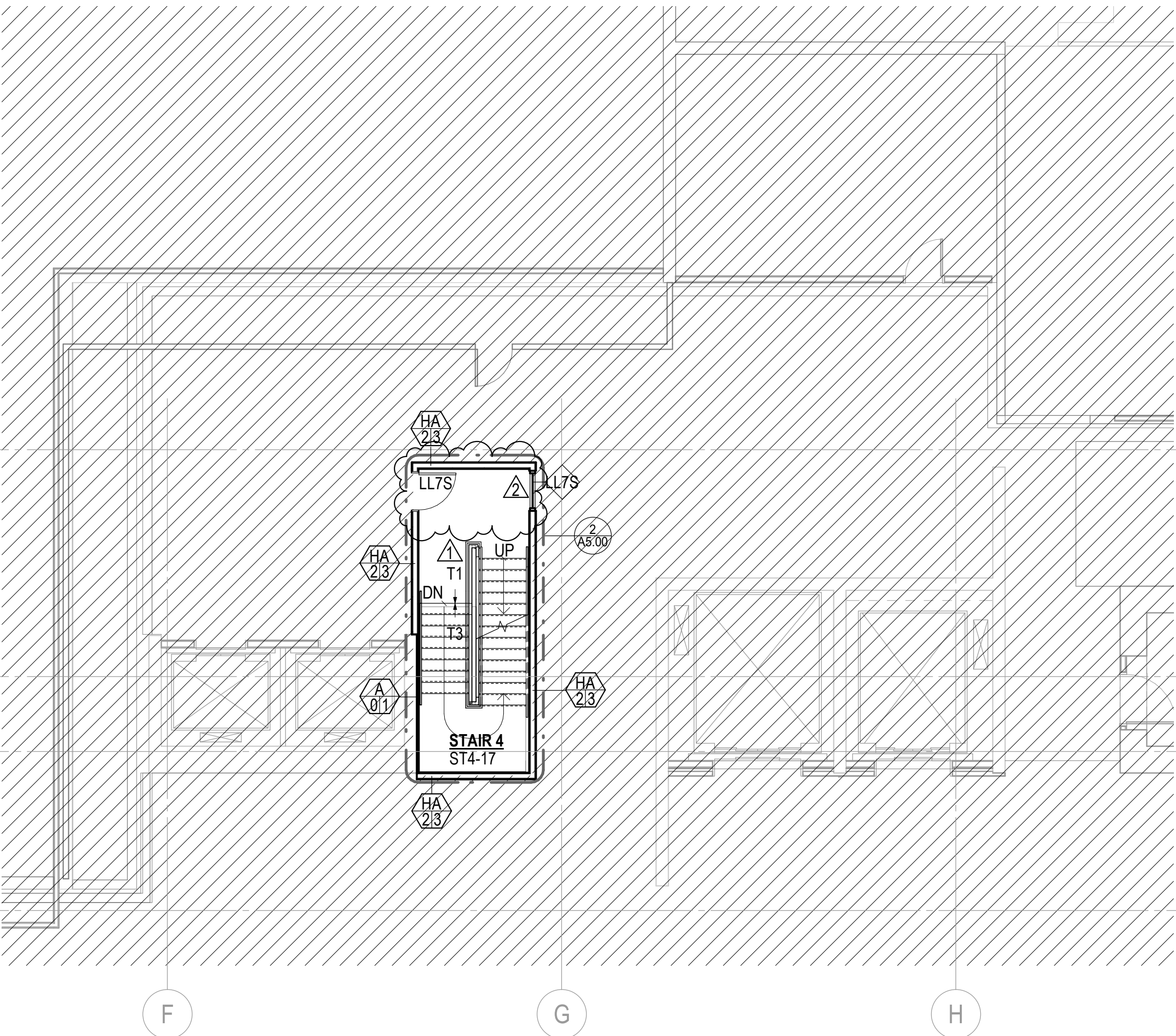
1 PLAN, LIFE SAFETY - LEVEL 01
A0.22 1/16" = 1'-0"PROJECT
NORTH

LEGEND - FINISHES

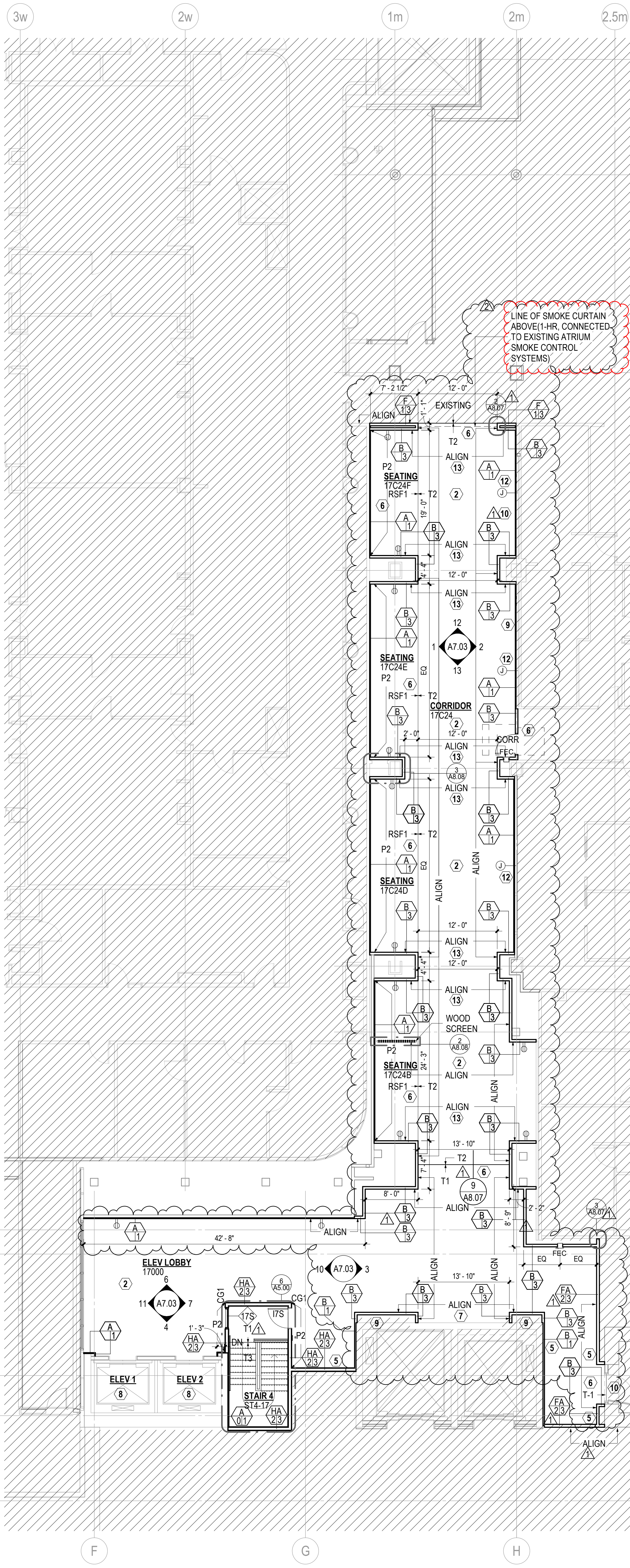
| | | | | | |
|------|--|------|---|------|---|
| APC1 | ACOUSTICAL CEILING TILE ARMSTRONG LYRA PB 8434PB 15/16" BEVELED CONCEALED EDGE 48" X 48" COLOR: WHITE | DGF1 | DECORATIVE GLASS FILM SOLYX SXB-49 KING BLUE SAND BLAST | SSM1 | ELEVATOR WALL PANELS CAMBRIA QUARTZ SMITHFIELD HIGH GLOSS 1CM |
| APC2 | NOT USED | DGF2 | DECORATIVE GLASS FILM SOLYX SXJ-0541-71 BROKEN LINES GRADIENT 71" HIGH | T1 | TERRAZZO TILES WAUSAU TILE 24" 24" X 5/8" TRADITIONAL SERIES COLOR: CRUSHED ICE 1/16" SPACERS FOR 1/8" GROUT JOINTS GROUT: TBD PROVIDE CRACK SUPPRESSION MEMBRANE |
| APC3 | ACOUSTICAL WOOD CEILING ARMSTRONG WOODWORKS LINEAR SOLID WOOD PLANKS 8117W1 3" WIDE PLANKS BIOACOUSTIC INFILL PANELS AT CEILING ONLY WESTERN HEMLOCK WALNUT | P1 | PAINT SHERWIN WILLIAMS SW 7636 ORIGAMI WHITE | T2 | PORCELAIN TILES DAL TILE TBD 12" X 24" GROUT: 1/8" COLOR: TBD PROVIDE CRACK SUPPRESSION MEMBRANE |
| APC4 | ACOUSTICAL CEILING TILE ARMSTRONG OPTIMA 3250 SQUARE REGULAR 15/16" 24" X 24" PRELUDE XL 15/16" EXPOSED TEE GRID COLOR: WHITE | P2 | PAINT WOLF GORDON SCUFFMASTER MATCH LEGACY BLUE | T3 | PRECAST TERRAZZO WAUSAU EPOXY TERRAZZO FLAT TREADS SIZE: 11" X 48" X 1/2" COLOR: CRUSHED ICE |
| C1 | CONCRETE EXISTING FINISH: INTERIOR CLEAR CONCRETE WALL/FLOOR SEALER | P3 | PAINT SHERWIN WILLIAMS MATCH LEGACY BLUE | T4 | PRECAST TERRAZZO WAUSAU EPOXY TERRAZZO FLAT TREADS SIZE: 11" X 48" X 5/8" COLOR: CRUSHED ICE |
| CG1 | STAINLESS STEEL CORNER GUARDS INPRO SURFACE MOUNTED CORNER GUARD, 403 STAINLESS STEEL 90 DEGREE, 1-1/2" X 1-1/2" PL PREMIUM HEAVY DUTY ADHESIVE PL PREMIUM HEAVY DUTY ADHESIVE | P4 | PAINT SHERWIN WILLIAMS MATCH RB1 | UPH1 | NOT USED |
| CP1 | CARPET TILES SHAW CONTRACT ALL ACCESS WALK OFF TILE COLLECTION PACE TILE 5T413 STEP 24" X 24" | PL1 | ELEVATOR WALL PANELS ROSEBURG DURAMINE WHITE | WD1 | NOT USED |
| CP2 | NOT USED | RB1 | RUBBER BASE TARKETT MILLWORK MANDALAY BLACK PEARL 2-1/2" | WLP1 | CUSTOM DIGITAL PRINTED WALL PANELS CS ACROVYN BY DESIGN 0.040" WALL COVERING SHEET 4X8' AND 4X10' SHEETS |
| | | RSF1 | RESILIENT SHEET FLOORING GERFLOR TARALAY IMPRESSION COMFORT GENTLEMAN 0772 COFFEE 6'-6" W X 82'-0" L ROLL, 3.35MM THICKNESS | | |

SHEET NOTES - FLOOR PLAN

- NOT USED
- PREPARE FLOOR READY FOR NEW FLOOR FINISHES.
REFER TO LEGEND - FINISHES FOR FLOOR FINISH.
PROVIDE CRACK SUPPRESSION MEMBRANE AT ALL NEW T1 AND T2 FLOOR TILE LOCATIONS
PER MANUFACTURERS INSTALLATION RECOMMENDATIONS
- PREPARE EXISTING EXPOSED CONCRETE WALL AREAS BELOW EXISTING GYP. BD WALLS
READY FOR PAINT FINISH TO MATCH P1.
- RELOCATE EXISTING WALL MOUNTED DEVICES AND CONDUIT.
COORDINATE AND VERIFY WITH ARCHITECT AND MEP CONSULTANTS FOR FINAL LOCATIONS.
- FURR OUT EXISTING CONCRETE COLUMNS/WALLS READY FOR NEW FINISHES.
PROVIDE METAL FURRING CHANNELS TO ACCEPT ELECTRICAL CONDUIT AND RECEPTACLE BOXES.
- CONTRACTOR TO PROVIDE ADA COMPLIANT TRANSITION AT EXISTING CONDITION. CONTRACTOR
TO VERIFY EXISTING FLOOR HEIGHT TRANSITIONS AND PREPARE EXISTING CONCRETE SLAB AS
REQUIRED TO ACHIEVE ADA COMPLIANCE.
- PREPARE EXISTING CONCRETE WALL AND/OR FLOOR. READY FOR INTERIOR CONCRETE SEALER FINISH
- PROVIDE PUBLIC ELEVATOR INTERIOR WALL AND FLOOR FINISHES.
INTERIOR ELEVATOR WALL FINISHES TO BE SELECTED FROM ELEVATOR MANUFACTURER
STANDARD FINISHES. VERIFY WITH ARCHITECT FINISH SELECTIONS AND
FINAL DESIGN CONFIGURATION.
- FURR OUT AND LOCATE NEW WALL PARTITIONS TO CLEAR EXISTING PLUMBING PIPES
- EXISTING ACCESS PANEL TO REMAIN, COORDINATE WITH NEW FINISHES, PAINT TO MATCH ADJACENT.
- NOT USED
- PROVIDE ELECTRICAL JUNCTION BOX FOR CONNECTION TO WALL MOUNTED ILLUMINATED SIGNAGE
VERIFY FINAL LOCATION WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.
- ALIGN FINISHED FACE OF PAINTED GYPSUM BOARD WITH FINISHED FACE OF WOOD WALL PANELING OPPOSITE.



2 PLAN, FLOOR - LOWER LEVEL
A2.01 1/8" = 1'-0"



1 PLAN, FLOOR - LEVEL 01
A2.01 1/8" = 1'-0"

GENERAL NOTES - FLOOR PLAN

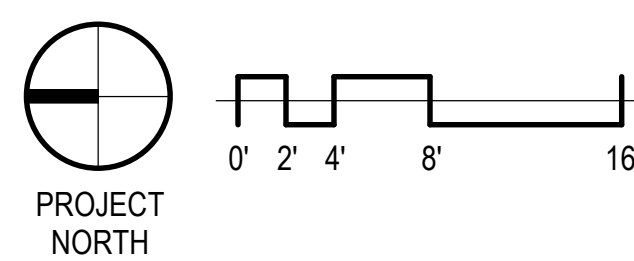
- FIELD VERIFY EXISTING CONDITIONS AND ITEMS TO BE REMOVED. PLANS MAY NOT ACCURATELY REFLECT EXISTING CONDITIONS. NOTIFY THE OWNER AND ARCHITECT OF ANY DISCREPANCIES.
- SALVAGE SERVICEABLE ITEMS REMOVED IN THE COURSE OF DEMOLITION AS DIRECTED BY THE OWNER. SALVAGE ITEMS FOR REUSE IN THE PROJECT AS INDICATED IN THE SHEET NOTES
- RECYCLE ITEMS INTENDED FOR DISPOSAL TO THE EXTENT PRACTICABLE, AS APPROVED BY THE OWNER IN ACCORDANCE WITH THE LOCAL JURISDICTION.
- CUT BACK INTO WALL AND CAP ANY PLUMBING MADE UNNECESSARY BY THE PROJECT SCOPE. DISCONNECT FROM WATER SOURCE.
- REMOVE EXISTING POWER AND COMMUNICATIONS ITEMS NOT CURRENTLY IN USE OR INTENDED FOR REUSE.
- CONFIRM EXISTING ABANDONED SMOKE DETECTORS AND LIFE SAFETY CABLING AND REMOVE FROM CEILING PLENUM.
- PROTECT ALL FINISHES AND SURFACES TO REMAIN IN PROJECT FROM DAMAGE DURING THE COURSE OF DEMOLITION IN PROJECT SCOPE AREAS AND IN ADJACENT AREAS.
- REMOVE EXISTING FINISHES IN AREA OF WORK, UNLESS NOTED OTHERWISE. PREPARE ALL SURFACES TO RECEIVE NEW FINISHES ACCORDING TO THE SPECIFIED PRODUCT MANUFACTURERS' INSTALLATION REQUIREMENTS AND DIRECTIONS.
- VERIFY WITH BUILDING OWNER PRIOR TO DEMOLITION, ALL ITEMS TO BE SALVAGED FOR REUSE.
- EXISTING COLUMN WRAPS ARE TO REMAIN, UNLESS NOTED OTHERWISE. PROTECT DURING THE COURSE OF CONSTRUCTION. PATCH AND REPAIR AS REQUIRED FOR NEW FINISHES
- PARTITIONS ARE CENTERED ON BUILDING PLANNING MODULE UNLESS DIMENSIONED OTHERWISE.
- DIMENSIONS ARE TO FINISH FACE OF GYPSUM BOARD PARTITION UNLESS NOTED OTHERWISE.
- PROVIDE REINFORCEMENT IN PARTITIONS FOR ANCHORAGE OF CASEWORK, MILLWORK AND OTHER WALL-SUPPORTED ITEMS.
- DOOR HARDWARE IS TO INCLUDE OWNER STANDARD LEVER HANDLES WITH LATCH SETS UNLESS NOTED OTHERWISE.
- PROVIDE LEVEL 4 FINISH AT ALL NEW GYPSUM BOARD PARTITIONS UNLESS NOTED OTHERWISE.
- PROVIDE OWNER STANDARD FINISHES THROUGHOUT UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS FOR ADDITIONAL FINISH INFORMATION.
- PAINT ALL GYPSUM BOARD WALLS P1 UNLESS NOTED OTHERWISE.
- RESILIENT BASE TO BE RB1 UNLESS NOTED OTHERWISE.
- EXTERIOR WINDOW SYSTEM MULLIONS AND SILL TO REMAIN EXISTING COLOR AND FINISH. REPAIR AND TOUCH-UP DAMAGED LOCATIONS.
- INSTALL ALL FINISHES LISTED PER MANUFACTURERS' SPECIFICATIONS AND PRINTED INSTALLATION INSTRUCTIONS FOR THE CONDITIONS INDICATED. DO NOT START INSTALLATION OF NEW FINISHES UNLESS SUBSTRATE MEETS THE MANUFACTURER'S REQUIREMENTS. START OF INSTALLATION IMPLIES ACCEPTANCE OF EXISTING CONDITIONS.
- INSPECT ALL FINISH MATERIALS UPON RECEIPT. DO NOT PROCEED WITH INSTALLATION OF ANY MATERIAL THAT HAS ANY DEFECTS. OBTAIN REPLACEMENT MATERIAL TO MEET PROJECT SCHEDULE AND RETURN DEFECTIVE MATERIAL TO MANUFACTURER IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, AT NO ADDITIONAL COST TO PROJECT.
- REPAIR ANY DAMAGED EXISTING SURFACES TO REMAIN DURING THE COURSE OF WORK TO MATCH EXISTING AND ADJACENT FINISHES.
- FIELD VERIFY EXISTING POWER OUTLETS INDICATED TO REMAIN, INCLUDING RECEPTACLE, CIRCUITING AND DEVICE PLATE.
- REVIEW ELEVATIONS AND COORDINATE OUTLET LOCATIONS TO AVOID CONFLICTS.
- INSTALL WALL-MOUNTED OUTLETS AT HEIGHTS INDICATED. WHERE HEIGHT IS NOT INDICATED, OR IS NOT ABLE TO BE INFERRED FROM THE DRAWINGS AND NOTES, INSTALL AT ADA MINIMUM HEIGHT.
- OUTLETS ARE SHOWN FOR APPROXIMATE LOCATION ONLY, EXCEPT WHERE DIMENSIONED. REFER TO ELEVATIONS FOR DIMENSIONS. VERIFY WITH OWNER ANY SPECIAL EQUIPMENT REQUIREMENTS PRIOR TO START OF CONSTRUCTION. VERIFY OUTLET LOCATIONS BY SITE-WALK WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN. AT NO ADDITIONAL COST, REVISE OUTLET LOCATIONS NOT EXCEEDING 8 FEET FROM LOCATIONS INDICATED IN THE DRAWINGS.
- VERIFY FLOOR-MOUNTED OUTLET LOCATIONS WITH OWNER.
- OFFSET ALL BACK TO BACK DEVICES BY ONE STUD BAY, MINIMUM, TO MINIMIZE SOUND TRANSMISSION. SEAL AROUND EACH OUTLET.
- PROVIDE ELECTRICAL REQUIREMENTS FOR HVAC EQUIPMENT.
- ALL COMMUNICATIONS WIRING AND TERMINATIONS ARE TO BE BY OWNER'S CONTRACTOR. PROVIDE PULL STRINGS AT EACH COMMUNICATION RECEPTACLE AND COORDINATE ALL RELATED WORK WITH OWNER.
- COORDINATE ALL AUDIOVISUAL REQUIREMENTS WITH ARCHITECT/OWNER'S AUDIOVISUAL VENDOR.
- ALL NEW DEVICE PLATES AND RECEPTACLES ARE TO BE CONFIRMED WITH ARCHITECT/OWNER.

LEGEND - FLOOR PLAN

- NOT IN CONTRACT
- EXISTING PARTITION / CONSTRUCTION TO REMAIN (SCREENED)
- NEW CONSTRUCTION (BOLD)
- EXISTING DOOR TO REMAIN (SCREENED)
- NEW DOOR (BOLD)
- EXISTING RELITE TO REMAIN (SCREENED)
- NEW RELITE (BOLD)

LEGEND - DEVICES

- DUPLEX OUTLET
- JUNCTION BOX
- THERMOSTAT BOX



| | |
|--------------|----------|
| 1 Addendum 1 | 10-07-21 |
| 2 Addendum 2 | 11-19-21 |

Revisions

| | |
|--------------|----------|
| 1 Addendum 1 | 10-07-21 |
| 2 Addendum 2 | 11-19-21 |



EMANUEL
MEDICAL CENTER

EMANUEL WEST
BUILDING

Partial Public
Spaces

2910 N. Kerby Ave
Portland, OR 97227

Drawing Title

PLAN, REFLECTED
CEILING - LEVEL 1



Date: 09-23-2021
Job No: 25799-ewpp
Drawn By: Author
Checked By: Checker

Drawing No.

A3.01

PERMIT SET

GENERAL NOTES - REFLECTED CEILING PLAN

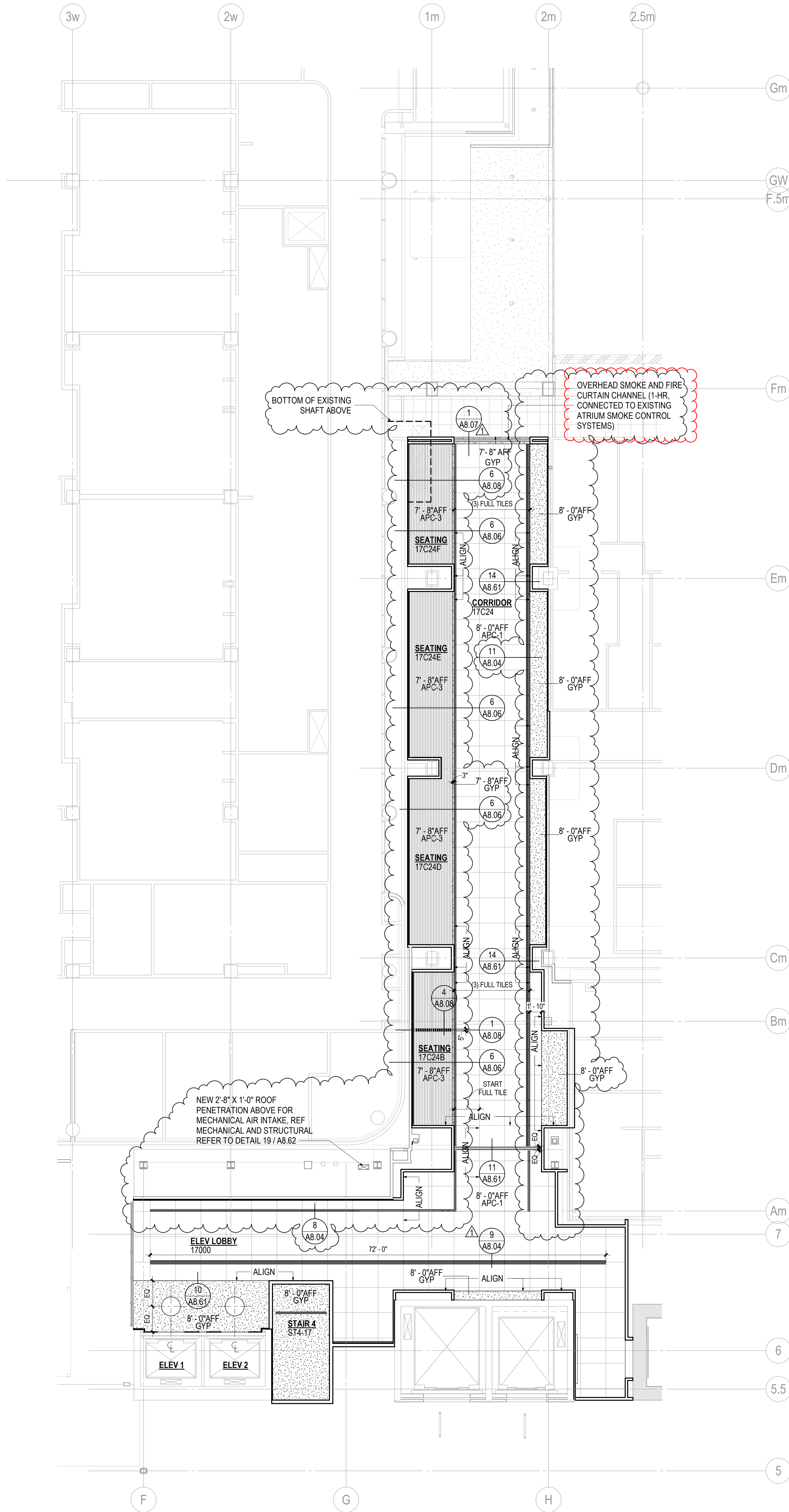
- CEILING HEIGHT IS 8'-0" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
- PROVIDE BUILDING STANDARD CONTROLS FOR LIGHT FIXTURES UNLESS OTHERWISE INDICATED. CONFIRM ENERGY REDUCTION SWITCHING WITH OWNER.
- PROVIDE BRACING OF PARTITIONS ABOVE CEILING AND COMPRESSION BRACING OF CEILING SYSTEM AS REQUIRED BY SEISMIC CODES AND AUTHORITIES HAVING JURISDICTION.
- CONFIRM EXIT SIGNAGE REQUIREMENTS WITH FIRE BUREAU. PROVIDE BUILDING STANDARD EXIT SIGNS AT LOCATIONS INDICATED AND ADDITIONAL LOCATIONS AS APPROVED.
- COORDINATE MECHANICAL (HVAC), FIRE PROTECTION (SPRINKLER) AND LIFE SAFETY ALARM AND SPEAKER LOCATIONS AND REQUIREMENTS WITH LIGHT FIXTURE LOCATIONS SHOWN. AVOID CONFLICTS.
- VERIFY LOCATIONS OF VISIBLE FIRE PROTECTION AND LIFE SAFETY ITEMS WITH ARCHITECT PRIOR TO SUBMITTING FOR PERMITS. THIS INCLUDES, BUT IS NOT LIMITED TO, EMERGENCY LIGHTING, FIRE SPRINKLERS, SMOKE/FIRE DETECTORS AND FIRE ALARM COMMUNICATION DEVICES.
- DESIGN FIRE PROTECTION AND LIFE SAFETY WORK TO CONFORM TO STATE AND LOCAL CODES AND REGULATIONS. MAINTAIN 100 PERCENT SPRINKLER COVERAGE.
- MODIFY EXISTING LIGHTING CONTROLS TO SERVE NEW ROOM CONFIGURATIONS. ALL NEW LIGHTING TO BE ON BUILDING STANDARD CONTROLS.
- ANY CEILING OR WALL-MOUNTED DEVICES AND/OR CONTROLS REQUIRED BUT NOT INDICATED (EXISTING OR NEW) ON THESE DOCUMENTS ARE TO BE REVIEWED AND COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION.
- INSTALL ALL SPRINKLER HEADS, RECESSED DOWNLIGHTS, SPEAKERS, VISUAL STROBE ALARMS AND OTHER CEILING-MOUNTED DEVICES CENTERED IN THE ACOUSTICAL CEILING PANEL UNLESS NOTED OTHERWISE.
- SUPPLY OCCUPANCY SENSORS IN ALL OCCUPIABLE SPACES PER APPLICABLE CODES AND BUILDING STANDARDS.
- DIMENSIONS ARE TO CENTERLINE OF FIXTURE UNLESS NOTED OTHERWISE.
- THE INSTALLED ELECTRIC LIGHTING SHALL MEET THE TARGET LIGHTING POWER DENSITY TARGETS INDICATED ON THE TABLE IN THE DRAWINGS. THE INSTALLED POWER DENSITY, MEASURED IN WATTS/SF, SHOULD NOT EXCEED THE ESTABLISHED PROJECT TARGET FOR EACH SPACE, WHILE PROVIDING AT A MINIMUM THE RECOMMENDED LIGHT LEVELS IN FOOTCANDLES AS MEASURED AT THE 30" HEIGHT OF THE WORKPLANE.
- PAINT ALL GYPSUM BOARD CEILINGS AND GYPSUM BOARD SOFFITS P1 UNLESS NOTED OTHERWISE.

LEGEND - REFLECTED CEILING PLAN

- NOT IN CONTRACT
- GYPSUM BOARD
- SUSPENDED ACOUSTICAL CEILING
- LINEAR WOOD CEILING
- RECESSED DOWN LIGHT
- RECESSED WALL WASHER
- RECESSED LINEAR LIGHT
- STRIP FIXTURE
- STRIP FIXTURE, BARE TUBE
- LINEAR COVE LIGHT
- ACCESS PANEL
- SUPPLY AIR DIFFUSER
- RETURN/EXHAUST AIR GRILLE
- LINEAR SUPPLY AIR DIFFUSER



0' 2' 4' 8' 16'



1 A3.01 PLAN, REFLECTED CEILING - LEVEL 1
1/8" = 1'-0"

| Revisions | | |
|-----------|------------|----------|
| 1 | Addendum 1 | 10-07-21 |
| 2 | Addendum 2 | 11-19-21 |



EMANUEL WEST BUILDING
Partial Public Spaces
2910 N. Kerby Ave
Portland, OR 97227

Drawing Title
DETAILS, INTERIOR

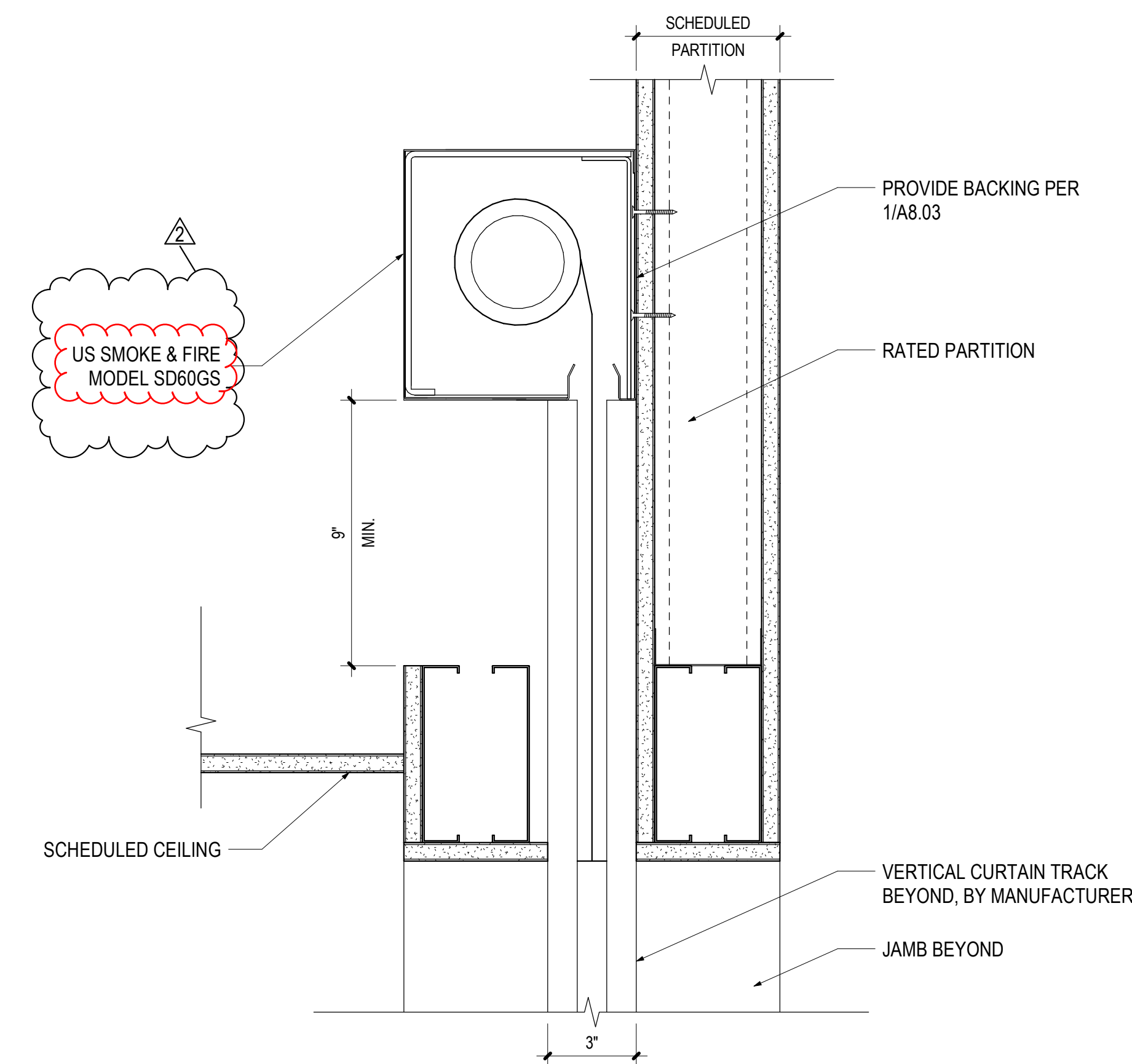


Date: 09-23-2021
Job No: 25799-ewpp
Drawn By: Author
Checked By: Checker

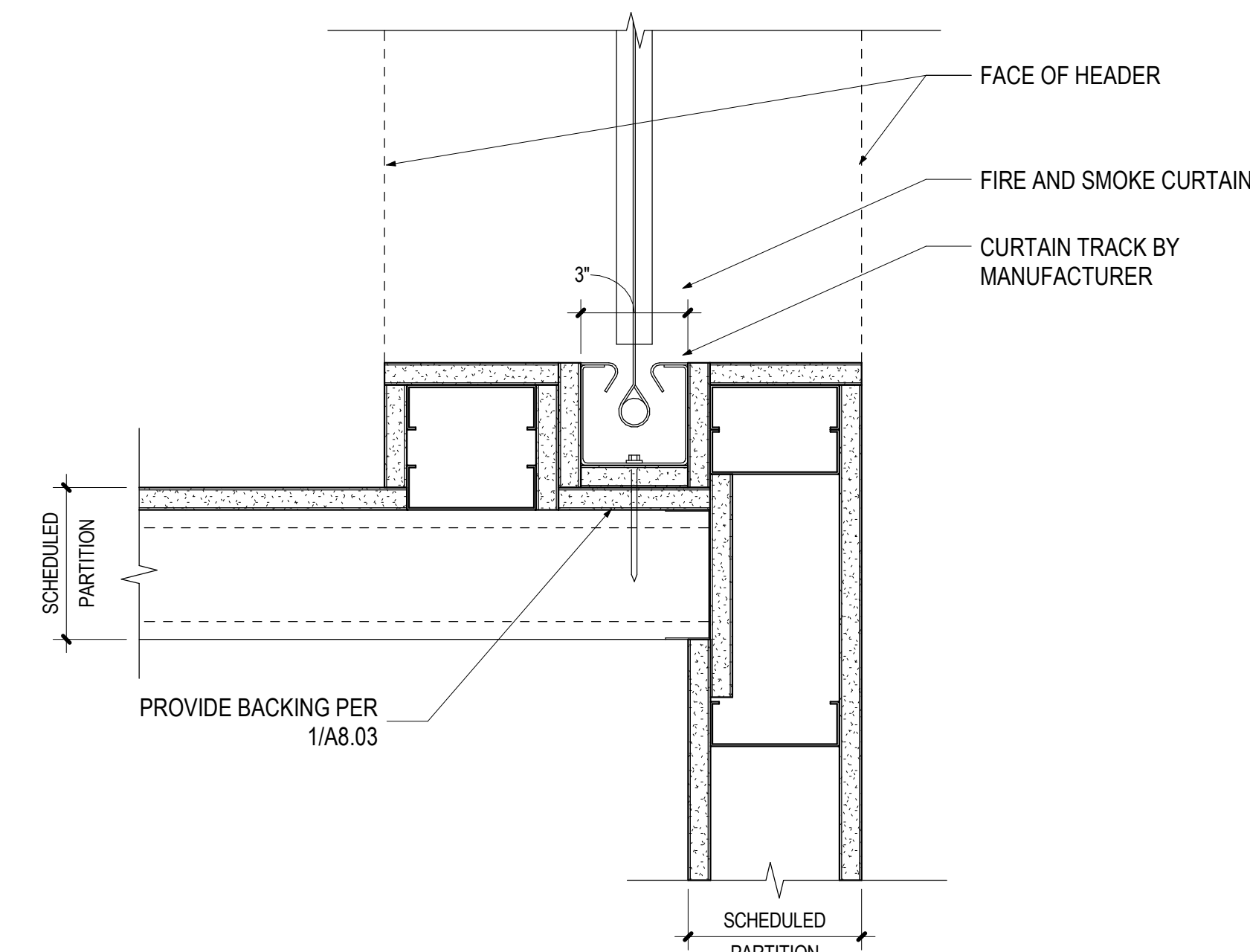
Drawing No.

A8.07

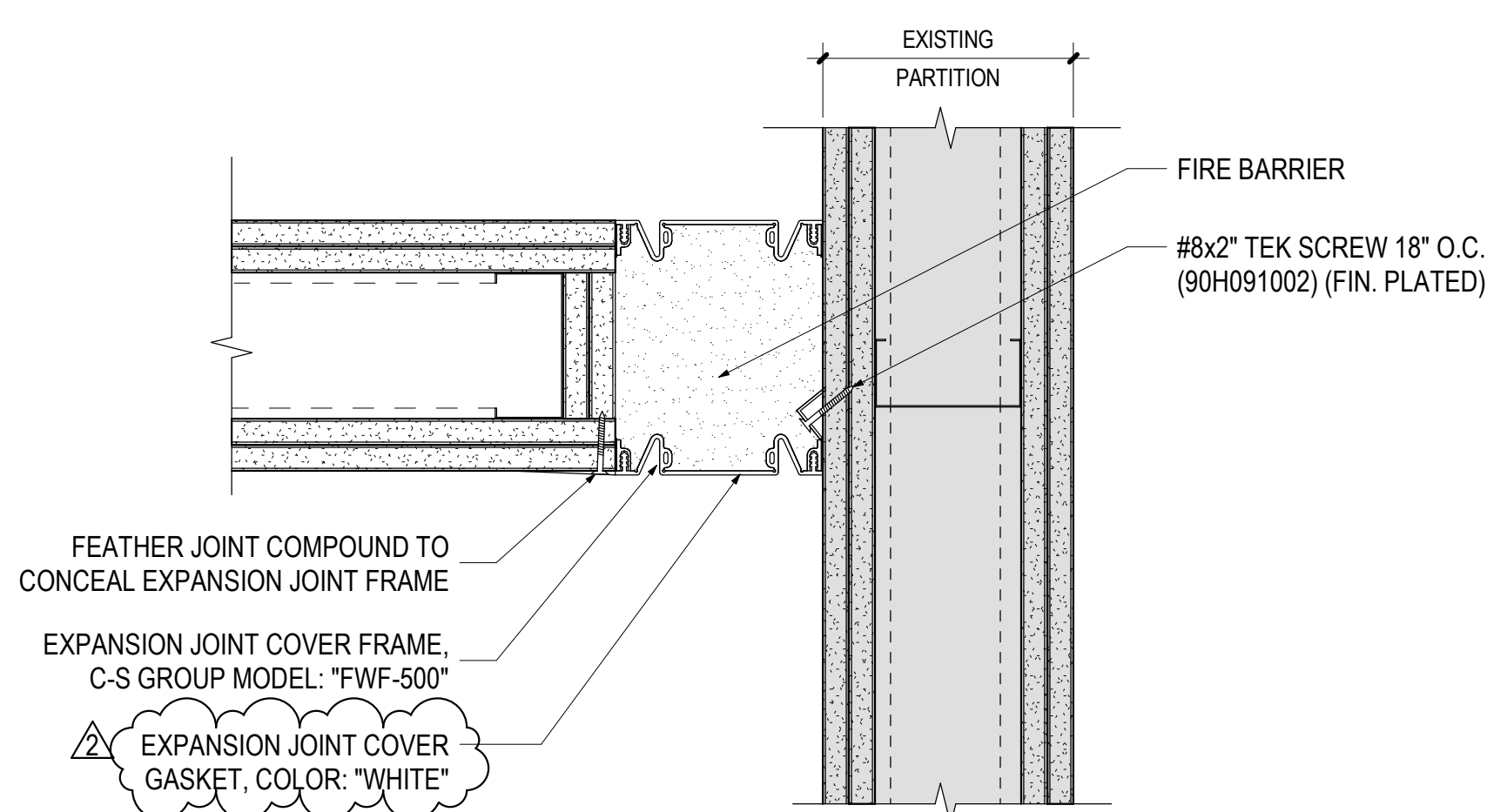
PERMIT SET



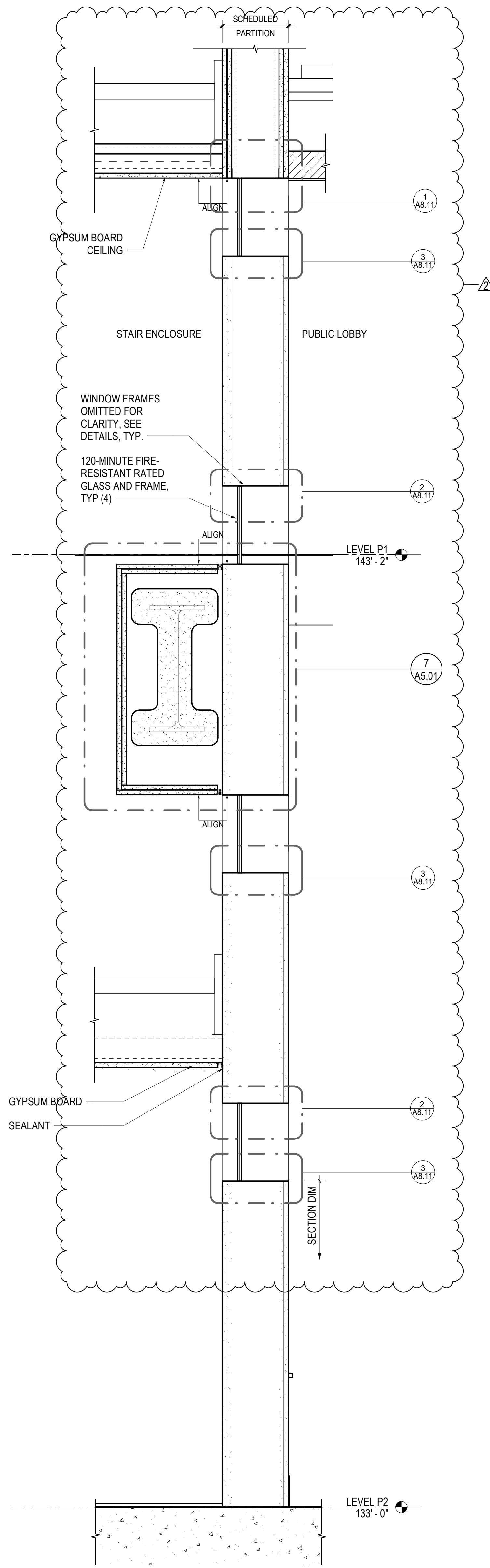
1 SECTION - FIRE CURTAIN AT HEAD
3" = 1'-0"



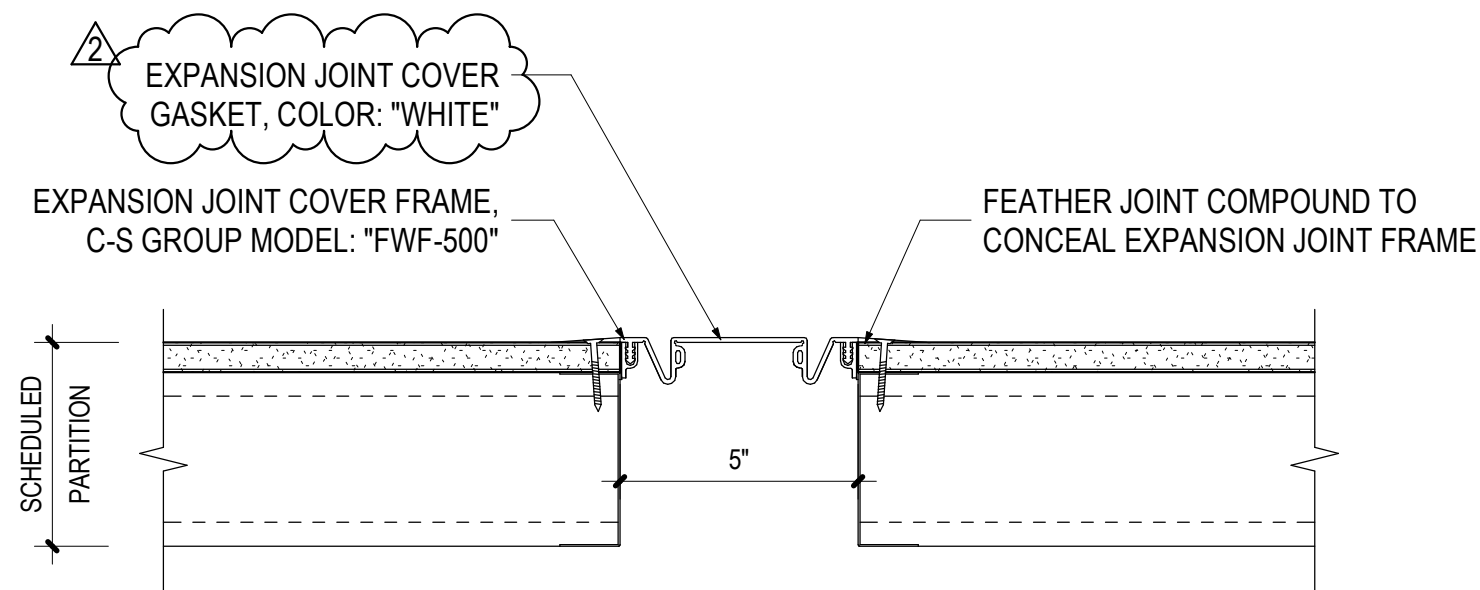
2 PLAN - FIRE CURTAIN AT JAMB
3" = 1'-0"



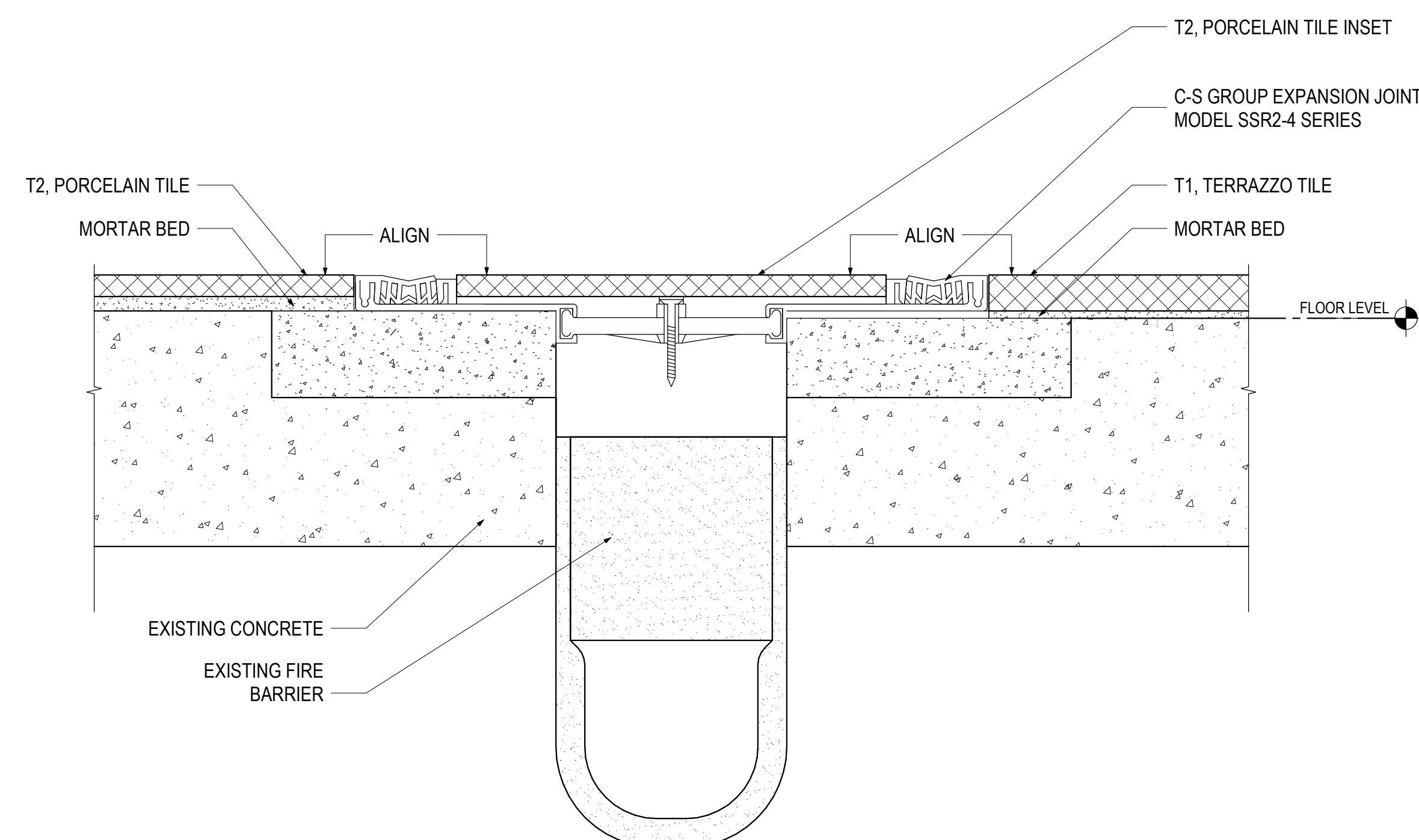
3 PLAN - EXPANSION JOINT AT CORNER
3" = 1'-0"



4 SECTION - DOUBLE HEIGHT RATED STAIR GLAZING
1 1/2" = 1'-0"



8 PLAN - EXPANSION JOINT AT WALL, IN-PLANE
3" = 1'-0"



9 FLOOR TRANSITION - TILE AT EXPANSION JOINT
6" = 1'-0"

RESOURCES

International Building Code, 2021

202 Definitions, 716 Opening Protectives, Referenced Standards

The development and final vote of the following code sections have been completed and will be published in the 2021 edition of the IBC:

Section 202 Definitions

FIRE PROTECTIVE CURTAIN ASSEMBLY. An assembly consisting of a fabric curtain, bottom bar, guides, coil, operating and closing system.

Section 716 Opening Protectives

716.4 Fire protective curtain assembly. Approved fire protective curtain assemblies shall be constructed of any materials or assembly of component materials tested without hose stream in accordance with UL 10D, and shall comply with Sections 716.4.1 through 716.4.3.

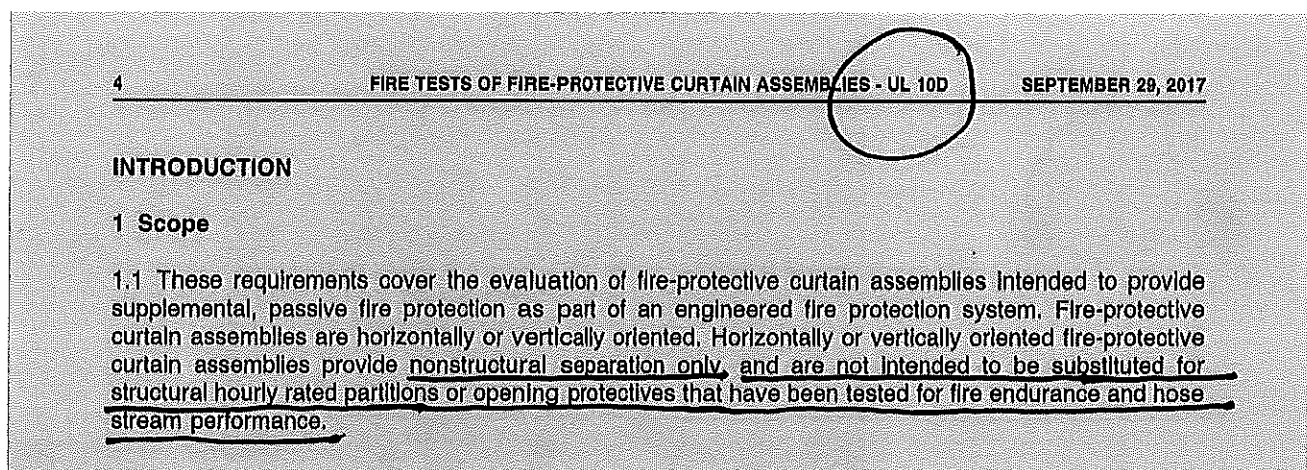
716.4.1 Label. Fire protective curtain assemblies used as opening protectives in fire rated walls and smoke partitions shall be labeled in accordance with 716.2.9.

716.4.2 Smoke and draft control. Fire protective curtain assemblies used to protect openings where smoke and draft control assemblies are required shall comply with Section 716.2.1.4.

716.4.3 Installation. Fire protective curtain assemblies shall be installed in accordance with NFPA 80.

Referenced Standards

UL 10D-17, Standard for Fire Tests of Fire Protective Curtain Assemblies (shown below)



716.1 General

Opening protectives required by other sections of this code shall comply with the provisions of this section and shall be installed in accordance with NFPA 80.

TABLE 716.1(1)
MARKING FIRE-RATED GLAZING ASSEMBLIES

| FIRE TEST STANDARD | MARKING | DEFINITION OF MARKING |
|------------------------------|---------|---|
| ASTM E119 or UL 263 | W | Meets wall assembly criteria. |
| ASTM E119 or UL 263 | FC | Meets floor/ceiling criteria ^a |
| NFPA 257 or UL 9 | OH | Meets fire window assembly criteria including the hose stream test. |
| NFPA 252 or UL 10B or UL 10C | D | Meets fire door assembly criteria. |
| | H | Meets fire door assembly hose stream test. |
| | T | Meets 450°F temperature rise criteria for 30 minutes |
| — | XXX | The time in minutes of the fire resistance or fire protection rating of the glazing assembly. |

For SI: °C = [(°F) — 32]/1.8

a. See Section 2409.1

TABLE 716.1(2)
OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS

| TYPE OF ASSEMBLY | REQUIRED WALL ASSEMBLY RATING (hours) | MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours) | DOOR VISION PANEL SIZE ^b | FIRE-RATED GLAZING MARKING DOOR VISION PANEL ^{c, e} | MINIMUM SIDELIGHT/TRANSOM ASSEMBLY RATING (hours) | | FIRE-RATED GLAZING MARKING SIDELIGHT/TRANSOM PANEL | |
|---|---------------------------------------|--|-------------------------------------|--|---|-------------------------------|--|-----------------|
| | | | | | Fire protection | Fire resistance | Fire protection | Fire resistance |
| Fire walls and fire barriers having a required fire-resistance rating greater than 1 hour | 4 | 3 | See Note b | D-H-W-240 | Not Permitted | 4 | Not Permitted | W-240 |
| | 3 | 3 ^a | See Note b | D-H-W-180 | Not Permitted | 3 | Not Permitted | W-180 |
| | 2 | 1 ¹ / ₂ | 100 sq. in. | ≤100 sq. in. = D-H-90 >100 sq. in.= D-H-W-90 | Not Permitted | 2 | Not Permitted | W-120 |
| | 1 ¹ / ₂ | 1 ¹ / ₂ | 100 sq. in. | ≤100 sq. in. = D-H-90 >100 sq. in.= D-H-W-90 | Not Permitted | 1 ¹ / ₂ | Not Permitted | W-90 |

| | | | | | | | | |
|--|-----|------------------|--------------------------|--|------------------|-----------------|---------------|-------|
| Enclosures for shafts, interior exit stairways and interior exit ramps. | 2 | 1 ^{1/2} | 100 sq. in. ^c | ≤100 sq. in. = D-H-90 > 100 sq. in.= D-H-T-W-90 | Not Permitted | 2 | Not Permitted | W-120 |
| Horizontal exits in fire walls ^d | 4 | 3 | 100 sq. in. | ≤100 sq. in. = D-H-180 > 100 sq. in.= D-H-W-240 | Not Permitted | 4 | Not Permitted | W-240 |
| | 3 | 3 ^a | 100 sq. in. | ≤100 sq. in. = D-H-180 > 100 sq. in.= D-H-W-180 | Not Permitted | 3 | Not Permitted | W-180 |
| Fire barriers having a required fire-resistance rating of 1 hour: Enclosures for shafts, exit access stairways, exit access ramps, interior exit stairways and interior exit ramps; and exit passageway walls | 1 | 1 | 100 sq. in. | ≤100 sq. in. = D-H-60 >100 sq. in.= D-H-T-W-60 | Not Permitted | 1 | Not Permitted | W-60 |
| | | | | | Fire protection | | | |
| Other fire barriers | 1 | 3/4 | Maximum size tested | D-H | 3/4 | | D-H | |
| Fire partitions: Corridor walls | 1 | 1/3 ^b | Maximum size tested | D-20 | 3/4 ^b | | D-H-OH-45 | |
| | 0.5 | 1/3 ^b | Maximum size tested | D-20 | 1/3 | | D-H-OH-20 | |
| Other fire partitions | 1 | 3/4 | Maximum size tested | D-H-45 | 3/4 | | D-H-45 | |
| | 0.5 | 1/3 | Maximum size tested | D-H-20 | 1/3 | | D-H-20 | |
| Exterior walls | 3 | 1 ^{1/2} | 100 sq. in. ^b | ≤100 sq. in. = D-H-90 > 100 sq. in = D-H-W-90 | Not Permitted | 3 | Not Permitted | W-180 |
| | 2 | 1 ^{1/2} | Maximum size tested | D-H 90 or D-H-W-90 | 1 ^{1/2} | 2 | D-H-OH-90 | W-120 |
| | | | | | | Fire protection | | |
| | 1 | 3/4 | Maximum size tested | D-H-45 | 3/4 | | D-H-45 | |
| Smoke barriers | | | | | | Fire protection | | |
| | 1 | 1/3 | Maximum size tested | D-20 | 3/4 | | D-H-OH-45 | |

For SI: 1 square inch = 645.2 mm.

- a. Two doors, each with a fire protection rating of 1^{1/2} hours, installed on opposite sides of the same opening in a fire wall, shall be deemed equivalent in fire protection rating to one 3-hour fire door.
- b. Fire-resistance-rated glazing tested to ASTM E119 in accordance with Section 716.1.2.3 shall be permitted, in the maximum size tested.

- c. Under the column heading "Fire-rated glazing marking door vision panel," W refers to the fire-resistance rating of the glazing, not the frame.
- d. See Section 716.2.5.1.2.1.
- e. See Section 716.1.2.2.1 and Table 716.1(1) for additional permitted markings.

TABLE 716.1(3)
FIRE WINDOW ASSEMBLY FIRE PROTECTION RATINGS

| TYPE OF WALL ASSEMBLY | REQUIRED WALL ASSEMBLY RATING (hours) | MINIMUM FIRE WINDOW ASSEMBLY RATING (hours) | FIRE-RATED GLAZING MARKING |
|---|---------------------------------------|---|-----------------------------|
| Interior walls | | | |
| Fire walls | All | NP ^a | W-XXX ^b |
| Fire barriers | >1 | NP ^a | W-XXX ^b |
| | 1 | NP ^a | W-XXX ^b |
| Atrium separations (Section 707.3.6), Incidental use areas (Section 707.3.7), Mixed occupancy separations (Section 707.3.9) | 1 | ³ / ₄ | OH-45 or W-60 |
| | 1 | ³ / ₄ | OH-45 or W-60 |
| Fire partitions | 0.5 | ¹ / ₃ | OH-20 or W-30 |
| Smoke barriers | 1 | ³ / ₄ | OH-45 or W-60 |
| Exterior walls | >1 | 1 ¹ / ₂ | OH-90 or W-XXX ^b |
| | 1 | ³ / ₄ | OH-45 or W-60 |
| | 0.5 | ¹ / ₃ | OH-20 or W-30 |
| Party wall | All | NP | Not Applicable |

NP = Not Permitted.

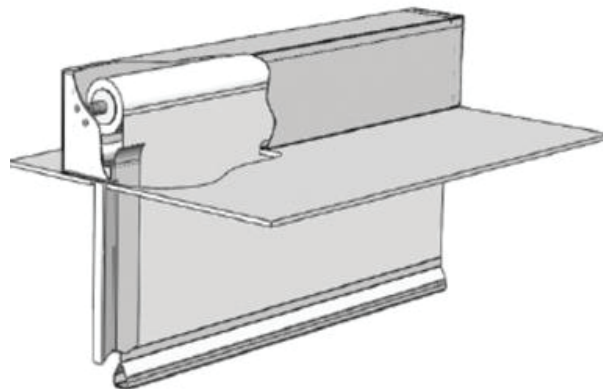
- a. Not permitted except fire-resistance-rated glazing assemblies tested to ASTM E119 or UL 263, as specified in Section 716.1.2.3.
- b. XXX = The fire rating duration period in minutes, which shall be equal to the fire-resistance rating required for the wall assembly.

716.1.1 Alternative Methods for Determining Fire Protection Ratings

**GENERAL DESCRIPTION:**

The SD60GS is a GRAVITY FAIL SAFE (GFS) deployable fire protective smoke curtain system composed of a glass- fiber fabric in a Panama weave rolled on a round steel tube in a fire rated assembly. The curtain remains retracted above the finished ceiling by a low voltage system until activated by fire alarm or smoke alarm at which point it descends at 6 in/sec. and creates a smoke and fire barrier. The curtain can also be non-motorized when activated by a fusible link. The SD60GS system consists of:

- Manufactured from 18ga galvanized steel, curtain head box rated at same temperature as curtain.
- A single or multi roller assembly with a 0.05 in. thick galvanized steel head box with a minimum 6 in. x 6 in. with a maximum span up to 146 ft. and drop height of 45 ft.
- A 24 V motor controller (MC) housed the steel enclosure and mounted onto the motor end of the head box. NFPA 70 compliant tubular DC low voltage motor interfaced with Control Panel (CP) and a suitably weighted bottom bar with a steel bottom bar.
- The fabric curtain manufactured from 660g/m² stainless steel, wire reinforced, woven glass fiber fabric coated on each side with silver polyurethane.
- Removable fire rated cover plates incorporated to allow access to curtain rollers.
- Curtain passes through fire rated galvanized steel auxiliary rails (side guides) that can be powder coated or prime coated in finish.
- Optional pass-through slot as secondary mean of manual egress..
- Egress switches on both sides of curtain per ANSI section 3.2.5 of AC 77.

**STANDARDS:**

The SD60GS is certified for quality by ISO 9000, meets and exceeds the requirements of:

- IBC 715.4 C Smoke Door Assembly
- NFPA 105 Compliance
- Tested to UL 10D (30 mins)
- Tested to UL 10B (20 mins) - No hose stream
- Tested to UL 10C (20 mins) - No hose stream
- UL 1784 Listed and Certified
- Tested to UL 864
- ASTM E84 Listed and Certified
- ASTM E136 Listed and Certified)

PERFORMANCE:

- 2000 cycles at normal ambient temperatures in the range (32°F - 140°F) and can withstand hot air and smoke at temperatures at UL 10D Time Temperature curves.
- Bottom bar deploys ~6"/second. Heavier bottom bar deploys ~12"/second.
- When tested in accordance with UL 1784, the SD60GS systems have air leakage ratings not exceeding 3.0 cfm per square foot of opening at a pressure differential of .01 w.c. at both ambient and elevated temperatures and are therefore eligible to bear an "S" label in accordance with Section 710.5.2.2.1 of the IBC and NFPA 105.

FABRIC:

The SD60GS® fabric is fabricated from woven glass fiber fabric coated on each side with silver polyurethane. The curtain fabric is manufactured from a unique “Panama” weave which offers an even surface and allows a tighter interlacing of the fabric edges. The tensile strength of Panama weave fabric is 10% greater than other fabrics due to constant thread tension.

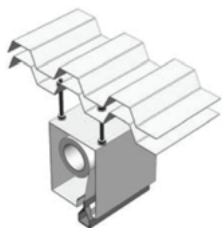


FABRIC

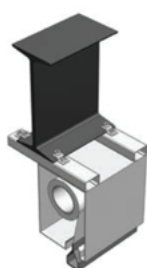
| | | |
|--------------------------|------------------|----------------------------------|
| Style: 30 minutes fabric | | Rating for 1832°F for 30 minutes |
| Test Characteristics | Unit | Data |
| Weight of fab | g/m ² | 455 ± 5% |
| Width | in. | 39.4 ± 1% |
| Thickness | in. | 0.017 ± 5% |
| Weave | | Panama |
| Threads /warp | Per cm. | 18.0 ± 3% |
| Fineness /warp | Tex | EC9 - 68x2 ± 5% |
| Tensile strength /weft | Lbf/ft | 6167.0 ± 5% |
| Threads /warp | Per cm. | 10.0 ± 3% |
| Fineness /weft | Tex | EC9 - 68x2 ± 5% |
| Tensile strength /weft | Lbf/ft | 3426.1 ± 5% |
| Coating Quantity | G/m ² | 35 ± 5% |
| One side/ Both sides | 1/2 | 2 |
| Application temp. | °F | 932 (Glass) |

HEADBOX INSTALLATION OPTIONS

There are many installation options that suit all types of ceiling configurations and provide a broad array of flexibility.



Unistrut Installation



I Beam

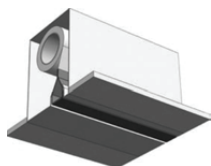


Back Mounted

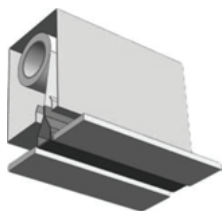


Top Mounted

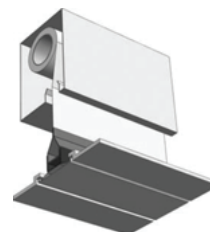
FINISHED CEILING OPTIONS



Flush



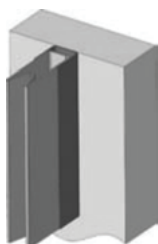
Shadow Gap



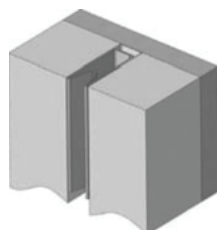
Downstand Neck

SIDE GUIDE CONFIGURATION

The side guide can either be exposed or recessed flush as shown below:



Exposed



Flush

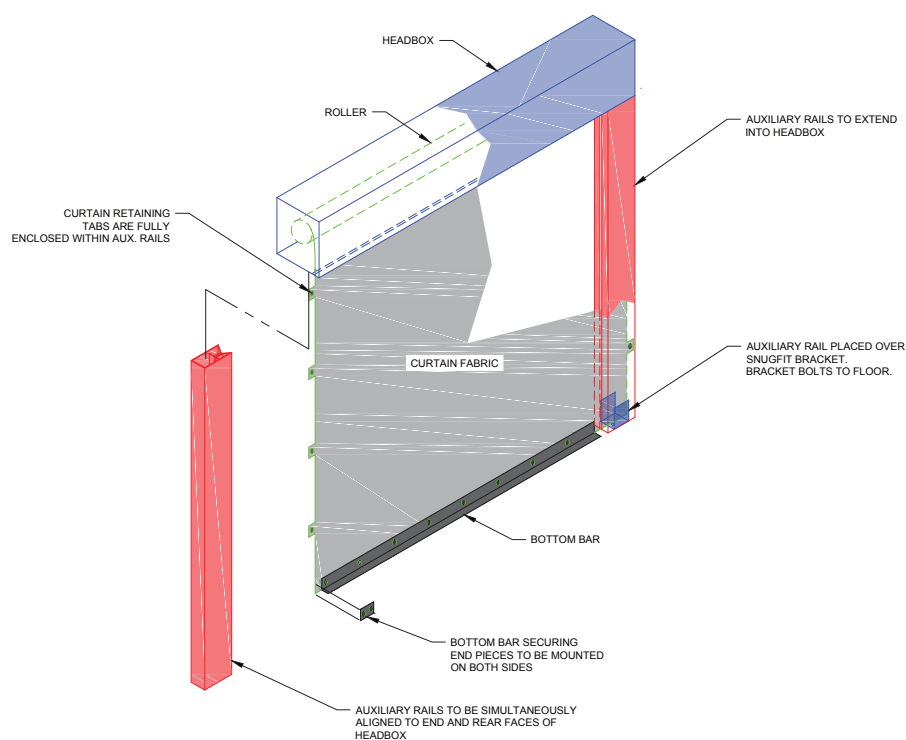
CONTROL PANEL (CP):

The curtain deployment mechanism is directly synced and integrated in the fire alarm emergency systems. When an alarm signal is detected, the CP will automatically trigger all the curtain systems to deploy in a controlled descent under gravity. Each CP controls a maximum of 4 Motor Controller (MC). In normal operating conditions the CP provide a 24v AC supply the MC to keep the curtains in retracted condition. Should smoke be detected, the fire alarm control system will signal the CP. The latter will open the circuit loop, remove the voltage and the curtains will deploy under gravity at a controlled speed.

MOTOR CONTROL SPECIFICATION (MC):

- Nominal Voltage= 24 V
- Nominal speed = 3100 rpm
- Dimensions: 145 mm x 250 mm x 50 mm
- Continuous Torque : 1400 Ncm
- Efficiency : 0.70
- Ratio : 100.00
- Shaft Load Capacity – Axial : 150 N
- Shaft Load Capacity – Radial : 250 N
- A dynamic braking system housed in the motor control circuit

FIRE-PROTECTIVE SMOKE CURTAIN DIAGRAM



U.S. SMOKE & FIRE®

12310 Pinecrest Road, Suite 300, Reston, VA 20191 • Phone: 888.917.8777 • Fax: 888.917.8777
Washington, DC • Boston • New York • Miami • Dallas • San Francisco
www.ussmokeandfire.com • aeteam@ussmokeandfire.com



2022/02/02



International
Organization for
Standardization



Page 12 of 21

SECTION 10 52 00
FIRE PROTECTIVE SMOKE CURTAIN

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Division 5 Section "Metal Fabrications" for supplementary metal members supporting smoke curtain systems to structure.
2. Division 26 Sections for electrical wiring and connections and for smoke curtain machines.
3. Division 28 Section "Fire Alarm" for connections of smoke and fire curtain machines to fire alarm, UL 864 label required.

B. Products Furnished Under This Section:

1. This Section includes Fire Protective Smoke Curtain – Model Number: U.S. Smoke & Fire® - SD60GS Fire Protective Smoke Curtain with Egress

C. Related Requirements:

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 REQUIRED TEST REPORTS & MINIMUM PERFORMANCE STANDARDS - Underwriter Laboratory Label Requirement for Fire Protective Automatic Smoke Curtains

A. Required Testing Reports, Label Requirements, and Minimum Performance Standards:

1. UL 10B- Fire test of Door Assemblies Time Temperature Curve Report- 1 hour.
2. UL 10C- Positive pressure for fire door assemblies Time Temperature Curve Report- 1 hour.
3. UL 10D- UL Labeled, Listed, Classified, Certified and Marked Fire

Protective Curtains -1 hour.

4. UL 1784- UL Labeled, Listed, Classified, Certified and Marked
5. UL 864- UL Labeled, Listed, Classified, Certified and Marked Control units and accessories for Fire Alarms Systems.
6. UL Oversize Certificate Labeled, Listed, Classified, Certified and Marked
7. UL Follow up Service Report Required
8. Tested in Accordance to” standard not acceptable for Fire Protective Curtains. Intertek label not acceptable for substitution.
10. ASTM E84-Test report with a calculated smoke developed (CSD) of 2 and a smoke developed index (SDI) of 0 and a calculated Flame spread (CFS) of 0.
11. ASTM 136 Test Report
12. NFPA 701 Test Report
13. Impact test report required by Independent Testing Laboratory
14. The system shall operate under the power of gravity at all times to prove correct gravity fail-safe capability. Battery back up required.
15. The system manufacturer shall be certified to ISO 9001 1994 for the design, manufacture, installation and commissioning of Automatic Fire Protective Smoke Barriers and Partitions

1.03 SUBMITTALS

A. Product Data:

1. For each type of product indicated.

B. Shop Drawings:

1. Show fabrication and installation details for automatic smoke curtains. Include plans, sections, details, attachments to other work, and the following:
 - a. Operating clearances.
 - b. Requirements for supporting automatic smoke curtains, track, and equipment. Verify capacity of each track and rigging

component to support loads.

- c. Locations of equipment components, switches, motors and controls. Differentiate between manufacturer-installed and field-installed wiring.

B. Samples:

- 1. For each type of fabric from dye lot to be used for the Work, with specified treatments applied, and showing complete pattern and texture repeat, if any. Mark top and face of fabric. Prepare Samples of not less than 36 inches (900 mm) square.

C. Underwriters Laboratory Label:

- 1. For each type of product provide UL label affixed to Assembly. Intertek label prohibited for Fire Protective Curtain.

D. Qualification Data:

- 1. For Installer. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

- E. U.S. Green Building Council (USGBC)- LEED- Pre-Recycled content. Assembled in the United States by factory-trained employees.

1.04 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data:

- 1. For automatic curtains to include in maintenance manuals.

B. Warranty Documentation:

- 1. Special warranties specified in this Section.

1.05 QUALITY ASSURANCE

B. Overall Standards:

- 1. Manufacturer shall maintain a quality control program for follow up service in accordance with ICC-ES Acceptance Criteria 77.

C. Qualifications:

1. Installers:

- a. A firm or individual in the United States with no less than five years on-site installation experience in the United States, experienced in installing curtains similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- b. Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.06 FIELD CONDITIONS

A. Existing Conditions:

1. Verify rough and clear openings and the dimensions of other construction by field measurements before fabrication and indicate measurements on shop drawings.

1.07 WARRANTY

A. Manufacturer Warranty:

1. Warranty one year on motors, Motor Control Circuits (MCC) and Group Control Panels (GCP) from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 FIRE PROTECTIVE SMOKE CURTAINS

A. Manufacturers:

1. U.S. Smoke & Fire Corp., 888-917-8777 Ext. 102 or 106
www.ussmokeandfirecurtain.com, www.ussmokeandfire.com
2. Smoke & Fire Prevention Systems, 434.374.8537
3. The Smith Overhead Door Company, Inc., 702.541.8786

B. Description:

1. Provide U.S. Smoke & Fire® - SD60GS with Egress
2. There are no substitutions of materials specified allowed during the bidding process. If, for any reason a deviation from materials specified by the designers is desired or warranted, a cover letter and a request for deviation. Transmittal form must be submitted to construction manager (CM). If the CM or the Designers reject the proposed deviation, it is this subcontractor's responsibility to obtain the original items and maintain the original construction schedule. The Designer has the right to require the originally specified material or item and his decision on the matter is final.

B. Performance/Design Criteria:

1. The curtain head box shall be manufactured from 1.2mm galvanized steel. The enclosure shall be rated at the same temperature as the curtain fabric.
2. Removable cover plates shall be incorporated to allow access to the curtain rollers.
3. Standard head box sizes shall be 150mm x 150mm for single rollers (maximum width 5.5m) and 250mm x 150mm for multiple rollers (over 5.5m wide). Larger head boxes may be required where the curtain drop is in excess of 3m.
4. A weighted bottom bar and side guides shall be provided to prevent deflection and ensure correct operation under gravity.
5. The roller shall be constructed from an octagonal tube, which will incorporate a 24v Motor and gearbox and a sealed heavy-duty ball bearing assembly.
6. A motor control circuit housed in a steel enclosure shall be mounted onto the motor end of the head box.
7. Provide each motorized curtain with back Electromagnetic force controlled speed of descent of no less than 6 inches per second and no

more than 24 inches per second.

8. The fabric curtain shall be manufactured from X32K woven. The woven glass fiber fabric shall have a nominal weight of no less than 540g/square meter and shall be UL certified for one hour.

C.Operation

1. The Fire Protective Automatic Smoke Curtain shall deploy upon a signal from the fire alarm system in an emergency situation.
2. The system must be proven to “fail safe” to the operational position on total loss of primary and auxiliary power. The system must contain a housed battery system at the Group Control Panels.
3. Under normal operating conditions the curtains would be held in the retracted position via the motors operating at low voltage. The manufacture must be able to confirm that the motor windings are suitable for this type of operation.
4. Upon activation of the fire alarm the control panel will remove the supply voltage and the curtain shall descend under the power of gravity in a controlled manner. A dynamic braking system housed in the motor control circuit shall control the speed of the descent of the curtain. The descent shall be electronically synchronized on overlapping curtains with a bottom bar.
5. To retract the curtain, the control panel shall supply 24v to the motor control circuits and motors will drive the curtains to the upper position. As the bottom bar or stopping bar hits the curtain head box a current limiting circuit will step back the voltage and current and hold the bottom bar in the retracted position.
6. Limit switches are not to be used to control the upper position of the curtain.
7. Group Control Panel must have a delayed descent system. Should the main power fail to the group control panel, the supply is automatically switched to the integral standby battery. The curtain will remain fully operational until the battery low voltage cut off facility reads a voltage

of 21v; the curtains will then safely descend under the power of gravity to the operational position.

8. Group Control Panel: Provide Group Control Panel (GCP) capable of controlling up to 6 no. 24v motor assemblies. During normal operation, the GCP will provide a 24v AC supply to the curtain motor holding them in the retracted position. Should smoke be detected, the fire alarm contact in the GCP will be opened by the fire alarm control system, the GCP will remove the 24v supply to the curtain motors and the curtains will descend under the power of gravity in a controlled manner.
9. Open on fire- configured to be gravity fail safe
10. Test Facility- key switch required
11. All push to exit buttons must contain internal battery back up power supply for fail-safe operation for ICC ES requirements.
12. All curtains must have two-stage descent option for secondary means of manual egress for ICC ES requirements.

PART 3 - EXECUTION

3.01 INSTALLERS

A. Installers:

1. U.S. Smoke & Fire Corp. 888.917.8777, Ext 102 or 106
2. Door Control Services 512.930.1541

3.02 EXAMINATION

A. Verification of Conditions:

1. Examine areas and conditions, with Installer present, for compliance with requirements for supporting members, blocking, installation tolerances, clearances, and other conditions affecting performance of automatic smoke-curtain work. Proceed with installation only after unsatisfactory conditions have been corrected.
2. Examine inserts, clips, blocking, or other supports to be installed by others to support boxes. Proceed with installation only after

unsatisfactory conditions have been corrected.

3.03 INSTALLATION

A. Install system according to manufacturer's written instructions.

B. Interface with Other Work:

1. Optional Building Management System Relay for remote Monitoring may be installed in the group control panel to provide BMS contacts for mains failure and curtain zone deployment.

3.04 FIELD QUALITY CONTROL

A. Field Tests and Inspections

1. Fire alarm testing, the smoke curtain is required to deploy upon a signal from the fire alarm in an emergency situation. The test to verify deployment shall be conducted in the presence of the authority having jurisdiction per NFPA guidelines.
2. When a smoke curtain is required to deploy in an emergency situation, it is probable that the main supply to the control panel may have already failed and that the cables linking the curtains to the control panel might have become damaged. Under these circumstances with no power available the curtain will have to deploy by gravity.
3. A total power failure should be simulated during each test to ensure gravity fail -safe deployment. A test in which a curtain is powered down under normal test conditions from either main power or the battery supply only proves that the curtain can be deployed when powered. This does not confirm an ability to be gravity fail safe.

3.05 CLOSEOUT ACTIVITIES

A. Demonstration:

1. Engage a factory-authorized service representative to test system.

B. Training:

1. Engage a factory-authorized service representative to train Owner's

Personnel to review operation of curtain.

3.06 ANNUAL REQUIRED PREVENTIVE MAINTENANCE REQUIREMENT

- A. This is a high performance system that requires annual adjustment, maintenance and preventative maintenance service. Engage U.S. Care factory certified technician to maintain system once per annum per manufacturers operation and maintenance manual for the preventative maintenance service. Any system that does not undergo the required preventative maintenance over a twelve-month period shall void the testing laboratory label on the assembly.
- B. Neither contractor nor end user shall attempt any service of the system. Such action shall void the testing laboratory label on the assembly. A U.S. Care factory certified technician must do all maintenance.

END OF SECTION 10 52 00

| Revisions | | |
|-----------|------------|----------|
| 1 | Addendum 1 | 10-07-21 |
| 2 | Addendum 2 | 11-19-21 |
| 6 | ASI 03 | 02-15-22 |



EMANUEL WEST
BUILDING
Partial Public
Spaces
2910 N. Kerby Ave
Portland, OR 97227

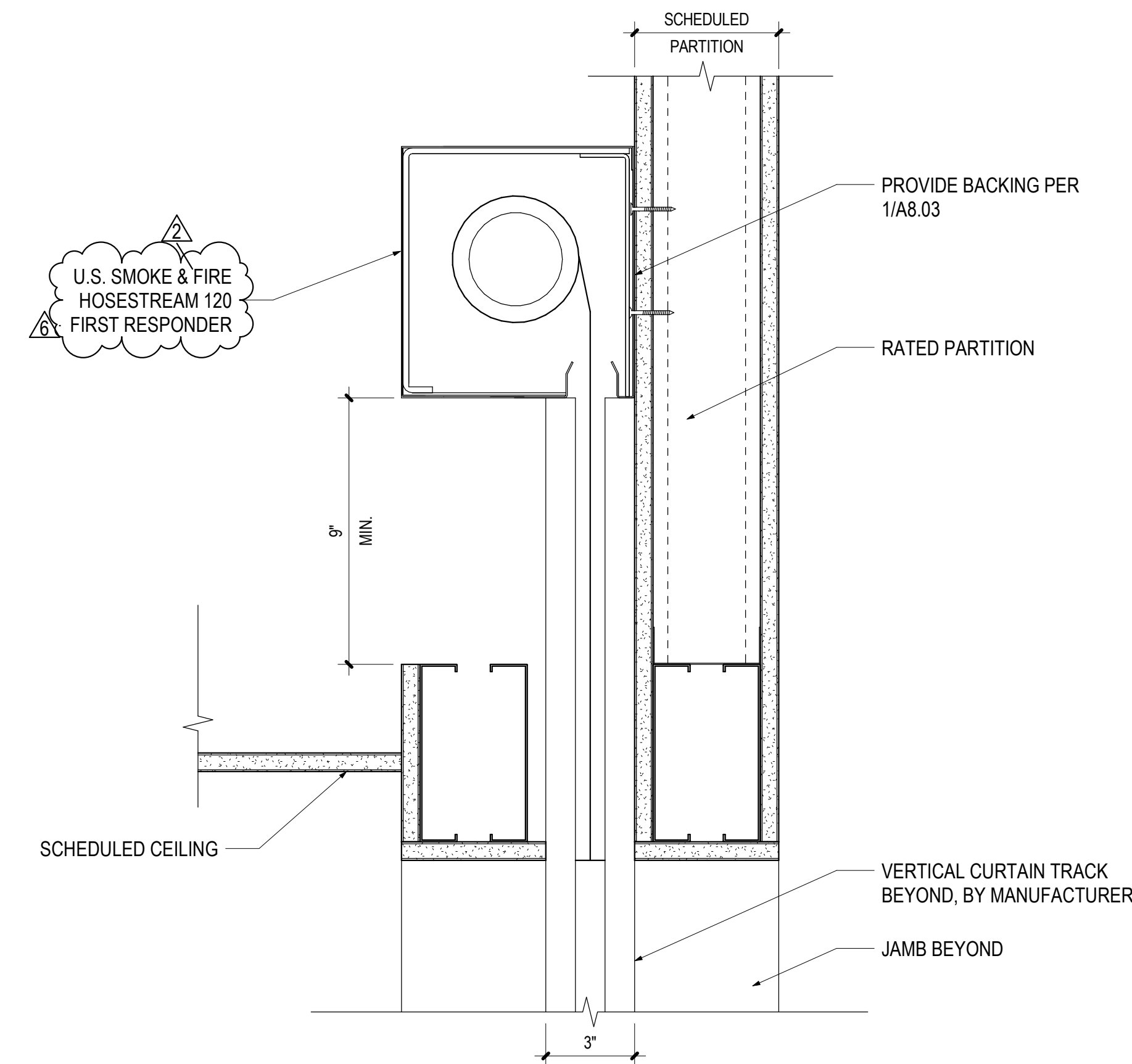
Drawing Title
DETAILS, INTERIOR

Date: 09-23-2021
Job No: 25799-ewpp
Drawn By: Author
Checked By: Checker

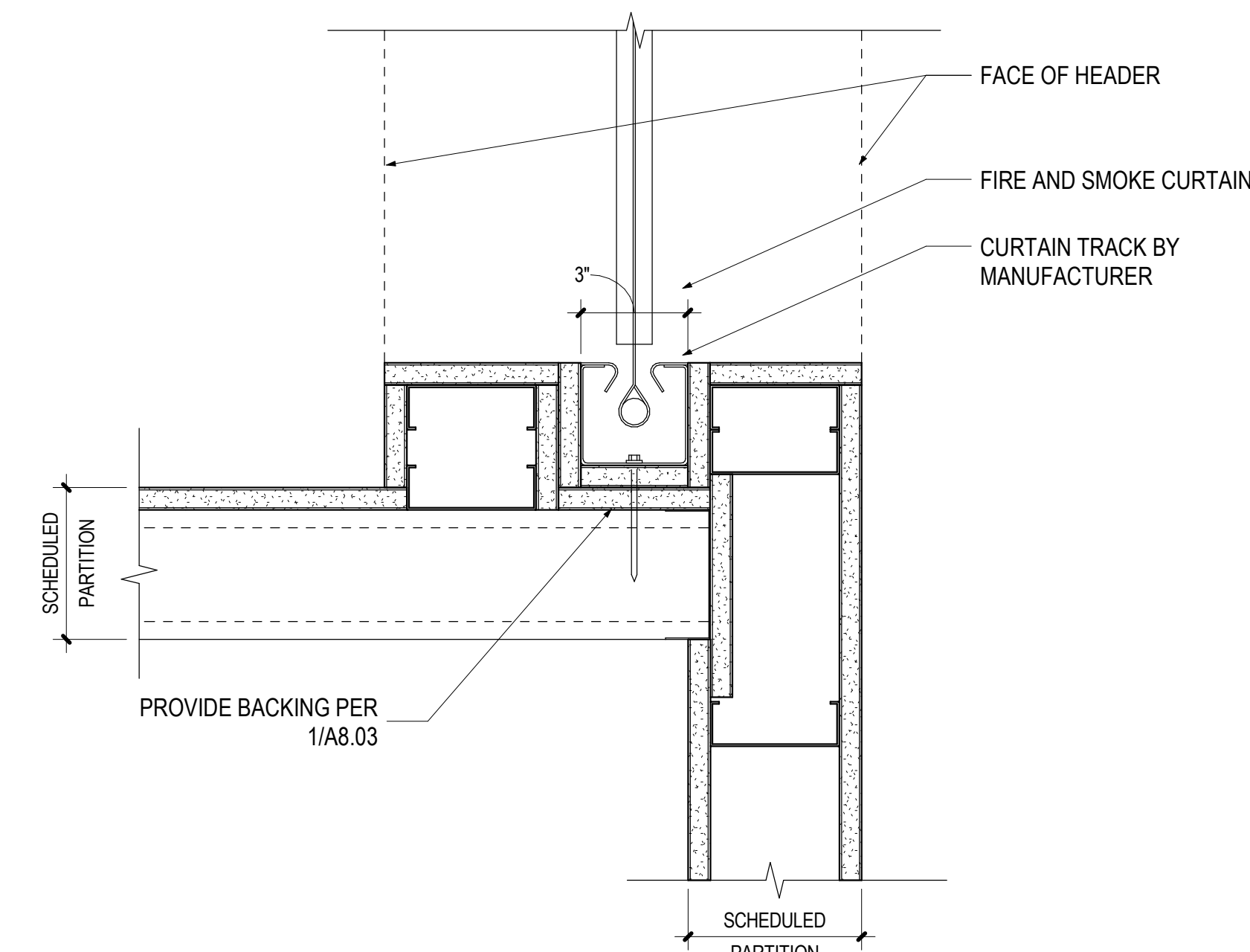
Drawing No.

A8.07

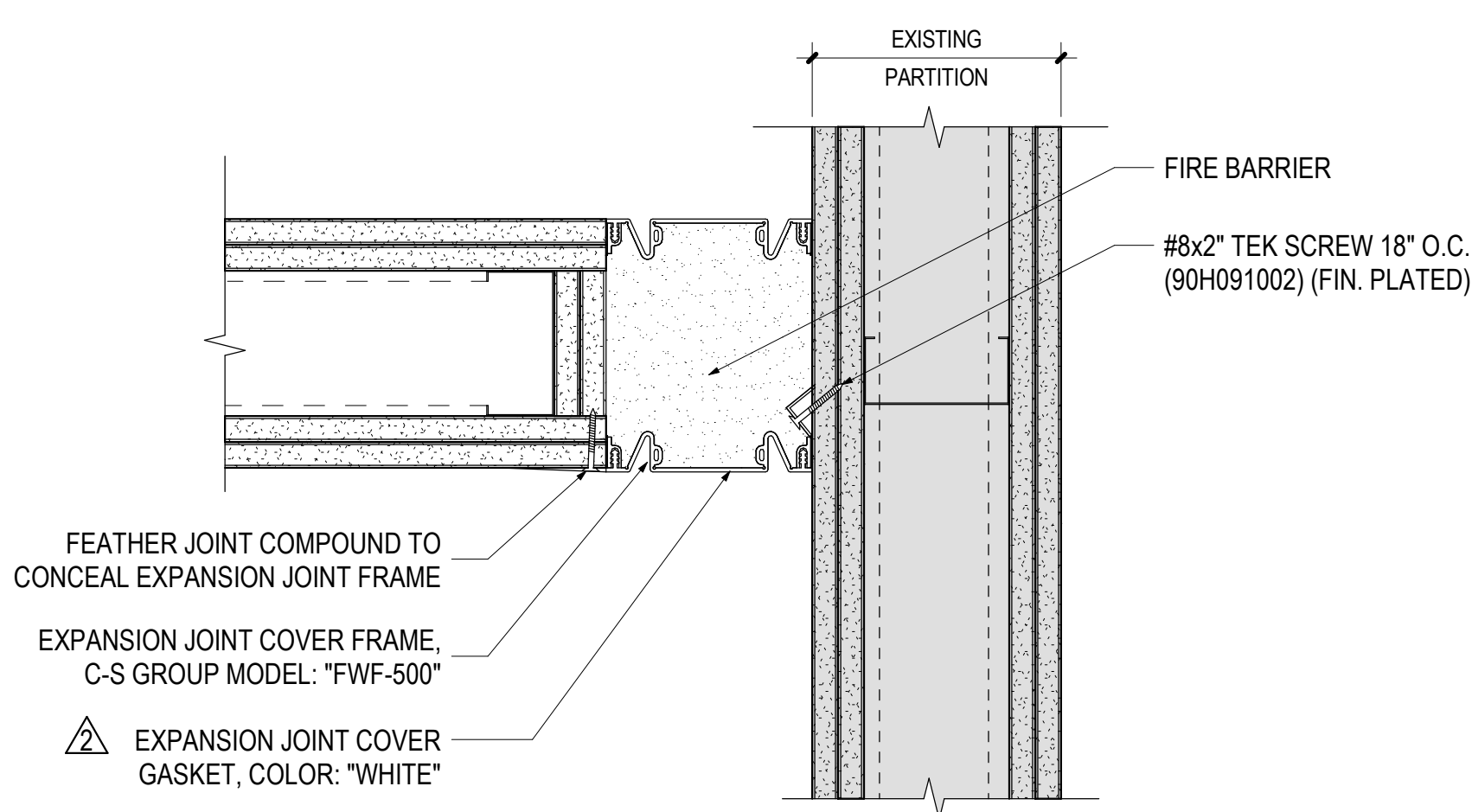
PERMIT SET



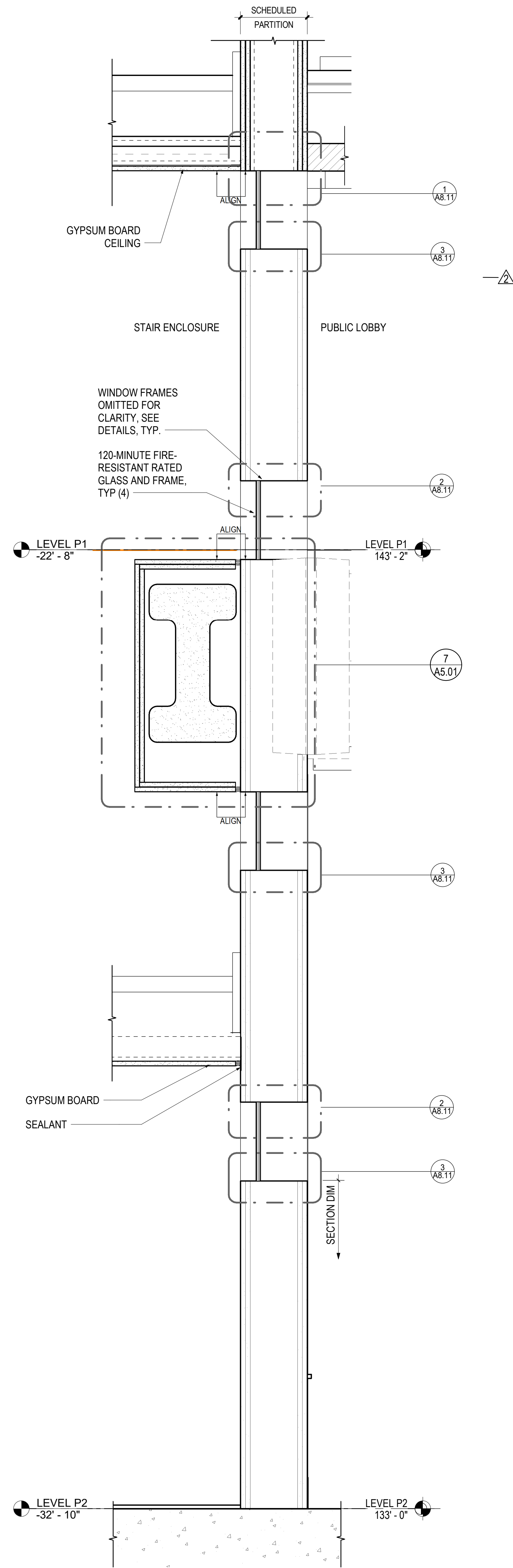
1
A8.07
SECTION - FIRE CURTAIN AT HEAD
3" = 1'-0"



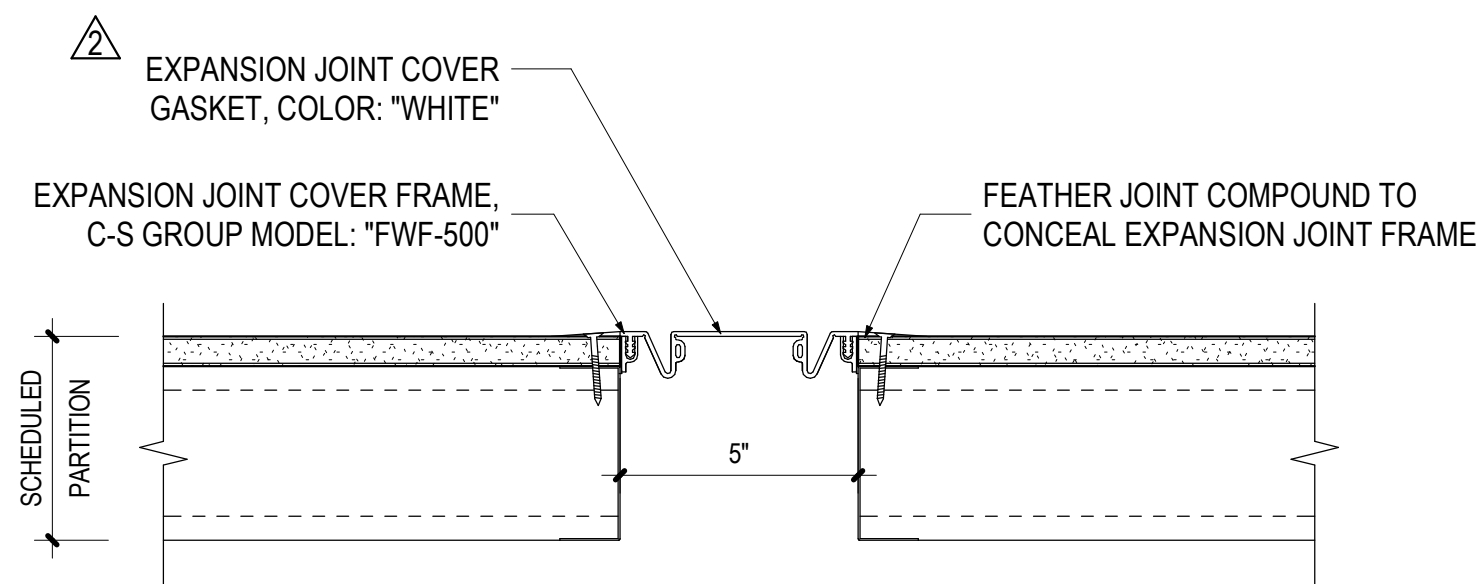
2
A8.07
PLAN - FIRE CURTAIN AT JAMB
3" = 1'-0"



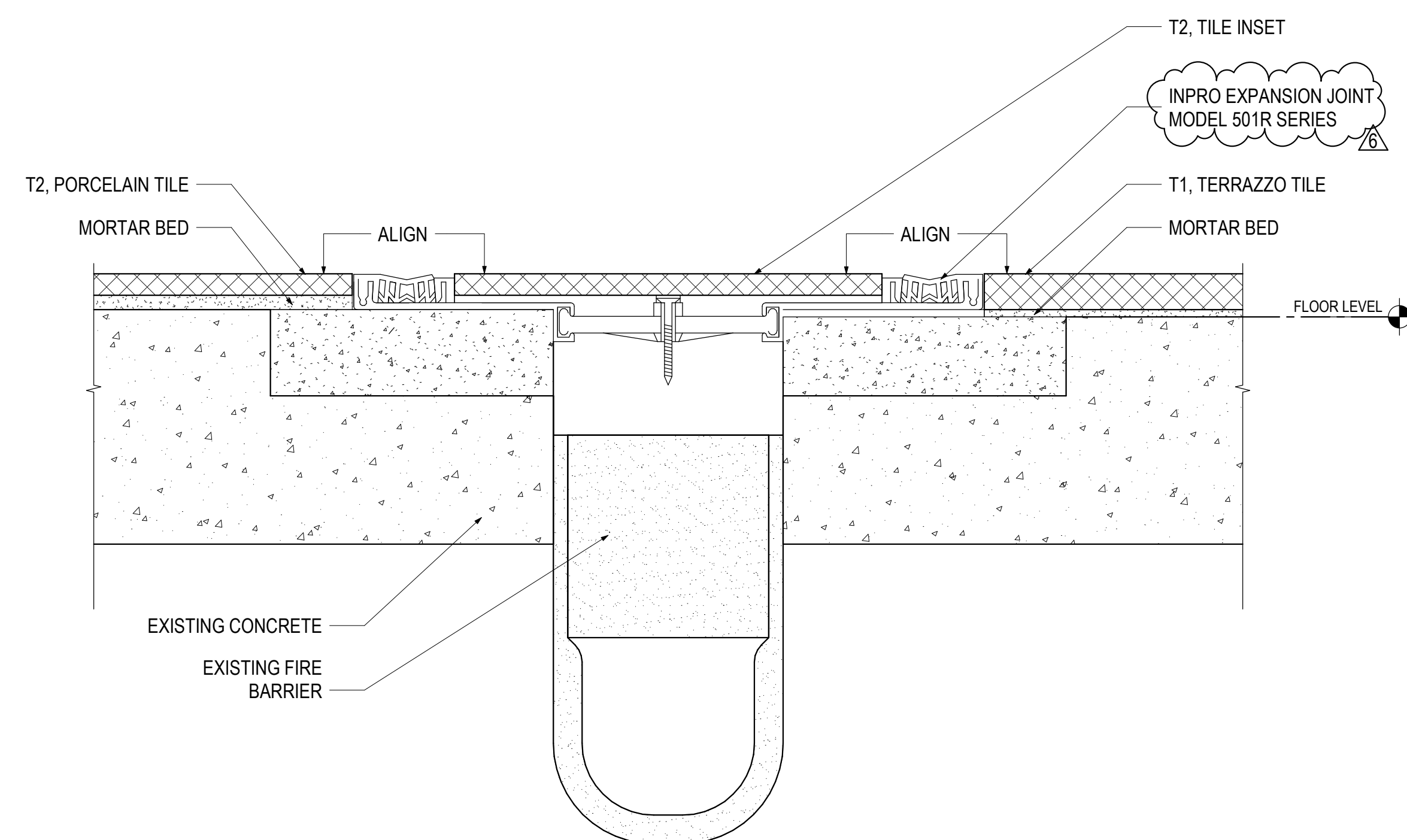
3
A8.07
PLAN - EXPANSION JOINT AT CORNER
3" = 1'-0"



4
A8.07
SECTION - DOUBLE HEIGHT RATED STAIR GLAZING
1 1/2" = 1'-0"



8
A8.07
PLAN - EXPANSION JOINT AT WALL, IN-PLANE
3" = 1'-0"



9
A8.07
FLOOR TRANSITION - TILE AT EXPANSION JOINT
6" = 1'-0"

**GENERAL DESCRIPTION:**

The HOSE STREAM 120® First Responder is a deployable Steel-Tex fire shutter system composed of a wired reinforced Steel-Tex on a round steel tube in a fire rated assembly. The Steel-Tex fire shutter remains retracted above the finished ceiling until activated by fire alarm or smoke alarm at which point it descends at 6 in/sec. and creates a smoke and fire barrier. The fire shutter can also be non-motorized when activated by a fusible link for smaller openings. The system consists of:

- A roller assembly with a 0.05 in. thick galvanized steel head box with a minimum 12 in. x 12 in. dimension. Maximum span up to 150 ft. and drop height of 46 ft.
- A motor controller (MC) is housed in a steel enclosure and mounted onto the motor end of the head box. NFPA 70 compliant DC motor interfaced with Control Panel (CP) and a suitably weighted bottom bar. Internal motor system.
- Removable fire rated cover plates incorporated to allow access to shutter roller.
- Shutter passes through fire rated galvanized steel aside guides that are factory primed and can be painted in the field by others.
- If required, egress switches can be provided on both sides of shutter when shutter is in the path of egress.
- Tested at Guardian Fire Testing Laboratories.
Accreditation
ISO 17025 (testing)
ISO 17020 (inspection)
ISO 17065 (production certification)

STANDARDS:

The HOSE STREAM 120® First Responder

- Tested in accordance to UL 10B and ASTM E2226 (Hose Stream Test) for 90 minutes. Certified by Guardian.
- NFPA 252 Compliance. Certified by Guardian
- UL864 Releasing Device USA & Canada 110V or 220V - Certified by Intertek

PERFORMANCE:

- Hose Stream 120® First Responder is utilized for openings for up to a 2 hour fire wall or fire barrier per IBC 715.3
- First Responder Door for Ingress and Egress per NFPA 101
- There is no fastener, no magnet, no latch at the door opening as the weight of the fabric keeps the door closed
- Door Opens 6 foot 8 inches, threshold 19 mm, which is beveled with a Slope not greater than 50%
- Opening Force less than five pounds
- There is a side hinge at the bottom bar that allows for swinging of the fabric that creates the back force to swing
- Building Management System Relay per UL 864
- Beam Obstruction Sensor Option
- Leading Edge Safety Sensor option
- Fail Safe battery backup Standard
- Up Buttons on Wall or Side Guide option
- Membrane Switch directly on Steel- Tex option
- Delayed Descent or Two stage Descent Option
- Confirmation of bottom bar full descent to floor option



Hose-Stream Application Does Not Open
First Responder Door



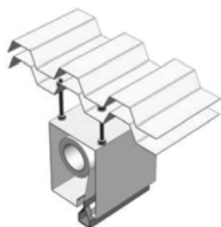
**After Hose-Stream Test



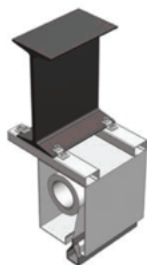
No Fastener at Fabric Overlap
Push to Exit

HEADBOX INSTALLATION OPTIONS

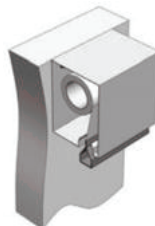
There are many installation options that suit all types of ceiling configurations and provide a broad array of flexibility.



Unistrut Installation



I Beam

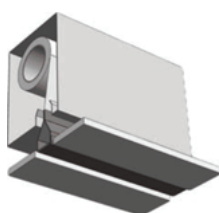


Back Mounted



Top Mounted

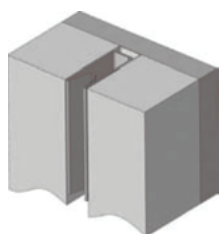
FINISHED CEILING OPTIONS



Shadow Gap

SIDE GUIDE CONFIGURATION

The side guide is recessed flush as shown below:



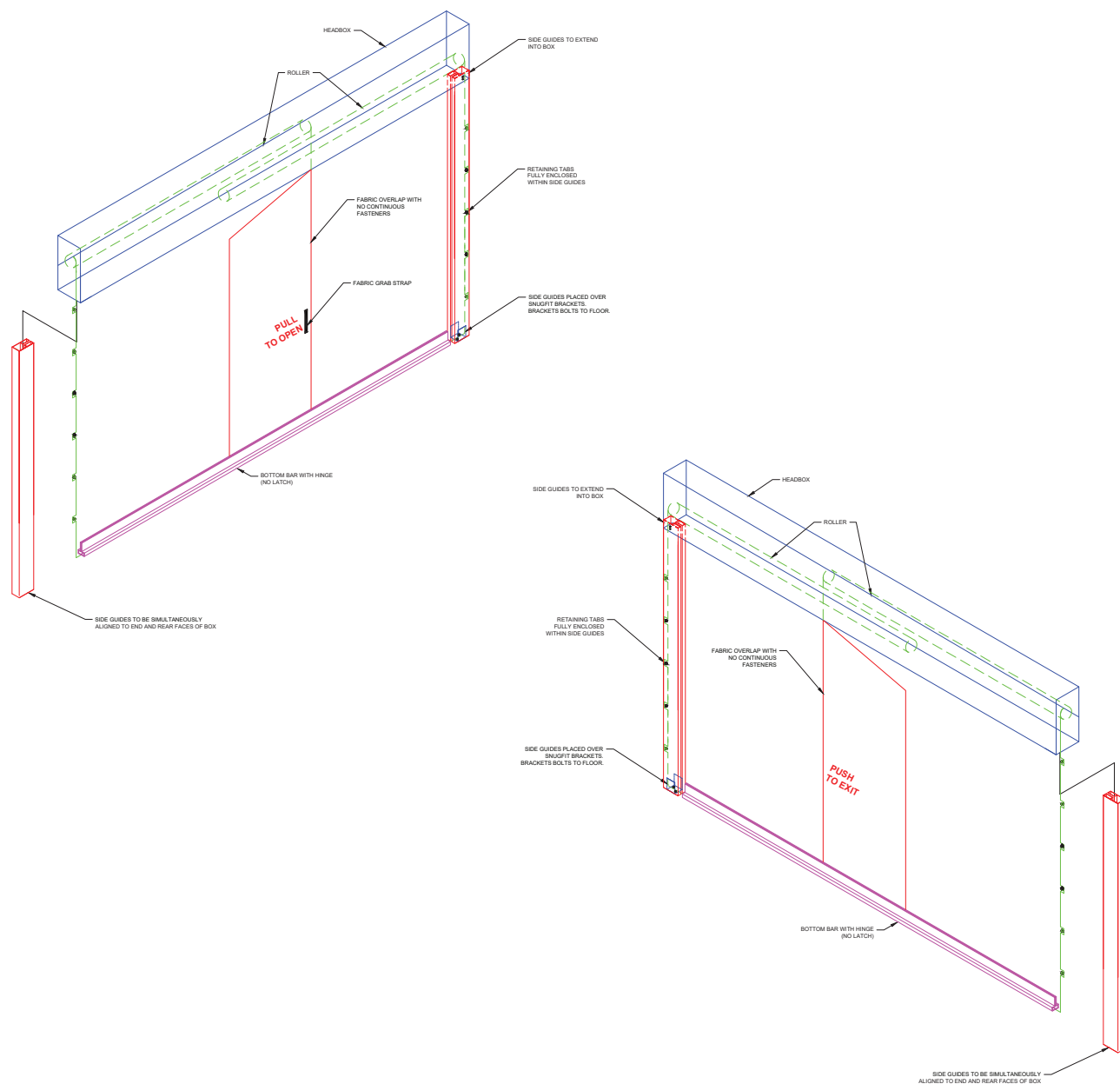
Flush

CONTROL PANEL (CP):

The Steel-tex fire shutter deployment mechanism is directly synced and integrated in the fire alarm emergency systems.

When an alarm signal is detected, the Control Panel (CP) will automatically trigger the shutter systems to deploy in a controlled descent under gravity. In normal operating conditions the CP provides AC supply to the Motor Controller (MC) to keep the shutters in retracted condition. Should smoke be detected, the fire alarm control system will send a signal to the CP and the shutters will deploy at a controlled speed to their operational position. When the fire alarm system goes back to normal power mode, the shutters will automatically retract back to the housing.

STEEL - TEX FIRE SHUTTER DIAGRAM



U.S. SMOKE & FIRE®

12310 Pinecrest Road, Suite 300, Reston, VA 20191 • Phone: 888.917.8777 • Fax: 888.917.8777
 Washington, DC • Boston • New York • Miami • Dallas • San Francisco
www.ussmokeandfire.com • aeteam@ussmokeandfire.com

