

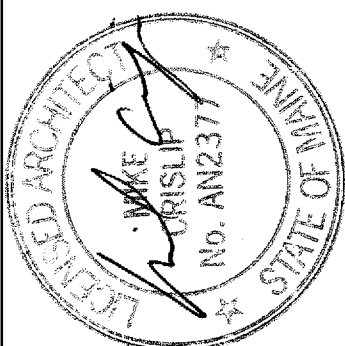
LifeStance HEALTH

TENANT IMPROVEMENT

53 BAXTER BOULEVARD, UNIT #6
PORTLAND, ME 04101

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
02/25/2019

MICHAEL CRISLIP ARCHITECT
28001 Emery Road, Suite 400
Cleveland, Ohio 44128
216.223.3200 onyxcreative.com



Design and construction documents are instruments of service and are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.

GENERAL NOTES

- GENERAL CONTRACTOR TO VERIFY LEASE DIMENSIONS, EXISTING DIMENSIONS, EXISTING STRUCTURAL ELEMENTS, AND CEILING HEIGHT CLEARANCES, ETC. AND REPORT TO ARCHITECT ANY INCONSISTENCY PRIOR TO START OF CONSTRUCTION.
- GENERAL CONTRACTOR TO COORDINATE ANY WORK IN TENANT SPACE BELOW, ABOVE AND OR ADJACENT WITH THAT TENANT AND LANDLORD. WORK TO TAKE PLACE OFF HOURS AND INCLUDE SECURITY AS REQUIRED BY TENANT AND OWNER.
- DIMENSIONS NOTED (WIDTH & HEIGHT) ARE TO BE MAINTAINED EXCEPT WHEN NOTED BY A +/- DIMENSION.
- DO NOT SCALE DRAWINGS. REQUEST CLARIFICATION FROM THE ARCHITECT TO RESOLVE DISCREPANCIES OR TO SUPPLY ADDITIONAL INFORMATION.
- GENERAL CONTRACTOR TO CLARIFY ANY INCONSISTENCIES WITHIN THE CONSTRUCTION DOCUMENTS WITH THE ARCHITECT PRIOR TO STARTING CONSTRUCTION.
- GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY THAT THE MECHANICAL AND ELECTRICAL CONTRACTOR IS SUPPLYING AND INSTALLING THE SPECIFIED ITEMS. GENERAL CONTRACTOR IS TO CLARIFY ANY INCONSISTENCY BETWEEN ARCHITECTURAL PLAN AND MECHANICAL AND ELECTRICAL PLANS PRIOR TO ANY INSTALLATION.
- GENERAL CONTRACTOR AND ALL SUB TRADES TO MAKE EVERY EFFORT TO PURCHASE MATERIALS FROM LOCALLY EXTRACTED AND MANUFACTURED SOURCES (WITHIN 500 MILE RADIUS).
- ALL WOOD PRODUCTS USED FOR FRAMING, ETC., THAT ARE NOT CLASSIFIED AS "INTERIOR FINISH MATERIALS" ACCORDING TO CODE SHALL BE FIRE PRESSURE TREATED LUMBER.
- PROVIDE FIRE BLOCKING AND DRAFT STOPPING AS SPECIFIED IN CODE CONCEALED WALL SPACES, IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED OR STUDDED OFF SPACES OF MASONRY OR CONCRETE WALLS, AT THE CEILING, FLOOR, OR ROOF LEVELS.
- PENETRATION THRU RATED WALLS AND FLOORS SHALL BE SEALED WITH A MATERIAL CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES WHEN SUBJECT TO THE REQUIREMENTS OF THE TEST STANDARD SPECIFIED FOR FIRE STOPS ASTM-E-814.
- LIGHT FIXTURES TO BE SUPPORTED INDEPENDENTLY OF SUSPENDED CEILING SHALL BE SUPPORTED WITHIN 6" OF EACH CORNER OF FIXTURE IN ACCORDANCE WITH ASTM C-636 76. REFER TO DETAILS IN PLANS.
- EXIT AND EMERGENCY LIGHTING - EXIT AND EMERGENCY LIGHTING SHALL BE ADEQUATE HOWEVER THE CITY RESERVES THE RIGHT TO MAKE FINAL DETERMINATION ON SITE.
- INTERIOR FINISH - CERTIFICATION OF "FIRE RATINGS" SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT BY THE TENANT FOR CARPETING AND OTHER INTERIOR FINISH MATERIAL REQUIRED BY CODE PRIOR TO THE ISSUANCE OF OCCUPANCY PERMIT.
- COMPLY WITH SPECIAL WORKING CONDITIONS RELATING TO THE PROJECT, INCLUDING BUT NOT LIMITED TO REQUIREMENTS FOR TEMPORARY PROTECTION, TRASH MANAGEMENT, NOISE, LIGHT, DUST AND POLLUTION CONTROL, AND LIMITATIONS ON WORKING HOURS.

CODE SUMMARY

CRITERIA	REQUIREMENTS	MUBEC REFERENCE
TYPE OF CONSTRUCTION	III-B	IBC SECTION 601
NUMBER OF FLOORS	(EXISTING) 2 FLR	
BUILDING HEIGHT	(EXISTING) / NO CHANGE (PROPOSED)	
USE AND OCCUPANCY GROUP	B - BUSINESS (CLINICAL OFFICE)	IBC SECTION 302 / 304
AREA AND OCCUPANT LOAD CALCULATIONS IBC TABLE 1004.1.2 / 1004.2		
EX. OVERALL SPACE: 9500 SQ FT ALLOWABLE	2846 GROSS SQ FT	IBC SECTION 302 / 304
OFFICES (B. CLINICAL OFFICE): 100 GROSS SQ FT PER OCCUPANT =	28 OCCUPANTS	IBC TABLE 1004.1.2
TOTAL SQUARE FEET / TOTAL OCCUPANTS	2846 SF / 28 OCCUPANTS	
EXITS REQUIRED / EXITS PROVIDED		
	2 (REQUIRED) / 2 (PROVIDED)	IBC TABLE 1006.3.1
EGRESS WIDTH REQUIRED: 28 OCCUPANTS x 20" INCHES PER OCCUPANT =	56' REQUIRED	IBC SECTION 1005.3.2
EGRESS WIDTH PROVIDED (1) DOORS x 34" EACH + (1) PAIR DOORS x 68" =	102' PROVIDED	
MAXIMUM TRAVEL DISTANCE:		
	200'-0" MAXIMUM	IBC TABLE 1006.3.1
MAXIMUM COMMON PATH DISTANCE:	100'-0" MAXIMUM	IBC TABLE 1017.2
PLUMBING CALCULATIONS OBC TABLE 2402.1		
B: TOILETS - 1 PER 25 / LAVS - 1 PER 40		
TOILETS : 28/25 = 1.12 LAVS : 28/40 = 0.70 (SEE NOTE 1)	REQUIRED: 2 TOILET / 1 LAV	PROVIDED: 3 TOILET / 3 LAV
ACTUAL FIXTURES PROVIDED (SEE NOTE 2)	3 TOILETS / 3 LAV	

CODE NOTES

- PLUMBING FACILITIES CALCULATED AS B BUSINESS / CLINICAL OFFICE. OCCUPANCY USE GROUP IS DECIDED BY TENANT BUSINESS OPERATION WHERE PROFESSIONAL CLINICAL COUNSELING OFFICE IS THE PRIMARY OPERATION & SERVICE.
- PLUMBING FIXTURES ARE PROVIDED IN THE COMMON SPACE BETWEEN SUITES AND DO NOT INCLUDE INTERNAL EMPLOYEE RESTROOM FIXTURES. SHARED FIXTURES ARE EXISTING AND NOT TO BE CHANGED WITH THIS TENANT IMPROVEMENT.

APPLICABLE CODES

2018 MAINE UNIFORM BUILDING AND ENERGY CODE (MUBEC)
2015 INTERNATIONAL BUILDING CODE (IBC)
2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
2004 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
2010 FEDERAL ADA STANDARDS FOR ACCESSIBLE DESIGN
CITY OF PORTLAND MUNICIPAL CODE, CHAPTERS 6 & 10
ANY AND ALL APPLICABLE LOCAL, STATE, REGIONAL & FEDERAL CODES AND REGULATIONS.

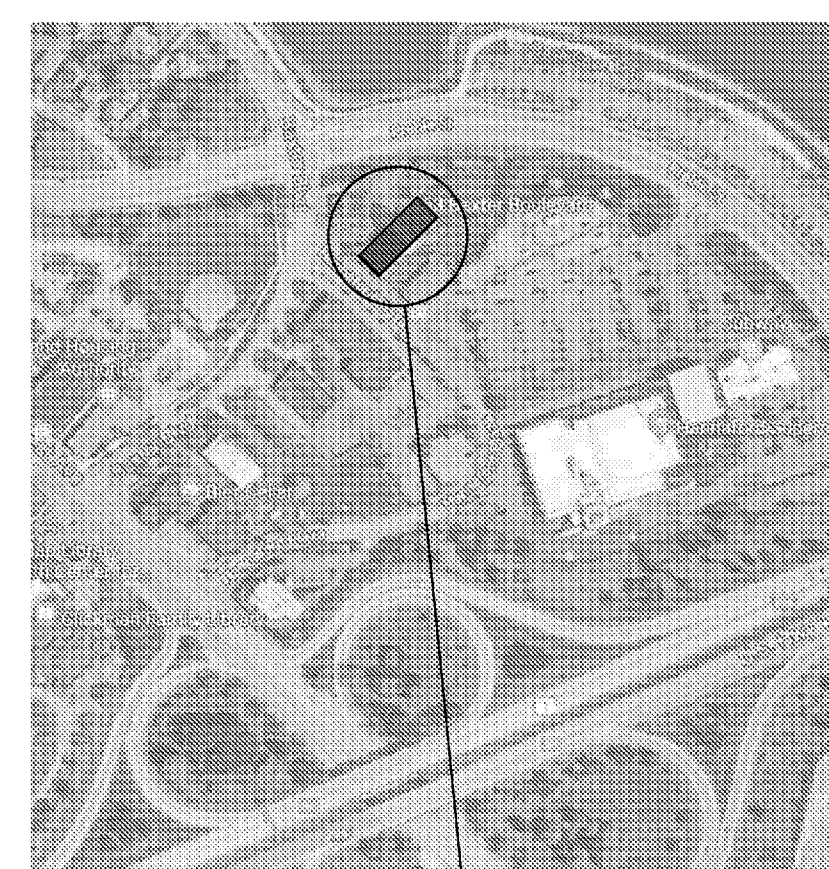
PROJECT SUMMARY

THIS WORK CONSISTS OF THE INTERIOR ALTERATIONS OF AN EXISTING VACANT TENANT SPACE IN AN EXISTING TWO-STORY BUILDING. THE WORK OF THIS PHASE INCLUDES: THE LIMITED DEMOLITION OF INTERIOR PARTITION WALLS; THE CONSTRUCTION OF NEW INTERIOR PARTITION WALLS; THE CONSTRUCTION AND INSTALLATION OF NEW INTERIOR FINISHES; THE MODIFICATION OF EXISTING ELECTRICAL AND MECHANICAL SYSTEMS; AND ALL NECESSARY AND PERTINENT ITEMS AS DIRECTED AND SPECIFIED BY THE TENANT.

DRAWING INDEX

CVR	COVER SHEET	REVISIONS	-	-	-	-	-	-	-	-
ARCHITECTURAL										
LS1.0	LIFE SAFETY PLAN & NOTES									
D1.0	DEMOLITION FLOOR PLAN & NOTES									
D1.1	DEMOLITION CEILING PLAN & NOTES									
A1.0	FLOOR PLAN & NOTES									
A1.1	REFLECTED CEILING PLAN & NOTES									
A2.0	FINISH PLAN & NOTES									
A3.0	ENLARGED PLANS & INTERIOR ELEVATIONS									
A3.1	DETAILS & WALL SECTIONS									
A3.2	DOOR, FINISH, & ROOM SCHEDULES & NOTES									
A4.0	ACCESSIBILITY									
A4.1	ACCESSIBILITY CONT.									
A5.0	ARCHITECTURAL SPECIFICATIONS									
A5.1	ARCHITECTURAL SPECIFICATIONS CONT.									
A5.2	ARCHITECTURAL SPECIFICATIONS CONT.									
A5.3	ARCHITECTURAL SPECIFICATIONS CONT.									
A5.4	ARCHITECTURAL SPECIFICATIONS CONT.									
A5.5	ARCHITECTURAL SPECIFICATIONS CONT.									
MECHANICAL & PLUMBING										
M1.0	MECHANICAL PLAN									
M2.0	MECHANICAL SCHEDULES									
P1.0	PLUMBING PLAN & SCHEDULES									
MP1.0	MECHANICAL & PLUMBING SPECIFICATIONS									
MP1.1	MECHANICAL & PLUMBING SPECIFICATIONS CONT.									
ELECTRICAL										
E1.0	LIGHTING PLAN									
E2.0	POWER PLAN									
E3.0	ELECTRICAL SCHEDULES & SPECIFICATIONS									

VICINITY MAP



53 BAXTER BUILDING

SITE MAP



LIFESTANCE HEALTH

CONTACTS

ARCHITECT

MICHAEL CRISLIP, ARCHITECT
28001 EMERY ROAD, SUITE 400
CLEVELAND, OH 44128
CONTACT: FRED MARGULIES
PH: 216-223-3220
E: fmargulies@onyxcreative.com

MECHANICAL ENGINEER

BLUE STREAK CONSULTING
25001 EMERY ROAD, SUITE 420
CLEVELAND, OH 44128
CONTACT: BRIAN RICE
PH: 216-223-3255
E: brice@bluestreak-consulting.com

ELECTRICAL ENGINEER

BLUE STREAK CONSULTING
25001 EMERY ROAD, SUITE 420
CLEVELAND, OH 44128
CONTACT: RICH KNAPP
PH: 216-223-3294
E: rknapp@bluestreak-consulting.com

OWNER'S REPRESENTATIVE

CBRE RETAIL PROJECT MANAGEMENT
1100 SUPERIOR AVENUE, SUITE 600
CLEVELAND, OH 44114
CONTACT: JIM WITT
PH: 216-755-4480
E: jim.witt@cbre.com

MUNICIPALITY

PORTLAND PERMITTING & INSPECTIONS
384 CONGRESS STREET, ROOM 315
PORTLAND, ME 04101
CONTACT: MICHAEL A. RUSSELL, MS
PH: 207-874-8703
E: buildinginspections@portlandmaine.gov

REQUIRED VENDORS

LIGHT FIXTURES / DIMMERS

MARS ELECTRIC SUPPLY
CONTACT: PHIL HARRELL
PH: 216-470-3542
E: pharrell@mars-electric.com

CARPET

INTERFACE
CONTACT: JEFF CREJCI
PH: 440-725-2440
E: jeff.krejci@interface.com

OFFICE SIGNAGE

MYDOORSIGN.COM
300 GADMAN PLAZA WEST, SUITE 1308
BROOKLYN, NY 11201
PH: 800-452-1457

LifeStance HEALTH
TENANT IMPROVEMENT
53 BAXTER BOULEVARD, UNIT #3
PORTLAND, ME 04101

Project No.: 6871
Drawn By: BCR
Date Issue
12-13-2018 Prelim Review
01-25-2019 Owner Review
01-30-2019 Bid & Permit

CVR

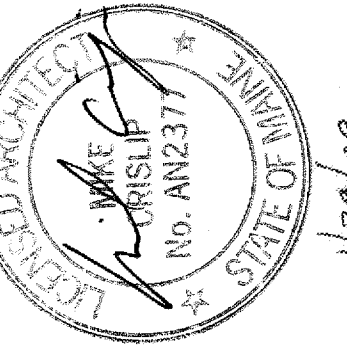
COVER SHEET

X:\2018 Projects\180710\180710_001\53 Baxter Blvd Portland ME\1000_LS_Prelim_CVR.dwg
Drawn: BCR
Date: 12/13/2018



Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
02/25/2019

MICHAEL CRISLIP ARCHITECT
26001 Emery Road, Suite 400
Cleveland, Ohio 44128
216.223.3500 mycreative.com



Design and construction documents as instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.

EXIT WIDTH CALCULATIONS

MUBEC SECTION 1005.1

EXIT NO.	EXIT SIZE	CLEAR WIDTH	REQ. WIDTH FACTOR	CAPACITY PROVIDED
1	6'-0"	68"	0.20" CALCULATION (68" / 0.20") =	340 LOAD CAPACITY
2	3'-0"	34"	0.20" CALCULATION (34" / 0.20") =	170 LOAD CAPACITY

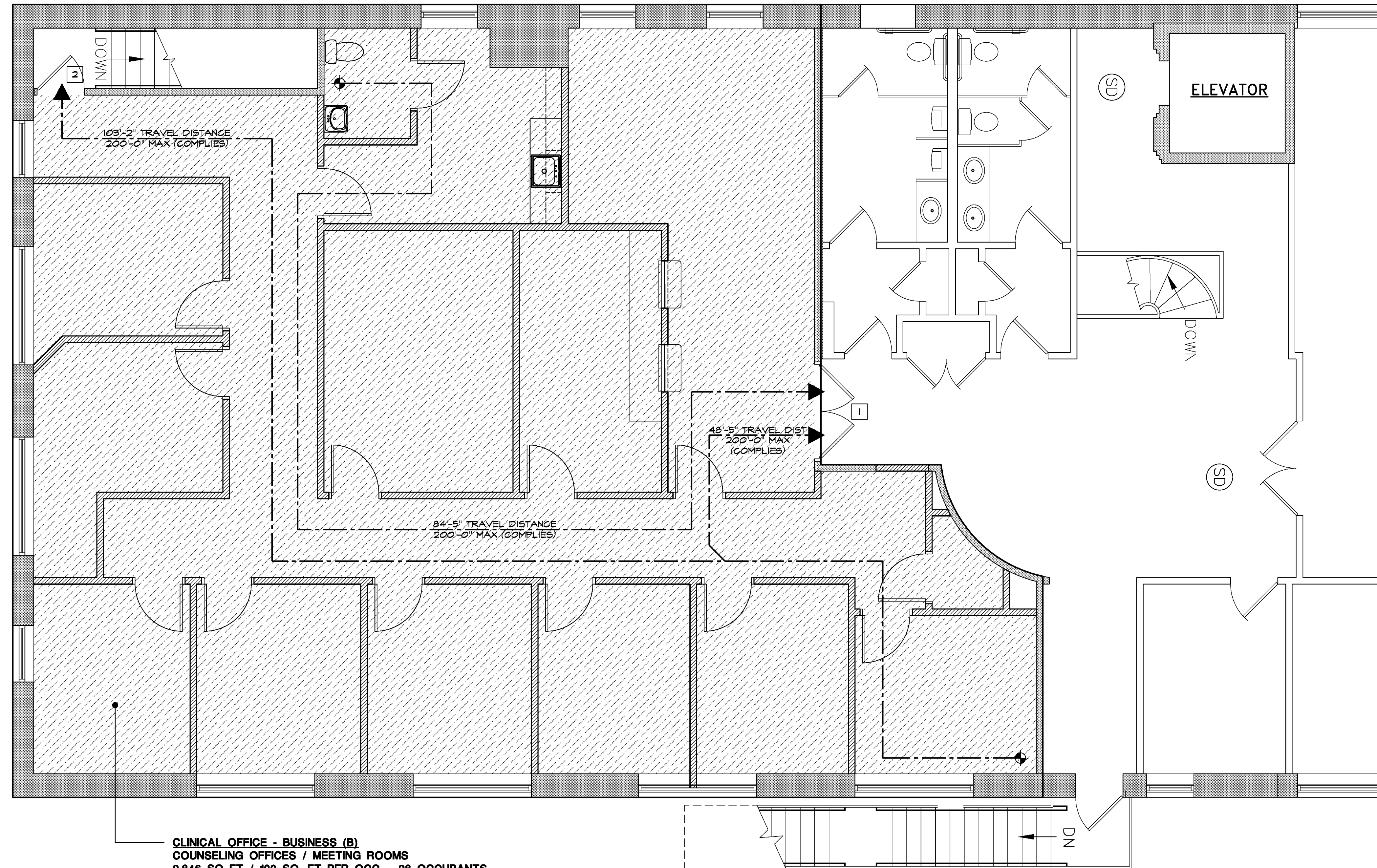
OCCUPANCY LOAD CALCULATIONS

NO.	NAME	AREA (SF)	USE CLASSIF.	SF/OCCUPANT	TOTAL
----	OFFICES / WAITING	2,846 SQ. FT.	BUSINESS	100	28

OCCUPANCY NOTES:
1. TOTAL SQUARE FOOTAGE IS LINKED TO THE GROSS AREA OF THE TENANT SPACE FOR OCCUPANCY GROUP B - BUSINESS.

GENERAL NOTES :

- ANY AND ALL POINTS OF EGRESS WITHIN THE SPACE ARE TO NOT EXCEED THE VALUES OF TRAVEL DISTANCE REQUIRED BY CODE: 200'-0" MAX FOR OCCUPANCY GROUP B, NON-SPRINKLED 20'-0" MAX DEAD END CORRIDOR
- REFER TO CODE SUMMARY ON COVER SHEET FOR ADDITIONAL INFORMATION



CLINICAL OFFICE - BUSINESS (B)
COUNSELING OFFICES / MEETING ROOMS
2,846 SQ FT / 100 SQ. FT PER OCC = 28 OCCUPANTS

LIFE SAFETY
EGRESS PLAN
1/4" = 1'-0"

LS1.0 - LifeStance Health
2/25/2019 - 12:13:20 PM
2/25/2019 - 01:25:20 PM
2/25/2019 - 01:30:20 PM
Drawn: Dylanshany Roman

LifeStance
HEALTH
TENANT IMPROVEMENT
53 BAXTER BOULEVARD, UNIT #3
PORTLAND, ME 04101

Project No.: 6871
Drawn By: BCR
Date Issue: 12-13-2018
Date Issue: 01-25-2019
Date Issue: 01-30-2019
Issue: Prelim Review
Issue: Owner Review
Issue: Bld & Permit

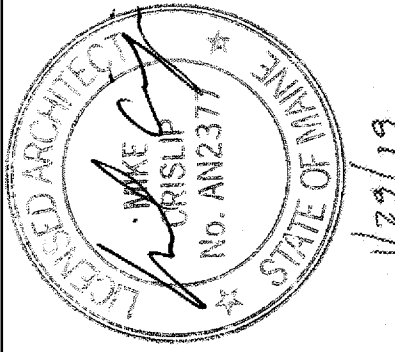
LS1.0

LIFE SAFETY



Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
02/25/2019

MICHAEL CRISLIP ARCHITECT
26001 Emery Road, Suite 400
Cleveland, Ohio 44128
216.223.3500 mycreative.com



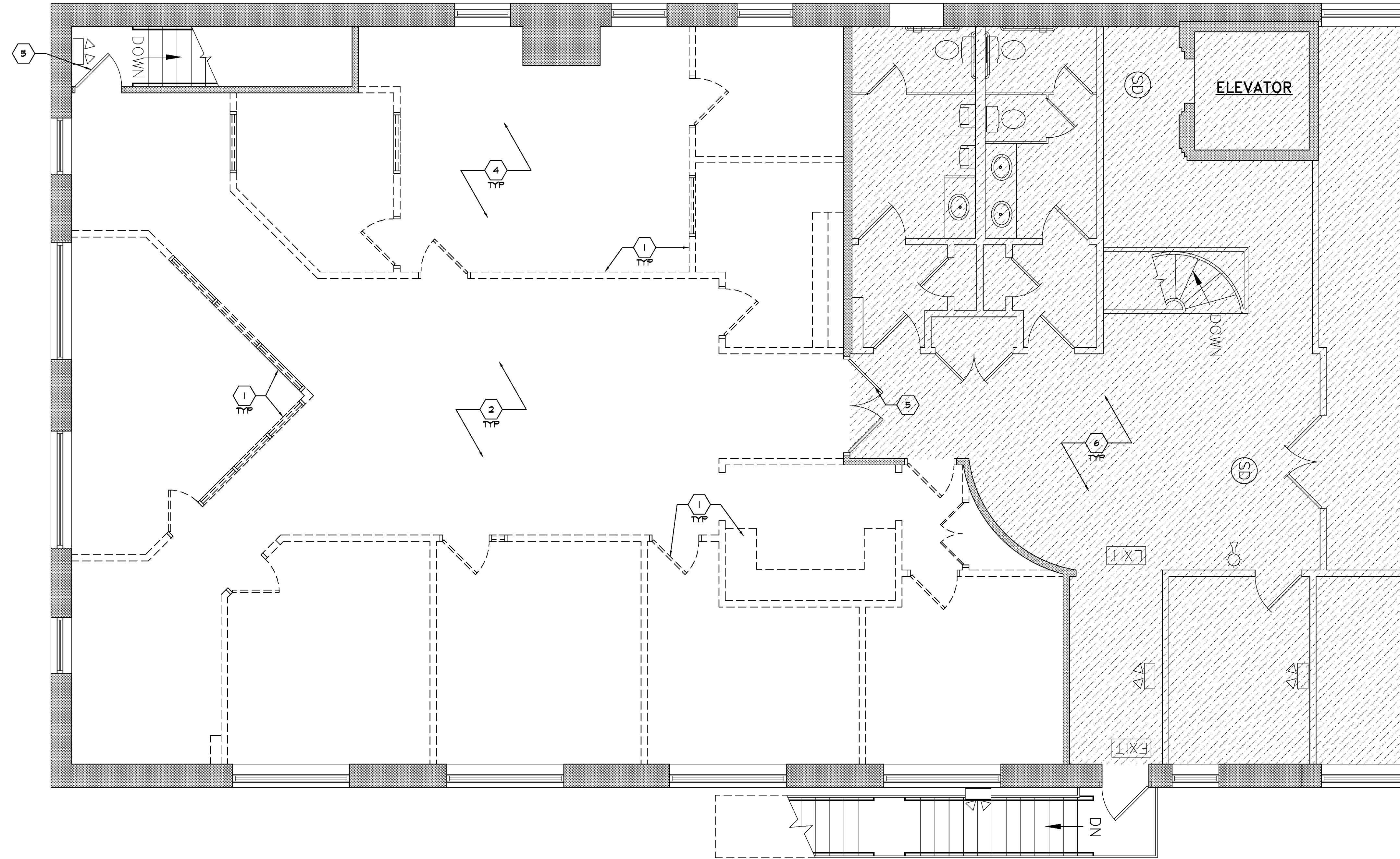
Design and construction documents as instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.

GENERAL NOTES:

1. S.C. TO VERIFY ALL CONDITIONS AND DIMENSIONS IN FIELD PRIOR TO BID AND NOTIFY ARCHITECT OF ANY INCONSISTENCIES.
2. S.C. TO REMOVE AND PROPERLY DISPOSE OF ALL ELEMENTS TO BE DEMOLISHED.

DEMOLITION CODED NOTES

- ① DEMO EXISTING WALLS, DOORS, HEADERS, INTERIOR GLAZING, AND MILLWORK THROUGHOUT SPACE.
- ② DEMO ALL EXISTING FLOORING THROUGHOUT SPACE.
- ③ NOT USED
- ④ DEMO EXISTING ALARM SYSTEM, ELECTRICAL SYSTEMS, THERMOSTATS, SMOKE DETECTORS, AND DATA CABLING THROUGHOUT SPACE.
- ⑤ EXISTING TO REMAIN
- ⑥ SHADING INDICATES EXISTING SHARED LOBBY TO REMAIN. NO WORK TO OCCUR IN THIS LOCATION.



DEMOLITION FLOOR PLAN
1/4" = 1'-0"

PLAN LS Portland, ME Proj
 150000 3/25/2019 12:00 PM
 Drawn: B. Crislip
 Date: 02/25/2019
 Time: 10:00 AM
 Project: 150000

LifeStance
HEALTH
TENANT IMPROVEMENT
53 BAXTER BOULEVARD, UNIT #3
PORTLAND, ME 04101

Project No:	16871
Drawn By:	BCR
Date	Issue
12-13-2018	Prelim Review
01-25-2019	Owner Review
01-30-2019	Bld & Permit

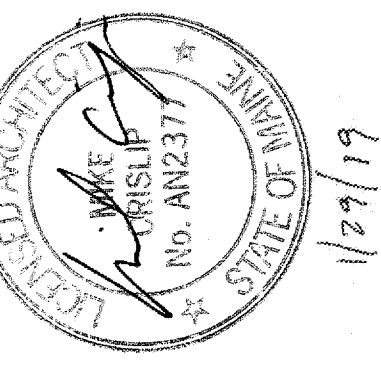
D1.0

DEMOLITION FLOOR PLAN



Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
02/25/2019

MICHAEL CRISLIP ARCHITECT
26001 Emery Road, Suite 400
Cleveland, Ohio 44128
216.223.3500 mycreative.com



Design and construction documents as instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.

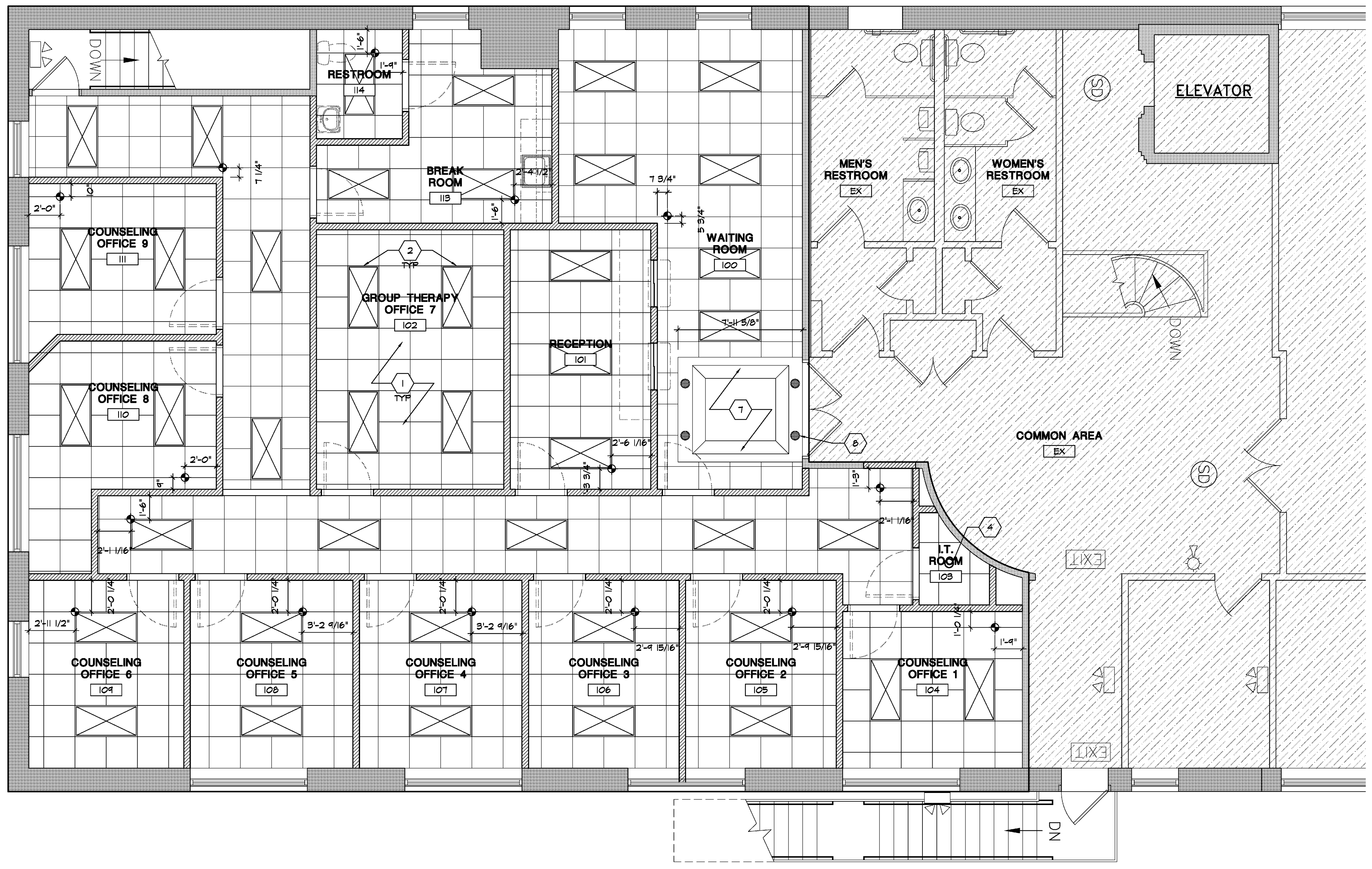
LifeStance
HEALTH
TENANT IMPROVEMENT UNIT #3
53 BAXTER BOULEVARD, PORTLAND, ME 04101

Project No.	6871
Drawn By	BCR
Date	Issue
12-13-2018	Prelim Review
01-25-2019	Owner Review
01-30-2019	Bld & Permit

- GENERAL NOTES:**
1. G.C. TO VERIFY ALL CONDITIONS AND DIMENSIONS IN FIELD PRIOR TO BID AND NOTIFY ARCHITECT OF ANY INCONSISTENCIES.
 2. G.C. TO VERIFY INSULATION CONTENT OF EXTERIOR WALLS AND CEILING CAVITY. WHERE NOT ADEQUATE G.C. TO PROVIDE NEW INSULATION TO MEET ALL LOCAL CODES AND ORDINANCES.

CEILING CODED NOTES

- 1 PROVIDE AND INSTALL NEW 2' x 2' LAY-IN CEILING THROUGHOUT SPACE
- 2 PROVIDE AND INSTALL NEW 2' x 4' LAY-IN LITHONIA LED FIXTURES. REFER ELEC. DRAWINGS FOR CONT.
- 3 PROVIDE AND INSTALL NEW EMERGENCY COMBO FIXTURES AS REQUIRED IN WHITE, TYP. REFER ELEC. DRAWINGS FOR CONT.
- 4 PROVIDE AND INSTALL NEW 6" LED DOWN LIGHT WHERE REQUIRED. REFER ELEC. DRAWINGS FOR CONT.
- 5 PROVIDE AND INSTALL NEW SUPPLY AND RETURN DIFFUSERS. REFER MECH. PLANS FOR CONT.
- 6 MATCH POSITION AND ORIENTATION OF CEILING GRIDS AS INDICATED ON CEILING PLANS.
- 7 EXISTING SKYLIGHT AND ASSOCIATED DRYWALL TO REMAIN. G.C. TO VERIFY EXACT DIMENSIONS AND LOCATION IN FIELD. VERIFY ASSEMBLY IS IN GOOD CONDITION AND REPAIR AS REQUIRED.
- 8 EX. CAN LIGHTS TO BE REPLACED W/ NEW LED FIXTURES SHOWN SHADED. REFER ELEC. DRAWINGS FOR CONT.



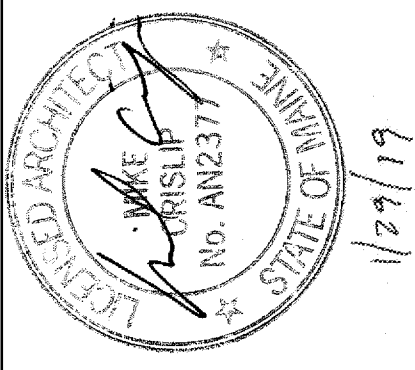
REFLECTED CEILING PLAN
1/4" = 1'-0"

02/25/2019
 2:15 PM
 12/13/2018
 12/13/2018
 01/25/2019
 01/30/2019
 01/29/19



Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
02/25/2019

MICHAEL CRISLIP ARCHITECT
26001 Emery Road, Suite 400
Cleveland, Ohio 44128
216.223.3500 mycreative.com



Design and construction documents as instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.

LifeStance
HEALTH
TENANT IMPROVEMENT
53 BAXTER BOULEVARD, UNIT #3
PORTLAND, ME 04101

Project No:	6871
Drawn By:	BCR
Date	Issue
12-13-2018	Prelim Review
01-25-2019	Owner Review
01-30-2019	Bld & Permit

- VCT-1**
VINYL COMPOSITION TILE
COLOR: CAROB
- SDT-1**
STATIC DISSIPATIVE TILE
COLOR: MARBLE BEIGE
- SC-1**
SEALED CONCRETE
COLOR: EXISTING SLAB
- P-2**
ACCENT WALL PAINT
COLOR: TEAL STENCIL
- P-3**
RESTROOM ACCENT WALL PAINT
COLOR: TEAL STENCIL W EPOXY
- CPT-1**
INTERFACE CARPET TILE
COLOR: FRENCH KNOT
BRICK PATTERN, BELOW
- CPT-2**
INTERFACE CARPET TILE
COLOR: CHESTNUT
QUARTER TURN PATTERN, BELOW

REQUIRED VENDOR: CARPET
INTERFACE
CONTACT: JEFF CREJCI
PH: 440-725-2440
E: jeff.krejci@interface.com



FINISH PLAN
1/4" = 1'-0"

PLOT BY: J. Krejci
 DATE: 02/25/2019
 PROJECT: 6871
 DRAWN BY: BCR
 CHECKED BY: J. Krejci
 SCALE: AS SHOWN
 SHEET: A2.0 OF 2

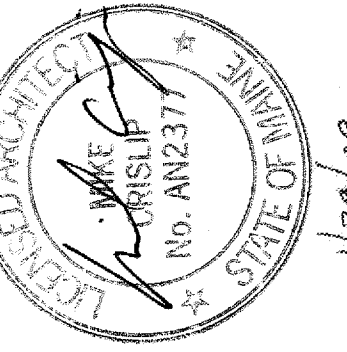
A2.0

FINISH PLAN

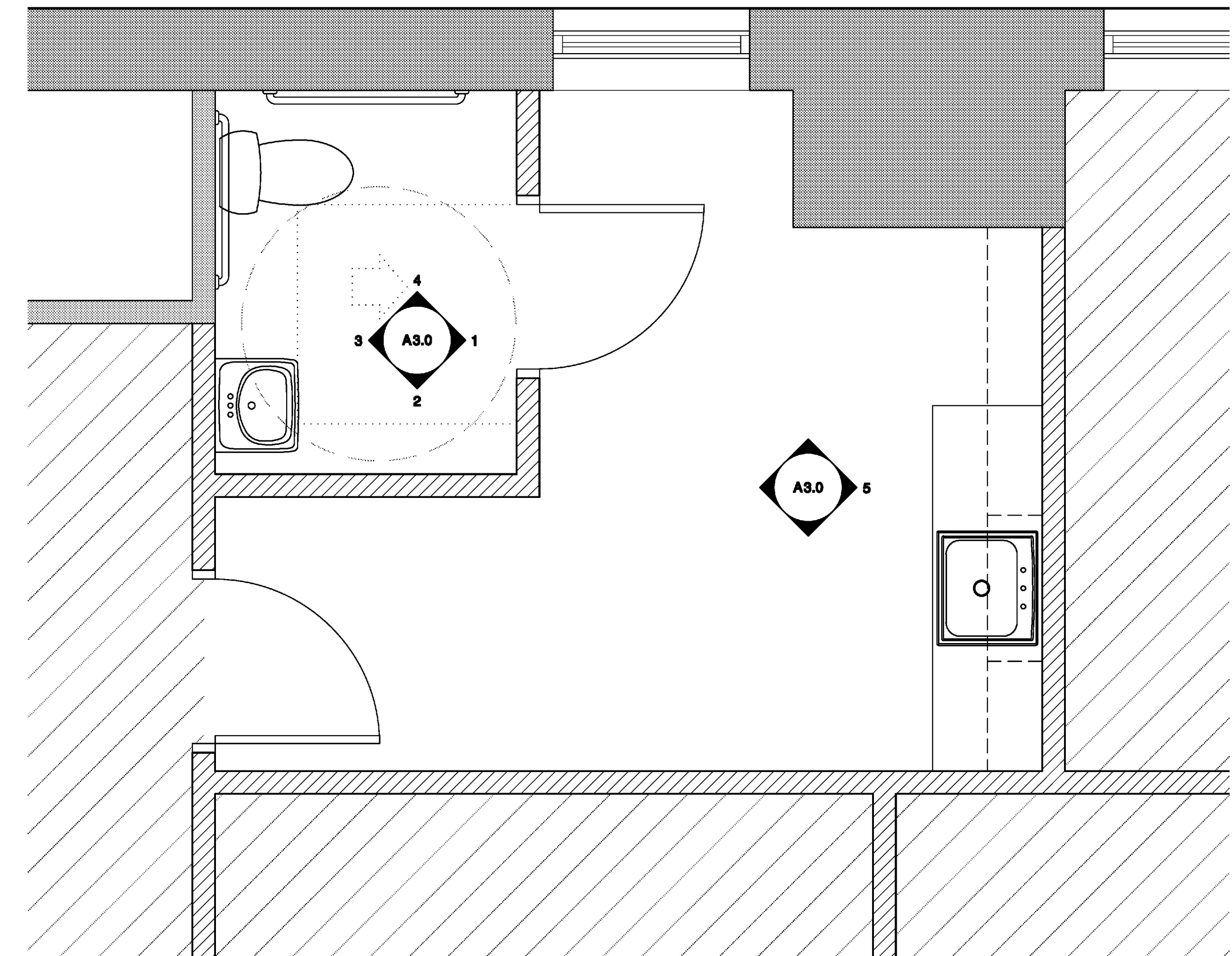
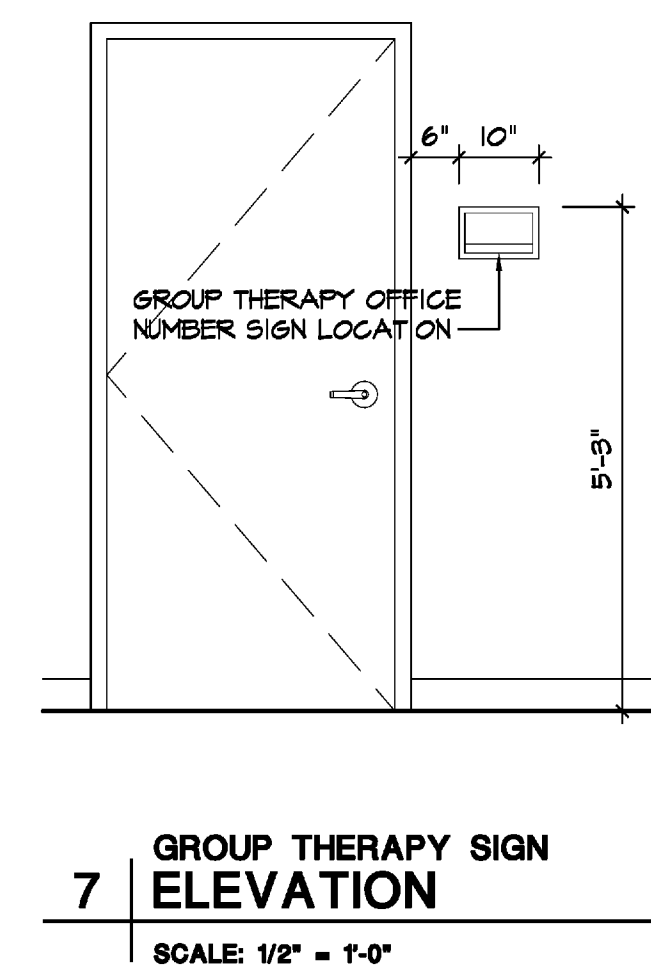
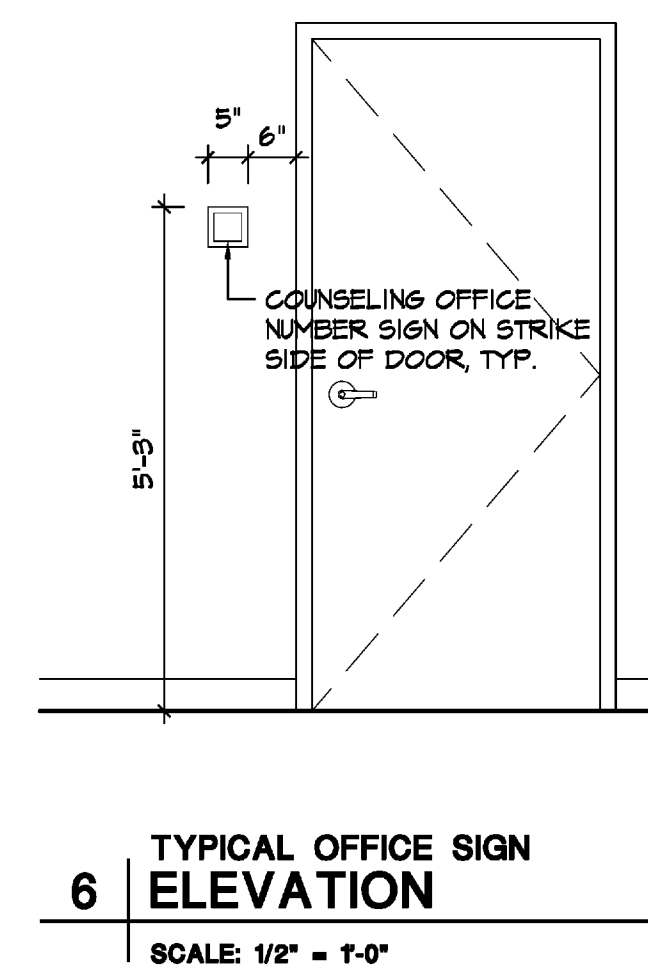
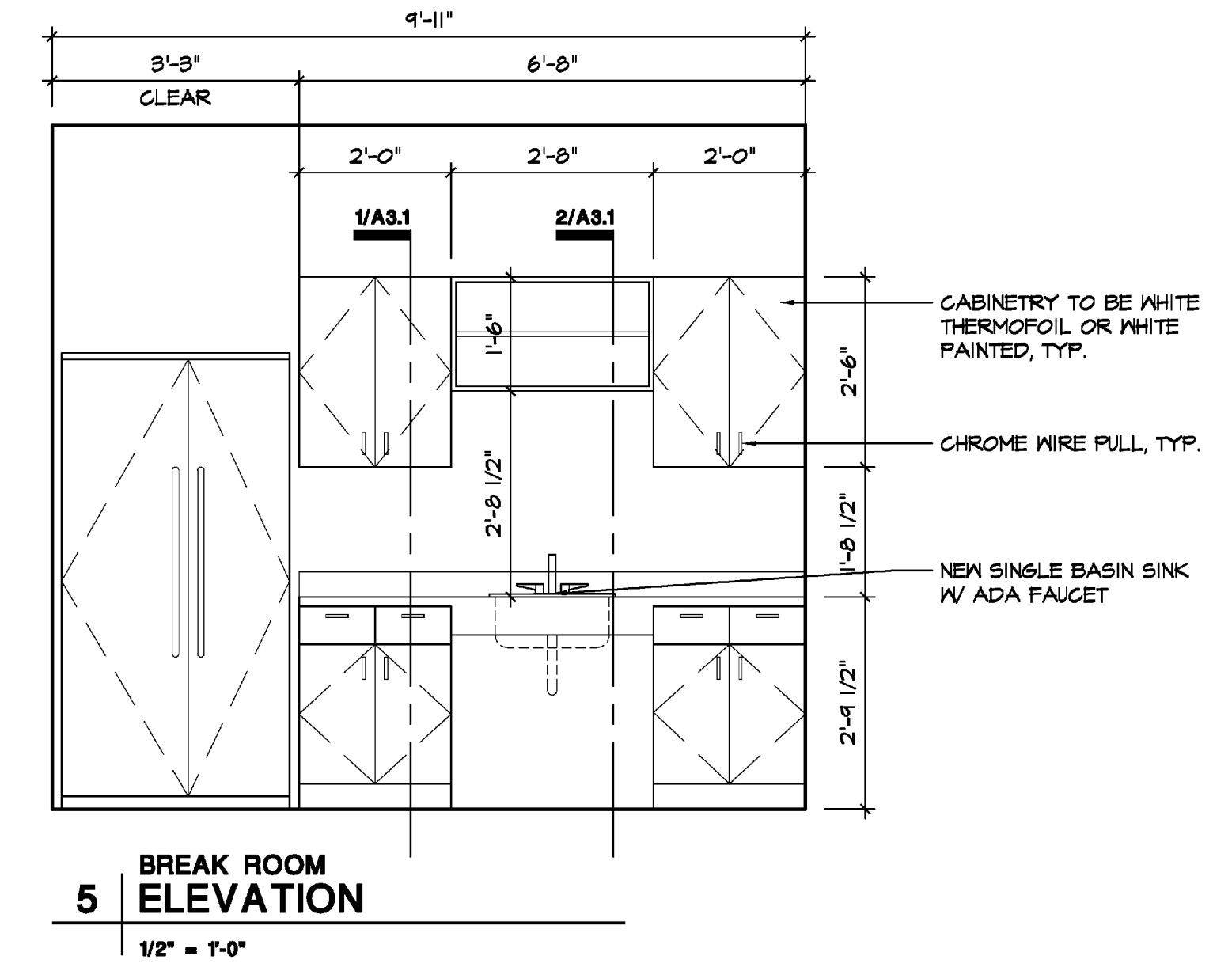
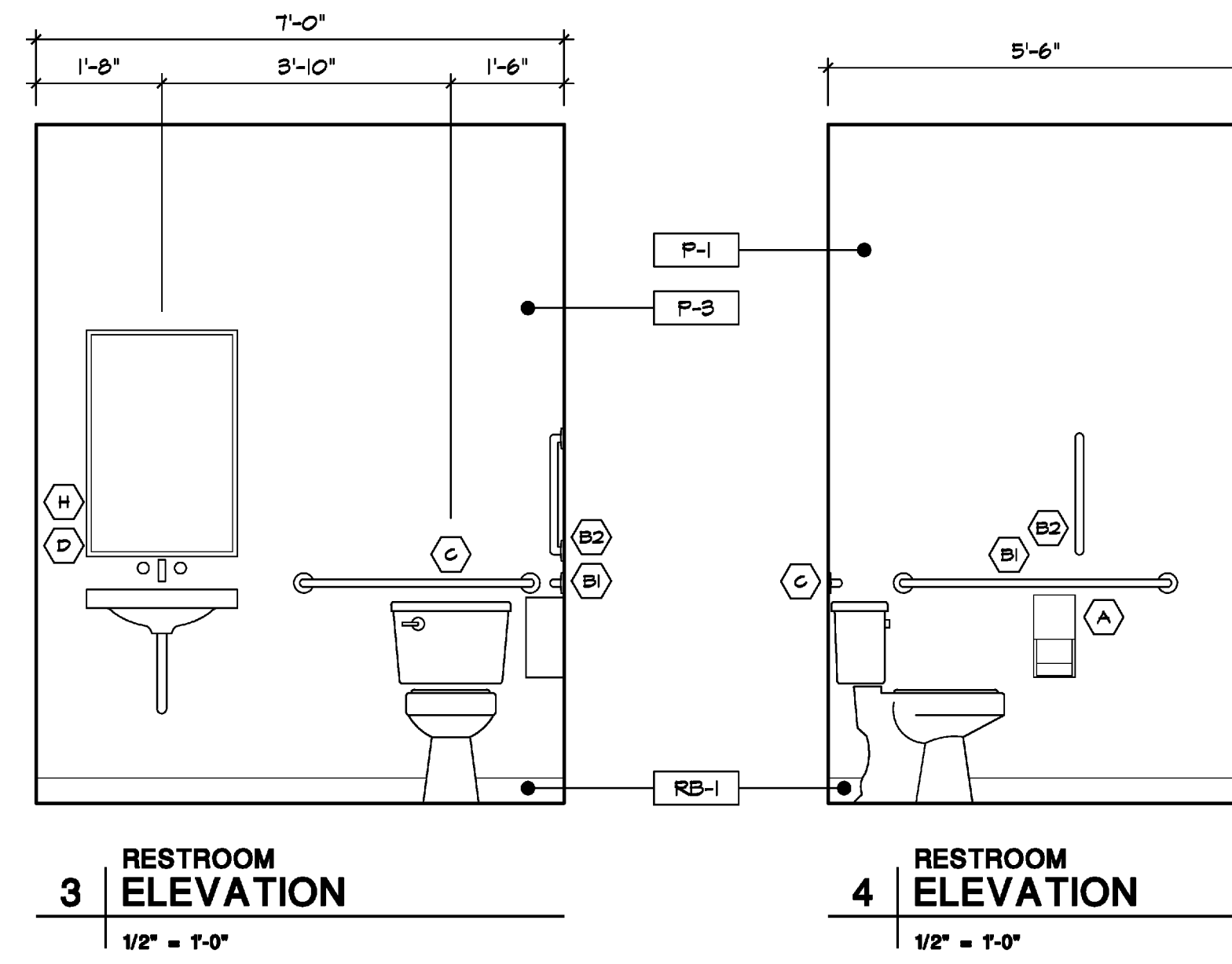
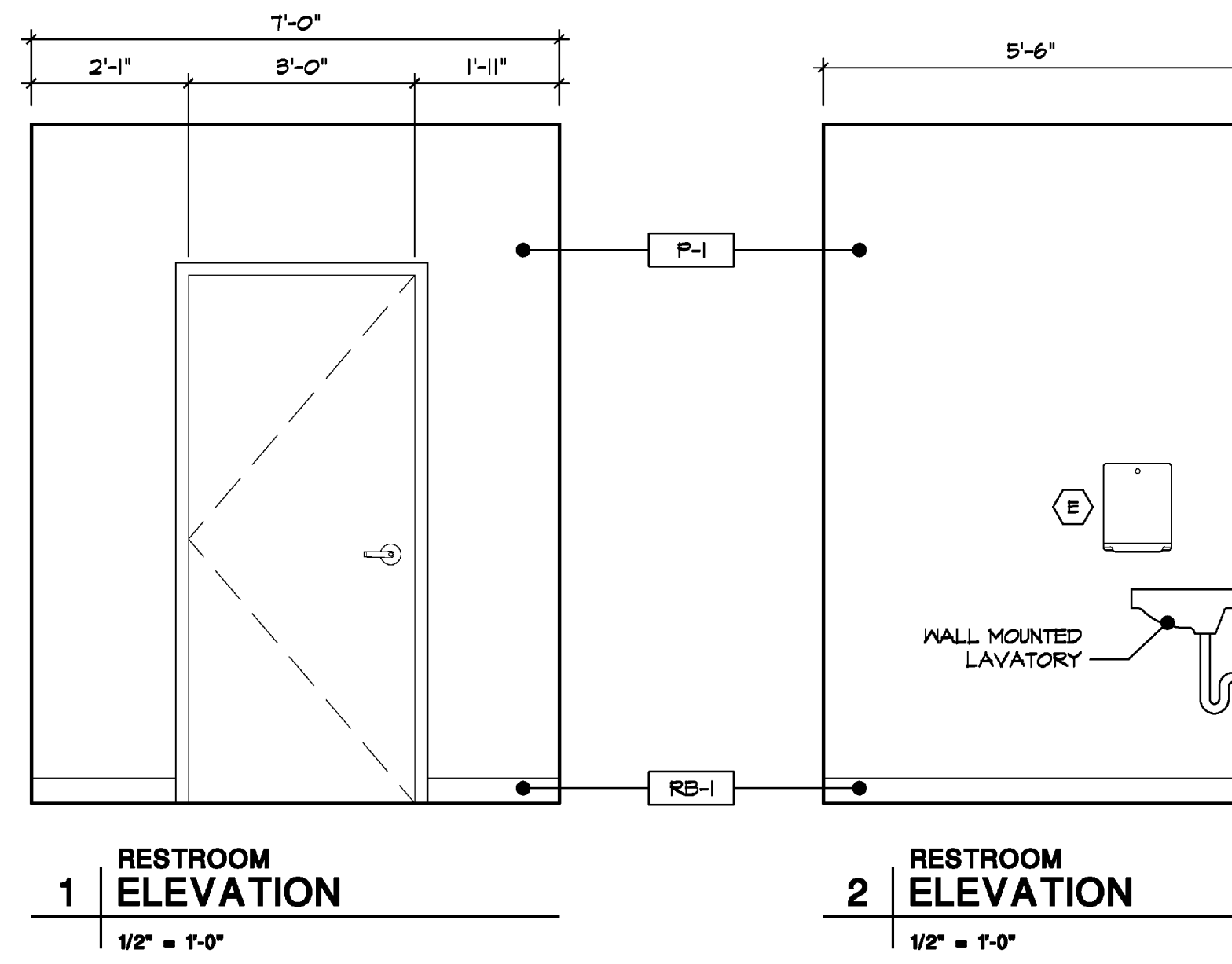


Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
02/25/2019

MICHAEL CRISLIP ARCHITECT
28001 Emery Road, Suite 400
Cleveland, Ohio 44128
216.223.3500 mycreative.com



Design and construction documents as instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.



PLAN: LS Portland, ME.dwg
XREF: U.S. Architectural Drawings
Drawn: R. Roman
Checked: M. Roman
Date: 02/25/2019
Project: 18871

LifeStance
HEALTH
TENANT IMPROVEMENT
53 BAXTER BOULEVARD, UNIT #3
PORTLAND, ME 04101

Project No: 18871
Drawn By: BCR
Date Issue: 12-13-2018
Date Preim Review: 01-25-2019
Date Owner Review: 01-30-2019
Date Bid & Permit:

A3.0

ENLARGED PLANS & ELEVATIONS



Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
02/25/2019

DOOR & FRAME SCHEDULE

DOOR NO.	DOORS				FRAMES		FIRE RATING	HARDWARE SET	COMMENTS
	TYPE	DESCRIPTION	SIZE	FINISH	TYPE	FINISH			
(100)	EX. B	EXISTING	3'-0" X 7'-0"	EX. TO REMAIN	EXISTING	EX. TO REMAIN	-	6.0 TMO SETS	----
(100A)	A	SOLID CORE BIRCH	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	2.0	----
(101)	A	SOLID CORE BIRCH	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	1.0	----
(102)	A	SOLID CORE BIRCH	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	1.2	----
(103)	A	SOLID CORE BIRCH	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	1.0	----
(104)	A	SOLID CORE BIRCH	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	1.1	----
(105)	A	SOLID CORE BIRCH	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	1.1	----
(106)	A	SOLID CORE BIRCH	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	1.1	----
(107)	A	SOLID CORE BIRCH	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	1.1	----
(108)	A	SOLID CORE BIRCH	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	1.1	----
(109)	A	SOLID CORE BIRCH	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	1.1	----
(110)	A	SOLID CORE BIRCH	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	1.1	----
(111)	A	SOLID CORE BIRCH	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	1.1	----
(112)	EX. C	EXISTING	3'-0" X 7'-0"	EX. TO REMAIN	EXISTING	EX. TO REMAIN	-	9.0	----
(113)	A	SOLID CORE WOOD	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	9.0	----
(114)	A	SOLID CORE WOOD	3'-0" X 7'-0"	STN-I	KNOCK-DOWN HOLLOW MTL	P-I	-	4.0	----

HARDWARE

SET 1.0 - RECEPTION

- 1/2 PAIR BUTT HINGES: HAGER BB1168 (ANSI 156.1, A811)
- LEVER LOCKSET: SCHLAGE AL50PD (ENTRANCE / OFFICE LOCK) W/ DEADLATCH AND CONVENTIONAL 6-PIN CYLINDER. JUPITER LEVER, COLOR 626 (SATIN CHROMIUM PLATED). KEYPED SEPARATELY AND MASTER KEYPED.
- COAT HOOK: BOBRICK B-692 ON INSIDE OF DOOR. COORDINATE LOCATION W/ CBRE PROJECT MANAGER IN FIELD.
- WALL DOOR STOP: GLYNN-JOHNSON 50C (ANSI A156.16/BHMA L1210)
- BOTTOM SEAL: REECE 480A AUTOMATIC DOOR BOTTOM SEAL

SET 1.1 - COUNSELING OFFICES

- ALL HARDWARE AS INCLUDED IN SET 1.0
- ROOM SIGN: MYDOORSIGN.COM METRO 5'x5" CUSTOM ROOM NUMBERS BRAILLE SIGN SE-3454 IN COLOR BLACK (637). INSTALL ON LATCH SIDE OF DOOR AT 63" AFF TO TOP OF SIGN W/ 6" FROM DOOR FRAME TO EDGE OF SIGN. VERIFY LOC. IN FIELD W/ CBRE PROJECT MANAGER

SET 1.2 - GROUP THERAPY OFFICE

- ALL HARDWARE AS INCLUDED IN SET 1.0
- ROOM SIGN: MYDOORSIGN.COM METRO 6.5'x10" CUSTOM CONFERENCE ROOM BRAILLE SIGN SE-3456 IN COLOR BLACK (637) W/ SILVER SLIDING PANEL. INCLUDE ROOM NUMBER ONLY. INSTALL ON LATCH SIDE OF DOOR AT 63" AFF TO TOP OF SIGN W/ 6" FROM DOOR FRAME TO EDGE OF SIGN. VERIFY LOC. IN FIELD W/ CBRE PROJECT MANAGER

SET 2.0 - WAITING AREAS

- 1/2 PAIR BUTT HINGES: HAGER BB1168 (ANSI 156.1, A811)
- LEVER LOCKSET: SCHLAGE AL50PD (STOREROOM LOCK) W/ DEADLATCH AND CONVENTIONAL 6-PIN CYLINDER. JUPITER LEVER, COLOR 626 (SATIN CHROMIUM PLATED). KEYPED SEPARATELY AND MASTER KEYPED.
- DOOR CLOSER: LCN 1450 SERIES (PARALLEL ARM), CLR ANODIZED, (ANSI 156.4, GRADE I)
- WALL DOOR STOP: GLYNN-JOHNSON 50C (ANSI A156.16/BHMA L1210)
- DOOR FRAME TO ACCEPT ELECTRIC STRIKE FOR ACCESS CONTROL SYSTEM (BY TENANT); PROVIDE 3/4" ELECTRICAL CONDUIT ON STRIKE SIDE OF FRAME FROM 42" AFF STUBBED INTO CEILING SPACE, REMOVE DUST BOX.

SET 3.0 - BREAK ROOM

- 1/2 PAIR BUTT HINGES: HAGER BB1168 (ANSI 156.1, A811)
- LEVER LOCKSET: SCHLAGE ALIOS (PASSAGE LATCH) W/ SPRINGLATCH. JUPITER LEVER, COLOR 626 (SATIN CHROMIUM PLATED).
- WALL DOOR STOP: GLYNN-JOHNSON 50C (ANSI A156.16/BHMA L1210)
- ROOM SIGN: MYDOORSIGN.COM METRO 5.5'x5" CUSTOM COMMON ROOM SIGN SE-3456 IN COLOR BLACK (637) WITH TEXT "STAFF ONLY". INSTALL ON LATCH SIDE OF DOOR AT 63" AFF TO TOP OF SIGN W/ 6" FROM DOOR FRAME TO EDGE OF SIGN. VERIFY LOC. IN FIELD W/ CBRE PROJECT MANAGER

SET 4.0 - SINGLE RESTROOMS

- 1/2 PAIR BUTT HINGES: HAGER BB1168 (ANSI 156.1, A811)
- LEVER LATCHSET: SCHLAGE ALIOS (PASSAGE LATCH) W/ SPRINGLATCH. JUPITER LEVER, COLOR 626 (SATIN CHROMIUM PLATED).
- DEADBOLT: SCHLAGE B571 (ONE-SIDED DEADBOLT) W/ OCCUPANCY INDICATOR. COLOR 626 (SATIN CHROMIUM PLATED).
- DOOR CLOSER: LCN 1450 SERIES (PARALLEL ARM), CLR ANODIZED, (ANSI 156.4, GRADE I)
- WALL DOOR STOP: GLYNN-JOHNSON 50C (ANSI A156.16/BHMA L1210)
- ADA COMPLIANT RESTROOM SIGNAGE: COORDINATE W/ CBRE PROJECT MANAGER

SET 5.0 - REAR EMPLOYEE ENTRANCE DOOR

- HINGES: VERIFY EXISTING IS IN GOOD CONDITION. REPLACE IF NECESSARY.
- INSTALL EGRESS PADDLE ON INTERIOR W/ NEW LOCK ON EXTERIOR. MASTER KEYPED.
- DOOR CLOSER: VERIFY OPERATION OF EXISTING AND ADJUST AS REQUIRED TO PROVIDE PROPER OPERATION. REPLACE IF NECESSARY.
- WALL DOOR STOP: GLYNN-JOHNSON 50C (ANSI A156.16/BHMA L1210)
- DOOR FRAME TO ACCEPT ELECTRIC STRIKE FOR ACCESS CONTROL SYSTEM (BY TENANT); PROVIDE 3/4" ELECTRICAL CONDUIT ON STRIKE SIDE OF FRAME FROM 42" AFF STUBBED INTO CEILING SPACE, REMOVE DUST BOX.

SET 6.0 - FRONT ENTRANCE

- HARDWARE LISTED IS FOR EACH LEAF. PAIRS OF DOORS REQUIRE TWO SETS OF HARDWARE.
- HINGES: VERIFY EXISTING IS IN GOOD CONDITION. REPLACE IF NECESSARY.
- EXISTING LOCK TO REMAIN. KEY TO MASTER KEY. REPLACE CYLINDER IF NECESSARY.
- DOOR CLOSER: VERIFY OPERATION OF EXISTING AND ADJUST AS REQUIRED TO PROVIDE PROPER OPERATION. REPLACE IF NECESSARY.
- INSTALL BLACKOUT WINDOW FILM. VERIFY COLOR WITH CBRE PROJECT MANAGER.

SET 7.0 - I.T. ROOM AND COPY ROOM

- 1/2 PAIR BUTT HINGES: HAGER BB1168 (ANSI 156.1, A811)
- LEVER LOCKSET: SCHLAGE AL50PD (STOREROOM LOCK) W/ DEADLATCH AND CONVENTIONAL 6-PIN CYLINDER. JUPITER LEVER, COLOR 626 (SATIN CHROMIUM PLATED). KEYPED SEPARATELY AND MASTER KEYPED.
- DOOR CLOSER: LCN 1450 SERIES (PARALLEL ARM), CLR ANODIZED, (ANSI 156.4, GRADE I)
- WALL DOOR STOP: GLYNN-JOHNSON 50C (ANSI A156.16/BHMA L1210)
- DOOR FRAME TO ACCEPT ELECTRIC STRIKE FOR ACCESS CONTROL SYSTEM (BY TENANT); PROVIDE 3/4" ELECTRICAL CONDUIT ON STRIKE SIDE OF FRAME FROM 42" AFF STUBBED INTO CEILING SPACE, REMOVE DUST BOX.

DOOR & FRAME NOTES

GENERAL NOTES:

G.C. TO INSPECT ALL EX. HARDWARE AND SYSTEMS FOR DEFECTS, DAMAGE AND OPERABILITY. IF ANY ITEMS OR ELEMENTS ARE FOUND TO BE INSUFFICIENT G.C. SHALL REPAIR OR REPLACE AS NECESSARY TO ENSURE COMPLETE OPERABILITY OF SYSTEM.

G.C. TO FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING OF HARDWARE AND DOOR SYSTEMS.

SOLID CORE WOOD DOORS TO BE BIRCH, FACTORY FINISHED W/ STAIN COLOR PROVIDED BY CBRE PROJECT MANAGER. FRAMES TO BE KNOCK-DOWN HOLLOW METAL FRAMES, FACTORY PRIMED. ALL DOOR MATERIALS, FINISHES AND STYLES ETC. ARE TO BE COORDINATED W/ CBRE PROJECT MANAGER PRIOR TO CONSTRUCTION.

HARDWARE NOTES:

HARDWARE SCHEDULES BY REFERENCE TO A MANUFACTURER IS FOR THE PURPOSE OF ESTABLISHING MINIMUM REQUIREMENTS.

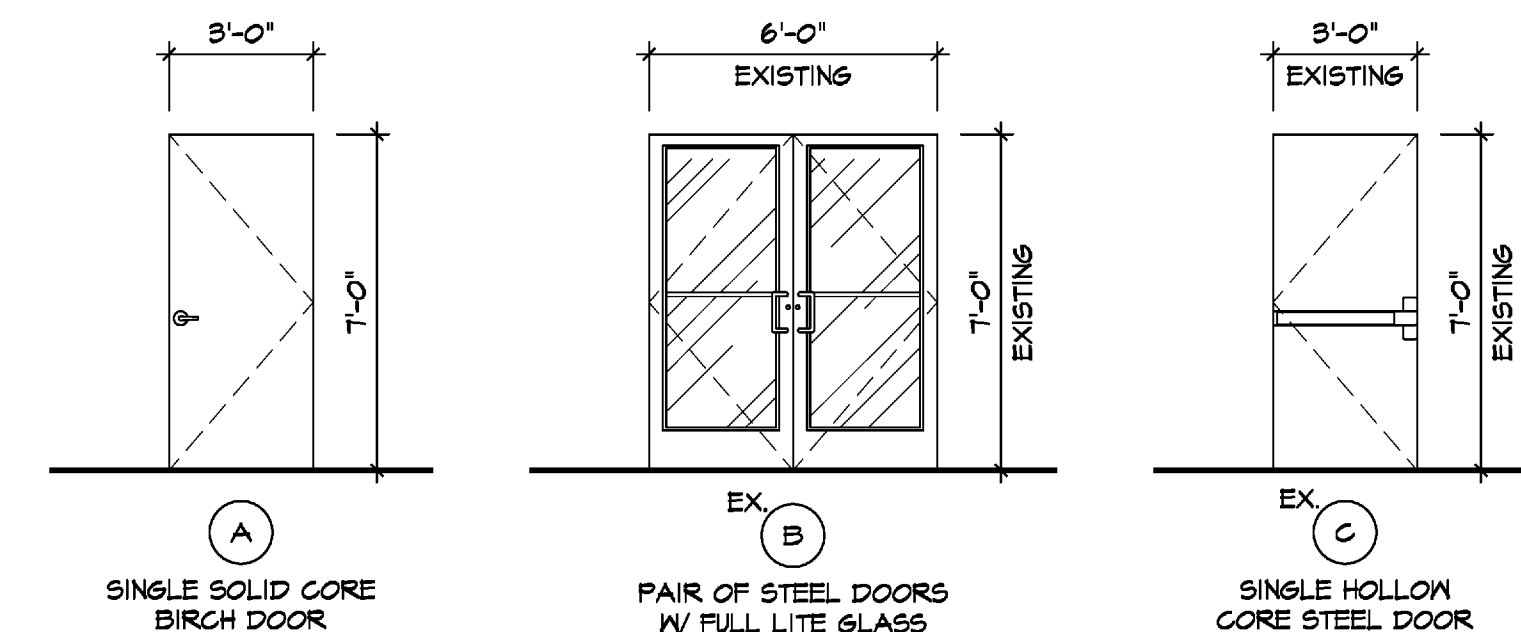
ALL HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, FINCHING OR TWISTING TO OPERATE.

MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED FIVE (5) POUNDS, PUSH & PULL.

HARDWARE FOR PAIRS OF DOORS IS FOR EACH LEAF UNLESS NOTED OTHERWISE.

COORDINATE W/ CBRE PROJECT MANAGER FOR PROPER KEYING OF CORES PRIOR TO INSTALLATION

DOOR & FRAME TYPES



MATERIAL SCHEDULE

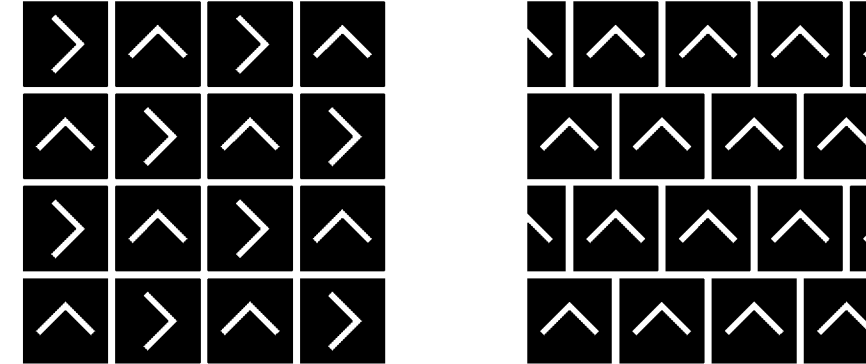
MATERIAL	SYMBOL	DESCRIPTION	NUMBER	COLOR	MANUFACTURER	COMMENTS
PAINT	P-1	EGGSHELL	5W6001	GRAYISH	SHERWIN WILLIAMS	PAINT DOOR FRAMES TO MATCH ADJACENT WALL - SEMI-GLOSS
	P-2	EGGSHELL	5W0018	TEAL STENCIL	SHERWIN WILLIAMS	PAINT DOOR FRAMES TO MATCH ADJACENT WALL - SEMI-GLOSS
	P-3	EGGSHELL W/ EPOXY	5W0018	TEAL STENCIL	SHERWIN WILLIAMS	PREP WALL TO LVL 5 FINISH, PRIME W/ PRO-MAR 200 ZERO VOC PRIMER, FINISH W/ 2 COATS PRO-INDUSTRIAL WATER BASED CATALYZED EPOXY
	P-4	FLAT		WHITE	SHERWIN WILLIAMS	FLAT WHITE FOR CEILING
ACOUSTIC CEILING TILE	ACT-1	2' x 2' LAY-IN CLING TILE W/ GRID	----	WHITE	----	MATCH PLACEMENT & ORIENTATION AS INDICATED ON CLING PLAN A.11
CARPET TILE	CPT-1	PRIMARY STITCH 1462102500	102417	FRENCH KNOT	INTERFACE	LAI'D IN BRICK PATTERN (NOTE 3), DIRECT GLUE DOWN METHOD REQUIRED VENDOR (NOTE 4)
	CPT-2	PLATFORM 1461202500	4325	CHESTNUT	INTERFACE	LAI'D IN QUARTER TURN PATTERN (NOTE 3), DIRECT GLUE DOWN METHOD REQUIRED VENDOR (NOTE 4)
VINYL COMPOSITION TILE	VCT-1	STANDARD EXCELRON IMPERIAL TEXTURE	54242	CAROB	ARMSTRONG	12' x 12' x 1/8"
STATIC DISSIPATIVE TILE	SDT-1	SDT	51450	MARBLE BEIGE	ARMSTRONG	12' x 12'
WALL BASE	RB-1	MANNINGTON EDGE	167	FUDGE	MANNINGTON	TRADITIONAL 4" (COVER) AT RESILIENT; TRADITIONAL TOELESS 4" AT CARPET. USED AT ALL WALLS.
TRANSITION STRIP	RB-2	GTA-XX-D 5/16" TO 1/8"	167	FUDGE	JOHNSONITE	----
PLASTIC LAMINATE	PL-1	STANDARD	4820-60	CARBON EV	WILSONART	----
	PL-2	STANDARD / MATTE	D354-60	DESIGNER WHITE	WILSONART	----
WOOD STAIN	STN-1	POLYURETHANE CLEAR SATIN	222	SEDONA RED	MINWAX	ALL BIRCH DOORS TO BE FACTORY FINISHED W/ STAIN

FINISH NOTES:

1. ALL INSTALLATIONS OF MATERIALS ARE TO BE PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS. CONTACT ARCHITECT, CBRE PROJECT MANAGER, AND PRODUCT MANUFACTURER FOR APPROVAL BEFORE DEVIATING FROM SPECIFICATIONS AND INSTRUCTION.

2. ALL PAINT & STAIN IS TO BE SHOP APPLIED, WHERE APPLICABLE.

3. CARPET TILE PATTERNS ARE TO BE LAID AS SHOWN BELOW:
QUARTER TURN, BRICK:



4. REQUIRED CARPET VENDOR: INTERFACE
CONTACT JEFF KREJCI
PHONE: 440-125-2440
EMAIL: JEFF.KREJCI@INTERFACE.COM

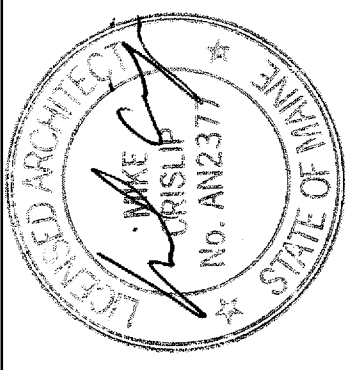
ROOM FINISH SCHEDULE

ROOM #	ROOM NAME	FLOOR	WALLS	BASE	CEILING	COMMENTS
100	WAITING AREA	CPT-1	P-1	RB-1	ACT-1	----
101	RECEPTION	VCT-1	P-1, P-2	RB-1	ACT-1	REFER FINISH PLAN A2.0 FOR LOCATION OF ACCENT WALL, P-2
102	GROUP THERAPY	CPT-2	P-1	RB-1	ACT-1	----
103	I.T. ROOM	SDT-1	P-1	RB-1	OPEN	----
104	COUNSELING OFFICE	CPT-2	P-1	RB-1	ACT-1	----
105	COUNSELING OFFICE	CPT-2	P-1	RB-1	ACT-1	----
106	COUNSELING OFFICE	CPT-2	P-1	RB-1	ACT-1	----
107	COUNSELING OFFICE	CPT-2	P-1	RB-1	ACT-1	----
108	COUNSELING OFFICE	CPT-2	P-1	RB-1	ACT-1	----
109	COUNSELING OFFICE	CPT-2	P-1	RB-1	ACT-1	----
110	COUNSELING OFFICE	CPT-2	P-1	RB-1	ACT-1	----
111	COUNSELING OFFICE	CPT-2	P-1	RB-1	ACT-1	----
112	CORRIDOR	CPT-1	P-1, P-2	RB-1	ACT-1	REFER FINISH PLAN A2.0 FOR LOCATIONS OF ALL ACCENT WALLS, P-2
113	BREAK ROOM	VCT-1	P-1	RB-1	ACT-1	----
114	RESTROOM	VCT-1	P-1, P-3	RB-1	ACT-1	REFER FINISH PLAN A2.0 FOR LOCATION OF EPOXY ACCENT WALL, P-3

ROOM FINISH NOTES:

- REFER TO INTERIOR ELEVATIONS & SECTIONS FOR LOCATION OF ALL INTERIOR FINISHES. PROVIDE AS SPECIFIED AND PER MANUF. RECOMMENDATIONS & SPECIFICATIONS.
- VERIFY FINISH MATERIAL W/ TENANT PROJECT MANAGER PRIOR TO ORDER AND INSTALLATION. PROVIDE PHYSICAL SAMPLES & CUTSHEETS FOR ALL FINISH MATERIAL & HARDWARE.
- WHERE EX. FINISHES ARE TO REMAIN, G.C. TO VERIFY MATERIALS ARE CLEAN AND IN GOOD CONDITION, AND TO CLEAN, REPAIR, OR REPLACE AS NECESSARY.
- WHERE EX. WALL BASE IS IN GOOD CONDITION, RETAIN AND REUSE. PAINT TO MATCH ADJACENT WALL. REPLACE WITH RB-1 WHERE NECESSARY.
- REFER TO MILLWORK / CASEWORK DETAILS FOR CABINETS BASE FINISHES.
- REFER TO MATERIAL SCHEDULE FOR CARPET TILE PATTERNS.

MICHAEL CRISLIP ARCHITECT



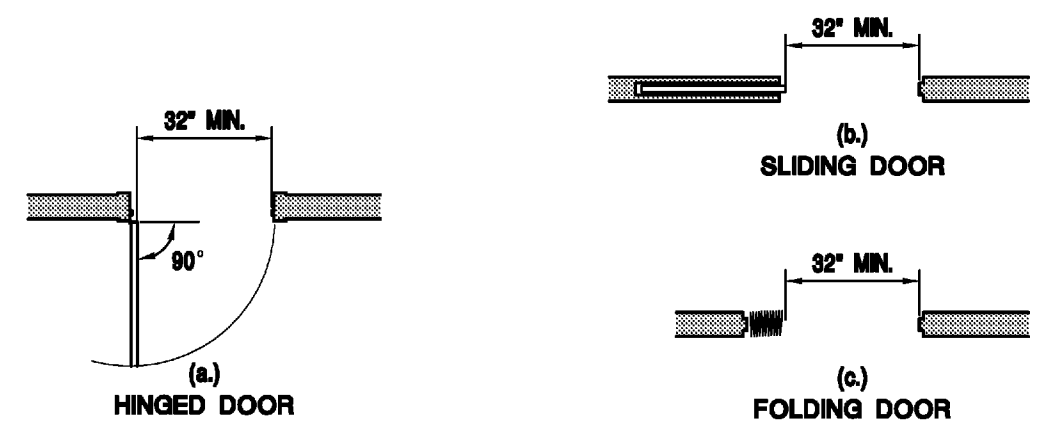
Design and construction documents as instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.

LifeStance HEALTH
TENANT IMPROVEMENT, UNIT #3
53 BAXTER BOULEVARD, PORTLAND, ME 04101

Project No.: 6871
Drawn By: BCR
Date: 12-13-2018
Issue: Prelim Review
01-25-2019 Owner Review
01-30-2019 Bid & Permit

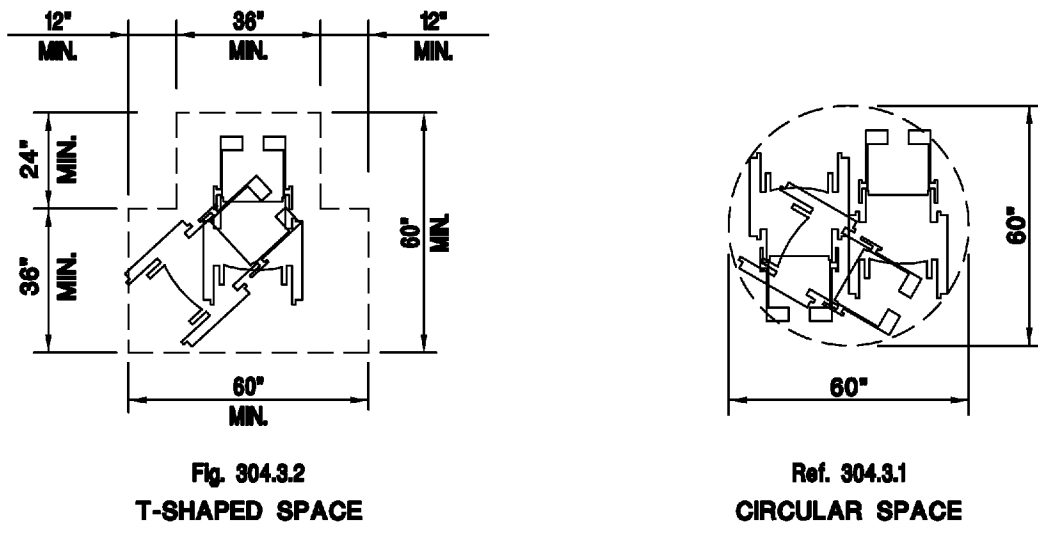
A3.2

SCHEDULES

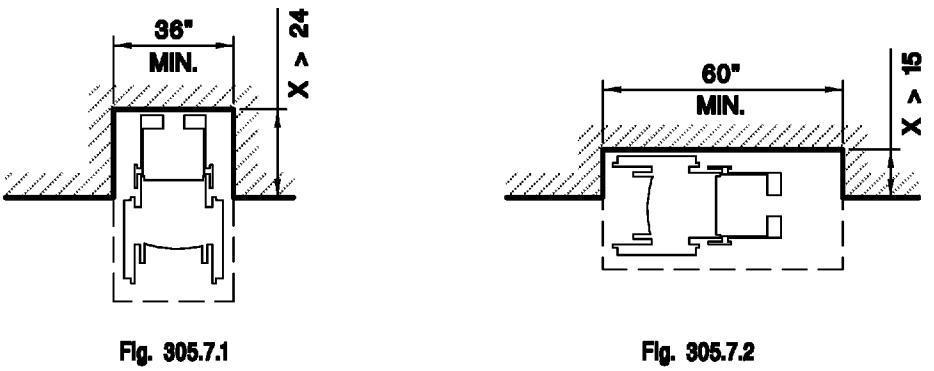


CLEAR WIDTH OF DOORWAYS
Fig. 404.2.3

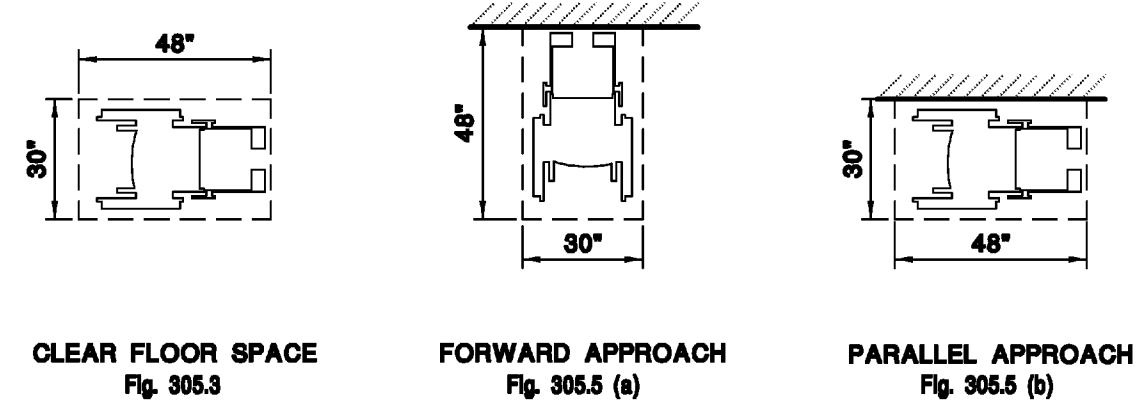
CLEAR FLOOR SPACE NOTES:
1. DOORS SHALL BE PERMITTED TO SWING INTO TURNING SPACES (304.4)
2. ONE FULL UNOBSTRUCTED SIDE OF THE CLEAR FLOOR SPACE MUST ADJOIN AN ACCESSIBLE ROUTE OR ANOTHER CLEAR FLOOR SPACE (305.6)
3. A CLEAR FLOOR SPACE IS REQUIRED AT ANY DEVICE WITH AN OPERABLE PART (309.2)



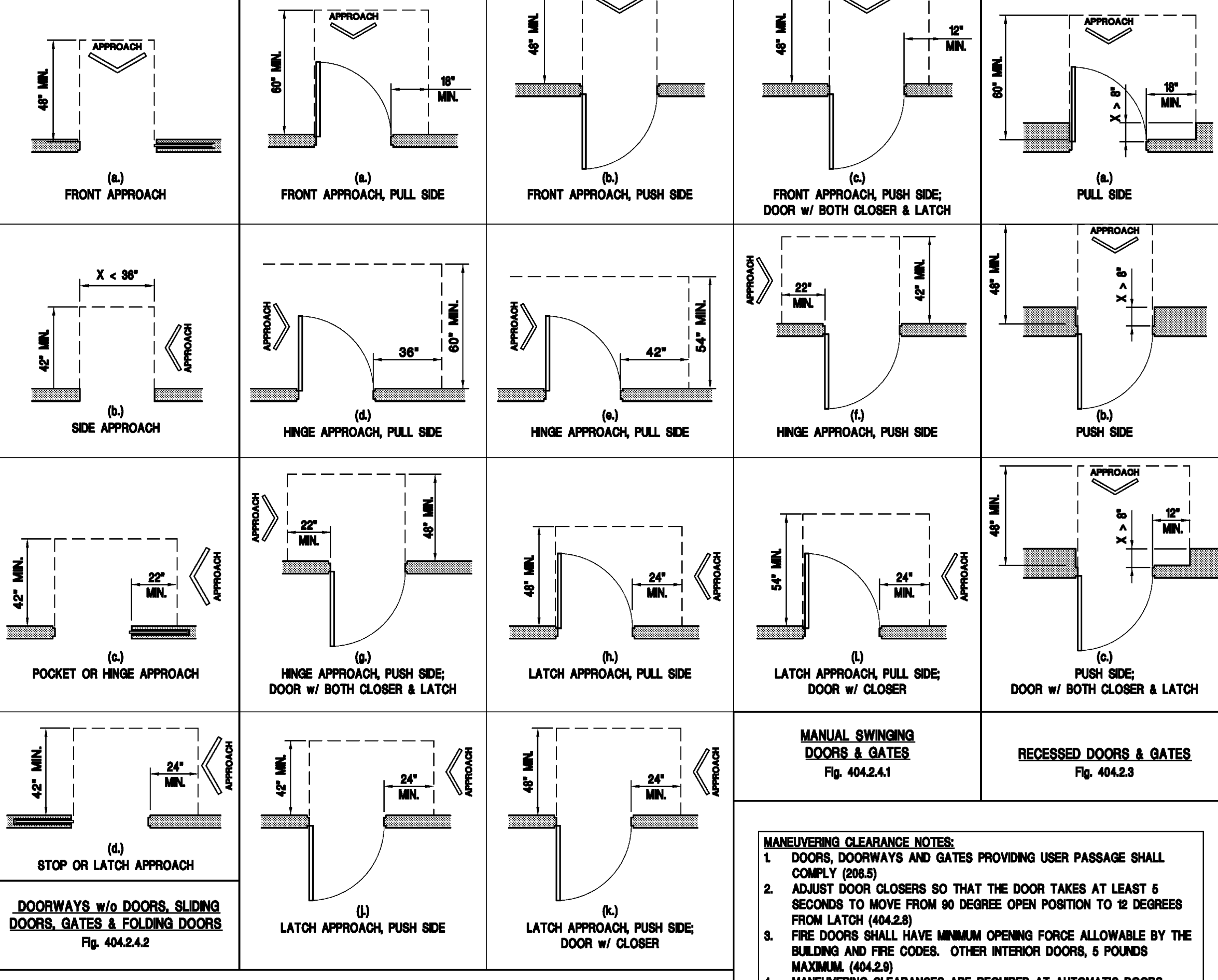
TURNING SPACE
Ref. Section 304



CLEAR FLOOR SPACE IN ALCOVES



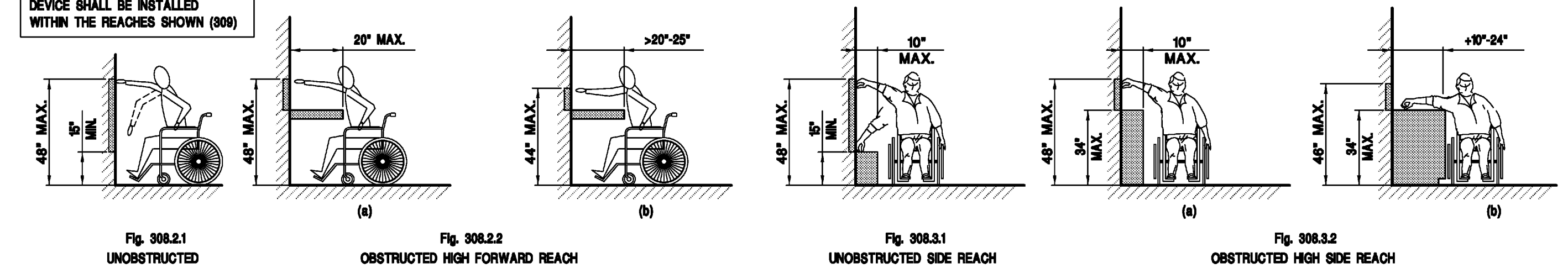
MINIMUM CLEAR FLOOR SPACE
Ref. Sections 304 & 305



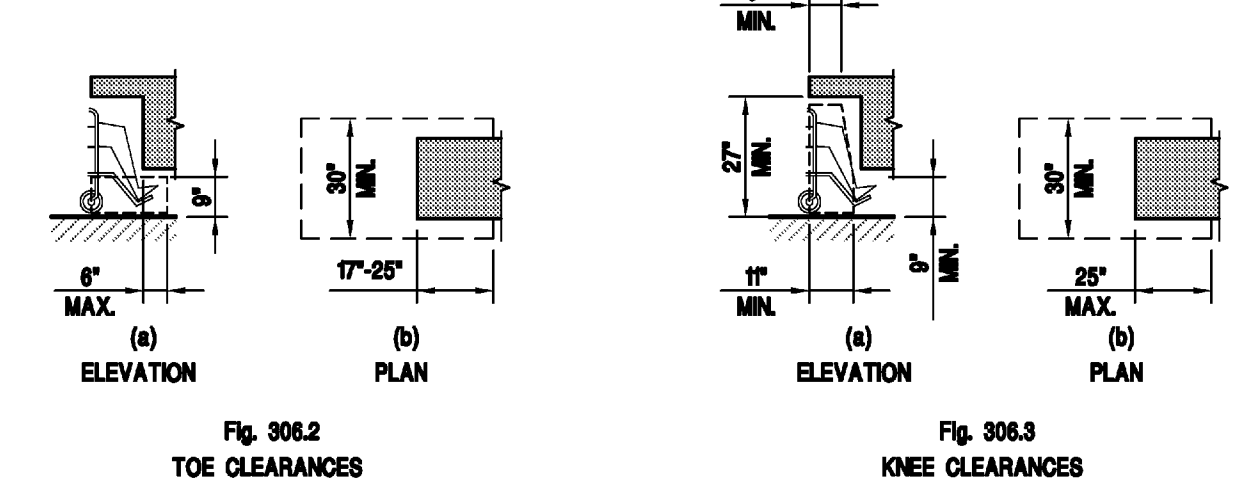
MANEUVERING CLEARANCES
Ref. Section 404.2.3

MANEUVERING CLEARANCE NOTES:
1. DOORS, DOORWAYS AND GATES PROVIDING USER PASSAGE SHALL COMPLY (208.5)
2. ADJUST DOOR CLOSERS SO THAT THE DOOR TAKES AT LEAST 5 SECONDS TO MOVE FROM 90 DEGREE OPEN POSITION TO 12 DEGREES FROM LATCH (404.2.8)
3. FIRE DOORS SHALL HAVE MINIMUM OPENING FORCE ALLOWABLE BY THE BUILDING AND FIRE CODES. OTHER INTERIOR DOORS, 5 POUNDS MAXIMUM (404.2.9)
4. MANEUVERING CLEARANCES ARE REQUIRED AT AUTOMATIC DOORS UNLESS DOOR OPERATION HAS STANDBY POWER (404.3.2)

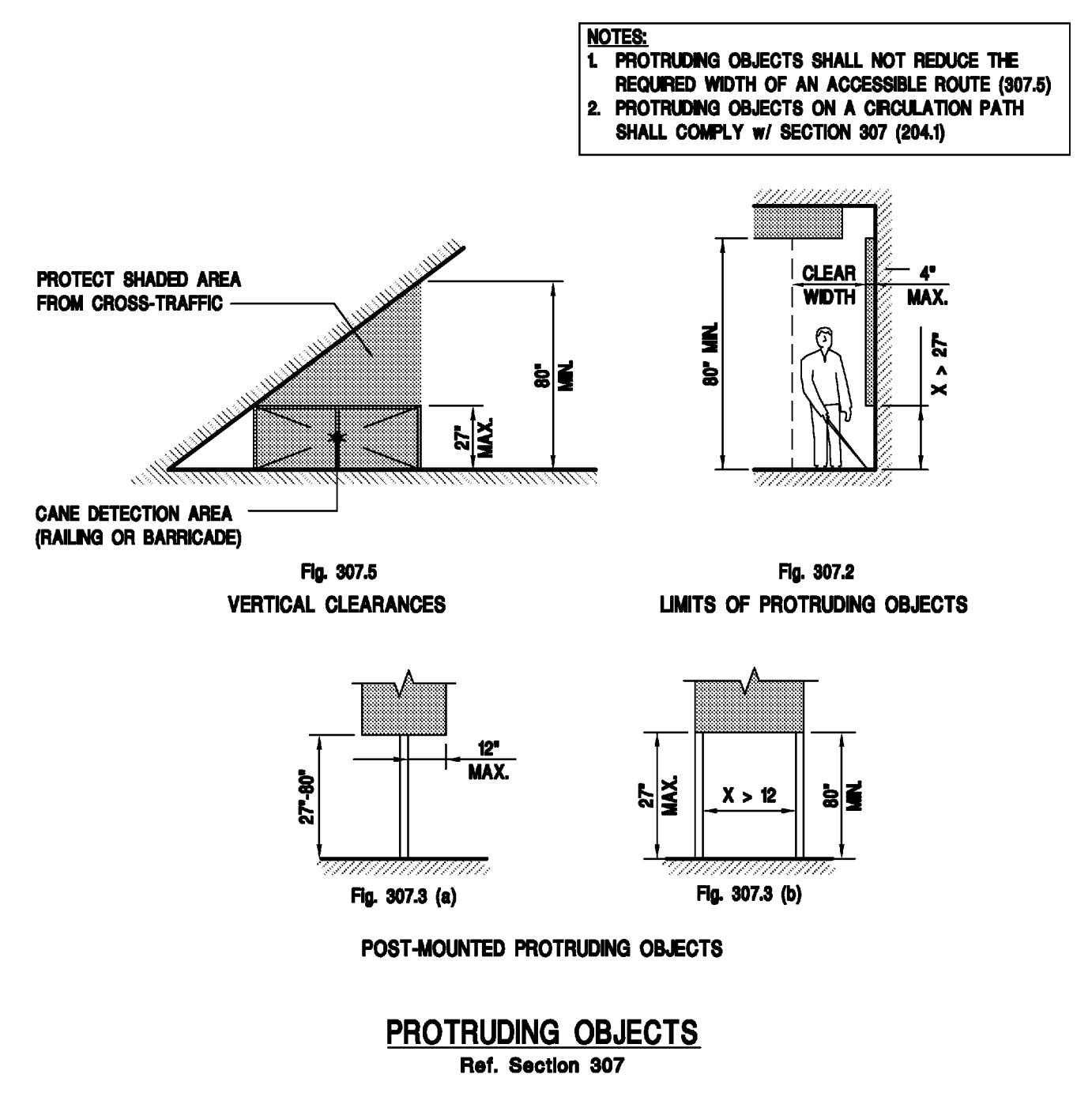
NOTE:
ANY OPERABLE PART OF ANY DEVICE SHALL BE INSTALLED WITHIN THE REACHES SHOWN (309)



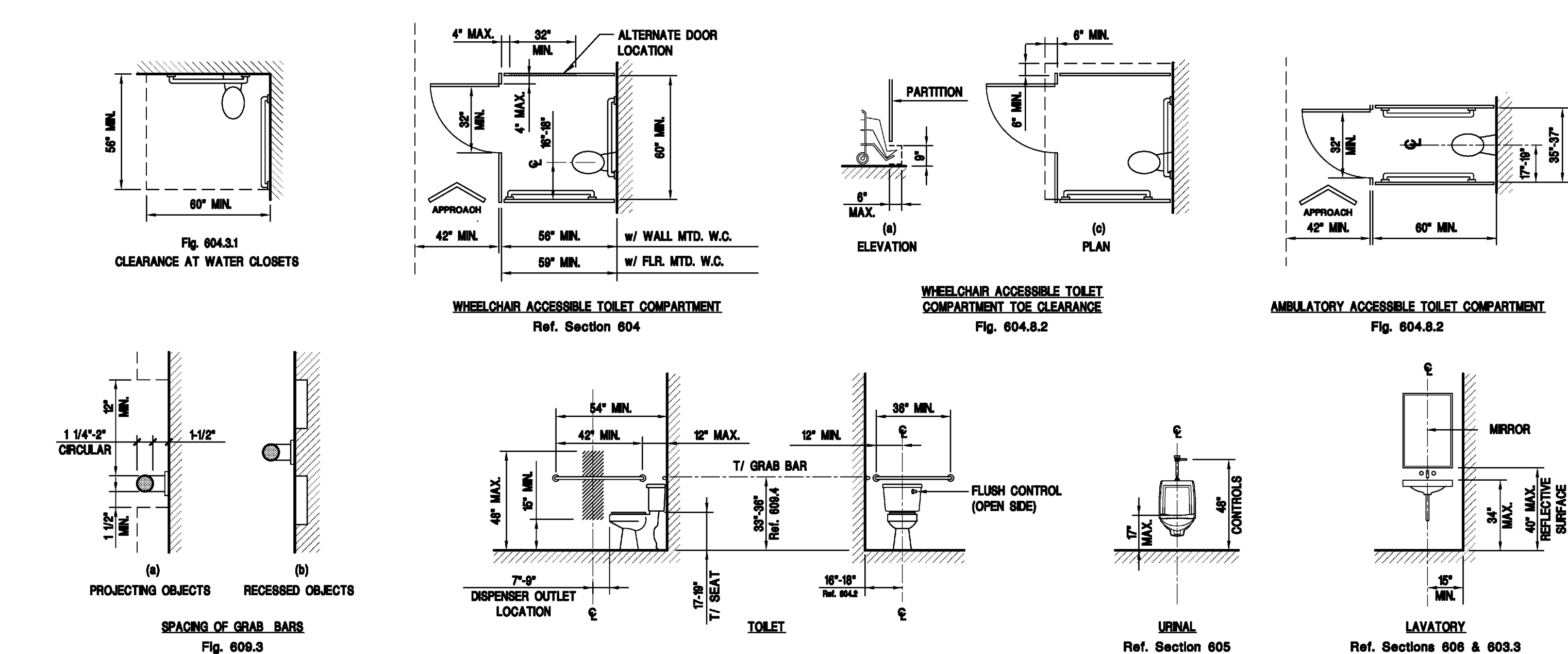
REACH RANGES
Ref. Section 308



KNEE & TOE CLEARANCES
Ref. Section 306

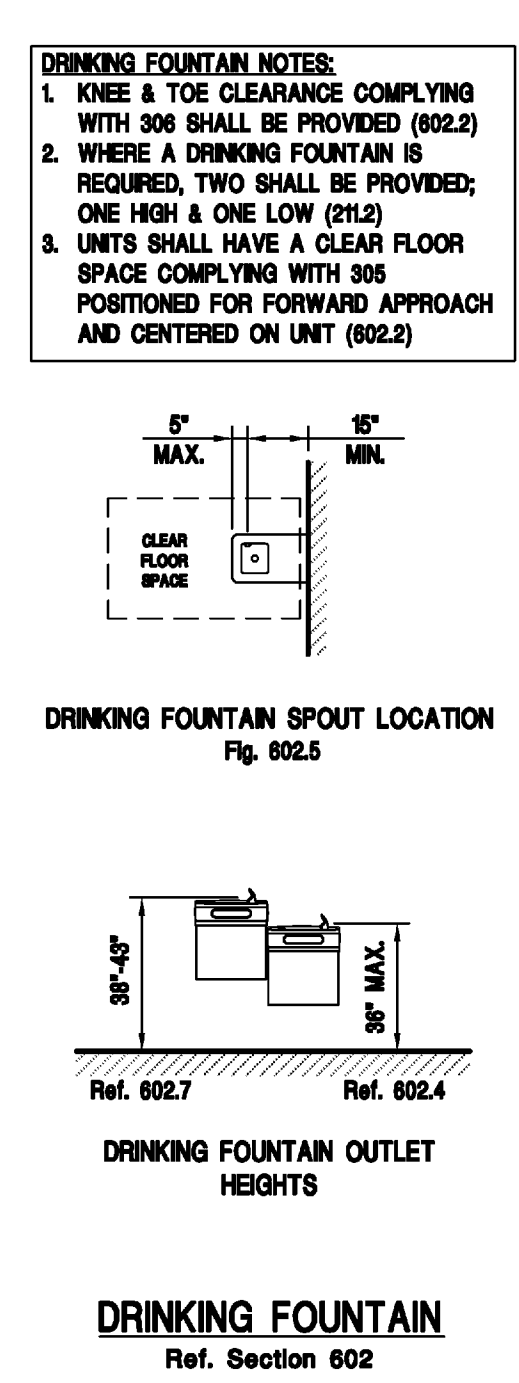


PROTRUDING OBJECTS
Ref. Section 307



TOILET ROOM CLEARANCES & MOUNTING HEIGHTS
Ref. Chapter 6

TOILET ROOM NOTES:
1. A TURNING SPACE PER SECTION 304 IS REQUIRED WITHIN A TOILET ROOM (603.2.1)
2. ONLY THE FOLLOWING OBJECTS ARE PERMITTED TO OVERLAP THE REQUIRED CLEARANCE: GRAB BARS, DISPENSERS, SANITARY NAPKIN DISPOSAL UNIT, COAT HOOKS AND SHELVES (604.8.2)
3. FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET (604.8)
4. URINALS SHALL HAVE A CLEAR FLOOR SPACE COMPLYING WITH 305 POSITIONED FOR FORWARD APPROACH AND CENTERED ON UNIT (605.3)
5. LAVATORIES SHALL HAVE A CLEAR FLOOR SPACE COMPLYING WITH 305 POSITIONED FOR FORWARD APPROACH AND CENTERED ON UNIT (605.2)
6. EXPOSED WATER SUPPLY AND DRAIN PIPES SHALL BE INSULATED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES (605.5)
7. INSTALL GRAB BARS TO WITHSTAND NOT LESS THAN A 250 POUND FORCE APPLIED AT ANY POINT ON THE BAR (609.6)



DRINKING FOUNTAIN
Ref. Section 602

TACTILE SIGN NOTES:
1. RAISED CHARACTERS SHALL COMPLY WITH 703.2 AND SHALL BE DUPLICATED IN BRAILLE. RAISED CHARACTERS SHALL BE INSTALLED IN ACCORDANCE WITH 703.4. (703.2)
2. BRAILLE SHALL BE CONTRACTED (GRADE 2) AND SHALL COMPLY WITH 703.3 AND 703.4. (703.3)
3. BRAILLE SHALL BE POSITIONED BELOW THE CORRESPONDING TEXT. IF TEXT IS MULTI-LINED, BRAILLE SHALL BE PLACED BELOW THE ENTIRE TEXT. (703.3.2)
4. PICTOGRAMS SHALL HAVE A FIELD HEIGHT OF 6 INCHES (150 MM) MINIMAL CHARACTERS AND BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM FIELD. (703.6.1)
5. PICTOGRAMS AND THEIR FIELD SHALL HAVE A NON-GLARE FINISH. PICTOGRAMS SHALL CONTRAST WITH THEIR FIELD WITH EITHER A LIGHT PICTOGRAM ON A DARK FIELD OR A DARK PICTOGRAM ON A LIGHT FIELD. (703.6.2)

TACTILE CHARACTER HEIGHT ABOVE FLOOR
Fig. 703.4.1

TACTILE SIGNS
Ref. Section 703

2010 ADA STANDARDS ACCESSIBLE GUIDELINES

THIS DRAWING IS A REPRESENTATIVE SUMMARY OF THE REQUIREMENTS OF THE 2010 ADA STANDARDS THAT MAY BE APPLICABLE TO THE PROJECT. WHERE SPECIFIC DIMENSIONAL INFORMATION AND CLEARANCES ARE NOT NOTED ON THE DRAWINGS, CONSTRUCT TO THE CLEARANCES AND TOLERANCES DEPicted ON ACCESSIBLE GUIDELINES SHEET(S). WHERE DRAWINGS SPECIFICALLY INDICATE DIFFERENT OR CONFLICTING INFORMATION WITH THE STANDARDS, CONSTRUCT USING THE MORE STRINGENT REQUIREMENT OR CONTACT THE ARCHITECT FOR RESOLUTION.

MICHAEL CRISLIP ARCHITECT
26001 Emery Road, Suite 400
Cleveland, Ohio 44128
216.223.3500 onycreative.com

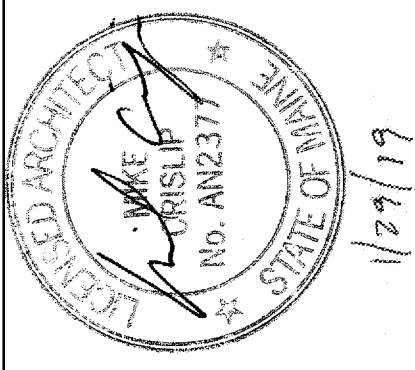
DESIGN AND CONSTRUCTION DOCUMENTS AS INSTRUMENTS OF SERVICE ARE GIVEN IN CONFIDENCE AND REMAIN THE PROPERTY OF MICHAEL CRISLIP ARCHITECT. THE USE OF THIS DESIGN AND THESE CONSTRUCTION DOCUMENTS FOR PURPOSES OTHER THAN THE SPECIFIC PROJECT NAMED HEREON IS STRICTLY PROHIBITED WITHOUT EXPRESSED WRITTEN CONSENT OF MICHAEL CRISLIP ARCHITECT.

LifeStance HEALTH
TENANT IMPROVEMENT
53 BAXTER BOULEVARD, UNIT #3
PORTLAND, ME 04101

Project No: 16571
Drawn By: BCR
Date: 12-13-2018
Issue: Prelim Review
01-25-2019
Owner Review
01-30-2019
Bld & Permit

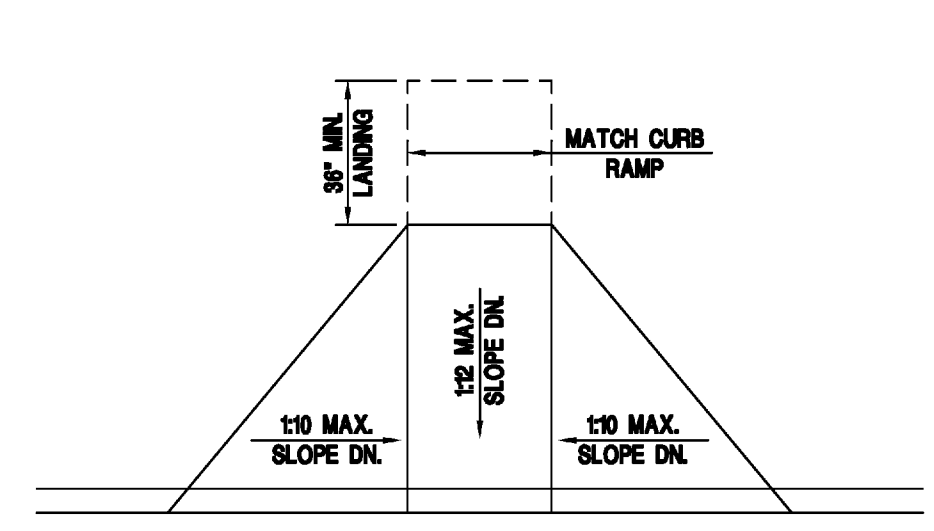
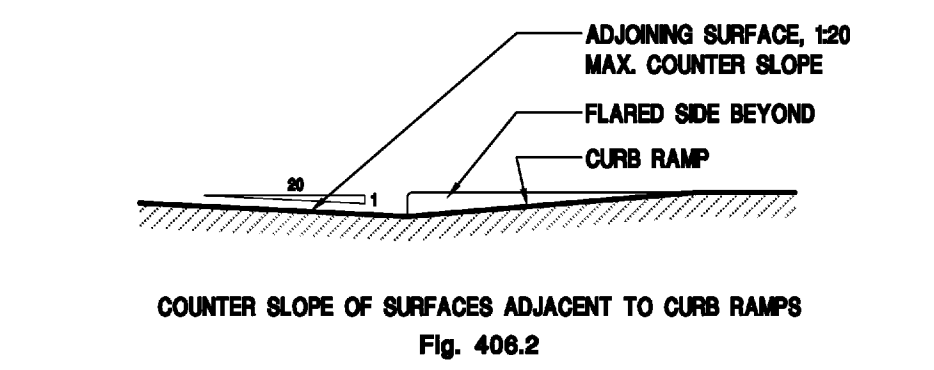
A4.0
ACCESSIBILITY

XTB U.S. Permitted Sealing
Drawn By: Michael Crislip
Drawn By: Michael Crislip



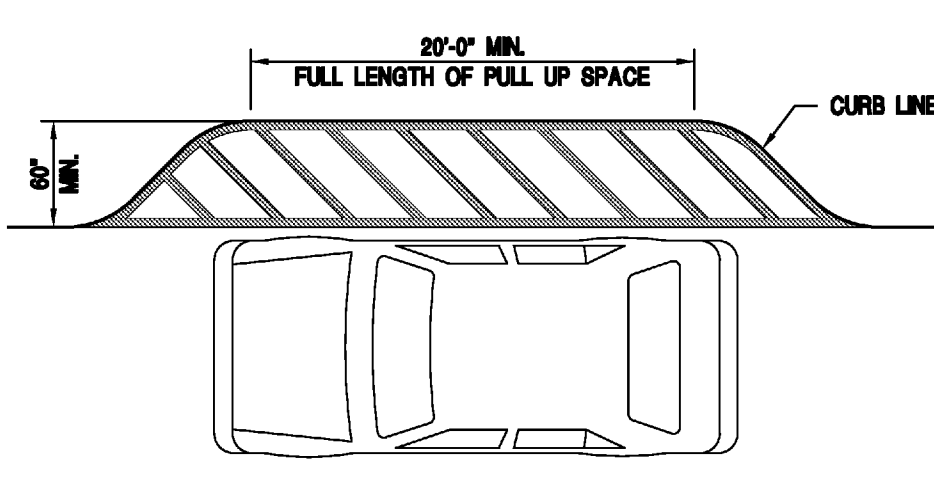
Design and construction documents are instruments of service given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.

Project No: 19871
 Drawn By: BCR
 Date: 12-13-2018 Issue: Prelim Review
 01-25-2019 Owner Review
 01-30-2019 Bld & Permit

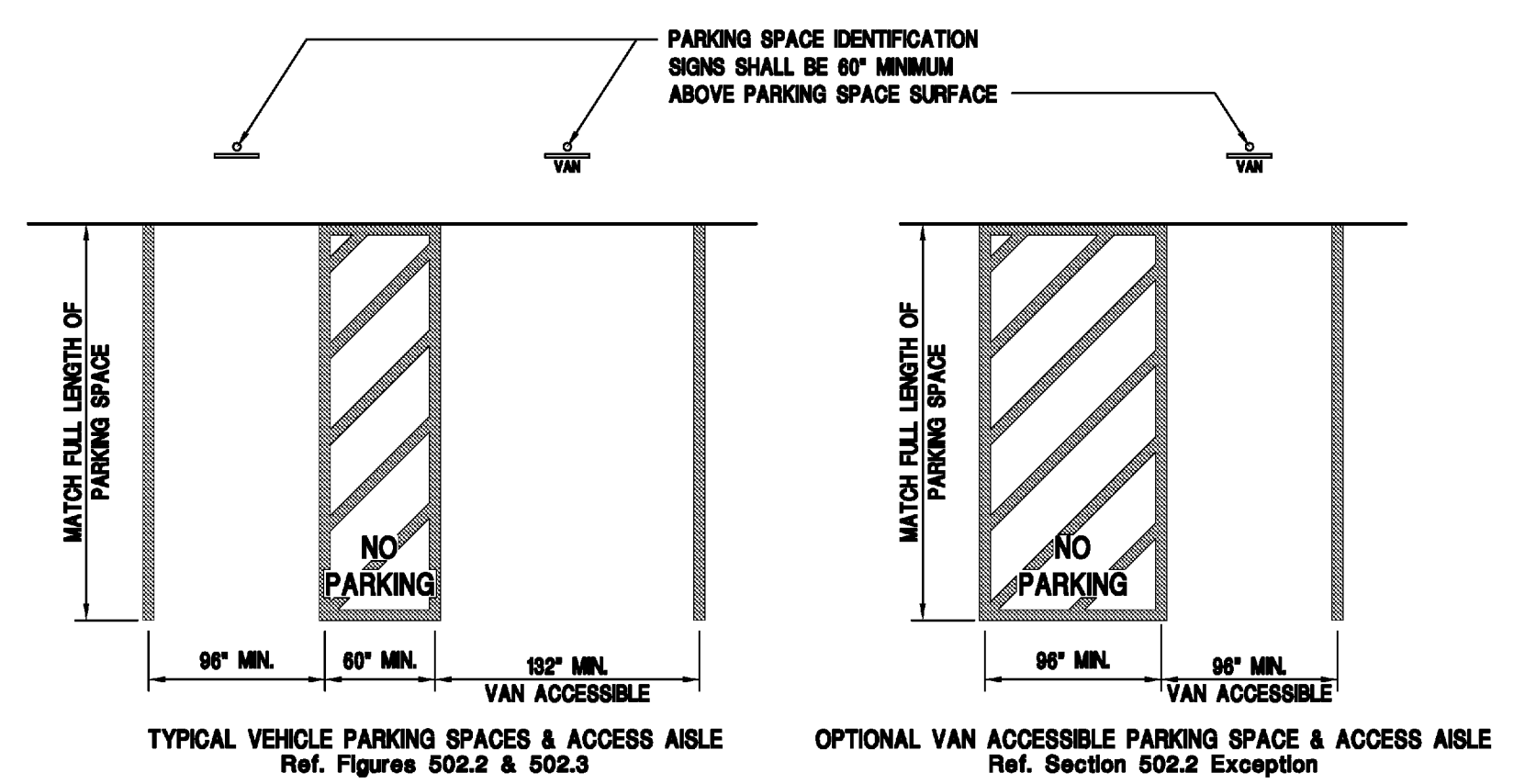


CURB RAMPS
 Ref. Section 408

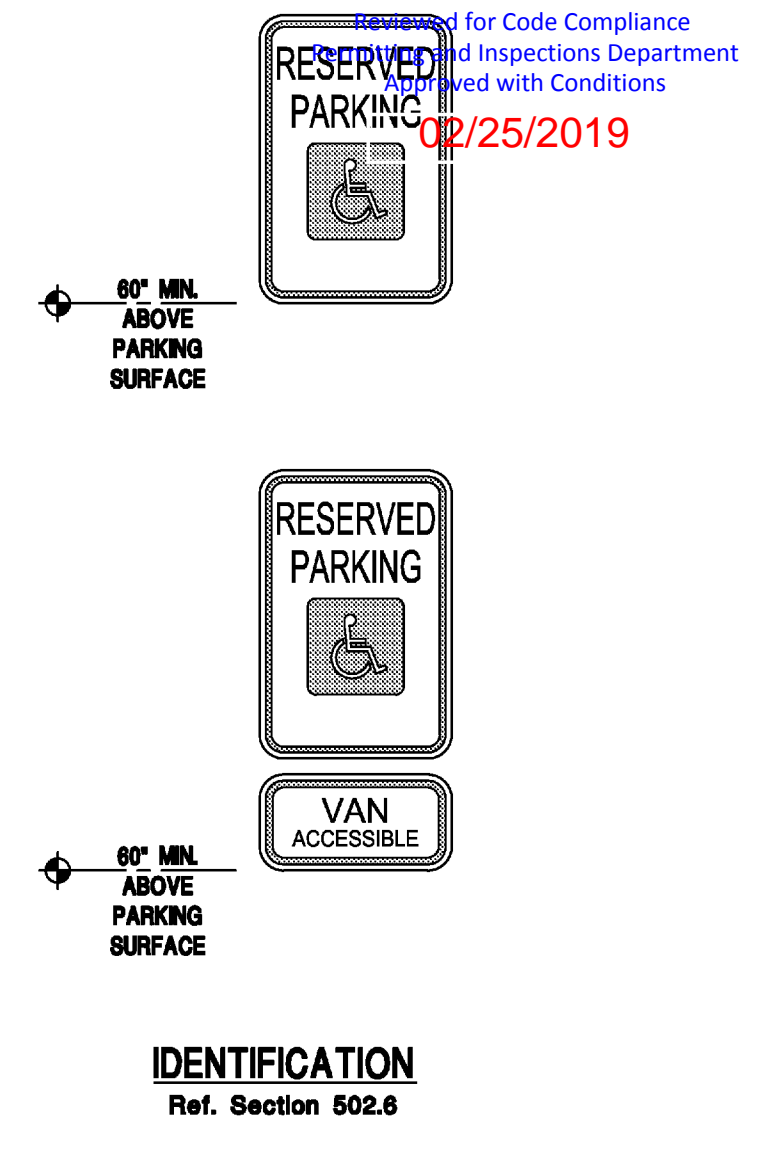
GENERAL SITE NOTES:
 1. ACCESSIBLE PARKING SPACES AND ACCESS AISLE SHALL BE LEVEL, MAXIMUM PERMITTED SLOPE IS 1/48 (502.2 & 502.3)
 2. ACCESSIBLE PARKING SPACES MUST BE IDENTIFIED WITH A SIGN. SIGNS IDENTIFYING VAN ACCESSIBLE SPACES SHALL CONTAIN THE DESIGNATION 'VAN ACCESSIBLE'. SIGNS SHALL BE MINIMUM 60" FROM THE PARKING SURFACE TO THE BOTTOM OF THE SIGN. (502.2.2 & 502.2.3)



PASSENGER LOADING ZONE ACCESS AISLE
 Fig. 503.3

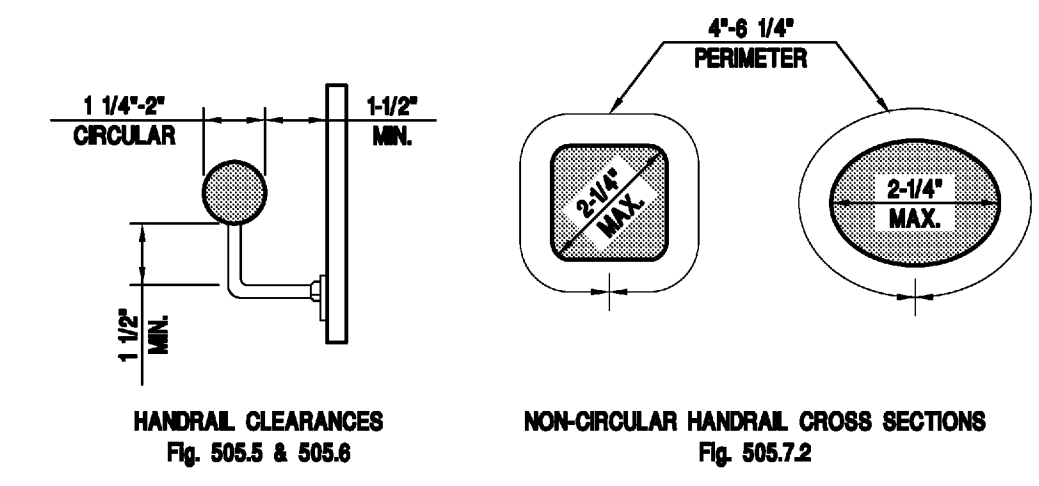


VEHICULAR PARKING SPACES & ACCESS AISLE
 Ref. Section 502

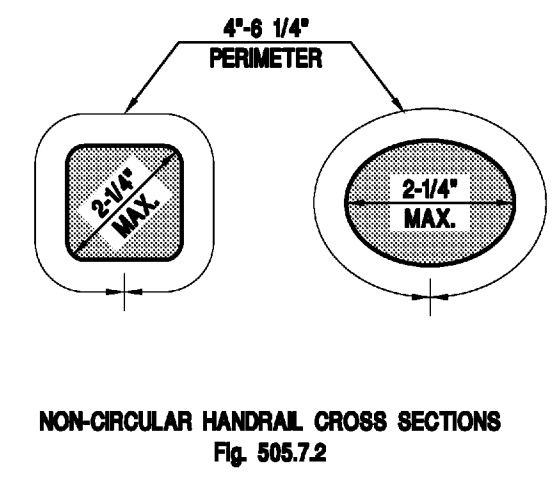


IDENTIFICATION
 Ref. Section 502.6

PARKING & PASSENGER LOADING ZONES
 Ref. Sections 502 & 503

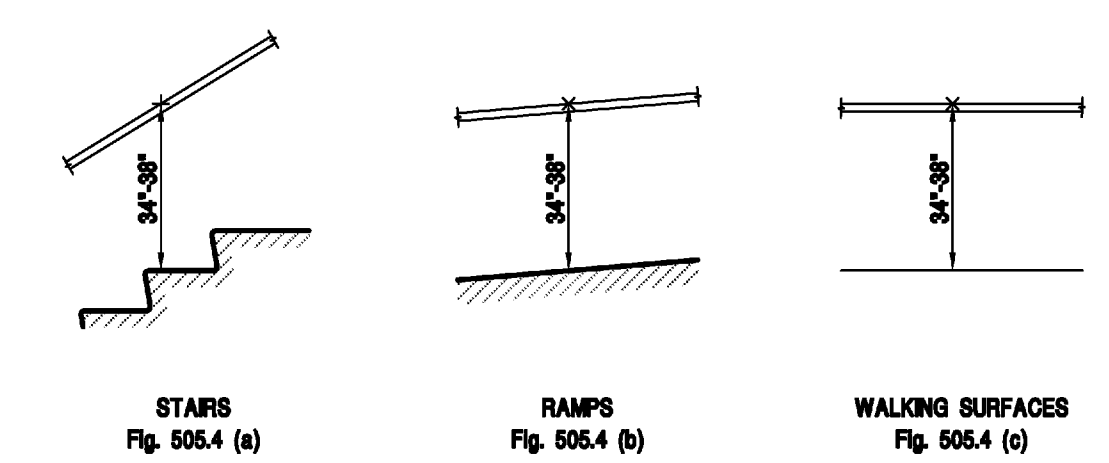


HANDRAIL CLEARANCES
 Fig. 505.5 & 505.6



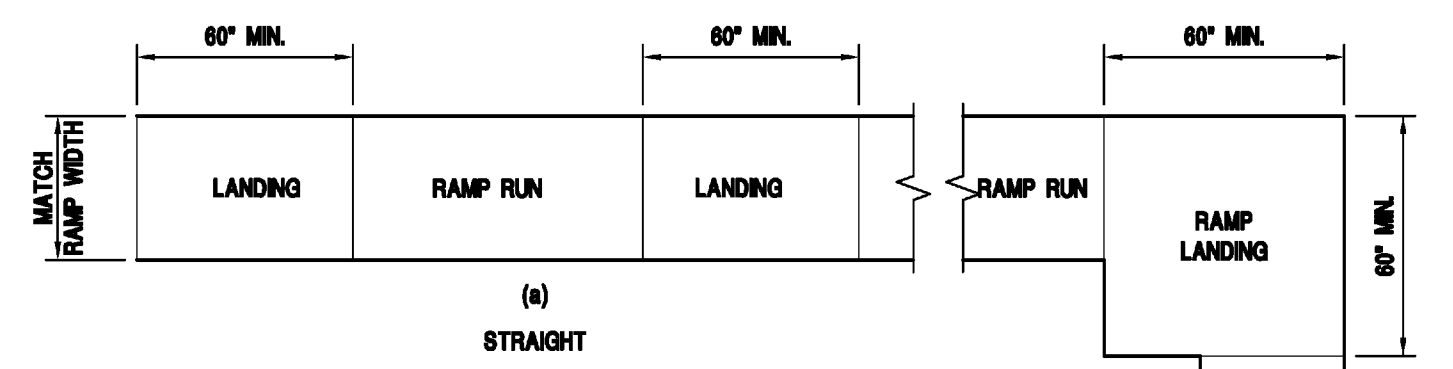
NON-CIRCULAR HANDRAIL CROSS SECTIONS
 Fig. 505.7.2

HANDRAIL SIZES & CLEARANCES



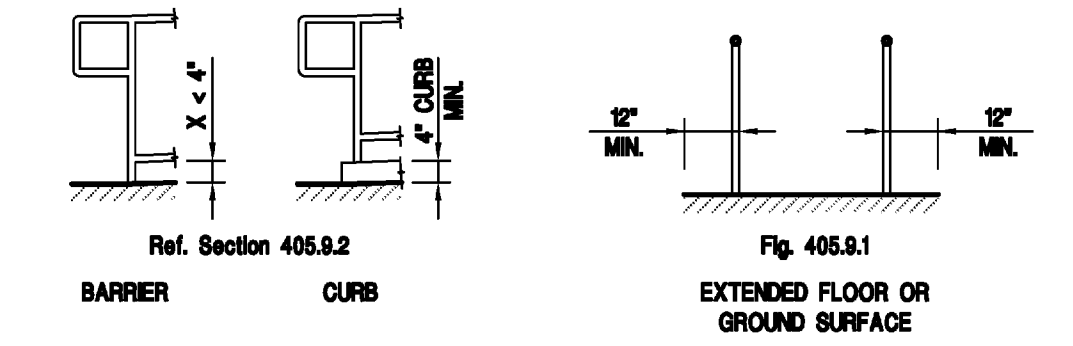
STAIRS Fig. 505.4 (a)
RAMP Fig. 505.4 (b)
WALKING SURFACES Fig. 505.4 (c)

HANDRAIL HEIGHTS
 Ref. Section 505



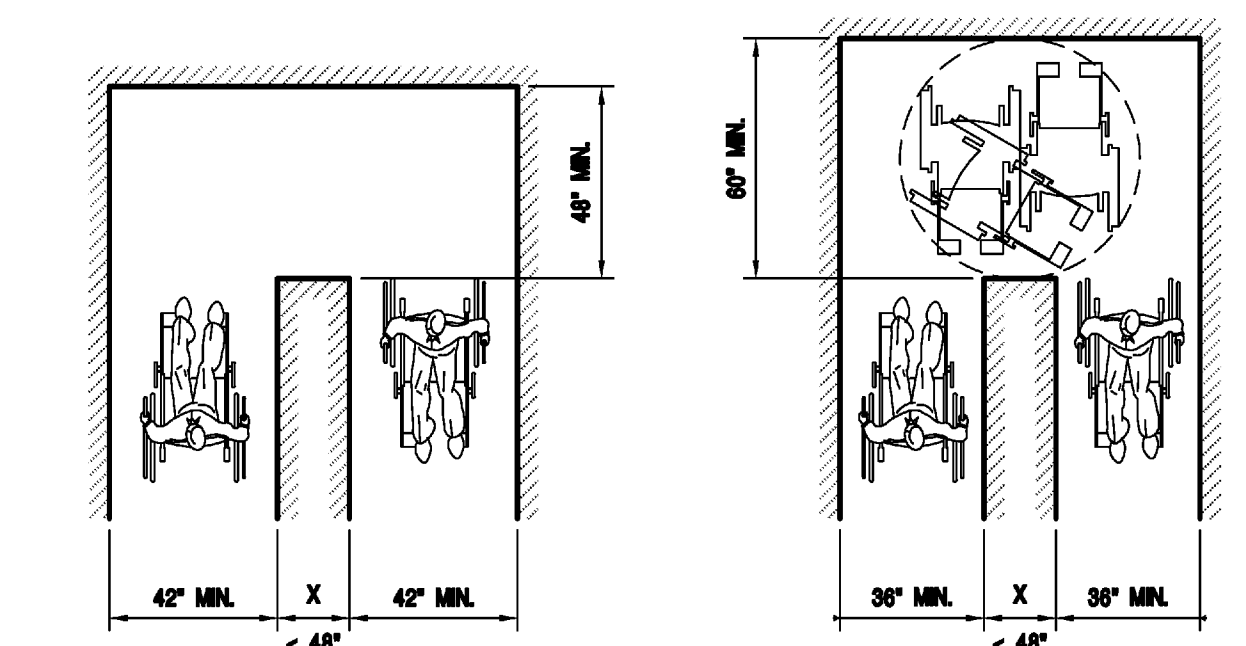
RAMP NOTES:
 1. MAXIMUM RAMP SLOPE SHALL BE 1:12 (405.2)
 2. MAXIMUM CROSS SLOPE OF RAMP SHALL BE 1/48 (405.3)
 3. MINIMUM CLEAR WIDTH OF A RAMP SHALL BE 36" WIDE (405.5)
 4. RAMPS WITH A RISE GREATER THAN 6" SHALL HAVE HANDRAILS, AND SHALL COMPLY W/ SECTION 505 (405.8)

RAMP LANDING
 Fig. 406.7

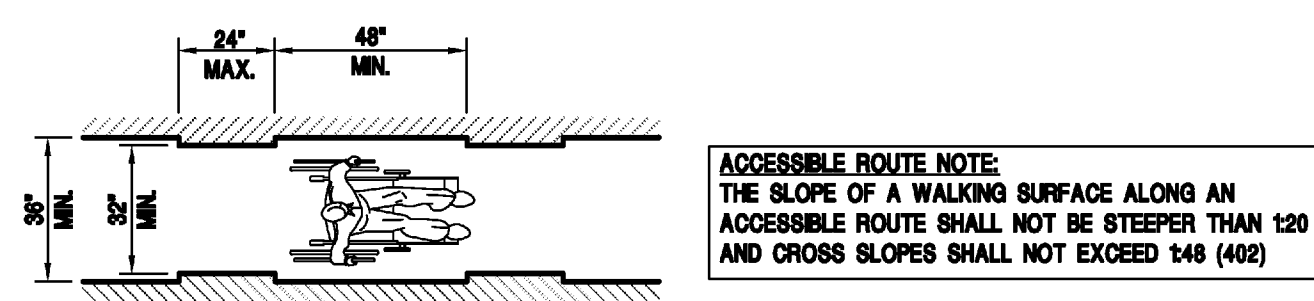


EDGE PROTECTION
 Ref. Section 405.9

RAMPS
 Ref. Section 405



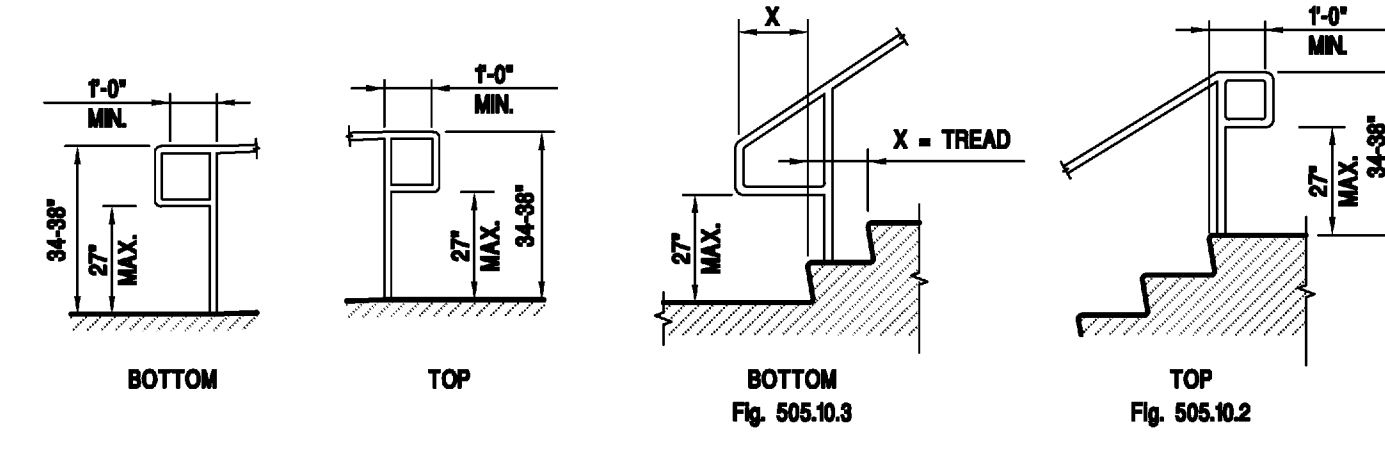
CLEAR WIDTHS AT 180 DEGREE TURNS
 Fig. 408.5.2 (a) & (b)



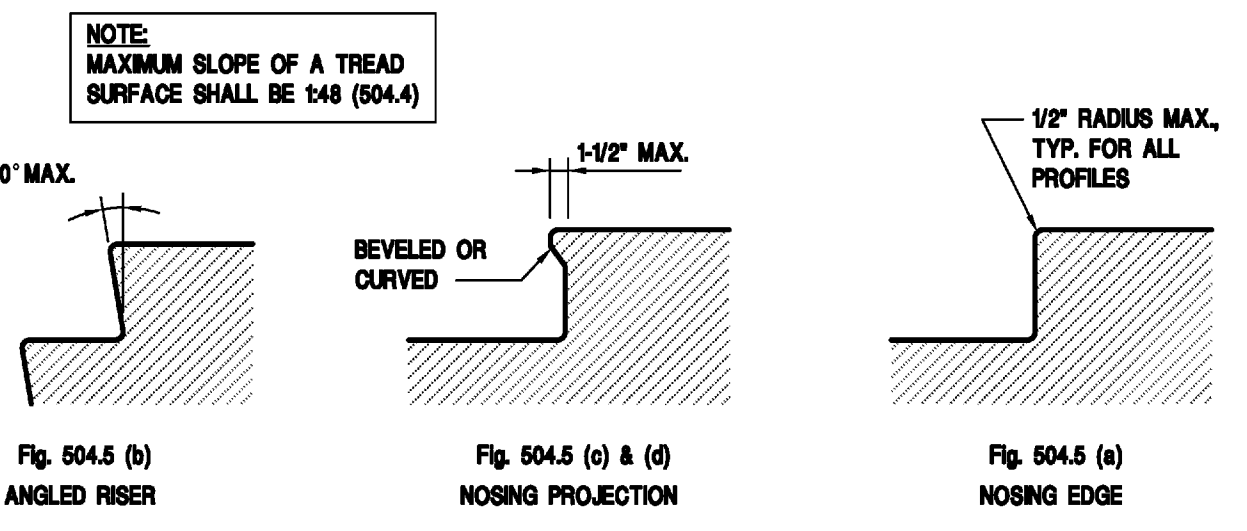
CLEAR WIDTHS
 Fig. 408.5.1

ACCESSIBLE ROUTE NOTE:
 THE SLOPE OF A WALKING SURFACE ALONG AN ACCESSIBLE ROUTE SHALL NOT BE STEEPER THAN 1:20 AND CROSS SLOPES SHALL NOT EXCEED 1/48 (402)

ACCESSIBLE ROUTE
 Ref. Section 402

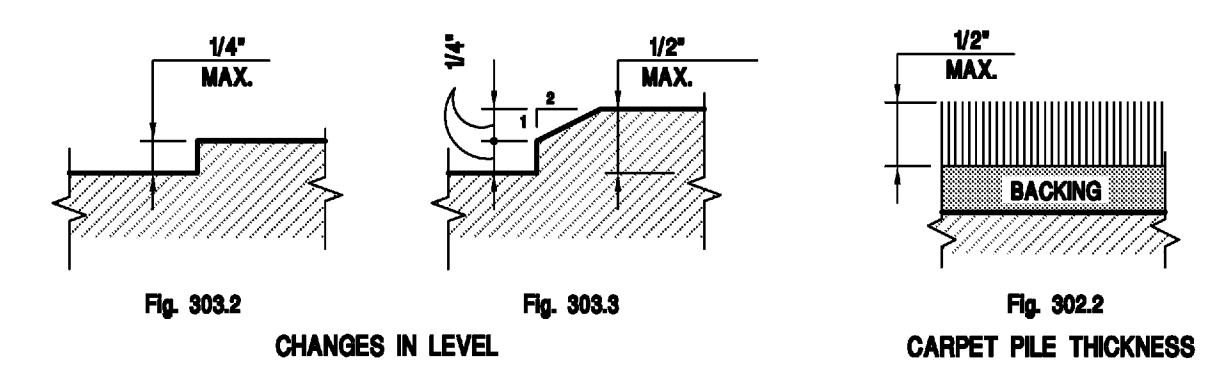


HANDRAIL EXTENSIONS @ RAMP Fig. 505.10.1
HANDRAIL EXTENSIONS @ STAIR Fig. 505.10.3 & 505.10.2

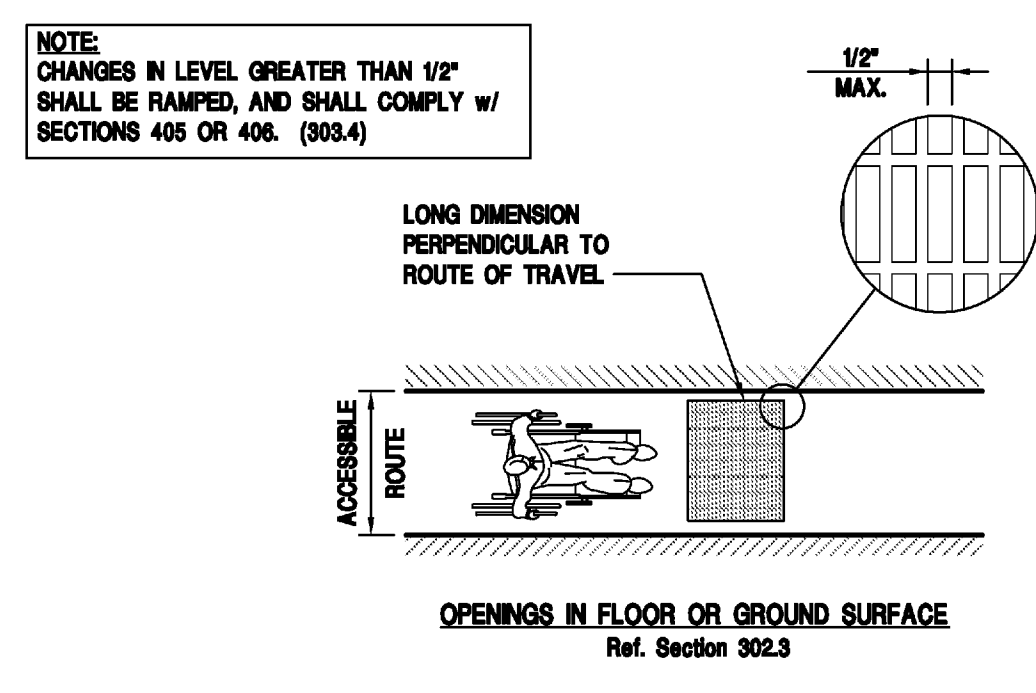


ANGLED RISER Fig. 504.5 (b)
NOSING PROJECTION Fig. 504.5 (c) & (d)
NOSING EDGE Fig. 504.5 (a)

STAIRWAYS & HANDRAILS
 Ref. Sections 504 & 505



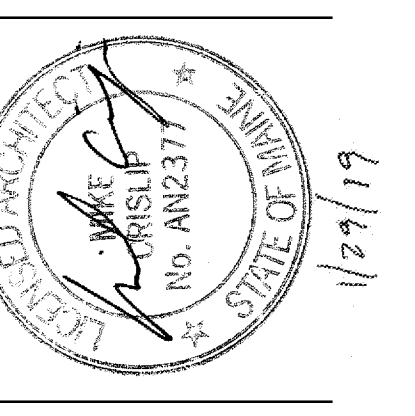
CHANGES IN LEVEL Fig. 303.2 & 303.3
CARPET PILE THICKNESS Fig. 302.2



OPENINGS IN FLOOR OR GROUND SURFACE
 Ref. Section 302.3

FLOOR & GROUND SURFACES
 Ref. Sections 302 & 303

XTB U.S. Architectural Record
 Drawn By: Michael Crislip
 Drawn By: Michael Crislip
 Drawn By: Michael Crislip



Design and construction documents as instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.



Project No:	16871
Drawn By:	BCR
Date	Issue
12-13-2018	Prelim Review
01-25-2019	Owner Review
01-30-2019	Bld & Permit

A5.0

SPECIFICATIONS

- B. Execute work by methods that avoid damage to other work and that appropriate surfaces to receive patching and finishing. In existing work, damage and restore to original condition.
- C. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements; employ skilled and experienced installer to perform cutting for other sight exposed surfaces.
- D. Examine areas to be cut or core drilled for presence of concealed utilities and structural elements including piping, electrical distribution, reinforced concrete and post-tensioning cables. Utilize x-ray equipment where necessary.
- E. Cut rigid materials using masonry saw or core drill.
- F. Restore work with new products in accordance with requirements of Contract Documents.
- G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material to maintain fire rating.
- I. Patching:
 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 2. Match color, texture, and appearance.
 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.
 4. When finish cannot be matched, refinish entire surface to nearest intersections.

- 3.08 PROGRESS CLEANING
 - A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
 - B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or restricted spaces, prior to enclosing the space.
 - C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
 - D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

- 3.09 PROTECTION OF INSTALLED WORK
 - A. Protect installed work from damage by construction operations.
 - B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
 - C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
 - D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
 - E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
 - F. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

- 3.10 SYSTEM STARTUP
 - A. Coordinate schedule for start-up of various equipment and systems.
 - B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
 - C. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
 - D. Verify that wiring and support components for equipment are complete and tested.
 - E. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturer's instructions.

- 3.11 DEMONSTRATION AND INSTRUCTION
 - A. Demonstrate operation and maintenance of products to Owner's personnel prior to date of Substantial Completion.
 - B. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.
 - C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
 - D. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of owner personnel.
 - E. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
 - F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

- 3.12 ADJUSTING
 - A. Adjust operating products and equipment to ensure smooth and unhindered operation.
- 3.13 FINAL CLEANING
 - A. Execute final cleaning prior to Substantial Completion. Clean areas to be occupied by Owner prior to final completion before Owner occupancy.
 - B. Use cleaning materials that are nonhazardous.
 - C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted areas, and clean surfaces.
 - D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
 - E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
 - F. Replace filters of operating equipment.
 - G. Clean debris from roofs, gutters, downspouts, and drainage systems.
 - H. Clean site; sweep paved areas, rake clean landscaped surfaces.
 - I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

- 3.14 CLOSEOUT PROCEDURES
 - A. In addition to the requirements of AIA A201, General Conditions of the Contract for Construction, comply with the following:
 1. Make submittals that are required by governing or other authorities. Provide copies to Owner.
 2. Comply with requirements of Section 01780, Closeout Submittals.
 3. Notify Architect when work is considered ready for Substantial Completion.
 4. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for review.
 5. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owner-occupied areas.
 6. Complete items of work determined by final inspection.

- 3.15 MAINTENANCE
 - A. Provide service and maintenance of components indicated in specification sections.
 - B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.
 - C. Furnish service and maintenance of components indicated in specification sections.
 - D. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
 - E. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
 - F. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

- B. Seal cracks or openings of substrate prior to applying next material or assistance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.
- 3.03 PREINSTALLATION MEETINGS
 - A. When investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 5. Will reimburse Owner and Architect for review or redesign services associated with substitution.
- B. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without prior written request, or when acceptance will require revision to the Contract Documents.
- C. Substitution Submittal Procedure:
 1. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 2. The Architect will notify Contractor in writing of decision to accept or reject request.

- 3.02 OWNER-SUPPLIED PRODUCTS
 - A. Owner's Responsibilities:
 1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
 2. Arrange and pay for product delivery to site.
 3. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 4. Arrange for manufacturers' warranties, inspections, and service.
 - B. Contractor's Responsibilities:
 1. Review Owner reviewed shop drawings, product data, and samples.
 2. Receive and unload products at site; inspect for completeness or damage and report damaged, defective, or deficient items to Owner.
 3. Handle, store, install and finish products.
 4. Repair or replace items damaged after receipt.
- 3.03 TRANSPORTATION AND HANDLING
 - A. Transport and handle products in accordance with manufacturer's instructions.
 - B. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- 3.04 STORAGE AND PROTECTION
 - A. Store and protect products in accordance with manufacturers' instructions.
 - B. Store with seals and labels intact and legible.
 - C. Prevent contact with material that may cause corrosion, discoloration, or staining.

- 3.05 GENERAL INSTALLATION REQUIREMENTS
 - A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.
 - B. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
 - C. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
 - D. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
 - E. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
 - F. Make neat transitions between different surfaces, maintaining texture and appearance.
 - G. Do not install products that are defective, including warped, bowed, dented, chipped, cracked or broken members, and members with damaged finishes.

- 3.06 ALTERATIONS AND SELECTIVE DEMOLITION
 - A. Perform an engineering survey of building to determine whether demolition operations might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures.
 - B. Drawings showing existing construction and utilities are based on existing record documents only.
 1. Verify that construction and utility arrangements are as shown.
 2. Report discrepancies to Architect before disturbing existing installation.
 - C. Beginning of alterations work constitutes acceptance of existing conditions.
 - C. Keep areas in which alterations are being conducted separated from other areas that are still occupied. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000.
 - D. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
 1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
 2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.

- E. Remove existing work as indicated and as required to accomplish new work.
 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
 2. Remove items indicated on drawings.
 3. Relocate items indicated on drawings.
 4. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces to receive new finish; remove existing finish if necessary for successful application of new finish.
 5. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces.
- F. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, Telecommunications, and Alarm systems): Remove, relocate, and extend existing systems to accommodate new construction.
 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 3. Where existing active systems served occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
 - b. Coordinate timing of service interruptions and shut-downs with the owner and affected occupants.
 - c. Provide temporary connections to maintain existing systems in service.
 4. Verify that abandoned services serve only abandoned facilities.
 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.

- G. Protect existing work to remain.
 1. Prevent movement of structure; provide shoring and bracing if necessary.
 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
 - H. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
 1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
 2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
 3. Where a change of plane of 1/4 inch or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.
 4. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
 5. Refinish existing surfaces as indicated:
 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
 - K. Clean existing systems and equipment.
 - L. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
 - M. Comply with all other applicable requirements of this section.

- 3.07 CUTTING AND PATCHING
 - A. Perform whatever cutting and patching is necessary to:
 1. Complete the work.
 2. Fit products together to integrate with other work.
 3. Provide openings for penetration of mechanical, electrical, and other services.
 4. Match work that has been cut to adjacent work.
 5. Repair areas adjacent to cuts to required condition.
 6. Repair new work damaged by subsequent work.
 7. Remove samples of installed work for testing when requested.
 8. Remove and replace defective and non-conforming work.

quantities specified in individual specification sections. Deliver and place in location as directed; obtain receipt prior to final payment.

- 3.01 SUBSTITUTION PROCEDURES
 - A. A request for substitution constitutes a representation that the submitter:
 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 2. Will provide the same warranty for the substitution as for the specified product.
 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 4. Waives claims for additional costs or time extension that may subsequently become apparent.
 5. Will reimburse Owner and Architect for review or redesign services associated with substitution.

- B. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without prior written request, or when acceptance will require revision to the Contract Documents.
- C. Substitution Submittal Procedure:
 1. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 2. The Architect will notify Contractor in writing of decision to accept or reject request.

- 3.02 OWNER-SUPPLIED PRODUCTS
 - A. Owner's Responsibilities:
 1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
 2. Arrange and pay for product delivery to site.
 3. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 4. Arrange for manufacturers' warranties, inspections, and service.
 - B. Contractor's Responsibilities:
 1. Review Owner reviewed shop drawings, product data, and samples.
 2. Receive and unload products at site; inspect for completeness or damage and report damaged, defective, or deficient items to Owner.
 3. Handle, store, install and finish products.
 4. Repair or replace items damaged after receipt.
- 3.03 TRANSPORTATION AND HANDLING
 - A. Transport and handle products in accordance with manufacturer's instructions.
 - B. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- 3.04 STORAGE AND PROTECTION
 - A. Store and protect products in accordance with manufacturers' instructions.
 - B. Store with seals and labels intact and legible.
 - C. Prevent contact with material that may cause corrosion, discoloration, or staining.

- 3.05 MANUFACTURERS' FIELD SERVICES
 - A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.
- 3.06 CORRECTION
 - A. Replace Work or portions of the Work not conforming to specified requirements.

SECTION 01 5000 — TEMPORARY FACILITIES, CONTROLS & SIGNS

- 3.01 TEMPORARY UTILITIES
 - A. Provide and pay for electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.
 - B. Provide, maintain, and pay for telecommunications services including internet connection to field office, through duration of project.
- 3.02 BARRIERS
 - A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
 - B. Provide barricades and covered walkways for public rights-of-way and to maintain safe public access to and egress from existing building.
 - C. Provide protection for plants designated to remain. Replace damaged plants.
- 3.03 FENCING
 - A. Commercial grade chain link fence. Provide 6 foot high.
- 3.04 EXTERIOR ENCLOSURES
 - A. Provide temporary weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.
 1. When the project site or portions thereof is to be occupied during construction, provide temporary insulated weather tight closure.

- 3.05 SECURITY
 - A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.
- 3.07 VEHICULAR ACCESS AND PARKING
 - A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
 - B. Coordinate access and haul routes with governing authorities and Owner.
 - C. Provide and maintain access to fire hydrants.
 - D. Provide means of removing mud from vehicle wheels before entering streets.
 - E. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.
- 3.08 WASTE REMOVAL
 - A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
 - B. Provide containers with lids. Remove trash from site periodically.
 - C. If materials to be recycled or reused on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
 - D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.
- 3.09 FIELD OFFICES
 - A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack and drawing display table.
 - B. Provide space for Project meetings, with table and chairs to accommodate 10 persons.
- 3.10 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS
 - A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
 - B. Clean and repair damage caused by installation or use of temporary work.
 - C. Restore existing facilities used during construction to original condition.
 - D. Restore new permanent facilities used during construction to specified condition.
- 3.11 PROJECT IDENTIFICATION SIGN
 - A. One pointed sign, 48 sq ft area, bottom 6 feet above ground.
 - B. Content:
 1. Project title, logo and name of Owner as indicated on Contract Documents.
 2. Names and titles of Architect and Consultants.
 3. Name of Prime Contractor.

- 3.06 CORRECTION
 - A. Replace Work or portions of the Work not conforming to specified requirements.

SECTION 01 7000 — EXECUTION REQUIREMENTS

- 3.01 QUALIFICATIONS
 - A. For demolition work, employ a firm specializing in the type of work required. Minimum of 5 years of experience.
 - B. For survey work, employ a land surveyor registered in Enter State Name Only Here.
 - C. For field engineering, employ a professional engineer of the discipline required for specific service on Project, licensed in Enter State Name Only Here.
 - D. For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in Enter State Name Only Here.
- 3.02 PROJECT CONDITIONS
 - A. Comply with Safeguards During Construction requirements as outlined in the International Building Code, Chapter 33, edition as adopted at the project location.
 - B. For demolition work comply with ANSI A10.6.
 - C. Protect site from puddling or running water.
 - D. Protect areas not undergoing alteration as specified for protection of installed work.
 - E. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
 - F. Dust Control: Execute work by methods to minimize raising dust from demolition or construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner.
 - G. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
 1. Minimize amount of bare soil exposed at one time.
 2. Provide temporary measures such as berms, dikes, and drains, to manage water flow.
 3. Construct fill and waste areas by selective placement to avoid erosive surface soils or clays.
 4. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.
 - I. Noise Control: Provide methods, means, and facilities to minimize noise produced by demolition or construction operations. Comply with local requirements for noise control.
 - J. Pest and Insect Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.
 - K. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.
 - L. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by demolition or construction operations.

SECTION 01 6000 — PRODUCT REQUIREMENTS

- 2.01 PRODUCTS
 - A. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.
 - B. Provide new products unless specifically required or permitted by the Contract Documents.
- 2.02 PRODUCT OPTIONS
 - A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
 - B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
 - C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.
 - D. Specifications are, in general, written to be non-proprietary, however; where specific products are required, for example a certain size, color, texture, configuration or other characteristic, manufacturer and product information were worked on the drawings in the form of notes or schedules as appropriate.
 1. Substitutions for products so indicated will be considered in accordance with "Substitution Procedures" of this specification Section.
- 2.03 MAINTENANCE MATERIALS
 - A. Furnish extra materials, spare parts, tools, and software of types and in

withstand stresses, vibration, physical distortion, and disfigurement.

- 3.02 TOLERANCES
 - A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
 - B. Comply with manufacturers' tolerances except where industry standard tolerances are more restrictive. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
- 3.03 TESTING AND INSPECTION
 - A. See individual specification sections for testing and inspection required.
 - B. Testing Agency Duties:
 1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 2. Perform specified sampling and testing of products in accordance with specified standards.
 3. ascertain compliance of materials and mixes with requirements of Contract Documents.
 4. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or products.
 5. Perform additional tests and inspections required by Architect.
 6. Submit reports of all tests/inspections specified.
 - C. Limits on Testing/Inspection Agency Authority:
 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency may not approve or accept any portion of the Work.
 3. Agency has no authority to stop the Work.
 - D. Contractor Responsibilities:
 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 3. Provide testing and inspection agency sufficient notice prior to expected time for operations requiring testing/inspection services.
 - E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency.
 - F. Re-testing required because of non-conformance to specified requirements shall be paid for by Contractor.

- 3.05 MANUFACTURERS' FIELD SERVICES
 - A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.
- 3.06 CORRECTION
 - A. Replace Work or portions of the Work not conforming to specified requirements.

SECTION 00 7200 — GENERAL CONDITIONS

FORM OF GENERAL CONDITIONS
AIA Document A201, General Conditions of the Contract for Construction, 2007 Edition.

SECTION 01 2000 — PRICE AND PAYMENT PROCEDURES

- 1.01 SCHEDULE OF VALUES
 - A. Submit a printed schedule on AIA Form G703 — Application and Certificate for Payment Continuation Sheet. Contractor's standard form or electronic media printout will be considered.
- 1.02 APPLICATIONS FOR PROGRESS PAYMENTS
 - A. Form: IA G702 Application and Certificate for Payment and IA G703 — Continuation Sheet including continuation sheets when required.
- 1.03 MODIFICATION PROCEDURES
 - A. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions as specified.
- 1.04 APPLICATION FOR FINAL PAYMENT
 - A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
 - B. Application for Final Payment will not be considered until the following have been accomplished:
 1. All closeout procedures specified.
 2. Final waivers of lien shall be submitted.

SECTION 01 3000 — ADMINISTRATIVE REQUIREMENTS

- 1.02 PROJECT COORDINATION
 - A. Provide for mobilization areas of site; for field offices and sheds, for access, traffic, and parking facilities. During construction, coordinate use of site and facilities.
 - B. Establish procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
 - C. Coordinate the use of temporary utilities and construction facilities.
 - D. Coordinate field engineering and layout work.
 - F. Make the submittals to Architect, where required by the Contract Documents, through the General Contractor.
 1. Allow 10 business days for Architect's review.

- 2.01 PROJECT MEETINGS
 - A. Schedule and administer meetings throughout progress of the Work.
 - B. Make arrangements for meetings, prepare agenda with copies for participants, attend at meetings. Distribute meeting minutes to Owner and Architect.
- 2.02 CONSTRUCTION PROGRESS SCHEDULE
 - A. Prepare detailed construction schedule.
- 2.03 PROGRESS PHOTOGRAPHS
 - A. Submit photographs with each application for payment, taken not more than 3 days prior to submission of application for payment.
- 2.04 REQUESTS FOR INFORMATION (RFI)
 - A. A standard RFI form shall be utilized, and an electronic version of the RFI form is available from the architect.
 - B. Response to an RFI is not authorization for a change in Contract Sum or a change in Contract Time, either on the RFI or attached documentation, and proceed in accordance with provisions of Section 01 2000 for Modification Procedures.

- 2.05 SUBMITTALS FOR REVIEW
 - A. When the following are specified in individual sections, submit them for review:
 1. Product data, Shop drawings, Samples for selection, Samples for verification.
 - B. Samples will be reviewed only for aesthetic, color, or finish selection.
- 2.06 SUBMITTALS FOR INFORMATION
 - A. When the following are specified in individual sections, submit them for information:
 1. Design data, Certificates, Test reports, Inspection reports, Manufacturer's instructions, Manufacturer's field reports.
 - B. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.
- 2.07 NUMBER OF COPIES OF SUBMITTALS
 - A. Documents for Review: Submit one copy electronically in.pdf file format.
 - B. Documents for Information: Submit one copy electronically in.pdf format.
 - C. Samples: Submit the number specified in individual specification sections, but not less than 3; one of which will be reviewed by Architect.

- 2.08 SUBMITTAL PROCEDURES
 - A. Transmit electronic submittals via e-mail. Include in the e-mail identification of the attachments as a submittal for review or for information. Do not include questions, comments, information or attachments pertaining to other than the submittal being sent in any submittal e-mail.
 1. MAXIMUM 8MB ATTACHMENT SIZE.
 2. Scans are to be of suitable resolution so as to be legible in all respects, but not less than 200 x 200 DPI.
 3. Information originally in color is to be scanned and submitted in color.
 - B. Transmit samples and other submittals that cannot be converted to electronic format with the Contractor's standard transmittal form.
 - C. The Architect and the architect's consultants will not accept submittals from subcontractors and suppliers
 - D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
 1. Submittals not bearing the contractor's approval will be returned with no action taken.
 - E. Make submittals that require field verification or field measurements only when progress of the work is complete to the point where verification and measurements can be performed and such information is included on the submittal.
 - F. For each submittal for review, allow 10 days for response.
 - G. Clearly identify variations from Contract Documents on the submittal.
 - H. Identify Product or system limitations which may be detrimental to successful performance of the completed Work.
 - I. When revised for resubmission, identify all changes made since previous submission.
 - J. Submittals not requested in the specifications will not be recognized or processed, and may be returned or discarded at the Architect's option.

SECTION 01 4000 — QUALITY REQUIREMENTS

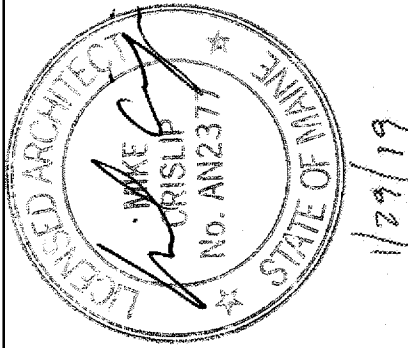
- 1.01 REFERENCES AND STANDARDS
 - A. For products and workmanship specified by reference to a document or documents not included in the Project Manual and all reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.

- 1.02 TESTING AND INSPECTION AGENCIES
 - A. Owner will employ services of an independent testing agency to perform certain code required special testing and inspection.
 - B. Contractor shall employ and pay for services of an independent testing agency to perform other specified testing and inspection.

SECTION 01 5000 — TEMPORARY FACILITIES, CONTROLS & SIGNS

- 3.01 CONTROL OF INSTALLATION
 - A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
 - B. Comply with manufacturers' instructions, including each step in sequence.
 - C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
 - D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
 - E. Have Work performed by persons qualified to produce required and specified quality.
 - F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
 - G. Secure products in place with positive anchorage devices designed and sized to

- 3.02 TOLERANCES
 - A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
 - B. Comply with manufacturers' tolerances except where industry standard tolerances are more restrictive. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
- 3.03 TESTING AND INSPECTION
 - A. See individual specification sections for testing and inspection required.
 - B. Testing Agency Duties:
 1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 2. Perform specified sampling and testing of products in accordance with specified standards.
 3. ascertain compliance of materials and mixes with requirements of Contract Documents.
 4. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or products.
 5. Perform additional tests and inspections required by Architect.
 6. Submit reports of all tests/inspections specified.
 - C. Limits on Testing/Inspection Agency Authority:
 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency may not approve or accept any portion of the Work.
 3. Agency has no authority to stop the Work.
 - D. Contractor Responsibilities:
 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities



Design and construction documents as instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, A R C H I T E C T .

Project No.:	19871
Drawn By:	BCR
Date	Issue
12-13-2018	Prinm Review
01-25-2019	Owner Review
01-30-2019	Bid & Permit

SECTION 01 7800 – CLOSEOUT SUBMITTALS

- 1.01 SUBMITTALS
- A. Project Record Documents: Submit documents to Owner when submitting final application for payment.
 - B. Operation and Maintenance Data: Submit two sets of final documents in final form.
 - C. Warranties and Bonds: Submit prior to final Application for Payment.
 - D. Certificate of Occupancy: Submit to owner when requesting Substantial Completion inspection
- 3.01 PROJECT RECORD DOCUMENTS
- A. Maintain on site one set of the following record documents; record actual revisions to the Work; including but not limited to, Drawings, Specifications, Addenda, Change Orders, and reviewed submittals.
 - B. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction.
- 3.02 OPERATION AND MAINTENANCE DATA
- A. For Each Product or System: List names, addresses and telephone numbers of z Subcontractors and suppliers.
 - B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
 - C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
 - D. For Each Product, Applied Material, and Finish:
 - 1. Product data, with catalog number, size, composition, and color and texture designations.
 - 2. Information for re-ordering custom mixed or manufactured products.
 - 3. Manufacturer's instructions for Care and Maintenance.
 - E. Moisture protection and weather-exposed products; Provide manufacturer recommendations for inspections, maintenance, and repair.
 - F. For Each Item of Equipment and Each System, provide the manufacturer's installation, operation and maintenance manuals. Include test and balancing reports.
- 3.03 WARRANTIES AND BONDS
- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.

SECTION 02 4100 – DEMOLITION

- 1.01 SUBMITTALS
- A. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.
- 1.02 QUALITY ASSURANCE
- A. Demolition Firm Qualifications: Company specializing in the type of work required.
 - B. Comply with governing EPA notification regulations.
- 3.01 SCOPE
- A. Remove portions the building, as indicated on drawings.
 - B. Remove paving and curbs as required to accomplish new work.
 - C. Within area of new construction, remove foundation walls and footings to a minimum of 2 feet below finished grade, or to a minimum of 12" below foundation bearing elevation for any construction within 4' of new foundations.
 - D. Outside area of new construction, remove foundation walls and footings to a minimum of 2 feet below finished grade.
 - E. Remove underground tanks.
 - F. Remove other items indicated, for salvage, relocation, and recycling.
 - G. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compacted as specified.
- 3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS
- A. Perform an engineering survey of building to determine whether demolition operations might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures.
 - B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Comply with applicable requirements of OSHA, NFPA 241, ANSI A10.6 and the Building Code.
 - 3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 4. Provide, erect, and maintain temporary barriers and security devices.
 - 5. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 6. Do not close or obstruct roadways or sidewalks without permit.
 - 7. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
 - 8. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
 - C. Do not begin removal until built elements to be salvaged or relocated have been removed.
 - D. Do not begin removal until vegetation to be relocated has been removed and specified measures have been taken to protect vegetation to remain.
 - E. Protect existing structures and other elements that are not to be removed. Provide bracing and shoring; prevent movement or settlement of adjacent structures and stop work immediately if adjacent structures appear to be in danger.
 - F. Minimize production of dust due to demolition operations.
 - H. If hazardous materials are discovered during removal operations, stop work and notify Owner.
 - I. Perform demolition in a manner that maximizes salvage and recycling of materials.
 - J. Partial Removal of Paving and Curbs: Maximize saw cut at right angle to surface.
 - K. Grade demolition areas to level condition, sloped to drain, with smooth transitions to adjacent surfaces.
- 3.03 EXISTING UTILITIES
- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
 - B. Protect existing utilities to remain from damage.
 - C. Do not disrupt public utilities without permit from authority having jurisdiction.
 - D. Do not close, shut off, or disrupt existing life safety systems that are in use.
 - E. Do not close, shut off, or disrupt existing utilities that are in use.
 - F. Locate and mark utilities to remain with identification of utility type.
 - G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
 - H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone; identify and mark utilities to be subsequently reconnected, in same manner as other utilities to remain.
 - I. Refer to mechanical and electrical specifications for additional demolition requirements for plumbing, mechanical and electrical items.
- 3.04 DEBRIS AND WASTE REMOVAL
- A. Remove debris, junk, and trash from site.
 - B. Leave site in clean condition, ready for subsequent work.
 - C. Clean up spillage and wind-blown debris from public and private lands.
- SECTION 05 5500 – METAL FABRICATIONS
- 1.03 SUBMITTALS
- A. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
- 2.01 MATERIALS – STEEL
- A. Steel Sections: ASTM A 36/A 36M.
 - B. Steel Tubing: ASTM A500/A500M, Grade B cold-formed structural tubing.
 - C. Pipe: ASTM A 53/A 53M, Grade B Schedule 40, black finish.
 - D. Bolts, Nuts, and Washers: ASTM A 325 (ASTM A 325M), Type 1, galvanized to ASTM A 153/A 153M where connecting galvanized components.
 - E. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
 - F. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

- G. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I – Inorganic, complying with VOC limitations of authorities having jurisdiction.
- 2.02 FABRICATION
- A. Fit and shop assemble items in largest practical sections, for delivery to site.
 - B. Fabricate items with joints tightly fitted and secured.
 - C. Continuously seal joined members by continuous welds.
 - D. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
 - E. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; nonobtrusively located; consistent with design of component, except where specifically noted otherwise.
 - F. Supply components required for anchorages. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- 2.03 FABRICATED ITEMS
- A. Bumper Posts and Guard Rails: As detailed; galvanized finish.
 - B. Ballards: Steel pipe, concrete filled, crowned cap, as detailed; galvanized finish.
 - C. Lintels: As detailed; galvanized finish.
- 2.04 FINISHES – STEEL
- A. Prepare surfaces to be primed in accordance with SSPC-SP2.
 - B. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
 - C. Prime Painting: One coat.
 - D. Galvanizing of Steel Members: Galvanize after fabrication to ASTM A 123/A 123M requirements.
- 2.05 FABRICATION TOLERANCES
- A. Squareness: 1/8 inch maximum difference in diagonal measurements.
 - B. Maximum Offset Between Faces: 1/16 inch.
 - C. Maximum Misalignment of Adjacent Members: 1/16 inch.
 - D. Maximum Bow: 1/8 inch in 48 inches.
 - E. Maximum Deviation From Plane: 1/16 inch in 48 inches.
- 3.01 EXAMINATION
- A. Verify that field conditions are acceptable and are ready to receive work.
- 3.02 PREPARATION
- A. Clean and strip primed steel items to bare metal where site welding is required.
 - B. Supply setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.
- 3.03 INSTALLATION
- A. Install items plumb and level, accurately fitted, free from distortion or defects.
 - B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
 - C. Perform field welding in accordance with AWS D1.1/D1.1M.
 - D. Obtain approval prior to site cutting or making adjustments not scheduled.
 - E. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized, except surfaces to be in contact with concrete.
- 3.04 TOLERANCES
- A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.
 - B. Maximum Offset From True Alignment: 1/4 inch.
 - C. Maximum Out-of-Position: 1/4 inch.

SECTION 06 1000 – ROUGH CARPENTRY

- 1.01 SUBMITTALS
- A. Manufacturer's Certificate: Certify that wood products supplied for rough carpentry meet or exceed specified requirements.
- 1.02 DELIVERY, STORAGE, AND HANDLING
- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.
 - B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, or installation.
- 2.01 GENERAL REQUIREMENTS
- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 - 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
 - B. Lumber fabricated from old growth timber is not permitted.
- 2.02 DIMENSION LUMBER
- A. Sizes: Nominal sizes as indicated on drawings, SAS.
 - B. Moisture Content: S-dry or MC19.
 - C. Miscellaneous Blocking, Nailers, and Furring: Lumber: SAS, No. 2 or Standard Grade. Boards: Standard or No. 3.
- 2.03 CONSTRUCTION PANELS
- A. Roof Sheathing: Any PS 2 type, rated Structural I Sheathing. Bond Classification: Exterior. Span Rating: 60. Performance Category: 3/4 PERF CAT.
 - B. Wall Sheathing: Any PS 2 type. Bond Classification: Exterior. Grade: Structural I Sheathing. Span Rating: 24. Performance Category: 5/8 PERF CAT.
 - C. Wall Sheathing: Glass mat faced gypsum, ASTM C1177/C1177M, square long edges, 5/8 inch. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly.
 - D. Insulated Wall Sheathing: Extruded polystyrene foam plastic, ASTM C 578, Type IV; tongue and groove long edges; 3/4 inch thick, unless noted otherwise.
 - E. Communications and Electrical Room Mounting Boards: PS 1 A-D plywood; 3/4 inch thick; flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.
- 2.04 ACCESSORIES
- A. Fasteners and Anchors: Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M for exterior, roof related and preservative-treated wood locations, unfinished steel elsewhere.
- 2.05 FACTORY WOOD TREATMENT
- A. Treated Lumber and Plywood: Comply with requirements of AWWA U1 – Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 - 1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.
 - 2. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWWA standards.
 - B. Fire Retardant Treatment:
 - 1. Exterior Type: AWWA U1, Category UCFB, Commodity Specification H, chemically treated and pressure impregnated; capable of providing a maximum flame spread rating of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes both before and after accelerated weathering test performed in accordance with ASTM D2898.
 - a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for plywood.
 - b. Do not use treated wood in direct contact with the ground.
 - 2. Interior Type A: AWWA U1, Use Category UCFA, Commodity Specification H, low temperature (low hygroscopic) type, chemically treated and pressure impregnated; capable of providing a maximum flame spread rating of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes.
 - a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
 - b. Treat rough carpentry items as indicated.
 - c. Do not use treated wood in applications exposed to weather or where the wood may become wet.
 - C. Preservative Treatment:
 - 1. Preservative Pressure Treatment of Lumber Above Grade: AWWA U1, Use Category UC3B, Commodity Specification A using waterborne preservative to 0.25 lb/cu ft retention.
 - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - b. Treat lumber in contact with roofing, flashing, or waterproofing.
 - c. Treat lumber in contact with masonry or concrete.
 - 2. Treat lumber less than 18 inches above grade.

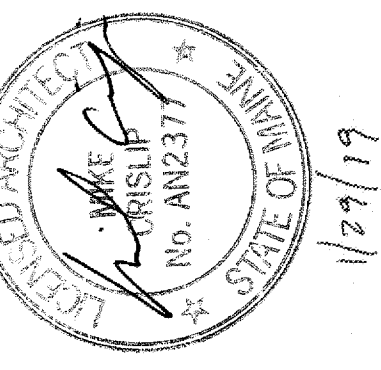
- 1) Treat lumber in other locations as indicated.
- 2. Preservative Pressure Treatment of Plywood Above Grade: AWWA U1, Use Category UC2 and UC3B, Commodity Specification F using waterborne preservative to 0.25 lb/cu ft retention.
 - a. Kiln dry plywood after treatment to maximum moisture content of 19 percent.
 - b. Treat plywood in contact with roofing, flashing, or waterproofing.
 - c. Treat plywood in contact with masonry or concrete.
 - d. Treat plywood less than 18 inches above grade.
 - e. Treat plywood in other locations as indicated.
- 3.01 INSTALLATION – GENERAL
- A. Select material sizes to minimize waste.
 - B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
 - C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.
- 3.02 BLOCKING, NAILERS, AND SUPPORTS
- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
 - B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to code authorities may be used in lieu of solid wood blocking.
 - C. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
 - D. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.
 - E. Specifically, provide the following non-structural framing and blocking:
 - 1. Handrails.
 - 2. Grab bars.
 - 3. Toilet room accessories.
- 3.04 INSTALLATION OF CONSTRUCTION PANELS
- A. Roof Sheathing: Secure panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.
 - 1. At long edges use sheathing clips where joints occur between roof framing members.
 - 2. Screw panels to framing; staples are not permitted.
 - B. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.
 - C. Communications and Electrical Room Mounting Boards: Secure with screws to studs with edges over firm bearing; space fasteners at maximum 24 inches on center on all edges and into studs in field of board.
 - 1. At fire-rated walls, install board over wall board indicated as part of the fire-rated assembly.
 - 2. Where boards are indicated as full floor-to-ceiling height, install with long edge of board parallel to studs.
 - 3. Install adjacent boards without gaps.
- 3.05 SITE APPLIED WOOD TREATMENT
- A. Apply preservative treatment compatible with factory applied treatment at site-sawn cuts, complying with manufacturer's instructions.
 - B. Allow preservative to dry prior to erecting members.
- 3.06 TOLERANCES
- A. Variation from Plane (Other than Floors): 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.
- ## SECTION 07 2100 – BOARD AND BATT INSULATION
- 1.01 SECTION INCLUDES
- A. Board insulation at perimeter foundation wall, underside of floor slabs, and as indicated on drawings.
 - B. Batt insulation in exterior wall, ceiling, and roof construction.
- 1.02 SUBMITTALS
- A. Provide data on product characteristics, performance criteria, and product limitations.
- 1.03 FIELD CONDITIONS
- A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.
- 2.01 FOAM BOARD INSULATION MATERIALS
- A. Extruded Polystyrene Board Insulation: ASTM C578, Type X; Extruded polystyrene board with either natural skin or cut cell surfaces; with the following characteristics:
 - 1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
 - 2. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
- 2.02 BATT INSULATION MATERIALS
- A. Glass Fiber Batt Insulation: Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
 - 1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
 - 2. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
 - 3. Combustibility: Non-combustible, when tested in accordance with ASTM E136.
 - 4. Formaldehyde Content: Zero.
 - 5. Facing: Unfaced.
 - a. In Climate Zones 4c and above; where a separate vapor retarder is being used.
 - b. In Climate Zones 1, 2, 3, 4a & 4b; where no vapor retarder is required.
 - 6. Facing: Asphalt treated Kraft paper, one side.
 - a. In Climate Zones 4c and above; where a vapor retarder is required.
 - b. Facing can not be exposed.
 - B. Tape: As recommended by manufacturer.
- 2.03 ACCESSORIES
- A. Sheet Vapor Retarder: Polyamide film with variable vapor permeability based on ambient humidity. Permeance of 1 perm or less by the dry cup method, increasing to 10 perms by the wet cup method. Flame spread rating of 25 or less, when tested in accordance with ASTM E84.
 - B. Tape: As recommended by manufacturer.
 - C. Insulation Fasteners: Impaling clip of unfinished steel with washer retainer and clips, to be adhered to surface to receive insulation, length to suit insulation thickness and substrate, capable of securely and rigidly fastening insulation in place.
 - D. Adhesive: Type recommended by insulation manufacturer for application.
- 3.01 EXAMINATION
- A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.
 - B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.
- 3.05 BATT INSTALLATION
- A. Install insulation and vapor retarder in accordance with manufacturer's instructions.
 - B. Install in exterior wall, roof, and ceiling spaces without gaps or voids. Do not compress insulation.
 - C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
 - D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
 - E. Install with factory applied vapor retarder membrane facing warm side of wall assembly. Lap ends and side flanges of membrane over framing members.
 - F. Tape seal butt ends, lapped flanges, and tears or cuts in membrane.
 - G. Place Sheet Vapor Retarder on warm side of insulation; lap and seal sheet retarder joints over member face.
 - H. Tape seal tears or cuts in vapor retarder.
 - I. Extend vapor retarder membrane tightly to full perimeter of adjacent window and door frames and other items interrupting the plane of the membrane. Tape seal in place.



Reviewed for Code Compliance
Permitted by Building Department
Approved for Construction
02/25/2019

MICHAEL CRISLIP
ARCHITECT

26001 Emery Road, Suite 400
 Cleveland, Ohio 44128
 216.223.3500
 mcrisli@mycreative.com



Design and construction documents as instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, A R C H I T E C T .

LifeStance
 HEALTH
 TENANT IMPROVEMENT
 53 BAXTER BOULEVARD, UNIT #3
 PORTLAND, ME 04101

Project No.:	19871
Drawn By:	BCR
Date	Issue
12-13-2018	Prinm Review
01-25-2019	Owner Review
01-30-2019	Bld & Permit

A5.2

SPECIFICATIONS

SECTION 01 7800 – CLOSEOUT SUBMITTALS

- 1.01 SUBMITTALS
- A. Project Record Documents: Submit documents to Owner when submitting final application for payment.
 - B. Operation and Maintenance Data: Submit two sets of final documents in final form.
 - C. Warranties and Bonds: Submit prior to final Application for Payment.
 - D. Certificate of Occupancy: Submit to owner when requesting Substantial Completion inspection
- 3.01 PROJECT RECORD DOCUMENTS
- A. Maintain on site one set of the following record documents; record actual revisions to the Work; including but not limited to, Drawings, Specifications, Addenda, Change Orders, and reviewed submittals.
 - B. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction.
- 3.02 OPERATION AND MAINTENANCE DATA
- A. For Each Product or System: List names, addresses and telephone numbers of z Subcontractors and suppliers.
 - B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
 - C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
 - D. For Each Product, Applied Material, and Finish:
 1. Product data, with catalog number, size, composition, and color and texture designations.
 2. Information for re-ordering custom mixed or manufactured products.
 3. Manufacturer's instructions for Care and Maintenance.
 - E. Moisture protection and weather-exposed products; Provide manufacturer recommendations for inspections, maintenance, and repair.
 - F. For Each Item of Equipment and Each System, provide the manufacturer's installation, operation and maintenance manuals. Include test and balancing reports.
- 3.03 WARRANTIES AND BONDS
- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.

SECTION 02 4100 – DEMOLITION

- 1.01 SUBMITTALS
- A. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.
- 1.02 QUALITY ASSURANCE
- A. Demolition Firm Qualifications: Company specializing in the type of work required.
 - B. Comply with governing EPA notification regulations.
- 3.01 SCOPE
- A. Remove portions the building, as indicated on drawings.
 - B. Remove paving and curbs as required to accomplish new work.
 - C. Within area of new construction, remove foundation walls and footings to a minimum of 2 feet below finished grade, or to a minimum of 12" below foundation bearing elevation for any construction within 4' of new foundations.
 - D. Outside area of new construction, remove foundation walls and footings to a minimum of 2 feet below finished grade.
 - E. Remove underground tanks.
 - F. Remove other items indicated, for salvage, relocation, and recycling.
 - G. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill, compacted as specified.
- 3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS
- A. Perform an engineering survey of building to determine whether demolition operations might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures.
 - B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 1. Obtain required permits.
 2. Comply with applicable requirements of OSHA, NFPA 241, ANSI A10.6 and the Building Code.
 3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 4. Provide, erect, and maintain temporary barriers and security devices.
 5. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 6. Do not close or obstruct roadways or sidewalks without permit.
 7. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
 8. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
 - C. Do not begin removal until built elements to be salvaged or relocated have been removed.
 - D. Do not begin removal until vegetation to be relocated has been removed and specified measures have been taken to protect vegetation to remain.
 - E. Protect existing structures and other elements that are not to be removed.
 1. Provide bracing and shoring, prevent movement or settlement of adjacent structures and stop work immediately if adjacent structures appear to be in danger.
 2. Minimize production of dust due to demolition operations.
 3. H. If hazardous materials are discovered during removal operations, stop work and notify Owner.
 - J. Perform demolition in a manner that maximizes salvage and recycling of materials.
 - K. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.
 - L. Grade demolition areas to level condition, sloped to drain, with smooth transitions to adjacent surfaces.
- 3.03 EXISTING UTILITIES
- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
 - B. Protect existing utilities to remain from damage.
 - C. Do not disrupt public utilities without permit from authority having jurisdiction.
 - D. Do not close, shut off, or disrupt existing life safety systems that are in use.
 - E. Do not close, shut off, or disrupt existing utilities that are in use.
 - F. Locate and mark utilities to remain with identification of utility type.
 - G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
 - H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone; identify and mark utilities to be subsequently reconnected, in same manner as other utilities to remain.
 - I. Refer to mechanical and electrical specifications for additional demolition requirements for plumbing, mechanical and electrical items.
- 3.04 DEBRIS AND WASTE REMOVAL
- A. Remove debris, junk, and trash from site.
 - B. Leave site in clean condition, ready for subsequent work.
 - C. Clean up spillage and wind-blown debris from public and private lands.

SECTION 06 1000 – ROUGH CARPENTRY

- 1.01 SUBMITTALS
- A. Manufacturer's Certificate: Certify that wood products supplied for rough carpentry meet or exceed specified requirements.
- 1.02 DELIVERY, STORAGE, AND HANDLING
- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.
 - B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, or installation.
- 2.01 GENERAL REQUIREMENTS
- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review,

- American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
 - B. Lumber fabricated from old growth timber is not permitted.
- 2.02 DIMENSION LUMBER
- A. Sizes: Nominal sizes as indicated on drawings, SAS.
 - B. Moisture Content: S-dry or MC19.
 - C. Miscellaneous Blocking, Nailers, and Furring: Lumber: S4S, No. 2 or Standard Grade. Boards: Standard or No. 3.
- 2.03 CONSTRUCTION PANELS
- A. Roof Sheathing: Any PS 2 type, Rated Structural I Sheathing. Bond Classification: Exterior. Span Rating: 60. Performance Category: 3/4 PERF CAT.
 - B. Wall Sheathing: Any PS 2 type. Bond Classification: Exterior. Grade: Structural I Sheathing. Span Rating: 24. Performance Category: 5/8 PERF CAT.
 - C. Wall Sheathing: Glass mat faced gypsum, ASTM C1177/C1177M, square long edges, 5/8 inch. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly.
 - D. Insulated Wall Sheathing: Extruded polystyrene foam plastic, ASTM C 578, Type IV; tongue and groove long edges; 3/4 inch thick, unless noted otherwise.
 - E. Communications and Electrical Room Mounting Boards: PS 1 A-D plywood; 3/4 inch thick; flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.
- 2.04 ACCESSORIES
- A. Fasteners and Anchors: Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M for exterior, roof related and preservative-treated wood locations, unfinished steel elsewhere.
- 2.05 FACTORY WOOD TREATMENT
- A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 – Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.
 2. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an AISC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.
 - B. Fire Retardant Treatment:
 1. Exterior Type: AWPA U1, Category UCFB, Commodity Specification H, chemically treated and pressure impregnated; capable of providing a maximum flame spread rating of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes both before and after accelerated weathering test performed in accordance with ASTM D2899.
 - a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
 - b. Do not use treated wood in direct contact with the ground.
 2. Interior Type A: AWPA U1, Use Category UCFB, Commodity Specification H, low temperature (low hygroscopic) type, chemically treated and pressure impregnated; capable of providing a maximum flame spread rating of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes.
 - a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
 - b. Treat rough carpentry items as indicated.
 - c. Do not use treated wood in applications exposed to weather or where the wood may become wet.
 - C. Preservative Treatment:
 1. Preservative Pressure Treatment of Lumber Above Grade: AWPA U1, Use Category UCFB, Commodity Specification A using waterborne preservative to 0.25 lb/cu ft retention.
 - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - b. Treat lumber in contact with roofing, flashing, or waterproofing.
 - c. Treat lumber in contact with masonry or concrete.
 - d. Treat lumber less than 18 inches above grade.
 - e. Kiln dry plywood after treatment to maximum moisture content of 19 percent.
 - f. Treat plywood in contact with roofing, flashing, or waterproofing.
 - g. Treat plywood in contact with masonry or concrete.
 - d. Treat plywood less than 18 inches above grade.
 - e. Treat plywood in other locations as indicated.
- 3.01 INSTALLATION – GENERAL
- A. Select material sizes to minimize waste.
 - B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
 - C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.
- 3.02 BLOCKING, NAILERS, AND SUPPORTS
- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
 - B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to code authorities may be used in lieu of solid wood blocking.
 - C. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
 - D. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.
 - E. Specifically, provide the following non-structural framing and blocking:
 1. Handrails.
 2. Grab bars.
 3. Toilet room accessories.
- 3.04 INSTALLATION OF CONSTRUCTION PANELS
- A. Roof Sheathing: Secure panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.
 1. At long edges use sheathing clips where joints occur between roof framing members.
 2. Screw panels to framing; staples are not permitted.
 - B. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.
 - C. Communications and Electrical Room Mounting Boards: Secure with screws to studs with edges over firm bearing; space fasteners at maximum 24 inches on center on all edges and into studs in field of board.
 1. At fire-rated walls, install board over wall board indicated as part of the fire-rated assembly.
 2. Where boards are indicated as full floor-to-ceiling height, install with long edge of board parallel to studs.
 3. Install adjacent boards without gaps.
- 3.05 SITE APPLIED WOOD TREATMENT
- A. Apply preservative treatment compatible with factory applied treatment at site-sawn cuts, complying with manufacturer's instructions.
 - B. Allow preservative to dry prior to erecting members.
- 3.06 TOLERANCES
- A. Variation from Plane (Other than Floors): 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

SECTION 07 2100 – BOARD AND BATT INSULATION

- 1.01 SECTION INCLUDES
- A. Board insulation at perimeter foundation wall, underside of floor slabs, and as indicated on drawings.
 - B. Batt insulation in exterior wall, ceiling, and roof construction.
- 1.02 SUBMITTALS
- A. Provide data on product characteristics, performance criteria, and product limitations.
- 1.03 FIELD CONDITIONS
- A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.
- 2.01 FOAM BOARD INSULATION MATERIALS
- A. Extruded Polystyrene Board Insulation: ASTM C578, Type X; Extruded polystyrene board with either natural skin or cut cell surfaces; with the following characteristics:
 1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.

- 2. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
- 2.02 BATT INSULATION MATERIALS
- A. Glass Fiber Batt Insulation: Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
 1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
 2. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
 3. Combustibility: Non-combustible, when tested in accordance with ASTM E136.
 4. Formaldehyde Content: Zero.
 5. Facing: Unfaced.
 - a. In Climate Zones 4c and above; where a separate vapor retarder is being used.
 - b. In Climate Zones 1, 2, 3, 4a & 4b; where no vapor retarder is required.
 6. Facing: Asphalt treated Kraft paper, one side.
 - a. In Climate Zones 4c and above; where a vapor retarder is required.
 - b. Facing can not be exposed.
- 2.03 ACCESSORIES
- A. Sheet Vapor Retarder: Polyamide film with variable vapor permeability based on ambient humidity. Permeance of 1 perm or less by the dry cup method, increasing to 10 perms by the wet cup method. Flame spread rating of 25 or less, when tested in accordance with ASTM E84.
 - B. Tape: As recommended by manufacturer.
 - C. Insulation Fasteners: Impaling clip of unfinished steel with washer retainer and clips, to be adhered to surface to receive insulation, length to suit insulation thickness and substrate, capable of securely and rigidly fastening insulation in place.
 - D. Adhesive: Type recommended by insulation manufacturer for application.
- 3.01 EXAMINATION
- A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.
 - B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.
- 3.05 BATT INSTALLATION
- A. Install insulation and vapor retarder in accordance with manufacturer's instructions.
 - B. Install in exterior wall, roof, and ceiling spaces without gaps or voids. Do not compress insulation.
 - C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
 - D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
 - E. Install with factory applied vapor retarder membrane facing warm side of wall assembly. Lap ends and side flanges of membrane over framing members.
 - F. Tape seal butt ends, lapped flanges, and tears or cuts in membrane.
 - G. Place Sheet Vapor Retarder on warm side of insulation; lap and seal sheet retarder joints over member face.
 - H. Tape seal tears or cuts in vapor retarder.
 - I. Extend vapor retarder membrane tightly to full perimeter of adjacent window and door frames and other items interrupting the plane of the membrane. Tape seal in place.
- SECTION 07 8400 – FIRESTOPPING**
- 1.01 SUBMITTALS
- A. Schedule of Firestopping: List each type of penetration, fire rating of the penetrated assembly, and firestopping test or design number.
 - B. Product Data: Provide data on product characteristics, performance ratings, and limitations.
- 1.02 QUALITY ASSURANCE
- A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with ASTM E 814 and ASTM E 119.
 1. Listings in the current-year classification or certification books of UL, FM, or ITS (Warnock Hersey) will be considered as constituting an acceptable test report.
 2. Valid evaluation report published by ICC Evaluation Service, Inc. (ICC-ES) at www.icc-es.org will be considered as constituting an acceptable test report.
 - B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years experience.
 - C. Installer Qualifications: Company specializing in performing the work of this section and with minimum 3 years experience installing work of this type.
- 1.03 FIELD CONDITIONS
- A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation. Maintain minimum temperature before, during, and for 3 days after installation of materials.
 - B. Provide ventilation in areas where solvent-cured materials are being installed.
- 2.01 FIRESTOPPING – GENERAL REQUIREMENTS
- A. Materials: Use any material meeting requirements.
 - B. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Type required for tested assembly design.
 - C. Fire Ratings: See Drawings for required ratings.
- 2.02 FIRESTOPPING ASSEMBLY REQUIREMENTS
- A. Perimeter Fire Containment Firestopping: Use any system that has been tested according to ASTM E2307 to have fire resistance F Rating equal to required fire rating of the floor assembly.
 - B. Head-of-Wall Firestopping at Joints Between Non-Rated Floor and Fire-Rated Wall: Use any system that has been tested according to ASTM E2837 to have fire resistance F Rating equal to required fire rating of floor or wall, whichever is greater.
 - C. Floor-to-Floor, Wall-to-Wall, and Wall-to-Floor Joints, Except Perimeter, Where Both Are Fire-Rated: Use any system that has been tested according to ASTM E1966 or UL 2079 to have fire resistance F Rating equal to required fire rating of the assembly in which the joint occurs.
 - D. Through Penetration Firestopping: Use any system that has been tested according to ASTM E814 to have fire resistance F Rating equal to required fire rating of penetrated assembly.
- 3.01 EXAMINATION
- A. Verify openings are ready to receive the work of this section.
- 3.02 PREPARATION
- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter that could adversely affect bond of firestopping material.
 - B. Remove incompatible materials that could adversely affect bond.
 - C. Install backing materials to arrest liquid material leakage.
- 3.03 INSTALLATION
- A. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openings.
 - B. Do not cover installed firestopping until inspected by authority having jurisdiction.
 - C. Install labeling required by code.
- SECTION 08 1416 – FLUSH WOOD DOORS**
- 1.01 SUBMITTALS
- A. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
 - B. Shop Drawings: Show doors and frames, elevations, sizes, finishes, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.
 - C. Samples: Submit two samples of door veneer, 4x4 inch in size illustrating wood grain, stain color, and sheen.
- 1.02 QUALITY ASSURANCE
- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of experience.
 - B. Installed Fire Rated Door and Transom Panel Assembly: Conform to NFPA 80 for fire rated class as scheduled.
- 1.03 DELIVERY, STORAGE, AND HANDLING
- A. Package, deliver and store doors in accordance with specified quality standard.
 - B. Accept doors on site in manufacturer's packaging. Inspect for damage.
 - C. Protect doors with resilient packaging. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.
- 1.04 WARRANTY
- A. Interior Doors: Provide manufacturer's warranty. Interior Hollow Core Doors: One (1) year. Interior Solid Core Doors: Life of Installation.
 - B. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

- 2.01 DOORS AND PANELS
- A. All Doors: See drawings for locations and additional requirements.
 1. Quality Level: Custom Grade, in accordance with AWI/AWMAC/MI Architectural Woodwork Standards.
 2. Wood Veneer Faced Doors: 5-ply or 7-ply unless otherwise indicated.
 - B. Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction. Fire Rated Doors: Tested to ratings indicated on drawings in accordance with NFPA 252, UL 10B, or UBC Standard 7-2-94 ("neutral pressure"); UL or WH (ITS) labeled without any visible seals when door is closed.
- 2.02 DOOR AND PANEL CORES
- A. Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (PC), plies and faces as indicated above.
 - B. Fire Rated Doors: Mineral core, Type FD, plies and faces as indicated above; with core blocking as required to provide adequate anchorage of hardware without through-bolting.
 - C. Hollow Core Doors: Type Institutional (IH/CHIC); plies and faces as indicated above.
- 2.03 DOOR FINISHES
- A. Wood Veneer Facing for Transparent Finish: Species as scheduled on the drawings, veneer grade as specified by quality standard, plain sliced, book veneer match, running assembly match; unless otherwise indicated.
 1. Vertical Edges: Any option allowed by quality standard for grade.
 2. Pairs: Pair match each pair; set match pairs within 10 feet of each other when doors are locked.
 - B. Veneer Facing for Opaque Finish: Any material allowed by quality standard.
- 2.04 ACCESSORIES
- A. Wood Louvers:
 1. Material and Finish: Species to match the door facing.
 2. Louver Blade: Flush louver.
 3. Louver Free Area: As indicated on mechanical drawings.
 - B. Metal Louvers: As specified in Mechanical Documents.
 - C. Glazing Stops: Wood, of same species as door facing, mitered corners; prepared for countersink style screws.
 - D. Astragals for Fire Rated Double Doors: Steel, shape as required to accomplish fire rating.
- 2.05 DOOR CONSTRUCTION
- A. Fabricate doors in accordance with door quality standard specified.
 - B. Cores Constructed with stiles and rails:
 1. Provide solid blocks at lock edge and top of door for closer for hardware reinforcement.
 - a. Provide solid blocking for other throughout hardware.
 - C. Where supplementary protective edge trim is required, install trim after veneer facing has been applied full-width.
 - D. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.
 - E. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
 1. Exception: Doors to be field finished.
 - F. Provide edge clearances in accordance with the quality standard specified.
- 2.06 FACTORY FINISHING – WOOD VENEER DOORS
- A. Finish work in accordance with AWI/AWMAC/MI Architectural Woodwork Standards, Section 5 – Finishing for Grade specified and as follows:
 - a. System – 12. Polyurethane, Water-based.
 - b. Stain: As indicated on drawings.
 - c. Sheen: As indicated in drawings.
- 3.01 EXAMINATION
- A. Verify existing conditions before starting work.
 - B. Verify that opening sizes and tolerances are acceptable.
 - C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.
- 3.02 INSTALLATION
- A. Install doors in accordance with manufacturer's instructions and specified quality standard. Install fire-rated doors in accordance with NFPA 80 requirements.
 - B. Factory-Finished and Fire Rated Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.
 - C. Field-Finished Doors: Trimming to fit is acceptable.
 1. Adjust width of non-rated doors by cutting equally on both jamb edges.
 2. Trim maximum of 3/4 inch off bottom edges.
 3. Trim fire-rated doors in strict compliance with fire rating limitations.
 - D. Use machine tools to cut or drill for hardware.
 - E. Coordinate installation of doors with installation of frames and hardware.
 - F. Coordinate installation of glazing.
 - G. Install door louvers plumb and level.
 - H. Adjust doors for smooth and balanced door movement.
- 3.03 TOLERANCES
- A. Conform to specified quality standard for fit and clearance tolerances.
 - B. Conform to specified quality standard for telegraphing, warp, and squareness.
- SECTION 08 7100 – DOOR HARDWARE**
- 1.01 ADMINISTRATIVE REQUIREMENTS
- A. Coordinate the manufacture, fabrication, and installation of products onto which door hardware will be installed.
 - B. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.
 - C. Convey Owner's keying requirements to manufacturers.
- 1.02 SUBMITTALS
- A. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project.
 - B. Hardware Schedule: Detailed listing of each item of hardware to be installed on each door. Use door numbering scheme as included in the Contract Documents. Identify electrically operated items and include power requirements.
 - C. Keying Schedule: Submit for approval of Owner.
 - D. Keys: Deliver with identifying tags to Owner by security shipment direct from hardware supplier.
- 1.03 QUALITY ASSURANCE
- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of experience.
 - B. Hardware Supplier Personnel: Employ an Architectural Hardware Consultant (AHC) to assist in the work of this section.
- 1.04 DELIVERY, STORAGE, AND HANDLING
- A. Package hardware items individually; label and identify each package with door opening code to match hardware schedule.
- 1.05 WARRANTY
- A. Grade 1: Provide 10 year warranty for door closers.
- 2.01 DOOR HARDWARE – GENERAL
- A. Provide all hardware specified or required to make doors fully functional, compliant with applicable codes, and secure to the extent indicated.
 - B. Provide all items of a single type of the same model by the same manufacturer.
 - C. Provide products that comply with the following:
 1. Applicable provisions of federal, state, and local codes.
 2. ADA Standards for Accessible Design.
 3. ANSI/ICC A117.1, American National Standard for Accessible and Usable Buildings and Facilities.
 4. Applicable provisions of NFPA 101, Life Safety Code.
 5. Fire-Rated Doors: NFPA 80.
 6. All Hardware on Fire-Rated Doors: Listed and classified by UL as suitable for the purpose specified and indicated.
 7. Hardware for Smoke and Draft Control Doors: Provide hardware that enables door assembly to comply with air leakage requirements of the applicable code.
 8. Products Requiring Electrical Connection: Listed and classified by UL as suitable for the purpose specified and indicated.
 - D. Function: Lock and latch function numbers and descriptions of manufactures series as shown on the drawings.
 - E. Finishes: Identified in schedule.
- 2.02 HINGES
- A. Hinges: Provide hinges on every swinging door.

KFB US Permitting & Inspection Services 10501 Baxter Blvd Portland, ME 04103 US Permit No. A01-A0-A0-0001
 Drawn By: Michael Crislip

SECTION 09 2116 — GYPSUM BOARD ASSEMBLIES

- 1.01 SUBMITTALS
 - A. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.
 - B. Product Data: Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.
- 1.02 QUALITY ASSURANCE
 - A. Installer Qualifications: Company specializing in performing gypsum board application and finishing, with minimum three years of experience.
- 2.01 GYPSUM BOARD ASSEMBLIES
 - A. Provide completed assemblies complying with ASTM C840 and GA-216.
 - B. Fire Rated Assemblies: Provide completed assemblies with UL Assembly Numbers: Provide construction equivalent to that listed for the particular assembly in the current UL Fire Resistance Directory.
- 2.02 METAL FRAMING MATERIALS
 - A. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf.
 - B. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.
 - C. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection using slotted holes, screws and anti-friction bushings, preventing rotation of studs while maintaining structural performance of partition.
 - 1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI North American Specification for the Design of Cold-Formed Steel Structural Members.
 - 2. Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/Z180 hot dipped galvanized coating.
 - D. Sheet Metal Backing: 0.043 inch thick, galvanized, 6" wide.
- 2.03 BOARD MATERIALS
 - A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place, ends square cut.
 - 1. Application: Use for vertical surfaces, unless otherwise indicated.
 - 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 - a. Mold-resistant board is required whenever board is being installed before the building is enclosed and conditioned.
 - 3. At Assemblies indicated with Fire-Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
 - 4. Thickness: Vertical Surfaces: 5/8 inch unless otherwise indicated or required by tested assembly.
 - B. Backing Board For Non-Wet Areas: Water-resistant gypsum backing board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - 1. Application: Vertical surfaces behind thinsert tile, except in wet areas.
 - 2. Type X Thickness: 5/8 inch.
 - 3. Edges: Tapered.
 - C. Ceiling Board: Special sag-resistant gypsum ceiling board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - 1. Application: Ceilings, unless otherwise indicated.
 - 2. Thickness: 1/2 inch, unless otherwise indicated.
 - 3. Edges: Tapered.
 - D. Exterior Sheathing Board: Sizes to minimize joints in place; ends square cut.
 - 1. Application: Exterior sheathing, unless otherwise indicated.
 - 2. Glass Mat Faced Sheathing: Glass mat faced gypsum substrate as defined in ASTM C1177/C1177M.
 - 3. Regular Board Thickness: 5/8 inch unless otherwise indicated.
 - 4. Edges: Square, for vertical application.
 - E. Exterior Soffit Board: Exterior gypsum soffit board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - 1. Application: Ceilings and soffits in protected exterior areas, unless otherwise indicated.
 - 2. At Assemblies indicated with Fire-Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X.
 - 3. Regular Type Thickness: 1/2 inch, unless otherwise indicated.
 - 4. Edges: Tapered.
- 2.04 ACCESSORIES
 - A. Water-Resistive Barrier: As specified in Section 07 2500.
 - B. Finishing Accessories: ASTM C1047, galvanized steel, rolled zinc, or rigid plastic, unless otherwise indicated.
 - 1. Types: As detailed or required for finished appearance.
 - 2. Special Shapes: In addition to conventional cornerbead and control joints, provide U-bead and L-bead at exposed panel edges.
 - C. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer for project conditions.
 - 1. Tape: 2 inch wide, coated glass fiber tape for joints and corners, at wet locations and with mold-resistant board.
 - 2. Tape: 2 inch wide, creased paper tape for joints and corners, except as otherwise indicated.
 - 3. Ready-mixed vinyl-based joint compound.
 - 4. Powder-type vinyl-based joint compound.
 - 5. Chemical hardening type compound.
 - D. High Build Drywall Surface: Vinyl acrylic latex-based coating for spray application, designed to take the place of skim coating and separate paint primer in achieving Level 5 finish.
 - E. Screws for Attachment to Steel Members Less Than 0.03 inch In Thickness, to Wood Members, and to Gypsum Board: ASTM C1002; self-piercing tapping type; cadmium-plated for exterior locations.
 - F. Screws for Attachment to Steel Members From 0.033 to 0.112 Inch in Thickness: ASTM C954; steel drill screws for application of gypsum board to loadbearing steel studs.
 - G. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.
 - H. Exterior Soffit Vents: One piece, perforated, ASTM B 221 6063 TS alloy aluminum, with edge suitable for direct application to gypsum board and manufactured especially for soffit application. Provide continuous vent.
- 3.01 EXAMINATION
 - A. Verify that project conditions are appropriate for work of this section to commence.
- 3.02 FRAMING INSTALLATION
 - A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.
 - B. Suspended Ceilings and Soffits: Space framing and furring members as permitted by standard.
 - 1. Laterally brace entire suspension system.
 - 2. Install bracing as required at exterior locations to resist wind uplift.
 - C. Studs: Space studs as indicated.
 - 1. Extend partition framing to height indicated on drawings.
 - 2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
 - 3. Partitions Penetrating Ceiling, not Terminating at Structure: Brace top track securely to structure at 48 inches on center, unless otherwise indicated.
 - 4. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.
 - D. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.
 - E. Standard Wall Furring: Install at concrete and masonry walls scheduled to receive gypsum board, not more than 4 inches from floor and ceiling lines and abutting walls. Secure in place on alternate channel flanges at maximum 24 inches on center.
 - 1. Orientation: Vertical.
 - 2. Spacing: As indicated.
 - F. Blocking: Use sheet metal backing secured to studs. Provide blocking for support of wall cabinets, toilet accessories, hardware, opening frames, and other wall mounted items requiring secure attachment.
 - 1. Use wood blocking secured to studs for plumbing fixtures, toilet partitions, grab bars, handrails and other items indicated on the drawings to be supported with wood blocking.
- 3.03 BOARD INSTALLATION
 - A. Comply with ASTM C 840 and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
 - B. Single-Layer Non-Rated: Install gypsum board perpendicular to framing, with ends

- and edges occurring over firm bearing.
 - 1. Exception: Tapered edges to receive joint treatment at right angles to framing.
 - C. Double-Layer Non-Rated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Place second layer perpendicular to framing or furring members. Offset joints of second layer from joints of first layer.
 - D. Fire-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
 - E. Exterior Sheathing: Comply with ASTM C1280. Install sheathing vertically, with edges butted tight and ends occurring over firm bearing.
 - F. Exterior Soffits: Install exterior soffit board perpendicular to framing, with staggered end joints over framing members or other solid backing.
 - G. Cementitious Backing Board: Install over steel framing members where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.
 - H. Installation on Metal Framing: Use screws for attachment of all gypsum board.
 - I. Curved Surfaces: Apply gypsum board to curved substrates in accordance with GA-226.
 - J. Moisture Protection: Treat cut edges and holes in moisture resistant gypsum board and exterior gypsum soffit board with sealant.
- 3.04 INSTALLATION OF TRIM AND ACCESSORIES
 - A. Control Joints: Place control joints consistent with lines of building spaces and as follows:
 - 1. Space in accordance with ASTM C840 and as indicated.
 - 2. Not more than 30 feet apart on walls and ceilings over 50 feet long.
 - 3. At exterior soffits, not more than 30 feet apart in both directions.
 - 4. Where partition, wall or ceiling traverses a construction joint (expansion, seismic, or building control element) in the base building structure.
 - 5. Where floor supported partition adjoining ceiling supported structures.
 - 6. Corner Beads: Install at external corners, using longest practical lengths.
 - C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials and as indicated.
 - D. Exterior Soffit Vents: Install according to manufacturer's written instructions and in locations shown on the drawings. Provide vent area indicated.
 - 3.05 JOINT TREATMENT
 - A. Glass Mat Faced Gypsum Board and Exterior Glass Mat Faced Sheathing: Use fiberglass joint tape, bedded and finished with chemical hardening type joint compound.
 - B. Paper Faced Gypsum Board: Use paper joint tape, bedded with ready-mixed vinyl or powder-type vinyl for interior applications, and chemical hardening type for exterior or wet locations, and finished with matching joint compound.
 - C. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
 - 1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
 - 2. Level 5: Walls and ceilings to receive semi-gloss or gloss paint finish and other areas specifically indicated.
 - 3. Level 3: Walls to receive textured wall finish.
 - 4. Level 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.
 - 5. Level 1: Wall areas above finished ceilings, whether or not accessible in the completed construction.
 - D. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 - 1. Feather coats of joint compound so that camber is maximum 1/32 inch.
 - 2. Where Level 5 finish is indicated, spray apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.
 - E. Fill and finish joints and corners of cementitious backing board as recommended by manufacturer.
 - 3.06 TOLERANCES
 - A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

SECTION 09 6500 — RESILIENT FLOORING

- 1.01 SUBMITTALS
 - A. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
 - B. Certification: Prior to installation of flooring, submit written certification by flooring manufacturer and adhesive manufacturer that condition of sub-floor is acceptable.
 - C. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 — Product Requirements, for additional provisions.
 - 2. Extra Flooring Material: 12 square feet of each type and color.
 - 3. Extra Wall Base: Eight linear feet of each type and color.
- 1.02 FIELD CONDITIONS
 - A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.
- 2.01 TILE FLOORING
 - A. Vinyl Composition Tile: Homogeneous, with color extending throughout thickness, and:
 - 1. Minimum Requirements: Comply with ASTM F1066, of Class corresponding to type specified.
 - 2. Size: 12 x 12 inch.
 - 3. Thickness: 0.125 inch.
 - 4. Pattern & Color: as indicated on the drawings.
 - 4. Accessories: Premolded external corners.
- 2.03 ACCESSORIES
 - A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.
 - B. Primers, Adhesives, and Seaming Materials: Waterproof; types recommended by flooring manufacturer.
 - 1. Provide only products having lower VOC content than allowed by local regulation.
 - C. Moldings, Transition and Edge Strips: As scheduled on the drawings.
 - D. Sealer and Polish: Types recommended by flooring manufacturer.
- 3.01 EXAMINATION
 - A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.
 - B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.
 - C. Cementitious Sub-Floor Surfaces: Verify that substrates are dry enough and ready for resilient flooring installation by testing for moisture and pH.
 - 1. Test in accordance with ASTM F710, including but not limited to Moisture Vapor Emission and pH.
 - 2. Test Internal Relative Humidity in accordance with ASTM F2170 Procedure A.
 - 3. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.
 - D. Verify that required floor-mounted utilities are in correct location.
- 3.02 PREPARATION
 - A. Prepare floor substrates as recommended by flooring and adhesive manufacturers and in accordance with ASTM F710.
 - B. Remove sub-floor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with sub-floor filler to achieve smooth, flat, hard surface.
 - C. Prohibit traffic until filler is cured.
 - D. Clean substrate.
 - E. Apply primer as required to prevent "bleed-through" or interference with adhesion by substances that cannot be removed.
- 3.03 INSTALLATION
 - A. Starting installation constitutes acceptance of sub-floor conditions.
 - B. Install in accordance with manufacturer's instructions.
 - C. Spread only enough adhesive to permit installation of materials before initial set.
 - D. Fit joints tightly.
 - E. Set flooring in place, press with heavy roller to attain full adhesion.

- F. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.
 - G. Install edge strips or vinyl transition trims at unprotected or exposed edges, where flooring terminates or abuts other floor finishes, and where indicated.
 - H. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.
 - 1. Install flooring in recessed floor access covers, maintaining floor pattern.
- 3.04 TILE FLOORING
 - A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless manufacturer's instructions say otherwise.
 - 3.05 RESILIENT BASE
 - A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.
 - B. After internal corners. At external corners, use premolded units. At exposed ends, use premolded units.
 - C. Install base on solid backing. Bond tightly to wall and floor surfaces.
 - D. Scribe and fit to door frames and other interruptions.
 - 3.06 CLEANING
 - A. Remove excess adhesive from floor, base, and wall surfaces without damage.
 - B. Clean, seal and polish in accordance with manufacturer's instructions.
 - 3.07 PROTECTION
 - A. Prohibit traffic on resilient flooring for 48 hours after installation.

SECTION 09 6813 — TILE CARPETING

- 1.01 SUBMITTALS
 - A. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.
 - B. Samples: Submit two carpet tiles illustrating color and pattern design for each carpet color selected.
 - C. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 — Product Requirements, for additional provisions.
 - 2. Extra Carpet Tiles: Quantity equal to 5 percent of total installed of each color and pattern installed.
- 1.02 QUALITY ASSURANCE
 - A. Installer Qualifications: Company specializing in installing carpet with minimum 3 years experience.
- 1.03 FIELD CONDITIONS
 - A. Store materials in area of installation for minimum period of 24 hours prior to installation.
- 2.01 MATERIALS
 - A. Carpet Tile: As indicated on drawings, manufactured in one color dye lot.
 - 1. Critical Radiant Flux: Minimum of 0.22 watts/sq cm, when tested in accordance with ASTM E648 or NFPA 253.
 - 2. Surface Flammability Ignition: Pass ASTM D2859 (the "pill test").
- 2.02 ACCESSORIES
 - A. Sub-Floor Filler: White premix latex; type recommended by flooring material manufacturer.
 - B. Edge Strips: Material and color as selected.
 - C. Adhesives: Acceptable to carpet tile manufacturer, compatible with materials being adhered; maximum VOC of 50 g/L; CRI Green Label certified; in lieu of labeled product, independent test report showing compliance is acceptable.
- 3.01 EXAMINATION
 - A. Verify that sub-floor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.
 - B. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to sub-floor surfaces.
 - C. Cementitious Sub-Floor Surfaces: Verify that substrates are dry enough and ready for flooring installation by testing for moisture and pH.
 - 1. Test in accordance with ASTM F710.
 - 2. Test Internal Relative Humidity in accordance with ASTM F2170 Procedure A.
 - D. Verify that required floor-mounted utilities are in correct location.
- 3.02 PREPARATION
 - A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.
 - B. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler.
 - C. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.
 - D. Vacuum clean substrate.
- 3.03 INSTALLATION
 - A. Starting installation constitutes acceptance of sub-floor conditions.
 - B. Install carpet tile in accordance with manufacturer's instructions and CRI Carpet Installation Standard.
 - C. Blend carpet from different cartons to ensure minimal variation in color match.
 - D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.
 - E. Lay carpet tile in patterns as indicated on drawings.
 - F. Locate change of color or pattern between rooms under door centerline.
 - G. Fully adhere carpet tile to substrate.
 - H. Trim carpet tile neatly at walls and around interruptions.
 - I. Complete installation of edge strips, concealing exposed edges.

SECTION 09 9123 — INTERIOR PAINTING

- 1.01 SECTION INCLUDES
 - A. Surface preparation.
 - B. Field application of paints, stains, and varnishes.
 - C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
 - 1. Prime surfaces to receive wall coverings.
 - 2. Mechanical and Electrical:
 - a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, rollers and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
 - b. In finished areas, paint shop-primed items.
 - D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
 - 5. Floors, unless specifically indicated.
 - 6. Glues.
 - 7. Concealed pipes, ducts, and conduits.
- 1.02 SUBMITTALS
 - A. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
 - 2. MPI product number (e.g. MPI #47).
 - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
 - B. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
 - 1. Where sheen is specified, submit samples in only that sheen.
 - 2. Where sheen is not specified, discuss sheen options with Architect before preparing samples, to eliminate sheens definitely not required.
 - C. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. Extra Paint and Finish Materials: 1 gallon of each color, type, and sheen; from the same product run, store where directed.
 - 2. Label each container with color, type, texture, and room locations in addition to the manufacturer's label.
- 1.04 QUALITY ASSURANCE
 - A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years experience.
 - B. Applicator Qualifications: Company specializing in performing the type of work

- specified with minimum three years experience.
- 1.05 DELIVERY, STORAGE, AND HANDLING
 - A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
 - B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
 - C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.
- 1.06 FIELD CONDITIONS
 - A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
 - B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
 - C. Provide lighting level of 80 ft candles measured mid-height at substrate surface.
- 2.01 MANUFACTURERS
 - A. Provide paints and finishes from the same manufacturer to the greatest extent possible.
 - 1. Substitution of other products by the same manufacturer is preferred over substitution of products by a different manufacturer.
 - 2. Substitution of a different paint system using MPI-approved products by the same manufacturer will be considered.
 - B. PAINTS AND FINISHES — GENERAL
 - A. Paints and Finishes: Ready mixed, unless intended to be a field-catalyzed paint.
 - 1. Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as otherwise indicated.
 - 2. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 3. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
 - 4. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 5. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
 - B. Volatile Organic Compound (VOC) Content:
 - 1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D—National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and which are added at project site; or other method acceptable to authorities having jurisdiction.
 - C. Flammability: Comply with applicable code for surface burning characteristics.
 - D. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.
 - E. Colors: As indicated on drawings.
 - 1. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.
 - 2.03 PAINT SYSTEMS — INTERIOR
 - A. Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, concrete, concrete masonry units, brick, wood, plaster, uncoated steel, shop primed steel, galvanized steel, and aluminum.
 - 1. Two top coats and one coat primer.
 - 2. Top Coat(s): Interior Latex; MPI #43, 44, 52, 53, 54, or 114.
 - 3. Top Coat Sheen, unless noted otherwise on drawings:
 - a. Flat: MPI gloss level 1; use this sheen for ceilings and other overhead surfaces.
 - b. Eggshell: MPI gloss level 3; use this sheen at all locations.
 - 4. Primer: As recommended by top coat manufacturer for specific substrate.
 - B. Medium Duty Door/Trim: For surfaces subject to frequent contact by occupants, including metals and wood:
 - 1. Medium duty applications include doors, door frames, railings, handrails, guardrails, and balustrades.
 - 2. Two top coats and one coat primer.
 - 3. Top Coat(s): High Performance Architectural Interior Latex; MPI #139, 140, or 141.
 - 4. Top Coat Sheen:
 - a. Semi-Gloss: MPI gloss level 5; use this sheen unless noted otherwise.
 - 5. Primer: As recommended by top coat manufacturer for specific substrate.
 - C. Dry Fall: Metals; exposed structure and overhead-mounted services or as indicated on drawings, including shop primed steel deck, structural steel, metal fabrications, galvanized ducts, galvanized conduit, and galvanized piping.
 - 1. Shop primer by others.
 - 2. One top coat .
 - 3. Top Coat: Latex Dry Fall; MPI #118, 155, or 226.
 - 4. Top Coat Sheen:
 - a. Flat: MPI gloss level 1; use this sheen unless noted otherwise.
 - D. Transparent Finish on Wood, unless noted otherwise.
 - 1. Stain: Semi-Transparent Stain for Wood; MPI #90.
 - 2. Top Coat(s): Clear Water Based Varnish; MPI #128, 129, or 130.
 - 3. Top Coat Sheen:
 - a. Satin: MPI gloss level 4; use this sheen unless noted otherwise.
 - E. Transparent Finish on Concrete Floors, unless noted otherwise.
 - 1. 2 coats sealer.
 - 2. Sealer: Water Based for Concrete Floors; MPI #99.
 - 3. Sealer Sheen:
 - a. Eggshell: MPI gloss level 3; use this sheen unless noted otherwise.
 - F. Wood, Opaque, Latex, 3 Coat:
 - 1. One coat of latex primer sealer.
 - G. Semi-gloss: Two coats of latex enamel; MPI #54, unless noted otherwise.
 - G. Concrete/Masonry, Opaque, Latex, 3 Coat:
 - 1. One coat of block filler.
 - H. Flat: Two coats of latex enamel; MPI #53, unless noted otherwise.
 - H. Ferrous Metals, Unprimed, Latex, 3 Coat:
 - 1. One coat of latex primer.
 - I. Semi-gloss: Two coats of latex enamel; MPI #153, unless noted otherwise.
 - I. Ferrous Metals, Primed, Latex, 2 Coat:
 - 1. Touch-up with latex primer.
 - J. Semi-gloss: Two coats of latex enamel; MPI #153, unless noted otherwise.
 - J. Galvanized Metals, Latex, 3 Coat:
 - 1. One coat galvanize primer.
 - K. Semi-gloss: Two coats of latex enamel; MPI #153, unless noted otherwise.
 - K. Fabrics/Insulation Jackets, Alkyd, 3 Coat:
 - 1. One coat of alkyd primer sealer.
 - 2. Flat: Two coats of alkyd enamel; MPI #49, unless noted otherwise.
 - 2.04 PRIMERS
 - A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
 - 1. Interior/Exterior Latex Block Filler; MPI #4.
 - 2. Interior Latex Primer Sealer; MPI #50.
 - 3. Interior Water Based Primer for Galvanized Metal; MPI #134.
 - 4. Latex Primer for Interior Wood; MPI #39.
 - 2.05 ACCESSORY MATERIALS
 - A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
 - B. Patching Material: Latex filler.
 - C. Fastener Head Cover Material: Latex filler.

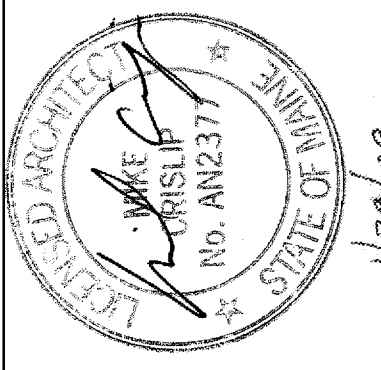
- 3.01 EXAMINATION
 - A. Do not begin application of paints and finishes until substrates have been properly prepared.
 - B. Verify that surfaces are ready to receive work as instructed by the product

- manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of painting operations for any condition that may potentially effect proper application.
- D. Test shop-applied primer for compatibility with subsequent cover materials.
- E. Measure moisture content of surfaces using an electronic moisture meter. Verify that all applied finishes unless moisture content of surfaces are below the following conditions maximums:
 - 1. Gypsum Wallboard: 12 percent.
 - 2. Plaster and Stucco: 12 percent.
 - 3. Masonry, Concrete, and Concrete Masonry Units : 12 percent.
 - 4. Interior Wood: 15 percent, measured in accordance with ASTM D4442.
 - 5. Concrete Floors and Traffic Surfaces: 8 percent.
- 3.02 PREPARATION
 - A. Clean surfaces thoroughly and correct defects prior to application.
 - B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
 - C. Remove or repair existing paints or finishes that exhibit surface defects.
 - D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
 - E. Seal surfaces that might cause bleed through or staining of topcoat.
 - F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
 - G. Concrete:
 - 1. Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions.
 - 2. Clean concrete according to ASTM D4258. Allow to dry.
 - 3. Prepare surface as recommended by top coat manufacturer and according to SSPC-SP 13.
 - H. Masonry:
 - 1. Remove efflorescence and alkali. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions. Allow to dry.
 - 2. Prepare surface as recommended by top coat manufacturer.
 - I. Concrete Floors and Traffic Surfaces: Remove contamination, acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.
 - J. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
 - K. Plaster: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
 - L. Insulated Coverings: Remove dirt, grease, and oil from canvas and cotton.
 - M. Aluminum: Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
 - N. Copper: Remove contamination by steam, high pressure water, or solvent washing.
 - O. Galvanized Surfaces:
 - 1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
 - 2. Prepare surface according to SSPC-SP 2.
 - P. Ferrous Metal:
 - 1. Solvent clean according to SSPC-SP 1.
 - 2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
 - 3. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning". Protect from corrosion until coated.
 - Q. Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.
 - R. Wood Surfaces to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.
 - S. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with clear sealer.
 - T. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.
- 3.03 APPLICATION
 - A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
 - B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
 - C. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
 - D. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
 - E. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
 - F. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.
 - G. Sand wood and metal surfaces lightly between coats to achieve required finish.
 - H. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
 - I. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
 - J. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.
- 3.04 PROTECTION
 - A. Protect finishes until completion of project.
 - B. Touch-up damaged finishes after Substantial Completion.

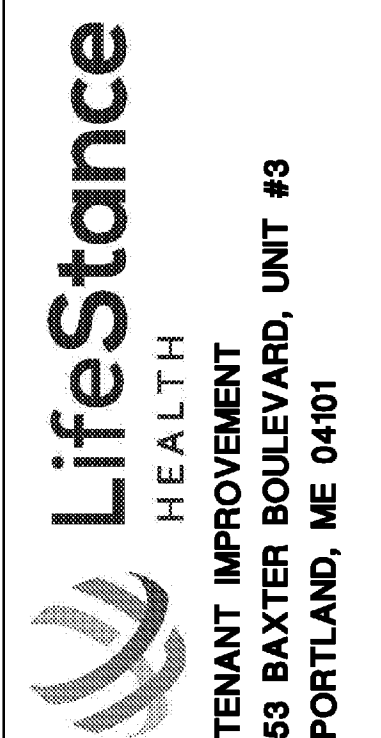
02/25/2019

Ohio State Board of Building and Construction Code Enforcement

MICHAEL CRISLIP ARCHITECT
26001 Emery Road, Suite 400
Cleveland, Ohio 44128
216.223.3500
mcr@creative.com



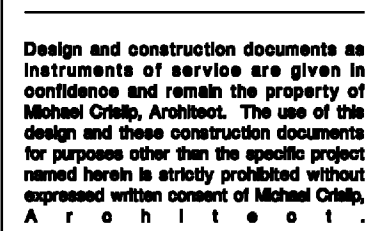
Design and construction documents are instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.



Project No.	16671
Drawn By	BCR
Date	Issue
12-15-2018	Prelim Review
01-25-2019	Owner Review
01-30-2019	Bid & Permit

A5.3

SPECIFICATIONS

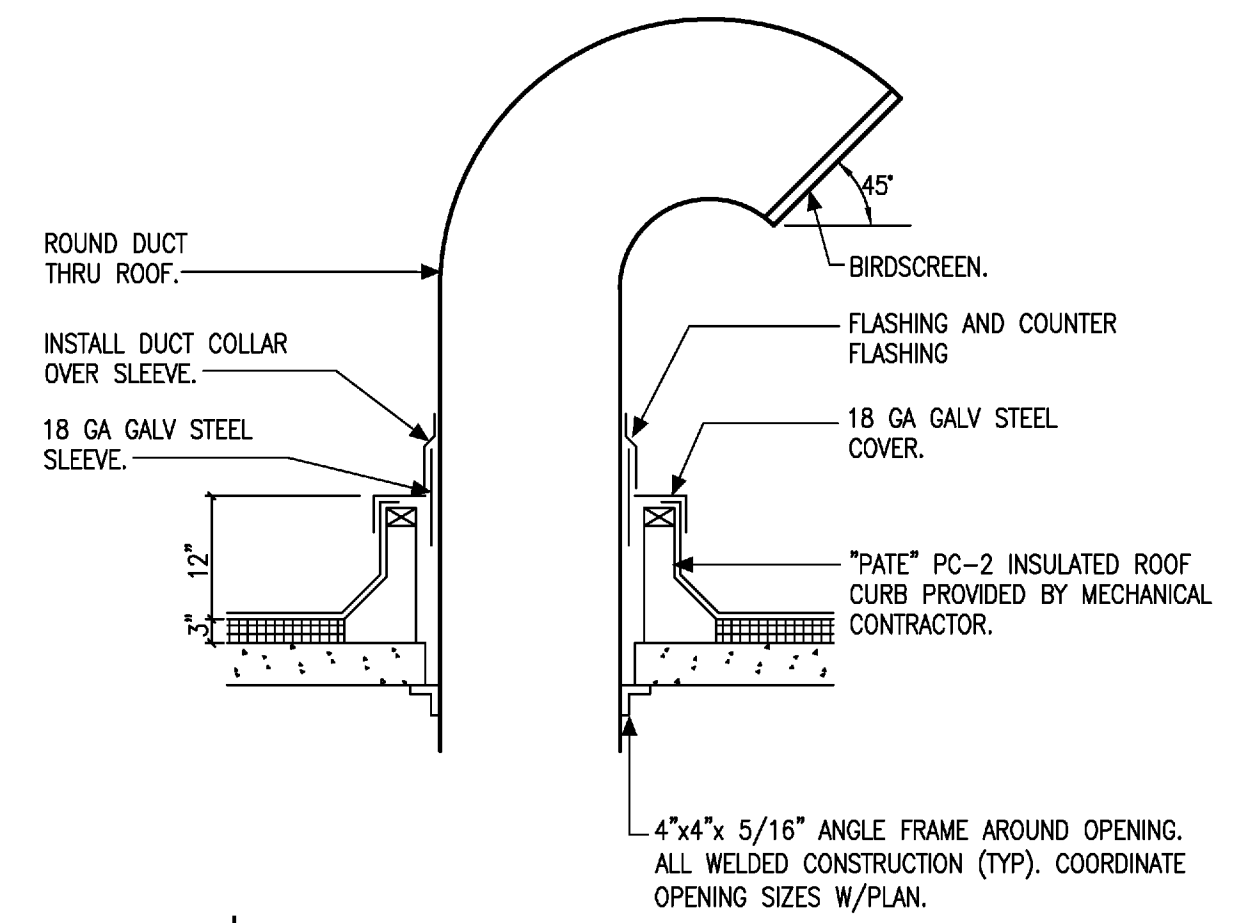


Design and construction documents as instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.

Project No:	6871
Drawn By:	AEU
Date	Issue
12-13-2018	Prelim Review
01-25-2019	Owner Review
01-30-2019	Bld & Permit

MECHANICAL GENERAL NOTES:

- CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT TO INSTALL A COMPLETE AND OPERATION HEATING AND COOLING SYSTEM.
- CONTRACTOR SHALL PROVIDE ALL REQUIRED HVAC PERMITS.
- THE CONTRACTOR SHALL COMPLY WITH NFPA-90A AND ALL APPLICABLE CODES.
- ALL HVAC WORK TO BE PERFORMED SHALL BE IN COMPLIANCE WITH ALL STATE AND LOCAL CODES.
- FLEXIBLE DUCT SHALL COMPLY WITH SMACNA, ALL LOCAL CODES, U.L. RATING, AND NOT EXCEED FIVE FEET IN LENGTH. SHEET METAL DUCT, WHERE REQUIRED BY LOCAL CODES, SHALL BE LINED WITH 1" MATT FACED DUCTLINER IN THE FIRST 10 (TEN) FEET OF THE RETURN AND SUPPLY DUCT STARTING FROM THE HVAC UNIT. AFTER THE FIRST 10 (TEN) FEET THE USE OF 1" DUCT WRAP SHALL BE ACCEPTABLE WORK MATERIAL TO BE VERIFIED WITH CEILING ACCESSIBILITY RATING.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SWITCHES, DISCONNECTS, AND CONTROL WIRING.
- ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS, ALLOW FOR DUCT INSULATION.
- THE CONTRACTOR SHALL PROVIDE A WRITTEN GUARANTEE THAT SHALL WARRANT ALL WORKMANSHIP AND MATERIALS FOR ONE (1) YEAR FROM THE FINAL WORK ACCEPTANCE BY THE OWNER.
- FILTERS SHALL BE OF THE DISPOSABLE TYPE AND SHALL BE MERV-8, PROVIDE TWO SETS, ONE DURING CONSTRUCTION AND ONE FOR USE AFTER OCCUPANCY.
- CONTRACTORS SHALL INSTALL ALL NECESSARY OFFSETS, BENDS, AND TRANSITIONS REQUIRED TO PROVIDE A COMPLETE SYSTEM AT NO ADDITIONAL COST TO THE OWNER.
- COORDINATE LOCATION OF ALL CEILING DIFFUSERS, GRILLES AND REGISTERS IN THE FIELD WITH THE ELECTRICIAN TO PREVENT CONFLICT WITH LIGHTS AND ARCHITECTURAL ELEMENTS.
- ALL WORK OF THIS TRADE SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID ANY INTERFERENCES THAT MAY DELAY PROGRESS DURING CONSTRUCTION.
- THE MECHANICAL CONTRACTOR SHALL TEST AND BALANCE TO THE AIR QUANTITIES ON THE PLAN AND PROVIDE A T&B REPORT.
- CONTRACTOR SHALL INSTALL MANUAL BALANCING DAMPERS AT ALL SUPPLY AIR BRANCH DUCTWORK RUN OUTS.
- CONTRACTOR SHALL INSTALL TURNING VANES AT ALL DUCTWORK TEES AND 90 DEGREE ELBOWS.
- ALL SHEET METAL DUCTWORK SHALL COMPLY WITH SMACNA STANDARDS. ALL DUCTWORK JOINTS SHALL BE TAPED AND SEALED.
- CONTRACTOR SHALL PROVIDE EQUIPMENT OF THE SCHEDULED CAPACITIES DESIGNED.



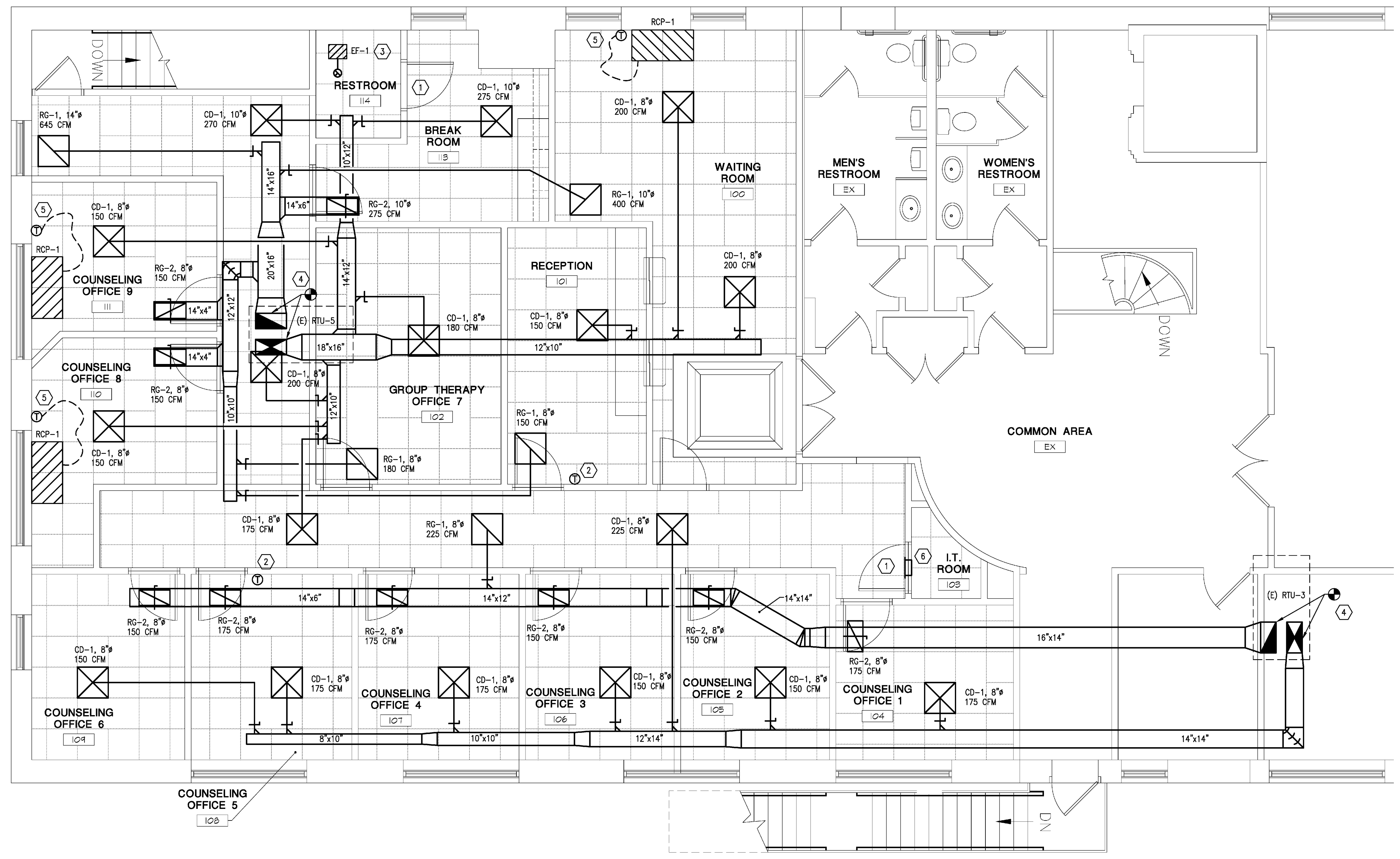
CODED NOTES:

- UNDERCUT DOOR 1"
- PROVIDE NEW THERMOSTAT, HONEYWELL MODEL RTH7500 WITH AUTO HEAT/COOL CHANGEOVER. PROVIDE CLEAR PLASTIC LOCKING COVER.
- INSTALL 6" EXHAUST DUCT UP THRU ROOF FROM EXHAUST FAN. TERMINATE WITH GOOSENECK. SEE DETAIL ON THIS SHEET.
- EXTEND AND CONNECT NEW DUCTWORK TO (E) SA AND RA DROPS FROM (E) RTUs.
- PROVIDE THERMOSTAT, HONEYWELL MODEL RLV4300, WITH INSULATED BACKING PLATE AND CLEAR PLASTIC LOCKING COVER.
- INSTALL 12"x6" GRILLE ABOVE DOOR IN WALL. GRILLE TITUS MODEL 300RL

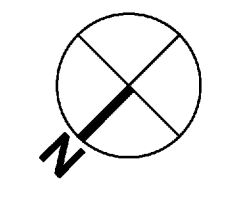
NOTE: TEST AND SERVICE ALL UNITS AND INSTALL NEW FILTERS AT THE END OF CONSTRUCTION.

DEMO ALL (E) DUCTWORK AND DIFFUSERS BACK TO RTU DROPS

MECHANICAL SYMBOL/ABBREVIATION LEGEND			
SYMBOL	DESCRIPTION	ABBREVIATION	DESCRIPTION
	THERMOSTAT	AFF	ABOVE FINISHED FLOOR
	VOLUME DAMPER	CD	CEILING DIFFUSER
	SUPPLY GRILLE	(E)	EXISTING
	RETURN GRILLE	EF	EXHAUST FAN
	END OF CONTRACT, CONNECT TO EXISTING	GC	GENERAL CONTRACTOR
	SUPPLY	OA	OUTSIDE AIR
	RETURN/O.A.	RA	RETURN AIR
	TURNING VANES	RCP	RADIANT CEILING PANEL
	EXHAUST	RG	RETURN GRILLE
		RTU	ROOFTOP UNIT
		SG	SUPPLY GRILLE
		SA	SUPPLY AIR



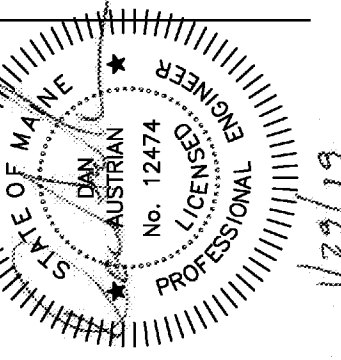
1 | MECHANICAL PLAN
 1/4" = 1'-0"





Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
02/25/2019

MICHAEL CRISLIP ARCHITECT
26001 Emery Road, Suite 400
Cleveland, Ohio 44128
216.223.3200 mycreative.com



Design and construction documents as instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.

VENTILATION SCHEDULE based on IMC 2015										
Zone Identification	Occupancy Category	Zone Floor Area Az (ft2)	Area Outdoor Airflow Rate Ra (CFM/ft2)	Occupant Density (#/1000ft2)	Zone Population Pz (People)	People Outdoor Airflow Rate Rp (CFM/person)	Zone Air Effectiveness Ez	Zone Outdoor Airflow Rate Vz (CFM)	Actual Provided Outdoor Airflow (CFM)	Mechanical Unit
100 Waiting Room	Reception Areas	353	0.06	30	11	5	0.80	95	117	RTU-5
101 Reception	Office Space	150	0.06	-	3	5	0.80	30	44	RTU-5
102 Group Therapy Office 7	Office Space	200	0.06	-	6	5	0.80	53	53	RTU-5
104 Counseling Office 1	Office Space	116	0.06	-	2	5	0.80	21	26	RTU-3
105 Counseling Office 2	Office Space	117	0.06	-	2	5	0.80	21	22	RTU-3
106 Counseling Office 3	Office Space	117	0.06	-	2	5	0.80	21	22	RTU-3
107 Counseling Office 4	Office Space	126	0.06	-	2	5	0.80	22	26	RTU-3
108 Counseling Office 5	Office Space	126	0.06	-	2	5	0.80	22	26	RTU-3
109 Counseling Office 6	Office Space	120	0.06	-	2	5	0.80	22	22	RTU-3
110 Counseling Office 8	Office Space	134	0.06	-	2	5	0.80	23	44	RTU-5
111 Counseling Office 9	Office Space	118	0.06	-	2	5	0.80	21	44	RTU-5
113 Break Room	Break Rooms	132	0.06	25	4	5	0.80	35	80	RTU-5
Corridors	Corridors	488	0.06	0	0	0	0.80	37	221	RTU-3/RTU-5
Totals:		2297						422	745	

NOTE: FOR ZONES HAVING OCCUPANT DENSITIES INDICATED WITH A DASH (-), ZONE POPULATIONS WERE INPUT TO REFLECT LIFESTANCE NEEDS.

EXHAUST FAN SCHEDULE									
MARK	MANUFACTURER	MODEL	TOTAL CFM	E.S.P. *WG	FAN RPM	INPUT WATTS	POWER V/PH	SONES	NOTES
EF-1	GREENHECK	SP-B90	73	0.237	700	20	115/1	1.3	1

NOTES:
1. CEILING MOUNTED, INTERLOCK WITH LIGHTS, VIBRATION ISOLATION KIT

RADIANT CEILING PANEL SCHEDULE							
MARK	MANUFACTURER	MODEL	TOTAL WATT	SIZE	POWER V/PH	AMPS	NOTES
RCP-1	MARLEY	CP621F	625	24"x48"	120/1	5.2	1-2

NOTES:
1. COLOR TO MATCH CEILING TILES
2. PROVIDE WITH LINE VOLTAGE THERMOSTAT

DIFFUSERS AND GRILLES							
MARK	MANUFACTURER	MODEL	MATERIAL	FRAME SIZE	MOUNT	MAX NC	NOTES
CD-1	TITUS	OMNI	STEEL	24"x24"	LAY-IN	25	1
RG-1	TITUS	PAR	STEEL	24"x24"	LAY-IN	25	1
RG-2	TITUS	PAR	STEEL	12"x24"	LAY-IN	25	1

NOTES:
1. CONTRACTOR SHALL CONFIRM EXACT LOCATION OF GRILLES WITH GENERAL CONTRACTOR, TENANT & ARCHITECT PRIOR TO ANY WORK.
PAINT GRILLES WHITE.

EXISTING ROOFTOP UNIT SCHEDULE										
MARK	MANUFACTURER	MODEL	TONS	SUPPLY CFM	OA CFM	POWER VOLT/PH	MCA	MOCP	GAS INPUT MBH	NOTES
RTU-3	YORK	D7CG036	3	1200	175	208/3	20.0	30	100	1,2
RTU-5	YORK	D7CG060	5	1950	570	208/3	27.9	40	125	1,2

NOTES:
1. REBALANCE SA AND OA TO QUANTITIES INDICATED IN SCHEDULE.
2. EXISTING RTU TO REMAIN. REPLACE BELTS & FILTERS, COMB COILS, ETC. TO REFURBISH UNIT TO LIKE NEW CONDITION.

LifeStance
HEALTH
TENANT IMPROVEMENT
53 BAXTER BOULEVARD, UNIT #3
PORTLAND, ME 04101

Project No: 6571
Drawn By: AEU
Date Issue: 12-13-2018
Date Preim Review: 01-25-2019
Date Owner Review: 01-30-2019
Date Bid & Permit: 01-30-2019

M2.0

MECHANICAL SCHEDULES

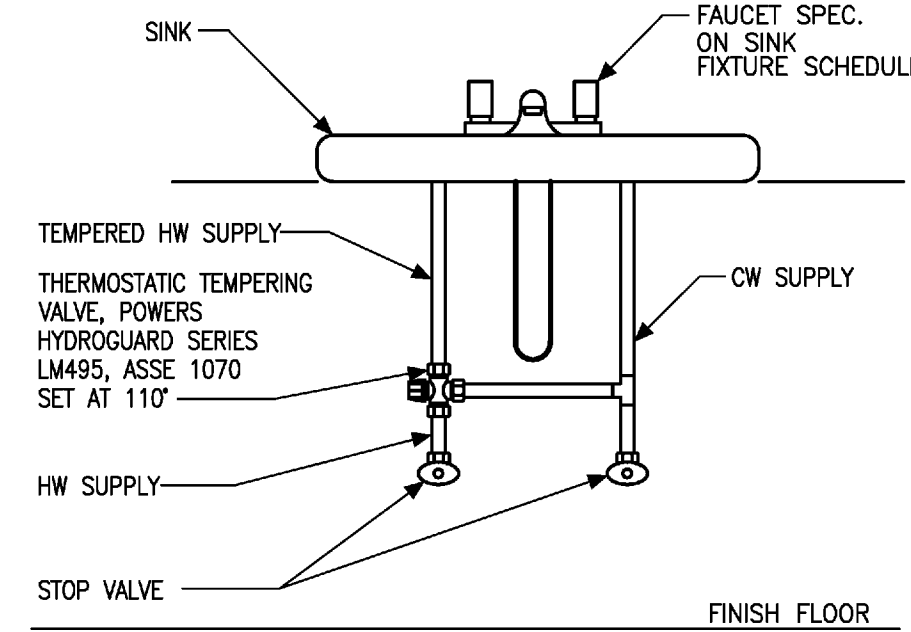


Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
02/25/2019

PLUMBING GENERAL NOTES:

- A. PLUMBING CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATIONS AND SIZES OF ALL UTILITIES, INCLUDING THE DEPTHS OF ALL BELOW GRADE SANITARY SEWERS, PRIOR TO START OF WORK. THIS DRAWING IS NOT INTENDED TO INDICATE ALL EXISTING UTILITIES.
- B. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID AND FIELD VERIFY EXISTING CONDITIONS TO ENSURE THAT THE WORK REPRESENTED ON THE DRAWINGS AND IN THESE SPECIFICATIONS CAN BE INSTALLED AS INDICATED. CONTRACTOR SHALL TAKE ALL INTERFERENCES INTO CONSIDERATION. IDENTIFY POTENTIAL INTERFERENCES WITH NEW WORK AND REPORT TO ARCHITECT IMMEDIATELY. PROVIDE ALL NECESSARY OFFSETS TO SUIT FIELD CONDITIONS AS REQUIRED.
- C. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS RELATED TO THE INSTALLATION OF THE WORK.
- D. ALL WORK SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES, LAWS, ACTS AND ALL AUTHORITIES HAVING JURISDICTION AND LANDLORD'S CRITERIA.
- E. MAINTAIN ALL MANUFACTURER'S RECOMMENDED SERVICE CLEARANCES FOR ALL FIXTURES AND EQUIPMENT. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF PLUMBING FIXTURES.
- F. ALL HORIZONTAL FIRE PROTECTION SPRINKLER PIPING AND ALL ABOVE GRADE EXPOSED HORIZONTAL PIPING IS TO BE INSTALLED AS HIGH AS POSSIBLE. SPRINKLER CONTRACTOR SHALL COORDINATE SPRINKLER SYSTEM WITH DUCTWORK AND LIGHTS. ALL COSTS ASSOCIATED WITH RAISING SPRINKLER PIPING WHERE THE ARCHITECTURAL DESIGN CAN NOT BE ACCOMPLISHED SHALL BE THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR.
- G. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITH THE CONTRACT DOCUMENTS BEFORE COMMENCING ANY WORK.
- H. SLEEVE AND SEAL ALL PIPE PENETRATIONS OF WALLS AND FLOORS. APPLY INTUMESCENT FIRE SAFING COMPOUND AT PENETRATIONS OF FIRE-RATED WALLS AND FLOORS, MAINTAINING INTEGRITY AND RATING OF FIRE SEPARATION. SLEEVES THROUGH FLOORS SHALL EXTEND 2" ABOVE FLOOR, BE GROUTED INTO PLACE AND WATERPROOFED. PIPING THROUGH EXTERIOR WALLS SHALL BE SLEEVED AND SEALED WEATHER TIGHT WITH SILICONE CAULK.
- I. ALL DOMESTIC COLD, HOT AND TEMPERED WATER PIPING TO BE INSULATED WITH RIGID FIBERGLASS INSULATION WITH TYPE 'ASJ' JACKET. COLD WATER PIPES AND TO HAVE 1/2" THICK INSULATION. DOMESTIC HOT AND TEMPERED WATER PIPES TO HAVE 1" THICK INSULATION.
- J. WHEN SUBMITTING SHOP DRAWINGS FOR PLUMBING FIXTURES, PLUMBING CONTRACTOR TO PROVIDE SEPARATE WATER CLOSET FIXTURE CUTS SHOWING FLUSH HANDLES ON APPROPRIATE SIDES OF TANK FOR ADA ACCESS.
- K. PVC PIPING IS NOT ALLOWED EXCEPT FOR UNDERGROUND SANITARY LINES.
- L. SPRINKLER HEADS WHICH OCCUR IN DRYWALL, METAL AND ACOUSTIC CEILINGS ARE TO BE CONCEALED AND CUSTOM COLORED TO MATCH CEILING COLOR.

PLUMBING SYMBOLS/ABBREVIATION LEGEND			
SYMBOL	DESCRIPTION	ABBREVIATION	DESCRIPTION
-----	DOMESTIC HOT WATER	A.F.F.	ABOVE FINISH FLOOR
-----	DOMESTIC COLD WATER	GC	GENERAL CONTRACTOR
-----	SANITARY VENT	PC	PLUMBING CONTRACTOR
-----	SANITARY SEWER	VTR	VENT THRU ROOF
⊙	END OF CONTRACT, CONNECT TO EXISTING		
—○—	PIPE DROP		
—○—	PIPE RISE		
—○—	PIPE BREAK		



NOTE:
A. INSULATE ALL EXPOSED WASTE AND SUPPLY PIPING UNDER LAVATORIES WITH THE HANDI-LAV GUARD INSULATION KIT BY TRUEBRO OR EQUAL.

6 TEMPERING VALVE DETAIL

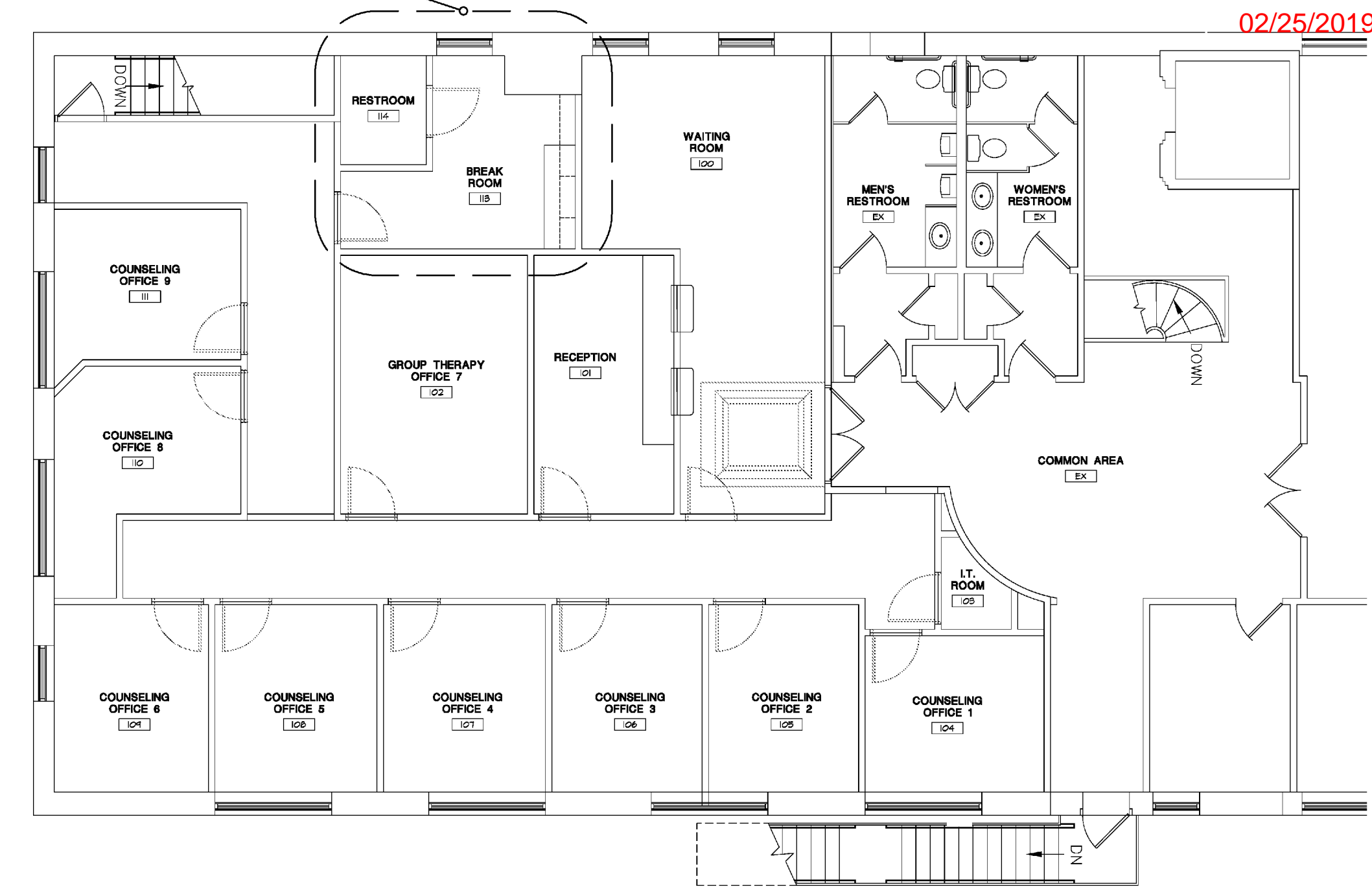
NOT TO SCALE

X CODED NOTES:

1. EXTEND AND CONNECT CW TO NEAREST EXISTING CW PIPE 3/4" OR LARGER. EXTEND AND CONNECT HW TO NEAREST EXISTING HW PIPE 1/2" OR LARGER. FIELD VERIFY LOCATION AND SIZE OF EXISTING PIPES PRIOR TO BID.
2. INSTALL "GUY GRAY" WHITE POWDER COATED METAL ICE MAKER OUTLET BOX BEHIND REFRIGERATOR, STOCK #88XXX. CONNECT 1/2" CW LINE TO NEAREST CW LINE FROM BREAK ROOM SINK.
3. EXTEND AND CONNECT SANITARY TO NEAREST EXISTING SANITARY 4" OR LARGER. EXTEND AND CONNECT VENT TO NEAREST EXISTING VENT 2" OR LARGER. FIELD VERIFY LOCATION AND SIZE OF EXISTING PIPES PRIOR TO BID.

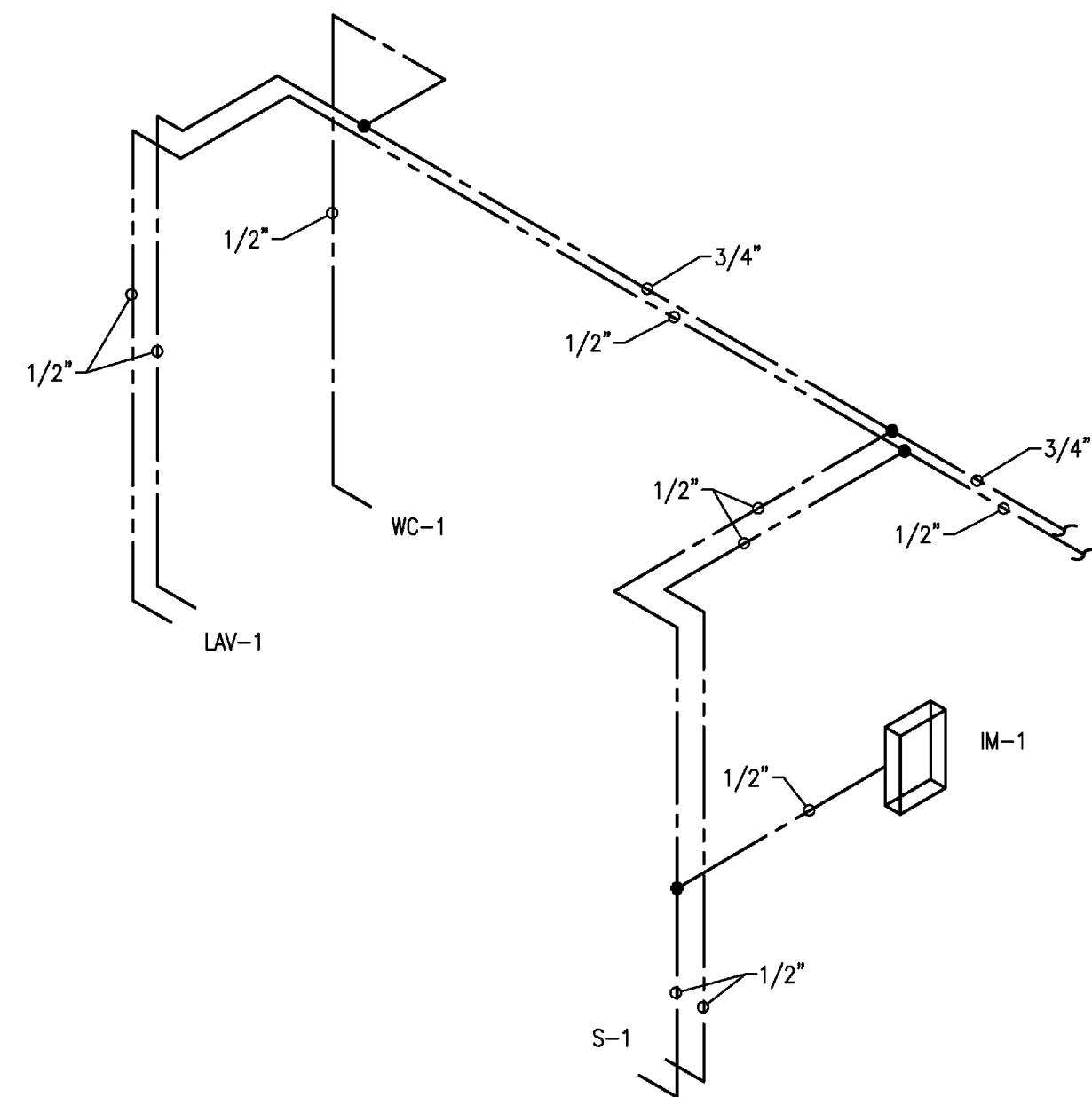
SPRINKLER SYSTEM SHALL BE RE-DESIGNED FOR NEW ROOM LAYOUT AND IS THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR.

SEE ENLARGED PLANS ON THIS SHEET



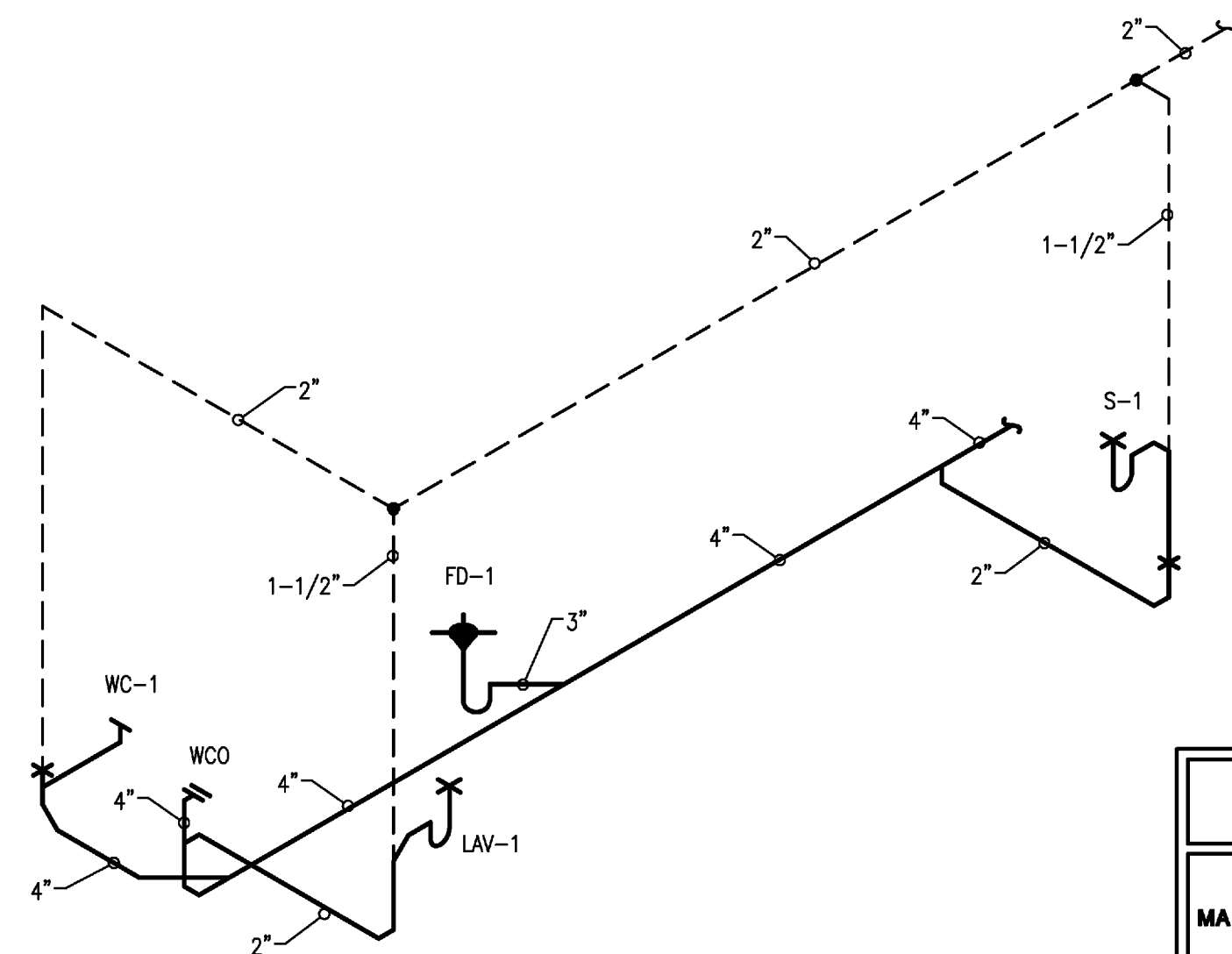
1 OVERALL PLUMBING PLAN

1/8" = 1'-0"



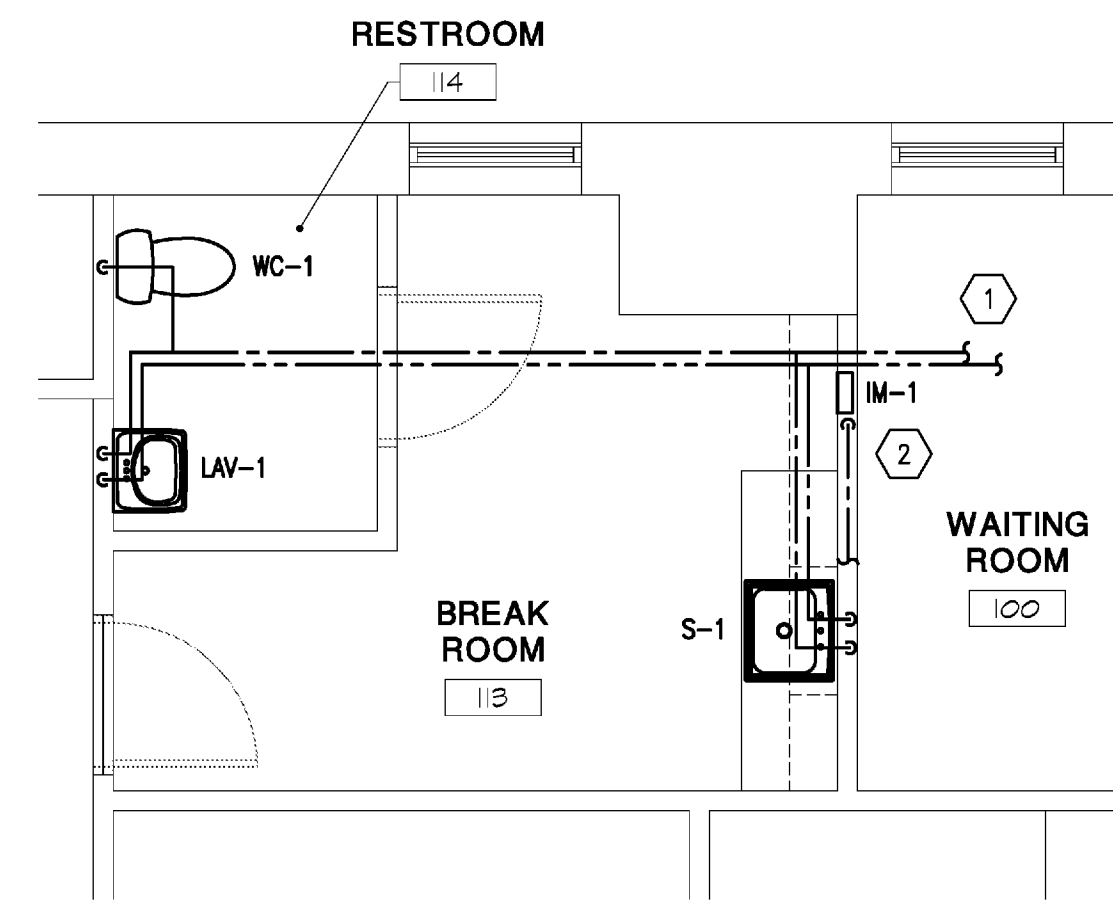
5 DOMESTIC WATER ISOMETRIC

NOT TO SCALE



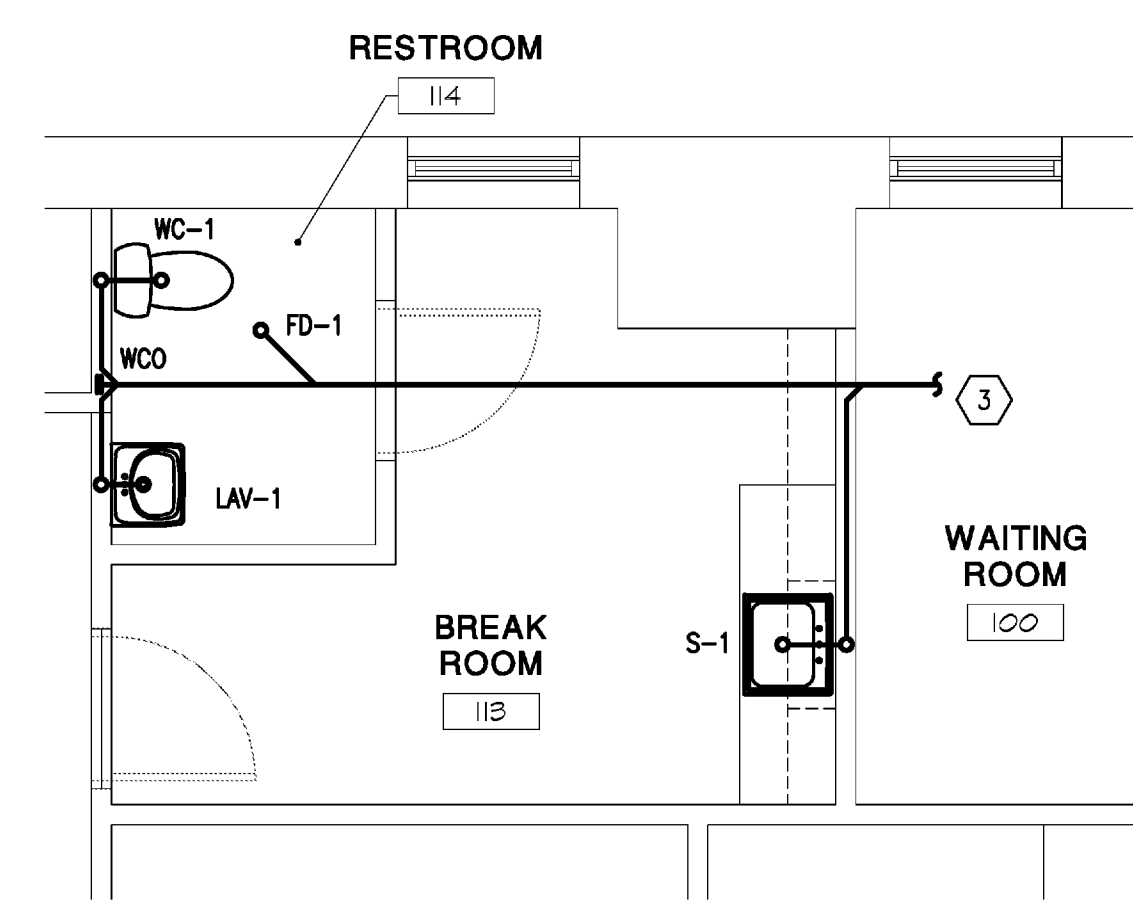
4 SANITARY ISOMETRIC

NOT TO SCALE



3 ENLARGED DOMESTIC WATER PLAN

1/4" = 1'-0"



2 ENLARGED SANITARY PLAN

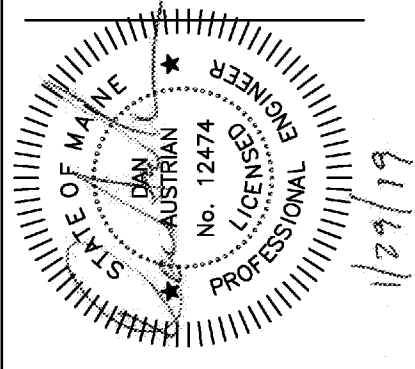
1/4" = 1'-0"

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	ITEM	MAKE	NAME	MODEL	TRIM	TRAP	STOPS	CONNECTIONS				REMARKS	NOTES
								WASTE	VENT	HW	CW		
WC-1	WATER CLOSET	AMERICAN STANDARD	VORMAX HET RIGHT HEIGHT ELONGATED 1.28_GPF	238AA.104	TANK TYPE	INTEGRAL	NOTE #3	4"	2"	-	1/2"	FLOOR MOUNT, FLUSH TANK, WITH 5055A.65C SEAT OR APPROVED EQUAL ADA COMPLIANT, TRIP LEVERS SHALL BE MOUNTED ON SIDE OF TOILET ON WIDE SIDE OF ROOM. LEFT TRIP LEVER: 238AA.104.	1,3,5
LAV-1	LAVATORY	AMERICAN STANDARD	LUCERNE	Q355.012 4" CENTERS	COLONY PRO	NOTE #2	NOTE #3	1-1/2"	1-1/2"	1/2"	1/2"	FAUCET TO BE 7075.050 SINGLE LEVER, 0.5 GPM, INSTALL WITH TEMPERING VALVE (SEE DETAIL), ADA COMPLIANT LAV AND FAUCET	1-4,6
S-1	KITCHEN SINK	ELKAY	CELEBRITY	GEGR2521	ELKAY CENTERSET	NOTE #2	NOTE #3	1-1/2"	1-1/2"	1/2"	1/2"	DRAIN - ELKAY D1125, STAINLESS STEEL WITH REMOVABLE BASKET. FAUCET TO BE #LK406HAD876, HIGH ARC SPOUT WITH WRIST BLADE HANDLES. INSTALL WITH TEMPERING VALVE (SEE DETAIL).	1-4
FD-1	FLOOR DRAIN	J.R. SMITH	-	2005-NB	-	3"	-	3"	-	-	-	WITH ROUND NICKEL BRONZE ADJUSTABLE STRAINER HEAD, CAST IRON DRAIN BODY, MEMBRANE FLASHING CLAMP.	1
WCO	WCO	J.R. SMITH	-	4402 SERIES	-	-	-	-	-	-	-	CAST IRON BODY WITH ROUND STAINLESS STEEL COVER.	1

- NOTES:
1. INSTALL SERVICE, SHUTOFF & CHECK VALVES, COCKS, STOPS, AIR CUSHIONS, VACUUM BREAKERS, AND SAFETY DEVICES WHERE REQUIRED BY CODE, SPECIFICATIONS, OR DRAWINGS.
 2. EXPOSED P-TRAPS TO BE 17 GA. CHROME PLATE WITH CLEANOUT AND ESCUTCHEON PLATE.
 3. STOPS TO BE CHROME PLATED 1/2" ANGLE VALVE WITH CHROME PLATED 12" LONG, 1/2" O.D. FLEXIBLE RISER AND ESCUTCHEON PLATE.
 4. ALL DRAINS AND WATER SUPPLY PIPING TO LAVATORIES TO BE INSULATED WITH "HANDI-LAV-GUARD" INSULATION KIT BY TRUEBRO.
 5. FLUSH VALVE HANDLES FOR ADA FIXTURES SHALL BE MOUNTED ON WIDE SIDE OF TOILET AREA.
 6. INSTALL WATTS USC-B TEMPERING VALVE. SET AT 110°.

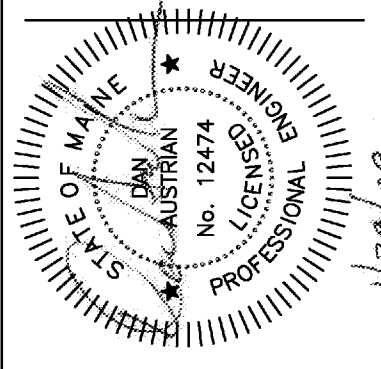
MICHAEL CRISLIP ARCHITECT
28001 Emery Road, Suite 400
Cleveland, Ohio 44128
216.223.3500
mcrcreative.com



Design and construction documents as instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.

LifeStance HEALTH
TENANT IMPROVEMENT
53 BAXTER BOULEVARD, UNIT #3
PORTLAND, ME 04101

Project No: 6871
Drawn By: AEU
Date Issue: 12-13-2018
01-25-2019
01-30-2019
Profm Review
Owner Review
Bid & Permit



Design and construction documents are instruments of service are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.

Project No: 6571
Drawn By: AEU
Date: 12-13-2018
Issue: Prelim Review
01-25-2019
Owner Review
01-30-2019
Bid & Permit

15001

GENERAL INFORMATION

A. GENERAL

- 1. CONFORM TO ALL GENERAL AND SPECIAL CONDITIONS OF CONTRACT AS SPECIFIED BY ARCHITECT, TENANT AND OWNER.
2. SPECIFICATIONS ARE APPLICABLE TO ALL CONTRACTORS AND SUBCONTRACTORS FOR MECHANICAL AND ELECTRICAL SYSTEMS
3. CONTRACTOR SHALL COMPLY WITH OWNER'S STANDARDS, FACILITY SPECIFICATIONS, RULES AND REGULATIONS. ALL OWNER'S CRITERIA SHALL BE COMPLIED WITH AND INCLUDED IN THIS BID. CHECK OTHER PLANS AND SPECIFICATIONS AND FULLY COORDINATE WITH OTHER TRADES AND ARCHITECT'S REQUIREMENTS.
4. VISIT SITE, CHECK FACILITIES AND CONDITIONS, AND VERIFY ALL UTILITY COMPANY REQUIREMENTS AND CONNECTION POINTS IN FIELD PRIOR TO STARTING WORK. TAKE ALL ITEMS INTO CONSIDERATION IN BID.
5. SYSTEMS ARE TO BE COMPLETE AND WORKABLE IN ALL RESPECTS, PLACED IN OPERATION AND PROPERLY ADJUSTED.
6. EACH CONTRACTOR SHALL PROVIDE FOR HIS OWN CLEAN-UP, REMOVAL AND LEGAL DISPOSAL OF ALL RUBBISH DAILY.
7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, AND SEQUENCES OF CONSTRUCTION AND THE SAFETY OF WORKMEN. COMPLY WITH ALL OSHA REGULATIONS.
8. NO PIPING, DUCTWORK, CONTROLS, ETC., SHALL BE INSTALLED OR ROUTED ABOVE ELECTRICAL PANELS AND EQUIPMENT OR THROUGH ELEVATOR ROOMS OR SHAFTS. THE MECHANICAL AND ELECTRICAL CONTRACTORS SHALL COORDINATE THE ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL EQUIPMENT PRIOR TO ORDERING OF EQUIPMENT. NO ADDITIONAL PAYMENT WILL BE MADE FOR LACK OF CONTRACTOR COORDINATION OF ELECTRICAL CHARACTERISTICS.
10. ALL MECHANICAL AND ELECTRICAL SYSTEM COMPONENTS SHALL BE ROUTED TIGHT TO UNDERSIDE OF STRUCTURE AND THROUGH JOISTS OR TRUSSES WHERE POSSIBLE. COORDINATE INSTALLATION TO PRESERVE HEADROOM, EQUIPMENT ACCESS, AND ARCHITECTURAL CLEARANCES FOR FINISHES, INCLUDING CEILING HEIGHTS. COORDINATE WITH ALL OTHER TRADES AND DO NOT CONFLICT WITH THE ARCHITECTURAL REQUIREMENTS FOR THE FINISHED CONSTRUCTION. PROVIDE OFFSETS WHERE REQUIRED TO COORDINATE WITH OTHER TRADES.
11. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF ALL GRILLES AND DIFFUSERS.
12. OPERATION AND MAINTENANCE MANUALS: THREE (3) BOUND SETS OF THE OPERATION AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE CONSTRUCTION REPRESENTATIVE AT TURNOVER, AND ARE REQUIRED FOR FINAL ACCEPTANCE.
13. AS-BUILT DRAWINGS: THE HVAC SUBCONTRACTOR SHALL PROGRESSIVELY RECORD ALL HVAC DRAWING CHANGES WHICH SHALL BE AVAILABLE AT ALL TIMES FOR REVIEW BY THE CONSTRUCTION REPRESENTATIVE. AN AUTOCAD COPY OF THE FINAL AS-BUILT DRAWINGS SHALL BE PROVIDED TO THE CONSTRUCTION REPRESENTATIVE AT TURNOVER. THIS AUTOCAD AS-BUILT IS REQUIRED FOR FINAL ACCEPTANCE OF THE PROJECT.

- B. CODES, STANDARDS AND REGULATIONS
1. CONFORM TO ALL APPLICABLE CODES, GOVERNMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS, AND NATIONAL ELECTRICAL CODE.
2. OBTAIN PERMITS AND PAY ALL FEES. ARRANGE FOR ALL REQUIRED INSPECTIONS AND APPROVALS.
C. RELATED WORK SPECIFIED ELSEWHERE
1. OPENINGS AND CHASES, WHEN SHOWN ON ARCHITECTURAL DRAWINGS.

- D. DRAWINGS
1. THE SYSTEMS AS SHOWN ON THE CONTRACT DRAWINGS ARE DIAGRAMMATIC.
2. THE INTENT IS FOR COMPLETE AND WORKABLE SYSTEMS. THE DRAWINGS AND THESE NOTES ARE TO BE USED TOGETHER AS A BASIS OF SHOWING AND/OR DESCRIBING THE SYSTEM REQUIREMENTS FOR THE FACILITY
3. VERIFY ALL DIMENSIONS AND CLEARANCES BY FIELD MEASUREMENT AND CHECK FOR INTERFERENCES PRIOR TO STARTING WORK.

- E. BASE EQUIPMENT AND MATERIALS AND SUBSTITUTIONS
1. ALL EQUIPMENT AND MATERIALS SHALL BE NEW, FREE OF DEFECTS AND U.L. LABELED.
2. SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT, FIXTURES, ETC., INCLUDING ALL ACCESSORIES TO BE FURNISHED. BASE BID MANUFACTURERS AND MODELS ARE INCLUDED IN SPECIFICATIONS OR LISTED IN SCHEDULE ON DRAWING. ANY OTHER MANUFACTURER OR MODEL IS A SUBSTITUTION.
3. SUBSTITUTIONS ARE SUBJECT TO THE APPROVAL OF THE OWNER AND SHALL BE LISTED ON THE FORM OF PROPOSAL FOR THE OWNER'S CONSIDERATION PRIOR TO CONTRACT AWARD. IF SUBSTITUTION IS SUBMITTED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO EVALUATE IT AND CERTIFY THAT THE SUBSTITUTION IS EQUIVALENT IN ALL RESPECTS TO THE BASE SPECIFICATIONS.
4. IF SUBSTITUTIONS ARE APPROVED, NOTIFY ALL OTHER CONTRACTORS, SUBCONTRACTORS OR TRADES AFFECTED BY SUBSTITUTION AND FULLY COORDINATE. ANY COSTS RESULTING FROM SUBSTITUTION, WHETHER BY CONTRACTOR OR OTHERS, SHALL BE RESPONSIBILITY OF AND PAID FOR BY SUBSTITUTING CONTRACTOR.
5. ALL EQUIPMENT SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO CHECK AND CONFORM TO THESE REQUIREMENTS PRIOR TO STARTING WORK.

- F. CHECK, TEST, START, ADJUST, BALANCE AND INSTRUCTIONS
1. AFTER INSTALLATION, CHECK ALL EQUIPMENT, AND PERFORM START UP IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
2. ALL PIPING SHALL BE TESTED AND FREE OF LEAKS.
3. BALANCE ALL SYSTEMS, CALIBRATE CONTROLS, CHECK FOR PROPER OPERATING SEQUENCE UNDER ALL CONDITIONS, AND MAKE ALL NECESSARY ADJUSTMENTS.
4. ALL WIRING SHALL BE FULLY TESTED AND MADE FREE OF GROUNDS AND SHORT CIRCUITS.
5. INSTRUCT OWNER IN OPERATION OF SYSTEMS AND SUBMIT OPERATING AND MAINTENANCE MANUAL ON ALL EQUIPMENT AND SYSTEMS.
6. PROVIDE ENGRAVED LABELS AND IDENTIFICATION TAGS FOR ALL PIPING SYSTEMS, VALVES AND EQUIPMENT.
7. PROVIDE TYPED PANEL DIRECTORIES AND ENGRAVED LABELS FOR ALL PANELS AND EQUIPMENT.

- G. CUTTING, PATCHING AND DRILLING
1. ALL CUTTING AND CHASING OF THE BUILDING CONSTRUCTION REQUIRED FOR THIS WORK SHALL BE BY THIS CONTRACTOR UNLESS SHOWN ON ARCHITECTURAL DRAWINGS AND CONFIRMED AS TO SIZE AND LOCATION PRIOR TO NEW CONSTRUCTION. CUTTING SHALL BE IN A NEAT AND WORKMANLIKE MANNER.
2. NEATLY SAW CUT ALL RECTANGULAR OPENINGS, SET SLEEVE THROUGH OPENING, AND FINISH PATCH OR PROVIDE TRIM FLANGE AROUND OPENING.
3. NEATLY SAW CUT FLOORS FOR SEWER INSTALLATION AND PATCH FLOOR TO MATCH EXISTING, INCLUDING FLOOR COVERING.
4. CORE DRILL AND SLEEVE ALL ROUND OPENINGS.
5. CUT AND PATCH EXISTING BUILDING WALLS AS REQUIRED FOR DUCT INSTALLATION. PROVIDE STEEL LINEL ABOVE OPENING WIDER THAN 10". SEE STRUCTURAL DRAWINGS FOR SIZES. PROVIDE ESCUTCHEONS OR 2" WIDE SHEET METAL FLANGES AROUND ALL EXPOSED PENETRATIONS.
6. DO NOT CUT ANY STRUCTURAL COMPONENTS WITHOUT ARCHITECT'S APPROVAL.
7. PATCH AND FINISH TO MATCH ADJACENT AREAS THAT HAVE BEEN CUT, DAMAGED OR MODIFIED TO INSTALL EQUIPMENT FOR THIS PROJECT.
8. CUTTING OF ROOF, INSTALLATION OF CURBS, AND PATCHING OF ROOF SHALL BE BY A CERTIFIED ROOFING CONTRACTOR, APPROVED BY BUILDING OWNER, AND PAID FOR BY THIS CONTRACTOR.
9. FIRE STOP ALL PENETRATIONS OF FIRE RATED CONSTRUCTION IN A CODE APPROVED MANNER, USING UL LISTED FIRE RATED MATERIALS.
10. ALL CONTRACTORS SHALL CONFIRM WITH OWNER, PRIOR TO BID, TIMES AVAILABLE FOR NOISE PRODUCING WORK SUCH AS CUTTING AND CORE DRILLING OF FLOORS, WALLS, ETC., AS WELL AS TIMES FOR WORK WHICH REQUIRE ACCESS INTO ADJOINING AREAS. INCLUDE ANY PREMIUM TIME REQUIRED IN BID.

- H. WARRANTY
1. FULLY WARRANT ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE.
2. REPAIR OR REPLACE WITHOUT CHARGE TO THE OWNER ALL ITEMS FOUND DEFECTIVE DURING THE WARRANTY PERIOD.

SECTION 15075

MECHANICAL IDENTIFICATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. NAMEPLATES.
B. TAGS.
C. PIPE MARKERS.
PART 2 PRODUCTS
2.01 IDENTIFICATION APPLICATIONS
A. DAMPERS: CEILING TACKS, WHERE LOCATED ABOVE LAY-IN CEILING.
B. PIPING: PIPE MARKERS.
C. SMALL-SIZED EQUIPMENT: TAGS.
D. THERMOSTATS: NAMEPLATES.
E. VALVES: TAGS AND CEILING TACKS WHERE LOCATED ABOVE LAY-IN CEILING.
2.02 NAMEPLATES
A. DESCRIPTION: LAMINATED THREE-LAYER PLASTIC WITH ENGRAVED LETTERS.
1. LETTER COLOR: WHITE.
2. LETTER HEIGHT: 1/4 INCH.
3. BACKGROUND COLOR: BLACK.
2.03 TAGS
A. PLASTIC TAGS: LAMINATED THREE-LAYER PLASTIC WITH ENGRAVED BLACK LETTERS ON LIGHT CONTRASTING BACKGROUND COLOR. TAG SIZE MINIMUM 1-1/2 INCH DIAMETER.
B. METAL TAGS: BRASS WITH STAMPED LETTERS; TAG SIZE MINIMUM 1-1/2 INCH DIAMETER WITH SMOOTH EDGES.
2.04 PIPE MARKERS
A. PLASTIC PIPE MARKERS: FACTORY FABRICATED, FLEXIBLE, SEMI-RIGID PLASTIC, PREFORMED TO FIT AROUND PIPE OR PIPE COVERING; MINIMUM INFORMATION INDICATING FLOW DIRECTION ARROW AND IDENTIFICATION OF FLUID BEING CONVEYED.
B. PLASTIC TAPE PIPE MARKERS: FLEXIBLE, VINYL FILM TAPE WITH PRESSURE SENSITIVE ADHESIVE BACKING AND PRINTED MARKINGS.
C. COLOR CODE AS FOLLOWS:
1. POTABLE, COOLING, BOILER, FEED, OTHER WATER: GREEN WITH WHITE LETTERS.
2. FIRE QUENCHING FLUIDS: RED WITH WHITE LETTERS.
2.05 CEILING TACKS
A. DESCRIPTION: STEEL WITH 3/4 INCH DIAMETER COLOR CODED HEAD.
PART 3 EXECUTION
3.01 PREPARATION
A. DECREASE AND CLEAN SURFACES TO RECEIVE ADHESIVE FOR IDENTIFICATION MATERIALS.
B. PREPARE SURFACES IN ACCORDANCE WITH SECTION 09900 FOR STENCIL PAINTING.
3.02 INSTALLATION
A. INSTALL PLASTIC NAMEPLATES WITH CORROSION-RESISTANT MECHANICAL FASTENERS, OR ADHESIVE. APPLY WITH SUFFICIENT ADHESIVE TO ENSURE PERMANENT ADHESION AND SEAL WITH CLEAR LACQUER.
B. INSTALL TAGS WITH CORROSION RESISTANT CHAIN.
C. INSTALL PLASTIC PIPE MARKERS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
D. USE TAGS ON PIPING 3/4 INCH DIAMETER AND SMALLER.
1. IDENTIFY SERVICE, FLOW DIRECTION, AND PRESSURE.
2. INSTALL IN CLEAR VIEW AND ALIGN WITH AXIS OF PIPING.
3. LOCATE IDENTIFICATION NOT TO EXCEED 20 FEET ON STRAIGHT RUNS INCLUDING RISERS AND DROPS, ADJACENT TO EACH VALVE AND TEE, AT EACH SIDE OF PENETRATION OF STRUCTURE OR ENCLOSURE, AND AT EACH OBSTRUCTION.
G. LOCATE CEILING TACKS TO LOCATE VALVES OR DAMPERS ABOVE LAY-IN PANEL CEILINGS. LOCATE IN CORNER OF PANEL CLOSEST TO EQUIPMENT.

- 4. INSERT MATERIAL: HYDROUS CALCIUM SILICATE INSULATION OR OTHER HEAVY DENSITY INSULATING MATERIAL SUITABLE FOR THE PLANNED TEMPERATURE RANGE.
I. CONTINUE INSULATION THROUGH WALLS, SLEEVES, PIPE HANGERS, AND OTHER PIPE PENETRATIONS. FINISH AT SUPPORTS, PROTRUSIONS, AND INTERRUPTIONS. AT FIRE SEPARATIONS.
J. PIPE EXPOSED IN MECHANICAL EQUIPMENT ROOMS OR FINISHED SPACES (LESS THAN 10 FEET ABOVE FINISHED FLOOR) WHERE SUBJECT TO DAMAGE: FINISH WITH PVC JACKET AND FITTINGS COVERS.
3.03 SCHEDULES
A. PLUMBING SYSTEMS:
1. DOMESTIC HOT AND COLD WATER SUPPLY:
a. GLASS FIBER INSULATION:
1) PIPE SIZE RANGE: 1/2-3 INCH.
2) THICKNESS: 1/2 INCH.
2. PLUMBING VENTS WITHIN 10 FEET OF THE EXTERIOR:
SECTION 15086
DUCT INSULATION
PART 1 GENERAL
1.01 SECTION INCLUDES
A. DUCT INSULATION.
B. DUCT LINER.
1.02 SUBMITTALS
A. PRODUCT DATA: PROVIDE PRODUCT DESCRIPTION, THERMAL CHARACTERISTICS, LIST OF MATERIALS AND THICKNESS FOR EACH SERVICE, AND LOCATIONS.
B. MANUFACTURER'S INSTRUCTIONS: INDICATE INSTALLATION PROCEDURES NECESSARY TO ENSURE ACCEPTABLE WORKMANSHIP AND THAT INSTALLATION STANDARDS WILL BE ACHIEVED.
1.03 QUALITY ASSURANCE
A. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING PRODUCTS OF THE TYPE SPECIFIED IN THIS SECTION WITH NOT LESS THAN THREE YEARS OF DOCUMENTED EXPERIENCE.
1.04 DELIVERY, STORAGE, AND HANDLING
A. ACCEPT MATERIALS ON SITE IN ORIGINAL FACTORY PACKAGING, LABELED WITH MANUFACTURER'S IDENTIFICATION, INCLUDING PRODUCT DENSITY AND THICKNESS.
B. PROTECT INSULATION FROM WEATHER AND CONSTRUCTION TRAFFIC, DIRT, WATER, CHEMICAL, AND MECHANICAL DAMAGE, BY STORING IN ORIGINAL WRAPPING.
1.05 FIELD CONDITIONS
A. MAINTAIN AMBIENT TEMPERATURES AND CONDITIONS REQUIRED BY MANUFACTURERS OF ADHESIVES, MASTICS, AND INSULATION CEMENTS.
B. MAINTAIN TEMPERATURE DURING AND AFTER INSTALLATION FOR MINIMUM PERIOD OF 24 HOURS.
PART 2 PRODUCTS
2.01 REQUIREMENTS FOR ALL PRODUCTS OF THIS SECTION
A. SURFACE BURNING CHARACTERISTICS: FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50, MAXIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM E 84, NFPA 255, OR UL 723.
2.02 GLASS FIBER, FLEXIBLE (THICKNESS SHALL PROVIDE R VALUE REQUIRED BY GOVERNING ENERGY CONSERVATION CODE FOR SPECIFIC APPLICATION)
A. INSULATION: FLEXIBLE, NONCOMBUSTIBLE BLANKET.
1. 'K' VALUE: 0.36 AT 75 DEGREES F.
2. MAXIMUM SERVICE TEMPERATURE: 450 DEGREES F.
3. MAXIMUM WATER VAPOR SORPTION: 5.0 PERCENT BY WEIGHT.
B. VAPOR BARRIER JACKET:
1. KRAFT PAPER WITH GLASS FIBER YARN AND BONDED TO ALUMINIZED FILM.
2. MOISTURE VAPOR PERMEABILITY: 0.02 PERM INCH.
3. SECURE WITH PRESSURE SENSITIVE TAPE.
C. VAPOR BARRIER TAPE:
1. KRAFT PAPER REINFORCED WITH GLASS FIBER YARN AND BONDED TO ALUMINIZED FILM, WITH PRESSURE SENSITIVE RUBBER BASED ADHESIVE.
D. TIE WIRE: ANNEALED STEEL, 16 GAGE.
2.03 DUCT LINER
A. INSULATION:
1. INCOMBUSTIBLE GLASS FIBER; FLEXIBLE BLANKET, RIGID BOARD, AND PREFORMED ROUND LINER BOARD; IMPREGNATED SURFACE AND EDGES COATED WITH POLY VINYL ACETATE POLYMER, OR ACRYLIC POLYMER SHOWN TO BE FUNGUS AND BACTERIA RESISTANT.
2. APPARENT THERMAL CONDUCTIVITY: MAXIMUM OF 0.31 AT 75 DEGREES F.
3. SERVICE TEMPERATURE: UP TO 250 DEGREES F.
4. RATED VELOCITY ON COATED AIR SIDE FOR AIR EROSION: 5,000 FPM, MINIMUM.
5. MINIMUM NOISE REDUCTION COEFFICIENTS:
a. 1 INCH THICKNESS: 0.45.
B. ADHESIVE: WATERPROOF, FIRE-RETARDANT TYPE.
C. LINER FASTENERS: GALVANIZED STEEL, SELF-ADHESIVE PAD, IMPACT APPLIED, OR WELDED WITH INTEGRAL, OR PRESS-ON HEAD.
PART 3 EXECUTION
3.01 EXAMINATION
A. VERIFY THAT DUCTS HAVE BEEN TESTED BEFORE APPLYING INSULATION MATERIALS.
B. VERIFY THAT SURFACES ARE CLEAN, FOREIGN MATERIAL REMOVED, AND DRY.
3.02 INSTALLATION
A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. INSTALL IN ACCORDANCE WITH NAIMA NATIONAL INSULATION STANDARDS.
C. EXPOSED PIPING: LOCATE INSULATION AND COVER SEAMS IN LEAST VISIBLE LOCATIONS.
D. INSULATED PIPES CONVEYING FLUIDS BELOW AMBIENT TEMPERATURE: INSULATE ENTIRE SYSTEM INCLUDING FITTINGS, VALVES, UNIONS, FLANGES, STRAINERS, FLEXIBLE CONNECTIONS, PUMP BODIES, AND EXPANSION JOINTS.
E. GLASS FIBER INSULATED PIPES CONVEYING FLUIDS BELOW AMBIENT TEMPERATURE:
1. PROVIDE VAPOR BARRIER JACKETS, FACTORY-APPLIED OR FIELD-APPLIED. SECURE WITH SELF-SEALING LONGITUDINAL LAPS AND BUTT STRIPS WITH PRESSURE SENSITIVE ADHESIVE. SECURE WITH OUTWARD CLINCH EXPANDING STAPLES AND VAPOR BARRIER MASTIC.
2. INSULATE FITTINGS, JOINTS, AND VALVES WITH MOLDED INSULATION OF LIKE MATERIAL AND THICKNESS AS ADJACENT PIPE. FINISH WITH GLASS CLOTH AND VAPOR BARRIER ADHESIVE OR PVC FITTING COVERS.
F. FOR HOT PIPING CONVEYING FLUIDS 140 DEGREES F OR LESS, DO NOT INSULATE FLANGES AND UNIONS AT EQUIPMENT, BUT BEVEL AND SEAL ENDS OF INSULATION.
G. GLASS FIBER INSULATED PIPES CONVEYING FLUIDS ABOVE AMBIENT TEMPERATURE:
1. PROVIDE STANDARD JACKETS, WITH OR WITHOUT VAPOR BARRIER, FACTORY-APPLIED OR FIELD-APPLIED. SECURE WITH SELF-SEALING LONGITUDINAL LAPS AND BUTT STRIPS WITH PRESSURE SENSITIVE ADHESIVE. SECURE WITH OUTWARD CLINCH EXPANDING STAPLES.
2. INSULATE FITTINGS, JOINTS, AND VALVES WITH INSULATION OF LIKE MATERIAL AND THICKNESS AS ADJOINING PIPE. FINISH WITH GLASS CLOTH AND ADHESIVE OR PVC FITTING COVERS.
H. INSERTS AND SHIELDS:
1. APPLICATION: PIPING 1-1/2 INCHES DIAMETER OR LARGER.
2. SHIELDS: GALVANIZED STEEL BETWEEN PIPE HANGERS OR PIPE HANGER ROLLS AND INSERTS.
3. INSERT LOCATION: BETWEEN SUPPORT SHIELD AND PIPING AND UNDER THE FINISH JACKET.
4. INSERT CONFIGURATION: MINIMUM 6 INCHES LONG, OF SAME THICKNESS AND CONTOUR AS ADJOINING INSULATION; MAY BE FACTORY FABRICATED.

- 5. PIPE, PIPE FITTINGS, VALVES, AND CONNECTIONS FOR PIPING SYSTEMS.
1. SANITARY SEWER AND VENT.
2. DOMESTIC WATER.
1.02 SUBMITTALS
A. PROJECT RECORD DOCUMENTS: RECORD ACTUAL LOCATIONS OF VALVES.
1.03 QUALITY ASSURANCE
1. PERFORM WORK IN ACCORDANCE WITH CURRENT LOCAL GOVERNING PLUMBING CODE
2. MAINTAIN ONE COPY ON PROJECT SITE.
B. VALVES: MANUFACTURER'S NAME AND PRESSURE RATING MARKED ON VALVE BODY.
C. WELDING MATERIALS AND PROCEDURES: CONFORM TO ASME (BPV IX) AND APPLICABLE STATE LABOR REGULATIONS.
D. WELDER QUALIFICATIONS: CERTIFIED IN ACCORDANCE WITH ASME (BPV IX).
E. IDENTIFY PIPE WITH MARKING INCLUDING SIZE, ASTM MATERIAL CLASSIFICATION, ASTM SPECIFICATION, POTABLE WATER CERTIFICATION, WATER PRESSURE RATING.
1.04 REGULATORY REQUIREMENTS
A. PERFORM WORK IN ACCORDANCE WITH CURRENT LOCAL GOVERNING PLUMBING CODE.
B. CONFORM TO APPLICABLE CODE FOR INSTALLATION OF BACKFLOW PREVENTION DEVICES.
C. PROVIDE CERTIFICATE OF COMPLIANCE FROM AUTHORITY HAVING JURISDICTION INDICATING APPROVAL OF INSTALLATION OF BACKFLOW PREVENTION DEVICES.
1.05 DELIVERY, STORAGE, AND HANDLING
A. ACCEPT VALVES ON SITE IN SHIPPING CONTAINERS WITH LABELING IN PLACE. INSPECT FOR DAMAGE.
B. PROVIDE TEMPORARY PROTECTIVE COATING ON CAST IRON AND STEEL VALVES.
C. PROVIDE TEMPORARY END CAPS AND CLOSURES ON PIPING AND FITTINGS. MAINTAIN IN PLACE UNTIL INSTALLATION.
D. PROTECT PIPING SYSTEMS FROM ENTRY OF FOREIGN MATERIALS BY TEMPORARY COVERS, COMPLETING SECTIONS OF THE WORK, AND ISOLATING PARTS OF COMPLETED SYSTEM.
PART 2 PRODUCTS
2.01 SANITARY SEWER AND VENT PIPING, ABOVE GRADE
A. CAST IRON PIPE: HUBLESS, SERVICE WEIGHT.
1. FITTINGS: CAST IRON.
2. JOINTS: NEOPRENE GASKETS AND STAINLESS STEEL CLAMP-AND-SHIELD ASSEMBLIES.
B. PVC PIPE (WHERE ACCEPTABLE IN GOVERNING PLUMBING CODE)
1. FITTINGS: PVC.
2. JOINTS: SOLVENT WELDED, WITH SOLVENT CEMENT.
2.02 WATER PIPING, ABOVE GRADE
A. COPPER TUBE: TYPE L (B), DRAWN (H).
1. FITTINGS: CAST COPPER ALLOY OR WROUGHT COPPER AND BRONZE.
2. JOINTS: ALLOY S99S SOLDER.
2.03 FLANGES, UNIONS, AND COUPLINGS
A. UNIONS FOR PIPE SIZES 3 INCHES AND UNDER:
1. FERROUS PIPE: CLASS 150 MALLEABLE IRON THREADED UNIONS.
2. COPPER TUBE AND PIPE: CLASS 150 BRONZE UNIONS WITH SOLDERED JOINTS.
B. FLANGES FOR PIPE SIZE OVER 3 INCH OR LARGER:
1. FERROUS PIPE: CLASS 150 MALLEABLE IRON THREADED OR FORGED STEEL SLIP-ON FLANGES; PREFORMED NEOPRENE GASKETS.
2. COPPER TUBE AND PIPE: CLASS 150 SLIP-ON BRONZE FLANGES; PREFORMED NEOPRENE GASKETS.
2.4 BALL VALVES
A. UP TO AND INCLUDING 2 INCHES
1. BRONZE, TWO PIECE BODY, CHROME PLATED, BRASS BALL, TEFLON SEATS AND TOPPING BOX RING, LEVER HANDLES AND BALANCING STOPS, SOLDER OR THREADED ENDS WITH UNION.
PART 3 EXECUTION
3.01 EXAMINATION
A. VERIFY THAT EXCAVATIONS ARE TO REQUIRED GRADE, DRY, AND NOT OVER-EXCAVATED.
3.02 PREPARATION
A. REAM PIPE AND TUBE ENDS. REMOVE BURRS. BEVEL PLAIN END FERROUS PIPE.
B. REMOVE SCALE AND DIRT, ON INSIDE AND OUTSIDE, BEFORE ASSEMBLY.
C. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES OR UNIONS.
3.03 INSTALLATION
A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, STATE AND LOCAL PLUMBING CODES.
B. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.
C. ROUTE PIPING IN ORDERLY MANNER AND MAINTAIN GRADIENT. ROUTE PARALLEL AND PERPENDICULAR TO WALLS.
D. INSTALL PIPING TO MAINTAIN HEADROOM, CONSERVE SPACE, AND NOT INTERFERE WITH USE OF SPACE.
E. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS.
F. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT.
G. PROVIDE CLEARANCE IN HANGERS AND FROM STRUCTURE AND OTHER EQUIPMENT FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES AND FITTINGS.
H. PROVIDE ACCESS WHERE VALVES AND FITTINGS ARE NOT EXPOSED. COORDINATE SIZE AND LOCATION OF ACCESS DOORS WITH ARCHITECTURAL DRAWINGS/SPECIFICATIONS.
I. INSTALL VENT PIPING PENETRATING ROOFED AREAS TO MAINTAIN INTEGRITY OF ROOF ASSEMBLY.
J. INSTALL BELL AND SPIGOT PIPE WITH BELL END UPSTREAM.
K. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED.
L. INSTALL WATER PIPING TO ASME B31.9.
M. PVC PIPE: MAKE SOLVENT-WELDED JOINTS IN ACCORDANCE WITH ASTM D 2855. (DO NOT INSTALL IN RETURN AIR PLENUMS.)
N. SLEEVE PIPES PASSING THROUGH PARTITIONS, WALLS AND FLOORS.
O. INSERTS:
1. PROVIDE INSERTS FOR PLACEMENT IN CONCRETE FORMWORK.
2. PROVIDE INSERTS FOR SUSPENDING HANGERS FROM REINFORCED CONCRETE SLABS AND SIDES OF REINFORCED CONCRETE BEAMS.
3. PROVIDE HOOKED ROD TO CONCRETE REINFORCEMENT SECTION FOR INSERTS CARRYING PIPE OVER 4 INCHES.
4. WHERE CONCRETE SLABS FORM FINISHED CEILING, LOCATE INSERTS FLUSH WITH SLAB SURFACE.
5. WHERE INSERTS ARE OMITTED, DRILL THROUGH CONCRETE SLAB FROM BELOW AND PROVIDE THROUGH-HOLE WITH RECESSED SQUARE STEEL PLATE AND NET ABOVE SLAB.
R. PIPE HANGERS AND SUPPORTS:
1. INSTALL IN ACCORDANCE WITH ASME B31.9.
2. SUPPORT HORIZONTAL PIPING AS PER PIPE MANUFACTURERS RECOMMENDATIONS OR AS SCHEDULED WHICH EVER IS MORE STRINGENT.
3. INSTALL HANGERS TO PROVIDE MINIMUM 1/2 INCH SPACE BETWEEN FINISHED COVERING AND ADJACENT WORK.
4. PLACE HANGERS WITHIN 12 INCHES OF EACH HORIZONTAL ELBOW.
5. USE HANGERS WITH 1-1/2 INCH MINIMUM VERTICAL ADJUSTMENT. DESIGN HANGERS FOR PIPE MOVEMENT WITHOUT DISENGAGEMENT OF SUPPORTED PIPE.
6. SUPPORT VERTICAL PIPING AT EVERY FLOOR. SUPPORT RISER PIPING INDEPENDENTLY OF CONNECTED HORIZONTAL PIPING.
7. WHERE SEVERAL PIPES CAN BE INSTALLED IN PARALLEL AND AT SAME ELEVATION, PROVIDE MULTIPLE OR TRAPEZE HANGERS.
8. PROVIDE COPPER PLATED HANGERS AND SUPPORTS FOR COPPER PIPING.
9. PRIME COAT EXPOSED STEEL HANGERS AND SUPPORTS. REFER TO SECTION 09900, HANGERS AND SUPPORTS LOCATED IN CRAWL SPACES, PIPE SHAFTS, AND SUSPENDED CEILING SPACES ARE NOT CONSIDERED EXPOSED.
10. SUPPORT CAST IRON DRAINAGE PIPING AT EVERY JOINT.
3.04 APPLICATION
A. USE GROoved MECHANICAL COUPLINGS AND FASTENERS ONLY IN ACCESSIBLE LOCATIONS.
B. INSTALL UNIONS DOWNSTREAM OF VALVES AND AT EQUIPMENT OR APPARATUS CONNECTIONS.
C. INSTALL BALL VALVES FOR SHUT-OFF AND TO ISOLATE EQUIPMENT, PART OF SYSTEMS, OR VERTICAL RISERS.
D. INSTALL BALL VALVES FOR THROTTLING, BYPASS, OR MANUAL FLOW CONTROL SERVICES.
E. PROVIDE FLOW CONTROLS AND CHECK VALVES IN WATER RECIRCULATING SYSTEMS WHERE

- SECTION 15082
PIPING INSULATION
PART 1 GENERAL
1.01 SECTION INCLUDES
A. PIPING INSULATION.
B. JACKETS AND ACCESSORIES.
1.02 RELATED REQUIREMENTS
PART 2 PRODUCTS
2.01 REQUIREMENTS FOR ALL PRODUCTS OF THIS SECTION
A. SURFACE BURNING CHARACTERISTICS: FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50, MAXIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM E 84, NFPA 255, OR UL 723.
2.02 GLASS FIBER (THICKNESS SHALL PROVIDE R VALUE REQUIRED BY GOVERNING ENERGY CONSERVATION CODE FOR SPECIFIC APPLICATION)
A. INSULATION: RIGID MOLDED, NONCOMBUSTIBLE.
1. 'K' VALUE: 0.24 AT 75 DEGREES F.
2. MAXIMUM SERVICE TEMPERATURE: 850 DEGREES F.
3. MAXIMUM MOISTURE ABSORPTION: 0.2 PERCENT BY VOLUME.
B. VAPOR BARRIER JACKET: WHITE KRAFT PAPER WITH GLASS FIBER YARN, BONDED TO ALUMINIZED FILM, MOISTURE VAPOR TRANSMISSION WHEN TESTED IN ACCORDANCE WITH 0.02 PERM-INCHES.
2.03 JACKETS
A. PVC PLASTIC.
1. JACKET: ONE PIECE MOLDED TYPE FITTING COVERS AND SHEET MATERIAL, OFF-WHITE COLOR.
a. MINIMUM SERVICE TEMPERATURE: 0 DEGREES F.
b. MAXIMUM SERVICE TEMPERATURE: 150 DEGREES F.
c. MOISTURE VAPOR PERMEABILITY: 0.002 PERM INCH, MAXIMUM.
d. THICKNESS: 10 MIL.
e. CONNECTIONS: BRUSH ON WELDING ADHESIVE.
PART 3 EXECUTION
3.01 EXAMINATION
C. VERIFY THAT PIPING HAS BEEN TESTED BEFORE APPLYING INSULATION MATERIALS.
D. VERIFY THAT SURFACES ARE CLEAN AND DRY, WITH FOREIGN MATERIAL REMOVED.
3.02 INSTALLATION
A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. INSTALL IN ACCORDANCE WITH NAIMA NATIONAL INSULATION STANDARDS.
C. EXPOSED PIPING: LOCATE INSULATION AND COVER SEAMS IN LEAST VISIBLE LOCATIONS.
D. INSULATED PIPES CONVEYING FLUIDS BELOW AMBIENT TEMPERATURE: INSULATE ENTIRE SYSTEM INCLUDING FITTINGS, VALVES, UNIONS, FLANGES, STRAINERS, FLEXIBLE CONNECTIONS, PUMP BODIES, AND EXPANSION JOINTS.
E. GLASS FIBER INSULATED PIPES CONVEYING FLUIDS BELOW AMBIENT TEMPERATURE:
1. PROVIDE VAPOR BARRIER JACKETS, FACTORY-APPLIED OR FIELD-APPLIED. SECURE WITH SELF-SEALING LONGITUDINAL LAPS AND BUTT STRIPS WITH PRESSURE SENSITIVE ADHESIVE. SECURE WITH OUTWARD CLINCH EXPANDING STAPLES AND VAPOR BARRIER MASTIC.
2. INSULATE FITTINGS, JOINTS, AND VALVES WITH MOLDED INSULATION OF LIKE MATERIAL AND THICKNESS AS ADJACENT PIPE. FINISH WITH GLASS CLOTH AND VAPOR BARRIER ADHESIVE OR PVC FITTING COVERS.
F. FOR HOT PIPING CONVEYING FLUIDS 140 DEGREES F OR LESS, DO NOT INSULATE FLANGES AND UNIONS AT EQUIPMENT, BUT BEVEL AND SEAL ENDS OF INSULATION.
G. GLASS FIBER INSULATED PIPES CONVEYING FLUIDS ABOVE AMBIENT TEMPERATURE:
1. PROVIDE STANDARD JACKETS, WITH OR WITHOUT VAPOR BARRIER, FACTORY-APPLIED OR FIELD-APPLIED. SECURE WITH SELF-SEALING LONGITUDINAL LAPS AND BUTT STRIPS WITH PRESSURE SENSITIVE ADHESIVE. SECURE WITH OUTWARD CLINCH EXPANDING STAPLES.
2. INSULATE FITTINGS, JOINTS, AND VALVES WITH INSULATION OF LIKE MATERIAL AND THICKNESS AS ADJOINING PIPE. FINISH WITH GLASS CLOTH AND ADHESIVE OR PVC FITTING COVERS.
H. INSERTS AND SHIELDS:
1. APPLICATION: PIPING 1-1/2 INCHES DIAMETER OR LARGER.
2. SHIELDS: GALVANIZED STEEL BETWEEN PIPE HANGERS OR PIPE HANGER ROLLS AND INSERTS.
3. INSERT LOCATION: BETWEEN SUPPORT SHIELD AND PIPING AND UNDER THE FINISH JACKET.
4. INSERT CONFIGURATION: MINIMUM 6 INCHES LONG, OF SAME THICKNESS AND CONTOUR AS ADJOINING INSULATION; MAY BE FACTORY FABRICATED.

- SECTION 15145
PLUMBING PIPING
PART 1 GENERAL
1.01 SECTION INCLUDES

- SECTION 15145
PLUMBING PIPING
PART 1 GENERAL
1.01 SECTION INCLUDES

- SECTION 15145
PLUMBING PIPING
PART 1 GENERAL
1.01 SECTION INCLUDES

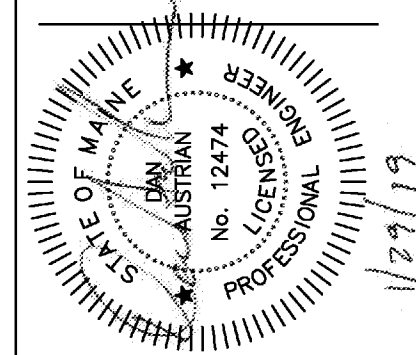
- SECTION 15145
PLUMBING PIPING
PART 1 GENERAL
1.01 SECTION INCLUDES

- SECTION 15145
PLUMBING PIPING
PART 1 GENERAL
1.01 SECTION INCLUDES

- SECTION 15145
PLUMBING PIPING
PART 1 GENERAL
1.01 SECTION INCLUDES

- SECTION 15145
PLUMBING PIPING
PART 1 GENERAL
1.01 SECTION INCLUDES

- SECTION 15145
PLUMBING PIPING
PART 1 GENERAL
1.01 SECTION INCLUDES



Design and construction documents are instruments of service and are given in confidence and remain the property of Michael Crislip, Architect. The use of the design and these construction documents for purposes other than the specific project named herein is strictly prohibited without expressed written consent of Michael Crislip, Architect.



Project No.: 15671

Drawn By: AEU

Date Issue
12-13-2018 Prelim Review

01-25-2019 Owner Review

01-30-2019 Bid & Permit

- C. SIDEWALL TYPE: WHITE SEMI-RECESSED HORIZONTAL SIDEWALL TYPE WITH MATCHING PUSH ON ESCUTCHEON PLATE.
1. RESPONSE TYPE: QUICK.
 2. COVERAGE TYPE: STANDARD.
 3. FINISH: WHITE ENAMEL.
 4. ESCUTCHEON PLATE FINISH: WHITE ENAMEL.
 5. FUSIBLE LINK: GLASS BULB LINK TYPE TEMPERATURE RATED FOR SPECIFIC AREA HAZARD.
- D. DRY SPRINKLERS: CONCEALED PENDENT TYPE WITH MATCHING PUSH ON ESCUTCHEON PLATE IN FINISHED CEILINGS AND ROUGH BRASS UPRIGHT TYPE IN UNFINISHED AREAS.
1. RESPONSE TYPE: QUICK.
 2. FINISH: CHROME.
 3. COVER PLATE FINISH: CHROME.
 4. FUSIBLE LINK: GLASS BULB LINK TYPE TEMPERATURE RATED FOR SPECIFIC AREA HAZARD.
- E. GUARDS: FINISH TO MATCH SPRINKLER FINISH.
- PART 3 EXECUTION
- 3.01 INSTALLATION
- A. INSTALL IN ACCORDANCE WITH ADOPTED LOCALITY NFPA DESIGN AND INSTALLATION STANDARDS.
 - B. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - C. PLACE PIPE RUNS TO MINIMIZE OBSTRUCTION TO OTHER WORK. RUN INSIDE STRUCTURE SUPPORTING STEEL WHERE POSSIBLE.
 - D. PLACE PIPING IN CONCEALED SPACES AS HIGH AS POSSIBLE ABOVE FINISHED CEILINGS.
 - E. APPLY MASKING TAPE OR PAPER COVER TO ENSURE CONCEALED SPRINKLERS, COVER PLATES, AND SPRINKLER ESCUTCHEONS DO NOT RECEIVE FIELD PAINT FINISH. REMOVE AFTER PAINTING. REPLACE PAINTED SPRINKLERS.
 - F. FLUSH ENTIRE PIPING SYSTEM OF FOREIGN MATTER.
 - G. INSTALL GUARDS ON SPRINKLERS WHERE REQUIRED.
 - H. HYDROSTATICALLY TEST ENTIRE SYSTEM.
 - I. REQUIRED TEST BE WITNESSED BY FIRE MARSHAL.

SECTION 15410

PLUMBING FIXTURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. WATER CLOSETS.
- B. LAVATORIES.
- C. SINKS.

PART 2 PRODUCTS

- A. SEE FIXTURE SCHEDULE ON DRAWINGS.

PART 3 EXECUTION

3.01 EXAMINATION

- A. VERIFY THAT WALLS AND FLOOR FINISHES ARE PREPARED AND READY FOR INSTALLATION OF FIXTURES.
- B. CONFIRM THAT MILLWORK IS CONSTRUCTED WITH ADEQUATE PROVISION FOR THE INSTALLATION OF COUNTER TOP LAVATORIES AND SINKS.

3.02 PREPARATION

- A. ROUGH-IN FIXTURE PIPING CONNECTIONS IN ACCORDANCE WITH MINIMUM SIZES INDICATED IN FIXTURE ROUGH-IN SCHEDULE FOR PARTICULAR FIXTURES.

3.03 INSTALLATION

- A. INSTALL EACH FIXTURE WITH TRAP, EASILY REMOVABLE FOR SERVICING AND CLEANING.
- B. PROVIDE CHROME PLATED RIGID OR FLEXIBLE SUPPLIES TO FIXTURES WITH LOOSE KEY STOPS, REDUCERS, AND ESCUTCHEONS.
- C. INSTALL COMPONENTS LEVEL AND PLUMB.
- D. INSTALL AND SECURE FIXTURES IN PLACE WITH WALL SUPPORTS AND BOLTS.
- E. SEAL FIXTURES TO WALL AND FLOOR SURFACES WITH SEALANT.
- F. SOLIDLY ATTACH WATER CLOSETS TO FLOOR WITH LAG SCREWS. LEAD FLASHING IS NOT INTENDED HOLD FIXTURE IN PLACE.

3.04 INTERFACE WITH WORK OF OTHER SECTIONS

- A. REVIEW MILLWORK SHOP DRAWINGS. CONFIRM LOCATION AND SIZE OF FIXTURES AND OPENINGS BEFORE ROUGH-IN AND INSTALLATION.

3.05 ADJUSTING

- A. ADJUST STOPS OR VALVES FOR INTENDED WATER FLOW RATE TO FIXTURES WITHOUT SPLASHING, NOISE, OR OVERFLOW.

3.06 CLEANING

- A. CLEAN PLUMBING FIXTURES AND EQUIPMENT.

3.07 PROTECTION

- A. PROTECT INSTALLED PRODUCTS FROM DAMAGE DUE TO SUBSEQUENT CONSTRUCTION OPERATIONS.
- B. DO NOT PERMIT USE OF FIXTURES BY CONSTRUCTION PERSONNEL.
- C. REPAIR OR REPLACE DAMAGED PRODUCTS BEFORE DATE OF SUBSTANTIAL COMPLETION.

SECTION 15810

DUCTWORK

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. METAL DUCTWORK.
- B. NONMETAL DUCTWORK.
- C. DUCT CLEANING.

PART 2 PRODUCTS

2.01 DUCT ASSEMBLIES

- A. ALL DUCTS: GALVANIZED STEEL, UNLESS OTHERWISE INDICATED.
- B. LOW PRESSURE SUPPLY: 2 INCH W.G. PRESSURE CLASS, GALVANIZED STEEL.
- C. RETURN AND RELIEF: 2 INCH W.G. PRESSURE CLASS, GALVANIZED STEEL.
- D. GENERAL EXHAUST: 2 INCH W.G. PRESSURE CLASS, GALVANIZED STEEL.
- E. OUTSIDE AIR INTAKE: 2 INCH W.G. PRESSURE CLASS, GALVANIZED STEEL.
- F. TRANSFER AIR AND SOUND BOOTS: 2 INCH W.G. PRESSURE CLASS, GALVANIZED STEEL.

2.02 MATERIALS

- A. GALVANIZED STEEL FOR DUCTS: HOT-DIPPED GALVANIZED STEEL SHEET, ASTM A 653/A 653M FS TYPE B, WITH G60/Z180 COATING.
- B. ALUMINUM FOR DUCTS: ASTM B 209 (ASTM B 209M); ALUMINUM SHEET, ALLOY 3003-H14. ALUMINUM CONNECTORS AND BAR STOCK: ALLOY 6061-1651 OR OF EQUIVALENT STRENGTH.
- C. STAINLESS STEEL FOR DUCTS: ASTM A 240/A 240M, TYPE 304.
- D. JOINT SEALERS AND SEALANTS: NON-HARDENING, WATER RESISTANT, MILDEW AND MOLD RESISTANT.
 1. TYPE: HEAVY MASTIC OR LIQUID USED ALONE OR WITH TAPE, SUITABLE FOR JOINT CONFIGURATION AND COMPATIBLE WITH SUBSTRATES, AND RECOMMENDED BY MANUFACTURER FOR PRESSURE CLASS OF DUCTS.
 2. VOC CONTENT: NOT MORE THAN 250 G/L, EXCLUDING WATER.
 3. SURFACE BURNING CHARACTERISTICS: FLAME SPREAD OF ZERO, SMOKE DEVELOPED OF ZERO, WHEN TESTED IN ACCORDANCE WITH ASTM E 84.
- E. HANGER ROD: ASTM A 36/A 36M; STEEL, GALVANIZED; THREADED BOTH ENDS, THREADED ONE END, OR CONTINUOUSLY THREADED.

2.03 DUCTWORK FABRICATION

- A. FABRICATE AND SUPPORT IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, AND AS INDICATED.
- B. NO VARIATION OF DUCT CONFIGURATION OR SIZE PERMITTED EXCEPT BY WRITTEN PERMISSION. SIZE ROUND DUCT INSTALLED IN PLACE OF RECTANGULAR DUCTS IN ACCORDANCE WITH ASHRAE HANDBOOK - FUNDAMENTALS.
- C. DUCT SYSTEMS HAVE BEEN DESIGNED FOR METAL DUCT. FIBROUS GLASS DUCT MAY NOT BE SUBSTITUTED FOR METAL DUCT.
- D. PROVIDE DUCT MATERIAL, GAGES, REINFORCING, AND SEALING FOR OPERATING PRESSURES INDICATED.

- E. CONSTRUCT T'S, BENDS, AND ELBOWS WITH RADIUS OF NOT LESS THAN 1-1/2 TIMES WIDTH OF DUCT ON CENTERLINE. WHERE NOT POSSIBLE, RECTANGULAR ELBOWS MUST BE USED. IN RECTANGULAR ELBOWS PROVIDE AIR FOIL TURNING VANES OF PERFORATED METAL WITH GLASS FIBER INSULATION.
- F. PROVIDE TURNING VANES OF PERFORATED METAL WITH GLASS FIBER INSULATION WHEN ACOUSTICAL LINING IS INDICATED.
- G. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES DIVERGENCE WHEREVER POSSIBLE; MAXIMUM 30 DEGREES DIVERGENCE UPSTREAM OF EQUIPMENT AND 45 DEGREES CONVERGENCE DOWNSTREAM.
- H. FABRICATE CONTINUOUSLY WELDED ROUND AND OVAL DUCT FITTINGS IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.
- I. WHERE DUCTS ARE CONNECTED TO EXTERIOR WALL LOUVERS AND DUCT OUTLET IS SMALLER THAN LOUVER FRAME, PROVIDE TRANSITION TO LOUVER'S FULL PERIMETER. SEAL TO LOUVER FRAME AND DUCT.

2.04 MANUFACTURED DUCTWORK AND FITTINGS

- A. DOUBLE WALL INSULATED ROUND DUCTS: ROUND SPIRAL LOCKSEAM DUCT WITH GALVANIZED STEEL OUTER WALL, PERFORATED GALVANIZED STEEL INNER WALL; FITTING WITH SOLID INNER WALL.
 1. MANUFACTURE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.
 2. INSULATION:
 - a. THICKNESS: 1 INCH.
- B. FLEXIBLE DUCTS: BLACK POLYMER FILM SUPPORTED BY HELICALLY WOUND SPRING STEEL WIRE.
 1. UL LABELED.
 2. INSULATION: FIBERGLASS INSULATION WITH POLYETHYLENE VAPOR BARRIER FILM.
 3. PRESSURE RATING: 10 INCHES WG POSITIVE AND 0.5 INCHES WG NEGATIVE.
 4. MAXIMUM VELOCITY: 4000 FPM.
 5. TEMPERATURE RANGE: -20 DEGREES F TO 175 DEGREES F.

PART 3 EXECUTION

3.01 INSTALLATION

- A. INSTALL, SUPPORT, AND SEAL DUCTS IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.
- B. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- C. DURING CONSTRUCTION PROVIDE TEMPORARY CLOSURES OF METAL OR TAPED POLYETHYLENE ON OPEN DUCTWORK TO PREVENT CONSTRUCTION DUST FROM ENTERING DUCTWORK SYSTEM.
- D. FLEXIBLE DUCTS: CONNECT TO METAL DUCTS WITH ADHESIVE AND MANUFACTURER'S PLASTIC DRAW BANDS.
- E. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS. FOR LINED DUCTS, MAINTAIN SIZES INSIDE LINING.
- F. LOCATE DUCTS WITH SUFFICIENT SPACE AROUND EQUIPMENT TO ALLOW NORMAL OPERATING AND MAINTENANCE ACTIVITIES.
- G. USE CRIMP JOINTS WITH OR WITHOUT BEAD FOR JOINING ROUND DUCT SIZES 8 INCH AND SMALLER WITH CRIMP IN DIRECTION OF AIR FLOW.
- H. USE DOUBLE NUTS AND LOCK WASHERS ON THREADED ROD SUPPORTS.
- I. CONNECT TERMINAL UNITS TO SUPPLY DUCTS DIRECTLY OR WITH FIVE FOOT MAXIMUM LENGTH OF FLEXIBLE DUCT. DO NOT USE FLEXIBLE DUCT TO CHANGE DIRECTION.

3.02 CLEANING

- A. CLEAN DUCT SYSTEM AND FORCE AIR AT HIGH VELOCITY THROUGH DUCT TO REMOVE ACCUMULATED DUST. TO OBTAIN SUFFICIENT AIR, CLEAN HALF THE SYSTEM AT A TIME. PROTECT EQUIPMENT THAT COULD BE HARMED BY EXCESSIVE DIRT WITH TEMPORARY FILTERS, OR BYPASS DURING CLEANING.
- B. CLEAN EXISTING DUCTWORK WHERE REUSED, USING THE LATEST NADCA STANDARDS FOR EXISTING DUCTWORK.

SECTION 15820

DUCT ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. AIR TURNING DEVICES/EXTRACTORS.
- B. DUCT ACCESS DOORS.
- C. FLEXIBLE DUCT CONNECTIONS.
- D. VOLUME CONTROL DAMPERS.

1.02 DELIVERY, STORAGE, AND HANDLING

- A. PROTECT DAMPERS FROM DAMAGE TO OPERATING LINKAGES AND BLADES.

PART 2 PRODUCTS

2.01 AIR TURNING DEVICES/EXTRACTORS

- A. MULTI-BLADE DEVICE WITH BLADES ALIGNED IN SHORT DIMENSION; STEEL CONSTRUCTION; WITH INDIVIDUALLY ADJUSTABLE BLADES, MOUNTING STRAPS.

2.02 DUCT ACCESS DOORS

- A. FABRICATE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, AND AS INDICATED.
- B. ACCESS DOORS WITH SHEET METAL SCREW FASTENERS ARE NOT ACCEPTABLE.

2.03 FLEXIBLE DUCT CONNECTIONS

- A. FABRICATE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, AND AS INDICATED.
- B. FLEXIBLE DUCT CONNECTIONS: FABRIC CRIMPED INTO METAL EDGING STRIP.
 1. FABRIC: UL LISTED FIRE-RETARDANT NEOPRENE COATED WOVEN GLASS FIBER FABRIC TO NFPA 90A, MINIMUM DENSITY 30 OZ PER SQ YD.
 - a. NET FABRIC WIDTH: APPROXIMATELY 2 INCHES WIDE.
 - a. NET FABRIC WIDTH: APPROXIMATELY 2 INCHES WIDE.
 2. METAL: 3 INCHES WIDE, 24 GAGE THICK GALVANIZED STEEL.
- C. LEADED VINYL SHEET: MINIMUM 0.55 INCH THICK, 0.87 LBS PER SQ FT, 10 DB ATTENUATION IN 10 TO 10,000 HZ RANGE.
- D. MAXIMUM INSTALLED LENGTH: 14 INCH.

2.04 VOLUME CONTROL DAMPERS

- A. FABRICATE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, AND AS INDICATED.
- B. SINGLE BLADE DAMPERS: FABRICATE FOR DUCT SIZES UP TO 6 X 30 INCH.
 1. FABRICATE FOR DUCT SIZES UP TO 6 X 30 INCH.
 2. BLADE: 24 GAGE, MINIMUM.
- C. MULTI-BLADE DAMPER: FABRICATE OF OPPOSED BLADE PATTERN WITH MAXIMUM BLADE SIZES 8 X 72 INCH. ASSEMBLE CENTER AND EDGE CRIMPED BLADES IN PRIME COATED OR GALVANIZED CHANNEL FRAME WITH SUITABLE HARDWARE.
 1. BLADE: 18 GAGE, MINIMUM.
- D. END BEARINGS: EXCEPT IN ROUND DUCTS 12 INCHES AND SMALLER, PROVIDE END BEARINGS. ON MULTIPLE BLADE DAMPERS, PROVIDE OIL-IMPREGNATED NYLON OR SINTERED BRONZE BEARINGS.

E. QUADRANTS:

1. PROVIDE LOCKING, INDICATING QUADRANT REGULATORS ON SINGLE AND MULTI-BLADE DAMPERS.
2. ON INSULATED DUCTS MOUNT QUADRANT REGULATORS ON STAND-OFF MOUNTING BRACKETS, BASES, OR ADAPTERS.
3. WHERE ROD LENGTHS EXCEED 30 INCHES PROVIDE REGULATOR AT BOTH ENDS.

PART 3 EXECUTION

3.01 INSTALLATION

- A. INSTALL ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, AND FOLLOW SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.
- B. PROVIDE DUCT ACCESS DOORS FOR INSPECTION AND CLEANING BEFORE AND AFTER FILTERS, COILS, FANS, AUTOMATIC DAMPERS, AND ELSEWHERE AS INDICATED. PROVIDE MINIMUM 8 X 8 INCH SIZE FOR HAND ACCESS. SIZE FOR SHOULDER ACCESS, AND AS INDICATED. PROVIDE 4 X 4 INCH FOR BALANCING DAMPERS ONLY. REVIEW LOCATIONS PRIOR TO FABRICATION.
- C. PROVIDE DUCT TEST HOLES WHERE INDICATED AND REQUIRED FOR TESTING AND BALANCING PURPOSES.
- D. AT FANS AND MOTORIZED EQUIPMENT ASSOCIATED WITH DUCTS, PROVIDE FLEXIBLE DUCT CONNECTIONS IMMEDIATELY ADJACENT TO THE EQUIPMENT.
- E. AT EQUIPMENT SUPPORTED BY VIBRATION ISOLATORS, PROVIDE FLEXIBLE DUCT CONNECTIONS IMMEDIATELY ADJACENT TO THE EQUIPMENT.
- F. FOR FANS DEVELOPING STATIC PRESSURES OF 5.0 INCHES AND OVER, COVER FLEXIBLE

- CONNECTIONS WITH LEADED VINYL SHEET, HELD IN PLACE WITH METAL STRAPS.
- G. PROVIDE BALANCING DAMPERS AT POINTS ON SUPPLY, RETURN, AND EXHAUST SYSTEMS WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING. INSTALL MINIMUM 2 DUCT WIDTHS FROM DUCT TAKE-OFF.
 - H. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFF TO DIFFUSERS, GRILLES, AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER, GRILLE, OR REGISTER ASSEMBLY.

SECTION 15850

AIR DISTRIBUTION DEVICES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. DIFFUSERS.
- B. REGISTERS/GRILLES.

PART 2 PRODUCTS

- 2.01 MANUFACTURERS, AS SCHEDULED ON DRAWINGS OR APPROVED EQUAL.

2.02 RECTANGULAR CEILING DIFFUSERS

- A. TYPE: SQUARE, STAMPED, MULTI-CORE DIFFUSER TO DISCHARGE AIR IN 360 DEGREE PATTERN WITH SECTORIZING BAFFLES WHERE INDICATED.
- B. FRAME: SURFACE MOUNT TYPE. IN PLASTER CEILINGS, PROVIDE PLASTER FRAME AND CEILING FRAME. PROVIDE FLANGED FRAME FOR SUSPENDED LAYIN CEILINGS.
- C. FABRICATION: STEEL WITH BAKED ENAMEL FINISH.
- D. COLOR: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE.
- E. ACCESSORIES: ROUND TO SQUARE ADAPTORS, RADIAL OPPOSED BLADE DAMPER AND MULTI-LOUVERED EQUALIZING GRID WITH DAMPER ADJUSTABLE FROM DIFFUSER FACE.

2.03 CEILING EXHAUST AND RETURN REGISTERS/GRILLES

- A. TYPE: STREAMLINED BLADES, 3/4 INCH MINIMUM DEPTH, 3/4 INCH MAXIMUM SPACING, WITH BLADES SET AT 45 DEGREES, VERTICAL FACE.
 - B. FRAME: 1-1/4 INCH MARGIN WITH COUNTERSUNK SCREW MOUNTING.
 - C. FABRICATION: STEEL WITH 20 GAGE MINIMUM FRAMES AND 22 GAGE MINIMUM BLADES, STEEL AND ALUMINUM WITH 20 GAGE MINIMUM FRAME, OR ALUMINUM EXTRUSIONS, WITH FACTORY BAKED ENAMEL FINISH.
 - D. COLOR: TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE.
 - E. DAMPER: INTEGRAL, GANG-OPERATED, OPPOSED BLADE TYPE WITH REMOVABLE KEY OPERATOR, OPERABLE FROM FACE WHERE NOT INDIVIDUALLY CONNECTED TO EXHAUST FANS.
- PART 3 EXECUTION
- 3.01 INSTALLATION
- A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - B. CHECK LOCATION OF OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM WITH ARCHITECTURAL FEATURES, SYMMETRY, AND LIGHTING ARRANGEMENT.
 - C. INSTALL DIFFUSERS TO DUCTWORK WITH AIR TIGHT CONNECTION.
 - D. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFF TO DIFFUSERS, AND GRILLES AND REGISTERS, DESPITE WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER, OR GRILLE AND REGISTER ASSEMBLY.
 - E. PAINT DUCTWORK VISIBLE BEHIND AIR OUTLETS AND INLETS MATTE BLACK.

SECTION 15950

TESTING, ADJUSTING, AND BALANCING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. TESTING, ADJUSTMENT, AND BALANCING OF AIR SYSTEMS.
- B. TESTING, ADJUSTMENT, AND BALANCING OF REFRIGERATING SYSTEMS.
- C. MEASUREMENT OF FINAL OPERATING CONDITION OF HVAC SYSTEMS.

1.02 SUBMITTALS

- A. TAB PLAN: SUBMIT A WRITTEN PLAN INDICATING THE TESTING, ADJUSTING, AND BALANCING STANDARD TO BE FOLLOWED AND THE SPECIFIC APPROACH FOR EACH SYSTEM AND COMPONENT.
 1. INCLUDE CERTIFICATION THAT THE PLAN DEVELOPER HAS REVIEWED THE CONTRACT DOCUMENTS, THE EQUIPMENT AND SYSTEMS, AND THE CONTROL SYSTEM WITH THE ARCHITECT AND OTHER INSTALLERS TO SUFFICIENTLY UNDERSTAND THE DESIGN INTENT FOR EACH SYSTEM.
 2. INCLUDE AT LEAST THE FOLLOWING IN THE PLAN:
 - a. LIST OF ALL AIR FLOW, WATER FLOW, SOUND LEVEL, SYSTEM CAPACITY AND EFFICIENCY MEASUREMENTS TO BE PERFORMED AND A DESCRIPTION OF SPECIFIC TEST PROCEDURES, PARAMETERS, FORMULAS TO BE USED.
 - b. COPY OF FIELD CHECKOUT SHEETS AND LOGS TO BE USED, LISTING EACH PIECE OF EQUIPMENT TO BE TESTED, ADJUSTED AND BALANCED WITH THE DATA CELLS TO BE GATHERED FOR EACH.
 - c. DISCUSSION OF WHAT NOTATIONS AND MARKINGS WILL BE MADE ON THE DUCT AND PIPING DRAWINGS DURING THE PROCESS.
 - d. FINAL TEST REPORT FORMS TO BE USED.
 - e. PROCEDURES FOR FORMAL DEFICIENCY REPORTS, INCLUDING SCOPE, FREQUENCY AND DISTRIBUTION.
- C. FINAL REPORT: INDICATE DEFICIENCIES IN SYSTEMS THAT WOULD PREVENT PROPER TESTING, ADJUSTING, AND BALANCING OF SYSTEMS AND EQUIPMENT TO ACHIEVE SPECIFIED PERFORMANCE.
 1. REVISE TAB PLAN TO REFLECT ACTUAL PROCEDURES AND SUBMIT AS PART OF FINAL REPORT.
 2. SUBMIT DRAFT COPIES OF REPORT FOR REVIEW PRIOR TO FINAL ACCEPTANCE OF PROJECT. PROVIDE FINAL COPIES FOR ARCHITECT AND FOR INCLUSION IN OPERATING AND MAINTENANCE MANUALS.
 3. INCLUDE ACTUAL INSTRUMENT LIST, WITH MANUFACTURER NAME, SERIAL NUMBER, AND DATE OF CALIBRATION.
 4. FORM OF TEST REPORTS: WHERE THE TAB STANDARD BEING FOLLOWED RECOMMENDS A REPORT FORMAT USE THAT; OTHERWISE, FOLLOW ASHRAE STD 111.
 5. UNITS OF MEASURE: REPORT DATA IN I-P (INCH-POUND) UNITS.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. PERFORM TOTAL SYSTEM BALANCE IN ACCORDANCE WITH ONE OF THE FOLLOWING:
 1. ASBC MN-11, ASBC NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE.
 2. NEBB PROCEDURAL STANDARDS FOR TESTING ADJUSTING BALANCING OF ENVIRONMENTAL SYSTEMS.
- B. BEGIN WORK AFTER COMPLETION OF SYSTEMS TO BE TESTED, ADJUSTED, OR BALANCED AND COMPLETE WORK PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT.
- C. WHERE HVAC SYSTEMS AND/OR COMPONENTS INTERFACE WITH LIFE SAFETY SYSTEMS, INCLUDING FIRE AND SMOKE DETECTION, ALARM, AND CONTROL, COORDINATE SCHEDULING, TESTING AND INSPECTION PROCEDURES WITH THE AUTHORITIES HAVING JURISDICTION.

D. TAB AGENCY QUALIFICATIONS:

1. COMPANY SPECIALIZING IN THE TESTING, ADJUSTING, AND BALANCING OF SYSTEMS SPECIFIED IN THIS SECTION.

E. TAB SUPERVISOR AND TECHNICIAN QUALIFICATIONS: CERTIFIED BY SAME ORGANIZATION AS TAB AGENCY.

3.02 AIR SYSTEM PROCEDURE

- A. PRIOR TO COMMENCING WITH THE BALANCING WORK THE BALANCING CONTRACTOR SHALL INSPECT THE DUCTWORK INSTALLATION TO DETERMINE IF ALL REQUIRED BALANCING DAMPERS AND ACCESS DOOR PANELS HAVE BEEN INSTALLED. DO NOT USE OUTLET OBD FOR BALANCING.
- B. PRIOR TO SCHEDULING THE EOC, THE HVAC SUBCONTRACTOR SHALL VERIFY THAT THE SHIPPING BLOCKS HAVE BEEN REMOVED. ALL OF THE AIR CONDITIONING UNITS ARE OPERATIONAL. DUCTWORK, GAS PIPING, CONDENSATE PIPING, POWER WIRING AND CONTROL WIRING HAVE BEEN INSTALLED.
- C. THE HVAC SUBCONTRACTOR SHALL PROVIDE AT THEIR COST A QUALIFIED SERVICE TECHNICIAN TO BE PRESENT DURING THE EQUIPMENT OPERATION CHECK.
- D. ANY AND ALL DEFECTS IN THE AIR CONDITIONING UNITS, INSTALLATION AND SYSTEM OPERATION SHALL BE CORRECTED BY THE HVAC SUBCONTRACTOR WITHIN 30 DAYS AFTER THE DISTRIBUTION OF THE EOC REPORT. FAILURE TO IDENTIFY A DEFECT DURING THE EOC DOES NOT RELIEVE THE HVAC SUB-CONTRACTOR OF THE RESPONSIBILITY TO CORRECT SUBSEQUENTLY IDENTIFIED DEFECTS.
- E. ALL EQUIPMENT, INSTALLATION, DESIGN AND OPERATION DEFECTS DISCOVERED DURING THE INSTALLATION, CHECK, BALANCE AND OPERATION OF THE HVAC SYSTEM THAT REQUIRE A CHANGE IN THE DESIGN AND SPECIFICATION OF THE HVAC SYSTEM OR ITS COMPONENTS MUST BE PROPERLY INCORPORATED BY CHANGE ORDER IN THE PROJECT CONSTRUCTION DOCUMENTS.
- F. BALANCE ALL FANS AIRFLOW WITHIN +10%/-5% OF DESIGN. REPLACE FAN DRIVE IF REQUIRED TO OBTAIN THE DESIGN CAPACITY.

