ONLINE SESSION 04

ARCH 202-04 Hathaway

Monday

3/30/20

TURN ON THE RECORDING!

WEEK 1

3/23

INTRO & SITE CONSTRAINTS

PROGRAMS

WEEK 2

3/30

SYSTEMS *(DRAW A REAL BUILDING)*

WEEK 3

4/6

PIN-UP

FACADE & ENVELOPE

WEEK 4

4/13

VIEWS, DIAGRAMS & DRAWINGS *(PRODUCTION)*

WEEK 5

4/20

PIN-UP

PRESENTATION *(PRODUCTION)*

4/27

REVIEW

WEEK 1

3/23
INTRO
DUE: N/A
IN-CLASS: ZONING
ASSIGN: ARCH. PRECEDENTS

3/25
DESK CRITS
DUE: ARCH. PRECEDENTS, DRAW.
IN-CLASS: LIGHT & AIR
ASSIGN: 3D MASSING MODEL

3/27
GROUP CRIT
DUE: 3D MASSING MODEL
IN-CLASS: SOLAR STUDY
ASSIGN: SITE MODEL

WEEK 2

3/30
DESK CRITS
DUE: PLANS, SECTIONS, 3D
IN-CLASS: CIRCULATION
ASSIGN: PROGRAMS

4/1
ALL STUDIO MTG.
DUE: CIRCULATION PLANS
IN-CLASS: UNIT PLANS
ASSIGN: STRUCTURE PRECEDENTS

4/3
DESK CRITS
DUE: STRUCTURE PRECEDENTS
IN-CLASS: SYSTEMS & STRUCTURE-
ASSIGN: N/A

WEEK 3

4/6
GROUP PIN-UP
DUE: PLANS, ELEVATIONS, 3D,
SUSTAINABILITY SECTION
ASSIGN: SITE ELEV'S

4/8
DESK CRITS
DUE: SITE ELEV'S
IN-CLASS: SITE & CONTEXT
ASSIGN: FACADE PRECEDENTS

4/10
GROUPS
DUE: FACADE SKETCHES
IN-CLASS: SITE & CONTEXT
ASSIGN: DIAGRAMS

WEEK 4

4/13
DESK CRITS
DUE: SECTIONS, 3D,
TECHNICAL SECTION
IN-CLASS: STORYTELLING

4/15
GROUPS
DUE: 2D DRAWINGS
IN-CLASS: PEER REDLINES
ASSIGN: 3D VIEWS

4/17
DESK CRITS
DUE: 3D VIEWS, DIAGRAMS
IN-CLASS: RENDERING
ASSIGN: N/A

WEEK 5

4/20
PIN-UP
MOCK REVIEW
DUE: EVERYTHING (DRAFT)

4/22
DESK CRITS
DUE: PRESENTATION TEXT
IN-CLASS: PRESENTING

4/24
MOCK PRESENT.
DUE: EVERYTHING
IN-CLASS: PRESENTATIONS

4/27
FINAL
REVIEW

TODAY

1. LECTURE: LIGHT & AIR, CIRCULATION
2. ASSIGN: PROGRAMS
3. IN-CLASS: PROGRAMS & VERT. CIRC.
4. DESK CRITS: PUBLIC CIRC.

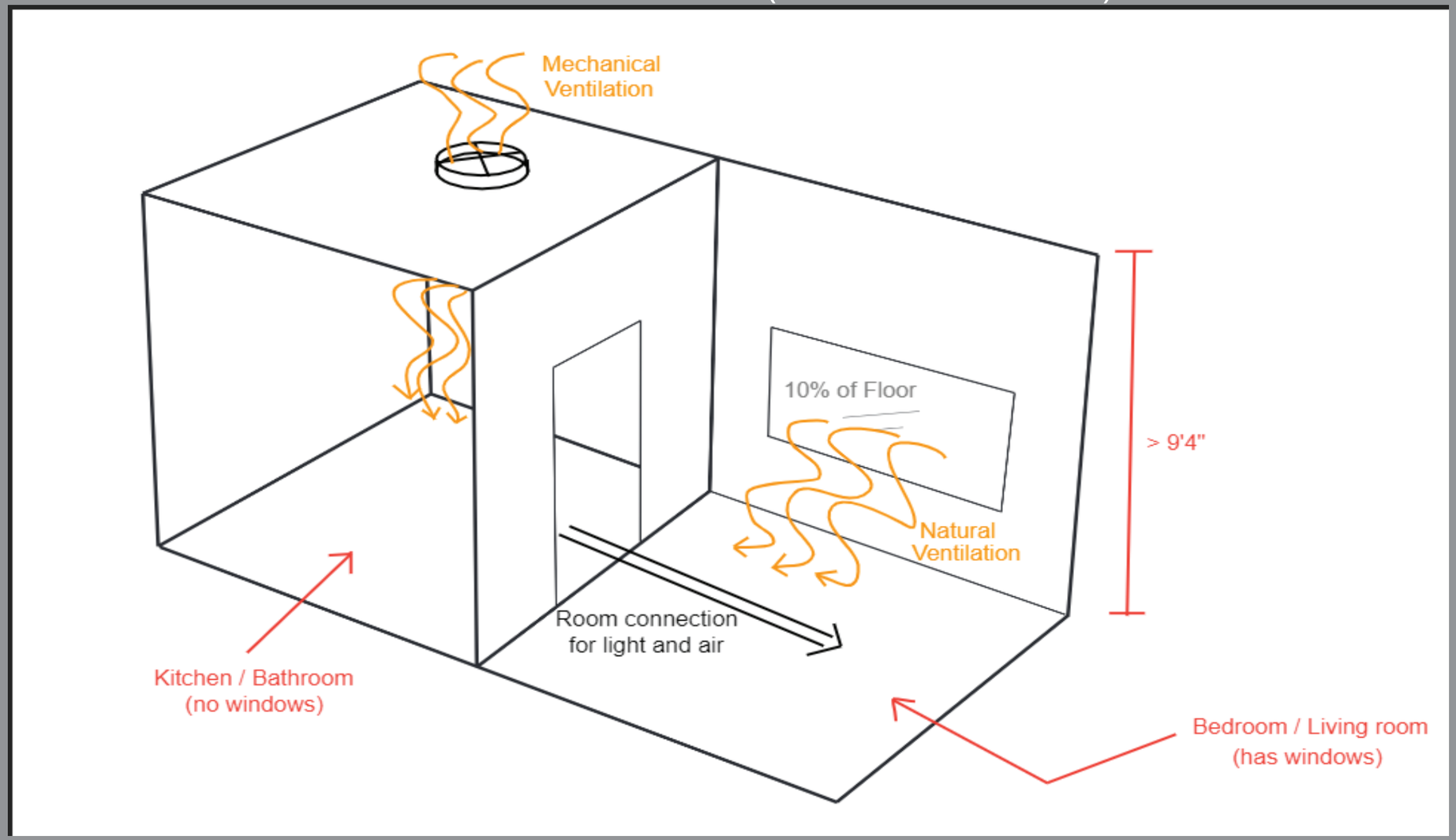
LIGHT & AIR

ALL SPACES REQUIRE VENTILATION (EXCHANGING FRESH AIR FOR “STALE” AIR) AND ILLUMINATION. BUILDING CODE STIPULATES THE AMOUNT OF VENTILATION AND ILLUMINATION REQUIRED FOR DIFFERENT TYPES OF SPACES.
FOR OUR PURPOSES WE WILL FOCUS ON NATURAL ILLUMINATION AND VENTILATION THROUGH OPENINGS (WINDOWS AND DOORS) IN THE EXTERIOR WALLS.

CODE ALSO SETS REQUIREMENTS FOR THE WINDOWS AND DOORS IN EXTERIOR WALLS TO LIMIT THE SPREAD OF FIRE.
THE MAIN REQUIREMENTS ARE FOR THE WALLS THEMSELVES BUT FOR OUR STUDIO WE’LL FOCUS ON THE OPENINGS.

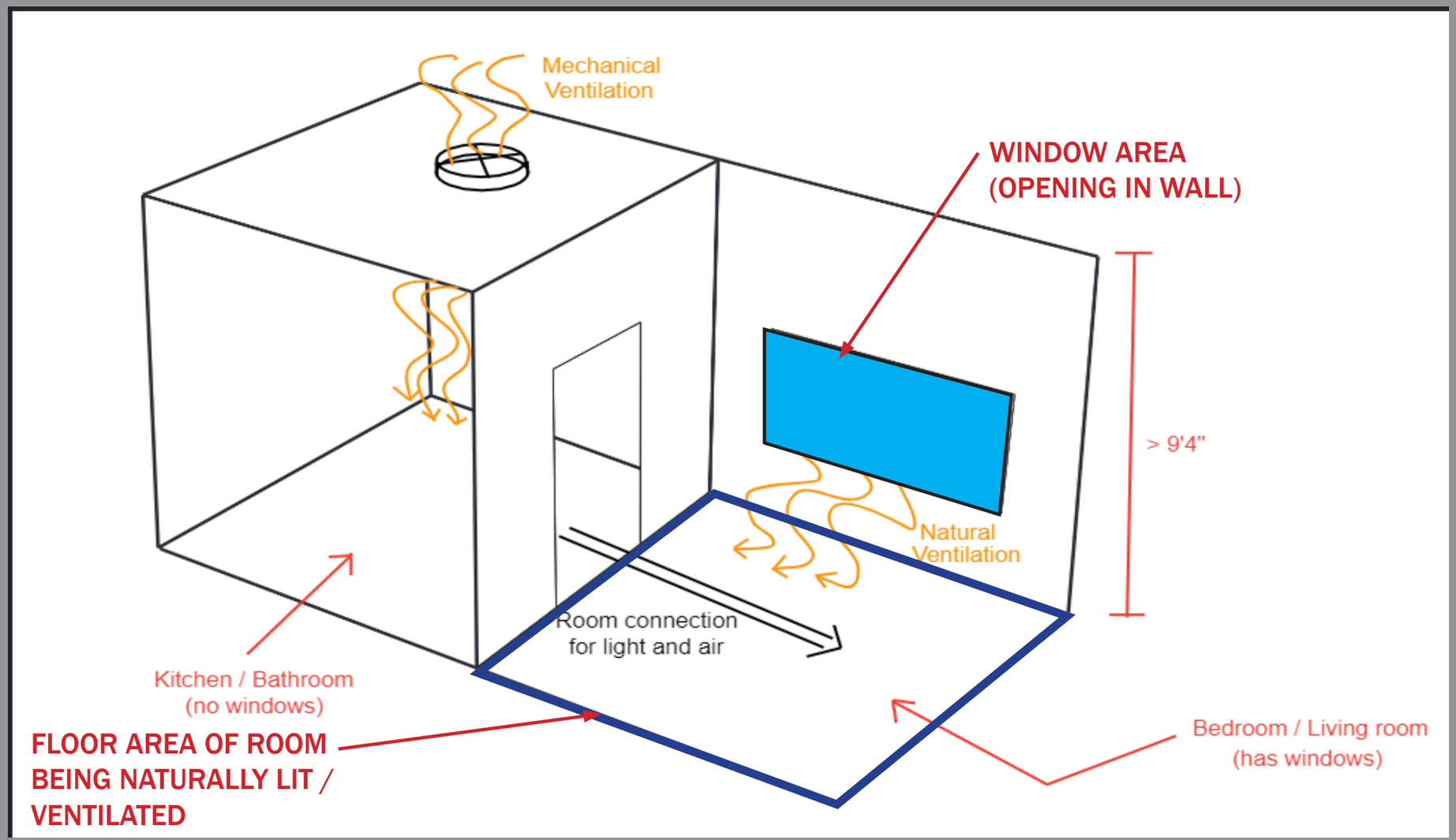
LIGHT & AIR

HABITABLE SPACES (FIRST ATTEMPT)



HABITABLE SPACES (LIVING, DINING, AND BEDROOMS) REQUIRE NATURAL LIGHT AND NATURAL VENTILATION (DIRECT FRESH AIR THROUGH AN OPERABLE OPENING). OTHER SPACES (LIKE KITCHENS AND BATHS) MAY BE MECHANICALLY VENTILATED.

LIGHT & AIR
HABITABLE SPACES

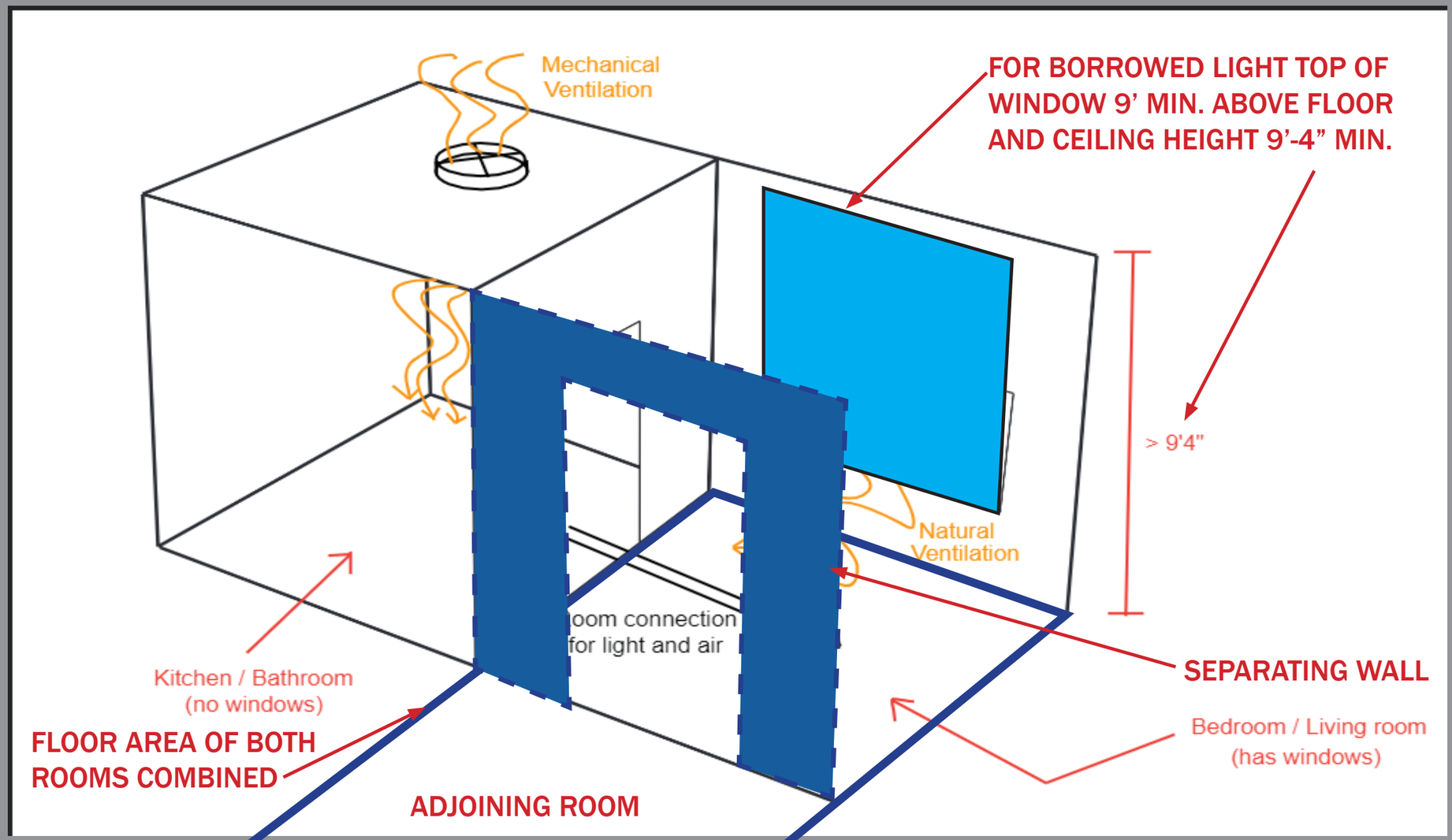


HABITABLE SPACES (LIVING, DINING, AND BEDROOMS)

WINDOW AREA (S.F.) ≥ 8% OF FLOOR AREA OF ROOM (S.F.) FOR NATURAL LIGHT

OPERABLE WINDOW AREA (S.F.) ≥ 4% OF FLOOR AREA OF ROOM (S.F.) FOR NATURAL VENTIALTION

LIGHT & AIR
ADJOINING & REMOTE ROOMS

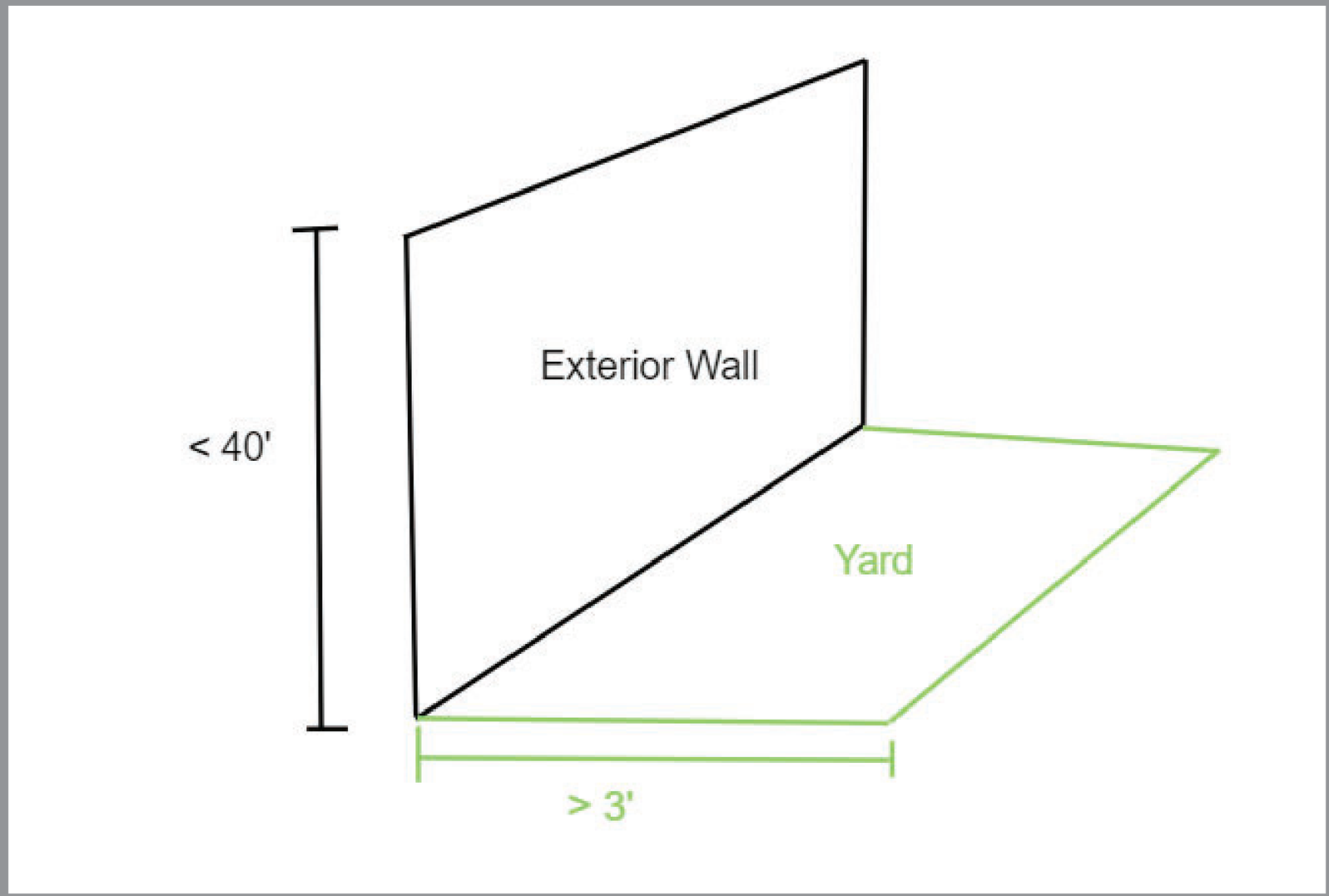


WINDOW AREA (S.F.) ≥ 8%
OF COMBINED FLOOR AREA OF
BOTH ROOMS.

REMOTE ROOM BORROWING LIGHT
SEPARATING WALL MUST BE PARALLEL TO
EXTERIOR WALL WITH WINDOW AND 50% OR
MORE OF THE SEPARATING WALL MUST BE OPEN

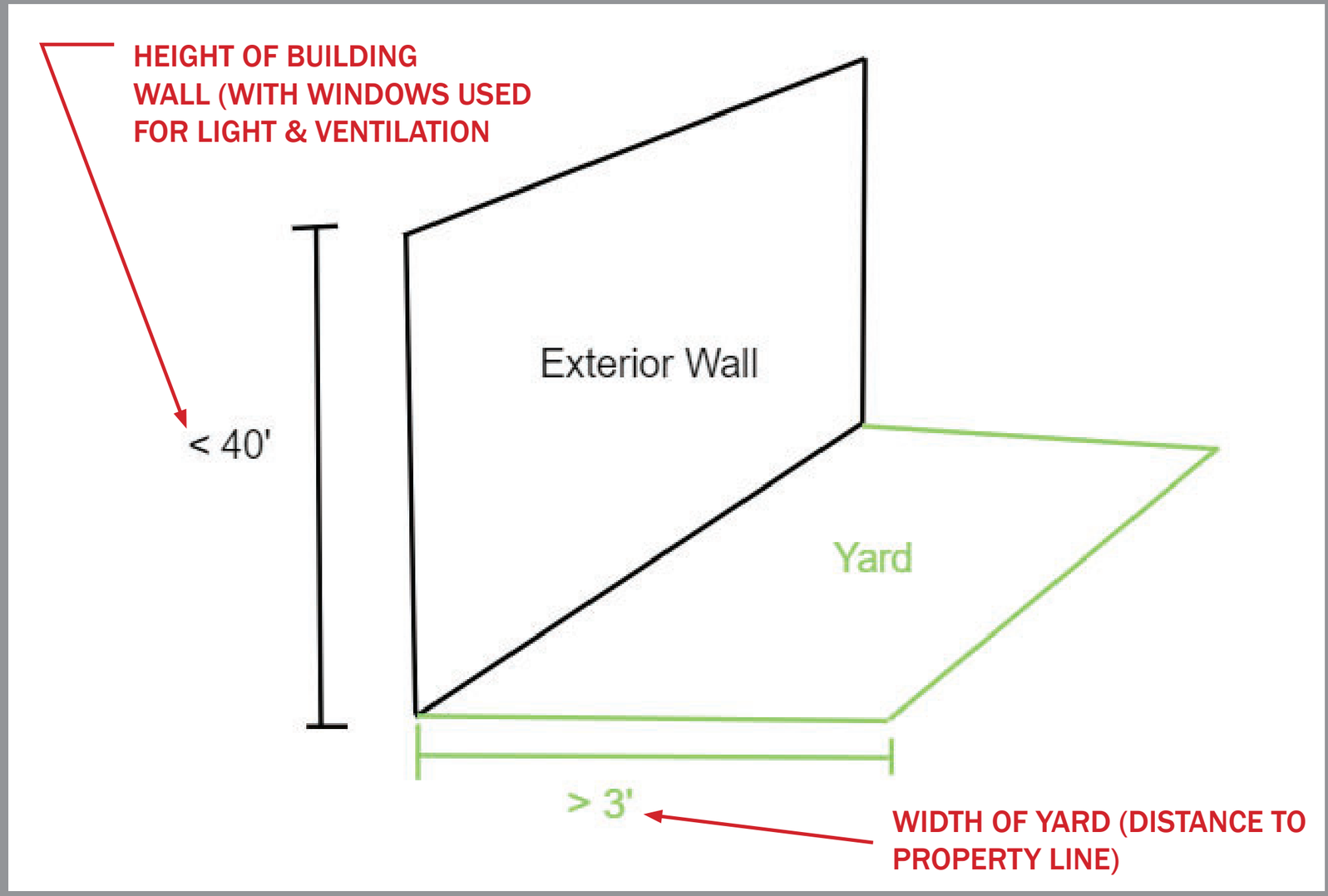
LIGHT & AIR

WHAT'S REQUIRED OUTSIDE THE WINDOWS (FIRST ATTEMPT)



LIGHT & AIR

WHAT'S REQUIRED OUTSIDE THE WINDOWS



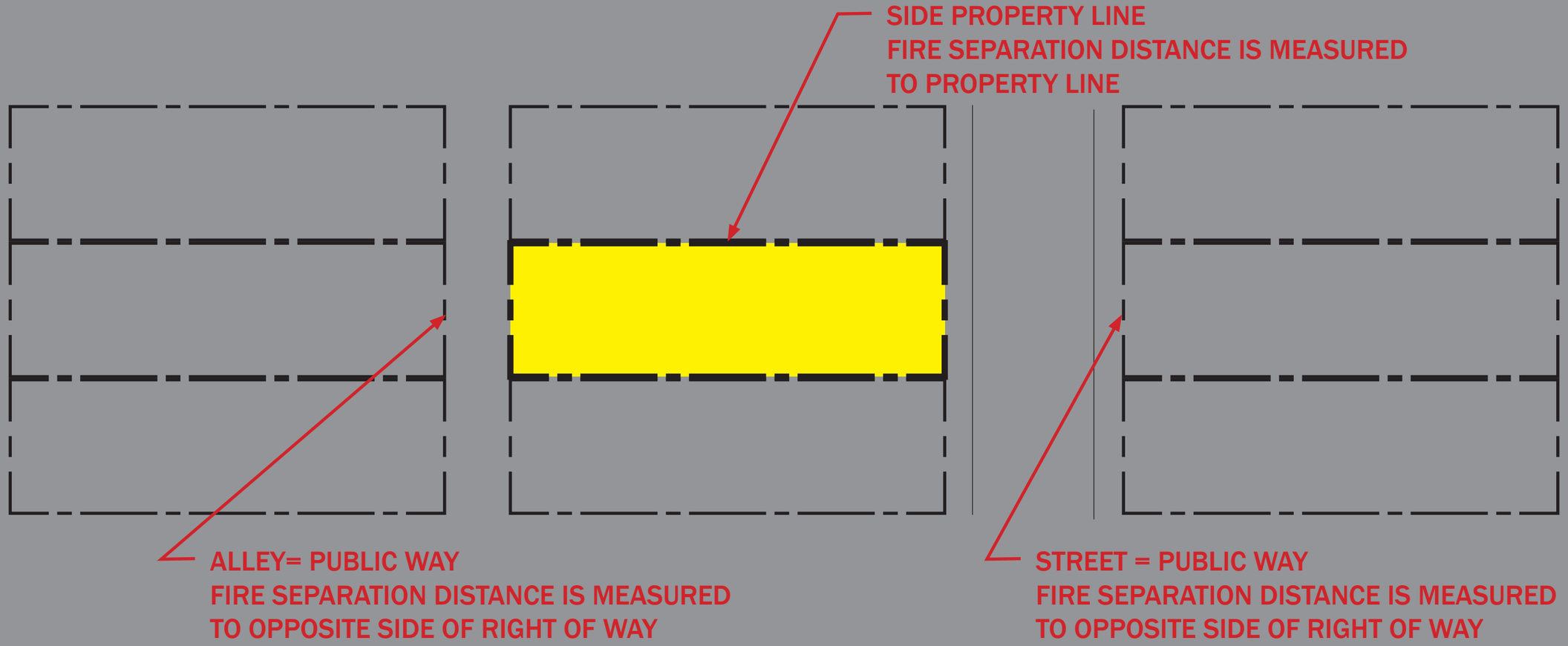
3' MINIMUM YARD WIDTH FOR WALLS UP TO 40' HIGH
(WALL HEIGHT MEASURED ABOVE LOWEST DAYLIT OR VENTILATED LEVEL)
FOR EVERY 1' OF WALL HEIGHT ABOVE 40' ADDITIONAL 2" OF YARD WIDTH REQUIRED

FIRE
FIRE SEPARATION DISTANCE

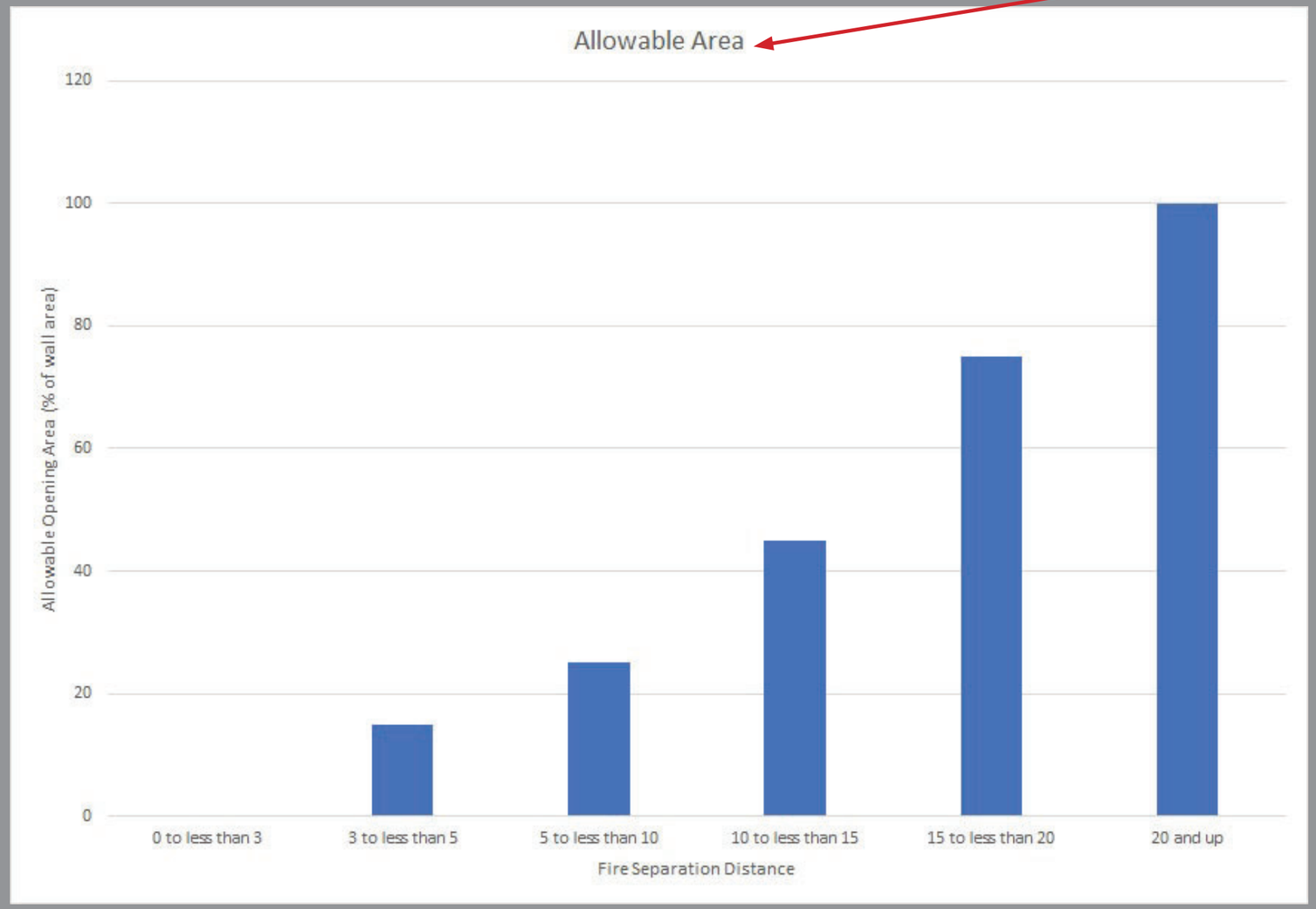
Definitions

1. Fire Separation Distance : The horizontal distance measured from the building face or element to one of the following:
-The closest abutting property line.
-The far boundary of a public way adjoining the lot.
-An imaginary line between two buildings on the same lot.

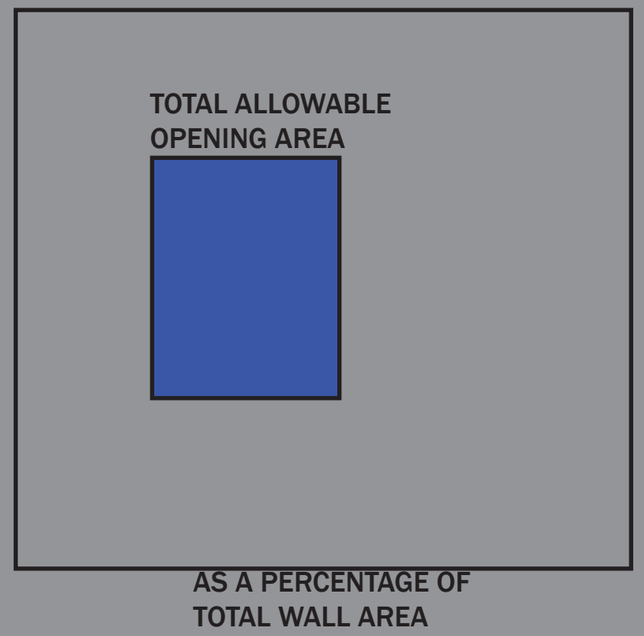
2. Allowable opening area: The percentage of the exterior wall area that is an unprotected opening



FIRE
MAX. ALLOWED OPENINGS



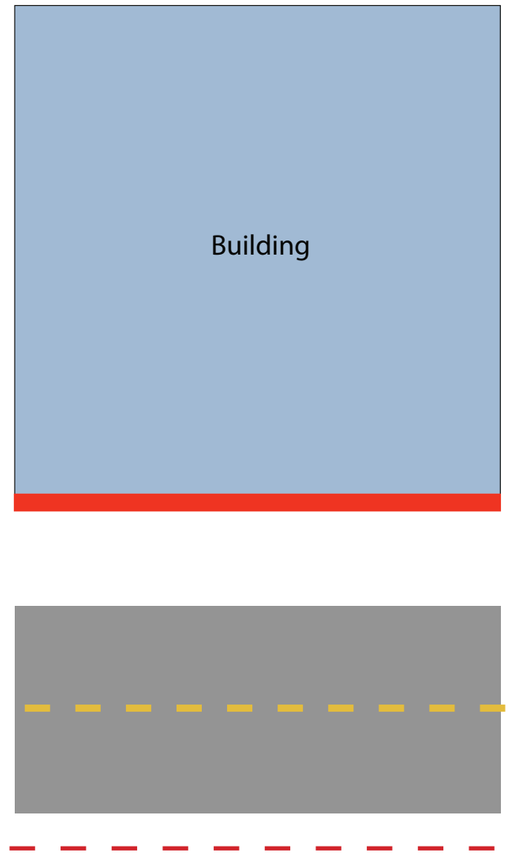
NOTE: THESE VALUES ARE BASED ON THE ASSUMPTIONS WE'VE SET FOR THE STUDIO: THAT THE BUILDING IS SPRINKLERED AND THE OPENINGS ARE UNPROTECTED



THE TOTAL AMOUNT OF WINDOW & DOOR OPENINGS IN A WALL IS BASED ON THE FIRE SEPARATION DISTANCE OF THAT WALL PER THE ABOVE CHART. (THERE ARE WAYS TO EXCEED THIS BY PROTECTING OPENINGS OR USING SPECIAL DOORS OR WINDOWS BUT THIS IS WHAT WE'LL BE USING.)

FIRE
EXCEPTIONS

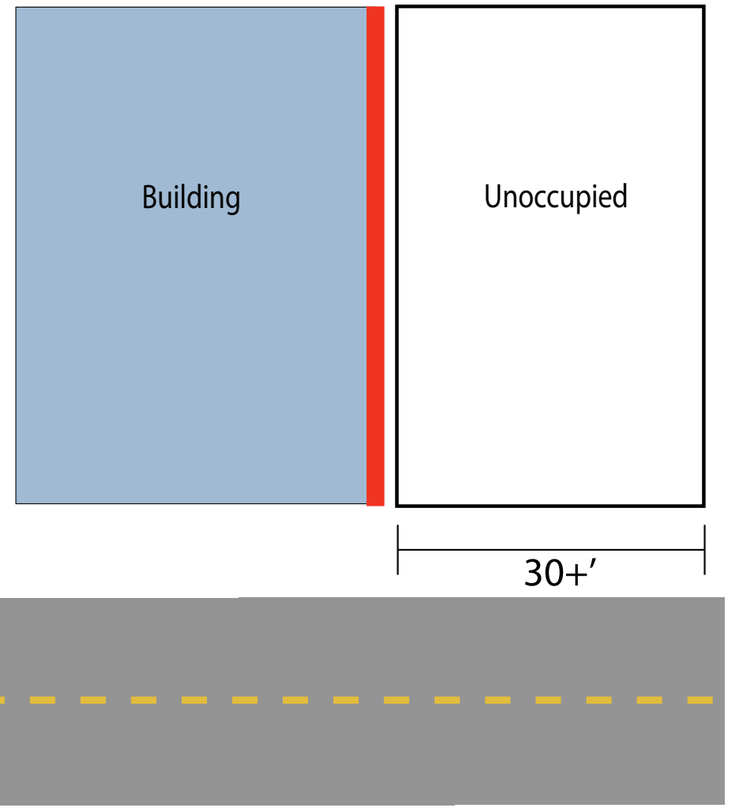
Exception 1.1



Unlimited unprotected openings permitted in the first story above grade plane where the wall faces a street and has a fire seperation distance on 15+ feet.

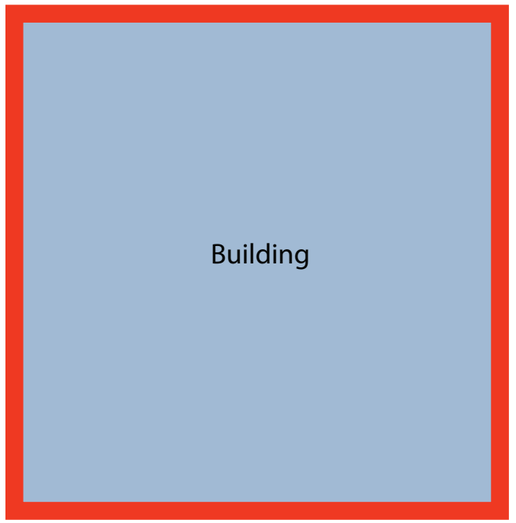
15’ MIN. MEASURED TO OPPOSITE SIDE OF RIGHT-OF-WAY

Exception 1.2



Unlimited unprotected openings permitted in the first story above grade plane where the wall faces an unoccupied space (can be on same lot or dedicated for public use) cannot be less than 30 feet in width and should have access fronmstreet

Exception 2



Buildings whose exterior bearing walls, exterior nonbearing walls and exterior primary structural frame are not required to be fire-re-sistance rated shall be permitted to have unlimited openings.

VERTICAL CIRCULATION

Otis® Create

PRODUCT FINDER

Reset Form

Explore our products and find an elevator or escalator that meets your needs.
Let's get started!

Product Type

Elevator

HydroFit™

HydroFit, our machine-roomless, holeless hydraulic elevator, has been designed to maximize your existing space while saving you construction time and cost.

Travel	Capacity	Speed
26 ft 6 in	2100-5000 lbs	125 fpm

Details Brochure

Gen2® Underslung Systems

A perfect blend of style and comfort for buildings up to 150 feet of travel and speeds up to 350 fpm.

Travel	Capacity	Speed
150 ft	2100-5000 lbs	150-350 fpm

Create Details Brochure

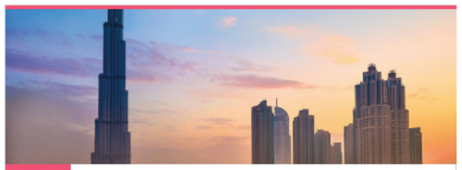
Gen2® Overslung Systems

A perfect solution for buildings up to 300 feet of travel and speeds up to 500 fpm.

Travel	Capacity	Speed
300 ft	2500-5000 lbs	200-500 fpm

Details Brochure

Feedback



Skyrise®

Our most advanced high-rise elevator yet. We combine cutting-edge science and precision engineering to deliver the solutions you need.

Travel	Capacity	Speed
980 ft	2100-5000 lbs	700-1200 fpm

Privacy - Terms

VERTICAL CIRCULATION

UTC OTIS CARRIER PRATT & WHITNEY COLLINS AEROSPACE

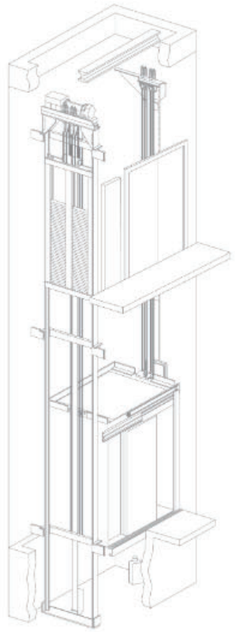
OTIS

PRODUCTS SERVICE MODERNIZATION TOOLS & RESOURCES PROJECTS CAREERS ABOUT CONTACT

Gen2 Underslung

With space saving architectural features, Gen2 Underslung has transformed the industry. A popular choice for low and midrise buildings, it has established new standards of performance. Reliability and energy savings.

350 fpm Top speed

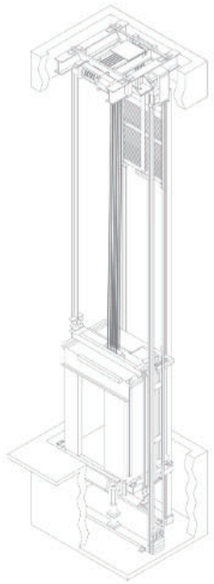


CONFIGURE AND DESIGN WITH OTIS CREATE

Gen2 Overslung

The Gen2 Overslung elevator offers a blend of elegant design and global engineering expertise. Your passengers will enjoy the style, comfort and speed, allowing them to experience your building to the fullest.

500 fpm Top speed



(Control room not shown)

CONFIGURE WITH ARCHITECT'S ASSISTANT™

CONTACT US

VERTICAL CIRCULATION

Otis® Create

PRODUCT FINDER | DRAWINGS | FINISHES | SPECS

DRAWINGS

Reset Form

Early in design and looking for key dimensions? Use our Standard Drawings tab. For more detailed drawings and options, use our Customized Drawing tab.

Standard Drawing | Custom Drawing

Mutiple Car Arrangement *: Simplex (1 elevator)

Capacity (lbs) *: 3000

Speed (fpm) *: 200

Openings *: Front Opening Only

Door Type *: Center Opening

Controller Location *: Control room, closet o...

Do Seismic Conditions Exist? *: Yes | No

Number of Stops *: 4

Travel *: 35 (ft) (in)

Customise Floor Height & Door Entrances

* Required Field

Download Drawing

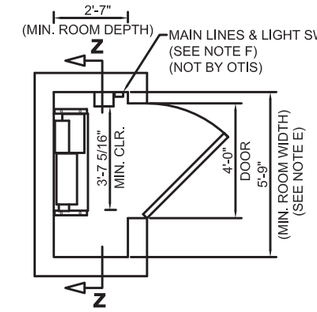
Contact Otis

GEN2® UNDERSLUNG SYSTEMS CONFIGURATION

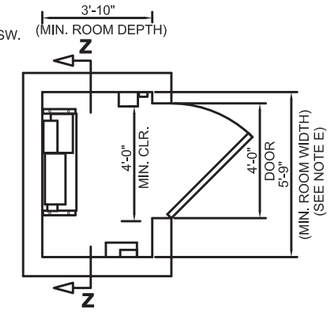
Note: Dimensions may vary based on code/local requirements and your choice of machine and drive.

Privacy - Terms

VERTICAL CIRCULATION



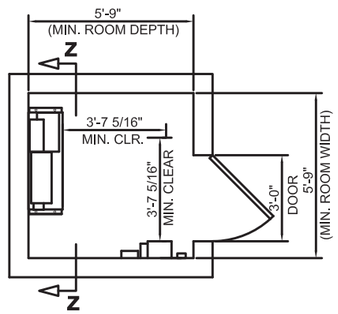
MINIMUM CONTROL SPACE REQUIREMENTS ONE CAR WITHOUT AUTOMATIC RECOVERY OPERATION



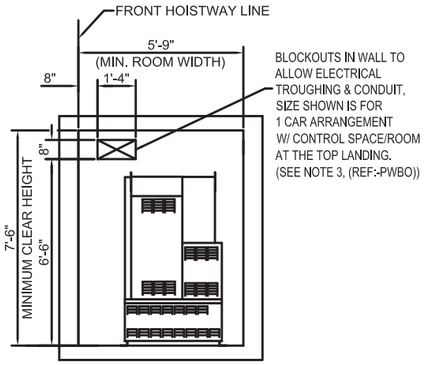
MINIMUM CONTROL SPACE REQUIREMENTS ONE CAR WITH AUTOMATIC RECOVERY OPERATION

NOTE E

CHECK LOCAL BUILDING CODES FOR HALLWAY CLEARANCES WHEN CONTROL DOORS ARE OPENED FOR SERVICE OF THE ELEVATOR.



MINIMUM CONTROL ROOM REQUIREMENTS ONE CAR



SECTION Z - Z

NOTE F

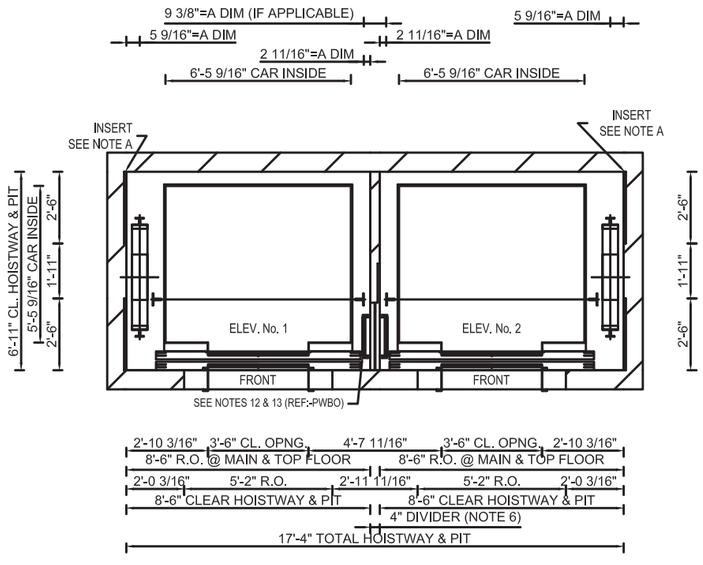
THE FRONT SURFACE OF THE MAINLINE DISCONNECT MUST PROJECT INTO CLEAR OPENING OF CONTROL SPACE. IF THE SIZE OF THE CONTROL SPACE IS INCREASED, A MEANS OF LOCATING THE MAINLINE DISCONNECT INTO THE CLEAR OPENING MUST BE PROVIDED.

NOTES:
WEIGHT OF CONTROLLER = 350 lbs.

	<= 2007 CODE YEAR		> 2009 CODE YEAR	
	CAB HEIGHT		CAB HEIGHT	
	7'-9"	9'-9"	7'-9"	9'-9"
MIN RISE	13'-7"			
MAX RISE	100'-0"			
MIN. TOTAL CLEAR HEIGHT	13'-1"	15'-1"	12'-11"	14'-11"
MAX. TOTAL CLEAR HEIGHT	MIN CLEAR HEIGHT + 2'-0" [609.6mm]			
PIT DEPTH	IF A17.7 IS ADOPTED THEN PIT DEPTH = 4'-0" IF A17.7 IS NOT ADOPTED THEN PIT DEPTH = 5'-0"			

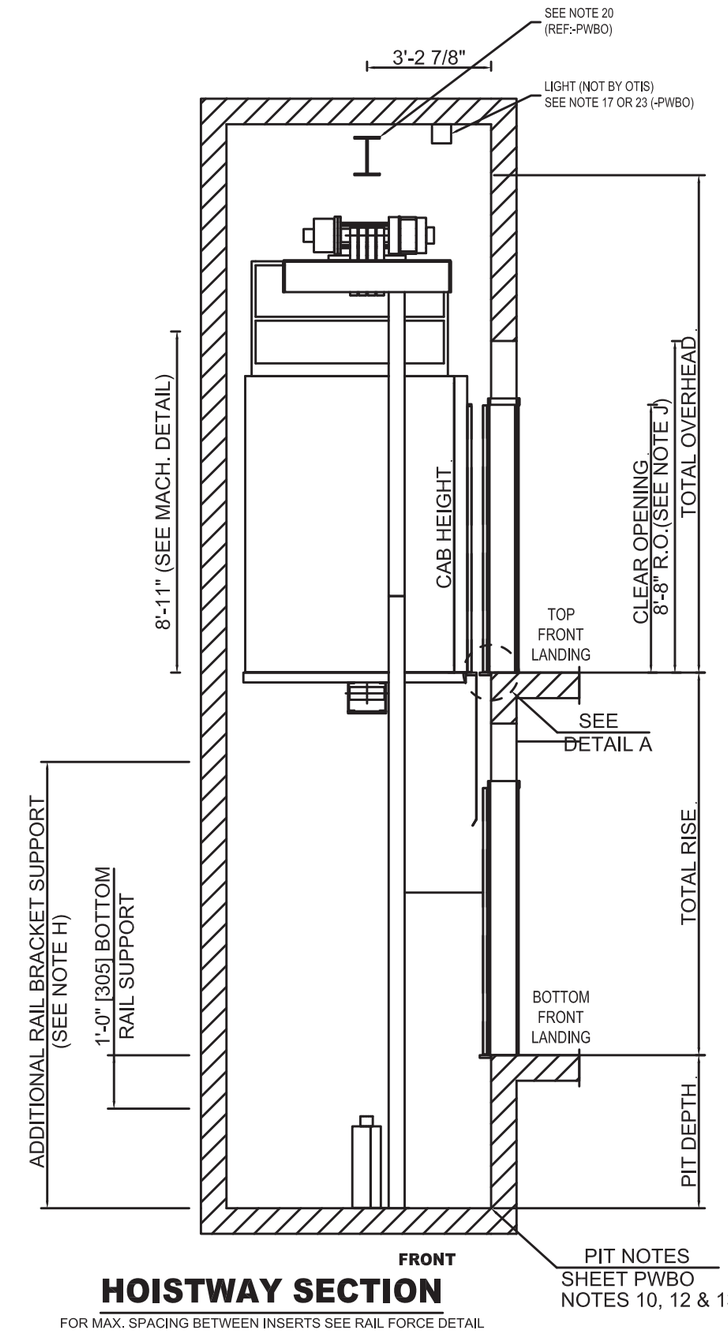
- MINIMUM FLOOR HEIGHT IS 8'-3" [2515mm] with 7'-0" [2134] ENTRANCE
- MAXIMUM FLOOR HEIGHT IS 20'-0"
- HOISTWAY LIGHT SWITCH LOCATED 3'-0" [914] ABOVE TOP LANDING COORDINATE WITH OTIS
- 8'-0" [2438] ENTRANCE AVAILABLE WITH 9'-9" [2819] CAB.
- IF HOISTWAY VENTILATION IS REQUIRED, THE LOCATION CANNOT BE LOCATED ABOVE OR NEAR THE MACHINE OF THE ELEVATOR SYSTEM.

STANDARD WORKING RANGES



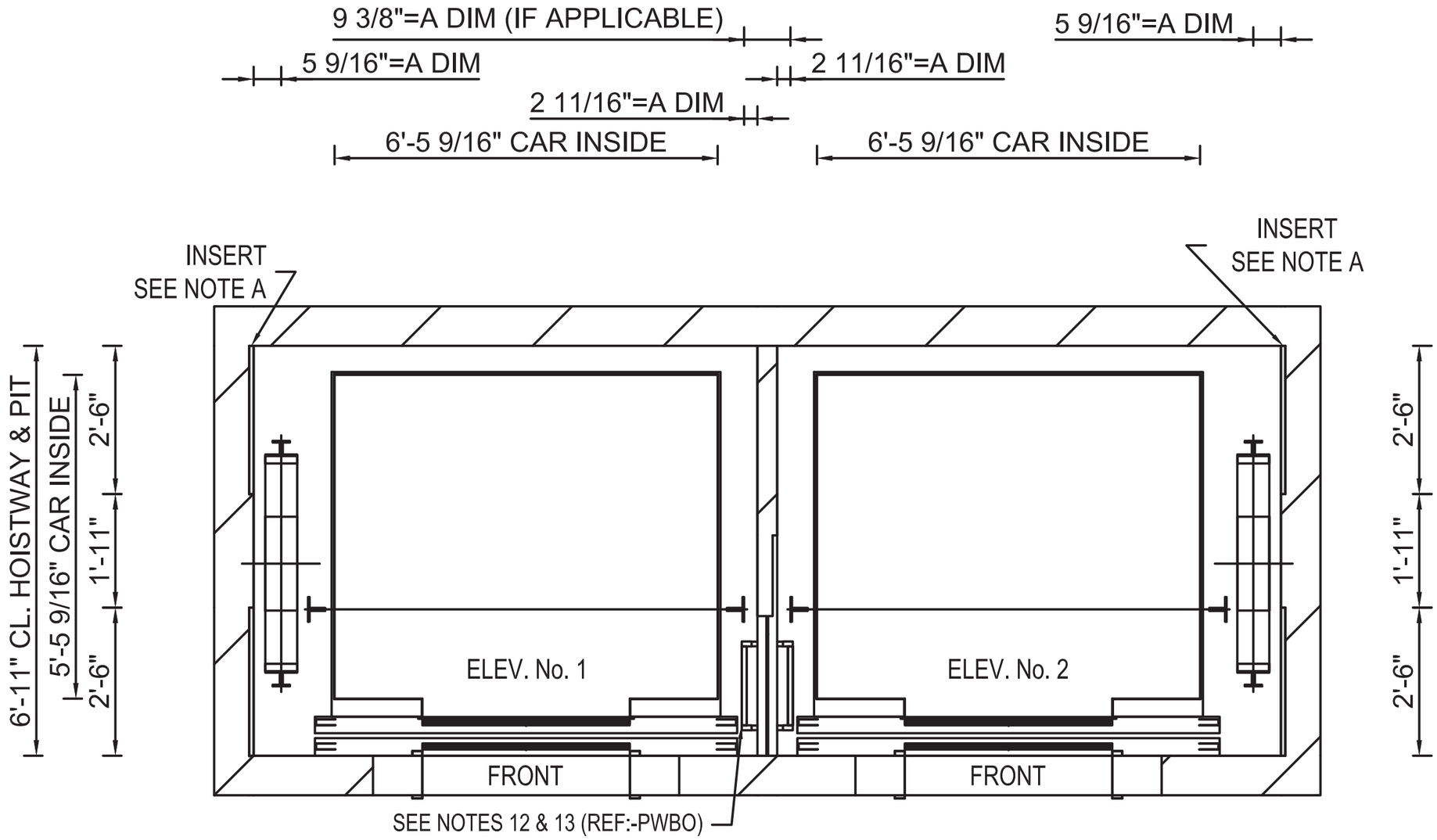
PLAN VIEW

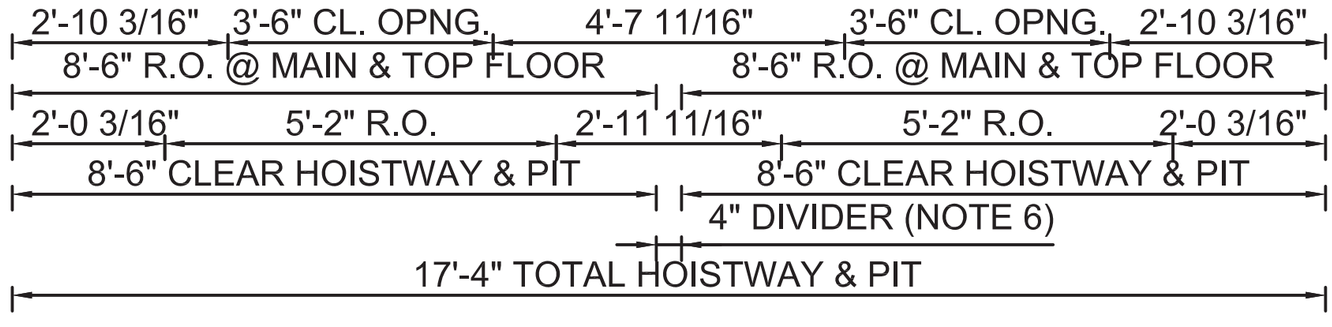
SEE NOTE 5, PWBO SHEET



HOISTWAY SECTION

FOR MAX. SPACING BETWEEN INSERTS SEE RAIL FORCE DETAIL


9 3/8"=A DIM (IF APPLICABLE)
5 9/16"=A DIM
5 9/16"=A DIM
2 11/16"=A DIM
2 11/16"=A DIM
6'-5 9/16" CAR INSIDE
6'-5 9/16" CAR INSIDE
INSERT
SEE NOTE A
INSERT
SEE NOTE A
6'-11" CL. HOISTWAY & PIT
5'-5 9/16" CAR INSIDE
2'-6"
1'-11"
2'-6"
2'-6"
1'-11"
2'-6"
ELEV. No. 1
ELEV. No. 2
FRONT
FRONT
SEE NOTES 12 & 13 (REF:-PWBO)


2'-10 3/16"
3'-6" CL. OPNG.
4'-7 11/16"
3'-6" CL. OPNG.
2'-10 3/16"
8'-6" R.O. @ MAIN & TOP FLOOR
8'-6" R.O. @ MAIN & TOP FLOOR
2'-0 3/16"
5'-2" R.O.
2'-11 11/16"
5'-2" R.O.
2'-0 3/16"
8'-6" CLEAR HOISTWAY & PIT
8'-6" CLEAR HOISTWAY & PIT
4" DIVIDER (NOTE 6)
17'-4" TOTAL HOISTWAY & PIT

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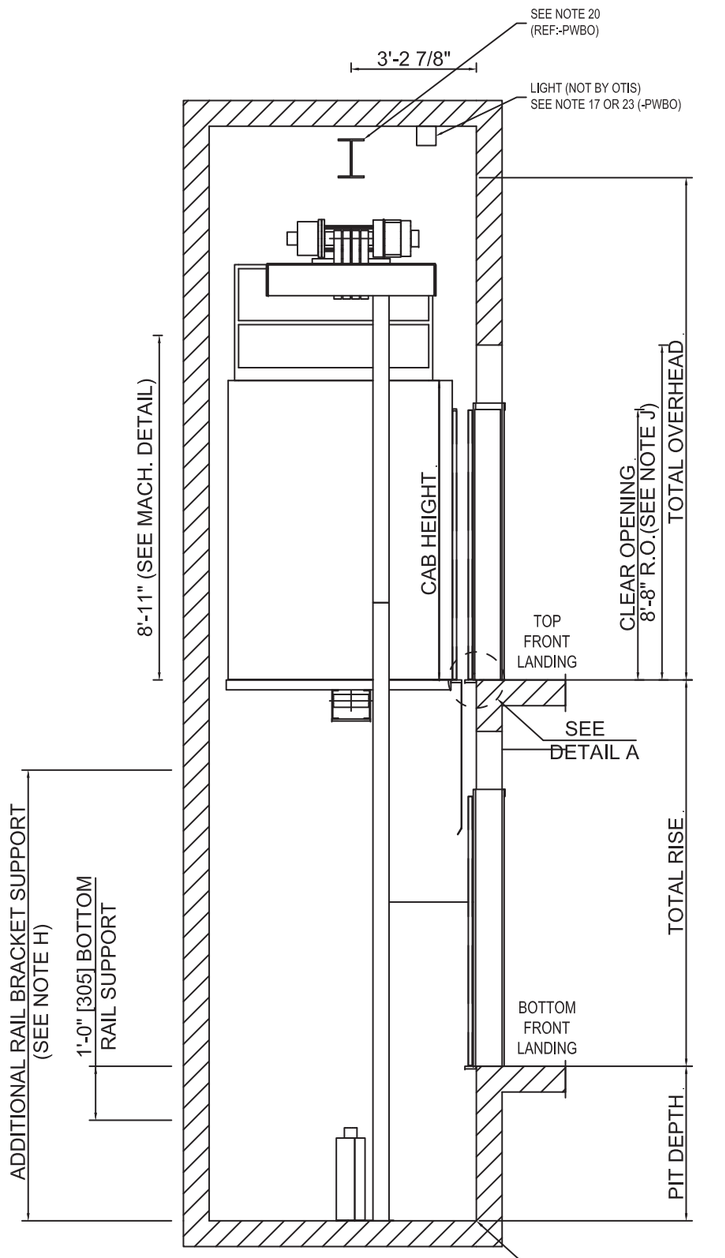
STANDARD WORKING RANGES



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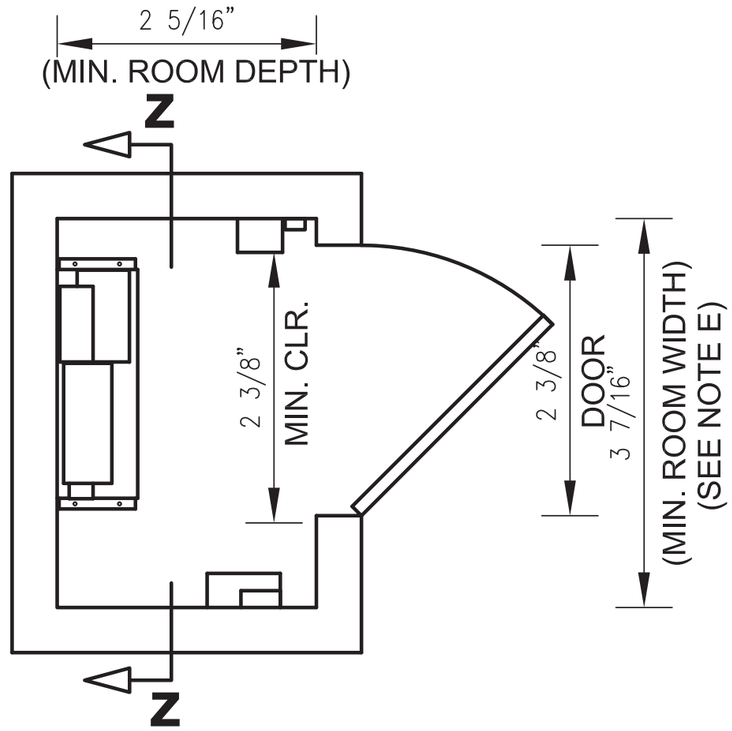
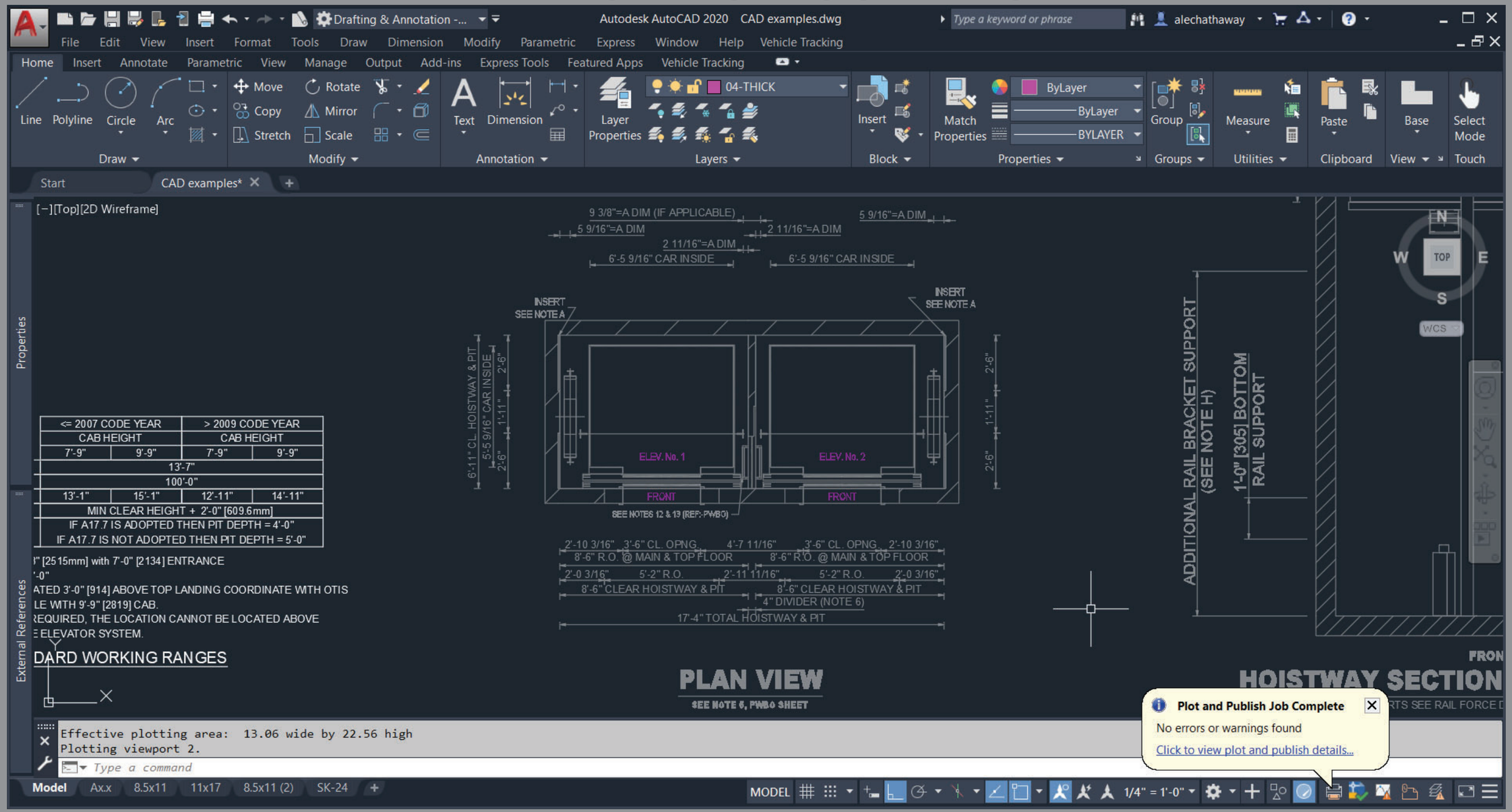


MINIMUM CONTROL SPACE REQUIREMENTS ONE CAR WITH AUTOMATIC RECOVERY OPERATION

NOTE E

CHECK LOCAL BUILDING CODES FOR HALLWAY CLEARANCES WHEN CONTROL DOORS ARE OPENED FOR SERVICE OF THE ELEVATOR.

VERTICAL CIRCULATION



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13'-7"			
100'-0"			
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MIN CLEAR HEIGHT + 2'-0" [609.6mm]			
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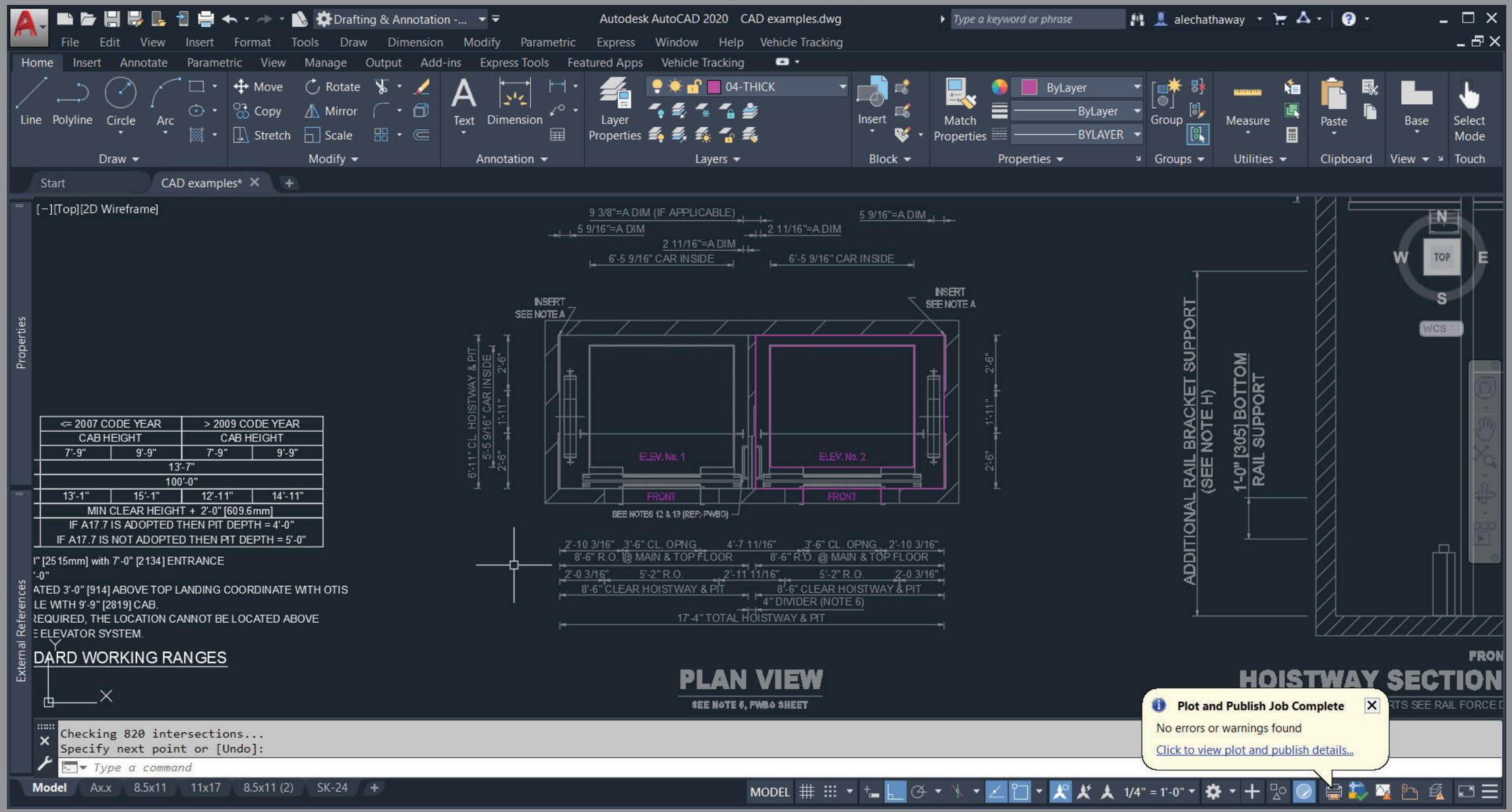
IF A17.7 IS NOT ADOPTED THEN PIT DEPTH = 5'-0"			

)" [2515mm] with 7'-0" [2134] ENTRANCE
'-0"
ATED 3'-0" [914] ABOVE TOP LANDING COORDINATE WITH OTIS
LE WITH 9'-9" [2819] CAB.
REQUIRED, THE LOCATION CANNOT BE LOCATED ABOVE
E ELEVATOR SYSTEM.

DARD WORKING RANGES

VERTICAL CIRCULATION



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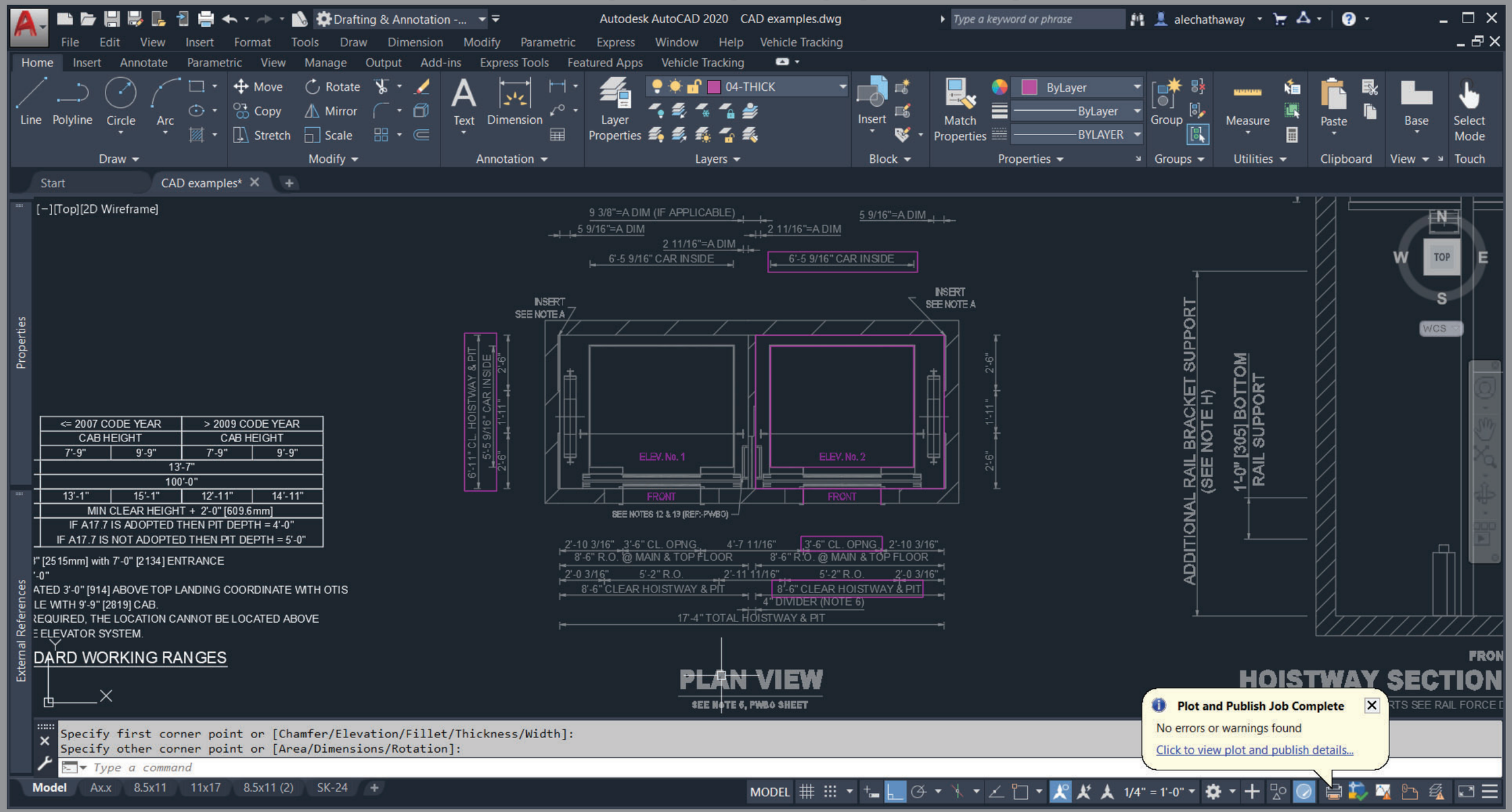
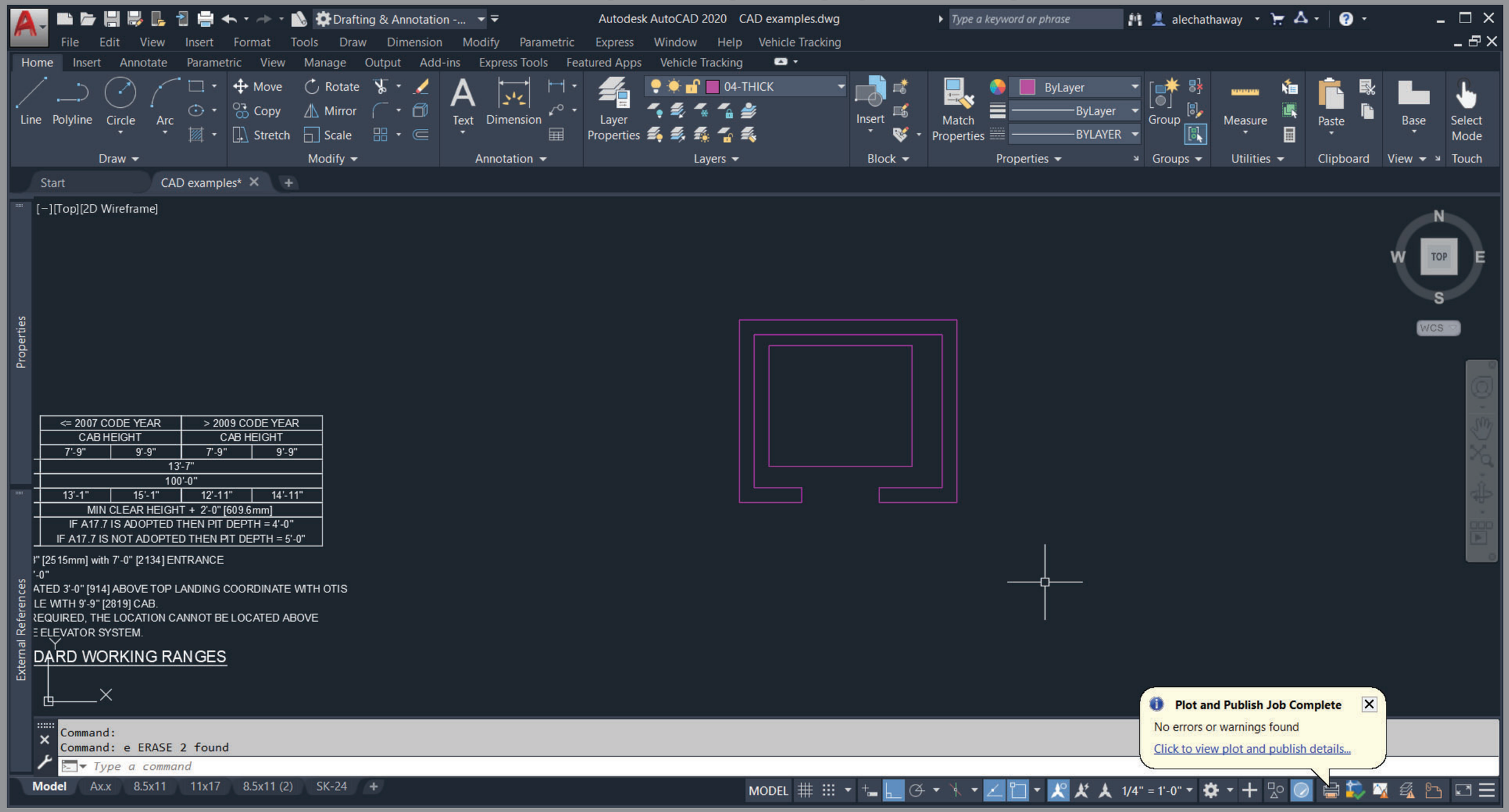
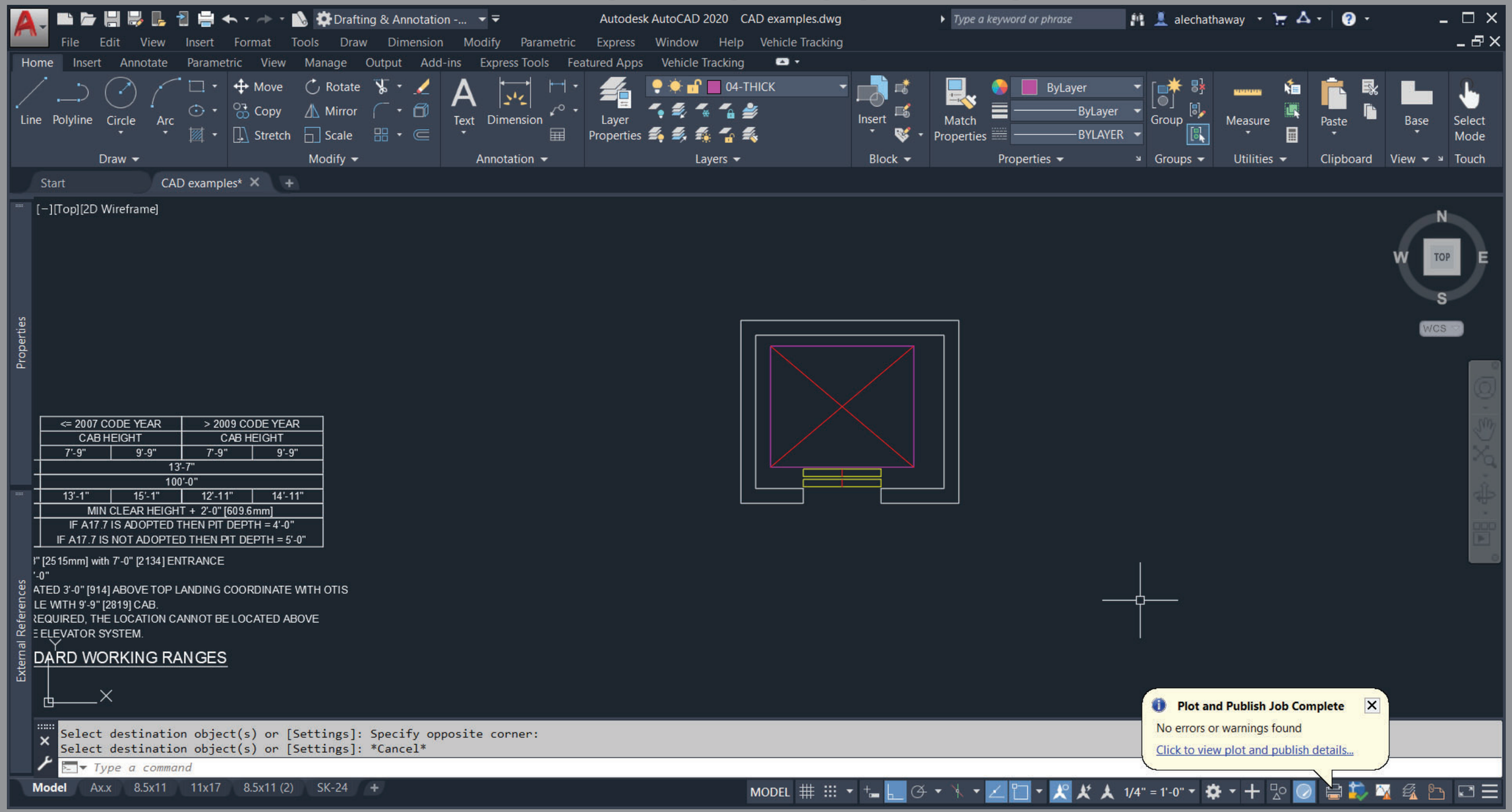
VERTICAL CIRCULATION

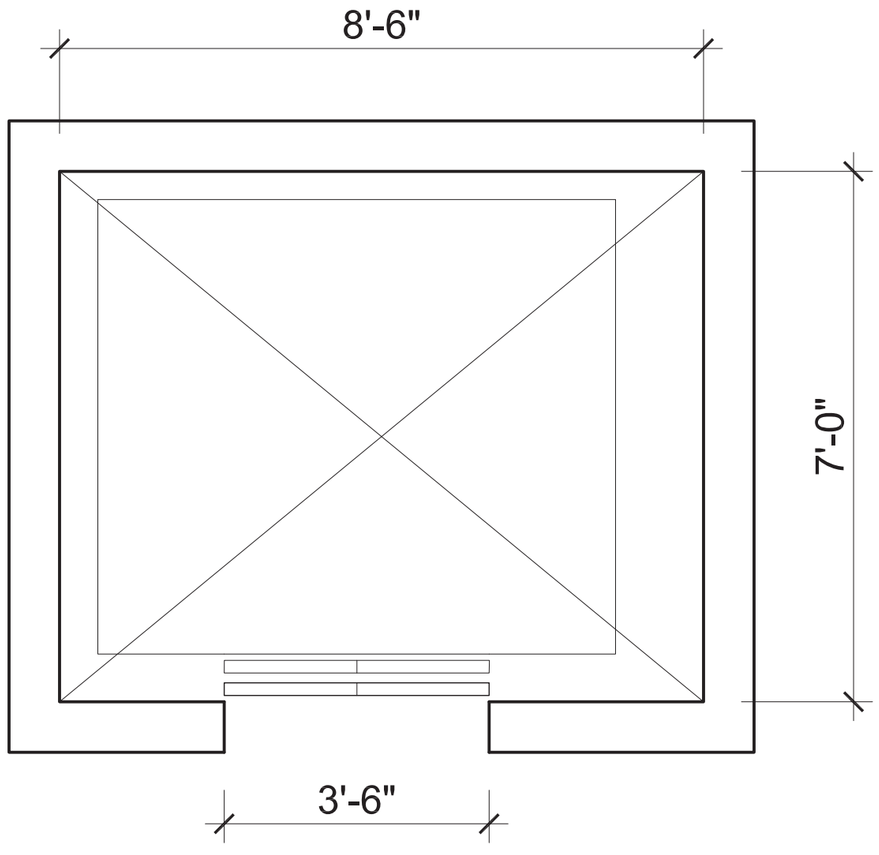


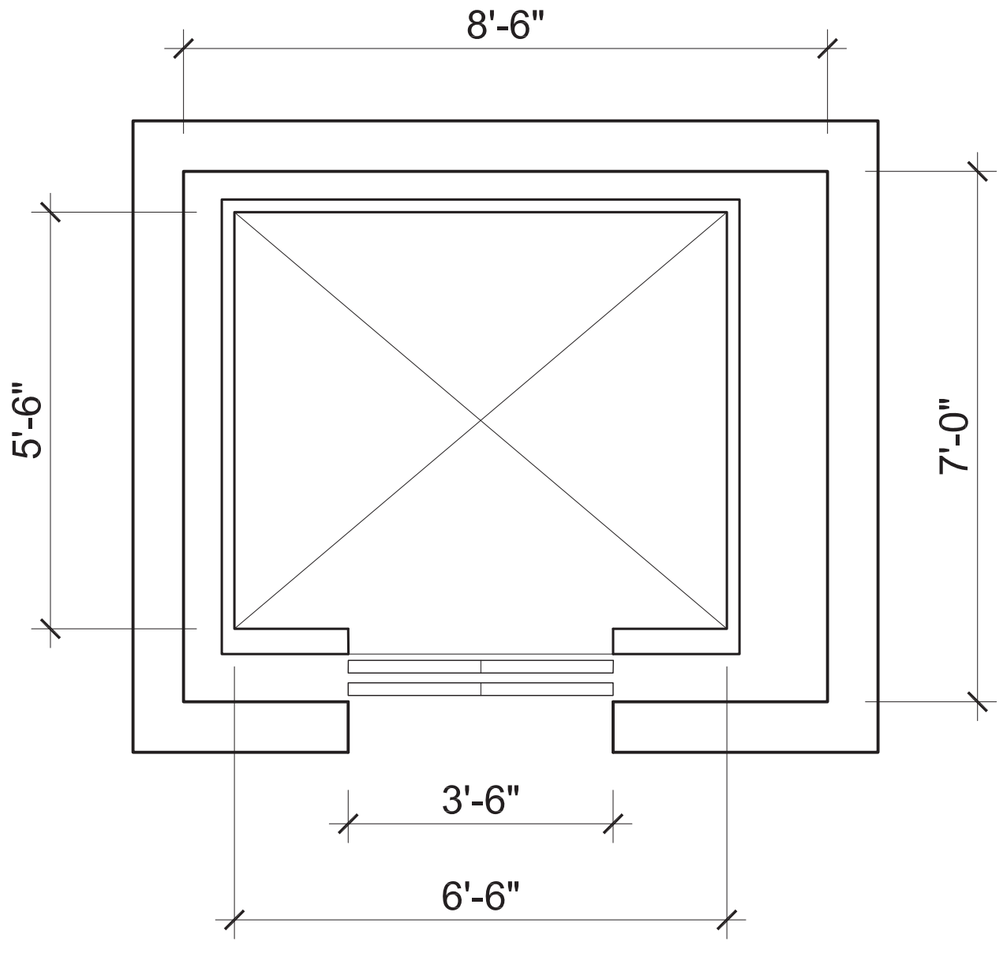
VERTICAL CIRCULATION



VERTICAL CIRCULATION




8'-6"
7'-0"
3'-6"


8'-6"
5'-6"
7'-0"
3'-6"
6'-6"

VERTICAL CIRCULATION