

FOOTING DESIGN
 SOIL BEARING CAPACITY UNKNOWN. ASSUME 1500 PSI
 USE EITHER 22"x22" or 25" ROUND BIGFOOT FORMS WHEN BEARING ON SOIL
 PER TABLE 507.3.1
 USE 16" ROUND SONOTUBE WHEN PINNED TO BEDROCK

780 CMR: STATE BOARD OF BUILDING REGULATIONS AND STANDARDS

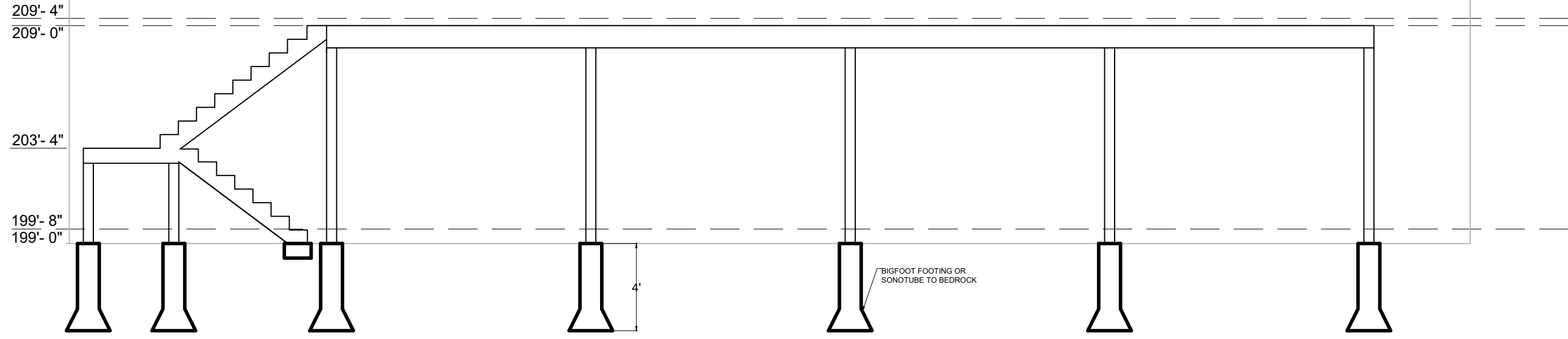
14.00: continued

City/Town	SNOW LOADS		BASIC WIND SPEED, V_w (mph)			SEISMIC PARAMETERS (%)	
	Ground Snow Load, S_g (psf)	Minimum Snow Load, S_g (psf)	Risk Category I	Risk Category II	Risk Category III or IV	S_a	S_d
Andover	40	35	118	129	139	6.185	0.995
Andover	40	35	117	127	138	6.237	0.991
Andover	40	35	116	126	137	6.290	0.987
Andover	40	35	115	125	136	6.343	0.983
Andover	40	35	114	124	135	6.396	0.979
Andover	40	35	113	123	134	6.449	0.975
Andover	40	35	112	122	133	6.502	0.971
Andover	40	35	111	121	132	6.555	0.967
Andover	40	35	110	120	131	6.608	0.963
Andover	40	35	109	119	130	6.661	0.959
Andover	40	35	108	118	129	6.714	0.955
Andover	40	35	107	117	128	6.767	0.951
Andover	40	35	106	116	127	6.820	0.947
Andover	40	35	105	115	126	6.873	0.943
Andover	40	35	104	114	125	6.926	0.939
Andover	40	35	103	113	124	6.979	0.935
Andover	40	35	102	112	123	7.032	0.931
Andover	40	35	101	111	122	7.085	0.927
Andover	40	35	100	110	121	7.138	0.923

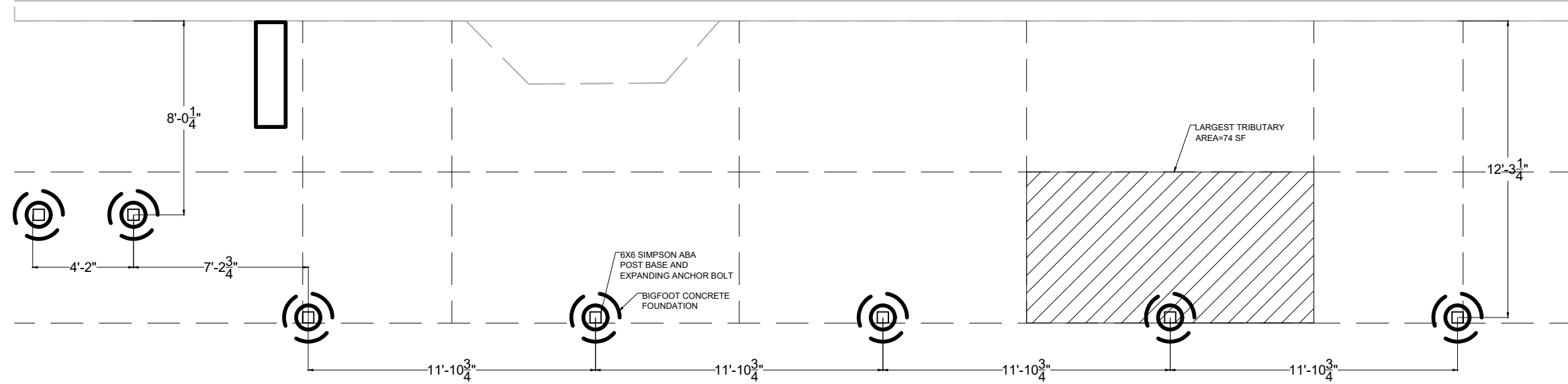
507.3 Minimum size.

TABLE 507.3.1 MINIMUM FOOTING SIZE FOR DECKS

LIVE OR DEAD LOAD (kN)	LIVE OR DEAD LOAD (kN)	LIVE OR DEAD LOAD (kN)				LIVE OR DEAD LOAD (kN)			
		Minimum	Minimum	Minimum	Minimum	Minimum	Minimum	Minimum	Minimum
10	10	10	10	10	10	10	10	10	10
15	15	15	15	15	15	15	15	15	15
20	20	20	20	20	20	20	20	20	20
25	25	25	25	25	25	25	25	25	25
30	30	30	30	30	30	30	30	30	30
35	35	35	35	35	35	35	35	35	35
40	40	40	40	40	40	40	40	40	40
45	45	45	45	45	45	45	45	45	45
50	50	50	50	50	50	50	50	50	50
55	55	55	55	55	55	55	55	55	55
60	60	60	60	60	60	60	60	60	60
65	65	65	65	65	65	65	65	65	65
70	70	70	70	70	70	70	70	70	70
75	75	75	75	75	75	75	75	75	75
80	80	80	80	80	80	80	80	80	80
85	85	85	85	85	85	85	85	85	85
90	90	90	90	90	90	90	90	90	90
95	95	95	95	95	95	95	95	95	95
100	100	100	100	100	100	100	100	100	100



ELEVATION



PLAN

Roache Residence

8 Prescott Street
 Melrose, MA 02176

ISSUED FOR PERMIT

Project Number:

DATE 4/7/2024

REVISIONS:

Foundation Plan

DRAWING NUMBER:

A1

SCALE 1/4" = 1.0'

SNOW LOAD
40 PSF REQUIRED FOR MELROSE PER 780 CMR
9TH EDITION (ALL DESIGN FACTORS EXCEED THIS REQUIREMENT)

JOIST SIZING
USE 2x10 SP JOISTS
16" O.C. PER IRC TABLE 507.5 (MEETS 70 PSF SNOW REQUIREMENTS)

JOIST SPAN
NO CANTILEVER, C/J=0
EFFECTIVE JOIST SPAN =
12'-0" x 0.66=8'-0" PER TABLE 507.5(5)

BEAM SPAN
(3)2x12 BEAM, EFFECTIVE JOIST SPAN=8'-0"
MAXIMUM BEAM SPAN = 13'-3" PER TABLE 507.5(1)
11'-10 3/4" PROVIDED (MEETS 60 PSF SNOW REQUIREMENTS)

LEDGER CONNECTIONS
SPACING EVERY 12" (MEETS 60 PSF SNOW REQUIREMENTS)

R507.5 Deck Joists.
Maximum allowable spans for wood deck joists, as shown in Figure R507.5, shall be in accordance with Table R507.5. Deck joists shall be permitted to cantilever not greater than one-fourth of the actual, adjacent joist span.
See the commentary to Section R507.4.

TABLE R507.5 DECK JOIST SPANS FOR COMMON LUMBER SPECIES^a (ft. - in.)

SPECIES ^a	SIZE	SPACING OF DECK JOISTS WITH NO CANTILEVER ^b (inches)			SPACING OF DECK JOISTS WITH CANTILEVERS ^c (inches)		
		12	16	24	12	16	24
Southern pine	2 x 8	8-11	8-0	7-7	6-8	6-8	6-8
	2 x 8	13-1	11-10	9-8	10-1	10-1	9-8
	2 x 10	18-2	14-0	11-5	14-8	14-0	11-6
Douglas fir-larch ^d , hem-fir ^e spruce-pine-fir ^f	2 x 8	9-8	8-8	7-2	6-3	6-3	6-3
	2 x 8	12-6	11-1	9-1	9-5	9-5	9-1
	2 x 10	15-8	13-7	11-1	13-7	13-7	11-1
Redwood, western cedars, ponderosa pine ^g , red pine ^h	2 x 8	18-0	15-9	12-10	18-0	15-9	12-10
	2 x 8	8-10	8-0	7-0	5-7	5-7	5-7
	2 x 8	11-8	10-7	8-8	8-8	8-8	8-8
	2 x 10	14-11	13-0	10-7	12-3	12-3	10-7
	2 x 12	17-5	15-1	12-4	16-5	15-1	12-4

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa, 1 pound = 0.454 kg.
a. No. 2 grade with wet service factor.
b. Ground snow load, live load = 40 psf, dead load = 10 psf, L₀ = 300.
c. Ground snow load, live load = 40 psf, dead load = 10 psf, L₀ = 300 at main span, L₀ = 180 at cantilever with a 220-pound point load applied to end.
d. Includes incising factor.
e. Northern species with no incising factor.
f. Northern species with no incising factor.
g. Cantilevered spans not exceeding the nominal depth of the joist are permitted.

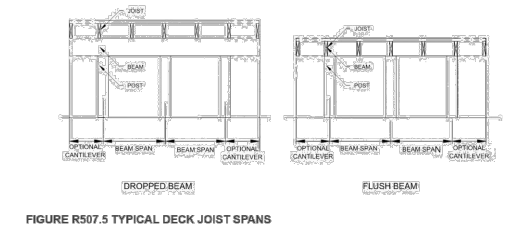
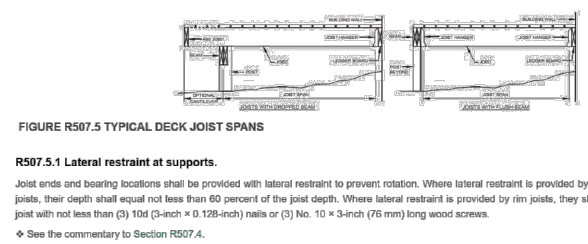
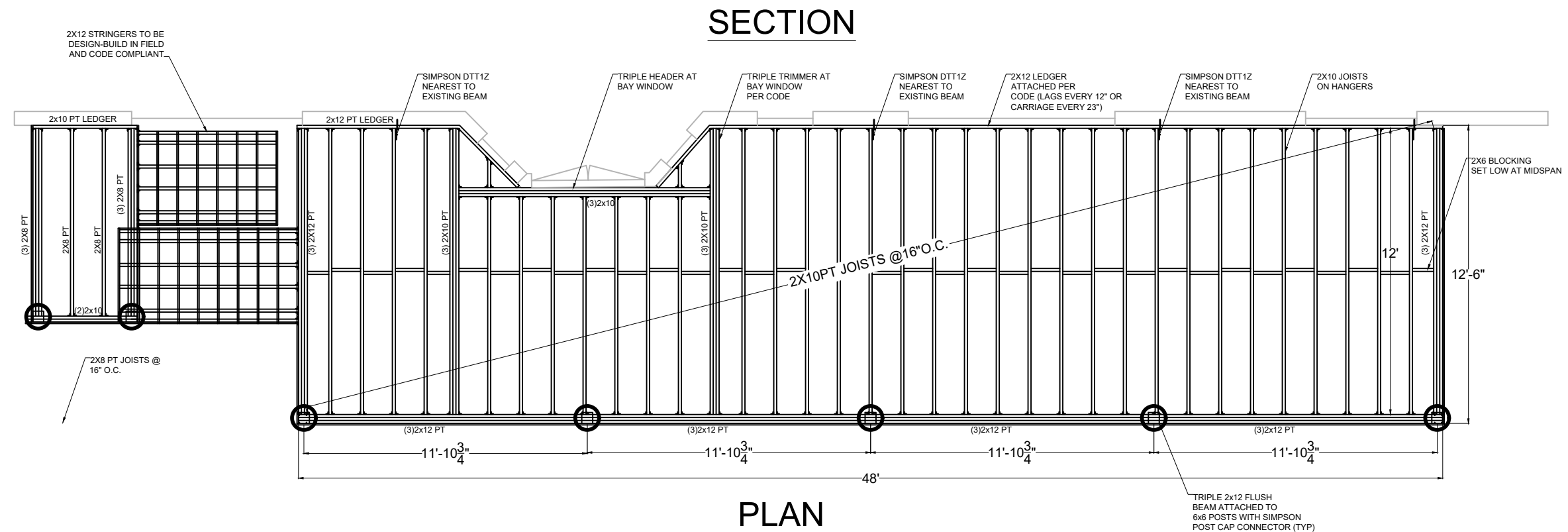
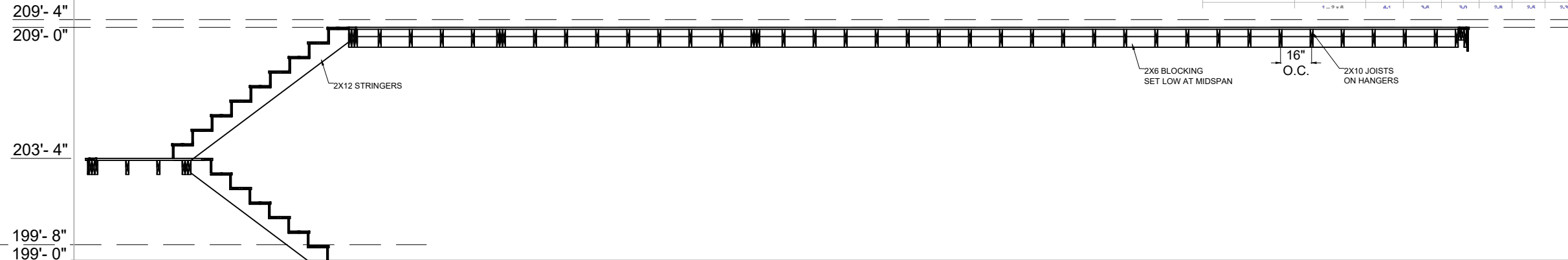


TABLE R507.5(5) JOIST SPAN FACTORS FOR CALCULATING EFFECTIVE DECK JOIST SPAN [for use with Note J in Tables R507.5(1), R507.5(2), R507.5(3) and R507.5(4)]

C/J ^a	JOIST SPAN FACTOR
0 (no cantilever)	0.66
1/12 (0.87)	0.72
1/10 (0.10)	0.80
1/8 (0.125)	0.84
1/6 (0.167)	0.90
1/4 (0.25)	1.00

For SI: 1 foot = 304.8 mm.
a. C = actual joist cantilever length (feet); J = actual joist span length (feet).



Roache Residence

8 Prescott Street
Melrose, MA 02176

Issued for Permit

Project Number: _____
DATE: 4/17/2022
REVISIONS: _____

Framing Plan

DRAWING NUMBER: _____

A2

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

**Roache
Residence**

8 Prescott Street
Melrose, MA 02176

**Issued for
Permit**

Project Number:

DATE 4/7/2024

REVISIONS:

NO.	DESCRIPTION

**Deck
Finish
Plan**

DRAWING
NUMBER:

A3

SCALE 1/4" = 1'-0"

219'- 4"

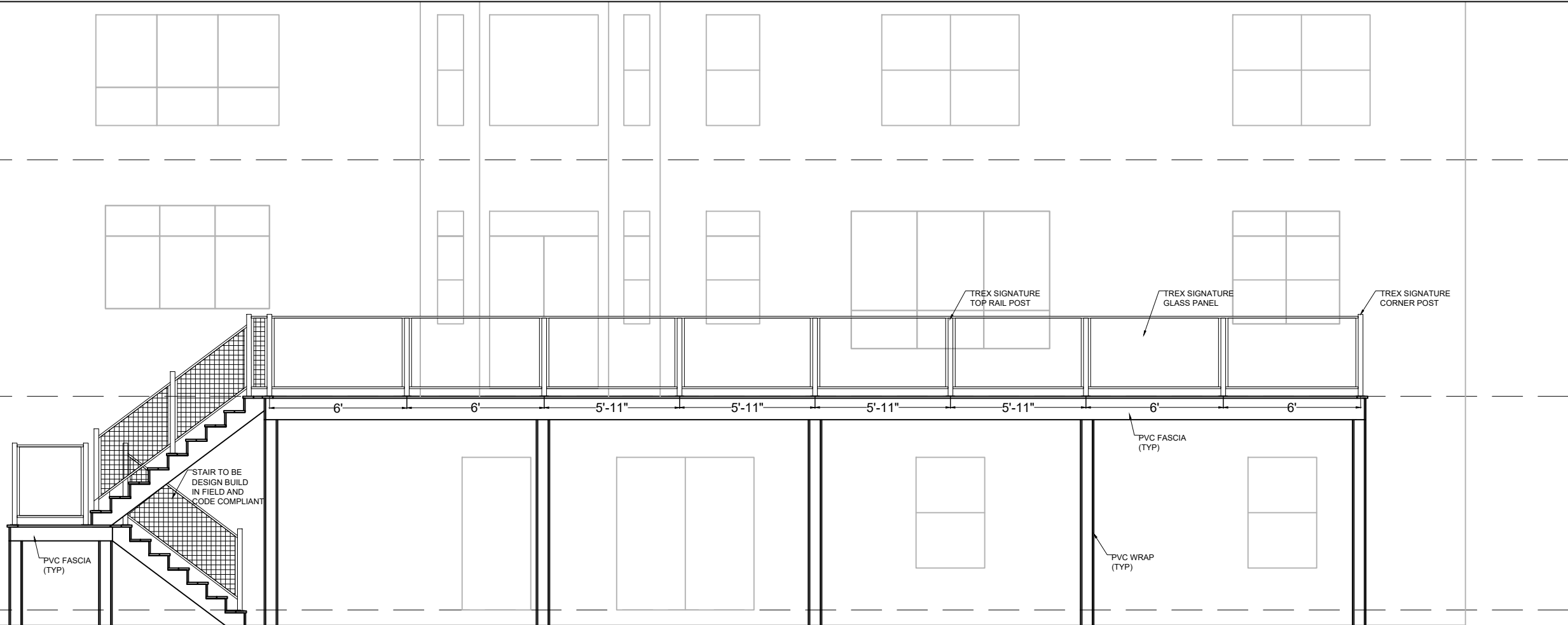
209'- 4"

209'- 0"

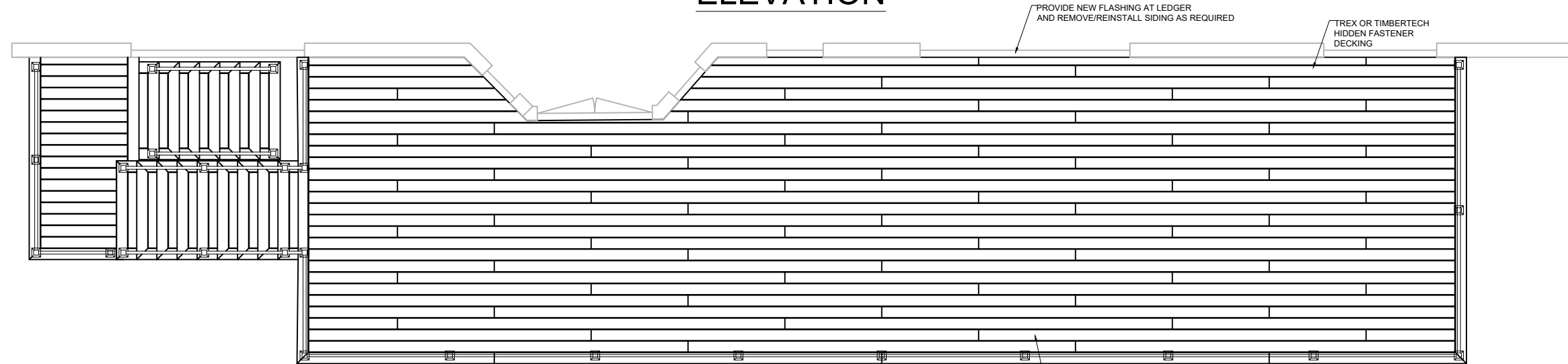
203'- 4"

199'- 8"

199'- 0"



ELEVATION



PLAN

NOTES:
DRAWING INCLUDED FOR REFERENCE ONLY.

GENERAL SCOPE SHOWN. CONTRACTOR RESPONSIBLE FOR FOLLOWING
MANUFACTURERS INSTRUCTIONS AND ORDERING ALL NECESSARY
MATERIAL.

FUTURE GUTTERS AND DOWNSPOUTS BY OWNER

**Roache
Residence**

8 Prescott Street
Melrose, MA 02176

**Issued for
Permit**

Project Number:

DATE 4/7/2022

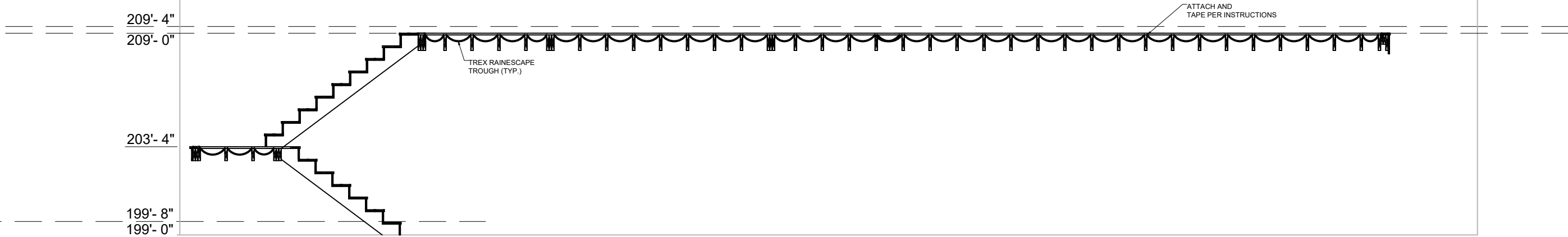
REVISIONS:

**Waterproofing
Plan**

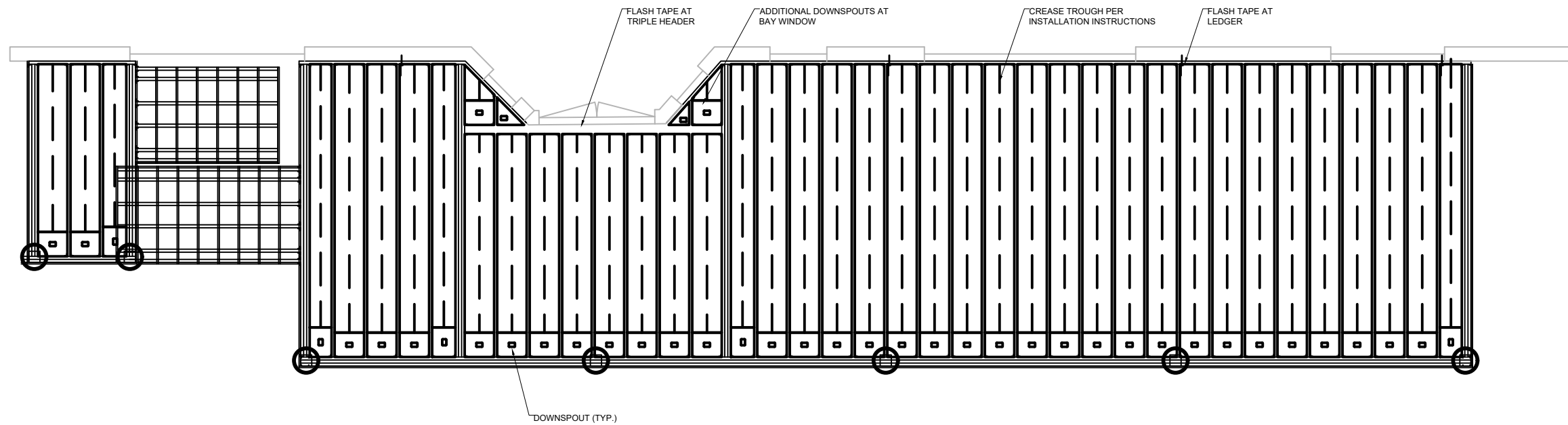
DRAWING
NUMBER:

A4

SCALE 1/4"=1.0'



SECTION



PLAN