OSSC Calculations – Chapter 5, Area Increase

Building Area Modifications.

506.1 General.

\[ A_a = \{A_t + [A_t \times I_f] + [A_t \times I_s]\} \]

Where:
\( A_a \) = Allowable building area per story (square feet).
\( A_t \) = Tabular building area per story in accordance with Table 503 (square feet).
\( I_f \) = Area increase factor due to frontage as calculated in accordance with Section 506.2.
\( I_s \) = Area increase factor due to sprinkler protection as calculated in accordance with Section 506.3.

506.2 Frontage increase.

\[ I_f = \frac{[F/P - 0.25]}{W/30} \]

Where:
\( I_f \) = Area increase factor due to frontage.
\( F \) = Building perimeter that fronts on a public way or open space having 20 feet open minimum width (feet).
\( P \) = Perimeter of entire building (feet).
\( W \) = Width of public way or open space (feet) in accordance with Section 506.2.1.

506.2.1 Width limits:

Weighted Average \( W = \frac{(L_1 \times w_1 + L_2 \times w_2 + L_3 \times w_3 \ldots)}{F} \)

Where:
\( L_n \) = Length of a portion of the exterior perimeter wall.
\( W_n \) = Width of open space associated with that portion of the exterior perimeter wall.

Existing facility code evaluation.

Calculations based on the following alternate assumptions:
(NOTE: this permit is NOT seeking change of occupancy)

- Occupancy Group: A2
- Construction Type: VB
- Fire sprinklers included
- 14,500 sq. ft. total (2 stories)

Table 503 limitations:

- 40-feet height (*60-feet with sprinklers)
- 1 story (*2 stories with sprinklers)
- 6,000 sq. ft.

*Automatic sprinkler system increases: 20-feet height and 1 additional story

Refer to attached site diagram for dimensions and distances.

Base frontage increase numbers:
FIRE LIFE SAFETY SITE PLAN

LEGEND:

- PRIMARY OCCUPANCY
- PATH OF EGRESS OR EXIT DISCHARGE
- EXIT/EGRESS PATHS
- TOTAL OCCUPANT LOAD FROM ROOM OR SPACE
- OCCUPANT LOAD AT EXIT
- IRRIGATED LIGHTED EXIT SIGN
- FIRE EXTINGUISHER

FLS DRAWINGS / CODE REVIEW SUMMARY

FIRE LIFE SAFETY SITE PLAN

EXISTING STRUCTURE ABOVE
EXISTING BUILDING
MODULAR BUILDING B
MODULAR BUILDING A
EXISTING FIRE SPRINKLER / FIRE ALARM

INUNDATED LOW VOLT FIRE ALARM MONITORING TO MODULARS FROM MAIN PANEL

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G2.01
LEVEL 1
0' - 0"
60' - 0"
32' - 0"
ROOF - MODULAR
14' - 3"
TOP PLATE - MODULAR
10' - 9"

LEVEL 1

LEVEL 2
9' - 0"

ROOF
30' - 0 11/16"

AC COVER
EXISTING ROOF

EXISTING BUILDING NORTH WALL AREA: +/- 1950' SF
EXISTING BUILDING NORTH WALL OPENING AREA: +/- 1005' SF (52%)

FIRST FLOOR NORTH WALL AREA: +/- 867' SF, 96% OPENING
SECOND FLOOR NORTH WALL AREA: +/- 1081' SF, 16% OPENING

MODULAR BUILDINGS SOUTH WALL AREA:
KITCHEN: +/- 350' SF TOTAL AREA, +/- 53' SF (15%) OPENING
DINING: +/- 645' SF TOTAL AREA, +/- 88' SF (14%) OPENING

OPEN PLAZA
- PEDESTRIAN ACCESS ONLY

7740 SE POWELL BLVD, PORTLAND, OR 97206

LILAC MEADOWS FAMILY SHELTER PACKAGE TWO

FLS ELEVATION - MODULAR BUILDINGS SOUTH ELEVATIONS

FLS ELEVATION - EXISTING BUILDING NORTH ELEVATION

NOTE: DRAWINGS ARE AT HALF SCALE WHEN PRINTED AT 11X17

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G2.03

MODULAR BUILDINGS
PACKAGE TWO

COREY M

DEVIN F

G2.03

DIAGRAMS

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

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

FLS ELEVATION
MODULAR BUILDINGS SOUTH ELEVATIONS

FLS ELEVATION
EXISTING BUILDING NORTH ELEVATION
LEGEND:
- EXISTING LANDSCAPE
- PROPOSED LANDSCAPE
- EXISTING CONCRETE PAVING
- PROPERTY LINE
- OVERHEAD

EXISTING LANDSCAPE, TYPICAL
EXISTING EXTERIOR PAVED WALK, TYPICAL
EXISTING STRUCTURE ABOVE

OPEN PLAZA, PEDESTRIAN ACCESS ONLY

EXISTING ASPHALTIC PAVEMENT

EXISTING ACCESSIBLE PARKING STALL - TO REMAIN

EXISTING LANDSCAPE, TYPICAL

EXISTING CONCRETE PAVING

EXISTING BUILDING

EXISTING ASPHALTIC PAVEMENT

MATERIALS & PROPERTY

NOTE: DRAWINGS ARE AT HALF SCALE WHEN PRINTED AT 11X17

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A1.01A

SITE PLAN

SCALE: 3/32" = 1'

LEGEND:
- EXISTING LANDSCAPE
- PROPOSED LANDSCAPE
- EXISTING CONCRETE PAVING
- PROPERTY LINE
- OVERHEAD

EXISTING LANDSCAPE, TYPICAL
EXISTING EXTERIOR PAVED WALK, TYPICAL
EXISTING STRUCTURE ABOVE

OPEN PLAZA, PEDESTRIAN ACCESS ONLY

EXISTING ASPHALTIC PAVEMENT

EXISTING ACCESSIBLE PARKING STALL - TO REMAIN

EXISTING LANDSCAPE, TYPICAL

EXISTING CONCRETE PAVING

EXISTING BUILDING

EXISTING ASPHALTIC PAVEMENT

MATERIALS & PROPERTY

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A1.01A

SITE PLAN

SCALE: 3/32" = 1'
ALTERNATE CODE EVALUATION - EXISTING FACILITY

SCALE: N.T.S.

Alternate Building Code Evaluation:

Alternate building facility item evaluated as type VB – no fire sprinklers

OSEC Chapter 8, Section 206 – Building Area Modification

Equations 5-1, 5-2, and 5-3 as outline.

\[ W = \frac{(L_1 \times W_1) + (L_2 \times W_2) + (L_3 \times W_3) + (L_4 \times W_4)}{F} \]

\[ W = \frac{(2610 + 6330 + 1890 + 2954)}{659} = 20.9 \]

\[ I_f = \frac{F}{P} - 0.25 \times \frac{W}{30} \]

\[ I_f = \frac{361}{659} - 0.25 \times \frac{20.9}{30} \]

\[ I_f = 0.30 \times 0.70 \]

\[ I_f = 0.21 \]

\[ A = \{A_t + [A_t \times I_f] + [A_t \times I_s]\} \]

\[ A = \{7000 + [7000 \times 0.21] + [7000 \times 1]\} \]

\[ A = \{7000 + 1470 + 7000\} \]

\[ A = 15,470 \text{ sq. ft.} \]