

CODE DATA:

BUILDING DESIGN IS BASED ON THE 2008 OHIO BUILDING CODE.

BUILDING USE GROUP: SEPARATED MIXED USE - B, A-3, I-3, S-2
I-3 OCCUPANCY, CONDITION 4, PER SECTION 308.4.4, REMOTE CONTROLLED RELEASE.

FIRE SEPARATION ASSEMBLIES PER TABLE 302.3.3:
B TO I-3: 2 HOUR - REDUCED TO 1 HOUR
B TO A-3: 2 HOUR - REDUCED TO 1 HOUR

REDUCTIONS OF FIRE RESISTANT RATINGS TAKEN PER EXCEPTION UNDER SECTION 302.3.2 BECAUSE THE BUILDING IS BEING FULLY SPRINKLED.

CONSTRUCTION TYPE: TYPE IIB, NON-COMBUSTIBLE, UNPROTECTED (TABLE 601)

FIRE PROTECTION: FULLY SPRINKLERED (903)
BUILDING DESIGNED FOR AUTOMATIC SPRINKLER SYSTEM THROUGHOUT PER SECTION 903.3.1.1 NFPA 13 SYSTEMS EXCEPT ATTIC SPACE (CONCEALED SPACE) IS NOT SPRINKLERED PER NFPA STANDARD 13 "INSTALLATION OF SPRINKLER SYSTEMS," CHAPTER 8 "CONCEALED SPACES NOT REQUIRING SPRINKLER PROTECTION", SUBSECTION 8.14.12.11.

BUILDING REQUIRES NO DRAFT STOPPING PER EXCEPTION UNDER SECTION 117.3.3.

DESIGN LOADS:

SOIL BEARING CAPACITY: 3,000 PSF
FLOOR LIVE LOADING: 100 PSF
SECOND FLOOR LIVE LOAD: 100 PSF
ROOF LIVE LOADING: 20 PSF

ROOF SNOW LOADING:
*GROUND SNOW LOAD: 20 PSF
*FLAT ROOF SNOW LOAD: 24.0 PSF
*SNOW EXPOSURE FACTOR: 1.0
*SNOW IMPORTANCE FACTOR: 1.2
*THERMAL FACTOR: 1.1

WIND LOADING
*BASIC WIND SPEED (3-SECOND GUST): 90 MPH
*WIND LOAD IMPORTANCE FACTOR: 1.15
*BUILDING CATEGORY: IV
*WIND EXPOSURE CLASSIFICATION: C
*INTERNAL PRESSURE COEFFICIENT: 0.18
*DESIGN WIND PRESSURE (COMPONENTS & CLADDING): 33 PSF

EARTHQUAKE DESIGN DATA
*SEISMIC CATEGORY (1604.5): IV (SEISMIC USE GROUP (TABLE 1604.5a): III)
*SITE CLASS (1615.11): D
*SEISMIC DESIGN CATEGORY (1616.3 (1) AND (2): C
*SPECTRAL RESPONSE COEFFICIENT: (Sds): 0.17
*SPECTRAL RESPONSE COEFFICIENT: (Sdi): 0.10
*SEISMIC IMPORTANCE FACTOR: 1.5
*MAPPED SPECTRAL RESPONSE ACCELERATION (Sa): 0.16
*MAPPED SPECTRAL RESPONSE ACCELERATION (Si): 0.003
*SEISMIC RESPONSE COEFFICIENT: (Cs): 0.102 (SHEAR WALLS)
0.04 (SHEAR PANELS)
*RESPONSE MODIFICATION FACTOR: (R): 2.5 (SHEAR WALLS)
6.5 (SHEAR PANELS)
*BASIC SEISMIC-FORCE RESISTING SYSTEM:
LIGHT FRAMED WALLS WITH SHEAR PANELS
ORDINARY REINFORCED MASONRY SHEAR WALLS
*DESIGN BASE SHEAR: 212.5 KIPS
*ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE

BUILDING OCCUPANCY CALCULATIONS:

USE GROUP	1ST FLOOR GSF	2ND FLOOR GSF	3RD FLOOR GSF	TOTAL GSF	PER OBC 1003.2.2.2	OCCUPANCY (PERSONS)
B - BUSINESS	5,546	5,887	5,203	16,636	/ 100 GSF	168
A-3 - ASSEMBLY	-	982	-	982	/15 GSF	66
I-3 - INSTITUTIONAL	1,616	-	-	1,616	/ 120 GSF	14
S-2 - LOW HAZARD STORAGE	831	-	-	831	/ 300 GSF	3
TOTAL	7,993	6,869	5,203	20,065		251
OCCUPANCY BY FLOOR	73	125	53			

IU - INCIDENTAL USE. SQUARE FOOTAGE IS INCLUDED IN USE GROUP B SQUARE FOOTAGES ABOVE.

ALLOWABLE AREA CALCULATIONS:

FRONTAGE INCREASE
CALCULATIONS PER OBC SECTION 506.2
If = AREA INCREASE DUE TO FRONTAGE (PERCENT)
F = BUILDING PERIMETER WHICH FRONTS ON A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET
OPEN MINIMUM WIDTH (FEET) = 388 FEET
P = PERIMETER OF ENTIRE BUILDING (FEET) = 388 FEET
W = MINIMUM WIDTH OF PUBLIC WAY OR OPEN SPACE (FEET) = 20 FEET

$I_f = 100 \left[\frac{F}{P} - 0.25 \right] \frac{W}{30}$ $I_f = 100 \left[\frac{388 \text{ FT}}{388 \text{ FT}} - 0.25 \right] \frac{20 \text{ FT}}{30}$ $I_f = 100 \left[.75 \right] 0.66 = 50\%$ FRONTAGE INCREASE

ALLOWABLE AREA INCREASE
CALCULATIONS PER OBC SECTION 506.1

B - BUSINESS
BASE AREA PER TABLE 503 (IIB) 23,000
FRONTAGE INCREASE (FROM ABOVE - 50 %) + 11,500
SPRINKLER INCREASE PER 506.3 (200 %) + 46,000
80,500 SF/ FLOOR ALLOWABLE

1ST FLOOR ACTUAL/FLOOR ALLOWABLE 5,546 SF/80,500 SF
2ND FLOOR ACTUAL/FLOOR ALLOWABLE 5,887 SF/80,500 SF
3RD FLOOR ACTUAL/FLOOR ALLOWABLE 5,203 SF/80,500 SF

A-3 - ASSEMBLY
BASE AREA PER TABLE 503 (IIB) 9,500
FRONTAGE INCREASE (FROM ABOVE - 50 %) + 4,750
SPRINKLER INCREASE PER 506.3 (200 %) + 19,000
33,250 SF/ FLOOR ALLOWABLE

2ND FLOOR ACTUAL/FLOOR ALLOWABLE 982 SF/33,250 SF

I-3 - INSTITUTIONAL
BASE AREA PER TABLE 503 (IIB) 10,000
FRONTAGE INCREASE (FROM ABOVE - 50 %) + 5,000
SPRINKLER INCREASE PER 506.3 (200 %) + 20,000
35,000 SF/ FLOOR ALLOWABLE

1ST FLOOR ACTUAL/FLOOR ALLOWABLE 1,616 SF/35,000 SF

S-2 - LOW HAZARD STORAGE
BASE AREA PER TABLE 503 (IIB) 26,000
FRONTAGE INCREASE (FROM ABOVE - 50 %) + 13,000
SPRINKLER INCREASE PER 506.3 (200 %) + 52,000
91,000 SF/ FLOOR ALLOWABLE

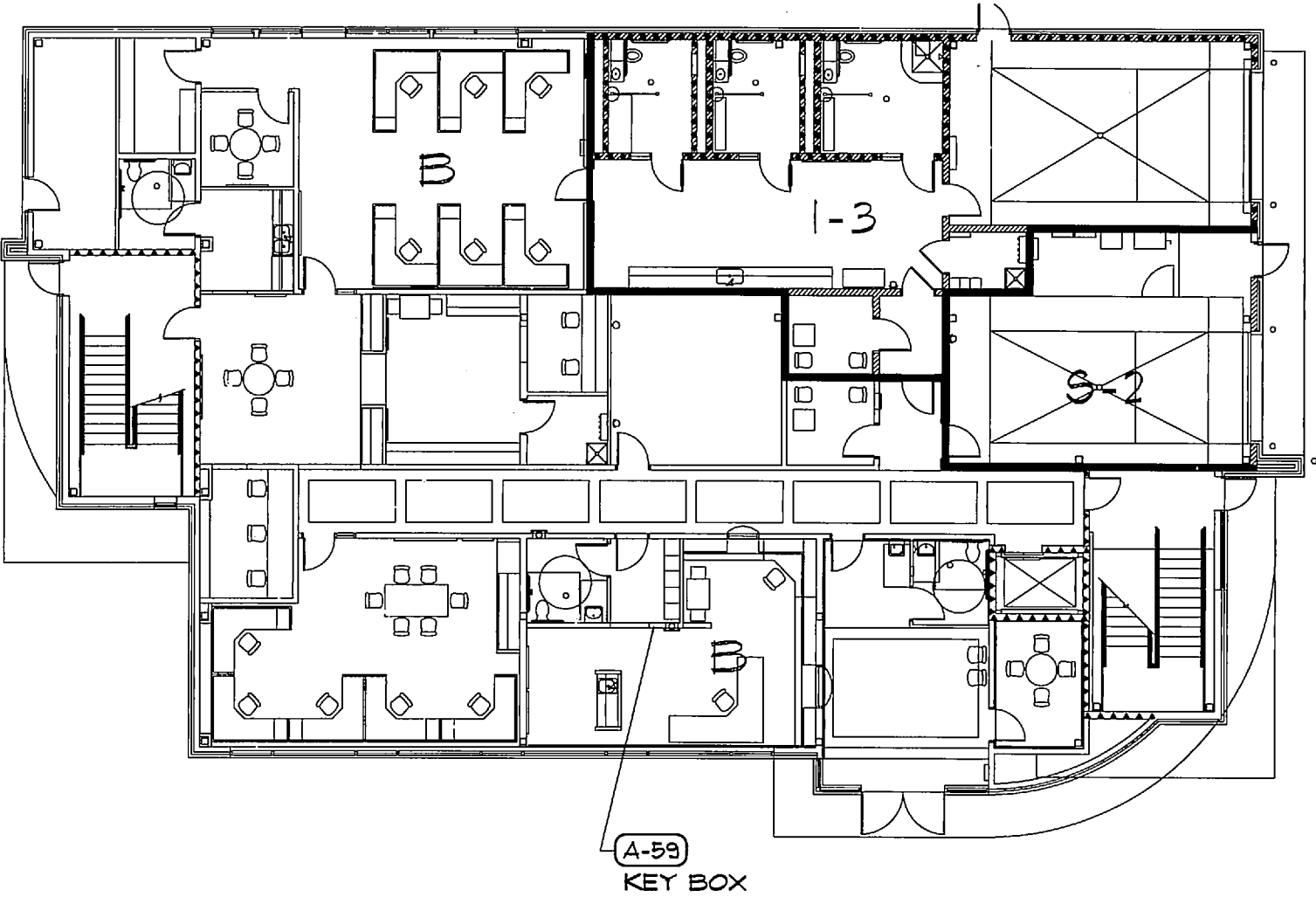
1ST FLOOR ACTUAL/FLOOR ALLOWABLE 831 SF/91,000 SF

ALLOWABLE HEIGHT INCREASE
CALCULATIONS PER OBC SECTION 504

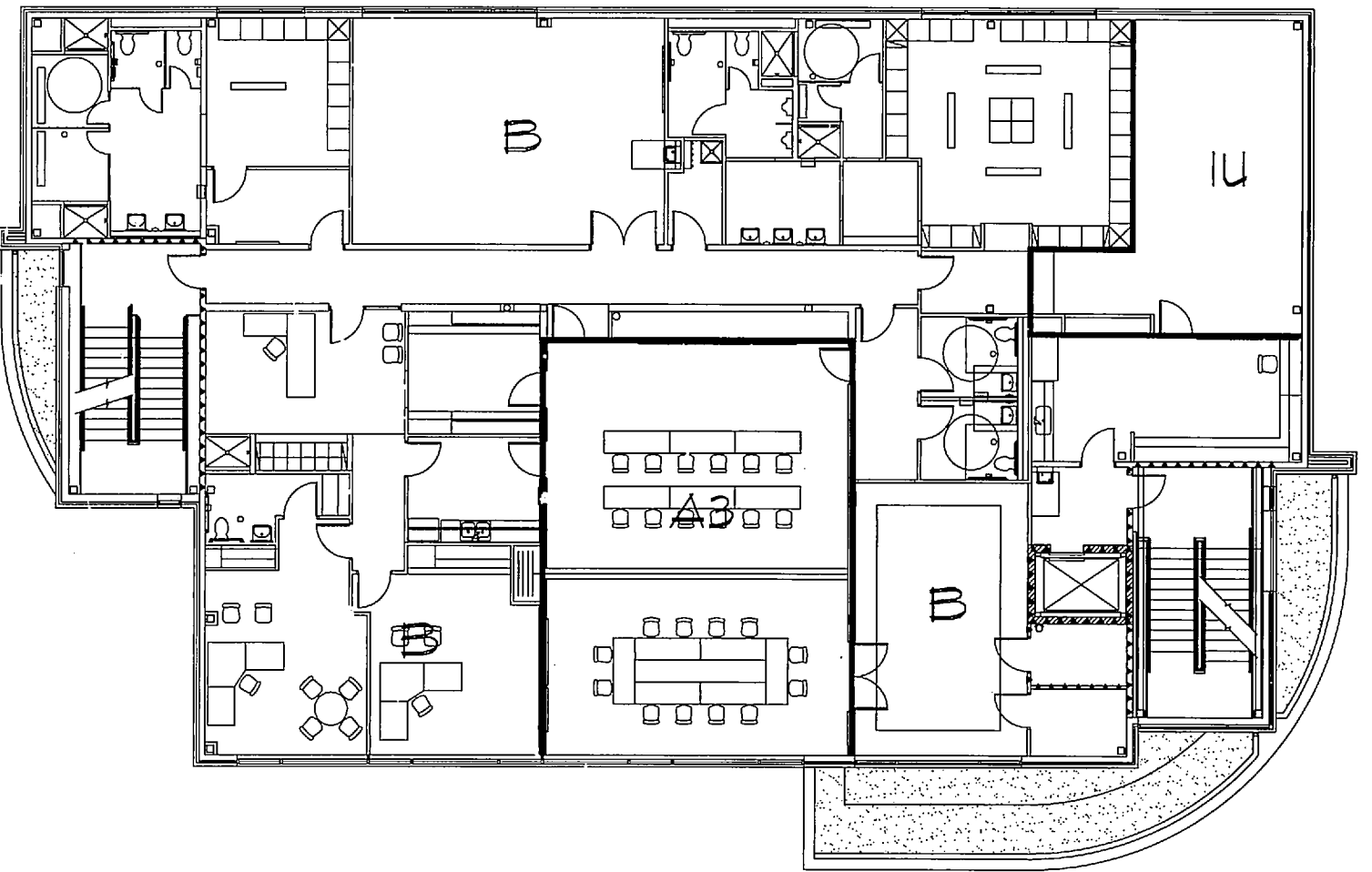
BASE HEIGHT + SPRINKLER INCREASE = ALLOWABLE HEIGHT		
B 4 STORIES 55'	1 STORY 20'	5 STORIES 75'
A-3 2 STORIES 55'	1 STORY 20'	3 STORIES 75'
I-3 1 STORY 55'	1 STORY 20'	2 STORIES 75'
S-2 4 STORIES 55'	1 STORY 20'	5 STORIES 75'

ACTUAL / ALLOWABLE

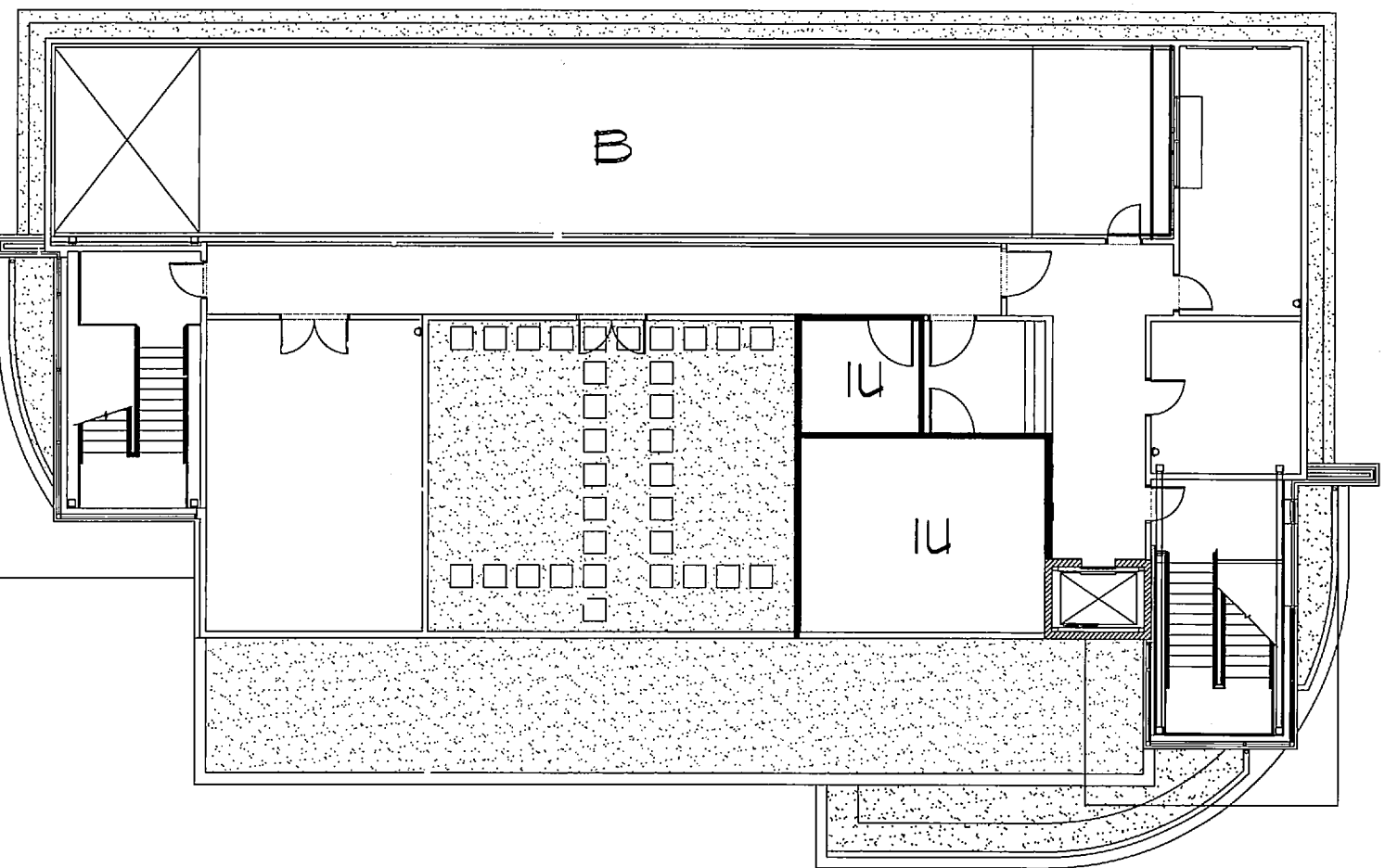
	1ST	2ND	3RD
B - BUSINESS			
1ST FLOOR ACTUAL/FLOOR ALLOWABLE	.07		
2ND FLOOR ACTUAL/FLOOR ALLOWABLE		.07	
3RD FLOOR ACTUAL/FLOOR ALLOWABLE			.06
A-3 - ASSEMBLY			
2ND FLOOR ACTUAL/FLOOR ALLOWABLE		.03	
I-3 - INSTITUTIONAL			
1ST FLOOR ACTUAL/FLOOR ALLOWABLE	.05		
S-2 - LOW HAZARD STORAGE			
1ST FLOOR ACTUAL/FLOOR ALLOWABLE	.01		
ALLOWABLE HEIGHT INCREASE	.13 < 1.00 1ST	.10 < 1.00 2ND	.06 < 1.00 3RD



A FIRST FLOOR USE GROUP PLAN
1/16" = 1'-0"



B SECOND FLOOR USE GROUP PLAN
1/16" = 1'-0"



C THIRD FLOOR USE GROUP PLAN
1/16" = 1'-0"

BEXLEY POLICE FACILITY
559 NORTH CASSINGHAM ROAD
BEXLEY, OHIO 43209

09/05/2008
BIDDING & PERMIT DOCUMENTS
CONSTRUCTION DOCUMENTS
APPENDUM

CODE DATA
HEIGHT & AREA

G101

PROJECT NO.: BX106