

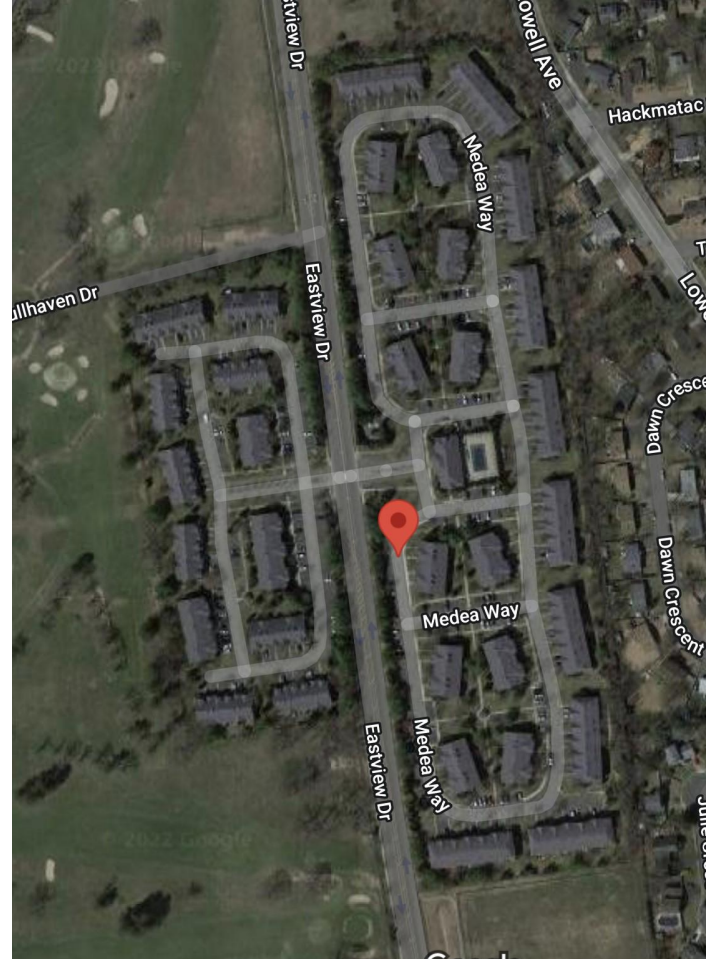
Project 2:
Multi-Family Housing
Site Analysis, Program and Res Code Review

Obasi, Syed, Jayvone

SITE ANALYSIS

Lot Size

- Tax Lot 3.32 (6.9 acres) and Tax Lot 3.33 (15.67 acres)
 - Combined into one lot (22.57 acres)
- 1 acre = 43,560 square feet
- Total Lot = $22.57 \times 43,560 = 983,149.2$ square feet



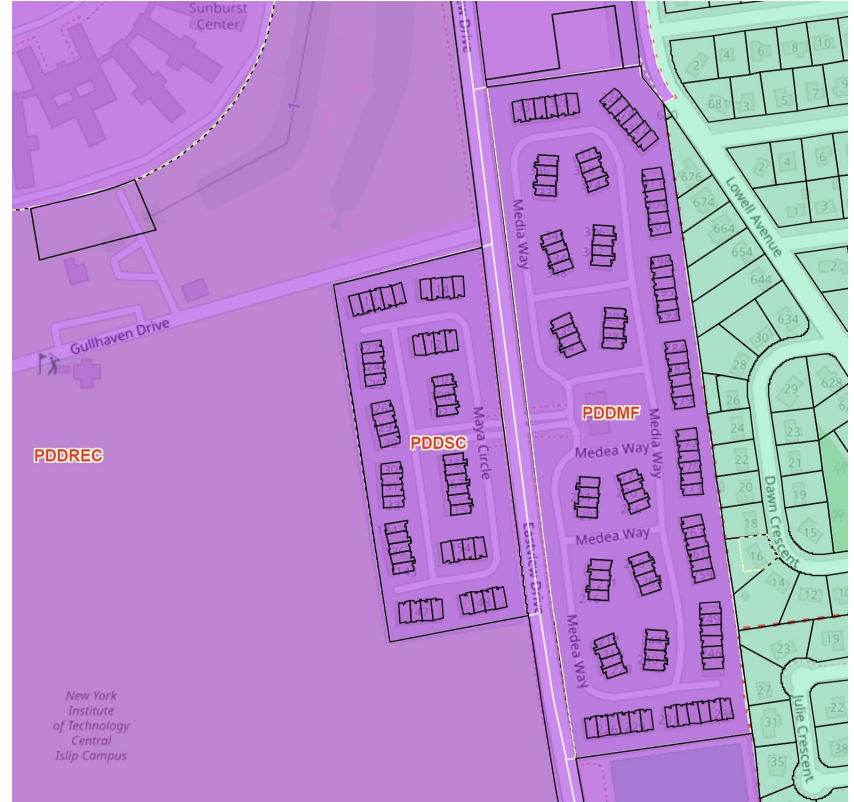
SUFFOLK COUNTY, LI, NEW YORK

Parcel A, Belt Drive East, Central Islip, NY 11722
(Smaller Site)

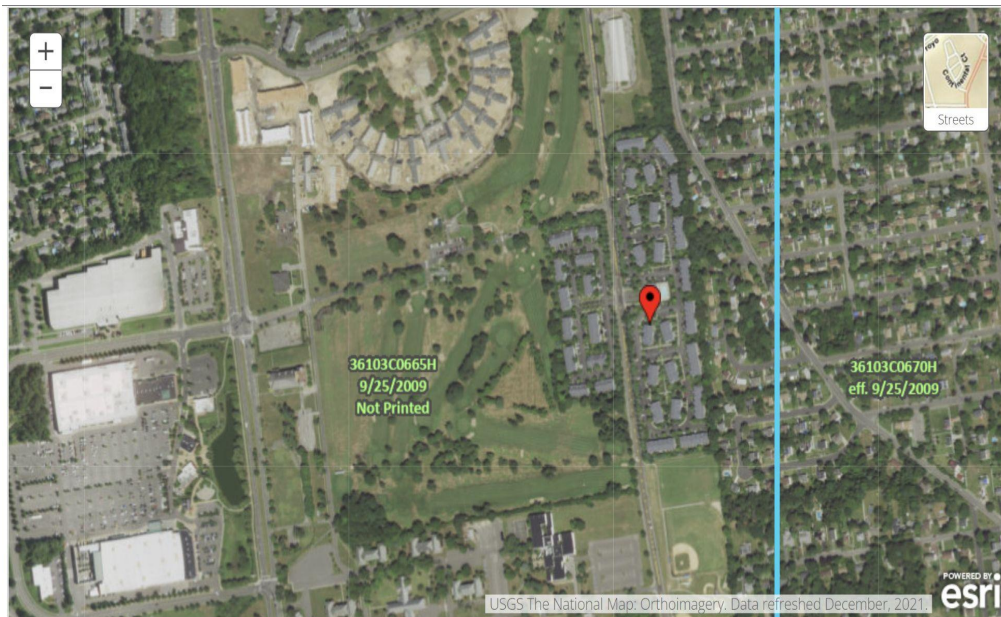
Parcel B, Belt Drive East, Central Islip, NY 11722
(Larger Site)

TAX LOT: 3.32 = 6.9 ACRES

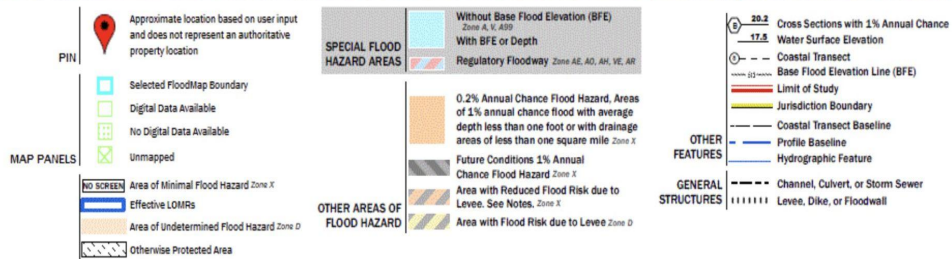
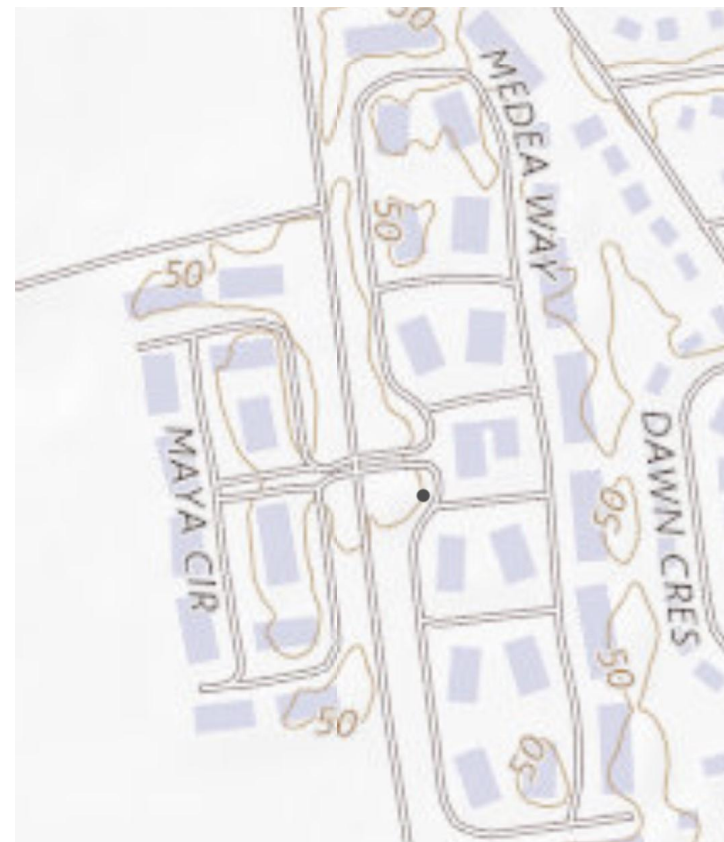
TAX LOT: 3.33 = 15.67 ACRES



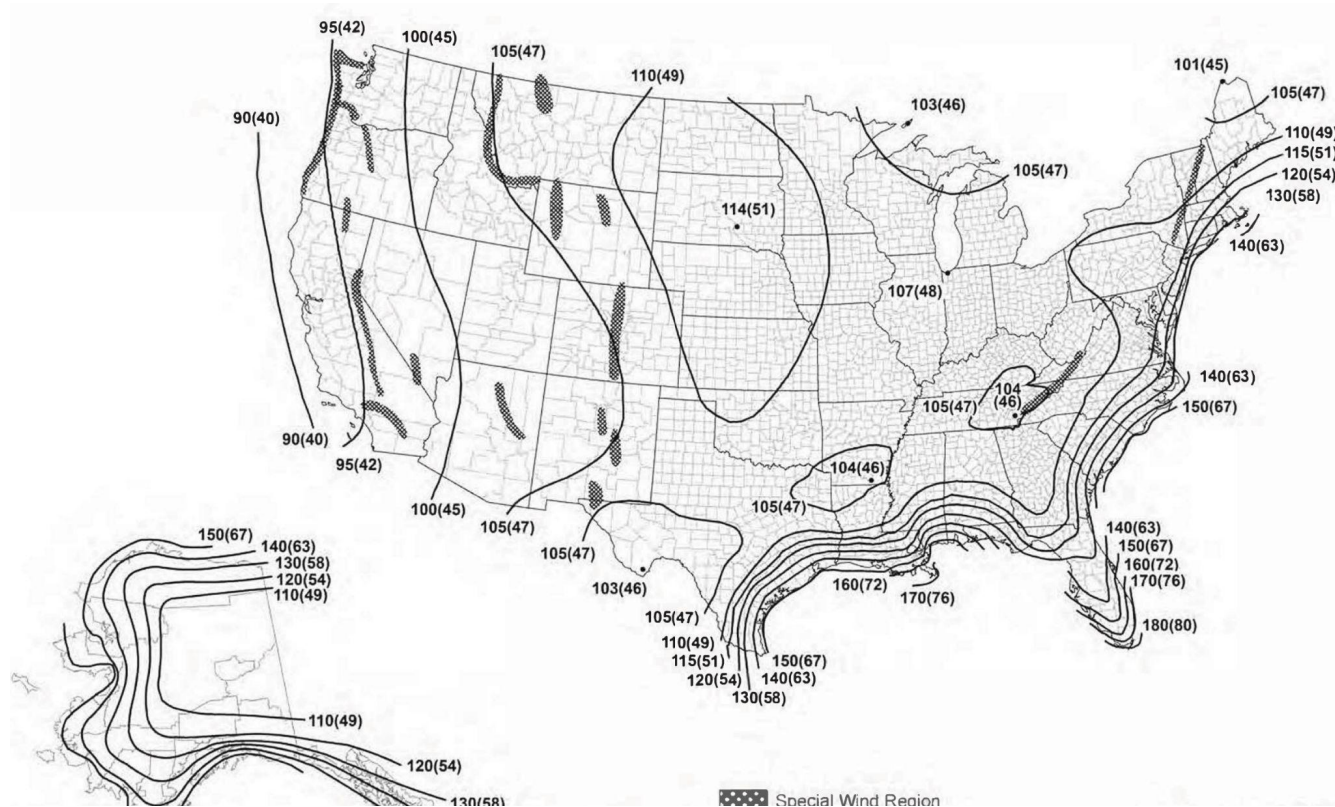
FLOOD PLAIN DATA



TOPOGRAPHY



WIND SPEED



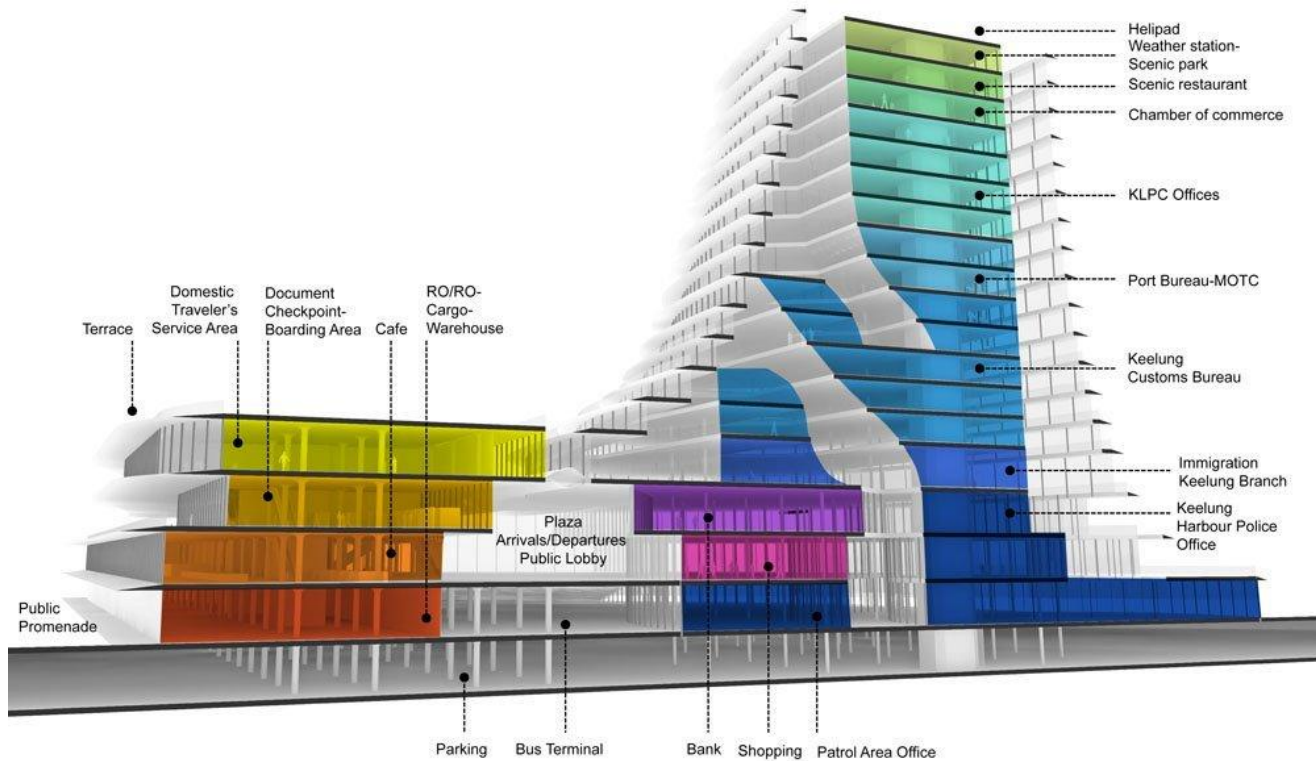
SEWER MANAGEMENT: CESSPOOL OR SEPTIC TANK



VIEWS



PROGRAM



PROGRAM - TWO FAMILY DWELLING UNITS

- BEDROOMS - 150 SF each (2)
- BATHROOM - 70 SF
- KITCHEN - 170 SF
- ELEVATOR - 25 SF
- MASTER BEDROOM - 210 SF
- LIVING ROOM - 270 SF
- GARAGE - 650 SF
- MECHANICAL/ELECTRICAL - 170 SF
- CIRCULATION - 345 SF
- OFFICE - 90 SF

= 2,300 SF TOTAL EACH

PROGRAM - 10 APARTMENT BUILDINGS

- BEDROOM - 190 SF
- BATHROOM - 80 SF
- KITCHEN - 170 SF
- MASTER BEDROOM - 200 SF
- LIVING ROOM - 290 SF
- CIRCULATION - 180 SF
- OFFICE - 90 SF

= 1,200 SF TOTAL EACH

- UNITS
- LAUNDRY ROOM - 60
- COMMUNITY CENTER (FITNESS/LOUNGE/MANAGEMENT/POOL/PARK)
- ELEVATOR -
- JANITOR/STORAGE
- MECHANICAL/ELECTRICAL

ZONING



HEIGHT SHALL NOT EXCEED 35 FEET OR TWO STORIES

FAR SHALL NOT EXCEED 0.25

MINIMUM PLOT AREA SHALL BE 80,000 SQUARE FEET

MINIMUM WIDTH OF A LOT SHALL BE 200 FEET THROUGHOUT

MINIMUM FRONT YARD SETBACK SHALL BE 50 FEET FROM ALL STREETS

MINIMUM SIDE YARD AND REAR YARD SETBACK OF 50 FEET

9 UNITS AN ACRE

2 APARTMENT BUILDINGS PER LOT

EACH APARTMENT WITH **1,200 SF**

ADD AN **EXTRA 15% FOR CIRCULATION**

10 UNITS PER BUILDING FOR EACH SITE

CODE



2021 INTERNATIONAL BUILDING CODE

APARTMENT

R-2

2021 INTERNATIONAL RESIDENTIAL CODE

TOWNHOME/DUPLEX

2020 NYS BUILDING CODE

OCCUPANCY TYPE: R-2

MAX HEIGHT: 60' STORIES: 4 AREA: 24,000

RESIDENTIAL CODE: 3 STORIES

MAXIMUM TOWN OF ISLIP ZONING CODE HEIGHT AND AREA:

HEIGHT: 35' FAR: 0.25

SPRINKLER SYSTEM FOR NEW CONSTRUCTION?

[F] 903.2 Where required.

Approved *automatic sprinkler systems* in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12.

YES FOR RESIDENTIAL CODE

NYS Building Code Table 601 Fire-Resistance Rating

TABLE 601 FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
	A	B	A	B	A	B	HT	A	B
Primary structural frame ^f (see Section 202)	3 ^{a, b}	2 ^{a, b}	1 ^b	0	1 ^b	0	HT	1 ^b	0
Bearing walls									
Exterior ^{e, f}	3	2	1	0	2	2	2	1	0
Interior	3 ^a	2 ^a	1	0	1	0	1/HT	1	0
Nonbearing walls and partitions	See Table 602								
Exterior									
Nonbearing walls and partitions	0	0	0	0	0	0	See Section 2304.11.2	0	0
Interior ^d									
Floor construction and associated secondary members (see Section 202)	2	2	1	0	1	0	HT	1	0
Roof construction and associated secondary members (see Section 202)	1½ ^b	1 ^{b, c}	1 ^{b, c}	0 ^c	1 ^{b, c}	0	HT	1 ^{b, c}	0

For SI: 1 foot = 304.8 mm.

- Roof supports: Fire-resistance ratings of primary structural frame and bearing walls are permitted to be reduced by 1 hour where supporting a roof only.
- Except in Group F-1, H, M and S-1 occupancies, fire protection of structural members in roof construction shall not be required, including protection of primary structural frame members, roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.
- In all occupancies, heavy timber complying with Section 2304.11 shall be allowed where a 1-hour or less fire-resistance rating is required.
- Not less than the fire-resistance rating required by other sections of this code.
- Not less than the fire-resistance rating based on fire separation distance (see Table 602).
- Not less than the fire-resistance rating as referenced in Section 704.10.

FIRE SEPARATION REQUIREMENTS

706.5.2 Horizontal projecting elements.

Fire walls shall extend to the outer edge of horizontal projecting elements such as balconies, roof overhangs, canopies, marquees and similar projections that are within 4 feet (1220 mm) of the *fire wall*.

Exceptions:

1. Horizontal projecting elements without concealed spaces, provided that the *exterior wall* behind and below the projecting element has not less than 1-hour fire-resistance-rated construction for a distance not less than the depth of the projecting element on both sides of the *fire wall*. Openings within such *exterior walls* shall be protected by opening protectives having a *fire protection rating* of not less than $\frac{3}{4}$ hour.
2. Noncombustible horizontal projecting elements with concealed spaces, provided that a minimum 1-hour fire-resistance-rated wall extends through the concealed space. The projecting element shall be separated from the building by not less than 1-hour fire-resistance-rated construction for a distance on each side of the *fire wall* equal to the depth of the projecting element. The wall is not required to extend under the projecting element where the building *exterior wall* is not less than 1-hour *fire-resistance rated* for a distance on each side of the *fire wall* equal to the depth of the projecting element. Openings within such *exterior walls* shall be protected by opening protectives having a *fire protection rating* of not less than $\frac{3}{4}$ hour.
3. For combustible horizontal projecting elements with concealed spaces, the *fire wall* need only extend through the concealed space to the outer edges of the projecting elements. The *exterior wall* behind and below the projecting element shall be of not less than 1-hour fire-resistance-rated construction for a distance not less than the depth of the projecting elements on both sides of the *fire wall*. Openings within such *exterior walls* shall be protected by opening protectives having a *fire protection rating* of not less than $\frac{3}{4}$ hour.

706.6 Vertical continuity.

Fire walls shall extend from the foundation to a termination point not less than 30 inches (762 mm) above both adjacent roofs.

Exceptions:

1. Stepped buildings in accordance with Section 706.6.1.
2. Two-hour fire-resistance-rated walls shall be permitted to terminate at the underside of the roof sheathing, deck or slab, provided that:
 - 2.1. The lower roof assembly within 4 feet (1220 mm) of the wall has not less than a 1-hour *fire-resistance rating* and the entire length and span of supporting elements for the rated roof assembly has a *fire-resistance rating* of not less than 1 hour.
 - 2.2. Openings in the roof shall not be located within 4 feet (1220 mm) of the *fire wall*.
 - 2.3. Each building shall be provided with not less than a Class B roof covering.
3. Walls shall be permitted to terminate at the underside of noncombustible roof sheathing, deck or slabs where both buildings are provided with not less than a Class B roof covering. Openings in the roof shall not be located within 4 feet (1220 mm) of the *fire wall*.
4. In buildings of Types III, IV and V construction, walls shall be permitted to terminate at the underside of combustible roof sheathing or decks, provided that all of the following requirements are met:
 - 4.1. Roof openings are not less than 4 feet (1220 mm) from the *fire wall*.
 - 4.2. The roof is covered with a minimum Class B roof covering.
 - 4.3. The roof sheathing or deck is constructed of *fire-retardant-treated wood* for a distance of 4 feet (1220 mm) on both sides of the wall or the roof is protected with $\frac{5}{8}$ -inch (15.9 mm) Type X gypsum board directly beneath the underside of the roof sheathing or deck, supported by not less than 2-inch (51 mm) nominal ledgers attached to the sides of the roof framing members for a distance of not less than 4 feet (1220 mm) on both sides of the *fire wall*.
5. In buildings designed in accordance with Section 510.2, *fire walls* located above the 3-hour *horizontal assembly* required by Section 510.2, Item 1 shall be permitted to extend from the top of this *horizontal assembly*.
6. Buildings with sloped roofs in accordance with Section 706.6.2.

RESIDENTIAL FIRE SEPARATION REQUIREMENTS

R302.3 Two-family dwellings.

Dwelling units in two-family dwellings shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating where tested in accordance with ASTM E119, UL 263 or Section 703.2.2 of the *International Building Code*. [Such separation shall be provided regardless of whether a lot line exists between the two dwelling units or not.](#) Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing.

MINIMUM NUMBER OF EXITS: 1 FOR MULTIFAMILY, 2 FOR APARTMENTS

MINIMUM STAIR, RAMP, AND HALLWAY WIDTHS: S(44”) R(36”) H/C(36”)

RESIDENTIAL: 36” FOR EACH

MAXIMUM EXIT ACCESS TRAVEL DISTANCE PER NYS BUILDING CODE 10.17.2

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)	WITH SPRINKLER SYSTEM (feet)
A, E, F-1, M, R, S-1	200 ^e	250 ^b