

CODE ANALYSIS

APPLICABLE CODES

INTERNATIONAL EXISTING BUILDING CODE (IEBC) / 2009
 INTERNATIONAL MECHANICAL CODE / 2009
 NATIONAL ELECTRIC CODE / 2009
 INTERNATIONAL PLUMBING CODE / 2009
 INTERNATIONAL ENERGY CONSERVATION CODE / 2009
 NFPA 1 - FIRE PREVENTION CODE / 2009
 NFPA 13 - INSTALLATION OF SPRINKLER SYSTEMS
 NFPA 12-9 NATIONAL FIRE ALARM CODE
 NFPA 101 - LIFE SAFETY CODE / 2009
 CONMAR 05.02.02 ADA/ADAAG MARYLAND ACCESSIBILITY CODE

3.1 BUILDING USE & TYPE OF CONSTRUCTION

OCCUPANCY TYPE: SEPARATED MIXED USE OCCUPANCIES

IBC 302: RESIDENTIAL (R), INSTITUTIONAL (I), ASSEMBLY (A), STORAGE (S), BUSINESS (B)
 NFPA 101 A.6.1.5.1: RESIDENTIAL, ASSEMBLY, BUSINESS, HEALTH CARE
 NFPA 13 - X

| SPACE | OCCUPANCY | CLASSIFICATION |
|---------------|--------------------|----------------|
| COTTAGE A | ASSISTED LIVING | I-1 |
| COTTAGE B & E | SKILLED NURSING | I-2 |
| COTTAGE C & D | INDEPENDENT LIVING | R-2 |

TYPE OF CONSTRUCTION:

IBC TABLE 601 - TYPE IIB, NONCOMBUSTIBLE MATERIALS

3.2 SPECIAL OCCUPANCY REQUIREMENT- INCIDENTAL USE AREAS (IBC 2009 TABLE 508.2.5)

| SPACE | SEPARATION/PROTECTION |
|--|-----------------------|
| LAUNDRY ROOM (OVER 100SF) | 1 HR OR AUTOMATIC FE |
| GROUP I-2, WASTE AND LINEN COLLECTION | 1 HR |
| WASTE AND LINEN COLLECTION (OVER 100 SF) | 1 HR OR AUTOMATIC FE |

3.3 EXTERIOR WALL FIRE RATING DUE TO DISTANCE

EQUAL TO OR GREATER THAN 30 FT.: 0 HR.
 ACTUAL DISTANCE: 50 FT.

3.4 OCCUPANCY CALCULATIONS:

PER IBC 2009 (TABLE 1004.1.1):

| FLOOR | OCCUPANCY | SF/OCCUPANT | TOTAL |
|---|---|----------------------------------|----------------|
| FIRST FLOOR: COTTAGE 'A': ASSISTED LIVING: | ASSEMBLY (ACCESSORY OCC) BUSINESS (ACCESSORY OCC) SLEEPING (I-1) | 15 NET 100 GROSS 120 GROSS | 42 11 36 |
| TOTAL | | | 89 |
| FIRST FLOOR: COTTAGE 'B' & 'E': SKILLED NURSING: | ASSEMBLY (ACCESSORY OCC) BUSINESS (ACCESSORY OCC) SLEEPING (I-2) | 15 NET 100 GROSS 120 GROSS | 42 11 36 |
| TOTAL | | | 89 |
| FIRST FLOOR: COTTAGE 'C' & 'D': INDEPENDENT LIVING: | ASSEMBLY (ACCESSORY OCC) BUSINESS (ACCESSORY OCC) RESIDENTIAL (R-2) | 15 NET 100 GROSS 200 GROSS | 15 7 42 |
| TOTAL | | | 64 |
| TOTAL BUILDING OCCUPANCY | | | 242 |

5.0 ALLOWABLE HEIGHT & AREA

| FLOOR | ACTUAL AREA (SF) | ALLOWABLE AREA (SF) PER IBC 506 |
|--------------------|------------------|---|
| 1st FL CORE | 33,671 | |
| 1st FL COTTAGE | 14,368 (EACH) | SEE NOTE 1 |
| 1st FL SUB TOTAL | 119,885 | *FIRE WALL SEPARATION BETWEEN CORE AND COTTAGES |
| LOWER LEVEL | 58,455 | |
| 2nd FLOOR | 13,017 | |
| TOTAL W/O COTTAGES | 105,149 | |

NOTE 1: 6 COTTAGES ARE SEPARATED BY 2 HR FIRE WALLS. CALCULATION

AUTOMATIC SPRINKLER SYSTEM INCREASE: 200% X 16,000 SF = 32,000 SF
 FRONTAGE INCREASE: 0 SF
 AREA ALLOWED/FLOOR: 16,000 SF + 32,000 SF + 0 SF = 48,000 SF
 TOTAL AREA ALLOWED: 48,000 SF X 3 STORIES = 144,000 SF

COTTAGE 'A'-1
 ALLOWABLE BUILDING HEIGHT AND AREAS: 3 STORY AND 10,000 AUTOMATIC SPRINKLER INCREASE: 200% + FRONTAGE INCREASE: 0%
 TOTAL AREA ALLOWED: 30,000 ACTUAL AREA: 14,368

COTTAGE 'B' & 'E'-1-2
 ALLOWABLE BUILDING HEIGHT AND AREAS: 1 STORY AND 11,000 AUTOMATIC SPRINKLER INCREASE: 200% + FRONTAGE INCREASE: 0%
 TOTAL AREA ALLOWED: 33,000 ACTUAL AREA: 14,368

COTTAGE 'C' & 'D'-R-2
 ALLOWABLE BUILDING HEIGHT AND AREAS: 4 STORY AND 16,000 AUTOMATIC SPRINKLER INCREASE: 200% + FRONTAGE INCREASE: 0%
 TOTAL AREA ALLOWED: 48,000 ACTUAL AREA: 14,368

6.0 CONSTRUCTION CLASSIFICATION

| BUILDING FIRE RATINGS: | IBC 2009 TYPE IIB | NFPA 2009 TYPE II |
|--------------------------|-------------------|-------------------|
| STRUCTURAL FRAME | 0 | 0 |
| EXTERIOR BEARING WALL | 0 | 0 |
| EXTERIOR NONBEARING WALL | 0 | 0 |
| INTERIOR BEARING WALL | 0 | 0 |
| INTERIOR NONBEARING WALL | 0 | 0 |
| FLOOR CONSTRUCTION | 0 | 0 |
| ROOF CONSTRUCTION | 0 | 0 |

6.1 COMBUSTIBLE MATERIAL IN TYPE II CONSTRUCTION

- IBC SECTION 603
 FIRE-RETARDANT-TREATED WOOD SHALL BE ALLOWED IN:
 1. NONBEARING PARTITIONS (LESS THAN 2 HR WALL)
 • NONBEARING EXTERIOR WALLS WITH NO FIRE RATING
 • ROOF CONSTRUCTION
 2. THERMAL & ACOUSTIC INSULATION WITH A FLAME SPREAD LESS THAN 25
 3. FOAM PLASTIC (SEE IBC SECTION 26)
 4. ROOF COVERINGS OF A, B, & C CLASSIFICATIONS
 5. INTERIOR WOOD FLOORS, PANELING, TRIM, DOORS, ETC., PLATFORMS PER IBC 410
 6. BLOCKING FOR HANDRAILS, CABINETS, WIDOW & DOOR FRAMES
 7. MASSICS AND SEALANTS
 8. NAILING AND FURRING STRIPS

7.1 FIRE-RESISTANCE RATING REQUIREMENTS

| BUILDING FIRE RATINGS: | IBC 2009 TYPE IIB | NFPA 2009 TYPE II |
|--|----------------------------|-------------------|
| IBC-2009 (TABLE 715.4) NFPA - 2009 (TABLE A.8.2.1.2) FIRE WALLS - USE GROUP I-2, R-2, B (COTTAGES) :PROTECTIVE OPENING RATING (106.3.4 & 715.4) (OTHER FIRE BARRIERS: 3/4 HR.) | 2 1 1/2 | |
| FIRE ENCLOSURE OF EXITS (1020.1) :PROTECTIVE OPENING RATING *EXTERIOR WALL IN A EXIT: NO RATING TABLES 601 & 602 | 1 1 | |
| SHAFTS AND ELEVATOR HOIST WAYS :PROTECTIVE OPENING RATING (107.4 / 8.6.5) | 1 1 | |
| CORRIDOR WALLS, IBC 708.1.4 & TABLE 1011 | R: 0.5 I-1: 0 I-1: 1 | |

*GLAZING IN EXIT ENCLOSURE DOORS, IBC 715.3.4.1: 100 SQ. IN. AREA
 *FIRE DOORS CLOSING, IBC 715.4.1.
 DOORS SHALL BE SELF-CLOSING
 DOORS SHALL BE SECURED W/ LATCH WHEN CLOSED
 *SMOKE ACTIVATED DOORS, IBC 715.4.8.3: DOORS IN FIREWALL

7.2 DWELLING AND SLEEPING UNIT SEPARATION IN TYPE IIB :

IBC 712.3:
 • NOT LESS THAN 1/2 HR IN BUILDING EQUIPPED WITH AUTOMATIC SPRINKLER SYSTEM

7.3 DUCTS & AIR TRANSFER OPENINGS:

- 716.5.1 FIRE WALLS - FIRE DAMPERS
- 716.5.2 FIRE BARRIERS - FIRE DAMPERS
- 716.5.3 SHAFT ENCLOSURES - FIRE & SMOKE DAMPERS
- 716.5.4 FIRE PARTITIONS - FIRE DAMPER
- 716.5.4.1 CORRIDORS - SMOKE DAMPERS
- 716.5.5 SMOKE BARRIERS - SMOKE DAMPERS

7.4 LAUNDRY CHUTES

- SHAFT WALL - 1HR RATED (108)
- LAUNDRY CHUTE ACCESS ROOM: 1HR RATED (108.13.3)
- DOOR: .75 HR & SMOKE ACTIVATED DOOR (108.13.3)

7.5 DUMBWAITER

- SHAFT WALL - 1HR RATED (108)

8.1 INTERIOR FINISH REQUIREMENTS: WALL & CEILING

| IBC-2009 (TABLE - 803.9) NFPA - 2009 (TABLE A.10.2.2) VERTICAL EXITS & PASSAGEWAYS: CORRIDORS: ROOMS & ENCLOSED SPACES: | CLASS | | | |
|---|-------|-----|-----|-----|
| | I-1 | I-2 | R-2 | B A |
| | B | B | C | B B |
| | C | B* | C | C B |
| | C | B* | C | C C |

*1. CLASS C SHALL BE PERMITTED IN ADMINISTRATION SPACE
 *2. CLASS C SHALL BE PERMITTED IN ROOM WITH A CAPACITY OF FOUR PERSONS OR LESS

8.2 INTERIOR FINISH REQUIREMENTS: FLOOR (IBC 804.1)

CLASSIFICATION, IBC 804.1 EXCEPTION: FINISH MUST COMPLY WITH DOC FF-1 "PILL TEST"

9.1 FIRE PROTECTION SYSTEM REQUIREMENTS:

- PROTECTION SYSTEMS SHALL BE INSTALLED, REPAIRED, OPERATED AND MAINTAINED IN ACCORDANCE WITH IBC 2009
- SUPERVISORY SERVICE, IBC 901.6.1. AUTO. SPRINKLER SYSTEMS SHALL BE MONITORED BY AN APPROVED SUPERVISING STATION.
- SPRINKLER SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13

| | REQUIRED | IBC 2009 | NFPA 2009 | PROVIDED |
|--------------------------------|----------|----------|-----------|----------|
| AUTOMATIC SPRINKLERS: | YES | 903.3.1 | 9.7.1.1 | YES |
| ALT. AUTOMATIC FIRE SPRINKLER: | NO* | 904.2 | 9.7.3.1 | NO |
| STANDPIPE SYSTEM: | NO** | 905.1 | 9.7.4.2 | NO |
| PORTABLE FIRE EXTINGUISHERS: | YES | 906.1 | 9.7.4.1 | YES |
| FIRE ALARM & DETECTION SYSTEM: | YES | 907.2 | 9.6.1.1 | YES |
| SMOKE CONTROL SYSTEM: | NO | 909.1 | 9.3.1 | NO |

*WHERE REQUIRED PER 904.2.1: COMMERCIAL HOOD AND DUCT SYSTEMS

** STANDPIPES, IBC 905.1: NOT REQUIRED DUE TO BUILDING HT.

PORTABLE FIRE EXTINGUISHERS, IBC 906.1: LOCATE & INSTALL PER NFPA 10

10.1 MAXIMUM TRAVEL DISTANCE TO EXIT:

| | USE GROUP I-2 | USE GROUP R-2/I-1 |
|--|---------------|-------------------|
| IBC-2009 (TABLE - 1016.1) WITH SPRINKLER | 200' | 250' |
| NFPA - 2009 (TABLE A.7.6) WITH SPRINKLER | 200' | 325'/200' |
| PROVIDED WITH SPRINKLER | SEE DWG | SEE DWG |

10.2 COMMON PATH OF EGRESS TRAVEL:

| | I-1 I-2 | R-2 |
|---------------------------------------|-------------|---------|
| IBC-2009 (1014.3) WITH SPRINKLER | 15' | 125' |
| IBC-2009 (TABLE A.7.6) WITH SPRINKLER | NR/100'/15' | 160' |
| ACTUAL MAXIMUM TRAVEL DISTANCE | SEE DWG | SEE DWG |

10.3 MINIMUM CORRIDOR WIDTH REQUIREMENTS:

| | REQD. | PROVIDED |
|------------------------|-------------------|----------|
| IBC-2009 (1018.2) | 44" MIN. 96" MIN. | 114"/66" |
| NFPA - 2009 (38.2.3.2) | 44" MIN. | 114"/66" |

* IN AREAS WHERE REQUIRED FOR BED MOVEMENTS

10.4 MAXIMUM DEAD END / DISTANCE:

| USE GROUP: | I-2 | I-1/R-2 | PROVIDED |
|--|-----|---------|---------------|
| IBC-2009 (1018.4) WITH SPRINKLER | 20' | 50' | LESS THAN 20' |
| NFPA - 2009 (TABLE A.7.6) WITH SPRINKLER | 50' | 50' | |

ALL DEAD END CORRIDORS ARE WITHIN THE 20' MAXIMUM DISTANCE.

10.5 EGRESS WIDTH PER OCCUPANT:

| | REQUIRED | | PROVIDED | |
|-------------------------|----------|--------------|----------|--------------|
| | STAIRS | OTHER EGRESS | STAIRS | OTHER EGRESS |
| | 0.3 | 0.2 | | |
| FIRST FL-"A" | 26.7" | 17.8" | NA | 192" |
| FIRST FL-"B" & "E"(I-2) | 26.7" | 17.8" | NA | 192" |
| FIRST FL-"C" & "D"(R-2) | 19.2" | 12.8" | NA | 120" |

10.6 MIN. NUMBER OF EXITS FOR OCCUPANT LOAD

OCCUPANT LOAD 1-500; 2 PER STORY REQUIRED
 PROVIDED: 4 IN COTTAGE A, B & E
 2 IN COTTAGE C & D

10.7 MIN. CEILING HEIGHT

| | REQUIRED | PROVIDED |
|-----------------------------------|----------|----------|
| MOE IBC-2009 (1003.2) | 7'6" | 8'-0" |
| HABITABLE SPACE IBC-2009 (1208.2) | 8'0" | 8'-0" |
| DOOR HEIGHT* | 8'0" | 7'-0" |

* DOOR HEIGHT MEANS OF EGRESS DOORS IN A GROUP I-2 OCCUPANCY USED FOR THE MOVEMENT OF BEDS SHALL PROVIDE A CLEAR WIDTH NOT LESS THAN 41.5 INCHES. THE HEIGHT OF DOORS SHALL NOT BE LESS THAN 80 INCHES. (1008.11)
 *8' PROVIDED

11.1 ACCESSIBLE TOILETS AND UNITS

| SPACE | OCCUPANCY | CLASSIFICATION | ACCESSIBLE | TYPE A | TYPE B |
|---------------|--------------------|----------------|-------------|--------|--------|
| COTTAGE A | ASSISTED LIVING | I-1 | 4% OF 18=1 | NA | 1 |
| COTTAGE B & E | SKILLED NURSING | I-2 | 50% OF 18=9 | NA | 9 |
| COTTAGE C & D | INDEPENDENT LIVING | R-2 | 1 | NA | 17 |

11.2 ACCESSIBLE PARKING SPACES

| TOTAL PARKING IN LOT | REQUIRED MINIMUM NUMBER OF ACCESSIBLE SPACES |
|----------------------|--|
| 76-100 | 4 |

PROVIDED NUMBER OF ACCESSIBLE SPACE EXCEEDS REQUIRED MINIMUM NUMBER OF OF ACCESSIBLE SPACE.

12.1 SOUND TRANSMISSION

- IBC 1201.2
- WALLS, PARTITIONS AND FLOOR/CEILING ASSEMBLIES SEPARATING DWELLING UNITS FROM EACH OTHER OR FROM PUBLIC OR SERVICE AREAS SHALL HAVE A SOUND TRANSMISSION CLASS (STC) OF NOT LESS THAN 50 (45 IF FIELD TESTED) FOR AIR-BORNE NOISE WHEN TESTED IN ACCORDANCE WITH ASTM E 90.

15.1 ROOF ASSEMBLIES

- FIRE CLASSIFICATION, IBC 1505: IIB CONSTRUCTION - CLASS C ROOF ASSEMBLY

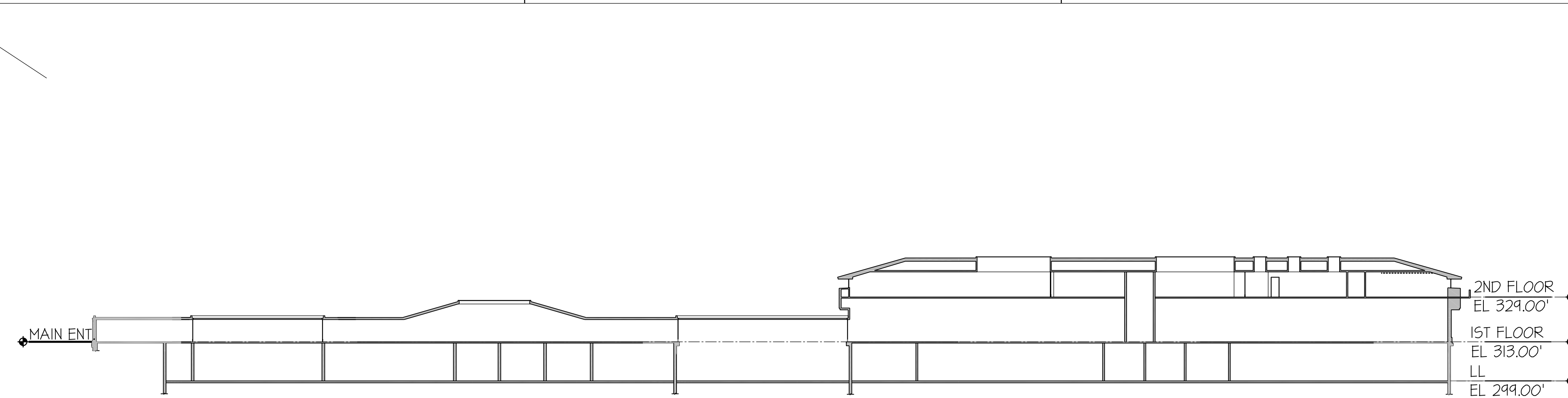
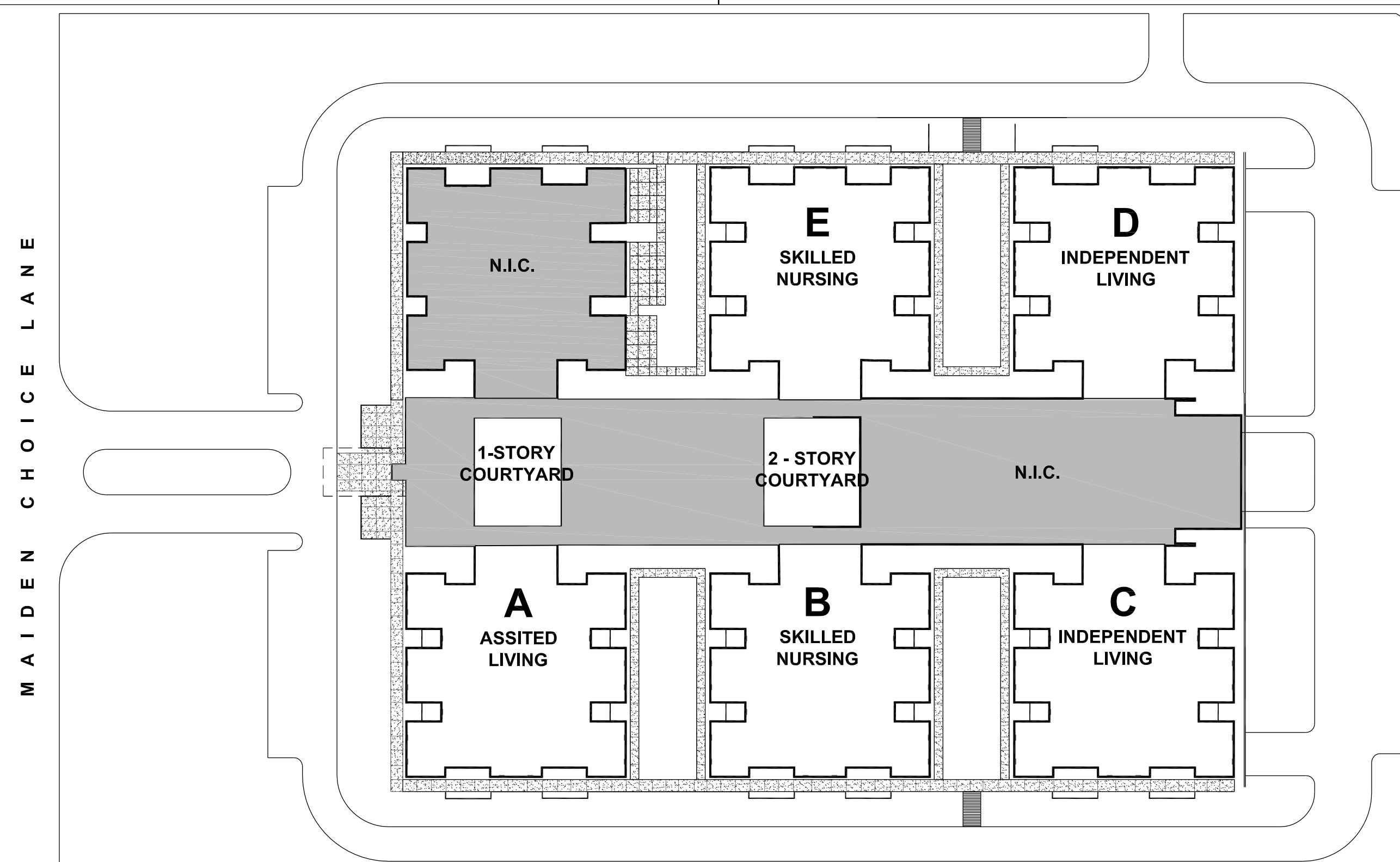
23.1 PLUMBING FIXTURE REQUIREMENTS

IBC 2009 TABLE 2402.1 & IPC 2009 TABLE 403.1:

| SPACE | | WATER CLOSET | | | LAV. | | | BATH/SHOWER | DRINKING FOUNTAIN | SERVICE SINK |
|---------------|----------|--------------|--------|------|-------|--------|------|-------------|-------------------|--------------|
| | | UNSEX | FEMALE | MALE | UNSEX | FEMALE | MALE | | | |
| COTTAGE A | REQUIRED | 1 | 2 | 3 | 1 | 2 | 2 | 5 | 2 | 2 |
| | PROVIDED | 21 | 0 | 0 | 21 | 0 | 0 | 18 | 2 | 1 |
| COTTAGE B & E | REQUIRED | 14 | 0 | 0 | 14 | 0 | 0 | 3 | 2 | 2 |
| | PROVIDED | 20 | 0 | 0 | 20 | 0 | 0 | 18 | 2 | 1 |
| COTTAGE C & D | REQUIRED | 15 | 0 | 0 | 15 | 0 | 0 | 0 | 2 | 2 |
| | PROVIDED | 16 | 0 | 0 | 16 | 0 | 0 | 14 | 2 | 1 |

PROJECT DESCRIPTION

ST. MARTIN'S HOME/LITTLE SISTERS OF THE POOR IS APPROXIMATELY 202,246 GSF. THE BUILDING HAS TWO FULL FLOORS ABOVE GRADE AND THE MAJORITY OF THE LOWER LEVEL BELOW GRADE. THE EXTERIOR WALLS OF THE BUILDING ARE CAVITY WALL CONSTRUCTION (BRICK & CMU) WITH NO THERMAL INSULATION. THE INS WINDOWS ARE SINGLE PANE, STEEL FRAME. THE ROOF IS A HIPPED ROOF WITH A 3/4 & 12 PITCH. THE ROOF CONSISTS OF THREE TAB ASPHALT SHINGLES OVER TWO OVER 30# FELT, 1" RIGID INSULATION AND 2" GYPSUM PLANK ON STEEL FRAME. THE FLAT PORTION OF THE ROOF IS BORDERED BY A WOOD & STEEL PARAPET CONSISTS OF BUILT-UP TAR AND GRAVEL SLOPED TO MULTIPLE 4" ROOF DRAINS OVER 1" RIGID INSULATION, 2" POURED GYPSUM & 1/2" FORM BOARD OVER STEEL FRAME.



LEGENDS

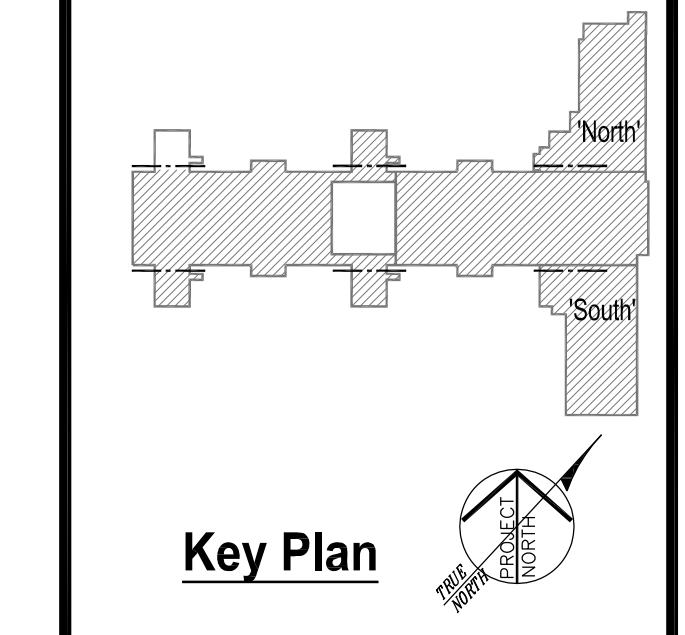
| | | |
|----------------------------|----------|-----------------------------------|
| ■■■■■■■■■■ FIRE WALL-2HR | □ OL:XX | □ OCCUPANT LOAD |
| ■■■■■■■■ ONE HOUR WALL | ■ N.I.C. | ■ NEW CEILING TILE/GRID WORK ONLY |
| ■■■■■■ 1/2 HOUR WALL | | |
| ■■■■■■■■■■ SMOKE PARTITION | | |

NOTES:
 1. SEE SHEET 6002 FOR MORE CODE INFO.
 2. SEE SHEET A601 FOR PARTITION TYPES.



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| NO. | DATE | DESCRIPTION |
|-----------|------|-------------|
| REVISIONS | | |
| | | |
| | | |
| | | |
| | | |



ST. MARTIN'S HOME
 PROPOSED RENOVATIONS
LITTLE SISTERS OF THE POOR
 601 MAIDEN CHOICE LANE
 BALTIMORE, MD 21228

CODE DATA & FIRE PROTECTION PLANS

| | |
|-----------------------|--------------------------|
| PROJ. NO. 09004.00 | DWG. NO. G-002 |
| DATE 7/08/10 | |