

Introduced 6/3/19
Public hearing 6/17/19
Council action 7/1/19
Executive action 7/5/19
Effective date 9/4/19

County Council of Howard County, Maryland

2019 Legislative Session

Legislative day # 8

BILL NO. 31- 2019 (ZRA - 187)

Introduced by: The Chairperson
at the request of Paul Goldenberg

AN ACT amending the Howard County Zoning Regulations to require Age-Restricted Adult Housing Conditional Uses with densities that exceed the base zoning district to have frontage on and direct access to a collector or arterial road; to allow Age-Restricted Adult Housing as a Conditional Use in the Rural Conservation (RC) and Rural Residential (RR) zoning districts; and generally relating to Age-Restricted Adult Housing Conditional Uses.

Introduced and read first time June 3, 2019. Ordered posted and hearing scheduled.

By order Jessica Feldmark
Jessica Feldmark, Administrator

Having been posted and notice of time & place of hearing & title of Bill having been published according to Charter, the Bill was read for a second time at a public hearing on June 17, 2019.

By order Jessica Feldmark
Jessica Feldmark, Administrator

This Bill was read the third time on July 1, 2019 and Passed , Passed with amendments , Failed .

By order Jessica Feldmark
Jessica Feldmark, Administrator

Sealed with the County Seal and presented to the County Executive for approval this 3rd day of July, 2019 at 4 a.m./p.m.

By order Jessica Feldmark
Jessica Feldmark, Administrator

Approved/Vetoed by the County Executive July 5, 2019

Calvin Ball
Calvin Ball, County Executive

NOTE: [[text in brackets]] indicates deletions from existing law; TEXT IN SMALL CAPITALS indicates additions to existing law; Strike-out indicates material deleted by amendment; Underlining indicates material added by amendment.

1
2 **Section 1.** *Be it enacted by the County Council of Howard County, Maryland, that the Howard*
3 *County Zoning Regulations are hereby amended as follows:*

4
5 *By Amending:*

6 *Section 131.0: "Conditional Uses"*

7 *Subsection N. "Conditional Uses and Permissible Zoning Districts"*

8 *Number 1. "Age-Restricted Adult Housing"*

9
10
11 **HOWARD COUNTY ZONING REGULATIONS**

12
13 **SECTION 131.0: Conditional Uses**

14
15 **N. Conditional Uses and Permissible Zoning Districts**

16 **1. Age-restricted Adult Housing**

17 **a. Age-Restricted Adult Housing, General**

18 A Conditional Use may be granted in the RC, RR, R-ED, R-20, R-12, R-SC,
19 R-SA-8, R-H-ED, R-A-15 or R-APT District, for age-restricted adult housing,
20 provided that:

- 21 (1) Single-family detached, semi-detached, multi-plex, attached and
22 apartment dwelling units shall be permitted, except that only detached,
23 semi-detached, multi-plex and single-family attached units are
24 permitted in developments with less than 50 dwelling units in the RC,
25 RR, R-ED, R-20 and R-12 districts.
- 26 (2) In the RC, RR, R-ED, R-20, R-12, R-SC, R-SA-8, R-H-ED, R-A-15, or
27 R-APT Districts the development shall have a minimum of 20 dwelling
28 units.
- 29 (3) ONLY DETACHED AND SEMI-DETACHED UNITS ARE PERMITTED IN THE RC
30 AND RR DISTRICTS.
- 31 (34) The maximum density shall be as follows:

Zoning District	Number of Dwelling Units in Development	Maximum Units Per Net Acre
RC and RR	20 or more	1
R-ED and R-20	20-49	4
	50 or more	5
R-12	20-49	5
	50 or more	6
R-SC	20-49	7
	50 or more	8
R-SA-8	20 or more	12
R-H-ED	20 or more	10
R-A-15	20 or more	25
R-APT	20 or more	35

1

2

(4)(5) IF THE DEVELOPMENT RESULTS IN INCREASED DENSITY ACCORDING TO

3

SUBSECTION (34) ABOVE, THE SITE MUST HAVE FRONTAGE ON AND

4

DIRECT ACCESS TO A COLLECTOR OR ARTERIAL ROAD DESIGNATED IN THE

5

GENERAL PLAN

6

(([4])6) Site Design:

7

The landscape character of the site must blend with adjacent residential

8

properties. To achieve this:

9

(a) Grading and landscaping shall retain and enhance elements that

10

allow the site to blend with the existing neighborhood.

11

(b) The project shall be compatible with residential development in

12

the vicinity by providing either:

13

(i) An architectural transition, with buildings near the perimeter

14

that are similar in scale, materials and architectural details to

1 neighboring dwellings as demonstrated by architectural
2 elevations or renderings submitted with the petition; or

3 (ii) Additional buffering along the perimeter of the site, through
4 retention of existing forest or landscaping, enhanced
5 landscaping, berms or increased setbacks.

6 (c) For projects with less than 50 dwelling units in the RC, RR, R-
7 ED, R-20 and R-12 Districts, setbacks from existing public streets
8 shall be the same as the setback required for residential uses on
9 adjacent properties.

10 (([5])7) Bulk Requirements

11 (a) Maximum Height:

12 (i) Apartments 40 feet

13 Except in R-SA-8, R-A-15 and R-APT\55 feet

14 (ii) Other Principal Structures 34 feet

15 (iii) Accessory Structures 15 feet

16 (b) Minimum Structure and Use Setback:

17 (i) From Public Street Right-of-way 40 feet

18 (ii) From residential lots in RC, RR, R-ED, R-20, R-12 or R-SC
19 Districts:

20 Apartments\100 feet

21 Single-family attached\75 feet

22 Single-family detached, semi-detached, and multi-plex\40 feet

23 (iii) From open space, multi-family or non-residential uses in RC,
24 RR, R-ED, R-20, R-12 or R-SC 30 feet

25 (iv) From zoning districts other than RC, RR, R-ED, R-20, R-12
26 or R-SC 20 feet

1 (c) Minimum structure setback from interior roadway or driveway for
2 units with garages 20 feet

3 (d) Minimum structure setback from lot lines for single-family
4 detached or multi-plex units

5 (i) Side 10 feet

6 Except zero lot line dwellings\0 feet

7 A minimum of 10 feet must be provided between structures

8 (ii) Rear 20 feet

9 (e) Minimum distance between single-family detached and/or
10 attached dwellings:

11 (i) For units oriented face-to-face 30 feet

12 (ii) For units oriented side-to-side 15 feet

13 (iii) For units oriented face-to-side or rear-to-side 20 feet

14 (iv) For units oriented rear-to-rear 40 feet

15 (v) For units oriented face-to-rear 100 feet

16 (f) Minimum distance between apartment buildings or between
17 apartment buildings and single-family dwellings:

18 (i) For units oriented face-to-face 30 feet

19 (ii) For units oriented side-to-side 15 feet

20 (iii) For units oriented face-to-side or rear-to-side 30 feet

21 (iv) For units oriented rear-to-rear 60 feet

22 (v) For units oriented face-to-rear 100 feet

23 (g) Apartment buildings and groups of single-family attached units
24 may not exceed 120 feet in length. However, the Hearing Authority
25 may approve a greater length, up to a maximum of 300 feet in R-
26 SA-8, R-A-15 and R-APT, or 200 feet in other districts, based on

1 architectural design that mitigates the visual impact of the increased
2 length.

3 ([6]8) At least 50% of the gross site area in the RC, RR, R-ED Districts,
4 at least 35% in the R-20, R-12, and R-SC Districts, and at least 25% in
5 R-SA-8, R-H-ED, R-A-15 and R-APT Districts, shall be open space or
6 open area in accordance with the Subdivision and Land Development
7 Regulations. The open space or open area shall provide amenities such
8 as pathways, seating areas and recreation areas for the residents, and
9 shall be protective of natural features.

10 ([7]9) Accessory uses may include social, recreational, educational,
11 housekeeping, security, transportation or personal services, provided that
12 use of these services is limited to on-site residents and their guests.

13 ([8]10) At least one on-site community building or interior community
14 space shall be provided that contains a minimum of:

- 15 (a) 20 square feet of floor area per dwelling unit, for the first 99 units
16 with a minimum area of 500 square feet, and
17 (b) 10 square feet of floor area per dwelling unit for each additional
18 unit above 99.

19 ([9]11) Loading and trash storage areas shall be adequately screened
20 from view.

21 ([10]12) For a development that will be built in phases, open space areas,
22 recreational facilities and other accessory facilities shall be provided in
23 each phase to meet the needs of the residents. The developer shall
24 provide a schedule for the installation of facilities at the time the
25 Conditional Use is approved.

26 ([11]13) The petition shall establish how the age restrictions required
27 under the definition of this use will be implemented and maintained over
28 times. If the development will not be a rental community under single
29 ownership, an entity such as a condominium association or homeowners
30 association shall be established to maintain and enforce the age
31 restrictions in addition to County enforcement of zoning regulations.

1 ((12))14) All open space, common areas and related improvements shall
2 be managed and maintained by a common entity, either the owner of the
3 development, a condominium association, or a homeowners association.

4 ((13))15) The development shall incorporate universal design features
5 from the Department of Planning and Zoning guidelines that identify
6 required, recommended and optional features. The petition shall include
7 descriptions of the design features of proposed dwellings to demonstrate
8 their appropriateness for the age-restricted population. The material
9 submitted shall indicate how universal design features will be used to
10 make individual dwellings adaptable to persons with mobility or
11 functional limitations and how the design will provide accessible routes
12 between parking areas, sidewalks, dwelling units and common areas.

13 ((14))16) At least 10% of the dwelling units in the **RC, RR, R-ED, R-20,**
14 R-12 and R-SC Districts, and at least 15% in the R-SA-8, R-H-ED, R-
15 A-15 and R-APT Districts, shall be Moderate Income Housing Units.

16 ((15))17) Housing for the elderly special exceptions uses approved by the
17 Board of Appeals on or prior to July 12, 2001 and constructed under the
18 Zoning Regulations in effect at that time, may convert the existing
19 dwelling units to age-restricted adult housing uses, with respect to
20 minimum age restrictions only, without being subject to further hearing
21 authority review and approval under current Conditional Use
22 requirements, provided that the dwelling units are made subject to the
23 new covenants and other legal means of enforcing the age-restricted
24 adult housing minimum age restrictions, and that a copy of the recorded
25 new covenants is submitted to the Department of Planning and Zoning
26 to be filed in the original special exception case file.

27 ((16))18) The Conditional Use plan and the architectural design of the
28 building(s) shall have been reviewed by the Design Advisory Panel, in
29 accordance with Title 16, Subtitle 15 of the Howard County Code, prior
30 to the submission of the Conditional Use petition to the Department of
31 Planning and Zoning. The Petitioner shall provide documentation with
32 the petition to show compliance with this criterion.

1 b. Age-Restricted Adult Housing, Multi-Plex

2 A Conditional Use may be granted in the R-ED, R-20, R-12, R-SC, R-SA-8,
3 R-H-ED, R-A-15, R-APT, B-1 or B-2 Districts for age-restricted multi-plex
4 adult housing, provided that:

5 (1) The landscape character of the site must blend with adjacent residential
6 development. To achieve this:

7 (a) Grading and all landscaping shall retain and enhance elements that
8 allow the site to blend and be compatible with adjacent residential
9 development.

10 (b) The project shall be compatible with adjacent residential
11 development by providing either:

12 (i) An architectural transition with buildings near the perimeter
13 that are similar to neighboring dwellings in scale, materials and
14 architectural detail as demonstrated by architectural elevations
15 or renderings submitted with the petition, or

16 (ii) Additional buffering along the perimeter of the site, through
17 retention of existing forest or landscaping, enhanced
18 landscaping, berms or increased setbacks.

19 (2) The following criteria shall be met:

20 (a) In the residential districts, one multi-plex dwelling unit building is
21 permitted per acre. There shall be no more than five multi-plex
22 dwelling unit buildings in a development. In the B-1 and B-2
23 Districts, the density shall be determined by available water and
24 septic facilities.

25 (b) The net floor area of a multi-plex dwelling unit building is limited
26 to 5,000 square feet.

27 (c) The multi-plex dwellings are limited to age-restricted adult
28 housing. The petition must include copies of proposed deed
29 restrictions or covenants that establish how the age restrictions

1 required under the definition of age-restricted adult housing will be
2 implemented and maintained.

3 (d) The dwellings will incorporate universal design features from the
4 Department of Planning and Zoning Guidelines that identify
5 required, recommended, and optional features. The petition shall
6 include descriptions of the design features of proposed dwellings to
7 demonstrate their appropriateness for the age-restricted populations.
8 The materials submitted shall indicate how universal design features
9 will be used to make individual dwellings adaptable to persons with
10 mobility or functional limitations and how the design will provide
11 accessible routes between driveways, sidewalks, common areas and
12 dwelling units.

13 (e) Properties in the B-1 and B-2 Districts shall be outside of the
14 Planned Service Area and adjoin, or be within 200 yards of a
15 community shopping center development with a food store greater
16 than 15,000 square feet.

17 (f) The development has frontage on and direct access to a public road.

18 (g) The minimum lot size is one gross acre in R-ED and R-20 and
19 20,000 square feet in R-12.

20 (3) The development shall comply with the following bulk requirements:

21 (a) Maximum Height

22 (i) Principal Structures 34 feet

23 (ii) Accessory Structures 15 feet

24 (b) Minimum structure and use setback from perimeter of
25 development:

26 (i) From public street right-of-way 40 feet

27 (ii) From RC, RR, R-ED, R-20 or R-SC Districts, the setback
28 applicable in the underlying zoning district.

1 (iii) From Zoning districts other than RC, RR, R-ED, R-20 or R-
2 SC 20 feet

3 (c) Minimum structure setback from interior roadway or driveway for
4 units with garages 20 feet

5 (d) Minimum structure setback from lot lines:

6 (i) Side 10 feet

7 Except zero lot line dwellings\0 feet

8 A minimum of 10 feet must be provided between structures

9 (ii) Rear 10 feet

10 (e) Minimum distance between principal structures 10 feet

11 (4) At least 35% of the gross site area shall be open space or open area in
12 accordance with the Subdivision and Land Development Regulations.
13 The open space or open area shall provide amenities such as pathways,
14 seating areas and outdoor recreation areas for the residents, and shall be
15 protective of natural features.

16 (5) Accessory uses may include social, recreational, educational,
17 housekeeping, security, transportation or personal services, provided that
18 the use of these services is limited to on-site residents and their guests.

19 (6) For developments with more than five multi-plex dwelling unit
20 buildings, at least one on-site community building or interior community
21 space shall be provided that contains a minimum of 500 square feet.

22 (7) The Conditional Use plan and the architectural design of the building(s)
23 shall have been reviewed by the Design Advisory Panel, in accordance
24 with Title 16, Subtitle 15 of the Howard County Code, prior to the
25 submission of the Conditional Use petition to the Department of
26 Planning and Zoning. The Petitioner shall provide documentation with
27 the petition to show compliance with this criterion.

1 ~~*Section 2. Be it further enacted by the County Council of Howard County, Maryland, that items*~~
2 ~~*4 through 16 of the Section 131.0 N.1.a of the Zoning Regulations are hereby renumbered to*~~
3 ~~*be items 5 through 17, respectively.*~~

4 *Section 2. Be it further enacted by the County Council of Howard County, Maryland, that the*
5 *publisher of the Howard County Zoning Regulations is authorized hereby to amend the*
6 *Conditional Uses and Permissible Zoning Districts chart attached to Section 131 of the Zoning*
7 *Regulations in order to reflect the substantive changes made by this Act.*

8
9 *Section 3. Be it further enacted by the County Council of Howard County, Maryland, that this*
10 *Act shall become effective 61 days after its enactment.*

11
12
13

Amendment 1 to Council Bill No. 31 - 2019

BY: David Yungmann

Legislative Day No. 9

Date: July 1, 2019

Amendment No. 1

(This amendment adds Age-Restricted Adult Housing as a Conditional Use in the RC and RR zoning districts.)

On the title page, in line 3 of the title, after the semi-colon, insert the following:

“to allow Age-Restricted Adult Housing as a Conditional Use in the Rural Conservation (RC) and Rural Residential (RR) zoning districts;”.

On page 1, in lines 18, 24, and 26, after “the”, insert “RC, RR”.

On page 1, immediately following line 27, insert the following:

“(3) ONLY DETACHED, AND SEMI-DETACHED AND MULTI-PLEX UNITS ARE PERMITTED IN THE RC AND RR DISTRICTS.”.

On page 1, in line 28, strike “3” and substitute “4”.

On page 1, in the chart, immediately below the header row, insert the following:

“

<u>RC AND RR</u>	<u>20 OR MORE</u>	<u>1</u>
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”.

On page 2, in line 2, strike “4” and substitute “5”.

ADOPTED as amended 7/1/19
 FAILED
 SIGNATURE Jessica Feldmark

1 On page 2, in line 6, insert the following:

2 “([4]6) Site Design:

3 The landscape character of the site must blend with adjacent residential
4 properties. To achieve this:

5 (a) Grading and landscaping shall retain and enhance elements that allow
6 the site to blend with the existing neighborhood.

7 (b) The project shall be compatible with residential development in the
8 vicinity by providing either:

9 (i) An architectural transition, with buildings near the perimeter that
10 are similar in scale, materials and architectural details to
11 neighboring dwellings as demonstrated by architectural elevations
12 or renderings submitted with the petition; or

13 (ii) Additional buffering along the perimeter of the site, through
14 retention of existing forest or landscaping, enhanced landscaping,
15 berms or increased setbacks.

16 (c) For projects with less than 50 dwelling units in the RC, RR, R-ED,
17 R-20 and R-12 Districts, setbacks from existing public streets shall be
18 the same as the setback required for residential uses on adjacent
19 properties.

20 ([5]7) Bulk Requirements

21 (a) Maximum Height:

22 (i) Apartments 40 feet

23 Except in R-SA-8, R-A-15 and R-APT\55 feet

24 (ii) Other Principal Structures 34 feet

25 (iii) Accessory Structures 15 feet

26 (b) Minimum Structure and Use Setback:

27 (i) From Public Street Right-of-way 40 feet

- 1 (ii) From residential lots in RC, RR, R-ED, R-20, R-12 or R-SC
2 Districts:
3 Apartments\100 feet
4 Single-family attached\75 feet
5 Single-family detached, semi-detached, and multi-plex\40 feet
6 (iii) From open space, multi-family or non-residential uses in RC,
7 RR, R-ED, R-20, R-12 or R-SC 30 feet
8 (iv) From zoning districts other than RC, RR, R-ED, R-20, R-12 or
9 R-SC 20 feet
10 (c) Minimum structure setback from interior roadway or driveway for
11 units with garages 20 feet
12 (d) Minimum structure setback from lot lines for single-family detached
13 or multi-plex units
14 (i) Side 10 feet
15 Except zero lot line dwellings\0 feet
16 A minimum of 10 feet must be provided between structures
17 (ii) Rear 20 feet
18 (e) Minimum distance between single-family detached and/or attached
19 dwellings:
20 (i) For units oriented face-to-face 30 feet
21 (ii) For units oriented side-to-side 15 feet
22 (iii) For units oriented face-to-side or rear-to-side 20 feet
23 (iv) For units oriented rear-to-rear 40 feet
24 (v) For units oriented face-to-rear 100 feet

1 (f) Minimum distance between apartment buildings or between apartment
2 buildings and single-family dwellings:

3 (i) For units oriented face-to-face 30 feet

4 (ii) For units oriented side-to-side 15 feet

5 (iii) For units oriented face-to-side or rear-to-side 30 feet

6 (iv) For units oriented rear-to-rear 60 feet

7 (v) For units oriented face-to-rear 100 feet

8 (g) Apartment buildings and groups of single-family attached units may
9 not exceed 120 feet in length. However, the Hearing Authority may
10 approve a greater length, up to a maximum of 300 feet in R-SA-8, R-
11 A-15 and R-APT, or 200 feet in other districts, based on architectural
12 design that mitigates the visual impact of the increased length.

13 ((6))8 At least 50% of the gross site area in the RC, RR, R-ED Districts, at
14 least 35% in the R-20, R-12, and R-SC Districts, and at least 25% in R-SA-
15 8, R-H-ED, R-A-15 and R-APT Districts, shall be open space or open area
16 in accordance with the Subdivision and Land Development Regulations.
17 The open space or open area shall provide amenities such as pathways,
18 seating areas and recreation areas for the residents, and shall be protective
19 of natural features.

20 ((7))9 Accessory uses may include social, recreational, educational,
21 housekeeping, security, transportation or personal services, provided that
22 use of these services is limited to on-site residents and their guests.

23 ((8))10 At least one on-site community building or interior community
24 space shall be provided that contains a minimum of:

25 (a) 20 square feet of floor area per dwelling unit, for the first 99 units
26 with a minimum area of 500 square feet, and

27 (b) 10 square feet of floor area per dwelling unit for each additional unit
28 above 99.

1 (((9))11) Loading and trash storage areas shall be adequately screened from
2 view.

3 (((10))12) For a development that will be built in phases, open space areas,
4 recreational facilities and other accessory facilities shall be provided in each
5 phase to meet the needs of the residents. The developer shall provide a
6 schedule for the installation of facilities at the time the Conditional Use is
7 approved.

8 (((11))13) The petition shall establish how the age restrictions required under
9 the definition of this use will be implemented and maintained over times. If
10 the development will not be a rental community under single ownership, an
11 entity such as a condominium association or homeowners association shall
12 be established to maintain and enforce the age restrictions in addition to
13 County enforcement of zoning regulations.

14 (((12))14) All open space, common areas and related improvements shall be
15 managed and maintained by a common entity, either the owner of the
16 development, a condominium association, or a homeowners association.

17 (((13))15) The development shall incorporate universal design features from
18 the Department of Planning and Zoning guidelines that identify required,
19 recommended and optional features. The petition shall include descriptions
20 of the design features of proposed dwellings to demonstrate their
21 appropriateness for the age-restricted population. The material submitted
22 shall indicate how universal design features will be used to make individual
23 dwellings adaptable to persons with mobility or functional limitations and
24 how the design will provide accessible routes between parking areas,
25 sidewalks, dwelling units and common areas.

26 (((14))16) At least 10% of the dwelling units in the RC, RR, R-ED, R-20, R-
27 12 and R-SC Districts, and at least 15% in the R-SA-8, R-H-ED, R-A-15
28 and R-APT Districts, shall be Moderate Income Housing Units.

1 ([15]17) Housing for the elderly special exceptions uses approved by the
2 Board of Appeals on or prior to July 12, 2001 and constructed under the
3 Zoning Regulations in effect at that time, may convert the existing dwelling
4 units to age-restricted adult housing uses, with respect to minimum age
5 restrictions only, without being subject to further hearing authority review
6 and approval under current Conditional Use requirements, provided that the
7 dwelling units are made subject to the new covenants and other legal means
8 of enforcing the age-restricted adult housing minimum age restrictions, and
9 that a copy of the recorded new covenants is submitted to the Department
10 of Planning and Zoning to be filed in the original special exception case file.

11 ([16]18) The Conditional Use plan and the architectural design of the
12 building(s) shall have been reviewed by the Design Advisory Panel, in
13 accordance with Title 16, Subtitle 15 of the Howard County Code, prior to
14 the submission of the Conditional Use petition to the Department of
15 Planning and Zoning. The Petitioner shall provide documentation with the
16 petition to show compliance with this criterion.

17 b. Age-Restricted Adult Housing, Multi-Plex

18 A Conditional Use may be granted in the ~~RC, RR~~, R-ED, R-20, R-12, R-SC, R-
19 SA-8, R-H-ED, R-A-15, R-APT, B-1 or B-2 Districts for age-restricted multi-
20 plex adult housing, provided that:

21 (1) The landscape character of the site must blend with adjacent residential
22 development. To achieve this:

23 (a) Grading and all landscaping shall retain and enhance elements that
24 allow the site to blend and be compatible with adjacent residential
25 development.

26 (b) The project shall be compatible with adjacent residential development
27 by providing either:

28 (i) An architectural transition with buildings near the perimeter that
29 are similar to neighboring dwellings in scale, materials and

1 architectural detail as demonstrated by architectural elevations or
2 renderings submitted with the petition, or

3 (ii) Additional buffering along the perimeter of the site, through
4 retention of existing forest or landscaping, enhanced landscaping,
5 berms or increased setbacks.

6 (2) The following criteria shall be met:

7 (a) In the residential districts, one multi-plex dwelling unit building is
8 permitted per acre. There shall be no more than five multi-plex
9 dwelling unit buildings in a development. In the B-1 and B-2 Districts,
10 the density shall be determined by available water and septic facilities.

11 (b) The net floor area of a multi-plex dwelling unit building is limited to
12 5,000 square feet.

13 (c) The multi-plex dwellings are limited to age-restricted adult housing.
14 The petition must include copies of proposed deed restrictions or
15 covenants that establish how the age restrictions required under the
16 definition of age-restricted adult housing will be implemented and
17 maintained.

18 (d) The dwellings will incorporate universal design features from the
19 Department of Planning and Zoning Guidelines that identify required,
20 recommended, and optional features. The petition shall include
21 descriptions of the design features of proposed dwellings to
22 demonstrate their appropriateness for the age-restricted populations.
23 The materials submitted shall indicate how universal design features
24 will be used to make individual dwellings adaptable to persons with
25 mobility or functional limitations and how the design will provide
26 accessible routes between driveways, sidewalks, common areas and
27 dwelling units.

28 (e) Properties in the B-1 and B-2 Districts shall be outside of the Planned
29 Service Area and adjoin, or be within 200 yards of a community

1 shopping center development with a food store greater than 15,000
2 square feet.

3 (f) The development has frontage on and direct access to a public road.

4 (g) The minimum lot size is one gross acre in RC, RR, R-ED and R-20
5 and 20,000 square feet in R-12.

6 (3) The development shall comply with the following bulk requirements:

7 (a) Maximum Height

8 (i) Principal Structures 34 feet

9 (ii) Accessory Structures 15 feet

10 (b) Minimum structure and use setback from perimeter of development:

11 (i) From public street right-of-way 40 feet

12 (ii) From RC, RR, R-ED, R-20 or R-SC Districts, the setback
13 applicable in the underlying zoning district.

14 (iii) From Zoning districts other than RC, RR, R-ED, R-20 or R-SC
15 20 feet

16 (c) Minimum structure setback from interior roadway or driveway for
17 units with garages 20 feet

18 (d) Minimum structure setback from lot lines:

19 (i) Side 10 feet

20 Except zero lot line dwellings\0 feet

21 A minimum of 10 feet must be provided between structures

22 (ii) Rear 10 feet

23 (e) Minimum distance between principal structures 10 feet

24 (4) At least 35% of the gross site area shall be open space or open area in
25 accordance with the Subdivision and Land Development Regulations. The
26 open space or open area shall provide amenities such as pathways, seating

1 areas and outdoor recreation areas for the residents, and shall be protective
2 of natural features.

3 (5) Accessory uses may include social, recreational, educational,
4 housekeeping, security, transportation or personal services, provided that
5 the use of these services is limited to on-site residents and their guests.

6 (6) For developments with more than five multi-plex dwelling unit buildings,
7 at least one on-site community building or interior community space shall
8 be provided that contains a minimum of 500 square feet.

9 (7) The Conditional Use plan and the architectural design of the building(s)
10 shall have been reviewed by the Design Advisory Panel, in accordance with
11 Title 16, Subtitle 15 of the Howard County Code, prior to the submission of
12 the Conditional Use petition to the Department of Planning and Zoning. The
13 Petitioner shall provide documentation with the petition to show
14 compliance with this criterion.”.

15
16 On page 2, strike lines 7 – 9, and substitute the following:

17 “Section 2. Be it further enacted by the County Council of Howard County,
18 Maryland, that the publisher of the Howard County Zoning Regulations is authorized
19 hereby to amend the Conditional Uses and Permissible Zoning Districts chart
20 attached to Section 131 of the Zoning Regulations in order to reflect the substantive
21 changes made by this Act.”.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 435

PROBLEM SET 1

1. Problem 1

Consider a particle of mass m moving in a potential $V(x) = \frac{1}{2}kx^2$. The energy eigenvalues are given by $E_n = \hbar\omega(n + \frac{1}{2})$.

Find the expectation value of the position operator $\langle x \rangle$ in the state $|n\rangle$.

Use the commutation relations $[x, p] = i\hbar$ and $[H, x] = -i\hbar p/m$.

Hint: Use the ladder operators a_{\pm} defined by $a_{\pm} = \frac{1}{\sqrt{2m\hbar\omega}}(mp \pm i\sqrt{m\hbar\omega}x)$.

Answer: $\langle x \rangle = 0$.

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