

ANN ARBOR HOUSING BOARD OF APPEALS

STAFF REPORT

Meeting Date: July 12, 2022

Type of Request: VARIANCE

Housing Board of Appeals Request HBA22-2001 at 227 Orchard Hills Dr, ANN ARBOR, MI 48104.

(Parcel Identification Number: 09-09-27-301-066)

DESCRIPTION AND DISCUSSION

Property Owners Name and Address:

Jeffrey Michael Schox
88 Montcalm St
San Francisco, CA, 94110

Gary Cox (agent)
10850 Fellows Hill Dr
Plymouth, MI 48170

BACKGROUND

The single-family dwelling located at 227 Orchard Hills Dr was built in 1955 and appears to be original construction.

The owner of the property requests one variance:

(1) Handrail for exit stairway

Variance from section 8:504(4)(b)5

(4) *Fire exits.*

(b) *Exit stairways.*

5. A handrail shall be located 30 to 38 inches above the nosing of the treads

8:500 definitions

(27) *Stairway:* One or more flights of stairs, and the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from 1 floor or level to another. For purposes of this chapter, a flight of stairs shall have at least 4 risers.

Standards for Approval:

1. *Practical difficulties or unnecessary hardship;*
2. *The variance does not violate the intent of this chapter; and*
3. *The variance does not jeopardize public health and safety.*

STAFF RECOMMENDATION

- Staff is unable to support granting of this variance. The housing code requires a handrail at all flights of stairs with 4 or more risers. This is similar to the current building code requirements found in the 2015 Michigan Residential Code and previous versions. Each stair within the flight of stairs in question are half the rise (4" riser) and twice as deep (18" treads) as allowable. The low slope of the stairs does not constitute omission of the required handrail. The 2015 Michigan residential Code requires a handrail on ramps exceeding a slope of one unit vertical and 12 units horizontal (8.33 percent). The slope of this flight of stairs is 25 percent, 3 times as steep as a ramp requiring a handrail. While accessibility is not required in single family homes, it would be unreasonable to expect a person with a wheel chair or walker to climb stairs as suggested in the owner's appeal. The code at the time of construction (Official Building Code of Ann Arbor-1929 Council Proceedings) is ambiguous and can be interpreted to require no handrail, or a handrail on one side. It is the cities interpretation that the intent was to require a handrail on one side. This is ultimately not relevant since the housing code is applicable to all dwellings without regard to whether they were constructed before or after the effective date (8:501 application of chapter).
- 7/1/2022 Addendum:
 - In addition to the set of 8 risers included in the original appeal, it has come to our attention that there is an additional set of 4 riser at the front entry that were not included in the appeal. This set of stairs also requires a handrail since it includes 4 risers.

PROPOSED MOTION

APPEAL GRANTED

That in Case BBA22-2001, **the appeal of the Building Official's decision** that the rental unit at 227 Orchard Hills Dr **not get** relief from section 8:502, and the Housing Board of Appeals **REVERSES** the Building Official's decision for the reason(s) that *[state reason in motion]*:

- ☐ (1) Practical difficulties or undue hardship
- ☐ (2) The variance does not violate the intent of section 8:502 of the Ann Arbor Housing Code
- ☐ (3) The variance does not jeopardize public health and safety.

Stipulations – If Applicable:

[Chairman to check box(es) following vote]

OR
APPEAL DENIED

That in Case HBA22-2001 **the appeal of the Building Official's decision** that the rental unit at 227 Orchard Hills Dr is **DENIED** and the Housing Board of Appeals **AFFIRMS** the Building Official's decision for the reason(s) that *[state reason in motion]*:

- ☐ (1) Practical difficulties or undue hardship do not exist.
- ☐ (2) The variance would violate the intent of section 8:502 of the Ann Arbor Housing Code;
- ☐ (3) The variance would jeopardize public health and safety.

Stipulations – if Applicable:

[Chairman to check applicable box(es) following vote]

Yeas:

Nays:

Absent for this vote:

Date

R311.7.8 Handrails. Handrails shall be provided on not less than one side of each continuous run of treads or flight with four or more risers.

R311.7.8.1 Height. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

Exceptions:

1. The use of a volute, turnout or starting easing shall be allowed over the lowest tread.
2. Where handrail fittings or bendings are used to provide continuous transition between flights, transitions at winder treads, the transition from handrail to *guard*, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed 38 inches (956 mm).

R311.7.8.2 Continuity. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1½ inches (38 mm) between the wall and the handrails.

Exceptions:

1. Handrails shall be permitted to be interrupted by a newel post at the turn.
2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.

R311.7.8.3 Grip-size. Required handrails shall be of one of the following types or provide equivalent graspability.

1. Type I. Handrails with a circular cross section shall have an outside diameter of not less than 1¼ inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter dimension of not less than 4 inches (102 mm) and not greater than 6¼ inches (160 mm) with a cross section of dimension of not more than 2¼ inches (57 mm). Edges shall have a radius of not less than 0.01 inch (0.25 mm).
2. Type II. Handrails with a perimeter greater than 6¼ inches (160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of ¾ inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of not less than 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for not less than 3/8 inch (10 mm) to a level that is not less than 1¾ inches (45 mm) below the tallest portion of the profile. The width of the handrail above the recess shall be not less than 1¼ inches (32 mm) and not more than 2¼ inches (57 mm).

inches (70 mm). Edges shall have a radius of not less than 0.01 inch (0.25 mm).

R311.7.8.4 Exterior plastic composite handrails. Plastic composite exterior handrails shall comply with the requirements of Section R507.3.

R311.7.9 Illumination. Stairways shall be provided with illumination in accordance with Section R303.7.

R311.7.10 Special stairways. Spiral stairways and bulkhead enclosure stairways shall comply with the requirements of Section R311.7 except as specified in Sections R311.7.10.1 and R311.7.10.2.

R311.7.10.1 Spiral stairways. Spiral stairways are permitted, provided that the clear width at and below the handrail is not less than 26 inches (660 mm) and the walkline radius is not greater than 24½ inches (622 mm). Each tread shall have a depth of not less than 6¼ inches (171 mm) at the walkline. All treads shall be identical, and the rise shall be not more than 9½ inches (241 mm). Headroom shall be not less than 6 feet 6 inches (1982 mm).

R311.7.10.2 Bulkhead enclosure stairways. Stairways serving bulkhead enclosures, not part of the required building egress, providing access from the outside *grade* level to the *basement* shall be exempt from the requirements of Sections R311.3 and R311.7 where the height from the *basement* finished floor level to *grade* adjacent to the stairway is not more than 8 feet (2438 mm) and the *grade* level opening to the stairway is covered by a bulkhead enclosure with hinged doors or other *approved* means.

R311.7.11 Alternating tread devices. Alternating tread devices shall not be used as an element of a means of egress. Alternating tread devices shall be permitted provided that the required means of egress stairway or ramp serves the same space at each adjoining level or where a means of egress is not required. The clear width at and below the handrails shall be not less than 20 inches (508 mm).

R311.7.11.1 Treads of alternating tread devices. Alternating tread devices shall have a tread depth of not less than 5 inches (127 mm), a projected tread depth of not less than 8½ inches (216 mm), a tread width of not less than 7 inches (178 mm) and a riser height of not more than 9½ inches (241 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projections of adjacent treads. The riser height shall be measured vertically between the leading edges of adjacent treads. The riser height and tread depth provided shall result in an angle of ascent from the horizontal of between 50 and 70 degrees (0.87 and 1.22 rad). The initial tread of the device shall begin at the same elevation as the platform, landing or floor surface.

R311.7.11.2 Handrails of alternating tread devices. Handrails shall be provided on both sides of alternating tread devices and shall comply with Sections R311.7.8.2 to R311.7.8.4. Handrail height shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

R311.7.12 Ships ladders. Ships ladders shall not be used as an element of a means of egress. Ships ladders shall be permitted provided that a required means of egress stairway or ramp serves the same space at each adjoining level or where a means of egress is not required. The clear width at and below the handrails shall be not less than 20 inches.

R311.7.12.1 Treads of ships ladders. Treads shall have a depth of not less than 5 inches (127 mm). The tread shall be projected such that the total of the tread depth plus the nosing projection is not less than $8\frac{1}{2}$ inches (216 mm). The riser height shall be not more than $9\frac{1}{2}$ inches (241 mm).

R311.7.12.2 Handrails of ships ladders. Handrails shall be provided on both sides of ships ladders and shall comply with Sections R311.7.8.2 to R311.7.8.4. Handrail height shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

R311.8 Ramps.

R311.8.1 Maximum slope. Ramps serving the egress door required by Section R311.2 shall have a slope of not more than 1 unit vertical in 12 units horizontal (8.3-percent slope). All other ramps shall have a maximum slope of 1 unit vertical in 8 units horizontal (12.5 percent).

Exception: Where it is technically infeasible to comply because of site constraints, ramps shall have a slope of not more than 1 unit vertical in 8 units horizontal (12.5 percent).

R311.8.2 Landings required. There shall be a floor or landing at the top and bottom of each ramp, where doors open onto ramps, and where ramps change directions. The width of the landing perpendicular to the ramp slope shall be not less than 36 inches (914 mm).

R311.8.3 Handrails required. Handrails shall be provided on not less than one side of ramps exceeding a slope of one unit vertical in 12 units horizontal (8.33-percent slope).

R311.8.3.1 Height. Handrail height, measured above the finished surface of the ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

R311.8.3.2 Grip size. Handrails on ramps shall comply with Section R311.7.8.3.

R311.8.3.3 Continuity. Handrails where required on ramps shall be continuous for the full length of the ramp. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than $1\frac{1}{2}$ inches (38 mm) between the wall and the handrails.

SECTION R312

GUARDS AND WINDOW FALL PROTECTION

R312.1 Guards. *Guards* shall be provided in accordance with Sections R312.1.1 through R312.1.4.

R312.1.1 Where required. *Guards* shall be located along open-sided walking surfaces, including stairs, ramps and

landings, that are located more than 30 inches (762 mm) measured vertically to the floor or *grade* below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a *guard*.

R312.1.2 Height. Required *guards* at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches (914 mm) in height as measured vertically above the adjacent walking surface or the line connecting the leading edges of the treads.

Exceptions:

1. *Guards* on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
2. Where the top of the *guard* serves as a handrail on the open sides of stairs, the top of the *guard* shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) as measured vertically from a line connecting the leading edges of the treads.

R312.1.3 Opening limitations. Required *guards* shall not have openings from the walking surface to the required *guard* height that allow passage of a sphere 4 inches (102 mm) in diameter.

Exceptions:

1. The triangular openings at the open side of stair, formed by the riser, tread and bottom rail of a *guard*, shall not allow passage of a sphere 6 inches (153 mm) in diameter.
2. *Guards* on the open side of stairs shall not have openings that allow passage of a sphere $4\frac{3}{8}$ inches (111 mm) in diameter.

R312.1.4 Exterior plastic composite guards. Plastic composite exterior *guards* shall comply with the requirements of Section R317.4.

R312.2 Window fall protection. Window fall protection shall be provided in accordance with Sections R312.2.1 and R312.2.2.

R312.2.1 Window sills. In dwelling units, where the top of the sill of an operable window opening is located less than 24 inches (610 mm) above the finished floor and greater than 72 inches (1829 mm) above the finished *grade* or other surface below on the exterior of the building, the operable window shall comply with one of the following:

1. Operable windows with openings that will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening where the opening is in its largest opened position.
2. Operable windows that are provided with window fall prevention devices that comply with ASTM F2090.
3. Operable windows that are provided with window opening control devices that comply with Section R312.2.2.

R312.2.2 Window opening control devices. Window opening control devices shall comply with ASTM F2090.

ARTICLE V.

The requirements for Class E buildings are given in Article X.

Class F shall be divided into the following sub-classes and shall include the following:

Sub-Class F-1.—All multiple dwellings, for three (3) or more families and all hotels, lodging or rooming houses, dormitories, monasteries, convents, boarding schools, club houses (providing sleeping rooms), and similar buildings containing more than ten (10) sleeping rooms. For the purpose of this classification, sleeping rooms of more than one hundred sixty (160) square feet will be regarded as two or more rooms, each eighty (80) square feet or fraction thereof being considered one room.

Sub-Class F-2.—All hospitals, sanitariums, and medical institutions providing more than ten (10) sleeping rooms as defined above.

Sub-Class F-3.—All prisons, reformatories, jails, asylums, and other places of detention for human beings.

The requirements for Class F buildings are given in Article XI.

Class G shall include all single or two family dwellings and all lodging or rooming houses, dormitories, monasteries, convents and other similar buildings providing not more than ten (10) sleeping rooms as defined under Class F, also all sheds and outhouses other than garages attached to or pertaining to the above buildings.

The requirements for Class G buildings are given in Article XII.

All buildings shall be constructed of one or more of the types of construction particularly mentioned and specified under Section 1 of the article governing this class of occupancy.

Miscellaneous structures such as open shelter sheds, radio towers, grandstands, roller coasters, tents and other amusement devices shall be constructed as required in Article XIII.

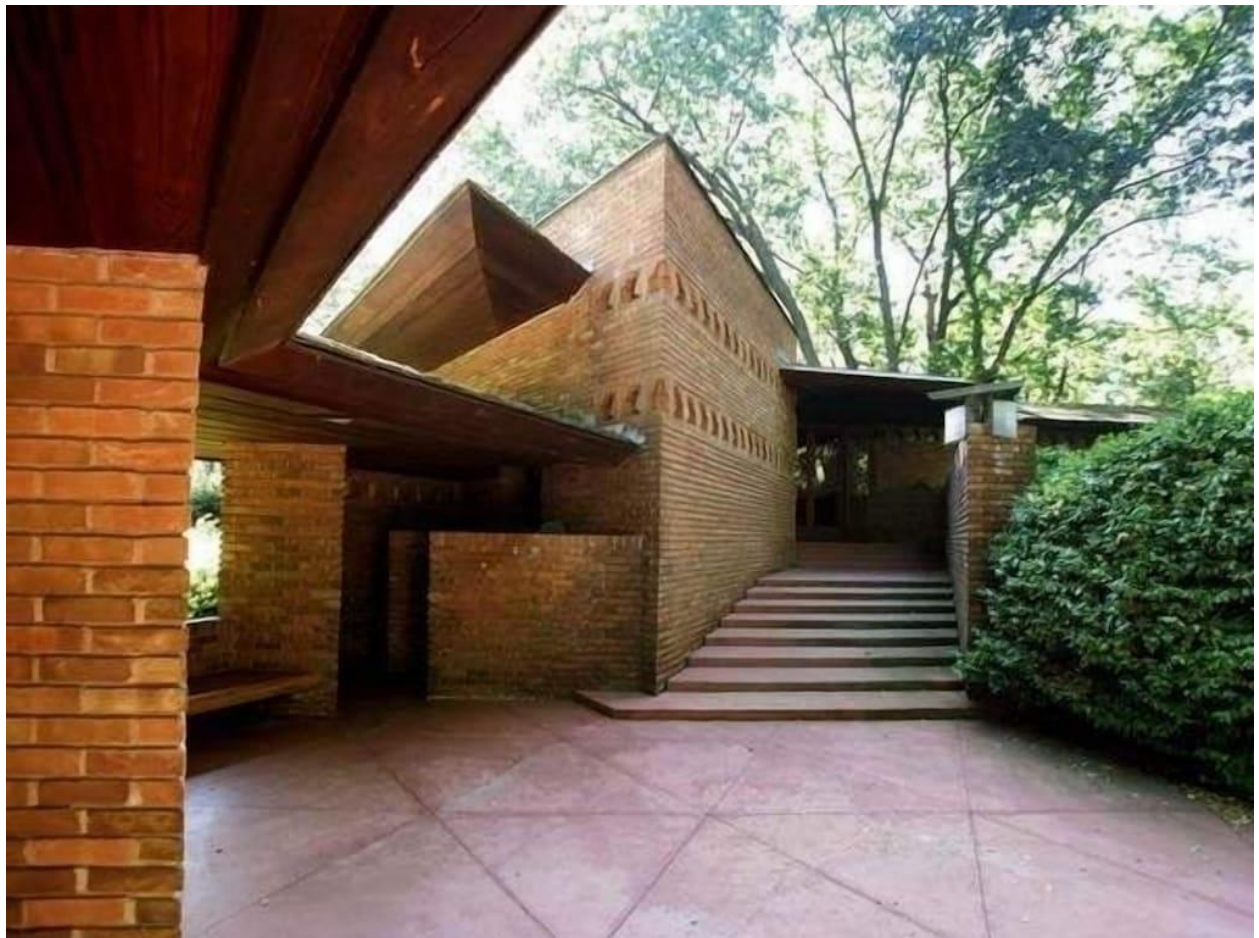
Section 2.—Mixed Occupancies.—Wherever two or more classes of occupancy are present in one building, the building shall be constructed as specified in Section 2 of the article relating to the first of the two classes. Whenever two classes of occupancy are allowed to be mixed without fire separation, the more restrictive requirements of either class shall be required throughout the buildings in the absence of any stipulation to the contrary, but where two occupancies are required to be separated by a fire separation, the restrictions of each class of occupancy shall apply to that section only.

All fire separation shall be as specified in Specification No. 37.

Section 3.—Stair and Exit Requirements for each class of occupancy shall be as given in Section 3 of the article governing that class of occupancy. The following general rules shall govern in all cases:

All stairways shall be three (3) feet six (6) inches wide between centers of hand rails except where otherwise noted. Hand rails shall be provided on both sides of all stairs except those in Class G buildings.

ARTICLE V.

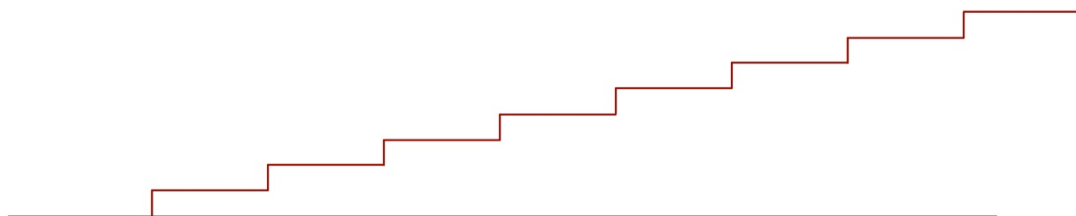


Date: 28 JUNE 2022

Subject: 227 Orchard Hills Drive / Appeal (CR09-0149)

Background: The house at 227 Orchard Hills Drive, known as the Palmer House, was designed by Frank Lloyd Wright and is listed on the National Register of Historic Places. The Palmer House, which is 70 years old, is in its original condition, without any modifications to the structure or the design. I purchased the Palmer House in 2009 from the Palmer family and I view myself not as an owner, but rather the steward of the Palmer House. In this capacity, I promised the Palmer family and I made an agreement with the Frank Lloyd Wright Building Conservancy (which owns an easement on the house) that I would never modify the structure of the Palmer House.

Front Entrance: The front entrance of the Palmer House has a lower series of eight 4" risers (half the height of a normal step) with 18" treads (twice the depth of a normal step), a landing, and an upper series of four 4" risers (half the height of a normal step) with 18" treads (twice the depth of a normal step). The lower series rises roughly 30" over a horizontal distance of 10 feet, while a normal staircase that rises the same amount would use only 2 feet.

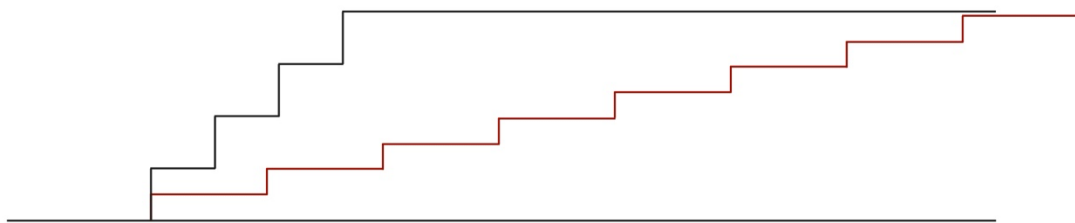


This is the FLW Palmer House,
with eight 4" risers and 18" treads.

1. Irreversible Damage. The Rental Housing Services of Ann Arbor has asked us to modify the structure and the design of the Palmer House and install a 12-foot handrail on the lower series and a 6-foot handrail on the upper series. The installation of these handrails would

require the drilling of holes, either in the original bricks or the original concrete. The holes, which would cause irreversible damage to the structure of the house, would be the first modification to the bricks or the concrete since the building of the house under the direction of Frank Lloyd Wright. Even if the handrail was later removed, the damage to the structure would remain. The Palmer House would no longer be considered “untouched” and the value of the Palmer House would be diminished.

2. Significantly Safer than a Normal Staircase. The Rental Housing Ordinance of Ann Arbor goes to great lengths to specify the maximum rise and minimum tread of a staircase because these dimensions are critical to the safety of a staircase. Tall risers increase the chance that a pedestrian trips on a stair, and shallow treads reduce the chance that a pedestrian regains their balance. As detailed above, the 4” risers are exactly half the height of a normal step, which makes them safer because they reduce the chance that a pedestrian trips on the riser. And the 18” treads are exactly twice the depth of a normal step, which makes them safer because they increase the chance that a pedestrian regains their balance. Together, the short risers and deep treads combine to make the front entrance significantly safer than a normal staircase.

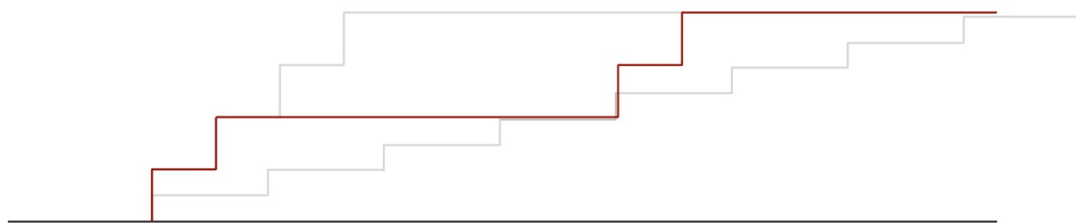


This is a normal staircase and the FLW Palmer House, rising the same height, but over drastically different distances.

3. Unfair Burden. The lower series of the front entrance at the Palmer House rises roughly 30” in height across 10 feet of horizontal distance. A normal staircase that rises roughly 30” in height would need only 2 feet of horizontal distance. This enormous difference in horizontal distance (10 feet vs. 2 feet) creates an unfair burden. Rental Housing Services would require

a handrail of approximately 3 feet for the normal staircase, but has asked us to install a handrail of approximately 12 feet for the front entrance at the Palmer House. In most scenarios, when something is safer, it would require less of a regulatory burden. In our scenario, however, Rental Housing Services is asking us to install a handrail that is more than 4x longer than the handrail of a normal staircase, despite the clear fact that the front entrance of the Palmer House is safer than a normal staircase. The 12-foot handrail, which Rental Housing Services requires to be continuous, will likely need at least 5 holes drilled into the bricks or 7 holes drilled into the concrete, while a normal staircase would need only 2 holes. As mentioned above, these holes are irreversible damage to a home preserved for the last 70 years without any modifications. For this reason, the requirement of a handrail is an unfair burden.

4. Safer than Equivalent Staircase that does not require Handrails. Because the eight 4" risers extend 10 feet to rise only 30", they can be easily reconfigured into an equivalent design with four 8" risers interrupted by a five foot landing, as shown below.

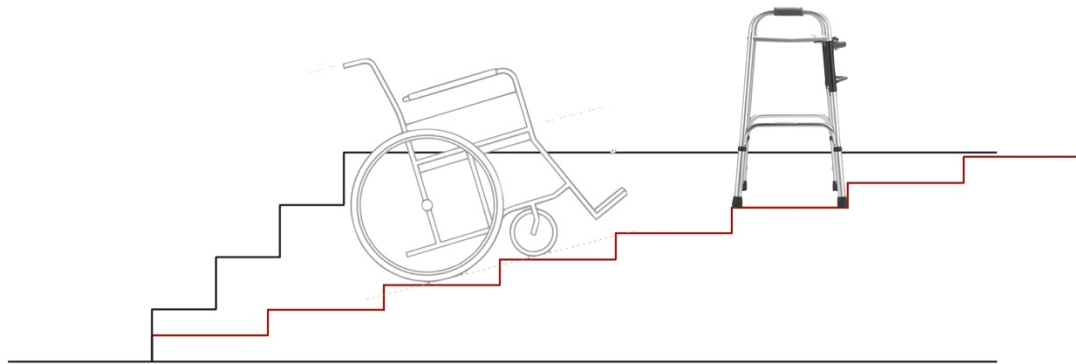


This is an alternative staircase, with four 8" risers, interrupted by a five foot landing. The landing, under the housing rules, eliminates the safety requirement for a handrail.

Because both sets only have two steps each and because they are "interrupted" by the landing, this equivalent design would not require a handrail under the Rental Housing Ordinance. They would not require a handrail, because Rental Housing Services deem this equivalent design to be safe. Returning to the previous argument, the front entrance of the Palmer House is safer than this equivalent design because the risers are shorter and the

treads are deeper. Because the front entrance of the Palmer House is safer than an equivalent staircase that does not require handrails, I believe that the front entrance of the Palmer House should not require a handrail.

5. More Accessible. While Rental Housing Services has indicated that accessibility is not a goal of the Rental Housing Ordinances, the front entrance of the Palmer House is significantly more accessible to more people. The 4" risers are so short that they safely accommodate all four wheels of a wheelchair and the 18" treads are so deep that they safely accommodate all four legs of a walker. I believe that a design that is safer for more people, is a safer design.



In addition to being more safe, the 4" risers and the 18" treads make the Palmer House significantly more accessible to more people, as they accommodate both a wheelchair and a walker.

6. Willingness to take other Precautions to ensure Safety. I take not just the design of the Palmer House seriously, but also the safety of our guests. Although none of our 5,000 guests have ever fallen over the last 13 years, I would be willing to warn our prospective guests of the omission of a handrail on our Airbnb and VRBO listings. Alternatively or additionally, I would be willing to keep a walker in the garage closet (next to the front entrance) which can — in effect — provide a handrail for not just one, but both hands of our guests.



Conclusion: The front entrance, because of the short risers and deep treads, is significantly safer than a normal staircase. Despite being safer, Rental Housing Services is requiring the installation of a handrail that is more than 4x longer than the handrail required for a normal staircase. This 12-foot handrail will require 5-7 holes to be drilled into the concrete or brick (as opposed to the 2 holes for a normal handrail) and these holes will create an irreversible damage to the otherwise original condition of this home designed by Frank Lloyd Wright and is listed on the National Register of Historic Places. For this reason, the requirement of a handrail is an unfair burden. This burden is completely unnecessary, as the front entrance is safer than an equivalent staircase that Rental Housing Services admits would not require a handrail. For these reasons, I request a variance on the requirement of a handrail on the lower and upper series of 4" risers in the front entrance of the Palmer House.

Respectfully Submitted

Jeffrey Schox

ANN ARBOR HOUSING BOARD OF APPEALS

STAFF REPORT

Meeting Date: June 14, 2022

Type of Request: VARIANCE

Housing Board of Appeals Request **HBA22-2001** at 227 Orchard Hills Dr, ANN ARBOR, MI 48104.

(Parcel Identification Number: **09-09-27-301-066**)

DESCRIPTION AND DISCUSSION

Property Owners Name and Address:

Jeffrey Michael Schox
88 Montcalm St
San Francisco, CA, 94110

Gary Cox (agent)
10850 Fellows Hill Dr
Plymouth, MI 48170

BACKGROUND

The single-family dwelling located at 227 Orchard Hills Dr was built in 1955 and appears to be original construction.

The owner of the property requests one variance:

(1) Handrail for exit stairway

Variance from section 8:504(4)(b)5

(4) *Fire exits.*

(b) *Exit stairways.*

5. A handrail shall be located 30 to 38 inches above the nosing of the treads

8:500 definitions

(27) *Stairway:* One or more flights of stairs, and the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from 1 floor or level to another. For purposes of this chapter, a flight of stairs shall have at least 4 risers.

Standards for Approval:

1. *Practical difficulties or unnecessary hardship;*
2. *The variance does not violate the intent of this chapter; and*
3. *The variance does not jeopardize public health and safety.*

STAFF RECOMMENDATION

- Staff is unable to support granting of this variance. The housing code requires a handrail at all flights of stairs with 4 or more risers. This is similar to the current building code requirements found in the 2015 Michigan Residential Code and previous versions. Each stair within the flight of stairs in question are half the rise (4" riser) and twice as deep (18" treads) as allowable. The low slope of the stairs does not constitute omission of the required handrail. The 2015 Michigan residential Code requires a handrail on ramps exceeding a slope of one unit vertical and 12 units horizontal (8.33 percent). The slope of this flight of stairs is 25 percent, 3 times as steep as a ramp requiring a handrail. While accessibility is not required in single family homes, it would be unreasonable to expect a person with a wheel chair or walker to climb stairs as suggested in the owner's appeal. The code at the time of construction (Official Building Code of Ann Arbor-1929 Council Proceedings) is ambiguous and can be interpreted to require no handrail, or a handrail on one side. It is the cities interpretation that the intent was to require a handrail on one side. This is ultimately not relevant since the housing code is applicable to all dwellings without regard to whether they were constructed before or after the effective date (8:501 application of chapter).

PROPOSED MOTION

APPEAL GRANTED

That in Case BBA22-2001, **the appeal of the Building Official's decision** that the rental unit at 227 Orchard Hills Dr **not get** relief from section 8:502, and the Housing Board of Appeals **REVERSES** the Building Official's decision for the reason(s) that *[state reason in motion]*:

- ☐ (1) Practical difficulties or undue hardship
- ☐ (2) The variance does not violate the intent of section 8:502 of the Ann Arbor Housing Code
- ☐ (3) The variance does not jeopardize public health and safety.

Stipulations – If Applicable:

[Chairman to check box(es) following vote]

OR

APPEAL DENIED

That in Case HBA22-2001 **the appeal of the Building Official's decision** that the rental unit at 227 Orchard Hills Dr is **DENIED** and the Housing Board of Appeals **AFFIRMS** the Building Official's decision for the reason(s) that *[state reason in motion]*:

- ☐ (1) Practical difficulties or undue hardship do not exist.
- ☐ (2) The variance would violate the intent of section 8:502 of the Ann Arbor Housing Code;
- ☐ (3) The variance would jeopardize public health and safety.

Stipulations – if Applicable:

[Chairman to check applicable box(es) following vote]

Yeas:

Nays:

Absent for this vote:

Date

R311.7.8 Handrails. Handrails shall be provided on not less than one side of each continuous run of treads or flight with four or more risers.

R311.7.8.1 Height. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

Exceptions:

1. The use of a volute, turnout or starting easing shall be allowed over the lowest tread.
2. Where handrail fittings or bendings are used to provide continuous transition between flights, transitions at winder treads, the transition from handrail to *guard*, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed 38 inches (956 mm).

R311.7.8.2 Continuity. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1½ inches (38 mm) between the wall and the handrails.

Exceptions:

1. Handrails shall be permitted to be interrupted by a newel post at the turn.
2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.

R311.7.8.3 Grip-size. Required handrails shall be of one of the following types or provide equivalent graspability.

1. Type I. Handrails with a circular cross section shall have an outside diameter of not less than 1¼ inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter dimension of not less than 4 inches (102 mm) and not greater than 6¼ inches (160 mm) with a cross section of dimension of not more than 2¼ inches (57 mm). Edges shall have a radius of not less than 0.01 inch (0.25 mm).
2. Type II. Handrails with a perimeter greater than 6¼ inches (160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of ¾ inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of not less than 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for not less than 3/8 inch (10 mm) to a level that is not less than 1¾ inches (45 mm) below the tallest portion of the profile. The width of the handrail above the recess shall be not less than 1¼ inches (32 mm) and not more than 2¼ inches (57 mm).

inches (70 mm). Edges shall have a radius of not less than 0.01 inch (0.25 mm).

R311.7.8.4 Exterior plastic composite handrails. Plastic composite exterior handrails shall comply with the requirements of Section R507.3.

R311.7.9 Illumination. Stairways shall be provided with illumination in accordance with Section R303.7.

R311.7.10 Special stairways. Spiral stairways and bulkhead enclosure stairways shall comply with the requirements of Section R311.7 except as specified in Sections R311.7.10.1 and R311.7.10.2.

R311.7.10.1 Spiral stairways. Spiral stairways are permitted, provided that the clear width at and below the handrail is not less than 26 inches (660 mm) and the walkline radius is not greater than 24½ inches (622 mm). Each tread shall have a depth of not less than 6¼ inches (171 mm) at the walkline. All treads shall be identical, and the rise shall be not more than 9½ inches (241 mm). Headroom shall be not less than 6 feet 6 inches (1982 mm).

R311.7.10.2 Bulkhead enclosure stairways. Stairways serving bulkhead enclosures, not part of the required building egress, providing access from the outside *grade* level to the *basement* shall be exempt from the requirements of Sections R311.3 and R311.7 where the height from the *basement* finished floor level to *grade* adjacent to the stairway is not more than 8 feet (2438 mm) and the *grade* level opening to the stairway is covered by a bulkhead enclosure with hinged doors or other *approved* means.

R311.7.11 Alternating tread devices. Alternating tread devices shall not be used as an element of a means of egress. Alternating tread devices shall be permitted provided that the required means of egress stairway or ramp serves the same space at each adjoining level or where a means of egress is not required. The clear width at and below the handrails shall be not less than 20 inches (508 mm).

R311.7.11.1 Treads of alternating tread devices. Alternating tread devices shall have a tread depth of not less than 5 inches (127 mm), a projected tread depth of not less than 8½ inches (216 mm), a tread width of not less than 7 inches (178 mm) and a riser height of not more than 9½ inches (241 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projections of adjacent treads. The riser height shall be measured vertically between the leading edges of adjacent treads. The riser height and tread depth provided shall result in an angle of ascent from the horizontal of between 50 and 70 degrees (0.87 and 1.22 rad). The initial tread of the device shall begin at the same elevation as the platform, landing or floor surface.

R311.7.11.2 Handrails of alternating tread devices. Handrails shall be provided on both sides of alternating tread devices and shall comply with Sections R311.7.8.2 to R311.7.8.4. Handrail height shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

R311.7.12 Ships ladders. Ships ladders shall not be used as an element of a means of egress. Ships ladders shall be permitted provided that a required means of egress stairway or ramp serves the same space at each adjoining level or where a means of egress is not required. The clear width at and below the handrails shall be not less than 20 inches.

R311.7.12.1 Treads of ships ladders. Treads shall have a depth of not less than 5 inches (127 mm). The tread shall be projected such that the total of the tread depth plus the nosing projection is not less than 8½ inches (216 mm). The riser height shall be not more than 9½ inches (241 mm).

R311.7.12.2 Handrails of ships ladders. Handrails shall be provided on both sides of ships ladders and shall comply with Sections R311.7.8.2 to R311.7.8.4. Handrail height shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

R311.8 Ramps.

R311.8.1 Maximum slope. Ramps serving the egress door required by Section R311.2 shall have a slope of not more than 1 unit vertical in 12 units horizontal (8.3-percent slope). All other ramps shall have a maximum slope of 1 unit vertical in 8 units horizontal (12.5 percent).

Exception: Where it is technically infeasible to comply because of site constraints, ramps shall have a slope of not more than 1 unit vertical in 8 units horizontal (12.5 percent).

R311.8.2 Landings required. There shall be a floor or landing at the top and bottom of each ramp, where doors open onto ramps, and where ramps change directions. The width of the landing perpendicular to the ramp slope shall be not less than 36 inches (914 mm).

R311.8.3 Handrails required. Handrails shall be provided on not less than one side of ramps exceeding a slope of one unit vertical in 12 units horizontal (8.33-percent slope).

R311.8.3.1 Height. Handrail height, measured above the finished surface of the ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

R311.8.3.2 Grip size. Handrails on ramps shall comply with Section R311.7.8.3.

R311.8.3.3 Continuity. Handrails where required on ramps shall be continuous for the full length of the ramp. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1½ inches (38 mm) between the wall and the handrails.

SECTION R312

GUARDS AND WINDOW FALL PROTECTION

R312.1 Guards. *Guards* shall be provided in accordance with Sections R312.1.1 through R312.1.4.

R312.1.1 Where required. *Guards* shall be located along open-sided walking surfaces, including stairs, ramps and

landings, that are located more than 30 inches (762 mm) measured vertically to the floor or *grade* below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a *guard*.

R312.1.2 Height. Required *guards* at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches (914 mm) in height as measured vertically above the adjacent walking surface or the line connecting the leading edges of the treads.

Exceptions:

1. *Guards* on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
2. Where the top of the *guard* serves as a handrail on the open sides of stairs, the top of the *guard* shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) as measured vertically from a line connecting the leading edges of the treads.

R312.1.3 Opening limitations. Required *guards* shall not have openings from the walking surface to the required *guard* height that allow passage of a sphere 4 inches (102 mm) in diameter.

Exceptions:

1. The triangular openings at the open side of stair, formed by the riser, tread and bottom rail of a *guard*, shall not allow passage of a sphere 6 inches (153 mm) in diameter.
2. *Guards* on the open side of stairs shall not have openings that allow passage of a sphere 4⅜ inches (111 mm) in diameter.

R312.1.4 Exterior plastic composite guards. Plastic composite exterior *guards* shall comply with the requirements of Section R317.4.

R312.2 Window fall protection. Window fall protection shall be provided in accordance with Sections R312.2.1 and R312.2.2.

R312.2.1 Window sills. In dwelling units, where the top of the sill of an operable window opening is located less than 24 inches (610 mm) above the finished floor and greater than 72 inches (1829 mm) above the finished *grade* or other surface below on the exterior of the building, the operable window shall comply with one of the following:

1. Operable windows with openings that will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening where the opening is in its largest opened position.
2. Operable windows that are provided with window fall prevention devices that comply with ASTM F2090.
3. Operable windows that are provided with window opening control devices that comply with Section R312.2.2.

R312.2.2 Window opening control devices. Window opening control devices shall comply with ASTM F2090.

ARTICLE V.

The requirements for Class E buildings are given in Article X.

Class F shall be divided into the following sub-classes and shall include the following:

Sub-Class F-1.—All multiple dwellings, for three (3) or more families and all hotels, lodging or rooming houses, dormitories, monasteries, convents, boarding schools, club houses (providing sleeping rooms), and similar buildings containing more than ten (10) sleeping rooms. For the purpose of this classification, sleeping rooms of more than one hundred sixty (160) square feet will be regarded as two or more rooms, each eighty (80) square feet or fraction thereof being considered one room.

Sub-Class F-2.—All hospitals, sanitariums, and medical institutions providing more than ten (10) sleeping rooms as defined above.

Sub-Class F-3.—All prisons, reformatories, jails, asylums, and other places of detention for human beings.

The requirements for Class F buildings are given in Article XI.

Class G shall include all single or two family dwellings and all lodging or rooming houses, dormitories, monasteries, convents and other similar buildings providing not more than ten (10) sleeping rooms as defined under Class F, also all sheds and outhouses other than garages attached to or pertaining to the above buildings.

The requirements for Class G buildings are given in Article XII.

All buildings shall be constructed of one or more of the types of construction particularly mentioned and specified under Section 1 of the article governing this class of occupancy.

Miscellaneous structures such as open shelter sheds, radio towers, grandstands, roller coasters, tents and other amusement devices shall be constructed as required in Article XIII.

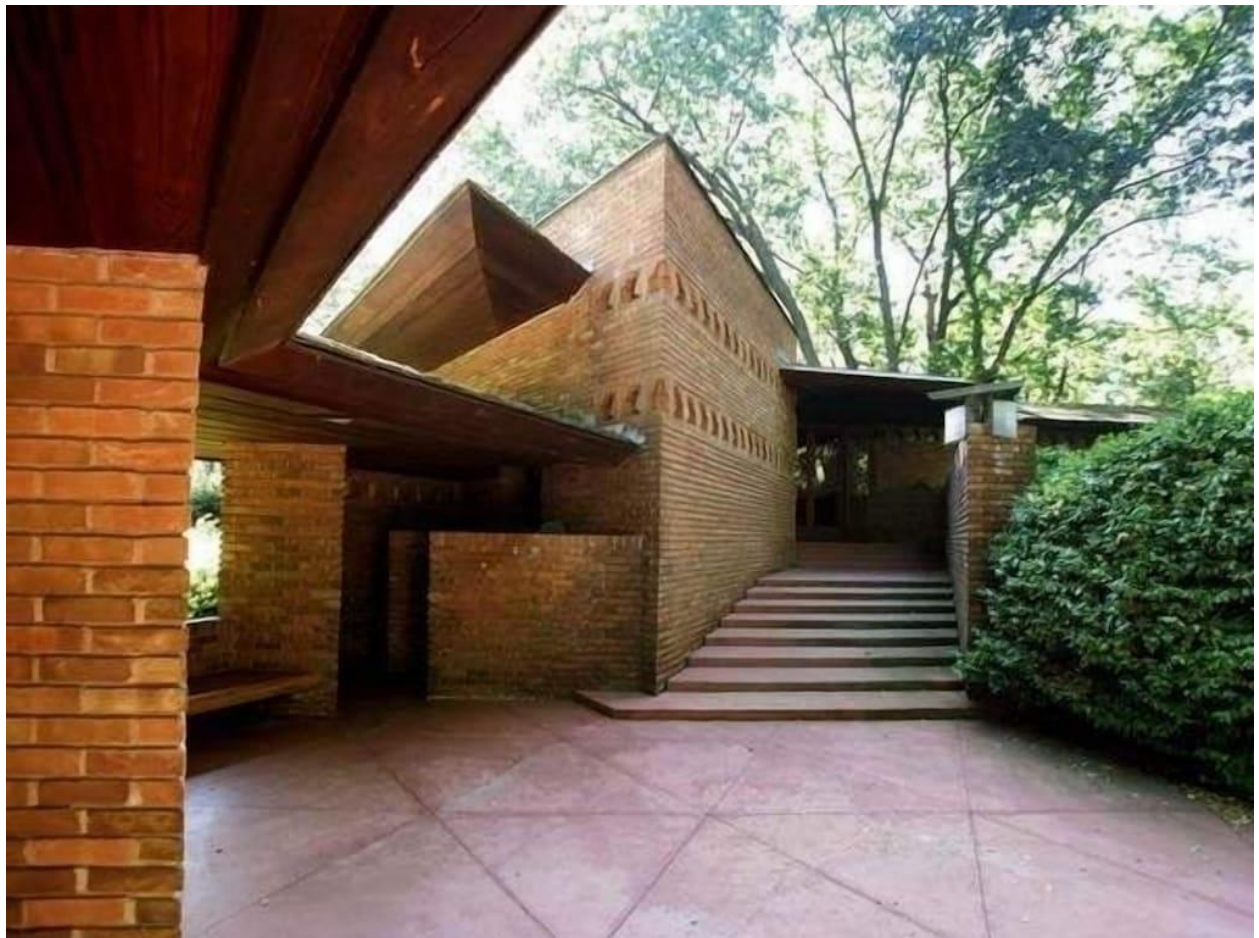
Section 2.—Mixed Occupancies.—Wherever two or more classes of occupancy are present in one building, the building shall be constructed as specified in Section 2 of the article relating to the first of the two classes. Whenever two classes of occupancy are allowed to be mixed without fire separation, the more restrictive requirements of either class shall be required throughout the buildings in the absence of any stipulation to the contrary, but where two occupancies are required to be separated by a fire separation, the restrictions of each class of occupancy shall apply to that section only.

All fire separation shall be as specified in Specification No. 37.

Section 3.—Stair and Exit Requirements for each class of occupancy shall be as given in Section 3 of the article governing that class of occupancy. The following general rules shall govern in all cases:

All stairways shall be three (3) feet six (6) inches wide between centers of hand rails except where otherwise noted. Hand rails shall be provided on both sides of all stairs except those in Class G buildings.

ARTICLE V.





PLAN SNAPSHOT REPORT HBA22-2001 FOR THE CITY OF ANN ARBOR

Plan Type: Housing Board of Appeals	Project:	App Date: 05/15/2022
Work Class: Variance	District: Ward 2	Exp Date: NOT AVAILABLE
Status: Submitted - Online	Square Feet: 0.00	Completed: NOT COMPLETED
Valuation: \$0.00	Assigned To: MacFarland, Chris	Approval Expire Date:
Description: We are proposing a variance (in the form of a waiver of a requirement) that allows us to proceed without the installation of a handrail.		

Parcel: 09-09-27-301-066	Main	Address: 227 Orchard Hills Dr Ann Arbor, MI 48104	Main	Zone: R1B(R1B)
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Owner/Agent	Applicant
Gary Cox	Jeffrey M Schox
Home: (734) 414-0811	227 Orchard Hills
Business: (734) 414-0811	Ann Arbor, MI 48104
Mobile: (734) 634-5444	

Plan Custom Fields

HBADetailedDescription We are proposing a variance (in the form of a waiver of a requirement) that allows us to proceed without the installation of a handrail.

HBAAretherehardships Yes. As detailed in the attachment, I have made a promise to the Palmer family and signed an easement with the Frank Lloyd Wright Building Conservancy that I would never modify the structure of the Palmer House in any way.

HBAAretheHardships M Yes. As detailed in the attachment, the Palmer House has an extreme dedication to simple and uninterrupted lines. More than 5,000 people have paid to stay at the Palmer House and some of these people traveled from afar (e.g., Japan and Australia) just for the design. Part of the appeal is that the Palmer House, which is 70 years old, is in its original condition. Any modification to the Frank Lloyd Wright design could lessen the value and appeal of the Palmer House.

HBAWhatEffectMemo Granting the variance will not have any effect on the neighboring properties.

HBAWhatphysicalChar As detailed in the attachment, we believe that our front entrance with 4" risers and 18" treads satisfies the intent of the housing code: to be a safe entrance and exit for all people. We believe that the current Ann Arbor housing code does not contemplate risers this short and treads this deep, and that our front entrance without a handrail is safe without a handrail. In fact, we believe that the front entrance is safer and more accessible than a normal staircase with a handrail.

HBAIstheconditionMem The front entrance was designed by Frank Lloyd Wright and approved through appropriate permits from the City of Ann Arbor.

Historic District None

Floodplain No

PLAN SNAPSHOT REPORT (HBA22-2001)

Attachment File Name	Added On	Added By	Attachment Group	Notes
FLWPH appeal memo.pdf	05/15/2022 17:11	Schox, Jeffrey	Available Online	Supporting Materials/Plans
FLWPH appeal photo riser (photo by Peter Held).jpg	05/15/2022 17:11	Schox, Jeffrey	Available Online	Photos of Property
FLWPH appeal photo tread (photo by Peter Held).jpg	05/15/2022 17:11	Schox, Jeffrey	Available Online	Photos of Property
Signature_Jeffrey_Schox_5/15/2022.jpg	05/15/2022 17:11	Schox, Jeffrey		Uploaded via CSS
PDF Staff Report HBA22-2001 227 Orchard Hills Dr. .pdf	06/07/2022 9:59	MacFarland, Chris		PDF staff report
Staff Report HBA22-2001 227 Orchard Hills Dr. .docx	06/07/2022 9:59	MacFarland, Chris		Word staff report

Invoice No.	Fee	Fee Amount	Amount Paid
INV-00005971	HBA - Housing Board of Appeals Fee	\$500.00	\$500.00
Total for Invoice INV-00005971		\$500.00	\$500.00
Grand Total for Plan		\$500.00	\$500.00

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Application Completeness Check - Board of Appeals v.1	Approved	05/15/2022	05/16/2022	05/19/2022	No	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Application Completeness Check - Brandi	Community Services	Williams, Debra	Not Required	05/15/2022	05/16/2022	05/19/2022

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Application Completeness Check - Debra	Community Services	Williams, Debra	Approved	05/15/2022	05/16/2022	05/19/2022

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Plan Review [Housing Board of Appeals] v.1	Approved	05/19/2022	06/17/2022	06/07/2022	No	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Housing Board of Appeals Review	Building	MacFarland, Chris	Complete	05/19/2022	06/17/2022	06/07/2022

Comments: Staff report attached

Workflow Step / Action Name	Action Type	Start Date	End Date
Application Completeness Check v.1			05/19/2022 9:23
Application Completeness Check - Board of Appeals v.1	Receive Submittal	05/15/2022 0:00	05/19/2022 9:23
Plan Review v.1			06/07/2022 9:38
Plan Review [Housing Board of Appeals] v.1	Receive Submittal	05/19/2022 0:00	06/07/2022 9:38
Appeals Approval Process v.1			
Board of Appeals Case for Processing v.1	Task	06/07/2022 0:00	
Staff Report Created and Attached v.1	Generic Action		06/07/2022 10:02
Notification to Tenants v.1	Generic Action		
Staff Report Submitted to Legistar v.1	Generic Action		06/07/2022 10:02
Housing Board of Appeals Decision v.1	Generic Action		
Decision Letter Created and Attached v.1	Generic Action		
Minutes Created and Published v.1	Generic Action		

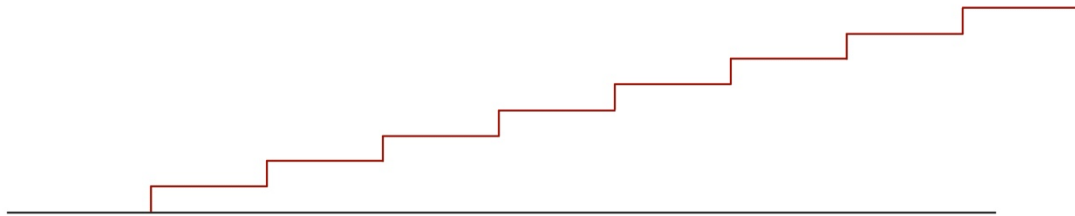
Date: 12 MAY 2022

Subject: 227 Orchard Hills Drive / Appeal (CR09-0149)

Background: The house at 227 Orchard Hills Drive, known as the Palmer House, is — quite literally — a national treasure. The Palmer House was designed by Frank Lloyd Wright, one of the greatest architects in the world and is listed on the National Register of Historic Places. The design of the Palmer House has an extreme dedication to simple and uninterrupted lines; the rooms do not have right angles (not even the beds), the cabinets lack handles, and the mortar of the bricks is flush in the vertical direction and recessed in the horizontal direction to draw strong horizontal lines. It is this strict adherence to a specific design aesthetic that makes both Frank Lloyd Wright and the Palmer House so special.

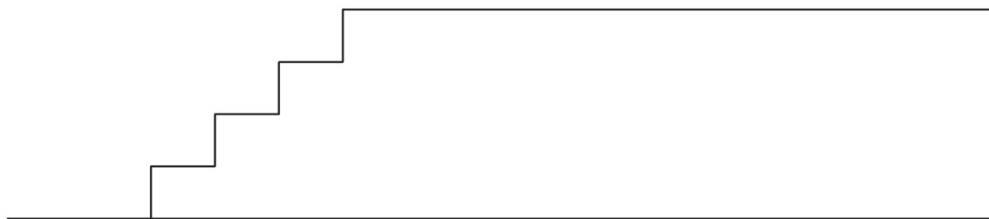
The Palmer House is celebrated as one of the top 20 Frank Lloyd Wright houses of all time, it has been featured in Architectural Digest, featured as the sole subject of two different books, featured in a film with Emily Blunt, and featured on the front page of Airbnb under their new “Design Homes” category. More than 5,000 people have paid to stay at the Palmer House and some of these people traveled from afar (e.g., Japan and Australia) just for the design. Part of the appeal is that the Palmer House, which is 70 years old, is in its original condition, without any modifications to the Frank Lloyd Wright design. I purchased the Palmer House in 2009 from the Palmer family and I view myself not as an owner, but rather the steward of the Palmer House. In this steward capacity, I promised the Palmer family and I made an agreement with the Frank Lloyd Wright Building Conservancy (which owns an easement on the house) that I would never modify the structure of the Palmer House in any way.

Front Entrance: The front entrance of the Palmer House, which was featured in a Chrysler advertisement and is arguably the most important view of the house, has a series of eight 4” risers (half the height of a normal step) with 18” treads (twice the depth of a normal step).



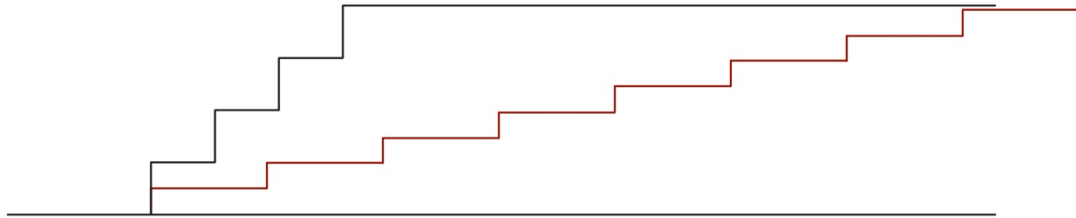
This is the FLW Palmer House,
with eight 4" risers and 18" treads.

The Housing Board has asked us to modify the structure of the Palmer House and install an 11-foot handrail. Adding a handrail of this length would compromise the horizontal lines of the front entrance designed by Frank Lloyd Wright and would break my promise to the Palmer family. I cannot do this. Instead, I hope to persuade you that the current eight risers without a handrail are at least as safe, if not safer, than a normal staircase with a handrail.



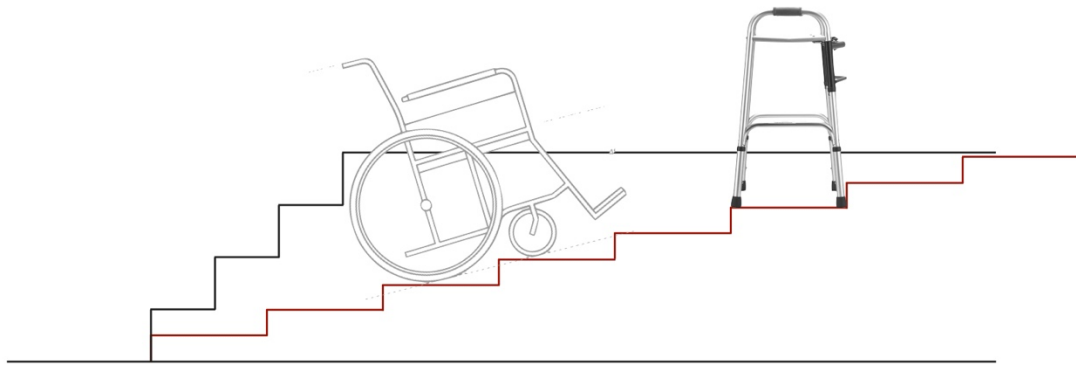
This is a normal staircase,
with four 8" risers and 10" treads.

As mentioned above, the 4" risers are half the height of a normal step and the 18" treads are twice the depth of a normal step. Under previous versions of the Michigan housing code, these risers are so short and the treads so deep that they would not even be considered stairs. The challenge here is that the current Ann Arbor housing code simply does not contemplate risers this short and treads this deep. The front entrance rises roughly 30" over 10 feet, while a normal staircase would use just over 2 feet for the same rise.



This is a normal staircase and the FLW Palmer House, rising the same height, but over drastically different distances.

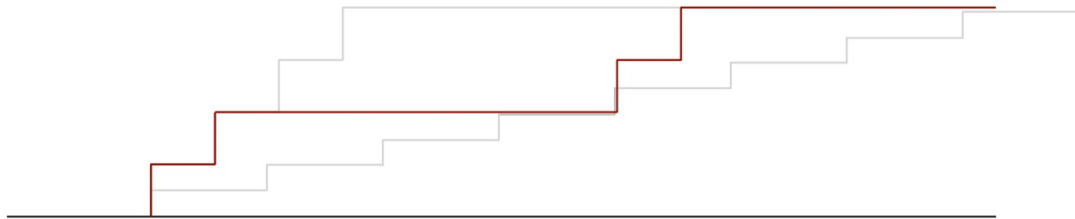
In addition to being safe, the front entrance of the Palmer House is significantly more accessible to more people, as the 4" risers are so short that they safely accommodate all four wheels of a wheelchair and the 18" treads are so deep that they safely accommodate all four legs of a walker. A guest in a wheelchair could *roll themselves* up the front entrance.



In addition to being more safe, the 4" risers and the 18" treads make the Palmer House significantly more accessible to more people, as they accommodate both a wheelchair and a walker.

A normal staircase cannot safely accommodate either a wheelchair or a walker. Because it is at least as safe, if not safer, and certainly more accessible than a normal staircase, I ask for a variance on the requirement for a handrail.

Alternative Design: If the request for a variance is not approved, we would likely seek a permit to extend the height of the risers to create four 8" risers interrupted by a five foot landing, as shown below.



This is an alternative staircase, with four 8" risers, interrupted by a five foot landing. The landing, under the housing rules, eliminates the safety requirement for a handrail.

Both the first set of two steps and the second set of two steps would not be “continuous and uninterrupted”. Because both sets only have two steps each, this alternative design would not require a handrail under Michigan housing rules. I do not want to pursue this alternative design (because it is both expensive and clearly less accessible), but the alternative design would not compromise the horizontal lines of the front entrance and would not require any modification to the structure, thus keeping my promise to the Palmer family.

I take not just the design of the Palmer House seriously, but also the safety of our guests. Although none of our 5,000 guests have ever fallen, I would be willing to warn our prospective guests of the omission of a handrail on our Airbnb and VRBO listings. Alternatively or additionally, I would be willing to keep a walker in the garage closet (next to the front entrance) which can — in effect — provide a handrail for not just one, but both hands of our guests.

Respectfully Submitted

A handwritten signature in black ink, appearing to read 'Jeffrey Schox', with a long horizontal line extending to the left.

Jeffrey Schox



