

Agenda Item 3a
Floor Area Ratio (FAR) Summary Sheet

Current County Floor Area Ratio (FAR) Scheme:

FAR: The ratio of total building floor area to the area of a lot. FAR provisions were part of the first comprehensive County Zoning Code and Shoreland & Floodland Protection Ordinance (SFPO) adopted, respectively, in 1959 and 1970.

- **Method for computation.** Total floor area (square footage of all levels of all structures on a lot (**except basements**)), divided by lot area.

Example: 20,000 sq. ft. lot improved with three buildings

- First floor of home- 1500 square feet
- Second floor of home- 500 square feet
- Attached garage, 400 square feet
- Shed, 100 square feet

Total floor area of all floors = 2,500 square feet

Lot Area = 20,000 square feet

Calculation: Total Floor Area (2,500) divided by lot area (20,000 sq. ft.) =12.5% FAR

- **FAR thresholds**

Each of the conventional SFPO zoning districts has a specified maximum permissible FAR (see table below).

SFPO Summary of FAR requirements

Zoning District Type	FAR (Maximum)
Residential Districts (R-1, R-2, R-3, RRD-5, AD-10, EC)	15%*
Rural & semi-rural districts (i.e. A-5, A-1)	10%*
Business Districts	20-50%*
Industrial Districts	70%*

*Sewered lots achieve a 30% FAR bonus

- **FAR flexibility implemented**
 - Finished basement space was originally counted in FAR calculations, but because of difficulty in enforcement, basement space, including finished living spaces, has not been counted in computing permissible FAR for many years.
 - Sewered lots are allocated 30% more FAR than unsewered lots.

Floor Area Ratio (FAR) Trends and Staff Observations

FAR trends

- Property owners have consistently pursued and been granted FAR variances from the Board of Adjustment (BOA).
 - 49 FAR variances requested (2014-2015 all permit types)
 - Average FAR proposed = 23.8%
 - Average FAR granted = 21.3%
 - Planning Staff analyzed 104 new home permits on 17 lakes over the past decade or so.
 - 71 homes (68%) complied with FAR
 - 33 homes (32%) requested FAR variances, of which, 91% were sub-standard relative to lot area. 5 of the 33 homes were denied FAR variances and 4 of the 5 denials were on substandard lots with lot sizes ranging from 14,000 sq. ft. to 18,000 sq. ft.
- Increasing popularity of larger home sizes & conversion of seasonal use lake cottages to year-round homes have changed consumer expectations. See table below:

Home Size Trends (U.S. Census Bureau and American Planning Association)

Year	Average Home Size (nationally)
1950	983 sq. ft.
1973	1,660 sq. ft.
2010	2,392

Staff Observations

• **Advantages of FAR**

- Has controlled building volume/bulk, to an extent.
- Equitable in that the floor area of multi-story structures is taken into account the same way as a one story building’s floor area.

• **Limitations observed by Staff.**

- Existing FAR limitations for sub-standard lots may not provide for reasonable use of property (see table below). FAR on severely sub-standard lots may not provide enough allowable square footage to achieve minimum required home size (1,100 sq. ft.) or any shed or garage.

Sample Substandard Lot FAR Allowances

Lot Size (sq. ft.)	Total FAR permitted (at 15%)
5,000	750 sq. ft.
6,000	900 sq. ft.
7,000	1,050 sq. ft.
8,000	1,200 sq. ft.

- FAR variances have been granted so frequently that in some areas a new “normal” has emerged.
- FAR relief has varied over time and permitted square footage has been inconsistent.

- FAR only controls volume/bulk of buildings to an extent. While the area of useable space is limited, overall building height is not influenced by FAR. The increasing popularity of vaulted ceilings, higher rooflines, taller stories (9’ or 10’ rather than 8’) and exposed/finished basements have caused FAR to be less relevant in controlling bulk.
- Some petitioners have expressed frustration that they have potentially useable space within a legally constructed building that cannot be finished because the regulations cap overall floor area.
- Permissive height allowances and exclusion of “counting” exposed basements and attic spaces have negated, to an extent, the effectiveness of FAR in controlling overall bulk.

Accessory Floor Area Ratio (AFAR) Summary Sheet

The SFPO also limits the total amount of accessory building floor area (all levels of outbuildings) that can be located on a lot to 3% of a lot’s area. Examples of buildings that must be counted include sheds, detached garages and boathouses.

Example: 20,000 sq. ft. lot with a detached garage and shed.

Detached garage= 450 sq. ft.

Shed= 100 sq. ft.

Total Accessory Building Area= 550 sq. ft.

Calculation: Total Accessory Building Area (550) divided by lot area (20,000 sq. ft.) =2.8% AFAR

Staff Observations

- **Advantages of AFAR**

- Has controlled accessory building volume/bulk, to an extent.
- Reduces architectural incompatibility.
- Equitable in that the floor area of multi-story structures is taken into account the same way as a one story building’s floor area.
- Large permitted building sizes on large lots may lead to illegal commercial uses.

- **Limitations observed by Staff.**

- Topography may not lend itself to attached garages.
- AFAR may not provide for a reasonably sized shed or garage.

Sample Lot AFAR Allowances

Lot Size (sq. ft.)	Total AFAR permitted (at 3%)
5,000	150 sq. ft.
10,000	300 sq. ft.
15,000	450 sq. ft.

Once the Shoreland Zoning Advisory Committee makes a recommendation on the building bulk/lot coverage regulatory option for all buildings, Staff will propose options for regulating the building bulk/lot coverage of accessory buildings.

Agenda Item 3b
Open Space Summary Sheet

Current County Open Space Scheme:

Open Space: The area of a lot that is devoid of buildings or enclosed or covered structures (i.e. covered porches).

Example: 20,000 sq. ft. lot with house and garage

House footprint = 1,500 sq. ft.

Garage footprint= 500 sq. ft.

Total building coverage= 2,000 sq. ft.

Calculation: 20,000 sq. ft. minus 2,000 sq. ft. = 18,000 square feet Open Space.

- **Origins to original Zoning Code.** Open Space provisions were part of the first comprehensive County Zoning Code and SFPO.
- **Open Space Thresholds.** Each zoning district has a stated amount of open space required. See table below:

Sample Open Space Limits

Zoning District	Minimum Open Space Required	Minimum Lot Size
R-3	15,000 sq. ft.	20,000 sq. ft.
R-2	25,000 sq. ft.	30,000 sq. ft.
R-1	30,000 sq. ft.	1 acre
A-2	2 acres	3 acres
A-3	75,000 sq. ft.	2 acres
A-5	4 acres	5 acres
A-1	1 acre	3 acres
B-1, B-2, B-3	15,000	30,000 sq. ft.
M-1, M-2	None	1 acre

*Sewered lots achieve 30% relief

Open Space Trends

- In 2014 and 2015, 47 individuals (second most of any variance type) sought relief from Open Space provisions. Most often, open space relief requests are affiliated with other relief (FAR, offsets, etc.).

Open Space flexibility implemented

- Sewered lots are allocated 30% more FAR than unsewered lots.

Advantage of Open Space

- Controls lot coverage.

Limitations observed by Staff.

- Current “whole number” open space requirements do not accommodate existing sub-standard lots. For example, an existing 14,000 square foot lot cannot comply with the required 15,000 square feet of open space required in the R-3 District.
- Other existing ordinance mechanisms generally control lot coverage in a more restrictive manner.

Agenda Item 3c
Alternate Building Bulk and Lot Coverage Options proposed by Staff

Planning Staff have analyzed alternative bulk regulation techniques in order to attempt to address the inefficiencies of the existing FAR and Open Space scheme.

Staff believes that bulk regulations are important for the following reasons.

- Shoreland aesthetics
- Neighborhood attractiveness and compatibility
- Adequate drainage
- Preservation of access to daylight for neighboring properties
- Maintenance and fire access

Of the options explored, staff feels that a building footprint (coverage) scheme, when paired with building height regulations, offers several advantages.

Footprint Summary

Building footprint: The ratio of total building coverage to lot area.

Advantages of footprint scheme:

- Less focus on useable space within a structure, more focus on size of footprint/building.
- When employed in combination with height limits, footprint will produce a maximum volume or 3-D envelope.
- Simplified computation of allowable building size.

Waukesha County communities that have employed “footprint” or building coverage:

C/Brookfield - 20%

V/ Elm Grove- 20%

T/Mukwonago: See table for substandard lots of record w/in 500 ft. of Phantom & Spring Lakes (R-3 District)

Mukwonago Building Lot Coverage for R-3 Residential District

Lot Size	Total Building Footprint
Less than 5,000	1,140 sq. ft.
At least 5,000 and less than 10,000	1,300 sq. ft.
At least 10,000 and less than 15,000	1,400 sq. ft.
At least 15,000 and less than 20,000	1,550 sq. ft.
At least 20,000 and less than 25,000	1,800 sq. ft.
At least 25,000 and less than 30,000	1,900 sq. ft.
More than 30,000	15% floor area ratio

The Town’s scheme provided larger building envelopes for substandard lots of record on a sliding scale while setting a height limitation of 34’ (no more than two stories viewed from the water) and required vegetative buffers as new homes were constructed.

Proposed Building Footprint Options developed by County staff

Option 1 “Sliding Scale”

Lot size (sq. ft.)	Total footprint allowed for all buildings (sq. ft.) (10% increase per 1,000 sq. ft.)	Total overall sq. ft. allowed for all buildings	Existing 15% FAR – total allowable sq. ft.	Existing 19.5% FAR – total allowable sq. ft.
0-5,000	1,100 (850 sq. ft. res. + 250 sq. ft. garage)	2,200	0 - 750	0 – 950
>5,000-6,000	1,200	2,400	750 – 900	950 - 1,170
>6,000 - 7,000	1,300	2,600	900 – 1,050	1,170 – 1,365
>7,000 - 8,000	1,400	2,800	1,050 – 1,200	1,365 – 1,560
>8,000 - 9,000	1,500	3,000	1,200 – 1,350	1,560 – 1,755
>9,000 – 10,000	1,600	3,200	1,350 – 1,500	1,755 – 1,950
>10,000-11,000	1,700	3,400	1,500 – 1,650	1,950 – 2,145
>11,000-12,000	1,800	3,600	1,650 – 1,800	2,145 – 2,340
>12,000-13,000	1,900	3,800	1,800 – 1,950	2,340 – 2,535
>13,000-14,000	2,000	4,000	1,950 – 2,100	2,535 – 2,730
>14,000-15,000	2,100	4,200	2,100 – 2,250	2,730 – 2,925
>15,000-16,000	2,200	4,400	2,250 – 2,400	2,925 – 3,120
>16,000-17,000	2,300	4,600	2,400 – 2,550	3,120 – 3,315
>17,000-18,000	2,400	4,800	2,550 – 2,700	3,315 – 3,510
>18,000-19,000	2,500	5,000	2,700 – 2,850	3,510 – 3,705
>19,000 -19,999	2,600	5,200	2,850 – 3,000	3,705 – 3,900

Conforming lots = 15% footprint (unsewered) & 19.5% (sewered) for residential districts, 10% agricultural districts, 50% commercial districts, and 70% industrial districts

Implications:

- The footprint is more restrictive than existing FAR scheme on some lots, but the overall sq. ft. allowed is significantly greater.
- Encourages 2-story structures rather than a larger footprint.
- Caps overall sq. ft. more restrictively than % options.

Option 2 “Percent Ranges”

OPTION 2: Footprint Determined by Percentage of Lot Area – 3 Sub-options					
Lot size (sq. ft.)	<u>Option 2A:</u> Total footprint allowed for all buildings 15% or 1,100 sq. ft., whichever is greater	<u>Option 2B:</u> Total footprint allowed for all buildings 17.5% or 1,100 sq. ft., whichever is greater	<u>Option 2C:</u> Total footprint allowed for all buildings 20% or 1,100 sq. ft., whichever is greater	Existing 15% FAR – total allowable sq. ft.	Existing 19.5% FAR – total allowable sq. ft.
0-5,000	1,100	1,100	1,100	0 - 750	0 – 950
>5,000-6,000	1,100	1,100	1,100 – 1,200	750 – 900	950 - 1,170
>6,000 - 7,000	1,100	1,100 – 1,225	1,200 – 1,400	900 – 1,050	1,170 – 1,365
>7,000 - 8,000	1,100 – 1,200	1,225 – 1,400	1,400 – 1,600	1,050 – 1,200	1,365 – 1,560
>8,000 - 9,000	1,200 – 1,350	1,400 – 1,575	1,600 – 1,800	1,200 – 1,350	1,560 – 1,755
>9,000 – 10,000	1,350 – 1,500	1,575 – 1,750	1,800 – 2,000	1,350 – 1,500	1,755 – 1,950
>10,000 – 11,000	1,500 – 1,650	1,750 – 1,925	2,000 – 2,200	1,500 – 1,650	1,950 – 2,145
>11,000 – 12,000	1,650 – 1,800	1,925 – 2,100	2,200 – 2,400	1,650 – 1,800	2,145 – 2,340
>12,000 – 13,000	1,800 – 1,950	2,100 – 2,275	2,400 – 2,600	1,800 – 1,950	2,340 – 2,535
>13,000 – 14,000	1,950 – 2,100	2,275 – 2,450	2,600 – 2,800	1,950 – 2,100	2,535 – 2,730
>14,000 – 15,000	2,100 – 2,250	2,450 – 2,625	2,800 – 3,000	2,100 – 2,250	2,730 – 2,925
>15,000 – 16,000	2,250 – 2,400	2,625 – 2,800	3,000 – 3,200	2,250 – 2,400	2,925 – 3,120
>16,000 – 17,000	2,400 – 2,550	2,800 – 2,975	3,200 – 3,400	2,400 – 2,550	3,120 – 3,315
>17,000 – 18,000	2,550 – 2,700	2,975 – 3,150	3,400 – 3,600	2,550 – 2,700	3,315 – 3,510
> 18,000 – 19,000	2,700 – 2,850	3,150 – 3,325	3,600 – 3,800	2,700 – 2,850	3,510 – 3,705
>19,000 - 19,999	2,850 - 3,000	3,325 – 3,500	3,800 – 4,000	2,850 – 3,000	3,705 – 3,900

Conforming lots = 15%/17.5%/20% footprint for residential districts, 10% agricultural districts, 50% commercial districts and 70% industrial districts.

Implications:

- 15% is most constraining option for ranch-style homes
- 20% may allow excessive bulk on larger lots

OPTION 2B (17.5% Footprint) with Floor Area Ratio (FAR) Sub-Options for R-3 Residential District					
Lot size (sq. ft.)	Total footprint allowed for all buildings 17.5% or 1,100 sq. ft., whichever is greater	Total square footage allowed for all buildings - w/o FAR		25% FAR – total allowable sq. ft. (basement not included in FAR) *Lots not conducive to basements get 5% FAR bonus.	30% FAR – total allowable sq. ft. (basement not included in FAR)
0-5,000	1,100	2,200		0 – 1,250	0 – 1,500
>5,000-6,000	1,100	2,200		1,250 – 1,500	1,500 – 1,800
>6,000 - 7,000	1,100 – 1,225	2,200 – 2,450		1,500 – 1,750	1,800 – 2,100
>7,000 - 8,000	1,225 – 1,400	2,450 – 2,800		1,750 – 2,000	2,100 – 2,400
>8,000 - 9,000	1,400 – 1,575	2,800 – 3,150		2,000 – 2,250	2,400 – 2,700
>9,000 – 10,000	1,575 – 1,750	3,150 – 3,500		2,250 – 2,500	2,700 – 3,000
>10,000 – 11,000	1,750 – 1,925	3,500 – 3,850		2,500 – 2,750	3,000 – 3,300
>11,000 – 12,000	1,925 – 2,100	3,850 – 4,200		2,750 – 3,000	3,300 – 3,600
>12,000 – 13,000	2,100 – 2,275	4,200 – 4,550		3,000 – 3,250	3,600 – 3,900
>13,000 – 14,000	2,275 – 2,450	4,550 – 4,900		3,250 – 3,500	3,900 – 4,200
>14,000 – 15,000	2,450 – 2,625	4,900 – 5,250		3,500 – 3,750	4,200 – 4,500
>15,000 – 16,000	2,625 – 2,800	5,250 – 5,600		3,750 – 4,000	4,500 – 4,800
>16,000 – 17,000	2,800 – 2,975	5,600 – 5,950		4,000 – 4,250	4,800 – 5,100
>17,000 – 18,000	2,975 – 3,150	5,950 – 6,300		4,250 – 4,500	5,100 – 5,400
> 18,000 – 19,000	3,150 – 3,325	6,300 – 6,650		4,500 – 4,750	5,400 – 5,700
>19,000 - 19,999	3,325 – 3,500	6,650 – 7,000		4,750 – 5,000	5,700 – 6,000

- **>20,000 sq. ft. lots zoned R-3 Residential District limited to 17.5% footprint/25% FAR or 30% FAR.**
- **Remaining Residential Districts, including R-1, R-2, RRD-5, AD-10, E-C = 15% footprint/25% FAR.**
- **Agricultural Districts = 10% footprint, Commercial Districts = 50% footprint, Industrial Districts = 70% footprint.**

Agenda Item 3c
Height Regulations Summary Sheet and Proposed Options

NR115(1)(f) To protect and preserve wildlife habitat and natural scenic beauty, on or after February 1, 2010, a county may not permit any construction that results in a structure taller than 35 ft. within 75 ft. of the OHWM of any navigable waters.

Note: DNR has indicated that counties may regulate height differently beyond 75 ft. of the OHWM.

NR115 does not explicitly describe how height should be measured but the DNR's model zoning ordinance shows illustrations depicting height being measured from lowest exposure to highest part of roof. DNR has indicated that the definition must meet the purpose and intent of NR115. The DNR Shoreland Policy Coordinator has confirmed that DNR will not accept the County's current height regulation scheme (46' to highest point) as complying with NR115.

DNR has recommended that height be measured from lowest exposure to highest peak, although they have indicated that they may accept an alternative measurement, such as 35' from the average grade to highest point of roof on exposed lots.

Current County Principal Building Height Scheme:

The vertical distance measured from the lowest exposed point of a structure to the highest point of any roof. The SFPO also limits height relative to eaves and highest floor lines, see summary below:

SFPO Height Limitations

Lowest exposure to highest floor line	27'
Lowest exposure to highest eave	36'
Lowest exposure to highest point of roof	46'

The current height limitation scheme was amended in 2005. During consideration of the amendments, the Metropolitan Builders Association (MBA) advocated for a maximum height of 45' to accommodate taller floors and three-story exposure buildings. MBA provided an example of a 10 ft. tall basement, 10 ft. tall 1st floor, 8 ft. tall 2nd floor and 12 ft. roof pitch height, which resulted in an overall height of 40 ft.

Examination of 104 recent new home permits shows that the vast majority of new homes (92%) were 42' or less. Some local fire departments have expressed concern about the increasing height of homes and the challenges of reaching the highest floors during an emergency.

Staff Recommendation:

Height limitation of **35'** from lowest exposure to highest point of roof for buildings **within 75' of the OHWM & on lots of less than 65' of width.**

Height limitation of **42' or 45'** from lowest exposure to highest point of roof for buildings **more than 75' from OHWM & on lots more than 65' of width.**

Proposed SFPO Height Limitations beyond 75 ft. of OHWM

Height to highest floor line	25'
Height to highest eave	35'
Height to highest point of roof	42' or 45'

Advantages:

- Complies with the purpose and intent of NR 115.
- Creates incentive for lot owners that desire taller buildings to site buildings 75' or more from the OHWM, which better protects the sensitive shoreland zone.
- If FAR is to be replaced with a much more permissive lot coverage scheme, a tiered building height limit scheme would ensure that extremely tall, tower-like structures are not permitted on severely non-conforming lots.

Proposed Height Options

Staff Recommendations presented at Meeting #2 (February 19, 2016):

Height limitation of **35'** from lowest exposure to highest point of roof for buildings **within 75' of the OHWM & on lots of less than 65' of width.**

Height limitation of **42' or 45'** from lowest exposure to highest point of roof for buildings **more than 75' from OHWM & on lots more than 65' of width.**

Proposed SFPO Height Limitations beyond 75 ft. of OHWM

Height to highest floor line	25'
Height to highest eave	35'
Height to highest point of roof	42' or 45'

Alternative Options to be presented at Meeting #3 (March 10, 2016):

- A. Height limitation of **35'** from average pre-construction grade to highest point of roof. **The maximum height of a principal structure may be increased by one (1) foot for each foot that said principal structure exceeds the required offset and 75 ft. shore setback (OHWM only), for a maximum of 10 additional feet in height.** The overall height of a principal structure shall not exceed 45' as measured from the lowest exposure to the highest point of the roof. On waterfront lots, no building or structure shall contain more than three (3) stories when viewed from the waterfront.
- Complies with the purpose and intent of NR 115.
 - Creates incentive for lot owners that desire taller buildings to site buildings more than 75' from the OHWM and side lot lines, which better protects the sensitive shoreland zone and adjacent properties.
 - Ensure that extremely tall, tower-like structures are not permitted on nonconforming lots.
- B. Measure height as the vertical distance measured from the lowest exposed point of a structure to the highest point of any roof. **Within 75 ft.** of the OHWM, limit the height to **35 ft. max.** If beyond 75 ft. of the OHWM, limit height to **45 ft. max.**, if the building is a **2-story with full exposure**, or **40 ft.** if the building is a **1-story with an exposure or 2-story without a full exposure.** On waterfront lots, no building or structure shall contain more than three (3) stories when viewed from the waterfront.
- Complies with the purpose and intent of NR 115.
 - Ensures that structures on flat lots are not excessively tall, but accommodates the additional height needed when steep slopes are present.