

# Impervious Coverage

## Current Regulation:

N/A- current zoning ordinance does not regulate impervious coverage in residential zoning districts.

## Proposed Regulation:

Maximum 40% impervious coverage for single-family detached homes, 50% impervious for Village House.

## The Question:

Is 40% too restrictive? How does this value compare to the existing character of single-family homes in Hatboro's neighborhoods?

## The Analysis:

Single-family lots were manually selected and measured using current aerial photography, with the intent of bracketing the range of impervious coverage found in Hatboro's neighborhoods. Lots were selected by appearance- both those with high levels of impervious coverage and those with little impervious coverage. At the time of their original construction, most homes in Hatboro had relatively small footprints, and since that time many have been expanded through additions or entirely replaced with larger homes. Homes that are more representative of the neighborhood's original character thus have lower levels of impervious coverage- 20% or lower on typical lots of 8,000-12,000 square feet range. The expansion of homes' footprints and the addition of garages- particularly garages located in the rear yard (as is preferred in many jurisdictions) greatly increase impervious coverage, even before considering other accessory structures and paved areas. Pools, sheds, patios, and front walks further increase impervious coverage. These additional impervious features may increase the runoff generated by a property, but do not necessarily impact the appearance of the property or neighborhood. Even properties with relatively high levels of impervious coverage can host mature shade trees, helping to mitigate the runoff and heat island effects of the impervious coverage. Although it is possible to offset the effects of impervious coverage, the nature of the impervious features often mean that mature trees are not present, as they would shade the patio and pool areas or were removed to allow for the construction of garages or other impervious features. As such, the features on single-family residential lots with the highest levels of impervious coverage are readily seen even in aerial photography from the height of summer. In this analysis, however, I found that impervious coverage rarely reached 50%, and that minimum setback requirements make it difficult to exceed 50% impervious coverage. A lot of minimum size (7,000 square feet) and minimum width (50 feet) is 140 feet deep. The required setbacks leave a developable area at the center of the lot which amounts to approximately 45% of

the lot's total area. On small lots, it becomes difficult to even accommodate impervious features amounting more than 50% of the lot's area, as they rapidly become crowded, and require encroachment into setback areas.

Recommendation:

I recommend retaining the proposed limit of 40% impervious coverage. However, if the borough wishes to increase this limit, I would suggest that it not be increased above 50%, and preferably remain lower. While impervious coverage limits of 40% may feel restrictive to owners of lots at or near the 7,000 square feet minimum size- giving them an allowance of only 2,800 square feet of impervious coverage- smaller lots historically tend to feature smaller homes. On larger lots of a quarter-acre, which are fairly common in the borough, the limit of 40% allows for a very generous 4,356 square feet of impervious coverage.

## Front Setbacks

Current Regulation:

*A front yard depth of not less than 25 feet measured from the right-of-way line to the building foundation wall nearest to the right-of-way line.*

Proposed Regulation:

*Minimum front setback: 25 feet, or the average of the front setbacks of the two adjacent lots may be substituted if either is less than 25 feet. For corner lots, lots adjacent to a vacant lot, or lots otherwise lacking an adjacent front setback to reference, the default front setback of 25 feet shall be used as reference.*

The Question:

Could a minimum distance of 15 feet be set, below which the front setback shall never be reduced, regardless of the contextual approach of averaging between neighbors' setbacks, or averaging between a neighbor's setback and the default front setback of 25 feet?

The Analysis:

In a cursory examination of existing conditions, 378 single-family properties in Hatboro have primary buildings with front facades located less than 40 feet from the centerlines of their respective frontage streets. This measure is a proxy for front setbacks of less than 15 feet, as rights-of-way for local streets are typically required to be 50 feet (extending 25 feet from the centerline) and the front setback distance in question (15 feet) is measured from the edge of right-of-way to the front facade of the primary building. While a property survey would be needed to ascertain the true front setback distance of any particular property, GIS data is sufficiently accurate to describe the

scale this issue in Hatboro. Properties identified in this analysis are widely distributed throughout the borough with significant clusters along:

- Mill Road
- South Chester Avenue
- Harding Avenue
- New Street
- Central Avenue
- North Penn Street
- East Montgomery Avenue
- East Moreland Avenue
- Bonair Avenue
- Lancaster Avenue
- Springdale Avenue
- Edward Road

Closer inspection of the identified properties and their surroundings indicates that front setbacks of less than 15 feet are not rare in the borough, and are found most commonly on smaller properties, associated with older homes. While front yards under 15 feet may be fairly common, most properties identified in this analysis are close to this threshold, and properties with shorter front setback distances increase in rarity in rough proportion with the magnitude by which they fall below that setback distance (i.e. 14 feet is more common than 12 feet, 12 feet is more common than 10 feet, and so on).

Conclusion:

Allowing the minimum front setback to be reduced below the default distance of 25 feet, by averaging as described above, but not less than 15 feet would render roughly 300-to-400 single-family properties non-conforming and push future redevelopment in those areas to differ from the existing character. The degree by which these affected properties would need to be altered to conform to the required minimum front setback of 15 feet is often only a small distance, but may cause a significant reduction in the potential buildable area on smaller properties.

Recommendation:

Keep the proposed regulation, as written above, though opting to set an absolute minimum front setback of 15 feet is not anticipated to cause a drastic change in the physical character of Hatboro or create new non-conformities.

## Agricultural Uses

Current Regulation:

“Cultivation of the soil (agriculture)” is listed among the uses permitted in the R-1 Residential Zoning District.

Proposed Regulation:

Agriculture is not included as a permitted use in the proposed R-1 district.

The Question:

If agriculture is not permitted in the proposed R-1 district, where will it be permitted? How will newer forms of agriculture (e.g. hydroponics, aquaponics, indoor agriculture) be handled in the proposed zoning?

The Recommendation:

Upon review of the proposed zoning and zoning in effect elsewhere in the region (especially newer zoning ordinances) It is recommended that the current language be retained in the proposed R-1 district, with indoor agriculture operations being restricted to the proposed IN General Industrial and LMX Limited-Industrial Mixed-Use zoning districts.