

UCF Team Working Paper

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Density Issues: mixed-use design

Density is generally defined as the amount of residential development permitted on a given parcel of land. It is typically measured in dwelling units per acre – the larger the number of units permitted per acre, the higher the density; the fewer units permitted, the lower the density.

In a word of increased traffic congestion, loss of open space, increased infrastructure cost and desire for more housing options, Smart Growth has been seen as a strategy for building and revitalizing communities, protecting the environment and catalyzing economic development. Many communities trying to implement smart growth strategies see density as an opposite of the success. Density faces broad opposition being blamed for more traffic, crime, parking shortage and ugly architecture. At the same time, communities with low density have difficulties as well.

People begin to realize that more intense development can help achieve local economic development goals, provide housing options, protect air, water and open space, and create walkable neighborhood. For these places to be created, communities are zoning some areas for higher density and a mix of houses, with parks, schools and shops. . a balanced perspective represent creation of great communities through combination of density and great design.

Density, if implemented along with smart growth, mixed-use and community design, can benefit community in many ways.

1. Density helps to create walkable neighborhoods, part of which would be providing attractive destinations nearby, as shops or restaurants. Density ensures that those places are both walkable and economically viable.

Retail destinations located within a short walk of residences (5-10 minutes) typically include markets, cafes, dry cleaners and convenience stores, all of which partially depend upon pedestrian traffic for their customer base.

2. Density supports housing choice and affordability. Lower density development usually increases housing prices. By balancing lower, medium and higher density projects, communities can offer a wider range of housing types. Higher density keeps housing prices on a reasonable level with lower per unit infrastructure costs.

3. Density helps expand transportation choices by providing the ridership needed to make bus and rail transit a viable and competitive transportation option. By creating choice, density also contributes to improvements in transportation system because with destinations close by, car trips are shorter, and people can choose to walk, bicycle or take transit at least some of the time. For those who cannot drive, such a choice equals the opportunity to travel independently.

Studies indicate that the average resident in a compact neighborhood will drive 20-30% less than residents of a neighborhood half as dense. At densities of eight units per acre and higher, neighborhoods begin to support bus and rail transit by

increasing the number of transit users within walking and bicycling distance of a bus or rail station.

4. Density supports community fiscal health by reducing infrastructure duplication and making efficient use of present capacity, before investing in costly infrastructure expansions.

In regions dependent on agricultural production, compact development helps to protect valuable farmland.

5. Density helps improve security through the use of design that encourages greater neighborhood surveillance and interaction. Density boosts street life by raising the sheer number of people living and working nearby.

6. Density helps to protect the environment because it reduces the impact of built area. Compact density development lessens the impact on air quality as well. Building at higher densities expands transportation options and reduces distances between destinations – both factors help minimize air pollution.

Convenient and walkable neighborhoods, housing choices and quality on the environment – all these are brought together by design. While density may provide access to transit or proximity to different land uses, it can neglect to create a welcoming place for people. Often poor building and street design create places where it is difficult or unsafe to walk and engage one's neighbors. Good design is built on the following principles:

1. Increase densities in appropriate locations. Greater density can help improve local safety by keeping the area busy after regular business hours. It can also help create a new town center by placing more homes closer to shops and offices.

One integral factor for density increases in appropriate locations is designing additional development to blend into the existing neighborhoods. Ideally, it will generate further community acceptance and support for density.

2. Connect people and places through a complete street network that invites walking and bicycling and provides convenient access to bus or rail. With a good street network and other mobility options, dense development allows people to choose an alternative to driving and also provides more route options to those who still choose to drive. Added density also promises new transportation choices. The best way to create a complete street network and support new transportation choices is to use a modified street grid network, ensure access to different modes of transportation and build inviting sidewalks.

The street network needed to accommodate both cars and people with many routes to their destination. The streets should primarily meet in three or four-way intersections to allow people and cars to go around congestion. The streets should also be relatively narrow, which helps slow traffic, improve safety and make people feel welcomed on the sidewalk. The network should include a complete sidewalk along the local streets.

3. Mix uses to create a quality of life where people may choose to live near their work, walk to the local store, or bike to the library with their kids. Without these walkable destinations, a new neighborhood becomes like any other place where

people must get into cars and drive to get somewhere. Mixed use can help add jobs or homes to an area, improving jobs/housing balance. It may also mean integrating parks throughout the area, so that every home is within a 2- to 3-minute walk of a small park.

Mixing uses in each building or in adjacent buildings works best when design guidelines ensure that the buildings will be consistent in heights and size, regardless of use.

4. Place parking in alternative locations to support density and create inviting places to walk. Shops and houses close to the street, not separated from the sidewalk by a stretch of parking or a wide setback from the street, help make this possible. On-street parking helps improve the safety of the neighborhood by slowing traffic and serving as a barrier between the sidewalk and the roadway.

The most important effect of density on parking is its potential to reduce required parking space. Different neighboring uses may also share the same parking spaces at different times of the day. Mixed use areas also help minimize the demand for parking by allowing people to park once and reach a number of shops.

A well-designed dense area with well-placed parking is an interesting place to walk – more people will choose to walk to the shops or offices when streets are welcoming and the stores are close by. Parking demand in a dense development is quite different from other locations. Communities should be allowed to reduce parking requirements and use better alternatives.

5. Create great places for the great people, which mean expansion of the community and making it even better. Combining all the different elements listed above

creates great places. The neighborhood has interesting places on the street, and the community feels inviting to the pedestrian, driver and bicyclist, and to young and old alike. A well-designed streetscape with good relationships between building height and street width makes people feel comfortable.

Placing building side-by-side to each other helps create a more interesting place to walk. These buildings should also have some architectural detail on the facades, and no blank walls facing the street. Porches, balconies and other additions add to the outdoor room to create a sense of community and a welcoming place to be. Open spaces, parks and plazas also enhance the community's experience. They provide gathering spaces and focal points for the community.

The combination of these five principles, along with resident involvement, helps ensure that density contributes to the community's economic, social and environmental health.

Examples of successful mixed-use are the following.

1. Mountain View, CA – The Crossings. A failing Old Mill Mall was transformed into a vibrant neighborhood that offers a variety of housing and transportation choices. The project leveraged the existing retail business while providing diverse housing choices to the community. Residential parking is located behind units, deeply set back from the housing units, or underground.
2. Davis, CA – Aggie Village and Davis Commons. Village was created with high citizens' involvement to provide housing for university employees. The density changes depending on proximity to the university or downtown.

3. Portland, OG – Belmont Dairy Redevelopment. The mix of land uses has expanded housing and retail options within the neighborhood. The overall design emphasizes the site’s historic presence in the neighborhood and creates a pedestrian-friendly streetscape. New businesses have entered the area.
4. Breckenridge, CO – Wellington Neighborhood Development. A traditional neighborhood development evokes the look and feel of a small town and fosters the social interaction and community cohesiveness. New development helped to keep housing affordable and restored land damaged by historic mining activities. It also protects valued open space and increased community access to cultural and natural resources.
5. Langley, WA – Third Street Cottages. Project has been able to increase housing supply with minimum land consumption. The Cottage Housing Development ordinance allows detached homes at twice the previous affordable density in all single-family zones. The designs use natural light and architectural details to make the spaces seem open and airy.
6. Minneapolis, MT – RiverStation and Heritage Landing. These developments are bringing residential units into the warehouse district. Street-level retail and outdoor seating for the restaurants contribute to street ambiance and activity. Both projects use mostly underground parking, which accounts for a more pleasant streetscape.
7. Addison, TX – Addison Circle. The missed-use complex is adjacent to “old town” Addison, within walking distance of employment, retail, entertainment, a conference and art center, and a proposed rail station. Addison Circle has

- expanded local housing choices, stabilized the suburb's tax base, and given it a physical focal point.
8. Seattle, WA – NewHolly Urban Village. The Village has added value to the community by replacing a derelict, under-performing residential sub-division with a pedestrian-friendly, mixed-use neighborhood that offers residents suitable housing options.
 9. Arlington, VA – Courthouse Hill. This development helps benefit neighboring residents by turning a large vacant area into a neighborhood that blends with its surroundings and provides attractive open space and pathways. Another benefit to residents is the convenience of living near subway stations, jobs and retail.

Bibliography:

1. *The Crossing: Transit-Oriented Neighborhood*,
<http://www.calthorpe.com/Project%20Sheets/Crossings.pdf>
2. *Advanced Planning Division – Integrated Transit-Oriented Development*,
http://www.ci.mtnview.ca.us/citydepts/cd/apd/transit_oriented_development.htm
3. *Better Ways to Grow*, <http://www.sacog.org/regionalfunding/betterways.pdf>
4. *Definition of Livable Communities*, January 20, 2005,
http://www.dot.ca.gov/hq/tpp/offices/ocp/livable_communities.htm
5. Stello, S., *Aggie Village: example to follow*, December 1, 2003,
<http://www.davisenterprise.com/articles/2003/12/01/news/030new1.txt>
6. Zykofsky, P., *Smart growth: Creating Livable, Vibrant Communities*,
http://www.lgc.org/freepub/land_use/presentations/zykofsky/
7. *Livable Places Update*, December 1999,
http://www.lgc.org/freepub/PDF/Land_Use/lpu/lpu_9911.pdf
8. *Belmont Dairy Turns A Brownfield Green*,
http://www.sustainableportland.org/energy_Belmont.pdf

9. Transit-Oriented Developments,
<http://www.trimet.org/inside/publications/pdf/sourcebook4.pdf>
10. *Smart Growth Hall of Fame 2001: Ten Examples of Good Planning Decisions in Colorado*, <http://www.sprawllaction.org/halloffame/JWellington.html>
11. *Cottage Housing Development Code*,
<http://www.cottagecompany.com/cczoning.html>
12. Miller, J., *Debunking the Myths of TND*, <http://www.tndhomes.com/under05.html>
13. Wolcott, J., *Cottage development; 'better rather than bigger'*,
<http://www.snohomishcountybusinessjournal.com/archive/jan02/cottage-jan02.htm>
14. *Minneapolis development projects*,
http://www.ci.minneapolis.mn.us/cped/projects_list.asp
15. *Addison circle Brings Urban Environment to Dallas Suburbs*,
http://www.lgc.org/freepub/land_use/models/addison_circle.html
16. *Destination 2030*, Regional View Newsletter, October 2001,
<http://www.psrc.org/datapubs/pubs/view/1001.htm>
17. *An Assessment of Gaps in Seattle's Open Space Network*,
http://www.cityofseattle.net/parks/open_spaces/gap_analysis_report.htm
18. *Seattle, WA: Excerpts from the executive Summary. Holly park Revitalization Plan*,
http://www.housingresearch.org/hrf/HRF_REFLIB.nsf/0/a1901cfd838d9a7b8525699a005e503c?OpenDocument