Master-Planning Study Report

By Ben Stevens

My research into private development master-planning led me to one conclusion above all others: street planning and master planning are very nearly the same thing. In a master-planned development, streets will determine:

- *how you will get around within a community* (is it easy to get around on foot, by bike, by transit, by car?)
- *the "speed" of the area* (narrow streets and two-way streets necessitate slower speeds, multi-lane one-way streets encourage almost highway speeds, and the velocity of traffic has consequences for the way people will want to use the parcels they're connected to)
- *the level of implied luxury* (are there pedestrian-only streets, how wide are the sidewalks, do the boulevards have trees in the center, on the sides, or both, or is the street simply a corridor between other places?)
- *important aspects of the scale* of the buildings (because streets inherently suggest parcel size). In *Smart Growth*, Duany suggests perimeters of 1000 to 2000 feet (so between 250x250 and 500x500) per block.
    - Portland's downtown grid is 250x250.
    - Manhattan's rectangular grid is around 230 x 470
    - Barcelona's grid is 400x400.
- *and the relationship between the parcels* (do the streets create a perfect grid, an intentionally heterogenous mix of lengths and widths, do they create curves and cul-de-sacs, are there dead end streets which increase congestion on the other streets, are intersections simple right angles or more complex patterns, are there cut-throughs and alleys? etc).

Many of the zoning specifications we spend our time on also stem from street concerns. When roads couldn't be easily widened because buildings had been set too close to them to allow that, cities started mandating "setbacks" from the road. So buildings themselves had to start obeying the current and potential future needs of the street. The street has become, in this way, a dynamic component of design that demands veto power over other elements.

Additionally, the street has major implications for building design. Vehicles from the street have to be dealt with by the building upon arrival. Do houses have garages prominently in the front or are they hidden in the back (in my experience, this has a tremendous effect on the feel of an area)? Do office buildings use structured parking garages that take up whole blocks or is parking hidden behind faux windows, below ground, or softened with first floor retail to keep them activated? Is street parking restricted or allowed, free or paid, parallel or angled? Will a building with 1000 employees have bike racks, and if so, where will they all go? Whether the more luxurious options listed here are financially feasible, the choice an owner or architect make will impact both their tenants and passersby.

Because of their size, streets also constitute a large amount of the land a developer owns, and there have been historical experiments like the Hampstead development in which developers tried to use very, very narrow streets to maximize the land they had for building. I happened to visit Hampstead as a kid while my uncle was working in London, and I vividly remember a run in with some blazing fast red sports car which we couldn't have evaded by more than a foot from the tiny sidewalk that was jammed up against the road. The developers may have squeezed the streetscape a *bit* too tight for comfort on that one.

It should be noted that at the level of street design, municipalities have a strong interest in what happens, both because of traffic implications and because of the desire to promote continuity with the existing system. In greenfield situations, the latter plays a smaller role because the site is, often, in a green field on the edge of town, where there's little in the way of infrastructure to which to connect. In urban infill situations, the most one normally sees is the absorption of an existing street. Even where proposed uses are outside the norm, however, there normally exists a process by which a developer can apply for variances. New Urbanists communities in particular have established a track record of convincing cities to try new things.

Maps usually only show streets, but looking at a map that only has streets can still help you determine a great deal about the environment of a place (think downtown vs. East Towne). For all the above reasons, my studies have inclined me to see street planning and master planning as very nearly the same thing.

Once the full concept for streets is in place, there are two other classes of considerations to include in design. Let me summarize those more briefly.

PUBLIC SPACES

What percent of the space in the development will be given over to the public and what percent will be private? Taking two dense cities like Berlin and Barcelona, the street grids and parcel sizes are very similar, but they feel radically different because of the proportion of green and public space that has been reserved. Click the links above to see the downtown areas at the same zoom factor. New York famously omitted this consideration from most of its original grid and for a long time (some would argue to the present) there was virtually nowhere to go to find open, public space that served as a refuge from the endless onslaught of buildings.

Whether the public space is green or plaza style, the decision of how much to reserve for public use will have radical consequences for the feel of the development. Savannah very famously has public squares at regular intervals which serve as the center of given neighborhoods. It has often been found that a neighborhood consists of the furthest distance you can reach in a 5 minute-walk, so public spaces often anchor and creates such neighborhoods. Research has also shown that people rarely walk more than 500 yards from their house before deciding to use a different mode of transportation like a bike or, more often, a car. So using public spaces to *create* neighborhoods is very effective.

I should note that there's often no need to choose between designating some space for public use and having a good return on your investment. That's because public spaces can substantially increase surrounding property values. Public space that's accessible and desirable counts as one of the top amenities that businesses, residents, and (perhaps most importantly) retailers look for.

Once street design and reserves for public spaces have been determined, you can finally turn to considerations of the buildings themselves.

HOMOGENEITY

Building more than five buildings at once, on the same site, is an historically odd undertaking. Normally, developers (and therefore cities) grow a building at a time. So the primary design challenge that master-planned developments face is how to avoid *looking* artificial. In the course of history, zoning changes, tastes change, materials in use change. Buildings in a city usually reflect that. But if you build ten or more buildings all at once, you risk creating a very bland looking space. They often stand out as islands, with the same scale as the rest of the city but an odd frozen-in-time quality that lacks any of the diversity of the surrounding areas. And

over time, that quality drives down the desirability of living and working there, with rents driven down as a result.

As a general rule, developers and architects fail to escape this problem. While living in Berlin, I was horrified by the Marzahn development, which was built for East Germany's post-war population. But even in higher end developments in more developed countries – by people who are design experts – the challenge normally proves more difficult than any *one person* can solve.

Economies of scale and efficiencies in workflow will suggest using one architect and a very narrow range of materials and designs for a development. But I would argue that historically, the negative impact of such choices on the desirability (and therefore, often, the profitability) of a project outweigh the upfront benefits.

Hiring multiple architects, who have different priorities and tastes, is the only way to remedy the problem. That's because it's the only means of *authentically* recreating the process (albeit on an accelerated timetable) that leads to diversity "in the wild." There are risks and costs associated with this approach. But they're necessary for avoiding formulaic, soulless developments.

If someone succeeds in devising a proper streetscape, in designating an appropriate amount of space for neighborhood-creating plazas, and in hiring out the work to a group of truly diverse designers, then all that remains are a few finishing touches.

Conclusion
There are a few best practices emerged in my reading as finishing touches. Try to terminate streets at a point of interest (think the Capitol Square) and use high points in the elevation (if the site has much topographical variance) to highlight special uses. Think strategically about the placement of LULUs (locally undesirable land uses) that are necessary but unsightly or cause nuisances. Do anything you can to define both the center of the development and its edge.

A list of this sort of details could go on for pages. But at its core, the functionality and therefore desirability (and hopefully, therefore, profitability) of a private, master-planned development will be determined by (in)attention to three details:

1) streetscape (and thereby parcel) design
2) the ratio of public to private spaces
3) the use of as many different architects and designers as is financially possible to recreate actual process by which diversity happens