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# Base Instincts



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Tom Ford has been with Gensler since 2012, initially in Hong Kong, before relocating to the Shanghai office to become the Planning & Urban Design Studio Leader. He is a motivated member of multiple project teams and provides senior leadership and urban design expertise to Gensler projects throughout Asia. Tom is particularly interested in the cultural and physical contexts in which large and complex projects are envisioned and developed. He is highly successful in maintaining good client relationships and is valued by both clients and team members for his collaborative design approach, work ethic, sense of humor, and communication skills.



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## Abstract

*Recent development has included significant advancement in the development of tall buildings. While the design achievement and skyline contributions have been significant, there has been a considerable lack of execution in the design at the base of tall buildings. We examine recent urban development in China and identify a series of contributing factors to the lack of design and development achievement at three community scales. Our investigation stakes a premise that the environment at the base of buildings is innately related to the health and happiness of the community. In the best cities it is simply a primal experience. We identify elements that at a basic level feed the successful urban habitat. We explore the disconnect between providing a piece of the skyline while not providing a piece of the city. Where the building touches the ground—and the streets around that juncture—is the primary focus of our discussion.*

**Keywords: Code Compliance; Community; Instinct(ively); Public Space; Urban Design; Urbanication**

Cities differentiate themselves by their skylines and their rich variety of resources, places, and populations. As regional destinations, marketplaces, cultural centers and activity hubs, city centers stand as icons in their regions. Their skylines are the markers that attract residents and strangers alike to the vast attraction and promising complexity of urban life. However, as much as a city's tall buildings will define its skyline, it is the activity below, in the streets and buildings of the city's far-ranging blocks and districts, that will deliver true civic promise and community pride.

## We're Off to See the Wizard

In the children's classic story, *The Wonderful Wizard of Oz*, written at the turn of the twentieth century, Dorothy finds herself lost in a strange land and soon learns that any route for getting home again to Kansas will require a trip through the Emerald City (Baum, 1900). The strangers she encounters counsel her to visit Oz, the Emerald City wizard, and so she begins a journey that takes her from the Country of the Munchkins to the Land of Oz and on to the city. Along her journey she befriends other characters and takes them on as travelling companions. Their course of travel, marked by a road made of golden brick, takes them through the woods and countryside of the vast hinterlands surrounding the Emerald City.

The journey through the countryside is fraught with peril and danger, requiring Dorothy and her cohorts to face down wild beasts together with treacherous and unforgiving terrain, but at



Figure 1. The skyline of a city can provide a powerful image that serves as a beacon when viewed from afar. The skyline of Chicago is seen from O'Hare International Airport, 12 miles from the city center. CHICAGO SKYLINE. (Source: Tom Ford)

last they arrive at the city. Written in an era largely before the advent of the skyscraper, the city Baum details in his book is one of urban orderliness, with tidy streets formed by green fences and farmhouses. As the travellers proceed along their route, those fences and houses slowly become denser, before giving way to the gates to the Emerald City. Indeed, the image Baum presents of the wizard's city is almost medieval, with a city wall and entry gate keeping uncivilized danger away while within the wall, Emerald City citizenry bustle about in green-tinted protective eyewear. Dorothy and her friends are "dazzled by the brilliancy of the wonderful City," the green marble pavement, window panes of green tinted glass and the sky above—even the sun's rays—all green (Baum, p. 197). The specter of the city is one defined not by height, stone, glass, and steel but by an allure of excitement and grandeur, orderliness and activity, all washed in green, the color of life.

As Baum went to publication at the turn of that century, however, the nature of urban development was changing dramatically with the advent of taller buildings. "The skyscraper and the twentieth century are synonymous; the tall building is the landmark of our age." (Huxtable, p. 1). Baum's city is tidy and neat and contrasts with the depiction of the wild and unruly lands outside the city. In contrast, by the time MGM released the film version of his book in 1939, cities—and their image in the popular imagination—had changed greatly. Whereas, Baum's 1900 narrative is largely about getting to the orderly and urbane city, the film version of *The Wizard of Oz* renders a city marked by a gleaming and soaring arrangement of skyscrapers. As Dorothy and her travelling companions emerge from the film set's forest and follow the yellow brick road into a clearing, they are awed by the vision of the towering and green sparkling Emerald City, glimmering in the distance and beckoning them to travel across the remaining length of countryside and end their journey within the city limits of Oz.

### Skyline and Ground Plane, Observer and Participant

Just as the filmed version of *The Wizard of Oz* contains a memorable and compelling image of a city—the Emerald City—an image that awes its viewers and compels them to gravitate toward it, cities around the world today can



Figure 2. The scale of the sidewalk and trees matches the predominant user of a Hong Kong street. HANKOW ROAD IN TSIM SHA TSUI, HONG KONG. (Source: Tom Ford)

capture and hold a far-flung viewer's attention in a similar fashion. The silhouette of a skyline, unique as a fingerprint, holds a magical draw for the viewer and conjures hopes—or for some, memories—of good and enjoyable times to be had in the urban milieu of that city's streets and attractions (see Figure 1).

In *The Image of the City*, Kevin Lynch differentiates between observing the city and being an active participant (Lynch, 1960). Tall buildings and the skylines they collectively form allow us to view the city as an object. But without the contributions and active participation of millions of inhabitants, a city cannot exist in any exciting and meaningful way. The environment in which that collective activity takes place requires as great an attention to design detail as do the buildings that form the skyline. The design of the ground plane and the urban habitat around

buildings is a critical element of an enjoyable and liveable place. The pedestrian realm, when purposefully designed, can assure active, safe, and viable streets that serve as the framework for vital neighborhoods and districts (see Figure 2.)

The spaces that are interspersed among a city's buildings play a vital role in the experience and liveability of the urban environment. Whether as singular components of a specific site or as a series of spaces—public and private open space—strung along a network to connect nodes or embellish a particular route, these spaces serve as the platforms for both active and passive use. In the best examples, these spaces play a vital and necessary role in our ability to function in urban environments (see Figure 3).



Figure 3. A statue honoring Nie Er, composer of the Chinese national anthem, is the featured element of an unnamed open space in Shanghai. The interior of the open space (left), is well designed and offers shade and places for sitting or gathering. The statue and the space open out to a busy intersection and the tall buildings and urban milieu that surround the space (right). NIE ER STATUE, SHANGHAI. (Source: Tom Ford)



Figure 4. The dramatic spectacle of the Lujiazui skyline in Shanghai has not been matched at the ground plane, where the pedestrian realm has been designed primarily for the benefit of moving vehicular traffic. LUJIAZUI SKYLINE AND SHANGHAI TOWER GROUND PLANE, SHANGHAI. (Source: Gensler)

### Base Instincts

As the world evolves toward a place that is to a greater degree urban, a sustained vigor in the design of our cities has become a critical piece of the transition. Urbanists and nonurbanists alike describe cities as the habitats within which one is most likely to find the greatest number of basic needs—the material and non-material elements that satisfy our base instincts. These environments—no matter the culture or place—have evolved over centuries to fit the basic needs of their inhabitants, using technologies and practices available to any particular era. Instinctively, humans strive for basic things: food, water, sleep, procreation, a roof over our heads. These things keep our lives centered, emotionally tethered to our homes and communities. At a very elementary level, these base instincts drive us. It is only after these basic needs are tended to that we are able to search for less vital but nonetheless important things: things that give us comfort. Cities—by their nature complex environments—provide the basic needs for the pursuit of a quality life but, because of their cosmopolitan complexity, have the capacity to provide indelibly more.

There are a variety of elements—or patterns—in the design of buildings and the physical environment that encourage and support human activity because of their scale, simplicity, and ability to inform a physical orderliness (see

Alexander, 1977). In addition to providing basic needs, the meaningful urban habitat shapes and forms a complex yet orderly social experience and adequately provides a basis for healthy living. However, the urban habitat needs to operate at the scale and operability of its users. We generally know the solutions to these issues: human scale, public safety, and thermal comfort being just a few. Nonetheless, the urban habitat is often lacking in those necessary components that make up a functioning community.

### Urbanization in China

Many observers have pointed out that the expansion of affluence in China, together with the scale of its urban migration over the last one to two decades has led the country to implement a development pattern that is identical—or certainly similar—to the land use planning and urban design policies and solutions that have proven unsustainable in American urban development. Automobile-centric and land intensive planning, design, and development policies in western countries, largely evident in the post-World War II era, have led to costly sprawl, resource depletion, and air and water pollution. China has been implementing design and development practices that repeat the failed urban design and planning solutions that

lead to unsustainable sprawl, congestion, deserted urban streets, and a dramatic rise in health problems (Bosker, 2014). Many if not most of the recent tall buildings constructed have been in Asia, specifically China. Although there has been a lot of attention given by architects, planners, developers, and government officials to the design and spectacle of these buildings, there has not been as much consideration given to the design of the public realm that is comprised of the streets and pedestrian areas around these buildings (see Figure 4). It is the design of these areas on the ground plane that offer the greatest opportunities to reduce automobile dependency and promote a higher degree of liveability.

The spaces at the bases of tall buildings and other components of the urban fabric face a number of design challenges beyond those of physical scale. Climatic elements and solar orientation add complexity to the challenges in developing design solutions that assure vitality in the plazas, entries, and sidewalks that connect buildings. Wind, rain, sun, and shadow—and a designer’s ability to provide refuge from these climatic conditions, which differ depending on the latitude and season of the year—are key components of urban design solutions for urban environments (see Figure 5).

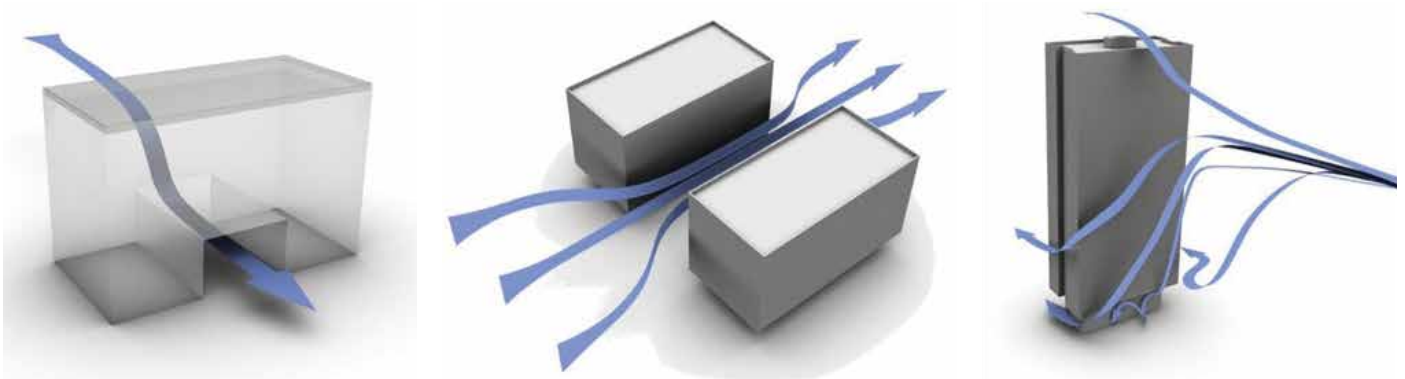


Figure 5. Wind that runs under, between, or down the façade of a building can be modeled to help in the design of the ground plane around tall buildings. Downwash (right) is particularly prevalent at the base of tall buildings. Tall building shapes and façade treatments together with effective canopy design can mitigate down drafts. At the building base, landscaping and other methods to shield building entries can improve pedestrian realm. WIND MODELING. (Source: RWDI)



Figure 7. Sharing density across parcels to share the mutual benefit of open space. DENSITY TRANSFER AND COORDINATED GREEN ALLOCATION. (Source: Gensler)

The degradation of the environment in China and the lack of a holistic approach to the design of the urban habitat require new solutions that explore the design and program deficiency at the base of urban buildings. Below, we explore this issue at three separate scales: Site, Street, and District. For each scale, we use recent planning and urban design work in China to examine and illustrate planning strategies and design solutions that protect and promote the public realm. Our goal in this work is to develop and propose design strategies for the ground plane and surrounding environment that match the level of creativity and exploration that has typically been expended on the tall building. We believe this will help to alleviate the problems that an over-reliance on the automobile and an under-appreciation of the spaces around tall buildings have created in cities in China.

area. However, it was underutilized as an asset upon which to shape a vision for the area, its twists and turns and picturesque features ignored in the siting of potentially key parcels that might draw value from the waterfront character to shape the public realm and urban habitat (see Figure 6).

Our largest challenges in developing a solution were the regulatory elements of the development code, particularly the rules regarding maximum site coverage, building setbacks, and, to a lesser degree, maximum building height. With a priority of shaping development to maximize transit use, our goals included creating rules that would implement a superior pedestrian environment. In order to do this, we investigated methods to facilitate a mix of uses and prioritize transit use by de-emphasizing vehicular throughways and parking.

The subway network offered an ability to access the CBD from the planning area in as few as one or two stops. We determined that this offered a key impetus to plan for development in the areas around the subway stations that takes advantage of the transportation investment and opportunity. But when investigating the existing development regulations for maximum site coverage, minimum parcel green percentages, and building height maximums, we determined that the existing code did not differentiate between non-transit development sites and sites that lay beyond a reasonable walking distance from the stations. By planning for development that could take advantage of the subway network for a significant percentage of residents' transportation needs, there was an opportunity to reduce dependence on the automobile but it would require design of the public realm to support safe and easy

### The Building Site

In Nanjing, we developed strategies to use building form to both shape the pedestrian realm along city streets and provide a way for future development to shape a differentiated and unique skyline. A Control Plan had been developed in accordance with the China development code for a 17-square kilometer area that held a complex and dynamic variety of site features. These features included a significant and storied river; a planned and partially constructed subway network that expanded on the city's existing transit system; a varied topography across the planning area; a lack of open space, including parks and linear greenways, as well as any kind of an open space network; and, an over-reliance on one employment sector, which was saturating the area with low-paying jobs, guaranteeing an overabundance of lower-end housing and stagnating investment in the riverfront and improvements to streets and the public realm.

The river winds its way through the site and provided an opportunity to enhance non-vehicular circulation across the planning



Figure 6. The urban design strategy for the Nanjing site established a vision for the riverfront that would create greater value along the water and extend the impact of that amenity inward toward the transit station areas. NANJING RIVERFRONT ILLUSTRATIVE. (Source: Gensler)



Figure 8. Focusing development at a transit node intensifies development at the transit opportunity and allows for the evolution of a skyline. INCENTIVISED DEVELOPMENT CONTROLS. (Source: Gensler)

pedestrian access and activity. Assuring that there is good urban design of the public realm will create a unique character for those transit neighborhoods and will add value to parcels much in the same way as taking advantage of the river's amenity.

Topography and a lack of open space provided opportunities to create non-vehicular circulation networks that could connect riverfront development to the transit opportunities. Likewise, such a pedestrian network would allow for a quicker access from the transit neighborhoods to the recreational and waterfront opportunities the river offers, thereby differentiating those neighborhoods in a way that will allow them to develop into places that would have a vital character that could stand apart from whatever character future buildings give the area.

One strategy we developed to revise the Control Plan is to allow and encourage the "sharing" and mixing of density and parcel green space across neighboring parcels (Figure 7). Partially shifting density from one parcel to another would allow a larger green area to be developed to the mutual benefit of both parcels, as well as other parcels. In some cases, differentiating the allowable maximum height might implement a better implementation of this strategy. The next step would be to follow the spirit of this mutual benefit development transfer across multiple parcels in the formation of an open space network. Such a green linear network could become a key component of the city's circulation infrastructure and facilitate greater pedestrian and bicycle access to the subway stations, as well as the river and other areas across the district.

Another planning strategy that will underpin better urban design is one that facilitates greater pedestrian activity,

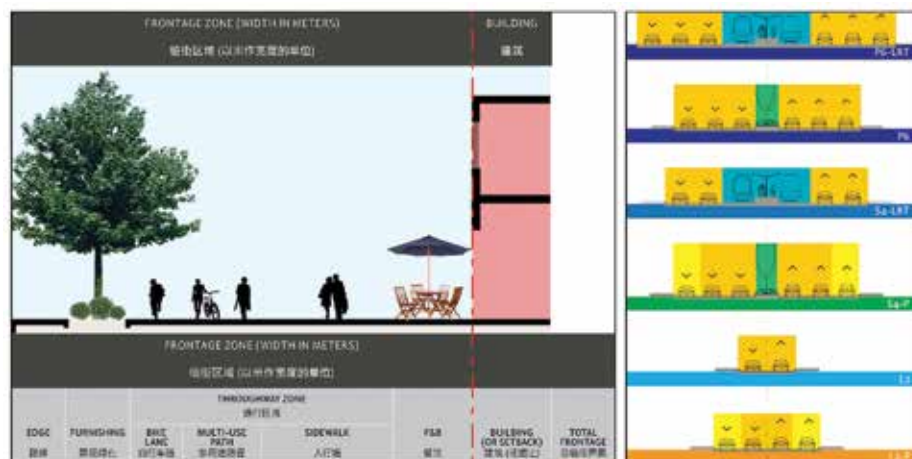


Figure 9. The Frontage Zones and Travelway zones together create the street cross-section. FRONTAGE ZONE AND TRAVELWAY ASSIGNMENTS. (Source: Gensler)

particularly for parcels within a short walking distance of a subway station. Presently, the regulations for maximum site coverage do not allow for enough built area to frame and reinforce the sidewalk realm. We proposed to allow greater site coverage and building height on parcels within four hundred meters of a station, about the distance of a 5-minute walk. On the ground plane, this will allow for a greater amount of building frontage at the block perimeter, which will provide an edge to the pedestrian environment. It will also allow taller development around transit stations, which will differentiate the height across the district and allow for the creation of a discernible skyline (see Figure 8). At the same time, this will require greater attention to shade and shadow issues and how those elements impact public spaces.

### The Street

In Kunming we developed a strategy that would assure favorable walking environments on all sidewalks within the 4,000-hectare planning area. We first assigned two different zones that together cover the distance from building face to building face, including the right-of-way and the parcel setback. The Frontage Zone provides a series of conditions for the area between the building face and the curb while the Travelway Zone assembles a series of curb-to-curb lane configurations that conform to the planning area's roadway hierarchy (see Figure 9).

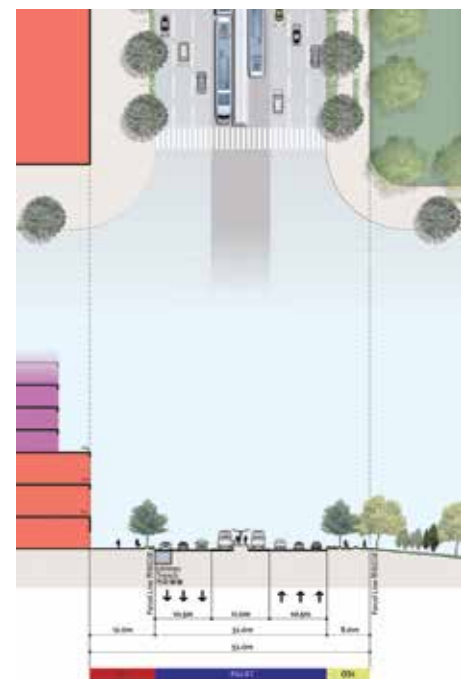


Figure 10. The cross-section of the planning area's most significant street shows it set between a key open space and the new CBD. FEI HU DA DAO CROSS-SECTION. (Source: Gensler)



Figure 11. A variety of ratios were developed for the Master Plan for Bandar Seri Begawan, the capital of Brunei, which is near the equator on the island of Borneo. The Master Plan put in place regulations that made building arcades mandatory for all new construction in the CBD. ARCADE DESIGN GUIDELINES. (Source: The Office of Tom Ford/HOK Asia Pacific)



Figure 12. The narrow lanes and intimate details of the lilong neighborhood exist in the context and sphere of new development that is taller and of a contemporary design style. ZHABEI DISTRICT LILONG, SHANGHAI. (Source: Gensler)



Figure 13. The District government determined that a number of existing lilongs should be conserved (buildings shown with terra cotta roof color) in the redevelopment of the Zhabei District neighborhood. AN'KANG YUAN SITE PLAN, SHANGHAI. (Source: Gensler)

The goal for this strategy is to provide the local government and future developers with an assurance of the future sidewalk conditions on all streets in the planning area as development proceeds in multiple phases over many years. By coding each of the sidewalk environments envisioned for the Frontage Zone and likewise coding each of the potential configurations of the Travelway, every block face in the planning area can receive an assignment that shows its predicted street character at plan buildout.

The frontage zone includes a series of components that comprise the public sidewalk realm in front of a building, including the building setback, if any. Each component, such as the Food and Beverage Zone, the Bike Lane, or the Sidewalk Zone, is given a dimension (including zero for some conditions, since not all streets will have food and beverage or bike lanes). Each potential configuration of Zones and dimensions is given a code and those codes are then assigned across the planning area. A series of street cross-section diagrams were developed for the various conditions (see Figure 10) and the codes are displayed along the dimension string at the bottom of the diagram.

One component that was not detailed in the building frontage selections for the Kunming site was that of an arcade. Because the climate in Yunnan Province is relatively moderate for much of the year, shaping the building frontage to provide relief from sun and precipitation was not an overriding concern. However, we have developed strategies (see Figure 11) to address those types of adverse climatic conditions in other places, particularly in Southeast Asia, where latitude and locale create conditions in which rain and direct sun negatively impact an unprotected public realm to a greater degree and for a significantly longer portion of the year.

### The District

In the Zhabei District of Shanghai, the small enclave of An'Kang Yuan is a lilong (lane house) neighborhood that is rich in character, densely built and of a memorable context (see Figure 12). The district government desires to keep many of the lilong structures intact while allowing denser and taller new development to be built at appropriate places within the neighborhood (see Figure 13). The government's desire is to see the new development—its height, massing, and style—implemented in such a way as to enhance the lilong neighborhood rather



Figure 14. These renderings are the beginning of a long process to determine the appropriate physical and contextual relationship between the lilong buildings and new development in the neighborhood. PROPOSED AN'KANG YUAN VIEWS, SHANGHAI. (Source: Gensler)



Figure 15. The "new" often appears while viewing the "old" in Shanghai. PUDONG AS SEEN FROM PUXI, YU GARDENS, SHANGHAI. (Source: Tom Ford)

than overwhelm it. The important issue in the government's decision to plan for future development in this way is that they are not looking at the existing lilong development in a way that is nostalgic, simply wanting to keep the buildings because they are beautiful or touching. Rather, the government understands the dynamic way in which people live in these neighborhoods and the bustling scale with which community members enjoy vitality and a lifestyle that in many other parts of Shanghai—and China—has been rapidly disappearing and being replaced.

The design challenge for the Zhabei District lilong neighborhoods has been one of devising a context for development that is part old and part new, part community heritage and part contemporary development. In this sense, there are actually two contexts: the old and the new. The key to developing successfully will be to meld those two contexts in a way that makes them mutually successful and allows the dynamic lifestyle to flourish (Figure 14).

### Urban Design Moving Forward

We have examined the public realm at three different scales: Building Site, Street, and District to demonstrate the wide variety of entry points at which urban designers and planners can insert themselves into the design process and ensure that as design goes up, with the development of new buildings, it also goes out, and includes the context in which new development occurs. Each of the three scales examined above should continue to push at the



limits imposed by the Chinese development code. Perhaps more government-sponsored projects in the spirit of the Zhabei District planning effort will come to fore. As Emily Talen writes, “who isn’t for nudging and tweaking instead of commanding and bulldozing?” (Talen, p. 183). And as Jao points out, many of the urban planning principles set forth in the Athens Charter nearly 80 years ago at the Congress International d’Architecture Moderne (CIAM) remain relevant today (Jao, p.148). As is so often the case, moving forward requires looking backward and endeavoring to undertake a rigorous examination of what has worked and what has not in the design of the urban

habitat. As was shown in Figure 3, above, some of our cities’ older spaces continue to provide clues for the development of design solutions today that bring scale, activity, and complexity to the public realm.

Reaching for the sky is one of the simplest and purest of human instincts. Tall buildings answer that desire in so many ways—symbolically, socially, and economically. However, beyond what a city gains from the tall building, there must remain an ability for it to function as an urban habitat. As Dorothy and her friends discovered in *The Wonderful Wizard of Oz*, travelling to the city is not as rewarding as

reaping the rewards that come with spending time there upon arrival. In fact, the overriding reason for Dorothy’s journey was to be home again. Her home, although not a city but late nineteenth century rural America, was a place she understood and where she instinctually knew she belonged. Moving forward, a reinvigorated implementation of urban design principles and design intent that expose and promote the character and attributes of the places we endeavor to improve, will ensure the development of places people want to be in as well as observe (see Figure 15).

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