



Five Infrastructural Areas That Impact Revenue In An Urban Region

To begin, we concede that infrastructure is a broad and vast issue to discuss. There are many definitions and diverse areas for describing infrastructure. For this issue, a collective definition of **Infrastructure** is the basic physical and organizational structures needed for the operation of a society or enterprise, or the services and facilities necessary for an economy to function. It is our belief that we all can wrap our minds around this concept and understand the “what and where” of these entities. Our roads, public works, mass telecommunications network and water supply are primary thoughts when Infrastructure is discussed, but rarely do we discuss the impact of these vital elements of our physical environment as it relates to the socio-economic aspects of life. This issue will focus on the inextricable linkage of infrastructure to the success and failures of urban areas as it pertains to revenue and other resources.

What are “Five” Key areas in which infrastructure impacts our social and economic lives? They are, in no particular order, as follows:

- 1) **Mass Transit**
- 2) **Transportation Network**
- 3) **Public Utility and Communication Network**
- 4) **Urban Design**
- 5) **Public Facilities**

This issue will explore the connectivity of the aforementioned and explain how they impact and, many times, dictate the future success and failures of urban areas.

- 1) **Mass Transit** – As a functional definition, we describe mass transit as any public entity that transports people within or external to a region. This may include bus, train, streetcar or ferry; to name a few. In regards to mass transit, the movement of people is critical to the socio-economic determination of an area and this is how.
 - a. Employment Opportunities are limited if there are “**spatial mismatches**” between potential employers and employees. Meaning, oftentimes employment opportunities are available to potential employees, but the linkages between the two are limited, weak or non-existent. This occurs when the employment center is located in an area that is difficult for the potential employee reach. The spatial mis-match can occur when the amount of time required to reach the “center” is not justified by the resources attained, as well as the amount of friction encountered by the traveler. Another mis-match is the amount of modes¹ required to travel to the employment center. Travelers requiring more than two modes of mass transit often find the friction of the trip to be overwhelming

¹ Mode is the type of vehicle used to travel; i.e. car, bus, train, cab, etc...



over time and opt out of the scenario altogether. Either way, a spatial mis-match occurs if the mass transit system lacks the ease of connectivity.

- b. **Human Connectivity** – When mass transit systems are effective and efficient, a social bond is created. This bond becomes the collective understanding that the mass transit system is a “sacred institution” that belongs to “everyone” and a cultural norm for utilizing it is formed. The system, in these scenarios, is viewed as being for “all” regardless of socio-economic background. These systems are closely protected by a group consciousness, as well as public safety resources. Subways and bus routes are closely guarded by police and security in effective systems, as well as citizens. In non-effective systems, the system itself is viewed as a last resort alternative for travel. The system is then surrendered to social deviants and others perceived to not have the resources to attain more effective transportation. This leads to the following.
- c. **Public Fear** – When the mass transit system lacks “human connectivity”, public fear ensues. The mass transit system is viewed as a dangerous mode of travel; the very last resort. When this occurs, the system itself begins to implode. Because the system lacks the volume of riders needed to support it, transportation routes are discontinued, the frequency of trips are reduced and, ultimately, the system begins to shut-down.

When these elements are poorly maintained or non-existent, a breakdown in the social fabric begins to occur. This ultimately leads to a public perception of limitations within the region/area and consequently to a mass community dis-investment in a critical area within the region.

- 2) The **Transportation Network** within a region is closely aligned with the mass transit system and sometimes a contributing factor to the success and failures of mass transit.

The transportation network deals specifically with roads, streets, freeways, tunnels and bridges. In a well-designed and maintained system, the streets easily link to major roads and freeways. These ultimately pass over and through bridges and tunnels making the transportation network seamless and invisible to the user. When these elements within a region are designed and maintained properly, successful business and human activity is most likely favorable. When the elements are not maintained and/or non-existent; failure is inevitable. Potholes, collapsed bridges and other visible deterioration lead to an overwhelming sense of failing. This leads to a lack of business development and friction for passenger/vehicle travel within the system. The consequences for a high-friction system is frustration, which leads to dis-investment. The disinvestments are realized in an inability to attract business to areas, as well as residents.



- 3) **Public Utility & Communication Network** - This deals with the capacity to offer electricity, heat and communicate effectively and efficiently within and outside the region. There are few urban areas that lack the basic elements to deliver electricity, heat and communicate through existing systems. The problems do not exist in or on an individual basis. The problem(s) exists in the dissemination and distribution of service delivery and information available through public venues.

Businesses seek areas that offer a flexible infrastructure to accommodate their business practices. The more advanced the current technology, the more that technology can grow with their business interests and link with future technology. Is the electricity delivered above or below ground? Are alternative energy sites available in your region? These are the new demand questions asked for attracting business and modern residents. Areas that possess basic communication infrastructure suffice for existing business practices, but lack the attractive elements for newer type businesses. Wi-Fi and Hot Spots are no longer considered new technology, they are now “normal” methods of communication. The less this is available, the less likely the area is going to attract new residents and business.

- 4) **Urban Design** - The urban design of an area deals specifically with the functionality of the area or region. Meaning, the design of the infrastructure factors into how the people live, work, travel and spend their leisure time in the area. Most older cities were designed on a grid system with streets and roads linking by way of a horizontal and vertical system (*essentially, straight lines of transportation and utilities*). This was highly effective for the times in which these system(s) were designed. Our modern way of life requires more detail to design for lifestyle and function. Grid systems allow for free access, but it also attracts less desirable traffic in areas that more modern urban designs deflect. In addition, Urban design of infrastructure assures inter-connectivity of land use by assuring each parcel of land compliments the adjacent parcels. Quick examples are to assure coffee shops and bookstores are located near universities and colleges. The compliment of the anchor, university, are support entities that reflects the values and social behaviors exhibited by college students and faculty. By design, these elements support each other and a well-designed master plan would reflect these ideas. Contrary to this is the development of a waste disposal and treatment industrial park near a densely populated residential area. By failing to compliment each parcel with each other, poor urban design is derived. The point to this is poor urban design can negatively impact an area for many years; as well as destroy the current and future values of the land in the area and region.



- 5) **Public Facilities** – A region’s public facilities can serve as great anchors for attracting desired populations and resources. On the other hand, poorly maintained public facilities are seen as signs of failure and decline; repelling current and future citizens and resources. To fully understand this requires a brief definition of a public facility. For practical purposes, we will say a public facility is any facility that is available to the general public for free or fee. These facilities can include, but not limited to, libraries, museums and other cultural destinations. Public Universities, colleges and public schools fall under this category. Also, Civic and convention centers, as well as stadiums and other leisure & recreational venues such as parks, plazas and recreation centers. Governmental support centers like police stations, fire-houses, city hall and courts fall within this definition. When these elements are properly maintained, most areas experience great success. In fact, when they function properly, citizens and businesses support them willingly with tax dollar mileages and their private patron funds. When they are not properly maintained, failure is eminent.

Stadiums become outdated, leading to poor attendance in failed systems. Poorly maintained parks and recreation centers begin to exhibit evidence of non-existent care and dilapidation. Public universities and colleges fail to attract students and other qualified support staff, because campuses lack the basic amenities found in successful scenarios. These are some of the impacting factors that lead to dis-investment within the region or community.

The impact of the failure to address the above infrastructural items leads to community collapse and chaos. More than any other element in community, the perception of a failed infrastructure deteriorates the collective psychology of the citizens therein. The large pothole at the end of the street sends a message of incompetence to address the needs of residents. Uncut grass at the local park and broken swings begins to attract undesired behaviors and most likely, increased crime. Closed and abandoned schools send, perhaps, the worst message of all; no help for children. When the infrastructure fails, the community fails, leadership is questioned and residential and business exodus is inevitable. With the mass loss of residents and businesses (*usually those possessing the needed resources to maintain the area*), chaos ensues.

Many areas try to fix the problems in segments with incremental projects, but this only frustrates the community further, because the increment is seen as a pacification gesture; due to all of the other elements that go unattended. Political leaders become frustrated, because the problems become overwhelming. As a result of this, the community begins a cycle of blaming and segregating themselves by collective interests. It is at this point, the community spirals out of control.



Failed infrastructure demands the most urgent attention and strategic planning to address the impacting issues.



SOLUTIONS TO FAILED OR POORLY MAINTAINED INFRASTRUCTURE

Whereas each of the aforementioned areas of infrastructural impact are unique in how they effect the revenue of an urban area, the solution(s) for addressing them, if inadequate, is essential the same; New master planning and an infusion of financial resources.

Whether it be mass transit or public facilities, the transportation network or urban design, the pre-requisite is essentially to devise a new master plan and pay for the implementation of the plan with new financial resources. Unfortunately, unlike in the near past, financial resources require a new approach to attainment. Gone are the days in which granting of a fiscal request from federal government agencies were as easy as a simple completion of a grant package. In our modern time, federal agencies are moving toward a more stringent and responsible determination criteria to grant financial resources to urban areas. Potential awardees are now expected to demonstrate the utilization of specific professional expertise of subject areas. With the rapid sharing of information and public data, the scrutiny for requests is reviewed by competing entities. Modern success and failure is based on the ability to justify, as well as demonstrate an executable plan of action to attain large awards.

Understanding this, the solutions for addressing the problems of failed infrastructure requires professionals that understand the “modern” issues and are prepared to address them with plans of action for the *current time and the foreseeable future*. “Template Planning”² is no longer an option for addressing crumbling roads and bridges. Dilapidated museums and cultural centers require more than superficial facelifts to attract new patrons. Mis-sized civic centers need more than renovation to attract conventions and major events. There must be a justification for the infusion of new resources to support these functions. In addition, a new burden of demonstrating a capacity to match or sustain resources has been derived by our current national financial crisis. If a plan fails to illustrate the ability to sustain itself after the infusion of resources, the plan is reviewed in a non-favorable way.

These are summaries of the thoughts and ideas of Central Place Planning Professionals, LLC regarding the Impact of Infrastructure on Urban Areas. For specific implementation strategies, please contact our office at (866) 546-2722. We look forward to hearing from you soon.

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² Template Planning refers to the practice of using one planned solution to address all socio-economic problems; without regard to details within a specific area.