

San Antonio Urban Lighting Master Plan Executive Summary



Introduction and Overview

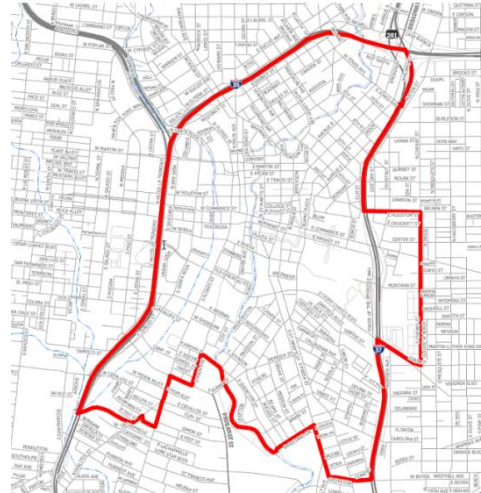
The San Antonio Urban Lighting Master Plan (ULMP) is a long term vision for lighting's role in the continued growth and prosperity of the City. It critically examines current lighting conditions and establishes a course forward for the upgrade and modernization of lighting systems. Lighting quality is the cornerstone of the master plan and serves as the basis for all recommendations. High quality lighting design embraces the entire visual environment, not only matters connected specifically to illuminance levels on street surfaces and sidewalks. It provides guidance on issues related to light as an influence on orientation, wayfinding, place making, aesthetic enrichment, and the reinforcement of perceptions related to safety and security. Further, the Plan provides perspective on the impact that lighting systems have on the City's daytime street life, as well as their potential role as broader, active participants in a digital communication infrastructure.

The ULMP is intended to provide guidance for the immediate upgrade or replacement of lighting systems to meet current institutional needs, including improvements in baseline lighting conditions where required throughout the City.

Ultimately the document is projected to guide sustainable improvement and development and to encourage a unified lighting character and identity throughout San Antonio. It recommended that this document be updated on a five to ten year cycle, if practical.

Scope of Work

The physical project limits were defined in the December 2016 Urban Lighting Master Plan (ULMP) RFQ (TCI #121616KY), issued by the City of San Antonio. It was defined as the area bordered by IH-35 to the north, IH-10 to the west, the southern boundary of San Antonio City Council District # 1 to the south, and IH-37 to the east, with the addition of the Alamodome area bordered by E Houston Street to the north, Cherry Street to the east and Cesar E. Chavez to the south.



The major areas of focus within the scope area are:

- **Streetscapes** – Lighting for streets and public thoroughfares including vehicular roadway and bicycle traffic, as well as pedestrian activity on sidewalks, crosswalks and other gathering areas.
- **City Parks** - Seventeen parks within the confines of the project's scope. The work in these parks focused on after-dark pedestrian activity including informal interaction with surroundings, routine social engagement, recreation and special events, as well as aesthetics and beautification.
- **Civic Art** - Existing public art within the scope boundaries that provides, or could provide, positive impact for the community through nighttime illumination. Incentivizing of private entities to illuminate their publicly viewable art.
- **Building Facades** - Study of the current and potential impact of lighted exterior building facades for both aesthetic appeal and overall contribution to safety and security within the urban environment, especially streetscapes.

The goals of the project were concentrated on the planning and design of successful lighting strategies throughout the identified scope area for the betterment of urban San Antonio and the greater community at large.

Stakeholder and Community Engagement

Fundamental to the success and support of the Master Plan was a conscientious program of stakeholder engagement. The principal stakeholders, by virtue of being the funding entities for the project, were the City of San Antonio and CPS Energy. This involved active data and opinion gathering from a variety of City Departments encompassing: Transportation and Capital Improvements, Center City Development Office, Building Equipment Services, Parks and Recreation, Planning, Arts and Culture, Historic Preservation, Innovation, Office of Sustainability and Law Enforcement. This interface took the form of formal presentations, informal interviews and meetings. CPS Energy was involved through face-to-face meetings and teleconferences during the process.



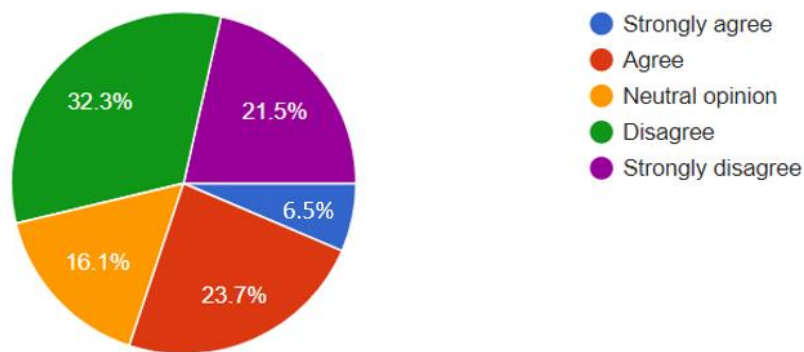
The participation of other stakeholder groups allowed for voices from a wide variety of users in the City's urban center including residents, jobholders, local and regional visitors, and tourists. Three (3) publicly advertised engagement and outreach sessions were held in the downtown to gather, first hand, questions and comments directly from these constituents.

The third of these sessions included a nighttime walk about the City and demonstration of building lighting effects.

An online opinion questionnaire about lighting in the downtown received over 400 responses from the public.

Your neighborhood or community has lighting that makes you feel safe after dark.

93 responses



Informal outreach to other local parties showing interest provided contacts with Centro Alliance, University of Texas San Antonio (UTSA), the American Institute of Architects (AIA), VIA Metropolitan Transit, and several other bodies with direct or indirect interest in the ULMP effort.



Lighting Quality

The ULMP speaks in detail about technical aspects of lighting in the downtown. These quantifiable characteristics of illumination focus on how much light is needed for driving, walking and performing other routine human tasks. It also addresses issues concerning equipment suitability, energy efficiency, and controls. Perhaps, however, the most important part of the master plan is the insight provided on the quality of light.

Light quality is a vital ingredient to a successful visual environment for San Antonio. Design of high-quality lighting supports, sustains and nurtures nighttime urban life. It is not limited to street and sidewalk surface illumination alone but, rather, it embraces other salient aspects of the nighttime street-level visual condition to better portray the true interactive human experience. How people feel - our moods, psychological wellbeing and perceptions about the world at large - can all be influenced by light. The minimization of glare and light trespass can provide a calmer, less stressful experience that helps enhance safety and security. Personal orientation and wayfinding can be improved after dark by providing proper visual cues through lighting. Light sources with high color rendering properties are best suited to naturalness and revelation of detail. The beautification of streetscape surroundings – building facades, art and landscape – through thoughtful, appropriately flattering light can elevate the sense of place and enrich social interaction for all.

Ultimately, the lighting master plan seeks to provide the framework for creating the highest level of lighting quality possible throughout the urban core.

The Streetscape



The lighting of streetscapes for vehicles, bicycles and pedestrians is at the core of the San Antonio ULMP.

Streetscape lighting design must account for a number of complex factors across the ULMP scope area. From a dense, commercial central core supporting business, tourism, conventions, and culture; to multi-use developments and light commercial in the area north of the central core; to low density single and multi-family residential in the south; the scope area exhibits

wide ranging diversity. Each of these zones and land uses do share a common characteristic, however, a need for a higher quality, better balanced lighting system for both and vehicular and pedestrian users.

Survey and Assessment

A survey of present-day illumination conditions throughout the scope area was conducted. Both quantifiable and non-quantifiable aspects of the lighting conditions were assessed. The principal elements examined were:

Objective evaluations:

- Measurable lighting quantities of illuminance and uniformity of light distribution
- Light source identification (high pressure sodium, metal halide, compact fluorescent and LED)
- Light source color attributes (Color temperature and color rendering properties)
- Currently installed lighting equipment
- Current energy and sustainability conditions
- Currently operating lighting control systems (where known)

Subjective judgments:

- General quality of light
- Impact of light source glare on drivers, bikers and pedestrians
- Appropriateness of lighting equipment selection with respect to scale, performance, energy consumption and controllability
- Impressions of existing lighting equipment aesthetics
- Observations of existing lighting layouts and their effectiveness in the reinforcement of orientation, wayfinding and safety

A unique set of street type categories were established to provide a hierarchical grouping of use that best aligned with the Federal Highway Administration (FHWA) guidelines. Those categories are: Minor Streets (both residential and commercial), Secondary Streets, Intermediate Thoroughfares and Primary Thoroughfares.

The field survey and assessment yielded wide ranging results, with a number of general operating characteristics and concerns emerging in each category.

Minor Streets – Residential: These are streets that serve predominantly residential communities, principally as local access, with little dedicated through-traffic. This includes areas with single-family and duplex homes, and some multi-family dwellings.

- Excessive spacing of light poles heightens sensitivity to light fixture glare.
- Extreme non-uniformity of lighting levels diminishes wayfinding and can result in perceptions of an unsafe environment to many residents.
- The color temperature of the LED fixtures installed on some streets is cool in appearance (4000K CCT), a whiteness which is normally perceived by home-dwellers in these residential areas as sterile and unflattering to pedestrians and an incongruent aesthetic.

- Pole heights of 25'+ in residential neighborhoods compromises scale and de-emphasizes pedestrian activity.
- Poor color rendering High Pressure Sodium fixtures found on some streets compromises visual perception and enjoyment of the nighttime neighborhood environment.
- The use of wood power poles for attaching streetlights is not ideal, as many of the poles are unsightly and out of-plumb.

Minor Streets - Mixed-Use and Commercial: These are streets that serve urban-centered mixed-use and commercial zones with destination street level activity such as retail, with limited dedicated through-traffic.

- Where dropped-refractor high pressure sodium (HPS) cobra head style fixtures are still in use, their direct glare is in marked contrast to the better LED cut-off optic luminaire styles used with other poles.
- Poor color rendering High Pressure Sodium fixtures diminish visual perception and acuity, while making it considerably more difficult to discriminate colors in the environment.
- The color temperature of the LED fixtures deployed on some streets is quite cool in appearance (4000K CCT), a whiteness which is not normally associated with historic downtowns.
- Where there is limited deployment of the acorn shade style heads using internal cut-off LED optics, effective pedestrian illumination and additional pavement illuminance for vehicles and bicycles is a welcome addition.
- A number of street blocks in this category include 14' to 16' poles with diffuse globes operating compact fluorescent sources - including one, two, four and five-globe configurations. These fixtures are neither historic, nor effective, producing glare and adding little functional illumination.

Secondary Streets: These are streets that serve both land access and traffic circulation in higher density residential and commercial/mixed-use areas. They distribute and channel trips between Minor Streets and Intermediate and Primary Thoroughfares.

- Where dropped-refractor high pressure sodium (HPS) cobra head style fixtures are still in use, their direct glare is in marked contrast to the better LED cut-off optic luminaire styles used with other poles.
- Where still utilized, the poor color rendering High Pressure Sodium fixtures diminish visual perception and acuity, while making it considerably more difficult to discriminate colors in the environment.
- The color temperature of the LED fixtures deployed on some streets is quite cool in appearance (4000K CCT), a whiteness which is not normally associated with historic downtowns.
- The uses of wood power poles for attaching streetlights is not ideal.
- A number of street blocks in this category include 14' to 16' poles with diffuse globes operating compact fluorescent sources - including one, two, four and five-globe configurations. These fixtures are neither historic, nor effective, producing glare and adding little functional illumination.

Intermediate Throughways: These are streets that Interconnect with, and augment, the higher-level Primary Throughways. They provide more land access than Primary Throughways without penetrating identifiable neighborhoods.

and

Primary Throughways: These streets serve major activity centers, have the highest traffic volume corridors and longest trip demands. They interconnect and provide continuity for entering and leaving the urban area. They serve demand for intra-area travel between the central business district and outlying residential areas.

- Where dropped-refractor high pressure sodium (HPS) cobra head style fixtures are still in use, their direct glare is in marked contrast to the better LED cut-off optic luminaire styles used with other poles.
- Where still utilized, the poor color rendering High Pressure Sodium fixtures diminish visual perception and acuity, while making it considerably more difficult to discriminate colors in the environment.
- The color temperature of the LED fixtures deployed on some streets is cool in appearance (4000K CCT), a whiteness not normally seen in historic downtowns.
- Where in limited deployment, the “acorn” shade style heads using internal cut-off LED optics are effective for pedestrian illumination and for providing additional pavement illuminance for vehicles and bicycles.
- The uses of wood power poles for attaching streetlights is not ideal.
- A number of street blocks in this category include 14’ to 16’ poles with diffuse globes operating compact fluorescent sources - including one, two, four and five-globe configurations. These fixtures are neither historic, nor effective, producing glare and adding little functional illumination.

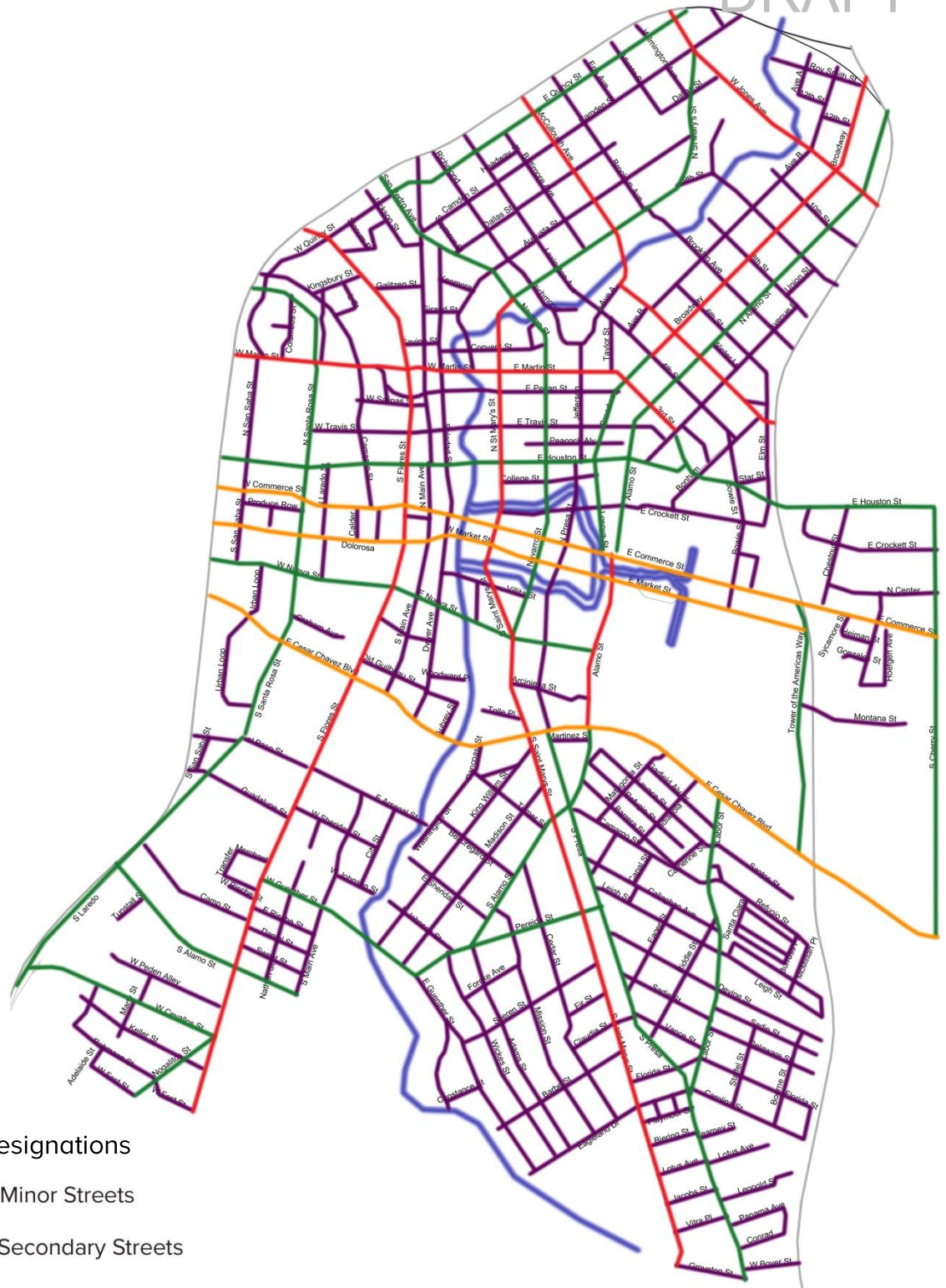
City Connected - Streetscape lighting recommendations

The survey and assessment phase provided an understanding of existing strengths and weaknesses in the current streetscape lighting conditions. The results were a major consideration in the master planning process.

The development of street lighting standards across street type categories had to accommodate the diversity of needs and challenges encountered in each area. Those requirements were best served by addressing three major criteria - pole and lighting fixture assemblies (pole and fixture mounting heights and fixture performance) light source color (color temperature and color rendering capabilities) and lighting intensity (based on visual needs of the street type).

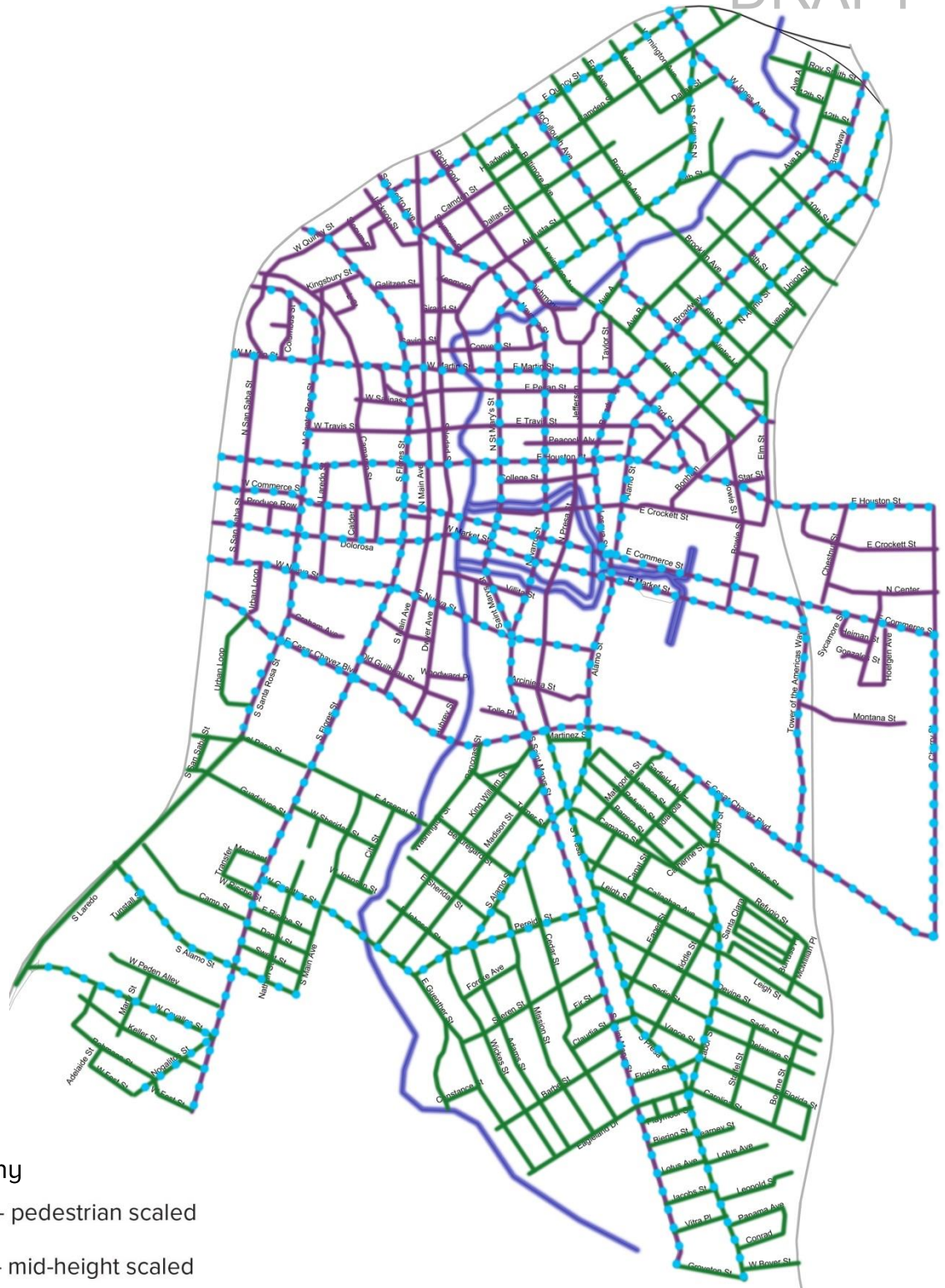
Further refinement was introduced through category variants to permit the inclusion of specific neighborhood and street-use conditions such as residential/commercial balance, vehicular/pedestrian interaction, scale, etc.

Streets throughout the ULMP scope area are categorized based on the street type classification. Graphical overlays of these classifications, as well as those of the defined variables of pole type, light source color and lighting intensity, provide an overview of the recommended lighting approaches for each street.



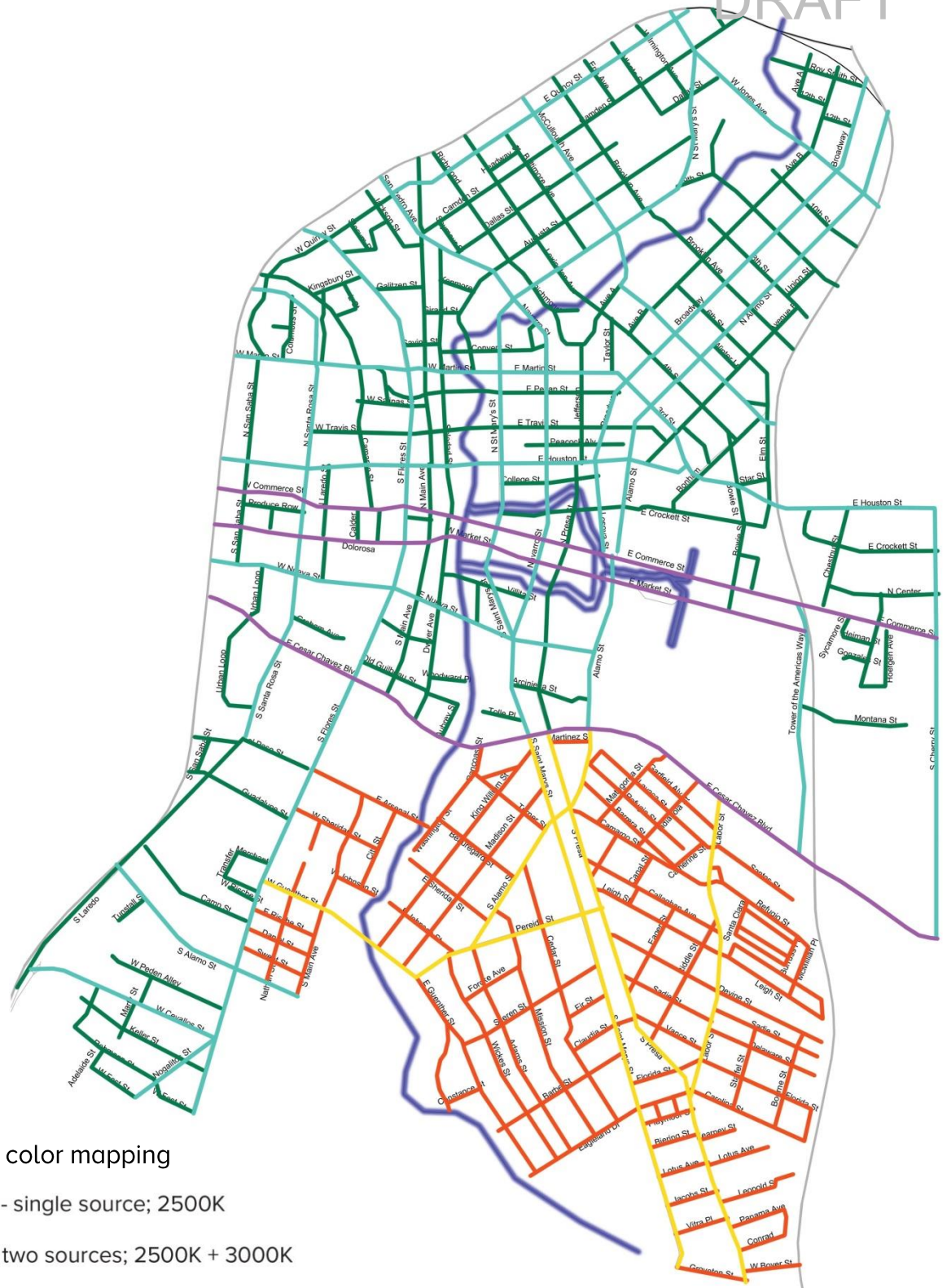
Overall street designations

1. ● Purple - Minor Streets
2. ● Green - Secondary Streets
3. ● Red - Intermediate Throughways
4. ● Orange - Primary Throughways



Pole typography

1. ● Purple - pedestrian scaled
2. ● Green - mid-height scaled
3. ● Cyan - roadway scaled



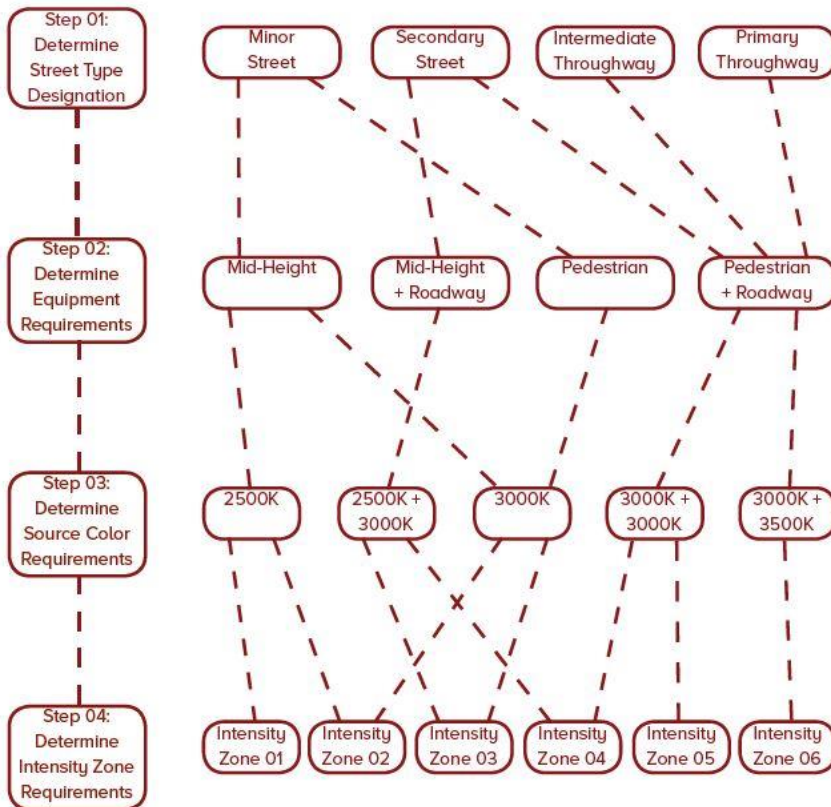
Overall source color mapping

1. ● Orange - single source; 2500K
2. ● Yellow - two sources; 2500K + 3000K
3. ● Green - single source; 3000K
4. ● Cyan - two sources; 3000K + 3000K
5. ● Purple - two sources; 3000K + 3500K



Overall source color mapping area

1. ● Blue - lighting intensity zone 01
2. ● Green - lighting intensity zone 02
3. ● Red - lighting intensity zone 03
4. ● Orange - lighting intensity zone 04
5. ● Cyan - lighting intensity zone 05
6. ● Yellow - lighting intensity zone 06



Each of the nine recommended streetscape lighting design combinations consist of these major elements:

- Street Type Designation (Ex. – Secondary Street: Variant A)
- Pole type(s) (Ex. – 30' Streetlight pole and 12' Pedestrian pole)
- Light source color temperature (Ex. – 3000K)
- Light intensity (Ex. – Intensity Zone 04)
- Other specific information (Ex. – Street width, recommended pole spacing, special optical considerations)

Tables, charts and support graphics further detail specifics of the deployment strategies for each of the street types. These approaches for streetscapes blend aspects of lighting quantity and quality to obtain a balanced, holistic lighting result.

Other streetscape contributors

In addition to vehicular and pedestrian needs met by the pole mounted lighting equipment, a number of other collateral influences on the overall streetscape lighting experience are addressed in this section. These include:

- Off-street lighting impacts – Surface and garage parking lots, building façade illumination, lighted storefronts graphics, canopies and overhangs
- Coordination with other street elements - trees and planters, graphics and signage, bus stops, seating, artwork
- Alleys and underpasses

System Controls and Smart City

San Antonio public utility CPS Energy has incorporated lighting control via a mesh network for much of the current urban core street lighting system. A more limited application of light intensity control has been installed by San Antonio's Building and Equipment Services Department (BESD) on a number of city blocks in the heart of the commercial district, which includes shorter, pedestrian-scaled poles and luminaires.. Both systems are being used to manage lighting assets. More pilot programs are underway as of the writing of this master plan.

The future of this control management for lighting and associated services is robust and should be expected to expand rapidly in the coming decade. The current and future lighting assets deployed throughout the urban area can serve as an expandable interconnected grid, capable of providing real time sensing and monitoring for both lighting and non-lighting resources. As the system continues to evolve and upgrade, a more comprehensive deployment of control and monitoring can occur with both lighting and non-lighting initiatives, including:

- Traffic volume light intensity adjustment
- White-color temperature tuning of LED light sources
- Curfew and special event setbacks
- Intelligent lighting intensity controls

Perhaps the fastest moving innovations are taking place in non-lighting arenas with environmental conditions sensing, wireless communication, parking space detection and similar digitally enable technologies. San Antonio's Office of Innovation has recently

- Noise sensing
- Air quality sensing
- Electrical transportation charging stations (EV)
- Parking availability assistance (sensor or camera)
- Emergency detection and response systems
- Small cell, Wi-Fi and other broadband/wireless interfaces
- Digital signage
- Ambient noise detection and monitoring
- Traffic cameras
- Temperature sensing and monitoring

San Antonio's Office of Innovation has incubated a number of use cases, currently being considered for deployment in designated zones of the City. A detailed critical assessment of each of the eleven (11) cases is provided in the appendix of the ULMP.

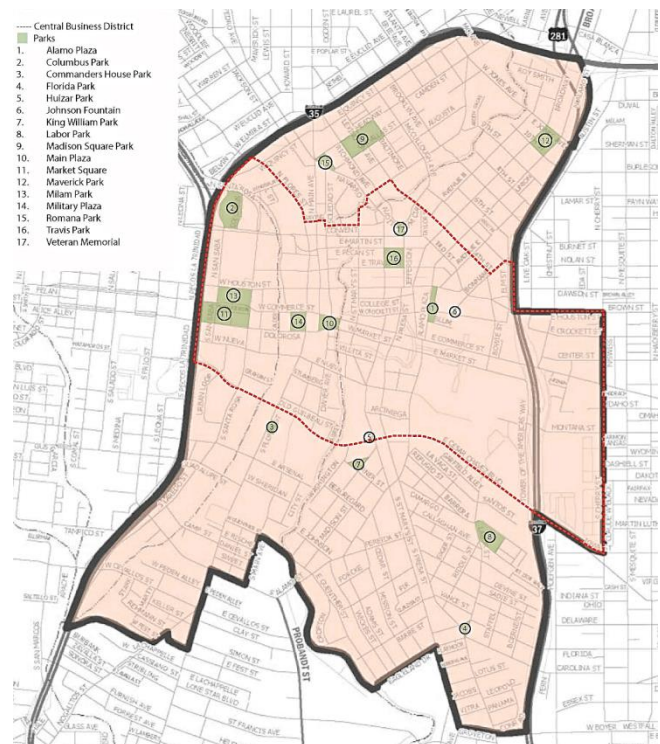
Parks

Overview

There are seventeen public parks found within the ULMP scope area, ranging in size from the multi-block Madison Square Park to smaller pocket parks like Huizar Garden and Johnson Fountain. They exhibit a variety of pedestrian-focused uses throughout daylight hours. Seasonal and holiday festivals are frequent occurrences in the city park system as well, although mostly daytime, serving a broad cross section of users including downtown residents, weekday city workers, weekend county visitors, and a regional and national tourist base. Unfortunately, the life of these parks is greatly diminished after dark. Pedestrian activity is low and organized nighttime events are rarely scheduled or supported. As with many American cities, there is thinking by many that urban parks are simply not safe at night. Whether borne out by crime statistics or not, the perception of a lack of safety and security is at the root of this concern.

Improved lighting can be a significant step in restoring these many of these spaces to relevancy after dark.

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|--------------------------|----------------------|
| 1. Alamo Plaza | 11. Market Square |
| 2. Columbus Park | 12. Maverick Pack |
| 3. Commanders House Park | 13. Milam Park |
| 4. Florida Park | 14. Military Plaza |
| 5. Huizar Garden Park | 15. Romana Park |
| 6. Johnson Fountain | 16. Travis Park |
| 7. King William Park | 17. Veteran Memorial |
| 8. Labor Park | |
| 9. Madison Square Park | |
| 10. Main Plaza | |





Survey & assessment of existing park lighting

The evaluation of each park was conducted at the outset of the master planning effort.

A thorough daylight and nighttime review of the existing parks served as a foundation for understanding the current lighting conditions. Lighting levels were measured for pathways and pedestrian

gathering areas, while detailed observations were made to answer key questions about glare, perceptions of safety and security, reinforcement of orientation and wayfinding, and even aesthetic suitability.

The quantity and quality of lighting varied dramatically from park-to-park, with a number of inadequacies and shortcomings found in the majority of the parks.

- Some parks have no pedestrian pathway lighting at all. Lighting levels in these cases are well below recommended professional practice for pedestrian walkways and are considered unsafe.
- Post-top, pedestrian scaled light poles produce glare and, in many cases, light trespass off property. Pedestrian visibility is significantly compromised in a number of the parks.
- Even in parks that have dedicated pedestrian lighting along pathways, some were found to be too non-uniform for good wayfinding.
- Ground, building and pole mounted area floodlights are routinely aimed at high angles causing discomfort glare and eroding visibility.
- White-light color temperatures are too “cool” in many parks (4000k or greater). 3000k sources are considered more pedestrian friendly and inviting.
- Very few parks include dedicated accent or highlighting to enhance landscape or architectural structures.
- Dedicated lighting equipment meant specifically for the illumination of special events or activities very limited.
- Some lighting equipment is outdated and/or nearing end of its useful life.
- Curfew lighting controls do not appear to be used in most parks.

Recommendations for upgrading existing lighting and planning for the future

A detailed analysis of these existing conditions gave rise to a set of guiding principles for improving fundamental lighting design in the parks of San Antonio. These recommendations are documented in detail within the ULMP, including specificity regarding quantitative and qualitative design practices. Guidelines include:

- Providing adequate functional illumination of pathways, gathering areas, and pedestrian interaction zones, including the creation of soft vertical light conducive to good visibility of nearby pedestrians.
- Exercising precise control over stray light and glare that can severely erode visibility and compromise perception, thereby heightening pedestrian feelings of uncertainty and sense of safety.
- Incorporating, where practical, the use of accent illumination and highlight to reveal landscape, hardscape and architectural features, all of which aids in the reinforcement of orientation and wayfinding for pedestrians.
- Furnishing of specialty lighting for artwork, memorials and other feature elements worthy of acknowledgment, helping to establish a level of dignity and neighborhood investment to the park's nighttime persona.
- Integrating special event lighting options, where appropriate, to support organized and informal evening activities and seasonal displays.
- Emphasizing long-term sustainability measures, along with manageable maintenance and operational strategies

Civic Art

Art is a vital part of a city's identity. The San Antonio Department of Arts and Culture is at the center of promoting fine arts in the community, and its leadership has emphasized engagement at all levels. Lighting art for enjoyment by those who live in, or visit, the downtown after dark is a natural extension of that outreach.

The ULMP addresses lighting design approaches for many of the existing art installations found in the scope area. Suggested equipment selections and deployment strategies are included for guidance at each location.

As new art pieces are placed throughout the City's downtown in the coming years, lighting should be an integral part of their installation and siting. The ULMP provides basic guidance on how art should be illuminated under various conditions. The techniques outlined and described include uplighting, remote accent lighting and light integral to the artwork.

There is also noteworthy art owned by private entities that is on display for the enjoyment of the public. After-dark illumination of these pieces should also be encouraged, and the City can help to incentivize the private owners to light their publicly displayed artworks in a number of ways.

- Permitting the private artwork owners to mount lighting fixtures on public light poles or in right-of-way areas to achieve maximum effectiveness when needed.
- Recognizing owners' willingness to light their art displays as a civic contribution to San Antonio's urban experience.



- Promoting and participating in a nighttime unveiling of the lighted work and supporting the occasion through public press outlets and announcements.
- Featuring illuminated private artwork on the City's "Get- Creative San Antonio" website and through other digital and print media.

In order to embrace a consistent and lasting attitude about lighting artwork it is important to:

- Build a lighting budget into every public art procurement. Currently there is no defined art lighting program and the budget for lighting is not clearly articulated.
- Identify who will be responsible for designing effective lighting for artwork. Utilize outside consulting lighting experts when possible to ensure effective results.
- Provide incentives or rebates to private entities for lighting their art.
- Supply artists' access to City resources for helping to coordinate a lighting effort.
- Consider a light-as-art festival. The opportunity to become a leader in this arena is promising. Artists located throughout the United States and working with light as an artistic medium, could be invited to prepare commissions for the festival. San Antonio area companies could become sponsors and help underwrite an event. Financial awards or recognition could be considered as an incentive for artist participation.



Building Architecture

Cities throughout the world are using lighting to extend the presence and impact of their buildings and structures into the nighttime. The implementation of the ULMP for San Antonio provides an opportunity to launch a program for illumination of the most meaningful and commendable of the City's structures.



Some of San Antonio's existing buildings and structures are currently illuminated after dark, to various degrees of visual effectiveness. These illuminated buildings do provide a glimpse into how important nighttime lighting is to enlivening the urban center. There is little question that a comprehensive program of lighting for key building facades and structures in the downtown would elevate the overall nighttime appeal, functionality and general character of the streetscape experience.

Key questions are provided to help guide the development of building lighting projects in both public and private sectors.

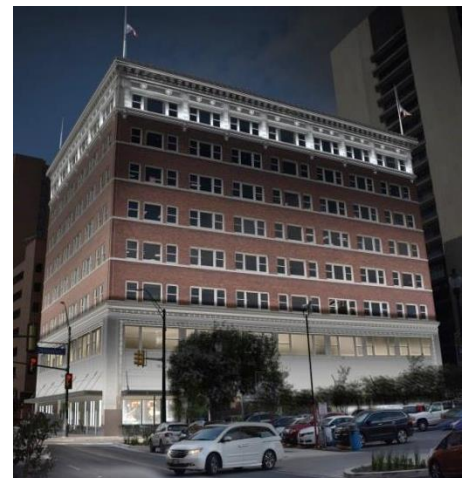
1. What are the principal goals for the job?
2. Does the structure have historic significance that may inform the design approach?
3. What aspects of the architecture will be worthy of revelation after dark? General facade? Details? Special features? Materiality?
4. Are there physical characteristics of the building that would be better left unlighted?
5. Are there special concerns about possible light trespass into the building's windows?
6. If uplighting is being used, can spill light into the sky be minimized by building features such as ledges and cornices?
7. Are there city or neighborhood requirements for the street on which the building is located that may have some bearing on the work or lighting solution?
8. Can high efficiency, long life and low maintenance LED sources be incorporated as a part of the solution?
9. Can lighting controls be effectively integrated into the design to permit dimmable fine-tuning of the lighting scheme, and to allow after-hour reductions in energy use?



Mock-ups and Renderings

One of the most successful ways that a proposed building facade lighting design can be visualized prior to the full procurement and installation of equipment is through a mock-up. This approach was demonstrated during the ULMP development through the execution of mock-up demonstrations for three buildings in downtown San Antonio - the Municipal Plaza Building at 114 W Commerce Street, the Plaza de Armas at 115 Plaza De Armas, and the Savoy Building (privately owned) at 116 E Houston Street. The viewing of this limited installation by attendees at the third public engagement session (October 02, 2018) helped foster an understanding of the overall design concept and its intended lighting effect for each subject building. This technique is highly recommended for building owners and their lighting design teams when making judgements about building illumination to maximize its impact. High quality technical and artistic renderings, which realistically capture the intent of a proposed facade lighting design, are other effective tools for communicating ideas. These are often less costly and time consuming than mock-ups.

It is suggested that the City use building facade and feature lighting as a technique for improving the downtown experience after dark. Full-scale mock-ups and professional renderings such as the ones conducted for



this ULMP should be considered as an integral tool for decision making.

Incentivizing Building Owners in the Private Sector

Even with focused commitment by the City of San Antonio to illuminate public architecture, further creative private sector incentivizing of building owners and developers is desirable. A number of initiatives should be considered by the City to encourage decision-makers to see the illumination of their buildings as beneficial to both their goals and that of the City's.

- Educate building owners and developers about the importance of doing their part to make the downtown safer and more appealing to both residents and visitors. Civic pride through enhancement of one of the City's greatest assets – its architecture.
- Host professional gatherings and other outreach programs to raise awareness and excitement in the business communities about lighting initiatives. Presentations by city representatives and design professionals that foster a discussion regarding exterior architectural illumination can be an effective catalyst.
- Publicize private ownership involvement whenever possible. Once an owner or developer proposes to illuminate their architecture, issue an announcement or press release publicizing their upcoming and important contribution to the city's streetscape environment. Portray their involvement as an investment in downtown San Antonio and an effort to help provide a safe, pleasing nighttime environment.
- Provide helpful resources to entities interested in illuminating their buildings. A list of examples of successful exterior lighting projects in the area can help raise awareness. A competitive list of potential lighting design and engineering firms that can provide professional services for such projects can be also be helpful. Designating someone within the City's administration to help facilitate these activities is advisable.