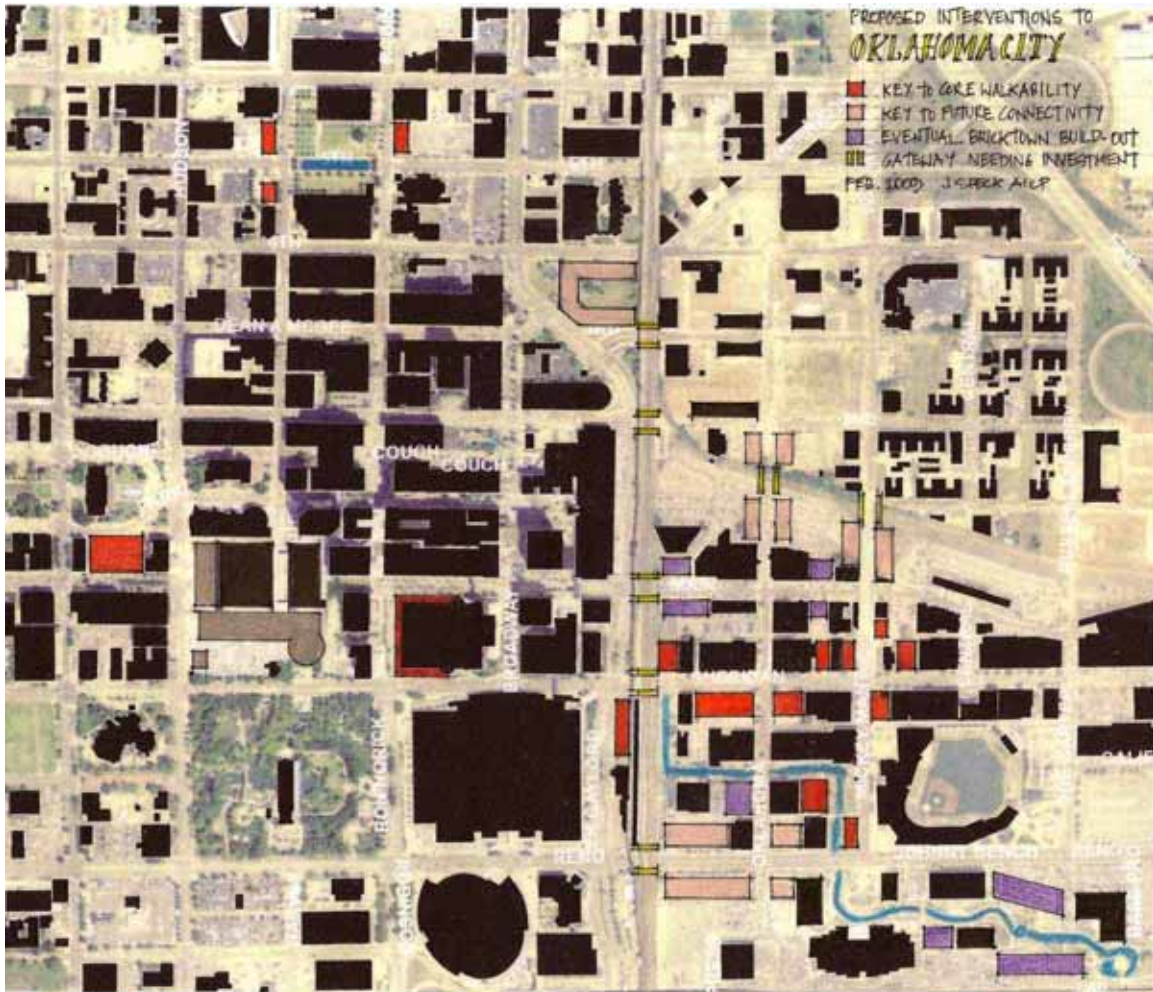


**OKLAHOMA CITY
DOWNTOWN WALKABILITY ANALYSIS AND RECOMMENDATIONS**



SUBMITTED MAY 15, 2009

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OKLAHOMA CITY DOWNTOWN WALKABILITY ANALYSIS AND RECOMMENDATIONS

The objective of this report is to address the challenges presented to pedestrians and pedestrian life in Oklahoma City, and to propose a strategy to meet these challenges with palpable improvements in the short term.

INTRODUCTION

Walkability in Oklahoma City

In its ranking of walkable cities nationwide, *Prevention* magazine ranks Oklahoma City dead last, number 500 out of 500 cities surveyed. This is cause for alarm. But is it cause for change? This report argues yes. It also argues that this change is possible, relatively inexpensive, and essentially painless. But it will not occur without strong political leadership, and the understanding that certain entrenched practices must be turned on their head if Oklahoma City is to become a more walkable place.

Why is Walkability Important?

Oklahoma City is principally a driving city. Residents of Oklahoma City drive far more than the national average, and use transit, bike, and walk far less than the national average. Much of this behavior is unavoidable, due to the organization of the city and decades of past decisions prioritizing the automobile over the pedestrian. But much of this behavior can also be attributed specifically to the uninviting nature of the City's built environment, and to specific details of that environment that can be changed in short order.

There are many reasons to want this change.

Health Reasons

In the book *Urban Sprawl and Public Health*, the epidemiologist authors compare more walkable cities with less walkable ones, and confirm that residents of less walkable environments face a measurably higher risk of the following physiological and psychological impacts:

- Decreased physical activity.
- Obesity (suggested also by Oklahoma City's obesity ranking of 8th nationally).
- Diabetes, especially childhood diabetes.
- Asthma.
- Increased traffic injuries.
- Decreased social capital.
- Increased social isolation.

Each of these health impacts has a cost that is borne first by individuals and ultimately by the community as a whole.

Environmental Reasons

One of the greatest contributors to greenhouse gases is the emissions from vehicular tailpipes. It is principally for this reason that the “greenest” communities in America, with the lowest carbon usage per resident, are those in which people walk more and drive less. Any commitment to community sustainability and climate change action brings with it a commitment to encourage pedestrian life.

Financial Reasons

Driving is expensive. The typical resident of the Oklahoma City metropolitan area drives over 32 miles per day, versus the national average of under 25 miles per day. That 30% increase means that local citizens are spending considerably more of their income on transportation, and have fewer dollars left over to spend within the community.

Economic Development Reasons

As cities compete to attract corporations, citizens, and especially young, entrepreneurial talent, the winners will be those places that can claim the sort of environment and culture that is favored by creative class and millennial workers. Studies document how these workers favor communities with *street life*, the pedestrian culture that arises from walkability. Street life is rarely evident in principally driving cities, and the first step to achieving street life is to achieve at least a small urban core of excellent walkability.

Any of these reasons alone provides compelling justification for becoming a more pedestrian-friendly city. Collectively, they provide ample reason for change. Any arguments against improving walkability, or delays in making such improvements, must be weighed against the significant daily costs of remaining the least walkable city in America.

PART I: BACKGROUND

What Causes People to Walk?

The pedestrian is a delicate creature. While there are many harsh environments in which people are physically able to walk, there are few in which they actively choose to walk, especially when the option of driving is available. The following four sections provide a hierarchy of conditions that must be met if the average person is going to make that choice. Each is necessary but not alone sufficient. They are:

- A reason to walk;
- A safe walk;
- A comfortable walk; and
- An interesting walk.

A Reason to Walk

As Jane Jacobs noted, “Almost nobody travels willingly from sameness to sameness. . . even if the physical effort required is trivial.” For people to choose to walk, the walk must serve some purpose. In planning terms, that goal is achieved through mixed use. Or, more accurately, placing the proper balance of the greatest number of uses all within walking distance of each other.

The first step towards achieving walkability, therefore, is to consider all of the uses present in the heart of your city, and to see which uses are lacking or in short supply. These uses include office, housing, retail, dining, entertainment, hospitality, schools, recreation, worship, and others. The better these uses can be balanced in your downtown, the more walkable it will be. In most downtowns, the use that is most underrepresented is housing, and that is also the case for Oklahoma City. Downtown is also underserved in terms of its retail provision, a deficiency that can be attributed principally to its low housing numbers.

A Safe Walk

While crime is always a concern, most people who avoid walking do so because the walk feels dangerous due to the very real threat of vehicles moving at high speed near the sidewalk. Statistically, automobiles are much more dangerous to pedestrians than crime, and the key to making a street safe is to keep automobiles at reasonable speeds and to protect pedestrians from them. This is achieved by meeting the following criteria, each of which will be addressed individually:

- A network of many small streets;
- Lanes of the proper width;
- Limited use and length of left-hand turn lanes;
- Two-way streets;
- Continuous on-street parking;
- Continuous street trees; and

- Limiting curb cuts.

A Network of Many Small Streets

Generally, the most walkable cities are those with the smallest blocks. This is because many small blocks allow for many small streets. Because traffic is dispersed among so many streets, no one street is required to handle a great amount of traffic, and that traffic does not reach a volume or speed that is noxious to the pedestrian. In a recent California study, cities with larger blocks suffered more than three times as many vehicular fatalities as cities with smaller blocks. (Marshall and Garrick: *Street Network Types and Road Safety*.) Downtown Oklahoma City is blessed by an extensive network of relatively small blocks, and therefore has an extremely porous network of many streets. Strangely, almost none of these streets are small – many hold four lanes of traffic or more. This network of many *large* streets has the capacity to handle much more traffic than is currently present, and therefore encourages speeding and unnecessarily endangers pedestrians.

Lanes of Proper Width

Different-width traffic lanes correspond to different travel speeds. A typical urban lane width is 10 feet, which comfortably supports speeds of 30 MPH. A typical highway lane width is 13 feet, which comfortably supports speeds of 70 MPH or more. Drivers instinctively understand the correlation between lane width and driving speed, and speed up when presented with wider lanes, even in urban locations. For this reason, any urban lane width in excess of 10' encourages speeds that can increase risk to pedestrians. Many streets in downtown Oklahoma City contain lanes that are 12' wide or more, and drivers can be observed approaching highway speeds when using them.

Limited Use and Length of Left-Hand Turn Lanes

Left-hand turn lanes are by no means the standard approach to intersection design. They should be used only at intersections where congestion is caused due to cars turning left. Four-lane streets with limited volumes do not need left-hand-turn lanes, as the right lane provides an unimpeded path through the intersection. When unnecessary left-hand turn lanes are provided, the extra pavement width encourages speeding and lengthens crossing distances. When justified, left-hand turn lanes should be just long enough to hold the number of cars that stack in them in standard rush-hour conditions. When they are longer, they create excess unused pavement that encourages speeding while also taking up roadway that could otherwise be used for on-street parking. The typical left-hand turn lane in Oklahoma City runs the full length of its block, creating a large-midblock section that serves only a negative purpose. As on Broadway, these are often striped yellow, but this striping does little to deter speeding or ease crossing comfort.

Two-Way Streets

Drivers tend to speed on multiple-lane one-way streets because there is less friction from opposing traffic, and because of the temptation to jockey from lane to lane. Whichever lane you are in, the other seems faster. In contrast, when two-way traffic makes passing impossible, the driver is less likely to slip into the “road racer” frame of mind. Also worth

noting is how visitors are confused and frustrated by one-way street systems; an Oklahoma City driver was recently quoted in the media as being reluctant to drive downtown for fear of getting lost. Wisely, the City is in the process of converting many of its one-way pairs back to two-way traffic, but this effort is far from comprehensive.

Continuous On-Street Parking

Whether parallel or angled, on-street parking provides a barrier of steel between the roadway and the sidewalk that is necessary if pedestrians are to feel fully at ease while walking. It also causes drivers to slow down out of concern for possible conflicts with cars parking or pulling out. On-street parking also provides much-needed life to city streets, which are occupied in large part by people walking to and from cars that have been parked a short distance from their destinations. Many streets in downtown Oklahoma City have lost their parallel parking in order that additional travel lanes could further ease traffic flow. The resulting unprotected sidewalks are not hospitable to walking, and the lack of on-street parking capacity has contributed to the proliferation of unattractive surface parking lots.

Continuous Street Trees

Street trees are such a valuable contributor to walkability that they receive their own section of this report. In the context of pedestrian safety, they are similar to parked cars in the way that they protect the sidewalks from the cars beyond them. They also create a perceptual narrowing of the street that lowers driving speeds. Only a few streets in downtown Oklahoma City can be said to possess continuous rows of street trees.

Limiting Curb Cuts

Every time a driveway crosses a sidewalk, pedestrians are endangered. In most downtowns, only rear alleys are allowed to break the curb, at a rate of one per block. Entries into parking structures, when not from alleys, must be limited and well marked. Drive-throughs and drop-offs – in which a vehicular path cuts into the sidewalk for driver convenience – are a suburban solution that does not belong in cities. Any drive-throughs should be accessed off of rear alleys, and drop-offs can be accomplished simply by reserving a few parking spaces for that use. In addition to a number of hotel porte-cochères, Oklahoma City presents the bizarre condition of drop-offs that cut into the sidewalk for parallel parking in places where parallel parking is already provided, resulting in odd, double-width parking spaces. Until these streets are reconstructed with straight curbs, these double-deep spaces are best used for angle parking.

A Comfortable Walk

The need for comfortable walk is perhaps the least intuitive part of this discussion, because it insists that people like to be *spatially contained* by the walls of buildings. Most people enjoy open spaces, long views, and the great outdoors. But people also enjoy – and need – a sense of enclosure to feel comfortable as pedestrians.

Evolutionary biologists tell us how all animals seek two things: prospect and refuge. The first allows you to see your prey and predators. The second allows you to know that your flanks are protected from attack. That need for refuge, deep in our DNA from millennia of survival, has led us to feel most comfortable in spaces with well defined edges. This issue has been discussed from before the Renaissance, in which it was argued that the ideal street space has a height-to width ratio of 1:1. More recently, it has been suggested that any ratio beyond 1:6 fails to provide people with an adequate sense of enclosure, creating a *sociofugal* space: an environment which people want to flee.

Therefore, in addition to feeling safe from automobiles, humans are not likely to become pedestrians unless they feel enclosed by firm street edges. This is accomplished in several ways:

Streets Shaped by Buildings

The typical way in which cities shape streets is with the edges of buildings that pull up to the sidewalk. These buildings need to be of adequate height so that the 1:6 rule is not violated, ideally approaching 1:1. Gaps between buildings should not be very wide. As required by current Oklahoma City codes, no building in the downtown should be allowed to sit behind its parking lot.

No Exposed Surface Parking Lots

Most American cities suffer from the windswept spaces created where historic buildings have been torn down to provide ample surface parking. These parking lots are the single greatest detriment to pedestrian comfort, and city codes and private land-use practices must be reviewed in order to fundamentally alter the conditions that lead to their proliferation. Among these are the on-site parking requirement, which must be replaced by practices that treat parking as a public good, provided strategically in the proper locations to encourage more productive land use. Conveniently, it is not necessary to eliminate surface parking lots fully; rather, only the front 60' needs to be replaced by a building against the sidewalk

Filling Missing Teeth

While most missing teeth between buildings are converted to surface parking, there are other empty lots that are simply filled with grass or dirt. While a well-landscaped park encourages walking, a simple grass field can have the opposite effect. In Oklahoma City, the future Chamber of Commerce site is one key location that functions in this way, providing a perceptual barrier between downtown and Maywood Park. A building filling this site, with firm edges against 3rd and 4th Streets, would give shape to this no-man's-land.

Avoiding Object Buildings

In the traditional, walking city, buildings take rectangular or other nondescript shapes in order to give shape to the spaces they surround – the streets and squares. In the modernist city of the automobile, buildings stand apart as sculptural objects. Rather than shaping the spaces around them, they proudly declare their own shapes. As a result, the

space between them – the public realm – becomes residual and poorly formed. There is a place for sculptural object buildings, but it is not in the city, except well above street level where the upper stories of a tower can cut back from the lot edges without eroding the street edge. The Stage Center (“Habitrail”) is one example of an object building in Oklahoma City. The proposed Chamber of Commerce building is another.

Street Trees

Already mentioned under Safety, trees are also essential to pedestrian comfort in a number of ways. They reduce ambient temperatures in warm weather, absorb rainwater and tailpipe emissions, provide UV protection, and reduce the effects of wind. Trees also improve the sense of enclosure by “necking down” the street space with their canopies. A consistent cover of trees can go a long way towards mitigating the impacts of an otherwise uncomfortable street space. While the climate and soil in Oklahoma City are not the most conducive to tree growth, they are not the principal cause of the city’s sparse tree cover. Rather, it is priorities and policies, such as the rule against planting a tree within 10’ of a water main, that have led to the current condition.

An Interesting Walk

Finally, even if a walk is useful, safe, and comfortable, people will not choose to go on foot unless it is also at least moderately entertaining. There needs to be something interesting to look at.

Humans are among the social primates, and nothing interests us more than other people. The goal of all of the designers who make up the city must be to create urban environments that communicate the presence, or likely presence, of human activity. This is accomplished by placing “eyes on the street,” windows and doors that open, and avoiding all forms of blank walls. These include the edges of structured parking lots, which must be shielded by a minimum 20’ thickness of habitable building edge, at least at ground level. Cities that support walkability do not allow any new parking structures to break this rule.

The activity that is placed against the sidewalk is also important. Retail use is much more interesting than office or residential use. Moreover, successful retail requires connectivity, so the goal of continuous retail against designated streets needs to inform planning requirements.

A final enemy of pedestrian interest is repetition. The era of the multi-block mega-project is fortunately over, but cities must take pains not to allow any single architectural solution to occupy more than a few hundred feet of sidewalk edge. Boredom is another reason why “almost nobody travels willingly from sameness to sameness,” and multi-building developments should be asked to distribute schematic design responsibility to multiple architects (even within the same firm), to avoid a city-as-project outcome. Many hands at work is another way to suggest human activity, especially when the number of humans on the sidewalk is less than ideal.

A Note on Weather

Almost every city, when presented with this discussion on walkability, insists that its weather makes it somehow less capable of supporting pedestrian life than the rest of planet Earth. It is worth noting that the principles described here have been developed by studying pedestrian behavior in such places as Miami in summer, Quebec City in winter, Seattle in the rain, and Chicago in the wind. While Oklahoma City does not have the perfect climate of southern California, it presents fewer weather impediments to walkability than some of the most walkable cities in the world.

The city in North America with the greatest number of continuous blocks of successful retail-fronted sidewalk is Toronto. Clearly, climate has only a limited impact on this conversation.

A Brief Review of Existing Plans

Before moving on to specific recommendations, it is useful to review some of the key planning exercises recently completed or currently underway in Oklahoma City. These include the following projects:

Core to Shore

The Core to Shore plan is a top-notch long-range plan for the expansion of the City. There is little in it that could be improved in terms of encouraging walkability. But, as a long-range plan, it is looking 20 to 50 years into the future, and shows how to absorb a large amount of growth once the downtown is complete. Like Daniel Burnham's famous "make no small plans" *Plan of Chicago*, this sort of document is necessary if a city is to grow in a healthy way. But, having a good plan for future expansion can also present a danger, if excitement for its development reallocates resources that would be better concentrated on the existing downtown. As will be argued in greater detail ahead, the center of Oklahoma City has yet to achieve critical mass from a walkability perspective, and public and private resources need to be further concentrated in key blocks if a tipping point is to be achieved. It is not self-contradictory to laud the Core to Shore plan while simultaneously recommending that not a penny be spent on its implementation until the downtown reaches this minimal condition.

The Boulevard Plan

The reconstruction of Interstate 40 five blocks south presents an opportunity to replace its trajectory with a new boulevard that forms a beautiful edge to the heart of downtown and a park-like center for future high-value growth. A great deal of energy and ambition has gone into the design of this new thoroughfare, but its current plan unfortunately does not achieve the City's stated objectives. This opportunity will be discussed in greater detail ahead.

Downtown Strategic Initiative

This grassroots-based initiative is the current planning effort most aligned in spirit with this walkability study. Its focus on such issues as transportation, transit, connectivity, parking, and even walkability, dovetails appropriately with the recommendations that will follow here. As this effort continues, it may wish to endorse some or all of this report.

Downtown Streetscape Master Plan

The City is currently slated to spend several hundred million dollars in streetscape reconstruction over the next decade. As is wise, the City commissioned a thorough master plan to guide this effort, establishing a functional classification for each street within the downtown and providing full right-of way design for each class of street. This document is extremely professional and skilled (with the exception that cars are drawn at 125% of actual size, making the streets seem much smaller than they actually are) but it incorporates three current City practices that must be eliminated if walkability is to be achieved. The first two of these – streets lacking on-street parking, and over-wide travel lanes – are easily resolved. The other problem, and the main challenge to walkability in Oklahoma City, is the functional classification plan, which reflects the current over-sizing of capacity. This will be addressed ahead.

T.I.F. and G.O. Bond Funded Streetscape Improvements

This design exercise is currently underway, led by a partnership of skilled landscape architecture firms, for the reconstruction of all street segments within a limited distance from the new Devon tower. This effort encompasses more than a dozen blocks, and will have a great impact on the downtown. The first draft proposals seem by-and-large to be informed by the safe-comfortable-interesting mandate discussed here, and includes such improvements as the reversion of streets to two-way and the provision of continuous tree cover. They do contain some details, however, such as overlong left-hand-turn lanes, that warrant modification. But the greatest concern presented by these plans is whether they will be made less pedestrian friendly as they bump up against the City's current auto-oriented street engineering practices.

10th Street Medical Business District Development Strategy

Another excellent project by a nationally-recognized design firm, this plan properly recognizes NW 10th Street as the most promising east-west connection in the near-north downtown area. These walkability recommendations would also hope to reinforce this axis as a focus of reinvestment.

Downtown Housing Demand Study

While this study contains a wealth of information on the potential for convincing more people to move downtown, two items stand out. The first is that 18% of renters in the Oklahoma City area describe themselves as “very likely to move downtown.” This is a remarkably high number, and shows that there is a huge market for downtown housing that is attainably priced and properly located. The second key finding is that 50% of potential downtown residents list Bricktown as their first or second location of choice (30% have it as their first choice), well ahead of all other places.

Bricktown Comprehensive Parking Strategy

This study confirmed planners' suspicions that Bricktown has access to a more than adequate supply of parking, but that this parking lacks proper wayfinding. It makes intelligent recommendations for solving this problem, but does not take an ambitious approach to the area's future growth. A more aggressive strategy for completing Bricktown, discussed ahead, will require more public parking than is currently provided.

Downtown Accessibility Review and Non-Discrimination Transition Plan

These documents address the fact that many sidewalks and crosswalks do not comply fully with federal laws regarding accessibility, and recommend a path towards compliance. These improvements are a necessary but not sufficient component of a walkable city – they are important, but not enough to encourage a walking culture.

The five sections that follow address the challenges and strategy presented above with a series of specific recommendations for making change. These are:

- Creating the Proper Balance of Uses;
- Making Walking Safe;
- Making Walking Comfortable and Interesting;
- Core Walkability Interventions; and
- Mistakes About To Be Made.

PART II: CREATING THE PROPER BALANCE OF USES

Incentivizing Housing Downtown

We have already discussed how a healthy balance of uses is key to walkability, and how housing is the urban use that is most under-represented downtown. If the City wants to increase downtown walking in a meaningful way, it must direct resources towards the provision of this housing, so that the private market finds it profitable to do so.

As noted, a remarkably large number of Oklahoma City suburbanites are very likely to relocate downtown if they can do so in a way that makes sense economically. The recent growth in Deep Deuce and Maywood Park manifests this appetite, as does the success of loft projects on Broadway. But any experienced developer will confirm that it simply takes more time and money to reinvest in existing neighborhoods than it does to create new subdivisions on the urban fringe, so cities that wish to invite more residents downtown must be willing to dedicate some of their own time and money towards this goal. These efforts could include such activities as:

- Removing or reducing any zoning impediments to housing provision.
- Creating an expedited process for housing developers.
- Donating underused public land to housing developers that meet certain criteria;
- Tax Increment Financing; and
- Creating a public office that writes grants and otherwise coordinates fundraising from other public and non-profit sources.

These are but a few of the techniques that have been used in other cities, some of which may be appropriate to Oklahoma City. Indeed, some of them may already be underway in Oklahoma City – it is not within the scope of this study to address housing challenges specifically. Rather, it is only important to note here that, if the city is to become significantly more walkable, more downtown housing is essential.

It is also essential that this housing be properly located. There are many sites in the downtown that are ready to receive more housing, but only a few of these are located in areas where walkability is achievable. As will become clear ahead, the vast majority of downtown streets are certain to remain principally automotive well into the future, and changing that situation is beyond our reach. Our goal, instead, should be to create a small, continuous core of excellent walkability, and one purpose of this report is to designate that core. If housing is to contribute to walkability, it must be located in areas where people are at least somewhat likely to walk.

Furthermore, within this core of walkability, Bricktown has been designated as not only the most popular location for future housing, but also the neighborhood that is closest to achieving true walkability. This is no coincidence, as citizens seeking the urban lifestyle are drawn to walkable areas first. Given the limited amount of housing that is being built downtown, and the great potential of Bricktown, it would be hard to find fault with a City program that focused specifically on bringing more housing to that location.

Housing and Transit

Oklahoma City is in the process of considering a downtown streetcar system, which is another way of describing a trolley on rails. Many cities have built these systems, and some have been very successful while others have never caught on. The key to creating a successful trolley system is to understand that these systems are principally useful not as a means of mobility but as a tool for increasing the value of real estate. The story of Portland's trolley in the Pearl District is the story of millions in public investment leading to billions in private investment, because the rail line was planned in conjunction with thousands of units of new housing, which was made desirable by its presence on a rail line. The lesson learned there and elsewhere is that the path of a new streetcar must be carefully coordinated with planned housing if the transit investment is to pay off.

Walking and Transit

Although beyond the scope of this study, it is worth noting that transit and walking are inextricably intertwined. It is not possible to have large-scale transit service in a non-walking city, because people want to arrive at and depart from transit as pedestrians. If the neighborhoods surrounding transit stops do not encourage walking, most potential transit users will end up driving. This understanding must play a large role in the location of Oklahoma City's new streetcar system. In addition to connecting key walkable destinations like Bricktown and the Convention Center, it must travel along streets that also have the potential to be walkable – as will be designated ahead. Moreover, its presence on these streets must make them more walkable, by placing the tracks directly in the roadbed, so that the streetcars interact with automobiles, slowing them down. Having a dedicated railway outside of the roadbed can cause transit to have the opposite of its desired effect.

Tourism, Conventions, and Sports Events

Tourists, especially conventioners, are natural walkers. Most of them do not know their way around your city, and would rather not drive unless they have to. They arrive in Oklahoma City mostly from more walkable places, and they will act upon their natural inclination toward walking until they find the experience too punishing to repeat. For this reason, it is essential that the Convention Center, downtown hotels, and the principal entertainment district (Bricktown) all be connected into a continuously walkable network.

The path from the Convention Center north to hotels is fairly adequate, and will benefit greatly from the replacement of the Century Center, one of the recommendations of this report. The path east to Bricktown along Sheridan is a bit trickier, as the blank walls of the Convention Center, the Sheraton, and the adjacent industrial venting facility make for a walk that seems considerably longer than its short 1000 feet. The solution probably lies in the re-activation of the Convention Center north façade, as well as the provision of some key infill buildings in Bricktown that will be proposed ahead. This problem is

surmountable. Far more difficult to overcome would be the relocation of the Convention Center a block or more further south, as is being contemplated. Such a move would require that the current Convention Center site and the Ford Center both create a consistently walkable edge against Robinson Avenue, to connect the new Convention Center back to downtown. It must be stressed that a decision to move the Convention Center south should not be accepted without a concurrent plan for a continuous retail streetfront connecting it back to Sheridan Avenue, and along Sheridan Avenue towards Gaylord.

Another key challenge in the downtown is properly connecting the Ford Center and Bricktown so that people will consider having dinner or a drink before or after a sports event. This is a natural synergy that Oklahoma City has not properly capitalized upon, because the walk down Reno Avenue into Bricktown is among the worst in the city. Fixing this walk will require not only a redesign of Reno as a lower-speed thoroughfare, but also a tremendous number of infill buildings along it in Bricktown. This solution needs to be the long-term goal; in the shorter term, the consistent provision on game nights of a free, frequent, friendly transit service east-west on Reno could have a great impact. This would be a good use of the City's aging rubber-wheeled trolleys.

Another solution being considered along this axis is the continuation of the Bricktown canal system west from its current terminus to the Ford Center entrance. This exciting concept is brilliant in theory, but must be carefully studied to make sure that its reality can approach the power of its vision. We must remember that the successful parts of the Canal are those where the waterway is lined by active buildings, not walls. For people to choose to walk from the Ford Center into Bricktown along this canal, it must be flanked at its grade by restaurants and housing that give supervision and life to its trajectory. Given that half of the built canal currently lacks such edges, it is difficult to advocate for building more of it. That said, an extended canal that reached the Ford Center, were it properly shaped and lined, would be a tremendous addition to the city.

The Underground

Every city planner who visits Oklahoma City is asked to opine on the Underground. Few dispute the fact that this extensive secondary pedestrian system is deeply wrong in theory, as it robs much-needed pedestrians from city streets. In practice, it is not as harmful as it could be, because it does not provide enough visual interest attract that many users. But it remains an unfortunate addition to the city, given that it has absorbed more than a few of the retail uses that are noticeably missing from along city streets.

In a perfect world, the Underground would be closed. But many people find it convenient, and more than a few merchants rely on it for their livelihoods. Other cities, like Toronto and Montreal, manage to support a thriving street life despite their underground systems, so we can have some hope that the Underground's continued existence need not inordinately limit the potential of the City's surface streets.

PART III: MAKING WALKING SAFE

By far the greatest impediments to walkability in Oklahoma City derive from perceived threats to pedestrian safety from the automobile. As discussed, these come from streets and lanes that are too wide, one-way streets, missing on-street parking, missing street trees, high-speed geometries, and an excess of curb cuts. How to fix each of these problems will be discussed in the pages ahead.

Right-Sizing the Number of Lanes

In a national context, Oklahoma City is remarkable for its large number of large streets. As discussed, most cities have fewer, larger streets, or more, smaller streets. Those few cities that have *both* an extensive grid of small blocks *and* very wide streets tend to be very dense, like Manhattan and Chicago, because it is only a great density of use that requires such a great a capacity of traffic. Observing Oklahoma City's street network, a planner has to ask how such a (relatively) low density of development has produced such a huge volume of traffic as to require so many lanes.

The answer is that it hasn't. There is not too much traffic in Oklahoma City. Rather, there is too much roadway for the traffic it contains. It is a general rule of thumb in city planning that a two-lane roadway (without left-hand turn lanes) can comfortably handle 10,000 cars per day. (Peak hour measures are more meaningful, but the ratio of hourly to daily travel follows certain predictable patterns.) Based on this measure, one would expect Average Daily Traffic volumes (ADTs) along most Oklahoma City streets to be in the 15,000 – 25,000 range, given the four to six lanes that have been provided for its movement.

In this context, it is perplexing to see the Oklahoma City traffic map, which records daily car counts across the downtown. Few segments of any streets have ADTs topping 10,000 per day, while most demonstrate activity in the mid four figures. Even six-lane roadways like E.K. Gaylord and Hudson Ave have trouble sustaining more traffic than would fill a well-designed two-laner.

The City's downtown car-count map is shown on the following page. It merits study:



Traffic volumes in cars/day in the downtown area.

Studying these traffic volumes allows one to understand, more than any other single factor, why Oklahoma City is considered unfriendly to pedestrians. A typical example illustrates a systemic malady: residents in a new apartment house on 4th Street in Deep Deuce complain that they are not allowed to park on-street in front of their building, and that this situation makes their sidewalk feel unsafe. Parallel parking is not allowed on 4th Street because that would reduce the number of travel lanes from 4 to 2. Yet the ADTs on 4th Street average under 5000 cars per day. The parallel parking can be added without significantly impeding traffic. If anything, it will help to lower travel speeds to be within range of the typically-exceeded speed limit.

A similar modification could be made to many downtown streets, right-sizing the number of lanes to bring back parallel parking on both sides of the roadway. On streets already holding parallel parking, angle parking could be placed on one side or both. In addition to satisfying a significant part of the parking demand, these additional on-street spaces would protect the walkers from cars, slow drivers down, and provide more pedestrian activity along the sidewalk.

In many cases, these changes to city streets could be done for the cost of paint and parking meters alone. While many streets are slated to be rebuilt, those that are not could

be restriped immediately. Such a practice is also a good idea before reconstruction, to test proposed configurations before they are cast in stone.

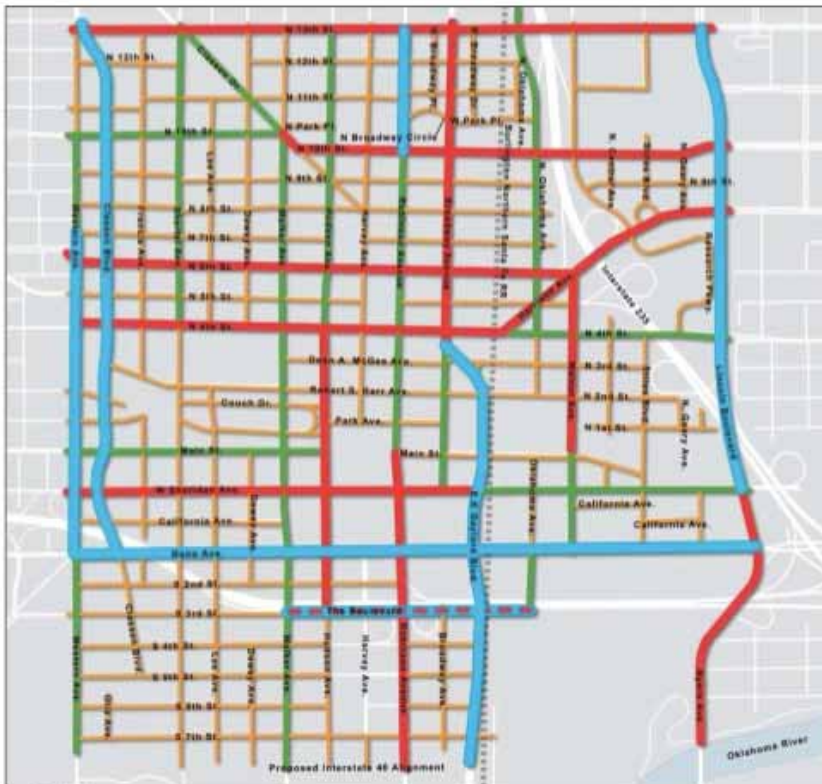
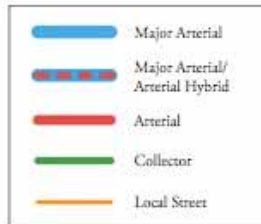
Especially concerning is the functional classification present in the Downtown Streetscape Master Plan, which calls our attention to the oversized status of many streets. As currently classified, a number of streets carrying relatively light traffic are shown as 4 to 6 lane arterials, some without on-street parking. This functional classification, provided below, shows how Gaylord, Reno, Sheridan, Robinson, Broadway, Walnut, Hudson, 4th, 6th, and 10th are all designated as arterials or major arterials. Of these ten streets, only Gaylord, Reno, Sheridan, and Hudson experience traffic flows in excess of 9000 cars per day, and no street handles more than 15,000 cars per day.

3.0 TRANSPORTATION FRAMEWORK

STREET TYPOLOGY

The Transportation Framework establishes four street typologies according to traffic volume and cross section, and describes the ideal characteristics for each typology. The four typologies include Major Arterial, Arterial, Collector, and Local Street. A fifth typology, Major Arterial / Arterial Hybrid, applies to The Boulevard from Walker Ave. to Oklahoma Ave.

The following pages identify the ideal characteristics associated with each typology.



Street Typology key map.

The downtown street classification, with red and blue streets indicating arterials.

Specifically, here are the highest traffic counts measured on some of the streets to be given Arterial status:

- Gaylord 12,482 cars/day
- Sheridan 10,066
- Hudson 8,389
- 4th 5,663
- Robinson 5,632
- 6th 4,507

This information was shared informally with transportation engineers from two different nationally active firms. Because they volunteered their advice without pay, they will not be named here. Both professionals expressed their surprise at the large number of streets that were more than two lanes wide, given the low volumes of traffic they were handling. One engineer commented that the street network seemed to be sized for a city of “two to three times the density” of Oklahoma City.

The planned reconstruction of city streets, due to both the Devon Tower and the recent bond issue, makes it essential that this issue be addressed with great attention in the short term. Hundreds of millions of dollars are slated to be spent on this effort – approx. \$100,000,000 in the near term – and this investment can either reinforce or correct the current oversized system. For this reason, it is worth spending the necessary funds to carefully plan the right-sizing of the number of lanes on all downtown streets.

In the absence of a more comprehensive study, it is possible to make generic recommendations about the number of lanes that could be assigned to each street. Streets carrying under 10,000 ADT could generally be downsized to two lanes plus a left-hand turn lane at intersections. Streets from 10,000 to 15,000 could be downsized to four lanes *without a left-hand turn lane*.

By this standard, Reno and Sheridan could introduce parallel parking on one side and eliminate their center turn lanes; Broadway could introduce angle parking on one side or possibly both; and Gaylord could introduce parallel parking on both sides and provide just two lanes in each direction. Almost every other downtown street could be limited to one lane in each direction, with left-hand turn lanes at intersections.

However, because this report is from a city planner and not an engineering firm, it probably does not have – and should not have – the authority to compel the changes recommended above. Furthermore, possible anomalies in the relationship between ADT and peak hour volume could result in some surprises. For that reason, a thorough engineering study is recommended.

Right Sizing the Lanes

As already mentioned, 10' is the right width for an urban driving lane that is not designed to encourage speeding, and 7' is ample width for a parking lane. However, since it is important to refer to endorsed standards, the *Urban Thoroughfares Manual*, a recommended best practice of the Institute of Traffic Engineers, specifies that major thoroughfares in urban centers have lane widths of 10' to 11' and parking lanes 8' wide. Based on this standard, the City should restripe (and eventually rebuild) all streets to contain travel lanes between 10' and 11' wide and parking lanes 8' wide.

Right-Sizing the Left-Hand Turn Lanes

As mentioned, not all streets in Oklahoma City should have left-hand turn lanes, especially those with more than one lane in a given direction. Where left-hand turn lanes are justified, these lanes should be right-sized to hold only the number of cars that stack in them in standard rush-hour conditions. This solution means that the middles of blocks will have excess unneeded pavement in them. This pavement can be absorbed by a treed median, by switching from parallel parking to angle parking at midblock, or by allowing the curb to shift inward at midblock when the road is rebuilt. Of course, unlike 4-lane streets, 2-lane streets are small enough that they can include a striped unused center in this location without becoming unduly dangerous.

Completing the Conversion Back to Two-Way Streets

As has already been initiated, all one-way streets in downtown Oklahoma City should be converted back to two-way at the first practical opportunity. This will require new striping and signalization, but should not have to wait for any additional reconstruction.

Reinstituting Continuous On-Street Parking

Perhaps no other change will have a greater impact on pedestrian impressions of safety than reintroducing on-street parking against every single curb in the downtown. We have already documented how this is possible; given current volumes, travel lanes converted to parking lanes will not be missed. The determination of what sort of parking to provide should be an outcome of the desired travel characteristics of the street. Once the number of lanes is right-sized, the remaining width of the roadway should be absorbed by parking. In some cases, this will require that one or both sides of the street receive angle parking.

(The above discussion presumes that a road is not being rebuilt from scratch. For new construction, planners may wish to provide a more ample sidewalk, in which case parallel parking may be the best solution.)

People in Oklahoma City talk with fear about angle parking, as if local drivers are somehow less skilled than those of other cities. The fact is that one can find angle

parking all over the United States and the world, including on the main street in Norman, where it functions perfectly well. While backing up into traffic can create conflicts – and fender benders – the presence of angle parking on the street results in slower driving speeds and therefore can be expected to result in accidents that are less severe than when people are driving faster. Still, concern over conflicts has led many cities to institute back-in angle parking, which has a better safety record than the conventional front-in solution.

The image below shows 18th Street in Washington, DC, which has parallel parking on one side and back-in angle parking on the other. Such a solution could be provided on Broadway if double angle parking is deemed to take up too much of the roadway.



18th Street, the heart of Adams Morgan in Washington, DC.

Indeed, such a configuration seems to have existed on Broadway in the early 20th Century:



Broadway's parking configuration in the early 20th Century.

Increasing the supply of parking on many downtown streets, in addition to slowing traffic to reasonable speeds, can have another positive effect. It will reduce the demand for (and profitability of) surface parking lots, and will make it more likely that these missing teeth get filled with new buildings. Placing housing on Broadway will become much more possible if the developers can offer these on-street spaces to their tenants. As the street becomes more pedestrian-friendly, apartment renters and even condo owners will be

willing to do what they do comfortably in other walkable cities: park on the street, rather than in costly dedicated lots.

Creating a Continuous Canopy of Street Trees

Street trees contribute powerfully to both the safety and the comfort of a city, and a consistent canopy of street trees must be understood as an essential component of every street in Oklahoma City. A plan should be created for adding trees to every street that lacks them, and any rules regarding utilities must be revisited so that they are not allowed to unduly impede this effort. Trees must be planted close enough together so that their branches touch at maturity, and the City must not leave their early-life maintenance to the whims of private property owners.

Why should the City contribute its precious taxpayer dollars to the planting of street trees? Because it has been documented that, in terms of real financial savings, street trees quickly pay for themselves many times over. Specifically, consistent tree cover provides the following benefits:

- Absorption of the first 30% of most precipitation, reducing storm-water runoff;
- 5 to 15 degrees local sidewalk heat reduction;
- 40% to 60% lengthening of pavement life;
- 4 to 7 degree reduction in overall urban temperature;
- Significant absorption of tailpipe emissions and ozone;
- UV protection;
- \$15-25,000 increase in home or business value; and
- Average 12% higher income streams to businesses;

(Source: Dan Burden, Glattig Jackson: "22 Benefits of Street Trees.")

Stormwater management, air conditioning, and pavement deterioration all present direct costs to cities that far exceed the costs of planting and maintaining trees. Air pollution, UV radiation, and heat island effects present negative health impacts that ultimately find their way into health insurance premiums paid by individuals, corporations, and governments alike. And property and business tax revenues rise when properties are more valuable and businesses more successful. All of these factors should compel the creation of an *Oklahoma City Continuous Canopy Campaign* to save the City money through the comprehensive planting of trees.

Getting the Details Right

A number of additional streetscape components, some already mentioned, must be addressed if streets are to feel fully safe. These include the following:

Curbs

The radius of curvature for curbs at corners should not exceed 15'. Ideally, rebuilt streets should include bulb-outs at corners embracing the parking zone, especially when angle parking is used. Mid-block curb cuts should be carefully regulated and only allowed under exceptional circumstances.

Street Lighting

Light standards should respond to the scale of the pedestrian by being small and frequent: typically 10' to 15' tall and alternating with street trees at the same on-center spacing distance. The newer light standards in Bricktown are a good model.

Crosswalks

Crosswalks should be brightly painted or stamped and, in areas of particular need, they should be raised as a "speed table." This is particularly warranted where crosswalks cross E. K. Gaylord.

Crosswalk Signalization

Truly walkable cities do not have pedestrian push-button crossings. They are a sign that the automobile dominates, and they cannot be found in significant number in New York, San Francisco, Washington, or anywhere else with a walking culture. As Oklahoma City's streets become less dangerous to pedestrians, the current push-button system should be replaced with a standard system where pedestrians flow with traffic, and cars making turns must wait for pedestrians to cross before proceeding.

Crosswalk Timing

In the meantime, the City would be well advised to conduct a quick test and adjustment of the timing of every crosswalk downtown, as many people complain that they do not have time to cross major streets, especially E. K. Gaylord. In addition, the City must ensure that traffic light cycles are not unduly long, as long waits at crosswalks cause frustration and jaywalking. No light should have a full signal cycle of more than 75 seconds, and most should be shorter than that.

Construction Fencing

When construction causes the closure of a sidewalk in Oklahoma City, the sidewalk is simply eliminated. This approach is quite different from most other cities, where closed sidewalks are moved into the roadbed and protected by Jersey barriers. Once again, sheer traffic capacity has been allowed to trump pedestrian safety. This approach must be replaced with the more civilized standard.

Bike Lanes

Little time has been spent on this report on bike lanes, because well-designed urban streets engender driving speeds that make it appropriate for bikes to mix with traffic. Adding bicycle lanes in these circumstances can create the impression of a widened roadway, and cause speeding. That said, there is a role for bike lanes to play when streets are being restriped but not yet reconstructed. Just as parallel and angle parking should be

used to absorb excessive roadway freed up by right-sizing the number and size of lanes, so can bike lanes use up road width that is not needed for other purposes. In the long run however, most city streets should have lanes that are designated – and marked – as shared between cars and bikes.

PART IV: MAKING WALKING COMFORTABLE AND INTERESTING

All of the above recommendations add up to a comprehensive plan for turning Oklahoma City into a place where pedestrians feel safe walking. That is essential, but it is not enough. To engender walking to any meaningful degree, streets must also be comfortable and interesting, in the manner that has already been discussed at length. This requirement presents a different kind of challenge to public servants, because most of what makes streets comfortable and interesting is accomplished by the private buildings that flank the right-of-way. In this case, the City is faced with the challenge of exerting control on private enterprise to the limited degree that such control is advisable, and also of recognizing the places where the quality of private investment merits corresponding public investment – and where it doesn't.

This latter issue is the central topic of this chapter, and the foundation of an approach to downtown revitalization that has come to be known as Urban Triage. Developed by Andres Duany, Urban Triage is a concept that makes many planners uncomfortable, but that is particularly necessary in these times of limited public resources.

Urban Triage: An Instrumental Urban Strategy

Most mayors, city council members, municipal planners, and other public servants feel a responsibility to their entire city. This is proper, but it can be counterproductive, because by trying to be universally good, most cities end up universally mediocre. This is particularly the case when it comes to pedestrian activity.

There are many areas of Oklahoma City that would benefit from concerted public investment. However, in these days of limited public resources, one has to set priorities about where municipal dollars should be invested and where private development should be most encouraged. This study begins on the assumption that the place to spend money first is in the downtown core.

Other neighborhoods may be in greater need of assistance. But it is important to remember that a city's downtown is its one neighborhood that really belongs to every resident, wherever they may live. In addition, the condition of a city's downtown plays a disproportionate role in the city's reputation and thus its future success. Make a residential neighborhood better, and its residents benefit. Make the downtown better, and the entire city benefits.

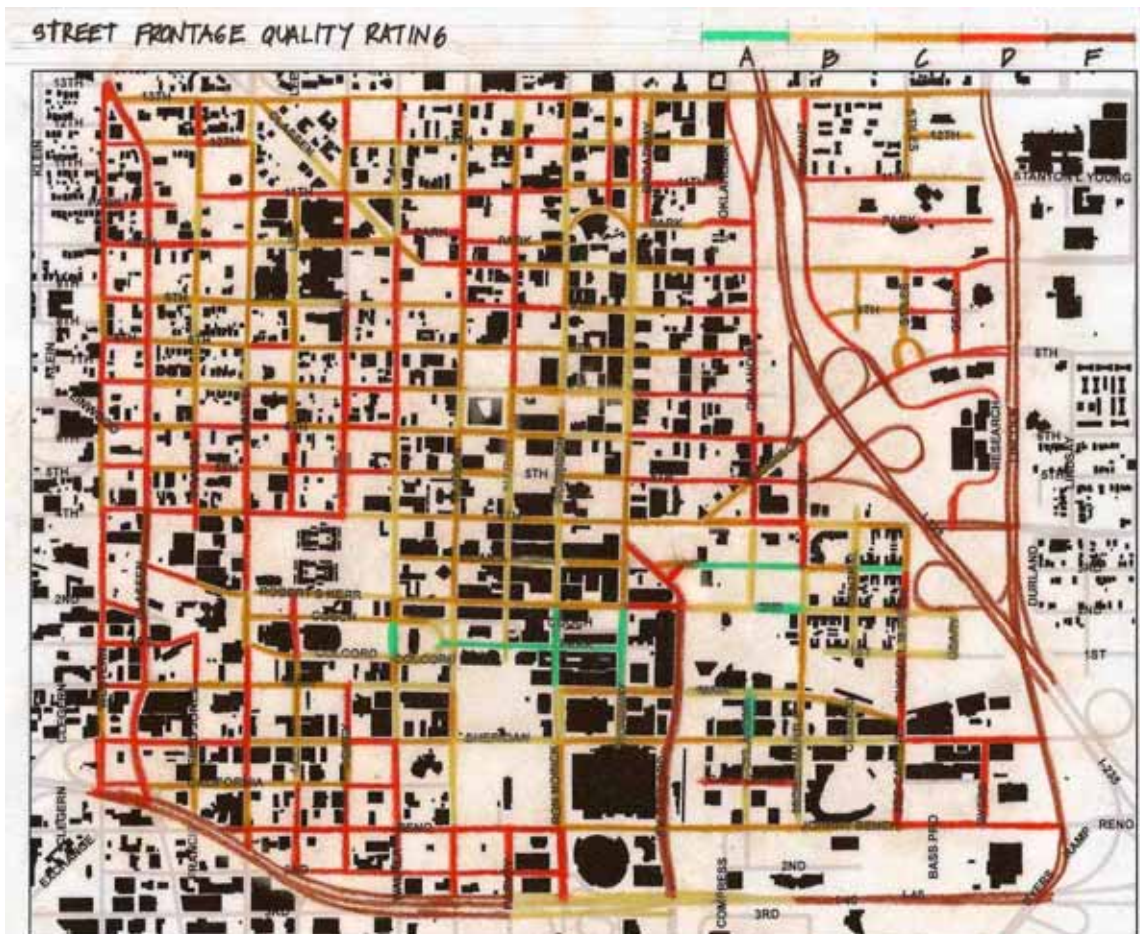
More to the point of this study, there are some areas within the downtown core where public investment will have a greater impact on walkability than in others. Only certain streets in your downtown are framed by buildings that have the potential to attract and sustain pedestrian life. There is little to be gained in walkability by improving the sidewalks along a street that is lined by muffler shops and fast-food drive-throughs. These streets should not be allowed to go to seed; the trash must be collected and the potholes filled. But investments in walkability should be made first in those places where

an improved public realm is given comfort and interest by an accommodating private realm – or a private realm that can be improved in short order.

By studying existing conditions, we can see where streets are most ready to support pedestrian life, and focus there. This technique of Urban Triage may seem mercenary and unfair, but it results in money being spent wisely.

The Street Frontage Quality Rating

The drawing below is a Street Frontage Quality Rating for downtown Oklahoma City. This map rates each block subjectively in terms of its pedestrian quality, based on the criteria of comfort and interest. Areas in green and yellow are generally comfortable and interesting, and therefore attract pedestrians. Areas in red and maroon are principally automotive, and it is hard to imagine how limited interventions could turn them into places where pedestrians would feel comfortable. And areas in orange could go either way with continued improvement or neglect.

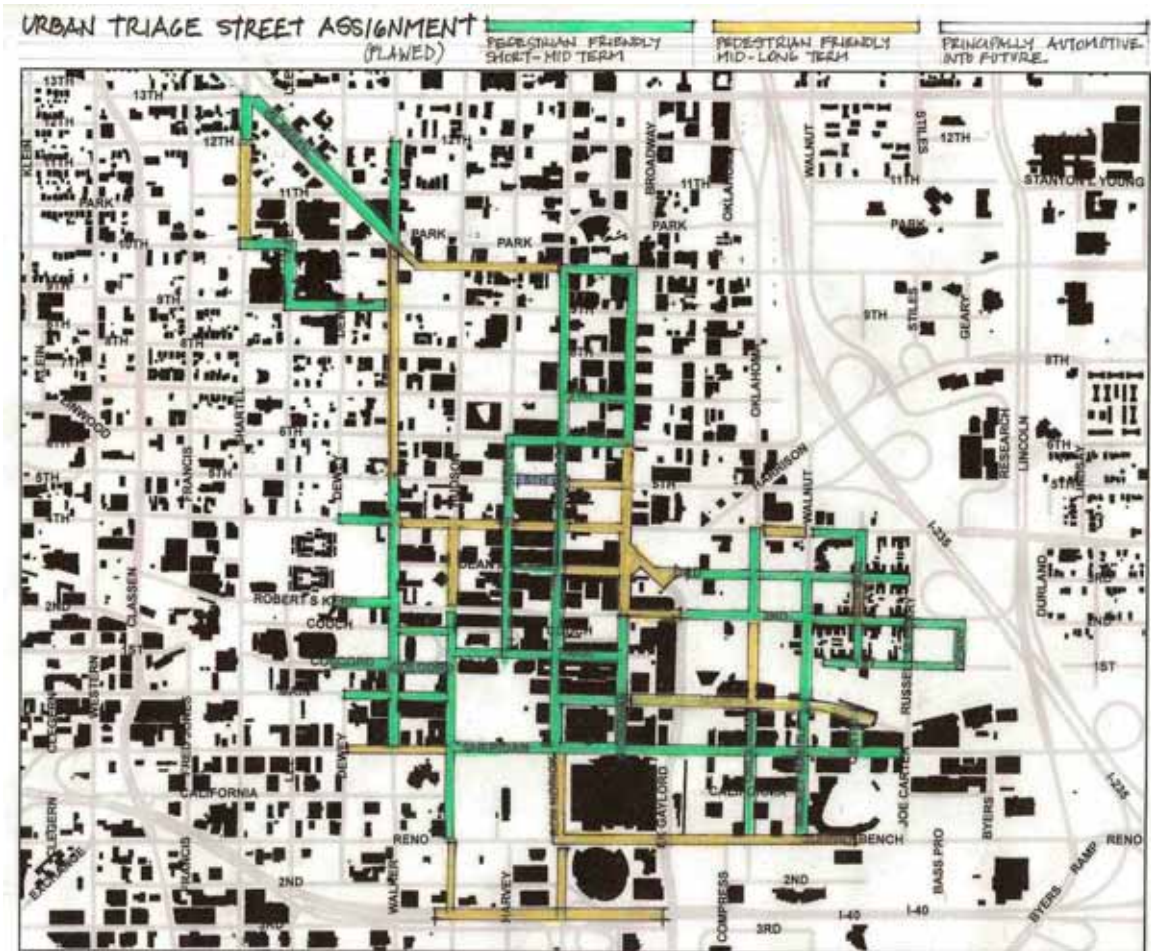


The Street Frontage Quality Rating documents where walking is most and least comfortable and interesting.

Please note that this assessment only addresses the quality of the spaces and buildings flanking the street, and does not consider the traffic or safety characteristics of the thoroughfare. This approach is based on the expectation that streets in potentially walkable areas will be reconfigured for safety.

The Urban Triage Street Assignment

This A-F Analysis leads to a second drawing, in which streets are given an Assignment in terms of their walkability status. Areas in green are capable of becoming pedestrian-friendly with limited short-term intervention. Areas in yellow have the potential to become walkable over a longer period of time. And areas in white are principally automotive in nature and are not likely to become walkable anytime soon. Comparing the two drawings, one can see how strengths have been reinforced in order to create a limited but continuous area of excellent quality.

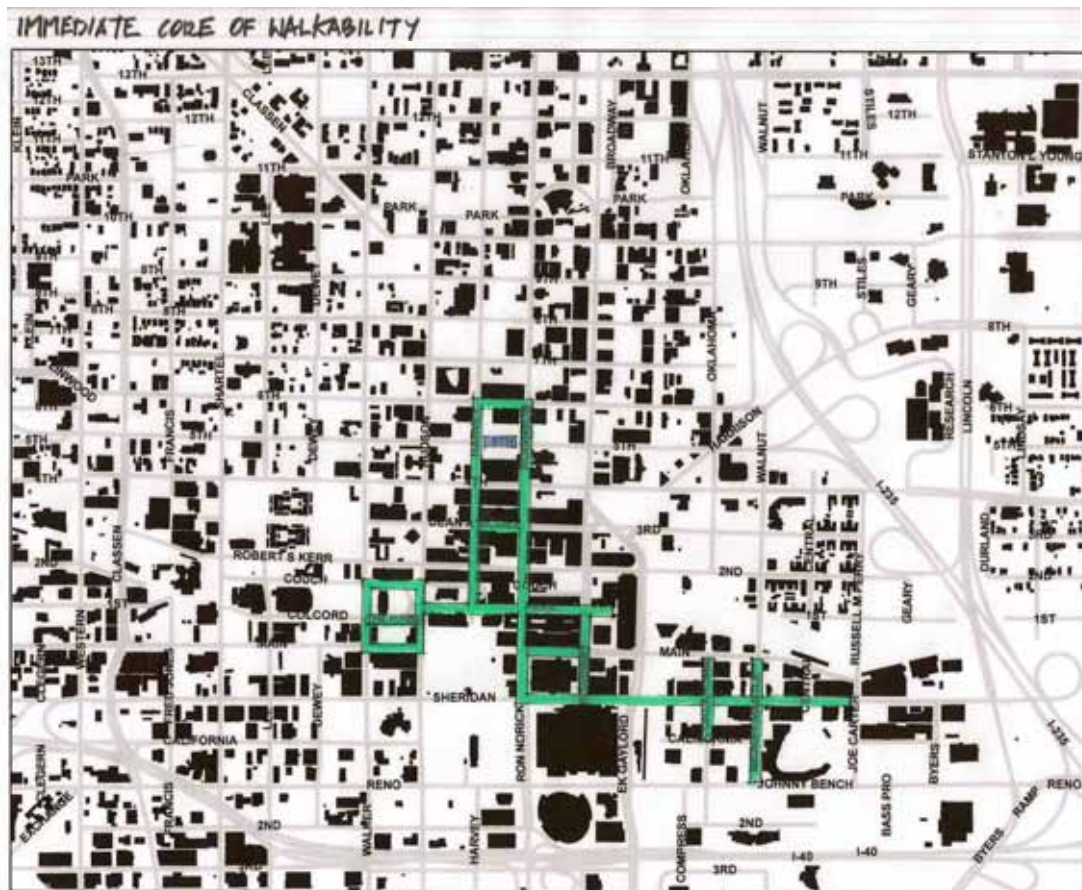


The Urban Triage Street Assignment reinforces existing patterns to create a network of walkability.

The Urban Triage Street Assignment is an essential tool in the planning of the downtown. The City has a limited amount of funds for making public investments, and a limited number of tools for encouraging private investments. If these funds and tools are to be used wisely, they will be concentrated on those specific areas that will improve, reinforce, and make continuous the part of downtown that is truly walkable. The Specific Interventions that make up the remainder of this chapter attempt to do just that.

The Immediate Core of Walkability

For this particular study, it is necessary to add one more map, a subset of the Pedestrian-Friendly Short-Mid Term (green) area designated above. This area, while not that large, will require a tremendous amount of private investment to place attractive sidewalk-flanking buildings on literally dozens of empty lots. Treating the whole area as equal will result in scattershot investment that takes a long time to achieve critical mass. Given the current recession economy and the desire to concentrate success, it makes sense to further hone in on a Phase One, where a limited amount of investment can make an impact quickly. We will call this area the Core of Walkability, and it consists of the streets that are currently good enough to become truly excellent soon.



The Core of Walkability further narrows the Pedestrian-Friendly area to those places where true walkability is possible soon.

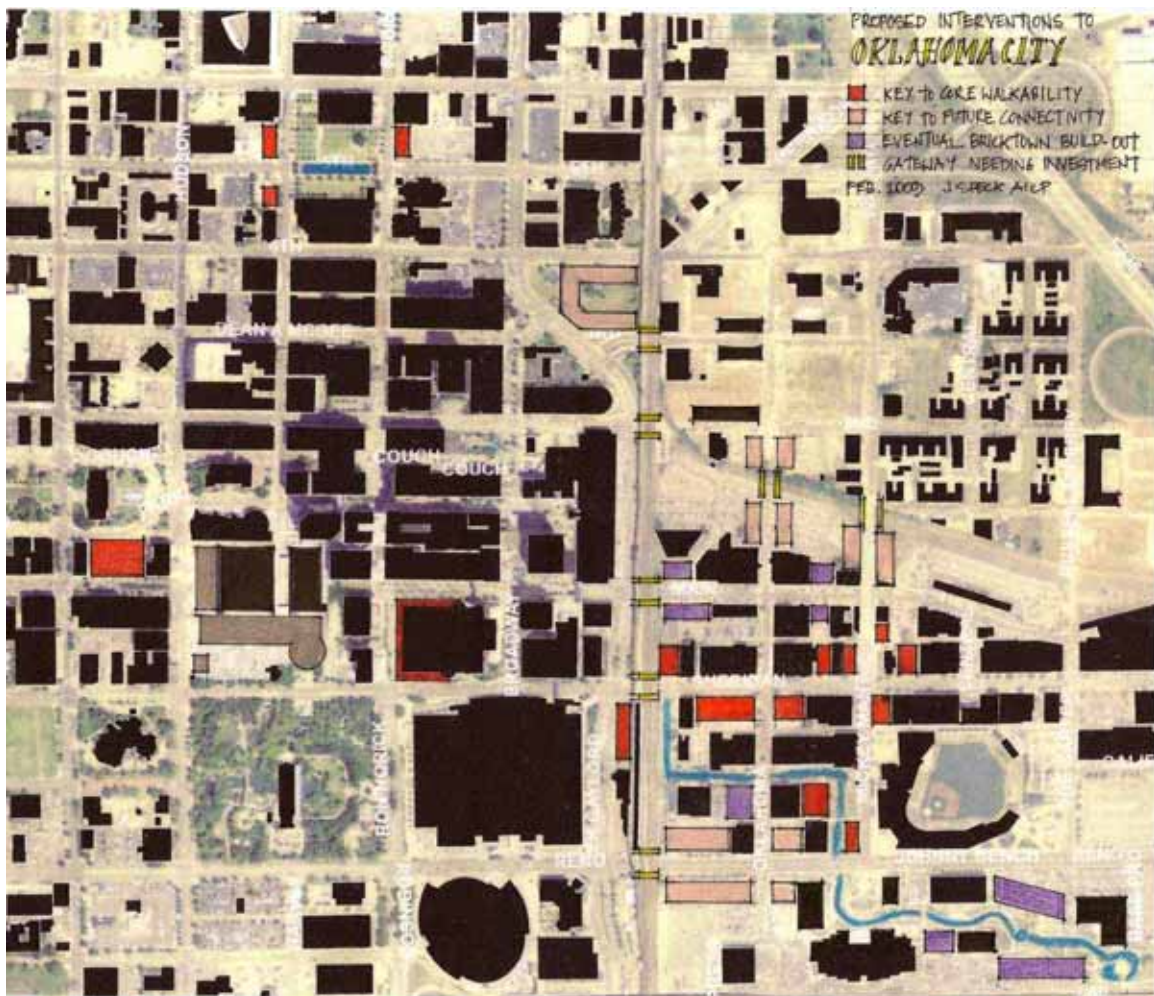
In addition to connecting current success into a continuous network of potential excellence, the Core of Walkability takes into account some key anchors within the downtown. City Hall, the Oklahoma City National Memorial, the Convention Center, key hotels, and Bricktown (including the Movie Theatre and AT&T ballpark) are all connected into one walkable circuit.

PART V: CORE WALKABILITY INTERVENTIONS

The Core of Walkability for initial efforts narrows to an achievable amount the number of public and private interventions that are necessary to make its streets fully comfortable and interesting. These Proposed Interventions are delineated in the following drawing, and include:

- 16 sites that are the highest priority in achieving core walkability;
- 4 sites that are ultimately key to the connectivity of downtown; and
- 7 gateway sites that merit public reinvestment.

Please note that this drawing also diagrams the eventual completion of Bricktown, but that effort is not considered to be a short-term endeavor.



The Proposed Interventions drawing, showing 16 key sites in red.

In discussing this plan, it is important to understand the nature of planning. It is not possible to simply put lines on a map and say “put buildings here.” One cannot presume economic energy where little exists. Rather, a plan is a *mold* designed to *shape* future

economic energy into the most efficacious form. This plan, and others like it, allow a city to use the resources and tools at its disposal to incentivize development in the right places, in the right shape. With a plan, resources and tools are no longer distributed randomly, and synergies between efforts are more likely to occur.

These proposed interventions are located and designed with the goal of reinforcing and, in a sense completing, the core of walkability. Comparing this drawing with the prior map shows how the 16 key sites simply constitute the missing teeth along the Core of Walkability that need to be filled in. Looking more closely at the drawing, these sites can be further identified as follows:

Missing Edges Against the Memorial

The Oklahoma City National Memorial is a site of tremendous value to local residents, and also a draw to visitors. People visiting the Memorial, whether from near or far, should see downtown Oklahoma City at its best, and should also be attracted to explore more of the city on foot. The paths down Robinson and Harvey, which provide high quality connections south, are blighted by the sites immediately east and west of the Memorial, which contain, respectively, a massive surface parking lot, a post office parking lot, and a small church parking lot. The largest parking lot need only dedicate a small western portion to line Robinson Avenue with a mixed-use building that frames the entrance to the Memorial. The post office lot, which appears half-used at rush hour, should also place a mixed-use building on its eastern half, against the sidewalk. The small church parking lot is supposedly already slated to receive a building.

The Main/Colcord Gap

An otherwise truly excellent pedestrian environment framing both W. Main Street and the City Hall green is marred by a single surface parking lot just west of Hudson Avenue. This parking lot is located within a block of several structured lots containing thousands of parking spaces, and is a poor use of the site. If this parking must remain on site, it should be contained in a structured lot which is lined with habitable building edges in the manner already discussed.

The Century Center

This inwardly-focused and largely empty building occupies the key knuckle between the downtown's most appealing north-south axis (Robinson) and its dominant east-west axis (Sheridan). Nowhere else does this report advocate demolition but, in its current form, this building provides a major impediment to walking downtown. It needs to be replaced or re-skinned in a manner that places windows and doors against the street, especially along Sheridan, the key axis into Bricktown. Presuming that the Sheraton Hotel must be kept actively in use, this renovation/replacement could limit itself to the western two-thirds of the block.

The Path to Bricktown

The block of Sheridan from Broadway to Bricktown represents one of the greatest challenges of this effort. Lined by the convention center, a venting facility, and a number of other blank walls, it terminates on the long walk across Gaylord, the underpass to Bricktown, and further gaps before the first Bricktown building appears. In the short term, this path will remain the best way in and out of Bricktown, and the importance of the Downtown/Bricktown connection suggests that it deserves special attention and investment. If there were ever a place for a large, dramatic piece of linear public art, this would be it. One is reminded of the interventions recently built in Phoenix. These sort of artworks, while appealing, are still considerably less interesting than buildings with shops and stoops against the sidewalk. In places where shops and stoops are not possible, they can be the best choice.



New lighting / shading devices in Phoenix frame an important axis.

Whatever the path, a key opportunity exists in the parking lot at the corner of Gaylord and Sheridan, against the railroad station. As marked on the Proposed Interventions drawing, this small parking lot – only a block away from the huge Santa Fe parking structure – could become the site of a dramatic building, a beacon that could draw pedestrians east from the Convention Center towards Bricktown.

Bricktown Infill

Often, it only takes the ascendancy of one small neighborhood to power the transformation of a downtown. Lodo, in Denver, is a great example of how just a few blocks of excellent urbanism helped to spur the renaissance of a city. It is clear that Bricktown has the potential to be Oklahoma City's Lodo. It has excellent physical stock, a great variety of nightlife options, and the additional benefit of the Canal, a public investment which has yet to reap its full reward. Unfortunately, the City's investments in Bricktown were not tied to a strong plan that prohibited the blight of surface parking lots, made valuable by that very investment. The current speculation (overpricing) of Bricktown properties, funded in part by parking revenues, is a nut that the city must crack if Bricktown is to reach its true potential.

Given the extent of its investment in Bricktown, the city should consider a full range of solutions to ending surface-parking-lot speculation there, from providing better wayfinding (now sorely lacking) to using eminent domain if necessary. Whatever the solution, there are currently ten lots – some small, some quite large – that need to receive buildings if the first phase of Bricktown is to be complete. Of these lots, indicated on the drawing, the largest ones and the ones at corners are the most important, especially the lot at the southeast corner of Sheridan and Mickey Mantle. This lot frames the ballpark plaza, and is currently a 20-car embarrassment.

As discussed, there is a great demand for housing in Bricktown, and this neighborhood truly represents the best hope for a downtown Oklahoma City renaissance. Not only does it deserve additional public funding – contingent on strong public planning controls – but the connections to and from Bricktown demand special attention, so that its energy can germinate into the rest of the downtown.

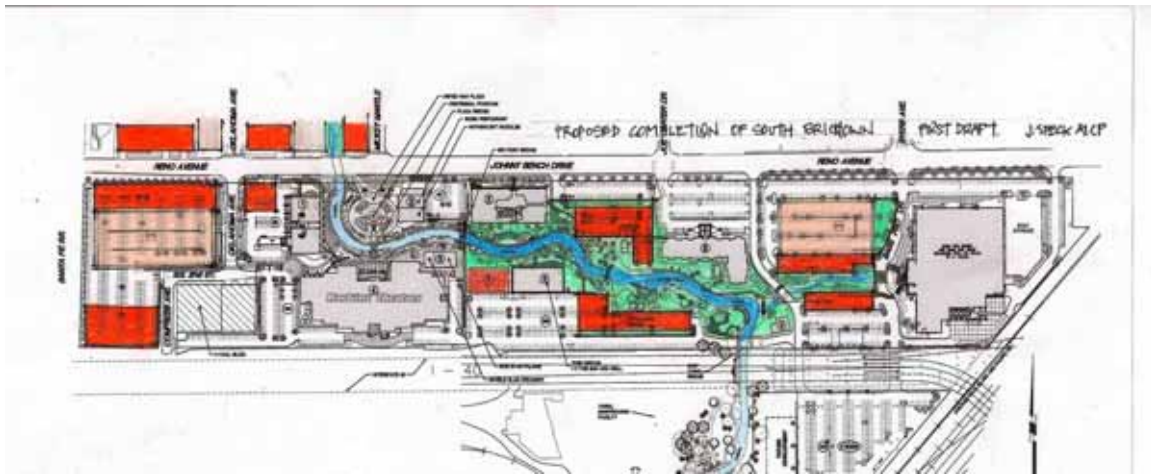
Bricktown Completion

The first phase completion of Bricktown (shown in red in the plan on page 30) is enough to create a critical mass of connected walkability. There are many reasons why this effort should be undertaken quickly. Less urgent, but valuable in the long run, would be the completion of the northern and southern areas of Bricktown. To the north, Main Street is halfway to success, and only four buildings (shown in purple) are necessary to bring it there. To the south, a major public investment in a canal has not been met in kind by the private sector. One does not build a beautiful canal in the expectation that it will be flanked by surface parking lots and exposed to a noisy elevated highway.

It is important to acknowledge that Lower Bricktown is not complete, and that no plan of quality exists for its completion. For this reason, it is useful to demonstrate what a plan of this sort would look like. The drawing below is a very quick study on this topic. It demonstrates the approach and criteria that might be applied to the eventual completion of Bricktown. These include the following:

- The canal is continuously lined by buildings, not parking lots.
- Reno Avenue is also lined by buildings (and is walkable) until it reaches the cinema, at which point it becomes a principally automotive street lined by parking lots.
- As part of the street right-sizing program already discussed, Reno Avenue would also be made more walkable through the addition of on-street parking.
- Structured lots are provided to allow for surface lots to become building pads. The investment in the canal deserves no less.
- The creek in the center of the Bass Pro parking lot becomes a pedestrian street flanked by buildings.
- As the highway lands and becomes the Boulevard (towards the west), it begins to be flanked by buildings.

As the principles of Urban Triage would suggest, not a single building in this plan should be built until the central portion of Bricktown is complete. But this site eventually deserves a build-out of this quality.



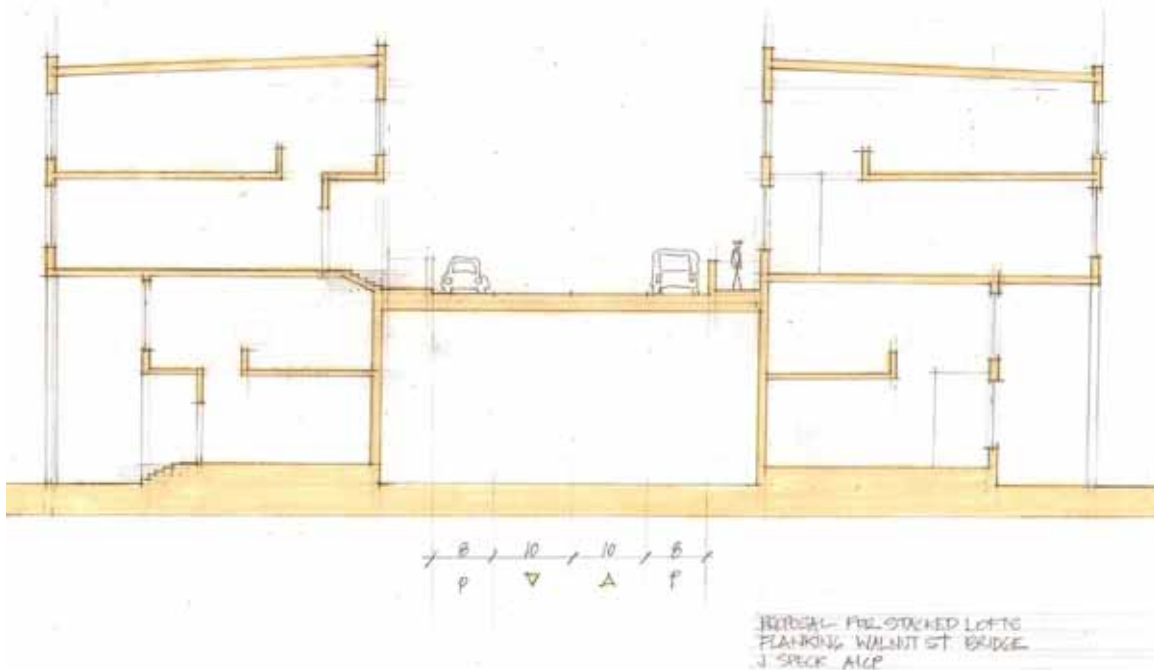
One possible plan for the eventual completion of Lower Bricktown.

Connections into Maywood Park and Deep Deuce

Whenever walkable areas are connected to walkable areas, walkability multiplies geometrically. As discussed, the energy of Bricktown has the potential to add great energy to its surrounding neighborhoods; it also has the potential to benefit greatly from those neighborhoods' residents finding the walk into Bricktown more inviting. This is particularly the case with Maywood Park and Deep Deuce to the north, two neighborhoods that are much closer to Bricktown than the experience of walking there would suggest.

That walk crosses a defunct rail line, but one which we hope will carry train service soon. In any case, crossing above the train tracks will probably always be an exposed, windswept experience. But much of that current crossing – on the Walnut Avenue bridge – is actually above not rail lines, but the grass field and surface parking north of Main Street. As this City-owned land is developed, perhaps into structured parking lots with habitable edges, buildings could be built on either side of the bridge, turning its trajectory from a noxious highway into an elevated street.

Currently, the Walnut Avenue bridge roadbed contains three 12' travel lanes, totaling 36'. This is the perfect width to hold two 10' travel lanes flanked by two 8' parking lanes. This elevated street could be lined by elevated rowhouses facing inward. These buildings could sit atop rowhouses that face outward to new streets between parking lots below. An illustration of this concept follows.



Proposed housing flanking the Walnut Avenue bridge.

In the above drawing, the baluster separating traffic from the sidewalk could be removed, since traffic would travel the proper speed when placed on a road without highway geometrics. The area under the bridge could be used for additional parking.

This proposal is a bit outlandish, but more aggressive acts of bridge-shaping have been successfully completed. The image below, from Columbus, Ohio, is a bridge that was built to draw pedestrians across a freeway.



The Cap at Union Station in Columbus, Ohio.

The above scheme required the extension of a bridge deck to support its buildings. The proposal for Walnut Avenue requires no more construction than the buildings themselves. Perhaps, if offered the land from the city for free, an ambitious developer would take this

project on, dramatically shortening the perceived distance from Maywood Park into Bricktown.

Another connection from Maywood Park into Bricktown is possible along Oklahoma Avenue. The street currently terminates at an overlook just south of 2nd Street, and some investment has gone into this feature. But there is no reason why Oklahoma Avenue cannot continue straight down the hill and cross the railroad tracks at grade, just as Perry Avenue does three blocks to the east. As with the above scheme, this effort would require the reshaping of the parking lots north of Main Street into a block structure with new buildings lining the north-south trajectories. Every additional connection from Maywood Park and Deep Deuce into Bricktown – especially vehicular connections with sidewalks and proper street geometrics – will encourage further pedestrian activity between the two neighborhoods.

Connections Under the Tracks

The Proposed Interventions drawing also highlights five key locations where east-west movement across the railroad tracks into Bricktown and Maywood Park could be improved by making a limited, artistic investment in the underpasses. These connections are key to downtown walkability, and they are currently far from appealing. Unfortunately, they have not even received as much attention as the Underground, where the creative introduction of fluorescent lighting by Rand Elliot has given some flair to an otherwise dull experience.



Artistic lighting in the Underground.

Thanks to this installation and others – such as the neon on Broadway – Oklahoma City is beginning to develop a trademark theme of colorful buildings and infrastructure. Unless a more creative response can be crafted, perhaps through a design competition, it would make a dramatic impression if each downtown rail underpass were brightly lit with a different color of the rainbow. A nice example of this approach can be found in the tunnel-like underbelly of the Netherlands Architectural Institute (below).



A lighting installation at the Netherlands Architectural Institute.

Moving Beyond the Core

The above discussion completes the review of interventions suggested by the identification of the Core of Walkability. It is important to repeat that these efforts are defined to the area delineated by that Core, which is merely the first phase of a larger project. The extent of this larger project is defined by the Urban Triage Street Assignment, in which first the green area and eventually the yellow area are slated to receive interventions of a similar nature. Those interventions have yet to be proposed, but they should follow the same principles as those already shown: buildings with doors and windows activating sidewalks against traffic-calmed streets, with surface parking lots replaced by new on-street parking and strategically-located structured lots.

As significant as this expansion beyond the Core is, it should not receive any City investment until the Core is largely complete. Urban Triage dictates that concentrated excellence is superior to dispersed mediocrity. The first phase efforts are necessarily about picking winners and reinforcing success. A thriving core will make the outward expansion of excellence more likely.

This strategy is also useful in considering the street improvements proposed in the chapter on safety. The strategy and standards suggested for remaking downtown streets may be applied universally right away. However, limited budgets as well as fear of congestion might suggest a more tempered approach. Clearly, Urban Triage suggests that these changes should be made first to the streets in the Core of Walkability, and next according to the green and yellow designations in the Urban Triage Map. In all cases, public investment and public support for private investment should occur simultaneously, in a place-based implementation model.

PART VI: MISTAKES ABOUT TO BE MADE

Oklahoma City is quite fortunate in that it has considerable economic energy at a time when most American cities are struggling. It is also fortunate to still have wealth in an era when the dominant urban paradigm has changed to a more humane approach than was practiced in the mid-20th Century. At that time, many communities, Oklahoma City included, allowed themselves to be eviscerated to meet the demands of “modernity.” Those parts of the City that were remade in the 60s and 70s, largely under the guidance of I.M. Pei, are the areas which have the least hope of attracting pedestrian activity.

Now, with the lessons of the 20th Century learned, the heroic modernist city, in thrall to the automobile, has been replaced in the popular esteem by a new ideal of the urban environment. This ideal, embraced on every page of this document, is for cities in which the car is an instrument of freedom rather than a prosthetic device, and the sidewalks pulse with the energy of a vital, productive pedestrian culture.

As Oklahoma City works toward achieving that ideal, its progress is threatened by certain projects underway that, in their current form, still represent the legacy of the older way of thinking. If these projects are built as planned, they will undermine the pedestrian quality of the city rather than improving it. Two of these efforts are described below.

The Chamber of Commerce Site

One final item shown in the Proposed Interventions drawing has yet to be discussed, and that is the “Key to Future Connectivity” site located where E.K. Gaylord curves at 3rd and 4th Streets. This large empty site has already been described as an important “missing tooth” in the streetscape of the city, a spatial void that fails to attract pedestrians past it in any direction, but especially to and from Maywood Park and Deep Deuce, where many downtown residents live.

As discussed in the sections on Comfort and Interest, sites like these need to be filled by buildings that shape the street space and place doors and windows against the sidewalk. Any parking lots placed upon them need to be hidden from the street. With those goals in mind, it is troubling to see the current plan for the site, shown on the next page.

As depicted here, the design of the building does not attempt to satisfy the above criteria. Furthermore, it is clearly an “object building.” Rather than shaping the space around it, it stands alone as a sculptural object, causing the public areas around it to feel residual and undefined. It might be a beautiful building, but it is not a building that encourages walking. Its vehicular drop-off endangers pedestrians on the sidewalk, and its exposed parking lot makes the walk east on 3rd and 4th Streets even less inviting than it is at present. While this design might be appropriate for a rural or suburban site, it does not belong on an urban site that is so important to the pedestrian connectivity.



Current plans for Chamber of Commerce site.

The proper use of the site, according to the criteria of walkability, would look more like the drawing below. A building, still with a green in front, holds to the edges of the lot and hides its parking at midblock. This building is considerably larger than what the Chamber of Commerce hopes to build, which suggests that the Chamber could occupy only a portion of the site, and allow the rest to be developed for another tenant.



One possible redesign.

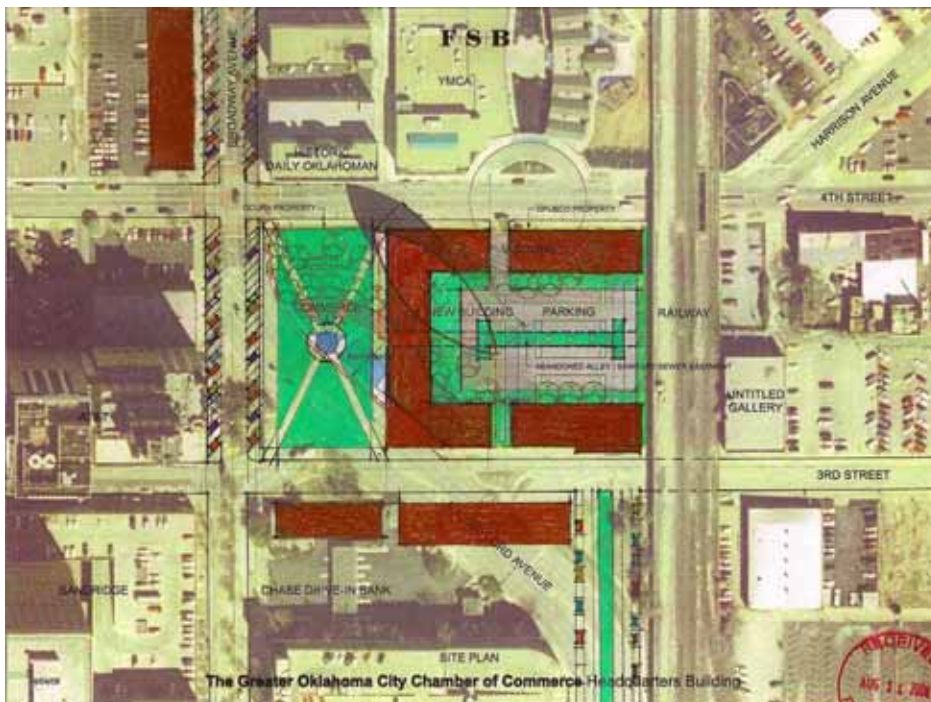
In the above drawing, the ratio of building to parking is considerably higher than currently proposed. This is because, on downtown sites, good urbanism does not include on-site parking unless that parking is structured. However, if parking is allowed on-street

and is consolidated in municipal lots, buildings can once again hold the edges of their lots without having to structure their parking.

The drawing below shows a proposal for the ultimate redesign of this area. Because the remarkably low traffic counts clearly allow for it, parallel parking has been fully reintroduced on Gaylord, and could also line both sides of 4th Street. As recommended, angle parking has been brought back to Broadway. All of this new parking is available to serve the Chamber site, so its own internal parking lot need not be any larger.

The plan also shows a major change originally suggested by Blair Humphreys, son of the former Mayor. Rather than swooping into Broadway with its highway geometrics, Gaylord terminates at 3rd Street. This intelligent solution solves several problems at once. Cars are brought down to urban speeds, and the left-hand turn onto 3rd Street allows drivers to select from a series of alternative paths north rather than simply being funneled onto Broadway. In a new 2-way system, Robinson, Harvey, and Hudson will all play their part in handling the Broadway traffic, and there need be no fear that double-angle parking will cause inordinate congestion.

It is mistaken to think that terminating Gaylord will cause back-ups. Drivers on Gaylord currently must stop at every intersection that has a red light. This plan only adds a left-hand turn to one of those stops. Upon most recent investigation, automobiles still demonstrated the capacity to turn left. In the light cycle, Gaylord traffic will take preeminence over the relatively light flow of cars on 3rd Street.



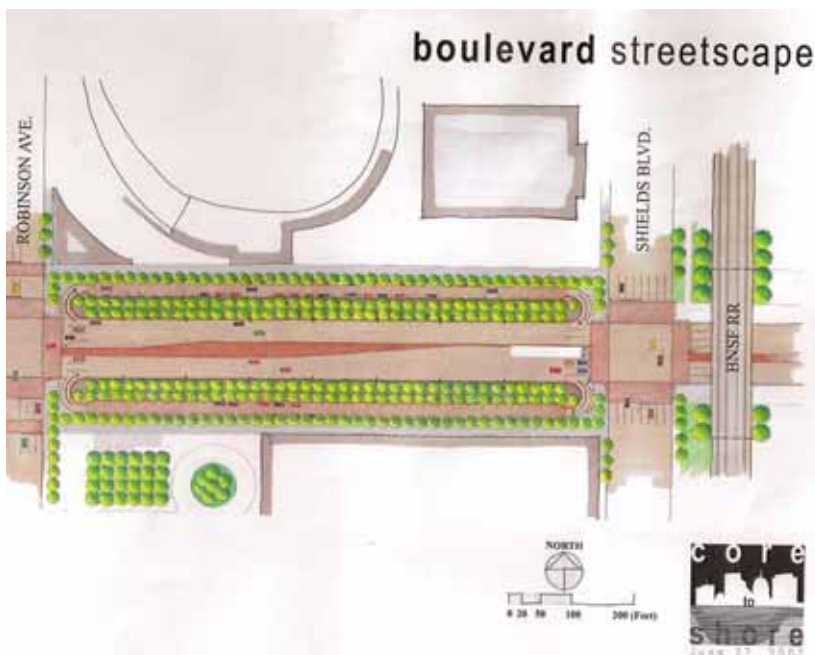
A proposal for the reconstruction of the area surrounding the Chamber site.

The above drawing also shows the additional new buildings that will be needed to fully shape the streets in this area. As always, the parking demands of these new buildings will need to be addressed not on-site, but through centralized parking nearby. Please note that these buildings do not find themselves in the Proposed Interventions drawing, because they are outside of the Core of Walkability. For that reason, this has to be considered a Phase Two project.

The Boulevard

“Oklahoma City Swaps Highway for a Park.” So reads the USA Today headline, describing the City’s plans to build “an old fashioned boulevard and mile-long park” in place of Interstate 40. This ambitious goal has received a tremendous amount of energy and attention. The team responsible for the Boulevard’s design was more than thorough in modeling alternative approaches. Unfortunately, old habits die hard and, the ever-present goal of moving cars quickly has turned this mile-long park into what could best be described as a highway with trees.

One block of the proposed boulevard is shown below. The design suggests that this new boulevard was charged with handling as much traffic as now fills the Interstate – indeed, rumors were circulating to that effect. Six lanes of through traffic – plus left-hand turn lanes – are flanked by two slip lanes to access the sidewalks. These slip lanes are necessary, as the idea of entering buildings along a 7-lane divided paved-center highway is hard to imagine. That’s 96’ of unmitigated pavement at the center of a right of way that is 272’ wide.



The current plan for this block of the Boulevard contains 8 to 9 travel lanes, 4 parking lanes, and is principally paved.

The fact that traffic engineering has been allowed to trump urban design in this proposal is made evident in the detail of the slip lanes. Notice how they are not continuous, as in any “old-fashioned” boulevard, but instead are clipped at the corners, and indeed double back on themselves, so that you have to pass your destination before reversing direction to get to it. This largely unprecedented solution represents the apotheosis of the fear-of-congestion school of traffic planning, in which the free flow of vehicles overwhelms all other considerations.

The discussion of precedent is important here. Urban design is a profession more than an art, and it derives its authority from the study of past successes and failures. Good designs are based upon past designs that have stood the test of time, and new inventions cannot be presumed excellent merely in theory. They must be shown to work.

In the case of the Boulevard, one has to ask where an urban street approaching 272’ in width has been successful. Some comparisons, already discussed publicly, are useful.

In San Francisco, the Central Freeway was removed after it collapsed in the 1989 Loma Prieta Earthquake. It wasn’t rebuilt or moved, but was simply replaced by a high-volume surface road. (It caused a sensation, as the reduced roadway volume, as predicted, led to reduced traffic congestion.) Shown below, this attractive boulevard could hardly be called a park. Unlike the proposed Boulevard, it has only 4 lanes of through traffic, *and no left-hand turn lanes*. Also, it is only about 125’ wide.



The boulevard replacing San Francisco’s Central Freeway is approx. 125’ wide.

Washington’s K Street has also been studied as a possible precedent for the Boulevard. But K Street, too, has only 4 central through lanes, and no left-hand turn lanes. It is the dominant east-west axis in downtown DC, and approximately 150’ wide (see below).



Washington's K Street is about 150' wide.

Finally, in discussing Boulevards, one has to consider the great avenues and boulevards of Paris. Surprisingly, studying the plans for Paris, one learns that most of these, like the Boulevard Kleber, are only about 100' wide.



Boulevard Kleber in Paris is 100' wide.

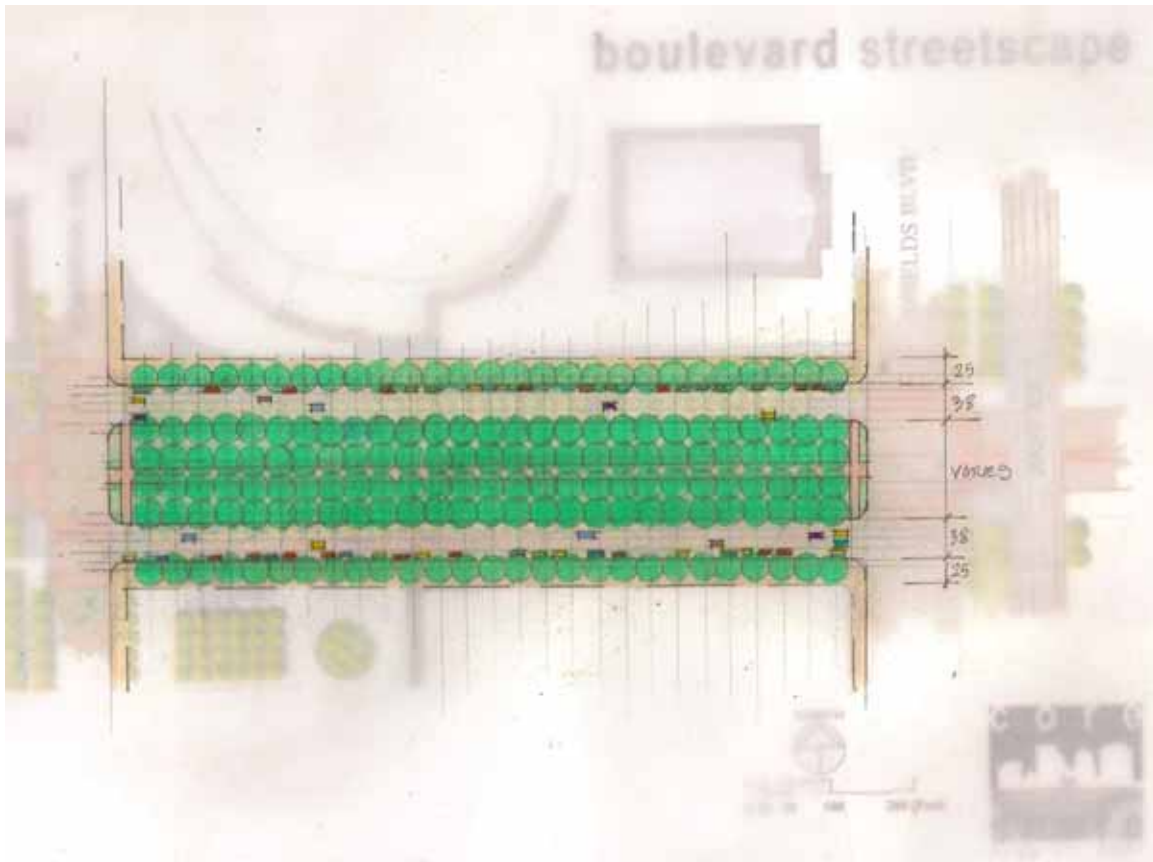
Given that Oklahoma City has over 250' to put to use as its boulevard, the challenge is to find another successful example of a very large urban street that moves considerable traffic, functions properly as a park, and contributes tremendously to the real estate value of the properties surrounding it. While other examples no doubt exist, probably the best known version of this type of roadway can be found in Boston, where Commonwealth Avenue takes its place in Frederick Law Olmstead's famous "Emerald Necklace."



Boston's Commonwealth Avenue, at 200' wide, contains a true park at its center.

Commonwealth Avenue is perhaps the best address in Boston, because the roadway – two lanes in each direction plus parking – flanks a true park, with a tree-lined walkway with benches down its center. Of course, there are no left-hand turn lanes. In any case, the deep median makes them unnecessary: turning cars stack in the cross street while waiting for the light to change.

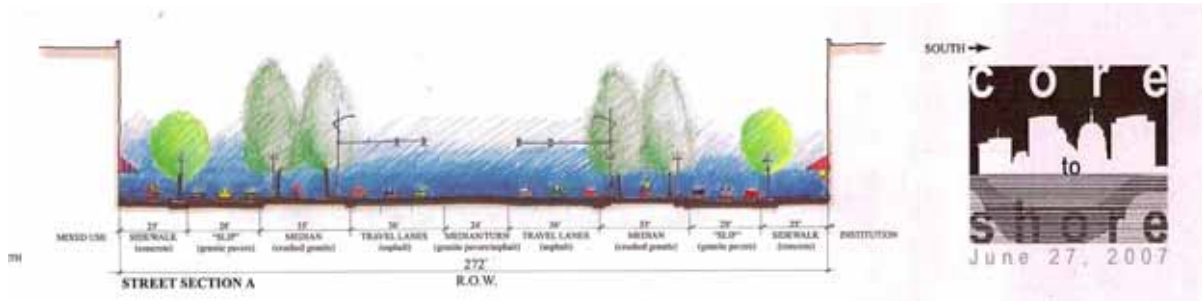
Until a better example can be found, Commonwealth Avenue presents itself as the best model for the design of the Boulevard, and can easily be adapted to the Boulevard's greater width. The drawing below shows the same block as before, redesigned after a block of Commonwealth Avenue.



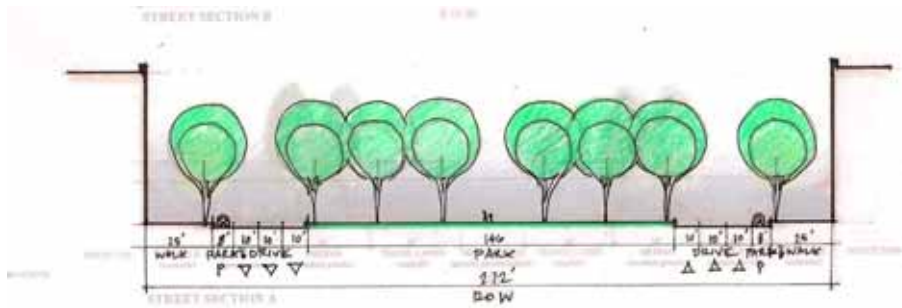
The Boulevard redrawn in emulation of Commonwealth Avenue.

Surprisingly, this redesign carries just as much through-traffic as the prior plan. It was drawn with that objective, and under the false assumption that such a requirement was in place. This plan could be further improved by limiting the number of through-lanes from six to four. It must be remembered that, whatever capacity the Boulevard provides, this will all be new capacity. The Interstate is not going away; it is merely moving. This street can handle as much or as little traffic as we want it to, and four lanes will produce an environment that is far more pleasant than six.

Comparing the current and the proposed plans in section further illustrates the difference between the two approaches. The first contains about 150' of paved roadway; the second less than half that amount.



Current boulevard design in section.



Boulevard redesign in section.

While it is not part of the Core of Walkability, the Boulevard is to be built soon, and therefore deserves even more attention than it has been getting. It is hoped that this report initiates an effort to restart the design based upon the study of past successes and failures. Ultimately, the design of the Boulevard must be for more than just a roadway, and must include full urban design criteria for the buildings that flank it, whose property value has the potential to be so dramatically enhanced by its construction.

PART VII: IMPLEMENTATION

The limited scope of this report does not include any specific focus on implementation. The recommendations are presented at face value to be made of use by the City’s Planning and Public Works departments, and to inform the actions of developers and citizens at large. However, since this effort was presented formally to the Mayor and City Council, it seems appropriate to make recommendations on the next steps that the City Council can take if it wishes to lead the implementation of the changes suggested here.

City Council can lead in many ways, but the principal way is through ordinances. Often, when the interactions between different city departments produce outcomes that are deemed unsatisfactory, an ordinance from the City Council is the only way to compel meaningful change away from “business as usual.” Indeed, in the absence of deep systemic change, it is hard to imagine any other path to reforming an armature of practices that have become as deeply ingrained as the ones that determine the quality of the public realm.

This report was commissioned because the Mayor and City Council recognized a problem: Oklahoma City is considered the least walkable city in America. This problem did not arise on their watch – it was several decades in the making – and they are to be congratulated for taking it on. But the problem will persist unless dramatic steps are taken to change it.

Municipal ordinances are complicated things, and they should be written with care. An ordinance intended to accomplish the objectives described herein must receive more detailed attention than the list that follows. But, for illustrative purposes, here is a first draft of what an Oklahoma City Walkability Ordinance should include:

1. A mandate that creates a Kit of Parts for street design, restriping, and reconstruction (ahead).
2. A mandate to restripe and re-signal streets now, in anticipation of future reconstruction.
3. A phasing plan for the above measures based on the Core of Walkability and Triage Plans.
4. A commitment to expending public resources on infill construction and attainable housing according to the priorities established in the Core of Walkability and Triage Plans.
5. A determination to fund and staff a Continuous Canopy Campaign, and modify the water-main tree-planting policy.
6. A determination to fund and staff a Bricktown Completion Plan that includes taking the steps necessary to stop surface-parking-lot speculation.
7. The naming of an urban designer of national reputation to lead a Boulevard redesign.

THE KIT OF PARTS FOR STREET DESIGN IN WALKABLE AREAS:

1. All one-way streets shall be converted to two-way streets.
2. Each street shall have no more driving lanes than suggested by traffic volume.
3. No driving lane shall be more than 11' wide.
4. No parallel parking lane shall be more than 8' wide.
5. Left-hand turn lanes shall be limited to two-lane streets only, and shall be no longer than required by typical rush-hour stacking.
6. Angle parking shall be used as a tool to absorb additional roadway made available by the above requirements.
7. Bicycle lanes shall also be used as a tool to absorb additional roadway made available by the above requirements.
8. On street parking shall be provided against every curb.
9. Street trees shall be planted continuously along streets at a spacing distance of 30' on center, or closer.
10. Curb return radii shall be limited to 15' max.

The above list is by no means complete, but it addresses the principal items that present the biggest impediments to change. A more thorough list could be compiled by reviewing this document in its entirety.

Only City Council can determine whether an ordinance is the best tool for accomplishing the changes suggested here. Given the extreme nature of the city's walkability challenge, a decision to forego such an ordinance should be bolstered by a series of alternative measures designed to accomplish a similar outcome.

While this report is long, it is hopefully not overwhelming. The steps to improving walkability in Oklahoma City are clear, and they are not hard to implement. They pertain to a series of physical design decisions which are principally within the City's control, and which can be effected quickly. The key ingredient to their implementation is will.

ACKNOWLEDGEMENTS

This report is submitted with gratitude for the opportunity to advise the City on such an important matter. Thanks are due to Mayor Mick Cornett for his steadfast commitment to design and his concern about this critical topic, and to the City Council for its decision to support this effort.

This report would not have been possible without the tremendous assistance provided by the Planning Department, including Russell Claus, Autumn Radle, A.J. Kirkpatrick, Greg Whittaker, and especially Aubrey Hammontree, who managed this project.