



Request for Qualifications – INCOG Bicycle/Pedestrian Master Plan

Interview Questions – Responses

1) Discuss problem-solving approaches the team has used or anticipates using in developing Bicycle/Pedestrian Master plans for other regions/cities?

Multi-jurisdictional bicycle/pedestrian master planning efforts present unique coordination challenges as they involve numerous stakeholders with different levels of awareness, comfort and “readiness” to consider and implement different types of infrastructure and policy improvements. The TDG Team understands that it is important to approach these types of projects respectfully and equitably. We must ensure that all participants have a shared understanding of the range of bicycle and pedestrian facilities and associated terminology. The project (and resulting plan) will describe the most progressive and innovative treatments, but we will work with each community to develop tailored recommendations. For many of our projects, TDG includes a one-day bicycle and pedestrian facility design training workshop. This is built around our work on the AASHTO Bike Guide, the AASHTO Pedestrian Guide, the NACTO Urban Street Design Guide, and other best practice manuals. We tailor the training to local context, ensuring that we focus on treatments that are of interest to our partner communities.

Multi-jurisdictional, regional projects often must contend with a tension between a desire for very localized, discreet recommendations (such as improvements to a specific intersection or corridor), and large-scale initiatives such as regional trail systems and longer distance routes. We have often found that the most successful regional planning projects focus primarily at the macro level, coupled with targeted assessment of key focus areas. These focus areas may be selected because they represent typical challenges found across the region, or they may be areas that exhibit relatively high levels of bicycle and/or pedestrian crashes.

We have found that even in a one-jurisdiction bicycle/pedestrian plan, stakeholders have very different goals and objectives for the project. This has the potential to become even more complicated as the number of jurisdictions increases. Therefore, we must work to develop consensus around regional priorities such as improving safety and reducing crashes. We must also establish shared understanding and expectations for the project process, deliverables and outcomes.

2) Describe how your team plans to utilize analytical tools such as GIS to conduct demand analysis and analysis of existing infrastructure.

Planning Experience in Connecting Destinations Using GIS Applications. GIS analysis can be an effective tool to identify transportation needs and prioritize improvements. TDG has a significant amount of experience working with large GIS datasets that compile information from multiple sources, including state DOTs, MPOs, municipalities and counties. For example, the statewide trails inventory we developed for the State of Maryland compiled information from 24 counties, over 20 municipalities and several MPOs or regional planning commissions.

Demand modeling. A primary example of our GIS capabilities is in bicycle and pedestrian travel demand modeling. The purpose of this mapping effort is to assess demand (both existing and potential) for bicycle and pedestrian travel throughout the region. The task of measuring demand is one that TDG has performed for many past projects, including most recently the Wichita, KS Bicycle Master Plan. The ultimate goal of conducting a demand analysis is to prioritize route network segments for implementation, but also to provide a tool that can be used by INCOG and member jurisdictions in the future to prioritize projects. The processes we use provide an objective method of assessing need.

On-line mapping tool. The WikiMap, a web based interactive mapping tool enables us to collect very detailed user input on a wide range of project elements, from existing conditions for bicycling, to desired routes and destinations, to comments on proposed recommendations. This feedback is then seamlessly integrated into our GIS analysis. We have had great success with this cost-effective tool, reaching thousands of individuals with local knowledge and expertise who can highlight the 'hidden' linkages that connect neighborhoods and expand project opportunities.

3) What is your recommended methodology for determining the range of bicycle & pedestrian infrastructure needs, developing cost estimates, and prioritizing the improvements for construction with an implementation schedule? Discuss your past experience with the use of this methodology.

The TDG Team uses an iterative method to determine bicycle pedestrian infrastructure needs that incorporates public and stakeholder input, data analysis (including demand mapping and crash analysis), and professional judgment. The TDG Team prides itself on developing recommendations that address connectivity and safety issues, while being practical and implementable. When conducting field work, we pair planners and engineers to create teams that are able to dynamically assess existing conditions in the field, assess current and projected roadway volumes, understand bicycle and pedestrian network needs, and develop recommendations for proposed facility improvements. In addition to identifying the facility type (such as "install bike lane"), we also identify the necessary action to implement the facility (such as "add shoulder" or "lane diet" depending on the situation).

TDG maintains a database of unit costs for different elements of construction projects, including installing asphalt or curb ramps, installing thermoplastic markings, pavement milling, etc. We update this with recent costs from bid tabulation sheets for local roadway and sidewalk improvement projects. This is used to quickly develop localized cost estimates for all types of bicycle and pedestrian improvement projects.

The TDG Team has a proven approach for developing and weighting prioritization criteria in the communities where we work. We have an extensive list of prioritization criteria that can be used to “prime the pump” and inform conversations with stakeholders. We typically use GIS analysis to run different prioritization programs so that decision makers can see the implications for different scenarios. Our projects almost always include a strong implementation schedule, identifying not only the timeframe for improvements, but the lead agency or office, and funding source(s).

We have used this approach in hundreds of communities around the country, including the Dallas Bicycle Plan, the St. Louis Regional Bicycle Master Plan, and the Wilmington, NC MPO Pedestrian Plan.

4) What type of data and survey methods do you anticipate using to create a comprehensive regional bicycle/pedestrian master plan?

To create a plan that represents a comprehensive vision for the region the TDG team will gather and review existing data and plans to:

1. Assess the planned and existing roadway, sidewalk, and trail network for deficiencies, barriers, and opportunities; and
2. Analyze and incorporate available planning data and public involvement to understand current bicycle and pedestrian travel and future demand with the goal of improving future mobility and accessibility.

After conducting a full review of GIS data we will create a series of base maps for all plan efforts including field work, network plan development and final recommendations. Field work identifying missing elements of data will be incorporated into the GIS dataset as necessary to complete the network plan.

In assessing bicycle and pedestrian infrastructure needs, a significant challenge is the often overwhelming number of locations that need improvement versus the limited budgets available to address these needs. TDG has developed methods to measure potential demand and to prioritize locations for additional analysis based on our work on numerous bicycle and pedestrian master plans, as well as our best practice work on NCHRP 7-17, Prioritizing Bicycle and Pedestrian Retrofits Along Existing Roadways. An easy-to-use, objective tool will be developed. This GIS-based demand analysis will incorporate existing demographic data such as journey to work data, car ownership, employment density, in combination with the locations of bicycle/pedestrian generators such as transit stops and hubs, parks, greenways, schools, colleges and universities, shopping centers, and others. The result of this task will be a “heat map” that shows areas with low, medium, and high demand.

Surveys and on-line public opinion polls using SurveyMonkey or similar web-based polling services are excellent vehicles for gathering data that is of particular concern the area residents. We anticipate doing one survey near the onset of the project with the goal of soliciting information on people’s bicycle/pedestrian travel habits. We have also effectively used interactive maps to collect and translate public input to help guide our network recommendations. The online interactive map (WikiMap) is where users can pinpoint issues, opportunities, and challenges, including desirable or undesirable routes, destinations of

interest, hazardous crossings or pavement, difficult intersections, ADA concerns, and other pertinent information.

5) There are numerous existing local and regional plans that require careful consideration in developing the master plan. For example, the City of Tulsa Comprehensive Plan, ADA Transition Plan, Arterial and Non-Arterial Rehabilitation projects, Arterial Widening projects, Small Area Plans, INCOG Trails Master Plan, Major Street and Highway Plan, etc. What is your proposed approach to coordinating with existing local and regional plans?

This project will be informed by previous planning projects, and should build on those efforts to the extent possible. The TDG Team will review existing plans and document relevant goals, objectives and actions. Initiatives that have been completed or are underway will be documented. The TDG Team will identify supportive goals and strategies in other plans. Furthermore, we will highlight areas where this project refines, or deviates from previous recommendations if such modifications are deemed appropriate.

Key examples from select relevant plans are noted below. We anticipate expanding upon this list if selected to include all pertinent local and regional plans.

PlaniTulsa - Tulsa Comprehensive Plan (July 2010)
Transportation Priorities, Goals and Policies

- Goal 14: Develop a Bicycle Master Plan and revise the Trails Master Plan as necessary to focus on connecting neighborhoods with destinations, such as employment, shopping and recreation.

Owasso Quality of Life Initiative (April 2011)
Pedestrian & Bicycle Improvements:

- Goal: Plan Owasso to maximize the value of regional trail linkages (per INCOG Regional Trail System Plan).
- Goal: Create a complete city-wide bike / pedestrian system that is safe and provides excellent connectivity.

Broken Arrow Old Town Study (July 2010 by Crafton Tull)
Connections

Trail

As part of the Tulsa 2030 Bicycle/Pedestrian Plan, proposed trails are planned to link to Central Park to the south through the park and to an existing trail to the southeast as well as to Seiling Park to the northwest corner of the study area. Also part of this plan is a proposed bikeway along 9th at the eastern edge of the study area. Depending upon the available right of way, a width of 8'-10' is proposed along 9th street (from Elm to Houston).

6) When discussing matters related to bike lanes and newer treatments, such as cycle tracks and buffered bike lanes, describe your team’s experience communicating with citizens and the media regarding how these treatments work and when they are appropriate to apply.

The TDG Team has designed many of the most innovative facilities in the country, including some of the first Rapid Flashing Beacons (RFBs) in North Carolina and Washington, DC; the Pennsylvania Avenue Cycletrack between the White House and the Capitol Building in Washington, DC, bicycle signals (using the FHWA pilot process) in multiple locations; and other new treatments. We have found that it is critical to educate stakeholders, decision makers, and the public about what these treatments are, why we are using them (generally to improve safety for all modes), and how they work. We have developed an extensive library of information about different bicycle and pedestrian facilities, including how they work and where they are appropriate- and perhaps more important not appropriate (e.g. pedestrian bridges). For the City of Boston, we developed clear, simple graphics educating drivers and bicyclists about new bike boxes the city was rolling out. These were installed in conjunction with bike box projects around the city and helped smooth the rollout of these new-for-Boston facilities.

For a location-specific project, it is important to educate adjoining property owners about pending changes. We have worked with the District of Columbia and City of Seattle to develop door hangers that informed residents and property owners about new bike lanes that the cities were installing, including sources of additional information.

In some cases, we have found that it is most successful to “just do it.” We have a strategic partnership with Team Better Blocks out of Dallas, TX and have partnered with them to install temporary demonstrations of new treatments, such as road diets, to illustrate to stakeholders and the media what a proposed facility would look like and how it would function. These events have a multi-media component, and include a significant pre-installation phase where we educate the community about the upcoming project and build excitement using conventional press, social media and community organizations. During the event, the press is often provided with a guided tour of the facility, and its operation is described in laypersons terms that can be easily conveyed to the general public.

7) Give an overview of the specific staff you are proposing for this project and the roles (i.e. traffic analysis, public involvement, GIS analysis, conceptual design) they will fill for the project. Include information about percentage availability to dedicate toward this project.

Toole Design Group

Jennifer Toole, AICP, ASLA

President

Role: Principal-in-Charge, providing project oversight and strategic advice;

RJ Eldridge

Vice President of Planning

Role: Project Director, overseeing all aspects of the project;

Jeffrey Ciabotti
Senior Planner

Role: Project Manager, serving as day-to-day point of contact and coordinator for public engagement;

Tony Hull
Senior Planner

Role: Duty Project manager assisting on all aspects of the project, network recommendations and mapping, final plan;

Tina Fink, P.E.
Traffic Engineer

Role: Data collection and analysis, network recommendations and mapping, final plan;

Ben Sigrist
GIS Coordinator

Role: Data collection and analysis, network recommendations and mapping;

Crafton Tull Associates

Dave Roberts, ASLA
Director of Planning

Role: Data collection and analysis, network recommendations and mapping, final plan;

Julie Luther, AICP, ASLA
Senior Planner

Role: Data collection and analysis, final plan;

Chuck Mitchell, P.E., LEED AP
Senior Vice President and Director of Infrastructure

Role: Network recommendations and mapping, final plan;

Shane Hansen Fernandez, AIA, NCARB, LEED AP
Executive Vice President at Crafton Tull

Role: Public engagement, media lead;

Team Better Block

Andrew Howard
Team Leader

Role: Public engagement and stakeholder involvement;

Our team's qualified staff of professional engineers, planners and designers have a great deal of experience working on similar projects. Please see Workload & Availability Chart included in Question 8 for staff percentage of availability to dedicate toward this project.

8) What other projects are this team and the Principal(s) committed to or pursuing that might interfere with staff availability?

STAFF WORKLOAD AND AVAILABILITY

After a review of the availability of individual team members, TDG is confident that this contract can be easily integrated into our workload.

Team Member	Role	Current Projects	Percent of Time Available	
			Mo. 1-6	Mo. 6-12
Toole Design Group				
Jennifer Toole	Principal-in-Charge	National Center for Safe Routes to School, Howard County Pedestrian Master Plan	20%	25%
RJ Eldridge	Project Director	College Park Riverdale Park Transit District Plan, Atlanta Regional Commission Project Development Process	35%	35%
Jeffrey Ciabotti	Project Manager	Harrisonburg-Rockingham MPO Bike/Ped Master Plan, Howard County Pedestrian Master Plan	45%	50%
Tony Hull	Deputy Project Manager	Hennipen County Bicycle Master Plan, Metropolitan Council Regional Bicycle System Study	40%	40%
Ben Sigrist	Data Collection & Analysis Network Recommendations and Mapping	Chapel Hill Bicycle Master Plan, Twin Cities (Minneapolis/St. Paul) Bicycle Study	55%	50%
Tina Fink	Data Collection & Analysis Network Recommendations and Mapping Final Plan	College Park Riverdale Park Transit District Plan, Hennepin County Bicycle Master Plan - Design Guide	45%	40%
Crafton Tull				
Dave Roberts	Data Collection & Analysis Network Recommendations and Mapping Final Plan	Arkansas Statewide Bike/Ped Plan, Growing Healthy Communities	55%	60%

Charles Mitchell	Network Recommendations and Mapping Final Plan	Management of staff for various municipal projects	45%	45%
Julie Luther	Data Collection & Analysis Public Engagement	Arkansas Statewide Bike/Ped Plan, 12th Street, Phase 2 Corridor Plan Study	55%	60%
Shane Fernandez	Media lead / public engagement	Tulsa Up with Trees, Chairman, Tulsa area Community Relations	30%	30%
Team Better Block				
Andrew Howard	Public engagement & stakeholder involvement	Better Block events in Norfolk, VA, Fort Worth, TX, and Indianapolis, IN	55%	60%

9) The Bicycle/Pedestrian Master Plan will require a multi-disciplinary staff. This includes expertise in traffic operations, bicycle facility design (on- and off-road), commute shed analysis, public participation and visualization. Describe how your team plans to integrate this expertise in the Tulsa Bicycle/Pedestrian Master Plan.

We are pleased to provide INCOG and its member jurisdictions with a multi-disciplinary team that includes professional engineers experienced in civil and geometric design, traffic operations analysis and signal design, bike parking and more. Our professional planners are experienced at network development and needs assessment, public and stakeholder facilitation, demand analysis, and policy assessment. Furthermore, the TDG/Crafton Tull Team combines national expertise with best practices in facility design and planning, with intimate local knowledge of key regional priorities, and roadway design standards and guidelines (state and local). Our team is led by Jeff Ciabotti, a senior transportation planner with extensive experience leading bicycle and pedestrian master plans for regional planning organizations. He will be supported by professional engineers, planners, GIS analysts, and public engagement specialists. Our landscape architects and urban designers are gifted at developing illustrative examples to help the public and decision makers understand what a proposed facility might look like and how it would be used. In addition, we have national experts in bike share on our team should there be a desire to evaluate the Tulsa Townies bike share program for possible expansion or modification.

As mentioned earlier, our field work will be conducted by teams of planners and designers. All recommendations will be evaluated by senior engineers for feasibility and constructability.

10) Describe your team’s approach to public involvement on this project.

Effective public and stakeholder engagement will be key to identifying regional bicycle and pedestrian priorities and building support for improvements. INCOG has a history of high

quality civic engagement, and this project will build off of that expertise. We propose working with the INCOG staff and the advisory committee to develop a comprehensive public involvement plan. Considerations for the plan should include reaching out beyond the traditional audience for bicycle and pedestrian plans by participating in festivals, farmers markets and other public events. Small-group focus meetings will allow us to speak to key stakeholders who will be essential to plan implementation. In addition to in-person stakeholder engagement, we will develop visually compelling and informative project websites, leverage the power of social media, and utilize our WikiMapping tool to broaden our public outreach.

An innovative outreach approach that would fit well with this planning process is a **Team Better Blocks** project. These community events demonstrate the potential to create a great walkable, vibrant neighborhood center with pop-up retail, cafes, art galleries, pocket parks, and actively engaging in the “complete streets” build out process. The City of Tulsa has already experienced a successful Better Block project to test a complete street for a one block stretch of Lewis Street. The TDG team recommends consideration of a Better Block project and other non-traditional outreach in connection with the public involvement component of this planning study.

11) As a client, one expectation INCOG will have is to have the consultant be the “face” of the project to the public. Describe your team’s experience communicating specific project details to the media and local government officials and how you expect to manage that process.

The Toole Design Group team will work with INCOG to ensure that an agreed upon consistent and positive message is delivered when interacting with the media, local government officials and the public. Our approach will be to utilize our team’s local presence to lead our public engagements, specifically, using Crafton Tull staff with in-depth experience in this area.

Shane Fernandez, Executive Vice President of Crafton Tull is located in the Tulsa office. He will act as the “face of the project” to communicate specific project details to the media and local governments. Shane has decades of experience with project management and quality control of highly visible public projects. From his bio you can see he is very active in the Tulsa area:

Shane currently serves on the Oklahoma State Chamber Board of Directors, the Tulsa Regional Chamber Executive Committee and Board of Directors, and the Oklahoma City Chamber Board of Advisors. On community based initiatives Shane serves on the board for the Oklahoma Center for Community and Justice, The Tulsa Area United Way, Aim High, and is President for Up With Trees. Shane also serves as Chairman for the OU College of Architecture Board of Visitors. He was previously class marshal of Leadership Tulsa Class 30 and the Chairman of Tulsa’s Young Professionals-the nation’s largest young professionals’ organization. Shane founded and chaired Mosaic - the Tulsa Regional Chamber’s Council of Diversity and Inclusion and is involved on many initiatives promoting the attraction and retention of talent. Shane believes in inspiring youth and he has donated many hours towards efforts with Youth at Heart, Youth Services of Tulsa, Street School, and Youth Leadership Tulsa.

The TDG team will combine our local leadership on this project with well-planned outreach events that will attract widespread public attention, key stakeholders, elected officials, and consequently media coverage. During these activities we emphasize local participation and often like to profile elected officials and other decision makers whose support is necessary to get

projects on the ground. We propose to use Team Better Block and other non-traditional outreach strategies as visible ways to demonstrate the viability of transforming the region into a walking and biking friendly community.

12) How has your team integrated public transit into previous bicycle/pedestrian planning efforts?

Toole Design Group is one of the nation’s leading experts on bicycle and pedestrian access to transit. We understand that transit stops are a major driver for pedestrian and bicycle trips, and consideration must be given to providing safe and convenient access routes. At the same time, walking and especially bicycling have the potential to significantly extend first and last mile connectivity for transit trips, and the quality and convenience of walking and bicycling facilities is directly related to how many people will use them.

We are working with transit agencies around the country, including the Triangle Transit Authority in Durham, CATS in Charlotte, ViaTransit in San Antonio, WMATA in the Washington, DC region, and RTD in the Denver region to develop tools and methodologies for assessing bicycle and pedestrian accommodations at and near transit stops. We have created a protocol for inventorying bus stops, including identifying appropriate amenities (shelters, seating, trash, etc.) based on ridership data and service operations.

In addition to our planning and design projects, TDG has also developed several best practice guides for enhancing safety and accessibility to transit. Working with ITE, TDG led the development of the “Pathways to Transit Guide” for Easter Seals Project Action, and was the lead author on FHWA’s “Pedestrian Safety Guide for Transit Agencies.”

We are currently working on a pedestrian master plan for Howard County, MD that has a significant transit access component. For this project, the team will be assessing pedestrian access to all bus stops (over 300) in the County. We will be using the same GPS-based electronic data collection equipment we have used on other projects.

13) Give examples of projects for which this team has recommended bicycle-oriented roadway treatments that were implemented after planning was completed.

The projects below represent planning efforts in major US cities that have resulted in constructed projects (in miles).

Toole Design Group Bicycle Master Plans - RESULTS (in miles)					As of 2010		
City	Year	Bike Lanes	Trails	Total	Bike Lanes	Trails	Total
Chicago, IL	1996	25	30	55	115	48	163
Washington, DC	2003	10	50	60	50	68	118
Baltimore, MD	2005	5	7	10	25	12.5	37.5
Seattle, WA	2006	25	39	64	87	45	132

TDG has also had great success in positioning our projects to garner significant state and federal funding for example successful Tiger Grant applications for the 58th Street Greenway, Anacostia River Trail, and the Connect Boston projects.

14) Based on your experience, describe what the pedestrian element of the plan would address. Would the plan be infrastructure or policy oriented? Or both?

The TDG team anticipates using a blended approach to addressing pedestrian issues in this plan. We will combine a broad policy scan and analysis with an overview of pedestrian conditions and gaps in select locations within the INCOG region.

Policy. Several INCOG and city policies and guidelines have a direct impact on the safety and quality of the pedestrian network across the INCOG region. The level to which these policies and guidelines either help or hinder pedestrian travel depends on many different factors, including the content of the original policy, the authority of government agencies to enforce the policies, the plan review process, the coordination between different departments and agencies, and the amount of resources available to ensure that policies are enforced.

The TDG Team will work with INCOG staff to identify and document the processes by which the pedestrian environment is currently improved and maintained, and the funding and design practices that are used. In addition, we will conduct interviews with staff of different departments that are responsible for aspects of the pedestrian environment: development review, permitting, maintenance, and management among other things.

Infrastructure. The purpose of this analysis is not to conduct a detailed field inventory of all roadway features impacting pedestrians; rather, to get a general overview of pedestrian conditions in various areas of INCOG, and to identify key gaps in the pedestrian network. If requested, we can also focus our efforts on building staff capacity to assess various aspects of the pedestrian network and identify deficiencies. Locations where pedestrian related field assessments will be conducted will be determined by the demand and needs analysis. The information will be supplemented with public and agency outreach. We will develop tools to assess walking conditions along the roadway, at roadway crossings, and access routes to transit as well as crossing roadways in these select locations.

Recommendations for Education and Encouragement Programs. The TDG team has a great deal of experience in preparing recommendations for programs and other efforts that are needed to support and encourage walking, such as pedestrian safety education, driver education and awareness programs, Safe Routes to Schools programs, employer incentives, walking route maps and other similar programs. Where applicable, examples from other communities will be included in the recommendations as a resource for the County.

15) Has your team worked with policy-related issues, such as block length on previous plans? Describe how block length and connectivity might be addressed in the plan.

Strong policy guidance is essential to ensure that plan recommendations are integrated into transportation projects. Clear and unambiguous policies articulate a community's priorities, and helps ensure implementation over the long term. The TDG Team has extensive experience assessing and crafting policies to support bicycle and pedestrian transportation. We recognize that policies must reflect the priorities of the communities where we work, and we strive to understand issues and concerns of local stakeholders, including transportation officials and agency staff, elected officials, stakeholders and the general public. Our policy work includes the following elements:

- Critiquing existing policies (including identifying policy gaps)
- Reviewing zoning and subdivision codes, roadway design manuals (geometric design, crosswalk marking policy, intersection signalization, traffic calming, complete streets, etc.)
- Reviewing and recommending improvements for funding and implementation
- Best practice review of policies nationwide
- Developing policy language, design guidance, etc.

Regarding the question of block length, we understand that this is a nuanced issue with many elements. In general, longer blocks provide less connectivity for pedestrians and may result in greater rates of crossing away from intersections. This can contribute to increased conflicts and crashes between pedestrians and motor vehicles. In many communities we have helped develop policies for installing mid-block crossings (signalized and unsignalized based on the roadway volumes, number of lanes, crossing volumes, and other factors). For Washington, DC, we created a flow chart that is adapted from the seminal Zegeer study of marked and unmarked crosswalks (FHWA: *Safety Effects of Marked Versus Unmarked Crosswalks...*), as well as other sources to help planners and engineers select the most appropriate crossing treatment.

Conversely, longer block lengths may create more comfortable cycling situations, as one of the areas of greatest conflict and discomfort for bicyclists is at intersections. As with all policy recommendations, it is important to understand the context and policy objectives when crafting recommendations for a specific community.

The TDG Team has experience crafting revisions to zoning, subdivision and roadway design codes that deal with the design and layout of new streets. Depending on the context, we have recommended ranges of block lengths for different land use contexts (e.g. industrial vs. mixed use vs. residential), and have included requirements for mid-block pathways and crossings to "break up" larger blocks.

For this project, we anticipate that block length and connectivity will be addressed differently for retrofit situations (i.e. existing roadways) vs. new roadways in greenfield situations.

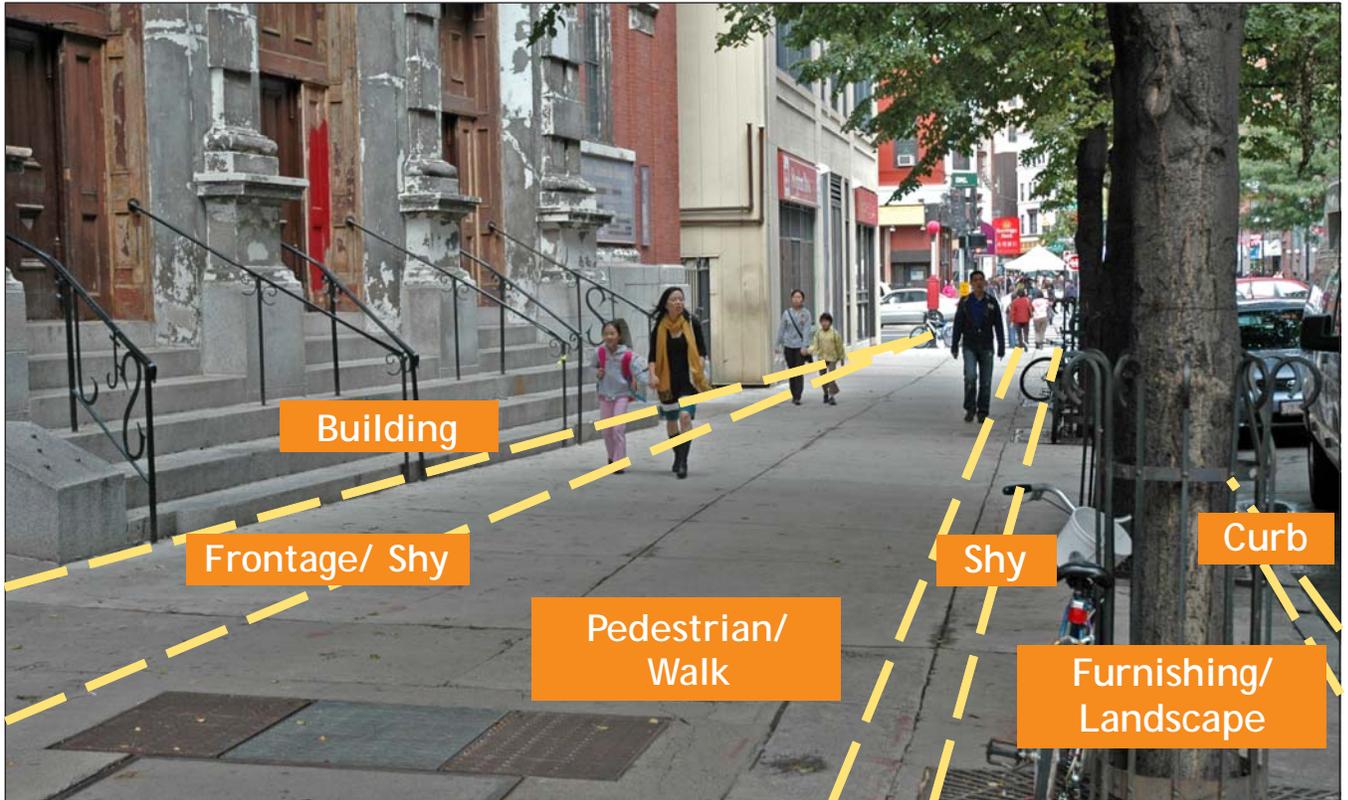
16) How has your team used visual aides (photographic renderings, maps, etc.) to illustrate to elected officials and the public the proposed projects of bicycle/pedestrian master plans?

Because this master plan will be shared with a wide variety of community stakeholders, government decision makers, and residents, the data and descriptive narrative in the report must be accompanied by convincing graphics and maps. These graphics will illustrate the functionality and variety of benefits that will result from our proposed projects and recommendations. To develop these materials our team includes experts in planning, GIS, landscape architecture, and graphic design who are highly skilled in graphic communication. Our team will use presentation media such as hand illustrations, CADD design, 3-D sketch-up models, Adobe Creative Suite, and photo-simulations as warranted to ensure high quality products.

Working with INCOG staff we will tailor the type of graphics and format to each audience and setting. Below are three examples of successful use of visual aides from past projects.



Boston, MA Boston's "Complete Streets" Guidelines



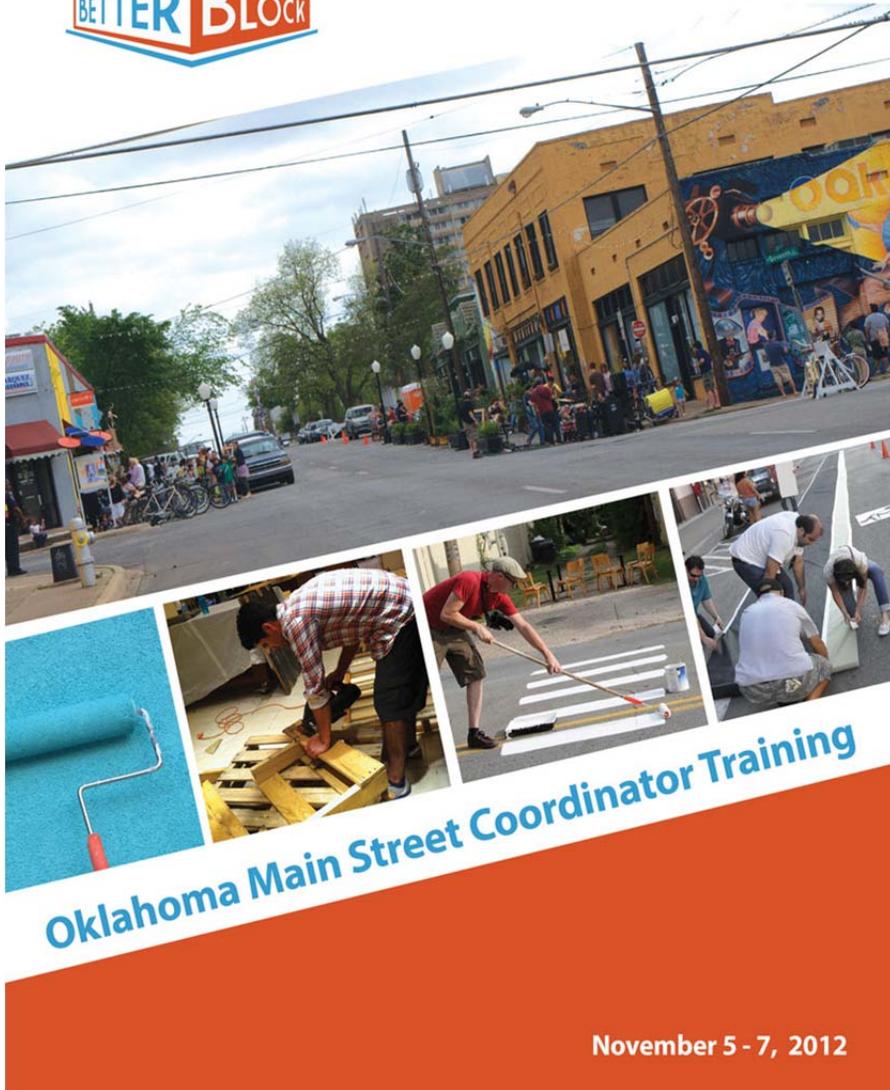
Toole Design Group (TDG) is serving as the prime contractor for the City of Boston's "Complete Streets" Guidelines. This project represents a fundamental change in Boston's approach to street design and operations, and reflects the Mayor's desire to become a more walkable, bikable and transit-friendly City. The project has four major components - multi-modal street design, green street design, "smart" street design (use of technology in the public ROW), and guidance for maintenance and operation of complete and green street elements.

An early component of TDG's work on the project was the adoption of new travel lane width guidelines for Boston, which have since been used in discussions with MassDOT on specific design projects. TDG is currently evaluating adapting the Multi-Modal Level of Service (MMLOS) contained in the 2010 Highway Capacity Manual in order to develop MMLOS criteria for different street types. Toole Design Group is responsible for all aspects of the project, including development of the guidelines as well as coordination between numerous city agencies and an advisory panel that includes a wide array of stakeholders.

Client

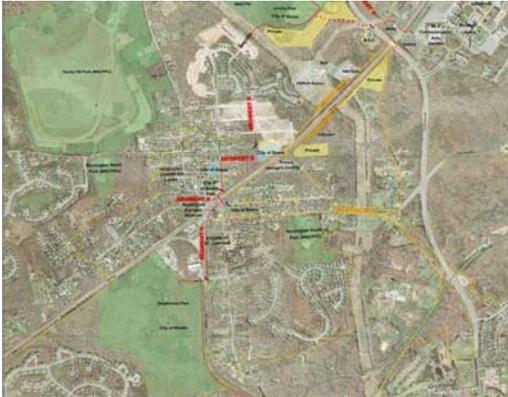
Boston Transportation Department
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The TDG team has worked with Team Better Block on planning projects across the country. These very tangible events provide an excellent opportunity to foster hands-on learning experiences for residents that are unfamiliar with complete streets concepts. We find that one Better Block event is worth a thousand images.





Bowie, MD Old Town Bowie Trail Study (Phases I & II)



Toole Design Group completed the first two phases of the proposed Bowie Heritage Trail in the Old Town section of Bowie, Maryland. Each phase consisted of a series of public meetings, field work and feasibility analysis for the proposed Trail along Railroad Avenue. Phase I work focused on potential trail alignments and resulted in identification of a recommended route for connecting Old Town with Bowie State University (BSU), the BUS Maryland Area Rail Commuter Train (MARC), and State and future mixed-use development slated for the area just north of the station. A key recommendation of the study was the scope of the proposed trail should be enlarged to include a connection between Washington Baltimore and Annapolis (WB&A) Trail near High Bridge Road and Old Town Bowie.

Phase II of the study consisted of completing the concept planning process for the Bowie Heritage Trail between Zug Road and 10th Street, previously known as the Railroad Avenue Hiker/Biker Trail. Phase II was conducted between April and August 2009, and it included five public meetings, while each meeting was structured to address a series of design-related issues.

As part of the project Toole Design Group completed the following tasks:

- Leading public meetings to explore needs and concerns related to the proposed and potential trails.
- Field assessment of a number of potential trail routes, including AMTRAK's Northeast Corridor, city and county residential streets, undeveloped street ROWs, public easements in new developments, historic rural roads, city-owned park lands, existing HOA trail systems, power line corridors and crossings, highway underpasses and other settings.
- Provide a final report, plan map and conceptual trail design graphics.

Deliverables also included a slide presentation and photo documentation of the various corridors explored.

Subsequent to completing the study, the City of Bowie contracted TDG to present the plan to the City Council where they initiated the process for formally incorporating the recommendations into the city's Trail Master Plan.

Client

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