3 Design Process

Street and sidewalk design in a built urban environment such as the City of Minneapolis is as much about meeting livability needs as it is about meeting transportation needs. Urban street design must consider sidewalks, cafes, street furniture, streetscape, landscaping, trees, stormwater management, pedestrian-level lighting, the needs of adjoining land uses, and many other factors. These issues must be considered along with the need to provide safe and convenient transportation for people who may be walking, biking, using transit, driving cars, or making deliveries. This multiplicity of demands makes the design process very challenging.

Available right-of-way is already established – in Minneapolis, most streets have right-of-way widths of 60, 66 or 80 feet and a few have even less. There are a very few streets in Minneapolis that have a right-of-way width of 100 feet. All streets need sidewalks and many streets need bike lanes and/or facilities for transit service, and product deliveries occur on many streets, particularly in commercial areas. In addition, many areas of the city, both residential and commercial, need on-street parking. The competing demands for the use of available space and the need to maintain a safe system for all users requires a clear understanding of modal priorities and a flexible approach when applying design standards or guidelines. It also requires a process that includes active and frequent input by key stakeholders (examples include adjacent property owners, residents and businesses; nearby neighborhoods; affected agencies such as Metro Transit; and others) that will be directly impacted by the proposed project.

The design process recommended for Minneapolis, shown in Figure 3-1, begins with setting clear goals for the design process, developing a citizen view of the street, verifying place and street design types, followed by a clear determination of modal needs. This leads to the selection of a preferred cross-section. In this process, traffic analysis is focused primarily on determining appropriate intersection design treatments and corridor operations strategies. Each step in the recommended design process is described below:

3.1 Set Clear Outcome and Process Goals

Too often, projects are done and stakeholder involvement processes are initiated without a clear and commonly held understanding of the problems that need to be solved. The first step in the design process should be to develop that understanding. Answer at least the following questions at the beginning:

- Why are we redesigning/rebuilding/rehabilitating/restriping this street?
- What are our goals for the street?
- What do we want to know and what do we need to know from the stakeholders?
- Are there ways that stakeholders can compile or provide information that we might otherwise not have access to?
- Who are the key stakeholders that should be involved?

- What are the best public involvement processes for this project?

3.2 Develop a Citizen View of the Street

This is a critical step in the design process, both for understanding neighborhood and property owner concerns and for building credibility in the design process. Streets have many different users with many competing needs/desires, and it is the project manager's responsibility to balance these different needs in the design process and in the ultimate design of the project. This step should occur early in the design process; focus on fact-finding rather than simply asking people what they want (this builds false expectations); and be conducted within the context of community or place-building, rather than street building. Some key questions to ask users and stakeholders at this stage are:

- What are the things you like about this place, street, neighborhood, community?
- What are the problems?
- How is this place/street used?
- What works well and doesn't work well?
- How have you seen this place/street change in the past? How do you expect it to change in the future?
- What kinds of trips do you make and what modes of transportation do you use?

This process will help to identify the needs/desires of various users and issues of importance to the key stakeholders. It is the project manager's job to listen carefully, understand thoroughly, and clearly articulate these needs and issues. The project manager will need to weigh the trade-offs among competing needs/desires and help people to understand those trade-offs throughout the design process.

Figure 3-1 Examples of User Needs/Desires

Pedestrians	Bicyclists	Motorists	Transit Operators	Transit Riders	Adjacent Property Owners
• Short walking distances • Buffer from moving traffic • Aesthetically pleasing surroundings • Protection from elements • Safe walking environment (traffic and personal safety)	• Well-connected network of bicycling facilities • Safe travel routes • Direct travel routes	• Minimal travel delays • Minimal conflicts (affects safety and delay) • Consistently designed facilities that are easy to use	• Enough space to maneuver vehicles • Minimal travel delays to keep routes operating on time • Minimal conflicts (affects safety and delay)	• Accessible bus stops • Easy connections between bus routes • Personal comfort and security while waiting for bus • Items listed in the Pedestrians column	• Lighting • Property access • Trees and landscaping • Parking • Slower speeds (residential neighborhoods) • No or minimal special assessments

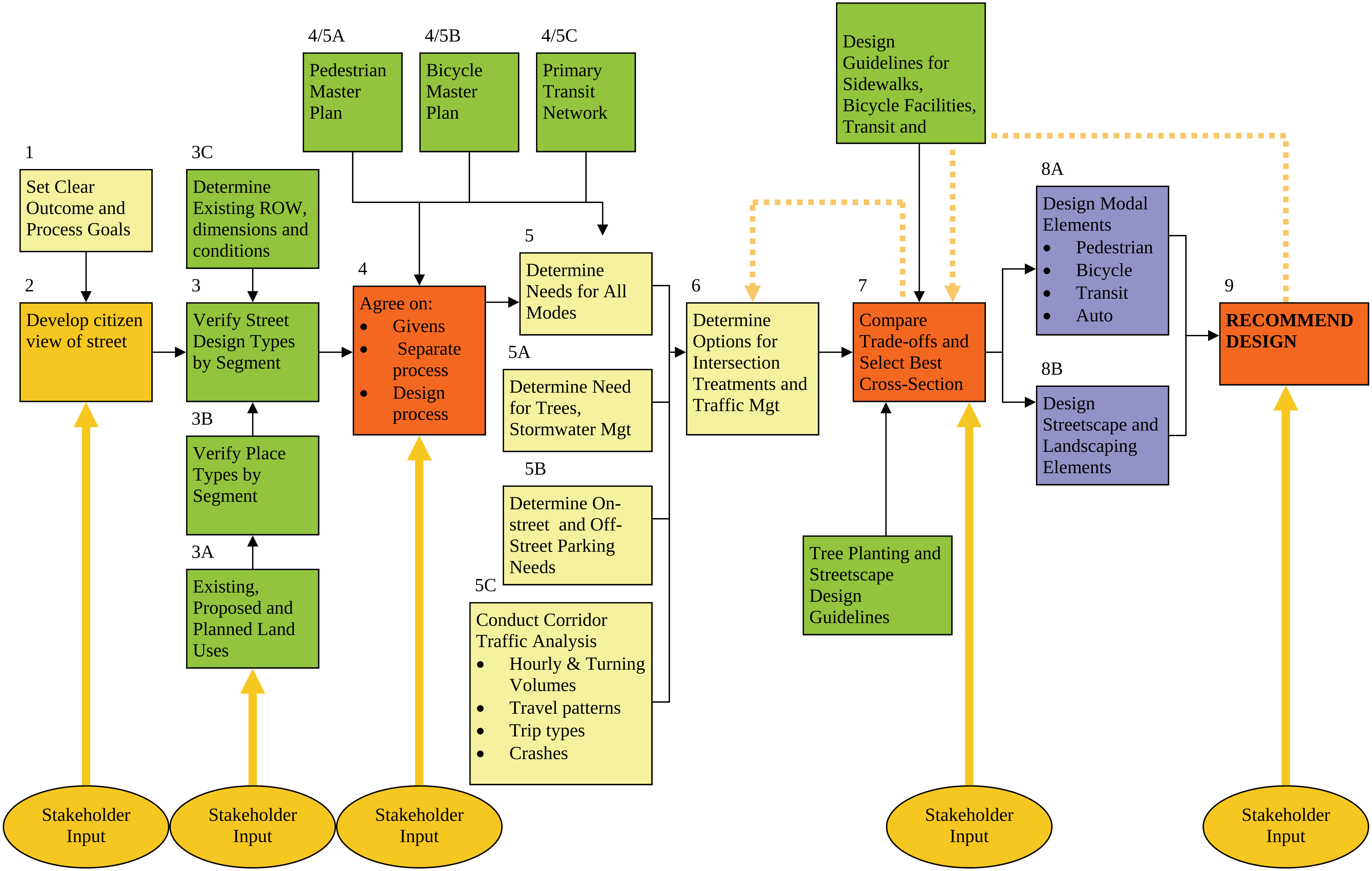

Figure 3-2 Corridor Design Process

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The design guidelines provide tools to help understand the trade-offs that will need to be made when balancing these competing needs, which in turn will provide help in making these decisions.

3.3 Verify Place Types and Street Design Types

Land uses change over time and can vary significantly from one part of a corridor to another. Therefore, it is important to start with a clear understanding of existing and proposed land uses. The comprehensive plan and small area plans are good sources for long range land use planning but it is equally important to understand current proposed building projects, both those approved and those in the future pipeline. The Project Manager should consult with CPED staff during this step in the design process to avoid duplication of past efforts and to transition from area planning to street design activities. Place type characteristics should be inventoried and the market forces that will influence land use changes over time should be clearly understood. This may require supplemental small area planning and/or traffic studies in areas where significant changes in land use type and/or land use density are expected over time. Any new land use planning initiatives will require active neighborhood and business participation.

Some of the questions that should be asked include:

- What does the area look like today – what are the existing land uses and densities?
- What are the typical building types, scale, setbacks and amenities?
- What kinds of activities occur in the corridor and in nearby neighborhoods?
- Are there future plans for the area and what do these plans envision regarding land uses, densities, setbacks, etc.?
- Are there adopted development policies, pedestrian overlay districts, etc. that apply to the area?
- Are there planning or development activities occurring that will impact the street design process or that should be informed by the street design process?

Once existing and planned land uses are established or confirmed, the place types should be verified. In most cases, the general place types are not likely to change but, for example, the boundaries or the limits of various land use types along a corridor may change. These details should be verified at this step in the process.

Roadway projects are required to have logical termini (project limits) to both qualify for funding and to allow for adequate environmental documentation. Overall project limits are typically defined by programmed funding, jurisdictional boundaries and/or where major network connections are located. It is important to remember that a street corridor, depending upon length, may be made up of multiple street types and place types, each of which may have its own set of modal priorities.

Verifying the limits of the different segments and clearly defining the transition areas between place types and street design types is an important initial step in the design process. This is a particularly significant issue in activity centers, growth areas, transit station areas and neighborhood commercial nodes. In these areas, the area impacted by traffic is often larger than the area defined in the comprehensive plan by development type. Decisions on street design type, parking and access needs, pedestrian needs, etc. must consider this wider transition area between the more intense land uses and adjoining lower density residential areas. For example, streets that form the boundaries of an activity or growth center may also provide access to off-street parking facilities that support the activity or growth center. Streets that provide access to a transit station area or a transit center may have a greater need for transit, pedestrian and or bicycle facilities. Activities or traffic on these streets may create barriers to pedestrians and divide neighborhoods. These special considerations must be carefully assessed when designing facilities that serve these more intense land use areas.

This step should take into account place type characteristics as well as an inventory of existing traffic volumes and verification that segment break locations remain logical based on both traffic volumes and place characteristics. It is not expected that overall street design types will change but, because a particular project corridor may have different street design types in different segments, it is important to verify that any transitions between street design types are occurring at the appropriate locations.

The existing right-of-way in the corridor and the existing curb-to-curb dimensions should also be verified in this step. If the proposed project is a reconstruction project, existing curb-to-curb dimensions are not as important. However, if the proposed project does not entail reconstruction, or this is part of the decision to be made, existing curb dimensions become very important because changing the curb line usually involves an order of magnitude increase in cost. These two dimensions will provide significant guidance as to the options available for street design in the corridor.

3.4 Agree on Scope of Design Process

This is a very critical step in the design process. Here is where the citizen view, the technical data, and previous plans are compared. Questions that should be asked at this stage are:

- What is compatible among these various viewpoints?
- Where do the viewpoints conflict?
- What absolute constraints exist?
- What issues can be addressed through the street design process?
- What other processes are in place, or can be initiated, to address the remaining issues?
- Who will be responsible for following up on these issues, how and when?

It is common for a very wide array of stakeholder issues to be identified. Many of these issues cannot or should not be resolved as part of a street design process. There are also many things that are "givens" going into the design process. However, if these concerns are simply ignored, the project manager may have great difficulty in moving the design process forward in a timely manner. Thus, the project manager needs to be very clear about what things are givens (that is, things that cannot be changed or negotiated), what things will be resolved through other processes (best to identify those processes specifically, if possible), and what things will be resolved through the street design process. Examples of givens may be:

- Existing right-of-way width
- Place type and street design type designations
- Primary Transit Network corridor status
- Outcomes of the Pedestrian and Bicycle Master Plans
- Budget
- Assessments

The entire process as outlined in this chapter may not be required for all types of projects. The entire process will typically need to be followed for new construction, street or bridge reconstruction and even some street or bridge renovation projects. A modified approach may be appropriate for less extensive projects where curb lines will not be affected or the general impacts are much less. Examples of the types of projects that may involve a more expedited process include neighborhood street repaving, restriping or signal projects, stormwater management and utility projects or projects related to bicycle, pedestrian and/or transit improvements.

3.5 Determine Modal Needs and Priorities

3.5.1 Pedestrian and Bicycle Needs

The Pedestrian Master Plan and the Bicycle Master Plan (or BAC Plan Map) should be reviewed to determine what needs exist for accommodating these modes in the study corridor/area. If specific recommendations have been made for pedestrian and/or bicycle facilities in the corridor, then these needs should be incorporated into the design as priorities. If bike lanes are recommended, they may need to be provided on a parallel street, depending on available right-of-way. If general guidelines have been provided but no specific recommendations have been made, then additional analysis may need to be undertaken to determine the exact facilities that should be provided for these modes.

3.5.2 Transit Needs

The map of transit routes in Minneapolis should be reviewed as a starting point for determining transit need in the study corridor/area. If the study corridor is part of the Primary Transit Network (PTN) shown in Figure 2-6, then the accommodation of transit in the corridor must be a priority. However, additional study is required in most of these corridors to determine the exact nature of facility and operations improvements that will be needed to ensure long-term fast and reliable transit service. Metro Transit should be actively involved in the determination of transit needs and design treatments in the study corridor/area.

3.5.3 Parking and Delivery Needs

A study of parking and delivery needs in the corridor, both on-street and off-street, should also be completed to assess the need for on-street parking and, if necessary, the ability to accommodate existing on-street parking on cross-streets or in privately provided off-street locations. Making decisions about on-street parking requires knowledge about how the parking is used (by whom and for how long) and whether private off-street parking is available in proximate locations. Such information is most often gathered through direct observation. Knowing what the on-street parking resource is supporting makes it possible to evaluate potential trade-offs of curb space for pedestrians, transit, bicycle lanes or travel lanes. It is also important to understand the magnitude and characteristics of needed delivery services and truck movements in the study corridor. This evaluation should consider the size and number of delivery vehicles and the frequency, time of day and location of deliveries. An assessment of ability to limit deliveries to specific times of day and/or specific locations may also be needed.

On-street parking has other benefits that should also be considered in this evaluation, including:

- Creates a safety buffer between pedestrians and moving traffic
- Creates the ability to provide curb extensions at intersections, which decreases crossing distance for pedestrians
- May slow traffic by creating edge friction
- Creates the perception of a narrower street, which is consistent with urban form objectives
- May be a means of creating additional peak period traffic capacity by restricting parking during peak periods
- Provides a space for transit stops outside the traffic lanes – this is especially beneficial on two-lane streets
- Provides space for drop-offs/pick-ups, deliveries, traffic management during construction, and other uses and activities

3.5.4 Need for Trees, Landscaping and Stormwater Management

Trees, landscaping and stormwater management are also essential components of the city's infrastructure. Trees provide shade and reduce heat, improve air quality, remove pollutants, help to manage stormwater, buffer the sidewalk area from traffic, provide habitat, create comfortable spaces, provide a distinctive identity and add value to adjacent properties. New stormwater management requirements must be addressed and innovative strategies and new materials may be required to reduce impervious surface. These needs must be addressed in the design process because they compete for space and they have design and cost implications.

Presently many of these elements may require additional special assessments to adjacent property owners, above the uniform assessment required for street improvements. Therefore, it is critical to work with the affected property owners to build an understanding of the benefits of these elements and the potential assessment costs. This may become a particularly sensitive issue if on-street parking is potentially affected as on-street parking is often seen as an important benefit while improved pedestrian zones, improved transit facilities, improved stormwater management and/or additional trees and landscaping may not be perceived to have equivalent value. The designer should consider innovative ways that parking and other needs can both be met through use of curb extensions, special materials or other strategies.

3.5.5 Traffic Needs

An analysis of corridor traffic conditions will be needed. This analysis will entail both an evaluation of existing and future traffic volumes and an understanding of travel patterns occurring in the corridor.

3.5.5.1 Forecasting Traffic Volumes

Roadway projects are typically required by funding agencies to be designed to be effective (usable by traffic) over the physical life of the investment, at least 20 years. Determination of effectiveness requires a forecast of future traffic volumes expected to use the corridor. These future volumes can be one of the largest factors influencing a street design. Forecasting traffic in a dense, multi-modal network like that found in Minneapolis is not an easy task. Expedient approaches such as using historic growth factors applied to existing traffic counts are not sensitive to changes in land use intensity nor can such factors adequately reflect the influence of congestion on motorist route choice, time of travel and mode of travel decisions. Regional travel demand forecasting models are better at addressing these influences, but historically have not provided sufficient detail within Minneapolis to be useful at the corridor design level. In the absence of a massive model development effort for the City, forecasting volumes in Minneapolis requires the integration of several existing approaches:

- Regional forecasts of traffic volumes and transit use need to be identified.
- The potential to focus[4] the regional model for a specific corridor needs to be assessed and implemented if feasible.
- Historic traffic patterns need to be evaluated as a check against model-based forecasts. Growth in traffic volumes should not be assumed. Depending on circumstances, traffic volumes may be declining on some streets, increasing on others, or staying approximately the same for long periods of time.

[4] Focusing a travel demand forecasting model involves adding more detail to the model's street network and subdividing the model's traffic analysis zones to provide for a finer grained forecast. A focused model retains the capability to forecast different mode use using the mode share module present in the regional model.

- Traffic forecasting models have historically been focused on daily and peak hour volumes. Given transportation funding and right-of-way constraints, forecasting should consider focused examination of travel time periods. Do the existing volumes and the anticipative future traffic growth occur in morning, midday, afternoon or evening periods? Will daily volumes only increase in the off-peak periods because peak hours are and will continue to be congested? Forecasting should examine hourly volumes throughout the day to understand only isolated or long periods of traffic congestion.
- Sources of demand in the corridor need to be identified along with areas of potential change and used as the basis for an analysis of potential trip generation. Is the historic development pattern being maintained? Are higher density uses coming in? Is a mixed-use pattern replacing a single use pattern or vice versa?
- The demand analysis needs to consider the areas tributary to the street, not just the parcels adjacent to it. The neighborhoods that are tributary to major streets in Minneapolis are largely built out, which means that travel demand from these areas is unlikely to grow rapidly, if at all. Hence, it is important to carefully identify potential sources of changes in demand and focus the volume projection analysis on those areas as a reality check.
- The potential for change in mode use by transit, walking and bicycling needs to be assessed in relation to the demand pattern and how it is projected to change. Are new routes/service levels proposed for transit? Will the future development pattern encourage walking? Are bicycle routes being implemented on this or parallel streets?

With an interconnected grid system of streets like that in Minneapolis, traffic will tend to use the entire street system unless there are physical barriers preventing this from occurring. When constraints exist on one street, traffic will tend to divert to other nearby streets. Accordingly, volume projections on major streets need to consider the potential for diversion to adjacent streets and incorporate a realistic amount of diversion. In areas where the potential for diversion is high, traffic management measures may need to be included in the development of concepts.

Similarly, where increases in transit are expected and in areas where travel demand management activities like car sharing and reduced parking requirements are introduced, the potential for such activities to reduce auto trip generation need to be assessed and incorporated into volume projections.

3.5.5.2 Travel Pattern Analysis

Coupled with the volume analysis is the need to identify travel patterns of traffic using the street. These patterns can be described as Z, L, and I shaped trips. Z trips are predominantly local trips that only travel on the street for a relatively short distance before turning off. L trips represent in/out-commute or destination-based trips that have one end outside the analysis corridor. I trips are through trips that essentially travel the length of an analysis corridor. The reason for determining these different trip types is to quantify a set of travel patterns that can be used to assess the relative effectiveness of changes along the street.

Why is such information important? When most trips on a street are of the end-to-end commute variety (I trips), the street functions more as one long continuous corridor. In that context, a faster trip over a long distance is important to the users of the street and design emphasis is placed on accommodating faster traffic. However, if motorists only use a short segment of the street in their trips, as is common with L and Z trips, the amount of benefit attained from faster traffic movement on the street is negligible.

Analyzing traffic patterns (trip lengths, trip purposes, turning movements, time of day, etc.) will provide direction on the number of traffic lanes that are needed on each segment in the corridor under study, the need for turn lanes, and the differences between peak and off-peak operation. Additional detailed operations and safety analysis may be required to determine the design treatments at individual intersections along the corridor (see Step 5).

Understanding the travel patterns on a street may lead to different decisions about how to organize and access parking and transit, how to organize pedestrian space and how to accommodate access to land use. Design considerations for turning lanes, additional through lanes, transit operations, bicycle lanes, and sidewalk widths also change dependent upon the perceived role of the street. As the emphasis of the design changes, it also involves the public in the planning process differently, since people are asked to consider design questions with different information and different outcomes.

3.6 Determine Options for Intersection Treatments and Traffic Management

Historically, decisions about turn lanes and traffic operations at intersections have been made based on a level of service evaluation driven by average vehicle delay. In urban areas, this can often lead to a proliferation of large scale intersections designed to minimize travel delay during the peak hour (highest traffic volume) of the day. This often has the unintended consequences of: (1) reducing space available for pedestrians at important transit stops and areas with high pedestrian volumes, (2) increasing pedestrian crossing distances and conflicts with vehicles, and (3) creating high speed roadways during off-peak periods when there is excess capacity. Technology has made it possible to manage corridor traffic and intersection traffic in a much more sophisticated manner that can be much more responsive to the needs of multi-modal corridors. It is important that the methodology used for making these decisions reflects both multi-modal needs and the range of traffic management tools available today.

The process recommended for determining traffic management needs and intersection design in a study corridor addresses three key factors: (1) safety, (2) corridor travel time impacts, and (2) impacts on peak periods. Each of these factors is discussed below.

3.6.1 Safety

A comprehensive analysis of crash patterns provides information about where safety issues are located and what users of the street are affected. Where crash patterns are identified and/or crash rates are above average for similar street segments, an evaluation of crash causes is needed. Once causes have been determined, the remedies for those causes need to be approached both physically and operationally. If a left turn accident problem might be remedied by adding a left turn lane, then other applicable measures (e.g., prohibiting turns, installing a median, adding a protected turn phase without a turn lane) should be considered and evaluated for effectiveness, cost and impact on all users (pedestrian, transit, bicycle, auto, etc.) This approach will do two things – quantify the relative value of each and identify mutually exclusive outcomes (for example, where fixing a problem for autos leads to creating a problem for pedestrians). With this information, an informed decision can be made. From this safety analysis, design requirements with priorities will emerge that can be carried forward through concept development.

3.6.2 Corridor Travel Time Impacts

Evaluating the relative effect of physical changes at individual intersections on the dominant corridor travel patterns provides the designer an understanding of the value of such improvements and whether they should be high or low priority or whether operational strategies may achieve a similar outcome to physical changes. For example, if adding a turn lane reduces a 10-minute trip by 20 seconds, but eliminates space for transit patrons to wait for the bus, what is the relative value of that turn lane addition?

To be able to make such comparisons, traffic simulation models should be used to achieve the necessary level of detail. The use of such models will allow travel times over typical paths to be measured during different volume conditions, will predict the length, frequency and duration of queues, will allow a more in-depth analysis of transit operations and their interaction with traffic flow (for example, the impacts of transit stopping in the travel lane rather than pulling into a parking lane), and will allow ITS/traffic operational strategies to be evaluated. Simulation models provide for a more robust incorporation of operations in the concept development and the design process. An added benefit of using a simulation model is the ability to calibrate it to local conditions. The additional data necessary for model calibration provides the means for describing traffic operations in terms that are more understandable than level of service to the general public.

3.6.3 Peak Period Impacts

The propensity for people to adjust travel times, travel routes and travel modes to reduce their exposure to congested conditions causes peak conditions to spread over time. These changes often result in a more effective use of the city's existing transportation system and these benefits should be recognized in the corridor evaluation. Care should be taken in the traffic analysis to account for spreading of peak conditions and for the expected queues that may result at specific intersections. The extent of queuing needs to be documented as well as the frequency and length of time the queues occur. This information is valuable in determining signal timing and implementing other traffic management strategies. The same type of analysis can be used to evaluate when time management of parking and other curb uses may be successful in providing additional peak capacity. The simulation models described above are excellent tools for evaluating and demonstrating these traffic operations impacts.

The process of selecting a preferred traffic operations approach is one of iterative testing of the effects of the concepts on the different modes that use the street. This process is also at the heart of public involvement in the design process since the expanded measures of effectiveness described above also form the basis for communicating the relative merits of various design elements. When these analytical approaches are combined with an adequate level of visualization of concepts (plan, examples, renderings, or photo simulations), the public can better understand the relative pros and cons of different alternatives.

Similarly, the designer, through this iterative process and with the help of simulation modeling, can evaluate combinations of physical elements and operational strategies on the overall design to achieve an optimized condition. The process allows for a progression of changes that are consistent with the basic cross sections of the street types.

3.7 Compare Trade-Offs and Select Best Cross-Section

The verification of place and street design type will have identified basic parameters for the type(s) of street design appropriate for the study corridor. The modal analysis will have identified what space is needed for walking, biking, transit, parking, stormwater management and plantings. The traffic analysis will have identified the desired number of traffic lanes and desired intersection capacities. Ideally, this combination of information will lead to a preferred cross-section for the available width of right-of-way. In some cases, additional discussion will be required to assess the trade-offs between using space for one mode or purpose versus another or the desirability of using reduced lane widths to better accommodate and balance all modal needs. Having good visual illustrations, such as photos of good examples or illustrated sketches of alternatives, is very helpful in this process.

3.7.1 Modal Priorities

In reality, modal priorities will vary given the relative needs in specific corridors. However, in general, the above-described design approach recommends the following modal priorities:

1. All streets must have sidewalks or other accommodation for pedestrians. A minimum width of 12 feet is recommended for the pedestrian zone which includes space for walking and space for plantings, street furniture, signage, etc. The pedestrian zone should be given priority in the allocation of available space, particularly in and near activity centers, growth centers, transit station areas and transit centers where there are often quite heavy pedestrian volumes. It should be noted that the environmental and health benefits of stormwater management, reduced impervious surface and tree planting are acknowledged as part of this priority.
2. Streets that are on the Primary Transit Network should be designed and operated to give buses priority and should include transit passenger facilities and other transit

facilities needed for the subject corridor. Transit facilities must be provided and given high priority on PTN corridors.

3. Streets that are designated in the Bicycle Master Plan as having bicycle facilities should incorporate special consideration for bicyclists. Depending on right-of-way width and competing needs, this may take a number of different forms such as bike lanes, signed routes, chevron pavement markings, cycle tracks or other design concepts. If there is no safe and acceptable way to accommodate bicyclists on the subject street due to the extent of other competing demands, than bikes must be provided for on a near-by parallel street.
4. If on-street parking needs to be removed to meet other priority needs and a need for on-street parking has been quantified, then alternative locations for on-street parking should be provided to the extent feasible. This may take the form of parking on one side of the street or parking on cross-streets. Since the provision of curb extensions is a priority for most street design types, it should be acknowledged early in the process that some on-street parking at intersections may be lost to provide either curb extensions or, in some cases, turn lanes. It is not the policy of the city to provide off-street parking as a replacement for the loss of on-street parking. If off-street parking is needed, it will be necessary to work with the adjacent property owners to determine how and where such parking would be provided and paid for.
5. Travel and turn lanes should be provided to the extent feasible given the above priorities. In some cases, this approach may result in higher peak period congestion or longer periods of traffic congestion. It will be a priority to incorporate efficient traffic management strategies, including the use of sophisticated signal systems, to optimize safety and capacity.

The above priorities should be discussed with the general public during *Step 3: Agree on the Scope of Design Process*. They will need to be discussed again in this step as the consequences of competing interests and modal priorities become known. This step may require an iterative process with multiple discussions with affected stakeholders, coupled with additional analysis. Preliminary design work may need to be undertaken and illustrative drawings of proposed cross-sections may need to be prepared to assist people in visualizing the proposed options and recommendations. While the specific method of evaluating tradeoffs may vary depending on the critical issues, it is very important to document the method of evaluation and the discussion of trade-offs. All perspectives should receive equal consideration in this discussion.

3.8 Develop Detailed Design

Once there is a general agreement on the best cross-section and preliminary design, detailed design work can be undertaken to work out the engineering details of the proposed design concept. This work will also likely involve an iterative process with affected stakeholders as details emerge regarding the street and sidewalk design and proposed streetscape elements, lighting, trees, landscaping, stormwater management, transit shelters and other design elements. The outcome of this process will be a recommended design that can be taken to City Council for approval and can ultimately be constructed.