



Legistar: 140091

February 27, 2014

TO: Public Works Committee and Transportation and Safety Committee  
FROM: Carl S. Goldsmith, Director of Public Works *CS*  
SUBJECT: Village Board Policy – Complete Streets (6.D.)

### Background

“Complete Streets” are streets designed to allow safe and convenient travel for all users, including pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, and transit users of all ages and abilities. The State of Illinois adopted Public Act 095-0665, that mandated that the principles of Complete Streets must be incorporated into all new projects and construction. The law required the Illinois Department of Transportation to include safe bicycling and walking facilities in all projects in urbanized areas, and is a victory for the movement to create Complete Streets that serve the needs of all road users. It was effective for project planning and required in construction beginning August 2008.

While the law does not specifically require municipal units of government to adopt a Complete Streets policy, pursuant to IDOT Bureau of Local Roads procedures require that, “any local public agency (LPA) project, regardless of funding, that impacts a State highway will need to comply with the Complete Streets requirements on the State highway.” As such, Village improvements to roads that intersect State Highways (i.e. North Avenue, Roosevelt Road, Butterfield Road, Highland Avenue (13<sup>th</sup> – 20<sup>th</sup>)) will need to incorporate Complete Streets concepts. Additionally, the Village staff anticipates that there will soon be requirements of Complete Streets policy in order to be considered for Federal and State grants for roadway projects. In anticipation of IDOT requirements and to establish best management practices for incorporating multi-modal concepts into roadway design, staff has developed a Complete Streets policy. The policy is not intended to be a one size fits all strategy, but does require consideration of various modes of transportation during design phases.

The proposed Complete Streets Policy (Policy) is intended to establish guidelines that the Village of Lombard can use to create safe places for residents to walk and bike, and to increase physical activity and access to transit, thereby making neighborhoods more connected and making the village a better place to live. The Policy is also intended to cover development and redevelopment in the public domain and street improvement within Lombard. It will also focus on regional connectivity and support the Village’s commitment to creating quality streets that are responsive to community needs, and safe for everyone, regardless of their age, ability, or mode of travel.

The objective of the proposed Complete Streets Policy is to establish guiding principles and practices so transportation improvements are planned, designed, constructed, operated and maintained to encourage walking, bicycling, and transit use while promoting safe operations for all users based upon the following principles:

- **Serve all Users** – Transportation improvements will be planned, designed, constructed, operated and maintained to support safe and convenient access for all users, and increase mobility for walking, bicycling and transit use, wherever possible while promoting safe and accessible operations for all users.
- **Context Sensitivity** – The planning and implementation of transportation projects will reflect conditions within and surrounding the project area, whether the area is a residential or business district or urban, suburban or rural. Project planning, design and construction of Complete Streets projects should include working with residents and merchants to ensure that a strong sense of place is maintained.
- **Complete Streets in Departments** – Relevant Village departments in the jurisdiction whose work affects the roadway must incorporate a Complete Streets approach into the review and implementation of their projects and activities. Potential Complete Streets opportunities could apply to projects such as, transportation projects, road rehabilitation, new development, utilities, etc.
- **Projects/Phases** - The policy will apply, as feasible, to roadway projects including those involving new construction, reconstruction, retrofits, repaving, rehabilitation, or changes in the allocation of pavement space on an existing roadway, as well as those that involve new privately built roads and easements intended for public use.

Implementing the Complete Streets Policy will require incorporating improvements that are specific to pedestrian and bicycle improvements that promote walking and bicycling, such as signage, striping, landscaping, and bus shelters, in the Village's Capital Improvements Program. It is estimated that implementation of the Complete Streets Policy could add to the cost of street improvements capital projects. Exact fiscal impacts will be addressed at the project level and will be incorporated into projects in the CIP. The adoption of the Policy itself does not obligate the Village to any additional funding, but will be instrumental in the assessment of roadway improvements.

A copy of the Village Board policy (6.J.) and the Complete Streets Policy has been attached for your consideration. Staff will be available to answer specific questions on the proposed policy.

**Recommendation**

Staff respectfully requests that the Public Works Committee and the Transportation and Safety Committee recommend that the Village Board of Trustees adopt of the Village of Lombard Complete Streets Policy (6.J).



## VILLAGE OF LOMBARD

**DRAFT**

### VILLAGE BOARD POLICY MEMORANDUM

**Subject: Complete Streets Policy**      **Section: 6.J.**  
**Dept.: PW**  
**Date:**  
**Updated:**

#### I. **Purpose**

This policy summarizes Village policy on the incorporation of a complete streets philosophy for roadways within the corporate limits of the Village of Lombard.

#### II. **Procedures/Guidelines**

The following procedures shall be used in order to ensure that the various projects within the Village advance the goals of the Complete Streets Policy:

- a) **Village of Lombard projects** – During the planning/design phase of any public transportation improvement project, the Director of Public Works, or his designee, shall conduct a review of the project relating to the incorporation of complete streets elements into the project. The review shall be made with reference to current best practices, as detailed in the reference materials and the Village of Lombard Complete Streets Policy.

The Complete Streets project checklist shall be used to assist with and to document the Complete Streets review process.

- b) **Other Public Agency projects** – The Village shall coordinate with external agencies, including but not limited to, the Illinois Department of Transportation and the DuPage County Division of Transportation, to ensure that all roadways and intersections within the corporate limits of the Village of Lombard meet the Village of Lombard Complete Streets Policy.

As with the review process for Village of Lombard projects, outside agency projects will be reviewed by the Director of Public Works or his designee for comments and the Complete Streets project checklist will be used to document the review.

- c) **Private Development projects** – The Village shall review all private development proposals that come before the Interdepartmental Review Committee (IDRC) with reference to the incorporation of complete streets elements and general consistency with the Village of Lombard

Complete Streets Policy. The Complete Streets project checklist shall be used to assist with and document the Complete Streets review.

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### III. Legislation/Documentation

*[The following text is extremely faint and largely illegible. It appears to be a list of items or a table with multiple columns, possibly detailing legislative or documentation requirements. The text is mirrored across the page, suggesting a bleed-through effect.]*



# Village of Lombard Complete Streets Policy

## I. Purpose and Background

Complete Streets provide streets that have facilities for all users, including pedestrians, bicyclists, mass transit users and motorists to the extent appropriate for the land use or the context of the street. Under the Complete Streets framework, minimizing traffic delay for private motor vehicle transportation should not be the only goal of the roadway and could be undesirable depending on the surrounding land use and needs of other intended roadway users.

Providing Complete Streets includes improvements in compliance with the Americans with Disabilities Act accessibility guidelines, such as handicapped accessible ramps at intersections with detectable warning surfaces for the visually impaired. Other characteristics of Complete Streets are features that create a multimodal-friendly environment, such as narrowing or removing traffic lanes (“lane diets” and “road diets”), adding median refuges, providing road re-striping to include bicycle lanes, reconfiguring parking, installing curb extensions (“bulb-outs”), and adding accessible pedestrian signals and countdown pedestrian signals.

Like many suburbs, roadways in Lombard were primarily designed for automobile transportation and in some cases lack facilities such as sidewalks, bus shelters and bicycle lanes. As demand for walking, bicycling, and transit facilities grows, safe and accessible transportation accommodations for all modes becomes even more necessary. Additional modal choices can also help in improving air quality and reducing greenhouse gas emissions by reducing private motor vehicle trips and miles traveled. In addition, Lombard is committed to serving its residents – children, elderly and persons with disabilities – by providing safe and accessible transportation facilities in the public right-of-way.

Complete Streets concepts have already been articulated in some of Lombard’s plans and policies. For instance, the Lilac Bikeway Plan provides guidance for bicycle routes throughout the Village and the Sidewalk Policy provides priority for sidewalk installation. The intent of Lombard’s Complete Streets policy is to bring all of these policies together and address their mutual concerns. It accomplishes this by both applying the transportation policies in prioritizing Complete Streets projects and by using the guidelines of these policies during the design and construction of projects.

## II. Policy Statement

The Complete Streets policy of the Village of Lombard is established to provide guidance for its residents, decision makers, planners and designers to ensure that multimodal elements are incorporated into transportation improvement projects.

- Where feasible and determined to be in the best interest of the public, new construction and roadway re-construction projects in the Village shall accommodate users of all ages

and abilities including pedestrians, bicyclists, transit users, motorists and adjacent land users.

- Roadway projects shall adhere to the most recent Village approved policies:
  - Comprehensive Plan;
  - Standard Specifications for Road and Bridge Construction
  - Lilac Bikeway Plan;
  - Subdivision and Development Code;
  - Sidewalk Policy; and
  - Other applicable transportation policies.
- Roadway projects shall respect the character of the community and preserve the environmental, scenic, aesthetic and historic resources of the area.
- Roadway projects shall include a project description that provides information about the Village right-of-way, public support for the improvement, and the potential environmental impacts of improvements.
- Roadway projects shall follow an open and transparent public engagement process during the planning, design and development of complete street projects.
- Roadway projects shall be funded through the Village's Capital Improvements Program, through Motor Fuel Tax Funds, Tax Increment Financing Funds, Capital Projects Fund, Developer/Resident Contributions and through Federal and State grants.
- Exceptions to the policy or exemptions from the policy shall be approved by the Director of Public Works and must be documented with supporting data that indicates the basis for the decision.

The following pictures are representative of the type of alterations/modifications to roadway configuration that are being sought through the Complete Street Policy. The pictures are examples of best management practices in the incorporation of multi-modal designs.

### III. Potential Complete Streets Outcomes



**Example 1: Modifications include widening a shared pedestrian and bicycle path, widening the sidewalk, adding landscaped buffers, and narrowing and landscaping the median.**



**Example 2: Modifications include adding bicycle lanes and markings, a sidewalk with buffer, and pavement markings.**





**Example 3: Modifications include adding sidewalks with buffers, "Share the Road" signs, "sharrow" markings, and landscaping the median.**

## **IV. Implementation**

To ensure that Complete Streets are successfully implemented in Lombard, roadway projects shall be prioritized by gauging the latent multimodal demand and the following criteria:

### Priority A Streets

- Arterial streets
- Streets included in the Lilac Bikeway Plan
- Street segments or intersections with pedestrian/bicycle accidents
- Streets adjacent to schools

### Priority B Streets

- Streets containing a high proportion of bus ridership
- Streets adjacent to high density residential areas zones

### Priority C Streets

- Streets linking neighborhoods to schools
- Streets adjacent to the Prairie Path and the Great Western Trail
- Streets linking neighborhoods to parks
- Streets linking neighborhoods to community facilities (i.e. Library and historically significant facilities)

When balancing competing interests, design decisions should be made to provide the safe, convenient and comfortable choices for all users. The objectives while making these design decisions are (1) to develop a transportation infrastructure that provides access for all appropriate modes of transportation and safety in equal measure for each mode of travel and (2) to ensure that transportation facilities fit their physical setting and preserve scenic, historic, aesthetic, community and environmental resources to the extent possible.

In some cases, these design objectives can be achieved within the available right-of-way. In other cases, the cost-benefit of acquiring additional right-of-way needs to be analyzed. Sometimes, tradeoffs in user accommodation need to be made to preserve environmental or community resources located within or adjacent to the right-of-way. In these situations, the challenge is to provide access and safety for each mode of travel. In other situations, it will be necessary to modify environmental characteristics in order to provide a safe and accommodating facility.

## **V. Design Guidance**

Once the purpose and need for a project is defined, a determination should be made to provide the safe, convenient and comfortable accommodation of all users within the context of the project. This process should be aided by the input from the various stakeholders involved to achieve the goals of a "Complete Street". There are several different scenarios for providing Complete Streets within the Village.

The three cases below depict roadway sections bounded by curb and sidewalk. These cases are representative of the vast majority of roadways found in Lombard. Case three (3) is for residential areas where pedestrians and bicycle activity may be infrequent or purely recreational. All three descriptive cases are not intended to be “typical sections” applied to roadways without regard for travel speeds, vehicle mix, adjacent land use, traffic volumes, and other factors since application of “typical sections” can lead to inadequate user accommodation (underdesign) or superfluous width (overdesign). Typical sections also leave little room for judgment reflecting the purpose and context of individual projects and can oversimplify the range of values that may be selected for each element of the cross-section.

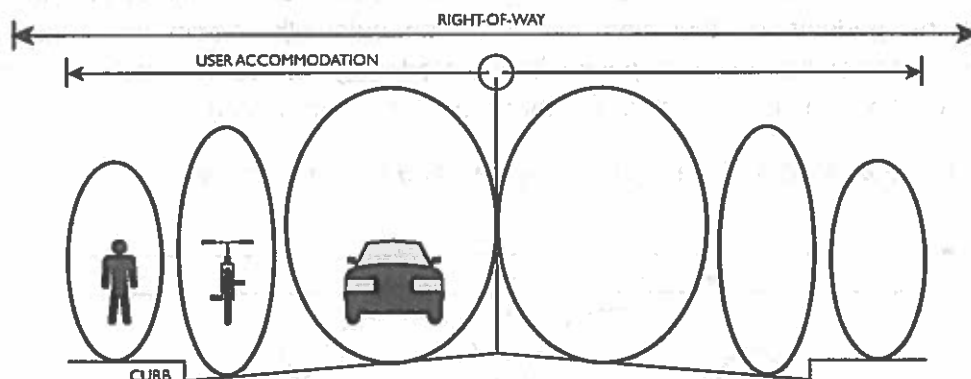
**Case 1: Separate Accommodation for All Users**

Case 1 provides the maximum separate accommodation for all modes of travel, as illustrated in Exhibit 1. This is often the preferred option in terms of providing safe, convenient, and comfortable travel for all users. It is usually found in areas of moderate to high density with curbed roadways.

Case 1 provides the highest level of safety and comfort for all users in areas with high levels of activity or where large speed differentials between the motorized and non-motorized modes are present. Case 1 usually requires the most width. In locations where the speed differential between different roadway users is small or overall activity is low, Case 1 may not be necessary to safely accommodate all users. However, in some instances, this case might be achieved by reallocating space within an existing roadway, thus eliminating potential impacts to the roadside environment.

This case might be considered in a wide variety of conditions including: areas with moderate to high pedestrian and bicycle volumes; areas with moderate to high motor vehicle speeds and traffic volumes; and areas without substantial environmental or right-of-way constraints.

**Exhibit 1 - Case 1: Separate Accommodation for All Users**



In Case One (1), pedestrians are provided with a sidewalk separated from the roadway by a raised curb and preferably a landscaped buffer. The clear width of the sidewalk should be sufficient to allow pedestrians or wheelchair users to pass without interfering with each other’s movement (preferred 5 feet sidewalk width excluding the curb and clear from items along the sidewalk such as fire hydrants, signs, trees and utility poles). It should be noted that the

Village's preferred width for sidewalks is 5 feet; however, in certain circumstances where 5 feet is not available, the Village will refer to the Americans with Disabilities Act guidelines. Sidewalks should be provided on both sides of the street unless there is a condition that suggests that a sidewalk is not needed on one side of the street. This might happen, for example, if there is physical impediment that would preclude development on one side of the street, such as a stream or mature old trees.

Provision of a striped bicycle lane or shoulder suitable for bicycle use (four (4) feet preferred) encourages cyclists to use the roadway. The bicycle lane/shoulder also provides for additional separation between motor vehicle traffic and pedestrians. If on-street parking is present, the bicycle lane should be at least four (4) feet wide so that the cyclist is provided with an additional buffer along the parked cars.

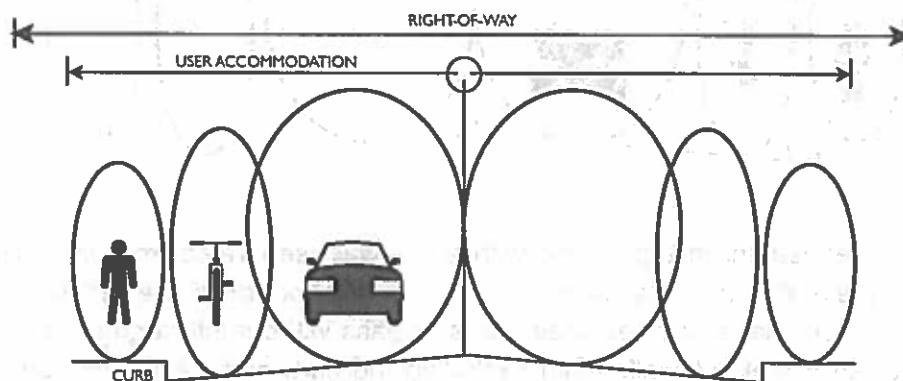
Motor vehicles are accommodated within travel lanes wide enough to eliminate encroachment by wider vehicles on either the adjacent bicycle lane or on the opposing motor vehicle travel lane. In addition to providing space for bicycles, shoulders also accommodate emergency stopping, maneuvering, and other functions. Where on-street parking is provided, shoulders or bicycle lanes should be maintained between on-street parking and the travel lane.

## Case 2: Partial Sharing for Bicycles and Motor Vehicles

There are instances in which the width necessary to provide accommodation for Case 1 is not available. There are also instances where some sharing and overlap between bicyclists and motor vehicle traffic is acceptable to achieve other environmental or design objectives. Case 2 describes an approach to multimodal accommodation in these situations and is illustrated in Exhibit 2.

Case Two (2) is common in areas of moderate to high density, where curbed roadway sections and separate sidewalks are provided. Pedestrians are provided with a sidewalk separated from the roadway by a raised curb and preferably a landscaped buffer, increasing the safety and comfort of the pedestrian. The clear width of the sidewalk should be sufficient to allow pedestrians or wheelchair users to pass without interfering with each other's movement (5 feet preferred excluding the curb and clear of other roadside obstructions).

### Exhibit 2 - Case 2: Partial Sharing for Bicycles and Motor Vehicles



In Case 2, there is some overlap between the spaces provided for bicycle use and that provided for motor vehicle travel. Signs or pavement markings indicating that the roadway is shared between cyclists and motor vehicles are appropriate for Case 2 roadways.

This type of accommodation is often used in areas with low motor vehicle speeds, low to moderate motor vehicle traffic volumes, and areas of environmental or right-of-way constraint where a smaller cross-section is necessary.

The designer should carefully consider the allocation of width to travel lanes and bicycle lanes/shoulders to provide the best balance of accommodation between bicycles and motor vehicles. In many instances, on-street parking will also be provided and additional width may be needed to reduce conflicts between bicycles and the adjacent parking. There are different possible configurations of lanes and shoulders possible in Case Two (2), but all feature some overlap in the space needed by bicyclists and motor vehicles:

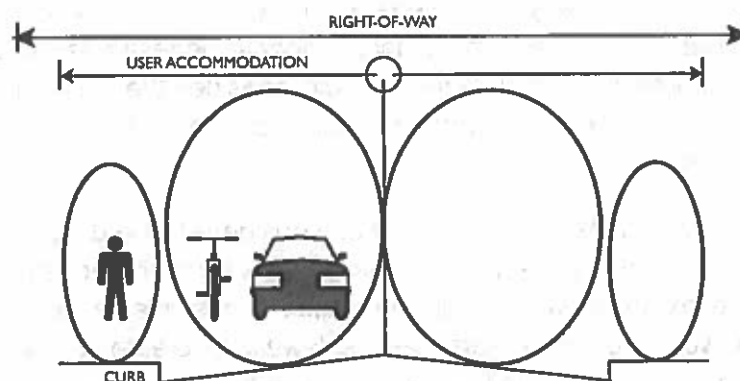
- Typical travel lanes combined with narrow shoulders (i.e. 11 to 12-foot lanes with 2 to 3-foot shoulders) provide maneuvering width for truck and bus traffic within the travel lane; however, bicyclists may be forced to ride along and over the pavement markings.
- Narrow travel lanes combined with wide shoulders (i.e. 10 to 11-foot lanes with 4 to 5-foot shoulders) provide greater separation between motor vehicle and bicycle traffic, but may result in motor vehicle traffic operating closer to the center line or occasionally encroaching into the opposing travel lane.

Wide curb lanes have also been used in Case 2; however, studies have shown that motorists and bicycles are less likely to conflict with each other and motorists are less likely to swerve into oncoming traffic as they pass a bicyclist when shoulder striping is provided.

### Case 3: Shared Bicycle/Motor Vehicle Accommodation

In Case Three (3), the accommodation of bicycles and motor vehicles is shared and separate pedestrian accommodation is maintained as illustrated in Exhibit 3. Case Three (3) is most likely to be found in the most densely developed areas where right-of-way is most constrained. It is also applicable to most residential streets where speeds and traffic volumes are low.

#### Exhibit 3 - Case 3: Shared Bicycle/Motor Vehicle Accommodation



Pedestrians are provided with a sidewalk separated from the roadway by a raised curb and preferably a landscaped buffer, increasing the safety and comfort of walking along this roadway. The clear width of the sidewalk should be sufficient to allow pedestrians or wheelchair users to pass without interfering with each other's movement (5 feet preferred excluding the curb and sidewalk clear of other roadside obstructions).

In Case Three (3), one lane is provided for joint use by motor vehicles and bicycles. This type of accommodation is used in the following conditions: areas with low to moderate motor vehicle traffic volumes; low motor vehicle speeds; and areas of severe right of way constraint where only a minimum pavement section is feasible.

Signs and pavement markings indicating that the roadway is shared between cyclists and motor vehicles should be provided for Case Three (3) roadways. On-street parking may be provided on these roadways and separate shoulders or bicycle lanes are not available.

## **VI. Design Elements**

There is no one-design standard that achieves the complete streets outcome. Designs for particular projects will be context-sensitive, considering adjacent land uses and local needs, and incorporating the most up-to date, widely-accepted design standards for the particular setting, traffic volume and speed, and current and projected demand (see references at end of policy). Each project must be considered both separately and as part of a connected network to determine the level and type of treatment necessary for the street to be complete. The need for complete streets treatments is greatest along corridors that connect populous residential settings with popular and important destinations, including, but not limited to the following: medical, shopping, employment, educational and recreational destinations.

### **Sidewalks**

Pedestrian accommodation should be consistent with the project context, including current or anticipated development density, roadway characteristics, right-of-way dimensions and availability, and community plans. The preferred width for sidewalks is 5 feet; however, in certain circumstances where 5 feet is not available, the Village will refer to the Americans with Disabilities Act guidelines. Wider sidewalks are desirable where there are high pedestrian volumes and where there is no buffer between high speed and high volume roadways. Sidewalks commonly accommodate street furniture, which includes items such as, trees, utilities, streetlights, parking meters, bicycle parking, benches, and refuse barrels. Additionally, sidewalks often abut fences, building edges, or vegetation along their outside edge. These elements influence the required width necessary to accommodate pedestrians, as pedestrians tend to "shy" from these obstructions. The designer should consider the desired location for these sidewalk features and, where they exist, the designer should provide appropriate offsets (or shy distances) to the pedestrian path.

Sidewalk widths of 6 to 10 feet are preferred and should be considered where higher pedestrian activity is anticipated. In the town center area and areas where very high pedestrian activity is anticipated, designers should try to provide wider sidewalks. If possible, a landscape buffer should also be provided between vehicular traffic and sidewalk to create a separation from motor vehicles and increase the comfort and safety of pedestrians. Landscape buffers are

usually 4-8 feet wide. On-street parking, shoulders or bike lanes can also act as buffers. One way to achieve additional width for the sidewalk area is by paving the landscape area with tree vaults, especially where on-street parking is provided. Narrowing travel lanes or reducing the number of through lanes where possible can also provide additional width.

For streets with higher bus ridership and high-density residential areas where moderate pedestrian activity is anticipated, sidewalk widths of 5-8 feet are preferred to accommodate group walking and also to provide waiting areas near bus stops. Landscape buffers of 4-6 feet should be provided in these areas.

Low to moderate pedestrian activity is anticipated in *Priority Areas C* and the preferred width for sidewalks is 5 feet.

## **Bicycles**

Bicycle accommodation should also be consistent with the project's context, roadway characteristics, right-of-way, community plans, and the level of service provided for the bicyclist. The designer should ensure that bicycle accommodation is based on anticipated development and community plans.

In addition to determining the type of accommodation for bicyclists, the designer should include other design features that improve the safety and comfort of the roadway for bicyclists. For example, if motor vehicle speeds are too high, the designer should consider selecting a lower motor vehicle design speed to increase the comfort and safety of the facility for bicycles. Additionally, the designer could consider narrowing motor vehicle lanes to provide wider shoulders. Some bicyclists feel more comfortable riding on the roadway surface, while others feel more comfortable separated from traffic on a shared-use path. As a result, the designer should consider a variety of configurations, both on- and off-road so that different levels of bicyclists are accommodated.

Bicycle lanes are typically four (4) feet wide and are sufficient for most conditions. On roadways with higher speeds or higher volumes of trucks and buses (30 or more per hour), the desirable bicycle lane width is five (5) feet. Bicycle lanes wider than five (5) feet are generally not used since they may encourage inappropriate use by motor vehicles. Designers should avoid combining minimum travel lane widths and minimum bike lane widths.

Bicycle lanes should be provided consistent with the Lilac Bikeway Plan. In areas where right-of-way is constrained and high bicycle usage is anticipated, it is prudent to provide bicycle facilities by eliminating non-critical design elements. For example, it may be desirable to convert a four-lane undivided street to a three-lane street with left-turn lanes to provide bicycle lanes rather than narrowing all of the other design elements to retain four lanes, if traffic capacity allows.

For streets where moderate to high speeds and volumes are expected, shared-use paths may be provided to accommodate both pedestrians and bicycles.

Streets in the *Priority Areas C* are typically in the residential areas. In cases of low speed, low to moderate traffic volumes, and low occurrence of trucks and buses, the shared lanes may be adequate to support bicycling. Before deciding to provide shared lanes as bicycle accommodation, the designer should be certain that the traffic volumes and motor vehicle speeds will be low enough so that all types of bicyclists can comfortably use the roadway.

## **Parking**

On-street parking serves several critical needs of adjacent land uses especially in urban town center areas and typically supplements the off-street parking supply. On-street parking also acts as a buffer between the sidewalk and travel lanes and provides additional comfort to pedestrians.

## **Travel Lanes**

Travel lanes are the component of the roadway cross-section that serves motor vehicle travel, or in some cases, joint use. In most cases, the travel lanes are the widest component of the roadway cross-section. The number of lanes in each direction should be determined based on the transportation demand estimates and appropriate level of service determined in the project planning process. In some instances, it may be possible to reduce the number of travel lanes to provide sidewalks, landscape buffers, bicycle lanes, and crossing islands.

The width of travel lanes is selected through consideration of the roadway context, approach to multimodal accommodation, and the physical dimensions of vehicles, speeds, and other traffic flow characteristics. The normal range of design lane width is between 10 and 12 feet. Travel lanes of 10 and 11 feet are generally preferred where additional width could be used to provide for wider sidewalks and bicycle lanes. Travel lanes between 11 and 12 feet in width are desirable for roadways where higher design speeds, higher traffic volumes, or higher truck and bus activity is anticipated.

Travel lanes narrower than 10 feet are generally not recommended. Lanes wider than 12 feet are sometimes used where shoulders are not provided, such as in suburban high-density areas, town centers, and urban areas. Another application of wide lanes is in areas with high driveway density. This application provides more maneuvering room for drivers entering or exiting driveways, or in areas of limited sight distance. In these cases wide lanes are typically 12 to 14 feet wide. However, if more than 12 feet is available, it is often preferable to stripe a shoulder.

## **Landscape Panel**

Landscape panels provide for a defined roadway edge and acts as a buffer between the traveled way and pedestrians in the sidewalk. Landscape panels typically also accommodate street trees, utility poles, street lights, fire hydrants, traffic signs, holding areas for plowed snow, and other appurtenances. This area can also be used to achieve stormwater and air quality benefits and lower operating speeds in some cases. Landscape panels are usually 4-8 feet wide, however, when street trees are provided, a minimum of 6 feet is preferred from the edge



of the traveled way. Designers should provide adequate clear zone dimensions, provided by AASHTO, to account for errant vehicles.

### **Intersections and Transitions**

In order to achieve the objectives of the Complete Streets Policy, intersections must be designed to accommodate reasonable expectations and to provide easy transitions for all roadway users including pedestrians, bicycles, cars, transit users, buses, and trucks. Pedestrians and walking bicyclists expect to cross the street safely with minimum delay. Drivers of large vehicles expect to maneuver turns with minimum difficulty. Riding bicyclists and drivers of motor vehicles expect to safely pass through an intersection with minimum delay. Well-designed, multimodal intersections accommodate all users and also meet the community's objectives and priorities.

Smooth roadway transitions and multimodal level of service methods must be used when reviewing intersection designs. Intersection widening for additional turn lanes should be balanced against potential impacts to pedestrians and bicyclists. In addition, as roadway users pass through an intersection, appropriate connections between transportation facilities, such as continuity of bicycle lanes and paths, should be provided. Intersection crossing features for pedestrians and bicyclists, such as pedestrian push buttons, should be designed to allow safe and convenient travel through the intersection, taking into consideration the design of the transportation facilities approaching the intersection. Proper sight triangles must be provided to minimize conflicts between different roadway users. Particular care should be given to ensure that intersections are fully accessible to the disabled and hearing and sight impaired.

### **VII. Benefits**

By providing, where appropriate, features such as accessible sidewalks, designated bike facilities and accessible transit stops, complete streets encourage walking, transit use and biking, all of which have important health benefits.

By shifting a share of automobile traffic to walking, biking and transit, complete streets help reduce the demand for fossil fuels, ease automobile congestion, reduce wear on roadways, improve air quality and make streets more attractive for businesses and customers, increasing economic activity at the neighborhood level.

Well-designed complete streets improve safety by reducing collisions between automobiles, pedestrians and cyclists. Complete streets are a logical extension of the Americans with Disabilities Act and improve access for people with disabilities and older citizens, allowing them to participate more fully in community life.

### **VIII. Applicability**

This policy applies to all roadway projects within the Village of Lombard, including:

1. Surface Transportation Program (STP),
2. Congestion Mitigation/Air Quality (CMAQ),
3. County and State projects within the village limits,

4. New Subdivisions (*pursuant to Section 154.304 Major Plat of Subdivision of the Lombard Code*), and
5. Projects located within any TIF District.

Some projects, especially those with rural cross sections (defined as 'uncurbed'), may require no additional complete streets treatments if it is determined during the application review phase that no current or projected need justifies such treatment.

To the extent consistent with current federal law, all projects federally funded under this policy will be to enhance transportation choices in both the community and the Region. The Village of Lombard encourages county and state jurisdictions to review and revise their ordinances and policies to reflect complete street design guidelines and to apply these guidelines to projects as appropriate. In addition, the Village of Lombard encourages private developers to apply complete streets principles to their projects. We also encourage neighboring regions to utilize these principles in order to ensure connectivity across jurisdictions and regions.

Projects subject to the Village of Lombard Complete Streets Policy shall be reviewed utilizing the *Checklist for Compliance with the Village of Lombard Complete Streets Policy*. The checklist is attached as Exhibit 4.

#### **Additional Information**

In addition to the information provided above, all new construction and reconstruction roadway projects must be compliant to the information provided in:

- Comprehensive Master Plan;
- Standards and Details for Construction;
- Lilac Bikeway Plan;
- Sidewalk Policy; and
- Other applicable transportation policies and ordinances.



# Checklist for Compliance with the Village of Lombard Complete Streets Policy

Village Project #: \_\_\_\_\_ Project Manager: \_\_\_\_\_

Reviewing Department: \_\_\_\_\_

Project Limits: \_\_\_\_\_

Project Funding Type:  Federal Aid  State Aid  Local Funds  Other Design

Phase:  Preliminary Design  Detail Design

Completed By: \_\_\_\_\_ Date Completed: \_\_\_\_\_

Existing Corridor Characteristics Review		
Average Daily Traffic (ADT):		Posted Speed:
Critical crash rate history within the project corridor?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<i>If yes, describe locations and crash rates</i>
Roadway Functional Class		
Road Use Classification		
Trip Generators: <input type="checkbox"/> School <input type="checkbox"/> Retail <input type="checkbox"/> Hospital <input type="checkbox"/> Fire station <input type="checkbox"/> Park <input type="checkbox"/> Church <input type="checkbox"/> Industry <input type="checkbox"/> Historic Site <input type="checkbox"/> Sports facility <input type="checkbox"/> Other		
Existing corridor ROW width:		
Typical Roadway Section/Lane Configuration:	<i>Describe here (# lanes &amp; width, curb type, etc.)</i>	
Intersection Configurations:	<i>Describe here (traffic signals, geometry, side street stops, turn lanes, etc.)</i>	
Side Street skewed <70° or existing sight distance issue	<i>Identify the intersecting streets and specify the problematic leg.</i>	
Any roadway or pedestrian (underpass/overpass) bridges?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<i>If yes, list type, location, number, and over/under roadways.</i>
Any railroad crossings?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<i>If yes, describe.</i>

<b>Complete Streets Features:</b> <input type="checkbox"/> Pedestrians List elements, i.e. sidewalk, trail, tunnel, etc. <input type="checkbox"/> Bicycles List elements, i.e. bike lanes, trails, bike boxes, etc. <input type="checkbox"/> Autos List elements, i.e. parking lanes, etc. <input type="checkbox"/> Trucks List elements, i.e. no lane encroachment, etc. <input type="checkbox"/> Buses List elements, i.e. bus stops, etc. <input type="checkbox"/> Other		
What is the average daily bicycle traffic?		
On Village/County Bike Plan?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, indicate which plans.
Roadway Restrictions	<input type="checkbox"/> Reduced Speed Zone <input type="checkbox"/> Advisory Signage <input type="checkbox"/> Clearance Restriction <input type="checkbox"/> Weight Restriction <input type="checkbox"/> Other	
Existing drainage problems or deficiencies?	List flooding/ponding and treatment/rate issues here.	

Proposed Corridor Characteristics Review				
Average Daily Traffic (ADT) Forecasted Year:	<i>Enter forecast year.</i>	<i>Enter ADT</i>	Posted Speed:	Design Speed:
Proposed Corridor ROW width:				
Easements Required?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Typical Roadway Section/Lane Configuration:				
Variances or Exceptions?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<i>List and describe each variance/exception.</i>		
Design Vehicle	<input type="checkbox"/> Passenger Car <input type="checkbox"/> Single-unit Truck <input type="checkbox"/> Bus List type. <input type="checkbox"/> Other			
Traffic Lane Information	Through _____ # of lanes Lane Width: _____ feet Roadway Surface Material: <input type="checkbox"/> Left <input type="checkbox"/> Double left <input type="checkbox"/> Right <input type="checkbox"/> Double right <input type="checkbox"/> CTWLTL			
Shoulders?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Width: _____ feet Shoulder Surface Material:		
Curb or Curb & Gutter?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type: <i>If yes, list type.</i>		
Medians?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Minimum Width: _____ feet Type: <i>Choose an item.</i>		

On Street Parking?	<input type="checkbox"/> Both sides <input type="checkbox"/> One side <input type="checkbox"/> None		Width: ___feet
Sidewalk/Trail Separation from Cars			Width: ___feet
Streetscape/Landscape	<i>List components, not including bike/bus features which are noted later.</i>		
Any roadway or pedestrian (underpass/overpass) bridges?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type: <i>If yes, list type, location, number, and over/under roadways.</i>	
Retaining Walls	Choose type.	<input type="checkbox"/> Fencing proposed <input type="checkbox"/> Building Permit Required	
Safety Barrier/Guardrail	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> With 6" curb <input type="checkbox"/> Crashworthy End Treatment(s) <input type="checkbox"/> Pedestrian Friendly End Treatment(s)	
Mailboxes	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Intersection Configurations:	<i>Describe here (traffic signals, geometry, side street stops, turn lanes, etc.)</i>		
Traffic Signals Proposed	<input type="checkbox"/> Yes <input type="checkbox"/> No	<i>List intersections.</i>	
Traffic Signals Warranted	<input type="checkbox"/> Yes <input type="checkbox"/> No	<i>If yes, warrant information</i>	<input type="checkbox"/> SJR <input type="checkbox"/> ICE Report
Traffic signal components included in design: <input type="checkbox"/> All pedestrian phase <input type="checkbox"/> Pedestrian actuated <input type="checkbox"/> Countdown timers <input type="checkbox"/> Accessible pedestrian signals <input type="checkbox"/> Bus preemption <input type="checkbox"/> Railroad preemption <input type="checkbox"/> Emergency Vehicle Preemption <input type="checkbox"/> Street lights <input type="checkbox"/> Interconnect <input type="checkbox"/> Video detection <input type="checkbox"/> Protected left turn <input type="checkbox"/> Permissive left turn with green globe <input type="checkbox"/> Permissive left turn with flashing yellow arrow			
Roundabouts Proposed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<i>List locations.</i>	<input type="checkbox"/> ICE report
4-Way Stop Proposed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<i>List intersections.</i>	
Intersection Components	<input type="checkbox"/> Crosswalks at all crossings <input type="checkbox"/> Crosswalks at some crossings <input type="checkbox"/> School crosswalks <input type="checkbox"/> Refuge islands <input type="checkbox"/> Pedestrian bump-outs Crosswalk Type: <i>List crosswalk striping type(s)</i>		
Side Street skewed <70° or sight distance issue	<i>Identify the intersecting streets and specify the</i>		

	<i>problematic leg.</i>	
<b>Complete Streets Features:</b> <input type="checkbox"/> Pedestrians <i>List elements, i.e. sidewalk, trail, tunnel, etc.</i> <input type="checkbox"/> Bicycles <i>List elements, i.e. bike lanes, trails, bike boxes, etc.</i> <input type="checkbox"/> Autos <i>List elements, i.e. parking lanes, etc.</i> <input type="checkbox"/> Trucks <i>List elements, i.e. no lane encroachment, etc.</i> <input type="checkbox"/> Buses <i>List elements, i.e. bus stops, etc..</i> <input type="checkbox"/> Other <i>List other here.</i>		
Sidewalk	<input type="checkbox"/> Both sides <input type="checkbox"/> One side <i>Location.</i> <input type="checkbox"/> None	Width: ___feet
Sidewalks ADA Compliant?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<i>If no, explain why not.</i>
Street Lighting	<input type="checkbox"/> Street Level <input type="checkbox"/> Pedestrian Level <input type="checkbox"/> Combined <input type="checkbox"/> None	
Stairways Proposed	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Handrails Included <input type="checkbox"/> Building Permit Required
On-Road Bike Lanes	<input type="checkbox"/> Both sides <input type="checkbox"/> One side <i>Location.</i> <input type="checkbox"/> None	Width: ___feet
	<input type="checkbox"/> Follows Right Turn Lane <input type="checkbox"/> Follows Thru Lane	
Off-Road Multi-Use Trail	<input type="checkbox"/> Both sides <input type="checkbox"/> One side <i>Location.</i> <input type="checkbox"/> None	Width: ___feet
Trails ADA Compliant?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<i>If yes, describe stops, location, etc.</i>
Bike Amenities	<input type="checkbox"/> Bike lane/path signage <input type="checkbox"/> Bike racks <input type="checkbox"/> Bike lockers	
Bus Elements	<input type="checkbox"/> Diamond Lanes <input type="checkbox"/> Bus Bays <input type="checkbox"/> Far Side Stops <input type="checkbox"/> Near Side Stops <input type="checkbox"/> Bus stop benches <input type="checkbox"/> Shelters <input type="checkbox"/> ADA landing <i>If not checked, explain why not.</i>	

## Comparison Summary of Pedestrian/Bicycle Improvements

Miles of sidewalk	Existing: <i>Number</i>	Proposed: <i>Number</i>
Miles of trails or bike lanes	Existing: <i>Number</i>	Proposed: <i>Number</i>
Number of striped crosswalks	Existing: <i>Number</i>	Proposed: <i>Number</i>
Number of ADA compliant ramps <i>(Note: Each crossing counts as 1 ramp; 2-way directional and diagonal ramps count as 2 ramps)</i>	Existing: <i>Number</i>	Proposed: <i>Number</i>
Number of pedestrian bump-outs	Existing: <i>Number</i>	Proposed: <i>Number</i>
Number of signals with countdown timers	Existing: <i>Number</i>	Proposed: <i>Number</i>
Miles of pedestrian lighting	Existing: <i>Number</i>	Proposed: <i>Number</i>

I, \_\_\_\_\_ (Director of Public Works/designee) for the Village of Lombard have reviewed this **Checklist for Compliance with the Village of Lombard Complete Streets Policy** for Project # \_\_\_\_\_, and approve of the recommended improvements under the Proposed Characteristics section.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection procedures and the use of advanced analytical techniques to derive meaningful insights from the data.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and analysis, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that the data remains reliable and secure throughout its lifecycle.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of a data-driven approach in decision-making and the need for continuous monitoring and improvement of data management practices.

6. The final part of the document provides a detailed list of references and sources used in the research. This includes academic journals, industry reports, and other relevant publications that support the findings and conclusions of the study.

7. The document also includes a list of appendices, which contain supplementary information such as raw data, detailed calculations, and additional charts. These appendices are provided to support the main text and allow for further exploration of the data.

8. The document is structured to be easy to read and understand, with clear headings and sub-headings. It uses a logical flow to present the information, ensuring that the reader can follow the argument and understand the significance of the findings.

9. The document is a comprehensive resource for anyone interested in data management and analysis. It provides a solid foundation of knowledge and practical insights that can be applied in various contexts, from business operations to academic research.

10. The document is a valuable tool for improving data management practices and enhancing the quality of decision-making. It provides a clear roadmap for organizations looking to optimize their data processes and maximize the value of their data assets.

11. The document is a key resource for understanding the latest trends and developments in data management and analysis. It provides a comprehensive overview of the field and offers practical advice on how to stay up-to-date and competitive in a rapidly changing environment.

12. The document is a must-read for anyone looking to improve their data management skills and drive better results. It provides a wealth of information and insights that can be used to inform and improve data-driven decision-making in any organization.

13. The document is a comprehensive and accessible resource for anyone interested in data management and analysis. It provides a clear and concise overview of the field, making it an ideal starting point for anyone looking to learn more about this important area of study.