3.0 Planning Approach and Process

Chapter 3 describes the planning approach and process used to develop the recommendations and implementation strategies, which are presented in Chapters 4-7. This chapter begins with a brief summary of the planning process used to develop recommendations, followed by a summary analysis of existing conditions and key challenges for creating a bicycle transportation network in Tysons Corner.

A description of the recommended bicycle transportation network is provided, including the criteria used to select network streets and trails, and an abbreviated bicycle facility "toolbox," which highlights the types of facilities that will comprise the bicycle network. A more extensive toolbox is provided in Appendix C. The chapter includes a summary of roadway design and land development policies that will be needed to support implementation of the recommended facilities. The role of bicycle safety education, encouragement and marketing programs also is discussed.

The chapter closes with an explanation of the implementation timeframes and the overall implementation strategy. This discussion will provide the broader context for the more detailed discussion of implementation in each phase. Taken together, the framework outlined in this chapter explains how the Plan's goals and objectives, presented in Chapter 1, will be achieved.

3.1 NETWORK PLANNING APPROACH

A feature element of this Plan is the identification of a physical network of bicycle facilities and signed bicycle routes throughout Tysons Corner. This network includes trails and bicycle lanes, intersection improvements, highway overpasses, bicycle access improvements, and a range of other facilities that will make bicycling more convenient and safer. It will make bicycling in Tysons Corner a more realistic travel option.

The bicycle facilities recommended for specific locations are a direct response to existing conditions and user needs along various roads in the area. They also are based on national standards and guidelines, proven best practices, use of emerging designs and technologies and the experiences of other jurisdictions in the Washington D.C. metropolitan region.

The analytical process used to identify the recommended network integrates local knowledge, engineering judgment, and input received through the BAC, stakeholders, the public and others. A broad discussion of existing conditions is provided below, followed by a presentation of the types of facilities selected to address the issues and opportunities uncovered as part of the existing conditions analysis.

3.2 BICYCLING IN TYSONS CORNER TODAY

Roadway Characteristics

The character of existing streets and roadways in Tysons Corner was evaluated to determine how conditions are affecting today's cyclists, as well as prospective future cyclists. Road characteristics that were evaluated during the field analysis phase of the project included the number of travel lanes, presence and configuration of turn lanes, lane widths, total road width (or right-of-way width), observed traffic volumes and speeds, posted speed limit, and presence of on-street parking.

Arterial roadways and collector streets in and around Tysons Corner are characterized by high-traffic volumes, and at times high speeds. However, it also is the case that on the major arterials traffic is frequently at a standstill due to congestion. Many roads have multiple thru lanes and turn lanes, which are generally 11-13 feet wide. The total widths of roads from curb to curb are highly variable. Wide arterials such as Route 7 have limited access sections of road and/or parallel service roads on one or both sides, and posted speed limits of 40-50 mph.

At major intersections additional traffic lanes are typically provided for left and/or right turns, sometimes double lefts or rights. Free-flow, right-turn slip lanes are common, as are right (or left) turn and through option lanes. As a result, intersections are very wide and cyclists must contend with motorists turning right and left across their path. Tysons Corner is bounded on two of three sides by limited access highways, including six major interchanges; four which feature predominantly high-speed free-flow exit and entrance ramps.

These and other factors make the majority of arterial and collector roadways in Tysons Corner highly uncomfortable for cyclists today and an unattractive choice for those who might want to bicycle in the future.

Local streets, both residential and commercial, are often more bicycle-friendly, but they tend to be discontinuous and circuitous. As such, they can be hard to navigate without the aid of an accurate map or GPS system.

As a result, their current value for bicycle travel is somewhat limited. However, a number of these local streets have hidden value that is, as yet, unused. This Plan proposes actions to overcome the minor challenges of bicycling on these streets and open up greater access for cyclists. Further, a bright spot in the local street system is that a number of residential subdivisions currently are connected by paths or sidewalks providing links between abutting cul-de-sacs.

Trail Characteristics

The W&OD Trail functions as a bicycle highway. It is level, relatively wide, and has few at-grade crossings. For bicycle transportation, it is highly efficient, costing even the average cyclist only 30 minutes for a 7.5 mile trip. The W&OD Trail also has fairly frequent access points to the adjacent street system. But, at its closest point, it is more than a mile from the center of Tysons Corner, so it provides only indirect access.

Other park trails like those in the Wolf Trap Creek Stream Valley Park are relatively narrow, hard to find and the surface quality is often poor. Many of the sidepaths along main roads also are narrow, overgrown with vegetation and discontinuous. Most sidewalks are narrow as well (4 feet) and of limited value for bicycle transportation.[19] Outside of the W&OD Trail and a few key connector paths, the trail system in and around Tysons Corner is generally not favored by cyclists making utilitarian trips.

Existing Bicycle Facilities and Facilities that are Under Construction, Planned, or Funded

In addition to the trails discussed above, a few on-road bicycle facilities exist in the greater Tysons Corner area. There are existing bicycle lanes on portions of Gallows Road, Old Courthouse Road, Ring Road and Westmoreland Avenue, and more are funded and awaiting implementation.

It is difficult to characterize the full extent of the design standards and features being used on some of the bicycle and pedestrian improvements being constructed in conjunction with the Silver Line and HOT lane projects. For example, Silver Line station plans have called for the closing of at-grade pedestrian and bicycle access across VA Route 123 at Tysons Boulevard, because Metro access will include a pedestrian overpass. However, the overpass will be difficult for cyclists to use, and will be closed to all traffic when Metrorail is not operating. As a result, some of these intersections may need additional

[19] At intersections, many sidewalks do not have all of the necessary curb ramps for wheeled vehicles to make safe passage.

pedestrian and bicycle crossing accommodations even after completion of ongoing Metrorail or HOT lane-related construction.

A major benefit for cyclists in the transportation projects underway in 2010-2011 are the bridge improvements that are being made on Oak Street, Lewinsville Road, Idylwood Road and West Park Drive, which include bike lanes, shoulders, or wide outside lanes.

Barriers to Bicycle Travel

The existence of major barriers may be the biggest challenge in making Tysons Corner accessible by bicycle. These barriers make some otherwise easy bicycle trips impossible, highly circuitous, unsafe or even illegal. They are a major deterrent for many people who would like to bicycle. Many of these barriers will be costly to overcome; others can only be mitigated over time as the built environment changes. A list of general barrier types found in Tysons Corner is provided below.

- Limited access highway crossings with multiple high-speed interchange ramps and merges.
- Wide arterials with medians and minimal minor street crossings, which create a barrier almost as daunting as a limited access highway.
- Topography and environmentally challenged stream valleys surrounded by suburban subdivisions that limit the potential for stream valley trails to serve bicycle transportation.
- Subdivisions adjacent to Tysons Corner that, by design, do not connect in any way with the Tysons Corner commercial areas.
- Streets on private property that serve public travel purposes, such as at shopping malls, office complexes and in Homeowner Association (HOA)-controlled subdivisions.
- Large development blocks, with buildings surrounded by surface parking lots.
- Input from the BAC and other stakeholders, along with a field analysis, helped the project team identify the most detrimental barriers in the existing bicycle network.

3.3 CRITERIA FOR CREATING A NETWORK

As has been noted, the recommended bicycle network is designed to meet the needs of people already riding as well as the needs of potential and future cyclists. The BAC placed a high value on developing a network that over the long run will allow children and senior cyclists, novice and experienced cyclists, regular and occasional commuters; students, visitors, tourists, and recreational riders to all feel comfortable and welcome to bicycle in Tysons Corner.[20]

As the bicycling population grows in Tysons Corner, it is important to recognize that some cyclists will only venture onto busier roads if they are provided with a facility that clearly delineates space in which they can operate or offers a significant degree of separation from traffic. Some cyclists will avoid roadways with high speeds and heavy volumes, regardless of the accommodations. Some will seek only quiet local streets, and some experienced cyclists will actually prefer arterials because their traffic is given priority at minor intersections and they provide the most direct route to their destination.

To address the goal of comfort for all cyclists, this plan recommends both improving arterial and collector roadways to accommodate bicycles, and providing trails, sidepaths and parallel routes along local streets.

Streets and trails were selected for inclusion in the recommended bicycle transportation network to create direct, convenient, and logical connections throughout the greater Tysons Corner area. The network includes streets and trails that cyclists currently use as well as roads they would like to use. In order to understand existing and desired bicycle travel patterns, the project team observed bicycle movements, met with local bicycle commuters, conducted a ride with area cyclists, and gathered feedback from the general public in-person and via an interactive web-based mapping tool.

The network is intended to encourage maximum use and comfort, while fostering safe and responsible riding. While bicycling is legal and should be facilitated on all public streets and roads (other than limited access highways) this Plan establishes route

[20]The BAC coined the phrase "from seven to seventy" to suggest that in the long run all potential riders should feel comfortable and welcome to bicycle in Tysons Corner.

development priorities to guide decisions about the types of roadway and trail improvements that are recommended; and their timing and funding. The routes selected for the recommended Bicycle Transportation Network were chosen using the following criteria:

- Recommended routes were identified to facilitate bicycle access to important destinations. Improvements are recommended where they will benefit the greatest numbers of people.

- Where direct, convenient and logical connections require using roads that have poor bicycling conditions today, appropriate facility upgrades are recommended (such as bicycle lanes, shared lane markings, climbing lanes, sidepaths or cycle tracks) to create better bicycling conditions in the future.
- Where parallel routes are equally direct and convenient the most bicycle-friendly route was typically selected for the network and the cost of upgrading an unfriendly roadway is avoided.
- In a number of corridors, such as along Leesburg Pike, and portions of International Drive, less costly, but lower quality facilities are recommended in the near term (Phase 1, 2 or 3), and higher quality facilities are recommended in the long term (Phase 4).
- Additionally, some corridors have recommendations for both on-road and off-road facilities, such as portions of VA Route 123, to ensure that these routes offer appropriate options for all types of cyclists.
- Signed Bicycle Routes are an important part of the proposed bicycle network. While, they are not considered bicycle facilities per se (because the existence of wayfinding guidance signs does not affect the cyclist's level of comfort in relation to motor vehicle traffic) they make a significant contribution that will be useful for new cyclists:

- Wayfinding signs are effective at helping cyclists find and follow routes that may be preferred for cycling due to any number of bicycle friendly conditions, such as lower traffic volumes and/or speeds, fewer or less severe hills, or guidance to the best intersections for crossing major arterials.
- In Tysons Corner, many preferred bicycle routes are not well known, are hard to find on a map, and can be difficult to follow in the field; the signed routes will increase cyclists' confidence in unfamiliar neighborhoods and enable new cyclists to have a successful and enjoyable experience on their first outing.
- In addition to directional guidance, signed bicycle routes will always include destination and distance information, and as such they will be useful for cyclists in combination with any bicycle facility as well as on streets that have no bicycle facilities.

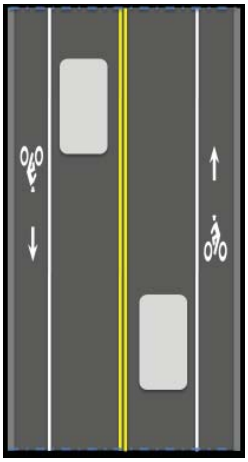
3.4 SUMMARY OF FACILITY AND ACTION RECOMMENDATIONS

The bicycle facilities recommended in this Plan range from on-road bike lanes and shared lane markings, to off-road cycle tracks, shared use paths and multiuse trails. They will be supplemented by intersection and interchange crossing accommodations, wayfinding signage and other types of bicycle accommodations. A select set of these facilities are shown graphically and discussed briefly in Figure 3.2 on the following pages.

A range of actions will be needed in order to create the bicycle network identified in this Plan. These actions account for the type of facility being installed, as well as the character and existing condition of each individual road. In some cases, bicycle facilities can be implemented by simply adding pavement markings on the road, while in other cases, existing lanes may need to be narrowed or eliminated or the entire roadway may need to be widened.

For more detailed information about bicycle facility types, design options and implementation actions see Appendix C.

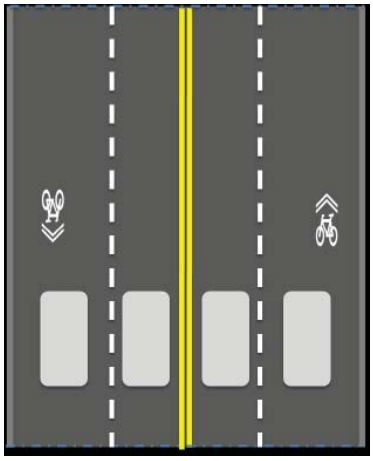
Bike Lane



A bike lane is a pavement marking that designates a portion of a roadway for the preferential or exclusive use of bicycles. Bike lane markings are dashed where vehicles are allowed to cross the bike lane, such as for right turns or at bus stops. Bike lanes are recommended on two-way arterial and collector streets where there is enough width to accommodate a bike lane in both directions, and on one-way streets where there is enough width for a single bike lane.

Sample Locations: Jones Branch Drive, Spring Hill Road, Old Courthouse Road

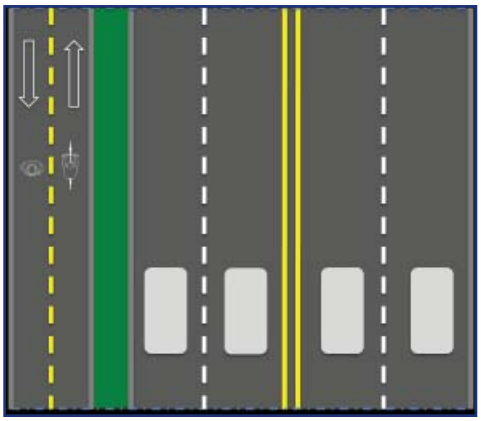
Shared Lane Markings- 4 Lane Street



Shared lane markings (sharrows) are used on roadways where bicyclists and motor vehicles must share the same travel lane. The sharrow helps position bicyclists in the most appropriate location to ride. It also provides a visual cue to motorists that bicyclists have a right to use the street. On a four lane street, sharrows should be placed in the outside lane. If the outside travel lane is too narrow for a motorist to comfortably pass a cyclists while staying within the travel lane (generally less than 13 feet) the sharrow marking may be centered in the lane. This encourages cyclists to "take the lane," and encourages motorists to use the left lane to pass. In a 12-14 foot lane, the marking may be offset from the curb by 4 feet. For 10-12 foot lanes, the BIKES MAY USE FULL LANE SIGN is recommended in Tyson's, because drivers are not used to sharing the road with cyclists and may not provide comfortable clearance when passing. Sharrows are not appropriate on streets with speed limits greater than 35 mph.

Sample Location: Tyco Road

Sidepath

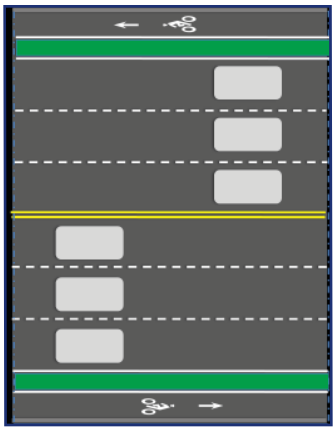


A sidepath is a shared-use path located adjacent to roadway. It is designed for use by bicyclists and pedestrians and each may travel in either direction. Sidepaths are sometimes created by designating a wide sidewalk for shared use; or they may be a segment of a longer trail or network of trails. Sidepath are sometimes provided to facilitate connections to on- and off-street bicycle facilities. A sidepath is not generally a substitute for on-road bicycle facilities, but may be considered in constrained conditions, or in addition to on-road facilities. Sidepaths may not be appropriate in areas of high pedestrian activity unless there is space to successfully manage conflicts.

Sample Locations: Route 123, Route 7 NW of Tysons Corner

Bicycle Facility and Accommodation Toolbox

Cycle Track



A cycletrack is a bicycle facility that is physically separated from both the roadway and the sidewalk. A cycletrack may be constructed at the roadway level using roadway space, or at the sidewalk level using space adjacent to the road. Cycletracks separate bicyclists from motor vehicle traffic using a variety of methods, including curbs, raised concrete medians, bollards, on-street parking, large planting pots/boxes, landscaped buffers (trees and lawn) or other methods. Cycletracks designed to be level with the sidewalk should provide a vertical separation between bicyclists and pedestrians, as well as a different surface treatment to delineate the bicycle from the pedestrian space. Cycletracks can be one way for bicycles on each side of a two-way road, or two-way, and installed on one or both sides of the road. Cycletracks provide cyclists with a higher level of comfort relative to motor vehicle traffic, and are typically used on large multi-lane arterials where higher vehicle speeds exist. They may also be appropriate on high-volume but low-speed streets such as in a commercial downtown.

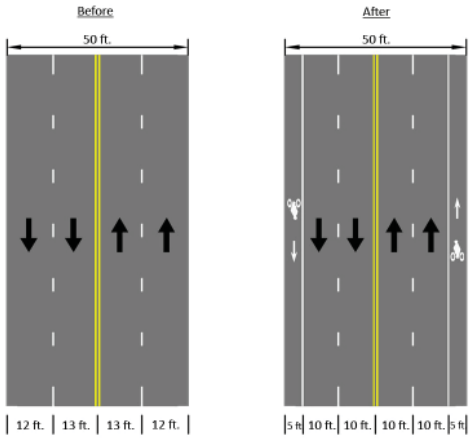
Sample Locations: Route 7, International Boulevard

Signed Bike Route

Signed bike routes provide distance and directional information as a wayfinding aid for bicyclists. Signed routes may be established on streets, trails or any combination of facility types that offer a continuous bicycling environment. Signs offer cyclists information about alternative routes and accessible destinations from their current location. They also can be used to suggest the types of conditions cyclists can expect on a route by referencing trails or roadways by name. Signed routes provide new cyclists greater confidence when they are exploring utilitarian cycling for the first time or when they are in unfamiliar territory. Signed routes can also prevent cyclists from getting lost in residential areas with curvilinear street layouts and few through streets.

Sample Location: Northbound on Gallows Road at Kidwell Drive

Lane Diet



A lane diet narrows the width of existing motor vehicle travel lane(s) and redistributes that space for bike lanes or other bikeway improvements. In some situations, a lane diet may be recommended for installation of shared lane markings. For example, a four lane road with 12 foot travel lanes can be restriped with 10 foot interior lanes and 14 foot wide outside lanes where the shared lane marking can be placed.

Sample Locations: Jones Branch Drive, Tysons Blvd

On-Road Actions

- Add striping/marking: A bicycle facility can be provided by simply adding pavement markings on the road.
- Lane diet: Narrow the width of existing motor vehicle travel lane(s) to free up space within the existing road to provide a bicycle facility.
- Road diet: Eliminate a travel lane(s) in order to provide a bicycle facility within the existing width of the road.
- Remove parking: Free up space to provide a bicycle facility by eliminating on-street parking.
- Pave shoulder: Widen the existing road slightly by paving the existing shoulder or existing right-of-way immediately next to the road.
- Widen road: The appropriate bicycle facility can be provided only by widening the existing footprint of the road.
- Off-Road Actions
- Easement: Obtain the legal right to provide public access through a privately owned property.
- Realign: Move an existing trail slightly so that it provides more convenient and direct access.
- Pave: Overlay pavement on top of an existing soft surface trail in order to improve bicycle accommodations.
- Rehab existing: Improve an existing paved trail to enhance surface quality and address issues such as cracks and heaving.
- Widen sidewalk: Make an existing sidewalk wider so that it can safely accommodate two way bicycle and pedestrian travel.
- Construct: Build a multiuse trail in an area where there currently is no trail available.
- Construct with road project: Build a multiuse trail, sidepath or cycle track as a part of a larger road project.

3.5 POLICY AND PROGRAM RECOMMENDATIONS

Policy recommendations are provided for both Fairfax County and VDOT and are presented in detail in Chapters 4-7. The recommendations for Fairfax County range from bike parking requirements for private developments to requirements for bicycle accommodations on private roads that serve public access. Inclusion of bicycle encouragement activities among the options in Transportation Demand Management (TDM) requirements also is key. To implement bicycle infrastructure and encouragement activities as TDM measures they must be coordinated with other TDM

activities, such as those that regulate vehicular parking supply, and they are best implemented by the designated Transportation Management Association (TMA) for the Tysons area.

The recommendations for VDOT include adoption of typical urban travel lane widths, access management across sidepaths and refining intersection design standards. The policy recommendations also highlight how Fairfax County can implement emerging bicycle treatments such as colored bike lanes and bike boxes.

The program recommendations also are presented throughout Chapters 4-7. They include recommendations for encouragement and marketing through initiatives like a Bike-to-Metro Ambassadors Program and a Bike-to-Lunch campaign. They also include recommendations for a Bicycle-Friendly Employers program, full-service bicycle stations, and a bike sharing service, like the one started in Arlington, VA and the District of Columbia in 2010. Bicycle safety education programs such as Safe Routes to School, and those directed toward motorists also are recommended.

A more detailed discussion of specific policy and program recommendations is provided in each of the implementation chapters that follow (Chapters 4-7). A detailed set of policy recommendations for Fairfax County is provided in Appendix D; a detailed set of policy recommendations for VDOT is provided in Appendix E; and a full list of encouragement and education program recommendations is provided in Appendix F.

3.6 RECOMMENDED PHASING

The recommendations provided in the following chapters are outlined as follows:

- Chapter 4 highlights recommendations for Phase 1, which covers 2011 to 2013.[21] These projects and programs have been set to coincide with the opening of the Silver Line Metrorail service in Tysons Corner in late 2013.
- Chapter 5 highlights recommendations for Phase 2, which covers 2012 to 2016. The overlapping of years with Phase 1 is intentional. Some of these projects may be able to be completed before the opening of the Silver Line; however, they are dependent on a host of factors that are hard to predict, such as the pace of private development, levels of funding available in public transportation budgets, and policy questions related to existing and future roadway design standards.

[21] Chapter 4 also includes recommendations for the Town of Vienna, which is responsible for implementing bicycle facilities on its own streets, and for coordinating with VDOT regarding state roads within Vienna. Fairfax County has no transportation planning authority or responsibility in the Town of Vienna. As a result the recommended bicycle improvements identified in this plan are shown to help the reader understand what may be desirable within Vienna to ensure the continuity of bicycle accommodations through the town. Tysons-related bicycle travel to, from and through Vienna will be desired by the bicycling public.

- Chapter 6 highlights recommendations for Phase 3, which covers 2015 to 2019. These projects are more complex and require resources and funding that will need to be spread out over multiple years.
- Chapter 7 highlights recommendations from Phase 4, which covers 2020 to 2030. These projects include the higher cost facilities such as new crossings of limited access roads and cycle tracks along major arterials.

3.7 IMPLEMENTATION STRATEGY

This Plan offers a strategic approach to the process of transforming Tysons Corner into a bicycle-friendly place. The approach acknowledges that achieving the goal will be a significant challenge. It will require changes to both private and public elements of the built environment. It will also require a change in the culture, from one that revolves around the motor vehicle to one that truly embraces multimodal transportation. As a result of these needed changes in the built environment and culture, achieving the goal will take time.

This Plan is meant to inform transportation decision-makers and in doing so, contribute to making this change a reality. It outlines an aggressive but realistic approach where the construction of physical facilities and the introduction of encouragement programs are closely coordinated. Implementing this approach will ensure that considerations for bicycle travel are integrated into every aspect of change occurring in Tysons Corner – private redevelopment, the creation of a new "grid of streets," siting of public facilities, and development of parks and greenways.

The approach also incorporates and informs the design of all types of transportation facilities, from streets and intersections to transit stations, centers, and services, including a future circulator. It also includes some discussion of the design of pedestrian travel ways, design of limited access highway interchanges, and ramp and grade separated structures.

This general strategy outlined in phase can be summarized as follows:

Phase 1: 2011-2013

- Begin with a set of relatively low-cost improvements that will "get the ball rolling" – such as establishing signed bike routes and installing shared lane markings (sharrows) in many locations where the impact to motor vehicle traffic will be minimal and the benefit for cyclists will be significant. Focus on providing sufficient bike parking at the Silver Line stations, as well as convenient and comfortable bicycle access to and from the stations.
- Start encouragement programs by working through existing Transportation Demand Management requirements and partnerships with the Tysons Partnership (future TMA), Fairfax Advocates for Better Bicycling (FABB), local employers and existing bicycle commuters. Focus near term bicycle-use promotion and route improvements on creating better access to and from the new Silver Line stations.

Phase 2: 2012-2016

- As the core of Tysons Corner begins redeveloping, implement priority on-street, and off-street bicycle facilities. Improve bicycle access within and from the surrounding communities. Install high-tech Bicycle Sharing infrastructure and launch encouragement programs like "Bike-to-Lunch" and "Bicycle-Friendly Employer Awards."

Readers Note
Each implementation chapter includes a corresponding map and summary table of all improvements recommended in the respective phase. A detailed list of each individual improvement is provided in Appendix H.

Phase 3: 2015-2019

- Plan, and implement over time, major new crossings of the Beltway and Dulles Toll Road. Until the communities north, northeast, and east of Tysons Corner can access destinations in a more convenient and comfortable manner, their close proximity and opportunity for biking to Tysons Corner will not be fully realized.
- As routine accommodations, implement bicycle facilities in conjunction with development of new streets in the planned downtown grid. As the residential population grows in the core of Tysons Corner, ensure that new trails are aligned and designed to serve both transportation and recreation, so that children and families can bicycle to school, the grocery store and other services. Residential and commercial developers should also design bike-friendly buildings and sites and provide bicycle support facilities to make bicycle-use prominent, convenient, expandable and ultimately commonplace.

Phase 4: 2020-2030

- In later years, transform even major arterials like VA 7, International Boulevard, and VA 123 by adding bicycle facilities that are separated from the road for priority cycling, shared use paths for lesser skilled cyclists, and signalization that facilitates safe multimodal travel along and across these corridors.

3.8 PERFORMANCE MEASURES

Establishing performance measures is an effective way of monitoring the progress of Plan implementation. They can also be used to determine if the plan is being effective at achieving its goals.

The authority to carryout actions that implement this plan are not centralized under one agency or even one level of government. Fairfax County plays a leading role, however all highways, roads and streets are owned and managed by VDOT. Still further, it will be a mix of land side development budgets and developer builders and public budgets and contractors that actually build or reconstruct roads. A host of other agencies will be involved in various other aspects of plan implementation.

For this reason, the simplest set of performance measures to measure progress are the facility type mileages and improvement location counts provided in a summary table at the end of each chapter (4-7).

On an annual or bi-annual basis, it may be desirable for the leadership of the FCDOT, Tysons Partnership, VDOT and FABB to meet, discuss and document the progress that has been made. Similarly, at the close of a Phase, a larger assessment can be made. Results can easily be shared with the public on appropriate websites.

To track the Plan's effectiveness at achieving plan goals, results from a bicycle count program recommended in Phase 1 can be used. Other measures can include the following:

- Number of employers in the Bicycle-Friendly Employer Program
- Number of bicycle parking spaces created
- Number of bicycle racks and lockers at Metrorail stations that are used on a peak usage day in May.
- Number of people using the Bicycle Sharing Service
- Number of participants in Bike-to-Work Day Activities
- Number of business and consumer participants in the Bike-to-Lunch Program
- Number of employees or employee groups participating in the social networking services

3.9 ON-LINE MAPS GUIDANCE

Electronic versions of the Plan implementation and summary maps are posted on the Fairfax County DOT project web site at:

http://www.fairfaxcounty.gov/fcdot/bike/county_bike_master_plan.htm.

These maps are posted as Adobe.pdf files at a 34" x 44" size to allow detailed viewing and printing at different sizes of all plan recommendations.

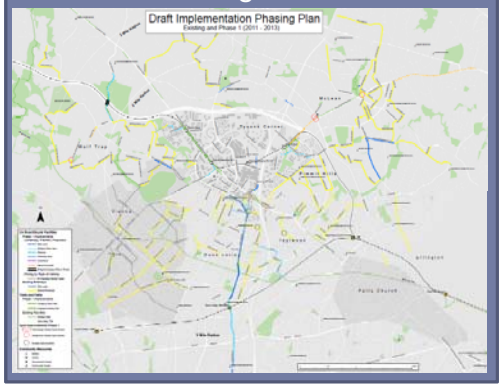
The eight on-line maps provide high-resolution versions of Figures 4.1, 5.1, 6.1 and 7.1 included in this document as well as additional summary maps of the complete recommended on and off-road network in Tysons Corner. The list of maps is presented below and the purpose of each are included in Figure 3.3 on the following page.

- Map A: Implementation Phasing Plan, Existing and Phase 1
- Map B: Implementation Phasing Plan, Phase 2
- Map C: Implementation Phasing Plan, Phase 3
- Map D: Implementation Phasing Plan, Phase 4
- Map E: Planned Bicycle Facility Network, Phase 4 Buildout
- Map F: Combined Bicycle Network and Signed Route System

- Map G: Signed Bike Route Plan, By Phase
- Map H: Proposed Implementation Actions

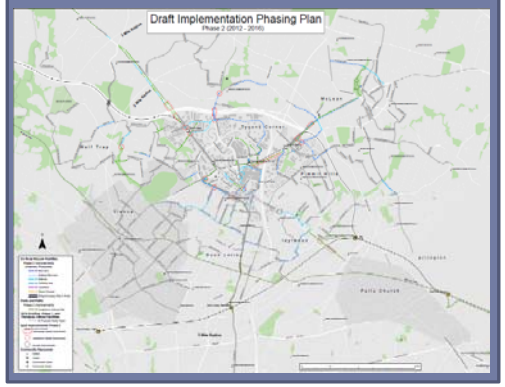
Figure 3.2 IMPLEMENTATION PHASING PLAN MAPS (PHASE 1, 2, 3 & 4)

Map A: Implementation Phasing Plan, Existing and Phase 1



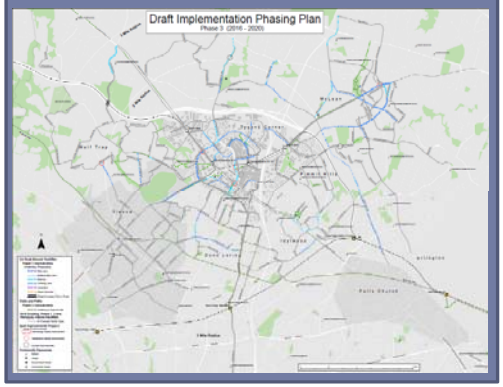
This map shows existing bike facilities and the bike facilities that are recommended in Phase 1, which covers the years 2011 to 2013.

Map B: Implementation Phasing Plan, Phase 2



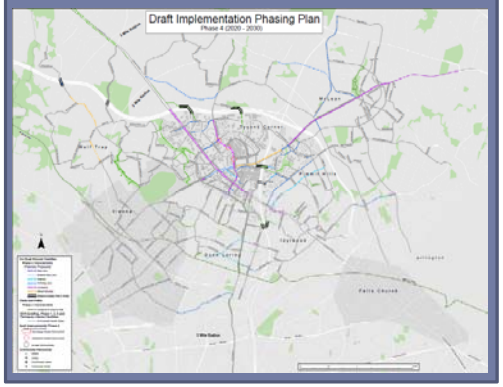
This map shows the bike facilities that are recommended in Phase 2, or in the years 2012 to 2016.

Map C: Implementation Phasing Plan, Phase 3



This map shows the bike facilities that are recommended in Phase 3, which covers the years 2015 to 2019.

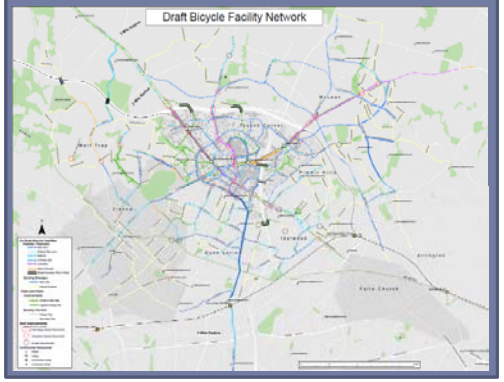
Map D: Implementation Phasing Plan, Phase 4



This map shows the bike facilities that are recommended in Phase 4, or in the years 2020 to 2030.

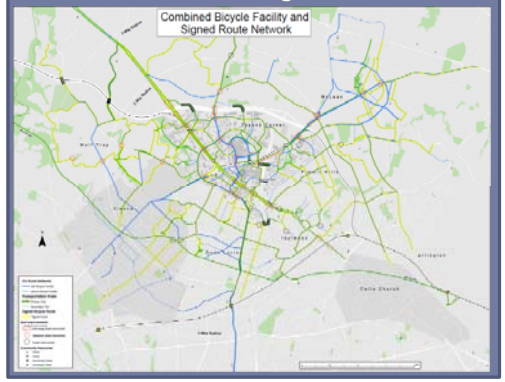
TYSONS CORNER BICYCLE MASTER PLAN SUMMARY MAPS

Map E: Planned Bicycle Facility Network, Phase 1 – 4 Buildout



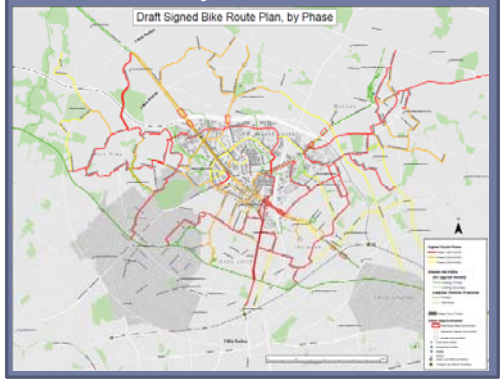
This map shows the full buildout of all on and off-road bike facility recommendations. It shows the ultimate recommended facility on every segment of the bike network.

Map F: Combined Bicycle Network and Signed Route



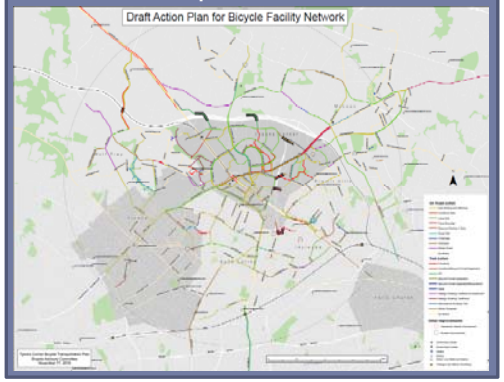
This map shows the full buildout of all bike facility recommendations along with the full signed route network recommended in this Plan.

Map G: Signed Bike Route Plan, By Phase



This map highlights how the signed route network will be developed over time. All signed routes will be completed in the first three phases, or between the years 2011-2019.

Map H: Proposed Bicycle Network Implementation Actions



This map shows the required engineering and construction action along each segment of the future bike network in order to create the recommended bike facility.

3.10 CONCLUSIONS

Successful implementation of the recommendations in the following chapters will require a great deal of coordination. The process for updating the Comprehensive Plan and planning for and constructing the Silver Line through the heart of Tysons Corner can serve as examples for this coordination. Implementing the recommendations will require a concerted effort from Fairfax County, VDOT, Toll Road Authority, WMATA, the Town of Vienna, bicycle advocates and other stakeholders.

The recommendations in the following chapters are meant to inform and set the stage for this coordination. They can help fulfill an emerging new vision of Tysons Corner, where bicycling supports and reinforces transit use and plays a vital role on its own by making travel to and from, within, through and around the new Tysons Corner an enjoyable and efficient experience.