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This document was developed through a collaborative process during 2015. It involved University staff from numerous departments, as well as faculty and students.

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The University of Carrollton 2014 Campus Aerial and Map.
Introduction

The University of West Georgia (UWG) is committed to the development of a sustainable transportation system where transit, walking and bicycling are the primary modes of campus travel. UWG has demonstrated this commitment to sustainability with projects such as the funding of fare-free bus lines, raised pedestrian crossings, and the addition of the Carrollton Greenbelt throughout campus. All of these actions support an increase in active travel to and on campus—and a decrease in single-occupancy vehicle travel—which can eliminate the need for additional parking as well as decrease the traffic burden on the surrounding streets and intersections.

This Bicycle Master Plan (the Plan) analyzes existing conditions, recommends bicycle facilities, gives best practice examples of facilities and programs at peer institutions, and recommends education, encouragement and enforcement strategies to create a bicycle friendly university. The greater intent of this Plan is to institutionalize bicycling as part of the UWG transportation system while improving existing bicycle facilities, adding new facilities where needed, and providing more educational opportunities to the campus community that help improve safety for all modes of travel even as the number of bicyclists increases.

The improvements envisioned in this Plan cannot be achieved in isolation from other University and City of Carrollton (City) initiatives. Coordination with the City of Carrollton has been a critical element of the Plan-development process, and their continued involvement will be vital to implementing the infrastructure recommendations of this Plan. Coordination across UWG departments will be critical as well.

PLAN PURPOSE AND GOALS

As part of the planning process, a group comprising key University stakeholders was invited to assist at the design charrette to help identify goals, issues and opportunities for the Plan that ultimately guided the development of recommendations.

The five goals developed by the charrette team highlight the fact that while bicycling is an informal part of campus life, it should be recognized formally as a fundamental component of the UWG transportation system. Additionally, the goals acknowledge that bicyclists travel both within and across campus boundaries, so careful coordination with the City must occur to ensure seamless trips in and out of campus.

The goals of the Bicycle Master Plan are interdependent and seek to improve, increase and integrate bicycling at UWG by addressing Safety, Convenience, Comfort, Connectivity and Mode Shift.

Bicyclist headed across Campus via the Carrollton Greenbelt. This typical condition of the trail crossing a sidewalk causes conflict points between cyclists and pedestrians.
1. **Increase safety** for all campus users including bicyclists, pedestrians, transit users and drivers. The large population of students, workers and visitors who access the UWG campus each day can result in congested streets and pathways. Safety for all users should be addressed, particularly by reducing conflicts among bicyclists, pedestrians and vehicles.

2. **Build a convenient bicycle facility network.** Making bicycling a more visible and convenient transportation option will encourage more people to choose to ride bikes on and near campus.

3. **Construct bicycle facilities that are comfortable to use.** Many students and visitors come to campus from communities where bicycling is not the norm or where they have ridden a bicycle in a less congested and urban context. To ensure that this transient population can navigate by bicycle, facilities should be easy and comfortable to use, with separation from vehicular traffic being a high priority.

4. **Create well-known and connected bicycle routes through campus.** The creation of well marked, easy to follow routes through campus will make bicycling easier and aid new bicyclists in choosing where to ride. Routes should provide ease of circulation by connecting to key destinations throughout campus.

5. **Make bicycle use a normal component of the University’s transportation mode choices.** Bicycling and walking are the most sustainable options of transportation. The University will better achieve mode split goals if bicycle use is a transportation priority.

UWG staff have expressed interest in applying to be rated by the national Bicycle Friendly University℠ (BFU) program. This program, created and run by The League of American Bicyclists, recognizes university applicants for improving bicycling conditions on campus.

The program scores universities in the following areas:

**The Five “E’s”**
1. Engineering: Creates safe and convenient places to ride and park a bicycle.
2. Education: Gives people of all ages and ability levels the skills and confidence to ride.
3. Encouragement: Creates a strong bike culture that welcomes and celebrates bicycling.
4. Enforcement: Ensures safe roads for all users.
5. Evaluation and Planning: Plans for bicycling as a safe and viable transportation option.

Each of these “E’s” is important to bringing about the holistic change that transforms a campus into a BFU. There are currently 100 BFUs across the country. A number of UWG’s peer institutions and schools throughout Georgia and the South have achieved this designation, including:

- Georgia Tech – Silver
- Emory University – Bronze
- Savannah College of Art and Design – Bronze
- Clemson – Bronze
- Arkansas State University – Bronze

The state of Georgia has also been ranked number 25 Bicycle Friendly State in 2015.

Consequently, the Five “E’s” framework was used to assess existing conditions at UWG and to organize the recommendations of this plan document.
STUDY AREA

The main area that is studied in this plan is all the land area on the main campus, adjacent neighborhood streets, and streets that connect the campus to downtown Carrollton and highways. Particular attention was paid to West Georgia Drive, University Drive, connections to Maple Street, and the on-campus pathway system.

As shown on the graphic map below, there are several key destinations that have high concentrations of students and staff. These destinations are mostly split between student housing/apartments, student classrooms, and extra curricular destinations like dining, the Coliseum, and recreational facilities. Available parking is also spread throughout the campus via large surface lots and some on-street parallel spaces, particularly on West Georgia Drive.

Unfortunately today bicycling is not thought of as an efficient or convenient means of transportation on campus. To better understand why the campus community does not travel by bicycle, it is important to understand the land use and geographic features within and surrounding area.

The historic core of the campus sits surrounded by West Georgia Drive and connects to downtown via Maple and South Streets. It is bordered by residential neighborhoods on all four sides, but the housing character varies between student apartments and traditional single family neighborhoods. The southern part of campus is separated from neighborhoods farther south by Maple Street, which is a three-lane roadway and presents a physical barrier to bicycle travel. Major routes into campus, including West Georgia Drive, are accessible from Maple and are currently not comfortable for most bicyclists. Maple Street is
included in the Carrollton Greenbelt Master Plan, and if the recommended improvements are implemented, conditions for bicycling will improve in future years.

Another major route into campus is University Drive which historically ran through the middle of campus. With the move toward a car-free campus core, University Drive was converted to a shared use pathway that is only driven on by campus vehicles from West Georgia Drive south. The wide pathway makes it safer to travel by foot and bicycle, but significant challenges at the intersection with University and West Georgia Street make travel more difficult and less safe. The Traffic Plan addresses this intersection.

On campus, academic undergraduate buildings are concentrated in the southern, historic part of campus mostly between Back and Front Campus Drives and stretching west to University. Athletic and recreation facilities are generally in the central and western part of campus. These facilities are located off of West Georgia Drive and extend out to the west along Stadium Drive.

Although there are undergraduate residential halls on campus, the majority of students live just north campus in apartment complexes or fraternity and sorority houses. The number of residential halls on campus has increased over the past ten years with the development of Center Point Suites and Arbor View Apartments. Due to the distance from these residential areas to the center of campus, the students in these new residence halls represent a large group of potential bicyclists.

The biggest positive impact to bicycling on campus and in the City of Carrollton has been the construction of the Carrollton Greenbelt. Not only does this shared use path run directly through campus, but it has future phases that will connect the campus to downtown and adjacent neighborhoods. This type of facility provides a safe and comfortable experience for all bicycle user types and provides a design standard that the University can aspire too implement.

**INTERACTION WITH TRAFFIC PLAN RECOMMENDATIONS**

This Bicycle Plan is working in concert with a traffic study that is looking at key intersections, access management, and street network. Traffic counts were conducted during the middle two weeks of April 2015 at numerous locations around campus. Engineers will incorporate these counts into a model of the current campus roadway and parking lot network. This network will also be used to test draft recommendations of new network streets, intersection changes and parking lot entrance closures. This assessment will inform revisions to the recommendations, if needed.
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Bridge on the Carrollton Greenbelt through campus.
Chapter 1

Existing Conditions

Support for the creation of a Plan was built over the spring semester of 2015 and came from a variety of groups. The University has realized that proper planning for bicycles on campus now can help avert problems and issues that could arise as more UWG affiliates ride bikes on campus.

The Plan was developed through a combination of public input methods and expert site analysis. Public input was collected through multiple strategies, including stakeholder interviews and a design charrette.

CHARRETTE PROCESS

The campus charrette trip focused on setting Plan goals, site analysis, and getting input from staff and students. Stakeholders discussed what the future of bicycling could look like at the University, as well as challenges to improving bicycling on the UWG campus. The committee agreed that the future campus should be a place where:

- Bicycles are recognized as a valued mode of transportation and receive an equal priority in planning and funding on campus.
- Bicycling is a mode that is available to all types of riders in a safe, comfortable and visible network.
- Bicycling is institutionalized and integrated into the culture of the University.
- All road users are educated about bicycling, including drivers, pedestrians and bicyclists.
- Conflicts between bicyclists and other modes are reduced.
- On-road infrastructure is improved for bicyclists.
- Off-road facilities are used to create improved connections.
- Connections and routes are widely known and easy to find.
- City-University bicycle connections are easy.
- Supporting infrastructure for bicyclists is created.
- Supporting programs for bicyclists are created.

Challenges to success were also identified and include:

- Many of the streets in and adjacent to campus are owned by the City and require approval and cooperation from the City.
- The plan needs to address residential streets that are key connections to campus, but political will may be difficult to get.
- Many students come from parts of the state and country where bicycling is not part of the way of life.

These issues will be addressed in this Plan and will require more outreach and future planning and design to be conducted. By prioritizing projects and implementing them in a manner that has the greatest impact for campus riding, the culture in the City and on campus will continue to pressure change toward a bicycle friendlier neighborhood.

Student Outreach

Beyond meeting with the stakeholder groups, the campus visit was critical in allowing the team to meet with students on campus in a variety of different locations, and have a meeting with the City and local advocates. The team set up an open table discussion area where students were allowed to discuss bicycling on campus with team members and find out how to stay involved to provide more input.

Students wait to cross the intersection of West Georgia and University Drives. This intersection has the highest volume of vehicles and pedestrians on campus.
STAKEHOLDER INTERVIEWS

The greatest amount of information and input for the consultant team derived from conducting interviews with representatives from stakeholder groups regarding bicycle programming, policies and infrastructure. Feedback and insight from these stakeholders informed the development of Plan recommendations. The following UWG departments and stakeholder groups were represented through the interview process:

- Risk Management
- Counseling Center (ADA compliance)
- Parking and Transportation
- Auxiliary Services
- Bus transportation
- Development
- University Police Department
- City of Carrollton Fire and Police Departments
- University Sustainability Council
- Coliseum operations
- Campus Planning & Facilities
- Student Senate
- Local bicycle and pedestrian advocates

ON-CAMPUS SITE ANALYSIS

Most importantly, this visit allowed the project team to do a van and walking campus tour, take critical measurements and photos, and understand how riders currently bicycle on campus and in the surrounding neighborhoods.

Street Network

The UWG campus is just over one mile from downtown Carrollton and is near the western edge of the City’s developed area. The campus includes a number of City streets meaning that cooperation with the City of Carrollton is necessary to complete any changes to these streets.

The streets surrounding UWG are a mix of major and campus streets and are described below.

Major Streets

The UWG campus has a number of major, multi-lane streets at its edges. Maple Street and Lovvorn Road create north and south edges of campus, and most commuter traffic uses these streets to access the campus from US Hwy 27 and 166. Generally, these streets are challenging for bicyclists to travel along.

Today, only Maple Street has a bicycle facility near UWG: the Greenbelt trail to the west of campus. South Street connects campus to downtown Carrollton and has bike lanes east of Maple Street. There is discussion of bike lanes or a separated trail on South Street to Adamson Square, but this is still in the planning process. Crossing these major streets is generally not an issue because most intersections are signalized.

Campus Streets

Much of the university-related bicycle traffic occurs on the campus streets. Most are local access in character with housing and educational buildings as their key destinations. West Georgia Drive is an exception with key destinations like the Coliseum, future plans of UWG administration offices, the Bookstore, and the main gateways into campus off of Maple Street and University Drive. Campus streets provide a comfortable riding environment for most bicyclists owing to lower traffic speeds and volumes.

Campus vehicles of all types currently share space with pedestrians and bicycles on internal walkways.
These streets generally range from 24 to 40 feet in width. Some streets have parallel parking on both sides of the street. Center lines and parking lines are generally striped. Most traffic control on campus streets is by two- and all-way stop signs, but traffic signals are present at crossings with major streets.

Bicyclists share the road with automobiles on these streets, and position themselves either in the right-hand side or center of the travel lane. Drivers were observed generally respecting bicyclists’ placement on the street and passing with care when an opportunity presented itself. The presence of stop signs at nearly every block keeps vehicle speeds low and decreases the speed differential between bicycles and automobiles.

West Georgia Drive was identified as one campus street that is currently uncomfortable for many bicyclists owing to a higher volume and speed of traffic. Today, bicyclists often ride in the parking lane when it is unoccupied which leads to unsafe weaving in and out of traffic.

Additionally, the intersection of University Drive was identified by many users as chaotic and difficult to navigate because of competition for space among multiple users: pedestrians, bicyclists, transit, private cars, UWG vehicles and delivery trucks.

Improvements for traffic calming and pedestrian access have been made on some of the campus streets. Raised crossings are present on West Georgia Drive and Roberts Drive. These crossings slow automobile traffic and make pedestrians more visible.

**Connectivity**

Some campus streets are discontinuous for vehicle traffic, but informal bicycling routes are present in these locations. Bicyclists were observed riding along sidewalks or goat paths to continue their trips.

Bicyclists are allowed on UWG campus pathways, but City of Carrollton regulation prohibits them from sidewalks except for children under the age of 12. Campus pathways are shared by bicyclists and pedestrians, and generally, few conflicts between these modes were observed. Conflicts are more likely where pathways are narrow; the narrowest pathways on campus are six feet, which less than the generally accepted minimum 10 feet for a shared use path. The widest pathway is 16 feet wide along the main north-south path that is the closed portion of University Drive between West Georgia Drive and the University Community Center.

**Access to Pathways**

Pathways on campus are mostly accessible for bicyclists without dismounting. Raised crossings and curb ramps allow bicyclists to ride across the sidewalk into these spaces. Many bicyclists and pedestrians use the pathway along Love Field to reach the core part of campus and the student housing. This pathway is accessible via the Greenbelt Trail and the paths along the core of campus which may lead to conflict with pedestrians at their mixing zones. Bicyclists on the Trail were observed at fairly high speeds in the downhill portion.

By examining connectivity, existing facilities and routes and intersections identified by stakeholders, the consultant team developed a “study network” of streets and pathways in need of further examination as part of this Plan. Fieldwork conducted on foot by the consultant team during April 2015 reviewed this study network. The team measured streets to determine existing space available to accommodate bicycle facilities and noted maintenance issues, sight lines, adjoining land use and other factors. The key observation was to see traffic operations and bicycle movements during the academic year. The consultant team observed driver, bicyclist and pedestrian behavior on streets and off-road facilities, and noted on conflicts and near-conflicts. Bicycle parking utilization was also observed to determine areas that may need increased numbers of bike racks.

**Existing Parking Capacity and Location**

To make bicycling an easy and reliable choice for travel at UWG, it must be convenient from the start to the end of a trip which includes having somewhere to store a bike at destinations. Most bicyclists desire parking as close to their destination as possible, so the location of parking is more important than the overall number of spaces on campus.

By University policy, bicycles are only allowed to be locked to racks placed for that purpose, not other fixed objects such as trash cans, light posts or railings. This policy further spurs the necessity of providing adequate bike parking. As bicycle use increases, it will be critical to have an adequate supply of spaces at high-use locations.

**Existing Parking Equipment**

The current campus standard is the “wave” rack which is found throughout campus. There are a few installations of U racks on campus. The wave rack does not meet some critical design criteria specified by the Association of Pedestrian and Bicycle Professionals and can lead to lower capacity, use of poor locks and damaged bicycles.

While the nominal capacity of one “m”-shaped wave rack is four bicycles, several factors can reduce functionality such as close siting relative to other racks or objects, the width of a bicycle’s handlebars or basket, orientation of other locked bicycles, and/or the comfort of an owner maneuvering their
bicycle. In such cases, capacity is more often three bicycles per rack. This overestimation of parking capacity may lead occupancy percentages to be lower than they are in reality. Installations with tightly spaced racks, may especially have falsely low occupancy numbers because the effective number of available spaces when racks are crowded is lower than stated capacity.

The necessity of squeezing a bicycle between others on these racks may also lead some owners to use locks that have a longer reach (cables, chains) but are less secure than smaller U-locks. Given the City of Carrollton’s low incidence of bike theft, but perceived threat, this can be a barrier to riding a bicycle on campus.

Bicycles locked to wave racks have only one point of contact which makes them substantially less stable than being locked to a rack that provides two points of contact. Because of this, bicycles may be more likely to slide on the rack or fall over completely which leads to blocking space for other riders and possible damage to the bicycle.

EXISTING PROGRAMS
There are currently no formal programs in bicycle encouragement or education on campus at UWG. The Center for Sustainability has expressed support for increased bicycling on campus and a bike share program, but efforts are in a nascent form.

EXISTING PLANS
This Plan represents the University’s first effort to specifically plan for bicycle travel on campus. While ad hoc work has been completed to date, a comprehensive plan will enable UWG to effectively anticipate campus needs as more community members ride bikes, and to move toward a bicycle friendly campus in a deliberate way.

An increase in campus bicycling supports the UWG Strategic Plan’s goal of improved performance in the Sustainability Tracking, Assessment & Rating System (STARS).
The old University Drive walkway is now the key north-south route for pedestrians and bicycles traveling through campus.
Chapter 2

Engineering Recommendations

Bicycling is a growing mode of transportation at the University of West Georgia (UWG). Many affiliates consulted as part of this plan noted that they see more bicyclists on campus and in the City today than in the past. Campus planning staff expect the number to continue to increase.

BICYCLE NETWORK

As discussed in Chapter 1, there are a number of challenges for bicyclists traveling to and through campus. This chapter presents a UWG bicycle network and provides an overview of the proposed infrastructure changes to mitigate identified challenges. The proposed UWG bicycle network consists of a series of easily identifiable routes that connect to one another and planned City bicycle infrastructure. The routes are intended to be designated on maps, and throughout campus with pavement materials, markings and wayfinding signs.

Coordination with City Plan

The improvements described within this chapter are limited to those which are within the boundaries or immediately adjacent to the UWG campus. This Plan, combined with the efforts of the current Carrollton bike plan, will result in the development of a robust bicycle network that is connected, convenient and safe, serving bicyclists as they move within and through the campus, as well as to and from campus from points around City.

UWG has worked with the City on pedestrian and traffic calming improvements and the Carrollton Greenbelt in the past and will build upon this relationship to implement bicycle infrastructure. Depending on the acceptance of concepts presented in this Plan, some future planning and additional design consideration may be necessary. It is clear that UWG is a major bicycle destination within the City, so it is anticipated that the campus will remain an important focus of City bicycle planning efforts.

Development of Bicycle Routes

Routes recommended in this plan were selected based on creating connections between important destinations on and near campus. These include classroom, office and residence destinations on campus, dining hubs and concentrations of student housing north of campus, and connections to the Greenbelt Trail. Public and stakeholder input also helped identify routes.

The routes proposed service internal and external trips to and through the UWG campus. These routes should be identified with wayfinding signs at key intersections and decision points as well as denoted on campus maps. To improve bicyclist safety and comfort, physical changes are recommended on individual segments of these routes ranging from the placement of pavement markings such as sharrows on streets, to installation of a widened shared use path.

Principles of Facility Selection

Before beginning the process of identifying the appropriate facility for each street in the route network, the project team established the following principles to guide facility type decisions:

1. Work within existing curb lines
2. Narrow travel lanes to calm traffic and provide space for facilities
3. Provide solutions that do not preclude any future, ultimate designs for the streets
4. Use minimum 2’ buffers, 5’ bike lanes, 8’ bi-directional lanes
5. Choose facility type based on street characteristics such as traffic volume speed.

Parking removal is often a concern when finding space for on-street bike facilities, but the recently completed Parking Study indicates an ample supply of parking on campus.

These principles acted as our litmus test to determine whether prescribed concepts worked with current facility design approaches and would provide a recommendation that is reasonable for implementation on a given street. They also provide direction toward actionable projects that are sensible and provide the most effective facility for reasonable investment.
On and Off-Street Bicycle Routes

Proposed On and Off-Street Bicycle Network Recommendations

- Separated bike lane/shared use pathways
- Spur routes via bike lanes and shared walkways
- Existing streets
- Proposed new street network
Toolbox of Bicycle Facilities

- **Bike Lanes**
- **Buffered Bike Lanes**
- **Separated Bike Lane**
- **Shared Lane Markings**
- **Widened Separated Pathway**
**ON-STREET FACILITY TOOLBOX**

**Separated Bike Lanes**

This category includes bike lanes that are located at street level, separated from motor vehicle travel lanes or a parking lane by a vertical object (or objects). The most common form of separation is via a flexible delineator post located in a striped buffer area. This type of separated bike lane is typically implemented during routine roadway maintenance projects. There are a number of other methods of separation as illustrated in the adjacent graphic. These grade-separated options are more costly because they require reconstruction of the road edge and may be considered in the longer term at the time of a full roadway reconstruction.

Separated bike lanes should be maintained for year-round use and maintenance should be accounted for during planning and design. The bike lane should be swept as necessary to remove debris. Adequate drainage should be provided for separated bike lanes to prevent pooling of water.

Some types of separated bike lanes create unique maintenance challenges. The method of separation may create a barrier for maintenance vehicles, because many of these vehicles are not designed to operate in narrow spaces. When designing a separated bike lane, it is important to take into consideration the current maintenance equipment owned by the responsible jurisdiction. The purchase of narrower maintenance vehicles is one option to ensure the facility can be adequately maintained.

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**Bike Lanes**

Bicycle lanes, which create a separate space for the bicyclists to travel on both sides of a roadway are preferred. A bike lane designates a portion of a roadway with pavement markings and signs for the exclusive use of bicycles. Bike lanes may vary in width, but should never be less than 5 feet in total width, exclusive of a gutter on curbed roadways. Bike lanes may be wider on campus where volumes of bicyclists are higher or street widths warrant them. Bike lanes are one-way facilities, and generally are located to the right of other travel lanes.

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**Buffered Bike Lanes**

Buffered bike lanes are created by striping a buffer zone between a bike lane and the adjacent travel lane and/or parking lane. The buffer creates a more comfortable operating environment for bicyclists by creating additional...
space between bicyclists and passing traffic or parked vehicles. Buffered bike lanes typically create sufficient space for bicyclists to operate side by side if desired or to pass slower moving bicyclists without having to encroach on adjacent travel lanes. Buffered bike lanes are typically a minimum of 7 feet in total width inclusive of a 2 foot buffer. The bike lane or buffer may be wider, and buffers may exist on both sides of the bike lane.

Shared Lane Markings
Where there is no room for bike lanes, marked shared lanes can be used. The marking of the lane as a shared use lane consists of a symbol placed in the center of the lane to indicate that this roadway is a shared use facility for both vehicles and bicycles. The symbol is repeated at regular intervals. The shared lane markings primarily are used as a tool to raise awareness that both bicycles and vehicles should share the road. These markings are sometimes referred to as “sharrows.”

OFF-STREET FACILITY TOOLBOX

Shared Pathway
A shared path is a two-way facility that is physically separated from motor vehicle traffic and is designed to accommodate pedestrian and bicycle traffic. The locations of the shared pathway in our recommendations coincide with existing walkways and would require some modifications in the materials and markings to express the intent of the travel along the paths.

The best example of a shared pathway is the converted internal roadways of the old University Drive, that is wide enough for both pedestrian and bicycle traffic. These pathways can be further enhanced with some additional markings and wayfinding.

Widened/Separated Pathway
A two-way pathway enables the bicyclist to ride in a protected space adjacent to a roadway or sidewalk to reach the continuation of the street or path system. This treatment is most often paired with the addition or upgrading of street or path crossings, which allows for crossing the intersection without conflict.

These pathways may be a newly constructed segment or may be the enhancement of an existing service drive or parking lot. The proposed pathway along the south side of the Love Field path, is a location where this type of approach could be applied to make a continuous path and can be cost effective by utilizing existing available infrastructure.

This wide separated pathway on Colorado State University’s campus is located on the alignment of a former through street.
ADDITIONAL INFRASTRUCTURE ELEMENTS

Raised Crossings

Raised crosswalks are essentially speed tables with a crosswalk across them. Raised crosswalks slow traffic on the street, and can provide a more accessible crossing for disabled pedestrians depending on how the crosswalk connects to the sidewalk.

Raised crossings have already been implemented at key entrances to the interior of campus across West Georgia Drive. These give users a safer and more obvious crossing locations, but the number of crossings should be evaluated and reduced in number to only be at key crossings and connections.

Route Wayfinding

It is recommended wayfinding signs be installed on all on-street routes. Wayfinding will help orient the new student population every year as well as campus visitors. The design and installation of the wayfinding signs should be coordinated with the City to ensure a uniform approach is developed to guide sign design and installation across jurisdictional boundaries. To simplify coordination, the use of a combination of MUTCD\(^1\) D1 and D11 series signs is recommended. Customized graphics could be developed for use on the D11 sign. At a minimum, the signs should provide destination information with confirmation arrows. Supplemental signs directing bicyclists to locations with bicycle parking can be valuable where the parking is not readily visible such as the inside of quadrangles.

Intersection Treatments

Intersection improvements can enhance bicyclist safety by eliminating or raising awareness of potential areas of conflict between motorists and bicyclists or between bicyclists and pedestrians. Many intersection improvements will require additional study to determine the preferred improvement. This section provides guidance for intersection and mid-block crossing treatments to supplement the American Association of State Highway Transportation Officials (AASHTO) Guide, National Association of City Transportation Officials (NACTO), and Manual on Uniform Traffic Control Devices (MUTCD) guidance.

\(^1\) The Manual on Uniform Traffic Control Devices (MUTCD) is the national standard for roadway and pathway signage and markings.
Bicycle lane extensions delineate a safe and direct bicycle crossing through an intersection, or driveway, providing a clear boundary between the paths of through bicyclists and either through or crossing motor vehicles in the adjacent lane. Within intersections, these are often parallel with pedestrian crosswalks. Striping through an intersection or driveway crossing is also recommended to alert cross traffic to the fact that there is two-way bicycle traffic present where a two-way separated bike lane is present.

Conflict zone markings demarcate locations where a bicyclist is susceptible to conflicting left or right turning traffic or merge areas where right turning vehicles must cross a through bicycle movement to enter a right turn lane. They areas are indicated by dashed bicycle lane markings and may be highlighted with green colored pavement. Conflict zone pavement markings and signage are part of the West Georgia Drive buffered bike lane design at the intersection with University Drive and at the location of bus stops throughout the length of the street.

Signal phasing may also help reduce intersection conflicts by separating bicyclists from automobiles through timing. A leading interval or protected phase gives bicyclists a head start or their own crossing time.

Left turn accommodations can help bicyclists navigate intersections where it may be difficult to navigate with a left turn movement across multiple lanes of traffic. They often consist of a green box marked with a bike symbol and left turn arrow. They may also consist of a jug-handle waiting space outside the alignment of the bike lane. This type of left turn accommodation may be appropriate at a number of locations when a two-way separated bike lane is ultimately installed on the interior of West Georgia Drive.

**BUS STOPS**

Transit stops on streets with separated bike lanes should be designed to reduce conflicts between bicyclists, transit riders and transit vehicles. One of the advantages of separated bike lanes is the ability to reduce or eliminate conflicts between bicycles and transit vehicles. With standard bike lanes, conflicts between bicyclists and transit vehicles occur when vehicles temporarily block the bike lane while accessing curb-side stops. With separated bike lanes, stops are typically located in the street buffer zone. All transit stop designs must follow the guidelines of the local transit agency.

Where separated bike lanes are present, the primary goal of the design of transit stops should be to reduce the potential for conflicts between people bicycling, walking and boarding or exiting transit vehicles. The following principles should be followed to the maximum extent feasible:

- Guide transit riders to cross the bike lane at clearly marked locations.
- Reduce the speed of bicyclists approaching transit stops through tapers and changes in width and/or elevation.
- Provide clear direction to bicyclists when they are expected to yield to pedestrians crossing the bike lane.

**Transit Stop Design**

There are two basic approaches to the design of transit stops in conjunction with separated bike lanes: 1) the bike lane can be routed between the stop and the sidewalk, or 2) the bike lane can be routed between the stop and the street. Where sufficient space is available, the first scenario should
be implemented because conflicts between pedestrians entering and exiting the transit stop and passengers bicyclists are minimized. Conflicts between bicyclists and transit vehicles are eliminated in either scenario.

**Accessible landing pad.** The accessible landing pad should be located to align with the front door of the transit vehicle to provide clearance for people using wheelchairs and mobility devices. The minimum dimension of this area is 5 feet parallel to the curb by 8 feet perpendicular to the curb.

**Accessible path of travel.** A minimum 3-foot wide clear path of travel must be provided between the accessible landing pad and the sidewalk, not including 1.5-foot shy distances from objects (e.g., shelters, benches, trees, etc.), walls/fences, building faces or the curb. Note that when the separated bike lane is a different elevation from the sidewalk, there are two approaches for providing an accessible path from the sidewalk to the stop: the bike lane may be raised flush with the sidewalk level or accessible ramps must be provided to access the stop location. Either design must include crosswalks across the separated bike lanes along the path of travel between sidewalk and the accessible landing pad.

**Shelters and benches.** When provided, shelters and benches should be offset a minimum of 1 foot from the separated bike lane edge to avoid pedal or handlebar strikes. In addition to maintaining a minimum 3-foot wide clear path of travel, pedestrian shy distances should be considered when locating shelters and benches. Where it is not feasible to provide these elements within the street buffer, the designer should consider opportunities to locate shelters and/or benches at the back of the sidewalk.

Figure X.1 and X.2 illustrate transit stops with separated bike lanes. They illustrate a design strategy where the separated bike lane bends away from the street thus narrowing the sidewalk buffer and widening the street buffer to provide sufficient space for the elements of the transit stop.
BICYCLE PARKING

Examples of bicycle parking typically found on university campuses are described below. The appropriate type of parking for each location varies based on the space available and how long people plan to leave a bicycle parked there.

Basic Bicycle Parking

At minimum, bicycle parking consists of an immovable, anchored object that a bicycle can be locked to using any type of lock. Basic bicycle parking is best suited for short-term use. On college campuses, basic parking usually takes the form of metal racks. A recommended list of racks is available in the Association of Pedestrian and Bicycle Professionals (APBP) Bicycle Parking Guidelines, 2nd Edition. Bicycle racks should be installed so that they provide adequate access aisles on all sides.

Covered Bicycle Parking

Covered bicycle parking consists of racks with a covering to protect the bicycles from precipitation. Most often, this is a simple roof or canopy, either a separate structure constructed to cover the racks, or part of a building’s structure. Covered parking helps prolong the life of bicycles and reduces their deterioration due to exposure.

Indoor Bicycle Parking

Indoor parking is the most secure and protected form of bike parking. Indoor parking can occur in a separate room dedicated to this purpose or in a shared public space. Wall-mounted hooks can be placed in a wide hallway, room or closet allowing users to hang bikes for storage. This method requires compliance with fire and accessibility egress requirements in the area. Indoor bicycle parking is ideal for long-term bicycle storage.

BICYCLE PARKING RECOMMENDATIONS

The bicycle parking recommendations are based on three categories of bicycle parking needs: capacity, weather protection and effective equipment. In order to create a supportive environment for cyclists and to encourage more bicycle use, the following approach to bicycle parking is recommended for UWG.

Enact Bicycle Parking Policy

As bicycling increases on campus, it will be important to first address the supply of racks and ensure adequate spaces are available at high-traffic locations. When campus staff begin to notice that bike racks tend to be more than 50 percent full, it is recommended that the University begin to enact a bicycle parking policy including the following elements:

Parking Supply

• Conduct a semi-annual survey of bicycle parking to prioritize locations for additional racks.
• Areas where parking exceeds 85 percent occupancy should be targeted for addition of new racks where space permits.
  • Use the actual, rather than advertised, capacity of racks to determin occupancy rates. As noted earlier, the typical “m” wave rack usually accommodates three bicycles rather than four.

Parking Type

• Prioritize covered parking at residence halls as student bicycles are most likely to be parked on racks for extended periods of time.
• Provide academic and office buildings with short-term outdoor parking at a minimum and seek opportunities for other types of longer-term parking as described in this chapter such as breezeways and building overhangs.

Equipment Specifications

• University design guidelines should specify the inverted U rack as the preferred type. Its strength, economy, ease of installation, ease of use and versatility in placement are major advantages over the wave rack. A single U rack accommodates two bicycles. Racks may be ordered and installed singly or on attached assemblies.
• Install racks according to the APBP Guidelines, and train staff on proper placement and installation techniques.
Parking in New Construction

- Always consider incorporation of indoor bike parking in new building design. Under-utilized spaces such as under stairways can be considered for parking, and separate, secure bike rooms are ideal.

- Indoor parking should be located so as to minimize the bicyclist’s distance between a building front door and the parking room. This will increase ease of use, reduce conflicts with other building occupants, and reduce the area through which dirt may be tracked.

- Indoor parking areas should incorporate appropriate flooring and drains to prevent puddling and water damage issues from wet bicycles.

- Where possible, take advantage of overhangs and breezeways to site parking that provides weather protection.

Retrofitting Parking

- Retrofitting existing racks is a lower priority, generally, than providing an adequate number of spaces at prioritized locations.

- Over time, retrofit all existing wave racks on campus and replace with inverted U racks.

Bicycle Parking Location

Most locations on campus have ample basic bike parking to meet daily demand. Our on site analysis and discussions with stakeholders indicated that they can always find bike parking at their campus destinations. However, in looking at new pathways and future destinations, new parking needs cluster around a few locations, mostly near the Campus Center, student housing and dining halls, as shown by the yellow dots on the map graphic on page 29.

Additional covered, secure parking should be provided at the parkings lots near the stadium. UWG requires freshmen to park in these lots, and provided high-quality bicycle storage will allow students, and others who park here, to store a bicycle for campus use once their vehicle is parked.

It is critical to add bike parking so bicyclists do not lock their bikes to non-rack objects. The new rack areas should be installed where space is available.

Indoor Bicycle Parking Opportunities

As bicycling grows, it is recommended that the University conduct a comprehensive survey of buildings to assess space availability for designated indoor bicycle parking. Building managers could work with student and staff volunteers to complete the survey. The surveyors should be trained to identify spaces that could fit vertical or horizontal bike parking and to estimate how many bikes could be accommodated. This survey will be a resource when funding is identified to add new parking. Buildings where existing bike commuters have offices should be prioritized for indoor parking. A one- or two-building pilot project may be conducted to gauge interest and usage.
BARRIER TO ACCESS AT UNIVERSITY AND WEST GEORGIA DRIVE

When University Drive was closed south of West Georgia Drive, and the TLC Building was constructed at the intersection of University and West Georgia Drive, the building became a barrier for traffic of all modes traveling north-south through campus. The blockage for motor vehicles was important to manage and enforce the removal of vehicles in the heart of campus, but this blockage also made bicycle and even pedestrian access more difficult. Students and staff that want to traverse from the parking lots on the north side of campus, down to the south side, have to enter through the TLC Building and walk through the lower lobby. People wishing to bicycle through it are directed to go around the building on walkways that are poorly marked and not direct. The added HVAC demand from the constant swinging of the doors from pedestrian travel is even something to consider, since the majority of people walking through the double doors are just passing through and not using the TLC Building as their final destination.

Opened Breezeway at TLC Building

By removing the existing double doors and adding doorways to the internal lobby of the building, access can be opened back for bicyclists and pedestrians. This will provide direct north-south travel through campus and will provide easier access for emergency vehicles. If designed properly, this breezeway could become an area for covered bicycle parking.

ON-STREET RECOMMENDATIONS

On-street routes are intended to connect key destinations as directly as possible. The key connections into and out of campus are most critical, so strengthening the north-south routes of University and the Greenbelt are vital. The east-west route on Maple Street, South Street, and West Georgia Drive are critical, and recommended connections to and through these routes will be important. All three have different context and character issues that provide challenges and opportunities.

External Campus Trips

There are large numbers of students, faculty, visitors and staff who originate off-campus and desire bicycle friendly routes to the UWG. Some of these key external destinations which generate bicycle traffic to and from campus include the apartment complexes to the north of campus, the Greenbelt Trail, and north to Downtown. The City Plan recommendations specifically address these connections, and these routes can help support their vision.

Internal Campus Trips

Within campus, a primary function of the bicycle network is to provide efficient travel during class breaks when bicycle and pedestrian traffic is heaviest. Residence halls are dispersed throughout campus from the Arbor View Apartments in the west to The Oaks on the east. The street network also connects into the heart of campus with University Drive providing access to the University Community Center and Back Campus Drive providing access to the library and academic buildings.
In the short term, improvements are generally limited to those that are achievable with fairly low costs or are key for providing major impact. Recommendations that can be implemented within the existing street cross section to avoid major street reconstruction fulfill these criteria.

**West Georgia Drive**
Overall, this campus loop road should present a more pedestrian-friendly experience and have a high-quality bike facility. Today, the sidewalk is discontinuous on the inside of the road near South Street. Raised crosswalks have been added to calm traffic speeds, but the wide roadway, lack of street trees and use of highway-type lighting send a message to drivers that higher speeds are appropriate.

Transit stops are provided along the street that allow a bus to pull out of traffic. These are either cut outs in the curb or locations where parallel parking is prohibited.

The first phase of calming West Georgia Drive and providing space for bicycle facilities can be accomplished by removal of parallel on-street parking. This suggestion was widely viewed as possible and desirable during the design charrette. This would improve the street through a number of means:

- Traffic would no longer be circling on the street to find parking.
- Space would be available for the addition of a high-quality on-street bike facility.
- Jaywalking will likely reduce as drivers will not cross the street from their parked car to a destination.

The addition of buffered bike lanes would have a traffic calming effect through visually narrowing the street and by placing transit vehicle stops in the travel lane. This slowed traffic can create a more pedestrian friendly environment along West Georgia and reduce the need for the large number of raised crosswalks that exist today.

Ultimately, when West Georgia Drive is reconstructed, separated bike lanes should be introduced. This facility could either be built at sidewalk height or built at roadway grade and vertical separation can be achieved with flex posts and painted buffer. This Plan’s recommendation is to build it at sidewalk grade, because of the Greenbelt facilities and trails on and adjacent to campus. This would provide a continuous separated facility around and through campus.


**South Street**

The connections to campus from downtown and surrounding neighborhoods are just as important as the facilities on campus. It will be key for the City and University to get bicyclists to campus via a few routes, and South Street is one of the major access routes. Today South Street is a two-lane street that ranges in width from 20’-30’ wide with a sidewalk on one or both sides.

South Street is fortunate that it was identified by the City to have one of the Greenbelt spur trails constructed on it. The Greenbelt trail on South Street will be a sidewalk-height, two-way facility that runs parallel to the street. It is planned to be on the south side of the street and connect from Adamson Square downtown on Bradley Street, cross the railroad tracks and turn onto South Street, cross the Hwy 27 bridge, cross Maple Street, and then connect into campus at West Georgia Street. The key to the success of this spur for UWG will be the West Georgia intersection and the connection to the initial buffered bike lanes and the ultimate separated bike lane. Description of intersection recommendations are below.

**Maple Street**

Maple Street is the southern border to campus and the Greenbelt trail extends from the west to the border of campus at West Georgia Drive (west). The City’s Greenbelt plan calls for the trail to be extended along the south side of campus and continue on past the UWG border to the intersection of South Street. This trail connection will create a great loop for bicyclists and pedestrians that traverse the southern edge of campus and connect into downtown.

**New Network Streets**

The concurrent transportation study being executed for UWG recommends a number of new streets to be added to the network as the campus expands. These streets should all be designed with bicycle travel in mind. For most, this will mean creating a low-speed shared street that creates an environment where bicyclists feel comfortable using the same travel lane as automobiles. In some cases, streets may also be designed with wider rights of way that will accommodate a separate bike facility such as bike lanes. However, in a congested campus environment with many pedestrians, the slow-speed shared street is preferred.
Intersection Improvements

This study will work in concert with the transportation study that is also being conducted. Below are some recommendations for how bicycles should work with the new traffic recommendations.

University Drive & West Georgia Drive
This is a three-legged, signalized intersection on the north side of campus. Many stakeholders noted that it does not function well for either automobile or pedestrian traffic. The current phasing is very confusing for pedestrians who often choose to not obey the pedestrian signals, thus creating conflicts with automobiles. There is a heavy volume of pedestrian traffic through this area as a result of the parking lots located on University Drive, the presence of the bookstore and the important campus destinations nearby such as the library and campus center.

This intersection will be addressed in the traffic study and initially will have signal timing improvements. When West Georgia Drive is reconstructed and the separated bike lanes are installed, it will be necessary to install a bicycle only phase into the intersection to accommodate turning cyclists. Green bike boxes and painted crosswalks for bicycles will also need to be installed at the intersection.

Maple Drive & West Georgia Drive (West)
This signalized intersection is the major gateway to the University from the west and the Route 166 Bypass. UWG property and the banner campaign begin at Forrest Drive, also a signalized intersection. Some campus visitors, and even faculty, staff and students, mistakenly turn at Forrest Drive to access campus. The West Georgia/Maple intersection is notably congested in the afternoon commute hour when nearby parking lots discharge vehicles.

Maple Street & West Georgia Drive (East)
This signalized intersection is the major gateway to the University from downtown Carrollton. Currently there is not a sense of arrival to campus at this intersection except for the beginning of the banner campaign. Some visitors enter instead along Front Campus Drive which provides access to Admissions, but also forces drivers to make a U-turn around the median at University Drive and Maple Street to exit campus. This movement is disorienting to visitors.

This intersection was also identified in the charrette and transportation plan to remove the signalized intersection and construct a one lane roundabout. When this improvement is constructed, it will be critical for bicycles to be accommodated and the Greenbelt Trail along Maple Street to safely cross West Georgia Drive.

South Street & West Georgia Drive
South Street intersects West Georgia Drive at a curve in the road. South Street is the other main access to downtown Carrollton and to a number of student apartments adjacent to campus. There are currently no crosswalks at this location.
because of poor sight lines for drivers, but pedestrians were observed crossing the street here. Additionally, a wide radius curve such as this one and the one at the intersection of Stadium Drive and West Georgia can be disorienting to drivers who do not notice the transition from traveling northbound to eastbound.

As previously mentioned in this chapter, South Street is planned to have a separated bike lane facility on its south side and West Georgia Drive will have interim buffered bike lanes and ultimately a separated bike lane on its south side. When the South Street improvements are made, a raised or high visibility crossing for pedestrians and a separate crossing for bicycles should be installed to safely get trail users across the intersection.

During the design charrette, this intersection was identified to have additional network extended to the north and the large radius in the curve to be removed and squared up by a one-lane roundabout. This could also be completed in phases and just have a 3 approach roundabout initially with the existing streets, but then if the new network street is extended north, it could easily be connected into the roundabout. The bike facilities along West Georgia Drive and South Street could then be designed into the roundabout and circulated safely without having to cross at the curve.

**Stadium Drive & West Georgia Drive**

This intersection is complicated by the presence of a drop off loop in front of the Coliseum building and a transit stop on either side of the street. Again, crosswalks are not present here because of poor sightlines along the curve in West Georgia Drive, but transit users were frequently observed crossing from a stop to the other side of the street. Cole Field, adjacent to this intersection, is also slated to move to the athletics area, freeing up the parcel for development. When this development occurs, it would be possible to remove the curve in West Georgia Drive and square up the intersection to be a four way stop. The intersection could also be raised flush to accommodate the pedestrians and bicycles traveling down West Georgia and Stadium Drive.

The bike lanes on Stadium Drive are the only on-street bicycle infrastructure on campus today. They are five feet wide, the minimum standard, but have a 12-inch gutter pan which may make the effective width less. There is space within the curbs to narrow travel lanes and widen the bike lanes for a more comfortable bicyclist experience. The bike lanes do not extend all the way to the stadium. Elsewhere, bicyclists share the road with automobiles or ride on sidewalks adjacent to the roadway. It is recommended that the lanes are widened to 6’ bike lanes and where they end, sharrow lane markings be added to the roadway.
OFF-STREET RECOMMENDATIONS

Love Field Path
The existing walkway along Love Field is currently used heavily by pedestrians and by some bicyclists. With its proximity to the heart of campus, direct east-west alignment and connection to the Greenbelt, it is recommended that the path be widened to be a separated facility. This new path should become the standard for on-campus bicycle paths, so that they are easily identified and used properly. A consistent material, colors, and markings as the Greenbelt trail will help give these paths a better identity.

Former University Drive Pathway
This pathway currently has ample width to accommodate pedestrians and bicyclists, as well as UWG staff trucks and carts. As bicyclist traffic increases, the University may want to designate space on this wide pathway for bicyclists and pedestrians to help avoid additional conflicts.
Walkways on campus are fairly wide and the adjacent space allows for ample room to construct bikeways to run parallel to the paths.
Chapter 3

Education, Encouragement and Enforcement Strategies

The engineering strategies presented in Chapter 2 will form an important foundation for bicycling on campus at the University of West Georgia, but to be a truly bike friendly university, efforts in other areas will be necessary. This chapter presents a series of program and policy recommendations in the areas of education, encouragement and enforcement. Operational and management recommendations are included under evaluation and planning. These recommendations are based on best practices from other bike friendly campuses around the country. Many of these recommendations provide suggestions for immediate and future programs and actions as bicycling grows at UWG.

EDUCATION

Bikes at UWG website

Create a bicycle website that is a one-stop location for information about bicycling on and to campus. This site can start simply, mostly relying on links to bicycle resources elsewhere, and be enhanced over time as program offerings and on-the-ground infrastructure increase.

Use other universities’ commuter websites as models for the type and level of information that should be available to the campus community about bicycling. The pages of UC-Davis and Yale are particularly good examples.

This site should include information regarding:

- Bike routes on campus and in Carrollton: including trails, any street with bike facilities and known bike friendly streets
- Bike facility descriptions: add facility types and proper usage as new facilities are added
- Bicycle parking: locations, recommendations about techniques and lock types
- Rules of the road: applicable traffic laws for bicyclists
- Campus bicycle policies: include summaries of any policies related to bikes or bicycling and links to actual text
- Safety tips: reference League of American Bicyclists “Ride Smart” program for resources

The website could be housed on any campus department’s site, but it should have an intuitive pointer URL such as www.westga.edu/bikes.

Outreach to all modes

Creating a bicycle friendly campus involves all users of streets and off-street pathways. As the number of bicyclists increases, and to help that number increase, the University should craft a set of messages to the community at large that gets the word out about how to interact properly and courteously.

A campaign to promote understanding and respect may help decrease conflicts amongst all modes on campus. People do not necessarily have an inherent understanding of the motivations, needs and behaviors of those traveling by other modes of transportation. For example, a driver may not understand the importance of using a turn signal to notify a bicyclist of an upcoming turn. A bicyclist may not appreciate how their travel speed impacts the comfort of pedestrians on shared pathways, and a pedestrian may not understand how important it is to make eye contact with a driver or bicyclist when crossing the street. Developing mutual respect and good communication amongst all transportation system users is central to creating a strong, multimodal transportation network.

Skills courses

Many bicyclists at UWG are likely to not have ridden a bike in years or to have ridden a bike for transportation regularly. These riders will be safer when equipped with basic bike handling skills and knowledge of rights and responsibilities on the road. Classes can help institutionalize safe bicycling practices among the entire campus community.

Begin by offering half-hour commuter seminars on a monthly or bi-monthly basis during lunch hour. These offerings can start with basic topics such as how to lock a

1 http://bikeleague.org/ridesmart
bike properly, how to carry your laptop/gym clothes/books, bike friendly routes to campus, how to bike in work clothes and how to pack your work clothes and look presentable.

Survey class attendees about desired further offerings, and adjust topics and expand class length as necessary. Consider a partnership with local bike shops for classes as they can provide resources to promote everyday bicycling and may have staff who would volunteer to teach such classes.

**Educate about new infrastructure**

Having all road users understand proper use of these facilities will lead to fewer opportunities for conflicts between bicyclists and drivers. While two-way shared use paths exist in the City of Carrollton today, there are no separated bike lanes on roadways near UWG. And though they will be designed to be as intuitive as possible, when these facilities are implemented on campus, community members may be confused about their proper usage.

Use posters throughout campus to graphically show proper placement of bicycles and automobiles on streets with new facilities.

Utilize UWG staff and student volunteers for in-person outreach when new bike infrastructure is implemented that may need more explanation of its use for bicyclists and drivers, such as the buffered bike lanes on West Georgia Drive.

**ENCOURAGEMENT**

**Implement bicycle commuter benefits**

There are a number of types of commuter benefits that can help encourage more affiliates to bike to campus. Allowing employees to utilize the federal pre-tax bicycle benefit will help defray their ongoing costs of bicycle maintenance. The pre-tax benefit provides up to $20 per month to bicycle commuters for maintenance and accessories.

Existing free access to the Campus Center should be promoted as a bicycle commuter benefit for those who would like to shower and change clothes upon arriving on campus.

**Offer on-campus bike maintenance options**

Most bicyclists do not know how to perform routine maintenance on their bike, and a small issue can prevent them from riding. The barrier of needing to visit a bike shop is too much for some riders.

Offering on-campus bike maintenance will help riders keep their bikes in working order. A widely publicized one-day bike maintenance event would be a good way to kick off this service. UWG should partner with a Carrollton bike shop to offer this service. Small repairs such as tire changes and brake adjustments could be completed on-site, and larger maintenance issues could be referred to the shop.

After an initial event, these maintenance days could be held every month or every other month during the fall and spring.

Additionally, installation of a DIY bike repair stand and tire pump in a central location such as the Campus Center would be a great benefit to bicyclists. These stands are equipped with QR codes to walk users through repairs, but the stand could also feature “office hours” from student volunteer mechanics who help riders understand how to use the various tools.
Explore bike rental and bike share options

Bicycle friendly campuses around the country offer a wide range of bicycle rental or bike share options for their communities. Because bicycling is still a growing mode at UWG, it is recommended that the campus start with a modest program of providing bikes through the existing rental infrastructure at Outdoor Recreation. Options to rent bicycles on a semester or yearly basis can lower the barrier to entry for students acquiring a bicycle. Rentals should include a maintenance program as well.

As bicycling grows on campus, UWG could explore developing a bike library. These campus systems utilize in-person check-out for bikes, often located at dorms, a campus gym or library. Bikes are rented out on an hourly or daily basis and need to be returned by the closing time of the rental location. Systems like this have been successfully implemented throughout the country including at UNC Chapel Hill and Tufts University.

This library type system is recommended in favor of a more robust and expensive bike share program that would require major investment in newer bicycle and locking technology.

Explore departmental fleet bicycle program

Today, many departments at UWG have fleet vehicles for transporting people, goods or equipment throughout campus. These fleets consist mostly of pick-up trucks and golf carts. The University should explore the possibility of supplementing these fleets with bicycles and/or cargo bicycles that can easily and safely travel on off-street pathways in the heart of campus. This could help eliminate some of the congestion seen today on pathways caused by carts and can help keep speeds lower.

A set of fleet bicycles can be an easy way to reuse abandoned bicycles or to partner with a local bike shop like The University of Chicago’s Recycles program does.

ENFORCEMENT

Use positive “re-enforcement” for safe and legal riding

Strict enforcement of existing traffic laws with applicable fees and fines may act as a deterrent to increasing the number of bicyclists on campus. Instead, a campaign to recognize and reward good behavior should be developed. Other campuses and advocacy groups have used rewards such as gift cards or granola bars to hand out to riders who obey traffic laws. Examples of these instances are yielding to pedestrians in a crosswalk or stopping for traffic signals.

As bicycling progresses at UWG, student citation officers for bicycle violations could be explored. One best practice enforcement example is Colorado State University’s Bicycle Education and Enforcement Program (BEEP). Student employees are empowered through BEEP to issue citations and tickets to bicyclists according to campus bicycle policies. These violations carry nominal fees of $10 to $20 and can be avoided for first-time offenders by taking a bicycle safety education class. BEEP employees also hand out bicycle safety information with tickets and act as good bicycling ambassadors.

EVALUATION + PLANNING

The value of the recommendations presented in this Plan hinges on the University’s ability to coordinate staff and resources to implement them. Improving the culture of bicycling at UWG will have increased success with well-coordinated and sustained support from multiple UWG staff, administrators and the broader community. UWG has already taken steps to improve bicycle conditions and programs on campus and has established ties with the City of Carrollton that will help with implementation of Plan recommendations.

Integrate bicycles into all routine campus planning efforts

In order to achieve the vision and goals of this Plan, bicycling must be fully integrated into University planning efforts in the same way that pedestrian and motor vehicle planning has been in the past. This includes all aspects of planning: master planning, evaluation of project scopes and project review.

Update plan document as bicycling increases

Bicycling today at UWG remains a lesser-used mode of transportation, so few major issues exist that need immediate attention. More issues are likely to arise in the

A set of fleet bicycles can be an easy way to reuse abandoned bicycles or to partner with a local bike shop like The University of Chicago's Recycles program does.
future as bicycling increases. While this Plan addresses challenges identified in 2014 and anticipates some additional issues, all good planning documents need periodic updating as conditions change. This Plan and its implementation should be reviewed in five years to determine if recommendations are still applicable and sufficient or if additional measures need to be implemented to provide a high-quality bicycling environment.

Create a Campus Bicycle Committee

Successful bicycle friendly universities have a bicycle committee that meets to discuss bike issues on campus. Such a group is necessary because many aspects of bicycling on campus reach across departmental and school boundaries and require coordination among varying entities. This Plan process was an important chance to bring together disparate parties who impact bicycling on campus, and Plan stakeholders should form the core of this Committee.

This group can serve both advisory and implementation functions and should form subcommittees that vary with the type of project undertaken.

Designate a Bicycle Coordinator

A coordinating role is critical to the implementation of this Plan, because there is currently no central coordination of efforts on campus bicycling. The role of a bicycle coordinator is to coordinate efforts throughout the institution to create a more bicycle friendly environment on campus.

Many universities designate a portion of a staff member’s time to bicycle planning, often someone who shares responsibility for pedestrian planning. This position is sometimes the Transportation Demand Management (TDM) coordinator or another staff member in a university’s transportation office. Bicycle programming and monitoring the implementation of bicycle infrastructure are written into that person’s job description and usually requires anywhere from 25 to 50 percent of their time.

It is recommended that UWG designate a portion of one staff member’s time to ensuring follow-through on the implementation of Plan recommendations.

Apply for Bicycle Friendly University (BFU) designation

As this Plan is implemented and infrastructure projects and programs to improve the bicycling environment are in place, the University should be recognized for these efforts. The process of assembling the BFU application can continue to solidify ties among departments made throughout the process of this Plan’s development. Official designation by the League of American Bicyclists as a BFU may act as a promotional point for prospective students, staff and faculty members and can help keep up interest in bicycling on campus. Other BFU campuses have also found the designation to be an important selling point when pursuing funding for bicycle improvements.