

EXECUTIVE SUMMARY

This *Transportation and Parking Master Plan* for the University of Wyoming (UW) has been developed in coordination with the Wyoming Department of Transportation (WYDOT) and the City of Laramie. The purpose of this *Transportation and Parking Master Plan* is to manage parking needs, integrate transit systems, and implement programs to improve local connectivity, mobility and safety on campus and in the adjacent community for vehicles, pedestrians, and bicyclists.

In 2006, a Memorandum of Understanding (MOU) was developed between UW, the City of Laramie, and WYDOT, to jointly develop a scope of work for this transportation and parking study, to insure that both local and regional issues were considered.

Study Approach

Parking, internal traffic circulation, and pedestrian/bicycle conflicts have been consistent problems at the University of Wyoming. These challenges are common to college and university campuses that draw commuter traffic from the adjacent communities and attract subsequent interface with high volumes of bicycle and pedestrian traffic.

Over two-thirds of the students, faculty and staff (resulting in approximately 6,888 person-round trips per day) commute, creating high vehicular travel in high pedestrian areas, particularly during morning and afternoon peaks. This also creates a high demand for parking close to campus that spills over into adjacent neighborhoods.

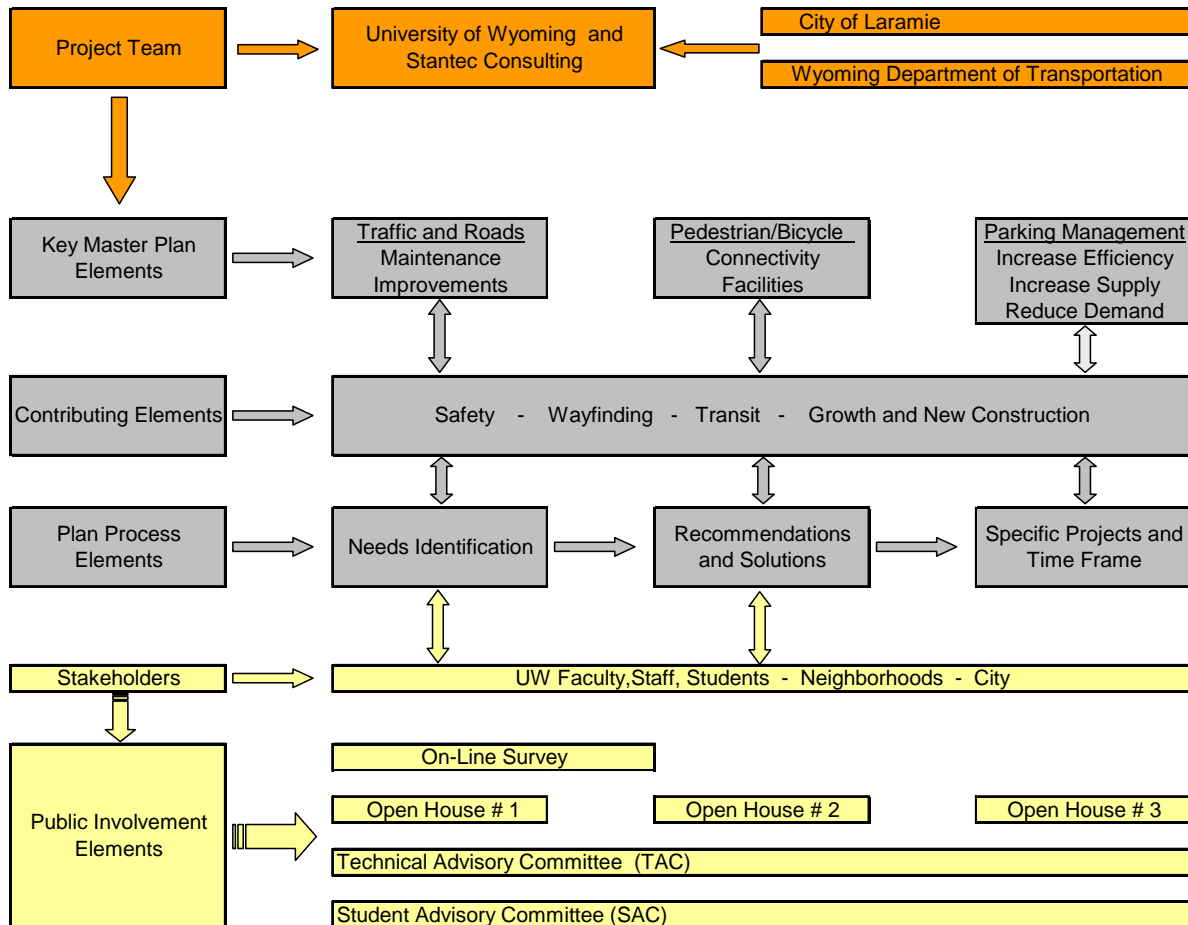
Although a number of previous studies have been conducted (including the 2001 *Campus Transportation and Parking Plan* and the 2005 *University of Wyoming Parking Needs Analysis*) and some interim solutions have been implemented, a more comprehensive and inclusive analysis is required to determine the best transportation solutions for the area.

Identified key elements for this Transportation and Parking Master Plan are: **Traffic and Roads, Bicycles and Pedestrians, and Parking Management**. Contributing elements include: **Safety, Wayfinding, Transit and Growth and New Construction**. To meet the purpose for this plan, the following objectives were pursued:

- Identification of traffic circulation and parking solutions
- Identification of pedestrian and bicycle circulation improvements
- Development of a short-term mobility plans to mitigate traffic circulation problems related to the construction program
- Development of way-finding solutions for visitors and new students
- Prepare a long term mobility/connectivity plan for the University, Convention Center and downtown Laramie.

Exhibit E.1 illustrates the relationships between the project team, key plan elements, plan process and stakeholders for major elements and activities.

Exhibit E. 1 Master Plan Team, Process and Stakeholder Elements and Activities



Study Area

The primary study area includes the UW campus. Boundaries are: Grand Avenue on the south, 9th Street on the west, Lewis Street on the north between 9th Street and 15th Street, then 15th Street on the west, Harney Street on the north between 15th Street and 30th Street, and 30th Street on the east. The secondary study area encompasses the entire community of Laramie.

Operations Analysis

Roads and Vehicular Traffic Flow

Vehicular traffic flow and operations were examined to determine the potential need for capacity improvements that could support master planning goals of improved connectivity and safety. Visual surveys of key roads were made to determine any significant design or condition needs. Turning movement and through traffic counts for each intersection within the primary study area were collected by *All Traffic Data* (November 26th to December 7th, 2007). A capacity analysis was performed in the project study area to quantify how well the intersections process traffic.

All intersections within the primary study area were analyzed, and no areas of significant congestion were observed. This means that there is sufficient capacity on the streets within the study area at the UW campus. This does not limit consideration of internal circulation changes to support connectivity and safety goals related to parking needs and pedestrian/bicycle interface. In a community where traffic congestion is minimal, small back-up associated with construction activities, or pedestrian crossing may be perceived as problematic. Road maintenance and improvement projects are included in the solutions portion of this plan.

Pedestrian and Bicycle Flow

The goal of the master planning process for pedestrian and bicycle users is to improve connectivity and safety. The primary concern is the potential for conflicts between pedestrians and vehicles at intersections and mid-block locations.

Pedestrian counts for each intersection, and key mid-block locations within the primary study area were collected. Although higher pedestrian crossing volume were observed at many locations during class change times, most intersections and mid-block areas did not experience excessive pedestrian volumes during the peak periods measured. Hourly volumes were typically under 100 and often less than 50. The exception was the Ivinson Avenue and 15th Street intersection, where 883 pedestrians crossed southeast to northwest during the morning peak hour. In the afternoon peak hour, 518 pedestrians crossed in the reverse direction.

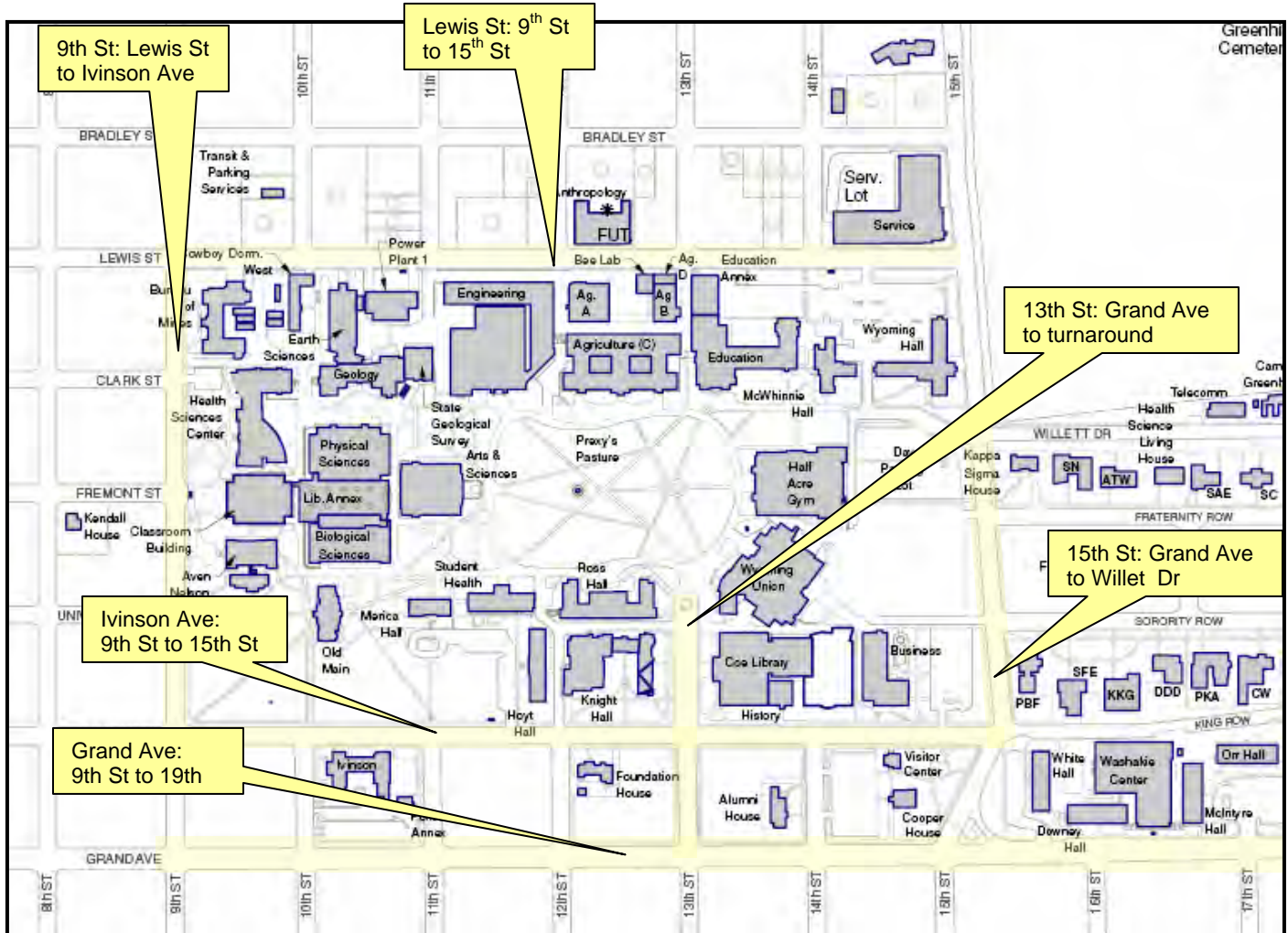
Six (6) locations were identified as critical areas containing high vehicle, pedestrian, and bicycle volumes. The presence of high volumes of even two of these three modes generates a high potential for conflicts, and possible safety concerns which need to be addressed. These six locations are illustrated on Exhibit E-2:

- Grand Avenue: 9th Street to 19th Street
- Ivinson Avenue: 9th Street to 15th Street
- 13th Street: Grand Avenue to turnaround
- 15th Street: Grand Avenue to Willet Drive
- Lewis Street: 9th Street to 15th Street
- 9th Street: Lewis Street to Ivinson Avenue

Transportation Safety

This portion of the study analyzed the results of actual crash data, identifying crash locations and types/causes of accidents. Crash data was provided by WYDOT for the primary study area intersections. A total of 251 crashes occurred over the 3.5 year period between January 2004 and July 2007. Seventy-one (71) crashes involved injuries (28%). One fatality occurred at Willet Drive and 30th Street. The predominant crash type was rear end collisions (82 crashes, 33%), with the second most common being left turns failing to yield the right-of-way (58 crashes, 23%), and the third being red light violations (38 crashes, 15%). These crash types are not generally related to roadway or signal design deficiencies and are mostly attributed to driver inattention. High numbers of accidents along Grande Avenue are related to higher traffic volumes on that street. Only 16 accidents involved pedestrians and/or bicycles. Ten intersections were identified as having safety concerns and all are included in the six critical safety areas identified above.

Exhibit E. 2 Key Safety Concern Areas with High Vehicle, Pedestrian and/or Bicycle Volumes



Parking

The purpose of this section was to inventory and identify deficiencies in the existing parking system, locations of parking areas, and system utilization. The goal of the master planning process is to identify parking solutions for UW and the City. Three types of solutions are considered:

- Identify more efficient ways to use existing parking facilities
- Reduce demand for parking
- Increase supply of parking

UW parking and transit is maintained and operated by TransPark Transit and Parking Services Department. On campus, there are 48 parking lots provided for resident and commuting students, faculty/staff, visitors, handicapped drivers, vendors, motorcycle riders, and UW or government vehicles. There are also metered parking spaces, paid day permit spaces, and a free shuttle lot.

In general, people desire to park close to their destination. There is insufficient parking available in the main campus area to meet the current demand. This, combined with relatively low parking permit fee and difficulties in enforcing parking citations on city streets, leads to a significant number of university-related vehicles parking on street in adjacent residential neighborhoods. There is also insufficient parking available to residential students, close to where they live, which also contributes to parking in neighborhoods. Input from the on-line Transportation and Parking Survey (conducted as part of this study – described below), clearly indicates a high percentage of commuters parking in the residential areas, which has created a growing conflict between the residents of Laramie and UW. The Survey revealed that 48% of commuters (over 3,000 individuals) do not have a parking permit, and either pay daily to park, or park in the residential neighborhoods.

General parking deficiencies include:

- Shortages of specific permitted types of parking spaces
- Mismatch of permits sales to spaces available
- Potential for as many as 1,340 commuters and residents in excess of available parking spaces close to the main campus
- There is additional parking available on East Campus, which many people currently do not use, due mainly to a real or perceived lack of convenience.

Transit

Transit considerations for UW and the adjacent community tie directly to goals for reductions of parking demand and improved mobility and connectivity between residential locations and key community and university destinations.

TransPark provides free shuttle services with three distinct shuttle routes and free paratransit service. The three shuttle routes are (1) Union Express, (2) Classroom Shuttle, and (3) Campus Shuttle. The shuttle service is limited to the campus area and does not extend into adjacent residential areas, nor does it provide access to key destinations in the City of Laramie.

The University also provides a free paratransit service as transportation to and from work, school, appointments, meetings, social and recreational needs, and other person needs. The boundaries are limited to the Laramie city limits and adjacent areas within two miles of the city limits.

In 2001, the Safe Ride program was developed by the Associated Students of the University of Wyoming (ASUW). This program is a free public transportation system with the goal of providing safe and reliable transportation within the Laramie city limits.



The Eppson Center for Seniors offers a public transit system, called Public Assisted Transportation Services (PATs), throughout the City of Laramie. There is both a fixed route with 22 bus stops and a door-to-door service. The fixed route has one bus that travels a 20-mile circle around all of Laramie (including West Laramie) with stops at various intersections, shopping centers, and other highly requested locations.

For the past three semesters, the overall ridership of the shuttle service has been consistent at approximately 2,000 passengers per day. Safe Ride's ridership has increased significantly since its inception, and 26,000 people used the service during the 2006-2007 academic year.

The University transit services focus on the shuttle service on campus and the Safe Ride's van program. Given that, the following deficiencies are noted:

- Identification of demand for connecting trips to downtown Laramie, the Grand Avenue retail corridor, UW Plaza (Convention Center), and other key destinations
- Identification of demand for commuter services to key locations of campus
- Need for re-analysis of the on campus shuttle routes and to enhance the amenities

Public Input

Community involvement was a critical part of this study, since they use the transportation daily and can reveal the existing issues and problem locations and engage in the solution process. Two committees were formed for this study: the Technical Advisory Committee (TAC); comprised of key university, city and state stakeholders; and the Student Advisory Committee (SAC). Both committees offered their support and volunteered their time to help for each of the various stages of the study beginning in October 2007.



Four public meetings were held starting in December 2007, with the most recent held in February 2008. These meetings were held to gather input on the existing issues and concerns and to obtain the public's ideas for solutions. The meetings were well attended and productive.

Transportation and Parking Survey

An on-line public survey was developed, with the objectives of identifying the travel patterns, travel choice characteristics, plus concerns and ideas regarding improvements to the transportation system. The survey was linked to UW students (residents and commuters), faculty/staff, and visitors through the campus website.

Currently the University has 9,982 students, (2,053 live on campus), and 2,445 faculty/staff members. A total of 1,229 (12%) completed the entire survey (the number of responses from visitors was minor). Note that the results of this survey reflect the stated opinions of the respondents and are not to be interpreted as reflecting the opinions of any other population.

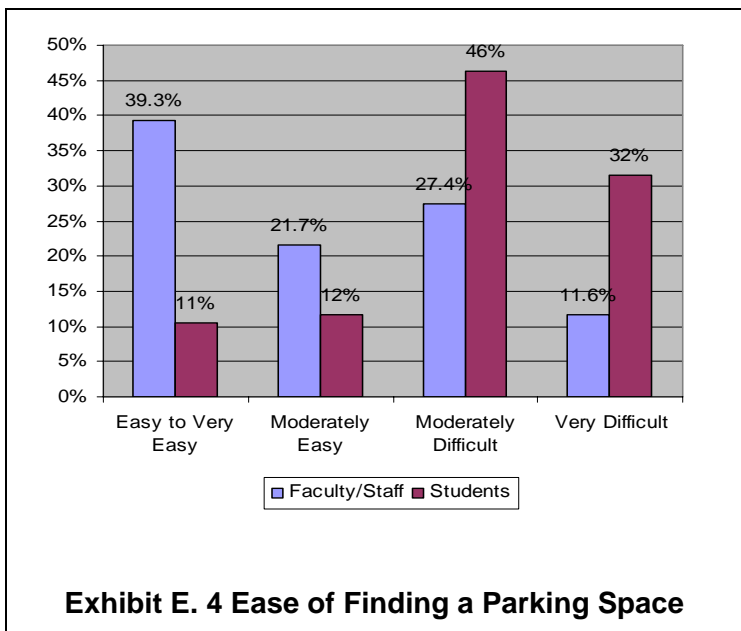
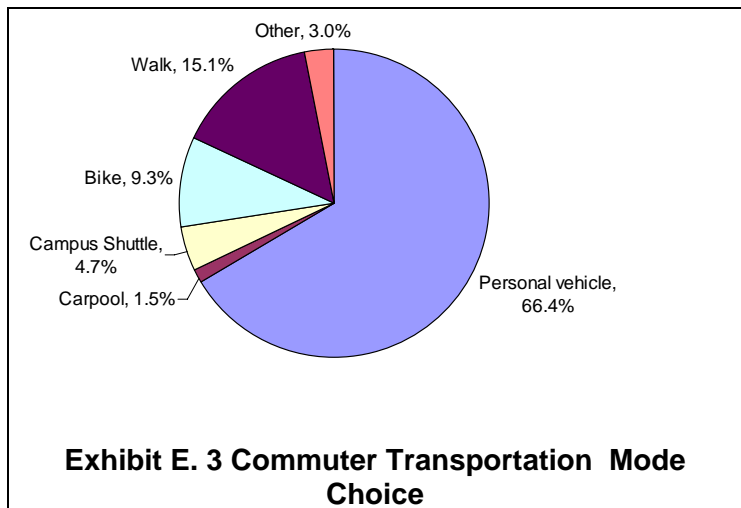
Exhibit E.3 illustrates the distribution of transportation mode choices for the surveyed commuters, with 66.4 percent selecting personal vehicles.

Survey responses indicate that the shuttle service is inconvenient for most commuters; however, the commuters that use the shuttle service felt that it was reliable and quick. It should also be noted that 54% of responding commuters indicated that they would consider using transit if it was convenient and affordable.

Nearly 25% of all commuters walk or bike to campus, especially in the warm months.

Approximately 415 students and 527 faculty/staff provided their origin address. Most students (29%) live south of Grand Avenue and many of these live along Palmer Drive. West Laramie houses 9% of students. 15% of the students live in the residential areas to the west of campus. Likewise, most faculty/staff (32%) live south of Grand Avenue and west (14%) of campus. There are more faculty/staff than students living in the residential area northeast of Harney Street at 30th Street and in the neighborhoods near the US 30/Interstate 80 interchange. Also 14% of the faculty/staff live in other cities and towns outside of Laramie.

Nearly 80% of students experience moderate to high difficulty in finding a parking space within and near campus. In comparison, over 60% of the faculty/staff feels that finding a parking space is moderately easy to very easy (see Exhibit E.4).



Future Conditions – Growth and Construction

The University of Wyoming’s current enrollment is 9,982 students, and it is projected to grow by 10% over the next 10 years. With the projected growth, the student enrollment will be nearly 11,000 students in the fall 2017 and with the loss of parking spaces due to construction, the parking demand will further be stressed.

The University Capital Facilities Plan specifies a number of key construction projects which will have both short- and long-term traffic and parking implications.

They are as follows:

- College of Business
- Information Library and Learning Center
- Information Technology Facility
- Berry Center for Natural History and Conservation
- Half Acre Gym Expansion
- Fine and Performing Arts
- School for Energy Resources



Key City projects identified and included in this study are:

- UW Plaza
- Grand Avenue improvements
- Clark Street bridge replacement
- Bicycle and Trail Master Plan Implementation



Needs and Solutions

Based on input received from the public (through public meetings, the on-line survey, and direct communications), the TAC and SAC, and the needs identified through this study, a list of Master Plan needs was generated (Exhibit E-5). The needs were grouped according to the identified key elements for this Master Plan: Traffic and Roads, Pedestrian/Bicycle Mobility and Parking Management. Again, with input from the public, TAC and SAC, a series of possible solutions was generated. Each of the solutions was evaluated as to its ability to satisfy the identified need(s) to which it was attributed. For most needs, only one solution was identified. For those with multiple solutions, a qualitative evaluation of benefits and costs was conducted. For the major cost solutions (parking garage vs. expanded transit system), planning-level costs were also generated, for comparison purposes. The results were shared with the TAC, leading to the Final Recommendations. The process is summarized below.

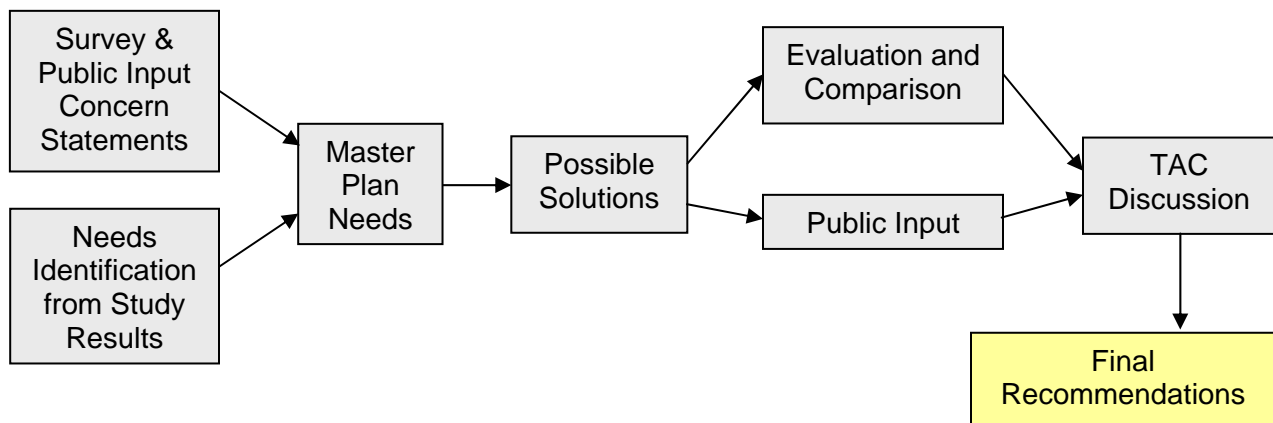


Exhibit E. 5 Master Plan Needs and Solutions Summary

Traffic Mobility and Road Conditions	
Needs Identification	Solutions
<p>Six Key critical areas with high vehicle, pedestrian, and bicycle volumes:</p> <ul style="list-style-type: none"> • Grand Avenue: 9th Street to 19th Street • Iverson Avenue: 9th Street to 15th Street • 13th Street: Grand Avenue to Turnaround • 15th Street: Grand Avenue to Willet Drive • Lewis Street: 9th Street to 15th Street • 9th Street: Lewis Street to Iverson Avenue 	
Minimize unnecessary travel on and around campus (campus-wide)	<ul style="list-style-type: none"> • Improve wayfinding sign system • Provide ITS variable message signs for special events and real-time parking directions • Provide alternative transportation modes • Provide bus stops
Provide for safe and efficient traffic flow (campus-wide)	<ul style="list-style-type: none"> • Improve signal phasing and coordination
Provide connectivity between key community origins and destinations (campus, downtown, conference center, athletic facilities, recreation facilities, shopping areas, residential areas)	<ul style="list-style-type: none"> • Improve wayfinding sign system • Provide alternative transportation modes • Provide bus stops
Fix pavement and drainage problems (focus – Iverson Ave., 15th St., Lewis St. , 9th St. and other roads on-campus and in Laramie)	<ul style="list-style-type: none"> • Provide drainage improvements to reduce the severity of gutter “dips” • Reduce height of road crown on Iverson Ave. • Road reconstruction and/or resurfacing projects, as needed • Review road maintenance and snow removal programs for possible improvements
Increase effectiveness and life of signs and striping (focus – Iverson Ave., 15th St., Lewis St. , 9th St. and other roads on-campus and in Laramie)	<ul style="list-style-type: none"> • Use signing and striping materials with higher visibility and reflectivity, and longer life • Design more effective signing and striping placement and maintenance plan
Pedestrian and Bicycle Mobility	
Needs Identification	Solutions
Improve pedestrian awareness (campus-wide)	<ul style="list-style-type: none"> • Enhance driver, pedestrian and bicycle education and awareness program • Use signing and striping materials with higher visibility and reflectivity, and longer life • Improve street lighting along pedestrian walkways and at intersections • Provide painted bike lanes

Provide increased pedestrian capacity (Iverson)	<ul style="list-style-type: none"> Widen sidewalks and crosswalks
Improve pedestrian safety at intersections for all six key areas ((focus – Grand Ave., Iverson Ave., 13th St., 15th St., Lewis St., 9th St.)	<ul style="list-style-type: none"> Provide pedestrian countdown signals Improve pedestrian signal timing Upgrade traffic signal heads Provide painted, textured or patterned crosswalks Include in-pavement lighting at key crosswalks Design raised crosswalks or intersections Provide flashing signs or lights Design narrow cross sections – neck downs Provide ADA compliance Supply “stop” flags at key crosswalks
Minimize mid-block pedestrian crossings (focus – Iverson Ave., 15th St., Lewis St., 9th St.)	<ul style="list-style-type: none"> Landscaping and/or decorative fencing to channelize pedestrians
Provide additional/upgraded bicycle facilities (focus – Iverson Ave., 13th St., 15th St., Lewis St., 9th St.)	<ul style="list-style-type: none"> Use signing and striping materials with higher visibility and reflectivity, and longer life Add more bike lanes Provide bike lockers and shelters Provide bus bike racks
Increase connectivity with City pedestrian/bicycle facilities	<ul style="list-style-type: none"> Provide pedestrian and bicycle facility connections to planned city system
Reduce vehicular speeds in high pedestrian areas (focus – Iverson Ave., 13th St., 15th St., Lewis St., 9th St.)	<ul style="list-style-type: none"> Design narrow cross sections – neck downs Lane matching on 15th St. Raised crosswalks Median w/landscaping
Reduce pedestrian/bicycle conflicts (campus-wide and adjacent neighborhoods)	<ul style="list-style-type: none"> Provide bike lanes Dismount zone system
Reduce vehicle travel in high pedestrian areas (focus – Iverson Ave., 13th St., 15th St. Lewis St., 9th St.)	<ul style="list-style-type: none"> Enhance transit system Improved wayfinding sign system Implement one-way street conversion on Iverson Ave. and Lewis St.
Parking Management	
Needs Identification	Solutions
Provide adequate university parking through more efficient use of existing parking	<ul style="list-style-type: none"> Provide more “R” & “C”-only permit spaces Redesign some parking lots to maximize the number of spaces Implement lot access control systems Provide shuttles to/from underutilized lots Revise parking permit fee structure – higher fees to park closer to campus

<p>Provide adequate university parking through reduction of parking demand</p>	<ul style="list-style-type: none"> • Expand bus transit system <ul style="list-style-type: none"> - New routes - Stops at key destinations and within neighborhoods - Transit hubs - Remote park-n-rides - Upgraded transit stop facilities • Make the bus system more attractive <ul style="list-style-type: none"> - Shorter headways - Longer hours - “Clean” fuel buses - Shrinkwrap “themed” buses - Marketing campaign - Incentive programs • Pedestrian/bicycle solutions and connections (see above)
<p>Provide adequate university parking through increase of parking supply</p>	<ul style="list-style-type: none"> • Implement one-way street conversion of Ivinson Ave. and Lewis St. to include additional diagonal parking • Provide surface parking on East Campus with expanded shuttle system and disincentives to Main Campus and neighborhood parking • Provide more “R” & “C”-only permit spaces • Assess motorcycle parking space needs • Construct parking structure on Ivinson Hall site • Provide surface parking on Ivinson Hall site
<p>Reduce neighborhood parking impacts north, west and south of campus</p>	<ul style="list-style-type: none"> • Improve enforcement • Implement a Parking Benefit District • Tighten parking restrictions • “Tweak” existing neighborhood parking district program • Provide alternative transportation modes
<p>Provide for lost parking spaces related to construction at identified locations</p>	<ul style="list-style-type: none"> • Provide surface parking on East Campus with expanded shuttle system • Provide surface parking on Ivinson Hall site

Project Recommendations

Additional cost analysis was conducted for the two high-cost solution alternatives – Expanded Transit System and Parking Garage. The cost figures below are for planning comparison purposes only, and represent typical expected costs based on university historical data, updated to reflect recent trends in cost increases for materials.

Expanded Transit System

Expanded Bus Maintenance Facility	\$2.0 million
Addition to Bus Fleet	\$5.0 million
Remote Lots (3)	\$2.5 million
Transit Amenities (Shelters)	\$0.5 million
<u>Operation and Maintenance (assume 10 year life)</u>	<u>\$20 million</u>
TOTAL	\$30 million

At the present time, there are grants available to pay for up to 90% of the bus vehicle costs and 50% of the operating costs. With these grants, the total cost for the transit expansion is **\$19.5 million**.

The current system has about 400,000 riders per year. There are about \$800,000 in operating costs per year, averaging about \$2 per ride. Grants pay half this cost, so the university pays about **\$1 per ride**.

Parking Garage

Assume a 600 car structure – net gain of 500 spots (over a 100 car surface lot)

Cost (\$30,000 average per space)	\$21 million
<u>Maintenance (\$500 annual per space, assume 30 year life)</u>	<u>\$9 million</u>
TOTAL	\$30 million

Based on university turnover data, 350 cars are estimated to park in each space per year. Annual cost of a space (based on a 30 year facility life and maintenance costs) is approximately \$1500. Distributed over the expected use by 350 cars, it costs about **\$4.29 per car**, over 4 times the cost of a transit ride. Although the costs are comparable, the transit system would provide ridership benefits to a significantly higher number of people, and have the additional benefits of reducing traffic, noise, fuel consumption, and improving pedestrian safety.

Short-term and long-term project recommendations are listed below. These recommendations are grouped as Pedestrian/Bicycle Safety Improvements, Transit System, and Parking Improvements. These categories represent the integration of the key master plan elements with the contributing elements resulting in specific projects and time frames identified. Except for the differentiation of short-term, intermediate-term and long-term projects, the order of listing does not indicate a prioritization of these projects. See Exhibits E.6 to E.8.

Exhibit E. 6 Recommendations for Short-Term Project Solutions**Short-Term Pedestrian/Bicycle Safety Improvements**

- a. Investigate City ordinances and codes to see if there are any restrictions on materials used for signing and striping. If so, work to get them changed to allow more durable and higher visibility materials.
- b. Install improved signing and striping on Iverson Ave., 15th St., Lewis St., 9th St., and 13th St., with use of materials with longer life, better visibility and reflectivity, and with more effective placement. Include lane markings, stop bars, crosswalks, bike lanes (existing).
- c. At the Iverson Ave./15th St. intersection, install traffic signal pedestrian countdown timer heads, better visibility traffic signal indications, audio pedestrian crossing indicators, either painted or textured crosswalks (for all four approaches plus the northwest/southeast diagonal crossing), and higher visibility/longer lasting stop bars and lane striping. Also strip out the northbound right turn lane, and make the existing single through lane a shared through/right turn lane (to help minimize illegal right turn on red movements). Install flashing pedestrian crossing signs in advance of all four approaches.
- d. Design and implement an improved city and campus wayfinding sign system, with a coordinated color and symbol scheme, for key destinations and parking.
- e. Implement traffic signal hardware (better visibility signal indications), phasing, timing, pedestrian indications and signal coordination improvements at the intersections of 15th St. with Grand Ave., Iverson Ave., Sorority Row, Willet Dr. and Harney St.; 9th St. with Lewis St., Iverson Ave., and Grand Ave.; and 13th St. with Grand Ave.
- f. Review the University and City road maintenance and snow removal programs to see if any improvements could be implemented.
- g. Promote driver, pedestrian and bicycle safety education programs.
- h. Study street lighting along Iverson Ave., 15th St., Lewis St., 9th St., and 13th St., and implement improvements, if warranted.
- i. Install flashing pedestrian crossing signs, painted crosswalks, and center "pedestrian crossing" cones at key mid-block or non-signalized crosswalks – Lewis St. between 13th St. and 14th St., at the Anthropology Building, and at 10th St.; 9th St. at Fremont St.; Iverson Ave. at 10th St. and 11th St.
- j. Install painted crosswalks at the intersections of Iverson Ave. and 13th St.; 15th St. with Sorority Row; and 9th St. with Lewis St. and Iverson Ave.
- k. Add bike lockers and bike shelters at key locations on-campus, to be determined by the on-going university/student government study.
- l. Post speed limit signs on Iverson Ave. between 9th St. and 15th St. Investigate the implementation of lower speed limits on Iverson Ave., 15th St., Lewis St., 9th St., and 13th St.
- m. Implement bike dismount zones in heavily utilized pedestrian zones on-campus.
- n. Develop an intergovernmental agreement between the UW Police Department and the City of Laramie to address enhanced parking and traffic enforcement issues adjacent to campus.

Short-Term Transit System Projects

- a. Add bike lockers and bike shelters at the existing remote park-n-ride lot on East Campus, and at key points on Main Campus.
- b. Extend an existing shuttle bus route to University Plaza (Convention Center).
- c. Extend evening service hours for Routes 2 and 3 (Campus Shuttle and Classroom Express).
- d. Shorten headways to 15 minutes during the 7 am – 5 pm time periods.
- e. Support and implement any recommendations of the upcoming East Campus Master Plan, regarding additional remote parking lots on East Campus. Look for opportunities to serve these lots by the University shuttle bus system.
- f. Install front load bike carriers on some of the existing University bus fleet to see if they will be used consistently.
- g. Install a microwave (or other type) communication system. Use it to monitor and disseminate real-time bus headway information, via web and monitors at bus stops.

Short-Term Parking Improvements

- a. Survey existing University parking lots to determine whether they could be re-designed and striped to gain additional parking spaces. One possible method is diagonal parking with one-way internal travel, to gain additional parking rows. A second method would be to strip out spaces for compact vehicles, as well as some longer spaces for larger trucks and SUVs, to better match demand.
- b. When any parking is lost due to University construction projects, either temporarily or permanently, communicate directly with any people that would be displaced to inform them of alternative parking locations, including remote parking/transit alternatives.
- c. Investigate potential locations on East Campus or other areas to provide more “R” and “C” remote spaces (to be addressed in the East Campus Master Plan), supplemented by transit improvements. Provide incentives to residents to use remote parking.
- d. Develop an intergovernmental agreement between the UW Police Department and the City of Laramie to address enhanced parking and traffic enforcement issues adjacent to campus.
- e. Investigate the feasibility of implementing a Parking Benefit District, possibly with a demonstration project. A Parking Benefit District is similar to the existing neighborhood permit system, except meters (physical meters or dashboard/cell phone “virtual” meters) are used to collect parking fees, which are funneled directly back to fund improvements to the neighborhood streets.

Exhibit E. 7 Recommendations for Intermediate -Term Project Solutions

Intermediate-Term Pedestrian/Bicycle Safety Improvements

- a. Implement road improvements on Ivinson Ave., 15th St., Lewis St., 9th St., and 13th St.:
 - i. Examine the feasibility of lowering the height of the road crown on Ivinson Ave.
 - ii. Drainage improvements to reduce the severity of gutter “dips”, and minimize ice pack on Ivinson Ave. Investigate other possible locations.
 - iii. Investigate redesigning and reconstructing the cross-section on 15th St., from Grand Ave. to Harney St., to provide one travel lane per direction, a center left turn lane, bike lanes, and curbs.
 - iv. Investigate the implications of converting Ivinson Ave. and Lewis St. (15th St. to 9th St.) to one-way. Investigate which directions would be more beneficial and/or have the fewest negative impacts (note that a portion of Lewis St. may be vacated, depending on future UW planning, which would necessitate investigation of alternative travel routes in this area). Evaluate the addition of new or wider bike lanes and diagonal parking (where it will not interfere with safe crosswalk operations).
 - v. Install neckdowns at all key intersections, to facilitate easier pedestrian crossings and better define the travel way.
- b. Completion of installing improved signing, striping and pedestrian crossings on Ivinson Ave., 15th St., Lewis St., 9th St., and 13th St.
 - i. Textured or patterned crosswalks at all signalized locations.
 - ii. Add bike lanes on 9th St. and 13th St. (Lewis St. to Grand Ave.).
 - iii. Partner with the City of Laramie to provide bike lanes and sidewalks that connect to the City bike trail and sidewalk system.
- c. At the Ivinson Ave./15th St. intersection, investigate converting to a raised intersection (traffic calming measure), with textured or brick pavement, and in-pavement lighting for the northwest to southeast diagonal crosswalk. Examine ways to make this location be an attractive University gateway theme, through signing, landscaping, and architectural features.
- d. Widen sidewalks along the north side of Ivinson Ave. Ensure ADA compliance of all sidewalks and crosswalks on Ivinson Ave., 15th St., Lewis St., 9th St., and 13th St.
- e. Add landscaping and/or decorative fencing to discourage pedestrians crossing at all mid-block locations on Ivinson Ave., 15th St., Lewis St., 9th St., and 13th St., except at designated crosswalks.

Intermediate-Term Transit System Projects

- a. Consider partnerships and collaborative strategies to extend a shuttle route to downtown Laramie.
- b. Continue to expand the microwave (or other type) communication system, to provide real-time bus headway information, via web and monitors at bus stops.

- c. Work towards having new bus stock be “clean” vehicles, which run on alternative fuels, generate cleaner emissions, and run quieter.
- d. If front load bike carriers are used consistently, install them on all buses in the University bus fleet.
- e. Develop a bus theme program and implement shrink-wrap on select buses. Shrink-wrapping is the covering of entire buses with shrink-wrap plastic materials of colorful scenes that have become increasingly common on bus fleets. Some kind of theme for these scenes could be developed that is appropriate for the University and Laramie, and used in marketing the bus system.
- f. Add bike lockers and bike shelters at the proposed new transit stops.

Intermediate-Term Parking Improvements

- a. Re-evaluate the parking fee structure and investigate the potential to raise some fees to provide a disincentive to park close to campus, and an incentive to use remote parking and transit on East Campus. Evaluate the potential to develop a new parking classification for spots on and around the Main Campus and raise fees for these more desirable spots.
- b. Expand the Parking Benefit District, if viable
- c. Provide additional surface parking on the Iverson Building site, with provisions for a future transit hub and bus turnouts/bus lanes.
- d. Provide additional surface parking on East Campus or other area, in line with any recommendations that will be made in the East Campus Master Plan.
- e. Pursue new surface parking locations, when they present themselves.
- f. Provide designated motorcycle parking areas, with shelters

Exhibit E. 8 Recommendations for Long-Term Project Solutions

Long-Term Pedestrian/Bicycle Safety Improvements

- a. Investigate the feasibility and benefit/cost of either a pedestrian bridge or tunnel at the Iverson Ave./15th Street intersection.

Long Term Transit System Projects

- a. Form the Laramie Transit Authority
- b. Construct the transit hub on the Iverson Building site, to include higher-end amenities, a transit/parking control and communications center, and TransPark administrative offices. Convert the existing TransPark facility on 10th Street to surface parking, or a different use as determine by University planning staff.
- c. Construct remote park-n-ride lots and facilities (north, south and west side of the Laramie area - locations to be determined during a detailed feasibility study, and based on population and destination data), plus improved bus stops.

- d. Construct a new bus maintenance facility.
- e. Develop and implement a north/south transit route (stop locations to be determined during a detailed feasibility study).
- f. Expand the east-west route to the airport, West Laramie and the East Grand retail corridor (stop locations to be determined during a detailed feasibility study).
- g. Implement Route 3, between north side neighborhoods, the east side shuttle lot, and downtown (stop locations to be determined during a detailed feasibility study).
- h. Extend bus service later into the evening to better serve student needs.
- i. Shorten headways to 10 minutes from 6 am – 7 pm, and 30 minutes from 7 pm – 1 am.
- j. Develop special route and headway plans for special events, for the new bus routes.
- k. Add bike lockers and bike shelters at new remote park-n-ride lots and at key new bus stops. Install front load bike carriers on all buses.
- l. Develop a bus fleet replacement program that will include “clean” vehicle technology.
- m. Expand the bus theme shrink-wrap program to include the new routes and all rolling stock.

Long-Term Parking Improvements

- a. Using the microwave (or other type) communication system, install variable message signs at key points on roads approaching campus, to direct people to available parking. This system would be used for event parking as well.
- b. In conjunction with the City of Laramie, re-examine the existing neighborhood residential parking program to explore alternative programs, including zones for “two hour parking only, except with permit” and possibly supplying residents with temporary permits for visitors. Alternative should be explored to provide a disincentive for University-related vehicles to be parked in these neighborhoods, and instead use remote park-n-ride lots and ride the expanded transit system.
- c. Continue to monitor and review the University parking fee structure and recognize opportunities to implement additional disincentives to park close to campus, and incentives to use remote parking and transit.
- d. Expand the city and campus coordinated color/symbol wayfinding sign system, to additional key destinations and parking, including the remote park-n-ride lots.

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